



City Council Meeting

September 17, 2018

6:00 p.m.

Cadillac Municipal Complex

Council Chambers

200 N. Lake St.

Cadillac, MI 49601



September 17, 2018 City Council Meeting Agenda
6 p.m. at City Hall – 200 N. Lake St. – Cadillac, MI 49601

We are fully present

CALL TO ORDER
PLEDGE OF ALLEGIANCE
ROLL CALL

I. APPROVAL OF AGENDA

II. PUBLIC COMMENTS

It is requested that comment time be limited to three (3) minutes.

III. CONSENT AGENDA

All items listed on the consent agenda are considered routine and will be enacted by one motion with roll call vote. There will be no separate discussion of these items unless a Council Member so requests it, in which event the items will be removed from the consent agenda and discussed separately.

A. Minutes from the regular meeting held on September 4, 2018.

Support Document III-A

B. Minutes from the closed session held on September 4, 2018.

IV. PUBLIC HEARINGS

A. Public hearing to consider adoption of Non-Discrimination Ordinance.

Support Document IV-A

V. COMMUNITY SPOTLIGHT

A. City of Cadillac wins Best Tasting Water in Michigan 2018

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VI. COMMUNICATIONS

- A. Zion Lutheran Church Craft Show
Support Document VI-A

VII. CITY MANAGER’S REPORT

- A. Medical Marihuana Update
Support Document VII-A
- B. Fluoride Discussion
Support Document VII-B

VIII. PUBLIC COMMENTS

It is requested that comment time be limited to three (3) minutes.

IX. GOOD OF THE ORDER

X. CLOSED SESSION

Adjourn to closed session to consult with the City Attorney regarding trial or settlement strategy in connection with Wexford County Circuit Court Consolidated Case Nos. 13-24803-CH and 17-27610-CZ, *TeriDee LLC et al. v Clam Lake Township and Haring Charter Township v City of Cadillac and HOP Family, LLC and City of Cadillac v Haring Charter Township and Clam Lake Township* and to consider the purchase or lease of real property.

XI. ADJOURNMENT

Core Values (R.I.T.E.)

Respect
Integrity
Trust
Excellence

Guiding Behaviors

We support each other in serving our community
We communicate openly, honestly, respectfully, and directly
We are fully present
We are all accountable
We trust and assume goodness in intentions
We are continuous learners

CITY COUNCIL MEETING MINUTES

6:00 PM – September 4, 2018
Cadillac City Hall – 200 N. Lake St. - Cadillac, Michigan 49601

CALL TO ORDER

Mayor Filkins called the City Council meeting to order at approximately 6:00 pm.

PLEDGE OF ALLEGIANCE

ROLL CALL

Council Present: Spoelman, Schippers, Engels, King, Mayor Filkins
Council Absent: None
Staff Present: Peccia, Dietlin, Roberts, Ottjepka, Homier, Wasson

APPROVAL OF AGENDA

2018-177 Approve agenda as presented.

Motion was made by King and supported by Spoelman to approve the agenda as presented.

Motion unanimously approved.

PUBLIC COMMENTS

Lisa Leedy, Executive Director for Alliance for Economic Success, provided copies of the Cadillac West 2018 Study. She stated they are also working on a Greater Downtown Study.

Billie Ritzema commented on public water fluoridation.

Mary Bretschneider commented on docks at road ends.

CONSENT AGENDA

2018-178 Approve consent agenda as presented.

Motion was made by Spoelman and supported by King to approve the consent agenda as presented.

Motion unanimously approved.

PUBLIC HEARINGS

- A. Public hearing to consider adoption of Ordinance Amending Chapter 42, Article II, Division 6 of the Cadillac City Code Regarding Institutional Controls for Kysor Industrial Corporation/Northern Plating Company.

Peccia stated the public hearing is regarding a higher level of restriction that the Environmental Protection Agency (EPA) is requiring in the area commonly known as the

Local Development Finance Authority (LDFA) area.

Jeff Dietlin, Director of Utilities, stated the EPA expressed concerns about the ordinance regarding the Kysor Site. He noted the EPA requested the ordinance be changed so that no one in the area is using private wells because there is contamination in the area. He stated the current ordinance leaves the decision to connect to the municipal water system up to home owners. He noted he believes there are three (3) residents in the area utilizing private wells.

Dietlin stated he believes that initial installation and fees for connection to the municipal water system was covered by the City.

Mayor Filkins opened the public hearing.

There were no public comments.

Mayor Filkins closed the public hearing.

Schippers stated if the connection cost was covered by the City in the past then she believes it should be covered for the remaining residents.

Dietlin recommended that if the City is going to cover the connection fees then the City should also pay for the abandonment of the wells so they are plugged correctly.

2018-179 Adopt Ordinance 2018-10.

Motion was made by Schippers and supported by King to approve the resolution to adopt Ordinance Amending Chapter 42, Article II, Division 6 of the Cadillac City Code Regarding Institutional Controls for Kysor Industrial Corporation/Northern Plating Company and to have the City cover the cost of connection as well as the cost of abandonment of the existing wells.

Motion unanimously approved.

COMMUNICATIONS

A. Homecoming Parade

2018-180 Approve parade route for Homecoming Parade.

Motion was made by King and supported by Schippers to approve the parade route for the Homecoming Parade beginning at 5:00 pm on September 28, 2018 with set-up starting at 3:30 pm.

Motion unanimously approved.

B. Child Safety Expo

2018-181 Approve street and parking lot closure for Child Safety Expo.

Motion was made by Schippers and supported by Spoelman to approve the closure of Lake St. between Pine St. and the Huntington Bank driveway and the closure of the south parking lot in the Municipal Complex from 1:00 pm to 8:00 pm on September 11, 2018 for the Child Safety Expo.

Motion unanimously approved.

C. Fall Color Train

Bob Matthews stated the street closure is being requested for the safety of the passengers. He noted ticket information can be found at www.michigansteamtrain.com.

2018-182 Approve street closure for Fall Color Train.

Motion was made by Spoelman and supported by Schippers to approve the closure of Lake St. between Cass St. and Pine St. from 11:00 am to 5:00 pm on October 13, 2018 for the Fall Color Train.

Motion unanimously approved.

D. Mayor's Youth Council Movie Night

Schippers stated they will be showing the movie Maleficent. She noted the movie is being sponsored by Munson Healthcare Cadillac Hospital.

2018-183 Approve street closure for Mayor's Youth Council Movie Night.

Motion was made by King and supported by Engels to approve the closure of Lake St. between Cass St. and Harris St. from 7:30 pm to 11:00 pm on September 15, 2018 for the Mayor's Youth Council Movie Night.

Motion unanimously approved.

APPOINTMENTS

A. Recommendation regarding appointment to the Downtown Development Authority.

2018-184 Approve appointment to the Downtown Development Authority.

Motion was made by Engels and supported by Spoelman to approve the appointment of Brian Kelsey to the Downtown Development Authority for a partial term to expire on June 16, 2019.

Motion unanimously approved.

CITY MANAGER'S REPORT

A. Recommendation regarding Certified Grant Administrator for grant administration services related to Community Development Block Grant.

Peccia noted the City is anticipating a rather sizable Community Development Block Grant (CDBG) for a project directly related to the Cadillac Lofts Development. The property is located off of Mitchell Street between Cass and Chapin Streets, formerly known as the Oleson site. He stated the Michigan Economic Development Corporation (MEDC) is working closely with the City on this project and related grant activities. As part of the grant, the City is required to retain the services of a certified Grant Administrator for assistance with the grant. He noted the City released a Request for Proposals and received three (3)

proposals. He stated the recommendation to award the contract to Venture North Funding. He noted funding for this role is paid through the grant.

Mayor Filkins noted there is a large variation between the estimated cost submitted by Venture North Funding and the other two (2) consulting firms. She noted she is concerned about whether or not they will be able to accomplish the work in the estimated hours provided.

Peccia stated there is no cap set. He noted their hourly rate is lower than the other two (2) firms. He noted Venture North Funding is located closer to the project site than the other two (2) firms.

Spoelman asked if the City had a Certified Grant Administrator on staff would that be acceptable or are we required to contract with an outside party.

Peccia stated the City does not have CDBG Certified Grant Administrator on staff.

King asked if the time required completing the work results in exceeding the \$10,000 cost estimated for the project is the City required to pay the difference from the General Fund.

Peccia stated he assumes they would need to show the reasons for exceeding the estimated hours. He noted the MEDC will issue the City a letter of authorization to proceed. He stated there has been no conversation with the MEDC regarding a cap of the cost. He noted even the scope of the grant itself as far as a cap is still abstract. He stated the grant will likely be somewhere between \$500,000 and a \$1 million.

Owen Roberts, Director of Finance, stated it is 100% grant funding and we are required to have a Certified Grant Administrator. He noted Venture North Funding had explained that one of the reasons for the lower estimated hours was their proximity to Cadillac and the scope of the project. He stated it is our understanding that this would be a fully reimbursable cost.

King asked if there will be language in the contract regarding approval for exceeding the estimated cost.

Roberts stated a "not to exceed" amount can be included in the contract. He recommended a contingency in the amount of \$2,500 be added.

2018-185 Award contract for CDBG Certified Grant Administrator.

Motion was made by King and supported by Schippers to award the contract for a CDBG Certified Grant Administrator to Venture North Funding in accordance with their proposal not to exceed \$10,000 but with a contingency of an additional \$2,500 if necessary to be managed by the City Finance Department.

Motion unanimously approved.

INTRODUCTION OF ORDINANCES AND RESOLUTIONS

- A. Adopt resolution to introduce Non-Discrimination Ordinance and set a public hearing for September 17, 2018.

Peccia asked City Attorney Homier if there were any amendments made to the ordinance since the previous version was presented at the last meeting.

Homier stated the language under Sec 2-398 – Prohibition was expanded to include “corporation, company, association or other entity”. He noted it previously stated “No person or persons”.

King asked if Freedom of Information Act (FOIA) requests were sent out to obtain additional information.

Peccia stated the FOIA’s were not issued. He noted it was his understanding after the last meeting that while it would be nice to have additional information from other municipalities it may not necessarily be useful for comparison purposes.

King noted he wants to ensure he has adequate information to make an educated decision moving forward. He stated he thought the direction was pretty clear that the FOIA requests would be sent out.

Spoelman stated she thought after the discussion it was felt that it would be difficult to obtain the additional information and believed it would be more random than quantitative.

Mayor Filkins stated she felt the response from City Attorney Homier to the questions proposed at the last meeting eased her concerns in truly understanding the financial impact or lack thereof that it could have on the City.

King stated he believes there is still information out there to make a good decision on whether the City needs to put a law in place. He noted he cannot go forward if we don’t have the information to know the consequences.

Peccia stated a FOIA request can be issued to any municipality. He asked if there are a few particular municipalities they were interested in obtaining additional from.

King stated there were several but the point is to gather information and learn about any pitfalls they may have encountered. He noted it would also be useful to understand the operation and application of the actual ordinance. He reiterated that moving forward with the FOIA request was included in the minutes from the previous meeting.

Peccia stated it was his understanding from the previous discussion that issuing the FOIA requests was not necessary. He noted there forty-three (43) municipalities on the list and we only had data from approximately six (6) of them.

Mayor Filkins noted the information gathered was very limited. She stated unless FOIA requests are sent we will not know if the other communities show anything different than

those who freely provided the information.

Peccia stated the public hearing could still be set and noted it could take almost a month to receive any data through the FOIA process. He explained that unless the data is available in a public document, the FOIA request may be denied because they are not required to create a document.

Peccia suggested FOIA requests could be submitted to the few municipalities that had reported that complaints had been received.

King stated he believes we would want to see information from communities that have a similar ordinance in place. He noted that anytime we are going to put something into law we have a duty to say what's the information behind this, how has this succeeded or failed, and how it has been applied. He noted his concern is not the basis of the ordinance but rather the application of the ordinance once it is in place.

Engels asked how the City would determine its own cost. He noted there will not be a line item in the budget that states "Non-Discrimination Ordinance Enforcement". He stated any cost associated with a complaint would not necessarily be easy to find. He added he believes any FOIA information gathered from other municipalities may not be helpful or be readily available. He noted the City does not currently have line items for enforcement of ordinances so it may be difficult to obtain specific cost of enforcement information from other municipalities.

King stated you can't get information if you don't ask. He added that the proposed ordinance delegates responsibility to the Director of Public Safety or the Police Chief so he is interested in finding out who is administering the ordinance in other cities. He believes they would keep track of information regarding the number of man-hours involved.

Schippers stated she would be surprised if municipalities kept track of what specific ordinances they are investigating.

King stated this ordinance includes the ability to request the cost of reimbursement for the enforcement of the ordinance. He added because of this, there would have to be an accounting of the time and the cost involved in order to ask a court to reimburse that amount.

Spoelman stated we have already conducted the survey and were unable to obtain that information. She noted submitting FOIA requests is a lot of extra work and we might not receive much additional information. She added they are not required to compile a document to accommodate a FOIA request.

2018-186 Introduce Non-Discrimination Ordinance and set public hearing.

Motion was made by Spoelman and supported by Schippers to adopt the resolution to introduce Non-Discrimination Ordinance and set a public hearing for September 17, 2018.

Ayes: Schippers, Spoelman, Engels, Mayor Filkins

Nays: King

Motion carried.

Peccia stated the City does track complaints received through the Police Department so any complaints received could be tracked as well. Peccia noted he will attempt to gather additional data.

King stated he is interested in obtaining data from communities who have this type of ordinance in place.

Engels noted about half of the communities listed utilize this style of ordinance (Adrian version).

King stated he is interested in a cross-section to see how this has worked.

Engels stated communities that have experienced complaints and those that utilize the Adrian version of the ordinance.

ADOPTION OF ORDINANCES AND RESOLUTIONS

- A. Adopt resolution to approve the MDNR - Michigan Natural Resources Trust Fund Development Project Agreement for the Cadillac Trailhead Project.

Peccia stated on the March 20, 2017, the City Council approved a Resolution of Support for the White Pine Trail Extension & Trailhead grant as required by the Michigan Department of Natural Resources (MDNR). He noted the City has received notice that the grant is awarded and the MDNR requires the City Council to pass a resolution to approve the grant agreement. He added the agreement stipulates the terms of the grant and reaffirms the City's commitment to the grant and the 30% matching funds.

Peccia stated the MDNR has been an incredible partner for the City. Most recently, the MDNR provided a 50/50 grant for the construction of the new restroom facilities at Kenwood Park.

Peccia stated the recommendation is for the City Council to adopt the Resolution to Approve the Development Project Agreement for the Michigan Natural Resources Trust Fund Project Number TF17-0091 for the Cadillac Trailhead Project.

Spoelman inquired about the source of the local match.

Peccia stated the local match comes from the Cadillac Rotary and the Development Fund that was used to help fund the Market. He noted the City is also researching another CDBG source as a means of funding for the project.

Peccia noted the engineers estimate on the project is nearly two (2) years old so the actual cost may be different than the estimated cost. He added the grant amount will remain the same.

King noted that according to the agreement the grantee has to immediately make available the funds. He asked if the City has all of the required funds.

Peccia stated funds are available but he would still like to fundraise for the project.

King asked how much money is coming from the Cadillac Rotary.

Peccia stated it is approximately \$33,000.

King asked if the balance would have to come from the City.

Peccia stated that is correct.

King stated he is concerned when the City is raising money from the public for a percent of these projects if we don't have the money because it turns out to be another tax. He wants to ensure the City budgets for this to ensure projects are fully funded and don't have to rely on fundraising. He asked if funds for this project have been budgeted so the City doesn't have to rely on fundraising.

Peccia stated both the grant dollars and the expenses come in through a budget amendment process that will occur later this fiscal year. He noted the funds on hand are appropriated to be used for this project.

King stated it is being fiscally responsible to not enter into a project that we expect the community to fund. He added when it is a City project that as a fiduciary we have to make sure Council is responsibly approving the monies of the taxpayers before moving forward on a project.

Peccia stated if the City did not have a 70% grant this project would not be viable.

King stated Rotary has been wonderful on these projects. He noted the City needs to secure funding upfront so by the time we get to the agreement we are able to say we are fully funded.

2018-187 Approve MDNR Trust Fund Development Project Agreement for Cadillac Trailhead Project.
Motion was made by Spoelman and supported by Schippers to adopt the Resolution to Approve Development Project Agreement for Michigan Natural Resources Trust Fund Project Number TF17-0091 for the Cadillac Trailhead Project.

Motion unanimously approved.

MINUTES AND REPORTS OF BOARDS AND COMMISSIONS

- A. Zoning Board of Appeals
- B. Historic Districts Commission
- C. Downtown Development Authority
- D. Planning Commission

PUBLIC COMMENTS

There were no public comments.

GOOD OF THE ORDER

Engels thanked Brian Kelsey for volunteering to serve on the Downtown Development Authority.

Peccia noted the City of Cadillac will be hosting the 3rd Annual Northern Michigan American Public Works Association Equipment and Trade Show. He stated it will be held at the Public Works garage on Thursday, September 6, 2018 from 10:00 am to 2:00 pm.

Peccia stated several years ago there was request from a doctor in the community to pursue the same grant that Dr. Ritzema referred to with respect to fluoridating the municipal water supply. He noted the City compiled a booklet that included articles on both sides of the issue and provided that information to the City Council for discussion. He stated the City Council determined at that time there was no action required as there was not a compelling reason to move forward. He noted it is a very controversial item and stated there are reports supporting both sides of the topic.

King asked if Council should hold a work session so Dr. Ritzema and others can attend and provide information on the topic.

Mayor Filkins asked how it was presented in the past.

Spoelman noted Council was provided with resource material and it was discussed.

Mayor Filkins asked if it is possible to obtain new material for review.

Engels mentioned the recent medical marihuana survey that was conducted. He stated if it was cost effective and the response was good a similar survey could be conducted regarding fluoridation of the municipal water supply.

Peccia stated that as of two (2) weeks ago, the City had only received 165 responses out of the approximately 4000 utility customers that received notice of the survey.

Schippers stated this may get more response because it is water related.

Spoelman stated the topic becomes very personal very fast. She noted in the past there were not enough compelling reasons to move forward.

Peccia stated he would provide information to Council on the topic and it can be discussed at a future meeting.

Peccia stated the section of statute that was referred to by Mary Bretschneider was that a public road end shall not be used for the construction, installation, maintenance, or use of a dock or wharf other than a single seasonal public dock or wharf that is authorized by the local unit of government, subject to any permit required under this part. He noted the key word is “public” and the docks that are installed along the south side of North Boulevard are all private.

Homier stated in 2010 the City received a correspondence from the MDNR which had concluded that the road ends were owned by the City and therefore could not allow non-riparian lot owners to install docks at those road endings without City written authorization to do so.

Peccia mentioned there will be a Lakes Mitchell and Cadillac Informational Open House held at the Municipal Complex on September 10, 2018.

Spoelman noted there will be a variety of organizations on hand to provide information about the lakes. She stated there will be a State of the Lakes report provided.

Schippers reminded everyone that school is back in session and urged people to watch for buses and children.

Mayor Filkins stated the City and County did a wonderful job during the recent storms. She noted she is proud of this community for the way in which people took care of each other.

CLOSED SESSION

Adjourn to closed session to consult with the City Attorney regarding trial or settlement strategy in connection with Wexford County Circuit Court Consolidated Case Nos. 13-24803-CH and 17-27610-CZ, *TeriDee LLC et al. v Clam Lake Township and Haring Charter Township v City of Cadillac and HOP Family, LLC and City of Cadillac v Haring Charter Township and Clam Lake Township* and to consider the purchase or lease of real property.

2018-188 Adjourn to closed session.

Motion was made by Spoelman and supported by King to adjourn to closed session to consult with the City Attorney regarding trial or settlement strategy in connection with Wexford County Circuit Court Consolidated Case Nos. 13-24803-CH and 17-27610-CZ, *TeriDee LLC et al. v Clam Lake Township and Haring Charter Township v City of Cadillac and HOP Family, LLC and City of Cadillac v Haring Charter Township and Clam Lake Township* and to consider the purchase or lease of real property: invite Jeff Dietlin, Director of Utilities.

Motion unanimously approved.

2018-189 Return to open session.

Motion was made by King and supported by Schippers to return to open session.

Motion unanimously approved.

ADJOURNMENT

Respectfully submitted,

Carla J. Filkins, Mayor

Sandra L. Wasson, City Clerk

September 17, 2018

COUNCIL COMMUNICATION

Re: Non-Discrimination Ordinance

At the City Council's last meeting in September, a draft ordinance was provided and Council moved to have a public hearing at tonight's meeting.

The following chart is a summary of the data received by noon on September 13th from the Freedom of Information Act request that was sent out to all of the municipalities on the list from the City Attorney's office that indicated that they had adopted a similar ordinance. Following our draft ordinance and notice of adoption, the packet contains all of the data that was received to-date.

Recommended Action:

Hold the public hearing regarding the adoption of a non-discrimination ordinance. Following the public hearing, the City Council has the opportunity to further discuss the ordinance in addition to considering the adoption or non-adoption of the ordinance.

Non-Discrimination FOIA Results Summary as of 9/13/18

Community	Complaints	Cost	Procedure
City of Albion	0	0	Title VI Coordinator
Canton Twp	0	0	Similar to Cadillac
City of Chelsea	0	0	Commission Process
Delhi Twp	0	0	Review Committee
Farmington Hills	0	0	Similar to Cadillac
Fenton	0	0	Similar to Cadillac
City of Howell	0	0	Similar to Cadillac
Kalamazoo Twp	0	0	Similar to Cadillac
City of East Lansing	4	No data	Commission Process
City of Mt. Pleasant	0	0	Similar to Cadillac
Oshtemo Twp	0	0	Similar to Cadillac
City of Portage	1	\$500 est.	Similar to Cadillac
Royal Oak	0	0	Police Department
City of Saline	0	0	Similar to Cadillac
Saugatuck Twp	0	0	Similar to Cadillac
Union Twp	0	0	Similar to Cadillac
City of Wayland	0	0	Similar to Cadillac

City Council

200 North Lake Street
Cadillac, Michigan 49601
Phone (231) 775-0181
Fax (231) 775-8755



Mayor
Carla J. Filkins

Mayor Pro-Tem
Shari Spoelman

Councilmembers
Tiyi Schippers
Robert J. Engels
Stephen King

RESOLUTION NO. 2018-_____

**RESOLUTION ADOPTING
NON-DISCRIMINATION ORDINANCE**

At a meeting of the City Council of the City of Cadillac, Wexford County, Michigan, held in the Council Chambers, Cadillac Municipal Complex, 200 North Lake Street, Cadillac, Michigan, on the 17th day of September, 2018, at 6:00 p.m.

PRESENT: _____

ABSENT: _____

The following preamble and resolution was offered by _____ and
seconded by _____ .

WHEREAS, the City wishes to consider an ordinance to add a section to the City Code entitled "Human Relations" that would provide for regulations preventing discrimination within the City regarding employment, housing, public accommodations and public services on the basis of age, color, disability, education, familial status, gender expression, gender identity, height, marital status, national origin, race, religion, sex, sexual orientation, or weight; and

WHEREAS, on September 17, 2018, the City conducted a public hearing to consider an ordinance adding an Article VII to Chapter 2 of the Cadillac City Code accordingly; and

WHEREAS, following the public hearing, the City has determined it is in the best interests of the health, safety and welfare of City residents to adopt the proposed ordinance.

NOW, THEREFORE, the City Council of the City of Cadillac, Wexford County, Michigan, resolves as follows:

1. Ordinance No. 2018-____, Non-Discrimination Ordinance (the "Ordinance," attached as Exhibit A) is hereby adopted.
2. The Ordinance shall be filed with the City Clerk.
3. The City Clerk is directed to publish a Notice of Adoption within seven (7) days after its adoption.
4. Any and all resolutions that are in conflict with this Resolution are hereby repealed to the extent necessary to give this Resolution full force and effect.

YEAS: _____

NAYS: _____

STATE OF MICHIGAN)
)
COUNTY OF WEXFORD)

I, Sandra Wasson, City Clerk of the City of Cadillac, hereby certify this to be a true and complete copy of Resolution No. 2018-____, duly adopted at a meeting of the City Council held on the 17th day of September, 2018.

Sandra Wasson
Cadillac City Clerk

City Council

200 North Lake Street
Cadillac, Michigan 49601
Phone (231) 775-0181
Fax (231) 775-8755



Mayor
Carla J. Filkins

Mayor Pro-Tem
Shari Spoelman

Councilmembers
Tiyi Schippers
Stephen King
Robert J. Engels

ORDINANCE NO. 2018-__

NON-DISCRIMINATION ORDINANCE

THE CITY OF CADILLAC ORDAINS:

Section 1. PURPOSE

It is the policy of the City of Cadillac to exercise its police power in order to ensure public safety, public health, and a person's general welfare. It is the intent of the City that no individual be denied equal protection of the laws, nor shall an individual be denied the enjoyment of his or her civil rights or be discriminated against because of age, color, disability, education, familial status, gender expression, gender identity, height, marital status, national origin, race, religion, sex, sexual orientation, or weight.

Section 2. ADDITION OF ARTICLE VII TO CHAPTER 2 OF CITY CODE ENTITLED "HUMAN RELATIONS"

The City hereby adds an Article VII to Chapter 2 of the City Code entitled "Human Relations" which shall read, in its entirety, as follows:

ARTICLE VII. – HUMAN RELATIONS

Sec. 2-397. – Definitions.

As used in this Article, the following words and phrases have the following meanings:

Discrimination or discriminate shall mean without limitation, any act which, because of age, color, disability, education, familial status, gender expression, gender identity, height, marital status, national origin, race, religion, sex, sexual orientation, or weight results in the unequal treatment or separation of any person, or denies, prevents, limits, adversely affects the benefit or enjoyment of any person, of employment, ownership, or occupancy of real property, or public accommodations and public services.

Sexual Orientation shall mean, emotional, romantic, and/or sexual attractions, or the absence thereof, to people. Sexual orientation also refers to a person's sense of identity based on those attractions, related behaviors, and membership in a community of others who share those attractions.

Gender Expression shall be defined as a gender-based appearance, expression, or behavior of an individual, regardless of the individual's assigned sex at birth.

Gender Identity shall be defined as an individual's internal sense of their own sex and a defining component of sex.

Sec. 2-398. – Prohibition.

No person, corporation, company, association or other entity shall discriminate against any person or persons within the City regarding employment, housing, public accommodations, and public services on the basis of age, color, disability, education, familial status, gender expression, gender identity, height, marital status, national origin, race, religion, sex, sexual orientation, or weight. To the extent that this ordinance confers benefits on any classes protected from discrimination under this ordinance, it shall not be construed to be preempted by state or federal statute.

Sec. 2-399. – Exceptions.

Section 2-398 shall not apply to:

(a) to a private club, or other establishment not in fact open to the public, except to the extent that the goods, services, facilities, privileges, advantages, or accommodations of the private club or establishment are made available to the customers or patrons of another establishment that is a place of public accommodation or is licensed by the state under Act No. 8 of the Public Act of 1933, being MCL §§ 436.1—436.58, the Michigan Liquor Control Act, as amended.

(b) a religious educational institution or an educational institution operated, supervised, or controlled by a religious institution or organization which limits admission or gives preference to an applicant of the same religion.

(c) the rental of housing accommodations in a building which contains housing accommodations for not more than two families living independently of each other if the owner or a member of the owner's immediate family resides in one of the housing accommodations, or to the rental of a room or rooms in a single-family dwelling by a person if the lessor or a member of the lessor's immediate family resides in the dwelling.

(d) the rental of housing accommodations for not more than three months by the owner or lessor where it was occupied by him/her and maintained as his/her home

for at least three months immediately preceding occupancy by the tenant and is temporarily vacated while maintaining legal residence.

(e) with respect to age only, the sale, rental or lease of housing accommodations meeting the requirements of federal, state or local housing programs for senior citizens, or accommodations otherwise intended, advertised, designed or operated, bona fide, for the purpose of providing housing accommodations for persons 50 years of age or older.

(f) with respect to gender only, a private educational institution which now or hereafter provides an education to only persons of one gender.

A governmental exemption shall not apply to any action by a governmental entity or agency where a person's qualification is expressly limited by statute, charter, ordinance or policy as otherwise provided at law.

Sec. 2-400. – Complaint Procedures.

(a) Any person claiming a violation of this chapter shall file a signed, written complaint with the city manager, or his or her designee, setting forth the details, including names, dates, witnesses and other factual matters relevant to the claim, within 180 days of the incident forming the basis of the complaint.

(b) No person shall provide false information to any authorized employee investigating a complaint regarding a violation of this chapter.

(c) In the course of investigation, the city manager, or his or her designee, may request a person to produce books, papers, records or other documents which may be relevant to an alleged violation of this chapter. If said person does not comply with such request, the city attorney may apply to the Wexford County Circuit Court for an order requiring production of said materials.

(d) Within 30 days of a written complaint being filed, the city manager, or his or her designee, shall undertake an investigation of any complaint filed in accordance with this section alleging a violation of this chapter not currently recognized or proscribed by Michigan or federal anti-discrimination statutes, and cause all other complaints to be referred to an appropriate state or federal agency for review. After the completion of an investigation, the city manager, or his or her designee, shall give written notice of the results of the investigation to the person who filed the complaint and the person accused of the violation. If the investigation establishes that a violation of this chapter occurred, the city manager, or his or her designee, shall attempt to resolve the matter by conciliation and persuasion or refer the complaint to the city attorney for prosecution in a court of competent jurisdiction.

(e) Conciliation agreements: In cases involving alleged violations of this Article, the city manager, or his or her designee, may enter into agreements whereby persons agree to methods of terminating discrimination or to reverse the effects of past discrimination.

(f) The city attorney may commence a civil action to obtain injunctive relief to prevent discrimination prohibited by this chapter, to reverse the effects of such discrimination, or to enforce a conciliation agreement.

Sec. 2-401 – Violations, Fines and Penalties.

Any person in violation of any of the provisions of this Article shall be responsible for a municipal civil infraction, and upon a determination or admission of responsibility shall be subject to a civil fine of not more than \$500.00, costs of prosecution and such other costs, damages, expenses, sanctions, and remedies as authorized by law, including but not limited to, the Revised Judicature Act, and specifically MCL 600.8302, as amended. Each day upon which a violation occurs shall constitute a separate and new violation.

Sec. 2-402 – Private Civil Action.

(a) To the extent allowed by law, an individual who is the victim of discriminatory action in violation of this chapter may bring a civil action for appropriate injunctive relief or damages or both against the person(s) who acted in violation of this Article.

(b) As used in subsection (a), "damages" means damages for injury or loss caused by each violation of this chapter, including reasonable attorney fees.

(c) Private actions and remedies under this section shall be in addition to any actions for violations which the City may take.

Sec. 2-403 – Interpretation.

This Non-Discrimination ordinance shall not be read to prohibit or interfere with a person's, or religious institution's, free exercise of religion as protected by the First Amendment to the United States Constitution and Article 1, Section 4, of the Michigan Constitution.

Section 3. SEVERABILITY

Any section or subsection not expressly amended by this Ordinance shall remain in full force and effect. Should any portion of this Ordinance be found invalid for any reason, such holding shall not be construed as affecting the validity of the remaining portions of this Ordinance.

Section 4. REPEALER

All other ordinances inconsistent with the provisions of this Ordinance are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 5. EFFECTIVE DATE

This Ordinance shall take effect twenty (20) days after its adoption.

City Council

200 North Lake Street
Cadillac, Michigan 49601
Phone (231) 775-0181
Fax (231) 775-8755



Mayor
Carla J. Filkins

Mayor Pro-Tem
Shari Spoelman

Councilmembers
Tiyi Schippers
Stephen King
Robert J. Engels

NOTICE OF ADOPTION

On September 17, 2018 the City Council of the City of Cadillac adopted Ordinance No. 2018-__, Non-Discrimination Ordinance. A true copy of the Ordinance is available for inspection at the offices of the City of Cadillac, located at 200 North Lake Street, Cadillac, Michigan, 49601. Inspections may take place during normal business hours. Members of the public may obtain a copy of the Ordinance for a reasonable charge. The following is a summary of the ordinance:

NON-DISCRIMINATION ORDINANCE

Section 1 of the ordinance states the purpose of the ordinance.

Section 2 of the ordinance adds an Article VII to Chapter 2 of the City Code entitled "Human Relations" which provides regulations and procedures for the prevention of discrimination in the City including complaint procedures and sanctions.

Section 3 provides that any section or subsection not expressly amended by the Ordinance shall remain in full force and effect. Should any portion of the Ordinance be found invalid for any reason, such holding shall not be construed as affecting the validity of the remaining portions of the Ordinance.

Section 4 provides that all other ordinances inconsistent with the provisions of the Ordinance are hereby repealed only to the extent necessary to give the Ordinance full force and effect.

Section 5 provides the effective date of the ordinance.

**CITY COUNCIL OF THE
CITY OF CADILLAC, MICHIGAN**

By: Sandra Wasson, City Clerk
Cadillac Municipal Complex
200 N. Lake Street
Cadillac, Michigan 49601
Telephone No: (231) 775-0181

From: Joan Lager
To: [Camille Lipke](#)
Subject: FW: FOIA C18-88 - Non-Discrimination Policy
Date: Monday, September 10, 2018 3:55:34 PM
Attachments: [FOIA Regarding Non-Discrimination.pdf](#)

Ms. Lipke

In Response to your FOIA Request C18-88

1. Copy of our Community's Code specific to this issue – below is the line to our Ordinance (All Canton's ordinances are available on line)

<https://library.municode.com/search?statel=22&clientId=808&searchText=CHAPTER%2036&contentType=CODES>

2. Copy of our Administrative policy – as we have not had any discrimination complaints the township does not have a specific policy.
3. And 4. None

This closed your FOIA. There will be no charge for this information.

If you have questions, please contact me.

Sincerely,

Joan

Joan Lager

Secretary to the Clerk
Charter Township of Canton
1150 S. Canton Center Road
Canton, MI 48188
jlager@canton-mi.org
Office: 734.394.5120
Fax: 734.394.5128
Direct: 734.394.5125



From: Camille Lipke [<mailto:payroll@Cadillac-MI.net>]

Sent: Friday, September 07, 2018 2:04 PM

To: FOIA - Admin <foia@canton-mi.org>

Subject: FOIA

FOIA

Thank you.

Camille Lipke
City of Cadillac

231.779.7337 (Direct)

www.cadillac-mi.net

Chapter 36 - EQUAL RIGHTS

Sec. 36-1. - Intent.

It is the intent of the township that no person be denied equal protection of the laws; nor shall any person be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived race, color, religion, national origin, sex, age, height, weight, condition of pregnancy, marital status, physical or mental limitation, source of income, family responsibilities, sexual orientation, gender identity or HIV status.

(Ord. of 6-10-2014, § 1)

Sec. 36-2. - Definitions.

As used in this chapter, the following words and phrases shall have the following meaning:

Age means chronological age.

Discriminate means to make a decision, offer to make a decision, or refrain from making a decision, based in whole or in part on the actual or perceived race, color, religion, national origin, sex, age, height, weight, condition of pregnancy, marital status, physical or mental limitation, source of income, family responsibilities, sexual orientation, gender identity, or HIV status of another person, that person's relatives, or that person's associates. Discrimination based on sex includes sexual harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when:

- (1) Submission to such conduct or communication is, either explicitly or implicitly, made a term or condition of obtaining employment, public accommodations, or housing;
- (2) Submission to or rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment, public accommodations or housing; and/or
- (3) Such conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or housing, or creating an intimidating, hostile, or offensive employment, public accommodations, or housing environment.

Discrimination based upon actual or perceived physical or mental limitation includes discrimination because of the use of adaptive devices or aids by an individual.

Family responsibilities means the state of being or the potential to become a contributor to the support of a person or persons in a family relationship.

Gender identity means a person's actual or perceived gender, including a person's gender identity, self-image, appearance, expression, or behavior, whether or not that gender identity, self-image, appearance, expression, or behavior is different from that traditionally associated with the person's sex at birth as being either female or male.

HIV status means the physical condition of a person who has, or has been diagnosed as having been infected with, the human immunodeficiency virus, whether or not that person has or has been diagnosed as having acquired immunodeficiency syndrome or acquired immunodeficiency syndrome related complex.

Housing facility means any dwelling unit or facility used for a person to regularly sleep and keep personal belongings including, but not limited to, a house, apartment, rooming house, housing cooperative, hotel, motel, tourist home, retirement home or nursing home.

Marital status means the state of being married, unmarried, divorced, or widowed.

Mental limitation means a limitation of mental capabilities unrelated to one's ability to safely perform the work involved in jobs or positions available to such person for hire or promotion; a limitation of mental capabilities unrelated to one's ability to acquire, rent and maintain property; or a limitation of mental capabilities unrelated to one's ability to utilize and benefit from the goods, services, activities, privileges and accommodations of a place of public accommodation. "Mental limitation" includes, but is not limited to, developmental and psychological disabilities. "Mental limitation" does not include any condition caused by the current use of alcohol or the current illegal use of a controlled substance.

Perceived means the perception of the person who acts, and not the perception of the person for or against whom the action is taken.

Physical limitation means a limitation of physical capabilities unrelated to one's ability to safely perform the work involved in jobs or positions available to such person for hire or promotion; a limitation of physical capabilities unrelated to one's ability to acquire, rent and maintain property; or a limitation of physical capabilities unrelated to one's ability to utilize and benefit from the goods, services, activities, privileges and accommodations of a place of public accommodation. "Physical limitation" includes, but is not limited to, blindness or partial sightedness, deafness or hearing impairment, muteness, partial or total absence of physical member, speech impairment and motor impairment. "Physical limitation" does not include any condition caused by the current use of alcohol or the current illegal use of a controlled substance.

Place of public accommodation means an educational, governmental, health, day care, entertainment, cultural, recreational, refreshment, transportation, financial institution, accommodation, business or other facility of any kind, whose goods, services, facilities, privileges, advantages or accommodations are extended, offered, sold or otherwise made available to the public, or which receives financial support through the solicitation of the general public or through governmental subsidy of any kind.

Sex means the status of being a man/boy or woman/girl, and a person's conformity to sex stereotypes. Sex shall further be defined to include a person's gender identity.

Sexual orientation means male or female homosexuality, heterosexuality, or bisexuality, by orientation or practice.

Source of income means any legal source from which a person obtains money.

(Ord. of 6-10-2014, § 1)

Sec. 36-3. - Discriminatory housing practices.

- (a) No person shall discriminate in leasing, selling or otherwise making available any housing facilities.
- (b) No person shall discriminate in the terms, conditions, maintenance, or repair in providing any housing facility.
- (c) No person shall refuse to lend money for the purchase or repair of any real property or to insure any real property solely because of the location in the township of such real property.
- (d) No person shall promote real estate transactions by representing that changes are occurring or will occur in an area with respect to race, religion or national origin.
- (e) No person shall place a sign or other display on any real property which indicates that the property is for sale or has been sold when it is not for sale or has not recently been sold.

(Ord. of 6-10-2014, § 1)

Sec. 36-4. - Discriminatory public accommodations practices.

No person shall discriminate in making available full and equal access to all goods, services, activities, privileges and accommodations of any place of public accommodation. No person shall prohibit a breastfeeding mother from or segregate a breastfeeding mother within any public accommodation where she and the child would otherwise be authorized to be.

(Ord. of 6-10-2014, § 1)

Sec. 36-5. - Discriminatory employment practices.

- (a) No person shall discriminate in the employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any person.
- (b) No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor union or apprenticeship program.

(Ord. of 6-10-2014, § 1)

Sec. 36-6. - Other prohibited practices.

- (a) No person shall adopt, enforce or employ any policy or requirement, publish, post or broadcast any advertisement, sign or notice which discriminates or indicates discrimination in providing housing, employment or public accommodations.
- (b) No person shall discriminate in the publication or distribution of advertising material, information or solicitation regarding housing, employment or public accommodations.
- (c) No agent, broker, labor union, employment agency or any other intermediary shall discriminate in making referrals, listings or providing information with regard to housing, employment or public accommodations.
- (d) No person shall coerce, threaten or retaliate against a person for making a complaint or assisting in the investigation regarding a violation or alleged violation of this chapter, nor require, request, conspire with, assist or coerce another person to retaliate against a person for making a complaint or assisting in an investigation.
- (e) No person shall conspire with, assist, coerce or request another person to discriminate in any manner prohibited by this chapter.

(Ord. of 6-10-2014, § 1)

Sec. 36-7. - Information and investigation.

- (a) Any person claiming a violation of this chapter shall file a signed, written complaint with the township supervisor setting forth the details, including the names, dates, witnesses and other factual matters relevant to the claim, within 180 days of the incident forming the basis of the complaint.
- (b) No person shall provide false information to any authorized employee investigating a complaint regarding a violation of this article.
- (c) In the course of the investigation, the township supervisor may request a person to produce books, papers, records or other documents which may be relevant to a violation or alleged violation of this article. If said person does not comply with such request, the township attorney may apply to the county circuit court for an order requiring production of said materials.
- (d) Within 30 days of a written complaint being filed, the township supervisor shall undertake an investigation of any complaint alleging a violation of this article not currently recognized or proscribed by Michigan or federal anti-discrimination statutes, and cause all other complaints to be referred to

an appropriate state or federal agency for review. After the completion of an investigation, the township supervisor shall give written notice of the results of the investigation to the person who filed the complaint and the person accused of the violation. If the investigation establishes that a violation of this article occurred, the township supervisor shall attempt to resolve the matter by conciliation and persuasion or refer the complaint to the township attorney for prosecution in a court of competent jurisdiction.

(Ord. of 6-10-2014, § 1)

Sec. 36-8. - Conciliation agreements.

In cases involving alleged violations of this chapter, the township may enter into agreements whereby persons agree to methods of terminating discrimination or to reverse the effects of past discrimination. A violation of such an agreement shall be a violation of this chapter. The township attorney may commence a civil action to enforce a conciliation agreement.

(Ord. of 6-10-2014, § 1)

Sec. 36-9. - Discriminatory effects.

No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived race, color, religion, national origin, sex, age, height, weight, condition of pregnancy, source of income, family responsibilities, sexual orientation, marital status, physical or mental limitation, gender identity or HIV status for a person to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a necessity does not arise due to a mere inconvenience or because of suspected or actual objection to such a person by neighbors, customers, or other persons.

(Ord. of 6-10-2014, § 1)

Sec. 36-10. - Exceptions.

Notwithstanding anything contained in this chapter, the following practices shall not be violations of this chapter:

- (1) For a religious organization or institution to restrict any of its facilities of housing or accommodations which are operated as a direct part of religious activities to persons of the denomination involved or to restrict employment opportunities for officers, religious instructors and clergy to persons of that denomination.
- (2) For the owner of an owner-occupied one-family or two-family dwelling, or a housing facility or public accommodation facility, respectively, devoted entirely to the housing and accommodation of individuals of one sex, to restrict occupancy and use on the basis of sex.
- (3) To limit occupancy in a housing project or to provide public accommodations or employment privileges or assistance to persons of low income, over 55 years of age, or who are handicapped.
- (4) To engage in a bona fide effort to establish an affirmative action program to improve opportunities in employment for minorities and women.
- (5) To discriminate based on a person's age when such discrimination is required by state, federal or local law.
- (6) To refuse to enter a contract with an unemancipated minor.

- (7) To refuse to admit to a place of public accommodation serving alcoholic beverages a person under the legal age for purchasing alcoholic beverages.
- (8) To refuse to admit persons under 18 years of age to a business providing entertainment or selling literature which the operator of said business deems unsuitable for minors.
- (9) For an educational institution to limit the use of its facilities to those affiliated with such institution.
- (10) To provide discounts on products or service to students, minors and senior citizens.
- (11) To discriminate in any arrangement for the sharing of a dwelling unit.
- (12) To restrict use of lavatories and locker room facilities on the basis of sex.
- (13) For a governmental institution to restrict any of its facilities or to restrict employment opportunities based on duly adopted institutional policies that conform to federal and state laws and regulations.
- (14) To restrict participation in an instructional program, athletic event or on an athletic team on the basis of age or sex.

(Ord. of 6-10-2014, § 1)

Sec. 36-11. - Violations and penalties.

- (a) A violation of any provision of this chapter is a civil infraction, punishable by a fine of not more than \$500.00, plus the costs of investigation and prosecution. Upon a finding or an admission of responsibility, the court may issue and enforce any judgment, writ, or order necessary to enforce this chapter.
- (b) Each day upon which a violation occurs shall constitute a separate violation.
- (c) Nothing contained in this chapter shall be construed to limit in any way the remedies, legal or equitable, which are available to the township or any other person for the prevention or correction of discrimination. Private actions and remedies shall be in addition to any actions for a violation which the township may take.

(Ord. of 6-10-2014, § 1)

**CHARTER TOWNSHIP OF KALAMAZOO
KALAMAZOO COUNTY, MICHIGAN**

ORDINANCE NO. 573

ADOPTED: JULY 22, 2013

**EFFECTIVE: 30 DAYS FOLLOWING
PUBLICATION AFTER ADOPTION**

An ordinance to protect the health, safety and general welfare of the citizens of the Charter Township of Kalamazoo through the prohibition of discrimination; and to provide for civil sanctions and civil remedies for violation of this ordinance.

**THE CHARTER TOWNSHIP OF KALAMAZOO
KALAMAZOO COUNTY, MICHIGAN
ORDAINS:**

**SECTION I
TITLE**

This ordinance shall be known and may be cited as the "Charter Township of Kalamazoo Non-Discrimination Ordinance".

**SECTION II
DEFINITIONS**

For purposes of this ordinance, the following definitions shall apply:

A. *Age*. Chronological age.

B. *Discriminate*. To make a decision, offer to make a decision or refrain from making a decision based in whole or in part on the actual or perceived race, color, sex, age, religion, national origin, height, weight, marital status, familial status, citizenship, physical or mental disability, gender identity, sexual orientation, or genetic information, of another person.

1. Discrimination based on sex includes sexual harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when:

(a) Submission to such conduct or communication is made a term or condition either explicitly or implicitly to obtain employment, public accommodations, or housing.

(b) Submission to rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment, public accommodations or housing.

(c) Such conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or housing, or creating an intimidating, hostile, or offensive employment, public accommodations, or housing environment.

2. Discrimination based on actual or perceived physical or mental limitation includes discrimination because of the use by an individual of adaptive devices or aids.

C. *Educational institution.* A public or private institution or a separate school or department thereof, including an academy, college, elementary or secondary school, extension course, kindergarten, nursery, local school system, or university, or a business, nursing, professional, secretarial, technical, or vocational school. For the purposes of this definition, educational institution includes an agent of an educational institution.

D. *Employee.* An individual who is hired for a wage, salary, fee, payment or other remuneration to perform work for an employer.

E. *Employer.* Any person employing one (1) or more persons.

F. *Employment Agency.* A person who undertakes to procure employees for an employer or procures opportunities for individuals to be employed by an employer.

G. *Familial Status.* The status of being in a family.

H. *Family.* This term shall mean a "traditional family" or "functional family" as defined below:

1. Traditional family – an individual or group of two or more persons related by blood, marriage or adoption, together with foster children, who are domiciled together as a single domestic housekeeping unit in a dwelling.

2. Functional family – a collective number of individuals domiciled together in one dwelling whose relationship is of a permanent and distinct domestic character, with a demonstrable and recognizable bond characteristic of a cohesive unit, and who are in fact cooking and living as a single non-profit housekeeping unit.

A "functional family" shall not include any of the following:

(a) Any group of individuals whose domestic relationship is transitory, temporary, or resort/seasonal in nature or character.

(b) Any group of individuals whose association is essentially for convenience or economics or for the limited duration of their education, training or a similar determinate period of time.

- I. *Gender identity.* An individual's appearance, expression, identity or behavior as being either male or female, whether or not that appearance, expression, identity or behavior is different from that which is traditionally associated with the individual's designated gender at birth.
- J. *Genetic Information:* information about an individual's genetic tests and the genetic tests of an individual's family members, as well as information about the manifestation of a disease or disorder in an individual's family members.
- K. *Housing Facility.* Any dwelling unit or facility used or intended or designed to be used as the home, domicile or residence of one or more persons including, but not limited to, a house, apartment, rooming house, housing cooperative, hotel, motel, tourist home, retirement home or nursing home.
- L. *Labor Organization.* An organization of any kind or structure in which employees participate or are members and which exists for the purposes, in whole or part, of dealing with employers concerning the terms and conditions of employment of its participants or members, whether or not such organization is subordinate to or affiliated with a national or international labor organization.
- M. *Marital Status.* The state of being married, never married, divorced, or widowed.
- N. *Perceived.* Refers to the perception of the person who acts, and not to the perception of the person for or against whom the action is taken.
- O. *Person.* An individual, agent, association, corporation, labor organization, legal representative, partnership, receiver, trust or any other legal or commercial entity.
- P. *Physical or Mental Disability.* A determinable physical or mental characteristic resulting from disease, injury, congenital condition of birth, or functional disorder and is unrelated to one's ability to safely perform the work involved in jobs or positions available to such person for hire or promotion; or unrelated to one's ability to acquire, rent and maintain property; or unrelated to one's ability to utilize and benefit from the goods, services, activities, privileges and accommodations of a place of public accommodation. "Physical or Mental Disability" does not include any condition caused by the current illegal use of a controlled substance or the use of alcohol liquor by an individual.
- Q. *Place of Public Accommodation.* An educational, governmental, health, entertainment, cultural, recreational, refreshment, transportation, or financial institution, business or

facility of any kind, whose goods, services, facilities, privileges, advantages or accommodations are extended, offered, sold, or otherwise made available to the public.

- R. *Private club.* An establishment that is not open to the public. A private club is one whose members' association with each other and the club is sufficiently intimate, small and exclusive that it is not open to the public.
- S. *Religious organization.* A religious corporation, association, educational institution or society whose purpose or character is directed toward the propagation of a particular religion, the inculcation of religious values or the provision of charity; primarily employs persons who share its religious tenets; and primarily serves persons who share its religious tenets or, on a charitable basis, the broader community. Religious organization includes, for illustration and not limitation: churches, mosques, synagogues and other houses of worship; any subsidiary organizations; educational institutions affiliated with, controlled, or managed by those houses of worship or with articles of incorporation, bylaws and other documents stating an intention to inculcate its religious tenets in students; and faith-based organizations that provide charitable services to the public.
- T. *Sexual Orientation.* Male or female homosexuality, heterosexuality or bisexuality, whether by orientation or practice. Sexual orientation does not include the physical or sexual attraction to a minor by an adult.
- U. *Township Supervisor:* The Township Supervisor, or his or her designee.

SECTION III **DISCRIMINATORY HOUSING PRACTICES**

Except as otherwise provided in this ordinance:

- A. A person shall not discriminate in leasing, selling, or otherwise making available any housing accommodation.
- B. A person shall not discriminate in the terms, conditions, or privileges of a real estate transaction or in the furnishing of facilities or services in connection with any housing accommodation.
- C. A person shall not discriminate in providing financing for the purchase, repair, or remodeling of any housing accommodations.
- D. A person shall not discriminate in making referrals, listings or otherwise providing information regarding housing accommodations.

SECTION IV
DISCRIMINATORY PUBLIC ACCOMMODATION PRACTICES

Except as otherwise provided in this ordinance, no person shall discriminate in making available full and equal access to all goods, services, activities, privileges, and accommodations of any place of public accommodation.

SECTION V
DISCRIMINATORY EMPLOYMENT PRACTICES

Except as otherwise provided in this ordinance:

- A. No employer shall discriminate in the employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any person.
- B. No labor organization shall discriminate in limiting membership, conditions of membership, or termination of membership of any person in any labor union or apprenticeship program.
- C. No employment agency shall discriminate in the procurement or recruitment of any person for possible employment with an employer.

SECTION VI
OTHER PROHIBITED PRACTICES

- A. No person shall adopt, enforce or employ any policy or requirement, publish, post or broadcast any advertisement, sign or notice which discriminates or indicates discrimination in providing housing, employment or public accommodations.
- B. No person shall discriminate in the publication or distribution of advertising material, information or solicitation regarding housing, employment or public accommodations.
- C. No agent, broker, labor organization, employment agency or any other intermediary shall discriminate in making referrals, listings or providing information with regard to housing, employment or public accommodations. A report of the conviction of any such person for a violation of this ordinance shall be made to the applicable licensing or regulatory agency for such person or business.
- D. No person shall coerce, threaten or retaliate against a person for making a complaint or assisting in the investigation regarding a violation or alleged violation of this ordinance, nor require, request, conspire with, assist or coerce another person to retaliate against a person for making a complaint or assisting in an investigation.
- E. No person shall conspire with, assist, coerce or request another person to discriminate in any manner prohibited by this ordinance.

SECTION VII **EXCEPTIONS**

The prohibitions against discrimination as provided for in this ordinance shall not be deemed preempted by federal or state law, but are intended to supplement state and federal civil rights law prohibiting discrimination in the areas of employment, public accommodations, and housing. However, this ordinance shall be construed and applied in a manner consistent with First Amendment jurisprudence regarding the freedom of speech and exercise of religion.

Nothing in this ordinance permits or requires access to any place of public accommodation for the purpose or intent of engaging in criminal conduct.

Nothing in this ordinance shall require the construction or provision of unisex, single-user restrooms, changing rooms, locker rooms, or shower facilities.

Notwithstanding anything contained in this ordinance, the following practices shall not be violations of this ordinance:

- A. For a religious organization to restrict employment opportunities, educational facilities, or occupancy of housing facilities that are operated as a direct part of its religious activities to persons who are members of or who conform to the moral tenets of that religious organization or the denomination to which it belongs.
- B. For the owner of a housing facility or public accommodation facility, respectively, devoted entirely to the housing and accommodation of individuals of one sex, to restrict occupancy and use on the basis of sex.
- C. To limit occupancy in a housing project or to provide public accommodations or employment privileges or assistance to persons of low income, persons over fifty-five (55) years of age or disabled persons.
- D. To engage in a bona fide effort to establish an affirmative action program to improve opportunities in employment for minorities and women consistent with applicable state and federal law.
- E. To discriminate based on a person's age when such discrimination is required by state, federal, or local law.
- F. To refuse to enter into a contract with an unemancipated minor.

- G. To refuse to admit to a place of public accommodation serving alcoholic beverages a person under the legal age for purchasing alcoholic beverages.
- H. To refuse to admit persons under eighteen (18) years of age to a business providing entertainment or selling literature which the operator of said business deems unsuitable for minors.
- I. For an educational institution to limit the use of its facilities to those affiliated with such institution.
- J. To provide discounts on products or services to students, or on the basis of age.
- K. To discriminate in any arrangement for the shared ownership, lease or residency of a dwelling unit.
- L. For a governmental institution to restrict any of its facilities or to restrict employment opportunities based on duly-adopted institutional policies that conform to federal and state laws and regulations.
- M. To restrict participation in an instructional program, athletic event or on an athletic team on the basis of age, sex, height, or weight.
- N. To restrict membership in a private club.
- O. To the employment of an individual by one's family.
- P. To the rental of housing facilities in a building which contains dwelling units for not more than two families living independently of each other if the owner of the building or a member of the owner's family resides in one of the dwelling units, or to the rental of a room or rooms in a one-family dwelling by an individual if the lessor or a member of the lessor's family resides in the dwelling.
- Q. For an employer offering health or pension plans to provide for marital or familial status limitations in such plans provided those limitations conform to state and federal laws, rules and regulations. Further, nothing in this ordinance shall be construed or interpreted to either require, or prohibit, a private employer from offering employment benefits to the same-sex partner of an employee.

- R. For the Township to allow use of its facilities or services by persons that may be affiliated with, or otherwise supported by, a religious organization, which may espouse policies or practices inconsistent with the general intent of this ordinance. Further, this ordinance shall not prohibit the Township from allowing use of its facilities or services by persons not generally affiliated with or supported by a particular religious organization, but who may espouse policies or practices inconsistent with the general intent of this ordinance.

SECTION VIII
INFORMATION AND INVESTIGATION

- A. Any person claiming to be discriminated against in a manner prohibited by this ordinance may, within 180 days of the alleged violation, file a signed, written complaint with the Township Supervisor, specifying in detail the names, dates, known witnesses and other pertinent facts relevant to the alleged violation.
- B. For any complaint alleging a violation of state or federal law, the Township Supervisor shall refer the complainant to the appropriate state or federal agency responsible for investigation and enforcement of such alleged violation. For any other complaint, the Township Supervisor shall undertake an investigation of the alleged violation.
1. No person shall provide false information to any Township official or employee investigating a complaint regarding a violation of this ordinance.
 2. In the course of the investigation, a person may be requested to produce books, papers, records or other documents which may be relevant to a violation or alleged violation of this ordinance. If said person does not comply with such request, the Township Supervisor may apply for a judicial order requiring production of said materials.
- C. After the completion of an investigation, the Township Supervisor shall give written notice of the result of the investigation to the person who filed the complaint and the person accused of the violation. If the investigation establishes that a violation of this ordinance occurred, the Township Supervisor shall, in his or her sole discretion, attempt to resolve the matter by conciliation and/or refer the complaint to the Township Police Department and/or the Township Attorney for prosecution.
- D. In cases involving alleged violations of this ordinance, the Township Supervisor may enter into agreements whereby persons agree to methods of terminating discrimination or to reverse the effects of past discrimination. A violation of such a conciliation agreement shall be a violation of this ordinance.

SECTION IX
SANCTIONS

Any person, firm, association, partnership, corporation, or governmental entity who violates any of the provisions of this ordinance shall be deemed to be responsible for a municipal civil infraction as defined by Michigan Statute which shall be punishable by civil fine determined in accordance with the following schedule:

	<u>Minimum</u> <u>Fine</u>	<u>Maximum</u> <u>Fine</u>
1st Offense within 3-year period*	\$75.00	\$500.00
2nd Offense within 3-year period*	\$150.00	\$500.00
3rd Offense within 3-year period*	\$325.00	\$500.00
4th or More Offense within 3-year period*	\$500.00	\$500.00

* Determined on the basis of the date of commission of the offense(s).

Additionally, the violator shall pay costs which may include all expenses, direct and indirect, to which the Charter Township of Kalamazoo has incurred in connection with the municipal civil infraction. In no case, however, shall costs of less than \$9.00 nor more than \$500.00 be ordered. In addition, the Charter Township of Kalamazoo shall have the right to proceed in any court of competent jurisdiction for the purpose of obtaining an injunction, restraining order, or other appropriate remedy to compel compliance with this ordinance. Each day that a violation of this ordinance exists shall constitute a separate violation of this ordinance.

SECTION X
SEVERABILITY

Should any part of this ordinance be declared unconstitutional, illegal or of no force and effect by a court of competent jurisdiction, such portion thereof shall not be deemed to affect the validity of any other part or portion of this ordinance.

SECTION XI
EFFECTIVE DATE

This ordinance shall take effect 30 days following publication following adoption.

KALAMAZOO CHARTER TOWNSHIP
Donald Z. Thall, Township Clerk
1720 Riverview Drive
Kalamazoo, MI 49004
269-381-8080

From: [Marcus Peccia](#)
To: [Camille Lipke](#)
Subject: FW: FOIA
Date: Thursday, September 13, 2018 11:25:14 AM
Attachments: [Title VI Non Discrimination Plan Signed.docx](#)

Marcus A. Peccia, City Manager
City of Cadillac
200 N. Lake Street
Cadillac, MI 49601
(231) 779-7344
Mobile (231) 884-3202
citymanager@cadillac-mi.net
<http://www.facebook.com/cityofcadillac>

From: Caresha Kendrick [mailto:ckendrick@cityofalbionmi.gov]
Sent: Thursday, September 13, 2018 11:04 AM
To: Marcus Peccia
Subject: FOIA

Mr. Peccia,

Attached to this email you will find a copy our Title VI Non Discrimination Plan. Thank you

Caresha Kendrick
Albion Public Safety, Records Clerk
112 W. Cass Street
Albion, MI 49224
(517) 629-3933 ext. 2700
ckendrick@cityofalbionmi.gov

CITY OF ALBION

TITLE VI

NON-DISCRIMINATION PLAN

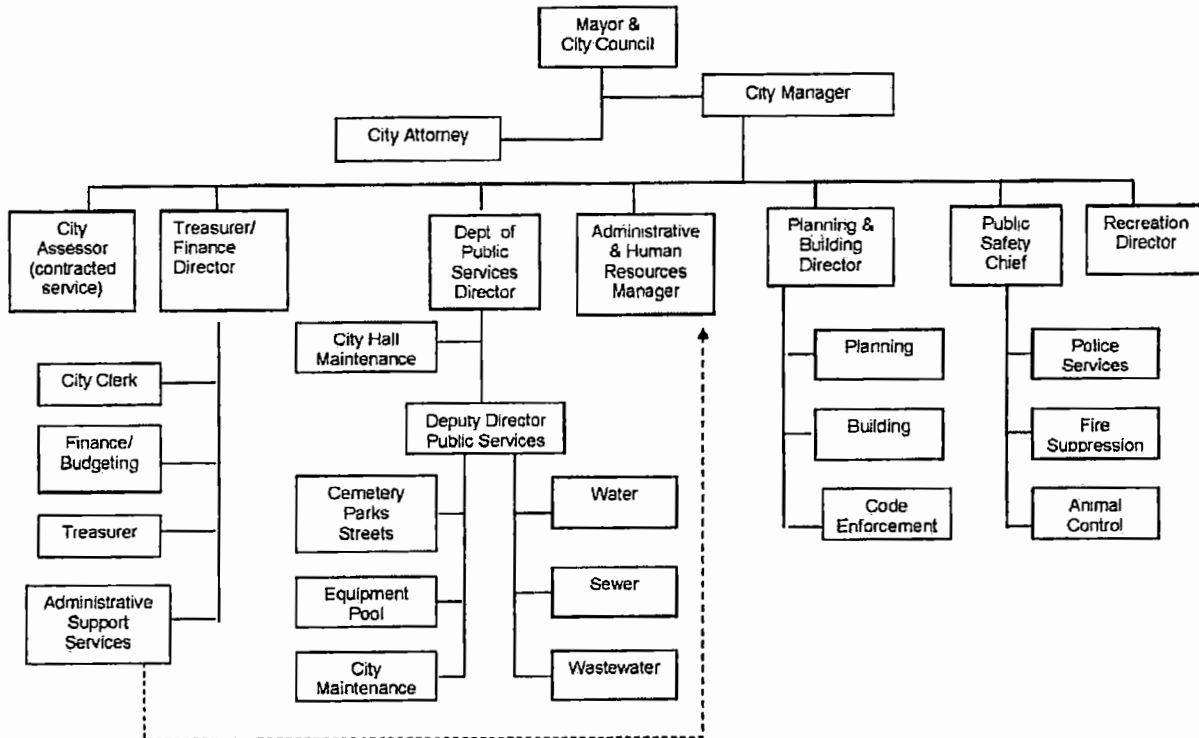
**112 West Cass Street
Albion, MI 49224
Phone: 517-629-7172
Fax: 517-629-4168
Website: <http://www.cityofalbionmi.gov/>**

**Title VI Coordinator:
Sheryl L. Mitchell, City Manager
Email: smitchell@cityofalbionmi.gov**

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CITY OF ALBION DEPARTMENTAL ORGANIZATIONAL CHART - 2015



SimOrg Charts 2015 COA Departmental

INTRODUCTION

In 1833, Tenney Peabody was the first permanent settler to what is now the City of Albion. In 1885, Albion was incorporated as a City. The Albion Historical Society was founded in 1955 to preserve and display the heritage of this small community with a very rich history. At least one station of the Underground Railroad operated in Albion prior to the Civil War. Albion's history is that of a city that forged both metal and minds, creating a dynamic community of hardworking people from all backgrounds and ethnicities.

The City of Albion is famous for its Festival of the Forks, which began in 1967. The Festival of the Forks is a celebration of Albion's historic heritage and rich ethnic diversity, traditionally featuring culinary, musical and visual arts. Under the auspices of the Greater Albion Chamber of Commerce, the Festival of the Forks is an annual reunion of current and former residents of the greater Albion area in celebration of the creativity and unity of its people. In 1973, Albion was named an All-America City by the National Civic League. It celebrated winning the award on May 15, 1974, when the Governor of Michigan, William Milliken, and many dignitaries came to town.

The City of Albion serves all people of the city, including minority populations, low-income populations, the elderly, persons with disabilities, and those who traverse the state of Michigan. The City of Albion recognizes its responsibility to provide fairness and equity in all of its programs, services, and activities, and that it must abide by and enforce federal and state civil rights legislation.

Title VI of the Civil Rights Act of 1964, is the overarching civil rights law which prohibits discrimination based on race, color, or national origin, in any program, service or activity that receives federal assistance. Specifically, Title VI assures that, "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefit of, or be otherwise subjected to discrimination under any program or activity receiving federal assistance." Title VI has been broadened by related statutes, regulations and executive orders. Discrimination based on sex is prohibited by Section 324 of the Federal-Aid Highway Act, which is the enabling legislation of the Federal Highway Administration (FHWA). The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 prohibit unfair and inequitable treatment of persons as a result of projects which are undertaken with Federal financial assistance. The Civil Rights Restoration Act of 1987 clarified the intent of Title VI to include all programs and activities of federal-aid recipients and contractors whether those programs and activities are federally funded or not.

In addition to statutory authorities, Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," signed in February of 1994, requires federal agencies to achieve Environmental Justice as part of its mission by identifying disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. Environmental Justice initiatives are accomplished by involving the potentially affected public in the development of transportation projects that fit within their communities without sacrificing safety or mobility. In 1997, the U.S. Department of Transportation (USDOT) issued its DOT Order to Address Environmental Justice in Minority Populations and Low-Income Populations to

summarize and expand upon the requirements of Executive Order 12898 on Environmental Justice. Also, Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency (LEP)," provides that no person shall be subjected to discrimination on the basis of race, color, or national origin under any program or activity that receives Federal financial assistance.

As a recipient of federal financial assistance, the City of Albion must provide access to individuals with limited ability to speak, write, or understand the English language. The City will not restrict an individual in any way from the enjoyment of any advantage or privilege enjoyed by others receiving any service, financial aid, or other benefit under its programs or projects. Individuals may not be subjected to criteria or methods of administration which cause adverse impact because of their race, color, or national origin, or have the effect of defeating or substantially impairing accomplishment of the objectives of the program because of race, color or national origin. Therefore, the primary goals and objectives of the City of Albion's Title VI Program are:

1. To assign roles, responsibilities, and procedures for ensuring compliance with Title VI of the Civil Rights Act of 1964 and related regulations and directives;
2. To ensure that people affected by the City's programs and projects receive the services, benefits, and opportunities to which they are entitled without regard to race, color, national origin, age, sex, or disability;
3. To prevent discrimination in the City of Albion's programs and activities, whether those programs and activities are federally funded or not;
4. To establish procedures for identifying impacts in any program, service, or activity that may create illegal adverse discrimination on any person because of race, color, national origin, age, sex, or disability; or on minority populations, low-income populations, the elderly, and all interested persons and affected Title VI populations;
5. To establish procedures to annually review Title VI compliance within specific program areas within the City;
6. To set forth procedures for filing and processing complaints by persons who believe they have been subjected to illegal discrimination under Title VI in the City's services, programs or activities.

As a sub-recipient of federal transportation funds, the City of Albion must comply with federal and state laws, and related statutes, to ensure equal access and opportunity to all persons, with respect to transportation services, facilities, activities, and programs, without regard to race, color, national origin, sex, socio-economic status, or geographical location. Every effort will be made to prevent discrimination in any program or activity, whether those programs and activities are federally funded or not, as guaranteed by the Civil Rights Restoration Act of 1987.

The City of Albion shall also ensure that their sub-recipients adhere to state and federal law and include in all written agreements or contracts, assurances that the sub-recipient must comply with

Title VI and other related statutes. The City of Albion, as a sub-recipient who distributes federal transportation funds, shall monitor their sub-recipients for voluntary compliance with Title VI. In the event that non-compliance is discovered, the City will make a good faith effort to ensure that the sub-recipient corrects any deficiencies arising out of complaints related to Title VI; and that sub-recipients will proactively gauge the impacts of any program or activity on minority populations and low-income populations, the elderly, persons with disabilities, all interested persons and affected Title VI populations.

Discrimination under Title VI

There are two types of illegal discrimination prohibited under Title VI and its related statutes. One type of discrimination which may or may not be intentional is "disparate treatment." Disparate treatment is defined as treating similarly situated persons differently because of their race, color, national origin, sex, disability, or age.

The second type of illegal discrimination is "disparate impact." Disparate impact discrimination occurs when a "neutral procedure or practice" results in fewer services or benefits, or inferior services or benefits, to members of a protected group. With disparate impact, the focus is on the consequences of a decision, policy, or practice rather than the intent.

The City of Albion's efforts to prevent such discrimination must address, but not be limited to, a program's impacts, access, benefits, participation, treatment, services, contracting opportunities, training, investigation of complaints, allocation of funds, prioritization of projects, and the overarching functions of planning, project development and delivery, right-of-way, construction, and research.

The City of Albion has developed this Title VI Plan to assure that services, programs, and activities of the City are offered, conducted, and administered fairly, without regard to race, color, national origin, sex, age, or disability of the participants or beneficiaries of federally funded programs, services, or activities (see Title VI Assurances).

**CITY OF ALBION
NON-DISCRIMINATION POLICY STATEMENT**

The City reaffirms its policy to allow all individuals the opportunity to participate in federal financially assisted services and adopts the following provision:

“No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” In applying this policy, the City and its sub-recipients of federal funds shall not:

1. Deny any individual with any service, opportunity, or other benefit for which such individual is otherwise qualified;
2. Provide any individual with any service, or other benefit, which is inferior (in quantity or quality) to, or which is provided in a different manner from that which is provided to others;
3. Subject any individual to segregated or disparate treatment in any manner related to such individual's receipt of services or benefits;
4. Restrict an individual in any way from the enjoyment of services, facilities or any other advantage, privilege or other benefit provided to others;
5. Adopt or use methods of administration, which would limit participation by any group of recipients or subject any individual to discrimination;
6. Address any individual in a manner that denotes inferiority because of race, color, or national origin;
7. Permit discriminatory activity in a facility built in whole or in part with federal funds;
8. Deny any segment of the population the opportunity to participate in the operations of a planning or advisory body that is an integral part of a federally funded program;
9. Fail to provide information in a language other than English to potential or actual beneficiaries who are of limited English speaking ability, when requested and as appropriate;
10. Subject an individual to discriminatory employment practices under any federally funded program whose objective is to provide employment;
11. Locate a facility in any way, which would limit or impede access to a federally-funded service or benefit.

The City of Albion will actively pursue the prevention of any Title VI deficiencies or violations and will take the necessary steps to ensure compliance. If irregularities occur in the administration of the program's operation, procedures will be promptly implemented to resolve Title VI issues all within a period not to exceed 90 days.

The City of Albion designates Sheryl L. Mitchell as the Title VI Coordinator. The City Manager will be responsible for initiating and monitoring Title VI activities and other required matters, ensuring that the City of Albion complies with the Title VI regulations and pursues prevention of Title VI deficiencies or violations. Inquiries concerning the City of Albion and Title VI may be directed to the Sheryl L. Mitchell, City Manager, 112 West Cass Street Albion, MI 49224; Phone: 517-629-7172; Fax: 517-629-4168; Email: smitchell@cityofalbionmi.gov.


Joe Domingo
Mayor


Sheryl L. Mitchell
City Manager/ Title VI Coordinator

CITY OF ALBION TITLE VI ASSURANCES

The City of Albion (hereinafter referred to as the "Recipient") hereby agrees that as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation, it will comply with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 USC 2000d-42 USC 2000d-4 (hereinafter referred to as the "Act"), and all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-Assisted Programs for the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964 (hereinafter referred to as the "Regulations") and other pertinent directives, to the end that in accordance with the Act, Regulations, and other pertinent directives, no person in the United States shall, on the grounds of race, color or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Recipient received Federal financial assistance from the Department of Transportation, including the Federal Highway Administration, and hereby gives assurances that it will promptly take any measures necessary to effectuate this agreement. This assurance is required by subsection 21.7 (a) (1) and (b) of the Regulations.

More specifically and without limiting the above general assurance, the Recipient hereby gives the following specific assurance with respect to the Federal Aid Highway Program:

1. That the Recipient agrees that each "program" and each "facility" as defined in subsections 21.23(e) and 21.23(b) of the Regulations, will be (with regard to a "program") conducted, or will be (with regard to a "facility") operated in compliance with all requirements imposed by, or pursuant to, the Regulations.
2. That the Recipient shall insert the following notification in all solicitations for bids for work or material subject to the Regulations and made in connection with all Federal Aid Highway Programs and, in adapted form in all proposals for negotiated agreements:

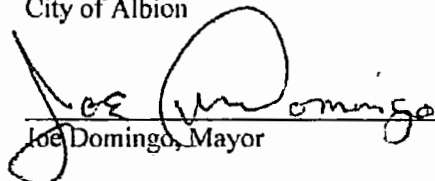
"The (Recipient), in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, SubTitle A, Office the Secretary, Part 21, Nondiscrimination in Federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award."

3. That the Recipient shall insert the clauses of Appendix A of this assurance in every contract subject to the Act and the Regulations.
4. That the Recipient shall insert the clauses of Appendix B of this assurance, as a covenant running with the land, in any deed from the United States effecting a transfer of real property, structures, or improvements thereon, or interest therein.
5. That where the Recipient receives Federal financial assistance to construct a facility, or part of a facility, the assurance shall extend to the entire facility and facilities operated in connection therewith.

6. That where the Recipient receives Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the assurance shall extend to rights to space on, over or under such property.
7. That the Recipient shall include the appropriate clauses set forth in Appendix C of this assurance, as a covenant running with the land, in any future deeds, leases, permits, licenses, and similar agreements entered into by the Recipient with other parties: (a) for the subsequent transfer of real property acquired or improved under the Federal Aid Highway Program; and (b) for the construction or use of or access to space on, over or under real property acquired, or improved under the Federal Aid Highway Program.
8. That this assurance obligates the Recipient for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property or interest therein or structures or improvements thereon, in which case the assurance obligates the Recipient or any transferee for the longer of the following periods: (a) the period during which the property is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or (b) the period during which the Recipient retains ownership or possession of the property.
9. The Recipient shall provide for such methods of administration for the program as are found by the Secretary of Transportation or the official to whom it delegates specific authority to give reasonable guarantee that it, other recipients, sub-grantees, contractors, subcontractors, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the Act, the Regulations and this assurance.
10. The Recipient agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the Act, the Regulations, and this assurance.

This assurance is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts or other Federal financial assistance extended after the date hereof to the Recipient under the Federal Aid Highway Program and is binding on it, other recipients, sub-grantees, contractors, sub-contractors, transferees, successors in interest and other participants in the Federal Aid Highway Program. The person or persons whose signatures appear below are authorized to sign this assurance on behalf of the Recipient.

City of Albion


Joe Domingo, Mayor

18 Feb 2015
Date

AUTHORITIES

Title VI of the Civil Rights Act of 1964, 42 USC 2000d to 2000d-4; 42 USC 4601 to 4655; 23 USC 109(h);

Title VI of the Civil Rights Act of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin (including Limited English Proficiency), be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal financial assistance (please refer to 23 CFR 200.9 and 49 CFR 21). Related statutes have broadened the grounds to include age, sex, low income, and disability.

The Civil Rights Restoration Act of 1987 also broadened the scope of Title VI coverage by expanding the definition of terms "programs or activities" to include all programs or activities of Federal Aid recipients, sub-recipients, and contractors, whether such programs and activities are federally assisted or not (Public Law 100-259 [S. 557] March 22, 1988).

Federal Aid Highway Act of 1973, 23 USC 324: No person shall on the ground of sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal assistance under this title or carried on under this title.

Age Discrimination Act of 1975, 42 USC 6101: No person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity receiving federal financial assistance.

Americans With Disabilities Act of 1990 PL 101-336: No qualified individual with a disability shall, by reason of his/her disability, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination by a department, agency, special purpose district or other instrumentality of a state or local government.

Section 504 of the Rehabilitation Act of 1973: No qualified individual with a disability shall, solely by reason of his/her disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity that receives or benefits from federal financial assistance.

USDOT Order 1050.2: Standard Title VI Assurances

EO12250: Department of Justice Leadership and coordination of Non-discrimination Laws.

EO12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

28 CFR 50.3: Guidelines for the enforcement of Title VI of the Civil Rights Act of 1964.

EO13166: Improving Access to Services for Persons with Limited English Proficiency.

DEFINITIONS

Adverse Effects – The totality of significant individual or cumulative human health or environmental effects including interrelated social and economic effects, which may include, but are not limited to: (See Appendix E for additional discussion of “significant”)

- Bodily impairment, infirmity, illness or death
- Air, noise and water pollution and soil contamination
- Destruction or disruption of man-made or natural resources
- Destruction or diminution of aesthetic values
- Destruction or disruption of community cohesion or community’s economic vitality
- Destruction or disruption of the availability of public and private facilities and services
- Adverse employment effects
- Displacement of person’s businesses, farms or non-profit organizations
- Increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community
- Denial of, reduction in, or significant delay in the receipt of benefits of the City programs, policies and activities

Federal Assistance – Includes grants and loans of federal funds; the grant or donation of federal property and interests in property; the detail of federal personnel, federal property or any interest in such property without consideration or at a nominal consideration or at a consideration which is reduced for the purpose of assisting the recipient, or in recognition of the public interest to be served by such sale or lease to the recipient; and any federal agreement, arrangement or other contract which has, as one of its purposes, the provision of assistance.

Limited English Proficiency - Individuals with a primary or home language other than English who must, due to limited fluency in English, communicate in that primary or home language if the individuals are to have an equal opportunity to participate effectively in or benefit from any aid, service or benefit provided by the City .

Low-Income – A person whose median household income is at or below the Department of Health and Human Service Poverty guidelines (see <http://aspe.hhs.gov/poverty/>).

Low-Income Population – Any readily identifiable group of low-income persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed City program, policy or activity.

Minority – A person who is:

- a. Black – A person having origins in any of the black racial groups of Africa;
- b. Hispanic – A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- c. Asian American – A person having origins in any of the original people of the Far East, Southeast Asia, the Indian sub-continent, or the Pacific Islands; or

- d. American Indian and Alaskan Native – A person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition.

Minority Population – Any readily identifiable groups of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed City program, policy or activity.

Non-Compliance – A recipient has failed to meet prescribed requirements and has shown an apparent lack of good faith effort in implementing all the requirements of Title VI and related statutes.

Persons – Where designation of persons by race, color or national origin is required, the following designation ordinarily may be used; "White not of Hispanic origin", "Black not of Hispanic origin", "Hispanic", "Asian or Pacific Islander", "American Indian or Alaskan Native". Additional sub-categories based on national origin of primary language spoken may be used, where appropriate, on either a national or a regional basis.

Program – Includes any road or park project including planning or any activity for the provision of services financial aid or other benefits to individuals. This includes education or training, work opportunities, health welfare, rehabilitation, or other services, whether provided directly by the recipient of federal financial assistance or provided by others through contracts or other arrangements with the recipient.

Recipient - Any state, territory, possession, the District of Columbia, Puerto Rico, or any political subdivision, or instrumentality thereof, or any public or private agency, institution, or organization, or other entity, or any individual, in any state, territory, possession, the District of Columbia, or Puerto Rico, to whom Federal assistance is extended, either directly or through another recipient, for any program. Recipient includes any successor, assignee, or transferee thereof, but does not include any ultimate beneficiary under any such program.

Significant Adverse effects on Minority and Low-Income Populations – An adverse effect that:

- a. is predominantly borne by a minority population and/or a low-income population, or
- b. will be suffered by the minority population and/or low-income population and is shown to be appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

Sub-Recipient – Any agency such as a council of governments, regional planning agency, or educational institution, for example, that received Federal Highway Administration (FHWA) funds through the State DOT and not directly from the FHWA. Other agencies, local governments, contractors, consultants that receive these funds are all considered sub-recipients.

ADMINISTRATION – GENERAL

The City of Albion designates Sheryl L. Mitchell, as the Title VI Coordinator (hereinafter referred to as the "Title VI Coordinator"). Ms. Mitchell shall have lead responsibility for coordinating the administration of the Title VI and related statutes, programs, plans, and assurances.

Complaints: If any individual believes that he/she or any other program beneficiaries have been the object of unequal treatment or discrimination as to the receipt of benefits and/or service, or on the grounds of race, color, national origin (including Limited English Proficiency), sex, age or disability, he/she may exercise his/her right to file a complaint with the City. Complaints may be filed with the Title VI Coordinator. Every effort will be made to resolve complaints informally at the lowest level.

Data Collection: Statistical data on race, color, national origin, English language ability and sex of participants in and beneficiaries of the City programs; e.g., impacted citizens and affected communities will be gathered and maintained by the City. The gathering procedures will be reviewed annually to ensure sufficiency of the data in meeting the requirements of the Title VI program.

Program Reviews: Special emphasis program reviews will be conducted based on the annual summary of Title VI activities, accomplishments, and problems. The reviews will be conducted by the Title VI Coordinator to assure effectiveness in their compliance of Title VI provisions. The Title VI Coordinator will coordinate efforts to ensure the equal participation in all their programs and activities at all levels. The City does not have any special emphasis programs at this time.

Title VI Reviews on Sub-Recipients: Title VI compliance reviews will be conducted annually by the Title VI Coordinator. Priority for conducting reviews will be given to those recipients of federal (U.S. Department of Transportation) funds with the greatest potential of impact to those groups covered by the Act. The reviews will entail examination of the recipients' adherence to all Title VI requirements. The status of each review will be reported in the annual update and reported to relevant U.S. Department of Transportation (USDOT) modes upon request.

Annual Reporting Form: The Title VI Coordinator will be responsible for coordination, compilation, and submission of the annual reporting form data to the Michigan Department of Transportation (MDOT), Civil Rights Program Unit via the Sub-Recipient Annual Certification Form (MDOT form #0179) by October 5th.

Title VI Plan Updates: If updated, a copy of Title VI Plan will be submitted to the MDOT, Civil Rights Program Unit, as soon as the update has been completed, or as soon as practicable, and no later than 30 days if significant changes are made.

Public Dissemination: The City will disseminate Title VI Program information to the City employees and to the general public. Title VI Program information will be submitted to sub-recipients, contractors and beneficiaries. Public dissemination will include inclusions of Title VI language in contracts and publishing the City's Title VI Plan within 90 days of approval on the main page of the City of Albion's internet website, at <http://www.cityofalbionmi.gov/>.

Remedial Action: The City, through the Title VI Coordinator, will actively pursue the prevention of Title VI deficiencies and violations and will take the necessary steps to ensure compliance with all program administrative requirements. When deficiencies are found, procedures will be promptly implemented to correct the deficiencies and to put in writing the corrective action(s). The period to determine corrective action(s) and put it/them in writing to effect compliance may not exceed 90 days from the date the deficiencies are found.

LIMITED ENGLISH PROFICIENCY (LEP)

On August 11, 2000, President William J. Clinton signed an executive order, Executive Order 13166: Improving Access to Service for Persons with Limited English Proficiencyⁱ, to clarify Title VI of the Civil Rights Act of 1964. It had as its purpose, to ensure accessibility to programs and services to otherwise eligible persons who are not proficient in the English language.

This executive order stated that individuals who do not speak English well and who have a limited ability to read, write and speak, or understand English are entitled to language assistance under Title VI of the Civil Rights Act of 1964 with respect to a particular type of service, benefit, or encounterⁱⁱ. These individuals are referred to as being limited in their ability to speak, read, write, or understand English, hence the designation, "LEP," or Limited English Proficient. The Executive Order states that:

"Each federal agency shall prepare a plan to improve access to its federally conducted programs and activities by eligible LEP persons. Each plan shall be consistent with the standards set forth in the LEP Guidance, and shall include the steps the agency will take to ensure that eligible LEP persons can meaningfully access the agency's programs and activities."

Not only do all federal agencies have to develop LEP plans as a condition of receiving federal financial assistance, recipients have to comply with Title VI and LEP guidelines of the federal agency from which funds are provided as well.

Federal financial assistance includes grants, training, use of equipment, donations of surplus property, and other assistance. Recipients of federal funds range from state and local agencies, to nonprofits and organizations. Title VI covers a recipient's entire program or activity. This means all parts of a recipient's operations are covered, even if only one part of a recipient's organization receives the federal assistance. Simply put, any organization that receives federal financial assistance is required to follow this Executive Order.

The City receives funds from the US Department of Transportation via the Federal Highway Administration.

The US Department of Transportation published *Policy Guidance Concerning Recipients' responsibilities to Limited English Proficient Person* in the December 14th, 2005 Federal Register.ⁱⁱⁱ

The Guidance implies that the City is an organization that must follow this guidance:

This guidance applies to all DOT funding recipients, which include state departments of transportation, state motor vehicle administrations, airport operators, metropolitan planning organizations, and regional, state, and local transit operators, among many others. Coverage extends to a recipient's entire program or activity, i.e., to all parts of a recipient's operations. This is true even if only one part of the recipient receives the Federal assistance. For example, if DOT provides assistance to a state department of transportation to rehabilitate a particular highway on the

National Highway System, all of the operations of the entire state department of transportation—not just the particular highway program or project—are covered by the DOT guidance.

Elements of an Effective LEP Policy

The US Department of Justice, Civil Rights Division has developed a set of elements that may be helpful in designing an LEP policy or plan. These elements include:

1. Identifying LEP persons who need language assistance
2. Identifying ways in which language assistance will be provided
3. Training Staff
4. Providing notice to LEP persons
5. The recommended method of evaluating accessibility to available transportation services is the Four-Factor Analysis identified by the USDOT.

These recommended plan elements have been incorporated into this plan.

Methodology for Assessing Needs and Reasonable Steps for an Effective LEP Policy

The DOT guidance outlines four factors recipients should apply to the various kinds of contacts they have with the public to assess language needs and decide what reasonable steps they should take to ensure meaningful access for LEP persons:

1. The number or proportion of LEP persons eligible to be served or likely to be encountered by a program, activity, or service of the recipient or grantee.
2. The frequency with which LEP individuals come in contact with the program.
3. The nature and importance of the program, activity, or service provided by the recipient to the LEP Community.
4. The resources available to the City and overall cost.

The greater the number or proportion of eligible LEP persons, the greater the frequency with which they have contact with a program, activity, or service and the greater the importance of that program, activity, or service, the more likely enhanced language services will be needed. The intent of DOT's guidance is to suggest a balance that ensures meaningful access by LEP persons to critical services while not imposing undue burdens on small organizations and local governments.

Smaller recipients with more limited budgets are typically not expected to provide the same level of language service as larger recipients with larger budgets.

The DOT guidance is modeled after the Department of Justice's guidance and requires recipients and sub-recipients to take steps to ensure meaningful access to their programs and activities to LEP persons. More information for recipients and sub-recipients can be found at <http://www.lep.gov>.

The Four-Factor Analysis

This plan uses the recommended four-factor analysis of an individualized assessment considering the four factors outlined above. Each of the following factors is examined to determine the level and extent of language assistance measures required to sufficiently ensure meaningful access to City of Albion services and activities that may affect their quality of life. Recommendations are then based on the results of the analysis.

Factor 1: The Proportion, Numbers and Distribution of LEP Persons

The Census Bureau has a range for four classifications of how well people speak English. The classifications are: 'very well,' 'well,' 'not well,' and 'not at all.' For our planning purposes, we are considering people that speak English less than 'very well' as Limited English Proficient persons.

As seen in Table #1, the Census 2013 Data for the City of Albion shows a small number of the population that speak English less than 'very well.'

TABLE #1

LANGUAGE SPOKEN AT HOME	# of Individuals	Percentage
Population 5 years and over	8,041	8,041
English only	7,498	93.2%
Language other than English	543	6.8%
Speak English less than "very well"	51	0.6%
Spanish	333	4.1%
Speak English less than "very well"	27	0.3%
Other Indo-European languages	116	1.4%
Speak English less than "very well"	12	0.1%
Asian and Pacific Islander languages	68	0.8%
Speak English less than "very well"	0	0.0%
Other languages	26	0.3%
Speak English less than "very well"	12	0.1%

Factor 2: Frequency of Contact with LEP Individuals

The City has conducted an informal survey of our employees with regard to whether they have had encounters with LEP individuals in the performance of their job functions and found that they have had encounters with LEP individuals. We have offices accessible to the public and therefore

accessible to LEP individuals. We also have staff that work in the field that could encounter LEP individuals. Additionally, regular Council meetings are held on the first and third Mondays of the month, which would potentially bring LEP individuals to these meetings. Given the number of LEP individuals, as displayed in Table #1 (above), the probability of our employees to encounter an LEP individual is low.

Factor 3: The Nature and Importance of the Program, Activity, or Service to LEP

The City of Albion serves individuals throughout the City in a variety of ways including managing roads, water, sewer, police, fire, elections, and other services to residents and other individuals, such as visitors and those traversing the state. The nature of the services that the City provides is very important to an individual's day-to-day life. Therefore the denial of services to an LEP individual could have a significant detrimental effect. Given the number of LEP individuals in the City, we will ensure accessibility to all of our programs, services, and activities.

Factor 4: The Resources Available to the City of Albion and Overall Cost

US Department of Transportation Policy Guidance Concerning Recipients' Responsibilities to Limited English Proficient (LEP) Persons published in the Federal Register: December 14, 2005 (Volume 70, Number 239) states:

"Certain DOT recipients, such as those serving very few LEP persons or those with very limited resources, may choose not to develop a written LEP plan."

The City of Albion serves very few LEP persons and has very limited resources. However, it has decided to include a LEP section in its Title VI Plan in order to comply with the Executive Order and to ensure access and reasonable accommodations for LEP persons who may be unknown at this time.

Safe Harbor Stipulation

Federal law provides a "Safe Harbor" situation so that recipients can ensure with greater certainty that they comply with their obligation to provide written translations in languages other than English. A "Safe Harbor" means that if a recipient provides written translation in certain circumstances, such action will be considered strong evidence of compliance with the recipient's written-translation obligations under Title VI.

The failure to provide written translations under the circumstances does not mean there is non-compliance, but rather provides a guide for recipients that would like greater certainty of compliance than can be provided by a fact-intensive, four factor analysis. For example, even if a

Safe Harbor is not used, if written translation of a certain document(s) would be so burdensome as to defeat the legitimate objectives of its program, it is not necessary. Other ways of providing meaningful access, such as effective oral interpretation of certain vital documents, might be acceptable under such circumstances.

Strong evidence of compliance with the recipient's written translation obligations under "Safe Harbor" includes providing written translations of vital documents for each eligible LEP language group that constitutes 5% or 1,000, whichever is less, of the population of persons eligible to be served or likely to be affected or encountered. Translation of other documents, if needed, can be provided orally.

This "Safe Harbor" provision applies to the translation of written documents only. It does not affect the requirement to provide meaningful access to LEP individuals through competent oral interpreters where oral language services are needed and are reasonable.

Given the small number of LEP language group members, the City of Albion's budget and number of staff, it is deemed that written translations of vital documents would be so burdensome as to defeat the legitimate objectives of our programs. It is more appropriate for the City of Albion to proceed with oral interpretation options for compliance with LEP regulations.

Providing Notice to LEP Persons

USDOT LEP guidance says:

Once an agency has decided, based on the four factors, that it will provide language service, it is important that the recipient notify LEP persons of services available free of charge. Recipients should provide this notice in languages LEP persons would understand.

The guidance provides several examples of notification including:

1. Signage, in languages that an LEP individual would understand that free language assistance is available with advance notice.
2. Stating in outreach documents that free language services are available from the agency.
3. Working with community-based organizations and other stakeholders to inform LEP individuals of the recipient's services, including the availability of language assistance services.

Statements in languages that an LEP individual would understand will be placed in public information and public notices informing LEP individuals that those requiring language assistance and/or special accommodations will be provided the requested service free of charge, with reasonable advance notice to the City of Albion.

Options and Proposed Actions

Options:

Federal fund recipients have two (2) main ways to provide language services: oral interpretation either in person or via telephone interpretation service and written translation. The correct mix should be based on what is both necessary and reasonable in light of the four-factor analysis.^{iv}

The City of Albion is defining an interpreter as a person who translates spoken language orally, as opposed to a translator, who translates written language or who transfers the meaning of written text from one language into another. The person who translates orally is not a translator, but an interpreter.^v

Considering the relatively small size of the City of Albion, the small number of LEP individuals in the service area, and limited financial resources, it is necessary to limit language aid to the most basic and cost-effective services. However, when requested appropriate assistance will be provided.

What the City of Albion will do. What actions will the City of Albion take?

- Notify the public that interpreter services are available upon request, with seven day advance notice.
- With advance notice of seven calendar days, the City will provide interpreter services at public meetings, including language translation and signage for the hearing impaired.
- The City will utilize the *Translators Resource List* as provided by MDOT for translation services and verbal interpretation.
- The Census Bureau "I-speak" Language Identification Card will be distributed to all employees that may potentially encounter LEP individuals.
- Once the LEP individual's language has been identified, an agency from the *Translators Resource List* will be contacted to provide interpretation services.
- Publications of the City's complaint form will be made available online and upon request.
- In the event that a City employee encounters a LEP individual, they will follow the procedure listed below:

OFFICE ENCOUNTER

1. Provide an I-speak language identification card to determine the language spoken by the LEP individual.

2. Once the foreign language is determined, provide information to Title VI Coordinator who will contact an interpreter from MDOT's *Translators Resource List*.
3. If the need is for a document to be translated, the Title VI Coordinator will have the document translated and provided to the requestor as soon as possible.

ROAD ENCOUNTER

1. Road crew employee will immediately contact the Title VI Coordinator for assistance, and provide an I-speak language identification card to the LEP individual to determine the language spoken by the individual.
2. Once the foreign language is determined, provide information to Title VI Coordinator who will contact an interpreter from MDOT's *Translators Resource List* to provide telephonic interpretation.
3. If the need is for a document to be translated, the Title VI Coordinator will have the document translated and provided to the requestor as soon as possible.

IN WRITING

1. Once a letter has been received it will be immediately forwarded to the Title VI Coordinator.
2. The Title VI Coordinator will contact a translator from the MDOT's *Translators Resource List* to determine the specifics of the letter request information.
3. The Title VI Coordinator will work with the selected agency to provide the requested service to the individual in a timely manner.

OVER THE PHONE

1. If someone calls into our office speaking another language, every attempt will be made to keep that individual on the line until an interpreter can be conferenced into the line, and if possible, determine the language spoken by the caller.
2. Once the language spoken by the caller has been identified, we will proceed with providing the requested assistance to the LEP individual.

The City of Albion's Staff Training

The City of Albion's staff will be provided training on the requirements for providing meaningful access to services for LEP persons.

ENVIRONMENTAL JUSTICE (EJ)

Compliance with Title VI includes ensuring that no minority or low income population suffers "disproportionately high and adverse human health or environmental effect" due to any "programs, policies and activities" undertaken by any agency receiving federal funds. This obligation will be met by the City in the following ways:

- When planning specific programs or projects, identifying those populations that will be affected by a given program or project.
- If a disproportionate effect is anticipated, follow mitigation procedures.
- If mitigation options do not sufficiently eliminate the disproportionate effect, discussing and, if necessary, implementing reasonable alternatives.

Disproportionate effects are those effects which are appreciably more severe for one group or predominantly borne by a single group. The City will use U.S. Census data to identify low income and minority populations.

Where a project impacts a small number or area of low income or minority populations, the City will document that:

- Other reasonable alternatives were evaluated and were eliminated for reasons such as the alternatives impacted a far greater number of people or did greater harm to the environment; etc.
- The project's impact is unavoidable;
- The benefits of the project far out-weigh the overall impacts; and
- Mitigation measures are being taken to reduce the harm to low income or minority populations.

If it is concluded that no minority and/or low income population groups are present in the project area, the City will document how the conclusion was reached. If it is determined that one or more of these population groups are present in the area, the City will administer a potential disproportionate effects test.

The following steps will be taken to assess the impact of projects on minorities and/or low income population groups:

STEP ONE: Determine if a minority or low income population is present within the project area. If the conclusion is that no minority and/or low income population is present within the project area, document how the conclusion was reached. If the conclusion is that there are minority population groups and/or low income population groups present, proceed to Step Two.

STEP TWO: Determine whether project impacts associated with the identified low income and minority populations are disproportionately high and adverse. In doing so, refer to the list of

potential impacts and questions contained in Appendix E. If it is determined that there are disproportionately high and adverse impacts to minority and low income populations, proceed to Step Three.

STEP THREE: Propose measures that will avoid, minimize and/or mitigate disproportionately high and disproportionate adverse impacts and provide offsetting benefits and opportunities to enhance communities, neighborhoods and individuals affected by proposed project.

STEP FOUR: If after mitigation, enhancements and offsetting benefits to the affected populations, there remains a high and disproportionate adverse impact to minority or low income populations, then the following questions must be considered:

Question 1: Are there further mitigation measures that could be employed to avoid or reduce the adverse effect to the minority or low income population?

Question 2: Are there other additional alternatives to the proposed action that would avoid or reduce the impacts to the low income or minority populations?

Question 3: Considering the overall public interest, is there a substantial need for the project?

Question 4: Will the alternatives that would satisfy the need for the project and have less impact on protected populations (a) have other social economic or environmental impacts that are more severe than those of the proposed action (b) have increased costs of extraordinary magnitude?

STEP FIVE: Include all findings, determinations or demonstrations in the environmental document prepared for the project.

FILING A TITLE VI COMPLAINT

I. Introduction

The Title VI complaint procedures are intended to provide aggrieved persons an avenue to raise complaints of discrimination regarding the City programs, activities, and services, as required by statute.

II. Purpose

The purpose of the discrimination complaint procedures is to describe the process used by the City for processing complaints of discrimination under Title VI of the Civil Rights Act of 1964 and related statutes.

III. Roles and Responsibilities

The Title VI Coordinator has overall responsibility for the discrimination complaint process and procedures. The Title VI Coordinator may, at his/her discretion assign a capable person to investigate the complaint.

The designated investigator will conduct an impartial and objective investigation, collect factual information and prepare a fact-finding report based upon information obtained from the investigation.

IV. Filing a Complaint

The complainant shall make himself/herself reasonably available to the designated investigator, to ensure completion of the investigation within the timeframes set forth.

Applicability: The complaint procedures apply to the beneficiaries of City programs, activities, and services, including but not limited to: the public, contractors, sub-contractors, consultants, and other sub-recipients of federal and state funds.

Eligibility: Any person who believes that he/she has been excluded from participation in, denied benefits or services of any program or activity administered by the City or its sub-recipients, consultants, and contractors on the basis of race, color, national origin (including Limited English Proficiency), sex, age or disability may bring forth a complaint of discrimination under Title VI.

Time Limitation on Filing Complaints: Title VI complaints may be filed with the Title VI Coordinator's office. In all situations, the employees of the City must contact the Title VI Coordinator immediately upon receipt of Title VI related complaints.

Complaints must be filed within 180 days of the alleged discrimination. If the complainant could not reasonably be expected to know that the act was discriminatory within the 180 day period, he/she will have 60 additional days after becoming aware of the illegal discrimination to file the complaint.

Complaints must be in writing, and must be signed by the complainant and/or the complainant's representative. The complaint must set forth as fully as possible the facts and circumstances surrounding the claimed discrimination. In cases where the complainant is unable or incapable of providing a written statement, the complainant will be assisted in converting the verbal complaint into a written complaint. All complaints, however, must be signed by the complainant and/or by the complainant's representative.

Items that should not be considered a formal complaint: (unless the items contain a signed cover letter specifically alleging a violation of Title VI) include but are not limited to:

1. An anonymous complaint that is too vague to obtain required information
2. Inquiries seeking advice or information
3. Courtesy copies of court pleadings
4. Newspaper articles
5. Courtesy copies of internal grievances

V. Investigation

Investigation Plan: The investigator shall prepare a written plan, which includes, but is not limited to the following:

- Names of the complainant(s) and respondent(s)
- Basis for complaint
- Issues, events or circumstances that caused the person to believe that he/she has been discriminated against
- Information needed to address the issue
- Criteria, sources necessary to obtain the information
- Identification of key people
- Estimated investigation time line
- Remedy sought by the complainant(s)

Conducting the Investigation:

- The investigation will address only those issues relevant to the allegations in the complaint.
- Confidentiality will be maintained as much as possible.
- Interviews will be conducted to obtain facts and evidence regarding the allegations in the complaint. The investigator will ask questions to elicit information about aspects of the case.
- A chronological contact sheet is maintained in the case file throughout the investigation.
- If a Title VI complaint is received on a MDOT related contract against the City of Albion, MDOT will be responsible for conducting the investigation of the complaint. Upon receipt of a Title VI complaint filed against the City of Albion, the complaint and any pertinent information should immediately be forwarded to the MDOT, Civil Rights Program Unit.

Investigation Reporting Process:

- Complaints made against a City of Albion sub-recipient should be investigated by the City following the internal complaint process.
- Within 60 days of receiving the complaint, the investigator prepares an investigative report and submits the report and supporting documentation to the office of Sheryl L. Mitchell for review.
- The Title VI Coordinator reviews the file and investigative report. Subsequent to the review, the Title VI Coordinator makes a determination of "probable cause" or "no probable cause" and prepares the decision letter.

Retaliation:

The laws enforced by this City prohibit retaliation or intimidation against anyone because that individual has either taken action or participated in action to secure rights protected by these laws. If you experience retaliation or intimidation separate from the discrimination alleged in this complaint please contact:

Sheryl L. Mitchell
 City of Albion
 112 West Cass Street
 Albion, MI 49224
 Phone: 517-629-7172
 Fax: 517-629-4168
 Email: smitchell@cityofalbionmi.gov

Reporting Requirements to an External Agency

A copy of the complaint, together with a copy of the investigation report and final decision letter will be forwarded to the MDOT, Civil Rights Program Unit within 60 days of the date the complaint was received.

Records

All records and investigative working files are maintained in a confidential area. Records are kept for three years.

APPENDIX A - [TO BE INSERTED IN ALL FEDERAL-AID CONTRACTS]

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees, as follows:

1. **Compliance with Regulations:** The contractor shall comply with Regulations relative to nondiscrimination in Federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
2. **Nondiscrimination:** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, sex, or national origin in the selection, retention, and treatment of subcontractors, including procurements of materials in the discrimination prohibited by Section 21.5 of the Regulation, including employment practices when the contractor covers a program set for in Appendix B of the Regulations.
3. **Solicitation for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under the contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor shall provide all information and reports required by the Regulations, or directives issues pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the State Highway Department or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the State Highway Department or the Federal Highway Administration, as appropriate, and shall set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event the contractor's noncompliance with the nondiscrimination provisions of this contract, the State Highway Department shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
 - a. Withholding payments to the contractor under the contract until the contractor complies and/or

b. Cancellation, termination or suspension of the contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor shall include provisions of paragraphs (1) through (6) in every subcontract, including procurement of material and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the State Highway Department or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the State Highway Department to enter into such litigation to protect the interests of the State, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

APPENDIX B - TRANSFER OF PROPERTY

The following clauses shall be included in any and all deeds effecting or recording the transfer of real property, structures or improvements thereon, or interest therein from the United States.

(GRANTING CLAUSE)

NOW THEREFORE, the Department of Transportation, as authorized by law, and upon the condition that the State of Michigan, will accept title to the lands and maintain the project constructed thereon, in accordance with Title 23, United States Code, the Regulations for the Administration of the Department of Transportation and, also in accordance with and in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter referred to as the Regulations) pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. 2000d to 2000d-4) does hereby remise, release, quitclaim and convey unto the State of Michigan all the right, title and interest of the Department of Transportation in and to said lands described Exhibit "A" attached hereto and made a part hereof.

(HABENDUM CLAUSE)*

TO HAVE AND TO HOLD said lands and interests therein unto the State of Michigan, and its successors forever, subject, however, the covenant, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and shall be binding on the State of Michigan, its successors and assigns.

The State of Michigan, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person shall on the grounds of race, color, national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part, on, over, or under such lands hereby conveyed (.) (and)*(2) that the State of Michigan shall use the lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended (.) and (3) that in the event of breach of any of the above-mentioned nondiscrimination conditions, the Department shall have a right to re-enter said lands and facilities on said land, and the above described land and facilities shall thereon revert to

and vest in and become the absolute property of the Department of Transportation and its assigns as such interest existed prior to this deed.

*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to effectuate the purpose of Title VI of the Civil Rights Act of 1964.

APPENDIX C - PERMITS, LEASES AND LICENSES

The following clauses shall be included in all deeds, licenses, leases, permits, or similar instruments entered into by the Michigan Department of Transportation, pursuant to the provisions of Assurance 7(a).

The grantee, licensee, lessee, permittee, etc., (as appropriate) for himself, his heirs, personal representative, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases, add, "as a covenant running with the land") that in the event facilities are constructed, maintained, or otherwise operated on the said property described in this (deed, license, lease, permit, etc.) for a purpose for which a Department of Transportation program or activity is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) shall remain and operate such facilities and services in compliance with all other requirements imposed pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

(Include in licenses, leases, permits, etc.)*

That in the event of breach of any of the above nondiscrimination covenants, the Michigan Department of Transportation shall have the right to terminate the license, lease, permit, etc., and to re-enter and repossess said land and the facilities thereon, and hold the same as if said license, lease, permit, etc., had never been made or issued.

(Include in deeds)*

That in the event of breach of any of the above nondiscrimination covenants, the Michigan Department of Transportation shall have the right to re-enter lands and facilities hereon, and the above described lands and facilities shall thereupon revert to and vest in and become the absolute property of the State of Michigan Department of Transportation and its assigns.

*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to effectuate the purpose of the Title VI of the Civil Rights Act of 1964 and the Civil Rights Act of 1987.

APPENDIX D - TITLE VI COMPLAINT FORM

CITY OF ALBION TITLE VI COMPLAINT FORM

Title VI of the Civil Rights Act of 1964 states that "No person in the United States shall on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefit of, or otherwise be subjected to discrimination in any program, service, or activity receiving federal assistance."

This form may be used to file a complaint with the City of Albion based on violations of Title VI of the Civil Rights Act of 1964. You are not required to use this form; a letter that provides the same information may be submitted to file your complaint. **Complaints should be filed within 180 days of the alleged discrimination. If you could not reasonably be expected to know the act was discriminatory within 180 day period, you have 60 days after you became aware to file your complaint.**

If you need assistance completing this form, please contact Sheryl L. Mitchell by phone at 517-629-7172 or via e-mail at smitchell@cityofalbionmi.gov.

Name: _____ Date: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ (home) _____ (work)

Individual(s) discriminated against, if different than above (use additional pages, if needed).

Name: _____ Date: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ (home) _____ (work)

Please explain your relationship with the individual(s) indicated above: _____

Name of agency and department or program that discriminated:

Agency or department name: _____

Name of individual (if known): _____

Address: _____

City: _____ State: _____ Zip: _____

Date(s) of alleged discrimination:

Date discrimination began _____ Last or most recent date _____

ALLEGED DISCRIMINATION:

If your complaint is in regard to discrimination in the delivery of services or discrimination that involved the treatment of you by others by the agency or department indicated above, please indicate below the basis on which you believe these discriminatory actions were taken.

____ Race

____ Disability

____ Sex

____ Color

____ Religion

____ Income

____ Age

____ National Origin

____ Retaliation

Explain: Please explain as clearly as possible what happened. Provide the name(s) of witness(es) and others involved in the alleged discrimination. (Attach additional sheets, if necessary, and provide a copy of written material pertaining to your case).

Signature: _____ Date: _____

Please return completed form to: Sheryl L. Mitchell, City Manager, 112 West Cass Street
Albion, MI 49224; Phone: 517-629-7172; Fax: 517-629-4168; Email:
smitchell@cityofalbionmi.gov.

Note: The City of Albion prohibits retaliation or intimidation against anyone because that individual has either taken action or participated in action to secure rights protected by policies of the City. Please inform the person listed above if you feel you were intimidated or experience perceived retaliation in relation to filing this complaint.

APPENDIX E - DETERMINE/DISTINGUISH SIGNIFICANT/NON-SIGNIFICANT EFFECTS

"Significant" requires considerations of both context and intensity:

(a) *Context*. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, nation), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the local area rather than in the world as a whole. Both short-and long-term effects are relevant.

(b) *Intensity*. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

- (1) Impacts that may be both beneficial and adverse. A significant effect may exist even if, on balance, the effect would be beneficial.

"Non-significant effect" means no substantial change to an environmental component and this has no material bearing on the decision-making process.

Scientific, technical, institutional, the public's value, and the local economic conditions influence the meaning of significant effect.

If an alternative would provide a beneficial effect, then the alternative would cause no significant adverse effect. If an alternative would provide an adverse effect, the effect might be significant or the effect might be non-significant.

Determinations of "significant" and "non-significant" effects will be made by the City Manager.

APPENDIX F - PROGRAM COMPLIANCE/PROGRAM REVIEW GOALS FOR CURRENT PLAN YEAR

1. The City of Albion's Title VI Plan will be communicated to each City Department Head who will review the plan with departmental employees. All City of Albion employees will be trained or made aware of the Title VI and LEP policies and complaint procedures.
2. The City of Albion's Title VI Plan will be published on the main page of the City's website <http://www.cityofalbionmi.gov/>, within 90 days of approval.
3. Appendix A will be included in all City contracts as outlined in the Title VI Plan.
4. The language in Number 2 of the City of Albion's Title VI Assurances will be included in all solicitations for bids for work or material subject to the Regulations and in all proposals for negotiated agreements.
5. The procedure(s) for responding to individuals with Limited English Proficiency will be implemented.
6. A review of City facilities will be conducted in reference to compliance with the American Disabilities Act.
7. The following data will be collected and reviewed by the Title VI Coordinator and included, where appropriate, in the annual report submitted to MDOT.
 - a. **Boards and Commissions:** The number of vacancies; how vacancies are advertised and filled; the number of applicants; the representation of minorities will be evaluated.
 - b. **Public Meetings:** The number of open meetings; how meeting dates and times are communicated to the general public and to individuals directly affected by the meeting.
 - c. **Construction Projects:** The number of construction projects and minority contractors bidding and the number selected; verification that Title VI language was included in bids and contracts for each project.
 - d. **LEP Needs:** The number of requests for language assistance that were requested or required; the outcome of these requests.
 - e. **Complaints:** The number of Title VI complaints received; nature of the complaints; resolution of the complaints.
 - f. **Timeliness of Services:** The number of requests for services; amount of time from request to when service was delivered; number of requests denied.
 - g. **Right of Way/Eminent Domain:** The number of such actions and diversity of individual(s) affected.
 - h. **Program Participants:** Racial data of program participants where possible.

¹ The executive order verbatim can be found online at <http://www.usdoj.gov/crt/cor/Pubs/colep.htm>.

² Policy Guidance Concerning Recipients' Responsibilities to Limited English Proficient (LEP) Persons. Federal Register: December 14, 2005 (Volume 70, Number 239)

³ The DOT has also posted an abbreviated version of this guidance on their website at <http://www.dotcr.ost.dot.gov/asp/lep.asp>.

⁴ <http://www.dotcr.ost.dot.gov/asp/lep.asp>

⁵ Department of Justice Final LEP Guidelines, Federal Register June 18, 2002-Vol. 67-Number 117.

From: Laura Kaiser
To: [Camille Lipke](#)
Subject: Re: FOIA
Date: Friday, September 7, 2018 2:51:46 PM

Hello Camille,

You can find information regarding our Non-Discrimination Ordinance and Human Rights Commission on our website at www.city-chelsea.org. Click on 'Ordinances' then search for 'Civil Rights'. The link is below:

https://library.municode.com/mi/chelsea/codes/code_of_ordinances?nodeId=COOR_CH33CIRI_ARTINSC_S33-8HURICOREAPTECO

We do not have any reports indicating how many complaints were received or how much it cost to process / investigate.

Best regards,
Laura

Laura Kaiser
City Clerk
City of Chelsea
305 S. Main St.
Chelsea, MI 48118
734.475.1771 x206
734.475.1811 fax

From: Camille Lipke <payroll@Cadillac-MI.net>
Sent: Friday, September 7, 2018 2:05:49 PM
To: Laura Kaiser
Subject: FOIA

FOIA

Thank you.

Camille Lipke
City of Cadillac
231.779.7337 (Direct)
www.cadillac-mi.net

Chapter 33 - CIVIL RIGHTS

ARTICLE I. - NON-DISCRIMINATION

Sec. 33-1. - Intent.

It is the intent of the city that no individual shall be denied equal protection of the laws; nor shall any individual be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived age, color, disability, familial status, gender expression, gender identity, genetic information, height, disability status, marital status, national origin, race, religion, sex, sexual orientation, source of income, veteran status, or weight.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-2. - Definitions.

As used in this chapter, the following words and phrases have the following meanings:

Age. Chronological age.

Bona fide occupational qualification. An otherwise protected characteristic which is reasonably necessary to the normal performance of the particular position in a particular business or enterprise.

Contractor. Any person having a contract with the city.

Disability.

(1) Under this chapter, the term "disability" means, with respect to an individual:

- a. A physical or mental impairment that substantially limits one or more major life activities of such individual;
- b. A record of such an impairment; or
- c. Being regarded as having such an impairment. An individual meets the requirement of "being regarded as having an impairment" if the individual establishes that he or she has been subjected to an action prohibited under this chapter because of an actual or perceived physical or mental impairment whether or not the impairment limits or is perceived to limit a major life activity.

(2) For purposes of subsection (1)a of this definition, major life activities include, but are not limited to, caring for oneself, performing manual tasks, seeing, hearing, eating, sleeping, walking, standing, lifting, bending, speaking, breathing, reading, concentrating, thinking, communicating, and working. Major life activities also includes the operation of a major bodily function, including, but not limited to, functions of the immune system, normal cell growth, digestive, bowel, bladder, neurological, brain, respiratory, circulatory, endocrine, and reproductive functions.

Disability does not include a determinable physical or mental characteristic caused by the current illegal use of a controlled substance by that individual. It also does not include a determinable physical or mental characteristic caused by the current use of alcoholic liquor by that individual, if that physical or mental characteristic negatively impacts that individual's ability to perform the duties of his or her job.

Discriminate. To make a decision, offer to make a decision or refrain from making a decision based in whole or in part on an individual's or his or her relatives' or associates' actual or perceived age, color, disability, familial status, gender expression, gender identity, genetic information, height, marital status, national origin, race, religion, sex, sexual orientation, source of income, veteran status, or weight.

Discrimination also includes harassment based upon any protected class, including, but not limited to sexual harassment.

Familial status. This term shall mean "traditional family" or "functional family" as defined below:

Traditional family. An individual or group of two or more persons related by blood, marriage, or adoption, together with foster children, who are domiciled together as a single domestic unit, including one or more children under the age of 18 residing with a parent or other individual having, or in the process of securing, legal custody of the child or children; or one or more children under the age of 18 residing with the designee of the parent or other individual having or securing custody, with the written permission of the parent or other individual.

Functional family. A collective number of individuals domiciled together in one dwelling whose relationship is of a permanent and distinct domestic character, with a demonstrable and recognizable bond characteristic of a cohesive unit, and who are in fact living as a single non-profit housekeeping unit.

A functional family shall not include any group of individuals whose association is essentially for convenience or economics or for the limited duration of their education, training, or similar determinate period of time.

Gender expression. A gender-based appearance, expression or behavior of an individual, regardless of the individual's assigned sex at birth.

Gender identity. An individual's internal sense of their own sex and a defining component of sex.

Genetic information. Information about an individual's genetic tests and the genetic tests of an individual's family members (e.g., family medical history), and the manifestation of a disease or disorder in family members of such individual. A genetic test is an analysis of DNA, RNA, chromosomes, proteins, or metabolites that detects genotypes, mutations or chromosomal changes.

Housing facility. Any dwelling unit or facility in which it is intended individuals regularly will sleep and keep personal belongings including, but not limited to, a house, apartment, rooming house, housing cooperative, homeless shelter, hotel, motel, tourist home, retirement home or nursing home.

Individual. A human being, as distinguished from a person.

Marital status. The state of being married, unmarried, divorced or widowed.

Perceived. Refers to the perception of the person who acts and not to the perception of the individual for or against whom the action is taken.

Person. Any individual, co-partnership, corporation, association, club, joint venture, estate, trust, and any other group or combination acting as a unit, and the individuals constituting such group or unit.

Place of public accommodation. An educational, governmental, health, day care, entertainment, cultural, recreational, refreshment, transportation, financial institution, accommodation, business or other facility of any kind, whose goods, services, facilities, privileges, advantages or accommodations are extended, offered, sold or otherwise made available to the public, or which receives financial support through the solicitation of the general public or through governmental subsidy of any kind.

Religious organization. Any entity or institution organized and operated exclusively to provide a place of worship, including any property or facility owned or operated by a church, synagogue, mosque, temple, or other place of worship.

Sex. Includes, but is not limited to, an individual's gender, gender identity, gender expression, pregnancy, childbirth, and medical conditions related to pregnancy or childbirth. An individual's sex shall be defined by that individual's gender identity; and use and/or occupancy of, access to and/or participation in sex-segregated facilities and/or entities shall be granted on that basis.

Sexual orientation. Emotional, romantic, and/or sexual attractions, or the absence thereof, to people. Sexual orientation also refers to a person's sense of identity based on those attractions, related behaviors, and membership in a community of others who share those attractions.

Sex-segregated facility or entity. Certain premises or organizations that allow for entry and/or participation of only one sex. Examples include, but are not limited to housing, public accommodations, lavatories, locker rooms, instructional programs, and athletic teams.

Source of income. Any legal source from which a person obtains money.

Veteran status. Having served in any unit of the United States Armed Forces or their reserve components, including the National Guard and the Coast Guard.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-3. - Discriminatory housing practices.

- (a) No person shall discriminate in leasing, selling or otherwise making available any housing facilities.
- (b) No person shall discriminate in the terms, conditions, maintenance or repair in providing any housing facility.
- (c) No person shall refuse to lend money for the purchase or repair of any real property or insure any real property solely because of the location in the city of such real property.
- (d) No person shall promote real estate transactions by representing that changes are occurring or will occur in an area with respect to any protected classification.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-4. - Discriminatory public accommodation practices.

- (a) No person shall discriminate in making available full and equal access to all goods, services, activities, privileges and accommodations of any place of public accommodation.
- (b) No person shall prohibit a breast-feeding mother from or segregate a breast-feeding mother within any public accommodation where she and the child would otherwise be authorized to be.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-5. - Other prohibited practices.

- (a) No agent, broker, labor union, employment agency or any other intermediary shall discriminate in making referrals, listings or providing information with regard to housing, employment or public accommodations. A report of the conviction of any such person for a violation of this chapter shall be made to the applicable licensing or regulatory agency for such person or business.
- (b) No person shall coerce, threaten or retaliate against an individual for making a complaint or assisting in the investigation regarding a violation or alleged violation of this chapter, nor require, conspire with, assist or coerce another person to retaliate against an individual for making a complaint or assisting in an investigation.
- (c) No person shall conspire with, assist or coerce another person to discriminate in any manner prohibited by this chapter.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-6. - Nondiscrimination by city contractors.

- (a) All contractors proposing to do business with the city shall satisfy the contract compliance administrative policy adopted by the city in accordance with the guidelines of this section.
- (b) All contractors shall agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of any applicable protected classification.
- (c) All city contracts shall provide further that breach of the obligation not to discriminate shall be a material breach of the contract for which the city shall be entitled, at its option, to do any or all of the following:
 - (1) Cancel, terminate, or suspend the contract in whole or part and/or refuse to make any required periodic payments under the contract;
 - (2) Declare the contractor ineligible for the award of any future contracts with the city for a specified length of time;
 - (3) In addition, the contractor shall be liable for any and all expenses incurred by the city in obtaining from other sources the work and services to be rendered or performed and/or the goods or properties to be furnished or delivered to the city under this contract.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-7. - Exceptions.

Notwithstanding anything contained in this chapter, the following practices shall not be violations of this chapter.

- (1) For a religious organization or institution to restrict any of its facilities of housing or accommodations which are operated as a direct part of religious activities to individuals of the denomination involved or to restrict employment opportunities for officers, religious instructors and clergy to individuals of that denomination.
- (2) For the owner of an owner-occupied one-family or two-family dwelling, or a housing facility or public accommodation facility, respectively, devoted entirely to the housing and accommodation of individuals of one sex, to restrict occupancy and use on the basis of sex.
- (3) To limit occupancy in a housing project or to provide public accommodations or employment privileges or assistance to individuals who are of low income, over 55 years of age or disabled, in circumstances in which such limitations are appropriately designated.
- (4) To discriminate based on an individual's age when such discrimination is required by state, federal or local law.
- (5) To refuse to enter a contract with an un-emancipated minor.
- (6) To refuse to admit to a place of public accommodation serving alcoholic beverages an individual under the legal age for purchasing alcoholic beverages.
- (7) To refuse to admit individuals under 18 years of age to a business providing entertainment or selling literature which the operator of said business deems unsuitable for minors.
- (8) For an educational institution to limit the use of its facilities to those affiliated with such institution.
- (9) To provide discounts on products or service to students, minors and senior citizens.
- (10) To discriminate in any arrangement for the sharing of a dwelling unit by an individual who is sharing the unit.
- (11) To restrict use of lavatories and locker room facilities on the basis of sex.

- (12) For a governmental institution to restrict any of its facilities or to restrict employment opportunities based on duly adopted institutional policies that conform to federal and state laws and regulations.
- (13) To restrict participation in an instructional program, athletic event or on an athletic team on the basis of age, weight or sex.
- (14) To restrict employment on the basis of a bona fide occupational qualification.
- (15) Nothing herein contained shall be construed to prohibit any affirmative action laws passed by any level of government.
- (16) Preferential treatment of, or benefits conferred on any of the classes protected from discrimination under this chapter are permissible to the extent allowed by law.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-8. - Human rights commission—Created; appointment; term; compensation.

- (a) There is hereby created a human rights commission. It shall be composed of five members approved by city council, and shall be responsible directly to the mayor and city council. Prospective members shall apply for consideration for appointment pursuant to a city administrative policy to be adopted by the city and amended from time to time. The commission shall select one of its members as chairperson. Members shall serve staggered three-year terms. The term as chairperson shall be for one year with no limit on the number of times a member may be reappointed as chairperson. Members, including the chairperson, shall serve without compensation.
- (b) Duties. The commission shall:
 - (1) Make periodic public reports and recommendations to the city council and city manager on ways to improve city government programs and ordinances designed to eliminate discrimination or to remove the effects of past discrimination;
 - (2) Study complaints filed with the commission, and make reports to city council and city manager regarding complaints from any class or group protected under the human rights ordinance;
 - (3) Research and formulate programs of community education with the objective of discouraging and eliminating racial tensions, and prejudice or discrimination against any groups of persons;
 - (4) Communicate with federal and state agencies regarding their human rights and affirmative action programs for the purpose of making recommendations to city council on more effective coordination of federal, state and city programs.
 - (5) The commission shall not address itself to questions of whether specific instances of discrimination have occurred, but, rather, shall address itself to needed changes in city procedures and programs.
- (c) The commission shall establish and submit for city council approval rules for the conduct of its meetings, and research.
- (d) The commission shall not have any inherent authority to take any unilateral action relative to its research or recommendations, nor may it carry out any programs or other plan it may formulate without being expressly authorized by a majority vote of the city council, and may then only act within the scope of the authorization granted by council.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-9. - Complaint procedure.

- (a) If any individual has a complaint alleging a violation of this chapter, he/she has 180 calendar days from the date of the individual's knowledge of the allegedly discriminatory action or 180 calendar days from the date when the individual should have known of the alleged discriminatory action to file a complaint with the city's human rights commission. If an individual fails to file a complaint alleging a violation of this chapter within the specified time frame, the complaint will not be considered by the human rights commission.
- (b) The complaint should be made in writing to the human rights commission. The complaint may be filed in person, by e-mail, or by mail. The complaint must contain information about the alleged discrimination, such as name, address, phone number of the complainant and location, date and description of the alleged violation of this chapter.
- (c) Upon receipt, the human rights commission will review the complaint and immediately forward a copy to the city attorney who will investigate the allegations made therein, and prosecute the claim if warranted. The human rights commission shall:
 - (1) Review the complaint;
 - (2) Provide a copy of the complaint to the city manager's designee who shall distribute copies to city council forthwith for informational purposes, only;
 - (3) Provide a copy of the complaint to the city attorney for investigation and prosecution, if warranted.
- (d) With respect to complaints filed by current city employees, the human rights commission will refer such employees to any applicable processes contained in collective bargaining agreements and/or the city human resources policies and procedures. If a current employee has exhausted any such processes, he/she may file a complaint with the human rights commission in accordance with subparagraphs (a) through (c) of this section.
- (e) The human rights commission will take action on the complaint within 90 days of receipt of the complaint. If additional time is necessary, the human rights commission will notify the complainant of the need for additional time.
- (f) All communications with the complainant regarding actions taken or additional time necessary will be in writing, with a copy to the city attorney. The city attorney will notify the human rights commission in writing of actions taken by the city attorney's office on complaints referred to that office by the human rights commission.
- (g) All complaints received by the human rights commission and responses from the human rights commission will be retained by the city for at least three years.
- (h) The human rights commission will provide an annual report to city council regarding the complaints received and actions taken.
- (i) No individual shall provide false information to any authorized individual investigating a complaint regarding a violation of this chapter.
- (j) For an investigation, the city attorney may request a person to produce books, papers, records or other documents which may be relevant to a violation or alleged violation of this chapter. If said person does not comply with such request, the city attorney may apply to the county circuit court for an order requiring production of said materials.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-10. - Conciliation agreements.

In cases involving alleged violations of this chapter, the city attorney may enter into agreements whereby persons agree to methods of terminating discrimination or to reverse the effects of past discrimination. Such agreements may be reviewed by the human rights commission. Violations of such agreements shall be violations of this chapter.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-11. - Injunctions.

The city attorney may commence a civil action to obtain injunctive relief to prevent discrimination prohibited by this chapter, to reverse the effects of such discrimination or to enforce a conciliation agreement.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-12. - Prosecution.

Prosecution for violation of this chapter may be initiated by the city attorney on behalf of the affected individual on the basis of an investigation initiated by a complaint to the human rights commission.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-13. - Penalties.

- (a) A violation of any provision of this chapter is a civil infraction punishable by a fine of not more than \$500.00 for each day upon which a violation occurs, plus all costs of the action. The court may issue and enforce any judgment, writ, or order necessary to enforce this chapter. This may include reinstatement, payment of lost wages, hiring and promotion, sale, exchange, lease or sublease of real property, admission to a place of public accommodation, and other relief deemed appropriate.
- (b) A violation proved to exist on a particular day shall be presumed to exist on each subsequent day unless it is proved that the violation no longer exists.
- (c) Nothing contained in this chapter shall be construed to limit in any way the remedies, legal or equitable, which are available to the city or any other person for the prevention or correction of discrimination.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-14. - Private actions for damages or injunctive relief.

- (a) To the extent allowed by law, an individual who is the victim of discriminatory action in violation of this chapter may bring a civil action for appropriate injunctive relief or damages or both against the person(s) who acted in violation of this chapter.
- (b) As used in subsection, "damages" means damages for injury or loss caused by each violation of this chapter, including reasonable attorney fees.
- (c) Private actions and remedies under this section shall be in addition to any actions for violations which the city may take.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-15. - Exemptions.

Any educational institution (and/or employee or agent of such institution) that receives or is otherwise eligible to receive federal and/or state funds, and is thus subject to applicable federal and/or state non-discrimination laws and regulations, is exempt from prosecution hereunder only to the extent that an

alleged violation occurs in connection with an official academic, extracurricular, or other education program or activity.

(Ord. No. [175](#), 1-19-2016)

Sec. 33-16. - Interpretation.

- (a) This non-discrimination chapter shall not be read to prohibit or interfere with a person's, or religious institutions', free exercise of religion as protected by the first amendment to the United States Constitution, and article 1, section 4, of the Michigan Constitution.
- (b) This non-discrimination ordinance shall not modify any state statute addressing criminal sexual conduct, stalking, harassment, infliction of emotional distress, or any similar or corresponding law of the state.

(Ord. No. [175](#), 1-19-2016)

From: Jennifer Shuster
To: [Camille Lipke](#)
Cc: [Kathryn Gardner](#)
Subject: RE: FOIA Request #2018-114 - City of Cadillac
Date: Tuesday, September 11, 2018 2:36:14 PM
Attachments: [Complaint Log.docx](#)
[final complaint procedure 2013.doc](#)
[18-114 Lipke Granted.pdf](#)

Camille,

Good afternoon!

In addition to the website information, below, please find a letter, attached, granting your FOIA request with applicable information.

Please note that a document of costs of complaints does not exist, as we have no such document and complaints are infrequent. Our HR Director, Shelli Neumann, would be happy to speak with the City Manager personally. Her email address is sneuman@cityofeastlansing.com.

Please feel free to contact me if I may be of additional assistance.

Jennifer Shuster, CERA

City Clerk
City of East Lansing

East Lansing e-news is just a click away. Sign up to receive East Lansing's Dialog e-newsletter and other e-publications. Just visit <http://www.cityofeastlansing.com/news> today!

>>> Camille Lipke <payroll@Cadillac-MI.net> 9/10/2018 4:06 PM >>>

Thank you.

Camille Lipke
City of Cadillac
231.779.7337 (Direct)
www.cadillac-mi.net

From: Jennifer Shuster [<mailto:jshuster@cityofeastlansing.com>]
Sent: Monday, September 10, 2018 9:31 AM
To: Camille Lipke
Cc: Kathryn Gardner
Subject: FOIA Request #2018-114 - City of Cadillac

Camille,

Good morning!

We have received your FOIA request and information for the first two bullet point requests can be found on the City of East Lansing website:

[https://library.municode.com/mi/east_lansing/codes/code_of_ordinances?](https://library.municode.com/mi/east_lansing/codes/code_of_ordinances?nodeId=PTIIICOR_CH26OF_ARTVINU_DIV5SMDITOPR_SDIINGE_S26-409NO)

[nodeId=PTIIICOR_CH26OF_ARTVINU_DIV5SMDITOPR_SDIINGE_S26-409NO](https://library.municode.com/mi/east_lansing/codes/code_of_ordinances?nodeId=PTIIICOR_CH26OF_ARTVINU_DIV5SMDITOPR_SDIINGE_S26-409NO)

<https://www.cityofeastlansing.com/DocumentCenter/View/641/Title-VI-Non-Discrimination-Plan-PDF?bidId=>

I have sent the FOIA request to the proper department to see if we have information to respond to the last two bullet points in your request.

Please feel free to contact me if I may be of additional assistance.

Jennifer Shuster, CERA

City Clerk

City of East Lansing

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>>> Camille Lipke <payroll@Cadillac-MI.net> 9/7/2018 2:20 PM >>>

FOIA

Thank you.

Camille Lipke

City of Cadillac

231.779.7337 (Direct)

www.cadillac-mi.net



September 11, 2018

SENT VIA E-MAIL

Camille Lipke - City of Cadillac

Re: Freedom of Information Act Request (18-114)
Granted

Dear Ms. Lipke:

On September 10, 2018, the City of East Lansing received your Freedom of Information Act request as follows:

"The City of Cadillac City Council has been considering the establishment of a new non-discrimination ordinance, and on their behalf, I am requesting the following:

- *Copy of your community's Code specific to this issue*
- *Copy of your community's administrative procedure/policy for how complaints are processed within the operation of the organization (i.e., who do complaints go to, and how are they processed)*
- *Copy of any reports (last 3-years) indicating how many complaints were received*
- *Copy of any reports (last 3-years) indicating how much it cost to process and/or investigate complaints"*

The City has identified records that respond to this request and they are attached. There is no charge for these records.

If you have any questions, you may contact me at (517) 319-6914.

Sincerely,

Jennifer Shuster

Jennifer Shuster
City Clerk

CITY OF EAST LANSING: HUMAN RIGHTS COMMISSION COMPLAINT LOG

Date of Complaint	Protected Class	Area of Discrimination	Complaint Status
September 2013	Race	Public Accommodation	Closed; mediated agreement
July 2012	Disability	Housing	Closed; inactive
December 2011	Race	Housing	Closed; not accepted; no violation of ordinance
November 2008	Disability	Housing	Closed; mediated agreement

City of East Lansing
Human Relations Commission

Complaint Procedure

1. A sworn, written statement alleging unlawful discrimination may be filed at anytime within 180 days of the event(s) or circumstance(s) giving rise to the complaint. The staff liaison will provide the complainant with a copy of the Complaint procedure and provide information about the process. The staff liaison to the Commission may assist in the recording of the complaint, but cannot provide legal advice. All complaints must be sworn and notarized. A complaint should include the name and address of the individual, business, or entity alleged to have violated the Ordinance and the nature and date of the alleged violation.
2. At the next Commission meeting, wherein a quorum is present, the Commission will review the Complaint and decide whether to hear the complaint or dismiss the complaint for failure to state a violation of the Human Relations Ordinance. If insufficient information is provided to make the determination by the Complainant, the Complaint will be dismissed.
3. The Complainant may file a written request for reconsideration with the staff liaison to the Commission within 14 days of receipt of notice of the Commission's decision to dismiss the Complaint. The request should provide additional information and/or evidence to show a violation of the Ordinance occurred.
4. If the Complaint is heard, the Complaint will be sent to the Respondent. The Commission may appoint a sub-committee, a designee, or decide to process the complaint itself.
5. The Respondent will have 21 days from the receipt of the Complaint to respond in writing to the Commission, if the Respondent so chooses.
6. Any response received by the Commission will be sent to the Complainant.
7. If the Complaint is heard, the Commission, Subcommittee, or Designee will review any response from the Respondent and may choose to do any or all of the following: (I) appoint an investigator, (II) attempt to resolve the dispute through meeting or mediation, or (III) proceed to a formal hearing. Prior to proceeding to a formal hearing, the Commission shall attempt to resolve the dispute through mediation.
8. A Complainant may withdraw his or her complaint at any time.
9. If mediation is attempted, no information disclosed during mediation shall be used during a subsequent investigation or formal hearing unless offered by the parties.
10. If a formal hearing is held, it will be held pursuant to Section 22-38 of the City's Ordinances. Such a hearing will be open to the public and held after notice given to all parties. After the hearing, the Commission will issue a written decision, which may be appealed to the Ingham County Circuit Court within 21 days of receipt of the written decision.

Enacted October 1, 2008

Updated March 2013

From: [Marcus Peccia](#)
To: [Camille Lipke](#)
Subject: FW: FOIA Request
Date: Tuesday, September 11, 2018 5:01:42 PM
Attachments: [#901 Anti-Discrimination ordinance.docx](#)

3 of 6

Marcus A. Peccia, City Manager
City of Cadillac
200 N. Lake Street
Cadillac, MI 49601
(231) 779-7344
Mobile (231) 884-3202
citymanager@cadillac-mi.net
<http://www.facebook.com/cityofcadillac>

From: Jane Cartwright [mailto:JCartwright@cityofhowell.org]
Sent: Tuesday, September 11, 2018 12:56 PM
To: Marcus Peccia
Subject: FOIA Request

Marcus,

Your freedom of information request received September 7, 2018 for the Anti Discrimination Ordinance is hereby granted; the file is attached. There are no administrative procedures other than what is contained in the ordinance and the City has not received any complaints. I believe this fulfills your request.

To view a complete copy of the City of Howell's FOIA Procedures & Guidelines along with the written public summary, please visit our website at http://www.cityofhowell.org/how_do_i/city_forms_and_policies/index.php#revize_document_center_rz339

Jane Cartwright, MMC, SHRM-CP
Howell City Clerk/HR
611 E. Grand River
Howell MI 48843
517-546-3502
Fax 517-546-6030
eFax 517-338-9070
jcartwright@cityofhowell.org

ORDINANCE NO. 901

An Ordinance to prohibit certain discriminatory practices to the Howell City Code.

THE CITY OF HOWELL ORDAINS:

Section 1. This Anti-Discrimination Ordinance is hereby added as follows:

Section 2.

100.01 Intent, Purpose and Construction.

As used in this act:

- (a) It is the intent of the City of Howell that no person be denied the equal protection of the laws; nor shall any person be denied the enjoyment of his or her civil rights or be discriminated against because of his or her actual or perceived race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability, family status, sexual orientation, or gender identity.
- (b) The prohibitions against discrimination as provided for in this chapter shall not be deemed preempted by federal or state law, but are intended to supplement state and federal civil rights law prohibiting discrimination in the areas of employment, public accommodations, and housing. Provided, however, this chapter shall be construed and applied in a manner consistent with First Amendment jurisprudence regarding the freedom of speech and exercise of religion.
- (c) Nothing in this chapter shall require preferential treatment of any person or group on the basis of sexual orientation or gender identity.

100.02 Definitions.

As used in this chapter, the following words and phrases have the following meanings:

- (a) “Affected Person” means a person who has filed a complaint pursuant to below section 100.10(a) AND who the City Manager, or his or her designee, has entered into a Conciliation Agreement pursuant to below 100.11 as a result of the affected person’s complaint.
- (b) “Age” means chronological age.
- (c) “City Manager” means the City Manager of the City of Howell.

- (d) “Contractor” means a person who by contract furnishes services, materials or supplies. “Contractor” does not include persons who are merely creditors or debtors of the City.
- (e) “Discriminate” means to make a decision, offer to make a decision or refrain from making a decision based in whole or in part on the actual or perceived race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability, family status, sexual orientation, or gender identity of another person.
 - (1) Discrimination based on sex includes sexual harassment, which means unwelcome sexual advances, request for sexual favors, and other verbal or physical conduct or communication of a sexual nature when:
 - (i) Submission to such conduct or communication is made a term or condition, either explicitly or implicitly, to obtain employment, public accommodations, or housing.
 - (ii) Submission to or rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual’s employment, public accommodations or housing.
 - (iii) Such conduct or communication has the purpose or effect of substantially interfering with individual’s employment, public accommodations or housing, or creating an intimidating hostile, or offensive employment, public accommodations, or housing environment.
 - (2) Discrimination based on actual or perceived physical or mental limitation includes discrimination because of the use by an individual of adaptive devices or aids.
- (f) “Employer” means any person employing one or more persons.
- (g) “Employment Agency” means a person who undertakes to procure employees for an employer or procures opportunities for individuals to be employed by an employer.
- (h) “Family Status” means the state of being in a family.
- (i) “Family” includes either of the following:
 - (1) An individual who is pregnant; or
 - (2) Two or more individuals related by blood within three degrees of consanguinity, marriage, adoption, in a foster care relationship or legal custody relationship.

- (j) “Gender Identity” means a person’s actual or perceived gender, including a person’s self-image, appearance, expression, or behavior, whether or not that self-image, appearance, expression, or behavior is different from that traditionally associated with the person’s biological sex as assigned at birth as being either female or male.
- (k) “Housing Facility” means any dwelling unit or facility used or intended or designed to be used as the home, domicile or residence of one or more persons, including, but not limited to, a house, apartment, rooming house, housing cooperative, hotel, motel, tourist home, retirement home or nursing home.
- (l) “Labor Organization” means an organization of any kind or structure in which employees participate or are members and which exist for the purpose, in whole or part, of dealing with employers concerning the terms and conditions of employment of its participants or members, whether or not such organization is subordinate to or affiliated with a national or international labor organization.
- (m) “Marital Status” means the state of being married, never married, divorced, or widowed.
- (n) “Perceived” refers to the perception of the person who acts, and not to the perception of the person for or against whom the action is taken.
- (o) “Person” includes an individual, association, partnership, agency, organization, or corporation, public or private, including all employees thereof as well as any natural person. The term, when applied to partnerships, associations, and corporations, includes members and officers.
- (p) “Physical or Mental Disability” means a determinable physical or mental characteristic resulting from disease, injury, congenital condition of birth, or functional disorder and is unrelated to one’s ability to safely perform the work involved in jobs or positions available to such person for hire or promotion; or unrelated to one’s ability to acquire, rent and maintain property; or unrelated to one’s ability to utilize and benefit from the goods, services, activities, privileges and accommodations of a place of public accommodation. “Physical or mental disability” does not include any condition caused by the current illegal use of a controlled substance or the use of alcoholic liquor by an individual.
- (q) “Place of Public Accommodation” means an educational, governmental, health, entertainment, cultural, recreational, refreshment, transportation, financial institution, business or facility of any kind, whose goods, services, facilities, privileges, advantages or accommodations are extended, offered, sold, or otherwise made available to the public.
- (r) “Religious Organization” means an organization, church, group, or body of communicants that is organized not for pecuniary profit that regularly gathers for worship and religious purposed, and includes a religious-based private school that is not organized for pecuniary profit.

- (s) “Sexual Orientation” means male or female homosexuality, heterosexuality or bisexuality, whether by orientation or practice. Sexual orientation does not include the physical or sexual attraction to a minor by an adult.

100.03 Discriminatory Housing Practices.

Except as otherwise provided in this chapter:

- (a) No person shall discriminate in leasing, selling or otherwise making available any housing facilities.
- (b) No person shall discriminate in the terms, conditions, maintenance or repair in providing any housing facility.
- (c) No person shall refuse to lend money for the purchase or repair of any real property or insure any real property solely because of the location in the City of such real property.
- (d) No person shall promote real estate transactions by representing that changes are occurring or will occur in an area with respect to race, religion or national origin.
- (e) No person shall place a sign or other display on any real property which indicates that the property is for sale or has been sold when it is not for sale or has not recently been sold.

100.04 Discriminatory Public Accommodation Practices.

- (a) Except as otherwise provided in this chapter, no person shall discriminate in making available full and equal access to all goods, services, activities, privileges, and accommodations of any place of public accommodation.
- (b) Nothing in this chapter permits or requires access to any place of public accommodation for the purpose or intent of engaging in criminal conduct.
- (c) Nothing in this chapter shall require the construction or provision of unisex, single-user restrooms, changing rooms, locker rooms or shower facilities.

100.05 Discriminatory Employment Practices.

Except as otherwise provided in this chapter:

- (a) No employer shall discriminate in the employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any person.

- (b) No labor organization shall discriminate in limiting membership, conditions of membership, or termination of membership of any person in any labor union or apprenticeship program.
- (c) No employment agency shall discriminate in the procurement or recruitment of any person for possible employment with an employer.

100.06 Other Prohibited Practices.

- (a) No person shall adopt, enforce or employ any policy or requirement, or publish, post or broadcast any advertisement, sign or notice which discriminates or indicates discrimination in providing housing, employment or public accommodations.
- (b) No person shall discriminate in the publication or distribution of advertising material, information or solicitation regarding housing, employment or public accommodations.
- (c) No agent, broker, labor organization, employment agency or any other intermediary shall discriminate in making referrals, listings or providing information with regard to housing, employment or public accommodations. A report of the conviction of any such person for a violation of this chapter shall be made to the applicable licensing or regulatory agency for such person or business.
- (d) No person shall coerce, threaten or retaliate against a person for making a complaint or assisting in the investigation regarding a violation or alleged violation of this chapter, nor require, request, conspire with, assist or coerce another person to retaliate against a person for making a complaint or assisting in an investigation.
- (e) No person shall conspire with, assist, coerce or request another person to discriminate in any manner prohibited by this chapter.

100.07 Nondiscrimination by City Contractors.

- (a) All contractors proposing to do business with the City of Howell shall satisfy the nondiscrimination administrative policy adopted by the City Manager in accordance with the guidelines of this section. All contractors shall receive approval from the City Manager prior to entering into a contract with the City, unless specifically exempted by administrative policy.
- (b) A contractor shall, as a condition of being deemed a responsible bidder, at the time of its submission to the City in responding to an invitation for bids or request for proposals, certify in writing that it is in compliance with the provisions of this chapter.
- (c) All City contracts shall provide further that breach of the obligations not to discriminate

shall be a material breach of the contract.

- (d) In addition, the contractor shall be liable for any costs or expenses incurred by the City in obtaining from other sources the work and services to be rendered or performed or the goods or properties to be furnished or delivered to the City under the contract.

100.08 Discriminatory Effects.

No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived race, color, religion, national origin, sex, age height, weight, family status, sexual orientation, marital status, physical or mental disability, or gender identity for a person to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a bona fide business necessity does not arise due to a mere inconvenience or because of suspected or actual objection to such a person by neighbors, customers, or other persons but shall require a demonstration that the policy or requirement is reasonably necessary to the normal operation of the person's business.

100.09 Exceptions.

Notwithstanding anything contained in this chapter, the following practices shall not be violations of this chapter:

- (a) For a religious organization to restrict the occupancy of any of its housing facilities or accommodations which are operated as a direct part of religious activities to persons of the denomination involved or to restrict employment opportunities for officers, religious instructors and clergy to persons of that denomination. It is also permissible for a religious organization to restrict employment opportunities, educational facilities, housing facilities, and homeless shelters or dormitories that are operated as a direct part of its religious activities to persons who are members of or who conform to the moral tenets of that religious organization.
- (b) For the owner of an owner-occupied, one-family or two-family dwelling, or a housing facility or public accommodation facility, respectively, devoted entirely to the housing and accommodation of individuals of one sex, to restrict occupancy and use on the basis of sex.
- (c) To limit occupancy in a housing project or to provide public accommodations or employment privileges or assistance to persons of low income, persons over 55 years of age or disabled persons.
- (d) To engage in a bona fide effort to establish an affirmative action program to improve opportunities in employment for minorities and women consistent with applicable state and federal law.
- (e) To discriminate based on a person's age when such discrimination is required by state,

federal or local law.

- (f) To refuse to enter into a contract with an unemancipated minor.
- (g) To refuse to admit to a place of public accommodation serving alcoholic beverages a person under the legal age for purchasing alcoholic beverages.
- (h) To refuse to admit to a place less than 18 years of age to a business providing entertainment or selling literature which the operator of said business deems unsuitable for minors.
- (i) For an educational institution to limit the use of its facilities to those affiliated with such institution.
- (j) To provide discounts on products or service to students, or on the basis of age.
- (k) To discriminate in any arrangement for the shared ownership, lease or residency of a dwelling unit.
- (l) For a governmental institution to restrict any of its facilities or to restrict employment opportunities based on duly adopted institutional policies that conform to federal and state laws and regulations.
- (m) To restrict participation in an instructional program, athletic event or on an athletic team on the basis of age, sex, height, or weight.
- (n) To restrict membership in a private club that is not open to the public except to the extent that private clubs which permit members to invite guest on the premises are not exempted as it concerns a member's guest.
- (o) To the employment of an individual by one's family.
- (p) To the use of marital status or family status limitations in a health or pension plan if such limitations conform to federal and state laws and regulations.
- (q) To the rental of housing facilities in a building which contains dwelling units for not more than two families living independently of each other if the owner of the building or a member of the owner's family resides in one of the dwelling units, or to the rental of a room or rooms in a single-family dwelling by an individual if the lessor or a member of the lessor's family resides in the dwelling.

100.10 Information and Investigation.

- (a) Any person claiming a violation of this chapter shall file a signed, written complaint with the City Manager, or his or her designee, setting forth the details, including the names,

dates, witnesses and other factual matters relevant to the claim, within 180 days of the incident forming the basis of the complaint.

- (b) No person shall provide false information to any authorized employee investigating a complaint regarding a violation of this chapter.
- (c) In the course of the investigation, the City Manager, or his or her designee, may request a person to produce books, papers, records or other documents which may be relevant to a violation or alleged violation of this chapter. If said person does not comply with such request, the City Attorney may apply to the Livingston County Court for an order requiring production of said materials.
- (d) Within thirty (30) days of written complaint being filed, the City Manager, or his or her designee, shall undertake an investigation of any complaint filed, the City Manager, or his or her designee, shall undertake an investigation of any complaint filed in accordance with this section alleging a violation of this chapter not currently recognized or proscribed by Michigan or federal anti-discrimination statutes, and cause all other complaints to be referred to an appropriate state or federal agency for review. After the completion of an investigation, the City Manager, or his or her designee, shall give written notice of the results of the investigation to the person who filed the complaint and the person accused of the violation. If the investigation establishes that a violation of this chapter occurred, the City Manager, or his or her designee, shall attempt to resolve the matter by conciliation and persuasion or refer the complaint to the City Attorney for prosecution in a court of competent jurisdiction.

100.11 Conciliation Agreements.

In cases involving alleged violations of this chapter, the City Manager, or his or her designee, may enter into agreements whereby persons agree to methods of terminating discrimination or to reverse the effects of past discrimination. Violations of such agreements shall be violations of this chapter.

100.12 Injunctions.

The City Attorney may commence a civil action to obtain injunctive relief to prevent discrimination prohibited by this chapter, to reverse the effects of such discrimination, or to enforce a conciliation agreement.

100.13 Prosecution.

- (a) Prosecution for violation of this chapter may only be initiated by complaint of the affected person due to the alleged violation of a conciliation agreement made pursuant to above Section 100.11, or by the City manager, or his or her designee, on the basis of an investigation undertaken by the City Manager, or his or her designee.

- (b) Violation of this chapter shall be prosecuted by the City Attorney as a municipal civil infraction pursuant to the provisions of Chapter 202.99 of the Howell City Code.

100.14 Penalties.

- (a) A violation of any provision of this chapter is a municipal civil infraction punishable by a fine of not more than \$500, plus all costs of the action. The court may issue and enforce any judgment, writ, or order necessary to enforce this chapter. This may include reinstatement, payment of lost wages, hiring and promotion, sale, exchange, lease or sublease of real property, admission to a place of public accommodation, and other relief deemed appropriate.
- (b) Each day upon which a violation occurs shall constitute a separate and new violation.
- (c) A violation proved to exist on a particular day shall be presumed to exist on each subsequent day unless it is proved that the violation no longer exists.
- (d) Nothing contained in this chapter shall be construed to limit in any way the remedies, legal or equitable, which are available to the City or any person for the prevention or correction of discrimination.

Section 3. All Ordinances inconsistent herewith are hereby repealed.

Section 4. This Ordinance shall take effect when published as provided by the Howell City Charter.

ADOPTED by the Howell City Council at its regular meeting on this ____ day of _____, 2016.

NICK PROCTOR, MAYOR

JANE CARTWRIGHT, CLERK

CERTIFICATION

I hereby certify that the foregoing is a true and complete copy of Ordinance No. 901, adopted by the City Council of the City of Howell, Livingston County, Michigan, at a regular meeting held on the 27th day of June, 2016 and that the meeting was held and the minutes therefore were filed in compliance with Act No. 267 of the Public Acts of 1976.

IN WITNESS WHEREOF, I have hereto affixed my official signature this 27th day of June, 2016.

BY:
Howell City Clerk

From: [Marcus Peccia](#)
To: [Camille Lipke](#)
Subject: FW: FOIA Response - September 7, 2018
Date: Wednesday, September 12, 2018 9:14:29 AM
Attachments: [Ordinance 973 - Human Rights Ordinance.pdf](#)

Marcus A. Peccia, City Manager
City of Cadillac
200 N. Lake Street
Cadillac, MI 49601
(231) 779-7344
Mobile (231) 884-3202
citymanager@cadillac-mi.net
<http://www.facebook.com/cityofcadillac>

From: Howard, Jeremy [mailto:jhoward@mt-pleasant.org]
Sent: Friday, September 07, 2018 4:15 PM
To: Marcus Peccia
Subject: FOIA Response - September 7, 2018

Mr. Peccia,

On September 7, 2018 the City received your request for records under the Michigan Freedom of Information Act ("FOIA"). The City is granting your request and disclosing all responsive records in its possession, which are as follows:

Request: *The City of Cadillac City Council has been considering the establishment of a new nondiscrimination ordinance, and on their behalf, I am requesting the following:*

- *Copy of your community's Code specific to this issue*
- *Copy of your community's administrative procedure/policy for how complaints are processed within the operation of the organization (i.e., who do complaints go to, and how are they processed)*
- *Copy of any reports (last 3-years) indicating how many complaints were received*
- *Copy of any reports (last 3-years) indicating how much it cost to process and/or investigate complaints*

Response: • Copy of your community's Code specific to this issue
A copy of the City of Mt. Pleasant's Human Rights ordinance is attached to this email in PDF format.

- Copy of your community's administrative procedure/policy for how complaints are processed within the operation of the organization (i.e., who do

complaints go to, and how are they processed)

Included in the ordinance language.

- Copy of any reports (last 3-years) indicating how many complaints were received

No complaints.

- Copy of any reports (last 3-years) indicating how much it cost to process and/or investigate complaints.

No complaints.

In accordance with the administration of the Michigan Freedom of Information Act, 1976 PA 442, as amended, MCL 15.231 et seq. (the "FOIA"), please see www.mt-pleasant.org/foia for copies of the City of Mt. Pleasant's FOIA Procedures and Guidelines, FOIA Public Summary of Procedures and Guidelines, and the Detailed Itemization of Costs Form.

Jeremy Howard, CMC, CMMC

City Clerk

City of Mt. Pleasant

Office: (989) 779-5374

Mobile: (989) 621-1688

Email: jhoward@mt-pleasant.org

ORDINANCE NO. 973

AN ORDINANCE TO AMEND THE MOUNT PLEASANT CITY CODE BY ADDING TITLE XVII,
TITLED “HUMAN RIGHTS,” TO PROHIBIT DISCRIMINATION IN EMPLOYMENT, HOUSING
AND PUBLIC ACCOMMODATIONS AND TO PROVIDE PENALTIES FOR VIOLATIONS

IT IS HEREBY ORDAINED BY THE PEOPLE OF THE CITY OF MOUNT PLEASANT:

Section 1. The Mount Pleasant City Code is amended adding Title XVII, called “Human Rights” to read as follows:

Title XVII
Human Rights
Chapter 170

§170.01. Purpose.

- (A) The City intends that no individual be denied the equal protection of the laws; nor shall any person be denied the enjoyment of his or her civil rights or be discriminated against because of his or her race, religion, color, national origin, gender, sex, age, marital status, physical or mental disability, family status, sexual orientation or gender identity.
- (B) The prohibitions against discrimination in this ordinance are intended to supplement federal and state civil rights law prohibiting discrimination in the areas of employment, housing and public accommodations. However, this chapter shall be construed and applied in a manner consistent with jurisprudence regarding the freedom of speech and exercise of religion under the First Amendment to the United States Constitution.
- (C) Nothing in this ordinance is intended to require or shall be construed to require preferential treatment of any individual or group identified in subsection (A).

§170.02. Definitions. For the purpose of this chapter, the following definitions shall apply:

- AGE.* Chronological age.
- AUTHORIZED CITY OFFICIAL.* A police officer, code enforcement personnel or any other personnel of the City designated and authorized by the City Manager, this code or any ordinance to investigate or issue municipal civil infraction citations or municipal civil infraction violation notices.
- CITY MANAGER.* The City Manager of the City, or his or her designee.
- COMPLAINANT.* An individual or other person who files a complaint alleging a violation of this chapter.
- DISCRIMINATE, DISCRIMINATION.* To make a decision, offer to make a decision or refrain from making a decision based in whole or in part on the race, religion, color, national origin, gender, sex, age, marital status, physical or mental disability, family status, sexual orientation or gender identity of an individual.
- EDUCATIONAL INSTITUTION.* A public or private institution, or a separate school or department thereof, including an academy, college, elementary or secondary school, extension course, kindergarten, nursery, local school system, or a business, nursing, professional, secretarial, technical, or vocational school. For the purposes of this chapter, educational institution includes an agent of the institution.
- EMPLOYEE.* An individual who is hired for a wage, salary, fee, payment or other remuneration to perform work for an employer.
- EMPLOYER.* A person who has one or more employees, and includes an agent of that person.
- EMPLOYMENT AGENCY.* A person regularly undertaking, with or without compensation, to procure, refer, recruit, or place an individual in an employment relationship with an employer.
- FAMILY STATUS.* One or more individuals related by blood within three degrees of consanguinity, marriage, adoption, in a foster care relationship or other legal custody relationship. For the purposes of this definition, family status shall include an individual who is pregnant.
- GENDER.* The actual biological state of being male or female as of birth, or subsequent alteration through surgical procedure, and without regard to any outward physical display or expression of gender identity.

GENDER IDENTITY. An individual's appearance, expression, identity or behavior as being either male or female, whether or not that appearance, expression, identity or behavior is different from that which is traditionally associated with the individual's designated gender at birth.

HOUSING ACCOMMODATION. Any improved or unimproved real property or part thereof, dwelling unit or facility used or intended, arranged, or designed to be used or occupied as a home, domicile, or residence of one or more individuals.

INDIVIDUAL. A single human being.

LABOR ORGANIZATION. An organization of any kind, an agency or employee representation committee, group, association, or plan in which employees participate in or are members of, which exists for the purpose, in whole or in part, of dealing with employers concerning collective bargaining, grievances, labor disputes, wages, rates of pay, hours, or other terms or conditions of employment. For purposes of this definition, a labor organization need not be subordinate to or affiliated with a national or international labor organization.

MARITAL STATUS. The state of being married, unmarried, divorced or widowed.

PERSON. An individual, agent, association, corporation, labor organization, legal representative, partnership, receiver, trust or any other legal or commercial entity.

PHYSICAL OR MENTAL DISABILITY. A determinable physical or mental characteristic of an individual, which may result from disease, injury, congenital condition of birth, or functional disorder, if the characteristic substantially limits a major life activity of that individual and is unrelated to the individual's ability to perform the duties of a particular job or position, is unrelated to the individual's ability to utilize and benefit from a place of public accommodation, or is unrelated to the individual's ability to acquire, rent, or maintain property. For the purposes of this definition, physical or mental disability does not include any condition caused by the current illegal use of a controlled substance or the use of intoxicating liquors by an individual.

PLACE OF PUBLIC ACCOMMODATION. A business, educational, refreshment, entertainment, recreation, health or transportation facility, organization or institution of any kind, whether licensed or not, whose goods, services, facilities, privileges, advantages, or accommodations are extended, offered, sold, or otherwise made available to the public.

PRIVATE CLUB. An establishment that is not open to the public. A private club is one whose members' association with each other and the club is sufficiently intimate, small and exclusive that it is not open to the public.

RELIGIOUS ORGANIZATION OR INSTITUTION. A religious corporation, association, educational institution or society, which is, in whole or substantial part, owned, supported, controlled or managed by a particular religion whose purpose or character is directed toward the propagation of that particular religion and that has the inculcation of religious values or the provision of charity as its purpose; primarily employs persons who share its religious tenets; and primarily serves persons who share its religious tenets or, on a charitable basis, the broader community. Religious organization or institution includes, for illustration and not limitation: churches, mosques, synagogues and other houses of worship; any subsidiary organizations; educational institutions affiliated with, controlled, or managed by those houses of worship or with articles of incorporation, bylaws and other documents stating an intention to inculcate its religious tenets in students; and, faith-based organizations that, due to a sense of duty based on particular religious tenets, provide charitable services to the public.

RESPONDENT. A person against whom a complaint is filed under this chapter.

SEX. Includes, but is not limited to pregnancy, childbirth, or a medical condition related to pregnancy or childbirth. Discrimination based on sex includes sexual harassment. Sexual harassment means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature under the following conditions:

- (A) Submission to the conduct or communication is made a term or condition, either explicitly or implicitly, to obtain employment, housing, or public accommodations.
- (B) Submission to or rejection of the conduct or communication by an individual is used as a factor in decisions affecting the individual's employment, housing, or public accommodations.
- (C) The conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or public services, or housing, or creating an intimidating, hostile, or offensive employment, housing, or public accommodations.

SEXUAL ORIENTATION. Male or female homosexuality, heterosexuality or bisexuality, whether by orientation or practice. Sexual orientation does not include any sexual activity or attempted activity otherwise prohibited by law.

§170.03. Employment Practices. Except as otherwise provided in section 170.07:

- (A) An employer shall not discriminate in the employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any individual.
- (B) A labor organization shall not exclude or expel from membership a member or applicant for membership, or otherwise discriminate in a manner prohibited by this ordinance when dealing with employers concerning collective bargaining, member grievances, labor disputes, wages, rates of pay, hours or other terms or conditions of employment.
- (C) An employment agency shall not discriminate in the procurement, referral, recruitment, or placement of an individual in an employment relationship with an employer.

§170.04. Housing Practices. Except as otherwise provided in section 170.07:

- (A) A person shall not discriminate in leasing, selling, or otherwise making available any housing accommodation.
- (B) A person shall not discriminate in the terms, conditions, or privileges of a real estate transaction or in the furnishing of facilities or services in connection with any housing accommodation.
- (C) A person shall not discriminate in providing financing for the purchase, repair, or remodeling of any housing accommodations.
- (D) A person shall not discriminate in making referrals, listings or otherwise providing information regarding housing accommodations.

§170.05. Public Accommodations. Except as otherwise provided in section 170.07, a person shall not discriminate in making available full and equal access to all goods, services, privileges, advantages, or accommodations of any place of public accommodation.

§170.06. General Prohibited Practices. Except as otherwise provided in section 170.07:

- (A) A person shall not adopt, enforce, or employ any policy or requirement, publish, post, circulate or otherwise broadcast any advertisement, sign, solicitation or notice which discriminates or suggests discrimination in providing employment, housing or public accommodations.
- (B) A person shall not coerce, threaten or retaliate against another for making a complaint or assisting in any investigation regarding a violation or alleged violation of this chapter. A person shall not require, request, conspire with, coerce or otherwise assist a person to retaliate against a person for making a complaint or assisting in an investigation.
- (C) A person shall not conspire with, assist, coerce, or request another to discriminate in any manner prohibited by this chapter.
- (D) A person shall not adopt, enforce, or employ any policy, practice or requirement which, while facially neutral, has the effect of discriminating in a manner prohibited by this chapter, except when there is a *bona fide* business necessity for such a policy, practice or requirement. For the purposes of this chapter, *bona fide* business necessity means that the policy, practice or requirement is reasonably necessary to the normal operation of the person's business. A *bona fide* business necessity does not arise due to a mere inconvenience or because of suspected or actual objection by neighbors, customers, or other persons.

§170.07. Exceptions. Any other provision of this chapter notwithstanding:

- (A) The provisions of this chapter do not apply to any religious organization or institution with respect to its employment of individuals.
- (B) A religious organization or institution may restrict the occupancy of any of its housing facilities or place of public accommodations operated as a part of its religious activities to persons of its denomination or those who conform to the moral tenets of that religious organization or institution. This exception shall apply to a religious organization or institution that allows persons other than its members to use its facilities if its facilities remain exempt from Michigan property taxation pursuant to section 7s of 1893 PA 206, as amended, MCL 211.7s.

(C) The owner of a housing facility or accommodation devoted entirely to the housing of individuals of one gender may restrict the occupancy of such a facility or accommodation on the basis of gender.

(D) The provisions of this chapter do not apply to the rental of a housing accommodation in a building that contains housing accommodations for not more than two (2) families living independently of each other if the owner or a member of the owner's immediate family resides in one (1) of the housing accommodations, or to the rental of a room or rooms in a single family dwelling by a person if the lessor or a member of the lessor's immediate family resides in the dwelling. This exception shall extend to advertisements, postings, notices or other solicitations for such a rental arrangement.

(E) The provisions of this chapter do not apply to any arrangement for shared ownership, lease or residency of a dwelling unit.

(F) An educational institution may limit the use of its facilities to those affiliated with such institution.

(G) A governmental institution may restrict any of its facilities or restrict employment opportunities based on duly-adopted institutional policies that conform to state and federal laws and regulations.

(H) A person may discriminate based on an individual's age when such discrimination is required by other local, state or federal laws.

(I) A person may provide discounts on products or services to students, or on the basis of age.

(J) A person may refuse to enter into a contractual relationship with an unemancipated minor.

(K) A person may restrict the use of restrooms, lavatories, locker room facilities or changing rooms on the basis of gender. Restrictions for the use of restrooms, lavatories, locker room facilities or changing rooms as provided in this section shall not be considered a violation of this chapter's prohibitions on discrimination based on gender identity.

(L) A person may restrict participation in an instructional program, athletic event or on an athletic team on the basis of age or gender.

(M) A person may restrict membership in a private club that is not open to the public.

(N) An employer may restrict employment opportunities to members of one's family.

(O) An employer offering health or pension plans may provide for marital or family status limitations in such plans provided those limitations conform to state and federal laws, rules and regulations. Further, nothing in this ordinance shall be construed or interpreted to either require, nor prohibit a private employer from offering employment benefits to the same-sex partner of an employee.

(P) This chapter shall not prohibit the City from allowing use of its facilities or services by persons that may be affiliated with, or otherwise supported by a religious organization or institution, which may espouse policies or practices inconsistent with the general intent of this chapter. Further, this chapter shall not prohibit the City from allowing use of its facilities or services by persons not generally affiliated with or supported by a particular religious organization or institution, but who may espouse policies or practices inconsistent with the general intent of this chapter.

(Q) This chapter shall not be construed to prohibit a city employee from exercising his or her First Amendment rights to donate to a charitable organization of his or her choosing through the use of the City's automatic payroll deduction program. This chapter shall not be construed to limit the availability of the City's automatic payroll deduction program only to charitable organizations that support or conform to the general intent and purposes of this chapter. Except as otherwise provided by law, the City retains the discretion to determine whether or not to participate in or allow any payroll deduction.

(R) This chapter is not intended to and shall not be construed to require an educational institution to, and an educational institution shall not use this ordinance as a justification to, suspend, expel or otherwise discipline a student enrolled in a medical, pharmaceutical, nursing, counseling, social work, or psychology program because the student refuses to counsel or serve a client or patient in a manner that conflicts with a sincerely held religious belief of the student. However, this provision is not intended to alter or affect any professional ethics or academic standards or codes of conduct.

(S) This chapter is not intended to and shall not be construed to require an employer to, and an employer shall not use this ordinance as a justification to, take any employment, promotion, compensation, benefits, termination or extension of employment action against, or alter the employment privileges of a professional employee, because that professional employee refuses to provide medical, social work, psychological or other professional counseling services when that counseling would reasonably conflict with that employee's sincerely held religious beliefs. However, this provision is not intended to alter or affect any professional ethics standards or codes of conduct.

§170.08. Investigation and Enforcement Procedure.

(A) Any person claiming to be discriminated against in a manner prohibited by this chapter, and not otherwise prohibited by state or federal law, may, within 180 days of the alleged violation, file a signed, written complaint with the City Manager, specifying, in detail, the names, dates, known witnesses and other pertinent facts relevant to the alleged violation. For any complaint alleging a violation of state or federal law, the City Manager shall refer the complainant to the appropriate state or federal agency responsible for investigation and enforcement of such alleged violations.

(B) After receiving a complaint, the City Manager shall review the complaint and may, in his or her reasonable discretion, do any of the following:

- (1) Undertake, or refer to City staff or the City attorney to undertake an investigation of the alleged violation.
- (2) Refer the matter to an authorized City official or the City attorney to issue a municipal civil infraction citation and prosecute the violation as a municipal civil infraction.
- (3) Refer the matter to the Isabella County Trial Court Alternative Program for Dispute Resolution, or other organization for conciliation or facilitative mediation services. A complainant or respondent failing to appear for a scheduled conciliation or mediation shall pay any costs resulting from such failure to appear. If a conciliation or mediation agreement is entered into under this section, the parties shall be bound to its terms. A breach of such an agreement by the respondent shall be considered a violation of this chapter.
- (4) Notify the complainant that no City action will be taken related to the complaint. Such a determination shall not be evidence of non-violation should the complainant choose to initiate a private civil action against the alleged violator as provided in this section.

(C) Nothing in this section shall be construed to limit a person's right to initiate a private civil action for an alleged violation as provided in section 170.09 of this chapter.

§170.09. Private Cause of Action for Damages or Injunctive Relief. A person alleging a violation of this chapter may bring a civil action within 180 days of the alleged violation, or 180 days after the end of an actions taken by the City under section 170.08, whichever is later, for appropriate injunctive relief or damages, or both, in a court of competent jurisdiction.

§170.10. Remedies.

(A) If a violation of this chapter is prosecuted as a municipal civil infraction under the City Code § 36.01 *et seq.*, fines of up to \$2,500 may be assessed. In addition to the penalties provided in this section, a court shall have equitable jurisdiction to enforce any judgment, writ, or order necessary to enforce any provision of this ordinance, including, but not limited to, abatement of the violating condition or the granting of injunctive relief.

(B) A court rendering judgment in a private civil action brought pursuant to section 170.09 of this chapter may order any remedy authorized by Article 8 the Elliott-Larsen Civil Rights Act, 1976 PA 453, as amended, MCL 37.2101 *et seq.*

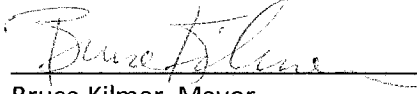
(C) Each day upon which a violation occurs shall constitute a separate and new violation.

§170.11. Violators Operating Under License Issued by City. The City Manager may suspend the license of any person operating under a license issued by the City, or any agency thereof, found to be in violation of this chapter and provide opportunity for a hearing conducted in accordance with the provisions of the City Code under which that person is licensed to determine whether such license should be revoked. The provisions of this section are not applicable to violations which are remedied through either conciliation or mediation services. However, a violation of a conciliation or mediation agreement shall be grounds for the revocation of a license as provided under this section.

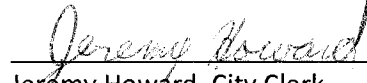
§170.12. Severability. If any section, subsection, sentence, clause, phrase or portion of this chapter is for any reason held invalid or unconstitutional by any court of competent jurisdiction, that portion

shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portions of this chapter.

Section 2. Publication and Effective Date. The City Clerk shall cause to be published a notice of adoption of this ordinance within 10 days of the date of its adoption. This ordinance shall take effect 30 days after its adoption.



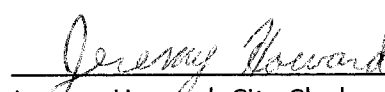
Bruce Kilmer, Mayor



Jeremy Howard, City Clerk

I, Jeremy Howard, City Clerk for the City of Mt. Pleasant, Michigan, do hereby certify that the foregoing is a true and complete copy of Ordinance No. 973 as passed and ordained by the City Commission on the 9th day of July 2012, and has been published one insertion in the Morning Sun on the 16th day of July 2012, according to the certificate now on file in my office.

In Witness Whereof, I hereunto set my hand and the seal of the City of Mt. Pleasant, Michigan, this 23rd day of July, 2012.



Jeremy Howard, City Clerk

From: [Marcus Peccia](#)
To: [Camille Lipke](#)
Subject: FW: FOIA 2018049 - Non Discrimination
Date: Tuesday, September 11, 2018 5:01:15 PM
Attachments: [2018049 Marcus Peccia - City of Cadillac Response Info.pdf](#)
[2018049 Marcus Peccia Completion Letter.pdf](#)

2 of 6

Marcus A. Peccia, City Manager
City of Cadillac
200 N. Lake Street
Cadillac, MI 49601
(231) 779-7344
Mobile (231) 884-3202
citymanager@cadillac-mi.net
<http://www.facebook.com/cityofcadillac>

From: Adam Herringa [<mailto:herringa@portagemi.gov>]
Sent: Tuesday, September 11, 2018 2:19 PM
To: Marcus Peccia
Cc: Mary Beth Block; Erica Eklov; Barbara Janicke
Subject: FOIA 2018049 - Non Discrimination

Mr. Peccia,

Thank you for your inquiry regarding our Non-Discrimination Ordinance. The requested information is attached. Please let me know if I can be of further assistance!

- Adam

Adam Herringa
City Clerk
Office of the City Clerk
City of Portage, Michigan
herringa@portagemi.gov
(269) 329-4512 (phone)
(269) 324-8070 (fax)

CONFIDENTIALITY: Pursuant to the Electronic Communications Privacy Act of 1986, 18 U.S.C. Sec. 2510, et seq. (the "ECPA"), notice is given that the information or documents in this electronic message are legally privileged and confidential information, intended only for the use of the individual or entity to whom it is sent. If you are not the intended recipient, please be aware that any disclosure, distribution, use or copying of the contents of this message is prohibited. If you have received this message in error, notify the sender immediately by return mail or contact helpdesk@portagemi.gov and delete this message and any attachments from your system. Thank you.

September 11, 2018

Mr. Marcus Peccia
City of Cadillac
200 North Lake Street
Cadillac, MI 49601

FOIA No. 2018049

Dear Mr. Peccia:

Re: Information related to the City of Portage Non-Discrimination Ordinance

The following information is also available for release:

- 1.) E-mail regarding complaints received
- 2.) Copy of Non-Discrimination Ordinance
- 3.) Non-Discrimination Ordinance Complaint Form

Your request is considered complete and the information provided to you. There is a no charge for the information.

Should you have any questions or wish additional information, please contact the Office of the City Clerk at Portage City Hall, 7900 S. Westnedge Avenue, Portage, Michigan 49002. The telephone number is (269) 329-4511. The City of Portage FOIA Procedures and Guidelines and Written Public FOIA Summary are available at no charge at the following location on the City of Portage website: www.portagemi.gov/Departments/City-Clerk.aspx.

The City of Portage FOIA Procedures and Guidelines and Written Public FOIA Summary are available at no charge at the following location on the City of Portage website: www.portagemi.gov/Departments/City-Clerk.aspx.

Should you have any questions or want additional information, please contact my office at Portage City Hall, 7900 South Westnedge Avenue, Portage, MI 49002. My phone number is (269) 329-4511.

Sincerely,



Adam Herringa
City Clerk

Adam Herringa

From: Victoria Georgeau
Sent: Tuesday, September 11, 2018 1:17 PM
To: Mary Beth Block
Cc: Adam Herringa; Tamara Stephens; Tom McCoy; Christopher Forth
Subject: RE: FOIA 2018049 - City of Cadillac Non-Discrimination Ordinance
Attachments: [Untitled].pdf; [Untitled].pdf

Mary Beth,

Please find attached the NDO and NDO complaint form. Since the NDO was adopted, we've received one complaint related to housing discrimination. The issue was resolved by city staff and its estimated 8 hours of staff time or approximately \$500 in personnel costs were allocated to resolving the complaint.

If you need additional information, please let me know.

Thanks,

Vicki Georgeau, AICP
Director of Community Development
City of Portage
7900 South Westnedge Avenue
Portage, MI 49002
269-329-4480 – phone
269-329-4506 - fax

From: Mary Beth Block
Sent: Monday, September 10, 2018 8:26 AM
To: Victoria Georgeau
Cc: Adam Herringa
Subject: FW: FOIA 2018049 - City of Cadillac Non-Discrimination Ordinance

Good morning, Vicki.

Attached is the FOIA request we spoke about.

MB

Mary Beth Block
Communications Manager | City of Portage
7900 South Westnedge Avenue | Portage, MI 49002
office (269) 329-4405 | fax (269) 324-9244
blockm@portagemi.gov | www.portagemi.gov

From: Adam Herringa
Sent: Friday, September 07, 2018 4:28 PM
To: Mary Beth Block <blockm@portagemi.gov>
Cc: Laurence Shaffer <shafferl@portagemi.gov>; Rob Boulis <boulisr@portagemi.gov>; Coleea Canders <candersc@portagemi.gov>; Barbara Janicke <janickeb@portagemi.gov>; Erica Eklov <eklove@portagemi.gov>;

'attorneybrown@att.net' <attorneybrown@att.net>; 'Charles Bear' <attorneybear@att.net>

Subject: FOIA 2018049 - City of Cadillac Non-Discrimination Ordinance

Mary Beth,

Attached please find the FOIA request that was received earlier today. According to Article 7, Section 24-154, Non-Discrimination Ordinance (NDO) complaints are to be filed and managed by the Office of the City Manager.

I am able to provide Mr. Peccia with a copy or link to the NDO. Further, I believe the process of managing complaints is addressed by the ordinance but would defer to you as to whether formal procedures have been developed. Please let me know if any complaints have been filed via the NDO and if I can be of any assistance.

- Adam

Adam Herringa
City Clerk
Office of the City Clerk
City of Portage, Michigan
herringa@portagemi.gov
(269) 329-4512 (phone)
(269) 324-8070 (fax)

**AN ORDINANCE TO AMEND THE CODE OF ORDINANCES
OF THE CITY OF PORTAGE, MICHIGAN BY ADDING ARTICLE 7, NON-
DISCRIMINATION ORDINANCE, OF CHAPTER 24, COMMUNITY QUALITY**

THE CITY OF PORTAGE ORDAINS:

That Chapter 24 shall be amended as follows to add Article 7, Non-Discrimination Ordinance, as follows:

CHAPTER 24. COMMUNITY QUALITY.

ARTICLE 7. NON-DISCRIMINATION ORDINANCE.

24-148. INTENT, PURPOSE AND CONSTRUCTION.

(a) It is the intent of the City of Portage that no person be denied the equal protection of the laws; nor shall any person be denied the enjoyment of his or her civil rights or be discriminated against because of their actual or perceived race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability, family status, sexual orientation, or gender identity.

(b) The prohibitions against discrimination as provided for in this ordinance shall not be deemed preempted by federal or state law, but are intended to supplement state and federal civil rights law prohibiting discrimination in the areas of employment, public accommodations, and housing. Provided, however, this ordinance shall be construed and applied in a manner consistent with First Amendment jurisprudence regarding the freedom of speech and exercise of religion.

24-149. DEFINITIONS.

As used in this chapter, the following words and phrases have the following meanings:

(a) "Age." Chronological age.

(b) "City Manager." The City Manager of the City of Portage or his or her designee.

(c) "Discriminate." To make a decision, offer to make a decision or refrain from making a decision based in whole or in part on the actual or perceived race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability, family status, sexual orientation, or gender identity, of another person.

(d) "Educational Institution." A public or private institution or a separate school or department thereof, including an academy, college, elementary or secondary school, extension course, kindergarten, nursery, local school system, or university, or a business, nursing, professional, secretarial, technical, or vocational school. For the purposes of this definition, educational institution includes an agent of an educational institution.

(e) "Employer." Any person employing one (1) or more persons.

promotion; or unrelated to one's ability to acquire, rent and maintain property; or unrelated to one's ability to utilize and benefit from the goods, services, activities, privileges and accommodations of a place of public accommodation "Physical or Mental Disability" does not include any condition caused by the current illegal use of a controlled substance or the use of alcohol liquor by an individual.

(p) "Place of Public Accommodation." An educational, governmental, health, entertainment, cultural, recreational, refreshment, transportation, financial institution, business or facility of any kind, whose goods, services, facilities, privileges, advantages or accommodations are extended, offered, sold, or otherwise made available to the public.

(q) "Religious Organization." An organization, church, group, or body of communicants that are organized not for pecuniary profit that regularly gathers for worship and religious purposes, and includes a religious-based private school that is not organized for pecuniary profit. Religious organization includes, for illustration and not limitation: churches, mosques, synagogues and other houses of worship, any subsidiary organizations, educational institutions affiliated with, controlled, or managed by those houses of worship or with articles of incorporation, bylaws and other documents stating an intention to inculcate its religious tenants in students; and, faith based organizations that, due to a sense of duty based on particular religious tenants, provide charitable services to the public.

(r) "Sexual Orientation." Male or female homosexuality, heterosexuality or bisexuality, by orientation or practice, whether past or present. This includes emotional, romantic, and/or sexual attractions, or the absence thereof, to other people. Sexual orientation also refers to a person's sense of identity based on those attractions, related behaviors, and membership in a community of others who share those attractions.

24-150. DISCRIMINATORY HOUSING PRACTICES.

Except as otherwise provided in this ordinance, no person shall:

- (a) Discriminate in leasing, selling or otherwise make available any housing facilities.
- (b) Discriminate in the terms, conditions, maintenance or repair in providing any housing facility.
- (c) Discriminate in providing financing for the purchase, repair or remodeling of any housing facility.
- (d) Discriminate in making referrals, listings or otherwise providing information regarding a housing facility

24-151. DISCRIMINATORY PUBLIC ACCOMMODATION PRACTICES.

Except as otherwise provided in this ordinance, no person shall discriminate in making available full and equal access to all goods, services, activities, privileges, and accommodations of any place of public accommodation. However, nothing in this ordinance: I) permits or requires access to any place of public accommodation for the purpose or intent of engaging in criminal conduct; or II) requires the construction or provision of unisex single user restrooms, changing rooms, locker rooms or shower facilities.

(g) To refuse to enter a contract with an unemancipated minor.

(h) To refuse to admit to a place of public accommodation serving alcoholic beverages to a person under the legal age for purchasing alcoholic beverages.

(i) To refuse to admit to a place persons under eighteen (18) years of age to a business providing entertainment or selling literature that the operator of said business deems unsuitable for minors.

(j) For an educational institution to limit the use of its facilities to those affiliated with such institution.

(k) To provide discounts on products or services to students, or on the basis of age.

(l) To discriminate in any arrangement for the shared ownership, lease or residency of a dwelling unit.

(m) For a governmental or educational institution to restrict any of its facilities or to restrict employment opportunities based on duly-adopted institutional policies that conform to federal and state laws and regulations.

(n) To restrict participation in an instructional program, athletic event or on an athletic team that conforms to federal and state laws and regulations.

(o) This ordinance shall not apply to a private club, or other establishment not in fact open to the public, except to the extent that the goods, services, facilities privileges, advantages or accommodations of the private club or establishment are made available to the customers or patrons of another establishment that is a place of public accommodation or is licensed by the State under Act No. 8 of the Public Act of 1933, being MCLA 436.1-436.58, the Michigan Liquor Control Act as amended. This exemption shall not apply to a private club that is otherwise defined as a place of public accommodation in this ordinance. Further, to the extent that the private club permits members to invite guests on the premises, such organization is not exempted as it concerns a member's guest.

(p) To the employment of an individual by one's family.

(q) For an employer offering health or pension plans to provide marital or familial status limitations in such plans provided those limitations conform to state and federal laws, rules and regulations.

(r) To the rental of housing facilities in a building which contains dwelling units for not more than two families living independently of each other if the owner of the building or a member of the owner's family resides in one of the dwelling units, or to the rental of a room or rooms in a single-family dwelling by an individual if the lessor or a member of the lessor's family resides in the dwelling.

(s) To allow use of facilities or services by persons that may be affiliated with, or otherwise supported by, a religious organization, which may espouse policies or practices inconsistent with the general intent of this ordinance.

penalties permitted in accordance with the Municipal Civil Infractions Act, MCL 600.8727 et seq. as amended. In addition, the City shall have the right to proceed in any court of competent jurisdiction for the purpose of obtaining an injunction, restraining order, or other appropriate remedy to compel compliance with this ordinance.

(b) Each day upon which a violation occurs shall constitute a separate and new violation.

(c) A violation proved to exist on a particular day shall be presumed to exist on each subsequent day unless it is proved that the violation no longer exists.

(d) Nothing contained in this ordinance shall be construed to limit in any way the remedies, legal or equitable, which are available to the City or any person for the prevention or correction of discrimination.

24-157. REPEALER.

All former ordinances or parts of ordinances conflicting or inconsistent with the provisions of this ordinance are repealed.

24-158. SEVERABILITY.

If any section, subsection, sentence, clause, phrase or portion of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, that portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portions of this ordinance.

24-159. EFFECTIVE DATE.

This ordinance shall take effect [30] days following publication.

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City of Portage Non-Discrimination Ordinance Complaint Form

In August 2015, the City of Portage adopted a Non-Discrimination Ordinance that provides protections against discrimination in housing, employment and public accommodations. This ordinance specifies that discrimination is prohibited within the City of Portage based on actual or perceived race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability, family status, sexual orientation, or gender identity.

This Complaint Form has been created to assist with the review and response to alleged incidents of discrimination that are prohibited by the City of Portage Non-Discrimination Ordinance, which can be found under Chapter 24, Article 7 of the City Code of Ordinances.

Please provide all relevant information and make additional notes if necessary.
Upon completion, this form should be submitted to:

Office of the City Manager
City of Portage
7900 S. Westnedge Ave.
Portage, MI 49002
Phone: (269) 329-4400
Fax: (269) 324-9244

Name: _____

Address: _____

Email: _____

Daytime Phone Number: _____

Evening Phone Number: _____

Best Time to Call: _____

Who do you believe discriminated against you? Was it a landlord, bank, real estate agent, company, organization or individual? Please provide name, address and phone number or other contact information of organization or individual.

Where did the alleged act of discrimination occur? For example: Was it at a public facility? Retail business? School or public service facility? Did it occur at a bank or other lending institution? Please provide Name of business or facility, address, and phone number or other locational information.

From: [Marcus Peccia](#)
To: [Camille Lipke](#)
Subject: FW: FOIA - City of Royal Oak
Date: Tuesday, September 11, 2018 5:02:20 PM
Attachments: [approval letter.doc](#)

5 of 6

Marcus A. Peccia, City Manager
City of Cadillac
200 N. Lake Street
Cadillac, MI 49601
(231) 779-7344
Mobile (231) 884-3202
citymanager@cadillac-mi.net
<http://www.facebook.com/cityofcadillac>

From: Braswell, Deanna [mailto:DeannaB@romi.gov]
Sent: Tuesday, September 11, 2018 10:23 AM
To: Marcus Peccia
Subject: FOIA - City of Royal Oak

Mr. Peccia,
Please see the attached correspondence regarding your recent FOIA request to the City of Royal Oak.
Thank you,
Deanna

Deanna Braswell
Deputy City Clerk

248.246.3050
deannab@romi.gov
211 S. Williams Street / Royal Oak, MI 48067

What's going on with the civic center development project?
Find out at rethinkro.com



September 11, 2018

City of Cadillac
Marcus Peccia, City Manager
200 North Lake Street
Cadillac, MI 49601

Re: Granting of Your Request / Denial of Your Request

Dear Mr. Peccia:

Please be advised that on the 7th day of September you submitted a FOIA request for the following public record(s):

Requesting records pertaining to Civil Rights/Non-Discrimination Program.

- **Copy of your community's Code specific to this issue.**
- **Copy of your community's administrative procedure/policy for how complaints are processed within the operation of the organization (i.e., who do complaints go to, and how are they processed)**
- **Copy of any reports (last 3-years) indicating how many complaints were received**
- **Copy of any reports (last 3-years) indicating how much it cost to process and or investigate complaints.**

Your request is granted in part.***"The copy of our community's Code specific to the issue"*** can be found at: (<https://ecode360.com/27075772?highlight=human%20rightst#27075772>).

Your request is denied in part***"Copy of our community's administrative procedure/policy for how complaints are processed within the operation of the organization"***. We have no administrative procedure.

Your request is denied in part ...***"any reports indicating how complaints were received, or any reports indicating how much it cost to process and or investigate complaints"***. We have never received a complaint, so there are no reports to satisfy this request.

If you are not satisfied with this response, I want to advise you of your rights. You have the right to submit a written appeal to the head of the City of Royal Oak who is City Manager Donald Johnson, that specifically states the word "appeal" and identifies the reason or reasons for reversal of this denial.

In addition, you may also seek judicial review of this denial pursuant to MCL 15.240. If you seek judicial review and the Court determines that the public records are not exempt from disclosure, you have the right to receive attorney fees and damages in an amount not to exceed \$1,000.00.

If you have any questions, please do not hesitate to contact me at 248.246.3050.

Sincerely,

Deanna Braswell
Deputy City Clerk / FOIA Coordinator

City of Royal Oak FOIA Policy can be found: <https://www.romi.gov/documentcenter/view/1050>

Chapter 402

HUMAN RIGHTS

GENERAL REFERENCES

Ethics — See Ch. 66.

Immunodeficiency virus testing — See Ch. 403.

§ 402-1. Intent.

It is the intent of the City that no person be denied equal protection of the laws; nor shall any person be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived race, color, religion, national origin, sex, age, height, weight, condition of pregnancy, marital status, physical or mental limitation, source of income, family responsibilities, sexual orientation, gender identity or HIV status.

§ 402-2. Definitions.

As used in this chapter, the following words and phrases shall have the following meaning:

AGE — Chronological age.

DISCRIMINATE — To make a decision, offer to make a decision, or refrain from making a decision, based in whole or in part on the actual or perceived race, color, religion, national origin, sex, age, height, weight, condition of pregnancy, marital status, physical or mental limitation, source of income, family responsibilities, sexual orientation, gender identity, or HIV status of another person, that person's relatives, or that person's associates. Discrimination based on sex includes sexual harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when: a) submission to such conduct or communication is, either explicitly or implicitly, made a term or condition of obtaining employment, public accommodations, or housing; b) submission to or rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment, public accommodations or housing; and/or c) such conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or housing, or creating an intimidating, hostile, or offensive employment, public accommodations, or housing environment. Discrimination based upon actual or perceived physical or mental limitation includes discrimination because of the use of adaptive devices or aids by an individual.

FAMILY RESPONSIBILITIES — The state of being or the potential to become a contributor to the support of a person or persons in a family relationship.

GENDER IDENTITY — A person's actual or perceived gender, including a person's gender identity, self-image, appearance, expression, or behavior, whether or not that gender identity, self-image, appearance, expression, or behavior is different from that traditionally associated with the person's sex at birth as being either female or male.

HIV STATUS — The physical condition of a person who has, or has been diagnosed as having been infected with, the human immunodeficiency virus, whether or not that person has or has been diagnosed as having acquired immunodeficiency syndrome or acquired immunodeficiency syndrome related complex.

HOUSING FACILITY — Any dwelling unit or facility used for a person to regularly sleep and keep personal belongings including, but not limited to, a house, apartment, rooming house, housing cooperative, hotel, motel, tourist home, retirement home or nursing home.

MARITAL STATUS — The state of being married, unmarried, divorced, or widowed.

MENTAL LIMITATION — A limitation of mental capabilities unrelated to one's ability to safely perform the work involved in jobs or positions available to such person for hire or promotion; a limitation of mental capabilities unrelated to one's ability to acquire, rent and maintain property; or a limitation of mental capabilities unrelated to one's ability to utilize and benefit from the goods, services, activities, privileges and accommodations of a place of public accommodation. "Mental limitation" includes, but is not limited to, developmental and psychological disabilities. "Mental limitation" does not include any condition caused by the current use of alcohol or the current illegal use of a controlled substance.

PERCEIVED — The perception of the person who acts, and not the perception of the person for or against whom the action is taken.

PHYSICAL LIMITATION — A limitation of physical capabilities unrelated to one's ability to safely perform the work involved in jobs or positions available to such person for hire or promotion; a limitation of physical capabilities unrelated to one's ability to acquire, rent and maintain property; or a limitation of physical capabilities unrelated to one's ability to utilize and benefit from the goods, services, activities, privileges and accommodations of a place of public accommodation. "Physical limitation" includes, but is not limited to, blindness or partial sightedness, deafness or hearing impairment, muteness, partial or total absence of physical member, speech impairment and motor impairment. "Physical limitation" does not include any condition caused by the current use of alcohol or the current illegal use of a controlled substance.

PLACE OF PUBLIC ACCOMMODATION — An educational, governmental, health, day care, entertainment, cultural, recreational, refreshment, transportation, financial institution, accommodation, business or other facility of any kind, whose goods, services, facilities, privileges, advantages or accommodations are extended, offered, sold or otherwise made available

to the public, or which receives financial support through the solicitation of the general public or through governmental subsidy of any kind.

SEXUAL ORIENTATION — Male or female homosexuality, heterosexuality, or bisexuality, by orientation or practice.

SOURCE OF INCOME — Any legal source from which a person obtains money.

§ 402-3. Discriminatory housing practices.

- A. No person shall discriminate in leasing, selling or otherwise making available any housing facilities.
- B. No person shall discriminate in the terms, conditions, maintenance, or repair in providing any housing facility.
- C. No person shall refuse to lend money for the purchase or repair of any real property or to insure any real property solely because of the location in the City of such real property.
- D. No person shall promote real estate transactions by representing that changes are occurring or will occur in an area with respect to race, religion or national origin.
- E. No person shall place a sign or other display on any real property which indicates that the property is for sale or has been sold when it is not for sale or has not recently been sold.

§ 402-4. Discriminatory public accommodation practices.

No person shall discriminate in making available full and equal access to all goods, services, activities, privileges and accommodations of any place of public accommodation. No person shall prohibit a breastfeeding mother from or segregate a breastfeeding mother within any public accommodation where she and the child would otherwise be authorized to be.

§ 402-5. Discriminatory employment practices.

- A. No person shall discriminate in the employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any person.
- B. No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor union or apprenticeship program.

§ 402-6. Other prohibited practices.

- A. No person shall adopt, enforce or employ any policy or requirement, publish, post or broadcast any advertisement, sign or notice which discriminates or indicates discrimination in providing housing, employment or public accommodations.

- B. No person shall discriminate in the publication or distribution of advertising material, information or solicitation regarding housing, employment or public accommodations.
- C. No agent, broker, labor union, employment agency or any other intermediary shall discriminate in making referrals, listings or providing information with regard to housing, employment or public accommodations.
- D. No person shall coerce, threaten or retaliate against a person for making a complaint or assisting in the investigation regarding a violation or alleged violation of this chapter, nor require, request, conspire with, assist or coerce another person to retaliate against a person for making a complaint or assisting in an investigation.
- E. No person shall conspire with, assist, coerce or request another person to discriminate in any manner prohibited by this chapter.

§ 402-7. Information and investigation.

No person shall provide false information to any police officer investigating an alleged violation of this chapter.

§ 402-8. Conciliation agreements.

In cases involving alleged violations of this chapter, the City may enter into agreements whereby persons agree to methods of terminating discrimination or to reverse the effects of past discrimination. A violation of such an agreement shall be a violation of this chapter. The City Attorney may commence a civil action to enforce a conciliation agreement.

§ 402-9. Discriminatory effects.

No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived race, color, religion, national origin, sex, age, height, weight, condition of pregnancy, source of income, family responsibilities, sexual orientation, marital status, physical or mental limitation, gender identity or HIV status for a person to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a necessity does not arise due to a mere inconvenience or because of suspected or actual objection to such a person by neighbors, customers, or other persons.

§ 402-10. Exceptions.

Notwithstanding anything contained in this chapter, the following practices shall not be violations of this chapter:

- A. For a religious organization or institution to restrict any of its facilities of housing or accommodations which are operated as a direct part of religious activities to persons of the denomination involved or to

restrict employment opportunities for officers, religious instructors and clergy to persons of that denomination.

- B. For the owner of an owner-occupied one-family or two-family dwelling, or a housing facility or public accommodation facility, respectively, devoted entirely to the housing and accommodation of individuals of one sex, to restrict occupancy and use on the basis of sex.
- C. To limit occupancy in a housing project or to provide public accommodations or employment privileges or assistance to persons of low income, over 55 years of age, or who are handicapped.
- D. To engage in a bona fide effort to establish an affirmative action program to improve opportunities in employment for minorities and women.
- E. To discriminate based on a person's age when such discrimination is required by state, federal or local law.
- F. To refuse to enter a contract with an unemancipated minor.
- G. To refuse to admit to a place of public accommodation serving alcoholic beverages a person under the legal age for purchasing alcoholic beverages.
- H. To refuse to admit persons under 18 years of age to a business providing entertainment or selling literature which the operator of said business deems unsuitable for minors.
- I. For an educational institution to limit the use of its facilities to those affiliated with such institution.
- J. To provide discounts on products or service to students, minors and senior citizens.
- K. To discriminate in any arrangement for the sharing of a dwelling unit.
- L. To restrict use of lavatories and locker room facilities on the basis of sex.
- M. For a governmental institution to restrict any of its facilities or to restrict employment opportunities based on duly adopted institutional policies that conform to federal and state laws and regulations.
- N. To restrict participation in an instructional program, athletic event or on an athletic team on the basis of age or sex.

§ 402-11. Violations and penalties.

- A. A violation of any provision of this chapter is a civil infraction, punishable by a fine of not more than \$500, plus the costs of investigation and prosecution. Upon a finding or an admission of responsibility, the court may issue and enforce any judgment, writ, or order necessary to enforce this chapter.

- B. Each day upon which a violation occurs shall constitute a separate violation.
- C. Nothing contained in this chapter shall be construed to limit in any way the remedies, legal or equitable, which are available to the City or any other person for the prevention or correction of discrimination. Private actions and remedies shall be in addition to any actions for a violation which the City may take.

From: [Marcus Peccia](#)
To: [Camille Lipke](#)
Subject: FW: FOIA
Date: Tuesday, September 11, 2018 5:04:53 PM
Attachments: [FOIA Regarding Non-Discrimination.pdf](#)
[NDO_REVISED_Final.pdf](#)

6 of 6

Marcus A. Peccia, City Manager
City of Cadillac
200 N. Lake Street
Cadillac, MI 49601
(231) 779-7344
Mobile (231) 884-3202
citymanager@cadillac-mi.net
<http://www.facebook.com/cityofcadillac>

From: Eleanor Getschman [<mailto:egetschman@cityofsaline.org>]
Sent: Monday, September 10, 2018 12:20 PM
To: Marcus Peccia
Subject: FW: FOIA

Good Afternoon Marcus,

Please see the attached non-discrimination ordinance as a response to your FOIA request from September 7th. As you will see, the ordinance was just passed in March 2018, and therefore we have no records at this time relating to complaints and processing. Please let me know if you have any questions

Thank you,
Elle

Elle Getschman
Admin. Assistant
City of Saline
100 North Harris Street
Saline MI, 48176
734-429-4907 ext. 2212
egetschman@cityofsaline.org

From: Terri Royal
Sent: Friday, September 7, 2018 3:56 PM
To: Eleanor Getschman <egetschman@cityofsaline.org>

Subject: FW: FOIA

Please see attached info.

Thank you!

Terri Royal, CMC
City Clerk
City of Saline
100 N. Harris St.
Saline, MI 48176
734.429.4907 ext. 2209
troyal@cityofsaline.org

From: Camille Lipke [<mailto:payroll@Cadillac-MI.net>]

Sent: Friday, September 07, 2018 3:51 PM

To: Terri Royal <troyal@cityofsaline.org>

Subject: FOIA

FOIA

Thank you.

Camille Lipke
City of Cadillac
231.779.7337 (Direct)
www.cadillac-mi.net



200 North Lake Street • Cadillac, Michigan 49601
231.775.0181 • fax 231.775.8755
www.cadillac-mi.net

September 5, 2018

Re: Request for Records Pertaining to Civil Rights/Non-Discrimination Program

To Whom It May Concern:

The City of Cadillac City Council has been considering the establishment of a new non-discrimination ordinance, and on their behalf, I am requesting the following:

- Copy of your community's Code specific to this issue
- Copy of your community's administrative procedure/policy for how complaints are processed within the operation of the organization (i.e., who do complaints go to, and how are they processed)
- Copy of any reports (last 3-years) indicating how many complaints were received
- Copy of any reports (last 3-years) indicating how much it cost to process and/or investigate complaints

I recognize that this request may not specifically or properly name the type of report or document your organization has regarding this topic, but would kindly request that if a document or record does exist that might be helpful, that it is provided in accordance with this request.

Please send all correspondence, including any notices regarding fees to my attention at mpeccia@cadillac-mi.net. Documents are preferred to be received electronically; however if necessary, they can also be mailed to my attention at Cadillac City Hall, 200 N. Lake Street in Cadillac, MI 49601.

Thank you in advance for all of your assistance!

A handwritten signature in blue ink, appearing to read "M. Peccia", is written over a horizontal line.

Marcus Peccia, City Manager

**CITY COUNCIL
CITY OF SALINE**
Washtenaw County, Michigan

ORDINANCE NO. 793

AN ORDINANCE AMENDING CHAPTER 46 OF THE SALINE CITY CODE BY ADDING SECTIONS 46-1 THROUGH 46-10 TO ARTICLE I TO PROTECT THE CIVIL RIGHTS OF INDIVIDUALS IN EMPLOYMENT, PUBLIC ACCOMMODATIONS, HOUSING, AND CITY CONTRACTS, INCLUDING PENALTIES AND OTHER CONSEQUENCES FOR VIOLATIONS, AND BY REPEALING ARTICLE II, ENTITLED "FAIR HOUSING"

The City of Saline Ordains:

Section 1. Amendment. Chapter 46, Article I of the Saline City Code is amended to read as follows:

ARTICLE I - NONDISCRIMINATION

46-1. – Purpose.

(A) The city intends that no individual be denied the equal protection of the laws; nor shall any individual be denied the enjoyment of his or her civil rights or be discriminated against because of race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression.

(B) The prohibitions against discrimination in this article are intended to supplement federal and state civil rights law prohibiting discrimination in the areas of employment, housing accommodations, and public accommodations.

(C) Nothing in this article is intended to require or shall be construed to require preferential treatment of any individual or group identified in subsection (A).

46-2. – Definitions and Interpretation.

(A) As used in this article:

(1) *Age* means chronological age beginning at birth, except as otherwise provided by law.

(2) *Alcoholic liquor* means that term as defined in section 105 of the Michigan liquor control code of 1998, 1998 PA 58, MCL 436.1105 or any statutory provision that replaces it.

(3) *Authorized City official* means a police officer, code enforcement personnel or any other City personnel designated and authorized by the City Manager, by any provision of the Saline City Code, or by state law to investigate or issue municipal civil infraction citations or municipal civil infraction violation notices.

(4) *Bona fide business necessity* means a policy, practice, or requirement reasonably necessary to the normal operation of the person's business. A bona fide business necessity does not arise (i) due to a mere inconvenience (ii) because of cost of compliance unless compliance with this article would be financially unfeasible, or (iii) because of suspected or actual objection by neighbors, customers, or other persons.

(5) *Bona fide occupational qualification* means an otherwise protected classification which is reasonably necessary to the normal performance of the particular position in a particular business or enterprise.

(6) *City Manager* means the individual appointed by the City Council as the City Manager, acting City Manager or interim City Manager and that individual's designee(s).

(7) *Complaint* means a verified, written statement alleging a violation of this article that is in a form and contains the information required in this article.

(8) *Contractor* means any person providing goods or services to the City, a City body, a City officer in that officer's official capacity, or a City employee in that employee's official capacity pursuant to a contract other than a contract of employment and includes all subcontractors. A person is not a contractor if the contract with the City (i) has as its principal purpose, making real

property available for use by the City or general public or (ii) is an unwritten contract for the City's incidental purchase goods or services that was made without a request for proposals, request for qualifications, or invitation to bid.

(9) *Controlled substance* means that term as defined in section 7104 of the Michigan public health code, 1978 PA 368, MCL 333.7104 or any statutory provision that replaces it.

(10) *Disability* means:

(a) One or more of the following:

(i) A determinable physical or mental characteristic of an individual, which may result from disease, injury, congenital condition of birth, or functional disorder, if the characteristic:

A. For purposes of section 46-3, substantially limits 1 or more of the major life activities of that individual and is unrelated to the individual's ability to perform the duties of a particular job or position or substantially limits 1 or more of the major life activities of that individual and is unrelated to the individual's qualifications for employment or promotion.

B. For purposes of section 46-4, is unrelated to the individual's ability to utilize and benefit from a place of public accommodation or public service.

C. For purposes of section 46-4, is unrelated to the individual's ability to utilize and benefit from educational opportunities, programs, and facilities at an educational institution.

D. For purposes of section 46-5, substantially limits 1 or more of that individual's major life activities and is unrelated to the individual's ability to acquire, rent, or maintain property.

(ii) A history of a determinable physical or mental characteristic described in subparagraph (i).

(iii) Being regarded as having a determinable physical or mental characteristic described in subparagraph (i).

(iv) Genetic information about an individual.

(b) For purposes of subsection (a) of this definition, major life activities include, but are not limited to, caring for oneself, performing manual tasks, seeing, hearing, eating, sleeping, walking, standing, lifting, bending, speaking, breathing, reading, concentrating, thinking, communicating, and working. Major life activities also include the operation of a major bodily function, including, but not limited to, functions of the immune system, normal cell growth, digestive, bowel, bladder, neurological, brain, respiratory, circulatory, endocrine, and reproductive functions.

(c) Disability does not include a determinable physical or mental characteristic caused by the current illegal use of a controlled substance by that individual. It also does not include a determinable physical or mental characteristic caused by the current use of alcoholic liquor by that individual, if that physical or mental characteristic negatively impacts that individual's ability to perform the duties of that individual's job.

(11) *Discriminate (discrimination)* means to make a decision, offer to make a decision or refrain from making a decision based in whole or in part on an individual's race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression. Discrimination also includes harassment based upon any protected class, including but not limited to sexual harassment.

(12) *Gender identity/expression* means gender-related identity and the appearance, mannerisms, behaviors, clothing, haircut or voice, and which may or may not conform to socially defined masculine or feminine behaviors and characteristics, regardless of sex assigned at birth.

(13)*Genetic information* means information about a gene, gene product, or inherited characteristic of an individual derived from the individual's family history or a genetic test.

(14)*Genetic test* means the analysis of human DNA, RNA, chromosomes, and those proteins and metabolites used to detect heritable or somatic disease-related genotypes or karyotypes for clinical purposes. A genetic test must be generally accepted in the scientific and medical communities as being specifically determinative for the presence, absence, or mutation of a gene or chromosome in order to qualify under this definition. Genetic test does not include a routine physical examination or a routine analysis including, but not limited to, a chemical analysis of body fluids unless conducted specifically to determine the presence, absence, or mutation of a gene or chromosome.

(15)*Harassment (harass)* means unwelcome verbal or physical conduct or communication based on a the victim's race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, gender identity/expression under any of the following conditions:

(a) Submission to the conduct or communication is made a term or condition either explicitly or implicitly to obtain employment, public accommodations, or housing accommodations;

(b) Submission to or rejection of the conduct or communication by an individual is used as a factor in decisions affecting the individual's employment, public accommodations or housing accommodations; or

(c) The conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or housing accommodations, or creating an intimidating, hostile, or offensive employment, public accommodations, or housing accommodations environment.

(16)*Housing accommodation* means any improved or unimproved real property or part thereof, dwelling unit or facility used or intended, arranged, or designed to be used or occupied as a home, domicile, or residence of one or more individuals.

(17)*Immediate family* means a spouse, parent, child or sibling.

(18)*Individual* means a human being.

(19)*Labor organization* means an organization of any kind, an agency or employee representation committee, group, association, or plan in which employees participate in or are members of, which exists for the purpose, in whole or in part, of dealing with employers concerning collective bargaining, grievances, labor disputes, wages, rates of pay, hours, or other terms or conditions of employment. For purposes of this definition, a labor organization need not be subordinate to or affiliated with a national or international labor organization.

(20)*Marital status* means the state of being married, unmarried, divorced or widowed.

(21)*National origin* means the nation of origin of an individual or that individual's ancestor.

(22)*Person* means any individual, agent, co-partnership, limited partnership, joint apprenticeship committee, labor organization, legal representative, mutual company, receiver, unincorporated organization, corporation, limited liability company, association, club, joint venture, joint stock company, estate, trust, trustee, government, government agency, any other legal entity, and any other group or combination acting as a unit.

(23)*Place of public accommodation or public accommodation* means an educational, governmental, health, day care, entertainment, cultural, recreational, refreshment, transportation, financial institution, accommodation, business or other facility of any kind, whose goods, services, facilities, privileges, advantages or accommodations are extended, offered, sold or otherwise made available to the public. Place of public accommodation includes a private club that is a (i) golf or country club, (ii) boating or yacht club, sports or athletic club, or (iv) dining club except a dining club that is a religious organization.

(24)*Private club* means an establishment that is not open to the public and is not a private club that is a place of public accommodation. A private club is one whose members' association with

each other and the club is sufficiently intimate, small and exclusive that it is not open to the public.

(25)*Real estate broker* means a person, whether licensed or not, who, for or with the expectation of receiving a consideration, lists, sells, purchases, exchanges, rents, or leases real property; who negotiates or attempts to negotiate any of those activities; who a person who represents that the person is as engaged in those activities; who negotiates or attempts to negotiate a loan secured or to be secured by a mortgage or other encumbrance upon real property; who is engaged in the business of listing real property in a publication; or a person employed by or acting on behalf of a real estate broker or salesperson.

(26)*Real estate transaction* means the sale, exchange, rental, lease, mortgaging or financing of real property, or an interest therein

(27)*Real property* means a building, structure, mobile home, real estate, land, mobile home park, trailer park, tenement, leasehold, or an interest in a real estate cooperative or condominium and includes, without limitation any housing accommodation.

(28)*Religious organization* means a religious corporation, association, educational institution or society owned, supported, controlled or managed by a particular religion a purpose of which is the propagation of that particular religion and the inculcation of religious values or the provision of charity; that primarily employs persons who share its religious tenets; and that primarily serves persons who share its religious tenets or, on a charitable basis, the broader community. Religious organization or institution includes, for illustration and not limitation: churches, mosques, synagogues and other houses of worship; and educational institutions affiliated with, controlled, or managed by those houses of worship or with articles of incorporation, bylaws and other documents stating an intention to inculcate its religious tenets in students.

(29)*Respondent* means a person against whom a complaint is filed under this article.

(30)*Sex or gender* includes, but is not limited to, marital status, pregnancy, childbirth, and medical conditions related to pregnancy or childbirth.

(31)*Sexual harassment* means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature under any of the following conditions:

- (a) Submission to the conduct or communication is made a term or condition either explicitly or implicitly to obtain employment, public accommodations, or housing accommodations.
- (b) Submission to or rejection of the conduct or communication by an individual is used as a factor in decisions affecting the individual's employment, public accommodations or housing accommodations.
- (c) The conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or housing accommodations, or creating an intimidating, hostile, or offensive employment, public accommodations, or housing accommodations environment.

(32)*Sexual orientation* means bisexuality, heterosexuality, or homosexuality.

(33)*Unfair housing practice* means:

- (a) For an owner, a real estate broker, or any other person to:
 - (i) Refuse to negotiate for a real estate transaction with a person because of race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression.
 - (ii) Refuse to engage in a real estate transaction with a person because of race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression.
 - (iii) Discriminate against a person in the terms, conditions or privileges of a real estate transaction or in the furnishing of facilities or services in connection therewith because

of race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression

(iv) Refuse to receive from, or to fail to transmit to, a person, a bona fide offer to engage in a real estate transaction because of race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression.

(v) Represent to a person that real property is not available for inspection, sale, rental or lease when in fact it is so available, or to fail to bring a property listing to the person's attention, or to refuse to permit that person to inspect real property, under reasonable conditions, because of race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression.

(vi) Publish or advertise, directly or indirectly, an intent to make a limitation, specification or discrimination based on race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression.

(vii) Use a form of application for a real estate transaction for the purpose of making a limitation, specification or discrimination based on race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression.

(viii) Make a record or inquiry in connection with a prospective real estate transaction which indicates the race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression of a person.

(ix) Offer, solicit, accept, use or retain a listing of real property with the understanding that a person may be discriminated against in a real estate transaction or in the furnishing of facilities or services in connection therewith with respect to race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression.

(b) A person to whom application is made for financial assistance in connection with a real estate transaction or for the construction, rehabilitation, repair, maintenance or improvement of real property, or a representative of such a person to:

(i) Discriminate against the applicant because of race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression.

(ii) Use a form of application for financial assistance or to make or keep a record of inquiry in connection with applications for financial assistance which indicated, directly or indirectly, the applicant's race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression.

(c) A person, for the purpose of inducing a real estate transaction from which the person may benefit financially, to:

(i) Initiate, instigate or participate in a series of representations, advertisements or contacts within a block, neighborhood or area designed to promote real estate transactions in the block, neighborhood or area based on the implication, directly or indirectly, that changes have occurred or will or may occur in the composition with respect to race, religion, color, national origin, gender, sex, age, height, weight, marital status, disability, sexual orientation, or gender identity/expression of the owners or occupants in the block, neighborhood or area in which the real property is located.

(ii) Solicit the sale or listing for sale of real property, by telephone, mail or personally, after the property owner has expressly requested the solicitor or the company the person represents to cease such solicitation.

(d) For a person to:

- (i) Retaliate or discriminate against a person because that person has opposed an unfair housing practice, or because that person has made a charge, filed a complaint, testified, assisted or participated in an investigation, proceeding or hearing under this article.
- (ii) Coerce a person to engage in an unfair housing practice.
- (iii) Interfere willfully with the performance of a duty or the exercise of a power by the any person investigating or taking action regarding an alleged violation of this article.
- (iv) Obstruct or prevent willfully a person from complying with the provisions of this article or an order issued hereunder.

(B) When construing this article, the following shall apply:

- (1) Except when necessary due to supplementation of state and federal law to address discrimination involving additional classifications not currently addressed by state and federal law, issues this article shall be construed and interpreted consistently with state and federal jurisprudence applicable to state and federal civil rights laws.
- (2) This article shall be construed and applied in a manner consistent with jurisprudence regarding freedom of speech, freedom of association, and free exercise of religion under the First Amendment to the United States Constitution.
- (3) If any provision or a part of any provision in this article is subsequently preempted by changes in state or federal law, any provisions and parts of provisions of this article not so preempted shall remain in effect.
- (4) If any provision or a part of any provision in this article is held to be invalid or unconstitutional by a court of competent jurisdiction, any provisions and parts of provisions of this article not held to be invalid or unconstitutional shall remain in effect.

46-3. – Employment.

Except as otherwise provided in this article or for a bona fide occupational qualification:

- (A) An employer, including the City, shall not discriminate in the employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any person.
- (B) A labor organization shall not discriminate in limiting membership, conditions of membership, or termination of membership of any person in any labor union or apprenticeship program.
- (C) An employment agency shall not discriminate in the procurement or recruitment of any person for possible employment with any employer.

46-4. – Public Accommodations.

- (A) Except as otherwise provided in this article no person shall discriminate in making available full and equal access to all goods, services, activities, privileges, advantages, and accommodations of any place of public accommodation.
- (B) No person shall prohibit a breast-feeding mother from or segregate a breast-feeding mother within any public accommodation where she and the child would otherwise be authorized to be. This provision shall not be construed to prevent a place of public accommodation from allowing a breast-feeding mother who desires to so do to segregate herself within the place of public accommodation or from providing segregated facilities for breast-feeding mothers who wish to use them.

46-5. – Housing Accommodations.

(A) A person shall not

- (1) Discriminate in leasing, selling, or otherwise making available any housing accommodation.

- (2) Discriminate in the terms, conditions, or privileges of a real estate transaction or in the furnishing of facilities or services in connection with any housing accommodation.
- (3) Discriminate in providing financing for the purchase, repair, or remodeling of any housing accommodations.
- (4) Discriminate in making referrals, listings or otherwise providing information regarding housing accommodations.
- (5) Engage in, participate in, or, with respect to any real property the person owns or has an interest in, allow others to engage in or participate in an unfair housing practice.

(B) Subsection (A) does not apply to:

- (1) The rental of a housing accommodation in a building that contains housing accommodations for not more than 2 families living independently of each other if the owner or a member of the owner's immediate family resides in one of the housing accommodations, or to the rental of a room or rooms in a single family dwelling by a person if the lessor or a member of the lessor's immediate family resides in the dwelling.
- (2) The rental of a housing accommodation for not more than 12 months by the owner or lessor if it was occupied by him or her and maintained as his or her home for at least 3 months immediately preceding occupancy by the tenant and is maintained as the owner's or lessor's legal residence.
- (3) With respect to the age provision and the familial status provision only, the sale, rental, or lease of housing accommodations meeting the requirements of federal, state, or local housing programs for senior citizens, or accommodations otherwise intended, advertised, designed or operated, bona fide, for the purpose of providing housing accommodations for persons 50 years of age or older.
- (4) Arrangements for the shared ownership, lease or occupancy of a housing accommodation.
- (5) The owner of a housing accommodation devoted entirely to the housing of individuals of one gender may restrict the occupancy of that housing accommodation on the basis of gender.

(C) Information relative to the marital status of an individual may be obtained when necessary for the preparation of a deed or other instrument of conveyance.

(D) This section does not preclude the use by a landlord of reasonable accommodations as required by section 102(2) of the Michigan handicappers' civil rights act, 1976 PA 220 MCL 37.1102.

46-6. – City Contracts.

(A) A person proposing to do contract with the City shall represent and covenant that the Contractor does not discriminate against employees or applicants for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment.

(B) All City contracts with Contractors shall include an agreement by the Contractor that the Contractor will not discriminate against employees or applicants for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment.

(C) All City contracts shall include a provision that if there is a misrepresentation in the representation and covenant required by subsection (A) or a failure to comply with the provision required in subsection (B) the City may, at its option, to do one or more of the following:

- (1) Terminate the contract in whole or part and/or refuse to make any required periodic payments under the contract.
- (2) Declare the Contractor ineligible for the award of any future City contracts for a specified length of time.

(3) Make the Contractor liable for all expenses the City incurs to obtain from other sources the materials, goods and services that were to be provided by the Contractor under the terminated contract.

46-7. – Other Practices.

Except as otherwise provided in this article:

(A) A person shall not adopt, enforce, or employ any policy or requirement, publish, post, circulate or otherwise broadcast any advertisement, sign, solicitation or notice which discriminates or suggests discrimination in providing employment, housing accommodations, or public accommodations.

(B) A person shall not coerce, threaten or retaliate against another for making a complaint or assisting in any investigation regarding a violation or alleged violation of this article. A person shall not require, request, conspire with, coerce or otherwise assist a person to retaliate against a person for making a complaint or assisting in an investigation.

(C) A person shall not conspire with, assist, coerce, or request another to discriminate in any manner prohibited by this article.

(D) A person shall not adopt, enforce, or employ any policy, practice or requirement which, while facially neutral, has the effect of discriminating in a manner prohibited by this article, except when there is a bona fide business necessity for such a policy, practice or requirement.

46-8. – Exceptions.

Regardless of any other provision of this article, the following shall not be a violation of this article:

(A) For a religious organization to limit its employment of individuals to those who share and practice its religious tenets and to engage in employment practices that are consistent with its religious tenets.

(B) A religious organization or institution may restrict the occupancy of any of its housing accommodations or place of public accommodations operated as a part of its religious activities to persons of its denomination or those who conform to the religious tenets of that religious organization or institution.

(C) To discriminate based on an individual's age when such discrimination is required by state, federal, or local law.

(D) To refuse to enter a contract with an un-emancipated minor.

(E) To refuse to admit to a place of public accommodation serving alcoholic beverages an individual under the legal age for purchasing alcoholic beverages.

(F) To refuse to admit individuals under 18 years of age to a business providing entertainment or selling literature which the operator of said business deems unsuitable for minors.

(G) For an educational institution to limit the use of its facilities to those affiliated with such institution.

(H) To provide discounts on products or service to students, minors, and senior citizens or others based on age.

(I) For a governmental institution to restrict any of its facilities or to restrict employment opportunities based on duly adopted institutional policies that conform to federal and state laws and regulations.

(J) To restrict participation in an instructional program, athletic event or on an athletic team on the basis of age, weight or sex.

(K) To restrict membership in a private club that is not a place of public accommodation.

(L) To restrict employment opportunities to members of one's family.

(M) To offer and limit participation in a health and retirement plan based on the requirements and provisions of the plan, provided the plan's requirements and provisions comply with all applicable laws, rules and regulations.

(N) For the City to allow use of its facilities or services by persons (i) who may be affiliated with or otherwise supported by a religious organization or institution which may espouse policies or practices inconsistent with the general intent of this article or (ii) who are not generally affiliated with or supported by a particular religious organization or institution, but who may espouse policies or practices inconsistent with the general intent of this article.

(O) To comply with the terms and conditions of any state or federal grant or loan agreement.

(P) To comply with any affirmative action laws, rules or regulations of any level of government.

(Q) To offer preferential treatment or benefits to any of the classes protected from discrimination under this article to the extent allowed by law.

46-9. – Complaints, Investigation and Enforcement.

(A) A person believing a violation of this article has occurred may file a complaint with the City Manager within 180 days of the date the alleged violation occurred. A complaint shall include at least the following:

(1) The complainant's name, address, telephone (cell) number, e-mail address and any other contact information.

(2) If the complainant is not the victim of the alleged violation, the victim's name, address, telephone (cell) number, e-mail address and any other contact information.

(3) To the extent known, the name, address, telephone (cell) number, e-mail address and any other contact information about the person alleged to have committed or participated in the violation of this article.

(4) The place(s) at which the alleged violation of this article occurred.

(5) To the extent known, the name, address, telephone (cell) number, e-mail address and any other contact information about any persons believed to have witnessed or to have information about the violation of this article.

(6) What provisions of this article were violated.

(7) Details about the incident(s), violation(s), person involved, and other information that may be needed or helpful in investigating the complaint.

(B) If the complaint alleges violations of state or federal laws, rules or regulations that are within the purview of any state or federal agency, the City Manager shall transmit and refer the complaint to that state or federal agency.

(C) If the complaint does not allege a violation of state or federal laws, rules or regulations or, in the City Manager's opinion, referral to a state or federal agency is otherwise inappropriate, the City Manager, in consultation with or direction of City personnel and the City attorney, shall:

(1) Investigate the complaint to determine whether or not a violation of this article occurred. Any investigation shall include communications with the respondent for an opportunity to provide any information the respondent deems appropriate and, if the respondent desires to do so, to file a written response to the complaint. A respondent shall have a right to a copy of the complaint before responding to the complaint.

(2) If the City Manager determines a violation of this article did not occur or cannot be reasonably proved, the City Manager shall notify the complainant in writing of that determination and that no action will be taken on the complaint. The complainant may pursue any other remedies for violation of this article.

(3) If the City Manager determines that a violation of this article occurred, the City Manager may do one or more of the following:

(a) Refer the matter for dispute resolution with an organization for conciliation or facilitative mediation services. A complainant or respondent failing to appear for a scheduled conciliation or mediation shall pay any costs resulting from such failure to appear. If a conciliation or mediation agreement is entered into under this section, the parties shall be

bound to its terms. A respondent's breach of such a conciliation or mediation agreement is a violation of this article.

(b) Refer the matter to an authorized City official to issue one or more municipal civil infraction citations and prosecute the matter as municipal civil infraction(s).

(c) If a violation of section 46-6, occurred:

(i) Recommend to the City Council termination of the contract and, if appropriate, payment of the City's expenses as provided in subsection 46-6(C).

(ii) Recommend to the City Council that the Contractor be ineligible for future City contracts for a period of time as provided in subsection 46-6(C)(2).

(d) Implement another remedy provided by this article.

(4) The City Manager shall at regular periods report to the City Council about the numbers and resolutions of any complaints filed under this article.

(5) To the extent not prohibited by law, in circumstances not involving dispute resolution under subsection 46-9(C)(3)(a), complaints shall be treated with the same confidentiality as complaints alleging or investigations about violations of other laws and ordinances.

46-10. – Violations as Municipal Civil Infractions; Other Remedies.

(A) A violation of this article is a municipal civil infraction. Persons responsible for such violations shall pay the costs of investigation and prosecution of the violation plus fines in the following minimum amounts.

(1) For a first violation of this article, the minimum fine shall be \$250.00.

(2) For a second violation of this article, the minimum fine shall be \$1,000.

(3) For a third or subsequent violation of this article, the minimum fine shall be \$2,500.00.

(B) A violation of this article shall be a nuisance *per se*.

(C) A plaintiff who successfully brings a civil action for a violation of this article may, in addition to any damages or other remedies resulting from such civil action, recover the plaintiff's costs to investigate, bring, and maintain that civil action through any appeals, including, without limitation, filing fees, discovery costs, fee paid to experts or investigators, and reasonable attorneys' fees. Such costs shall be determined and awarded in the same manner as for recoveries of such costs under 42 USC §1985.

(D) If a person violates this article, the City may bar that person from entering into license agreements and other contracts to use City parks and other City facilities for a period of time. This provision shall not preclude any individual from using City parks or facilities on a basis that does not require a license agreement or other contract with the City, from attending any City meetings generally open to the public, from seeking police or other emergency assistance from the City, or from entering City Hall or other City facilities to may payments, seek permits or engage in other business with the City.

Section 2. Repeal. Chapter 46, article II, of the Saline City Code, entitled "Fair Housing," is repealed.

Section 3. Effective Date. This ordinance shall become effective 20 days after its adoption or upon its publication, whichever occurs later.

Yeas: Dillon, Girbach, McClelland, Mitchell, TerHaar, Marl

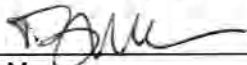
Nays: _____

Abstain: _____

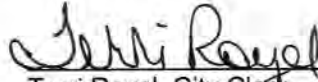
Absent: Ceo

CERTIFICATION

This is a true and complete copy of Ordinance No. 793 adopted at a regular meeting of the Saline City Council held on March 5, 2018.



Brian Marl, Mayor



Terri Royal, City Clerk

Adopted: March 5, 2018
Published: March 15, 2018
Effective: April 4, 2018

GRAPIDS 57653-1 464068v9

From: Michelle Herman
To: [Camille Lipke](#)
Subject: RE: FOIA
Date: Thursday, September 13, 2018 9:03:53 AM
Attachments: [Ordinance 234 Non-Discrimination Final.pdf](#)

As requested – this is what I have for you.

Have a good day.

Michelle Herman
City Clerk
City of Wayland
103 South Main Street
Wayland, MI 49348

Primary 269-792-2265
Fax 269-792-0387



Please think of the environment before printing this email!

The information contained in this electronic message and any attachments is intended for the use of the individual or entity to whom it is addressed and may contain legally privileged, confidential information and/or work product. If the reader of this message is not the intended recipient, you are hereby notified that any use, dissemination, distribution, or forwarding of this electronic message is strictly prohibited.

From: Camille Lipke [mailto:payroll@Cadillac-MI.net]
Sent: Friday, September 07, 2018 3:57 PM
To: mherman@cityofwayland.org
Subject: FOIA

FOIA

Thank you.

Camille Lipke
City of Cadillac
231.779.7337 (Direct)
www.cadillac-mi.net

ORDINANCE NO. 234

Non-Discrimination Ordinance

ADOPTED: May 18, 2015

**EFFECTIVE: 30 DAYS FOLLOWING
PUBLICATION AFTER ADOPTION**

An ordinance to protect the health, safety and general welfare of the citizens of the City of Wayland through the prohibition of discrimination; and to provide for civil sanctions and civil remedies for violation of this ordinance.

THE CITY OF WAYLAND, WAYLAND, MICHIGAN ORDAINS:

SECTION I
TITLE

This ordinance shall be known and may be cited as the “City of Wayland Non-Discrimination Ordinance”.

SECTION II
DEFINITIONS

For purposes of this ordinance, the following definitions shall apply:

- A. *Age*. Chronological age.
- B. *Contractor*. A person who by contract furnishes services, materials or supplies. “Contractor” does not include persons who are merely creditors or debtors of the City, such as those holding the City’s notes or bonds or persons whose notes, bonds or stock is held by the City.
- C. *Discriminate*. To make a decision, offer to make a decision or refrain from making a decision based in whole or in part on the actual or perceived race, color, sex, age, religion, national origin, height, weight, marital status, familial status, citizenship, physical or mental disability, gender identity, sexual orientation, or genetic information, of another person.
 - 1. Discrimination based on sex includes sexual harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when:
 - (a) Submission to such conduct or communication is made a term or condition either explicitly or implicitly to obtain employment, public accommodations, or housing.

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(b) Submission to rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment, public accommodations or housing.

(c) Such conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or housing, or creating an intimidating, hostile, or offensive employment, public accommodations, or housing environment.

2. Discrimination based on actual or perceived physical or mental limitation includes discrimination because of the use by an individual of adaptive devices or aids.

D. Educational institution. A public or private institution or a separate school or department thereof, including an academy, college, elementary or secondary school, extension course, kindergarten, nursery, local school system, or university, or a business, nursing, professional, secretarial, technical, or vocational school. For the purposes of this definition, educational institution includes an agent of an educational institution.

E. Employee. An individual who is hired for a wage, salary, fee, payment or other remuneration to perform work for an employer.

F. Employer. Any person employing one (1) or more persons.

G. Employment Agency. A person who undertakes to procure employees for an employer or procures opportunities for individuals to be employed by an employer.

H. Familial Status. The status of being in a family.

I. Family. This term shall mean a "traditional family" or "functional family" as defined below:

1. Traditional family — an individual or group of two or more persons related by blood, marriage or adoption, together with foster children, who are domiciled together as a single domestic housekeeping unit in a dwelling.

2. Functional family — a collective number of individuals domiciled together in one dwelling whose relationship is of a permanent and distinct domestic character, with a demonstrable and recognizable bond characteristic of a cohesive unit, and who are in fact cooking and living as a single non-profit housekeeping unit.

A "functional family" shall not include any of the following:

(a) Any group of individuals whose domestic relationship is transitory, temporary, or resort/seasonal in nature or character.

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- (b) Any group of individuals whose association is essentially for convenience or economics or for the limited duration of their education, training or a similar determinate period of time.
- J. Gender identity.* An individual's appearance, expression, identity or behavior as being either male or female, whether or not that appearance, expression, identity or behavior is different from that which is traditionally associated with the individual's designated gender at birth.
- K. Genetic Information:* information about an individual's genetic tests and the genetic tests of an individual's family members, as well as information about the manifestation of a disease or disorder in an individual's family members.
- L. Housing Facility.* Any dwelling unit or facility used or intended or designed to be used as the home, domicile or residence of one or more persons including, but not limited to, a house, apartment, rooming house, housing cooperative, hotel, motel, tourist home, retirement home or nursing home.
- M. Labor Organization.* An organization of any kind or structure in which employees participate or are members and which exists for the purposes, in whole or part, of dealing with employers concerning the terms and conditions of employment of its participants or members, whether or not such organization is subordinate to or affiliated with a national or international labor organization.
- N. Marital Status.* The state of being married, never married, divorced, or widowed.
- O. Perceived.* Refers to the perception of the person who acts, and not to the perception of the person for or against whom the action is taken.
- P. Person.* An individual, agent, association, corporation, labor organization, legal representative, partnership, receiver, trust or any other legal or commercial entity.
- Q. Physical or Mental Disability.* A determinable physical or mental characteristic resulting from disease, injury, congenital condition of birth, or functional disorder and is unrelated to one's ability to safely perform the work involved in jobs or positions available to such person for hire or promotion; or unrelated to one's ability to acquire, rent and maintain property; or unrelated to one's ability to utilize and benefit from the goods, services, activities, privileges and accommodations of a place of public accommodation. "Physical or Mental Disability" does not include any condition caused by the current illegal use of a controlled substance or the use of alcohol liquor by an individual.
- R. Place of Public Accommodation.* An educational, governmental, health, entertainment, cultural, recreational, refreshment, transportation, or financial institution, business or facility of any kind, whose goods, services, facilities, privileges, advantages or accommodations are extended, offered, sold, or otherwise made available to the public.

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- S. *Private club.* An establishment that is not open to the public. A private club is one whose members' association with each other and the club is sufficiently intimate, small and exclusive that it is not open to the public.
- T. *Religious organization.* A religious corporation, association, educational institution or society whose purpose or character is directed toward the propagation of a particular religion, the inculcation of religious values or the provision of charity; primarily employs persons who share its religious tenets; and primarily serves persons who share its religious tenets or, on a charitable basis, the broader community. Religious organization includes, for illustration and not limitation: churches, mosques, synagogues and other houses of worship; any subsidiary organizations; educational institutions affiliated with, controlled, or managed by those houses of worship or with articles of incorporation, bylaws and other documents stating an intention to inculcate its religious tenets in students; and faith-based organizations that provide charitable services to the public.
- U. *Sexual Orientation.* Male or female homosexuality, heterosexuality or bisexuality, whether by orientation or practice. Sexual orientation does not include the physical or sexual attraction to a minor by an adult.
- V. *City Manager:* The City Manager, or his or her designee.

SECTION III

DISCRIMINATORY HOUSING PRACTICES

Except as otherwise provided in this ordinance:

- A. A person shall not discriminate in leasing, selling, or otherwise making available any housing accommodation.
- B. A person shall not discriminate in the terms, conditions, or privileges of a real estate transaction or in the furnishing of facilities or services in connection with any housing accommodation.
- C. A person shall not discriminate in providing financing for the purchase, repair, or remodeling of any housing accommodations.
- D. A person shall not discriminate in making referrals, listings or otherwise providing information regarding housing accommodations.

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SECTION IV

DISCRIMINATORY PUBLIC ACCOMMODATION PRACTICES

Except as otherwise provided in this ordinance, no person shall discriminate in making available full and equal access to all goods, services, activities, privileges, and accommodations of any place of public accommodation.

SECTION V

DISCRIMINATORY EMPLOYMENT PRACTICES

Except as otherwise provided in this ordinance:

- A. No employer shall discriminate in the employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any person.
- B. No labor organization shall discriminate in limiting membership, conditions of membership, or termination of membership of any person in any labor union or apprenticeship program.
- C. No employment agency shall discriminate in the procurement or recruitment of any person for possible employment with an employer.

SECTION VI

OTHER PROHIBITED PRACTICES

- A. No person shall adopt, enforce or employ any policy or requirement, publish, post or broadcast any advertisement, sign or notice which discriminates or indicates discrimination in providing housing, employment or public accommodations.
- B. No person shall discriminate in the publication or distribution of advertising material, information or solicitation regarding housing, employment or public accommodations.
- C. No agent, broker, labor organization, employment agency or any other intermediary shall discriminate in making referrals, listings or providing information with regard to housing, employment or public accommodations. A report of the conviction of any such person for a violation of this ordinance shall be made to the applicable licensing or regulatory agency for such person or business.
- D. No person shall coerce, threaten or retaliate against a person for making a complaint or assisting in the investigation regarding a violation or alleged violation of this ordinance, nor

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COUNTY OF ALLEGAN, MICHIGAN**

require, request, conspire with, assist or coerce another person to retaliate against a person for making a complaint or assisting in an investigation.

- E. No person shall conspire with, assist, coerce or request another person to discriminate in any manner prohibited by this ordinance.

SECTION VII

EXCEPTIONS

The prohibitions against discrimination as provided for in this ordinance shall not be deemed preempted by federal or state law, but are intended to supplement state and federal civil rights law prohibiting discrimination in the areas of employment, public accommodations, and housing. However, this ordinance shall be construed and applied in a manner consistent with First Amendment jurisprudence regarding the freedom of speech and exercise of religion.

Nothing in this ordinance permits or requires access to any place of public accommodation for the purpose or intent of engaging in criminal conduct.

Nothing in this ordinance shall require the construction or provision of unisex, single-user restrooms, changing rooms, locker rooms, or shower facilities.

Notwithstanding anything contained in this ordinance, the following practices shall not be violations of this ordinance:

- A. For a religious organization to restrict employment opportunities, educational facilities, or occupancy of housing facilities that are operated as a direct part of its religious activities to persons who are members of or who conform to the moral tenets of that religious organization or the denomination to which it belongs.
- B. For the owner of a housing facility or public accommodation facility, respectively, devoted entirely to the housing and accommodation of individuals of one sex, to restrict occupancy and use on the basis of sex.
- C. To limit occupancy in a housing project or to provide public accommodations or employment privileges or assistance to persons of low income, persons over fifty-five (55) years of age or disabled persons.
- D. To engage in a bona fide effort to establish an affirmative action program to improve opportunities in employment for minorities and women consistent with applicable state and federal law.

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- E. To discriminate based on a person's age when such discrimination is required by state, federal, or local law.
- F. To refuse to enter into a contract with an unemancipated minor.
- G. To refuse to admit to a place of public accommodation serving alcoholic beverages a person under the legal age for purchasing alcoholic beverages.
- H. To refuse to admit persons under eighteen (18) years of age to a business providing entertainment or selling literature which the operator of said business deems unsuitable for minors.
- I. For an educational institution to limit the use of its facilities to those affiliated with such institution.
- J. To provide discounts on products or services to students, or on the basis of age.
- K. To discriminate in any arrangement for the shared ownership, lease or residency of a dwelling unit.
- L. For a governmental institution to restrict any of its facilities or to restrict employment opportunities based on duly-adopted institutional policies that conform to federal and state laws and regulations.
- M. To restrict participation in an instructional program, athletic event or on an athletic team on the basis of age, sex, height, or weight.
- N. To restrict membership in a private club.
- O. To the employment of an individual by one's family.
- P. To the rental of housing facilities in a building which contains dwelling units for not more than two families living independently of each other if the owner of the building or a member of the owner's family resides in one of the dwelling units, or to the rental of a room or rooms in a one-family dwelling by an individual if the lessor or a member of the lessor's family resides in the dwelling.
- Q. For an employer offering health or pension plans to provide for marital or familial status limitations in such plans provided those limitations conform to state and federal laws, rules and regulations. Further, nothing in this ordinance shall be construed or interpreted to either

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require, or prohibit, a private employer from offering employment benefits to the same-sex partner of an employee.

- R. For the City to allow use of its facilities or services by persons that may be affiliated with, or otherwise supported by, a religious organization, which may espouse policies or practices inconsistent with the general intent of this ordinance. Further, this ordinance shall not prohibit the City from allowing use of its facilities or services by persons not generally affiliated with or supported by a particular religious organization, but who may espouse policies or practices inconsistent with the general intent of this ordinance.

SECTION VIII

INFORMATION AND INVESTIGATION

- A. Any person claiming to be discriminated against in a manner prohibited by this ordinance may, within 180 days of the alleged violation, file a signed, written complaint with the City Manager, specifying in detail the names, dates, known witnesses and other pertinent facts relevant to the alleged violation.
- B. For any complaint alleging a violation of state or federal law, the City Manager shall refer the complainant to the appropriate state or federal agency responsible for investigation and enforcement of such alleged violation. For any other complaint, the City Manager shall undertake an investigation of the alleged violation.
1. No person shall provide false information to any City official or employee investigating a complaint regarding a violation of this ordinance.
 2. In the course of the investigation, a person may be requested to produce books, papers, records or other documents which may be relevant to a violation or alleged violation of this ordinance. If said person does not comply with such request, the City Manager may apply for a judicial order requiring production of said materials.
- C. After the completion of an investigation, the City Manager shall give written notice of the result of the investigation to the person who filed the complaint and the person accused of the violation. If the investigation establishes that a violation of this ordinance occurred, the City Manager shall, in his or her sole discretion, attempt to resolve the matter by conciliation and/or refer the complaint to the City Police Department and/or the City Attorney for prosecution.
- D. In cases involving alleged violations of this ordinance, the City Manager may enter into agreements whereby persons agree to methods of terminating discrimination or to reverse the

**CITY OF WAYLAND
COUNTY OF ALLEGAN, MICHIGAN**

effects of past discrimination. A violation of such a conciliation agreement shall be a violation of this ordinance.

SECTION IX

SANCTIONS

Any person, firm, association, partnership, corporation, or governmental entity who violates any of the provisions of this ordinance shall be deemed to be responsible for a municipal civil infraction as defined by Michigan Statute which shall be punishable by civil fine determined in accordance with the following schedule:

	Minimum Fine	Maximum Fine
1st Offense within 3-year period*	\$ 75.00	\$500.00
2nd Offense within 3-year period*	\$150.00	\$500.00
3rd Offense within 3-year period*	\$325.00	\$500.00
4th or More Offense within 3-year period*	\$500.00	\$500.00

* Determined on the basis of the date of commission of the offense(s).

Additionally, the violator shall pay costs which may include all expenses, direct and indirect, to which the City of Wayland has incurred in connection with the municipal civil infraction. In no case, however, shall costs of less than \$9.00 nor more than \$500.00 be ordered. In addition, the City of Wayland shall have the right to proceed in any court of competent jurisdiction for the purpose of obtaining an injunction, restraining order, or other appropriate remedy to compel compliance with this ordinance. Each day that a violation of this ordinance exists shall constitute a separate violation of this ordinance.

SECTION X

SEVERABILITY

Should any part of this ordinance be declared unconstitutional, illegal or of no force and effect by a court of competent jurisdiction, such portion thereof shall not be deemed to affect the validity of any other part or portion of this ordinance.

**CITY OF WAYLAND
COUNTY OF ALLEGAN, MICHIGAN**

SECTION XI

The vote in favor of this Ordinance was:

YEAS: Councilmember(s) Banas, Bivins, Mathis, Rose, Sloan and Mayor Bala

NAYS: None

ABSENT: Councilmember(s) Antel

ORDINANCE DECLARED ADOPTED.

CERTIFICATION

STATE OF MICHIGAN)
) ss.
COUNTY OF ALLEGAN)

I hereby certify that the foregoing is a true and complete copy of an ordinance adopted by the City Council of the City of Wayland at a regular meeting held on the date first stated above, and I further certify that the public notice of such meeting was given in pursuant to and in full compliance with the City Charter and the Open Meetings Act, Public Act 267 of 1976, as amended. I further certify that the Ordinance was published in the Allegan County News on June 4, 2015.

Michelle Herman, City Clerk

EFFECTIVE DATE

This ordinance shall take effect 30 days following publication following adoption.

22782252.1\094854-00002

From: [Marcus Peccia](#)
To: [Camille Lipke](#)
Subject: FW: Delhi Twp. FOIA
Date: Tuesday, September 11, 2018 5:00:53 PM
Attachments: [image003.png](#)
[2018-034 City of Cadillac-Peccia, Marcus.pdf](#)

1 of 6

Marcus A. Peccia, City Manager
City of Cadillac
200 N. Lake Street
Cadillac, MI 49601
(231) 779-7344
Mobile (231) 884-3202
citymanager@cadillac-mi.net
<http://www.facebook.com/cityofcadillac>

From: Amy Finch [mailto:Amy.Finch@delhitownship.com]
Sent: Monday, September 10, 2018 3:21 PM
To: Marcus Peccia
Subject: Delhi Twp. FOIA

Thank you for your FOIA request received on September 7, 2018 via email. Attached is the data you requested. There is no charge for this request.

Please let me know you received this successfully.

Delhi Charter Township FOIA Procedures and Guidelines can be found at:
http://www.delhitownship.com/forms/clerk/Delhi_Township_FOIA_Procedures_Guidelines.pdf

Amy D. Finch, CMC
Asst. Twp. Clerk, Deputy Clerk
Delhi Charter Township
2074 Aurelius Road
Holt, MI 48842
517.694.2135

[#Delhi175](#)



#HappyinHolt - Holt was named in the top 10 happiest towns in Michigan!



200 North Lake Street • Cadillac, Michigan 49601
231.775.0181 • fax 231.775.8755
www.cadillac-mi.net

FOIA No.: 2018-034
Due: 09/14/2018

September 5, 2018

Re: Request for Records Pertaining to Civil Rights/Non-Discrimination Program

To Whom It May Concern:

The City of Cadillac City Council has been considering the establishment of a new non-discrimination ordinance, and on their behalf, I am requesting the following:

- Copy of your community's Code specific to this issue
- Copy of your community's administrative procedure/policy for how complaints are processed within the operation of the organization (i.e., who do complaints go to, and how are they processed)
- Copy of any reports (last 3-years) indicating how many complaints were received
- Copy of any reports (last 3-years) indicating how much it cost to process and/or investigate complaints

I recognize that this request may not specifically or properly name the type of report or document your organization has regarding this topic, but would kindly request that if a document or record does exist that might be helpful, that it is provided in accordance with this request.

Please send all correspondence, including any notices regarding fees to my attention at mpeccia@cadillac-mi.net. Documents are preferred to be received electronically; however if necessary, they can also be mailed to my attention at Cadillac City Hall, 200 N. Lake Street in Cadillac, MI 49601.

Thank you in advance for all of your assistance!

A handwritten signature in blue ink, appearing to read "M. Peccia", is written over a horizontal line.

Marcus Peccia, City Manager

September 10, 2018

City of Cadillac Michigan
Marcus Peccia, City Manager
200 North Lake Street
Cadillac, MI 49601

mpeccia@cadillac-mi-net

Re: Freedom of Information Act Request

Dear Mr. Peccia:

The Charter Township of Delhi is in receipt of your e-mail dated September 7, 2018 regarding a request under the Michigan Freedom of Information Act ("FOIA"). You requested information including but not limited to Delhi Township's Non-Discrimination Ordinance.

I hereby certify, pursuant to Section 5(4)(b) of the FOIA, that your FOIA request is denied, in part because, to the best of my knowledge, information and belief, no public records exist as of September 10, 2018 that pertain to 1) copy of any reports (last 3-years) indicating how many complaints were received and 2) copy of any reports (last 3-years) indicating how much it cost to process and/or investigate complaints. MCL 15.235(4)(b).

**RIGHT TO APPEAL DISCLOSURE DENIAL
AND RECOVER ATTORNEYS FEES AND COSTS**

If a public body makes a final determination to deny all or a portion of a FOIA request, the requesting person may do one of the following at his or her option:

- (1) Submit to the "head of the public body" (the Governing Board) a written appeal that specifically states the word "appeal" and identifies the reason or reasons for reversal of the disclosure denial; or
- (2) Commence an action in the circuit court to compel the public body's disclosure of the public records.

If a person asserting the right to inspect, copy, or receive a copy of all or a portion of a public record prevails in an action commenced under section 10 of the FOIA, the court shall award reasonable attorneys' fees, costs, and disbursements. If the person or public body prevails in part, the court may, in its discretion, award all or an appropriate portion of reasonable attorneys' fees, costs, and disbursements. The award shall be assessed against the public body

liable for damages that kept or maintained the public record as part of its public function.

If the circuit court determines in an action commenced under section 10 of the FOIA that the Township arbitrarily and capriciously violated the FOIA by refusal or delay in disclosing or providing copies of a public record, or that the Township willfully and intentionally failed to comply with the FOIA or otherwise acted in bad faith, the court shall award, in addition to any actual or compensatory damages, punitive damages as prescribed in the FOIA to the person seeking the right to inspect or receive a copy of a public record. The damages shall not be assessed against an individual, but shall be assessed against the next succeeding public body that is not an individual and that kept or maintained the public record as part of its public function.

A full explanation of your right to seek either appeal or judicial review is set forth in Section 10 of the FOIA, MCL 15.240.

A copy of the Township's FOIA Procedures and Guidelines is available on the Township's website at www.delhitownship.com.

Very truly yours,

By:

A handwritten signature in black ink, appearing to read "Evan Hope", is written over a faint circular official stamp.

Evan Hope, Clerk
FOIA Coordinator
Delhi Charter Township

**DELHI CHARTER TOWNSHIP
INGHAM COUNTY, MICHIGAN
ORDINANCE NO. 125**

At a duly scheduled and noticed meeting of the Township Board of the Charter Township of Delhi, Ingham County, Michigan, held at the Delhi Township Offices on October 1, 2013 at 7:30 p.m., Township Board Member Trustee John Hayhoe moved to adopt the following Ordinance, which motion was seconded by Township Board Member Clerk Evan Hope:

AN ORDINANCE OF THE CHARTER TOWNSHIP OF DELHI, INGHAM COUNTY, MICHIGAN, PROVIDING THAT THE CODE OF ORDINANCES, CHARTER TOWNSHIP OF DELHI, MICHIGAN, BE AMENDED BY ADDING A NEW CHAPTER 20 ("NON-DISCRIMINATION") TO PROHIBIT DISCRIMINATORY PRACTICES; PROVIDE DEFINITIONS; ESTABLISH PROCEDURES FOR INVESTIGATIONS AND CONCILIATION AGREEMENTS; REQUIRE TOWNSHIP CONTRACTORS TO ABIDE BY NON-DISCRIMINATION; PROVIDE PENALTIES; REPEAL ORDINANCES AND PORTIONS OF ORDINANCES INCONSISTENT WITH THIS ORDINANCE; AND PROVIDE AN EFFECTIVE DATE HEREOF.

THE TOWNSHIP BOARD OF TRUSTEES FOR THE CHARTER TOWNSHIP OF DELHI
HEREBY ORDAINS:

Section 1. Addition of Chapter 20. The Code of Ordinances, Charter Township of Delhi, Michigan (or Delhi Charter Township Code), is hereby amended by adding a new Chapter, Chapter 20, which shall read as follows.

CHAPTER 20 – NON-DISCRIMINATION

ARTICLE I – IN GENERAL

Sec. 20-1. Intent.

It is the intent of the Township that no person be denied equal protection of the laws; nor shall any person be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental limitation, source of income, family responsibilities, sexual orientation, gender identity/expression, genetic information

or any protected status. Nothing contained in this Chapter shall be construed to prohibit any affirmative action policies passed by any level of government.

Sec. 20-2. Definitions.

The following words, terms and phrases, when used in this Chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Age. Chronological age.

Complaint Review Committee. Four individuals responsible for reviewing complaints. One member will be a member of the Board, one member will be the Township Manager, one member will be the Township Human Resource Director, and one member shall be a citizen of Delhi Township. The committee may have more members or alternates as determined by the Township Board.

Agreement. An agreement entered into between the person alleged to have been discriminated against and the person alleged to have engaged in a prohibited practice under this Chapter, whereby the persons agree to methods of resolving a complaint, terminating discrimination or reversing the effects of past discrimination.

Contractor. A person who by contract furnishes services, materials or supplies. "Contractor" does not include persons who are merely creditors or debtors of the Township, such as those holding the Township's notes or bonds or persons whose notes, bonds or stock is held by the Township.

Discriminate. To make a decision, offer to make a decision or refrain from making a decision based in whole or in part on the actual or perceived race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental limitation, source of income, family responsibilities, sexual orientation, gender identity/expression, or protected status.

Discrimination based on actual or perceived physical or mental limitation includes discrimination because of the use by an individual of adaptive devices or aids.

Disability. Disability means that term as defined at Section 103(d) of the Persons with Disabilities Civil Rights Act, Public Act No. 220 of 1976 (MCL 37.1103(d)).

Employer. A person employing one or more persons.

Employment agency. A person regularly undertaking, with or without compensation, to procure, refer, recruit, or place an employee for an employer, or

to procure, refer, recruit, or place for an employer or person the opportunity to work for an employer and includes any agent of that person.

Gender identity/expression. A person's actual or perceived gender, including a person's gender identity, self-image, appearance, expression, or behavior, including whether that gender identity, self-image, expression, or behavior is different from that traditionally associated with the person's sex at birth.

Harassment. To have physical conduct or communication with refers to an individual protected under this article, when such conduct or communication demeans, disparages or dehumanizes and has a purpose or effect of substantially interfering with an individuals employment, public accommodations or public services or housing or creating an intimidating, hostile or offensive employment public accommodations, public services or housing environment.

Housing facility. Any dwelling unit or facility used for a person to regularly stay and store personal items. Housing facility includes, but is not limited to, a house, apartment, rooming house, housing cooperative, hotel, motel, tourist home, retirement home or nursing home.

Labor organization. Includes an organization of any kind, an agency or employee representation committee, group, association, or plan in which employees participate and which exists for the purpose, in whole or in part, of dealing with employees concerning grievances, labor disputes, wages, rate of pay, hours, or other terms or conditions of employment.

Marital status. The state of being married, separated, unmarried, divorced or widowed.

Person. Shall mean an individual, agent, association, organization, corporation, limited liability company, partnership or other unincorporated or incorporated public or private entity of any kind, including any other legal, commercial, or governmental entity or agency.

Physical limitation. A limitation of physical capabilities unrelated to one's ability to safely perform the work involved in jobs or positions available to such person for hire or promotion; a limitation of physical capabilities unrelated to one's ability to acquire, rent and maintain property; or a limitation of mental capabilities unrelated to one's ability to utilize and benefit from the goods, services, activities, privileges and accommodations of a place of public accommodation. "Physical limitation" includes, but is not limited to, blindness or partial sightedness, deafness or hearing impairment, muteness, partial or total absence of physical member, speech impairment and motor impairment. "Physical limitation" does

not include any condition caused by the current illegal use of alcohol, prescription drugs or a controlled substance.

Place of public accommodation. An educational, governmental, health, entertainment, cultural, recreational, refreshment, transportation, financial institution, accommodation, business or other facility of any kind, whose goods, services, facilities, privileges, advantages or accommodations are extended, offered, sold or otherwise made available to the general public, or which receives financial support through the solicitation of the general public or through governmental subsidy of any kind, but shall not mean any facility not open or accessible to the general public. By way of example, day care operations being conducted in a private home shall not be considered a place of public accommodation.

Sex discrimination. Discrimination because of sex includes sexual harassment which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when:

- (1) Submission to such conduct or communication is made a term or condition either explicitly or implicitly to obtain employment, public accommodations, or public services or housing.
- (2) Submission to or rejection of such conduct or communication by an individual is used as a factor in decisions effecting such individuals employment, public accommodations or public services or housing.
- (3) Such conduct or communication has a purpose or effect of substantially interfering with an individuals' employment, public accommodations or public services, or housing or creating an intimidating, hostile, or offensive employment, public accommodation, public service, or housing environment.

Sexual orientation. Being or regarded as being heterosexual, homosexual, bisexual, or having a history of such identification.

Sec. 20-3. Employment.

(a) It is unlawful for an employer to:

- (1) Limit, segregate, classify, fail or refuse to hire, to recruit, to discharge, or otherwise discriminate against an individual with respect to employment, compensation, or a term, condition, or privilege of employment, including a benefit plan or system, because of religion, race, color, national origin, age, sex, height, weight, marital status, sexual orientation, gender identity/expression, genetic information or expression, any protected status, or because of the use by an individual of adaptive devices or aids.

- (2) Fail or refuse to hire, recruit, or promote an individual on the basis of any physical or mental limitations that are not directly related to the requirements of the specific job.
 - (3) Discharge or take other discriminatory action against an individual on the basis of any physical or mental examinations that are not directly related to the requirements of the specific job.
 - (4) Fail or refuse to hire, recruit, or promote an individual when adaptive devices or aids may be utilized thereby enabling that individual to perform the specific requirements of the job.
 - (5) Discharge or take other discriminatory action against an individual when adaptive devices or aids may be utilized thereby enabling that individual to perform the specific requirements of the job.
 - (6) Discriminate against a person with respect to hire, tenure, terms, conditions, or privileges of employment because of an arrest, detention, or disposition of a violation of a misdemeanor, felony, or local ordinance substantially corresponding to state law, when a conviction did not result.
 - (7) Make, keep or use an oral inquiry, form of application, or record that elicits or attempts to elicit information concerning the religion, race, color, national origin, age, sex, height, weight, marital status, sexual orientation, gender identity/expression, genetic information, protected status, or because of the use by an individual of adaptive devices or aids except where applicable under federal and state law, or local ordinance.
- (c) An employer, labor organization, or employment agency shall not print, circulate, post, mail, or otherwise cause to be published a statement, advertisement, notice, or sign relating to employment by the employer, or relating to membership in or a classification or referral for employment by the labor organization, or relating to a classification or referral for employment by the employment agency, which indicates a preference, limitation, specification, or discrimination, based on religion, race, color, national origin, age, sex, height, weight, marital status, sexual orientation, gender identity or expression, or genetic information, protected status, or the need for any reasonable accommodations, including but not limited to the use by an individual of adaptive devices or aids.

- (d) This section shall not apply to the employment of an individual by his/her parent, spouse, or child.
- (e) A contract or agreement to which the Township, its department, or unit thereof, is a party shall contain a provision by the contractor and his/her subcontractors not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, including a benefit plan or system or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, disability, sexual orientation, gender identity/expression, genetic information or any protected status or use by an individual of adaptive devices or age. Breach of such provision may be regarded as a material breach of the contract or agreement.
- (f) This section is also applicable to labor organizations, employment agencies, apprenticeships, and job training programs. In addition, a labor organization shall not discriminate in its membership practices nor fail to fairly represent its membership in a grievance process because of race, color, religion, national origin, age, sex, height, weight, marital status, disability, sexual orientation, gender identity/expression, genetic information or any protected status or use by an individual of adaptive devices or age.

Sec. 20-4. Housing.

- (a) No person shall discriminate in referring, leasing, selling, renting, showing, advertising, pricing, offering, inspecting, listing, or otherwise making available any real property, including discrimination in providing information and receiving or communicating a bona fide offer on any real property.
- (b) No person shall discriminate in: (1) the application, conditions, or granting of mortgages or other financing; (2) the offer, conditions, or sale of home-owner or rental insurance; or (3) the contracting of construction, rehabilitation, maintenance, repair, or other improvement of any housing facility.
- (c) No person shall refuse to lend money for the purchase or repair of any real property or insure any real property solely because of the location in the Township of such real property, except for legitimate non-discriminatory reasons related to actual risks associated with the property itself, such as being within a floodplain.

- (d) No person shall promote any sale, rental, lease, sublease, exchange, transfer, or assignment of real property by representing that demographic changes are occurring or will occur in an area with respect to any illegitimate or discriminatory characteristics.
- (e) No person shall indicate, communicate, or otherwise represent to another person that any real property or interest therein is not available for inspection, sale, rental, or lease knowing in fact it is available, including failing to make a person aware of a real property listing, refusing to permit inspection of real property, and representing that a property has been sold when in fact it has not.

Sec. 20-5. Public accommodation.

- (a) No person shall discriminate in making available full and equal access to all goods, services, activities, privileges and accommodations of any place of public accommodation or public service because of race, color, religion, national origin, age, sex, height, weight, marital status, disability, sexual orientation, gender identity/expression, genetic information or any protected status or use by an individual of adaptive devices or age.
- (b) No person shall print, calculate, post, mail, or otherwise cause to be published a statement, advertisement, notice, or sign which indicates that the full and equal enjoyment of the goods, services, facilities, privileges, advantages, or accommodations of a place of public accommodation or public service will be refused, withheld from, or denied an individual because of race, color, religion, national origin, age, sex, height, weight, marital status, disability, sexual orientation, gender identity/expression, genetic information or any protected status or use by an individual of adaptive devices or age, or that individuals patronage of, or presence at a place of public accommodation, is objectionable, unwelcome, unacceptable, or undesirable because of race, color, religion, national origin, age, sex, height, weight, marital status, disability, sexual orientation, gender identity/expression, genetic information or any protected status or use by an individual of adaptive devices or age.

Sec. 20-6. Duty to accommodate persons with disabilities.

A person shall accommodate a person with disabilities for purposes of employment, public accommodation, public service, or housing unless a person demonstrates that the accommodation would impose an undue hardship.

Sec. 20-7. Other prohibited practices.

- (a) No person shall adopt, enforce or employ any policy or requirement, publish, post or broadcast any advertisement, sign or notice which discriminates or indicates discrimination in providing housing, employment or public accommodations.
- (b) No person shall discriminate in the publication or distribution of advertising material, information or solicitation regarding housing, employment or public accommodations.
- (c) No agent, broker, labor union, employment agency or any other intermediary shall discriminate in making referrals, listings or providing information with regard to housing, employment or public accommodations. A report of the conviction of any such person for a violation of this Chapter shall be made to the applicable licensing or regulatory agency for such person or business.
- (d) No person shall coerce, threaten or retaliate against a person for making a complaint or assisting in the investigation regarding a violation or alleged violation of this Chapter, nor require, request, conspire with, assist or coerce another person to retaliate against a person for making a complaint or assisting in an investigation.
- (e) No person shall conspire with, assist, coerce or request another person to discriminate in any manner prohibited by this Chapter.
- (f) No person shall provide false or misleading information to any authorized person investigating a complaint regarding a violation or alleged violation of this Chapter, or sign a complaint for a violation of this Chapter based upon false or substantially misleading information.

Sec. 20-8. Information and investigation.

- (a) No person shall provide false information to any authorized employee or Township Agent investigating a complaint regarding a violation of this Chapter.
- (b) For an investigation, the Complaint Review Committee may request a person to produce materials, items, videos, books, papers, records or other documents which may be relevant to a violation or alleged violation of this Chapter. If said person does not comply with such request, the Township Attorney may apply to Ingham County Circuit Court for an order requiring production of said materials.

Sec. 20-9. Conciliation agreements.

In cases involving alleged violations of this Chapter, the Complaint Review Committee may enter into agreements whereby persons agree to methods of terminating discrimination or to reverse the effects of past discrimination. Violations of such agreements shall be violations of this Chapter.

Sec. 20-10. Injunctions.

The Township Attorney may commence a civil action to obtain injunctive relief to prevent discrimination prohibited by this Chapter, to reverse the effects of such discrimination or to enforce a conciliation agreement.

Sec. 20-11. Discriminatory effects.

No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived race, color, religion, national origin, sex, age, height, weight, source of income, family responsibilities, sexual orientation, marital status, physical or mental limitation, or gender identity/expression or genetic information, or any protected status for a person to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a necessity does not arise due to a mere inconvenience or because of suspected or actual objection to such a person by neighbors, customers, or other persons.

Sec. 20-12. Exceptions.

Notwithstanding anything contained in this Chapter, the following practices shall not be violations of this Chapter.

- (a) For a religious organization or institution to restrict any of its facilities of housing or accommodations which are operated as a direct part of religious activities to persons of the denomination involved or to restrict employment opportunities for officers, religious instructors, staff and clergy to persons of that denomination or organization.
- (b) For the owner of an owner-occupied single-family or two-family dwelling, or a housing facility or public accommodation facility, respectively, devoted entirely to the housing and accommodation of individuals of one sex, to restrict occupancy and use on the basis of sex.
- (c) To limit occupancy in a housing project or to provide public accommodations or employment privileges or assistance to persons of low income, over 55 years of age or who are handicapped.

- (d) To engage in a bona fide effort to establish an affirmative action program to improve opportunities in employment for minorities and women.
- (e) To discriminate based on a person's age when such discrimination is required by state, federal or local law.
- (f) To refuse to enter a contract with an un-emancipated minor.
- (g) To refuse to admit to a place of public accommodation serving alcoholic beverages a person under the legal age for purchasing alcoholic beverages.
- (h) To refuse to admit to a place persons under eighteen (18) years of age to a business providing entertainment or selling literature which the operator of said business deems unsuitable for minors.
- (i) For an educational institution to limit the use of its facilities to those affiliated with such institution.
- (j) To provide discounts on products or service to students, minors and senior citizens, or members of an organization.
- (k) To discriminate in any arrangement for the sharing of a dwelling unit.
- (l) To restrict use of lavatories and locker room facilities on the basis of sex.
- (m) For a governmental institution to restrict any of its facilities or to restrict employment opportunities based on duly adopted institutional policies that conform to federal and state laws and regulations.
- (n) To restrict participation in an instructional program, athletic event or on an athletic team on the basis of age or sex.
- (o) Placing reasonable restrictions on breast feeding in an area open to the general public.

Sec. 20-13. Nondiscrimination by Township contractors.

- (a) A written contract to which the Township, a political subdivision, or an agency thereof, is a party shall contain a covenant by the contractor and his/her subcontractors not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, including a benefit plan or system or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, sexual orientation, gender identity/expression,

genetic information or protected status or use by an individual of adaptive devices or aids. Breach of this covenant may be regarded as a material breach of the contract.

- (b) This section is also applicable to labor organizations, employment agencies, apprenticeships and job training programs. In addition, a labor organization shall not discriminate in its membership practices nor fail to fairly represent its membership in a grievance process because of religion, race, color, national origin, age, sex, height, weight, marital status, sexual orientation, gender identity/expression, genetic information, or protected status or use by an individual of adaptive devices or aids.

Sec. 20-14. Complaints.

- (a) Any person claiming to be discriminated against in violation of this ordinance may file with the Township Manager's Office a complaint, in writing, setting forth with reasonable specificity the person or persons alleged to have violated this Chapter, the specific nature of the violation and the date(s) of the alleged violation. A person filing a complaint must do so within 180 days of the incident forming the basis of the complaint.
- (b) To the extent permitted by law, all written complaints of discrimination in employment, public accommodation, public services, and housing received by the Township Manager's Office shall be kept confidential.
- (c) The Township Manager shall:
 - (1) Review the complaint and seek to resolve the complaint within a reasonable time of receipt; or
 - (2) Forward the complaint to the Complaint Review Committee.
- (d) Complaint Review Committee shall:
 - (1) Be responsible for receipt, recordation, investigation, mediation, conciliation, recommendation, and/or referral to the Office of the Township Attorney;
 - (2) Ensure there are no undue burdens placed on a Claimant, which might discourage filing of a discrimination complaint;
 - (3) Commence and complete the complaint investigation, mediation/conciliation, and recommendation process in a timely manner;
 - (4) Hold any complaint investigation, mediation/conciliation and recommendation in abeyance pending the outcome of any state or federal

investigation being conducted or private cause of action regarding the same matter or incident forming the basis of the complaint;

- (5) Promulgate and publish rules and guidelines for processing, investigating, mediating/conciliating, and recommending resolution of the complaint; and
- (6) Refer a complaint it deems valid and sufficiently egregious directly to the Township Attorney for review and additional action.

Sec. 20-15. Investigation and hearing.

- (a) During an investigation, the Complaint Review Committee may request the appearance of witnesses and the production of materials, items, videos, books, papers, records or other documents that may be relevant to a violation or alleged violation of this Chapter.
- (b) If the Complaint Review Committee determines that the complaint and preliminary evidence gathered indicates a prima facie violation of any provision in this Chapter, the Complaint Review Committee shall conduct a hearing within 90 days after completion of its preliminary investigation. The person alleged to have committed a violation (the “Respondent”) and the Claimant shall be sent by regular mail at least 14 days advance notice of the location and scheduled date and time of the hearing and a request to appear. At the hearing testimony will be taken. All testimony shall be on the record, under oath and either recorded or transcribed. Both Claimant and Respondent shall be allowed to testify, present evidence, bring witnesses to testify, and to cross-examine all witnesses at the hearing. Traditional court rules of evidence shall not apply.
- (c) A failure of either the Claimant or the Respondent to cooperate with the Complaint Review Committee may result in an adverse determination for that person at the hearing.

Sec. 20-16. Findings and recommendations.

- (a) The Complaint Review Committee shall make findings of fact based on the testimony and evidence introduced at the hearing and shall recommend such relief as the Complaint Review Committee deems appropriate. The findings and recommendations shall be served by regular mail on the Claimant and Respondent. The Claimant and Respondent shall have 30 days from the date the findings and recommendations are mailed to either: (1) comply with the findings and recommendations; or (2) appeal the findings and recommendations to the Ingham County Circuit Court.

Section 20-17. Available recommendations.

Complaint Review Committee recommendations may include, but are not limited to, one or more of the following:

- (a) Ceasing the illegal conduct cited in the complaint and taking steps to alleviate the effect of such illegal conduct;
- (b) Providing that the Respondent apologize to the Claimant;
- (c) Closing the matter based upon a mediation/conciliation agreement of the Claimant and Respondent;
- (d) Paying actual damages for injury or loss;
- (e) Hiring, reinstating, or promoting the Claimant, with or without back pay, or providing such fringe benefits as the Claimant may have been denied;
- (f) Selling or leasing of a housing or dwelling unit in question to the Claimant;
- (g) Admitting the Claimant to a place of public accommodation or extending full and equal use and enjoyment of said place of public accommodation;
- (h) Paying some or all of the Claimant's costs, incurred at any stage of review;
- (i) Dismissing the complaint; and
- (j) Imposing costs against a Claimant for a frivolously filed claim.

Sec. 20-18. Penalties.

- (a) A violation of a prohibited act in this Chapter is designated a municipal civil infraction, is not a crime and shall not be punishable by imprisonment.
- (b) Schedule of civil fines. The violation shall be according to the following schedule:
 - (1) First violation.....\$500.00
 - (2) Second violation.....\$750.00
 - (3) Third (or any subsequent) violation.....\$1000.00
- (c) Continuing violation.
 - (1) For an offense that is a single and discrete occurrence, a single violation shall accrue. Subsequent single and discrete occurrences shall result in additional

violations according to the above schedule.

- (2) For offenses that are continuing in nature, rather than single and discrete, the first violation shall accrue with the first day of the occurrence, and subsequent violations shall accrue for each additional day of that occurrence (for example, an impermissible hiring practice that continues each day on an ongoing basis).
- (3) For continuing violations under subsection (c)(2), the day of the first occurrence shall be measured from the day of service of the Township Attorney's complaint.

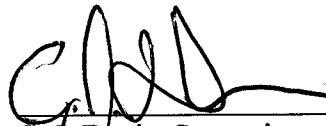
Sec. 20-19. Private actions for damages or injunctive relief.

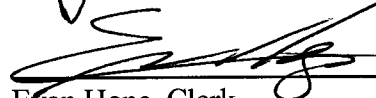
- (a) An individual who is the victim of discriminatory action in violation of this Chapter may bring a civil action for appropriate injunctive relief or damages or both against the person(s) who acted in violation of this Chapter.
- (b) As used in subsection 20.15(a), "damages" means damages for injury or loss caused by each violation of this Chapter, including reasonable costs and attorney fees.
- (c) Private actions and remedies under this section shall be in addition to any actions for violations which the Township may take action.

Section 2. Severability. If a court of competent jurisdiction declares any provision of this Ordinance, or a statutory provision referred to or adopted by reference herein, to be unenforceable, in whole or in part, such declaration shall only affect the provision held to be unenforceable and shall not affect any other part or provision. Provided, however, that if a court of competent jurisdiction declares a penalty provision to exceed the authority of the Township, the penalty shall be construed as the maximum penalty that is determined by the court to be within the authority of the Township to impose.

Section 3. Repeal. All ordinances or parts of ordinances in conflict or inconsistent with the provisions of this Ordinance are hereby repealed; provided that any violation charged before the effective date of this Ordinance under an ordinance provision repealed by this Ordinance shall continue under the ordinance provision then in effect.

Section 4. Effective Date. This ordinance shall take effect immediately after final publication.

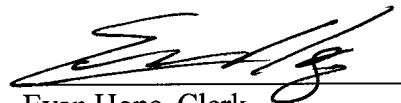


C. J. Davis, Supervisor

Evan Hope, Clerk

I, Evan Hope, Clerk of the Charter Township of Delhi, do hereby certify that the above is a true action taken by the Delhi Charter Township Board of Trustees as follows:

First Reading:	<u>September 17, 2013</u>
First Publication (Posting):	<u>September 22, 2013</u>
Second Reading:	<u>October 1, 2013</u>
Second Publication (Posting):	<u>October 6, 2013</u>
Effective Date:	<u>October 6, 2013</u>



Evan Hope, Clerk

From: [Marcus Peccia](#)
To: [Camille Lipke](#)
Subject: FW: Farmington Hills FOIA Request Response - Civil Rights/Non-Discrimination Program
Date: Wednesday, September 12, 2018 11:10:21 AM
Attachments: [FOIA Request Response - Peccia.pdf](#)

Marcus A. Peccia, City Manager
City of Cadillac
200 N. Lake Street
Cadillac, MI 49601
(231) 779-7344
Mobile (231) 884-3202
citymanager@cadillac-mi.net
<http://www.facebook.com/cityofcadillac>

From: Ashley Hopper [mailto:AHopper@fhgov.com]
Sent: Wednesday, September 12, 2018 10:24 AM
To: Marcus Peccia
Subject: Farmington Hills FOIA Request Response - Civil Rights/Non-Discrimination Program

Mr. Peccia,

Attached is the City Clerk's response to your FOIA Request received September 7, 2018. The information is included with this letter.

Thank you,

Ashley Hopper
City Clerk's Office
City of Farmington Hills
248/871-2422
ahopper@fhgov.com



OFFICE OF CITY CLERK

September 12, 2018

VIA E-MAIL

Marcus Peccia
City of Cadillac Michigan
200 North Lake Street
Cadillac, MI 49601
mpeccia@cadillac-mi.net

Re: Freedom of Information Act Request

Dear City Manager Peccia:

This letter is in response to your Freedom of Information Act (FOIA) request the City Clerk's Office received on September 7, 2018 requesting the following information regarding the establishment of a new non-discrimination ordinance:

1. Copy of the community's code specific to this issue
2. Copy of the community's administrative procedure/policy for how complaints are processed within the operation of the organization (i.e. who do complaints go to, and how are they processed)
3. Copy of any reports (last 3 years) indicating how many complaints were received
4. Copy of any reports (last 3 years) indicating how much it costs to process and/or investigate complaints

Your request is granted in part with respect to items 1 and 2 above. There is no charge as the records were available with minimal research.

Your request is denied in part with respect to items 3 and 4 above, per MCL 15.235(5)(b) as it has been determined, after review of our records, that such records do not exist. This letter shall serve as my certificate as such.

In the event you are not satisfied with this response, you have the right to submit a written appeal under MCL 15.240 that specifically states the word "appeal" and identifies the reason or reasons for reversal of this denial. In addition, you may also seek judicial review of this denial pursuant to MCL 15.240, including the right to receive attorney fees and damages as provided in MCL 15.240 if, after judicial review, the circuit court determines that the public body has not complied with MCL 15.235 and orders disclosure of all or a portion of a public record.

The City's specific protocol for responding to FOIA requests is set forth in the Public Summary and the City's Procedure and Guidelines available on its website at: www.fhgov.com. Paper copies of the aforementioned documents are also available at the City Clerk's Office.

If you have any questions regarding this matter, please contact me at 248-871-2420.

Sincerely,

CITY OF FARMINGTON HILLS

A handwritten signature in black ink, appearing to read "P. Smith".

Pamela B. Smith, CMMC/MMC
City Clerk

ORDINANCE NO. C-4-2015

**CITY OF FARMINGTON HILLS
OAKLAND COUNTY, MICHIGAN**

AN ORDINANCE TO AMEND THE FARMINGTON HILLS CODE OF ORDINANCES TO ADD A NEW CHAPTER 13.5, "HUMAN RIGHTS," IN ORDER TO ESTABLISH REGULATIONS FOR THE PREVENTION OF DISCRIMINATION IN EMPLOYMENT, HOUSING AND PUBLIC ACCOMMODATIONS BY PROHIBITING DISCRIMINATION BASED ON ACTUAL OR PERCEIVED RACE, COLOR, RELIGION, NATIONAL ORIGIN, SEX, AGE, HEIGHT, WEIGHT, CONDITION OF PREGNANCY, MARITAL STATUS, PHYSICAL OR MENTAL LIMITATION, SOURCE OF INCOME, FAMILY STATUS, SEXUAL ORIENTATION OR GENDER IDENTITY, AND TO PROVIDE REMEDIES FOR VIOLATION OF THIS CHAPTER.

THE CITY OF FARMINGTON HILLS ORDAINS:

Section 1 of Ordinance.

The Farmington Hills City Code is amended to add a new Chapter 13.5, Human Rights, to read as follows:

Chapter 13.5 – HUMAN RIGHTS

Sec. 13.5-1 Intent.

It is the intent of the City that no person be denied equal protection of the laws; nor shall any person be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived race, color, religion, national origin, sex, age, height, weight, condition of pregnancy, marital status, physical or mental limitation, source of income, family status, sexual orientation or gender identity.

Sec. 13.5-2 Definitions.

The following words, terms and phrases, when used in this Chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

"Age" means chronological age.

"City Manager" means the Manager of the City of Farmington Hills or his or her designee.

"Discriminate" and "Discrimination" mean to make a decision, offer to make a decision or refrain from making a decision based in whole or in part on the race, color, religion, national origin, sex, age, height, weight, condition of pregnancy, marital status, physical or mental limitation, source of income, family status, sexual orientation or gender identity of another person, that person's relatives, or that person's associates. Discrimination based on sex includes sexual harassment, which means unwelcome

sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when: (a) submission to the conduct or communication is made a term or condition either explicitly or implicitly of obtaining or maintaining employment, public accommodations or housing; (b) submission to or rejection of the conduct or communication by an individual is used as a factor in decisions affecting the individual's employment, public accommodations or housing; and/or (c) the conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or housing, or creating an intimidating, hostile, or offensive employment, public accommodations or housing environment. Discrimination based upon actual or perceived physical or mental limitation includes discrimination because of the use by an individual of an adaptive device or aid.

“Educational institution” means a public or private institution, or a separate school or department thereof, including an academy, college, elementary or secondary school, extension course, kindergarten, nursery, local school system, university, or a business, nursing, professional, secretarial, technical, or vocational school. For the purposes of this chapter, educational institution includes an agent of the institution.

“Employer” means any person employing one (1) or more persons, and includes an agent of the employer.

“Employment agency” means a person regularly undertaking, with or without compensation, to procure, refer, recruit, or place an individual in an employment relationship with an employer.

“Family status” means two or more individuals related by blood within three degrees of consanguinity, marriage, adoption, foster care relationship or other legal custody relationship. For purposes of this definition, family status shall include an individual who is pregnant.

“Gender” means the actual biological state of being male or female as of birth, or subsequent alteration through surgical procedure, and without regard to any outward physical display or expression of gender identity.

“Gender identity” means a person's actual or perceived gender, including a person's appearance, expression, identity or behavior as being either male or female, whether or not that appearance, expression, identity or behavior is different from that traditionally associated with the person's sex at birth as being either female or male.

“Housing accommodation” means any improved or unimproved real property or part thereof, dwelling unit or facility used or intended, arranged, or designed to be used or occupied as a home, domicile, or residence of one or more individuals.

“Labor organization” means an organization of any kind, an employee representation committee, group, association, or plan in which employees participate in or are members of, and which exists for the purpose, in whole or part, of dealing with employers concerning grievances, labor disputes, wages, rates of pay, hours, or other terms or

conditions of employment of its participants or members, whether or not such organization is subordinate to or affiliated with a national or international labor organization.

"Marital status" means the state of being married, unmarried, divorced or widowed.

"Perceived" means the perception of the person who acts, and not the perception of the person for or against whom the action is taken.

"Physical or mental disability" means a determinable physical or mental characteristic of an individual, which may result from disease, injury, congenital condition of birth, or functional disorder, if the characteristic substantially limits a major life activity of that individual and is unrelated to the individual's ability to perform the duties of a particular job or position, is unrelated to the individual's ability to utilize and benefit from a place of public accommodation, or is unrelated to the individual's ability to acquire, rent, or maintain property. For the purposes of this definition, physical or mental disability does not include any condition caused by the current illegal use of a controlled substance or the use of intoxicating liquors by an individual.

"Place of Public Accommodation" means a business, educational, refreshment, entertainment, recreational, health, or transportation facility, organization or institution of any kind, whether licensed or not, whose goods, services, facilities, privileges, advantages, or accommodations are extended, offered, sold, or otherwise made available to the public.

"Private club" means an establishment that is not open to the public. A private club is one whose members' association with each other and the club is sufficiently intimate, small and exclusive that it is not open to the public.

"Sexual orientation" means male or female homosexuality, heterosexuality or bisexuality, whether by orientation or practice.

"Source of income" means any legal source from which a person obtains money.

Sec. 13.5-3 Discriminatory Housing Practices.

Except as otherwise provided in this chapter:

- A. No person shall discriminate in leasing, selling or otherwise making available any housing accommodation.
- B. No person shall discriminate in the terms, conditions, or privileges of a real estate transaction or in the furnishing of facilities or services in connection with any housing accommodation.
- C. No person shall discriminate in providing financing for the purchase, repair, or remodeling of any housing accommodations.
- D. No person shall discriminate in making referrals, listings or otherwise

providing information regarding housing accommodations.

- E. No person shall promote real estate transactions by representing that changes are occurring or will occur in an area with respect to race, religion or national origin.

Sec. 13.5-4 Discriminatory Public Accommodations Practices.

Except as otherwise provided in this chapter:

- A. No person shall discriminate in making available full and equal access to all goods, services, facilities, privileges, advantages or accommodations of any place of public accommodation.
- B. No person shall prohibit a breastfeeding mother from or segregate a breastfeeding mother within any public accommodation where she and the child would otherwise be authorized to be.

Sec. 13.5-5 Discriminatory Employment Practices.

Except as otherwise provided in this chapter:

- A. No person shall discriminate in the employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any person.
- B. No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor organization.
- C. No employment agency shall discriminate in the procurement, referral, recruitment, or placement of an individual in an employment relationship with an employer.

Sec. 13.5-6 Other Prohibited Practices.

Except as otherwise provided in this chapter:

- A. No person shall adopt, enforce or employ any policy or requirement, publish, post or broadcast any advertisement, sign, solicitation or notice in the City which discriminates or suggests discrimination in providing housing, public accommodations or employment.
- B. No person shall discriminate in the publication or distribution of advertising material, information or solicitation in the City regarding housing, public accommodations or employment.
- C. No agent, broker, labor union, employment agency or any other intermediary shall discriminate in making referrals, listings or providing information with

regard to housing, public accommodations or employment.

- D. No person shall coerce, threaten or retaliate against a person for making a complaint or assisting in any investigation regarding a violation or alleged violation of this chapter. A person shall not require, request, conspire with, assist or coerce another person to retaliate against a person for making a complaint or assisting in an investigation.
- E. No person shall conspire with, assist, coerce or request another person to discriminate in any manner prohibited by this chapter.

Sec. 13.5-7 Information and Investigation.

- A. Any person claiming a violation of this chapter shall file a signed, written complaint with the City Manager setting forth the details, including the names, dates, witnesses and other factual matters relevant to the claim, within 180 days of the incident forming the basis of the complaint.
- B. No person shall provide false information to any authorized city official investigating a complaint regarding a violation of this chapter.
- C. Within 30 days of a written complaint being filed, the City Manager or his or her designee shall review the complaint and undertake an investigation of any complaint alleging a violation of this chapter not currently recognized or proscribed by Michigan or federal anti-discrimination statutes, and cause all other complaints to be referred to an appropriate state or federal agency for review.
- D. In the course of the investigation, the City Manager may request a person to produce books, papers, records or other documents which may be relevant to a violation or alleged violation of this chapter. If said person does not comply with such request, the City Attorney may apply to the Oakland County Circuit Court for an order requiring production of the requested materials.
- E. After the completion of an investigation, the City Manager or his or her designee shall provide written notice of the results of the investigation to the person filing the complaint and to the person accused of the violation. If the investigation establishes that a violation of this chapter occurred, the City Manager or his or her designee shall, by using informal methods of conference, conciliation and persuasion, endeavor to work with the person filing the complaint and the accused person to correct the violation or prevent a further violation from occurring. During the course of informal negotiations, the City may enter into a conciliation agreement with the person accused of the violation whereby said individual shall agree to methods of terminating discrimination or to reverse the effects of past discrimination. A violation of a conciliation agreement shall be a violation of this chapter. The City Attorney may commence a civil action to enforce a conciliation agreement.

- F. If, after ninety (90) business days, the City Manager or his or her designee is unable through informal methods to resolve the violation or prevent further violations, the City Manager or his or her designee shall cause a civil infraction citation to issue to the person accused of the violation and shall refer the matter to the City Attorney to prosecute the violation as a municipal civil infraction.

Sec. 13.5-8 Exceptions.

Notwithstanding anything contained in this chapter, the following practices shall not be violations of this chapter:

- A. For a religious organization or institution to restrict any of its housing facilities or accommodations which are operated as a direct part of religious activities to persons of the religion involved or to restrict employment opportunities for officers, religious instructors and clergy to persons of that religion. It is also permissible for a religious organization to restrict employment opportunities, educational facilities, housing facilities, and homeless shelters or dormitories that are operated as a direct part of its religious activities to persons who are members of that religious organization.
- B. For the owner of an owner-occupied one-family or two-family dwelling, or a housing facility or public accommodation facility, respectively, devoted entirely to the housing and accommodation of individuals of one gender, to restrict occupancy and use on the basis of gender.
- C. To limit occupancy in a housing project or to provide public accommodations or employment privileges or assistance to persons of low income, persons over fifty-five (55) years of age or disabled persons.
- D. To engage in a bona fide effort to establish an affirmative action program to improve opportunities in employment for minorities and women consistent with applicable state and federal law.
- E. To discriminate based on a person's age when such discrimination is required by state, federal or local law.
- F. To refuse to enter a contract with an unemancipated minor.
- G. To refuse to admit to a place of public accommodation serving alcoholic beverages a person under the legal age for purchasing alcoholic beverages.
- H. To refuse to admit persons under eighteen (18) years of age to a business providing entertainment or selling literature which the operator of said business deems unsuitable for minors.
- I. For an educational institution to limit the use of its facilities to those affiliated with such institution.
- J. To provide discounts on products or service to students, minors and senior citizens.

- K. To discriminate in any arrangement for the shared ownership, lease or residency of a dwelling unit.
- L. To restrict use of lavatories and locker room facilities on the basis of sex .
- M. For a governmental institution to restrict any of its facilities or to restrict employment opportunities based on duly adopted institutional policies that conform to federal and state laws and regulations.
- N. To restrict participation in an instructional program, athletic event or on an athletic team on the basis of age, sex, height or weight.
- O. To restrict membership in a private club that is not open to the public except to the extent that private clubs which permit members to invite guests on the premises are not exempted as it concerns a member's guest.
- P. To restrict employment opportunities with respect to members of one's family.
- Q. To provide for marital or family status limitations in a health or pension plan if such limitations conform to federal and state laws and regulations.

Sec. 13.5-9 Violations and Penalties.

- A. A violation of any provision of this chapter is a civil infraction, punishable by a fine of not more than \$500, plus all costs of the action. Upon a finding or an admission of responsibility, the court may issue and enforce any judgment, writ, injunction or order necessary to enforce this chapter. This may include reinstatement, payment of lost wages, hiring and promotion, sale, exchange, lease or sublease of real property, admission to a place of public accommodation, or other relief deemed appropriate.
- B. Each day upon which a violation occurs shall constitute a separate and new violation.
- C. A violation proved to exist on a particular day shall be presumed to exist on each subsequent day unless it is proved that the violation no longer exists.

Sec. 13.5-10 Rights and Remedies.

Nothing contained in this chapter shall be construed to limit in any way the remedies, legal or equitable, which are available to the City or to the person claiming a violation of this chapter for the prevention or correction of discrimination.

Section 2 of Ordinance. Severability.

Should any section, subdivision, clause, or phrase of this Ordinance be declared by the courts to be invalid, the validity of the Ordinance as a whole, or in part, shall not be affected other than the part invalidated.

Section 3 of Ordinance. Repeal of Conflicting Ordinances.

All Ordinances or parts of Ordinances conflicting or inconsistent with the provisions of this Ordinance are repealed only to the extent necessary to give this Ordinance full force and effect.

Section 4 of Ordinance. Savings.

All proceedings pending and all rights and liabilities existing, acquired or incurred at the time this Ordinance takes effect, are saved and may be consummated according to the law in force when they were commenced.

Section 5 of Ordinance. Effective Date.

The provisions of this Ordinance are ordered to take effect twenty-one (21) days after enactment.

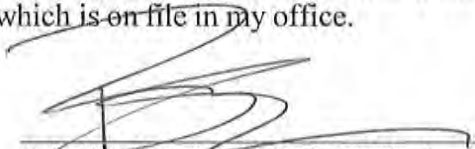
Section 6 of Ordinance. Enactment.

This Ordinance is declared to have been enacted by the City Council of the City of Farmington Hills at a meeting called and held on the 13th day of April, 2015 and ordered to be given publication in the manner prescribed by law.

Ayes: Brickner, Bridges, Bruce, Knol, Lerner, Massey and Steckloff
Nays: None
Abstentions: None
Absent: None

STATE OF MICHIGAN)
) ss.
COUNTY OF OAKLAND)

I, the undersigned, the qualified and acting City Clerk of the City of Farmington Hills, Oakland County, Michigan, do certify that the foregoing is a true and complete copy of the Ordinance adopted by the City Council of the City of Farmington Hills at a meeting held on the 13th day of April, 2015, the original of which is on file in my office.


PAMELA B. SMITH, City Clerk
City of Farmington Hills

INTRODUCED: MARCH 23, 2015
ADOPTED: APRIL 13, 2015
PUBLISHED: APRIL 19, 2015
EFFECTIVE: MAY 4, 2015

From: [Marcus Peccia](#)
To: [Camille Lipke](#)
Subject: Fwd: Request for records pertaining to Civil Rights/Non-Discrimination Program
Date: Wednesday, September 12, 2018 4:45:46 PM
Attachments: [Ordinance No. 679 Anti-Discrimination.docx](#)

Marcus A. Peccia, City Manager
City of Cadillac
[200 N. Lake Street](#)
[Cadillac, MI 49601](#)
[\(231\) 775-0181 Extension 122](#)
Mobile [\(231\) 884-3202](#)
citymanager@cadillac-mi.net
<http://www.facebook.com/cityofcadillac>

----- Original message -----

From: Sue Walsh <swalsh@cityoffenton.org>
Date: 9/12/18 4:37 PM (GMT-05:00)
To: Marcus Peccia <mpeccia@cadillac-mi.net>
Subject: Request for records pertaining to Civil Rights/Non-Discrimination Program

Mr. Peccia,
Please find attached the City of Fenton's Ordinance pertaining to Anti-Desccrimination.
We are in the process of updating our policy and procedures manual. At this time, it is not addressed.
There have been no complaints filed with the City of Fenton.

If you have any further questions, please feel free to contact my office.

Sincerely,

Sue Walsh

City Clerk
City of Fenton
301 S. Leroy Street
Fenton, MI 48430
810-629-2261
Fax: 810-629-2004
swalsh@cityoffenton.org

**CITY OF FENTON
ORDINANCE NO. 679**

AMENDMENT TO THE FENTON CODE OF ORDINANCES

An ordinance to amend the City of Fenton Code, to add Chapter 15 Human Rights to secure the public health, safety and general welfare of the residents and property owners of the City of Fenton, Genesee County, Michigan, by regulating discrimination based on race, religion, color, national origin, gender, sex, age, marital status, physical or mental disability, family status, sexual orientation or gender identity, to provide a civil fine for the occurrence of such discriminatory acts, and to repeal all ordinances or parts thereof in conflict therewith.

THE CITY OF FENTON, GENESEE COUNTY, MICHIGAN ORDAINS:

Section 1: The City of Fenton Code is amended by adding Chapter 15 Human Rights and renumber all subsequent Chapters starting with Chapter 16.

Section 2: The City of Fenton Code is amended by adding Article I to Chapter 15 Human Rights, which shall read as follows:

ARTICLE I: GENERAL PROVISIONS

Sec. 15-1. Findings and Purpose

- (a) The city intends that no individual be denied the equal protection of the laws; nor shall any person be denied the enjoyment of his or her civil rights or be discriminated against because of his or her race, religion, color, national origin, gender, sex, age, marital status, physical or mental disability, family status, sexual orientation or gender identity.
- (b) The prohibitions against discrimination in this chapter are intended to supplement federal and state civil rights law prohibiting discrimination in the areas of employment, housing and public accommodations. However, this chapter shall be construed and applied in a manner consistent with jurisprudence regarding the freedom of speech and exercise of religion under the First Amendment to the United States Constitution.
- (c) The city does not intend that this chapter shall require preferential treatment of any person or group on the basis of sexual orientation or gender identity.

Section 15-2. Definitions

Unless the context specifically indicates otherwise, the following terms shall have the following meanings as used in this Ordinance:

“Contractor” means a person who by contract furnishes services, materials, or supplies. “Contractor” does not include persons who are merely creditors or debtors of the city, such as those holding the City’s notes or bonds or persons whose notes, bonds, or stock is held by the City.

“Discriminate” means to make a decision, offer to make a decision, or refrain from making a decision based in whole or in part on a person’s race, religion, color, national origin, gender, sex, age, marital status, physical or mental disability, family status, sexual orientation or gender identity.

“Employer” means any person employing one or more persons.

“Family status” means the state of being in a family. “Family” includes either of the following: (1) an individual who is pregnant; or (2) two or more individuals related by blood within three degrees of consanguinity, marriage, adoption, in a foster care relationship, or legal custody relationship.

“Gender” means the actual biological state of being male or female as of birth, or subsequent alteration through surgical procedure, and without regard to any outward physical display or expression of gender identity.

“Gender identity or expression” means a person’s actual or perceived gender, including a person’s self-image, appearance, expression, or behavior, whether or not that self-image, appearance, expression, or behavior is different from that traditionally associated with the person’s biological sex as assigned at birth as being either female or male.

“Housing Facility” means any dwelling unit or facility used or intended or designed to be used as the home, domicile, or residence of one or more persons, including, but not limited to, a house, apartment, rooming house, housing cooperative, hotel, motel, tourist home, retirement home, or nursing home.

“Labor Organization” means an organization of any kind or structure in which employees participate or are members and which exists for the purposes, in whole or part, of dealing with employers concerning the terms and conditions of employment of its participants or members, whether or not such organization is subordinate to or affiliated with a national or international labor organization.

“Marital Status” means the state of being married, unmarried, divorced, or widowed.

“National origin” includes the national origin of an ancestor, and shall include persons who are not naturalized citizens.

“Physical or Mental Disability” means a determinate physical or mental characteristic of an individual, which may result from disease, injury, congenital condition of birth, or functional disorder, if the characteristic substantially limits a major life activity of that individual and is unrelated to the individual’s ability to perform the duties of a particular job or position, is unrelated to the individual’s ability to utilize and benefit from a place of public accommodation, or is unrelated to the individual’s ability to acquire, rent, or maintain property, except for any condition caused by current illegal use of a controlled substance or the use of intoxicating liquors by an individual.

“Public Accommodation” means an educational, governmental, health, entertainment, cultural, recreational, refreshment, transportation, financial institution, business or facility of any kind, whose goods, services, facilities, privileges, advantages, or accommodations are extended, offered, sold, or otherwise made available to the public.

“Religious Organization” means an organization, church, group, or body of communicants that is organized for regularly gatherings of worship and religious purposes, including a religious-based private school, that is not organized for pecuniary profit. Religious organization includes, for illustration and not limitation: churches, mosques, synagogues and other houses of worship; any subsidiary organizations; educational institutions affiliated with, controlled, or managed by those houses of worship or with articles of incorporation, bylaws and other documents stating an intention to inculcate its religious tenets in students; and, faith-based organizations that, due to a sense of duty based on particular religious tenets, provide charitable services to the public.

“Sex” includes, but is not limited to, pregnancy, childbirth, or a medical condition related to pregnancy or childbirth. Discrimination because of sex includes sexual harassment which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of sexual nature when:

- (1) Submission to such conduct or communication is made a term or condition either explicitly or implicitly to obtain employment, public accommodations or public services, education, or housing.
- (2) Submission to or rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual’s employment, public accommodations or public services, education, or housing.
- (3) Such conduct or communication has the purpose or effect of substantially interfering with an individual’s employment, public accommodations or public services, education, or housing; or creating an intimidating, hostile, or offensive employment, public accommodation, public service, educational, or housing environment.

“Sexual orientation” means being or regarded as being heterosexual, homosexual, bisexual, or having a history of such identification, whether by orientation or practice.

“To harass” means to have physical conduct or communication which refers to an individual protected under this Ordinance, when such conduct or communication demeans or dehumanizes and has the purpose or effect of substantially interfering with an individual’s employment, public accommodations or public services, education, or housing, or creating an intimidating, hostile, or offensive employment, public accommodations, public services, education, or housing environment.

ARTICLE 2: PROHIBITED DISCRIMINATORY PRACTICES

Sec. 15-3. Prohibited Discriminatory Housing Practices

No person shall do the following:

- (a) discriminate in leasing, selling, or otherwise making available any housing facilities.
- (b) discriminate in the terms, conditions, maintenance, or repair in providing any housing facility.
- (c) refuse to lend money for the purchase or repair of any real property or refuse to insure any real property in the City.
- (d) No person shall promote real estate transactions by representing that changes are occurring or will occur in an area with respect to race, religion, color, national origin, gender, sex, age, marital status, physical or mental disability, family status, sexual orientation or gender identity.

Sec 15-4. Prohibited Discriminatory Employment Practices

No person shall do the following:

- (a) No person shall discriminate in the employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any person.
- (b) No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor union or apprenticeship program.
- (c) No employment agency shall discriminate in the procurement or recruitment of any person for possible employment with an employer.

Sec 15-5. Prohibited Discriminatory Public Accommodations or Services Practices

- (a) No person shall discriminate in making available full and equal access to all goods, services, activities, privileges, and accommodations of any place of public accommodation.
- (b) Nothing in this article permits or requires access to any place of public accommodation for the purpose or intent of engaging in criminal conduct.
- (c) Nothing in this article shall require the construction or provision of unisex, single-user restrooms, changing rooms, locker rooms, or shower facilities.

Sec 15-6. Other Prohibited Practices

- (a) No person shall adopt, enforce, or employ any policy or requirement, or publish, post, or broadcast any advertisement, sign, or notice which discriminates or indicates discrimination in providing housing, employment, or public accommodations.
- (b) No person shall discriminate in the publication or distribution of advertising material, information, or solicitation regarding housing, employment, or public accommodations.
- (c) No agent, broker, labor organization, employment agency, or any other intermediary shall discriminate in making referrals, listings, or providing information with regard to housing, employment, or public accommodations. A report of the conviction of any such person for a violation of this article shall be made to the applicable licensing or regulatory agency for such person or business.
- (d) No person shall coerce, threaten, or retaliate against a person for making a complaint or assisting in the investigation regarding a violation or alleged violation of this article, nor require, request, conspire with, assist, or coerce another person to retaliate against a person for making a complaint or assisting in an investigation.
- (e) No person shall conspire with, assist, coerce, or request another person to discriminate in any manner prohibited by this article.
- (f) No person shall adopt, enforce, or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived race, religion, color, national origin, gender, sex, age, marital status, physical or mental disability, family status, sexual orientation or gender identity for a person to obtain housing, employment, or public accommodation, except for a bona fide business necessity. Such a bona fide business necessity does not arise due to a mere inconvenience or

because of suspected or actual objection to such a person by neighbors, customers, or other persons but shall require a demonstration that the policy or requirement is reasonably necessary to the normal operation of the person's business.

Sec 15-7. Exceptions.

Notwithstanding anything contained in this chapter, the following practices shall not be violations of this Ordinance:

- (a) For a religious organization or institution to restrict any of its facilities of housing or accommodation which are operated as a direct part of religious activities to persons of the denomination involved or to restrict employment opportunities for officers, religious instructors and clergy to persons of that denomination. It is also permissible for a religious organization to restrict employment opportunities, educational facilities, housing facilities, and homeless shelters or dormitories that are operated as a direct part of its religious activities to persons who are members of or who conform to the moral tenets of that religious organization.
- (b) For the owner of an owner-occupied one-family or two-family dwelling, or a housing facility or public accommodation facility, devoted entirely to the housing and accommodation of individuals of one sex, to restrict occupancy and use on the basis of sex.
- (c) To limit occupancy in a housing project or to provide public accommodation or employment privileges or assistance to persons of low income, over 55 years of age, or who are handicapped.
- (d) To discriminate based on a person's age when such discrimination is required by state, federal, or local law.
- (e) To refuse to enter into a contract with an unemancipated minor.
- (f) To refuse to admit to a place of public accommodation serving alcoholic beverages a person under the legal age for purchasing alcoholic beverages.
- (g) To refuse to admit persons under 18 years of age to a business providing entertainment or selling literature which the operator of said business deems unsuitable for minors.
- (h) For an educational institution to limit the use of its facilities to those affiliated with such institution.
- (i) To provide discounts on products or service to students, or on the basis of age.

- (j) To discriminate in any arrangement for the shared ownership, lease, or residency of a dwelling unit.
- (k) For a governmental institution to restrict any of its facilities or to restrict employment opportunities based upon duly-adopted institutional policies that conform to federal and state laws and regulations.
- (l) To restrict participation in an instructional program, athletic event, or on an athletic team on the basis of age, sex, height, or weight.
- (m) To the employment of an individual by one's family.
- (n) To restrict membership in a private club that is not open to the public except to the extent that private clubs which permit members to invite guests on the premises are not exempted as it concerns a member's guest.
- (q) To the use of marital status or family status limitations in a health or pension plan if such limitations conform to federal and state laws and regulations.
- (p) To the rental of housing facilities in a building which contains dwelling units for not more than two families living independently of each other if the owner of the building or a member of the owner's family resides in one of the dwelling units, or to the rental of a room or rooms in a single-family dwelling by an individual if the lessor or a member of the lessor's family resides in the dwelling.

ARTICLE III: COMPLAINT PROCESS, RESOLUTION, AND PENALTIES

Sec 15-8. Complaint Process.

- (a) Any person claiming a violation of this Ordinance shall file a signed, written complaint with the City Manager setting forth the details, including the names, dates, witnesses, and other factual matters relevant to the claim, within 30 days of the incident forming the basis of the complaint.
- (b) No person shall provide false information to any authorized employee investigating a complaint regarding a violation of this chapter.
- (c) In the course of the investigation, the City Manager may request a person to produce books, papers, records, or other documents which may be relevant to a violation or alleged violation of this chapter. If said person does not comply with such request, the City Council may direct the City

Attorney to apply to the Genesee County Circuit court for an order requiring production of said materials.

- (d) Within 30 days of a written complaint being filed, the City Manager shall undertake an investigation of any complaint alleging a violation of this chapter not currently recognized or proscribed by Michigan or federal anti-discrimination statutes, and cause all other complaints to be referred to an appropriate state or federal agency for review. After the completion of an investigation, the City Manager shall give written notice of the results of the investigation to the person who filed the complaint and the person accused of the violation. If the investigation establishes that a violation of this ordinance occurred, the City Manager shall attempt to resolve the matter by conciliation and persuasion. If a resolution is not achieved, the City Council may refer the complaint to the City Attorney for prosecution in a court of competent jurisdiction.

Sec 15-9. Mediation.

- (a) In cases involving alleged violations of this article, the City Manager may enter into agreements whereby persons agree to methods of terminating discrimination or to reverse the effects of past discrimination. Violations of such agreements shall be violations of this ordinance.
- (b) Prosecution for violation of this ordinance may be initiated by complaint of the affected person on the basis of a violation of a mediation agreement.

Sec 15-10. Penalties.

- (a) A violation of any provision of this chapter is a municipal civil infraction punishable by a fine of not more than \$500, plus court costs and the costs of prosecution, and all other penalties permitted in accordance with the Municipal Civil Infractions Act, MCL 600.8727 et seq., including an injunction.
- (b) Each day upon which a violation occurs shall constitute a separate and new violation.
- (c) A violation proved to exist on a particular day shall be presumed to exist on each subsequent day unless it is proved that the violation no longer exists.

Section 3: Savings Clause. All proceedings pending and all rights and liabilities existing, acquired or incurred at the time this Ordinance takes effect are saved and may be consummated according to the law enforced when they are commenced.

Section 4: Severability. The various parts, sections and clauses of this Ordinance are hereby declared to be severable. If any part, sentence, paragraph, section or clause is adjudged unconstitutional or invalid by a Court of competent jurisdiction, the remainder of the ordinance shall not be affected.

Section 5: Repeal of Inconsistent Ordinances. All regulatory provisions contained in other City ordinances that are inconsistent with the provisions of this ordinance are repealed.

Section 6: Effective Date; Publication. This ordinance shall become effective thirty (30) days after publication of a notice in a newspaper circulated in the City, stating the date of the enactment and the effective date of the ordinance, a brief notice as to the subject matter of this ordinance, and such other facts as the City Clerk shall deem pertinent and that a copy of the ordinance is available for public use and inspection at the office of the City Clerk.

At a regular meeting of the City Council held on the 9th day of June, 2014, it was moved by Jacob and supported by McDermott that this Ordinance No.679 be adopted. Motion carried.

Sue Osborn, Mayor

Renee Wilson, City Clerk

I, Renee Wilson, City Clerk of the City of Fenton, hereby certify this to be a true and complete copy of Ordinance No. 679, duly adopted at a regular meeting of the City Council held on the 9th day of June, 2014.

Renee Wilson, City Clerk

From: Mark E. Miller
To: [Camille Lipke](#)
Cc: [Marcus Peccia](#)
Subject: RE: FOIA
Date: Friday, September 7, 2018 3:48:32 PM

Hello Camille –

It is good to hear that you are considering a non-discrimination ordinance! Ours can be found here:

[https://library.municode.com/mi/kalamazoo_charter_township_\(kalamazoo_co\)/ordinances/compilation-general_ordinances?nodeId=603521](https://library.municode.com/mi/kalamazoo_charter_township_(kalamazoo_co)/ordinances/compilation-general_ordinances?nodeId=603521)

The administrative procedure is contained within the ordinance.

I wrote, or arranged this at the time (2013). I used the City of Kalamazoo's ordinance as a source, with appropriate changes for the difference between cities and townships. So you may wish to look at their ordinance as well.

Several years ago, I asked our Supervisor how many complaints he had investigated under this ordinance. The answer then was zero. I just now asked our current Supervisor the same question, and the answer is still zero.

One might say that it was a waste of time to adopt it then... but I think there is a value in making a statement. Even if it is never 'used'. At any rate, I had heard the same thing from several other municipalities back when I was researching and collecting examples of existing ordinances. Based on this experience, it is very unlikely to become an enforcement burden.

All the best!

Mark E. Miller, Clerk
Kalamazoo Charter Township

From: Camille Lipke [mailto:payroll@Cadillac-MI.net]
Sent: Friday, September 07, 2018 2:41 PM
To: Mark E. Miller
Subject: FOIA

FOIA

Thank you.

Camille Lipke
City of Cadillac
231.779.7337 (Direct)
www.cadillac-mi.net

**CHARTER TOWNSHIP OF KALAMAZOO
KALAMAZOO COUNTY, MICHIGAN**

ORDINANCE NO. 573

ADOPTED: JULY 22, 2013

**EFFECTIVE: 30 DAYS FOLLOWING
PUBLICATION AFTER ADOPTION**

An ordinance to protect the health, safety and general welfare of the citizens of the Charter Township of Kalamazoo through the prohibition of discrimination; and to provide for civil sanctions and civil remedies for violation of this ordinance.

**THE CHARTER TOWNSHIP OF KALAMAZOO
KALAMAZOO COUNTY, MICHIGAN
ORDAINS:**

**SECTION I
TITLE**

This ordinance shall be known and may be cited as the “Charter Township of Kalamazoo Non-Discrimination Ordinance”.

**SECTION II
DEFINITIONS**

For purposes of this ordinance, the following definitions shall apply:

A. *Age*. Chronological age.

B. *Discriminate*. To make a decision, offer to make a decision or refrain from making a decision based in whole or in part on the actual or perceived race, color, sex, age, religion, national origin, height, weight, marital status, familial status, citizenship, physical or mental disability, gender identity, sexual orientation, or genetic information, of another person.

1. Discrimination based on sex includes sexual harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when:

(a) Submission to such conduct or communication is made a term or condition either explicitly or implicitly to obtain employment, public accommodations, or housing.

(b) Submission to rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment, public accommodations or housing.

(c) Such conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or housing, or creating an intimidating, hostile, or offensive employment, public accommodations, or housing environment.

2. Discrimination based on actual or perceived physical or mental limitation includes discrimination because of the use by an individual of adaptive devices or aids.

C. *Educational institution.* A public or private institution or a separate school or department thereof, including an academy, college, elementary or secondary school, extension course, kindergarten, nursery, local school system, or university, or a business, nursing, professional, secretarial, technical, or vocational school. For the purposes of this definition, educational institution includes an agent of an educational institution.

D. *Employee.* An individual who is hired for a wage, salary, fee, payment or other remuneration to perform work for an employer.

E. *Employer.* Any person employing one (1) or more persons.

F. *Employment Agency.* A person who undertakes to procure employees for an employer or procures opportunities for individuals to be employed by an employer.

G. *Familial Status.* The status of being in a family.

H. *Family.* This term shall mean a "traditional family" or "functional family" as defined below:

1. Traditional family – an individual or group of two or more persons related by blood, marriage or adoption, together with foster children, who are domiciled together as a single domestic housekeeping unit in a dwelling.

2. Functional family – a collective number of individuals domiciled together in one dwelling whose relationship is of a permanent and distinct domestic character, with a demonstrable and recognizable bond characteristic of a cohesive unit, and who are in fact cooking and living as a single non-profit housekeeping unit.

A "functional family" shall not include any of the following:

(a) Any group of individuals whose domestic relationship is transitory, temporary, or resort/seasonal in nature or character.

(b) Any group of individuals whose association is essentially for convenience or economics or for the limited duration of their education, training or a similar determinate period of time.

- I. *Gender identity*. An individual's appearance, expression, identity or behavior as being either male or female, whether or not that appearance, expression, identity or behavior is different from that which is traditionally associated with the individual's designated gender at birth.
- J. *Genetic Information*: information about an individual's genetic tests and the genetic tests of an individual's family members, as well as information about the manifestation of a disease or disorder in an individual's family members.
- K. *Housing Facility*. Any dwelling unit or facility used or intended or designed to be used as the home, domicile or residence of one or more persons including, but not limited to, a house, apartment, rooming house, housing cooperative, hotel, motel, tourist home, retirement home or nursing home.
- L. *Labor Organization*. An organization of any kind or structure in which employees participate or are members and which exists for the purposes, in whole or part, of dealing with employers concerning the terms and conditions of employment of its participants or members, whether or not such organization is subordinate to or affiliated with a national or international labor organization.
- M. *Marital Status*. The state of being married, never married, divorced, or widowed.
- N. *Perceived*. Refers to the perception of the person who acts, and not to the perception of the person for or against whom the action is taken.
- O. *Person*. An individual, agent, association, corporation, labor organization, legal representative, partnership, receiver, trust or any other legal or commercial entity.
- P. *Physical or Mental Disability*. A determinable physical or mental characteristic resulting from disease, injury, congenital condition of birth, or functional disorder and is unrelated to one's ability to safely perform the work involved in jobs or positions available to such person for hire or promotion; or unrelated to one's ability to acquire, rent and maintain property; or unrelated to one's ability to utilize and benefit from the goods, services, activities, privileges and accommodations of a place of public accommodation. "Physical or Mental Disability" does not include any condition caused by the current illegal use of a controlled substance or the use of alcohol liquor by an individual.
- Q. *Place of Public Accommodation*. An educational, governmental, health, entertainment, cultural, recreational, refreshment, transportation, or financial institution, business or

facility of any kind, whose goods, services, facilities, privileges, advantages or accommodations are extended, offered, sold, or otherwise made available to the public.

- R. *Private club.* An establishment that is not open to the public. A private club is one whose members' association with each other and the club is sufficiently intimate, small and exclusive that it is not open to the public.
- S. *Religious organization.* A religious corporation, association, educational institution or society whose purpose or character is directed toward the propagation of a particular religion, the inculcation of religious values or the provision of charity; primarily employs persons who share its religious tenets; and primarily serves persons who share its religious tenets or, on a charitable basis, the broader community. Religious organization includes, for illustration and not limitation: churches, mosques, synagogues and other houses of worship; any subsidiary organizations; educational institutions affiliated with, controlled, or managed by those houses of worship or with articles of incorporation, bylaws and other documents stating an intention to inculcate its religious tenets in students; and faith-based organizations that provide charitable services to the public.
- T. *Sexual Orientation.* Male or female homosexuality, heterosexuality or bisexuality, whether by orientation or practice. Sexual orientation does not include the physical or sexual attraction to a minor by an adult.
- U. *Township Supervisor:* The Township Supervisor, or his or her designee.

SECTION III

DISCRIMINATORY HOUSING PRACTICES

Except as otherwise provided in this ordinance:

- A. A person shall not discriminate in leasing, selling, or otherwise making available any housing accommodation.
- B. A person shall not discriminate in the terms, conditions, or privileges of a real estate transaction or in the furnishing of facilities or services in connection with any housing accommodation.
- C. A person shall not discriminate in providing financing for the purchase, repair, or remodeling of any housing accommodations.
- D. A person shall not discriminate in making referrals, listings or otherwise providing information regarding housing accommodations.

SECTION IV
DISCRIMINATORY PUBLIC ACCOMMODATION PRACTICES

Except as otherwise provided in this ordinance, no person shall discriminate in making available full and equal access to all goods, services, activities, privileges, and accommodations of any place of public accommodation.

SECTION V
DISCRIMINATORY EMPLOYMENT PRACTICES

Except as otherwise provided in this ordinance:

- A. No employer shall discriminate in the employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any person.
- B. No labor organization shall discriminate in limiting membership, conditions of membership, or termination of membership of any person in any labor union or apprenticeship program.
- C. No employment agency shall discriminate in the procurement or recruitment of any person for possible employment with an employer.

SECTION VI
OTHER PROHIBITED PRACTICES

- A. No person shall adopt, enforce or employ any policy or requirement, publish, post or broadcast any advertisement, sign or notice which discriminates or indicates discrimination in providing housing, employment or public accommodations.
- B. No person shall discriminate in the publication or distribution of advertising material, information or solicitation regarding housing, employment or public accommodations.
- C. No agent, broker, labor organization, employment agency or any other intermediary shall discriminate in making referrals, listings or providing information with regard to housing, employment or public accommodations. A report of the conviction of any such person for a violation of this ordinance shall be made to the applicable licensing or regulatory agency for such person or business.
- D. No person shall coerce, threaten or retaliate against a person for making a complaint or assisting in the investigation regarding a violation or alleged violation of this ordinance, nor require, request, conspire with, assist or coerce another person to retaliate against a person for making a complaint or assisting in an investigation.
- E. No person shall conspire with, assist, coerce or request another person to discriminate in any manner prohibited by this ordinance.

SECTION VII **EXCEPTIONS**

The prohibitions against discrimination as provided for in this ordinance shall not be deemed preempted by federal or state law, but are intended to supplement state and federal civil rights law prohibiting discrimination in the areas of employment, public accommodations, and housing. However, this ordinance shall be construed and applied in a manner consistent with First Amendment jurisprudence regarding the freedom of speech and exercise of religion.

Nothing in this ordinance permits or requires access to any place of public accommodation for the purpose or intent of engaging in criminal conduct.

Nothing in this ordinance shall require the construction or provision of unisex, single-user restrooms, changing rooms, locker rooms, or shower facilities.

Notwithstanding anything contained in this ordinance, the following practices shall not be violations of this ordinance:

- A. For a religious organization to restrict employment opportunities, educational facilities, or occupancy of housing facilities that are operated as a direct part of its religious activities to persons who are members of or who conform to the moral tenets of that religious organization or the denomination to which it belongs.
- B. For the owner of a housing facility or public accommodation facility, respectively, devoted entirely to the housing and accommodation of individuals of one sex, to restrict occupancy and use on the basis of sex.
- C. To limit occupancy in a housing project or to provide public accommodations or employment privileges or assistance to persons of low income, persons over fifty-five (55) years of age or disabled persons.
- D. To engage in a bona fide effort to establish an affirmative action program to improve opportunities in employment for minorities and women consistent with applicable state and federal law.
- E. To discriminate based on a person's age when such discrimination is required by state, federal, or local law.
- F. To refuse to enter into a contract with an unemancipated minor.

- G. To refuse to admit to a place of public accommodation serving alcoholic beverages a person under the legal age for purchasing alcoholic beverages.
- H. To refuse to admit persons under eighteen (18) years of age to a business providing entertainment or selling literature which the operator of said business deems unsuitable for minors.
- I. For an educational institution to limit the use of its facilities to those affiliated with such institution.
- J. To provide discounts on products or services to students, or on the basis of age.
- K. To discriminate in any arrangement for the shared ownership, lease or residency of a dwelling unit.
- L. For a governmental institution to restrict any of its facilities or to restrict employment opportunities based on duly-adopted institutional policies that conform to federal and state laws and regulations.
- M. To restrict participation in an instructional program, athletic event or on an athletic team on the basis of age, sex, height, or weight.
- N. To restrict membership in a private club.
- O. To the employment of an individual by one's family.
- P. To the rental of housing facilities in a building which contains dwelling units for not more than two families living independently of each other if the owner of the building or a member of the owner's family resides in one of the dwelling units, or to the rental of a room or rooms in a one-family dwelling by an individual if the lessor or a member of the lessor's family resides in the dwelling.
- Q. For an employer offering health or pension plans to provide for marital or familial status limitations in such plans provided those limitations conform to state and federal laws, rules and regulations. Further, nothing in this ordinance shall be construed or interpreted to either require, or prohibit, a private employer from offering employment benefits to the same-sex partner of an employee.

- R. For the Township to allow use of its facilities or services by persons that may be affiliated with, or otherwise supported by, a religious organization, which may espouse policies or practices inconsistent with the general intent of this ordinance. Further, this ordinance shall not prohibit the Township from allowing use of its facilities or services by persons not generally affiliated with or supported by a particular religious organization, but who may espouse policies or practices inconsistent with the general intent of this ordinance.

SECTION VIII

INFORMATION AND INVESTIGATION

- A. Any person claiming to be discriminated against in a manner prohibited by this ordinance may, within 180 days of the alleged violation, file a signed, written complaint with the Township Supervisor, specifying in detail the names, dates, known witnesses and other pertinent facts relevant to the alleged violation.
- B. For any complaint alleging a violation of state or federal law, the Township Supervisor shall refer the complainant to the appropriate state or federal agency responsible for investigation and enforcement of such alleged violation. For any other complaint, the Township Supervisor shall undertake an investigation of the alleged violation.
1. No person shall provide false information to any Township official or employee investigating a complaint regarding a violation of this ordinance.
 2. In the course of the investigation, a person may be requested to produce books, papers, records or other documents which may be relevant to a violation or alleged violation of this ordinance. If said person does not comply with such request, the Township Supervisor may apply for a judicial order requiring production of said materials.
- C. After the completion of an investigation, the Township Supervisor shall give written notice of the result of the investigation to the person who filed the complaint and the person accused of the violation. If the investigation establishes that a violation of this ordinance occurred, the Township Supervisor shall, in his or her sole discretion, attempt to resolve the matter by conciliation and/or refer the complaint to the Township Police Department and/or the Township Attorney for prosecution.
- D. In cases involving alleged violations of this ordinance, the Township Supervisor may enter into agreements whereby persons agree to methods of terminating discrimination or to reverse the effects of past discrimination. A violation of such a conciliation agreement shall be a violation of this ordinance.

SECTION IX
SANCTIONS

Any person, firm, association, partnership, corporation, or governmental entity who violates any of the provisions of this ordinance shall be deemed to be responsible for a municipal civil infraction as defined by Michigan Statute which shall be punishable by civil fine determined in accordance with the following schedule:

	<u>Minimum</u> <u>Fine</u>	<u>Maximum</u> <u>Fine</u>
1st Offense within 3-year period*	\$75.00	\$500.00
2nd Offense within 3-year period*	\$150.00	\$500.00
3rd Offense within 3-year period*	\$325.00	\$500.00
4th or More Offense within 3-year period*	\$500.00	\$500.00

* Determined on the basis of the date of commission of the offense(s).

Additionally, the violator shall pay costs which may include all expenses, direct and indirect, to which the Charter Township of Kalamazoo has incurred in connection with the municipal civil infraction. In no case, however, shall costs of less than \$9.00 nor more than \$500.00 be ordered. In addition, the Charter Township of Kalamazoo shall have the right to proceed in any court of competent jurisdiction for the purpose of obtaining an injunction, restraining order, or other appropriate remedy to compel compliance with this ordinance. Each day that a violation of this ordinance exists shall constitute a separate violation of this ordinance.

SECTION X
SEVERABILITY

Should any part of this ordinance be declared unconstitutional, illegal or of no force and effect by a court of competent jurisdiction, such portion thereof shall not be deemed to affect the validity of any other part or portion of this ordinance.

SECTION XI
EFFECTIVE DATE

This ordinance shall take effect 30 days following publication following adoption.

KALAMAZOO CHARTER TOWNSHIP
Donald Z. Thall, Township Clerk
1720 Riverview Drive
Kalamazoo, MI 49004
269-381-8080

From: Kathy Barnes
To: [Camille Lipke](#)
Cc: [Dusty Farmer](#); [James Porter](#)
Subject: FOIA Request - Non-Discrimination Program
Date: Monday, September 10, 2018 11:58:17 AM
Attachments: [Ltr to Peccia_City of Cadillac FOIA Req_091018.pdf](#)
[Oshtemo Twp Non-Discrimination Ord No. 549.pdf](#)

Ms. Lipke:

Please provide the attached letter from Attorney Porter and its attachment to Cadillac City Manager Marcus Peccia.

Thank you.

Kathy K. Barnes
Paralegal Administrative Assistant
to James W. Porter, Township Attorney
Oshtemo Charter Township
7275 West Main Street
Kalamazoo, MI 49009
(269) 375-7195
(269) 375-7180 (Fax)

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TOWNSHIP ATTORNEY'S OFFICE
7275 WEST MAIN STREET
KALAMAZOO, MI 49009-9334

269-375-7195 FAX: 269-375-7180

jposhtwp@oshtemo.org

September 10, 2018

EMAILED: payroll@Cadillac-MI.net

Mr. Marcus Peccia
City Manager
City of Cadillac
200 North Lake Street
Cadillac, MI 49601

Attn: Camille Lipke

Re: FOIA Request – Non-Discrimination Program

Dear Mr. Peccia:

I am writing in response to the FOIA Request to the Oshtemo Charter Township Clerk dated September 5, 2018, and received on September 7, 2018, concerning the above matter. Attached hereto you will find a copy of the Township's Non-Discrimination Ordinance No. 549. I believe the Ordinance, itself, is self-explanatory.

With regard to any reports indicating how many complaints were received or reports indicating the cost to process and/or investigate complaints, the Township has received no complaints, nor has the Township processed any complaints since Ordinance No. 549 was enacted.

Given the Attorney General's recent opinion on this issue (AG Opinion No. 7305 issued July 20, 2018), I would strongly suggest that you discuss the enactment of any ordinance or policy very closely with your City Attorney.

Very truly yours,

A handwritten signature in dark ink, appearing to read "James W. Porter", is written over a horizontal line. Below the signature, the name "James W. Porter" and the title "Township Attorney" are printed in a serif font.

James W. Porter
Township Attorney

JWP/kkb
Attachment
c: Dusty Farmer



COMPILATION OF GENERAL ORDINANCES

OFFENSES

PART 174

174.000 - NON-DISCRIMINATION ORDINANCE

Ord. No. 549 Adopted: August 27, 2013

Contents:

- 174.001 - Title.
- 174.002 - Definitions.
- 174.003 - Discriminatory housing practices.
- 174.004 - Discriminatory public accommodation practices.
- 174.005 - Discriminatory employment practices.
- 174.006 - Other prohibited practices.
- 174.007 - Exceptions.
- 174.008 - Information and investigation.
- 174.009 - Sanctions.
- 174.010 - Severability.
- 174.011 - Effective date.

174.001 - Title.

Sec. I.

This ordinance shall be known and may be cited as the "Oshtemo Charter Township Non-Discrimination Ordinance".

174.002 - Definitions.

Sec. II.

For purposes of this ordinance, the following definitions shall apply:

Age. Chronological age.

Contractor. A person who by contract furnishes services, materials or supplies. "Contractor" does not include persons who are merely creditors or debtors of the Township, such as those holding the Township's notes or bonds or persons whose notes, bonds or stock is held by the Township.

Discriminate. To make a decision, offer to make a decision or refrain from making a decision based in whole or in part on the actual or perceived race, color, sex, age, religion, national origin, height, weight, marital status, familial status, citizenship, physical or mental disability, gender identity, sexual orientation, or genetic information, of another person.

1. Discrimination based on sex includes sexual harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when:
 - a. Submission to such conduct or communication is made a term or condition either explicitly or implicitly to obtain employment, public accommodations, or housing.
 - b. Submission to rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment, public accommodations or housing.
 - c. Such conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or housing, or creating an intimidating, hostile, or offensive employment, public accommodations, or housing environment.
2. Discrimination based on actual or perceived physical or mental limitation includes discrimination because of the use by an individual of adaptive devices or aids.

Educational institution. A public or private institution or a separate school or department thereof, including an academy, college, elementary or secondary school, extension course, kindergarten, nursery, local school system, or university, or a business, nursing, professional, secretarial, technical, or vocational school. For the purposes of this definition, educational institution includes an agent of an educational institution.

Employee. An individual who is hired for a wage, salary, fee, payment or other remuneration to perform work for an employer.

Employer. Any person employing one (1) or more persons.

Employment Agency. A person who undertakes to procure employees for an employer or procures opportunities for individuals to be employed by an employer.

Familial Status. The status of being in a family.

Family. This term shall mean a "traditional family" or "functional family" as defined below:

1. Traditional family - an individual or group of two or more persons related by blood, marriage or adoption, together with foster children, who are domiciled together as a single domestic housekeeping unit in a dwelling.
2. Functional family - a collective number of individuals domiciled together in one dwelling whose relationship is of a permanent and distinct domestic character, with a demonstrable and recognizable bond characteristic of a cohesive unit, and who are in fact cooking and living as a single non-profit housekeeping unit.

A "functional family" shall not include any of the following:

- a. Any group of individuals whose domestic relationship is transitory, temporary, or resort/seasonal in nature or character.
- b. Any group of individuals whose association is essentially for convenience or economics or for the limited duration of their education, training or a similar determinate period of time.

Gender identity. An individual's appearance, expression, identity or behavior as being either male or female, whether or not that appearance, expression, identity or behavior is different from that which is traditionally associated with the individual's designated gender at birth.

Genetic Information: Information about an individual's genetic tests and the genetic tests of an individual's family members, as well as information about the manifestation of a disease or disorder in an individual's family members.

Housing Facility. Any dwelling unit or facility used or intended or designed to be used as the home, domicile or residence of one or more persons including, but not limited to, a house, apartment, rooming house, housing cooperative, hotel, motel, tourist home, retirement home or nursing home.

Labor Organization. An organization of any kind or structure in which employees participate or are members and which exists for the purposes, in whole or part, of dealing with employers concerning the terms and conditions of employment of its participants or members, whether or not such organization is subordinate to or affiliated with a national or international labor organization.

Marital Status. The state of being married, never married, divorced, or widowed.

Perceived. Refers to the perception of the person who acts, and not to the perception of the person for or against whom the action is taken.

Person. An individual, agent, association, corporation, labor organization, legal representative, partnership, receiver, trust or any other legal or commercial entity.

Physical or Mental Disability. A determinable physical or mental characteristic resulting from disease, injury, congenital condition of birth, or functional disorder and is unrelated to one's ability to safely perform the work involved in jobs or positions available to such person for hire or promotion; or unrelated to one's ability to acquire, rent and maintain property; or unrelated to one's ability to utilize and benefit from the goods, services, activities, privileges and accommodations of a place of public accommodation. "Physical or Mental Disability" does not include any condition caused by the current illegal use of a controlled substance or the use of alcohol liquor by an individual.

Place of Public Accommodation. An educational, governmental, health, entertainment, cultural, recreational, refreshment, transportation, or financial institution, business or facility of any kind, whose goods, services, facilities, privileges, advantages or accommodations are extended, offered, sold, or otherwise made available to the public.

Private club. An establishment that is not open to the public. A private club is one whose members' association with each other and the club is sufficiently intimate, small and exclusive that it is not open to the public.

Religious organization. A religious corporation, association, educational institution or society whose purpose or character is directed toward the propagation of a particular religion, the inculcation of religious values or the provision of charity; primarily employs persons who share its religious tenets; and primarily serves persons who share its religious tenets or, on a charitable basis, the broader community. Religious organization includes, for illustration and not limitation: churches, mosques, synagogues and other houses of worship; any subsidiary organizations; educational institutions affiliated with, controlled, or managed by those houses of worship or with articles of incorporation, bylaws and other documents stating an intention to inculcate its religious tenets in students; and faith-based organizations that provide charitable services to the public.

Sexual Orientation. Male or female homosexuality, heterosexuality or bisexuality, whether by orientation or practice. Sexual orientation does not include the physical or sexual attraction to a minor by an adult.

Township Supervisor: The Township Supervisor, or his or her designee.

174.003 - Discriminatory housing practices.

Sec. III.

Except as otherwise provided in this ordinance:

- A. A person shall not discriminate in leasing, selling, or otherwise making available any housing accommodation.
- B. A person shall not discriminate in the terms, conditions, or privileges of a real estate transaction or in the furnishing of facilities or services in connection with any housing accommodation.
- C. A person shall not discriminate in providing financing for the purchase, repair, or remodeling of any housing accommodations.
- D. A person shall not discriminate in making referrals, listings or otherwise providing information regarding housing accommodations.

174.004 - Discriminatory public accommodation practices.

Sec. IV.

Except as otherwise provided in this ordinance, no person shall discriminate in making available full and equal access to all goods, services, activities, privileges, and accommodations of any place of public accommodation.

174.005 - Discriminatory employment practices.

Sec. V.

Except as otherwise provided in this ordinance:

- A. No employer shall discriminate in the employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any person.
- B. No labor organization shall discriminate in limiting membership, conditions of membership, or termination of membership of any person in any labor union or apprenticeship program.
- C. No employment agency shall discriminate in the procurement or recruitment of any person for possible employment with an employer.

174.006 - Other prohibited practices.

Sec. VI.

- A. No person shall adopt, enforce or employ any policy or requirement, publish, post or broadcast any advertisement, sign or notice which discriminates or indicates discrimination in providing housing, employment or public accommodations.
- B. No person shall discriminate in the publication or distribution of advertising material, information or solicitation regarding housing, employment or public accommodations.
- C. No agent, broker, labor organization, employment agency or any other intermediary shall discriminate in making referrals, listings or providing information with regard to housing, employment or public accommodations. A report of the conviction of any such person for a violation of this ordinance shall be made to the applicable licensing or regulatory agency for such person or business.
- D. No person shall coerce, threaten or retaliate against a person for making a complaint or assisting in the investigation regarding a violation or alleged violation of this ordinance, nor require, request, conspire with, assist or coerce another person to retaliate against a person for making a complaint or assisting in an investigation.

- E. No person shall conspire with, assist, coerce or request another person to discriminate in any manner prohibited by this ordinance.

174.007 - Exceptions.

Sec. VII.

The prohibitions against discrimination as provided for in this ordinance shall not be deemed preempted by federal or state law, but are intended to supplement state and federal civil rights law prohibiting discrimination in the areas of employment, public accommodations, and housing. However, this ordinance shall be construed and applied in a manner consistent with First Amendment jurisprudence regarding the freedom of speech and exercise of religion.

Nothing in this ordinance permits or requires access to any place of public accommodation for the purpose or intent of engaging in criminal conduct.

Nothing in this ordinance shall require the construction or provision of unisex, single-user restrooms, changing rooms, locker rooms, or shower facilities. Notwithstanding anything contained in this ordinance, the following practices shall not be violations of this ordinance:

- A. For a religious organization to restrict employment opportunities, educational facilities, or occupancy of housing facilities that are operated as a direct part of its religious activities to persons who are members of or who conform to the moral tenets of that religious organization or the denomination to which it belongs.
- B. For the owner of a housing facility or public accommodation facility, respectively, devoted entirely to the housing and accommodation of individuals of one sex, to restrict occupancy and use on the basis of sex.
- C. To limit occupancy in a housing project or to provide public accommodations or employment privileges or assistance to persons of low income, persons over fifty-five (55) years of age or disabled persons.
- D. To engage in a bona fide effort to establish an affirmative action program to improve opportunities in employment for minorities and women consistent with applicable state and federal law.
- E. To discriminate based on a person's age when such discrimination is required by state, federal, or local law.
- F. To refuse to enter into a contract with an unemancipated minor.
- G. To refuse to admit to a place of public accommodation serving alcoholic beverages a person under the legal age for purchasing alcoholic beverages.
- H. To refuse to admit persons under eighteen (18) years of age to a business providing entertainment or selling literature which the operator of said business deems unsuitable for minors.
 - I. For an educational institution to limit the use of its facilities to those affiliated with such institution.
 - J. To provide discounts on products or services to students, or on the basis of age.
- K. To discriminate in any arrangement for the shared ownership, lease or residency of a dwelling unit.
- L. For a governmental institution to restrict any of its facilities or to restrict employment opportunities based on duly-adopted institutional policies that conform to federal and state laws and regulations.
- M. To restrict participation in an instructional program, athletic event or on an athletic team on the basis of age, sex, height, or weight.
- N. To restrict membership in a private club.
- O. To the employment of an individual by one's family.
- P. To the rental of housing facilities in a building which contains dwelling units for not more than two families living independently of each other if the owner of the building or a member of the owner's

family resides in one of the dwelling units, or to the rental of a room or rooms in a one-family dwelling by an individual if the lessor or a member of the lessor's family resides in the dwelling.

- Q. For an employer offering health or pension plans to provide for marital or familial status limitations in such plans provided those limitations conform to state and federal laws, rules and regulations. Further, nothing in this ordinance shall be construed or interpreted to either require, or prohibit, a private employer from offering employment benefits to the same-sex partner of an employee.
- R. For the Township to allow use of its facilities or services by persons that may be affiliated with, or otherwise supported by, a religious organization, which may espouse policies or practices inconsistent with the general intent of this ordinance. Further, this ordinance shall not prohibit the Township from allowing use of its facilities or services by persons not generally affiliated with or supported by a particular religious organization, but who may espouse policies or practices inconsistent with the general intent of this ordinance.

174.008 - Information and investigation.

Sec. VIII.

- A. Any person claiming to be discriminated against in a manner prohibited by this ordinance may, within 180 days of the alleged violation, file a signed, written complaint with the Township Supervisor or his/her designee, specifying in detail the names, dates, known witnesses and other pertinent facts relevant to the alleged violation.
- B. For any complaint alleging a violation of state or federal law, the Township Supervisor shall refer the complainant to the appropriate state or federal agency responsible for investigation and enforcement of such alleged violation. For any other complaint, the Township Supervisor shall undertake an investigation of the alleged violation.
 - 1. No person shall provide false information to any Township official or employee investigating a complaint regarding a violation of this ordinance.
 - 2. In the course of the investigation, a person may be requested to produce books, papers, records or other documents which may be relevant to a violation or alleged violation of this ordinance. If said person does not comply with such request, the Township Supervisor may apply for a judicial order requiring production of said materials.
- C. After the completion of an investigation, the Township Supervisor or his/her designee shall give written notice of the result of the investigation to the person who filed the complaint and the person accused of the violation. If the investigation establishes that a violation of this ordinance occurred, the Township Supervisor or the designee shall, in his or her sole discretion, attempt to resolve the matter by conciliation and/or refer the complaint to the Township Police Department and/or the Township Attorney for prosecution.
- D. In cases involving alleged violations of this ordinance, the Township Supervisor or his/her designee may enter into agreements whereby persons agree to methods of terminating discrimination or to reverse the effects of past discrimination. A violation of such a conciliation agreement shall be a violation of this ordinance.

174.009 - Sanctions.

Sec. IX.

Any person, firm, association, partnership, corporation, or governmental entity who violates any of the provisions of this ordinance shall be deemed to be responsible for a municipal civil infraction as defined by Michigan Statute which shall be punishable by civil fine determined in accordance with the following schedule:

	Minimum Fine	Maximum Fine
1st Offense within 3-year period*	\$75.00	\$500.00
2nd Offense within 3-year period*	150.00	500.00
3rd Offense within 3-year period*	325.00	500.00
4th or More Offense within 3-year period*	500.00	500.00
* Determined on the basis of the date of commission of the offense(s).		

Additionally, the violator shall pay costs which may include all expenses, direct and indirect, to which the Charter Township of Oshtemo has incurred in connection with the municipal civil infraction. In no case, however, shall costs of less than \$9.00 nor more than \$500.00 be ordered. In addition, the Charter Township of Oshtemo shall have the right to proceed in any court of competent jurisdiction for the purpose of obtaining an injunction, restraining order, or other appropriate remedy to compel compliance with this ordinance. Each day that a violation of this ordinance exists shall constitute a separate violation of this ordinance.

174.010 - Severability.

Sec. X.

Should any part of this ordinance be declared unconstitutional, illegal or of no force and effect by a court of competent jurisdiction, such portion thereof shall not be deemed to affect the validity of any other part or portion of this ordinance.

174.011 - Effective date.

Sec. XI.

This ordinance shall take effect 30 days following publication following adoption.

From: [Marcus Peccia](#)
To: [Camille Lipke](#)
Subject: Fwd: anti-discrimination FOIA
Date: Thursday, September 13, 2018 7:02:09 AM
Attachments: [July 26. Summary of discrimination ordinance.doc](#)
[2016-04 Resolution Personnel Policy Update Vac & Orientation.pdf](#)
[ARTICLE V. NONDISCRIMINATION ORDINANCE.doc](#)
[20160129 Saugatuck Township Personnel Policy.doc](#)

Marcus A. Peccia, City Manager
City of Cadillac
[200 N. Lake Street](#)
[Cadillac, MI 49601](#)
[\(231\) 775-0181 Extension 122](#)
Mobile [\(231\) 884-3202](#)
citymanager@cadillac-mi.net
<http://www.facebook.com/cityofcadillac>

----- Original message -----

From: Brad Rudich <brudich@saugatucktownship.org>
Date: 9/12/18 10:47 PM (GMT-05:00)
To: Marcus Peccia <mpeccia@cadillac-mi.net>
Subject: FW: anti-discrimination FOIA

This is in response to your FOIA received September 7, 2018.

Enclosed are our documents requested. If you have further question, please feel free to email me.
Thanks, Brad

Bradley C. Rudich
Saugatuck Township Clerk
(269) 857-7721

From: Aaron Sheridan
Sent: Tuesday, September 11, 2018 4:01 PM
To: Brad Rudich
Subject: anti-discrimination FOIA

See attached.

Summary of Ordinance No. 2007-2

An ordinance to amend the township code of ordinances, Township of Saugatuck, Allegan County, Michigan, adding a non-discrimination ordinance.

Section 1 Titles the ordinance as the Non-discrimination Ordinance.

Section 2 State the purpose and lists persons or groups more commonly discriminated against.

Section 3 Further defines persons more commonly subject to discrimination. Defines “person” and lists various venues and physical or mental discrimination limitation definitions.

Section 4 Pertains to “Prohibited Acts.”

Section 5 Enumerates ordinance exemptions.

Section 6 Describes “Filing of Complaint” procedure.

Section 7 Describes “Notification and Investigation” procedures upon receipt of a civic rights complaint and resolution of allegations.

Section 8 Record keeping and recommendations.

Section 9 Absolves township board members, officers, agents and employees from liability in administration of the ordinance.

Section 10 This ordinance shall become effective 30 days after the date of publication.

Members voting yes: Jarzembowski, Knikelbine, Wright, Roerig, Wester.

Members voting no : None.

ORDINANCE DECLARED ADOPTED.

Jane Wright, Township Clerk

This ordinance is available for inspection or for copying at the township office 3461 Blue Star Highway, Saugatuck, MI 49453. It is also available for viewing and or downloading at the township website @ www.saugatucktownship.org.

ARTICLE V. - NONDISCRIMINATION ORDINANCE^[6]

Footnotes:

--- (6) ---

Editor's note— Ord. No. 2007-2, § 1, adopted Aug. 2, 2007, did not specifically amend the code therefore, has been included as art. V, as herein set out, at the editor's discretion.

Sec. 2-251. - Purpose.

It is the purpose of this article and the policy of the township to promote the equal treatment of all individuals and to assure equal opportunity to all persons in the area of employment, housing, public accommodations, and public services. Discrimination based upon race, color, religion, gender, age, height, weight, marital status, sexual orientation, national origin, or physical or mental limitation is contrary to the keeping of the peace, goodwill, and harmony among the citizens of Saugatuck Township.

(Ord. No. 2007-02, § 2, 8-2-2007)

Sec. 2-252. - Definitions.

Age. An individual's chronological age.

Color. An individual's skin pigmentation.

Discriminate. Without limitation, any act which because of race, color, religion, gender, age, height, weight, marital status, sexual orientation, national origin, or physical or mental limitation results in the unequal treatment or separation of any person, or denies, prevents, limits or otherwise adversely affects the benefit or enjoyment of any person, of employment, ownership or occupancy of real property or public accommodations and public services.

Employment. The act of hiring, retaining, and promoting of a person to perform the duties of a particular job or position.

Gender. The real or perceived sex, gender identity, or gender expression.

Height or weight. The physical characteristics of an individual as it relates to that individual's size.

Housing. The opportunity to purchase, lease, sell, hold, rent, use, and convey dwelling units.

Marital status. The state of being single, married, separated, widowed, or divorced.

National origin. Shall be defined to include the national origin of an ancestor.

Person. An individual, firm, partnership, corporation, association, organization, unincorporated organization, labor organization, trustee, receiver, or other fiduciary.

Mental limitation. A limitation or physical capabilities unrelated to one's ability to safely perform the work involved in jobs available to such person for hire or promotion; a limitation of mental capabilities unrelated to one's ability to acquire, rent, and maintain property; or a limitation of mental capabilities unrelated to one's ability to utilize and benefit from the goods, services, activities, privileges, and accommodations of a place of public accommodation. "Mental limitation" includes, but is not limited to: developmental disabilities, psychological, etc. "Mental limitation" does not include any condition caused by the current illegal use of a controlled substance.

Physical limitation. A limitation or physical capabilities unrelated to one's ability to safely perform the work involved in jobs or positions available to such person for hire or promotion; a limitation of physical capabilities unrelated to one's ability to acquire, rent, and maintain property; or a limitation of physical

capabilities unrelated to one's ability to utilize and benefit from the goods, services, activities, privileges, and accommodations of a place of public accommodation. "physical limitation" includes, but is not limited to: blindness, or partial sightedness, deafness, or hearing impairment, "physical limitation" does not include any condition caused by the current illegal use of a controlled substance.

Public accommodations and public services. The full and equal access to any educational, cultural, governmental, health care, accommodation, business, or other facility of any kind, whose goods, services, facilities, privileges, advantages, or accommodations are extended, offered, sold, or otherwise made available to the public, or which receive financial support through the solicitation of the general public or through governmental subsidy of any kind.

Sexual orientation. Male or female heterosexuality, homosexuality, or bisexuality, real or perceived by orientation or practice.

(Ord. No. 2007-02, § 3, 8-2-2007)

Sec. 2-253. - Prohibited acts.

No person or persons shall discriminate against any person or persons within the township regarding employment, housing, public accommodations, and public services on the basis of that person's race, color, religion, gender, age, height, weight, marital status, sexual orientation, national origin, or physical or mental limitation. This division shall not be construed to be preempted by state or federal statute.

(Ord. No. 2007-02, § 4, 8-2-2007)

Sec. 2-254. - Exemptions.

Private club exemption. The prohibition of section 2-253 shall not apply to a private club, or other establishment not in fact open to the public, except to the extent that the goods, services, facilities, privileges, advantages, or accommodations of the private club or establishment are made available to the customers or patrons of another establishment that is a place of public accommodation or is licensed by the state under Act No.8 of the public Act of 1933, being MCL 236.1 through 436.8, the Michigan Liquor Control Act, as amended.

Religious exemption. The prohibition of section 2-253 shall not apply to a religious education institution or an educational institution operated, supervised, or controlled by a religious institution or organization which limits admission or gives preference to an applicant of the same religion.

Private residence exemption. The prohibition of section 2-253 shall not apply to:

- (1) The rental of housing accommodations in a building which contains housing accommodation for not more than two families living independently of each other if the owner or a member of the owner's immediate family resides in one of the housing accommodations, or to the rental of a room or rooms in a single-family dwelling by a person if the lessor or a member of the lessor's immediate family resides in the dwelling.
- (2) The rental of housing accommodations for not more than 12 months by the owner or lessor where it was occupied by his/her and maintained as his/her home for at least three months immediately preceding occupancy by the tenant and is temporarily vacated while maintaining legal residence.
- (3) With respect to the age provision only, the sale, rental, or lease of housing accommodations meeting the requirements of federal, state, or local housing programs for senior citizens, or accommodations otherwise intended, advertised, or designed or operated, bona fide, for the purpose of providing housing accommodations for persons 50 years of age or older.

Bona fide occupational qualification exemption. The prohibition of section 2-253 with respect to employment only, shall not apply where a protected classification set forth in section 2-253 is a bona fide

occupational qualification reasonably necessary to the normal operation of a business or enterprise. A person shall have the burden of establishing that the qualification is reasonably necessary to the normal operation of that person's business or enterprise.

Private education institution exemption. The prohibition of section 2-253 relating to gender only shall not apply to an educational institution which now or hereafter provides an education to persons of one gender.

Governmental exemption. The prohibition of section 2-253 shall not apply to any action by a governmental agency where a person's qualification is expressly limited by statute, charter, ordinance, or policy as otherwise provided by law.

(Ord. No. 2007-02, § 5, 8-2-2007)

Sec. 2-255. - Filing of complaint.

Any person or persons claiming to be aggrieved by an unfair or discriminatory practice (complainant) shall fill a complaint in writing with the township manager or township clerk within 30 days of the alleged discriminatory act.

(Ord. No. 2007-02, § 6, 8-2-2007)

Sec. 2-256. - Notification and investigation.

Following the filing of a complaint, the township manager or township clerk shall notify in writing the person or persons subject to the complaint (respondent) of the allegations in the complaint and provide the respondent the opportunity to respond to the allegations. The respondent may admit the act of discrimination and pay the township civil infraction fine or disagree and respond in writing to the township manager or township clerk and no further township action shall be taken for that complaint.

(Ord. No. 2007-02, § 7, 8-2-2007)

Sec. 2-257. - Recordkeeping and recommendations.

The township clerk shall keep a record of all complaints filed and the resolution thereof. The township manager or township clerk shall also make recommendations as needed to the township board as to the need for amendments and changes to this article based on the record.

(Ord. No. 2007-02, § 8, 8-2-2007)

Sec. 2-258. - Administrative liability.

No township officer, agent or employee or member of the township board shall be personally liable for any damage that may accrue to any person, firm, association, corporation, partnership, joint venture, or combination of any of them as the result of any act, decision or other consequence of occurrence arising out of the discharge of duties and responsibilities pursuant to this article.

(Ord. No. 2007-02, § 9, 8-2-2007)

**TOWNSHIP OF SAUGATUCK
COUNTY OF ALLEGAN, MICHIGAN**

At a meeting of the Township Board of the Township of Saugatuck, Allegan County, Michigan, held in the Saugatuck Township Hall, 3461 Blue Star Memorial Highway, in the Township, on the 3rd day of February, 2016, at 6:00 p.m., local time.

PRESENT: Wester, Rudich, Babinski, Phillips, McIlwaine.

ABSENT: None.

The following preamble and resolution were offered by Wester and seconded by Phillips:

RESOLUTION NO. 2016 - 04

RESOLUTION TO AMEND SECTIONS OF THE SAUGATUCK TOWNSHIP PERSONNEL POLICY TO INCLUDE ORDINANCE LANGUAGE REGARDING ANTI-DISCRIMINATION AND EQUAL EMPLOYMENT OPPORTUNITY; AND TO AMEND CERTAIN SECTIONS TO REMOVE ERRONEOUS LANGUAGE TO EMPLOYEE VACATION ACURALS; AND LANGUAGE OF VACATION ALLOWANCES.

WHEREAS, the Saugatuck Township Board is responsible for the administration and operation of public programs, services and facilities within its boundaries; and

WHEREAS, the Township's ability to perform these functions and to provide services are directly related to its employees and retirees; and

WHEREAS, uniform personnel rules and regulations apply to all employees and retirees that is outlined in a Personnel Policy and Job Classification Plan that is kept up-to-date and amended as needed by Board Resolution; and

WHEREAS, amendments endeavor to keep the Personnel Policy and Job Classification Plan up-to-date and consistent with employee/retiree procedures and Township Ordinance as adopted; and

WHEREAS, such amendments are listed below as #1-4 follows:

1. As copied below, include term “sexual orientation” in first sentence of Chapter I – GENERAL PRINCIPLES - Section 1.1. Equal Opportunity.

The Township is an equal opportunity employer and will not discriminate with regard to religion, race, color, national origin, age, sex, height, weight, sexual orientation, marital status or disability in treatment, employment or access to programs and activities. Individuals who believe that they have been unlawfully discriminated against may file complaint with the Township Manager, who is designated as the EEO/ADA/Section 504 Compliance Officer. In the event of an alleged act of discrimination caused by the Township Manager, the report shall be made to the Township Attorney or to a member of the Township Board. The Township will ensure that a prompt and equitable resolution of the complaint is achieved.

2. As copied below, delete wordage “At least one (1) but” of Chapter VI – VACATION – Section 6.0. Vacation Allowance.

<u>Years of Service</u>	<u>Time Off</u>
~~At least one (1) but~~ Less than five (5) years	10 days
At least five (5) but less than ten (10) years	12 days
At least ten (10) but less than fifteen (15) years	15 days
At least fifteen (15) but less than twenty (20) years	17 days
At least twenty (20) but less than twenty-five (25) years	20 days
At least twenty-five (25) years	25 days

3. As copied below, delete first two sentences of the first paragraph and replace with wordage “Vacation Allowance does not accrue or rollover” to Chapter VI – VACATION – Section 6.0. Vacation Allowance.

Vacation Allowance does not accrue or rollover. ~~and is credited to eligible employees on their anniversary date each year, based upon their years of continuous service with the Township as of that date. In order to be eligible for full vacation leave benefits, an employee must have worked a total of at least 2080 hours during the preceding twelve (12) months.~~

Eligible employees who fail to work the required number of hours shall be entitled to prorated vacation based-upon the ratio the hours they actually worked to 2080. For the purposes of this section, hours worked shall include paid sick leave, paid funeral leave, paid jury duty leave, paid vacation, paid holidays, days off due to injury for which workers' compensation is paid by the Township not to exceed six (6) months from the date of injury credited at the number of hours in the employee's normal work day, and all hours actually worked.

4. As copied below, delete Section 6.3. in its entirety and replace with "Employees of the Township shall not receive pay for unused vacation leave" to Chapter VI – VACATION – Section 6.3. Benefits on Termination.

~~Employees who leave the employ of the Township may receive pay for accrued but unused vacation leave in any of the following circumstances:~~

~~a. If an employee retires in accordance with the retirement plan currently in effect.~~

~~b. If an employee resigns from employment and a minimum of two (2) weeks advance notice is given to the Township.~~

~~c. If an employee is laid off and requests payment of vacation pay, provided however that such vacation pay shall be designated to the period of the layoff.~~

~~d. In the event of the death of an employee, vacation pay shall be paid to the employees' estate.~~

Employees of the Township shall not receive pay for unused vacation leave.

NOW, THEREFORE, IT IS RESOLVED AS FOLLOWS:

1. The Saugatuck Township Board adopts the above listed amendments #1-4 in its Personnel Policy and Job Classification Plan and shall direct the Manager to disseminate copies of the new updated Personnel Policy and Job Classification Plan to Township employees/retirees and the Township Board.

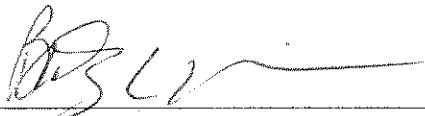
YES: Babinski, McIlwaine, Phillips, Wester, Rudich.

NO: None.

ABSENT: None.

RESOLUTION DECLARED:

Dated: February 4, 2016

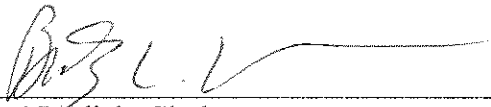


Brad Rudich, Clerk
Township of Saugatuck

STATE OF MICHIGAN)
) ss.
COUNTY OF ALLEGAN)

I, the undersigned, the duly qualified and acting Clerk of the Township of Saugatuck, Allegan County, Michigan (the "Township"), certify that the foregoing is a true and complete copy of a Resolution adopted by the Township Board of the Township at a meeting held on the 3rd day of February, 2016, the original of which is on file in my office. Public notice of the meeting was given pursuant to and in compliance with Act 267 of the Public Acts of Michigan 1976, as amended.

IN WITNESS WHEREOF, I have affixed my official signature this 4th day of February, 2016.



Brad Rudich, Clerk
Township of Saugatuck

CHAPTER I GENERAL PRINCIPLES

Section 1.0. Application of Personnel Rules and Regulations. The rules and regulations contained in this Personnel Policy apply to all Township employees; provided, however that where the provisions in this Manual conflict with or differ from the provisions of any written employment agreement, the provisions of the written employment agreement shall be applied to the signatory to the written employment agreement rather than the provisions of this manual. These rules and regulations are subject to change, and employees should consult with the Township Manager to determine whether a particular rule or regulation remains in effect.

Section 1.1. Equal Opportunity. The Township is an equal opportunity employer and will not discriminate with regard to religion, race, color, national origin, age, sex, height, weight, sexual orientation, marital status or disability in treatment, employment or access to programs and activities. Individuals who believe that they have been unlawfully discriminated against may file compliant with the Township Manager, who is designated as the EEO/ADA/Section 504 Compliance Officer. In the event of an alleged act of discrimination caused by the Township Manager, the report shall be made to the Township Attorney or to a member of the Township Board. The Township will ensure that a prompt and equitable resolution of the compliant is achieved.

Section 1.2. Personnel Records. Personnel files are maintained for all employees in the Township Manager's Office. Employees are required to advise the Township Manager's Office in writing of their current address, telephone number, name, and marital status as well as any changes in this information. Employees desiring personnel information released to outside parties shall provide a signed authorization to the Township Manager's Office. Employees may review the contents of their personnel files upon written request to the Township Manager, but may not remove their personnel file from the Township Manager's Office.

CHAPTER II EMPLOYEE SELECTION

Section 2.0. Employee Selection. The Township Board is responsible for the selection, employment, and discharge of the Township Manager. The Township Manager is responsible for the selection, employment, and discharge of all other employees of the Township with Board approval. The Township Supervisor, Township Clerk and Township Treasurer are elected officials whose term of office is controlled by statutory provisions.

Section 2.1. Job Vacancies. When a vacancy occurs in a full-time, regular part-time or temporary Township position other than an elected position, notice of the vacancy shall be posted in the Township Hall and advertised by such other means as deemed appropriate by the Township. Individuals interested in the position may file a written

application by the deadline established in the vacancy notification. The Township Board shall determine if a vacancy exists which is to be filled.

The Township shall give due consideration to all applicants for the vacancy, including applications from non-Township employees. The applicant considered by the Township to be the best qualified shall be awarded the vacancy, but the Township normally gives preference to qualified internal candidates over non-employee applicants. The Township reserves the right to determine that none of the applicants are qualified and leave the position open or to seek further applicants.

Section 2.2. Job Classification Plan. The Township maintains a Job Classification Plan with written description for all job classifications. Each job description includes a classification title, a general statement of normal duties and responsibilities, a determination whether the position is exempt from overtime payment, a listing of the position's essential functions, and a statement of the licenses, certifications and other requirements of the position. The Township Manager periodically reviews and updates the job descriptions.

Section 2.3. Categories of Employment. In addition to an employee's job classification, employees are categorized as follows:

- a. Full-time employees: A full-time employee is an employee whose normal schedule of work usually consists of at least forty (40) hours per week on a regular schedule in a position classified by the Township as permanent.
- b. Regular part-time employee: A regular part-time employee is an employee whose normal schedule of work usually consists of at least sixteen (16) but less than forty (40) hours per week on a regular schedule in a position classified by the Township as permanent.
- c. Temporary employee: A temporary employee is an individual not included within the definitions of full-time or regular part-time employee who is working on any other basis, including casual or seasonal.

An employee's status as a full-time, regular part-time or temporary employee will be established at the time of their initial employment and will only be changed when there is an increase or decrease in their regular work hours.

Section 2.4. Probationary Period. All full-time and regular part-time employees are in a period of probation for their first twelve (12) months of continuous employment. The Township reserves the right to extend the probationary period of individuals whose service is not entirely satisfactory for a period of an additional six (6) months upon written notice to the employee. The probationary period is a time for an employee to decide whether to continue to work for the Township and for the Township to determine if the employee can provide the level of performance required from the Township employees. An employee may be discharged for any reason during the probationary

period without recourse to the grievance procedure. The employment relationship with the employee after probation is subject to the employee's continued performance of assigned work in a manner satisfactory of the Township and the Township's financial ability and need to continue the services provided by the employee.

Section 2.5. Supplemental Employment. No full-time employee shall hold a full-time job, or its equivalent, in addition to their regular Township employment. Employees may take a part-time job provided there is no conflict with their regular working hours and normally anticipated overtime work, the employee's work efficiency is not affected, and there is no conflict with the interest of the Township or appearance of conflict.

The following lists of activities, not all-inclusive, are considered to be in conflict with the Township's employment:

- a. Any employment, activity or enterprise which involves for private gain the use of the Township's time, facilities, equipment, supplies, the prestige or the influence of the Township's office.
- b. Any activity which involves receipt or acceptance of any money or other consideration from anyone other than the Township for performance of an act which the employee should be required or expected to render in the regular course of their Township employment or their duty as an employee of the Township.
- c. Any activity which involves a performance of an act other than in their capacity as a Township employee which may later be subject to the control, inspection, review or enforcement by the employee or the department within which the are employed.
- d. Any activity which involves so much of an employee's time that it impairs their attendance or efficiency in the performance of their duties.

Employees desiring to engage in supplemental employment must apply in writing to the Township Manager specifying the nature of the employment, the employer, the approximate number of hours to be worked in a given work week, and the nature of the duties to be performed. The Township Manager will inform the employee in writing whether the supplemental employment would constitute a violation of this policy. If the Township Manager determines that the supplemental employment would violate this policy, or if after supplemental employment has been approved the Township Manager determines that supplemental employment violates this policy, the employee shall resign either the supplemental employment or their position with the Township. All approvals of supplemental employment will be reviewed on an annual basis by the Township. Employees whose outside employment lasts for more than one (1) year are required to resubmit their request for approval on their anniversary date each year.

Section 2.6 Anniversary Date. An employee's anniversary date is the most recent date upon which the employee commenced work for the Township, and the same date thereafter in succeeding years.

Section 2.7 Termination of Employment. The employment relationship with employees of the Township is at will and is subject to termination for any reason by the employee or the Township. In most instances, the Township provides at least two (2) weeks advance notice that an individual's employment will end. Employees who resign or retire shall notify the Township Manager in writing at least two (2) weeks prior to the effective date of the resignation or retirement and make arrangements for the return of any Township equipment in their possession on or before their last day of work. The Township Manager will normally schedule an exit interview with employees who leave Township employment. Employees who leave Township employment will receive their final paycheck on the first regularly scheduled payday following termination of employment. If the employee does not desire to personally pickup their final check on that date, it will be mailed to the employee at their home address as listed in the employee's personnel file or to such other address as designated in writing by the employee to the Township Manager.

Section 2.8 Political Activities. Employees may, except during hours that the employee is working for the Township or while in uniform, engage in political activities. Employees who become candidates for the Saugatuck Township Board will be required to take leave of absence without pay when that employee complies with the candidacy filing requirements or sixty (60) days before any election relating to that position, whichever date is closest to the election. Employees who are elected to the Saugatuck Township Board must resign their Township employment prior to the commencement of their term of office.

Section 2.9. Performance Evaluations. The performance of all employees shall be evaluated on the following schedule:

- a. Normal Evaluation periods – within 10 days of :
 1. For probationary employees: End of third, sixth, ninth and twelfth months of probationary period;
 2. For non probationary employees: Normally in December of each year;
- b. Special Evaluations: A special evaluation of an employee's performance may be performed at any time.

The Township Manager prepares a written evaluation in the form prescribed by the Township at the end of the evaluation period and schedules a conference with the employee to review the evaluation. At the completion of the conference, the employee shall sign the evaluation. The employee will be permitted a reasonable time to prepare a written statement to attach to the evaluation if there is disagreement with its contents.

Evaluations are placed in the employee's personnel file, and a copy is provided to the employee. An unsatisfactory evaluation may be followed by a further evaluation at the end of ninety (90) days. If at the end of this period the evaluation is still "unsatisfactory" dismissal is the normal action.

CHAPTER III HOURS OF WORK

Section 3.0. Work period. The work period for all employees shall begin at 12:00 a.m. on Saturday and end at 11:59 p.m. the following Friday.

Section 3.1. Hours of Work. The regular work hours of all Township employees shall be determined by the Township Manager. The normal workweek for full time employees shall be forty (40) hours and their normal workday shall consist of eight (8) hours, including meal periods. Nothing contained herein shall be construed to constitute a guarantee of any particular numbers of hours of work or pay per day or hours of work or pay per week. The Township may change the normal workweek and workday whenever the Township Manager determines that operating conditions warrant such changes.

Section 3.2. Work Schedule. The work schedule of all Township employees shall be determined by the Township Manager. The normal work schedule for full time employees is Monday through Friday from 8 a.m. to 4 p.m. The Township may change the normal work schedule whenever the Township Manager determines that operating conditions warrant such changes.

Section 3.3. Overtime. All employees shall be expected to work overtime upon request. Overtime must be authorized in advance by their Manager.

Section 3.4. Meal Periods. All full-time employees will be allowed one hour meal period with pay. This meal period shall be at or near the midpoint of the scheduled day. The timing of an employee's meal period shall be scheduled by their Manager so as not to interfere with prompt and efficient service to the Township and the public.

Section 3.5. Tardiness and Absenteeism. Employees shall report promptly for work and remain at work until the end of the work schedule. In the event that an employee is unable to report for work, they must notify their supervisor as soon as possible thereafter.

Section 3.6. Time Reporting. The Township Manager maintains a listing of the regular work hours of each employee in their personnel file. Employees are required to verify the hours they actually worked on a weekly basis by submitting documentation indicating any deviation from their regular hours and the type of leave to be utilized for the period of absence and setting forth any periods of time worked outside of their regular hours for which they claim entitlement to additional compensation. Employees who falsify a record of hours shall be subject to disciplinary action, up to and including dismissal.

Section 3.7. Inclement Weather. Township services remain operational during severe weather periods, and employees are expected to report for and remain at work unless Township operations are officially closed by the Township Manager. Employees prevented from reporting for work at their scheduled time due to severe weather conditions must notify the Township Manager as soon as possible.

Section 3.8 Employee Compensation. The Township Board maintains a pay range for each job classification, which consists of a minimum or start rate and a maximum or top rate. Newly hired full-time and regular part-time employees are normally paid at the minimum rate for their classification. The Township reviews the salaries each year as part of the annual budget process, and determines the amount of across-the-board increase (cost of living) that will be applied to the salaries for the next year. Approved across-the-board increases and will normally take effect on July 1st for full-time and regular part-time employees, but the Township may withhold an across-the-board increase from employees whose performance has not been satisfactory. In addition to across the board increases, the Township Board may authorize merit advancement to a higher level on the pay range for those full-time and regular part-time employees whose performance during the past year is considered exemplary. Merit increases will normally take effect on July 1st for those employees who are authorized such increases. Employees who are promoted to a higher paid classification will normally be placed at the lowest step on that pay range which provides them with an increase in pay.

Section 3.9. Overtime Pay. Non-exempt employees shall be paid one and one-half (1 ½) time their regular straight time rate of pay for all hours worked in excess of forty (40) in any workweek. Hours compensated at time and one-half (1 ½) for work on holidays shall not again be counted as hours worked for overtime calculation purposes.

Section 3.10. Compensatory Time. Salaried exempt employees are often required to spend time beyond their normal work schedule in order to carry out their required functions, but are not entitled to additional compensation for this work. As a means to recognize responsive, responsible and quality performance, the Township Manager may from time to time authorize compensatory time off to salaried exempt employees. The granting of compensatory time is at the discretion of the Township Manager.

Section 3.11. Pay Periods. Employees are paid on a bi-monthly basis with paychecks issued on the 1st and the 15th of each month. Paychecks will cover that portion of the employee's salary through the date of the check. When payday falls on a Saturday, Sunday or holiday, checks will be issued on the next working day.

Section 3.12. Retirement. The Township Clerk, Township Treasurer, and all Township Board approved full-time employees are enrolled in the Plan B-3 (FAC-3) of the Municipal Employees' Retirement System of Michigan (MERS). The Township currently pays all contributions to the retirement plan. The specific terms and conditions governing the retirement plan are controlled by the statutes and regulations establishing the Michigan Municipal Employees' Retirement System. Effective July 1, 2011 any newly elected or hired or appointed full time employee will be enrolled in MERS

Restated Uniform Hybrid Program (Benefit Program H) which is a defined contribution component. Program terms and conditions along with contribution options are available upon request.

Section 3.13. Work-Related Expenses. The Township will reimburse employees for the reasonable cost of expenses incurred as a result of their official duties as a Township employee. Employees will only be reimbursed if they had the prior authorization of the Township Manager to incur the expense.

Section 3.14. Professional and Service Memberships. Employees desiring to have the Township reimburse them for the expenses related to any professional or service organization shall request approval of such expenses in advance from the Township Board, who will approve all requests on an individual basis. Normally, the Township will not underwrite membership in an organization unless it is directly related to the employee's position.

CHAPTER IV LEAVES OF ABSENCE

Section 4.0. Unpaid Personal Leave. Requests for an unpaid leave of absence for purposes not covered by other leaves of absences shall be submitted in writing to the Township Manager, indicating the reason for the leave and the period of leave requested. The Township may in its discretion grant an unpaid personal leave of absence for a period normally not to exceed thirty (30) calendar days. An extension of an unpaid personal leave of absence may be granted by the Township Manager if the extension is requested in writing prior to the termination of the original leave period, provided that an unpaid leave of absence may not be granted for a period in excess of one (1) calendar year. A request for an unpaid personal leave of absence is not considered approved unless such approval is in writing signed by the Township Manager. An employee will not be paid or be entitled to the accrual of benefits during the period of an unpaid leave of absence.

Section 4.1. Paid Sick Leave. Full-time employees shall earn and be guaranteed sick leave of absence with pay under the following conditions and qualifications:

- a. Paid sick leave will be earned at a rate of five (5) days per year.
- b. Employee's unused sick leave can not be accumulated. However, in instances where an employee is injured while on duty no time shall be deducted from sick leave for that day.
- c. Employees will be required to sign a statement requesting use of paid sick leave, indicating the reason for the absence. The Township may require, in addition to the employee's own statement, a physician's certificate setting forth the reasons for the sick leave. The Township will not normally require a physician's certificate for short sick leaves of one or two days, unless the Township has reason to believe that the employee is abusing sick leave. Falsification of the

physician's certificate or falsely setting forth the reasons for the absence shall constitute cause for discipline, up to and including discharge.

Section 4.2. Non-Duty Disability Leave. A disability leave of absence will be granted to employees who have been absent for more than five (5) consecutive working days because of a non-work related injury, illness, pregnancy or other disability, subject to the right of the Township to require a physician's certificate establishing to the satisfaction of the Township that the employee is incapacitated from the performance of work due to illness, injury, or other disability. A disability leave shall be without pay. This disability leave will continue for the period of the employee's disability; provided, however, that an employee may not be on a disability leave for a period of more than twelve (12) consecutive months. The Township may request at any time, as a condition of continuance of a disability leave of absence, proof of a continuing disability. In situations where the employee's capacity to perform the job, the Township may require a medical examination by a physician chosen by the Township at the Township's expense and, if appropriate, require the employee to take a leave of absence under this Section. Employees who are anticipating a leave of absence under this Section may be required to present a physician's certificate recommending that the employee continue at work and in all cases the employee's attendance and job responsibilities must be satisfactorily maintained. Employees are required to notify the Township of any condition which will require a leave of absence under the Section together with the anticipated date for commencement of such leave. This notice shall be given to the Township by the employee as far in advance as possible of the anticipated date to commence the disability leave. All employees returning to work from a disability leave of absence must present a physician's certificate satisfactory to the Township indicating the employee is medically able to return to work.

Section 4.3. Military Training or Emergency Duty Leave. Employees required to perform active duty for training or to perform emergency duty in any reserve component of the Armed Forces of the United States or the National Guard shall be granted a leave of absence without pay for the period of such training or emergency duty upon request and the presentation of proper documentation from the employee's Commanding Officer. The provisions of the Section do not apply to an employee's initial period of active duty for training.

Section 4.4. Jury Duty Leave. Employees summoned by a court to serve as jurors shall be given a jury leave of absence for the period of their jury duty. For each day, up to a maximum of twenty (20) days per year, that an eligible employee serves as juror when the employee otherwise would have worked, the employee shall receive the difference between the employee's regular rate of pay for the employee's regularly scheduled hours and the amount the employee received from the court, exclusive of mileage and meal reimbursement. In order to be eligible to receive jury duty pay from the Township, an employee must:

- a. Be a full time employee;

- b. Give the Township reasonable advanced notice of the time that employee is required to report for jury duty;
- c. Give satisfactory evidence that the employee served as a juror at the summons of the court on the day that the employee claims to be entitled to jury duty pay;
- d. Return to work promptly after being excused from jury duty service;

Section 4.5. Funeral Leave. In the event that a death occurs to a member of the employee's immediate family, the employee shall be entitled to take up to three (3) consecutive days of leave to attend the funeral. "Immediate family" shall mean the employee's current spouse, child, father, mother, sister, brother, father-in-law, mother-in-law, grandparent or grandchild. Full-time employees who lose work from their regularly scheduled hours as a result of funeral leave shall receive their regular rate for such lost time. Employees needing additional time off may request to use unpaid leave time.

Section 4.6. Workers Compensation Leave. Upon written application, a leave of absence for a period of not more than twelve (12) months will be granted to employees who are unable to continue to work at the Township because of a work related injury or disease for which the employee is entitled to receive benefits under the Worker's Compensation laws of the State of Michigan and is receiving payments from the Township, subject to the Township's right to require medical proof. Extension of the leave may be granted by the Township upon written application establishing to the Township's satisfaction that there is a reasonable likelihood that the employee will be able to return to work during the period of the extension, provided that no leave will be granted for a period longer than twenty-four (24) consecutive months. The Township may require at any time, as a condition of continuance of a worker's compensation leave of absence, proof of a continuing inability to perform work with the Township. In the event that the Township, in conjunction with its medical advisors, determines that the employee is capable of returning to work, the employee's leave of absence shall immediately end.

Section 4.7. Return to Work After Leave of Absence. Employees returning from approved leaves of absence will be reinstated to their former job classification. The provisions of the foregoing notwithstanding, the Township reserves the right not to reinstate to their former job classification any employee who no longer has the necessary qualifications, skill and ability to perform the work.

CHAPTER V HOLIDAYS

Section 5.0. Recognized Holidays. The following holidays shall be recognized as holidays for employees of the Township:

Christmas Eve	December 24 th
Christmas	December 25 th

New Year's Eve	December 31 st
New Year's Day	January 1 st
Memorial Day	4 th Monday in May
Independence Day	July 4 th
Labor Day	1 st Monday in September
Veterans' Day	November 11 th
Thanksgiving Day	4 th Thursday in November
Day after Thanksgiving	4 th Friday in November

It is understood that employees may be required to work on holidays in accordance with normal scheduling procedures.

Section 5.1. Holiday Observation. When Independence Day or Veterans' Day falls on Saturday the preceding Friday shall be considered the holiday, and when it falls on Sunday the following Monday shall be considered the holiday. The Township Manager shall establish the eve holiday when Christmas Day or New Years Day falls on Saturday or Sunday.

Section 5.2. Holiday Eligibility. Employees are eligible for holiday pay if they satisfy all of the following conditions and qualifications:

- a. The employee must have worked the scheduled hours of work on their last scheduled workday preceding the holiday and on their scheduled workday following the holiday; provided, however, that absence due to approved paid leaves of absence or vacations will not disqualify an employee for holiday pay.
- b. The employee must be on the active payroll as of the date of the holiday. For purposes of this section, a person is not on the active payroll of the Township during unpaid leaves of absence, layoffs, when receiving workers compensation for a period greater than six (6) consecutive months, or during a disciplinary suspension. Employees scheduled to report for work on a holiday, but who fail to report for and perform such work, shall not be entitled to any holiday pay.

Employees scheduled to report for work on a holiday, but who fail to report for and perform such work, shall not be entitled to any holiday pay.

Section 5.3. Holiday Pay. Eligible full time hourly employees shall receive eight (8) hours of pay for each recognized holiday. Eligible regular part-time hourly employees shall receive pay for each recognized holiday in an amount equal to the number of hours lost from their normal schedule due to the Township's observation of the holiday not to exceed eight (8) hours; provided however that if the hours lost by the regular part-time employee as a result of the holiday are rescheduled to another time during the week in which the holiday is celebrated, no holiday pay shall be provided. All holiday pay shall be at the employee's straight time regular rate of pay, exclusive of all premiums. Eligible salaried employees are not normally required to work on holidays, but shall continue to receive their salaries.

Section 5.4. Holiday Work Premium. Hourly employees required to work on recognized Township holidays shall be paid at one and one half (1 ½) times their regular straight time hourly rate for the hours actually worked, in addition to holiday pay if otherwise eligible. For the purpose of this section, a holiday is defined as a twenty-four (24) hour period beginning at 12:01 a.m. of the holiday.

CHAPTER VI VACATION

Section 6.0. Vacation Allowance. All full-time employees shall be granted vacation leave with pay and benefits based upon their length of continuous service with the Township in accordance with the following:

<u>Years of Service</u>	<u>Time Off</u>
Less than five (5) years	10 days
At least five (5) but less than ten (10) years	12 days
At least ten (10) but less than fifteen (15) years	15 days
At least fifteen (15) but less than twenty (20) years	17 days
At least twenty (20) but less than twenty-five (25) years	20 days
At least twenty-five (25) years	25 days

Vacation allowance does not accrue or rollover. Eligible employees who fail to work the required number of hours shall be entitled to prorated vacation based upon the ratio the hours they actually worked to 2080. For the purposes of this section, hours worked shall include paid sick leave, paid funeral leave, paid jury duty leave, paid vacation, paid holidays, days off due to injury for which workers' compensation is paid by the Township not to exceed six (6) months from the date of injury credited at the number of hours in the employee's normal work day, and all hours actually worked.

Section 6.1. Vacation Scheduling. Employees desiring to take vacation shall submit a Vacation Leave Request form to the Township Manager. The Township will endeavor to honor all vacation requests, but reserves the right to deny a request to take a vacation at the time requested if the vacation would interfere with the efficient operation of the Township. The Vacation Leave Request form should normally be submitted by the employee to the Township Manager at least two (2) weeks in advance of the period requested.

Section 6.2. Vacation Pay. Vacation pay shall be at the employee's straight time rate in effect at the time the employee takes vacation leave. Employees may not take vacations

prior to the time that the vacation is earned. Vacation shall be charged in increments of not less than one full day. Employees are required to take their vacation during the twelve (12) months following its crediting, and all unused vacation shall be forfeited.

Section 6.3. Benefits on Termination. Employees of the Township shall not receive pay for unused vacation leave.

CHAPTER VII INSURANCE

Section 7.0. Health Insurance. The Township makes available a group insurance program covering certain hospitalization, surgical and medical expenses for full-time employees and regular part-time employees working at least 30 hours per week and their eligible dependents. Summary descriptions of the program are available in the Township Manager's Office. The specific terms and conditions governing the group insurance program as issued by the carrier or carriers. The Township reserves the right to modify the coverage's provided under the insurance program, to select the insurance carrier or carriers, to become a self-insurer whether wholly or partially, and to select the administrator of such self-insurance programs.

The Township also reserves the right to require co-payments or premium contributions from employees or to reduce coverages in the event that costs of insurance exceeds Township ability to pay.

Employees electing to participate in the group medical insurance plan shall advise the Township in writing of this intent and shall make arrangements satisfactory to the Township for the payment of the required monthly premium, if any. Employee should contact the Township Manager to determine the portion of the insurance premium currently paid by the Township on behalf of eligible employees.

Section 7.1. Dental Insurance. The Township makes available a group insurance program covering certain dental expenses for the Township Clerk, Township Treasurer, full-time employees and regular part-time employees working at least 30 hours per week and their eligible dependents. Summary descriptions of the program are available in the Township Manager's Office. The specific terms and conditions governing the group insurance programs are set forth in detail in the master policy or policies governing the program as issued by the carrier or carriers. The Township reserves the right to modify the coverages provided under the insurance program, to select the insurance carrier or carriers, to become a self-insurer either wholly or partially, and to select the administrator of such self-insurance programs.

Employees electing to participate in the group dental insurance plan shall advise the Township in writing of this intent and shall make arrangements satisfactory to the Township for the payment of the required monthly premium, if any. Employees should contact the Township Manager to determine the portion of the insurance premium currently paid by the Township on behalf of eligible employees.

Section 7.2. Term Life Insurance. The Township Clerk, Township Treasurer and full-time employees shall be eligible for group term life insurance policy coverage in the amount of \$10,000. The specific terms and conditions governing the term life insurance coverage are set forth in detail in the master policy or policies issued by the carrier or carriers. The Township pays the required monthly premium for eligible employees.

Section 7.3. Continuance of Insurance Premiums. In the event that an employee eligible for insurance coverage is discharged, quits, retires, resigns, is laid off, or commences an unpaid leave of absence, the Township shall have no obligation or liability whatsoever for making any insurance premium payment for any such employee or their lawful dependents beyond the month in which the discharge, quit, retirement, resignation, layoff, or unpaid leaves of absence commences. Employees on Township approved leaves of absence and eligible retirees may continue insurance benefits on a month-by month basis by paying to the Township, in advance, the amount of the next month's premium for that employee and/or their lawful dependents, subject to the approval of the insurance program. The Township shall resume payment of insurance premiums for eligible employees who return to work from layoff or unpaid leaves of absence as of the first (1st) day of the premium month following the date of the employee's return to work. The provisions of the section notwithstanding, the Township shall continue the payment of health insurance premiums for employees on workers compensation leave for a period of six (6) months.

Section 7.4. Workers Compensation. The Township provides workers compensation coverage for all of its employees. Employees are required to report any job related injury or occupational disease to the Township Manager as soon as possible, but no longer than twenty-four (24) hours after the accident or injury occurs or the disease is diagnosed. Failure to report a job related accident, injury or disease may result in a denial of compensation benefits.

Section 7.5. Unemployment Compensation. All employees are covered under Michigan's unemployment compensation system.

CHAPTER VIII GRIEVANCE PROCEDURES

Section 8.0. Grievances. The Township endeavors to apply its policies, benefits, and rules in a uniform and equitable manner. The grievance procedure is available to attempt to resolve complaints of employees who believe that they are not receiving fair treatment or not receiving all the benefits due to them as an employee.

Section 8.1. Grievance Procedure. All grievances shall be handled in the following manner:

Step 1. Oral Procedure to Township Manager. An employee with a complaint shall discuss the matter with the Township Manager, or designated representative,

within five (5) working days from the time of the occurrence of the events giving rise to the complaint or within five (5) working days from the time the employee involved first knew or should have known of the facts giving rise to the complaint in situations where it was impossible for the employee involved to have known at the time of the actual occurrence of the events giving rise to the complaint. The Township Manager, or designated representative, will endeavor to give a written answer to the complaint within five (5) working days of the discussion with the employee concerned. Every effort shall be made to settle the complaint in this manner.

Step 2. Written Procedure to Township Board. If a grievance is not satisfactorily settled in the Step 1, Oral Procedure, the employee may appeal the Township Manager's decision by delivering to the Township Board through the Township Manager's office a written request for a meeting concerning the grievance within five (5) working days following receipt of the Township Manager's disposition of the grievance. Within ten (10) working days after the grievance has been appealed, a meeting shall be held between representatives of the Township and the employee. If the meeting cannot be held within the ten (10) working day period, it shall be scheduled for a date mutually convenient for the parties. The Township Supervisor, or designated representative, shall place a written disposition on the grievance within ten (10) working days following the date of this meeting, and return it to the employee. The Township's Supervisor answer to the grievance shall be the Township's final disposition of dispute.

CHAPTER IX MISCELLANEOUS

Section 9.0. Use of Township Property. No property belonging to the Township may be borrowed for personal use by employees. Any Township property provided to an employee for use while a Township employee must be returned upon termination of employment.

Section 9.1. Use of Personal Property. Employees shall not use their personal property for any Township business unless specifically requested to and authorized by the Township Manager. The Township shall not be liable for any loss incurred to an employee's personal property unless use of the property has been authorized in writing prior to the date of loss.

Section 9.2. Use of Township Vehicles and Equipment. The use of Township owned vehicles is confined to that necessary to conduct official Township business and shall not be used for private or unauthorized purposes. Vehicles shall be driven in a manner so as to conform to all posted speed limits, state traffic rules and regulations and local ordinances. Any fines incurred by an employee while operating a Township vehicle due to traffic or parking violations shall be the responsibility of the employee. Persons other than Township employees shall not be authorized to drive or ride in Township vehicles unless authorized by the Township Manager, and then only for official Township

business. Township-owned vehicles assigned to employees are subject to the rules and regulations established by the Township Manager.

Township vehicles, equipment, supplies, tools and uniforms shall not be used for private or unauthorized purposes. Employees shall not dispose of Township property including sale, auction, or disposal without the approval of the Township Manager. When using the Township's vehicular equipment, employees must keep in mind that they are representatives of the Township and that their conduct in adhering to the rules of safety and courtesy on the road is a reflection on the Township. Employees shall be responsible for the proper care and use of Township vehicles and equipment and shall report promptly any malfunction so that repairs may be made. Employees are required to lock Township Vehicles when absent from the vehicle and not within sight of the vehicle.

Employees are required to wear seat belts during any activity performed as a part of their employment. This request includes the wearing of seat belts while driving any Township-owned equipment or driving a personal vehicle while on Township business.

Section 9.3. Gifts and Favors. Employees shall not accept loans, gifts of money or goods, services or any other proffered arrangements for personal benefit under any circumstance directly or indirectly involving possible influence or appearance of influence upon the manner in which they perform work, make decisions, or otherwise discharge their duties as a Township employee.

Section 9.4. Smoking. All buildings and vehicles controlled by the Township are designated as non-smoking.

Section 9.5. Harassment Policy. The Township prohibits employees from engaging in the sexual, racial, ethnic, age or other harassment of a member of the public or of another employee. Such harassment is a serious violation of Township rules.

Sexual harassment involving individuals within the employment setting is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when:

1. Submission to such conduct or communication is made a term or condition either explicitly or implicitly to obtain employment;
2. Submission to or rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment;
3. Such conduct or communication has the purpose or effect of unreasonably interfering with an individual's employment or creating an intimidating, hostile or offensive employment environment;

Examples of sexual harassment, may include, but are not limited to, the following:

- Pressure for sexual activity;
- Repeated remarks with sexual or demeaning implications;
- Unwelcome touching;
- Sexual jokes, posters, and cartoons.

Similar actions taken by employees towards members of the general public are considered to be sexual harassment prohibited by this policy.

The Township also discourages romantic relationship between supervisors and subordinates and prohibits any such conduct that is unwelcome. Anyone who is an unwilling participant in such a relationship must notify the Township Manager or the Township Supervisor immediately.

Violation of this rule prohibiting harassment will subject the violator to discipline, including the possibility of immediate discharge.

Managers and Supervisors are required to be alert to stop any harassment from occurring in the workplace. Employees who believe that they have been harassed, sexually or otherwise, or who have observed an employee harassing another employee or a member of the public should immediately report the incident to the Township Manager or the Township Supervisor. In the event of an incident of alleged harassment by the Township Manager, the report should be made to the Township Attorney or to a member of the Township board. When making this report, the employee should clearly state that they believe that they are the victim of harassment and that the employee is reporting the incident pursuant to this policy. The Township will investigate all reports of harassment.

Making a complaint of harassment is a serious matter, but no employee will be subject to any form of retaliation or disciplinary action for making or pursuing a complaint of harassment that is made in good faith. Employees who knowingly submit false, inaccurate, or otherwise misleading information to the Township in connection with a report of alleged harassment or the investigation of an alleged incident of harassment shall be subject to discipline, up to and including discharge. The Township will keep complaints of harassment confidential to the extent that it is possible and still conduct an investigation.

Section 9.6. Personal Appearance and Conduct. Employees are expected to present a suitable and well-groomed appearance at all times. Employees shall refrain from conduct, which will reflect adversely on their personal reputation and/or that of the Township.

Section 9.7. Use of Township Telephones. Employees shall observe the rules of telephone courtesy in receiving and placing calls. Employees are permitted to use Township telephones for personal reasons only in cases of absolute necessity. This is a privilege and not a right and may be withdrawn by the Township if abused through excessive use or if telephoning causes interference with work duties. Employees shall discourage persons from telephoning them at work.

Section 9.8. Payroll Deductions. The Township withholds Federal Income Tax, State Income Tax, Federal Social Security Tax, employee contributions to the Township Retirement Plan, court-ordered garnishments and child support payments from employee paychecks in the amount and manner prescribed by state and federal law. In addition, the Township will withhold voluntary authorized deductions from an employee's paycheck for other programs approved by the Township. The starting and changing of voluntary deductions must be requested on a form provided by the office of the Township Manager.

Section 9.9. Consumption of Alcoholic Beverages. Employees are prohibited from consuming alcoholic beverages at any time during the working day, including during the lunch hour. Employees must also refrain from consuming alcohol a sufficient time prior to reporting for work so that there will be no odor of alcohol on one's breath or any impairment of their actions.

Section 9.10. Computer and Email Usage. Computers, computer files, and E-mail system, and software furnished to employees are Township property intended for business use. Employees should not use a password, access a file, or retrieve any stored communication without authorization. To ensure compliance with the policy, computer and E-mail usage may be monitored. The Township strives to maintain a workplace free of harassment and sensitive to the diversity of its employees, prohibits the use of computers and any E-mail system in ways that are disruptive, offensive to others, or harmful to morale. For example, the display or transmission of sexually explicit images, messages, and cartoons is not allowed. Other such misuse includes, but is not limited to ethnic slurs, racial comments, off-color jokes, or anything that may be construed as harassment or showing disrespect for others. E-mail may not be used to solicit others for commercial ventures, religious or political causes, outside organizations, or other non-business matters. The Township purchases and licenses the use of various computer software for business purposes and does not own the copyright to this software or its related documentation. Unless authorized, by the software developer, the Township does not have the right to reproduce such software for use on more than one computer. Employees may only use software on local area networks or on multiple machines according to the software license agreement. The Township prohibits the illegal duplication of software and its related documentation.

CHAPTER X DISCIPLINARY ACTION

Section 10.0. General Policy. All employees are expected to conduct their private and professional lives in a manner that reflects positively upon the Township. Employees shall be courteous in their dealings with the public and other employees. Employees shall avoid any action that gives the appearance of impropriety. Adherence to this policy is essential for the Township to maintain the public support necessary to carry out its functions.

Section 10.1. Disciplinary Action. The imposition of disciplinary action is normally the responsibility of the Township Manager. Situations of a minor nature are handled informally by the Township Manager and normally result in a verbal warning conducted in private. The warning may be documented and placed in the personnel file. Offenses of a serious nature are to be documented in writing and retained in the employee's personnel file. Habitual minor offenses shall be considered serious and shall be entered into the personnel file. Terminations must have the prior approval of the Township Manager.

Section 10.2. General Work Rules. The following rules are provided for the guidance of all employees.

1. Employees should be at their workstations prior to the commencement of the workday.
2. Employees must secure permission from the Township Manager to leave work prior to the scheduled end of their workday.
3. All known needed repairs and/or safety hazards on equipment and property must be reported to the Township Manager as soon as possible.
4. Any accident involving personal injury must be reported to the Township Manager.
5. All damage to Township equipment, vehicles, tools, or property must be reported to your supervisor.
6. All safety rules and regulations must be followed. Employees are required to report any and all potentially dangerous work practices, unsafe work conditions, horseplay, negligence and carelessness to the Township Manager.
7. Any employee involved in an accident with a Township owned vehicle shall promptly notify the nearest law enforcement agency regardless of how minor the accident.

Section 10.3. Unacceptable Employee Conduct. The Township expects that the personal and professional conduct of its employees will conform to acceptable standards. In instances where an employee fails to comply with these standards, an attempt may be made to correct an employee's conduct through the use of progressive discipline, but commission of the following offenses or any other improper employee action may result in disciplinary action up to and including discharge, depending upon the seriousness of the offense in the judgment of the Township.

1. Using intoxicating beverages, marijuana, narcotics or any controlled substance while at work or while on Township property;

2. Sale of intoxicating beverages, marijuana, narcotics or any controlled substance while at work or while on Township property;
3. Possession of intoxicating beverages, marijuana, narcotics or any controlled substance while at work or while on Township Property;
4. Using intoxicating beverages, marijuana, narcotics or any controlled substance at such time before work that will interfere with one's mental or physical ability to satisfactory perform assigned duties;
5. Stealing, abusing, misusing, removing or deliberately destroying Township property or the property of its employees;
6. Violation of safety regulations;
7. Failure to carry out instructions, orders, or work assignments;
8. Refusal to answer questions of the Township Manager/designee or submit reports pertaining to the performance of official duties;
9. Any communication or action intended to threaten, intimidate or coerce another employee or a member of the general public;
10. Engaging in sexual harassment;
11. Marring, marking or defacing any Township building;
12. Failing to notify your supervisor that you are using prescribed medication or a non-prescription drug that could interfere with your ability to perform your assigned duties in a safe and efficient manner;
13. Conducting or betting on any game of chance involving money or any representation of value while on duty or while on Township property;
14. Unauthorized possession of firearms, weapons and/or explosives while on duty or while on Township property;
15. Using abusive language, threatening, intimidating, coercing and/or fighting with employees, supervisors or the general public;
16. Engaging in obscene or indecent conduct;
17. Sleeping, loafing, idling or loitering during working hours;
18. Horseplay, creating a distraction, interfering with an employee or causing unsafe or unsanitary working conditions;

19. Falsifying records, reports, documents, or knowingly misrepresenting any information requested by supervision;
20. Conducting personal business while on duty;
21. Failing to properly advise the Township when not reporting to work;
22. Failing to provide a reason acceptable to the Township for absence from work or tardiness for work;
23. Excessive tardiness or absences;
24. Using your position of employment with the Township to directly or indirectly gain benefits, favors, money, advantages, privileges or anything of value other than regular compensation;
25. Disregarding or refusing to obey an order, either written or verbal, from a supervisor or the Township Manager;
26. Destroying, altering or removing any materials or information posted by the Township;
27. Supporting a restriction of output, slowdown or any unauthorized interruption of assigned duties;
28. Submission of false time reports and/or sick leave requests, or removing time reports from Township offices;
29. Failure to advise the Township of the names, addresses and telephone numbers of the dependents of the employee, or a change in the employee's name, address or telephone number;
30. Soliciting or receiving any gift, service, gratuity, loan, fee, or anything else of value which is offered or may be offered as a consequence of Township employment;
31. Failing to comply with any provision in the Personnel Policy with any other rule and regulation applicable to the employee;
32. Conviction of any felony or conviction of any misdemeanor involving moral turpitude or casting doubt upon the employee's ability to perform work.
33. Taking any other action which interferes with the proper performance of the employee's assigned work or which would reflect discredit upon the Township.

This list of unacceptable employee conduct does not include all examples of improper conduct, but is provided for the guidance of employees. Employees with questions concerning the propriety of any contemplated action should consult with their supervisor or the Township Manager before engaging in the activity.

From: [Marcus Peccia](#)
To: [Camille Lipke](#)
Subject: FW: FOIA
Date: Tuesday, September 11, 2018 5:01:58 PM
Attachments: [FOIA Regarding Non-Discrimination-Cadillac.pdf](#)
[Human Rights Ordin.pdf](#)
[Policy.pdf](#)
[Non Discrimination Resolution June 2017- Elliot-Larson Norm.pdf](#)
[6-14-17 Meeting Minutes.pdf](#)

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Marcus A. Peccia, City Manager
City of Cadillac
200 N. Lake Street
Cadillac, MI 49601
(231) 779-7344
Mobile (231) 884-3202
citymanager@cadillac-mi.net
<http://www.facebook.com/cityofcadillac>

From: Mark Stuhldreher [mailto:mstuhldreher@uniontownshipmi.com]
Sent: Tuesday, September 11, 2018 10:57 AM
To: Marcus Peccia
Cc: Camille Lipke; Jennifer Loveberry; Lisa Cody
Subject: FOIA

Good morning, Mr. Peccia-

In response to your FOIA request (attached for your convenience with notes), please see the additional attached documents. I trust you'll find this response satisfactory. Please let me know if you have any questions.

Best,

Mark Stuhldreher
Township Manager
Charter Township of Union
2010 S Lincoln
Mt. Pleasant, MI 48858
989.772.4600 ext 231



200 North Lake Street • Cadillac, Michigan 49601
231.775.0181 • fax 231.775.8755
www.cadillac-mi.net

September 5, 2018

Re: Request for Records Pertaining to Civil Rights/Non-Discrimination Program

To Whom It May Concern:

The City of Cadillac City Council has been considering the establishment of a new non-discrimination ordinance, and on their behalf, I am requesting the following:

- Copy of your community's Code specific to this issue ← attached
- Copy of your community's administrative procedure/policy for how complaints are processed within the operation of the organization (i.e., who do complaints go to, and how are they processed) ←
- Copy of any reports (last 3-years) indicating how many complaints were received ← none
- Copy of any reports (last 3-years) indicating how much it cost to process and/or investigate complaints ←

I recognize that this request may not specifically or properly name the type of report or document your organization has regarding this topic, but would kindly request that if a document or record does exist that might be helpful, that it is provided in accordance with this request.

Please send all correspondence, including any notices regarding fees to my attention at mpeccia@cadillac-mi.net. Documents are preferred to be received electronically; however if necessary, they can also be mailed to my attention at Cadillac City Hall, 200 N. Lake Street in Cadillac, MI 49601.

Thank you in advance for all of your assistance!

A handwritten signature in blue ink, appearing to read "Marcus Peccia", written over a horizontal line.

Marcus Peccia, City Manager

2.3. (c) Revision

The Union Township Board, may from time to time adopt, publish, change, amend, and enforce rules and regulations for all employees governing discipline, health and safety, duties, rules of conduct, and work rules.

The policies and procedures contained in this manual can only be changed by a formal resolution of the Union Township Board. Employee ideas, comments and suggestions are encouraged and they are to be submitted in writing to the Township Supervisor. The Township Supervisor will pass on to the Union Township Board any suggestions or comments that have merit.

2.3.(d) Distribution of the Manual

Employees will receive a copy of the Township Personnel Policies and Procedures Manual. New employees will receive a copy of the manual at the time of orientation. If requested, an applicant being considered for employment with the Township will be allowed to review the manual. Current employees will sign a form acknowledging receipt of the manual.

2.3. (e) Equal Employment Opportunity Policy

Introduction

You are now a part of the Charter Township of Union professional team of highly qualified employees. It is the policy of the Township to hire qualified people to perform varied tasks. An intricate part of this policy is to administer hiring, transfers, promotions, terminations, working conditions, benefits, and privileges of employment compensation, and training for all employees without regard to race, color, religious creed, sex, age, weight, height, marital status, ancestry, national origin, or physical handicap.

2.3. (f) Sexual, Ethnic, Racial and Religious Harassment Policy

The Charter Township of Union has a long-standing commitment to provide a work

environment free from all forms of sexual, ethnic, racial and religious harassment. Any substantiated incidents of sexual, ethnic, racial and/or religious harassment by a management or supervisory employee, co-worker or non-employee, may result in immediate disciplinary action including possible termination. It is the responsibility of every employee to bring to the Superintendent's attention any evidence of sexual, ethnic, racial and/or religious harassment so that the matter can be promptly investigated and appropriate action taken. The Superintendent shall inform the Township Supervisor of the allegation(s) and/or complaint. It shall be the responsibility of the Superintendent and Supervisor to inform the Board of Trustees of the allegation/complaint in case of possible legal actions.

Sexual, ethnic, racial and/or religious harassment is an offense against the Township and against employees or groups of employees. Offenses refer to physical, verbal, or implied actions that have the purpose or effect of creating a hostile, offensive, or intimidating working environment or have a sexual, ethnic, racial, religious basis or both. Examples

would include, but are not limited to: physical contact of a sexual nature; sexual, racial, ethnic or religious jokes, comments, insults, cartoons, innuendoes or personal conduct of mannerisms that could be construed as offensive.

Additionally, sexual harassment includes unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when submission to such conduct or communication is made a term or a condition either explicitly or implicitly to obtain employment; submission to or rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment.

PURPOSE

To maintain a quality working environment for all employees of the Township so that they may work free from intimidation, humiliation or insult; to prevent employees from being subjected to offensive physical, psychological, or verbal abuse or actions of a sexual, ethnic, racial, or religious nature. The Charter Township of Union adopts the following policy against all forms of sexual, ethnic, racial or religious harassment.

APPLICATION

All employees, elected and appointed officials, or committee members of the Charter Township of Union.

POLICY

1. Sexual, ethnic, racial, and/or religious harassment is an offense against the Township and against employees or groups of employees.
2. Offenses refer to physical, verbal, psychological, or implied actions that have the purpose or effect of creating a hostile, offensive, or intimidating working environment or have an ethnic, racial, religious or sexual basis or both. Examples would include, but are not limited to: physical contact of a sexual nature; sexual, racial, ethnic or religious jokes, comments, insults, cartoons, innuendoes or personal conduct or

- mannerisms that could be construed as offensive.
3. Additionally, sexual harassment included unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when submission to such conduct or communication is made a term or condition either explicitly or implicitly to obtain employment; submission to or rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment.
 4. This Township will deal with all such incidents in a fair, impartial and speedy manner.
 5. All complaints or incidences will be investigated on a case-by-case basis. Any employee believing that they have been a victim of harassment or discrimination should contact the Township Superintendent to report the occurrence. The Superintendent shall apprise the Supervisor of the matter. After appropriate investigation and verification of the incident by the Superintendent, the Township Board of Trustees shall be informed so appropriate action may be taken officially.
 6. In all incidents where a violation has been shown to occur, appropriate action will be taken by the Township Board of Trustees up to and including termination of employment to remedy the situation and to prevent its reoccurrence.
 7. It is each employee's responsibility to help eliminate all forms of harassment and unwanted conduct. It is each department head and supervisor's responsibility to prevent such behavior from occurring within their work jurisdiction and they shall report to the Superintendent any and all occurrences of which they have knowledge.
 8. All employees who violate this policy shall be subjected to disciplinary action by the Township board of Trustees up to and including dismissal/termination of employment.

PROCEDURE

STEP 1:

The individual alleging harassment will report the incident to the Superintendent and will then be interviewed to discuss the nature of the allegations. If allegations are made to any other person, the matter should be immediately directed to the Superintendent.

Individuals alleging harassment will be informed that in order for the Township to pursue the complaint, the employee must complete a written statement on the Township's harassment form, specifically detailing the nature of the complaint. If the complainant refuses to complete a written statement on the specified form, then the Township Superintendent cannot further investigate the matter unless circumstances clearly indicate otherwise.

Upon receipt of the employee's written harassment complaint, the Superintendent will investigate each complaint and allegation, plus maintain all associated paperwork or evidence. The Township Supervisor will be informed, along with the Board of Trustees.

STEP 2:

After the Superintendent receives the complaint in writing, the Township Superintendent will conduct an investigation and interview any witnesses, including the alleged harasser. The Superintendent will review Township policy and procedure with the alleged harasser and indicate that a charge of harassment has been filed in writing with the Township. The alleged harasser will have an opportunity to refute the allegation by responding to the

complaint in writing.

STEP 3:

If the evidence substantiates the claim of harassment, the Superintendent may take appropriate action up to suspension from employment. The Superintendent will inform the Township Board of Trustees for appropriate Board action to be taken up to and including immediate discharge/termination of employment. If the evidence does not support the allegation, the employee filing the complaint will be informed of that fact and that no action will be taken by the Superintendent.

APPEAL PROCESS

If the Superintendent determines that the evidence does not support the allegation and no action is taken, the victim may appeal to the Township Board of Trustees. If a board member is the accused, that board member must remove himself or herself from the process of determination by the Board of Trustees as to the action to be taken.

IMPLEMENTATION

It will be the responsibility of the Superintendent to provide information regarding this policy and procedures to all employees; citing the gravity of such behavior and the procedure to be employed in the event such an allegation develops.

2.3. (g) REPORTING VIOLATION OF EEO POLICY

If you have a problem related to equal employment opportunity or sexual harassment, we advise that you immediately report the problem to the Township Supervisor/Superintendent. The Township Supervisor/Superintendent will be responsible for accepting complaints of discrimination. Such complaints shall be in writing with the date of the report clearly indicated. Upon notification, the Township Supervisor/Superintendent shall attempt to determine, through fact-finding, if the alleged complaint is within his or her purview and if a formal investigation is warranted.

A date will be established for the investigation and an in-depth interview with the complainant and the department involved. The Township Supervisor/Superintendent shall attempt resolution with the complainant and appropriate management personnel, separately or together. Any agreements reached between the complainant and management must be in writing and witnessed plus copies provided to all parties involved.

The informal resolution process must be performed in an expeditious manner, not to exceed fifteen (15) calendar days. It is Charter Township of Union's intention to resolve all complaints internally, and every effort will be made to do so.

2.4 BOARD MEETING ADMINISTRATION

BOARD AGENDA

A. Discussion / Action: Consider approving resolution in support of amending the Elliot-Larson Civil Rights Act

Woerle moved Cody supported to approve the resolution extending the Elliot-Larson Civil Rights Act to include sexual orientation, gender identity, and expression, in support of Michigan HB 4689 (2017). **Roll Call Vote: Ayes: Gunning, Cody, Rice, B. Hauck, Lannen, Mikus, and Woerle Nays: 0. Motion carried.**

Lannen moved Rice supported the Clerk record this resolution with the office of the Governor and the Majority and Minority Leaders in the State Senate and the House of Representatives. **Vote: Ayes: 7 Nays: 0. Motion carried.**

B. Discussion/ Action: Consider appointment of John Dauffenbach as Township of Union's Building Official.

B. Hauck moved Cody supported to postpone naming John Dauffenbach as the Township of Union's Building Official until the June 28, 2017 Board of Trustees meeting. **Vote: Ayes: 4 Nays: 3. Motion carried.**

C. Discussion/ Action: Approve MTA Principles of Governance Resolution

Woerle moved Rice supported to approve and adopt the Principles of Governance from the Michigan Townships Association. **Vote: Ayes: 7 Nays: 0. Motion carried.**

D. Discussion / Action: Request to award bid for 2017 Sanitary Sewer Cleaning & Televising to Plummers Environmental

Mikus moved Lannen supported the approval of awarding the bid for the 2017 Sanitary Sewer Cleaning and Televising to Plummers Environmental, in the amount of \$94,664.50, to complete 39,775 feet of sanitary sewer mains. **Vote: Ayes: 7 Nays: 0. Motion carried.**

E. Discussion / Action: Request to award bid for 2017 Sanitary Sewer Bypass Manhole Structure #5 Pump Station to JJZ Contracting LLC

Woerle moved Rice supported the approval of the bid from JJZ Contracting LLC, in the amount of \$37,000.00, to complete the required rehabilitation and repairs to sanitary sewer bypass manhole at pump station #5. **Vote: Ayes: 7 Nays: 0. Motion carried.**

F. Discussion / Action: Request to award bid for 2017 Well #1 Replacement to Peerless Midwest

Woerle moved Rice supported the approval of the bid from Peerless Midwest, in the amount of \$76,655.00, to redrill Well #1 located at the Isabella Well Site. **Vote: Ayes: 7 Nays: 0. Motion carried.**

G. Recommendation to adopt Zoning Ordinance 2017-05 (Roll Call Vote)

Mikus moved Rice supported to adopt Zoning Ordinance 2017-05, titled as section 8.225 Outdoor Lighting in the Zoning Ordinance. **Roll Call Vote: Ayes: Gunning, Cody, Rice, B. Hauck, Lannen, Mikus, and Woerle Nays: 0. Motion carried.**

154.000 - HUMAN RIGHTS Ord. No. 2012-06 Adopted: Oct. 10, 2012

AN ORDINANCE TO AMEND THE CHARTER TOWNSHIP OF UNION CODE OF ORDINANCES BY ADDING A NEW ORDINANCE TITLED "HUMAN RIGHTS," TO PROHIBIT DISCRIMINATION IN EMPLOYMENT, HOUSING AND PUBLIC ACCOMMODATIONS AND TO PROVIDE PENALTIES FOR VIOLATIONS.

IT IS HEREBY ORDAINED BY THE PEOPLE OF THE CHARTER TOWNSHIP OF UNION:

154.001 - Purpose.

Sec. 1.

- (A) The Township intends that no individual be denied the equal protection of the laws; nor shall any person be denied the enjoyment of his or her civil rights or be discriminated against because of race, religion, color, national origin, sex, age, marital status, physical or mental disability, height, weight, familial status, sexual orientation or gender identity.
- (B) The prohibitions against discrimination in this ordinance are intended to supplement federal and state civil rights law prohibiting discrimination in the areas of employment, housing and public accommodations. However, this chapter shall be construed and applied in a manner consistent with jurisprudence regarding the freedom of speech and exercise of religion under the First Amendment to the United States Constitution.
- (C) Nothing in this ordinance is intended to require or shall be construed to require preferential treatment of any individual or group identified in subsection (A).

154.002 - Definitions.

Sec. 2. For the purpose of this chapter, the following definitions shall apply:

- (A) *Age*. Chronological age.
- (B) *Authorized Township official*. Code enforcement personnel or any other personnel of the Township designated and authorized by the Township Manager, this code or any ordinance to investigate or issue municipal civil infraction citations or municipal civil infraction violation notices.

- (C) *Complainant.* An individual or other person who files a complaint alleging a violation of this chapter.
- (D) *Discriminate, discrimination.* To make a decision, offer to make a decision or refrain from making a decision based in whole or in part on the race, religion, color, national origin, sex, age, marital status, physical or mental disability, height, weight, familial status, sexual orientation or gender identity of an individual. Sex discrimination includes sexual harassment and discrimination based on pregnancy, childbirth, or a medical condition related to pregnancy or childbirth that does not include non-therapeutic abortion not intended to save the life of the mother.
- (E) *Educational institution.* A public or private institution or a separate school or department thereof, including an academy, college, elementary or secondary school, extension course, kindergarten, nursery, local school system, or university, or a business, nursing, professional, secretarial, technical, or vocational school. For the purposes of this definition, educational institution includes an agent of an educational institution.
- (F) *Employee.* An individual who is hired for a wage, salary, fee, payment or other remuneration to perform work for an employer.
- (G) *Employer.* A person who has one or more employees, and includes an agent of that person.
- (H) *Employment agency.* A person regularly undertaking, with or without compensation, to procure, refer, recruit, or place an employee for an employer or to procure, refer, recruit, or place for an employer or person the opportunity to work for an employer. For purposes of this definition, employment agency includes an agent of that person.
- (I) *Familial status.* One or more individuals under the age of 18 residing with a parent or other person having custody or in the process of securing legal custody of the individual or individuals or residing with the designee of the parent or other person having or securing custody, with the written permission of the parent or other person. For the purposes of this definition, "parent" shall include an individual who is pregnant.
- (J)

Gender identity. An individual's appearance, expression, identity or behavior as being either male or female, whether or not that appearance, expression, identity or behavior is different from that which is traditionally associated with the individual's designated gender at birth.

(K) *Housing accommodation.* Any improved or unimproved real property, or a part thereof, which is used or occupied, or is intended, arranged, or designed to be used or occupied, as a home or residence of one or more individuals.

(L) *Immediate family.* A spouse, parent, child or sibling.

[L.1] *Individual.* A single human being.

(M) *Labor organization.* An organization of any kind, an agency or employee representation committee, group, association, or plan in which employees participate and which exists for the purpose, in whole or in part, of dealing with employers concerning grievances, labor disputes, wages, rates of pay, hours, or other terms or conditions of employment. For purposes of this definition, a labor organization need not be subordinate to or affiliated with a national or international labor organization.

(N) *Marital status.* The state of being married, unmarried, divorced or widowed.

(O) *Person.* An individual, agent, association, corporation, labor organization, legal representative, partnership, receiver, trust or any other legal or commercial entity.

(P) *Physical or mental disability.* A determinable physical or mental characteristic of an individual, which may result from disease, injury, congenital condition of birth, or functional disorder, if the characteristic substantially limits a major life activity of that individual and is unrelated to the individual's ability to perform the duties of a particular job or position, is unrelated to the individual's ability to utilize and benefit from a place of public accommodation, or is unrelated to the individual's ability to acquire, rent, or maintain property. For the purposes of this definition, physical or mental disability does not include any condition caused by the current illegal use of a controlled substance or the use of intoxicating liquors by an individual.

(Q)

Place of public accommodation. A business, or an educational, refreshment, entertainment, recreation, health, or transportation facility, or institution of any kind, whether licensed or not, whose goods, services, facilities, privileges, advantages, or accommodations are extended, offered, sold, or otherwise made available to the public.

- (R) *Private club.* An establishment that is not open to the public. A private club is one whose members' association with each other and the club is sufficiently intimate, small and exclusive that it is not open to the public.
- (S) *Religious organization or institution.* A religious corporation, association, educational institution or society, which is, in whole or substantial part, owned, supported, controlled or managed by a particular religion whose purpose or character is directed toward the propagation of that particular religion and that has the inculcation of religious values or the provision of charity as its purpose; primarily employs persons who share its religious tenets; and primarily serves persons who share its religious tenets or, on a charitable basis, the broader community. Religious organization or institution includes, for illustration and not limitation: churches, mosques, synagogues and other houses of worship; any subsidiary organizations; educational institutions affiliated with, controlled, or managed by those houses of worship or with articles of incorporation, bylaws and other documents stating an intention to inculcate its religious tenets in students; and, faith-based organizations that, due to a sense of duty based on particular religious tenets, provide charitable services to the public.
- (T) *Respondent.* A person against whom a complaint is filed under this chapter.
- (U) *Sex.* The actual biological state of being male or female as of birth, or subsequent alteration through surgical procedure, and without regard to any outward physical display or expression of gender identity.
- (V) *Sexual harassment.* Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature under the following conditions:
 - (1) Submission to the conduct or communication is made a term or condition, either explicitly or implicitly, to obtain employment, housing, or public accommodations.
 - (2)

Submission to or rejection of the conduct or communication by an individual is used as a factor in decisions affecting the individual's employment, housing, or public accommodations.

- (3) The conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or public services, or housing, or creating an intimidating, hostile, or offensive employment, housing, or public accommodations.
- (W) *Sexual orientation*. Male or female homosexuality, heterosexuality or bisexuality, whether by orientation or practice. Sexual orientation does not include any sexual activity or attempted activity otherwise prohibited by law.
- (X) *Township manager*. The Township Manager of the Township, or his or her designee.

154.003. - Employment practices.

Sec. 3. Except as otherwise provided in section 170.07 [154.007]:

- (A) An employer shall not discriminate against an individual with respect to recruitment, employment, compensation, work classifications, promotion or demotion, termination, or a term, condition or privilege of employment.
- (B) A labor organization shall not exclude or expel from membership a member or applicant for membership, or otherwise discriminate against a member or applicant for membership with respect to collective bargaining, member grievances, labor disputes, wages, rates of pay, hours or other terms or conditions of employment.
- (C) An employment agency shall not discriminate in the procurement, referral, recruitment, or placement of an individual for employment with an employer.

153.004 - Housing practices.

Sec. 4. Except as otherwise provided in section 7 [154.007]:

- (A) A person shall not discriminate in leasing, selling, or otherwise making available any housing accommodation.
- (B)

A person shall not discriminate in the terms, conditions, or privileges of a real estate transaction or in the furnishing of facilities or services in connection with any housing accommodation.

- (C) A person shall not discriminate in providing financing for the purchase, repair, or remodeling of any housing accommodations.
- (D) A person shall not discriminate in making referrals, listings or otherwise providing information regarding housing accommodations.

154.005 - Public accommodations.

Sec. 5. Except as otherwise provided in section 7 [154.007], a person shall not discriminate in making available full and equal enjoyment of the goods, services, privileges, advantages, or accommodations of any place of public accommodation.

154.006 - General prohibited practices.

Sec. 6. Except as otherwise provided in section 7 [154.007]:

- (A) A person shall not adopt, enforce, or employ any policy or requirement, or print, post, circulate, mail or otherwise publish any statement, advertisement, sign, or notice which discriminates or suggests discrimination in providing employment, housing or public accommodations.
- (B) A person shall not coerce, threaten or retaliate against another for making a complaint or assisting in any investigation regarding a violation or alleged violation of this chapter. A person shall not require, request, conspire with, coerce or otherwise assist a person to retaliate against a person for making a complaint or assisting in an investigation.
- (C) A person shall not conspire with, assist, coerce, or request another to discriminate in any manner prohibited by this chapter.
- (D) A person shall not adopt, enforce, or employ any policy, practice or requirement which has the effect of discriminating in a manner prohibited by this chapter, except when there is a bona fide business necessity for such a policy, practice or requirement. For the purposes of this chapter, bona fide business necessity means that the policy, practice or requirement is reasonably necessary to the normal operation of the person's business. A

bona fide business necessity does not arise due to a mere inconvenience or because of suspected or actual objection by neighbors, customers, or other persons.

154.007 - Exceptions.

Sec. 7. Any other provision of this chapter notwithstanding:

- (A) The provisions of this chapter do not apply to any religious organization or institution with respect to its employment of individuals.
- (B) A religious organization or institution may restrict the occupancy of any of its housing facilities or place of public accommodations operated as a part of its religious activities to persons of its denomination or those who conform to the moral tenets of that religious organization or institution. This exception shall apply to a religious organization or institution that allows persons other than its members to use its facilities if its facilities remain exempt from Michigan property taxation pursuant to section 7s of 1893 PA 206, as amended, MCL 211.7s.
- (C) The owner of a housing facility or accommodation devoted entirely to the housing of individuals of one gender may restrict the occupancy of such a facility or accommodation on the basis of gender.
- (D) The provisions of this chapter do not apply to the rental of a housing accommodation in a building that contains housing accommodations for not more than two (2) families living independently of each other if the owner or a member of the owner's immediate family resides in one (1) of the housing accommodations, or to the rental of a room or rooms in a single family dwelling by a person if the lessor or a member of the lessor's immediate family resides in the dwelling.
- (E) The provisions of this chapter do not apply to any arrangement for shared ownership, lease or residency of a dwelling unit.
- (F) An educational institution may limit the use of its facilities to those affiliated with such institution.
- (G) A governmental institution may restrict any of its facilities or restrict employment opportunities based on duly-adopted institutional policies that conform to state and federal laws and regulations.

- (H) A person may discriminate based on an individual's age when such discrimination is required or permitted by local, state or federal law.
- (I) A person may provide discounts on products or services to students, or on the basis of age.
- (J) A person may refuse to enter into a contractual relationship with an unemancipated minor.
- (K) A person may restrict the use of restrooms, lavatories, locker room facilities, shower facilities, or changing rooms on the basis of gender. Restrictions for the use of restrooms, lavatories, locker room facilities, shower facilities, or changing rooms as provided in this section shall not be considered a violation of this chapter's prohibitions on discrimination based on gender identity.
- (L) A person may restrict participation in an instructional program, athletic event or on an athletic team on the basis of age, height, weight or gender.
- (M) A person may restrict membership in a private club that is not open to the public.
- (N) An employer may restrict employment opportunities to members of one's family.
- (O) An employer offering health or pension plans may provide for marital or familial status limitations in such plans provided those limitations conform to state and federal laws, rules and regulations. Further, nothing in this ordinance shall be construed or interpreted to neither require, nor prohibit, a private employer from offering employment benefits to the same-sex partner of an employee.
- (P) This chapter shall not prohibit the Township from allowing use of its facilities or services by persons that may be affiliated with, or otherwise supported by a religious organization or institution, which may espouse policies or practices inconsistent with the general intent of this chapter. Further, this chapter shall not prohibit the Township from allowing use of its facilities or services by persons not generally affiliated with or supported by a particular religious organization or institution, but who may espouse policies or practices inconsistent with the general intent of this chapter.
- (Q) This chapter shall not be construed to prohibit a township employee from exercising his or her First Amendment rights to donate to a charitable organization of his or her choosing through the use of the Township's

automatic payroll deduction program. This chapter shall not be construed to limit the availability of the Township's automatic payroll deduction program only to charitable organizations that support or conform to the general intent and purposes of this chapter. Except as otherwise provided by law, the Township retains the discretion to determine whether or not to participate in or allow any payroll deduction.

- (R) This chapter is not intended to and shall not be construed to require an educational institution to, and an educational institution shall not use this ordinance as a justification to, suspend, expel or otherwise discipline a student enrolled in a medical, pharmaceutical, nursing, counseling, social work, or psychology program because the student refuses to counsel or serve a client or patient in a manner that conflicts with a sincerely held religious belief of the student. However, this provision is not intended to alter or affect any professional ethics or academic standards or codes of conduct.
- (S) This chapter is not intended to and shall not be construed to require an employer to, and an employer shall not use this ordinance as a justification to, take any employment, promotion, compensation, benefits, termination or extension of employment action against, or alter the employment privileges of a professional employee, because that professional employee refuses to provide medical, social work, psychological or other professional counseling services when that counseling would reasonably conflict with that employee's sincerely held religious beliefs. However, this provision is not intended to alter or affect any professional ethics standards or codes of conduct.

154.008 - Investigation and enforcement procedure.

Sec. 8.

- (A) Any person claiming to be discriminated against in a manner prohibited by this chapter, and not otherwise prohibited by state or federal law, may, within 180 days of the alleged violation, file a signed, written complaint with the Township Manager, specifying, in detail, the names, dates, known witnesses and other pertinent facts relevant to the alleged violation. For any complaint

alleging a violation of state or federal law, the Township Manager shall refer the complainant to the appropriate state or federal agency responsible for investigation and enforcement of such alleged violations.

- (B) After receiving a complaint, the Township Manager shall review the complaint and may, in his or her reasonable discretion, do any of the following:
 - (1) Undertake, or refer to Township staff or the Township attorney to undertake an investigation of the alleged violation.
 - (2) Refer the matter to an authorized Township official or the Township attorney to issue a municipal civil infraction citation and prosecute the violation as a municipal civil infraction.
 - (3) Refer the matter to the Isabella County Trial Court Alternative Program for Dispute Resolution, or other organization for conciliation or facilitative mediation services. A complainant or respondent failing to appear for a scheduled conciliation or mediation shall pay any costs resulting from such failure to appear. If a conciliation or mediation agreement is entered into under this section, the parties shall be bound to its terms. A breach of such an agreement by the respondent shall be considered a violation of this chapter.
 - (4) Notify the complainant that no Township action will be taken related to the complaint. Such a determination shall not be evidence of non-violation should the complainant choose to initiate a private civil action against the alleged violator as provided in this section.
- (C) Nothing in this section shall be construed to limit a person's right to initiate a private civil action for an alleged violation as provided in Section 170.09 [154.009] of this chapter.

154.009 - Private cause of action for damages or injunctive relief.

Sec. 9. A person alleging a violation of this chapter may bring a civil action within 180 days of the alleged violation, or 180 days after the end of an action taken by the Township under section 8 [154.008], whichever is later, for appropriate injunctive relief or damages, or both, in a court of competent jurisdiction.

154.010 - Remedies.

Sec. 10.

- (A) If a violation of this chapter is prosecuted as a municipal civil infraction under the Township Code § 36.01 et seq., fines of up to \$2,500 may be assessed. In addition to the penalties provided in this section, a court shall have equitable jurisdiction to enforce any judgment, writ, or order necessary to enforce any provision of this ordinance, including, but not limited to, abatement of the violating condition or the granting of injunctive relief.
- (B) A court rendering judgment in a private civil action brought pursuant to section 9 [154.009] of this chapter may order any remedy authorized by Article 8 of the Elliott-Larsen Civil Rights Act, 1976 PA 453, as amended, MCL 37.2101 et seq.
- (C) Each day upon which a violation occurs shall constitute a separate and new violation.

154.011 - Violators operating under license issued by Township.

Sec. 11. The Township Manager may suspend the license of any person operating under a license issued by the Township, or any agency thereof, found to be in violation of this chapter and provide opportunity for a hearing conducted in accordance with the provisions of the Township Code under which that person is licensed to determine whether such license should be revoked. The provisions of this section are not applicable to violations which are remedied through either conciliation or mediation services. However, a violation of a conciliation or mediation agreement shall be grounds for the revocation of a license as provided under this section.

154.012 - Severability.

Sec. 12. If any Section, Subsection, sentence, clause, phrase or portion of this chapter is for any reason held invalid or unconstitutional by any court of competent jurisdiction, that portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portions of this chapter.

154.013 - Publication and effective date.

Sec. 13. The Township Clerk shall cause to be published a notice of adoption of this ordinance within 10 days of the date of its adoption. This ordinance shall take effect 30 days after its adoption.

**CHARTER TOWNSHIP OF UNION
A RESOLUTION EXTENDING THE ELLIOT-LARSON CIVIL
RIGHTS ACT TO INCLUDE SEXUAL ORIENTATION,
GENDER IDENTITY, AND EXPRESSION, IN SUPPORT OF
MICHIGAN HB 4689 (2017)**

At a meeting of the Township Board of the Charter Township of Union, Isabella County, Michigan held at 2010 South Lincoln Road, Mt. Pleasant, Michigan 48858 on the 14th day of June, 2017:

Present:

Absent:

The following resolution was offered by _____; and supported by _____

Whereas, The Charter Township of Union, MI adopted Human Rights Ordinance Number 2012-06 on October 10, 2012 and reaffirmed on March 22, 2017, which prohibits discrimination in employment, housing and public accommodations and provides penalties for violations; and,

Whereas, the Township through Ordinance Number 2012-06 intends that no individual be denied the equal protection of the laws, nor shall any person be denied the enjoyment of his or her civil rights or be discriminated against because of race, religion, color, national origin, sex, age, marital status, physical or mental disability, height, weight, familial status, sexual orientation or gender identity; and,

Whereas, the Elliott-Larson Civil Rights Act 453 of 1976 does not currently include those protections for sexual orientation, gender identity and expression to citizens in the State of Michigan; and,

Whereas, no citizens in our state should fear losing their job, being denied a job, housing or public accommodations because of their sexual orientation, gender identity, and expression; and,

Whereas, all citizens should be assured their rights, freedom and equality and feel emotionally, psychological and physically safe without discrimination; and,

Whereas, the Union Township Board of Trustees passed a similar resolution on December 4, 2014 in support of amending the Elliot Larson Civil Rights Act; and,

Now, Therefore, be it resolved, on this day, June 14, 2017 that the Union Township Board of Trustees recommends the Michigan Legislature to pass HB 4689 to amend the Elliott-Larson Civil Rights Act to include sexual orientation, gender identity and expression as protected under the law.

ADOPTED: June 14, 2017

AYES:

NAYES:

ABSENT:

I hereby certify that the foregoing constitutes a true and complete copy of a Resolution adopted by the Board of Trustees of the Charter Township of Union, County of Isabella, Michigan, at a regular meeting held on Wednesday, June 14, 2017.

Lisa Cody, Clerk

154.000 - HUMAN RIGHTS Ord. No. 2012-06 Adopted: Oct. 10, 2012

AN ORDINANCE TO AMEND THE CHARTER TOWNSHIP OF UNION CODE OF ORDINANCES BY ADDING A NEW ORDINANCE TITLED "HUMAN RIGHTS," TO PROHIBIT DISCRIMINATION IN EMPLOYMENT, HOUSING AND PUBLIC ACCOMMODATIONS AND TO PROVIDE PENALTIES FOR VIOLATIONS.

IT IS HEREBY ORDAINED BY THE PEOPLE OF THE CHARTER TOWNSHIP OF UNION:

154.001 - Purpose.

Sec. 1.

- (A) The Township intends that no individual be denied the equal protection of the laws; nor shall any person be denied the enjoyment of his or her civil rights or be discriminated against because of race, religion, color, national origin, sex, age, marital status, physical or mental disability, height, weight, familial status, sexual orientation or gender identity.
- (B) The prohibitions against discrimination in this ordinance are intended to supplement federal and state civil rights law prohibiting discrimination in the areas of employment, housing and public accommodations. However, this chapter shall be construed and applied in a manner consistent with jurisprudence regarding the freedom of speech and exercise of religion under the First Amendment to the United States Constitution.
- (C) Nothing in this ordinance is intended to require or shall be construed to require preferential treatment of any individual or group identified in subsection (A).

154.002 - Definitions.

Sec. 2. For the purpose of this chapter, the following definitions shall apply:

- (A) *Age*. Chronological age.
- (B) *Authorized Township official*. Code enforcement personnel or any other personnel of the Township designated and authorized by the Township Manager, this code or any ordinance to investigate or issue municipal civil infraction citations or municipal civil infraction violation notices.

- (C) *Complainant.* An individual or other person who files a complaint alleging a violation of this chapter.
- (D) *Discriminate, discrimination.* To make a decision, offer to make a decision or refrain from making a decision based in whole or in part on the race, religion, color, national origin, sex, age, marital status, physical or mental disability, height, weight, familial status, sexual orientation or gender identity of an individual. Sex discrimination includes sexual harassment and discrimination based on pregnancy, childbirth, or a medical condition related to pregnancy or childbirth that does not include non-therapeutic abortion not intended to save the life of the mother.
- (E) *Educational institution.* A public or private institution or a separate school or department thereof, including an academy, college, elementary or secondary school, extension course, kindergarten, nursery, local school system, or university, or a business, nursing, professional, secretarial, technical, or vocational school. For the purposes of this definition, educational institution includes an agent of an educational institution.
- (F) *Employee.* An individual who is hired for a wage, salary, fee, payment or other remuneration to perform work for an employer.
- (G) *Employer.* A person who has one or more employees, and includes an agent of that person.
- (H) *Employment agency.* A person regularly undertaking, with or without compensation, to procure, refer, recruit, or place an employee for an employer or to procure, refer, recruit, or place for an employer or person the opportunity to work for an employer. For purposes of this definition, employment agency includes an agent of that person.
- (I) *Familial status.* One or more individuals under the age of 18 residing with a parent or other person having custody or in the process of securing legal custody of the individual or individuals or residing with the designee of the parent or other person having or securing custody, with the written permission of the parent or other person. For the purposes of this definition, "parent" shall include an individual who is pregnant.
- (J)

Gender identity. An individual's appearance, expression, identity or behavior as being either male or female, whether or not that appearance, expression, identity or behavior is different from that which is traditionally associated with the individual's designated gender at birth.

(K) *Housing accommodation.* Any improved or unimproved real property, or a part thereof, which is used or occupied, or is intended, arranged, or designed to be used or occupied, as a home or residence of one or more individuals.

(L) *Immediate family.* A spouse, parent, child or sibling.

[L.1] *Individual.* A single human being.

(M) *Labor organization.* An organization of any kind, an agency or employee representation committee, group, association, or plan in which employees participate and which exists for the purpose, in whole or in part, of dealing with employers concerning grievances, labor disputes, wages, rates of pay, hours, or other terms or conditions of employment. For purposes of this definition, a labor organization need not be subordinate to or affiliated with a national or international labor organization.

(N) *Marital status.* The state of being married, unmarried, divorced or widowed.

(O) *Person.* An individual, agent, association, corporation, labor organization, legal representative, partnership, receiver, trust or any other legal or commercial entity.

(P) *Physical or mental disability.* A determinable physical or mental characteristic of an individual, which may result from disease, injury, congenital condition of birth, or functional disorder, if the characteristic substantially limits a major life activity of that individual and is unrelated to the individual's ability to perform the duties of a particular job or position, is unrelated to the individual's ability to utilize and benefit from a place of public accommodation, or is unrelated to the individual's ability to acquire, rent, or maintain property. For the purposes of this definition, physical or mental disability does not include any condition caused by the current illegal use of a controlled substance or the use of intoxicating liquors by an individual.

(Q)

Place of public accommodation. A business, or an educational, refreshment, entertainment, recreation, health, or transportation facility, or institution of any kind, whether licensed or not, whose goods, services, facilities, privileges, advantages, or accommodations are extended, offered, sold, or otherwise made available to the public.

- (R) *Private club.* An establishment that is not open to the public. A private club is one whose members' association with each other and the club is sufficiently intimate, small and exclusive that it is not open to the public.
- (S) *Religious organization or institution.* A religious corporation, association, educational institution or society, which is, in whole or substantial part, owned, supported, controlled or managed by a particular religion whose purpose or character is directed toward the propagation of that particular religion and that has the inculcation of religious values or the provision of charity as its purpose; primarily employs persons who share its religious tenets; and primarily serves persons who share its religious tenets or, on a charitable basis, the broader community. Religious organization or institution includes, for illustration and not limitation: churches, mosques, synagogues and other houses of worship; any subsidiary organizations; educational institutions affiliated with, controlled, or managed by those houses of worship or with articles of incorporation, bylaws and other documents stating an intention to inculcate its religious tenets in students; and, faith-based organizations that, due to a sense of duty based on particular religious tenets, provide charitable services to the public.
- (T) *Respondent.* A person against whom a complaint is filed under this chapter.
- (U) *Sex.* The actual biological state of being male or female as of birth, or subsequent alteration through surgical procedure, and without regard to any outward physical display or expression of gender identity.
- (V) *Sexual harassment.* Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature under the following conditions:
 - (1) Submission to the conduct or communication is made a term or condition, either explicitly or implicitly, to obtain employment, housing, or public accommodations.
 - (2)

Submission to or rejection of the conduct or communication by an individual is used as a factor in decisions affecting the individual's employment, housing, or public accommodations.

- (3) The conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or public services, or housing, or creating an intimidating, hostile, or offensive employment, housing, or public accommodations.
- (W) *Sexual orientation*. Male or female homosexuality, heterosexuality or bisexuality, whether by orientation or practice. Sexual orientation does not include any sexual activity or attempted activity otherwise prohibited by law.
- (X) *Township manager*. The Township Manager of the Township, or his or her designee.

154.003. - Employment practices.

Sec. 3. Except as otherwise provided in section 170.07 [154.007]:

- (A) An employer shall not discriminate against an individual with respect to recruitment, employment, compensation, work classifications, promotion or demotion, termination, or a term, condition or privilege of employment.
- (B) A labor organization shall not exclude or expel from membership a member or applicant for membership, or otherwise discriminate against a member or applicant for membership with respect to collective bargaining, member grievances, labor disputes, wages, rates of pay, hours or other terms or conditions of employment.
- (C) An employment agency shall not discriminate in the procurement, referral, recruitment, or placement of an individual for employment with an employer.

153.004 - Housing practices.

Sec. 4. Except as otherwise provided in section 7 [154.007]:

- (A) A person shall not discriminate in leasing, selling, or otherwise making available any housing accommodation.
- (B)

A person shall not discriminate in the terms, conditions, or privileges of a real estate transaction or in the furnishing of facilities or services in connection with any housing accommodation.

- (C) A person shall not discriminate in providing financing for the purchase, repair, or remodeling of any housing accommodations.
- (D) A person shall not discriminate in making referrals, listings or otherwise providing information regarding housing accommodations.

154.005 - Public accommodations.

Sec. 5. Except as otherwise provided in section 7 [154.007], a person shall not discriminate in making available full and equal enjoyment of the goods, services, privileges, advantages, or accommodations of any place of public accommodation.

154.006 - General prohibited practices.

Sec. 6. Except as otherwise provided in section 7 [154.007]:

- (A) A person shall not adopt, enforce, or employ any policy or requirement, or print, post, circulate, mail or otherwise publish any statement, advertisement, sign, or notice which discriminates or suggests discrimination in providing employment, housing or public accommodations.
- (B) A person shall not coerce, threaten or retaliate against another for making a complaint or assisting in any investigation regarding a violation or alleged violation of this chapter. A person shall not require, request, conspire with, coerce or otherwise assist a person to retaliate against a person for making a complaint or assisting in an investigation.
- (C) A person shall not conspire with, assist, coerce, or request another to discriminate in any manner prohibited by this chapter.
- (D) A person shall not adopt, enforce, or employ any policy, practice or requirement which has the effect of discriminating in a manner prohibited by this chapter, except when there is a bona fide business necessity for such a policy, practice or requirement. For the purposes of this chapter, bona fide business necessity means that the policy, practice or requirement is reasonably necessary to the normal operation of the person's business. A

bona fide business necessity does not arise due to a mere inconvenience or because of suspected or actual objection by neighbors, customers, or other persons.

154.007 - Exceptions.

Sec. 7. Any other provision of this chapter notwithstanding:

- (A) The provisions of this chapter do not apply to any religious organization or institution with respect to its employment of individuals.
- (B) A religious organization or institution may restrict the occupancy of any of its housing facilities or place of public accommodations operated as a part of its religious activities to persons of its denomination or those who conform to the moral tenets of that religious organization or institution. This exception shall apply to a religious organization or institution that allows persons other than its members to use its facilities if its facilities remain exempt from Michigan property taxation pursuant to section 7s of 1893 PA 206, as amended, MCL 211.7s.
- (C) The owner of a housing facility or accommodation devoted entirely to the housing of individuals of one gender may restrict the occupancy of such a facility or accommodation on the basis of gender.
- (D) The provisions of this chapter do not apply to the rental of a housing accommodation in a building that contains housing accommodations for not more than two (2) families living independently of each other if the owner or a member of the owner's immediate family resides in one (1) of the housing accommodations, or to the rental of a room or rooms in a single family dwelling by a person if the lessor or a member of the lessor's immediate family resides in the dwelling.
- (E) The provisions of this chapter do not apply to any arrangement for shared ownership, lease or residency of a dwelling unit.
- (F) An educational institution may limit the use of its facilities to those affiliated with such institution.
- (G) A governmental institution may restrict any of its facilities or restrict employment opportunities based on duly-adopted institutional policies that conform to state and federal laws and regulations.

- (H) A person may discriminate based on an individual's age when such discrimination is required or permitted by local, state or federal law.
- (I) A person may provide discounts on products or services to students, or on the basis of age.
- (J) A person may refuse to enter into a contractual relationship with an unemancipated minor.
- (K) A person may restrict the use of restrooms, lavatories, locker room facilities, shower facilities, or changing rooms on the basis of gender. Restrictions for the use of restrooms, lavatories, locker room facilities, shower facilities, or changing rooms as provided in this section shall not be considered a violation of this chapter's prohibitions on discrimination based on gender identity.
- (L) A person may restrict participation in an instructional program, athletic event or on an athletic team on the basis of age, height, weight or gender.
- (M) A person may restrict membership in a private club that is not open to the public.
- (N) An employer may restrict employment opportunities to members of one's family.
- (O) An employer offering health or pension plans may provide for marital or familial status limitations in such plans provided those limitations conform to state and federal laws, rules and regulations. Further, nothing in this ordinance shall be construed or interpreted to neither require, nor prohibit, a private employer from offering employment benefits to the same-sex partner of an employee.
- (P) This chapter shall not prohibit the Township from allowing use of its facilities or services by persons that may be affiliated with, or otherwise supported by a religious organization or institution, which may espouse policies or practices inconsistent with the general intent of this chapter. Further, this chapter shall not prohibit the Township from allowing use of its facilities or services by persons not generally affiliated with or supported by a particular religious organization or institution, but who may espouse policies or practices inconsistent with the general intent of this chapter.
- (Q) This chapter shall not be construed to prohibit a township employee from exercising his or her First Amendment rights to donate to a charitable organization of his or her choosing through the use of the Township's

automatic payroll deduction program. This chapter shall not be construed to limit the availability of the Township's automatic payroll deduction program only to charitable organizations that support or conform to the general intent and purposes of this chapter. Except as otherwise provided by law, the Township retains the discretion to determine whether or not to participate in or allow any payroll deduction.

- (R) This chapter is not intended to and shall not be construed to require an educational institution to, and an educational institution shall not use this ordinance as a justification to, suspend, expel or otherwise discipline a student enrolled in a medical, pharmaceutical, nursing, counseling, social work, or psychology program because the student refuses to counsel or serve a client or patient in a manner that conflicts with a sincerely held religious belief of the student. However, this provision is not intended to alter or affect any professional ethics or academic standards or codes of conduct.
- (S) This chapter is not intended to and shall not be construed to require an employer to, and an employer shall not use this ordinance as a justification to, take any employment, promotion, compensation, benefits, termination or extension of employment action against, or alter the employment privileges of a professional employee, because that professional employee refuses to provide medical, social work, psychological or other professional counseling services when that counseling would reasonably conflict with that employee's sincerely held religious beliefs. However, this provision is not intended to alter or affect any professional ethics standards or codes of conduct.

154.008 - Investigation and enforcement procedure.

Sec. 8.

- (A) Any person claiming to be discriminated against in a manner prohibited by this chapter, and not otherwise prohibited by state or federal law, may, within 180 days of the alleged violation, file a signed, written complaint with the Township Manager, specifying, in detail, the names, dates, known witnesses and other pertinent facts relevant to the alleged violation. For any complaint

alleging a violation of state or federal law, the Township Manager shall refer the complainant to the appropriate state or federal agency responsible for investigation and enforcement of such alleged violations.

- (B) After receiving a complaint, the Township Manager shall review the complaint and may, in his or her reasonable discretion, do any of the following:
 - (1) Undertake, or refer to Township staff or the Township attorney to undertake an investigation of the alleged violation.
 - (2) Refer the matter to an authorized Township official or the Township attorney to issue a municipal civil infraction citation and prosecute the violation as a municipal civil infraction.
 - (3) Refer the matter to the Isabella County Trial Court Alternative Program for Dispute Resolution, or other organization for conciliation or facilitative mediation services. A complainant or respondent failing to appear for a scheduled conciliation or mediation shall pay any costs resulting from such failure to appear. If a conciliation or mediation agreement is entered into under this section, the parties shall be bound to its terms. A breach of such an agreement by the respondent shall be considered a violation of this chapter.
 - (4) Notify the complainant that no Township action will be taken related to the complaint. Such a determination shall not be evidence of non-violation should the complainant choose to initiate a private civil action against the alleged violator as provided in this section.
- (C) Nothing in this section shall be construed to limit a person's right to initiate a private civil action for an alleged violation as provided in Section 170.09 [154.009] of this chapter.

154.009 - Private cause of action for damages or injunctive relief.

Sec. 9. A person alleging a violation of this chapter may bring a civil action within 180 days of the alleged violation, or 180 days after the end of an action taken by the Township under section 8 [154.008], whichever is later, for appropriate injunctive relief or damages, or both, in a court of competent jurisdiction.

154.010 - Remedies.

Sec. 10.

- (A) If a violation of this chapter is prosecuted as a municipal civil infraction under the Township Code § 36.01 et seq., fines of up to \$2,500 may be assessed. In addition to the penalties provided in this section, a court shall have equitable jurisdiction to enforce any judgment, writ, or order necessary to enforce any provision of this ordinance, including, but not limited to, abatement of the violating condition or the granting of injunctive relief.
- (B) A court rendering judgment in a private civil action brought pursuant to section 9 [154.009] of this chapter may order any remedy authorized by Article 8 of the Elliott-Larsen Civil Rights Act, 1976 PA 453, as amended, MCL 37.2101 et seq.
- (C) Each day upon which a violation occurs shall constitute a separate and new violation.

154.011 - Violators operating under license issued by Township.

Sec. 11. The Township Manager may suspend the license of any person operating under a license issued by the Township, or any agency thereof, found to be in violation of this chapter and provide opportunity for a hearing conducted in accordance with the provisions of the Township Code under which that person is licensed to determine whether such license should be revoked. The provisions of this section are not applicable to violations which are remedied through either conciliation or mediation services. However, a violation of a conciliation or mediation agreement shall be grounds for the revocation of a license as provided under this section.

154.012 - Severability.

Sec. 12. If any Section, Subsection, sentence, clause, phrase or portion of this chapter is for any reason held invalid or unconstitutional by any court of competent jurisdiction, that portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portions of this chapter.

154.013 - Publication and effective date.

Sec. 13. The Township Clerk shall cause to be published a notice of adoption of this ordinance within 10 days of the date of its adoption. This ordinance shall take effect 30 days after its adoption.

2.3. (c) Revision

The Union Township Board, may from time to time adopt, publish, change, amend, and enforce rules and regulations for all employees governing discipline, health and safety, duties, rules of conduct, and work rules.

The policies and procedures contained in this manual can only be changed by a formal resolution of the Union Township Board. Employee ideas, comments and suggestions are encouraged and they are to be submitted in writing to the Township Supervisor. The Township Supervisor will pass on to the Union Township Board any suggestions or comments that have merit.

2.3.(d) Distribution of the Manual

Employees will receive a copy of the Township Personnel Policies and Procedures Manual. New employees will receive a copy of the manual at the time of orientation. If requested, an applicant being considered for employment with the Township will be allowed to review the manual. Current employees will sign a form acknowledging receipt of the manual.

2.3. (e) Equal Employment Opportunity Policy

Introduction

You are now a part of the Charter Township of Union professional team of highly qualified employees. It is the policy of the Township to hire qualified people to perform varied tasks. An intricate part of this policy is to administer hiring, transfers, promotions, terminations, working conditions, benefits, and privileges of employment compensation, and training for all employees without regard to race, color, religious creed, sex, age, weight, height, marital status, ancestry, national origin, or physical handicap.

2.3. (f) Sexual, Ethnic, Racial and Religious Harassment Policy

The Charter Township of Union has a long-standing commitment to provide a work

environment free from all forms of sexual, ethnic, racial and religious harassment. Any substantiated incidents of sexual, ethnic, racial and/or religious harassment by a management or supervisory employee, co-worker or non-employee, may result in immediate disciplinary action including possible termination. It is the responsibility of every employee to bring to the Superintendent's attention any evidence of sexual, ethnic, racial and/or religious harassment so that the matter can be promptly investigated and appropriate action taken. The Superintendent shall inform the Township Supervisor of the allegation(s) and/or complaint. It shall be the responsibility of the Superintendent and Supervisor to inform the Board of Trustees of the allegation/complaint in case of possible legal actions.

Sexual, ethnic, racial and/or religious harassment is an offense against the Township and against employees or groups of employees. Offenses refer to physical, verbal, or implied actions that have the purpose or effect of creating a hostile, offensive, or intimidating working environment or have a sexual, ethnic, racial, religious basis or both. Examples

would include, but are not limited to: physical contact of a sexual nature; sexual, racial, ethnic or religious jokes, comments, insults, cartoons, innuendoes or personal conduct of mannerisms that could be construed as offensive.

Additionally, sexual harassment includes unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when submission to such conduct or communication is made a term or a condition either explicitly or implicitly to obtain employment; submission to or rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment.

PURPOSE

To maintain a quality working environment for all employees of the Township so that they may work free from intimidation, humiliation or insult; to prevent employees from being subjected to offensive physical, psychological, or verbal abuse or actions of a sexual, ethnic, racial, or religious nature. The Charter Township of Union adopts the following policy against all forms of sexual, ethnic, racial or religious harassment.

APPLICATION

All employees, elected and appointed officials, or committee members of the Charter Township of Union.

POLICY

1. Sexual, ethnic, racial, and/or religious harassment is an offense against the Township and against employees or groups of employees.
2. Offenses refer to physical, verbal, psychological, or implied actions that have the purpose or effect of creating a hostile, offensive, or intimidating working environment or have an ethnic, racial, religious or sexual basis or both. Examples would include, but are not limited to: physical contact of a sexual nature; sexual, racial, ethnic or religious jokes, comments, insults, cartoons, innuendoes or personal conduct or

- mannerisms that could be construed as offensive.
3. Additionally, sexual harassment included unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when submission to such conduct or communication is made a term or condition either explicitly or implicitly to obtain employment; submission to or rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment.
 4. This Township will deal with all such incidents in a fair, impartial and speedy manner.
 5. All complaints or incidences will be investigated on a case-by-case basis. Any employee believing that they have been a victim of harassment or discrimination should contact the Township Superintendent to report the occurrence. The Superintendent shall apprise the Supervisor of the matter. After appropriate investigation and verification of the incident by the Superintendent, the Township Board of Trustees shall be informed so appropriate action may be taken officially.
 6. In all incidents where a violation has been shown to occur, appropriate action will be taken by the Township Board of Trustees up to and including termination of employment to remedy the situation and to prevent its reoccurrence.
 7. It is each employee's responsibility to help eliminate all forms of harassment and unwanted conduct. It is each department head and supervisor's responsibility to prevent such behavior from occurring within their work jurisdiction and they shall report to the Superintendent any and all occurrences of which they have knowledge.
 8. All employees who violate this policy shall be subjected to disciplinary action by the Township board of Trustees up to and including dismissal/termination of employment.

PROCEDURE

STEP 1:

The individual alleging harassment will report the incident to the Superintendent and will then be interviewed to discuss the nature of the allegations. If allegations are made to any other person, the matter should be immediately directed to the Superintendent.

Individuals alleging harassment will be informed that in order for the Township to pursue the complaint, the employee must complete a written statement on the Township's harassment form, specifically detailing the nature of the complaint. If the complainant refuses to complete a written statement on the specified form, then the Township Superintendent cannot further investigate the matter unless circumstances clearly indicate otherwise.

Upon receipt of the employee's written harassment complaint, the Superintendent will investigate each complaint and allegation, plus maintain all associated paperwork or evidence. The Township Supervisor will be informed, along with the Board of Trustees.

STEP 2:

After the Superintendent receives the complaint in writing, the Township Superintendent will conduct an investigation and interview any witnesses, including the alleged harasser. The Superintendent will review Township policy and procedure with the alleged harasser and indicate that a charge of harassment has been filed in writing with the Township. The alleged harasser will have an opportunity to refute the allegation by responding to the

complaint in writing.

STEP 3:

If the evidence substantiates the claim of harassment, the Superintendent may take appropriate action up to suspension from employment. The Superintendent will inform the Township Board of Trustees for appropriate Board action to be taken up to and including immediate discharge/termination of employment. If the evidence does not support the allegation, the employee filing the complaint will be informed of that fact and that no action will be taken by the Superintendent.

APPEAL PROCESS

If the Superintendent determines that the evidence does not support the allegation and no action is taken, the victim may appeal to the Township Board of Trustees. If a board member is the accused, that board member must remove himself or herself from the process of determination by the Board of Trustees as to the action to be taken.

IMPLEMENTATION

It will be the responsibility of the Superintendent to provide information regarding this policy and procedures to all employees; citing the gravity of such behavior and the procedure to be employed in the event such an allegation develops.

2.3. (g) REPORTING VIOLATION OF EEO POLICY

If you have a problem related to equal employment opportunity or sexual harassment, we advise that you immediately report the problem to the Township Supervisor/Superintendent. The Township Supervisor/Superintendent will be responsible for accepting complaints of discrimination. Such complaints shall be in writing with the date of the report clearly indicated. Upon notification, the Township Supervisor/Superintendent shall attempt to determine, through fact-finding, if the alleged complaint is within his or her purview and if a formal investigation is warranted.

A date will be established for the investigation and an in-depth interview with the complainant and the department involved. The Township Supervisor/Superintendent shall attempt resolution with the complainant and appropriate management personnel, separately or together. Any agreements reached between the complainant and management must be in writing and witnessed plus copies provided to all parties involved.

The informal resolution process must be performed in an expeditious manner, not to exceed fifteen (15) calendar days. It is Charter Township of Union's intention to resolve all complaints internally, and every effort will be made to do so.

2.4 BOARD MEETING ADMINISTRATION

Date: September 17, 2018

Council Communication

Re: *Zion Lutheran Church Craft Show*

Introduction

Zion Lutheran Church is asking to place three yard type signs with dimensions of three feet by three feet square in the City Right-Of-Way for four days advertising their Craft Show on October 20th. The Craft Show benefits the work they do with Love Inc. and Project Christmas.

The locations they are requesting are;

1. At South Mitchell Street and Pearl Street intersection on the west side.
2. On South Mitchell Street across from Pearl Street on the east side near Maple Hill Cemetery.
3. At Sunnyside Drive and Pearl Street intersection.

The sign copy will read;

**FALL CRAFT SHOW
ZION LUTHERAN
CHURCH
THIS SATURDAY
9AM to 3PM**

Staff Comments

This request is very similar to the temporary sign request in previous years from Zion Lutheran Church. One change is they wish to put two signs on South Mitchell Street near the intersection with Pearl Street. They're asking to place one on the east side of the road this year also.

Requested Council Action

Consider granting permission for the Zion Lutheran Church to place one sign at each of the locations listed above from October 17th through October 20th.

Mike Coy

CITY OF CADILLAC MICHIGAN

200 Lake Street
Cadillac, MI 49601
Phone (231) 775-0181

SIGN PERMIT APPLICATION/PERMIT

Permit # _____	Office Use Only
Zoning District <u>R-2</u>	Date _____
Approved By: _____	Fee: Permanent \$20.00 OR Temporary \$10.00

Applicant's Name Zion Lutheran Church Phone 231-775-9821

Address 350 Pearl St ② Pearl + Sunnyside

Site Address ① Pearl + Mitchell Business Name _____

Property Owner's Name _____

Address _____

Sign Type (W, Po, Pr, R, M) _____ Perm _____ Temp ☒ Days 4

Purpose (I, B, D) Craft Show Value _____ Height 3'x3'

Setback(s) _____ (stakes 5')

For Wall Signs: Building Height _____ Width _____

both are
in road
right-a-way
we believe
* ① east side
outside
wall of
cemetery
② on west
side

SHOW SIGN COPY	SKETCH
FALL CRAFT SHOW ZION LUTHERAN Church This Saturday 9am to 3pm	October 20th H E I G H T 30' 26' 22' 18' 14' 10' 6' 2'
TOTAL DISPLAY AREA _____	

* southwest
corner
blocks
traffic
for Pearl
St. stop
sign.

I hereby certify that the proposed work is authorized by the property owner and will comply with all local and state laws. This permit will become null and void if work is not started within six months from date of permit.

APPLICANT'S SIGNATURE Barbara J Taylor DATE August 24, 2018

Barbara Taylor
9461 W Oak Dr
Lake City Bill

231-839-7437
231-342-8629

September 17, 2018

COUNCIL COMMUNICATION

Re: Medical Marihuana Update

Earlier this summer the City of Cadillac hosted a public forum on medical marihuana. The forum provided the public with an opportunity to hear from a panel of experts from the Michigan Municipal League, Wexford County Prosecutor's Office and Weedmaps Policy division about medical marihuana in addition to providing attendees with the opportunity to ask questions.

In an effort to solicit input from folks that live, and/or own property in the City limits, a notice was put into the approximately 4,000 utility bills that are mailed monthly, which included information on this topic and a web address to take an online survey. The survey itself was modeled after another Michigan community's survey tool regarding this same topic.

The survey included 10 multiple choice questions along with the opportunity to type in additional feedback on several of them. The number of responses ranged from 287-294 people, and the survey results are statistically invalid. That stated, the following list summarizes some, but not all of the data received. All of the survey results, including the typed feedback, are included in this packet and immediately follows this communication. Summary List:

- Respondents that live in the City of Cadillac – 86.05%
- Respondents Not Worried if the City allows growing, testing, process, or the selling of medical marihuana in the City – 45.67%
- Respondents Extremely Worried if the City allows growing, testing, process, or the selling of medical marihuana in the City – 28.03%
- Approximately 50-60% of respondents are in favor of allowing growing, testing, processing or selling medical marihuana facilities in the City of Cadillac, and nearly 60% believe there should be a 1,000 foot zone between the facilities and schools, churches, daycares and residential areas, with nearly 70% wanting a limitation of the number of permits/licenses issued.

Following the survey data in the packet is a new report from the University of Michigan's Center for Local, State, and Urban Policy (CLOSUP) on this topic, which contains survey data from Michigan local government leaders across the state related to medical and recreational marihuana.

In summary, the spring 2018 Michigan Public Policy Survey (MPPS), CLOSUP surveyed local government leaders from 1,372 Michigan jurisdictions (counties, cities, townships, and villages). Their data states that 8% of cities, villages, and townships statewide report “opting in” to allow medical marihuana facilities in their jurisdictions, while 75% report they have chosen to prohibit medical marihuana facilities. Other “key findings” of the Report per the Michigan Public Policy Survey include the following:

- 17% of jurisdictions report experience with medical marihuana facilities in their jurisdiction, either currently (10%) or in the past (7%). By contrast, 69% say there have never been such facilities in their jurisdiction, and none have been proposed or planned for the future, while another 5% of jurisdictions have never had facilities in the past but report that some new facilities are proposed or planned.
- As of this past spring, three-quarters of Michigan’s local governments statewide report that they have decided to prohibit medical marijuana facilities in their jurisdiction. Among these, 29% report they have passed a resolution to formally “opt out” of the MMFLA, while 46% chose to take no action, which has the effect of opting out. Meanwhile, only 8% of Michigan cities, villages, and townships report having passed a formal ordinance to “opt in” to allow medical marijuana facilities in their jurisdiction, 16% report they have not made a decision either way, 9% say they are currently discussing the issue, and 7% say it has not yet been discussed.
- Officials from 42% of all local jurisdictions statewide report seeing some problems related to medical marijuana in their community, while 21% say their jurisdiction has seen benefits related to medical marijuana.
- Only 21% of local officials support legalizing recreational marijuana.

Following the University of Michigan Report, the packet also includes the responses from the Michigan Municipal League and Wexford County Prosecutor’s Office to the questions that were written on notecards at the public forum earlier this summer. Please note that the questions were transcribed from the notecards without any modification to how they were provided.

There is a lot of information available regarding this important topic, and there are several options for the City to consider. One major area of concern however is the upcoming November referendum regarding recreational marihuana, since if approved by the voters, it will impact the medical marihuana “law”.

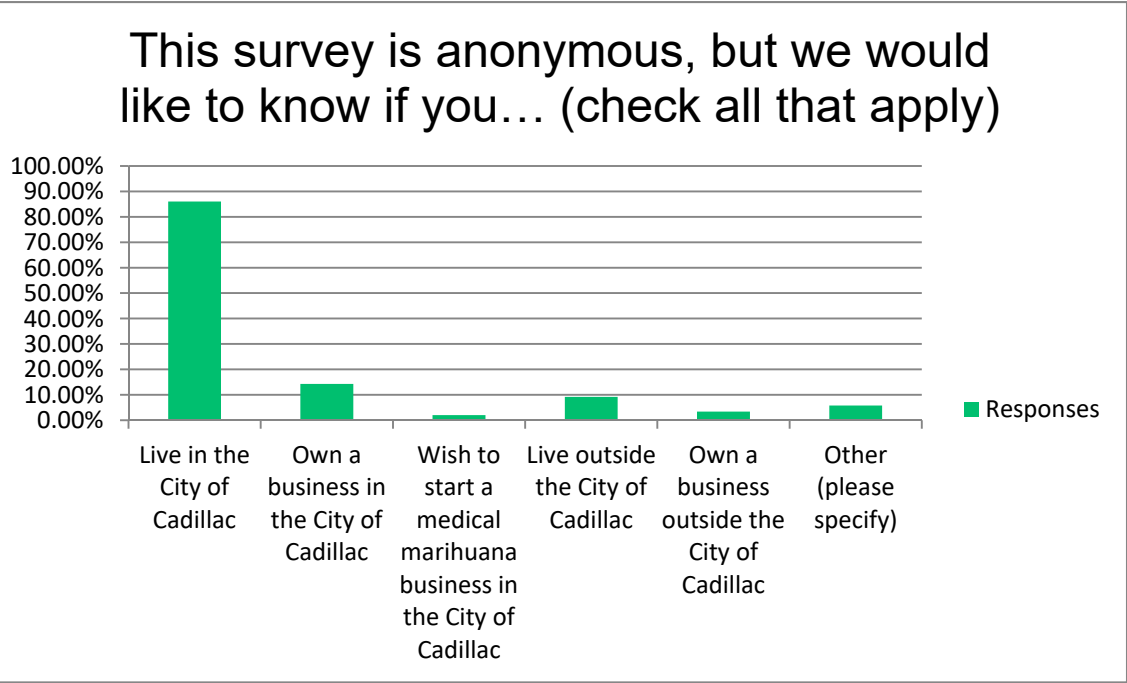
Recommended Action:

Hold a discussion regarding medical marihuana, and consider what further action might be required.

Medical Marihuana Act

This survey is anonymous, but we would like to know if you...
(check all that apply)

Answer Choices	Responses	
Live in the City of Cadillac	86.05%	253
Own a business in the City of Cadillac	14.29%	42
Wish to start a medical marihuana business in the City of Cadillac	2.04%	6
Live outside the City of Cadillac	9.18%	27
Own a business outside the City of Cadillac	3.40%	10
Other (please specify)	5.78%	17
Answered		294
Skipped		0



Medical Marihuana Act

If the City Council allows growing, testing, processing, or the selling of medical marihuana in the city, how much would this worry you? Choose on a scale from 1 to 10 (1 = Not Worried, 10 = Extremely Worried)

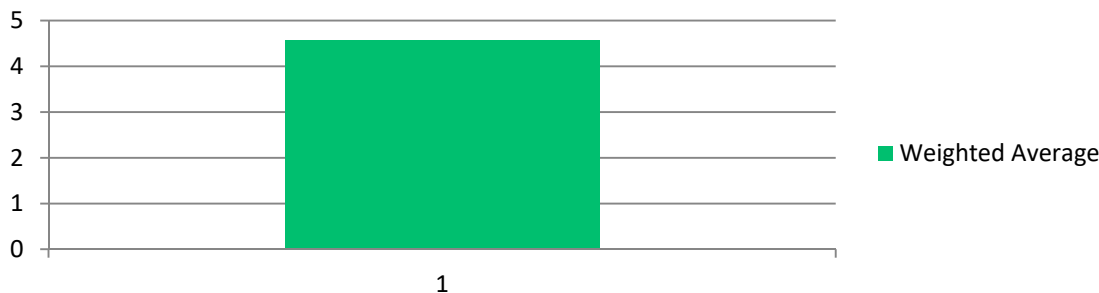
Scale	Percent	# of Responses
1	45.67%	132
2	7.27%	21
3	4.50%	13
4	0.35%	1
5	3.11%	9
6	1.73%	5
7	1.73%	5
8	4.50%	13
9	3.11	9
10	28.03	81

Answered: 289

Skipped: 5

Weighted Average: 4.57

If the City Council allows growing, testing, processing, or the selling of medical marihuana in the city, how much would this worry you? Choose on a scale from 1 to 10 (1 = Not Worried, 10 = Extremely Worried)

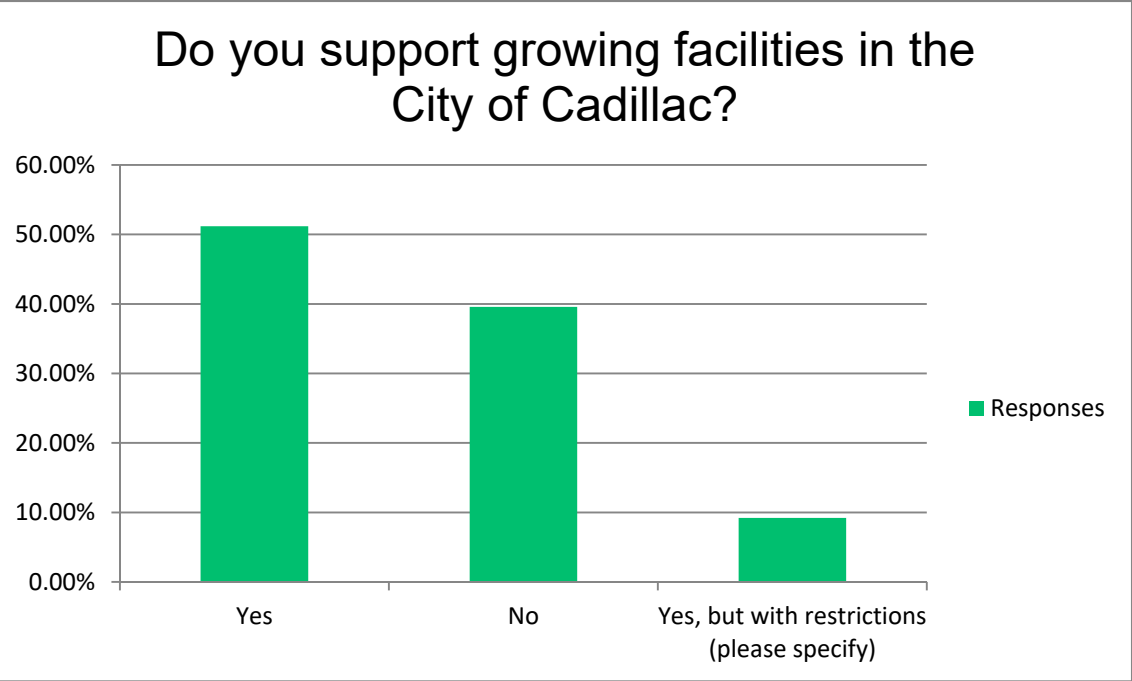


Question 2

Medical Marihuana Act

Do you support growing facilities in the City of Cadillac?

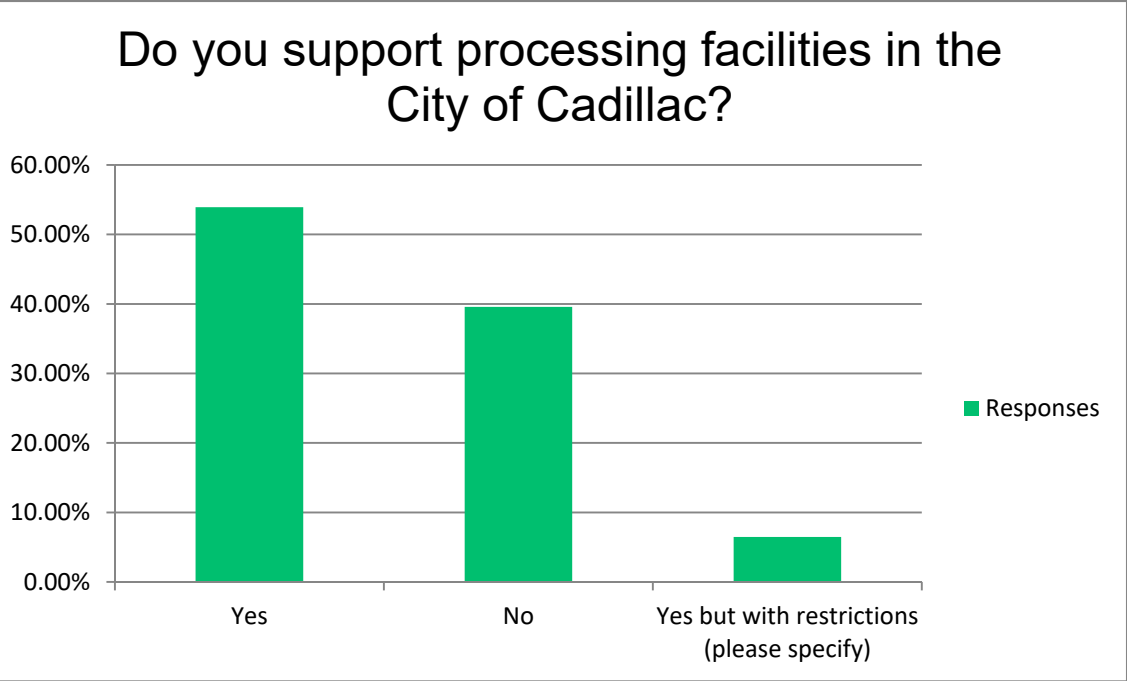
Answer Choices	Responses	
Yes	51.19%	150
No	39.59%	116
Yes, but with restrictions (please specify)	9.22%	27
Answered		293
Skipped		1



Medical Marihuana Act

Do you support processing facilities in the City of Cadillac?

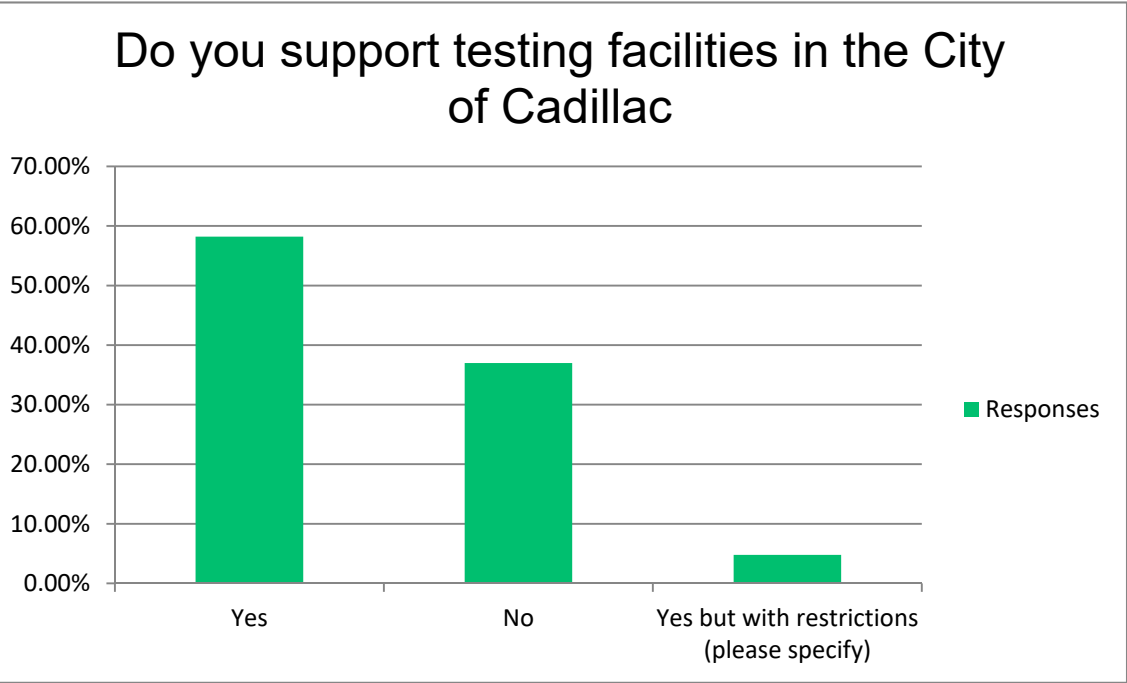
Answer Choices	Responses	
Yes	53.92%	158
No	39.59%	116
Yes but with restrictions (please specify)	6.48%	19
Answered		293
Skipped		1



Medical Marihuana Act

Do you support testing facilities in the City of Cadillac

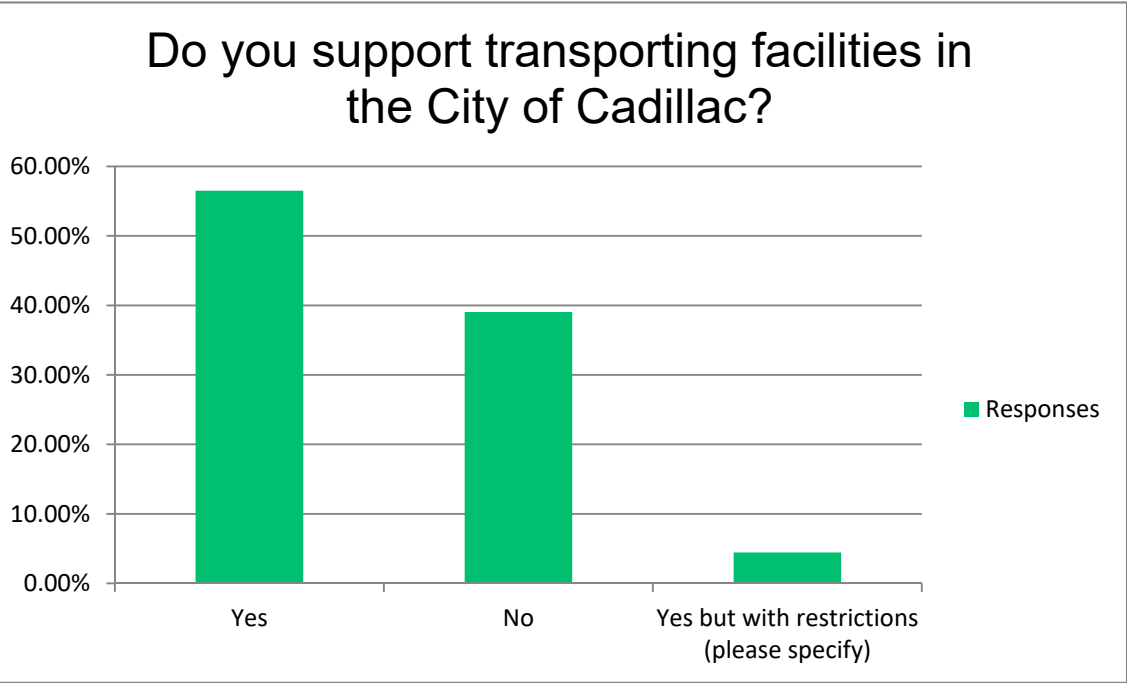
Answer Choices	Responses	
Yes	58.22%	170
No	36.99%	108
Yes but with restrictions (please specify)	4.79%	14
Answered		292
Skipped		2



Medical Marihuana Act

Do you support transporting facilities in the City of Cadillac?

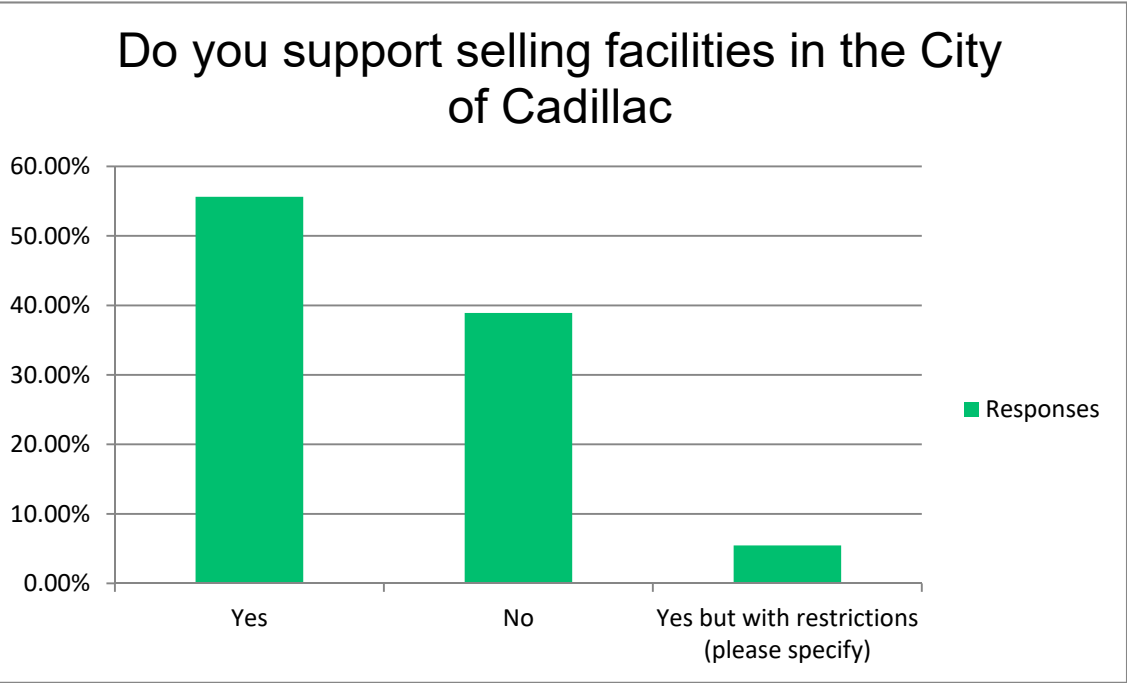
Answer Choices	Responses	
Yes	56.51%	165
No	39.04%	114
Yes but with restrictions (please specify)	4.45%	13
Answered		292
Skipped		2



Medical Marihuana Act

Do you support selling facilities in the City of Cadillac

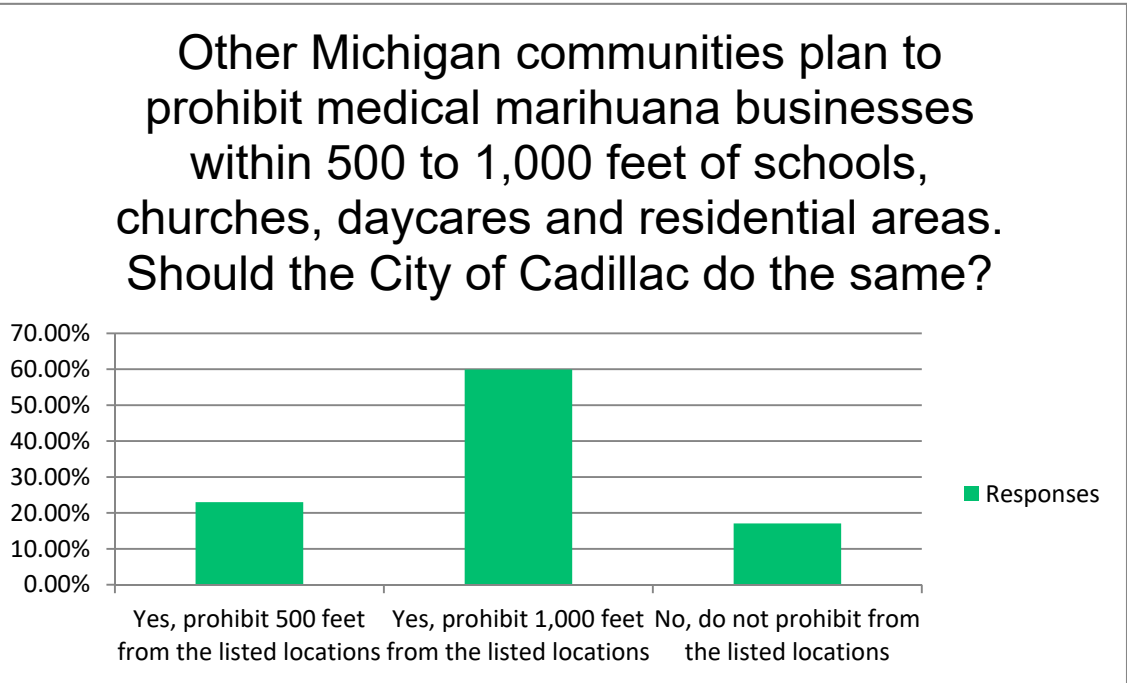
Answer Choices	Responses	
Yes	55.63%	163
No	38.91%	114
Yes but with restrictions (please specify)	5.46%	16
Answered		293
Skipped		1



Medical Marihuana Act

Other Michigan communities plan to prohibit medical marihuana businesses within 500 to 1,000 feet of schools, churches, daycares and residential areas. Should the City of Cadillac do the same?

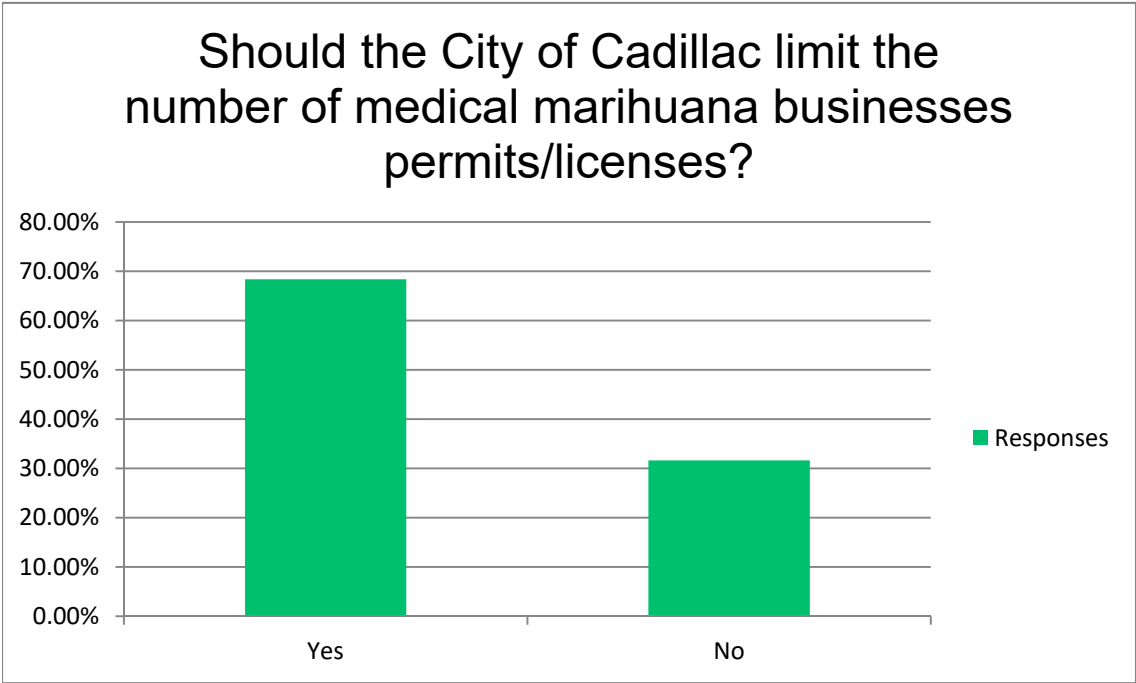
Answer Choices	Responses	
Yes, prohibit 500 feet from the listed locations	23.00%	66
Yes, prohibit 1,000 feet from the listed locations	59.93%	172
No, do not prohibit from the listed locations	17.07%	49
	Answered	287
	Skipped	7



Medical Marihuana Act

Should the City of Cadillac limit the number of medical marihuana businesses permits/licenses?

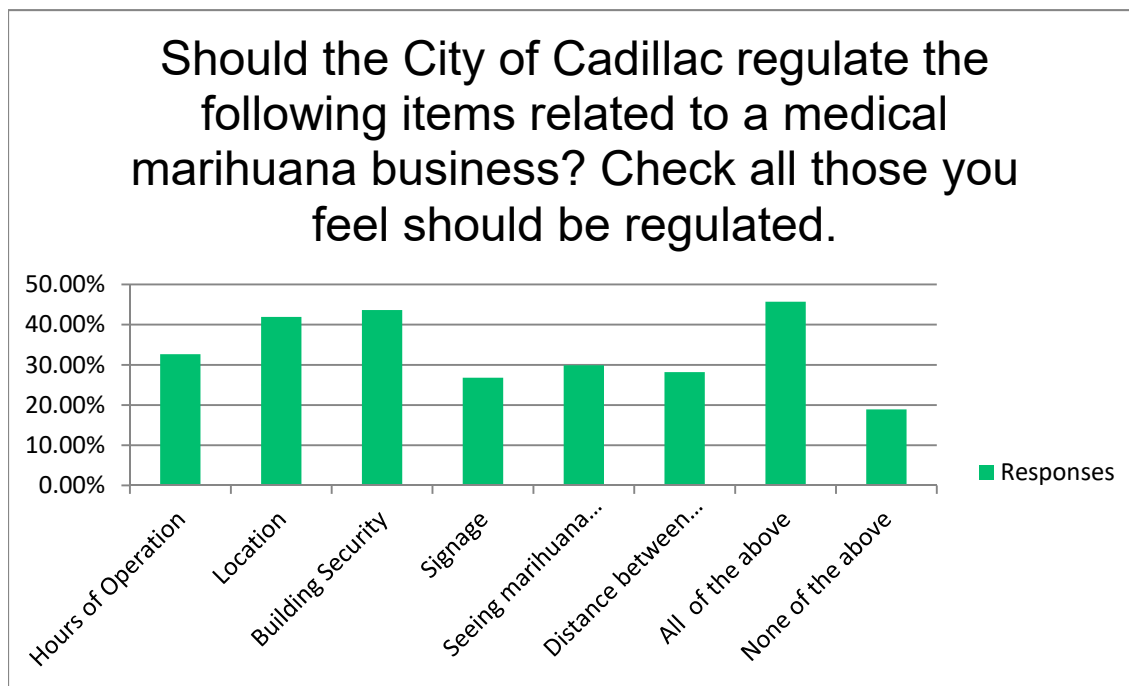
Answer Choices	Responses	
Yes	68.38%	199
No	31.62%	92
Answered		291
Skipped		3



Medical Marihuana Act

Should the City of Cadillac regulate the following items related to a medical marihuana business? Check all those you feel should be regulated.

Answer Choices	Responses	
Hours of Operation	32.65%	95
Location	41.92%	122
Building Security	43.64%	127
Signage	26.80%	78
Seeing marihuana products from the street/public view	29.90%	87
Distance between marihuana businesses	28.18%	82
All of the above	45.70%	133
None of the above	18.90%	55
Answered		291
Skipped		3



Q1 Residence

own a house in Cadillac

work in Cadillac/family lives in Cadillac

Marijuana was a gateway drug for me. I am opposed. People don't get smart smoking pot. Bad idea. Some of the questions below assume that I am not opposed. Survey could be designed a bit better.

Retired

Resident

Volunteer American Red Cross Disaster Services

Prefer that all medical marijuana laws be amended state wide to provide for dispensing only from a licensed pharmacy based on a doctor ordered prescription. Such as Rite Aid, Walgreens, Cadillac Family Pharmacy and

Live in Cadillac part time

Live in Cherry Grove Township

Legilize marijuana

Sort of embarrassing that you haven't spelled marijuana correctly on the letter or this survey.

Drugs, and Alcohol make our state of Michigan an UNPURE MICHIGAN. It makes the law officers job a lot harder when they try to arrest someone on drugs, and alcohol. We would be totally ashamed of this city for caving in to

Manage a business in Cadillac

Property owner in Cadillac

Should be voted on by the people

Live and work in the city

I think you have descriptions 3 and 5 reversed above.

Q3 Growing Facilities

it is my understanding this is already occurring

As long as they comply w the laws set by the city...

Monitoring by the city or state

Regulations should be strictly enforced with unscheduled inspections to insure compliance register and liscensed

Limit it to one or two

Close regulations

Number, size, and location of facilities is a minor concern.

Safety compliance as listed above

As long as there is a task force that will enforce that the laws/rules are being followes

Can only be done by a licensed grower and has to be supervised extremely well.

In Industrial part of town.

They should probably be restricted to industrial sections of the city

for self healig not for selling

Would rather growing facilities were out of the city.

not near schools

Maybe a specified distance from child related ventures like school.

Only by those well trained in growing in strict compliance

not around schools

based on identified need

with regular oversight by government agencies to reduce occurrence of illegal activities

no large scale grow operations (1000+ plants) if the wastewater run off would negatively impact our water system

Security regulations and restrictions

only in a commerically zoned area...no neighborhood facilities

Providing the correct strain for the diagnosis.

License and inspect regularly including reviewing documentation.
within reason and in good taste

Q4 Processing Facilities

there again I believe this is already occurring-licensing should help regulate it
Regulations on distribution and access
register and liscensed
Limit it to one or two
Close regulations
Would like more information on what is done during processing.
As with anything, this is for medical reasons, but as we all know, some will abuse the law. So I believe they should
Same as above
In Industrial part of town.
Restricted to industrial section of city
under certain economic sizes, say, growwing \$50,000 per year
not downtown or on mitchell st.
Limit to a low number
Must be in strict compliance to the law.
with regular oversight by government agencies to reduce occurrence of illegal activities
Would bring alot of jobs to cadillac
Only in a commerically zoned area...no neighborhoods
Providing the correct strain for the diagnosis being treated
License and inspect regularly including reviewing documentation.

Q5 Testing Facilities

Yes as long as regulations are being followed. I think it will be good for city economy. Other states are thriving fin
Laboratory's should be in place to guarantee quality of products
register and liscensed
Limit it to one or two
compliance as listed above
Same as previous two
restricted to industrial sections of city
not downtown or on mitchell st.
Limit to low number
Must be in strict compl;iance to the laws regulating it.
not around schools
Commerically zoned areas only
Worried about the THC levels being too high
License and inspect regularly including reviewing documentation.

Q6 Transporting Facilities

by licensing/regulating it should be easier to control
Again following city laws
Same as above with regulations and monitoring system or check in system for accountability
Limit it to one or two
for medical purposes, yes. For recreational use, no
Same

restricted to industrial sections of city
not downtown or on mitchell st.

Limit to low number

Again, only in strict compliance to the laws.

with regular oversight by government agencies to reduce occurrence of illegal activities

commercially zoned only

This one concerns me more but seems to be needed.

Q7 Selling Facilities

If sellers are only allowed so many patients-it regulates itself

Strict laws set by the city must be followed

Same as above

should be sold in drug store with a prescription

Limit it to one or two

Close regulations

as listed in #6

With the same task Force that will make sure they are selling to the proper clientele with proper documentation.

Same

Hospital

Limit to low number

only with a prescription, no under age, lots of mandatory video cameras

Only in strict compliance to the laws allowing it.

commercially zoned only

Licenses should specify the strain required for treatments

License and inspect regularly including reviewing documentation.

The Center for Local, State, and Urban Policy

Gerald R. Ford School of Public Policy >> University of Michigan

Michigan Public
Policy Survey September 2018

Michigan local government leaders' views on medical and recreational marijuana

By Natalie Fitzpatrick, Debra Horner, and Tom Ivacko

This report presents information from Michigan's local government officials regarding the status of medical marijuana facilities in their jurisdictions as of spring 2018, as well as officials' opinions on the impacts of medical marijuana on local communities. In addition, the report looks at local officials' support for or opposition to legalizing recreational marijuana. These findings are based on statewide surveys of local government leaders in the Spring 2018 wave of the Michigan Public Policy Survey (MPPS).

>> The Michigan Public Policy Survey (MPPS) is a census survey of all 1,856 general purpose local governments in Michigan conducted by the Center for Local, State, and Urban Policy (CLOSUP) at the University of Michigan in partnership with the Michigan Municipal League, Michigan Townships Association, and Michigan Association of Counties. The MPPS investigates local officials' opinions and perspectives on a variety of important public policy issues. Respondents for the Spring 2018 wave of the MPPS include county administrators, board chairs, and clerks; city mayors, managers, and clerks; village presidents, managers, and clerks; and township supervisors, managers, and clerks from 1,372 jurisdictions across the state.

For more information, please contact: closup-mpps@umich.edu / (734) 647-4091. You can also follow us on Twitter @closup

Key Findings:

- As of spring 2018, three-quarters (75%) of Michigan cities, villages, and townships statewide report they have chosen to prohibit medical marijuana facilities, while just 8% report "opting in" to allow such facilities in their jurisdiction under Michigan's Medical Marijuana Facilities Licensing Act (MMFLA).
 - » Among Michigan's largest jurisdictions, 14% say they have opted in, compared to just 6% of the smallest jurisdictions.
 - » Among jurisdictions that have opted in, three-quarters (77%) say they have amended, or will amend, their land use zoning ordinance to regulate these facilities.
- Overall, 17% of jurisdictions report experience with medical marijuana facilities in their jurisdiction, either currently (10%) or in the past (7%).
 - » By contrast, 69% say there have never been such facilities in their jurisdiction, and none have been proposed or planned for the future.
 - » Another 5% of jurisdictions have never had facilities in the past but report that some new facilities are proposed or planned.
- When it comes to allowing medical marijuana facilities in the jurisdiction, most local officials believe there is overall opposition among their jurisdiction's Board or Council, residents, and chief law enforcement officer. Meanwhile, only 17% of local leaders support allowing facilities themselves, while 65% oppose this.
- Officials from 42% of all local jurisdictions statewide report seeing some problems related to medical marijuana in their community, while 21% say their jurisdiction has seen benefits related to medical marijuana.
 - » Compared to jurisdictions that have never had medical marijuana facilities, officials from jurisdictions with facilities either now or in the past report experiencing both more problems (55% compared to 38% in places with no facilities) and more benefits (28% versus 19%).
- Only 21% of local officials support legalizing recreational marijuana, and this is significantly lower than the 61% of Michigan residents who expressed support on a recent public opinion survey.
 - » Lower support among officials than residents remains true even when looking by partisan identification and by age category, two important factors related to citizen support of legalizing recreational marijuana.

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Center for Local, State, and Urban Policy

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OF PUBLIC POLICY**
UNIVERSITY OF MICHIGAN

www.closup.umich.edu

Background

Under the federal Controlled Substances Act, marijuana is illegal and is treated as a schedule I drug, meaning it has no medical value. However, since 1996, when California became the first state to legalize medical marijuana, a total of 31 states have legalized or decriminalized the use of marijuana for people with serious medical conditions. In November 2008, Michigan became the 13th state to legalize medical marijuana, as voters passed the Michigan Medical Marihuana Initiative. This allowed for people with certain medical conditions to possess and use marijuana¹ and was implemented under the Michigan Medical Marihuana Act (MMMA). Under the MMMA, the only legal way for patients to obtain medical marijuana was from individual registered caregivers.² Subsequently, dispensaries selling marijuana to certified patients opened in jurisdictions across the state, but in 2013 the Michigan State Supreme Court ruled that such dispensaries were illegal.³ However, not all local jurisdictions chose to strictly enforce the state or federal law, and some dispensaries remained open after this ruling.

To address this, and other gaps in the MMMA, the Michigan legislature passed the Medical Marihuana Facilities Licensing Act (MMFLA) in 2016. This law created a licensing and regulatory structure giving Michigan's local governments authority to regulate commercial medical marijuana facilities.⁴ The MMFLA authorized a number of types of facilities, including growers, processors, provisioning centers (also known as dispensaries), secure transporters, and safety compliance facilities. Furthermore, Michigan's Department of Licensing and Regulatory Affairs (LARA) established a set of administrative rules to regulate those facilities.

Beginning on December 15, 2017, Michigan cities, villages, and townships could "opt in" under the MMFLA and allow medical marijuana facilities to operate in their jurisdiction by enacting a facilities licensing ordinance. However, because facilities cannot open unless individual jurisdictions have actively opted in, local governments have the ability to block medical marijuana in their communities simply by taking no action to formally opt in, or they can also explicitly vote to "opt out." While cities, villages, and townships have primary authority over whether to opt in or out of the MMFLA, county governments can also play a role. As of 2017, over one-third of Michigan counties report that they manage land use zoning for at least some of their constituent townships.⁵ While these counties cannot make a decision to opt in to allowing medical marijuana facilities within the county, they can choose not to zone for or permit types of medical marijuana facilities, which can affect the ability of county-zoned townships within their boundaries to authorize facilities within the local jurisdiction.⁶

Meanwhile, in 2012, the first two states in the nation—Colorado and Washington—legalized the sale and use of recreational marijuana. Since then, six other states and Washington, D.C. have legalized or decriminalized some recreational use of marijuana.⁷ On a local level, municipalities across the U.S. have voted to decriminalize marijuana (or lower the priority level for law enforcement), including some local jurisdictions in Michigan.⁸ In November 2018, Michigan voters will decide on the Michigan Regulation and Taxation of Marijuana Act, a ballot initiative to legalize and regulate recreational marijuana statewide.

On the Spring 2018 MPPS, local officials across Michigan were asked about their jurisdiction's approach to allowing medical marijuana facilities under the MMFLA, as well as about their experiences with medical marijuana more generally. The survey also asked local officials about their support for or opposition to legalization of recreational marijuana in general.



Most local jurisdictions have chosen to prohibit medical marijuana facilities

As of spring 2018, three-quarters of Michigan's local governments statewide report that they have decided to prohibit medical marijuana facilities in their jurisdiction. Among these, 29% report they have passed a resolution to formally "opt out" of the MMFLA, while 46% chose to take no action, which has the effect of opting out (see *Figure 1a*). Meanwhile, only 8% of Michigan cities, villages, and townships report having passed a formal ordinance to "opt in" to allow medical marijuana facilities in their jurisdiction. The remaining 16% report they have not made a decision either way, with 9% currently discussing the issue, and 7% not yet having discussed it. [Note: Under the MMFLA, counties cannot make a decision to "opt in" or "opt out" for any city, township, or village within the county, although they may regulate medical marijuana facilities through a county land use zoning ordinance that may apply to some constituent jurisdictions within the county.]

As shown in *Figure 1b*, Michigan's largest jurisdictions (those with more than 30,000 residents) are the most likely to report opting in as of spring 2018, with 14% saying they have done so, compared to just 6% of the smallest jurisdictions (those with fewer than 1,500 residents). At the same time, though, the largest jurisdictions are also the most likely to report being undecided, with 23% saying they are currently discussing the issue, and 4% saying they have not yet discussed the issue.

There are also regional differences in how local governments are currently approaching the MMFLA. Officials from jurisdictions in Southwest Michigan (13%) and the Upper Peninsula (10%) are the most likely to report opting in, compared to only 4% of jurisdictions in the Northern Lower Peninsula and West Central Michigan (see *Figure 1c*).

Figure 1a

Michigan local jurisdictions' approaches to the MMFLA (among cities, villages, and townships), by jurisdiction type

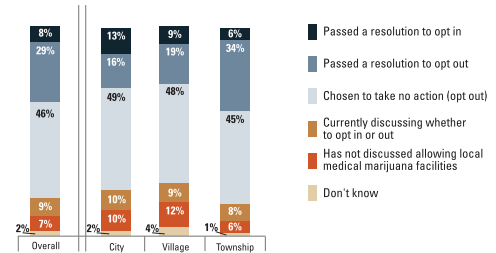


Figure 1b

Michigan local jurisdictions' approaches to the MMFLA (among cities, villages, and townships), by population size

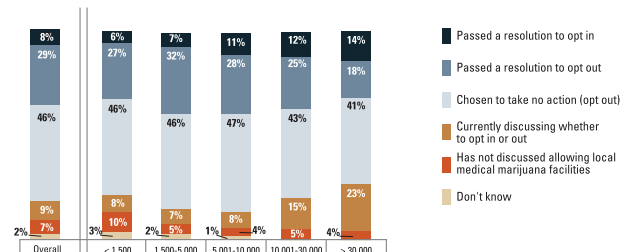
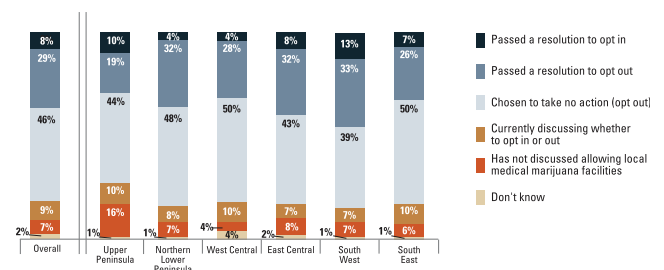


Figure 1c

Michigan local jurisdictions' approaches to the MMFLA (among cities, villages, and townships), by region



Local units are taking a range of approaches to regulating medical marijuana facilities

Michigan jurisdictions that opt into the MMFLA may choose to amend their land use zoning ordinance to regulate local medical marijuana facilities, although this is not required. Among officials from the 8% of cities, villages, and townships that have opted in, 77% report their jurisdictions have amended, or plan to amend their zoning ordinance as of spring 2018, while 6% say they have decided not to amend their ordinance (see *Figure 2*).

Although cities, villages, and townships decide for themselves whether or not to allow medical marijuana facilities in their jurisdiction, 4% of the jurisdictions that report having opted in also say the land use zoning that governs their own jurisdiction is conducted by their county. For these jurisdictions under county zoning, regulation of medical marijuana facilities is a more complex situation, dependent upon the counties' zoning code and thus a step removed from direct control by the village or township. An additional 9% are unzoned, which means that once they have passed an ordinance to opt in, they cannot further regulate those medical marijuana facilities through a zoning ordinance.

Local governments can amend their zoning ordinance in numerous ways to regulate medical marijuana facilities. As shown in *Figure 3*, jurisdictions that have amended their zoning ordinance are mostly likely to report restricting facilities to particular zoning districts (77%) within the jurisdiction. Other common approaches include: enforcing distance from schools, parks, etc. (69%), specifically limiting the number of facilities allowed (67%), and allowing multiple facilities on the same site (52%).

Figure 2
Michigan local jurisdictions' approach to regulating medical marijuana facilities (among jurisdictions that have opted in to the MMFLA)

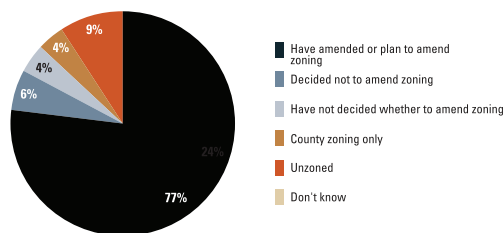
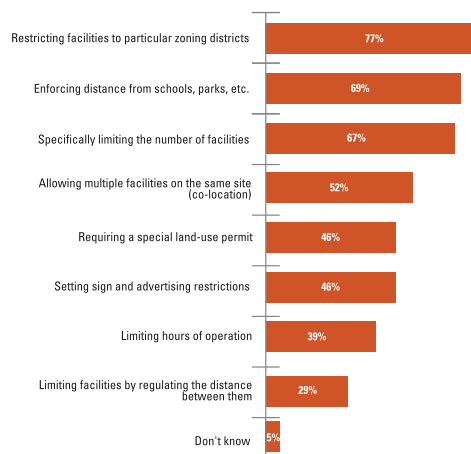


Figure 3
Michigan local jurisdictions' zoning ordinance amendments to regulate medical marijuana facilities (among jurisdictions that have or will amend their zoning ordinance)





Most local officials believe their jurisdiction understands current MMFLA rules, but significant uncertainty remains

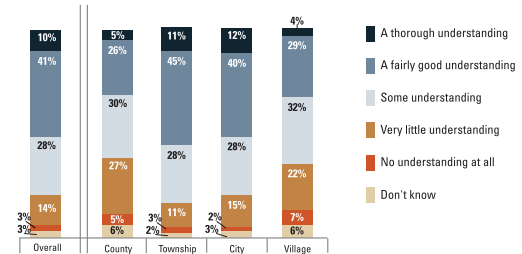
The MMFLA is new, and administrative rules were still under development when the law went into effect. Despite this, a majority (51%) of local leaders believe their jurisdiction's Board or Council has a fairly good (41%) or thorough (10%) understanding of what it legally can or cannot do to regulate local medical marijuana facilities under the current MMFLA rules (see *Figure 4*). However, 45% say their Board or Council has less than a fairly good understanding. Among this group, 28% say they have some understanding, 14% say they have very little understanding, and 3% say they have no understanding at all.

County officials are significantly less likely to say their county Board of Commissioners has either a thorough (5%) or fairly good (26%) understanding of what they legally can or cannot do to regulate local medical marijuana facilities under the MMFLA. Since counties cannot make a decision about opting in or out of allowing such facilities, it is not surprising that county officials appear somewhat less informed about the law compared with other types of local government officials.

Officials who report their jurisdiction has taken action (i.e., passing an ordinance or resolution to opt in or opt out) are more likely to say their Board or Council is informed. Among these jurisdictions, 17% of officials say their jurisdiction's governing body has a thorough understanding, while another 51% say they have a fairly good understanding. Still, over a quarter (26%) of officials from jurisdictions that have opted in say their Board or Council has only some, very little, or no understanding at all.

Figure 4

Local officials' assessments of their jurisdiction's Board or Council's understanding of what they can or cannot legally do to regulate medical marijuana facilities under the current MMFLA rules, by jurisdiction type



Few Michigan jurisdictions report having medical marijuana facilities currently operating

While applications for licenses for medical marijuana facilities under the MMFLA were not available until December 2017, unlicensed dispensaries operated in some cities, villages, and townships prior to that time. The MPPS asked local officials about their jurisdiction's past and current experience with medical marijuana facilities.

As of spring 2018, most local officials report there have never been medical marijuana facilities in their jurisdiction, with 69% saying that not only have there been none in the past, but also that none are currently proposed or planned for the future (see *Figure 5a*). Another 5% say there have never been facilities in the past, but that some new facilities have now been proposed or planned. Meanwhile, 10% of Michigan's cities, villages, and townships say they have medical marijuana facilities currently operating in their jurisdiction, while 7% report that there were previously facilities in their jurisdiction but that none are still operating today.

Looking by community size, Michigan's largest cities and townships are the most likely to report having facilities in their jurisdiction, either currently (25%) or only in the past (15%). By comparison, only 6% of the smallest jurisdictions report currently having facilities, and another 6% say they had facilities in the past.

When looking at regional differences, currently-operating facilities are most commonly reported in the Upper Peninsula (16%) and Southeast Michigan (14%), and least commonly in the Northern Lower Peninsula (3%). However, 11% of cities, villages, and townships in the Northern Lower Peninsula report having facilities in the past that are now all closed. Facilities in Southwest Michigan appear to be expanding; in addition to the 11% of jurisdictions with facilities currently operating, 9% of jurisdictions report that new facilities are currently proposed or planned (see *Figure 5b*).

Figure 5a

Michigan local jurisdictions' status of medical marijuana facilities (among cities, villages, and townships), by population size

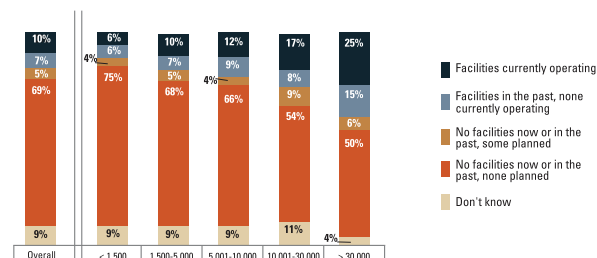
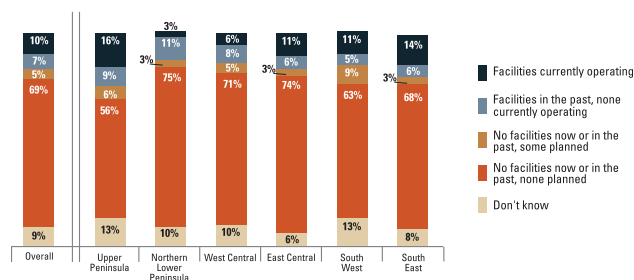


Figure 5b

Michigan local jurisdictions' status of medical marijuana facilities (among cities, villages, and townships), by region





Most local officials oppose allowing local medical marijuana facilities

There is currently considerable opposition among local government officials to allowing medical marijuana facilities in Michigan communities. Local leaders from all jurisdiction types (counties, cities, villages, and townships) report low levels of support personally, and also believe there is low support among their jurisdiction's Board or Council, their jurisdiction's residents, and the chief law enforcement officer in their jurisdiction.

In their role as a local official, just 17% themselves strongly (7%) or somewhat (10%) support allowing medical marijuana facilities in their jurisdiction. Conversely, 65% oppose this, including 50% who are strongly opposed (see *Figure 6*). Personal support for allowing medical marijuana facilities in their jurisdiction is correlated with party identification, with 28% of Democrats in support of allowing these facilities compared to just 12% of Republican officials.

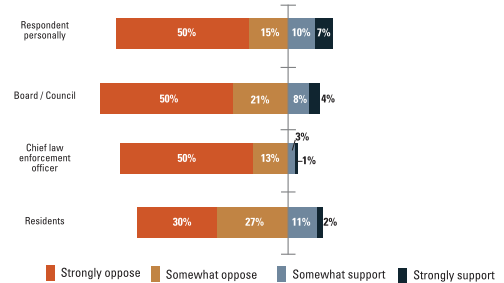
When asked to gauge support or opposition among their jurisdiction's Board or Council, 50% of local leaders say the majority of their jurisdiction's governing body is strongly opposed to allowing such facilities, and an additional 21% say their Board or Council is somewhat opposed. Just 12% believe a majority of their Board or Council supports allowing these facilities.

In addition, 50% of local leaders report their jurisdiction's chief law enforcement officer strongly opposes allowing medical marijuana facilities. Only 4% say the officer strongly (1%) or somewhat (3%) supports allowing facilities. However, a sizeable 26% of local officials are unsure about their chief law enforcement officer's support for or opposition to allowing medical marijuana facilities.

And when it comes their citizens, local officials in 57% of jurisdictions believe a majority of their residents oppose local medical marijuana facilities,, although only 30% believe their residents strongly oppose such facilities. And there is again significant uncertainty about residents' preferences, with 20% of local officials saying they don't know their residents' views.

Figure 6

Local officials' assessments of support for allowing medical marijuana facilities in their jurisdiction



Note: includes responses from county, city, village, and township officials; responses for "neither support nor oppose" and "don't know" not shown

Local leaders report both problems and benefits related to medical marijuana

Even in jurisdictions that do not have medical marijuana facilities, medical marijuana may still have a presence because of facilities in neighboring jurisdictions, because of residents with medical marijuana cards, or due to individual caregivers growing marijuana (under the MMMA). The MPPS asked local government officials from all jurisdictions about both problems and benefits their jurisdiction may have experienced related to medical marijuana.

Statewide, officials from 42% of local jurisdictions report experiencing some (28%) or significant (14%) problems related to medical marijuana in their community (see *Figure 7a*), while 35% report very few (17%) or no problems at all (18%). Officials from larger communities report seeing more problems compared with those from smaller places. And in jurisdictions that report having facilities now or in the past, over half (55%) say they have experienced problems, though only 19% report experiencing significant problems (see *Figure 7b*). However, even among jurisdictions that have never had facilities, 38% report experiencing some (25%) or significant (13%) problems.

The MPPS also asked local leaders to describe any problems their community has experienced related to medical marijuana in an open-ended survey question. Among the most common problems cited are concerns about illegitimate use of medical marijuana cards, illegal growers and dispensaries, crime, and neighborhood or community concerns (including odor of marijuana and electricity use for marijuana growing operations).

Figure 7a

Local officials' assessments of problems regarding medical marijuana in their community, by population size

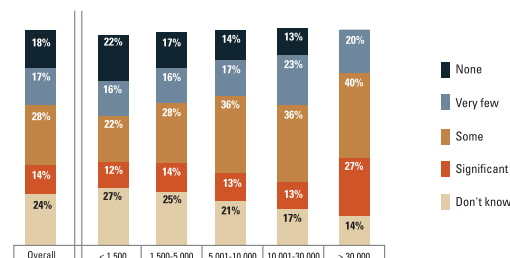
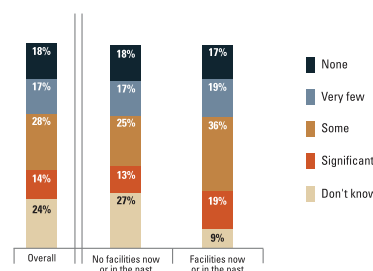


Figure 7b

Local officials' assessments of problems regarding medical marijuana in their community, by history of medical marijuana facilities in their jurisdiction



Voices Across Michigan

Quotes from local leaders discussing problems regarding medical marijuana in their jurisdiction

“Providers for medical marijuana have openly sold for recreational use. This has forced law enforcement providing cease and desist orders, thus no facilities are available for the patients that do request their medicinal uses.”

“The current confusion regarding marijuana has left our local law enforcement in a situation where they are pretty much washing their hands of it and trying not to get involved.”

“We have had a lot of problems with home growing facilities. The police have closed multiple grow houses in the township. Other violations around the township that we have no control over have caused hostility from residents.”

“I feel strongly that marijuana used as a prescription means for a medical problem that is between a doctor and their patient is a wonderful thing. I have had complaints about people having issues with their electricity when their neighbor turns on the grow lights. I don’t know that our rural, outdated infrastructure can handle it.”



In terms of benefits, as shown in *Figure 8a*, just 21% of local leaders report experiencing some (16%) or significant (5%) benefits to their community related to medical marijuana, while 51% report very few (20%) or no benefits at all (31%). And, while jurisdictions with facilities now or in the past report more problems than other jurisdictions, they are also more likely to report benefits (28%), compared to 19% of communities that report never having had such facilities (see *Figure 8b*).

When asked to describe the benefits their community had seen related to medical marijuana, many local officials cited the medical benefits to residents. Some local officials also cited current or expected economic benefits to their jurisdiction, particularly when it comes to revenue sources such as local administrative fees on medical marijuana providers, property tax revenues paid on facilities, and shared state tax revenues on products.⁹

Figure 8a

Local officials' assessments of benefits regarding medical marijuana in their community, by population size

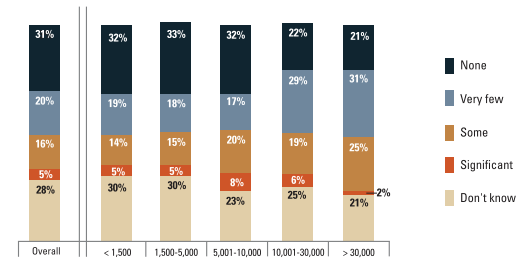
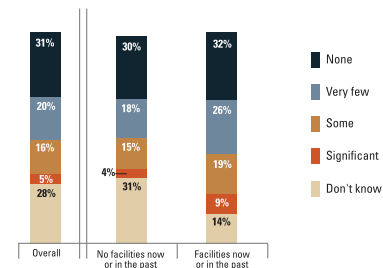


Figure 8b

Local officials' assessments of benefits regarding medical marijuana in their community, by history of medical marijuana facilities in their jurisdiction



Voices Across Michigan

Quotes from local leaders discussing benefits regarding medical marijuana in their jurisdiction

"The benefit lies with people having the choice to use medical marijuana as a treatment for their illness without prosecution. There has not been an increase in marijuana related crime since the implementation of medical marijuana."

"No problems at present and we expect benefits from annual licensing fees, land returning to the tax roll, jobs, filled store fronts, customers for existing businesses, (currently empty) house sales."

"The community has not experienced any issues relative to the grow/processing and provisioning centers that have been approved in the community. The developers have been very willing to contribute to local events, charities and community planning projects both financially and with professional staffing."

Support for legalizing recreational marijuana appears lower among local officials than the public

In November 2018, Michigan residents will vote on a ballot measure to legalize, regulate, and tax recreational marijuana in the state. The MPPS did not ask local officials about this specific ballot measure, but rather about support more generally for legalization of recreational use (including regulation and taxation). Consistent with low support for medical marijuana facilities in their jurisdiction, just 21% of local officials say they would support marijuana legalization, while 54% are opposed, including 44% strongly opposed (see *Figure 9a*).

One important factor correlated to support for marijuana legalization is partisan identification. The MPPS finds that support for legalizing recreational marijuana is 35% among Democratic officials, and just 17% among Republican officials (see *Figure 9b*).

As seen in *Figure 10*, opposition among local officials stands in contrast to a recent public opinion poll on support for legalizing recreational marijuana through a possible ballot initiative. The Winter 2018 State of the State Survey (SOSS)—conducted by Michigan State University’s Institute for Public Policy and Social Research during September 2017 through January 2018—found that 61% of Michigan residents would vote “yes” on such an initiative.¹⁰

While the MPPS sometimes finds differences between local officials’ opinions and those of citizens, these often can be attributed to the different demographic characteristics of the MPPS sample compared to a statewide sample of residents (for example, Michigan local officials are more likely to self-identify as Republican than is the public as a whole). However, the differences in support for legalizing recreational marijuana still exist when comparing within different demographic groups. Looking by partisanship, support is lower among officials of all parties when compared to their counterpart Michigan residents. For Democrats, the percentage of Michigan residents who would vote “yes” is 67%, compared to just 35% of local officials who would support recreational legalization. For Republicans, support among residents is 39%, compared to 17% among local officials.

Another factor correlated to support for legalization is the respondent’s age. The MPPS finds significant variation by age group among local officials, with 24% of officials under age 30 supporting recreational marijuana legalization, compared to just 10% of officials 80 years or older. By contrast, the SOSS finds 80% support among 18-29 year olds, and 30% among residents 65 years or older.

Figure 9a

Local officials’ support for and opposition to legalizing, regulating, and taxing recreational marijuana

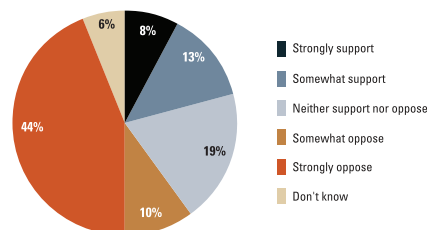
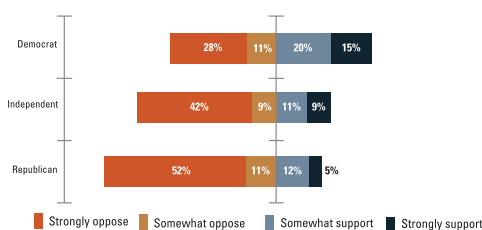


Figure 9b

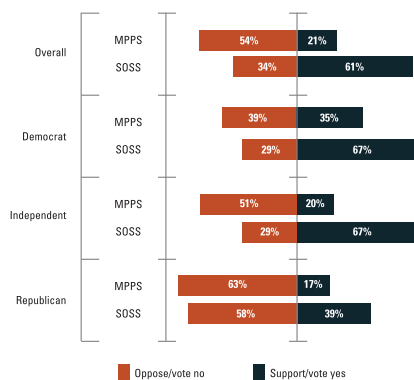
Local officials’ support for and opposition to legalizing, regulating, and taxing recreational marijuana, by partisan identification



Note: responses for “neither support nor oppose” and “don’t know” not shown

Figure 10

Support for and opposition to legalizing recreational marijuana, by local leaders’ opinions vs. public opinion



Note: The Spring 2018 MPPS questionnaire asked local officials whether they would “support” or “oppose” legalization of recreational marijuana, while the Winter 2018 SOSS survey asked citizens if they would vote “yes” or “no” on a possible ballot initiative; responses on MPPS & SOSS for “don’t know” not shown, and responses on MPPS for “neither support nor oppose” not shown.



Conclusion

While medical marijuana has been legal under state law in Michigan for the last decade, commercial facilities growing, processing, transporting, or selling medical marijuana were illegal under state law until December 2017 when the Medical Marijuana Facilities Licensing Act was enacted. Under the new MMFLA rules, these facilities are now allowed, but only if authorized by local government action. Once a local government has opted-in to allow such facilities, they can also be regulated via land-use zoning ordinances at the local or county level.

Most (75%) Michigan jurisdictions have made the decision to keep medical marijuana facilities out of their jurisdiction, while only 8% of cities, villages, and townships have voted to allow such facilities in their community. There is significant opposition to allowing such facilities, with 50% of local officials strongly opposed to allowing them. Most local officials also perceive high levels of opposition among their jurisdiction's Board or Council, law enforcement leaders, and the residents of their jurisdiction.

While many jurisdictions report having experienced some problems related to medical marijuana in their community, fewer report that these problems have been significant. Some communities also report experiencing benefits related to medical marijuana, such as medical benefits for their residents, as well as current or expected economic benefits in some jurisdictions that have allowed medical marijuana facilities.

In recent years, there has been increased support nationally for legalizing recreational marijuana, and several states have voted to allow recreational marijuana use. However, while a recent survey of Michigan residents shows high levels of public support for legalizing recreational marijuana in the state, the MPPS shows that local government leaders are less supportive, with only 21% saying they would generally support legalizing, regulating, and taxing recreational marijuana in Michigan.

Notes

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10. Ballard, C. L. (2018). *State of the State Survey [Winter 2018]*. East Lansing, MI: Institute for Public Policy and Social Research, Michigan State University. Retrieved from <http://ippsr.msu.edu/sites/default/files/soss/soss75presentation.pdf>

Survey Background and Methodology

The MPPS is an ongoing survey program, interviewing the leaders of Michigan's 1,856 units of general purpose local government. Surveys are conducted each spring (and prior to 2018, were also conducted each fall). The program has covered a wide range of policy topics, and includes longitudinal tracking data on "core" fiscal, budgetary and operational policy questions and designed to build-up a multi-year time-series.

In the Spring 2018 iteration, surveys were sent by the Center for Local, State, and Urban Policy (CLOSUP) via the internet and hardcopy to top elected and appointed officials (including county administrators and board chairs; city mayors and managers; village presidents, clerks, and managers; and township supervisors, clerks, and managers) from all 83 counties, 280 cities, 253 villages, and 1,240 townships in the state of Michigan.

The Spring 2018 wave was conducted from April 9 – June 8, 2018. A total of 1,372 jurisdictions in the Spring 2018 wave returned valid surveys (65 counties, 237 cities, 177 villages, and 893 townships), resulting in a 74% response rate by unit. The margin of error for the survey for the survey as a whole is +/- 1.35%. The key relationships discussed in the above report are statistically significant at the $p < .05$ level or below, unless otherwise specified. Missing responses are not included in the tabulations, unless otherwise specified. Some report figures may not add to 100% due to rounding within response categories. Quantitative data are weighted to account for non-response. "Voices Across Michigan" verbatim responses, when included, may have been edited for clarity and brevity. Contact CLOSUP staff for more information.

Detailed tables of the data analyzed in this report broken down three ways—by jurisdiction type (county, city, township, or village); by population size of the respondent's community, and by the region of the respondent's jurisdiction—are available online at the MPPS homepage: <http://closup.umich.edu/mpps.php>.

The survey responses presented here are those of local Michigan officials, while further analysis represents the views of the authors. Neither necessarily reflects the views of the University of Michigan, or of other partners in the MPPS.



Previous MPPS reports

Rising confidence in Michigan's direction among local leaders, but partisan differences remain (July 2018)

Michigan local government officials weigh in on housing shortages and related issues (June 2018)

Approaches to land use planning and zoning among Michigan's local governments (May 2018)

Workforce issues and challenges for Michigan's local governments (January 2018)

Local leaders' views on elections in Michigan: accuracy, problems, and reform options (November 2017)

Michigan local government officials report complex mix of improvement and decline in fiscal health, but with overall trend moving slowly upward (October 2017)

Michigan local leaders want their citizens to play a larger role in policymaking, but report declining engagement (August 2017)

Michigan local leaders' views on state preemption and how to share policy authority (June 2017)

Improving communication, building trust are seen as keys to fixing relationships between local jurisdictions and the State government (May 2017)

Local leaders more likely to support than oppose Michigan's Emergency Manager law, but strongly favor reforms (February 2017)

Local government leaders' views on drinking water and water supply infrastructure in Michigan communities (November 2016)

Michigan local leaders say property tax appeals are common, disagree with 'dark stores' assessing (October 2016)

Local officials say Michigan's system of funding local government is broken, and seek State action to fix it (September 2016)

Michigan local governments report first declines in fiscal health trend since 2010 (August 2016)

Michigan local leaders' doubts continue regarding the state's direction (July 2016)

Hospital access primary emergency medical concern among many Michigan local officials (July 2016)

Firefighting services in Michigan: challenges and approaches among local governments (June 2016)

Most local officials are satisfied with law enforcement services, but almost half from largest jurisdictions say their funding is insufficient (April 2016)

Local leaders say police-community relations are good throughout Michigan, but those in large cities are concerned about potential civil unrest over police use-of-force (February 2016)

Report: Responding to budget surplus vs. deficit: the preferences of Michigan's local leaders and citizens (December 2015)

Michigan's local leaders concerned about retiree health care costs and their governments' ability to meet future obligations (October 2015)

Fiscal health rated relatively good for most jurisdictions, but improvement slows and decline continues for many (September 2015)

Confidence in Michigan's direction declines among state's local leaders (August 2015)

Michigan local government leaders' views on private roads (July 2015)

Few Michigan jurisdictions have adopted Complete Streets policies, though many see potential benefits (June 2015)

Michigan local leaders have positive views on relationships with county road agencies, despite some concerns (May 2015)

Michigan local government leaders say transit services are important, but lack of funding discourages their development (April 2015)

Michigan local leaders see need for state and local ethics reform (March 2015)

Local leaders say Michigan road funding needs major increase, but lack consensus on options that would raise the most revenue (February 2015)

Michigan local government leaders' views on employee pay and benefits (January 2015)

Despite increasingly formal financial management, relatively few Michigan local governments have adopted recommended policies (December 2014)

Most Michigan local officials are satisfied with their privatized services, but few seek to expand further (November 2014)

Michigan local governments finally pass fiscal health tipping point overall, but one in four still report decline (October 2014)

Beyond the coast, a tenuous relationship between Michigan local governments and the Great Lakes (September 2014)

Confidence in Michigan's direction holds steady among state's local leaders (August 2014)

Wind power as a community issue in Michigan (July 2014)

Fracking as a community issue in Michigan (June 2014)

The impact of tax-exempt properties on Michigan local governments (March 2014)

Michigan's local leaders generally support Detroit bankruptcy filing despite some concerns (February 2014)

Michigan local governments increasingly pursue placemaking for economic development (January 2014)

Views on right-to-work legislation among Michigan's local government leaders (December 2013)

Michigan local governments continue seeking, and receiving, union concessions (October 2013)

Michigan local government fiscal health continues gradual improvement, but smallest jurisdictions lagging (September 2013)

Local leaders evaluate state policymaker performance and whether Michigan is on the right track (August 2013)

Trust in government among Michigan's local leaders and citizens (July 2013)

Citizen engagement in the view of Michigan's local government leaders (May 2013)

Beyond trust in government: government trust in citizens? (March 2013)

Local leaders support reforming Michigan's system of funding local government (January 2013)

Local leaders support eliminating Michigan's Personal Property Tax if funds are replaced, but distrust state follow-through (November 2012)

Michigan's local leaders satisfied with union negotiations (October 2012)

Michigan's local leaders are divided over the state's emergency manager law (September 2012)

Fiscal stress continues for hundreds of Michigan jurisdictions, but conditions trend in positive direction overall (September 2012)

Michigan's local leaders more positive about Governor Snyder's performance, more optimistic about the state's direction (July 2012)

Data-driven decision-making in Michigan local government (June 2012)

State funding incentives increase local collaboration, but also raise concerns (March 2012)

Local officials react to state policy innovation tying revenue sharing to dashboards and incentive funding (January 2012)

MPPS finds fiscal health continues to decline across the state, though some negative trends eased in 2011 (October 2011)

Public sector unions in Michigan: their presence and impact according to local government leaders (August 2011)

Despite increased approval of state government performance, Michigan's local leaders are concerned about the state's direction (August 2011)

Local government and environmental leadership: views of Michigan's local leaders (July 2011)

Local leaders are mostly positive about intergovernmental cooperation and look to expand efforts (March 2011)

Local government leaders say most employees are not overpaid, though some benefits may be too generous (February 2011)

Local government leaders say economic gardening can help grow their economies (November 2010)

Local governments struggle to cope with fiscal, service, and staffing pressures (August 2010)

Michigan local governments actively promote U.S. Census participation (August 2010)

Fiscal stimulus package mostly ineffective for local economies (May 2010)

Fall 2009 key findings report: educational, economic, and workforce development issues at the local level (April 2010)

Local government officials give low marks to the performance of state officials and report low trust in Lansing (March 2010)

Local government fiscal and economic development issues (October 2009)

All MPPS reports are available online at: <http://closup.umich.edu/mpps.php>

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The **Center for Local, State, and Urban Policy (CLOSUP)**, housed at the University of Michigan's Gerald R. Ford School of Public Policy, conducts and supports applied policy research designed to inform state, local, and urban policy issues. Through integrated research, teaching, and outreach involving academic researchers, students, policymakers and practitioners, CLOSUP seeks to foster understanding of today's state and local policy problems, and to find effective solutions to those problems.

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(ex officio)

Questions Asked Via Notecards from the June 28, 2018 Medical Marihuana Public Forum

(Transcribed as written)

- 1) In an article when you were elected you stated you were going to go after the Meth & Heroin dealers? But you gave a deal to a know addict in trade for testifying against Don Koshmider. What is your real agenda?

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

- 2) Question for Kip Belcher: Isn't it true that asset forfeiture laws had to be changed to protect people from an over zealous police force that used it to profit? Example would be the dispensaries raided in Northern Michigan.

A seven bill package was signed in to law in October 2015 regarding Michigan civil asset forfeiture. The changes require more transparency and local law enforcement to file annual reports detailing their forfeiture cases and proceeds.

Additional changes have been introduced this legislative term. [House Bill 4158](#) was passed by the (Michigan) House of Representatives on May 8, 2018. The legislation has been referred to the Committee on Judiciary in the Senate.

- 3) With so many people in need of jobs why are you fighting the recreational marijuana industry?

I'm not sure what the person asking this question is referring to since the purpose of the public forum was to seek community input and have a discussion regarding medical marihuana...what possible benefits might be (like job creation?) as well as possible adverse effects to the city opting in to the MMFLA ([Public Act 281 of 2016](#)). I did not hear any of the panelist express "fighting the recreational marijuana industry".

- 4) Is open discussion going to be available afterward? If not I have a couple questions for Jason

N/A for MML to answer

5) Will "THE PINES" Brand A Dispensary

N/A for MML to answer

6) ARE CARE GIVERS THE ILLEGAL MARKET AS DEFINED BY ELMORE

No

7) How many medical marijuana patients are referred to CPS once the county is aware the child's parents are cardholders?

Question was answered during the forum, and the answer was none.

8) CAN JASON ELMORE NAME 5 COUNTIES USING LTMUS TEST

What is a LTMUS TEST? N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

9) Why is There so much concern about a roadside test for marijuana when there is no roadside test for opiates? Thank you.

Question was answered during the forum. N/A for MML to add any additional information.

10) COULD ELMORE CITE CASES SURROUNDING HIS INTERPRETATION OF USE ABLE MARIJUANA

N/A for MML to answer

11) DID ELMORE'S SCREEN SAY CAREGIVERS PRODUCE 600 LB A YEAR

I don't believe so. I believe the figure given represented the amount that COULD be produced based on the total number of registered caregivers and patients plus the allowable amounts they are able to have per the law.

12) HOW MANY PATIENTS HAVE SUBMITTED A AFFIRMATIVE DEFENSE TO JURY IN MICHIGAN

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

13) IS DON BAILEY PERSONALLY PROFITTING OFF MMFLA

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

14) IS WEED MAPS OWNED BY GEORGE SOROS???

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

15) HOW CAN YOU EXPECT PATIENTS TO FOLLOW THE LAW WHEN THERE IS NO ACCESS TO LEGAL MEDICATION? Medical professionals in the area don't even know where to get approval for a license.

N/A for MML to answer.

16) Mr. Elmore. I read an article that a dispensary in Morenci, MI already turned in over \$10,000 in tax revenue to the treasury. If all are illegal does that mean the state is involved in money laundering?

N/A for MML to answer. I did do a google search and found nothing citing a dispensary in Morenci, MI (nor any other community) turning over tax revenue to treasury.

17) WHERE DID ELMORE GET STATISTICS ON POWER POINTS

Question was answered during the forum. N/A for MML to add any additional information.

18) If I was a solo patient, and ran out of my medicine. Where do I go to get my Medication? Why has it become about money instead of the health of patients? Could I still grow my own 12 plants because I don't want to grow 500. Has anyone overdosed on Marijuana.NO. Why would we regulate how much one could have.

Under current law, your options would be to grow your own plants (per the allowable amount in the law) or receive medical marihuana from a registered caregiver. Nothing has changed per the patient caregiver model set up in the 2008 MMA ([Initiated Law 1 of 2008](#)). At this time, no provisioning center licenses have been awarded under the MMFLA ([Public Act 281 of 2016](#)). Once they are, you would also be able to buy your medical marihuana medication from a state licensed provisioning center.

19) Do you agree that minors (teens) with special cases and have a card should use cannabis? No THC just CBD like oils or juices why or why not?

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

20) As a patient myself, im confused. With no dispensaries in the Cadillac area, im at a loss where to get medicine. Mr Elmore stated its illegal to acquire from anyone but your caregiver. A gentleman stated a patient can. Mr Elmore later said theres a second affirmative defense to protect people. Which one is it? Can a police officer arrest me for purchasing at a dispensary?

N/A for MML to answer. See info provided in question 18 answer...

21) How can Elmore say that the language on the initiative approved was written poorly?

N/A for MML to answer, but agree the recreational marihuana initiative is poorly written.

22) Is there any conflict of interest with our county prosecutor, Mr Elmore, as he is a federal judge?

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

23) There are many dispensaries operating in MI. They have invested a great amount of money (currently going through state licensure) & patients have to currently travel to go to dispensaries, so as a community, is it a good idea to opt-in?

This is a question for the community to answer more so than the panelist at the forum.

24) Will police arrest kids if caught with cannabis & ruin chances at school loans?

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

25) Could DEA raid a dispensary with a militarized raid?

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

26) Why do the state legalize some of these and not others? Why cant mom & pa due this and its ok for the money people?

Not sure what this question is referring to/asking.

27) I have epilepsy and can get my pharmaceutical prescriptions at any local pharmacy. Why shouldn't this medicine be equally available? Shouldn't patients be aloud to self medicate with what works for them?

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

28) Can this issue be put on a ballot left up to the people?

This question would be best answered by your municipal attorney.

29) Why do judges not acknowledge the pot doctor as a real doctor, yet they want a patient doc relation established?

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

30) Will the prosecutors stop giving addicts deals for testifying against caregivers? please treat opiates higher priority than cannabis.

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

31) "I have MS and am a service connected Army Paralegic Veteran. How are you going to make sure I have safe access for my medicine?"

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

32) "What will happen to current medical card holders? How will this affect their "medical" access?"

Nothing has changed to the 2008 MMA ([Initiated Law 1 of 2008](#)), so the patient caregiver model remains intact.

33) "How would a medical marijuana ordinance be impacted by legalization of marijuana, if it passes in November? Would the City have to pass a separate ordinance for recreational?"

Any medical marijuana regulatory system in place will most likely have to be revisited or changed if the recreational ballot initiative passes in November. If the recreational initiative passes, they city would have to decide if it wants to allow for recreational

licensed facilities or not. If not, the city would need to pass an opt out ordinance. Otherwise, the city would have to allow licensed recreational facilities to operate within its municipal boundaries.

34) “Mr. Elmore, I read an article stating a dispensary turned in over \$10,000 in tax revenue already. If LARA can’t issue licenses, and none are legal, is the state involved in money laundering?”

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

35) “How many people has Wexford prosecuted for driving with Rx meds?”

N/A for MML to answer.

36) “How many nanograms will result in DUI?”

N/A for MML to answer.

37) “Does weed maps take money from illegal dispensary?”

N/A for MML to answer. Also, not relevant to the discussion/reason for the public forum.

38) “Do patients get cease & disist orders?”

N/A for MML to answer.

Questions Asked Via Notecards from the June 28, 2018 Medical Marihuana Public Forum
Answers Provided by the County Prosecutor in Bold

(Transcribed as written, which includes spelling & grammatical errors.)

- 1) In an article when you were elected you stated you were going to go after the Meth & Heroin dealers? But you gave a deal to a know addict in trade for testifying against Don Koshmider. What is your real agenda?

Mr. Koshmider was charged by the previous prosecutor in 2016. In fact, by the time I assumed the office, the case was already in Circuit Court.

There were no plea agreements made between this office and any meth or heroin dealers in exchange for their testimony. The only agreements made by this office in regard to that file, as I recall, were with the two individuals Mr. Koshmider was using at his illegal dispensary to distribute marijuana to the informants. If you were present at the trial, the one witness, who was an informant used in one of the multiple controlled-buys and who had been picked up on a heroin case in another county (not Wexford County), testified that he actually never received a benefit.

Respectfully, your question assumes incorrect facts. If you look at the cases handled by the Wexford County Prosecutor's Office since January 1, 2017, you will find that we take a very strong and aggressive stance on meth, heroin, and all drug cases. Controlled substance crimes are a top priority as these poisons impact not only the addict, but also their families, friends, fellow citizens, and the community as a whole. Again, I encourage you to look at the extensive media reporting how we are attacking drugs in our county.

- 2) Question for Kip Belcher: Isn't it true that asset forfeiture laws had to be changed to protect people from an over zealous police force that used it to profit? Example would be the dispensaries raided in Northern Michigan.
- 3) With so many people in need of jobs why are you fighting the recreational marijuana industry?

This question assumes there is a connection between jobs and ones' position for or against the marijuana industry. There are several potential industries that could result in a positive or negative, temporary or permanent impact on jobs and also have a net negative impact on a community in other ways that would make the impact on jobs irrelevant. The two issues – jobs and legalization of marijuana – are entirely separate issues. Thus, we should really just look at the second.

An answer to the second question – why would one oppose a marijuana industry – was covered in several of the points raised during the panel discussion, such as impacts on health care, traffic safety, children, crime rates, black markets, and much more - therein lies the reason one may or may not be opposed to the marijuana industry.

It is worth noting that the question only said “marijuana industry” and did not differentiate between recreational and medical marijuana industries. The panel discussion was about medical marijuana facilities. The intent was, as I understand it, for the City Council to hear from local constituents.

- 4) Is open discussion going to be available afterward? If not I have a couple questions for Jason

No response is necessary

- 5) Will “THE PINES” Brand A Dispensary

I am uncertain as what this question is addressing.

The only connection I can assume the author is focused, which is based on the flyer distributed by someone not from Wexford County or the City of Cadillac at the discussion, mentioned a business my family once owned several years ago called “The Pines.”

My father, his two brothers, and my grandfather once owned the business, which including a bowling alley, pizzeria, and bar. They owned it for about 31 years. After my grandfather’s passing in 1985 and one uncle selling his shares, it was then owned by my father and uncle. As my father also worked for the State of Michigan Department of Transportation and owned a Christmas tree farm, from what had been told since I was a child, my uncle owned the controlling interest and managed it. After several years of my encouragement, the family sold the business about 7 or 8 years ago.

While I have no information as to any intentions of those outside of myself, my younger brother who has lived in Atlanta for 15 years, and my parents, who are now divorced and remarried, I would discourage anyone in my family from owning or operating any marijuana related business or working for any such business.

6) ARE CARE GIVERS THE ILLEGAL MARKET AS DEFINED BY ELMORE

The illegal market I referenced during the panel discussion was only in reference to those whose possession, manufacture, and/or distribution of marijuana was done outside of the law.

The Michigan Medical Marijuana Act does not make these actions lawful. It only creates affirmative defense in specific situations to certain individuals.

The MMMA only permits those who qualify under the law as a patient or caregiver a very limited affirmative defense to possess a certain number of ounces and/or plants and to provide a certain amount between a caregiver and his/her patients without profit. Patients can, as the law provides, may self-provide these items or obtain them from a caregiver as defined and set forth under the MMMA.

The Marijuana Facilities Licensing Act has neither given any temporary licenses nor granted any authority to LARA to give out such. It has set forth certain tasks to LARA, which are not yet complete. LARA is an agency and may set forth administrative rules; however, that ability and those rules are not law and cannot circumvent or trump the law. Since the law did not grant authority for temporary licenses, LARA cannot give any such, and, to the best of my understanding, it and its Facilities Licensing Board has not given out, any temporary licenses. Thus, until a facility has been given an actual license and is operating under such, those facilities or business would be operating unlawfully and making any profit would also be unlawful.

Simply put, if anyone is operating a medical marijuana facility at this time, they would be doing so unlawfully. If anyone is going to support the MMMA and MFJA, then he/she must support and obey it as it is written.

7) How many medical marijuana patients are referred to CPS once the county is aware the child's parents are cardholders?

I believe this question was asked at the panel discussion. Just as answered at the discussion, no-one at the panel could answer that question as none work at or represent Child Protective Services or any other part of the Department of Health and Human Services.

8) CAN JASON ELMORE NAME 5 COUNTIES USING LTMUS TEST

This has been reported in the news. Those counties have not yet, at last I know, issued reports on the results of efficiency.

- 9) Why is There so much concern about a roadside test for marijuana when there is no roadside test for opiates? Thank you.

The question mistakenly assumes the issue of concern is limited to marijuana verses opiates.

The panel discussion was set up to assist the City Council of Cadillac to help educate the public and make an educated decision about whether it would opt in to allowing medical marijuana facilities to operate within city limits. The intent and focus was not about opiates. As a result, the discussion focused on the negative impacts of marijuana legalization (recreational or medical) on highway safety. Therefore, the issue of roadside testing was a relevant topic for discussion and was so focused.

A follow on question would be “is the use of opiates and its presence in the blood streams of drivers an important safety concern?” The answer is that it is an important concern. It is concerning when anyone operates a vehicle on a roadway or area open to the public while under the influence of alcohol, marijuana, opiates, methamphetamines, and other controlled substances.

If during a traffic stop a law enforcement officer has probable cause to obtain a search warrant for a blood test of a driver for alcohol, marijuana, heroin, opiates, methamphetamine, or other controlled substance, he or she may do so. The laws across the 50 states has adopted over several decades of experience of legalized alcohol and its impact on safe roadways. Medical marijuana is now creeping across the states and, very similarly to alcohol testing at one time, there is no standardized test. It is, in part, difficult due to how the body metabolizes alcohol compared to marijuana and other controlled substances.

We need to protect the safety of our roadways and communities from drivers operating under the influence of alcohol, marijuana, opiates, and other drugs.

- 10) COULD ELMORE CITE CASES SURROUNDING HIS INTERPRETATION OF USE ABLE MARIJUANA

The Greenmill fire case from 2017 is an example of someone use butane extraction to create a useable form of THC from marijuana plants absent the bud/flower.

- 11) DID ELMORE'S SCREEN SAY CAREGIVERS PRODUCE 600 LB A YEAR

Not legally produce.

12) HOW MANY PATIENTS HAVE SUBMITTED A AFFIRMATIVE DEFENSE TO JURY IN MICHIGAN

This was asked at the panel discussion.

13) IS DON BAILEY PERSONALLY PROFITTING OFF MMFLA

14) IS WEED MAPS OWNED BY GEORGE SOROS???

15) HOW CAN YOU EXPECT PATIENTS TO FOLLOW THE LAW WHEN THERE IS NO ACCESS TO LEGAL MEDICATION? Medical professionals in the area don't even know where to get approval for a license.

This is an inappropriate question for this panel. Law enforcement only enforces the laws as they are written. Law enforcement only enforces the laws given to it by the legislature. This is a question to taken to a legislator or council member.

16) Mr. Elmore. I read an article that a dispensary in Morenci, MI already turned in over \$10,000 in tax revenue to the treasury. If all are illegal does that mean the state is involved in money laundering?

This is a repeated question

17) WHERE DID ELMORE GET STATISTICS ON POWER POINTS

This was answered at the discussion. Wexford County specific numbers came from the office of the Wexford County Prosecutor. The several news reports were from newspaper articles available online. The remainder of the statistics came from the Colorado HIDTA 2017 report. Those reports are available through National Marijuana Initiative, which can be found online.

18) If I was a solo patient, and ran out of my medicine. Where do I go to get my Medication? Why has it become about money instead of the health of patients? Could I still grow my own 12 plants because I don't want to grow 500. Has anyone overdosed on Marijuana.NO. Why would we regulate how much one could have.

The answer for the first part is simple. According to the MMMA, a patient can have up to a certain amount of ounces and plants. It does not contemplate from where one gets it. Hence, this is the first issue of the poorly conceived and written law. The remainder of your questions are not appropriate for this panel. Those remaining points should be addressed with your legislator. Law enforcement can only enforce the law as written. If there is a problem in obtaining it, that is a legislative issue and not one for this panel.

19) Do you agree that minors (teens) with special cases and have a card should use cannabis? No THC just CBD like oils or juices why or why not?

This is an inappropriate question for this panel. Law enforcement only enforces the laws as they are written.

20) As a patient myself, im confused. With no dispensaries in the Cadillac area, im at a loss where to get medicine. Mr Elmore stated its illegal to acquire from anyone but your caregiver. A gentleman stated a patient can. Mr Elmore later said theres a second affirmative defense to protect people. Which one is it? Can a police officer arrest me for purchasing at a dispensary?

Again, the MMMA results in confusion. This is an inappropriate question for this panel. This panel was set up for citizens of City of Cadillac and the City Council to determine if medical marijuana facilities will be permitted within the city. This is a question that should be directed to a legislator. Law enforcement may only enforce the law as it is written. It cannot give individuals legal advice and it cannot make changes to the law. Again, talk to your legislator.

21) How can Elmore say that the language on the initiative approved was written poorly?

The fact so many people have questions about it is the first proof. Similarly, it proposes legalization based on a similar structure as the MMMA, which has been and is still full of confusion. Again, the questions raised at the and since the panel discussion are evidence of the confusion. Lastly, regulating marijuana based “marijuana” and not on THC means that the focus is not on the actual drug at issue – THC and other cannabinoids.

22) Is there any conflict of interest with our county prosecutor, Mr Elmore, as he is a federal judge?

Mr. Elmore is not a federal judge. Federal judges are U.S. District and Circuit judges appointed by the President of the U.S and enforce federal criminal and civil laws under the U.S. Code. They involve life-time appointments. Mr. Elmore is a military judge in the U.S. Army Reserve assigned to the Third Judicial Circuit. His couple of cases a year involve only servicemembers in military courts-martial involving violations of the Uniform Code of Military Justice. His presence at the panel discussion was as an invitee by the City Council of Cadillac. His presence and comments were and are not provided in his role as an officer in the U.S. Army Judge Advocate General’s Corp and U.S. Army Reserve. He was not and is not on active duty at the panel or in response to these questions.

23) There are many dispensaries operating in MI. They have invested a great amount of money (currently going through state licensure) & patients have to currently travel to go to dispensaries, so as a community, is it a good idea to opt-in?

This is the very question to be determined by the elected officials for the City of Cadillac, who set up the panel discussion, and other municipalities. The objective of the panel was for voters to be present, ask questions, listen to information, and then go out and conduct their own research in order to make their own conclusions and potentially share those thoughts with their elected officials.

24) Will police arrest kids if caught with cannabis & ruin chances at school loans?

It is unlawful for children to possess and use marijuana. Parents need to be responsible is setting the example for their children. Juvenile courts have several options when addressing juvenile misconduct (those under 17 years old). Similarly, district and circuit courts also have several option when addressing adult misconduct (those over 17 years old). For instance, juvenile adjudications are non-public records. Moreover, children who are placed on a diversion program called "consent calendar" are given the opportunity to avoid an adjudication. In adult courts, there are also diversion programs in which young people have the opportunity to avoid a permanent conviction, such as Section 7411 and the Holmes Youthful Trainee Act. These permit the person an opportunity to learn from the event and avoid a permanent conviction. Our office has and will continue to encourage first time and youthful offenders a chance in appropriate cases to learn from the event and put it behind them. These options are true for any juvenile involved in or charged with a crime, be it involving alcohol, larceny, or any other crime.

25) Could DEA raid a dispensary with a militarized raid?

This is an inappropriate question for this panel.

26) Why do the state legalize some of these and not others? Why cant mom & pa due this and its ok for the money people?

This is an inappropriate question for this panel.

27) I have epilepsy and can get my pharmaceutical prescriptions at any local pharmacy. Why shouldn't this medicine be equally available? Shouldn't patients be aloud to self medicate with what works for them?

This is an inappropriate question for this panel.

28) Can this issue be put on a ballot left up to the people?

This is an inappropriate question for this panel.

29) Why do judges not acknowledge the pot doctor as a real doctor, yet they want a patient doc relation established?

This is an inappropriate question for this panel.

30) Will the prosecutors stop giving addicts deals for testifying against caregivers? please treat opiates higher priority than cannabis.

This is an inappropriate question for this panel. This assumes facts unknown to this prosecutor.

31) "I have MS and am a service connected Army Paralegic Veteran. How are you going to make sure I have safe access for my medicine?"

This is an inappropriate question for this panel. It is not the job of anyone present to do so. That is a question that should be directed at a legislator.

32) "What will happen to current medical card holders? How will this affect their "medical" access?"

This is an inappropriate question for this panel. This panel was set up for citizens of City of Cadillac and the City Council to determine if medical marijuana facilities will be permitted within the city.

33) "How would a medical marijuana ordinance be impacted by legalization of marijuana, if it passes in November? Would the City have to pass a separate ordinance for recreational?"

This is an inappropriate question for this panel. This panel was set up for citizens of City of Cadillac and the City Council to determine if medical marijuana facilities will be permitted within the city.

34) "Mr. Elmore, I read an article stating a dispensary turned in over \$10,000 in tax revenue already. If LARA can't issue licenses, and none are legal, is the state involved in money laundering?"

The question is referenced to an unknown article reporting unspecific information. This is an inappropriate question for this panel. This panel was set up for citizens of

City of Cadillac and the City Council to determine if medical marijuana facilities will be permitted within the city.

35) "How many people has Wexford prosecuted for driving with Rx meds?"

Those statistics are not readily available as MCL 257.625 is the same offense for operating under the influence of drugs or alcohol.

36) "How many nanograms will result in DUI?"

This is an inappropriate question for this panel. This panel was set up for citizens of City of Cadillac and the City Council to determine if medical marijuana facilities will be permitted within the city. This is a question for a legislator. Presently, the law simply says that one may not operate under the influence of the substance, which involves impairment.

37) "Does weed maps take money from illegal dispensary?"

38) "Do patients get cease & desist orders?"

Patients can possess a certain number of ounces and plants. They may, if they qualify, assert an affirmative defense in criminal court if charged. If they are caught with more than the allowed amounts, then they can be prosecuted despite the affirmative defense.



I AM A
Veteran
We Deserve More!

ELMORE
NAFIA

DON IS
INNOCENT

September 17, 2018

COUNCIL COMMUNICATION

Re: Fluoride Discussion

At the City Council's last meeting in September, a local dentist inquired about having the City explore adding fluoride into our potable water systems. As part of the Good of the Order, the City Manager mentioned that in approximately 2012 a similar request came forward and a packet of materials including information both in support and not in support of fluoride was put together for Council review. Ultimately the City Council did not take any action and the matter did not proceed in any fashion.

For reference, the 2012 packet of information follows, along with the 2018 packet of information that was provided by the local dentist. At this time, there has not been any significant public demand for adding fluoride into our potable water system; however the City Council at the last meeting advised that this topic would be further discussed.

Recommended Action:

Hold a discussion regarding fluoride and determine if there is any further action required.



MEMORANDUM

November 28, 2012

To: Hon. Mayor William S. Barnett & Members of City Council

C: Jeff Dietlin, Utilities Director
Michael Homier, City Attorney

From: Marcus A. Peccia, City Manager 

Re: Fluoride Information Binder

In an effort to provide Council with pertinent information regarding the potential fluoridation of the City's water system, I am providing everyone with a binder that includes copies of correspondence received regarding this issue, as well as a sampling of the pro and con data available online.

The debate from either perspective is quite compelling, and could make it difficult to alter our current practice of not fluoridating, even though there are grant dollars available to aid in the acquisition and installation of equipment for fluoridation.

With respect to timing, it was previously discussed publicly during a Council meeting earlier this fall/late summer that the notice of intent for the grant is due January 31, 2013 with proposals due February 8, 2013. During that same discussion with respect to process, it was discussed that information would be provided to Council for review, and that the time when Council evaluates whether to proceed or not to proceed may or may not necessarily be within this year's grant window. It was also mentioned that the grant does seem to be made available on an annual basis, and also that perhaps Council schedule a public hearing or even have a new referendum question developed to ask the voters to decide. Important to note however, in a conversation with the City Attorney following Council's discussion, I was advised that the City may not be able to have a referendum vote on this issue, and that when the time is appropriate a legal opinion would be drafted that would be shared in a closed session of Council accordingly.

Therefore, at this time I simply request that members of Council review the information provided in the binders, and I will coordinate with the City Attorney a date for reviewing in closed session his opinion as it relates to this issue and a referendum vote, since knowing what is or isn't possible will be key in identifying Council's potential next steps which could include hosting a public hearing, the consideration of a resolution (of support or no support), or even the action of taking no action. I anticipate trying to have a closed session discussion on the Attorney's opinion to be possibly at our second meeting in December at the earliest, or sometime later this winter. Lastly, I did speak with "Neil" from Interlochen Public Radio and advised that there will not be anything coming forward publicly at this time, but that I would call and let him know when it would be on the Council's agenda.

Fluoride Information Index

Anti-Fluoride:

1. Christine Potter Letter to Council Members, Mayor Barnett and Mr. Peccia
2. 2000 Nobel Prize Winner in Medicine Opposes Fluoridation
3. Nofluoride.com – List of 144 Cities rejecting fluoridation since 1990
4. Nofluoride.com – Statements from European and Asian Governments on Fluoridation
5. New York State Coalition Opposed to Fluoridation
6. York Voters give fluoridated drinking water the brush off
7. 10 Reasons Why You, too Should Oppose Fluoridation
8. A Most Compelling and Urgent Citizen Message: Subject- - Water Fluoridation
9. Protect our water, our health, our rights – Mt. Pleasant Citizens for Safe Drinking Water
10. Who will be the keepers of the well?
11. Chicago Tribune articles on fluoride
12. Cathy Justus, National Spokesperson Against Fluoride Poisoning in Animals
13. 50 Reasons to Oppose Fluoridation
14. WHO: Tooth Decay Rates in Fluoridated vs. Non-Fluoridated Countries
15. Mayo Clinic: Fluoridation & Bone Disease in Renal patients
16. Fluoride Action Network: Water Fluoridation
17. The Absurdities of Water Fluoridation
18. Why EPA's Headquarters Professionals' Union Opposes Fluoridation
19. U.S. Says too Much Fluoride in Water

Pro-Fluoride:

1. Michigan Department of Community Health-Oral Health Program – RFP Fluoridation Equipment 2013
2. Michigan Department of Community Health-Oral Health Program – Community Water Fluoridation Program Report 2009-2010
3. American Dental Association – Fluoridation Facts
4. American Dental Association – Fluoridated water reaching more U.S. residents
5. American Dental Association – ADA Supports Fluoridation
6. American Dental Association – Statement of the Effectiveness of Community Water Fluoridation
7. American Dental Association – Statement on Water Fluoridation Efficacy & Safety
8. American Dental Association – Statement Commemorating the 60th Anniversary of Community Water Fluoridation
9. Status of Fluoridation in the United States
10. Center for Disease Control and Prevention – Community Water Fluoridation: Questions and Answers
11. Center for Disease Control and Prevention – Fluoridation Basics
12. Center for Disease Control and Prevention – Preventing Dental Caries with Community Programs
13. Fluorideinfo.org – Top Ten Facts
14. Fluorideinfo.org – Fluoride Information: Is Fluoride Good to Have in your Drinking Water
15. National Cancer Institute – Fact Sheet
16. Water Fluoridation in Michigan

General Statistics

1. Fluoridated Water Systems – Michigan (Group by County and Water System Name)
2. Center for Disease Control and Prevention – 2010 Water Fluoridation Statistics

September 17, 2012

Cadillac City Council Members, Honorable Mayor, Mr. Peccia,

On the topic of the potential application for a grant to add fluoridation to the City of Cadillac water system, I would like to present the following information, study results, and observations.

The Food and Drug Administration (FDA) states that fluoride is not a mineral nutrient; it is a prescription drug. Every prescription drug has side-effects, including fluoride. Fluoride has never received FDA approval and does not meet the legal requirements of safety and effectiveness necessary for such approval. Once this drug is put in the water there is no control over individual dosage.

Once added to a community water supply, water fluoridation becomes a Constitutional and Civil liberty issue and is regarded as the forced mass medication of the population when alternative means of reducing cavities are easily available, such as tooth brushing. Even so-called mandatory school immunizations provide exemptions for parents who wish not to participate.

The proper use of any drug requires an understanding of how much is too much. Since fluoride is already in many foods and beverages, an estimated total intake of existing fluoride amounts is imperative. Research shows fluoridation is unnecessary since we're already receiving 300% or more of the American Dental Association's recommended daily amount through our daily food and beverage.

Some segments of the population, and I include segments of the local population of Cadillac Michigan, are unusually susceptible to the toxic effects of fluoride. They include "postmenopausal women and elderly men, pregnant woman and their fetuses, people with deficiencies of calcium, magnesium and/or vitamin C, and people with cardiovascular and kidney problems." (United States Public Health Service Report (ATSDR TP-91/17, pg. 112, Sec.2.7, April 1993)

"The plain fact that fluorine is an insidious poison harmful, toxic and cumulative in its effects, even when ingested in minimal amounts, will remain unchanged no matter how many times it will be repeated in print that fluoridation of the water supply is 'safe.'" (Dr. Ludwig Grosse, Chief of Cancer Research, U.S. Veterans Administration).

"Fluoride has been shown to adversely affect the central nervous system, causing behavioral changes, increased hip fractures and reproduction problems." Natick Report Research Team

[Research Microbiologist, U.S. Army, Dr. B. J. Gallo, Environmental Chemist, J. Kupperschmidt Apollo Program Project Scientist, Dr. N.R. Mancuso, U.S. Army Natick Research Labs, A. Murray, Molecular Biologist, Dr. Strauss]

"I am appalled at the prospect of using water as a vehicle for drugs. Fluoride is a corrosive poison that will produce serious effects on a long range basis. Any attempt to use water this way is deplorable." (Dr. Charles Gordon Heyd, Past President of the American Medical Association)

"The E.P.A. should act immediately to protect the public, not just on the cancer data, but on the evidence of bone fractures, arthritis, mutagenicity and other effects." (Dr. William Marcus, Senior Toxicologist at E.P.A.)

The American Dental Association continues to state fluoride is responsible for reducing cavities. The National Institute of Dental Health produced the largest and most comprehensive study on over 39,000 school children aged 5 -17 years. The study showed no significant differences in cavities in fluoridated vs. non-fluoridated or partially fluoridated communities. This study was never refuted by the ADA.

There have been many government sponsored reports - U.S., England and Canada - which have reviewed the various aspects of fluoridation and all have questioned the practice. Even UNICEF, the health arm of the United Nations, warns of fluoride's negative effects. The evidence against the safety of this public health policy keeps mounting; it is too compelling to ignore.

A Toxicological Profile done by the Department of Health and Human Resources, revealed that certain people may have an allergic reaction to fluoride.

Many health related agencies and organizations no longer support the addition of fluoride to community water systems. Some of the more vocal agencies are:

- American Cancer Society
- American Heart Association
- National Kidney Foundation
- American Academy of Allergy and Immunology
- American Diabetes Association
- Society of Toxicology
- Chronic Fatigue Syndrome Activation Network
- American Psychiatric Association
- American Chiropractic Association
- American Civil Liberties Union
- National Institute of Law Municipal Officers

I could present studies and results to you all day long, as I am sure that fluoride proponents could do too. The point is, I am a long time taxpayer in this community and I am not willing to have my tax dollars spent to ruin our water system with an unapproved drug that could potentially worsen my own current medical condition and possibly cause other community members to develop new and potentially serious

medical problems. I am also not willing to pay for a service (water with fluoride) that is detrimental to anyone's health.

Thank you for your time.

Christine Potter
615 Stimson Street
Cadillac, MI 49601
231-775-7923
christinepotter1210@gmail.com

10 REASONS WHY YOU, TOO, SHOULD OPPOSE FLUORIDATION

- 1 A major study found that there is a higher incidence of cancer in cities with fluoridation
- 2 1 to 5% of the population drinking fluoridated water will experience allergic or an intolerant reaction
- 3 Fluoride is a *POISON* registered with the National Poison Centers and is between lead and arsenic for toxicity
- 4 Fluoride accumulates in the body like lead and arsenic and should be avoided by any one who has kidney, thyroid, heart or bone disorders
- 5 The fluoride that is added is called *hydrofluosilicic acid* and is made from the cleaning of fertilizer plant chimneys plus it contains lead and other toxic chemicals as well
- 6 Fluoride accidents have caused injuries and fatalities. There are 14 reported known accidents involving heavily toxic fluoride release into water supplies here in the U.S.
- 7 Fluoridation has never been proven safe. Although endorsed by the major medical organizations, none of them can produce from history or current research, a study made under scientific conditions which supports their endorsement. Every time a medical or dental witness was put under oath and subject to the rules of the court none have ever been able to testify that fluoridation is safe. No court case has ever been lost by any person who has suffered fluoride effects
- 8 Total fluoride intake increased dramatically over the years. Almost all oral dental pastes and treatments are fluoridated. Commercial food companies are using municipally fluoridated water for food preparation, as are beverage companies. The nation's largest baby food manufacturer was required to alter its water supply when it was revealed that their cooked babyfood products had retained excessive fluoride beyond anyone's reasonable levels.
- 9 56% of medically advanced Western Europe has banned, rejected or discontinued fluoridation, including Canadian provinces, because the risks outweigh any benefit
- 10 Fluoride links up with metals like calcium and magnesium so that they are made unusable for the body. Unlike chlorine, which evaporates, fluoride concentrates on boiling

For More Information or to offer your help, please contact Gladys Mitchell (517/ 773-3236) or Margaret Heintz (517/ 772-3619), of the Central Michigan Citizens Opposed to Water Fluoridation.

2000 Nobel Prize Winner in Medicine Opposes Fluoridation



"I would advise against fluoridation," says Dr. Arvid Carlsson of Sweden, co-winner of the Nobel Prize for medicine.

Dr. Carlsson was awarded the Nobel Prize in 2000 for his discovery of how brain cells transmit signals to each other, laying the groundwork for improved treatments for neurological and psychiatric disorders.

He says fluoridation will harm some people and is not considered a proper health-care measure in his country.

"Fluoridation of water supplies would also treat people who may not benefit from the treatment.

Side-effects cannot be excluded and, thus, some people might only have negative effects without any benefit."

"In Sweden, water fluoridation, to my knowledge, is no longer advocated by anybody. In Sweden, the emphasis nowadays is to keep the environment as clean as possible with regard to pharmacologically active and, thus, potentially toxic substances."

Awards:

- 1947 Magnus Blix' Prize, University of Lund, Sweden
- 1970 First Annual James Parkinson Lecture and Award, New York
- 1970 Pehr Dubb's Gold Medal, The Medical Society of Gothenburg
- 1974 Anders Jahre's Medical Prize, University of Oslo, Norway
- 1975 Stanley R Dean Lecture and Award, Phoenix, Arizona
- 1975 Anna-Monika Stiftung, 1st Prize, for research on antidepressants and neuroleptics
- 1979 Wolf Prize in Medicine, Jerusalem, (together with R.W. Sperry and O Hornykiewicz)
- 1981 Björkén'ska Priset, University of Uppsala, Sweden
- 1982 Gairdner Foundation Award, Toronto, Canada
- 1985 Hilda and Alfred Eriksson's Prize, The Royal Swedish Academy of Science
- 1989 Bristol-Myers Award for Distinguished Achievement in Neuroscience Research, New York
- 1990 The Paul Hoch Prize, American Psychopathological Assoc., New York
- 1990 The Fred Springer Award, American Parkinson Disease Assoc., Miami, FL
- 1991 William K Warren Schizophrenia Research Award, Tucson, AZ
- 1992 The Open Mind Award in Psychiatry, Janssen Research Foundation, Paris
- 1992 The Julius Axelrod Medal, The Catecholamine Club, Anaheim, CA
- 1994 The Japan Prize, in Psychology and Psychiatry,
- 1995 The Lieber Prize for research in schizophrenia, USA
- 1995 The Research Prize of the Lundbeck Foundation, Roskilde, Denmark
- 1995 The Robert J and Claire Pasarow Foundation Award for Neuropsychiatric Research
- 1996 Gold Medal and Honorary Diploma, The Swedish Parkinson Association
- 1997 Kraepelin-Medaille in Gold, Max-Planck Institut für Psychiatrie, München
- 1998 Gold Medal, Society of Biological Psychiatry, Toronto, Canada
- 1999 Gold Medal, Distinguished Lecture and Award, University of Bari, Italy
- 1999 Antonio Feltrinelli International Award, Accademia dei Lincei, Rome

The following is a list of 144 cities rejecting fluoridation since 1990. Fourteen cities stopped their fluoridation with a few changing their policy after 40 years.

City	Date of Rejection	Status
<u>West Elgin, UK</u>	6/9/03	city government halts ...
<u>Dutton-Dunwich, UK</u>	6/9/03	city government halts ...
<u>York, Nebraska</u>	5/7/03	Rejected by Voters ...
Sequim, Washington	5/7/03	Rejected by City Council ...
<u>Canton, New York</u>	2/18/03	Rejected by City Council ...
<u>Shaler, Pennsylvania</u>	2/11/03	Rejected by City Council ...
Holladay, Utah	11/20/02	Council Passed Safe Water Ordinance
<u>Redding, California</u>	11/5/02	Voters Passed Safe Water Ordinance
<u>Watsonville, California</u>	11/5/02	Voters Passed Safe Water Ordinance
<u>Texarkana, Arkansas</u>	11/5/02	Rejected by Voters ...
Ashdown, Arkansas	11/5/02	Rejected by Voters ...
<u>Washoe County (Reno, Lake Tahoe), Nevada</u>	11/5/02	Rejected by Voters ...
Methuen, Mass	11/5/02	Rejected by Voters ...
Kailspell, Montana	11/5/02	Rejected by Voters ...
<u>West Jordan, Utah</u>	9/3/02	Council Passed Safe Water Ordinance
<u>Billings, Montana</u>	8/6/02	Rejected by Voters ...
<u>Oneida, New York</u>	5/02	Rejected by City Council ...
<u>Franklin, North Carolina</u>		Rejected by Voters ...
<u>Plainville, Mass</u>	4/1/02	Rejected by City Council ...
<u>Nowata, Oklahoma</u>	3/5/02	Rejected by City Council ...
<u>Ashburton, New Zealand</u>	3/2/02	Rejected by City Council ...
<u>Monroe, Louisiana</u>	2/25/02	Rejected by City Council ...
<u>Colorado Springs, Colorado</u>	1/16/02	Rejected by City Council ...
<u>Kennewick, Washington</u>	1/15/02	Rejected by Voters ...
<u>Maui County, Hawaii</u>	1/10/02	Rejected by City Council ...
<u>Bennington, Vermont</u>	1/8/02	Rejected by Voters ...
Springfield, Mass	1/3/02	Rejected by Voters ...
<u>Cobalt, Ontario</u>	12/11/01	Rejected by Voters ...
<u>Erie, Colorado</u>	11/26/01	Vote delayed by 8 months ...
<u>San Antonio, Texas</u>	11/14/01	3rd rejection by Voters ...
<u>Modesto, California</u>	11/6/01	3rd rejection by Voters ...
<u>Flagstaff, Arizona</u>	11/6/01	4th rejection by Voters ...
<u>Worcester, Mass</u>	11/6/01	Rejected by Voters ...
Sutherlin, Oregon	11/6/01	Rejected by Voters ...
<u>Kamloops, B.C.</u>	10/13/01	Stopped Fluoridating after 40 years
<u>Goldendale, Washington</u>	9/6/01	Rejected by Voters ...
<u>White Salmon, Washington</u>	8/15/01	Rejected by Voters ...
<u>Woods Cross, Utah</u>	8/7/01	Rejected by Voters ...

Bishopville, South Carolina	6/30/01	Rejected by Voters . . .
Eureka Springs, Arkansas	6/1/01	Rejected by Voters . . .
Harper, Kansas	5/30/01	Rejected by Voters . . .
Brester, Massachusetts	5/15/01	Rejected by Voters . . .
Kildare, Ireland	5/3/01	Rejected by City Council . . .
McPherson, Kansas	4/3/01	Rejected by Voters . . .
Norridgewock, Maine	3/5/01	Rejected by Voters . . .
Los Altos Hills, California	2/1/2001	Rejected by City Council . . .
Blue River Wisconsin	2/01	Rejected by Voters . . .
Willamina, Oregon	1/01	Rejected by Voters . . .
Wooster, Ohio	11/7/00	Rejected by Voters . . .
Ozark, Missouri	11/7/00	Rejected by Voters . . .
Ithaca, New York	11/7/00	Rejected by Voters . . .
Pequannock, New Jersey	11/7/00	Rejected by Voters . . .
Brattleboro, Vermont	11/7/00	Rejected by Voters . . .
Wenatchee, Washington	11/7/00	Rejected by Voters . . .
Shawano, Wisconsin	11/7/00	Rejected by Voters . . .
Spokane, Washington	11/7/00	Rejected by Voters . . .
Logan City, Utah	11/7/00	Rejected by Voters . . .
Smithfield City, Utah	11/7/00	Rejected by Voters . . .
Providence City, Utah	11/7/00	Rejected by Voters . . .
Hyrum City, Utah	11/7/00	Rejected by Voters . . .
River Heights, Utah	11/7/00	Rejected by Voters . . .
Nibly City, Utah	11/7/00	Rejected by Voters . . .
Squamish, British Columbia	10/16/00	Rejected by Voters . . .
Woodside, Cal	9/14/00	Rejected by Voters . . .
Ste. Genevieve, Missouri	8/8/00	Rejected by City Council . . .
Frostburg, Maryland	3/22/00	Rejected by Voters . . .
Wilmington, Mass.	2/15/00	Rejected by Voters . . .
Winfield, Kansas	3/6/00	Rejected by Voters . . .
Santa Barbara, California	11/23/99	Rejected by Voters . . .
Tooele, Utah	11/2/99	Rejected by Voters . . .
Johnstown, New York	11/19/99	Rejected by Voters . . .
Wichita, Kansas	10/26/99	Rejected by Voters . . .
Boca Raton, Florida	10/25/99	Rejected by Voters . . .
Helix Water District, California	4/7/99	Rejected by Voters . . .
Lakeside Water District, Cal.	4/6/99	Rejected by Voters . . .
Hutchinson, Kansas	3/30/99	Rejected by Voters . . .
Riverview Water District, Cal.	3/24/99	Rejected by Voters . . .
Wenatchee, Washington	3/8/99	Rejected by Voters . . .
Santa Cruz, California	3/2/99	Rejected by Voters . . .
El Cajon, Cal.	4/27/99	Rejected by Voters . . .
Escondido, California	4/7/99	Rejected by Voters . . .
La Mesa, California	3/9/99	Rejected by Voters . . .

<u>Bremerton, Washington</u>	2/2/99	Rejected by Voters . . .
Olympia, Washington	12/15/98	Rejected by Voters . . .
Seward, Nebraska	11/3/98	Rejected by Voters . . .
Whitehorse, Yukon Terr Can.	7/28/98	Stopped Fluoridating after 30 years
Ste. Genevieve, Missouri	7/1/98	Stopped Fluoridating after 13 years
Salt Lake City, Utah	6/10/98	Rejected by Voters . . .
Grand Island, Nebraska	5/13/98	Stopped Fluoridating after 13 years
Norfolk, Nebraska	5/13/98	Rejected by Voters . . .
Scottsbluff, Nebraska	5/13/98	Rejected by Voters . . .
Aurora, Nebraska	5/13/98	Rejected by Voters . . .
Stromsburg, Nebraska	5/13/98	Rejected by Voters . . .
North Platte, Nebraska	5/13/98	Rejected by Voters . . .
Washington, Missouri	4/7/98	Rejected by Voters . . .
Santa Cruz, California	3/12/98	Rejected by Voters . . .
Kitimat, B. C., Canada	3/98	Stopped Fluoridating.
Hot Springs, Arkansas	2/98	Rejected by Voters . . .
Ridgefield, Oregon	12/22/97	Rejected by Voters . . .
Methuen, Massachusetts	11/04/97	Rejected by Voters . . .
Brisbane, Australia	10/01/97	Rejected by Voters . . .
Spokane, Washington	8/25/97	Rejected by Voters . . .
Largo, Florida	7/15/97	Rejected by Voters . . .
Clearwater, Florida	7/15/97	Rejected by Voters . . .
North Redington Beach, Fla.	7/15/97	Rejected by Voters . . .
Amsterdam, New York	5/21/97	Rejected by Voters . . .
Suisun City, California	5/1/97	Rejected by Voters . . .
Yardly, Pennsylvania	4/16/97	Rejected by Voters . . .
Erie, Pennsylvania	3/21/97	Rejected by Voters . . .
Orfordville, Wisconsin	12/9/96	Rejected by Voters . . .
Western Nassau County, N.Y.	11/21/96	Stopped Fluoridating after 23 years
Kelowna, B. C., Canada	11/16/96	Stopped Fluoridating after 42 years
Gothensburg, Nebraska	11/96	Rejected by Voters . . .
Worcester, Massachusetts	11/6/96	Rejected by Voters . . .
Bloomer, Wisconsin	11/6/96	Rejected by Voters . . .
Kodiak, Alaska	7/12/96	Rejected by Voters . . .
Carle Place, New York	2/1/96	Stopped Fluoridating . .
Winter Springs, Florida	1/10/96	Rejected by Voters . . .
Pasco, Florida	12/14/95	Rejected by Voters . . .
York, Pennsylvania	7/29/95	Rejected by Voters . . .
Bradenton, Florida	4/27/95	Rejected by Voters . . .
Santa Clara, California	4/11/95	Rejected by Voters . . .
Thurmont, Maryland	2/3/94	Rejected by Voters . . .
Albany, New York	12/8/94	Rejected by Voters . . .
Middletown, Maryland	11/93	Stopped Fluoridating . .

Sarnia, Ontario, Canada	1/30/93	Rejected by Voters . . .
Barnstable, (Cape Cod) Mass.	11/4/93	Rejected by Voters . . .
Wagoner, Oklahoma	6/17/93	Rejected by Voters . . .
Redwood Valley, California	2/6/93	Rejected by Voters . . .
Los Altos Hills, (Purissima) Cal.	1993	Rejected by Voters . . .
Campbell River, BC, Canada	4/93	Stopped Fluoridating after 33 years
Port Hardy, B. C., Canada	11/93	Stopped Fluoridating after 19 years
Squamish, B. C., Canada	11/93	Stopped Fluoridating after 20 years
Fort Smith, Arkansas	11/3/92	Rejected by Voters . . .
Milltown, Wisconsin	10/17/92	Rejected by Voters . . .
Bellingham, Washington	5/19/92	Rejected by Voters . . .
Washoe County, Nevada	7/15/92	Rejected by Voters . . .
Comox Courtenay, B. C., Can.	2/92	Rejected by Voters . . .
Palm Beach County, Florida	10/22/91	Rejected by Voters . . .
Ketchikan, Alaska	10/2/91	Rejected by Voters . . .
Suffolk County, New York	8/15/91	Rejected by Voters . . .
Davis, California	12/14/90	5th rejection by Voters . . .
Cumberland, Maryland	5/17/90	Stopped Fluoridating after 2 years
Morgan Hill, California	3/7/90	Stopped Fluoridating after 40 years

NoFluoride.com

Citizens for Safe Drinking Water



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Europe & Asia Reject Fluoridation



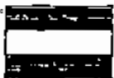
France:

"Fluoride chemicals are not included in the list [of 'chemicals for drinking water treatment']. This is due to ethical as well as medical considerations." (*Louis Sanchez, Directeur de la Protection de l'Environnement, August 25, 2000*). [\[see their letter\]](#)



Germany:

"Generally, in Germany fluoridation of drinking water is forbidden. The relevant German law allows exceptions to the fluoridation ban on application. The argumentation of the Federal Ministry of Health against a general permission of fluoridation of drinking water is the problematic nature of compulsion medication." (*Gerda Hankel-Khan, Embassy of Federal Republic of Germany, September 16, 1999*). [\[see their letter\]](#)



Luxembourg:

"Fluoride has never been added to the public water supplies in Luxembourg. In our views, the drinking water isn't the suitable way for medicinal treatment and that people needing an addition of fluoride can decide by their own to use the most appropriate way, like the intake of fluoride tablets, to cover their [daily] needs." (*Jean-Marie RIES, Head, Water Department, Administration De L'Environnement, May 3, 2000*). [\[see their](#)

letter]



Finland:

"We do not favor or recommend fluoridation of drinking water. There are better ways of providing the fluoride our teeth need." (*Paavo Poteri, Acting Managing Director, Helsinki Water, Finland, February 7, 2000*).

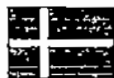
"Artificial fluoridation of drinking water supplies has been practiced in Finland only in one town, Kuopio, situated in eastern Finland and with a population of about 80,000 people (1.6% of the Finnish population). Fluoridation started in 1959 and finished in 1992 as a result of the resistance of local population. The most usual grounds for the resistance presented in this context were an individual's right to drinking water without additional chemicals used for the medication of limited population groups. A concept of "force-feeding" was also mentioned.

Drinking water fluoridation is not prohibited in Finland but no municipalities have turned out to be willing to practice it. Water suppliers, naturally, have always been against dosing of fluoride chemicals into water." (*Leena Hiisvirta, M.Sc., Chief Engineer, Ministry of Social Affairs and Health, Finland, January 12, 1996.*) [see their letter]



Belgium:

"This water treatment has never been of use in Belgium and will never be (we hope so) into the future. The main reason for that is the fundamental position of the drinking water sector that it is not its task to deliver medicinal treatment to people. This is the sole responsibility of health services." (*Chr. Legros, Directeur, Belgaqua, Brussels, Belgium, February 28, 2000*). [see their letter]



Denmark:

"We are pleased to inform you that according to the Danish Ministry of Environment and Energy, toxic fluorides have never been added to the public water supplies. Consequently, no Danish city has ever been fluoridated." (*Klaus Werner, Royal Danish Embassy, Washington DC, December 22, 1999*). [see their letter]



Norway:

"In Norway we had a rather intense discussion on this subject some 20 years

ago, and the conclusion was that drinking water should not be fluoridated." (*Truls Krogh & Toril Hofshagen, Folkehelse Statens institutt for folkehelse (National Institute of Public Health) Oslo, Norway, March 1, 2000*). [see their letter]



Sweden:

"Drinking water fluoridation is not allowed in Sweden...New scientific documentation or changes in dental health situation that could alter the conclusions of the Commission have not been shown." (*Gunnar Guzikowski, Chief Government Inspector, Livsmedels Verket -- National Food Administration Drinking Water Division, Sweden, February 28, 2000*). [see their letter]



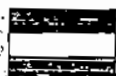
Netherlands:

"From the end of the 1960s until the beginning of the 1970s drinking water in various places in the Netherlands was fluoridated to prevent caries. However, in its judgement of 22 June 1973 in case No. 10683 (Budding and co. versus the City of Amsterdam) the Supreme Court (Hoge Raad) ruled there was no legal basis for fluoridation. After that judgement, amendment to the Water Supply Act was prepared to provide a legal basis for fluoridation. During the process it became clear that there was not enough support from Parlement [sic] for this amendment and the proposal was withdrawn." (*Wilfred Reinhold, Legal Advisor, Directorate Drinking Water, Netherlands, January 15, 2000*). [see their letter]



Northern Ireland:

"The water supply in Northern Ireland has never been artificially fluoridated except in 2 small localities where fluoride was added to the water for about 30 years up to last year. Fluoridation ceased at these locations for operational reasons. At this time, there are no plans to commence fluoridation of water supplies in Northern Ireland." (*C.J. Grimes, Department for Regional Development, Belfast, November 6, 2000*). [see their letter]



Austria:

"Toxic fluorides have never been added to the public water supplies in Austria." (*M. Eisenhut, Head of Water Department, Österreichische Vereinigung für das Gas-und Wasserfach Schuberting 14, A-1015 Wien, Austria, February 17, 2000*). [see their letter]

**Czech Republic:**

"Since 1993, drinking water has not been treated with fluoride in public water supplies throughout the Czech Republic. Although fluoridation of drinking water has not actually been proscribed it is not under consideration because this form of supplementation is considered:

- o uneconomical (only 0.54% of water suitable for drinking is used as such; the remainder is employed for hygiene etc. Furthermore, an increasing amount of consumers (particularly children) are using bottled water for drinking (underground water usually with fluor)
- o unecological (environmental load by a foreign substance)
- o unethical ("forced medication")
- o toxicologically and physiologically debateable (fluoridation represents an untargeted form of supplementation which disregards actual individual intake and requirements and may lead to excessive health-threatening intake in certain population groups; [and] complexation of fluor in water into non biological active forms of fluor." (Dr. B. Havlik, Ministerstvo Zdravotnictví České Republiky, October 14, 1999). [see their letter]

Despite the fact that these countries have decided against fluoridation, they have approximately the same level of dental decay as the United States (which is around 60% fluoridated). The following is data from the World Health Organization

DMFT Status (Decayed, Missing & Filled teeth) for 12 year olds:

	DMFTs	Year	Status
Netherlands	0.9	1992-93	unfluoridated
Sweden	1.0	1997	unfluoridated
UK (England, Scotland, N. Ire)	1.1	1996-97	10% fluoridated
Denmark	1.2	1995	unfluoridated
Finland	1.2	1995	unfluoridated
US	1.4	1991	fluoridated
Belgium	1.6	1998	unfluoridated
Germany	1.7	1997	unfluoridated
Austria	1.7	1997	unfluoridated
France	1.9	1998	unfluoridated
Norway	2.1	1993	unfluoridated

Data from: WHO Oral Health Country/Area Profile Programme
 Department of Noncommunicable Diseases Surveillance/Oral Health WHO
 Collaborating Centre, Malmö University, Sweden
<http://www.whocollab.od.mah.se/euro.html>

New York State Coalition Opposed to Fluoridation

Canton, New York, Stops Fluoridation - Spurred by College Faculty, Staff & Students

February 21, 2003

NEW YORK, Feb. 21 /PRNewswire/ -- Village trustees voted, on February 18, 2003, to halt fluoridation in Canton, New York. One hundred and thirty faculty and staff members of Canton's St. Lawrence University and 300 students petitioned the village trustees to ban fluoride from its water supply, reports the New York State Coalition Opposed to Fluoridation (NYSCOF).

July 2001, fluoridation was discontinued to replace equipment. Residents decided fluoridation should end for good.

The decision caps months of public discussion and research about whether residents' best interests were served with fluoridation, the intentional addition of cavity-preventing fluoride into water supplies.

Trustee Stephen Putnam, who voted against fluoridation, said he spent much of December and January reading articles about fluoride and was concerned that fluoride accumulates in the bones, particularly for menopausal women who drink fluoridated water over many years, reported the Watertown Daily Times.

Paul Connett, PhD, who led the campaign to rid fluoride from Canton's tap water said, "An independent review of the literature finds that fluoridation is:

- * unethical (medication without patient's informed consent)
- * unnecessary (kids get too much fluoride from many sources)
- * ineffective (at best, fluoridation saves less than one tooth surface out of 128 in a child's mouth)
- * unsafe (fluoride accumulation can make bones brittle and joints painful)
- * inequitable (the poor cannot afford to avoid it, if desired)
- * unscientifically defended (proponents cannot defend the practice in open debate)
- * wasteful, literally pouring taxpayer money down the drain."

Dr. Connett, Chemistry Professor, St. Lawrence University is also co-founder, Fluoride Action Network, an International Coalition to End Water Fluoridation.

Biochemist and fluoride expert, Hardy Limeback, PhD, DDS, Head of Preventive Dentistry, University of Toronto, drove four hours by car, at his own expense, to give testimony. Once an avid fluoridation promoter, Limeback turned fluoridation opponent when he discovered the:

- a) incidence of children's dental fluorosis (fluoride discolored teeth) has risen sharply,
- b) benefits of fluoridation are topical, not systemic (swallowed fluoride does not prevent tooth decay),
- c) chemical most used in fluoridation schemes is not pharmaceutical grade, but an industrial

waste-product, hexafluorosilicic acid, which the US Environmental Protection Agency admits has never been safety tested.

"People, who had been previously pro-fluoridation, spoke out against it. At a public hearing, two months before the vote, a young local dentist, when asked about the issue, was lukewarm about fluoridation's benefits. He said words to the effect, 'If you don't continue, I don't think we will have a dental crisis; and, if we continue, I don't think we will see an end to tooth decay,'" says Connett.

"New York City has temporarily halted fluoridation. We hope City residents take the lead from the people of Canton, New York, and demand their water remain fluoride-free," says Paul Beeber, President, (NYSCOF).

York voters give fluoridated drinking water the brush off

YORK -- The York ban stands on fluoridation.

BY Art Hovey
Lincoln Journal Star

May 7, 2003

Voters who wanted to retain a three-decade ban on adding fluoride to York's drinking water prevailed Tuesday 1,018 to 913 in a special election. [Note: York is just outside Lincoln Nebraska]

The lead changed hands several times at the York County Courthouse before the final outcome became known about 9:30 p.m.

The unofficial total was also a victory for Wesley Trollope and Citizens for Safe Water and a defeat for the York Fluoride Committee.

Trollope reacted to victory by tapping the Bible he carried under his arm and reciting the Lord's Prayer.

"What's so hard for anyone to understand that you just don't put poison in another man's water?" he said.

Margaret Brink, a member of the York City Council and president of the York County Board of Health, sat tensely near the vote-tabulating room at the courthouse and then slumped in her chair.

Why the obvious suspicion about fluoride, Brink was asked?

"I think that's in every community," she said. "I suppose as a society we're not very trusting of one another. And although our water is not pure, there's something about wanting pure water."

An 8-0 vote by the York City Council last summer put a population of about 8,000 on a course toward fluoridation.

The council's action had strong support from dentists and other health professionals promoting fluoride's inhibiting effects on tooth decay.

But the vote was preceded by strong objections from what appeared to be a small group of citizens. They raised concerns about brittle bones, diminished brain function and heavy-handed government. They also began a petition drive that eventually produced more than 1,500 valid signatures.

That was about 300 more than necessary to get the measure on the ballot.

Potentially confusing ballot language called on fluoride supporters to vote no to turn back the petition challenge and uphold council action. Those against fluoridation had to vote yes to uphold the ban and contradict the council.

More than 70 percent of the state's population, including Omaha and Lincoln, drink water treated with fluoride.

The Tuesday election was preceded by months of give and take in letters to the editor of the local newspaper. Sometimes the tone turned bitter.

"I'm not a Communist. I'm not a Nazi. I'm not anti-American and I'm not receiving any money from the aluminum companies," Brink said with a weary smile.

She suggested that part of the momentum behind the opposition is part of a local pattern of challenging city government decisions. York had two special elections in 2001 on swimming pool and sidewalks issues.

"Some of this vote is anti-city government and not necessarily anti-fluoride."

Besides casting his grateful eyes toward Heaven, Trollope cast them toward several supporters who helped him with the petition drive and, in at least one case, clasped hands and whispered prayers as they awaited the final result with him.

He called them "these wonderful ladies who are descended from the pioneer women of the early days."

York dentist Mark Brouillette, one of the leaders of the York Fluoride Committee, called the outcome "sad. The thing that bothers me the most," he said, "is that there are so many kids here who will have a hardship with their teeth, just because of some ignorance."

10 REASONS WHY YOU, TOO, SHOULD OPPOSE FLUORIDATION

- 1 A major study found that there is a higher incidence of cancer in cities with fluoridation
- 2 1 to 5% of the population drinking fluoridated water will experience allergic or an intolerant reaction
- 3 Fluoride is a *POISON* registered with the National Poison Centers and is between lead and arsenic for toxicity
- 4 Fluoride accumulates in the body like lead and arsenic and should be avoided by any one who has kidney, thyroid, heart or bone disorders
- 5 The fluoride that is added is called *hydrofluosilicic acid* and is made from the cleaning of fertilizer plant chimneys plus it contains lead and other toxic chemicals as well
- 6 Fluoride accidents have caused injuries and fatalities. There are 14 reported known accidents involving heavily toxic fluoride release into water supplies here in the U.S.
- 7 Fluoridation has never been proven safe. Although endorsed by the major medical organizations, none of them can produce from history or current research, a study made under scientific conditions which supports their endorsement. Every time a medical or dental witness was put under oath and subject to the rules of the court none have ever been able to testify that fluoridation is safe. No court case has ever been lost by any person who has suffered fluoride effects
- 8 Total fluoride intake increased dramatically over the years. Almost all oral dental pastes and treatments are fluoridated. Commercial food companies are using municipally fluoridated water for food preparation, as are beverage companies. The nation's largest baby food manufacturer was required to alter its water supply when it was revealed that their cooked babyfood products had retained excessive fluoride beyond anyone's reasonable levels.
- 9 98% of medically advanced Western Europe has banned, rejected or discontinued fluoridation, including Canadian provinces, because the risks outweigh any benefit
- 10 Fluoride links up with metals like calcium and magnesium so that they are made unusable for the body. Unlike chlorine, which evaporates, fluoride concentrates on boiling

For More Information or to offer your help, please contact Gladys Mitchell (517/ 773-3236) or Margaret Heintz (517/ 772-3519), of the Central Michigan Citizens Opposed to Water Fluoridation.

4. Skin contamination—Wash skin for at least 15 minutes.
- B. Antidote: Milk may be given by mouth, or water can be used externally.
- C. General Measures: Treat as described on p 201.
- D. Special Problems:
 1. Treat pulmonary edema (see p 65).
 2. Treat esophageal stricture (see p 201).

Prognosis

Patients who survive 48 hours are likely to recover. Eye contact is frequently followed by permanent blindness.

FLUORINE, HYDROGEN FLUORIDE, & DERIVATIVES

Fluorine, hydrogen fluoride, and many derivatives of fluorine are gases at ordinary temperatures. Sulfur pentafluoride is a liquid.

Fluorine is used in organic synthesis. Hydrogen fluoride (hydrofluoric acid) is useful in the petroleum and semiconductor industries and in etching glass. Cryolite (sodium aluminum fluoride) is used in aluminum reduction and many other industrial processes. Fluoride salts are used in the prevention of dental caries and in rodenticides. A 90-g tube of fluoride toothpaste contains 67 mg of fluoride. Methyl sulfonyl fluoride is used as a fumigant.

The exposure limits for fluorine and derivatives are as follows: fluorine, 1 ppm; hydrogen fluoride, 3 ppm; fluoride salts, 2.5 mg/m³; boron trifluoride, 1 ppm; bromine pentafluoride, 0.1 ppm; carbonyl fluoride, 2 ppm; chlorine trifluoride, 0.1 ppm; nitrogen trifluoride, 10 ppm; oxygen difluoride, 0.05 ppm; perchloryl fluoride, 3 ppm; selenium hexafluoride, 0.05 ppm; sulfur hexafluoride, 1000 ppm; sulfur pentafluoride, 0.01 ppm; sulfur tetrafluoride, 0.1 ppm; sulfuryl fluoride, 5 ppm; tellurium hexafluoride, 0.02 ppm. The fatal dose of sodium fluoride is 5–10 mg of fluorine per kilogram, and toxic effects occur below 1 mg of fluorine per kilogram. The fatal plasma level of fluorine is 3 mg/L. Patients with osteoporosis tolerate up to 60 mg of sodium fluoride per day, but osteosclerosis may occur at a urinary excretion level of 10 mg of fluoride per day in workers exposed to fluoride. The fatal dose of fluorosilicates is about the same as for fluorides, but that of cryolite is much higher (above 10 g). The LD50 for methyl sulfonyl fluoride in experimental animals is 3.5 mg/kg.

Fluorine and fluorides act as direct cellular poisons by interfering with calcium metabolism and enzyme mechanisms. Fluorides form an insoluble precipitate with calcium and lower the plasma calcium level.

Fluorine, hydrogen fluoride (hydrofluoric acid), and most fluorine derivatives are corrosive to tissues.

Skin or mucous membrane contact with hydrogen fluoride produces deeply penetrating, necrotic ulcerations.

Neutral fluorides in 1–2% concentrations will cause inflammation and necrosis of mucous membranes. After death, rigor mortis sets in rapidly. Postmortem findings are cerebral hyperemia and edema, pulmonary edema, and degenerative changes in the liver and kidneys.

In fatalities caused by inhalation of hydrogen fluoride or fluorine, pulmonary edema and bronchial pneumonia are the most prominent findings.

In deaths following prolonged absorption of fluoride, the bone structure shows thickening with calcification in the ligamentous attachments. Bone marrow space is greatly reduced.

Clinical Findings

The principal manifestation of fluorine and fluoride poisoning is corrosion.

A. Acute Poisoning:

1. Inhalation—Inhalation of hydrogen fluoride, fluorine, and most fluorine derivatives causes coughing, choking, and chills lasting 1–2 hours after exposure. After an asymptomatic period of 1–2 days, fever, cough, tightness in the chest, rales, and cyanosis indicate pulmonary edema. These symptoms progress for 1–2 days and then regress slowly over a period of 10–30 days. Sulfuryl fluoride causes narcosis, convulsions, and pulmonary irritation. Nitrogen trifluoride causes methemoglobin formation. Bromine pentafluoride causes nephrosis and hepatitis. Sulfur hexafluoride (sulfur fluoride) is nearly nontoxic.

2. Ingestion—Ingestion of neutral fluorides such as sodium fluoride or sodium silicofluoride causes salivation, nausea and vomiting, diarrhea, and abdominal pain. Later, weakness, tremors, shallow respiration, carpopedal spasm, and convulsions occur. Death is by respiratory paralysis. If death does not occur immediately, jaundice and oliguria may appear. Experience with oral fluoride supplements used to prevent tooth decay has been reassuring; no adverse effects occur unless enormous amounts are ingested.

3. Contact—Skin or mucous membrane contact with hydrogen fluoride solution results in damage depending on the concentration. Concentrations above 60% result immediately in severe, extremely painful burns. Such burns are deep and heal slowly. Concentrations less than 50% may cause slight immediate irritation of the skin or none at all. The acid penetrates readily, however, and a deep-seated ulceration results if contact continues for more than a few minutes. A fatality has occurred from systemic poisoning following exposure of 2.5% of the body surface to hydrofluoric acid.

Handbook of Poisonings Book

A MOST COMPELLING AND URGENT CITIZEN MESSAGE:

SUBJECT--WATER FLUORIDATION

Responsibility of Public Officials

Federal and State law place the responsibility for decisions about intentional fluoridation of community water supplies squarely on the shoulders of local jurisdictions. In light of current research findings, such as those cited below, some experts are predicting that **continued fluoridation of public water supplies will be grounds for criminal prosecution** of local governments and elected officials. Even when fluoridation was widely believed to be safe, it was a blatant violation of civil liberties and medical ethics.

Bone Fractures

Four major studies reported since 1990 in the Journal of the American Medical Association and the American Journal of Epidemiology show significantly more hip fractures among senior citizens living in areas with elevated fluoride levels in drinking water. The most carefully controlled of these studies found **41% more hip fractures among men and 27% more hip fractures among women** in Brigham City, Utah, where water is intentionally fluoridated to 1.0 parts per million. ("Hip Fractures and Fluoridation in Utah's Elderly Population" by Christa Danielson, MD and others. *Journal of the American Medical Association*, Aug. 12, 1992, pp. 746-48. "Water Fluoridation and Hip Fracture" by C. Cooper and others. *Journal of the American Medical Association*, July 24, 1991, p. 513. "Regional Variation in the Incidence of Hip Fracture" by S.J. Jacobsen and others. *Journal of the American Medical Association*, July 25, 1990 pp. 500-02. "A Prospective Study of Bone Mineral Content and Fracture in Communities with Differential Fluoride Exposure" MaryFran Sowers and others. *American Journal of Epidemiology*, April 1, 1992, pp. 649-60.)

Cancer

In 1990 the U.S. Public Health Service reported a study of laboratory animals in which 4 of the 80 male rats that received a fluoride dose equivalent to 20 years of human exposure to intentionally fluoridated water, developed bone cancer. ("Weak Link on Fluoride and Cancer Is Backed," *The New York Times*, April 27, 1990.) In 1992 the New Jersey State Department of Health released the results of a study which found **six times more bone cancer among males under the age of 20** living in communities with fluoridated water. ("A Brief Report on the Association of Drinking Water Fluoridation and the Incidence of Osteosarcoma Among Young Males" by Perry D. Cohn, Ph.D., MPH. Environmental Health Service, New Jersey Dept. of Health, Nov. 8, 1992.)

Dental Fluorosis

U.S. Public Health Service statistics indicate that **30% of children are afflicted with fluorosis** in areas where fluoride is added to water supplies. (*Review of Fluoride Benefits and Risks*, full report. U.S. Public Health Service, February 1991, p. 53.) Fluorosis is permanent malformation of tooth enamel and is associated with alterations in bone growth. (Letter by John Colquhoun, Ph.D., reporting on a study of "Bone Structure Assessment on Radiograms of Distal Radial Metaphysis in Children with Dental Fluorosis" by Chlebena-Sokol and others. *New Zealand Medical Journal*, Oct. 28, 1992. Study will be published in the international journal *Fluoride*.)

Damage to Immune System

Fluoride reacts with hydrogen bonds in biological molecules to form hydrogen-fluoride bonds. This distorts the hydrogen bonding responsible for normal configuration of proteins and enzyme activity. It is therefore not surprising that **fluoride has adverse physiological effects on many aspects of body functioning**. Research now reveals harmful effects of fluoride at levels once believed to be safe.

The immune system is the first line of defense against bacteria, viruses and other parasites, as well as from the spontaneous generation of potentially cancerous cells. Any agent which reduces

-MORE-

the ability of the immune system to function efficiently will tend to reduce the resistance of the population to infection and will increase susceptibility to cancer and immune depressed states such as post-viral fatigue syndrome and AIDS. ("Effects of Fluoride on Immune System Function" by Sheila L.M. Gibson, MD. *Complementary Medical Research*, October 1992, pp. 111-113.)

Over the past 20 to 30 years, there has been a substantial and unexplained rise in a number of conditions such as allergy, auto-immune diseases and the post viral fatigue syndrome. The common factor in these conditions is an alteration in the efficiency of the immune system. This alteration coincides with the widespread introduction of fluoride into public water supplies and the food chain.

Multiple Exposures to Fluoride

Approximately half the population of Washington state depends on water supplies with intentionally elevated levels of fluoride. Moreover, because there is no control of the use of fluoridated water in food processing, and because of the nearly universal use of dentifrices containing high concentrations of fluoride, virtually all Washington state residents are likely to be exposed to more than the traditionally advocated 1 milligram of fluoride per day. Those residing in fluoridated areas may be exposed to 5 milligrams per day or more. (*Review of Fluoride Benefits and Risks*, full report. U.S. Public Health Service, February 1991, pp. 16-17.)

The observed world-wide decline in tooth decay over the past few decades has occurred at the same rate in areas that are not fluoridated as in areas that are. ("The Mystery of Declining Tooth Decay" by Mark Diesendorf, *Nature*, July 10, 1986, pp. 125-29.) A recent study of children in Tucson, Arizona found that children who received fluoridated water actually had *more* cavities than children who received non-fluoridated water. ("Fluoridation Controversy" by Cornelius Steelink, Ph.D. in *Chemical and Engineering News*, July 27, 1992, p. 2.) Tooth decay rates correlate inversely with family income, not with exposure to fluoride.

Seattle

Seattle has had fluoridated water for over 20 years. The city is now experiencing a ***dental care crisis***. In 1990, National Cancer Institute statistics showed a ***79% increase in bone cancers in males under the age of 20*** in Seattle for the period 1981-87 over the period 1973-80. The Seattle finding was originally discounted because cancer incidence did not appear to correlate with years of exposure to fluoridated water. However, the data from New Jersey indicate that cancer incidence is correlated with exposure to fluoridated water at the time of the adolescent growth spurt.

Tacoma

Fluoride is highly corrosive, causing leaching of lead and other metals from water pipes. In the first half of 1992 the City of Tacoma ***failed to meet EPA standards*** for lead contamination. When equipment failure forced a halt to fluoridation of Tacoma's water supply, tests showed a nearly 50 percent drop in lead contamination.

Additional References

- Scientific Knowledge in Controversy: The Social Dynamics of the Fluoridation Debate* by Brian Martin. Albany, NY: State University of New York Press, 1991.
- Fluoridation: The Great Dilemma* by George L. Waldbott, MD. Lawrence, KS: Coronado Press, 1978.
- "Fluoridation of Water," by Bette Hileman. *Chemical and Engineering News*, August 1, 1988, p.26-42.

12 Fluoridation has been rejected, discontinued, or banned throughout most of the world. Almost all of Europe is unfluoridated, and their teeth are often healthier than fluoridated Americans'.

- 1) *Chemical and Engineering News*, vol. 66, p. 30, 1988.
- 2) World Health Organization data

13 Recent studies show that hip fracture rates in the elderly are significantly higher in fluoridated areas.

- 1) *Journal of the American Medical Assn.*, vol. 264, 1990; vol. 266, 1991; vol. 268, 1992; vol. 273, 1995.
- 2) *Annals of Epidemiology*, vol. 2, pp. 617-26, 1992.
- 3) *Amer. J. of Epidemiology*, vol. 150, pp. 817-24, 1999.

14 Malnourished people, particularly children, as well as the elderly, people with diabetes, kidney, and heart disease, are at greater risk for fluoride's harmful effects.

U.S. Dept. of Health and Human Services,
ATSDR Doc. TP 91/17 (1993).

15 Fluoride is linked to many health problems, including thyroid disease, bone cancer, behavior problems, arthritis, and genetic damage.

- 1) *J. Clinical Endocrinology*, 18:1102-1110, 1958.
- 2) *Problemy Endokrinologii*, 42:6-9, 1996.
- 3) *Chemical and Engineering News*, vol. 66, 1988
- 4) *Lancet*, vol. 36, p. 737, 1990.
- 5) *Review of Fluoride: Benefits and Risks*, U.S. Public Health Service, pages FI-F7, 1991.
- 6) *Carcinogenesis*, vol. 9, pp. 2279-2284, 1988.
- 7) *A Brief Report on the Association of Drinking Water Fluoridation and the Incidence of Osteosarcoma among Young Males*, New Jersey Department of Health, Nov. 1992.
- 8) *Neurotoxicology & Teratology*, vol. 17, no. 2, 1995.

16 It is the right of every citizen to make personal health decisions.

It is a basic right to have our water supply free of medication.

No one should be forced to take a prescription dose of fluoride because public, professional, or political organizations demand it.

"I am opposed to fluoridation because of the overwhelming evidence that fluoridation is not only potentially harmful but has already caused considerable, well-documented harm."

Albert Schatz, Ph.D., biochemistry, world-renowned co-discoverer of streptomycin. (Oct., 1999)

**If there's any doubt,
leave it out!**

For more information, visit
the following websites:

www.fluoridealert.org
www.slweb.org

**Mt. Pleasant Citizens
for Safe Drinking Water**

(989) 773-3236

**PO Box 382
Mt. Pleasant, MI 48804**

National Contact: (800) 728-3833



Protect

Our Water

Our Health

Our Rights

16

Here are sixteen good reasons to

Vote Yes for Safe Drinking Water

Learn the real truth about fluoride.

1 The type of fluoride added to our drinking water never occurs in nature. It is a toxic industrial waste product, contaminated with many hazardous substances.

- 1) Lucier Chemical Industries, Inc. internal spec. sheet
- 2) *Chemical and Engineering News*, vol. 66, p. 39, 1988.
- 3) Thomas Reeves, Chief Fluoridation Engineer, CDC, 2001.

2 Fluoride is a potent toxin ranging between lead and arsenic in acute toxicity. Surprisingly, the maximum allowable level of fluoride, which is regulated as a contaminant in municipal water, is **80 to 266 times the allowable levels of arsenic and lead.**

- 1) *Clinical Toxicology*, 1984.
- 2) U.S. Environmental Protection Agency

3 Fluoride accumulates in the body like lead and arsenic, inflicting damage over a long period of time.

- 1) *Clinical Toxicology*, 1984.
- 2) U.S. Dept. of Health and Human Services, ATSDR Doc. TP 91/17 (1993).

4 Four glasses (one liter) of fluoridated water equals a one-milligram prescription dose of fluoride, or **four times the recommended dose** for children six months to three years of age.

- 1) *EPA Drinking Water Glossary*, p. 19, June, 1994.
- 2) http://www.ada.org/public/topics/fluoride/fluoride_article01.asp#dosage

5 Fluoride supplements are only available by prescription. Putting fluoride in the water is therefore medicating entire populations without people's permission.

6 We are already being over-fluoridated without drinking artificially fluoridated water. Fluoride is found in most toothpastes, in foods and drinks processed in fluoridated areas, and in pesticide residue on fruits, vegetables, and grains.

7 Infants should be given no fluoride at all. Formula made with fluoridated water is harmful to babies.

- 1) *Journal of Public Health Dentistry*, vol. 59, 1999.
- 2) *Journal of the American Dental Association*, vol. 131, 2000.

8 Toothpaste manufacturers are required by law to print a warning on all fluoridated toothpaste: *"Keep out of the reach of children under 6 years of age. If you accidentally swallow more than used for brushing, seek professional assistance or contact a poison Control Center immediately."*

9 Dental fluorosis, the permanent discoloration, scarring, and weakening of children's teeth, is a visible sign of fluoride poisoning. Fluorosis is rapidly increasing in this country, even in unfluoridated areas.

- 1) *Journal of Public Health Dentistry*, vol. 57, pp. 136-143, 1997.
- 2) *Journal of Public Health Dentistry*, vol. 46, pp. 184-187, 1986.
- 3) *Journal of the American Dental Association*, vol. 108, pp. 56-59, 1984.
- 4) *Health Effects of Ingested Fluoride*, National Research Council, p. 37, 1993.

10 There is NO DIFFERENCE in tooth decay rates in fluoridated and unfluoridated cities. Recent studies of *defluoridated* cities have shown no increase in cavities, and sometimes a decrease.

- 1) *Perspectives in Biology and Medicine*, vol. 41, 1997
- 2) www.fluoridealert.org/WHO-dmft.htm
- 3) *Journal of the Canadian Dental Association*, vol. 53, 1987.
- 4) *Caries Research*, vol. 34, pp.462-8, 2000.

11 Fluoridation chemicals have never been approved for safety or effectiveness by either the EPA or the FDA. The product used in most water supplies is hydrofluosilicic acid.

Letters from the EPA, CDC, FDA, and NSF responding to a congressional investigation, 1998-2000.

HYDROFLUOSILICIC ACID

AVOID CONTACT WITH SKIN, EYES, MOUTH & CLOTHING

AVOID BREATHING FUMES OR VAPOR



DANGER POISON



DIRECTIONS FOR WATER FLUORIDATION: Application of this product for water fluoridation is subject to approval of all interested state and local health authorities. Its use should conform to the American Water Works Association's "Statement of Recommended Practice and Procedure."

Exact dosage must not raise the total fluoride concentration in drinking water above 1.5 ppm. (U.S. Public Health Service maximum limit)

DO NOT TAKE INTERNALLY

WARNING

IF MATERIAL IS SPILLED OR RELEASED, NEUTRALIZE WITH LIME AND DISPOSE AS CALCIUM FLUOSILICIC WASTE

SPECIAL PROTECTION INFORMATION: RESPIRATORS APPROVED FOR FLUORINE, RUBBER GLOVES, CHEMICAL GOGGLES AND A PROTECTIVE APRON OR ACID RESISTANT CLOTHING SHOULD BE USED SPECIAL PRECAUTIONS SHOULD BE TAKEN IN HANDLING AND STORING MATERIAL: AVOID STORAGE IN GLASS CONTAINERS.

WHEN MATERIAL IS CONTACTED WITH FIRE, FLUORIDE GAS MAY BE RELEASED. OVEREXPOSURE TO MATERIAL MAY CAUSE CONSTRICTED BREATHING COUGHING, SKIN REDNESS, OR BURNING OF THE THROAT

ANTIDOTE

SKIN: COPIOUS AMOUNTS OF WATER FOR 15 MINUTES.
INTERNAL: CONTACT PHYSICIAN
OTHER: CONSULT PHYSICIAN IN THE EVENT INGESTION HAS OCCURRED.
GIVE COPIOUS AND REPEATED AMOUNTS OF WATER OR A WEAK SOLUTION OF CALCIUM CHLORIDE

Fluoridation product warning label

PLEASE SHARE
THIS INFORMATION
WITH A FRIEND

USE
FLUORIDATED
DENTALS



Who will
Protect our Drinking Water
from the
Dangers of Fluoridation?

History of Fluoridation

by Theodora Kerry

Where Fluoride Comes From

Fluoride is a generic term to indicate a wide variety of substances containing the element fluorine. Slightly less toxic than arsenic, but more toxic than lead, fluorine is the most negatively charged and most chemically active of all elements on earth, which means it loves to combine and recombine with other elements in its path, ever looking for the strongest bond, and wreaking havoc all along the way by creating even more toxic combinations.

Contrary to fluoridationist assurances, fluoride is anything but benign, and that's why industry loves it. How do the industrial, agricultural, pharmaceutical, and military interests love fluoride? Let us count the ways. Used to etch glass, ceramics and computer chips, refine petroleum products, make ceramic materials more porous, inhibit fermentation in breweries and wineries, polish aluminum, refine metals, and separate uranium isotopes in the production of atomic bombs, fluoride is also a key ingredient in the most widely used insecticides and pesticides (rat poison), and is used in most

general anesthetics, in many nerve gases (Sarin) and in many psychotropic drugs (Prozac). But what sounds like a dream lover for industry, is a toxic nightmare for the rest of us, as industry continually searches for new places to dispose of its fluoride waste products.

Up until the 1920's and '30's, industry didn't have to look far, simply discharging wastes directly into the air and waterways, causing great harm to anyone and anything downstream or downwind, including fish, animals, and farms. By the 1930's, lawsuits were mounting as more and more victims understood that their problems were caused by fluoride poisoning. Not surprisingly, industry's response was focused on changing the public's perception of fluoride rather than on stopping their dangerous practices. At this time, the public understood fluoride to be synonymous with rat poison, not healthy teeth, but this was all about to change!

The Solution to Pollution is Dilution

Funded by top fluoride-emitters such as the Aluminum Company of America (Alcoa), new research emerged which claimed to show

a connection between ingested fluoride and resistance to tooth decay. So it was, in 1939, that the first public proposal to fluoridate U.S. water supplies came, not from a doctor or dentist, but from Alcoa-funded Gerald Cox, an industry scientist working for a company threatened by fluoride damage claims. As Alcoa, DuPont, and other companies stepped up production for World War II, it became even more imperative to sell Americans on fluoride's supposed benefits. Since many of the fluoride wastes were being produced by the Manhattan Project, the U.S. Military's program to create the first atomic bomb, various federal agencies became full parties to this national effort to fool Americans into becoming fools for fluoride. Formerly classified documents show that scientists and officials from the U.S. War Department, the FDA, the Agriculture and Justice Departments, among others, met secretly with industry lawyers to plan how to legally defeat those already suing for fluoride injuries. Their plan would ultimately include fluoridation, the dumping of these toxic wastes in controlled doses into our drinking water, and this effort was openly led by the U.S. Public Health Service which, at the time, was under the jurisdiction of Andrew Mellon, the founder of Alcoa, and, after 1947, Oscar Ewing, a long-time Alcoa lawyer. With the help of Edward Bernays, the "father of public relations", who had made smoking respectable for women, Americans would soon be convinced that fluoride was safe for one and all.

The first city in America to be fluoridated was Newburgh, New York in 1945, chosen by a committee led by members of the Manhattan Project, although their military affiliations were kept secret. Newburgh was also near the University of Rochester which housed a clandestine division of the Manhattan Project to study the health effects of the special materials, including fluoride, that were used to make the atomic bomb. (This was the same facility where unsuspecting patients were injected with radioactive plutonium.) For the next ten years, blood and tissue samples of Newburgh residents were sent to the University of Rochester, supposedly to study the effect on children's teeth, but a classified 1948 report told the real purpose: "to supply evidence useful in the litigation arising from an alleged loss of a fruit crop... since excessive blood fluoride levels were reported in human residents of the same area". Since the intention of these studies was to defend fluoride-emitters from damage claims, the military scientists conducting them had ev-

ery reason to find fluoride beneficial to the teeth, and harmless to the rest of the body at higher rather than lower doses. Unfortunately, that research has become the foundation of what the government, via dentists and public health officials, tells us about fluoridation.

Fluoride - The Protected Pollutant

Since the Public Health Service (PHS) endorsed fluoridation in 1950, over 2/3 of our nation's reservoirs have been fluoridated with sodium fluoride and hydrofluosilicic acid, the toxic waste by-products of the aluminum and phosphate fertilizer industries. Substances that would cost these industries millions to store at Class I Hazardous Waste Sites, are instead sold to communities at great profit and dumped into our drinking water. Since there is no regulatory oversight or standards for these products, they often contain other wastes, including radionuclides, cadmium, lead, arsenic, uranium, and mercury. Even worse, there have never been any controlled clinical studies on how these particular fluoridating agents react in water systems, let alone, in our bodies, despite the fact that fluoride is known for its ability to leach copper and lead from water pipes, as well as combine with all manner of chemicals, including those used in the water purification process. Recent research involving children in fluoridated areas has shown elevated levels of lead in their blood, while other studies have shown that cooking with fluoridated water in aluminum pots releases much higher amounts of aluminum into the food or drink. Since lead-poisoning is associated with higher rates of learn-

Who's Rejected Water Fluoridation?

Countries that reject fluoridation:

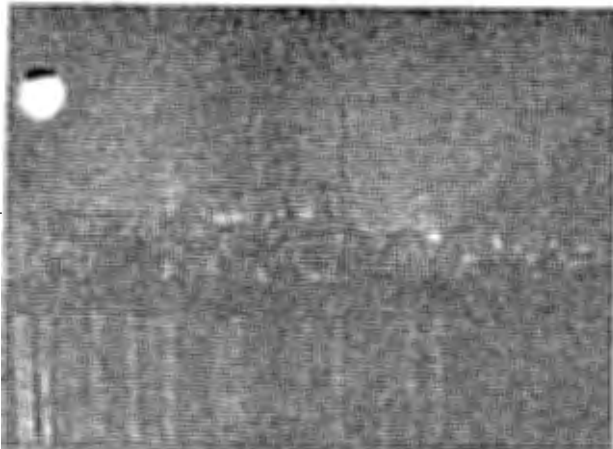
Germany	Japan
Belgium	China
Austria	Pakistan
Hungary	Portugal
Netherlands	Samos
Denmark	Luxembourg
Finland	India
Norway	Switzerland (only Basel is fluoridated)
Sweden	

Cities that reject fluoridation (since 1990):

Canton, New York	quit-2/18/03
Shaler, Pennsylvania	3/11/03
Wasserville, California	initiative-11/5/02
Piedmont, California	initiative-11/5/02
Washoe County (Reno), Nevada	11/5/02
North, Massachusetts	11/5/02
Andover, Arkansas	11/5/02
Tarrant, Arkansas	11/5/02
Kalispell, Montana	11/5/02
Billings, Montana	11/5/02
West Jordan, Utah	3/3/02
Druid, New York	6/9/02
Franklin, North Carolina	5/7/02
Missoula, Montana	5/4/02
Plainville, Massachusetts	4/1/02
Johnson, New Zealand	quit-2/28/02
Colorado Springs, Colorado	1/15/02
Kennecott, Washington	1/15/02
Lanal Water Co., Maui County, Hawaii	1/12/02
Berkeley, Vermont	1/9/02
Springfield, Massachusetts	12/02
Cobalt, Ontario	quit-12/11/01
Erie, Colorado	11/26/01
Moderio, California	3rd rejection-11/9/01
Worcester, Massachusetts	4th rejection-11/9/01
Flagstaff, Arizona	3rd rejection-11/9/01
Susheela, Oregon	11/8/01
Kamloops, British Columbia	10/13/01
Goodenall, Washington	9/30/01
Wichita, Washington	8/15/01
Woods Cross, Utah	8/7/01
Blanchville, South Carolina	quit-6/30/01
Eureka Springs, Arkansas	6/8/01
Harper, Kansas	5/30/01
Blanchville, Massachusetts	5/15/01
McPherson, Kansas	4/30/01
Norfolk, Virginia	3/30/01
Blue River, Wisconsin	2/01
Wilkes, Oregon	1/01
Itasca, New York	11/7/00
Spokane, Washington	11/7/00
Ellensburg, Vermont	11/7/00
Wenatchee, Washington	11/7/00
Shawano, Wisconsin	11/7/00
Niles City, Utah	11/7/00
Hyrum City, Utah	11/7/00
Providence City, Utah	11/7/00
Scraper City, Utah	11/7/00
Laguna City, Utah	11/7/00
Plover Heights, Utah	11/7/00
Pewaukee, New Jersey	11/7/00
Clark, Nevada	11/7/00
Waco, Ohio	11/7/00
Seymour, British Columbia	10/19/00
Woodside, California	8/00
St. George, Missouri	6/9/00
Walla, Kansas	2/15/00
Johnstown, New York	11/15/99
Tooele, Utah	11/5/99
Wichita, Kansas	10/25/99
Bozeman, Florida	10/25/99
El Cajon, California	10/25/99
Hot Water District, California	4/7/99
Lakewood Water District, California	4/6/99
Hutchinson, Kansas	3/30/99
River View Water District, California	3/24/99
Wenatchee, Washington	3/20/99
La Mesa, California	3/19/99
Santa Cruz, California	citizens initiative-3/4/99
Bremerton, Washington	4th rejection initiative-2/26/99
Wichita, Kansas	12/15/98
Seward, Nebraska	11/23/98
Whitehorse, Yukon Territory, Canada	7/22/98
St. George, Missouri	7/15/98
Grand Island, Nebraska	quit-5/1/98
North Platte, Nebraska	5/13/98
Wichita, Kansas	5/13/98
Wichita, Kansas	5/13/98
Kinnaird, British Columbia, Canada	quit-5/5/98
Hot Springs, Arkansas	2/98
Ridgely, Oregon	12/22/97
Milpitas, Massachusetts	11/04/97
Brisbane, Australia	10/01/97
Spokane, Washington	9/22/97
Lafayette, Florida	7/15/97
Clearwater, Florida	7/15/97
North Redington Beach, Florida	7/15/97
Amherst, New York	5/21/97
Suisun City, California	5/1/97
Yardley, Pennsylvania	4/16/97
Village of Oronoke, Wisconsin	12/8/96
Western Nassau County, New York	11/21/96
Kelowna, British Columbia, Canada	11/19/96
Solihennig, Nebraska	11/16
Bloomer, Wisconsin	11/15/96
Kosak, Alaska	7/19/96
Carle Place, New York	quit-2/1/96
Winter Springs, Florida	11/05/96
Pasco, Florida	12/14/95
York, Pennsylvania	7/23/95
Thurmont, Maryland	5/20/94
Albany, New York	12/8/94
Medford, Maryland	quit-11/30
Smith, Ontario, Canada	10/05/93
Barnstable, (Cape Cod) Massachusetts	11/19/93
Wagoner, Oklahoma	6/11/93
Redwood Valley, California	2/6/93
Los Altos Hills (Piedmont) California	93
Campbell River, British Columbia, Canada	4/93
Port Hardy, British Columbia, Canada	11/93
Squamish, British Columbia, Canada	11/93
Port Smith, Arkansas	11/22/92
Milpitas, Wisconsin	10/17/92
Bellingham, Washington	3/4/92
Washoe County, Nevada	7/15/92
Commonwealth, British Columbia, Canada	2/92
Palm Beach County (Deland), Florida	10/22/91
Kenichikan, Alaska	10/2/91
Suffolk County, New York	9/15/91
Davis, California	12/14/90
Morgan Hill, California	quit-3/7/90

Compiled (3-7-02) by Maureen Jones.
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A fertilizer plant where fluorosilicic acid is a toxic waste by-product produced from the manufacture of phosphate fertilizers.

ing disabilities, hyperactivity, and anti-social behavior, and excess aluminum intake is associated with Alzheimer's Disease, one would think that the Public Health Service would welcome these studies, but they don't.

And neither do the administrators at the Environmental Protection Agency, the ones who set the standards for drinking water. While fluoride is equal in toxicity to both lead and arsenic, the EPA's Maximum Contaminant Level (MCL) for fluoride is 4000 parts per billion (ppb) compared to 15 ppb for lead and 50 ppb for arsenic. It gets worse. Since its creation in 1972, the EPA has consistently ignored the mounting evidence against fluoridation, even raising the MCL from 2000 ppb to 4000 ppb in 1985 after EPA's own staff scientists recommended a MCL of 1000 ppb because of their concerns about fluoride's effects on the bones of children, the dental fluorosis, and for the overall lack of scientific data. When a National Toxicology Program study (ordered by Congress in 1977) clearly linking cancer to fluoridation was released in 1989, the PHS and the EPA quickly formed a new commission to review the findings. In the final report, the evidence of carcinogenicity was systematically down-graded, leading Dr. William Marcus, then Senior Science Advisor and Toxicologist in the Office of Drinking Water, to blow the whistle and release the true findings. His reward for doing the job he was paid for? The EPA fired him! Although Dr. Marcus eventually won his suit against the EPA, and was joined in 1997 by his co-workers: the chemists, toxicologists, and science professionals who then came out against fluoridation, EPA management still continues to drag its feet in all matters related to the safety of fluoridation.

Fluoridation Pollutes Our Environment

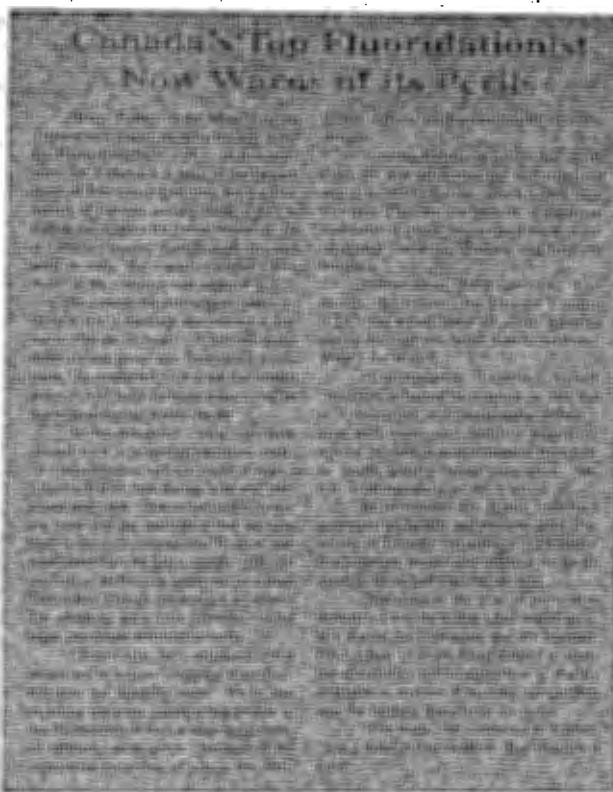
Meanwhile, 99% of all fluoridated tap water winds up in our ecosystem ensuring that our rivers, lakes, and oceans will also be contaminated with excess fluoride, thus affecting all life within those systems. Some studies show

that fluoride levels above 200 ppb in fresh water migratory paths, can reduce migration by as much as 50%, thus impacting salmon populations in the Pacific Northwest. And, what about food crops irrigated with fluoridated water? Some plants can synthesize organic fluoride compounds like fluoracetates which are among the most poisonous substances known. We should also be concerned about the spreading of sewage sludge on agricultural and forested lands, especially if it comes from fluoridated areas, since it will contain even higher concentrations of fluoride which will then be released into the soil.

Saying No to Fluoridation

Clearly, fluoridation is driven by the needs of industry, not by concerns for healthy teeth, let alone a healthy environment. No one sums it up better than Councilman Keith Beier of Escondido when he made the following statement in 1999 as his fellow council members debated the issue: "Our water department calculates that we would be buying more than 33 tons/year of a substance that can't be given to us for free because it is classified as a toxic hazardous waste; yet, we are supposed to accept that if we pay \$8.35/gallon and they slap a new label on the container, this same toxic waste can be shipped to us untreated, directly from the scrubber systems of the phosphate fertilizer industry that they use to keep fluoride from becoming airborne and killing everything in sight, and that on the truck-ride here it will magically be converted to a safe and desirable nutrient. The kicker to this scheme is that the amount intended for the targeted children is only 16 pounds of that 33 tons." Shortly thereafter, Escondido joined the long list of cities that have rejected fluoridation. We hope you will use this information to make that list even longer!

For more information on the history of fluoridation and its effects on our environment, read the Earth Island Journal's "Fluorides and the Environment", and their Winter '97-'98 edition, or visit their website at www.earthisland.org.



A Citizen's Tool Box

Please take action, it's for the sake of life on our planet: yours, your children's, your family's and friends', including the animals and plants, *all life!* There truly is no time to waste. When the finite amount of potable water on our Earth is poisoned, all life will pay the price.

Some Ways to Take Action:

1. Get involved / Form a group. The following organization will connect you with others in your community: Citizens for Safe Drinking Water 1-800-728-3833 or greenjaff@csdw.net Maureen Jones: (408) 297-8487 or maureenj@pacbell.net
2. Call and write city, county, state, and federal government officials. Share this information with them and encourage them to take action as well.

3. Call and write your local water districts, and water commissions. They too need to be educated!
4. Contact dentists and doctors. Most are not familiar with the latest research information.
5. Inform parents about the dangers of excess fluoride to their children's health.
6. Educate your local organizations and businesses, such as: service clubs, churches, women's and men's groups, senior centers, etc.
7. Take it to the streets, peacefully protest. Stand up. Speak up for your rights!
8. Visit the following websites. New research is being published continually, and efforts to challenge fluoridation are ongoing throughout America, and the world.

List of Websites:
www.keepers-of-the-well.org
www.fluoridealert.org
www.earthisland.org

The local distributors of this publication can be reached at:

by Theodora Kerry

Now that California has mandated fluoridation for all water districts with over 10,000 connections, it's even more imperative that we, the water consumers, ask questions and demand answers about this practice and its effects on all parts of our bodies, not just our teeth. Fortunately, in the 50 years since fluoridation began in America, much has been learned about how ingested fluoride impacts our health. Contrary to the assurances of those who would literally force fluoride down our throats, none of these impacts are beneficial. Read on to learn the fluoride facts that your friendly fluoridationist would rather not tell you, and remember, only by educating ourselves about this crucial issue will we be able to prevent truth decay in future generations!

What is Fluoride

- Fluoride is an element equal in toxicity to lead and arsenic, which are allowed in our water only at levels of 15 and 50 parts per billion (ppb) respectively, while fluoride levels are allowed to be as high as 4000 ppb.
- Fluoride is not an essential nutrient. No disease has ever been linked to a fluoride deficiency.
- Fluoride is a cumulative poison. Only 50% of the fluoride we ingest each day is excreted through the kidneys, while the remainder accumulates in our bones, pineal gland, and other tissues.
- Fluoride is so toxic that the FDA now requires poison notices on all fluoridated toothpastes warning parents to put no more than a pea-sized amount on their children's toothbrushes.

Fluoridation Agents

- Hydrofluosilicic acid and sodiumsilicofluoride, the chemicals used in 90% of U.S. water fluoridation programs, are the hazardous wastes of the aluminum and phosphate fertilizer industries. (*Fluorine Recovery in the Fertilizer Industry - a Review*, Phosphorus & Potassium No. 103, Sept/Oct '79)
- There are no government standards nor regulatory oversight for these products which means they are commonly contaminated with radionuclides, lead, arsenic, uranium, and mercury.
- There have been no clinically controlled long-term studies of the actual chemicals used in fluoridation.
- Fluoride is one of the most inter-

active elements which means it easily combines with other elements along its path thus making new chemical concoctions with the other water additives, and leaching lead and copper from our pipes and aluminum from our cookware.

A consistent and significant association of silicofluoride treated water with elevated blood lead in New York children ages 0-6 was reported in *NeuroToxicology*, 2000. Results were consistent with prior analyses of surveys of children's blood lead in Massachusetts and NHANES III. Over 430,000 venous blood samples collected by State Health Departments were involved.

and protein-poor diets). Ironically, those most likely to suffer from malnutrition are the poor, who are precisely the ones being targeted by new fluoridation proposals.

Although the fluoride ion is chemically inert, biochemically it is devastating. It can attach to the active site of an enzyme and attract groups that form strong hydrogen bonds to itself. Ultimately, this inactivates the enzyme by changing its shape, or molecular conformation. Thus, genetic damage, birth defects, and cancer can arise from fluoride interference. (*New Scientist*; 1981, 1985.)

Fluoride has been shown to be mutagenic, cause chromosome damage and interfere with the en-

zyme involved with DNA repair in a variety of insect, tissue culture and animal studies (*DHSS*, 1991; *Miyashita and Tsutsui*, 1996). Fluoride administered to animals at high doses wreaks havoc on the reproductive system - it renders defective sperms and increases the rate of infertility (*Chinoy et al*, 1995; *Kumar & Sushela*, 1994; *Chinoy & Narayana*, 1994; *Chinoy & Sequeira*, 1989).

Rats fed for one year with 1 ppm fluoride had morphological changes to their kidneys and brains and had an increased level of aluminum present in their brain (*Yamer et al*, 1998). Aluminum in the brain is associated with Alzheimer's disease.

Animal experiments show that fluoride exposure alters behavior (*Mullenix et al*, 1995). Rats dosed prenatally demonstrated hyperactive behavior. Those dosed postnatally demonstrated hypoactivity (i.e. under activity or "couch potato" syndrome).

Three studies from China show a lowering of IQ in children associated with fluoride exposure (*Li et al*, 1995; *Zhao et al*, 1996 and

show a possible association between osteosarcoma in young men and fluoridated water (*National Cancer Institute*, 1989 and *Cohn*, 1992).

Fluoridation Does Not Prevent Tooth Decay

Leading dental researchers (*Levine*, 1976; *Fejerskov, Thylstrup and Larsen*, 1981; *Carlos*, 1983; *Featherstone*, 1987, 1999, 2000; *Margolis and Moreno*, 1990; *Clark*, 1993; *Burt*, 1994; *Shellis and Duckworth*, 1994 and *Limeback*, 1999, 2000), and the Centers for Disease Control and Prevention (*CDC*, 1999, 2001) are now acknowledging that any claimed benefits from fluoride are mainly TOPICAL.



Fluoridation is Harmful to Your Health

- The National Federation of Federal Employees Local 2050, representing the 1200 chemists, toxicologists, and science professionals at the EPA stated in 1997 that they oppose fluoridation because their "members' review of the body of evidence over the last 11 years, including animal and human epidemiology studies, indicate a causal link between fluoridation and cancer, genetic damage, neurological impairment, bone pathology, and lower IQ's in children", and that "contrary to public perception, there is virtually no evidence of significant benefits."
- According to the U.S. Dept. of Health and Human Services (*Toxicological Profile TP91/17-1993*) those people particularly vulnerable to fluoride's toxic effects include postmenopausal women, elderly men, diabetics, people with poor kidney function or cardiovascular problems, and people who suffer from malnutrition (e.g. calcium, magnesium, vitamin C, vitamin D and iodine deficiencies

rather than SYSTEMIC.

The early studies conducted in 1945-1955 in the US, which helped to launch fluoridation, have been heavily criticized for their poor methodology and poor choice of control communities (*De Stefano*, 1954; *Sutton*, 1959, 1960 and 1996).

Modern research (e.g. *Diesendorf*, 1986; *Colquhoun*, 1997, and *De Liefde*, 1998) shows that decay rates were coming down before fluoridation was introduced and have continued to decline even after its benefits would have been maximized.

The largest survey ever conducted in the U.S. (over 39,000 children from 84 communities in 1987) by the National Institute of Dental Research showed no statistical difference in tooth decay among children in fluoridated and non-fluoridated communities (*Hileman*, 1989 and *Namowitz*, 1990).

98% of Europe is unfluoridated (by choice) and its citizens have experienced the same decline in dental decay as the U.S., which is 60% fluoridated.

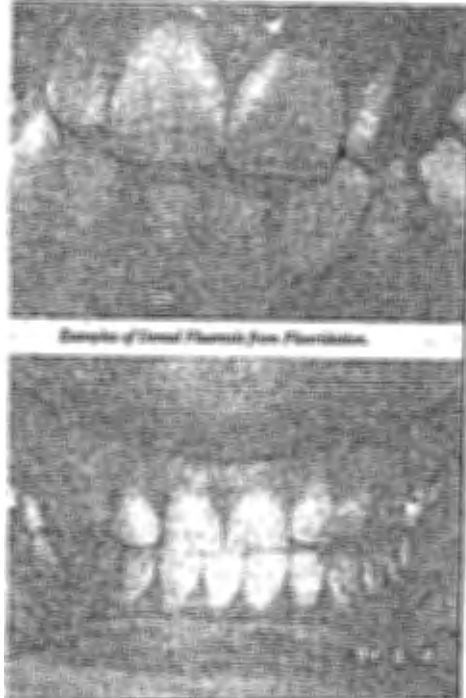
Two epidemiological studies (*Colletti & Joyet*, 1958). Hypothyroidism, whose symptoms include depression, fatigue, weight gain, muscle and joint pain, and risk of heart disease, is rampant in the U.S..

In some studies, when high doses of fluoride were used in trials to treat patients with osteoporosis in an effort to harden their bones and reduce fracture rates, it actually led to a HIGHER number of hip fractures (*Hedlund and Gollagher*, 1989; *Riggs et al*, 1990).

Ten studies since 1986 have examined the possible relationship of fluoridation and an increase in hip fracture among the elderly. Seven of these studies found an association, three did not. Hip fracture is doubled in women exposed to fluoridated water for 20 years prior to menopause. 50% of ingested fluoride is incorporated into bone where it robs bone of elasticity by disrupting collagen (protein) synthesis.

One animal study (*National Toxicology Program*, 1990) shows a dose-related increase in osteosarcoma (bone cancer) in male rats.

Fluoridation



Examples of Dental Fluorosis from Fluoridation

Fluoridation Means Overdosing Ourselves on Fluoride

- Fluoridation allows water consumers to be medicated at doses higher than a physician can legally prescribe. Both the American Dental Association and the American Academy of Pediatrics prescription schedules recommend that infants in unfluoridated areas receive no additional fluoride, while children under 3 receive the amount in 1 cup/day of fluoridated water, and children under 6 receive the amount in 2 cups/day. (*Journal of the ADA (JADA)*, Vol. 126, June 1995, 19-5) Any consumption of fluoridated water beyond these amounts would constitute an overdose!
- The level of fluoride commonly put into water (1 ppm) is 100 times higher than normally found in mothers' milk (0.01 ppm) (*Institute of Medicine*, 1997).
- Once fluoride is put in the water, it is impossible to control the dose each individual receives. Some people drink more water than others, plus we receive fluoride from sources other than the water supply.
- A 1997 study of fluoride concentrations in 238 commercial baby foods found levels ranging from 0.01 to 8.38 parts per million (ppm), with the highest levels found in those products containing chicken. (*Heilman, et al., JADA*; 128: 857-63, 1997)
- A 1991 study of 43 commercial fruit juices found that 42% of the samples had more than 1 ppm of fluoride. (*Stannard, et al., Journal of Clinical Pediatric Dentistry*; 16: 38-40, 1991)

- A 1999 study of 332 carbonated soft drinks found fluoride levels ranging from 0.02 to 1.28 ppm, with 71% exceeding 0.60 ppm. (*Heilman, et al., JADA*; 130: 1593-99, 1999)
- A 1997 study found that the water-extractable fluoride content of 5 brands of California raisins varied from 0.83 to 5.20 ppm (*Burgstahler, et al., Fluoride*; 30: 142-146, 1997). The elevated fluoride levels in these wines and raisins result from the use of cryolite, a fluoride-containing pesticide which is also used on many other crops including potatoes, cabbage, lettuce, and tomatoes. These crops are allowed to contain fluoride residues at levels well over 50 ppm.
- Although we are exposed to far more fluoride in 2002 than we were in 1945 when fluoridation began, the "optimal" fluoridation level is still 1 ppm (1000 ppb), the same level deemed optimal in 1945!
- The fluoridation program has been very poorly monitored, and U.S. health officials have never done a comprehensive analysis of the fluoride levels in the bones of the American people.

White promoters of fluoridation continue to deny that there is any scientific debate on this issue, and while many professionals in the scientific and medical communities have been subjected to censorship and intimidation (*Martin 1991*) when they've spoken out against the practice, the truth is that the list of opponents to fluoridation has, from the beginning, included thousands of scientists, bio-chemists, toxicologists, physicians, dentists, and concerned citi-

zens. One of the most outspoken is Paul Connitt, Ph.D., a Professor of Chemistry at St. Lawrence University in New York, who's "50 Reasons to Oppose Fluoridation" (www.fluoridealert.org) formed the basis of this article. He has proved to be a trusted Keeper of the Well. Now that you know the truth about fluoridation, will you become one too?

List of 14 Noble-Prize winners who have opposed or expressed reservations about fluoridation:

- 1) Adolf Butenandt (Chemistry, 1939)
- 2) Arvid Carlsson (Medicine, 2000)
- 3) Hans von Euler-Chelpin (Chemistry, 1929)
- 4) Walter Rudolf Hess (Medicine, 1949)
- 5) Corneille Jean-François Heymans (Medicine, 1938)
- 6) Sir Cyril Norman Hinshelwood (Chemistry, 1956)
- 7) Joshua Lederberg (Medicine, 1958)
- 8) William P. Murphy (Medicine, 1934)
- 8) Giulio Natta (1963 Nobel Prize in Chemistry)
- 10) Sir Robert Robinson (Chemistry, 1947)
- 11) Nikolaï Semenov (Chemistry, 1956)
- 12) James B. Sumner (Chemistry, 1946)
- 13) Hugo Theorell (Medicine, 1955)
- 14) Arthur T. Welford (Chemistry, 1945)

Although Native American residents of fluoridated children have a much higher incidence of dental decay than children in other U.S. communities. (*ADA News* 10/7/94)

When fluoridation has been discontinued in communities in Canada, the former East Germany, Cuba and Finland, dental decay as not increased but has actually decreased (*Maupome et al, 2001; Jenzel and Fischer, 1997, 2000; Jenzel et al, 2000 and Seppa et al, 2000*).

While ingested fluoride can make teeth harder, it also makes them more brittle and thus, more fracture prone. This is the same reason the incidence of hip fractures among the elderly is higher in fluoridated communities.

cases, as brown stains on the tooth surface. Although dentists consider this to only be a cosmetic problem, it is indicative of fluoride poisoning throughout the whole body.

• 66.4% of U.S. schoolchildren in "optimally" fluoridated communities have at least one tooth that displays the permanent signs of dental fluorosis. (*Journal of Public Health Dentistry*, Vol. 57: No. 3 Summer 1997)

• African-American children experience twice the prevalence of dental fluorosis as white children, and it tends to be more severe. (*National Research Council, Health Effects of Ingested Fluoride*, 1993, pg. 44)

• Some of the early symptoms of skeletal fluorosis, which impacts millions of people in India, China, and Africa, mimic the symptoms of arthritis, and are often misdiagnosed. Few if any studies have been done to determine whether the high prevalence of arthritis in America is related to our growing fluoride exposure.

Fluoridation Causes Dental Skeletal Fluorosis

Dental fluorosis means that a child has been poisoned by fluoride. It appears, in milder cases, as white spots, and in moderate to severe



A bowl of Wheaties, a glass of milk, and a Coke deliver twice the U.S. Public Health Service's daily goal of fluoridation.

ITEM	FLUORIDE PPM	DOSE (MG)
12 oz. Coke	.98	.35
8 oz. 2% Milk	.72	.17
Wheaties	10.00	1.80
TOTAL DOSE		2.32

Exceeds 1.0 mg. Fluoridation Goal 232%

Top EPA Scientists Call for Moratorium on Water Fluoridation at U.S. Senate Hearing

Statement of Dr. J. William Hirzy
National Treasury Employees Union
Chapter 280 before the Sub-
committee on Wildlife, Fisheries and
Drinking Water of the United States
Senate—June 29, 2000.

Good morning Mr. Chairman and Members of the Subcommittee. I appreciate the opportunity to appear before this Subcommittee to present the views of the union, of which I am a Vice-President, on the subject of fluoridation of public water supplies.

Our union is comprised of and represents the professional employees at the headquarters location of the U.S. Environmental Protection Agency in Washington D.C. Our members include toxicologists, biologists, chemists, engineers, lawyers and others defined by law as "professionals." The work we do includes evaluation of toxicity, exposure and economic information for management use in formulating public health and environmental protection policy.

I am not here as a representative of EPA, but rather as a representative of EPA headquarters professional employees, through their duly elected labor union. The union first got involved in this issue in 1965 as a matter of professional ethics. In 1997 we most recently voted to oppose fluoridation. Our opposition has strengthened since then.

Summary of Recommendations

1) We ask that you order an independent review of a cancer bioassay previously mandated by Congressional committee and subsequently performed by Battelle Memorial Institute, with appropriate blinding and instructions that all reviewers' independent determinations be reported to this Committee.

2) We ask that you order that the two waste products of the fertilizer industry that are now used in 90% of fluoridation programs, for which EPA states they are not able to identify any chronic studies, be used in any future toxicity studies, rather than a substitute chemical. Further, since federal agencies are actively advocating that each man woman and child drink, eat and bathe in these chemicals, silicofluorides should be placed at the head of the list for establishing a MCL that complies with the Safe Drinking Water Act. This means that the MCL be protective of the most sensitive of our population, including infants, with an appropriate margin of safety for ingestion over an entire lifetime.

3) We ask that you order an epidemiology study comparing children with dental fluorosis to those not displaying overdose during growth and development years for behavioral and other disorders.

4) We ask that you convene a joint Congressional Committee to give the only substance that is being mandated for ingestion throughout this country the full hearing that it deserves.

National Review of Fluoridation

The Subcommittees hearing today can

only begin to get at the issues surrounding the policy of water fluoridation in the United States, a massive experiment that has been run on the American public, without informed consent, for over fifty years. The last Congressional hearings on this subject were held in 1977. Much knowledge has been gained in the intervening years. It is high time for a national review of this policy by a Joint Select Committee of Congress. New hearings should explore, at minimum, these points:

- 1) excessive and un-controlled fluoride exposures;
- 2) altered findings of a cancer bioassay;
- 3) the results and implications of recent brain effects research;
- 4) the "protected pollutant" status of fluoride within EPA;
- 5) the altered recommendations to EPA of a 1983 Surgeon General's Panel on fluoride;
- 6) the results of a fifty-year experiment on fluoridation in two New York communities;
- 7) the findings of fact in three landmark lawsuits since 1978;
- 8) the findings and implications of recent research linking the predominant fluoridation chemical with elevated blood-lead levels in children and anti-social behavior; and
- 9) changing views among dental researchers on the efficacy of water fluoridation

Fluoride Exposures Are Excessive and Un-controlled

According to a study by the National Institute of Dental Research, 66 percent of America's children in fluoridated communities show the visible sign of over-exposure and fluoride toxicity: dental fluorosis (1). That result is from a survey done in the mid-1980's and the figure today is undoubtedly much higher. Centers for Disease Control and EPA claim that dental fluorosis is only a "cosmetic" effect. God did not create humans with fluorosed teeth. That effect occurs when children ingest more fluoride than their bodies can handle with the metabolic processes we were born with, and their teeth are damaged as a result. And not only their teeth. Children's bones and other tissues, as well as their developing teeth are accumulating too much fluoride. We can see the effect on teeth. Few researchers, if any, are looking for the effects of excessive fluoride exposure on bone and other tissues in American children. What has been reported so far in this connection is disturbing. One example is epidemiological evidence (2a, 2b) showing elevated bone cancer in young men related to consumption of fluoridated drinking water.

Without trying to ascribe a cause-and-effect relationship beforehand, we do know that American children in large numbers are afflicted with hyperactivity-attention deficit disorder, that autism seems to be on the rise, that bone fractures in young athletes and military personnel are on the rise, that earlier onset of puberty in young women is occurring. There are biologically plausible mechanisms described in peer-reviewed research on fluoride that can link some of these effects to fluoride exposures (e.g. 3,4,5,6). Considering the economic and human costs of these conditions, we believe that Congress should order epidemiology studies that use dental fluorosis as an index of exposure to determine if there are links between such effects and fluoride over-exposure.

In the interim, while this epidemiology is conducted, we believe that a national moratorium on water fluoridation should be instituted. There will be a hue and cry from some quarters, predicting increased dental caries, but Europe has about the same rate of dental caries as the U.S. (7) and most European countries do not fluoridate (8). I am submitting letters from European and Asian authorities on this point. There are studies in the U.S. of localities that have interrupted fluoridation with no discernable increase in dental caries rates (e.g. 9). And people who want the freedom of choice

to continue to ingest fluoride can do so by other means.

Cancer Bioassay Findings

In 1990, the results of the National Toxicology Program cancer bioassay on sodium fluoride were published (10). The initial findings of which would have ended fluoridation. But a special commission was hastily convened to review the findings, resulting in the salvation of fluoridation through systematic down-grading of the evidence of carcinogenicity. The final, published version of the NTP report says that there is, "equivocal evidence of carcinogenicity in male rats," changed from "clear evidence of carcinogenicity in male rats."

The change prompted Dr. William Marcus, who was then Senior Science Adviser and Toxicologist in the Office of Drinking Water, to blow the whistle about the issue (22), which led to his firing by EPA. Dr. Marcus sued EPA, won his case and was reinstated with back pay, benefits and compensatory damages. I am submitting material from Dr. Marcus to the Subcommittee dealing with the cancer and neurotoxicity risks posed by fluoridation.

We believe the Subcommittee should call for an independent review of the tumor slides from the bioassay, as was called for by Dr. Marcus (22), with the results to be presented in

a hearing before a Select Committee of the Congress. The scientists who conducted the original study, the original reviewers of the study, and the "review commission" members should be called, and an explanation given for the changed findings.

Brain Effects Research

Since 1994 there have been six publications that link fluoride exposure to direct adverse effects on the brain. Two epidemiology studies from China indicate depression of I.Q. in children (11,12). Another paper (3) shows a link between prenatal exposure of animals to fluoride and subsequent birth of off-spring which are hyperactive throughout life. A 1998 paper shows brain and kidney damage in animals given the "optimal" dosage of fluoride, viz. one part per million (13). And another (14) shows decreased levels of a key substance in the brain that may explain the results in the other paper from that journal. Another publication (5) links fluoride dosing to adverse effects on the brains pineal gland and pre-mature onset of sexual maturity in animals. Earlier onset of menstruation of girls in fluoridated Newburg, New York has also been reported (6).

Given the national concern over the incidence of attention deficit-hyperactivity disorder and autism in our children, we believe that the authors of these studies should be called before a Select Committee, along with those who have critiqued their studies, so the American public and the Congress can understand the implications of this work.

Fluoride as a Protected Pollutant

The classic example of EPA's protective treatment of this substance, recognized the world over and in the U.S., before the linguistic de-toxification campaign of the 1940's and 1950's, as a major environmental pollutant, is the 1983 statement by EPA's then Deputy Assistant Administrator for Water, Rebecca Hammer (15), that EPA views the use of hydrofluosilicic acid recovered from the waste stream of phosphate fertilizer manufacture as, "...an ideal solution to a long standing problem. By recovering by-product fluosilicic acid (sic) from fertilizer manufacturing, water and air pollution are minimized, and water authorities have a low-cost source of fluoride..." In other words, the solution to pollution is dilution, as long as the pollutant is dumped straight into drinking water systems and not into rivers or the atmosphere. I am submitting a copy of her letter.

Other Federal entities are also protective of fluoride. Congressman Calvert of the House Science Committee has sent letters of inquiry to EPA and other Federal entities on the matter of fluoride, answers to which have not yet been received.

We believe that EPA and other Federal officials should be called to testify on the manner in which fluoride has been protected. The union will be happy to assist the Congress in identifying targets for an inquiry. For instance, hydrofluosilicic acid does not appear on the

Since 1994 there have been six publications that link fluoride exposure to direct adverse effects on the brain.

Fluoride Prescriptions for Children Lack FDA Approval

by **Robert Jones**

Consumers, we have been told for so long that fluoride builds strong teeth, that we just this to be true. Thus, we buy our fluorinated dental products; we urge our legislators to add more fluoride to the water; we even give fluoride pills and drops to the most vulnerable among us... our infants and children. Because we are so sure that all this fluoride is good

that for 50 years, sodium fluoride drops and tablets have been prescribed to our children without any FDA approval:

"The Food and Drug Administration Office of Prescription Drug Compliance has confirmed, to my surprise, that there are no studies to demonstrate either the safety or effectiveness of these drugs, which FDA classifies as unapproved new drugs."

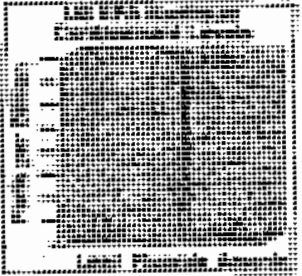
Assemblyman John V. Kelly, New Jersey, letter June 3, 1993, to Dr. David Kessler, M.D., Commissioner U.S. FDA, Rockville, Maryland.

"At this time there are no approved new drug applications on file with the Agency for these products."

Frank Pazzari, FDA, Office of Compliance, letter Feb. 21, 1997, to New Jersey Assemblyman John V. Kelly.

"Fluoride, when used in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or animal, is a drug that is subject to FDA regulation, ... No New

Drug Applications have been approved or rejected for fluoride drugs meant for ingestion."



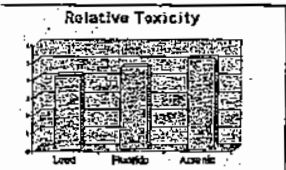
Fluoride tablets and drops are sold without FDA approval.

"The criticisms are serious and virtually none of the early fluoride supplement studies would be published today...they

present conclusions that are not supported by their data or consistent with their designs...their sample consisted of the children of dentists and other employees of the (U.S. Public Health) service...there does not seem to be scientific evidence to support the widespread use of fluoride supplements by young children, even in the absence of fluoride in water.

Dental fluorosis has long been accepted as a consequence of chronic toxic doses of fluoride, from whatever source...typically about 30-45% of regular supplement users developed fluorosis...the public is generally not aware of dental fluorosis. This is changing; there have been attempts at litigation in several countries...It is only a matter of time until a case is brought that gets public attention...The risk is that noticeable fluorosis will be perceived by the public as a toxic consequence of fluoride ingestion - which, arguably, it is."

Fluoride supplements for young children: an analysis of the literature focusing on benefits and risks. "Community Dentistry and Oral Epidemiology": Vol. 27: 72-83, 1999.



Fluoride is less toxic than lead and arsenic.

thus, we never ask for the evidence. So, what would that evidence look like we were to ask? At the very least, it should begin with well-documented, peer-reviewed studies over time, resulting in approval by the Food & Drug Administration (FDA), the only federal agency that has regulatory authority over health claims. Instead, the real evidence shows

Continued from Previous page

toxic Release Inventory list of chemicals, and there is a remarkable discrepancy among the maximum Contaminant Levels for fluoride, arsenic and lead, given the relative toxicities of these substances.

Surgeon General's Panel on Fluoride

We believe that EPA staff and managers would be called to testify, along with members of the 1983 Surgeon General's panel and officials of the Department of Human Services, to explain the original recommendations of a Surgeon General's panel (16) were altered to allow EPA to set otherwise unjustifiable drinking water standards for fluoride.

Kingston and Newburg, New York results

In 1998, the results of a fifty-year fluoridation experiment involving Kingston, New York (un-fluoridated) and Newburg, New York (fluoridated) were published (17). In summary, there is no overall significant difference in rates dental decay in children in the two cities, but children in the fluoridated city show significantly higher rates of dental fluorosis than children in the un-fluoridated city.

We believe that the authors of this study and representatives of the Centers for Disease Control and EPA should be called before a Select Committee to explain the increase in dental fluorosis among American children and the implications of that increase for skeletal and other effects as the children mature, including increased cancer, stress fractures and arthritis.

Findings of Fact by Judges

In three landmark cases adjudicated since 1978 in Pennsylvania, Illinois and Texas (18), judges with no interest except finding fact and administering justice heard prolonged testimony

from proponents and opponents of fluoridation and made dispassionate findings of fact. I cite one such instance here.

In November, 1978, Judge John Flaherty, now Chief Justice of the Supreme Court of Pennsylvania, issued findings in the case, *Aikenhead v. Borough of West View*, tried before him in the Allegheny Court of Common Pleas. Testimony in the case filled 2800 transcript pages and fully elucidated the benefits and risks of water fluoridation as understood in 1978. Judge Flaherty issued an injunction against fluoridation in the case, but the injunction was overturned on jurisdictional grounds. His findings of fact were not disturbed by appellate action. Judge Flaherty, in a July, 1979 letter to the Mayor of Auckland New Zealand wrote the following about the case:

"In my view, the evidence is quite convincing that the addition of sodium fluoride to the public water supply at one part per million is extremely deleterious to the human body, and, a review of the evidence will disclose that there was no convincing evidence to the contrary..."

"Prior to hearing this case, I gave the matter of fluoridation little, if any, thought, but I received quite an education, and noted that the proponents of fluoridation do nothing more than try to impose (sic) the objectivity of those who oppose fluoridation."

In the Illinois decision, Judge Ronald Niemann concludes: "This record is barren of any credible and reputable scientific epidemiological studies and/or analysis of statistical data which would support the Illinois Legislature's determination that fluoridation of the water supplies is both a safe and effective means of promoting public health."

Judge Anthony Farris in Texas found: "[T]hat the artificial fluoridation of public water supplies, such as contemplated by (Houston) City Ordinance No. 80-2330 may cause or contribute to the cause of cancer, genetic dam-

age, intolerant reactions, and chronic toxicity, including dental mottling, in man; that the said artificial fluoridation may aggravate malnutrition and existing illness in man; and that the value of said artificial fluoridation is in some doubt as to reduction of tooth decay in man."

The significance of Judge Flaherty's statement and his and the other two judges' findings of fact is this: proponents of fluoridation are fond of reciting endorsement statements by authorities, such as those by CDC and the American Dental Association, both of which have long-standing commitments that are hard if not impossible to recant, on the safety and efficacy of fluoridation. Now come three truly independent servants of justice, the judges in these three cases, and they find that fluoridation of water supplies is not justified.

Proponents of fluoridation are absolutely right about one thing: there is no real controversy about fluoridation when the facts are heard by an open mind.

I am submitting a copy of the excerpted letter from Judge Flaherty and another letter referenced in it that was sent to Judge Flaherty by Dr. Peter Sammartino, then Chancellor of Fairleigh Dickinson University. I am also submitting a reprint copy of an article in the Spring 1999 issue of the Florida State University Journal of Land Use and Environmental Law by Jack Graham and Dr. Pierre Morin titled "Highlights in North American Litigation During the Twentieth Century on Artificial Fluoridation of Public Water". Mr. Graham was chief litigator in the case before Judge Flaherty and in the other two cases (in Illinois and Texas).

We believe that Mr. Graham should be called before a Select Committee along with, if appropriate, the judges in these three cases who could relate their experience as trial judges in these cases.

Hydrofluosilicic Acid

There are no chronic toxicity data on the

predominant chemical, hydrofluosilicic acid and its sodium salt, used to fluoridate American communities. Newly published studies (19) indicate a link between use of these chemicals and elevated levels of lead in children's blood and anti-social behavior. Material from the authors of these studies has been submitted by them independently.

We believe the authors of these papers and their critics should be called before a Select Committee to explain to you and the American people what these papers mean for continuation of the policy of fluoridation.

Changing Views on Efficacy and Risk

In recent years, two prominent dental researchers who were leaders of the pro-fluoridation movement announced reversals of their former positions because they concluded that water fluoridation is not an effective means of reducing dental caries and that it poses serious risks to human health. The late Dr. John Colquhoun was Principal Dental Officer of Auckland, New Zealand, and he published his reasons for changing sides in 1997 (20). In 1999, Dr. Hardy Limeback, Head of Preventive Dentistry, University of Toronto, announced his change of views, then published a statement (21) dated April 2000. I am submitting a copy of Dr. Limeback's publications.

We believe that Dr. Limeback, along with fluoridation proponents who have not changed their minds, such as Drs. Ernest Newbrun and Herschel Horowitz, should be called before a Select Committee to testify on the reasons for their respective positions.

Thank you for your consideration, and I will be happy to take questions.

For references and research related to this information go to www.fluoridealert.org. See article: "Vice President of EPA's Scientist Union Testifies Against Fluoridation."

Esteemed Voices have for 50 years warned the American public that water fluoridation has dangerous long-term consequences to health:

I am appalled at the prospect of using water as a vehicle for drugs. Fluoride is a corrosive poison that will produce serious effects on a long range basis. Any attempt to use water this way is deplorable."

Dr. Charles Gordon Heyd, Past President of the American Medical Association.

Fluoridation... it is the greatest fraud that has ever been perpetrated and it has been perpetrated on more people than any other fraud has."

Prof. Albert Schatz, Ph.D. (Microbiology). Discoverer of streptomycin

In the interim, while this epidemiology is conducted, we believe that a national moratorium on water fluoridation should be instituted.

Statement of Dr. J. William Hirzy, Vice-President of the union that is comprised of and represents the scientists and professionals at U.S. EPA Headquarters in Washington D.C., before the U.S. Senate Subcommittee on Wildlife, Fisheries and Drinking Water, June 29th, 2000.

Esteemed Quotes

"In my view, the evidence is quite convincing that the addition of sodium fluoride to the public water supply at one part per million is extremely deleterious to the human body, and, a review of the evidence will disclose that there was no convincing evidence to the contrary. Since my decision, I have received hundreds of letters, quite a few of which have been sent by physicians and dentists, all concurring with my decision."

After five months and 3,000 pages of testimony, the above statement was made on 7/11/79 by Justice John P. Flaherty. He is currently Chief Justice of the Supreme Court of Pennsylvania.

"It is important to understand that while it appears that fluoride causes a multiplicity of ill-effects, virtually all of these ill-effects can be traced to the effect of fluoride on enzymes or proteins, as well as a possible direct effect on the DNA molecule itself."

John Yamouyannis, Ph.D. Biochemistry
"Fluoride The Aging Factor", 1993.

"...I've been trying to produce osteosarcomas (a rare bone cancer) in animals for almost 20 years and the only luck I ever had was with an experiment in dogs and monkeys and the osteosarcomas took nearly the lifetime of the animals and we were using radium which specifically produces that in bones and here we have a compound (sodium fluoride) commonly available, that did it in rats in two years or less."

3/19/95 radio interview with William Marcus, Ph.D., D.A.B.T., Senior Science Advisor, U.S. Environmental Protection Agency (EPA) - Office of Drinking Water (18 years).

"I know of absolutely none, and I mean absolutely no means of prevention that would save so many lives as simply to stop fluoridation, or don't start it where it is otherwise going to be started. There you might save 30,000 lives a year."

Statement made at a judicial hearing on 1/14/82 before the District Court of Texas (Borris County) by Dr. Dean Burk, Senior Chemist, National Cancer Institute and Director of the Cytotoxicity Section for 35 years.

William Marcus, Ph.D., D.A.B.T. (Toxicology), former U.S. EPA, Senior Science Advisor, Office of Drinking Water, Albert W. Burdick, Ph.D. (Organic Chem, Environ. Florida).

Robert J. Carlton, Ph.D. (Environ. Sciences and Risk Assessment), Paul Cornett, Ph.D. (Environmental Chemistry and Toxicology), Richard Foulkes, M.D., F.R.C. (Consult. to Health Minist., BC, Canada).

J. William Hirzy, Ph.D. (Chemical and Risk Assessment), S.V.P., N.F.E.E. Environmental Protection Agency (EPA).

Robert L. Isaacson, Ph.D. (Neurobehavioral Science), Dist. Prof. David C. Kennedy, D.D.S., Int. Acad. Oral Med. and Toxicology.

Harold O. Kleschka, M.D., F.A.C.S. (Chir. Chair, of Bio-Medical, Inc.), Lemart Krook, D.V.M., Ph.D. (Paradology) Cornell Univ. and NYSC.

Richard A. Kunin, M.D., Pres., Soc. for Orthomolecular Health Medicine, Gene W. Miller, Ph.D. (Biochemistry and Toxicology), Phyllis Muller, Ph.D. (Pharmacology and Neurotoxicology).

John Colquhoun, B.Sc., MPhil, Ph.D., D.Sc., F.R.S., F.R.C. (Dent.), New Zealand, John A. Yamouyannis, Ph.D. (Biochemistry).

Nancy Appleton, Ph.D. (Clinical Nutrition), A.K. Sushie, Ph.D., F.A.S. (Histochemistry), Benedek J. Gallo, Ph.D. (Biology), Research Microbiologist.

Norman R. Mancuso, Ph.D. (Chemistry), Apollo Project Scientist, Andrew Berns-Hicks, Hazardous Substance Engineer, C.A.B.P.A.

Jason Kupperman, B.C. (Chemical Engineering), Rudolph Zieglerbecker, Ph.D. (Physics) Inst. of Environ. Hlth, Austria.

M. A. Krubler, M.D., Hemochromatosis Foundation, Albany, N.Y., Alfred J. Murray, M.S.T. (Chemistry).

Mark Oleszewski, Ph.D. (Mathematics), John J. Miller, Ph.D. (Biochemistry), Paul H. Phillips, Ph.D. (Biochemistry), Kaj Roholm, M.D., Ph.D. (Biochemistry), Hubert A. Arnold, Ph.D. (Math) UC Davis.

James W. Benfield, A.B., D.D.S., F.A.C.D., Eugene Peterson, Ph.D. (Chem. Eng.), UC Berkeley.

Cornelius Steelink, Prof. Emeritus Chemistry, John Thomson, Ph.D. (Biochemistry), D. Skinner, B.Sc., M.D., C.A.F.C.I.

Richard Manna, Ph.D. (Physics) UC Berkeley, Laura Nader, Ph.D. (Anthropology) UC Berkeley, D. W. Hansen, Ph.D. (Chem. Eng.) UC Berkeley.

C.J. King, Ph.D. (Chem. Eng.), J. B. Nalands, Ph.D. (Biochemistry) UC Berkeley, Giovanni Amas, Ph.D. (Biochem.) UC Berkeley, Alexis T. Bell, Ph.D. (Chem. Eng.) UC Berkeley.

G.A. Samorod, Ph.D. (Chemistry) UC Berkeley, Henry Cheung, Ph.D. (Chem. Eng.), Thomas M. DeStefano, A.B., D.D.S.

Harold S. Strauss, Ph.D. (Molecular Biology), Gaudrey, D.D.S., Ph.D. (Botany) A.R.C.S., Frederick I. Scott, B.S., M.S., Chem. Eng.

Thomas D. Hensley, Prof. of Soil Ecology, Roy E. Harford, M.D. (Phys. and Surgery), Stanley Monsteth, M.D., Ortho. Surgeon (ret.).

John R. Lee, M.D., J.C. Smart, Ph.D. (Chem.) UC Berkeley, Gerard F. Judd, Ph.D. (Chemistry).

Gerson Jacobs, M.D., Michael F. Zill, D.D.S., Harvey Petrosky, M.D., Robert J. H. Mott, D.D.S., E. R. Cooper, M.D., C. T. Betts, D.D.S., J. E. Waters, D.D.S., Eben London, D.D.S., Edward A. McLaughlin, M.D., Philip E. Zantaghi, M.D., George W. Heald, D.D.S., Charles Olson, D.D.S., L.D.S., Leslie A. Russell, D.M.D. (Dentist), Casimir R. Short, D.D.S., Jonathan Forman, M.D., Ross Pringle, D.D.S., A. B. MacWhinnie, D.D.S., A. C. Bauman, D.D.S., Kirk Youngman, D.M.D., L. A. Allen, M.D., Paul W. Sheeran, D.M.D., Robert Davis, D.D.S., William J. Flann, M.D., Dean Gunk, Ph.D. (Biochemistry) Fmr. Senior Chemist and Director - Cytotoxicity Sec., Natl. Cancer Institute.

Harold Warner, Prof. of Research, Chief, Biomedical Eng. Div., Sheila M. Gibson, M.D., B.Sc., M.F. Horn, (Research Physician), James B. Patrick, Ph.D. (Chemistry), Antibiotics Research.

L.R. Mann, Senior Lecturer in Endocrin. Studies, U. of Auckland, Bruce J. Spittle, Ph.D., Psycho. Med. U. of Otago Med. Sch., New Zealand, George L. Waldbott, M.D., founder - Int'l Soc. for Fluoride Research and J. Fluoride.

Alfred Taylor, Ph.D., Research Scientist, Clayton Fed. Biochem. Inst., Ludwig Gross, M.D., FRC, Chief of Cancer Research - Vol. Admin., N.Y., Dr. Daniel Ziskin, Chf. Diagnostician - Columbia Sch. of Dentistry, Geoffrey E. Smith, L.D.S., R.C.S. Dental Surgeon, Philip R. N. Sutton, D.D.S., L.D.S., F.R.A.C.D.S., Brian A. Drenth, Ph.D. (Biochemistry and Toxicology), John P. Flaherty, Chief Justice, Supreme Court of Pennsylvania, Simon Belsler, M.D., Chief of Urology, Roosevelt Hosp., N.Y., Miloslav Nostal, MSc, Ph.D., Prof. of Biostatistics, U of Calgary, Fred Segars, M.D., Head of Oral Surgery, Lenox Hill Hosp., N.Y., John Garlock, M.D., Consulting Surgeon, Mt. Sinai Hosp., N.Y., Edgar A. Lawrence, M.D., Dir. of Medicine, Lenox Hill Hosp., N.Y., Girard F. Obarrador, M.D., Dir. of Otolaryngology, Lenox Hill, N.Y., Frederick B. Exner, M.D., Fellow of the Am. Col. of Radiology, Charles C. Bass, M.D., Dean Emeritus, Tulane Univ. Med. Sch., Alton Ochener, M.D., Chief, Dept. of Surgery, Tulane Univ. Med. School, Jeyal W. Taylor, D.D.S., Michael Oberstad, D.D.S., Shendon B. Marasas, D.D.S., Scott McAdoo, D.D.S., Tony Lees, B.D.S., Dental Surgeon, Frederick W. Howe, D.D.S., Elisworth C. Foreman, D.M.D., Robert D. Stephan, D.D.S., Carl Westman, D.D.S., Hans Modgenburgh, M.D., Peter Mansfield, M.D., William F. Corell, M.D., F. Logan Stanfield, M.D., Julian Whitaker, M.D., Robert C. Atkins, M.D., James A. Paar, M.D., Kenneth H. Rudolph, M.D., Jonathan Wright, M.D., John McDougall, M.D., John R. Lippendahl, Jr., D.D.S., Hal A. Hoggins, D.D.S., Herbert H. Robinson, D.D.S., James P. Hammond, M.D., Philip Sukel, D.D.S., Delosa E. Winkler, Ph.D. (Chem.).

This is a partial list.

"Above allusions are listed for identification purposes only and do not imply written endorsement or support.

Esteemed Quotes

"The Public Health Service unfortunately has locked itself into a position where it has made this statement on the record that there is absolutely no hazard to fluoridating public water supplies. If the Public Health Service was proved wrong, what would people think about the Public Health Service in all the other things they are doing? It's a very pathetic situation, unfortunately."

Statement made by Ralph Nader at a press interview in Sioux Falls, S.D., on November 2, 1970.

"Our members' review of the body of evidence over the last eleven years, including animal and human epidemiology studies, indicates a causal link between fluoride/fluoridation and cancer, genetic damage, neurological impairment and bone pathology. Of particular concern are recent epidemiology studies linking fluoride exposures to lower IQ in children."

Letter dated 7/2/97, to Citizens for Safe Drinking Water from J. William Hirzy, Ph.D., Senior Vice-President of Local 2050, N.F.E.E. which represents, and is comprised of the scientists and other professionals at the U.S. Environmental Protection Agency (EPA) headquarters in Washington, D.C.

"Whether or not the early studies were valid, new evidence strongly indicates that water fluoridation today is of little if any value. Moreover, it is now widely conceded that the main action of fluoride on teeth is a topical one (at the surface of the teeth), not a systemic one as previously thought, so that there is negligible benefit from swallowing fluoride."

John Colquhoun, B.D.S., Former Principal Dental Officer, Auckland, New Zealand. Article: "Why I Changed My Mind About Fluoridation", Perspectives in Biology and Medicine - Vol. 41.1, Autumn 1998.

"Bone specialists I've talked to assure me that fluoride not only hinders the normal formation of healthy new bone, but by creating crystals of calcium fluoride, actually produces new bone of inferior quality. My advice to you is that if your water isn't fluoridated and your local government comes along and wants to fluoridate it, you should yell like hell!"

Robert C. Artas, M.D., Health Newstender, March, 1974 (Vol. 11, No. 2).

3 U. of C. kidney patients die

5 others have allergic reactions to dialysis treatment

By Jerry Crimmins
TRIBUNE STAFF WRITER

Three women died Friday after they received kidney dialysis treatments at an outpatient facility operated by the University of Chicago Hospitals, and patients who undergo dialysis there have been told to use other sites, hospital officials said.

Five other patients, out of a total of 20 who underwent kidney dialysis Friday at the same outpatient center, at 1164 E. 55th St., suffered an allergic reaction described as itching and hives. They were admitted to the U. of C. Hospitals for observation, said Susan Phillips, hospital vice president.

"We ... will be working around the clock to determine the cause

of this tragedy," said Ralph Muller, president of the U. of C. Hospitals.

The names of the women who died were not released pending notification of family. The Cook County medical examiner's office is investigating the deaths.

A hospital statement said all three patients who died "suffered from end-stage kidney disease and had multiple, additional complex medical conditions, including advanced heart disease."

Two of the women who died received their dialysis treatments between 6 and 9 a.m. and the third between 9:30 a.m. and 1:15 p.m., the statement said.

The first woman, age 78, died in the waiting room at the 55th Street dialysis center at 10 a.m.

The second, age 58, returned home before she began to feel ill and was taken to Jackson Park Hospital, where she died.

The third, age 80, went into heart fibrillation in the ambulance that takes her to and from dialysis. She was pronounced dead at 4 p.m. in the emergency room at Bernard Mitchell Hospital, part of the U. of C. complex, hospital officials said.

People whose kidneys have stopped working undergo dialysis about three times a week to remove accumulated toxins from their blood. In the process, Phillips said, a patient's blood is run through a series of filters in the dialysis machine, and the blood "is essentially washed and goes back into the patient."

Fluoride blamed in dialysis deaths

By Jerry Crimmins
TRIBUNE STAFF WRITER

The deaths of three kidney dialysis patients who used the same dialysis center operated by the University of Chicago Hospitals July 16 were caused by "acute exposure to excess fluoride in the water" used for the treatment, a preliminary investigation has determined.

U. of C. officials announced that finding Friday in the midst of their investigation being conducted in cooperation with officials from the Centers for Disease Control and the Illinois Department of Public Health.

Three women died and six other kidney patients suffered an allergic reaction after they underwent dialysis July 16 at the U. of C. dialysis center at 1164 E. 55th St.

The levels of fluoride found in the dialysis water system at the

center were "very high," much higher than that found in Chicago's drinking water, hospital officials said. They said the system used to filter fluoride out of the tap water used for dialysis apparently had failed.

The excess fluoride caused heart failure in the three who died because it interfered with the body's electrical system, which makes the heart beat, said Susan Phillips, hospital vice president.

Those who suffered an allergic reaction were admitted for observation to the U. of C. Hospitals and subsequently released.

Phillips said Chicago area residents who drink tap water with a small amount of fluoride added to prevent tooth cavities have no reason to worry.

A person who drinks a lot of water might drink about two quarts a day, she said, or 3% gal-

lons of water per week. In contrast, kidney dialysis patients use about 300 gallons of water per week, she said.

"Because dialysis patients are exposed to high volumes of water these patients can accumulate potentially harmful amounts of fluoride if the water is left untreated. Consequently, dialysis water systems have special equipment to filter out fluoride," said the hospital's statement.

But at the dialysis center on 55th Street, the filtering process for some reason did not work, and instead high concentrations of fluoride were released into the water used by the patients, the statement said.

"This tragedy has deeply affected every one of us at the hospitals, and our hearts go out to the families of those patients who died," said Ralph Muller, president of the U. of C. Hospitals.

CHICAGO SUN-TIMES, SATURDAY, JULY 31, 1993

Fluoride Blamed in 3 Deaths

By Gary Wisby
Staff Writer

Fluoride poisoning was blamed Friday in the July 16 deaths of three dialysis patients at the University of Chicago Hospitals.

Hospital spokeswoman Susan Phillips said symptoms suffered by the victims—and by six other dialysis patients who developed symptoms similar to allergic reactions—"were consistent with fluoride exposure."

Traces of the chemical were found in patients' blood serum and in water samples taken at the

Traces Found in Blood of U. of C. Dialysis Patients

Phillips said.

Small amounts of fluoride are added to city water to help prevent tooth decay. A series of devices used to purify the water used for dialysis somehow failed to do so, Phillips said.

Hospital president Ralph Muller said, "We will continue our investigation."

The finding was confirmed by the federal Centers for Disease Control in Atlanta, which is assisting in the investigation along with

ment. In addition, samples were tested by laboratories from around the country, Phillips said.

The victims were Beulah Wynn, 56, of the 1400 block of East 69th Street; Ardelle Bell, 78, of the 6200 block of South King Drive; and Mattie Lee, 80, of the 7200 block of South Euclid Avenue.

All suffered from advanced heart disease in addition to the kidney disease that necessitated the blood-cleansing dialysis process.

Exposure to high fluoride levels

of water are used in dialyzing kidney patients, they can accumulate harmful amounts of fluoride if the water is untreated.

Water cleanliness standards are based on exposure by healthy people to 14 liters a week. Dialysis patients use more than 300 liters a week.

The U. of C. Hospitals' water-purification system uses deionizers, reverse osmosis, water softeners and three filtration meth-

The 55th Street facility will be closed until the investigation is completed. Until then, its patients will be treated at the hospital, which has a separate filtration system, or a second off-site dialysis center.

Phillips said none of the hospital's 250 dialysis patients, who undergo the process three times a week, have canceled appointments since the deaths occurred.

The death rate for dialysis patients is 26 percent a year in Illinois. The rate at the U. of C. Hospitals fell from 17 percent in

Meagan Hoblet

From: Marcus Peccia
Sent: Wednesday, October 03, 2012 11:41 AM
To: Meagan Hoblet
Cc: Jeff Dietlin
Subject: Fwd: fluoridation
Attachments: LETTER mine.doc; ATT236032.htm

Meagan,

Please add to the binder.

Thanks!

Marcus

Begin forwarded message:

From: "Antionette Schippers" <aschippers@Cadillac-MI.net>
Date: October 3, 2012, 10:56:02 AM EDT
To: "Marcus Peccia" <citymanager@cadillac-mi.net>
Subject: FW: fluoridation

Please pass on. Thanks.
tiyi

From: Wayne & Cathy Justus [<mailto:justusoriginals@pagosa.net>]
Sent: Tue 10/2/2012 4:00 AM
To: Antionette Schippers
Subject: fluoridation

Dear Councilman Chipper,

Please read and share my attached letter with the rest of the council. It is of immanant importance for your health and that of your community.

Thank you,
Cathy Justus

Let me introduce myself. I am Cathy Justus from Pagosa Springs, Colorado. I have the sad distinction of owning the first horses to ever be diagnosed with "chronic fluoride poisoning" from artificially fluoridated municipal water. I have this distinction not because it hasn't been happening for years all over this world, but because vets, like doctors and dentists are not taught in their schooling the science, toxicology, and biochemistry of fluoride and what it does to the body. I know of this lack of training of proven science because I have made it a point, over the last 25 years, to talk to hundreds of these professionals. We have now lost 8 horses and 4 dogs to this virulent cumulative toxin. This was scientifically proven by the world's authority on fluoride poisoning at Cornell University in New York.

I come from a whole different perspective than you have heard from those speaking about fluoride. I watched and lived the hell of my beloved animals getting progressively sicker and ultimately dying as others are doing with their animals, their friends and their family without these so called experts knowing why. The difference is that I have a background in knowing the science behind this toxin. Despite the science, and truth, behind fluoride poisoning, I could not get our water municipality to acknowledge the growing amount of proven, damning science against fluoride consumption from 1985 until 2005. It was at that point that they knew, from the scientific proof I provided about our horses, that either they stop this mass medication without consent, or there would be a class action lawsuit.

There have been many lives lost and are being lost to the very same ills our animals succumbed to. Vets, like doctors, just diagnose the symptoms and then treat these symptoms instead of looking for the cause. Until the cause is addressed, the symptoms will progress. The ills caused by fluoride consumption is a very lucrative business practice and when approached with the truth, like I did with the 8 vets that were consulted, these medical professionals get bent out of shape and say, "We are the experts", period. How can a person be an expert when the truth about a subject was never taught to them nor have they ever done their due diligence to find the truth? A perfect quote that fits this situation is ***"It is hard to convince someone of something when their income depends on them not believing it"***. To add to that quote, ***"And when their job standings depends on them not believing it"*** which is the case with the Public Health Authorities. CDC and EPA. Both these quotes are, I have found, the case, with not only most dentists, doctors and veterinarians but also the ADA, AMA, CDC, U.S. Public Health Service, and the EPA. They promote whatever will benefit them, whether or not it is scientific or ethical. Look at the science. The facts plainly reveal this. In fact between 2003 and 2006 the EPA commissioned the National Research Council, the highest scientific group in the U.S., to review the recent science on fluoride. There were 12 scientists from around the world on this distinguished panel, 3 of which I have personally talked to and have corresponded with quite a bit. The amount of damning science this panel of scientists found against fluoride was unbelievable, including 23 recent studies showing fluoride consumption reduces I.Q. This review has been published into a 507

page book called "Fluoride In Drinking Water, A Scientific Review Of EPA's Standards" available through The National Academy Press www.nap.edu in Washington, D.C.

I have studied both sides of this issue. In the beginning when I had narrowed my horse's ills down to beginning when fluoridation began, I didn't want fluoridation to be the culprit. I knew that it would be harder to stop fluoridation than to change feed or any other causative agent. So I studied the pro side of fluoridation trying to convince myself it wasn't the fluoride causing the progression of my animals ills. In a very short time it was very obvious that a deception was being promulgated onto the public. I also studied old science from back in the 30s, 40s, 50s, 60s and 1970s that was in my Dad's medical library. I purchased the books "Fluoride The Aging Factor", "Fluoride, The Great Dilemma", "Fluoridation, Drinking Ourselves to Death", and read through web sites like www.FluorideAction.net, www.slweb.org and the peer reviewed manuscripts in FLUORIDE The Quarterly Journal of the International Society For Fluoride Research at www.fluorideresearch.org which reiterated the old science I had read and furthered this damning information of fluoridation. When the book "The Fluoride Deception" came out, my suspicions were proven time and time again as I read this book, which was full of fluoride science, truth, and proven recently declassified top-secret government documentation. One third of this book is documented science and history. The ills described paralleling those my horses were showing were too similar to ignore. Now there is a new book, "The Case Against Fluoride" How Hazardous Waste Ended Up In Our Drinking Water and the Bad Science and Powerful Politics That Keep It There" by Dr. Paul Connett, et al, that has all the recent science backing this title and what I am saying with researchable references.

I was raised to be independent of the good or bad opinions of others, to listen and to then do my own research and come to my own conclusion. I was also taught to never be swayed by other's words and especially when there is the possibility of these others to profit from what they say and promote.

My favorite quote is, *"You simply must not ignore the facts because of your preconceived notions"* Dr. Max Gerson. By saying something over and over and saying it with authority, like the USPHS, CDC, EPA, ADA, etc. have for over 60 years about fluoride's safety and efficiency, does not make what they say true, nor does it change the fluoride damning true science proven in over 60,000 world wide independent research studies. These so called self-proclaimed experts just count on you not doing your due diligence and taking their word as the gospel. These agencies promote and market fluoridation disregarding the importance of FDA drug regulatory approval being totally missing and the fact that there are no scientific safety studies that have been done in the case of the fluoridation product. They disregard this lack of FDA approval, which shows their lack of concern to protect the public. No high quality studies are ever provided by them to support their claims of either safety or efficiency because there are none. They just count on you depending on their letters after their names as proof of their knowledge.

Our water municipality started fluoridating in 1985. Up until that time our animals were well. When fluoridation started, all our horses and dogs started getting many and varied

ailments that seemed to have no connection to each other. We ultimately had 8 veterinarians, two of which were at Colorado State University when we took two mares there, tell us they had no idea what was causing these ailments nor why they were being added to and getting progressively worse as time went on. They were confused but eager to get paid to treat these many and varied symptoms.

We moved to Pagosa Springs in 1978 from Fallbrook, Calif, knowing that the clean air and water would be a great place to raise our Quarter Horses. And it was a perfect place for that until fluoridation started. As an important point, we are just below the source of our water, the Continental Divide, San Juan Mountains. This water is considered one of the top 3 cleanest in the U.S. without contaminants and then they started adding *hydrofluorosilicic acid* to artificially fluoridate it and the ills in our town started and grew over the years, not just in animals but humans too. The amount of heart attacks, arteriosclerosis, cancer, thyroid problems, dental fluorosis, kidney problems, etc., became rampant in humans and animals.

The first symptom to manifest in our horses was chronic colics. Fluoride ingestion has been shown through proven science to change hydrochloric acid, meant to help digestion, into *hydrofluoric acid*, which can eat the stomach lining and cause such problems as acid reflux, digestive problems and ulcers. Colic in horses is deadly and is the number one killer of horses in America. Being well over 65% of America is fluoridated, no wonder this ailment is so rampant in horses. Colic would strike any of our horses at any time and this happened often. This symptom continued until we started hauling clean, unprocessed river water in 2004. That was the only change to bring upon this ceasing of colic. We have not had a single colic since. And didn't have a single colic before 1985 when fluoridation began. Every horse we purchased during fluoridation, that we boarded or that was raised here, became sick. The symptoms were many and varied. Here are just a few. Colic, cancer, skeletal problems, osteoporosis, muscles and ligaments hardening, skin allergy, reproductive problems, deformed fetus', abortions, thyroid problems, abscesses, head shaking, neurological problems and seizures, hormone problems, malocclusion of teeth, dental fluorosis, gum recession, teeth chipping and breaking, kidney problems, equine metabolic syndrome, laminitis, malformation of hooves, Cushing's disease, chronic coughing and lung problems, early onset of puberty, Alzheimer's, bone spurs, arthritis, heart attacks, fibromyalgia, and the list goes on. Take a look at many of these symptoms from the human perspective and see just how many of these ailments have been multiplying in incidence in humans over the last 60 years since fluoridation started, without the so called experts being able to tell what is causing them. They just keep dispensing drugs and doing surgery, two very lucrative actions. And when a patient dies they name the symptom and just move on to the next patient. Fluoridation has a very good record of producing these patients.

In the fall of 2004 we lost yet another mare. One of the two that had been taken to Colorado State University. It was the straw that broke the camel's back. I had done my due diligence researching the possible causes for these ills but nothing but one thing, fluoride, had been proven to cause them all. Up until this time, it was my theory that fluoride was the culprit, after years of intense research on my own. My many years of

research of some of the over 60,000 world wide independent scientific research studies had brought me to this conclusion. I was able to contact Dr. Lennart Krook, DVM, PhD., Emeritus, from Cornell University in New York. He was well known as the world's authority on fluoride poisoning in animals. I told him the many and varied symptoms my horses had and he said that all had been scientifically proven to be caused by fluoride but he would not give me a diagnosis without scientific proof. He said he needed bones and teeth. You can see the resulting necropsy and tooth report in color at www.myspace.com/poisonedhorses. Dr. Krook said the ills and deaths caused by fluoride consumption by my horses and others in our town shows that **"Horses are like the canaries in the mines"**. *What showed up in them over the years of fluoridation in our town, is manifesting in humans too, just slower because horses drink so much more water in a much shorter time frame.* This poisoning of humans is also mirroring my horses in the sooner manifestation of ills with each generation. Look at the children with arthritis, cancer, early onset of puberty, kidney problems, etc. When I was young I knew no young person with these problems. Now it is rampant. There are even hospitals just for children with cancer and other diseases like these. I know fluoride is not the only cause of these many diseases in humans, but fluoride is the number one most consumed and absorbed toxin. That puts it at the top of the heap for damage done.

A small part of my fluoride horse hell, up until 2006, is told in the documentary DVD "Poisoned Horses". It can be seen at www.youtube.com/watch?v=7TwwwNZyRVOA& It can be purchased from the International Academy For Oral Medicine and Toxicology. 8297 ChampionsGate Blvd, Ste.193, ChampionsGate, FL 33896. (863)420-6373. I would also suggest their two DVDs with multiple documentaries about fluoride toxicity with interviews of scientific research experts called "Let The Truth Be Told" volumes 1 and 2. The DVD called "Professional Perspectives" can be purchased from www.fluorideAction.net It contains interviews from many fluoride scientists including 4 that were on the National Research Council's 3 plus year review of the recent science on fluoride that the EPA commissioned. The EPA has pretty much ignored the recent science this NRC review produced and their recommendations. Why? It didn't reveal what the EPA wanted. The results didn't support their many years of promotion of fluoridation, which puts them squarely in line for litigation along with the whole chain of command down the line directly to commissioners and the water municipalities.

Of course the story didn't end when fluoridation ended in Pagosa Springs. Just before the documentary, Poisoned Horses, was released we lost Skipper. This is told at the end of this documentary. What isn't told is that Skipper had huge cancerous tumors in his lungs, and his kidneys were full of cancer. According to the California EPA there is enough **arsenic** in the product used to artificially fluoridate municipal water, sodium fluorosilicates, to kill people of lung, kidney, and bladder cancer. Skipper had two of these cancers. He was only 9 years old. The two surgeons and pathologist who did the necropsy said the kind of cancer he had was very slow growing and, no doubt, had started by the time he was a yearling. He was born in 1999. Skipper was second-generation consuming fluoridated water so his fluoride caused ills came sooner and in fact he was born with many. Look at the children with the above mentioned ills these days. Why? Could it be from the consumption and absorption of fluoride, well known in true science

as a very potent poison? Could it be that we are now several generations post the start of fluoridation so the toxicity is greater and this is the main reason America is getting sicker? Fluoride is the number one most consumed toxin, far and above any other toxins since fluoridation started 60 years ago and it is not just in many water systems but also in foods and pesticides and Teflon cooking pans, etc. Go to the site "Fluoride In The National Food Supply" at <http://www.ars.usda.gov/Services/docs.htm?docid=6312> and add up a typical days menu. Then tell me that you find it necessary to put fluoride into the municipal water to bring the general public's ingestion of fluoride up to the "so called optimal" 1 ppm. We are already being overdosed with fluoride through processed food, beverages, etc.

Follow the money to be made from illness caused by fluoride consumption. Follow the money to be saved by the fluoride polluting industries that produce this toxic waste they call a "toxic soup", by convincing you to put it into our municipal water and letting us and our beloved animals carry it to their early graves and slowly but surely polluting the environment. It would cost these industries over \$7,000.00 a truckload to dispose of this same toxic waste at an A1 toxic dump for the worst of the worst toxins. Instead they, I have no doubt, pay lobbyists, the ADA, the CDC, the Health Departments and the EPA lawmakers to promote it and they get help by these agencies miss placed authority given them by those who would believe their lies. And at the same time saving the fluoride polluting industries billions of dollars in disposal costs.

Fluoridation has been touted by many agencies as "one of the top 10 health care advances in the 20th century". One should note that this quote was written by a dentist, who will benefit monetarily from this practice from the damage done to teeth and gums. His co author was an environmentalist. Neither of these people are scientists. Neither of these people had ever written a scientific paper ever before, and this paper was never peer reviewed. This quote has no validity other than saying these two people's personal opinion. Despite this, the so-called authorities, all of which benefit monetarily for the promotion of fluoride, have taken this statement and repeated it time and time again as the gospel and scientific truth by using the promotional advertising practice of saying it with authority will make everyone believe it and eventually make what they say fact, whether proven or not.

The Federal government has never appointed a tracking agency to gather and report fluoride consumption's side effects, like it has for all other drugs. Why is this? So the detrimental effects must be searched out. The ADA, CDC, EPA, USPHS have used the ridiculous lie that, *if you don't look, you won't see, and therefore the science doesn't exist. They say the antis have no science to back up their warnings. Yet another lie.* Plus the amount of fluoride consumed by each individual cannot be regulated by it being put into the water systems. This fact is a "no brainer". These agencies don't expect you to think about this either. There will be those, like babies, who will drink far more liquid in comparison to their body weight. And those with renal problems, such as diabetics and those with heart problems and the elderly, whose kidneys cannot filter out up to 50% of the fluoride consumed as healthy people can.

In 2010, in February, we lost Skipper's full brother, Win, to a massive heart attack. Yes fluoride has been proven many times over to cause heart and artery damage and arteriosclerosis, the number one killer in the U.S. He was only 12 years old. He too was second-generation drinking artificially fluoridated drinking water. He too, like Skipper was born with physical problems caused by fluoride absorbed during gestation from his mother's consumption of artificially fluoridated water. Win was born in 1998. While his dam was nursing Win, Skipper was being gestated. So their dam was drinking up to twice the amount of fluoridated water to nurse Win while Skipper was being gestated. Fluoride has been proven to not go into the milk but it does pass through the placental barrier, so Skipper was getting a huge amount of fluoride deposited into his bones and system before he was even born. No wonder his health was worse when he was born and he died earlier than Win.

Win had also developed Fibromyalgia from the poisoning by the toxins in the fluoride product. We found a vet who specialized in toxins who found not only fluoride toxicity but also arsenic, mercury, lead, cadmium, beryllium, and even radio-active poisoning in Win's system. The industries that produce the fluoridation product call this product they send you to artificially fluoridate municipal water a "toxic soup" because it contains all these carcinogens. This product is only between 17% and 23% fluoride. The rest consists of the toxins mentioned above. The radio-activity and other toxins comes from the phosphate rock dug up for phosphate fertilizer. This very same phosphate rock is dug up for radio-active uranium too. This toxic soup is then sent to water municipalities for a cheap source of fluoride and these industries don't have to spend the billions of dollars it would cost them to dispose of this unwanted and non usable toxic soup. Instead they pay off officials and self-appointed experts who gain monetarily from the ailments caused, money hungry to promote and convince water municipalities to put this poison in the water. When water is fluoridated, we all get to carry it to our early graves with most people's last years being plagued with ill health. Again, follow the money. Who is profiting? Those who promote fluoridation.

Recently, since hurricane Katrina knocked out many of the phosphate industries, the fluoride product being used in a lot of U.S. communities is now coming from China. This now puts fluoridating with this product in a whole new problem of being a **National Security issue**. No one in their right mind would allow any other country access to their water systems, especially a country that we are not in very good terms with and has a track record of sending us products tainted with toxins. Recently there was a scientific group in Boulder, Colorado who did research on this imported fluoride product and they found ingredients in it that they still don't know what they are. And this is being put in our drinking water? Where has common sense gone?

I think here is where I need to tell you how fluoride is capable of doing such a hugely diverse amount of damage to the body. Fluoride research in true science, not arguable by either side of this issue, reveals that fluoride is just slightly less poisonous than arsenic and more poisonous than lead and cumulative like lead. It is a systemic poison, disturbing and changing mechanisms of the body at the very core of life. It has been scientifically proven that fluoride changes the DNA by breaking it's protein bonds.

Fluoride changes the mineralization system, known as the collagen system that is supposed to know to keep the skin soft and the bones hard. It pulls calcium (calcium) out of the bones and teeth and replaces with fluoroapetite (fluoride) making the bones harder and more crystalline, therefore being more likely to break. Look at the hip fracture rate in the U.S. With the calcium replaced by fluoride in the bones, the body needs to put it somewhere so it finds places like the veins and arteries (cholesterol and hardening of the arteries), kidneys and bladder (as stones), cartilage (arthritis) and so on. All these problems are increasing in the U.S. including in children. Fluoride kills enzymes and changes their shapes so they don't fit into their receptors. Enzymes are needed to catalyze every metabolic system and function in the body. The easiest to see outward sign of this enzyme disruption is dental fluorosis, the mottling, brown and white spotting, and pitting of the teeth. This happens when the fluoride is consumed during the time of the tooth bud's formation. This disturbance, changing of shape and killing of these tooth forming enzymes results in the dental fluorosis mottling, brittleness and malocclusion of teeth when they erupt. For the USPHS, ADA, CDC, EPA to say this is merely a cosmetic effect shows their ignorance and ignoring of the science that has proved this biological action of fluoride. Dental fluorosis is the outward showing of a **systemic poisoning of the whole body**, not just the teeth. In the U.S., the CDC has now said that 41% of 12 to 15 year olds has dental fluorosis. When anything is consumed, it has side effects. This is very clear in any of the commercials seen today about drugs. Fluoride also displaces iodine needed for the thyroid to make thyroxine that regulates many of the body's systems and hormones. And the list goes on of the biological disturbances that fluoride consumption and accumulation has been proven scientifically to cause. Being fluoride is a systemic toxin, disturbing at the very core systems of life, it can cause virtually any chronic degenerative disease *depending the individual's inherent weakness*. Just these mentioned above disturbed mechanisms alone are, I would think, enough to stop fluoridation. But *if you don't see or find the science, the science doesn't exist* seems to be the working orders for these organizations that push the practice of fluoridation. Or in other words, *don't look for the science and it won't exist and you can honestly say so*. This has been proven time and time again in legal cases and the so called experts have been made to look like idiots because of this lack of real proven science to support their "endorsements." When asked to openly debate with those who know the proven science, these so called experts will refuse to show up for this reason. They know nothing of what they say they know. And remember, endorsements are not science. They are merely opinions by those whose job and or income depend on what they say.

We have been asked, if fluoridation stopped in 2005 and we started hauling clean unprocessed river water in 2004, why are our horses still sick and dying? Common sense and a little research would explain that **fluoride is a cumulative toxin**. It accumulates in the bones. Bone cell turn over is the slowest and can take many, many years for these poisoned cells and accumulation of fluoride to release. While at the same time, as long as this toxin is in your body it is progressively poisoning your system. Fluoride poisons going in, poisons while trapped in your bones and poisoning when released during cell turn over.

We only have two horses left that had consumed the artificially fluoridated water. One is the gelding that developed the crooked pastern (front leg) shown in the Poisoned Horses DVD. He had a chronic cough while he consumed fluoridated water, besides having chronic colic. The coughs have almost completely stopped now. The colics stopped when he didn't drink the fluoridated water anymore. He has had what most would call Alzheimer's in humans, and has for many, many years. He didn't remember where he ate everyday among other things. It was sad but this symptom is slowly improving since his consumption of fluoridated water ceased 7 years ago. The other horse is the sorrel mare that had the weird allergy bumps all over her body shown in the DVD, Poisoned Horses. We have bred her three times to two different stallions. She has conceived all three times. By 60 days she has lost the babies. She is only 10 years old now. She also still has thyroid problems caused by her fluoride consumption. Both of these horses have dental fluorosis and gum recession. The gum recession is caused by the shrinking of the alveolar bone, the bone that the teeth hook into, which shrinks when fluoride is deposited into it through fluoride's accumulation and the gums are pulled up with this bone shrinkage. The incidence of gum disease and gum recession is yet another growing problem in the U.S. population.

The horses we have purchased since we started hauling clean river water in 2004 and when fluoridation ceased in 2005 have remained healthy without a single ailment that all the others had manifested. Never allowing them to consume artificially fluoridated water is the only thing that has been changed since then. We are feeding the same feed and the same supplements.

And then there is the issue of pollution. The very product, hydrofluosilicic acid, if it gets spilled into the air, land, ocean or waterways, is considered by the EPA a toxic waste very hazardous product and must have people in hazmat suits called in to clean it up immediately. Yet when this very same hazardous waste is put into our municipal water, it suddenly becomes a product that is good for us. This is an impossibility, yet most have been convinced by the mantra, "safe and effective and good for your teeth" by 60 years of this being said. I ask that you go to <http://www.wqad.com/videobeta/9e389127-335a-426e-b690-b1db6b88e3f2/News/Hazmat-Called-To-Rock-Island-Water-Department-Building> and see the hydrofluosilic acid used to fluoridate municipal water eating through the concrete and they still say it's safe. And remember that 99% plus of this toxin put into the municipal water goes into the environment through household use, flushing toilets, showering, watering lawns, etc., slowly accumulating and poisoning our earth and all that inhabits it.

There have now been an editorial and two **"peer reviewed scientific research manuscripts"** written on our horses. They can be seen in the Journal FLUORIDE, The Quarterly Journal of The International Society For Fluoride Research. www.fluorideresearch.org. This scientific journal is well known as the "fluoride bible". The editorial written about our horse/fluoride story is at www.fluorideresearch.org/391/files/3911-2.pdf. It is titled "Failure To Diagnose Fluoride Poisoning In Horses Caused By Water Fluoridation". The first peer reviewed manuscript is "Fluoride Poisoning Of Horses From Artificially Fluoridated Drinking

Water" www.fluorideresearch.org/391/files/3913-10.pdf. The second peer reviewed manuscript is entitled "Allergy In Horses From Artificially Fluoridated Water" at www.fluorideresearch.org/392/files/39289-94.pdf I would suggest you log onto this site and read many of the hundreds of peer reviewed scientific manuscripts from around the world on fluoride's toxicity. Many of these peer-reviewed manuscripts from this journal were referenced in the fluoride review of recent research by the National Research Council, the highest scientific group in the US, for their 3 plus year review of fluoride. Again, this NRC review by 12 world wide prestigious experts in the science of fluoride has been ignored by the EPA who commissioned this review. Why? No doubt because this review didn't find the benign findings about fluoride that previous biased government reviews did. *Follow the money*. This is the first review that had a very diverse panel of 12 scientists who had the expertise and knowledge to look at, and scientifically review the recent science on fluoride in an honest, nonbiased way. They also found credible science that shows fluoride damages the endocrine system, including the thyroid, causes osteoporosis, arthritis and cancer. All these are ailments that manifested in my horses and are increasing significantly across the US in humans. They also found very vulnerable subsets of the population to fluoride consumption like the elderly, the young, those with diabetes, and kidney malfunction and those who have immune system dysfunction and those who have mineral imbalances. The so called experts pushing this stupidity of fluoridation never take these subsets into consideration nor the rest of the bodily systems that fluoride harms. By what they say, they seem to think we are just big mouths full of teeth and nothing else.

These so-called experts never reveal that solid scientific proof of **fluoride stopping cavities has never been proven**. Common sense, if looked at, reveals that after 60 years of fluoridation, if it really worked, there would be very little dental decay in the U.S. People have just believed their superiors and trade organizations, the ADA and AMA, the CDC, US Public Health Department and the EPA telling them this lie. There has never been scientific proof that fluoride is a necessary element for the body either. Cavities don't come from lack of fluoride just as headaches don't come from lack of aspirin.

The Surgeon General has come out saying there is a "*Silent Epidemic*" of pit and fissure cavities. If fluoride actually worked as touted by these so-called experts, then taking fluoride into the body systemically, it would be incorporated into the teeth and saliva and stop all cavities even in the pits and fissures. If pit and fissure cavities are such a problem, then it must mean they think that these pits and fissures don't get fluoride deposited there and the saliva just skips over these pits and fissures and makes these places more susceptible to cavities. Give me a break! How dumb do they think we are? A lot of people use fluoridated toothpaste too and even that addition of fluoride is not working to stop this "silent epidemic". Fluoride doesn't work! Good nutrition and oral hygiene are what keeps you from getting cavities, not fluoride. And the CDC came out in 1999 saying fluoride's benefits are "*topical*". This means swallowing fluoride does not work.

The ADA, merely a trade union who's sole purpose is the financial gain of their members, nor any of their dentist members are licensed for internal medicine so for them

to tout a substance to be taken internally to do something medically, they are practicing medicine without a license. I have a letter from the Calif. Dental Association. It clearly states that "ingested fluoride is not within the purview of dentistry". So again, for dentists or the ADA to promote this practice of fluoridating municipal water, they are going beyond what they are licensed to do. They don't, nor will they ever, look at the systemic side effects of fluoride consumption. They don't want you to either. It would hurt their income if this scientific information got out as general knowledge. But this knowledge is getting out and their time is coming. In an ADA survey, they found that dentists working in fluoridated cities make 17% more income. In another survey it was found that of the 10 cities where dentists make the most money in the U.S., 9 were fluoridated. Why would this be? They get to whiten teeth with fluorosis, fix cracked and broken teeth, treat gum disease and recession, and do orthodonture, all created by fluoride consumption and absorption.

At our countywide forum put on by our water municipality to see what the populous thought about this issue, the state head of the Health Dept., the state Epidemiologist, the state fluoride expert and a local dentist came to give their side for the practice of fluoridation. What they touted about fluoride was "safe and effective and good for your teeth". The very same old mantra touted by all the pro side of this issue. These so called experts had no science to back them up. The well informed audience, who had done their due diligence and researched the science behind fluoride, ate these so called experts up and showed them for what they were.....followers of those in charge, spewing lies with written, practiced monologues. They had no science to back their words up because there is no credible science to do so, although they said "there are thousands of research studies showing fluoride's benefits". Saying it doesn't mean it exists. The same as saying those who are opposed to fluoridation have no credible science. Avoiding true science has always been a deliberate and chosen tactic of the promoters of fluoridation. They just keep touting their credentials and authority and expect you to fall for their untruths.

I also have a letter from the EPA saying the EPA has no safety research on the fluoridation product. So why do they continue to promote it? Follow the money and as Dr. Hirzy, PhD, past vice president of the EPA Union says, "They have a tiger by the tail and can't let loose". We have to be the ones who do the right thing and stop this stupidity.

Fluoridation has resulted in the unholy alliances between the ADA, USPHS, CDC, and the EPA lawmakers to now cover their rears for this stupidity and to keep the money rolling in thinking water municipalities and city councils are going to ultimately be the scapegoat. They are the ones who actually would be making the decision to fluoridate and doing the deed and putting this toxin in the municipal water. So they are the ones who will receive the brunt of the blame and liability, although this chain of command, right up to the top, will ultimately be named when the lawsuits ensue. They are very willing to leave the liability of ills and deaths caused by fluoridation in the hands of city councils and water municipalities. And they have a record of doing this in past lawsuits saying they were "just recommending fluoridation". It has been said that the pay-outs for

the ills and deaths from fluoride consumption is going to make the cigarette payouts look like peanuts. Everyone drinks water, not every smokes.

As far as the long list of organization endorsements the so-called experts wave in front of you and others, one must clear their mind and realize that endorsements are not science. Those two things are totally different things but the experts are counting on you not thinking this through. And in fact, the National Kidney Foundation pulled it's endorsement of fluoridation when approached by a lawsuit detailing the kidney problems fluoride causes. Not one of the organizations endorsing fluoridation has done any credible, double blind scientific research on the "side effects" of pharmaceutical fluoride put into toothpaste, let alone any health effects caused by the "toxic soup" product used to artificially fluoridate municipal water, which is an industrial waste product. The EPA even says they have no safety science about this product.

Again the ADA and AMA are simply and merely trade unions whose sole goal is to ensure the financial gain of their members. No wonder they endorse fluoride. It is well known in true science that fluoride ruins teeth and gums and causes dental fluorosis and other tooth problems and many and varied systemic health problems. Look at what it did to my horses teeth and bodies, and horses don't eat sugary things like humans do to ruin their teeth. JADA, The Journal of the American Dental Assoc., does contain research material but it is from outside the ADA and is always slanted towards their ultimate goals of producing income for their members. Their promotion of fluoridation is perfect for this goal. Research the source of these studies and you will find that these studies are paid for by those who will ultimately gain from fluoride's promotion. ***Science that knows the end result of the research before it is finished is not true science.*** This is what you see in pro-fluoridation manuscripts. Bad methodology, skewed results and fudged numbers. Paying for the end result wanted, is not science. Only in true science does the end result come without being manipulated to come to the end result wanted. Fluoride ingestion has been proven scientifically in "independent" research to cause dental fluorosis, need for braces from malocclusion of teeth, brittle teeth that chip and break, all by doing enzyme damage at the cellular level and all things the ADA and it's members profit from. Follow the money.

Why is it that on the back of all fluoridated toothpaste, it says "***if more than a pea size amount of toothpaste is swallowed, call the poison control center immediately***"? What is used in toothpaste is pharmaceutical grade fluoride, not the toxic soup put into municipal water. This safety warning is mandated by the FDA. Do you know that there is 1/4 milligram fluoride in that pea size amount of toothpaste and it has a safety warning? That 1/4 milligram is the same amount of toxic waste fluoride in one glass of water. Why is it that there is no safety warning on your water bill or water quality report for the 1 ppm of fluoride put into municipal water saying if more than one glass of water is consumed, call your poison control center immediately? Why is it that doctors suggest everyone drink 8 glasses of water per day, which would be a huge overdose according to the FDA's toothpaste safety warning? There is never a mention that if this water is fluoridated, that you should call the poison control center immediately?

You need to realize that 1ppm fluoride is *confusing the amount put into water with the dose consumed*. Just because you put 1ppm fluoride in the drinking water does not insure that everyone will only drink that amount. Those with any kind of kidney dysfunction, heart problems, diabetes, athletes, babies who drink far more liquids than adults when comparing weight to liquid consumption, and outside workers, etc., drink far more water than most. So these people can consume way more than the "so called" optimal amount of fluoride. This is just one of the reasons fluoridation is so ridiculous. ***You can't control the dose. I challenge you to think of a single other drug that is safe for everyone, no matter of age weight or medical conditions, can be consumed in any amount, and is recommended to be taken the rest of your life no matter your health changes.***

The EPA is the controlling agency for water and toxins. It has no authority for drugs or medications. That is the FDA's charge. Why is the EPA's policy of the promotion of fluoridation so different from the FDA's non-approval of any fluoride product meant for consumption? Why are the very same products, sodium fluorosilicates, said to be ok put into our drinking water for us to consume yet not ok if spilled onto the land, water-ways or ocean? The government agencies are not doing their job of protecting the populous and obviously not conversing with each other to get their stories and jobs in order.

Do you know that in 2006 the ADA came out with a memo to it's "dentist members only", that they should tell their patients that babies should not have their infant formula reconstituted with fluoridated water? Did you know that the CDC backed this up? But yet this has not gone out to the media. Why has this information not been put in water quality reports from water municipalities in fluoridated communities? Could it be that the so-called experts have again failed their job and just not told you?

Now, I do agree that giving people the choice if they want to use fluoridated toothpaste or other fluoride dentifrices is fine, even though I do not and would not use it because all fluoride is poisonous and cumulative. *Everyone should have the ability to choose what they want to use for their own health.* And these sources of fluoride are very cheap and a way to distribute these products could be easily done instead of forcing fluoridation on everyone. This could be done much cheaper than fluoridating the water, therefore putting the liability on the individual who chooses these sources of fluoride for themselves, as individuals, instead of on the city councils and water municipalities and all the agencies above them.

As far as putting fluoridation up for a vote of the populous, that again takes away individual rights. Millions of men and women have fought and died to retain our individual freedoms. Squelching these hero's ultimate sacrifice for our freedom by forcing a mass medication that some don't want is against our God given and Bill of Rights given rights as individuals?

During our discussions with our water municipality, they wanted to show us that naturally occurring fluoride was already in our water so it was ok to add more. Pagosa Springs is the first town that the water from the source, the mountains, gets to. There is

no source of fluoride or pollution before the water is taken directly from the river by our water department for our town. The municipality presented samplings of water collected all around our town from the multiple bodies of water and rivers. Downstream and in town, in the river, there was quite a bit of fluoride in the water. In lakes that had a lot of homes around them, there was quite a bit of fluoride in the water. In the samplings from the river that the municipality gets our water from, that runs through town, as they took samplings going up the river getting closer and closer to the mountains, the source of our water, the fluoride got less and less. Thus showing that, as has been proven many times in research, most of this artificially fluoridated water is not consumed, but goes into the environment through household use. In fact it has been proven that over 99% of this toxic waste ends up in the environment slowly accumulating and poisoning it. Again the EPA is not doing their job to protect us, nor the environment. This is a major double standard by the EPA promoting fluoridation. In fact, back in 1983, Rebecca Hanmer, the deputy assistant administrator for water at the EPA described the practice of fluoridation as *"an ideal solution to a long standing problem. By recovering by-product fluorosilicic acid from fertilizer manufacturing, water and air pollution are minimized, and water authorities have a low-cost source of fluoride available to them"*. This alone shows that common sense has flown out the window on this subject when it comes to government agencies. How stupid can these agencies be? Again, as Dr. Hirzy, PhD, past vice president of the EPA workers union (who wants fluoridation to cease immediately on the proven cancer research they have done alone) has said, "they have a tiger by the tail and can't let loose". He has said that the EPA's lawmakers seem to think that the solution to pollution is dilution. This stuff is still getting into the environment and if 99% plus is not consumed, where is it going? The environment, of course! Dr. Hirzy argues with the EPA lawmakers saying that "The public water supply should not be used as a means of getting rid of hazardous waste", and in his testimony before the U.S. Senate in 2000 he described Hanmer's views as "linguistic de-toxification". The EPA lawmakers, and other agencies, have promoted this toxin for far too long and if they admit what they know, the lawsuits are going to make the cigarette lawsuits payout look like peanuts and the government agencies are going to lose all credibility. Take a look at the lawsuits for ills caused by asbestos, DDT, lead in gas, and all the drugs once said to be "safe and effective" like VIOX and Phen Fen, and all those products with advertisements from lawyers on TV wanting people to come forward to sue because of ills and damage done by these so called safe and effective things. Lawsuits that are certain to ensue, and are ensuing with the many and varied scientifically proven ills caused by fluoridation.

Do you know that the EPA was started because of fluoride pollution and the making ill and killing of people, animals and the land? It was the Denora, Penn. incident, many, many years ago. This incident was caused by a weather inversion of effluent (toxic smoke) of the very same stuff captured by wet scrubbers and put into fluoridated water. You can read about it in the book "The Fluoride Deception" which is a must read for anyone involved in fluoridation. Again one third of this book is documented research material.

Have you read the story of how Dr. William Marcos PhD., the head toxicologist of the EPA, found that fluoride caused two very bad, but used to be rare cancers? He turned his

research into the EPA lawmakers who immediately downgraded his scientific results 4 points therefore nullifying his research. These EPA lawmakers are supposed to take the proven science from their scientists and make law on them to protect us, but that didn't happen then, nor is it happening now. Dr. Marcos started telling people about his findings, he was warned to keep quiet, his integrity wouldn't allow him to be quiet because he knew people were dying from the consumption of fluoride, and he was fired. He sued and won and the EPA was forced to rehire him. It was because of this pressure from the EPA lawmakers on their own scientists they are supposed to support, that the EPA Workers Union was formed. Now all eleven EPA Unions, over 7,000 scientists, lawyers, etc. have signed a petition and gone in front of a Senate Sub Committee and asked for a permanent moratorium on fluoridation on the cancer data alone they have found. Part of this filmed testimony is on the "Poisoned Horses" documentary. A very large part of this filmed testimony is on the first "Let the Truth Be Told" documentary series mentioned above.

Not only did we have the proven science from a world fluoride expert at Cornell University behind us when fluoridation was ceased here in Pagosa Springs, but we also made our water municipality realize that we do have a choice as to what we put into our bodies as individuals. We revealed to them a major court case, after 9/11, where the Federal government was going to force all troops to receive anthrax and other vaccinations. These drugs had not been FDA approved, same as has no fluoride product meant for ingestion ever been FDA approved. A lot of the troops refused these vaccinations and were court marshaled. It went to **Federal court and the final ruling was that no one, not even the Federal government has the right to force anyone to take into their body a non approved drug**. This case was Doe verses Rumsfeld. This court case has set a major legal president for future lawsuits including those about fluoridation and the ills it causes. Recently, in a national lawyer publication, it was revealed that people with ailments caused by fluoride consumption is a potential goldmine for litigation. The truth is becoming known.

The action of fluoridation is against all rules of pharmacology. No doctor is allowed to prescribe a drug to any of his patients without first seeing and diagnosing them and getting written consent on an individual basis. Then the patient can still refuse, even after this consent is signed. No doctor would prescribe the same medication to every patient, no matter their age, weight, personal medical situation, allergies, etc. Nor would he tell them to take as much as they like and take it the rest of their life as is done with fluoridated municipal water. For any water municipality to put a substance into the water solely for treating humans, as fluoridation is, they are **mass medicating, for medical purposes, with a substance never FDA approved for ingestion, by a non medical entity who has no medical license (water municipality and city council) without ever getting signed consent from each individual consumer and without knowing if anyone has an allergy or other medical problem that would make it even more toxic and deadly**. That is setting all those involved up for major lawsuits just on those merits alone. No licensed medical professional is allowed to do this. And there have been cases when the municipalities have been sued, they have asked the so called authorities that have pushed them into fluoridating or continuing fluoridation, to be expert witnesses in

court. These promoting, so called authority's answer has been in the past, that they were just recommending the council and municipality to fluoridate and would not testify leaving the council and municipality holding the lions share of the liability. **It is said that ignorance of the law is no sound defense to legal charges brought against you.** **This fact is the same that ignorance of the medical facts of the fluoride product being put into everyone's water source, is no defense either.** This is especially true when that information can be easily accessed. Believing the so-called experts would be called "hear say" in court. And remember that the Nuremberg Trials established the precedent that the statement "I was only following orders" does not hold water.

Please remember that when it comes to municipal water, the one and only job of councilors, of water municipalities and mayors is to deliver clean water to the populous, and to improve the quality of that water. Fluoridation does neither. Their job is NOT to medicate the population with a non-approved drug. Water fluoridation does nothing for the water quality. Fluoridation's only purpose is to medicate. Looks like fluoridation is a major liability lawsuit waiting to happen to me. And the lawsuits are increasing in number nation wide as we speak.

A new recent development is that a world wide insurance company has stated that they will not cover water municipalities or those who deliberately do something that has been scientifically shown to do harm, which includes approving and sending out fluoridated water to their customers. How many other insurance companies will follow suit? This again puts the liability squarely in the laps of those who promote it and deliver it as individuals and could very well void Directors and Officers insurance.

Another development is the question of "**Fluoridegate**". This scandal is widening with calls for hearings as new revelations highlight the fact that science is in conflict with official's promotions and statements on water fluoridation safety.

And another development is that fluoride trucks have been identified by our government as terrorist targets. If this stuff is benign, why is this true?

I am writing this because I am scared. I have seen personally, over many, many years, the devastating ills that fluoride is capable of doing to the body. You are seeing it too, you just aren't aware that fluoride is the cause and the self proclaimed authorities want to keep you in the dark while they pad their pockets with money made through suffering from fluoride consumption and accumulation. Please realize that by putting this toxic waste into municipal water, it is not only doing physical harm to living beings but also to the environment.

Please remember that we who are against fluoridation have nothing to gain but our health and freedoms and that of others and future generations and also the stopping of the poisoning of this wonderful planet we live on. Not so with the promoters of this toxin. Their pockets are growing full either from the gain of their jobs promoting this, or by treating the bad teeth, gums and internal ailments fluoride consumption creates. Again,

follow the money when it comes to these promoters. Read the book "The Fluoride Deception" by Christopher Bryson and the newly release book "The Case Against Fluoride" How Hazardous Waste Ended Up in Our Drinking Water and the Bad Science and Powerful Politics That Keep It There... by Dr. Paul Connett, Phd, James Beck, MD, PhD, and H.S. Micklein, Dphil. These book's truths about fluoride and fluoridation are backed up by recently declassified "top secret" government documents and peer reviewed scientific research. We who are against fluoridation are spending our precious time and resources trying to regain our rights given to us by God, the Bill of Rights, and those who have died to retain those freedoms. We should be able to decide, as individuals, what we take into our bodies. Please do the right thing, legally, morally, intelligently and integrally. Do what is necessary to stop this stupidity.

Thank you for your time in reading this.

Sincerely,

Cathy Justus
National Spokesperson Against Fluoride Poisoning In Animals
Palette J Ranch Quarter Horses
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(970) 264-4462
justusoriginals@pagosa.net

REFERENCE LINKS:

"FLUORIDE" The Quarterly Journal of The International Society For Fluoride Research
www.fluorideresearch.org

www.myspace.com Web site with lots of scientific information about our horses and others in Pagosa Springs

www.youtube.com/watch?v=7TwwNZyRVOA The short documentary called "Poisoned Horses" produced by Dr. David Kennedy, DDS and the International Academy of Oral Medicine and Toxicology

www.slweb.org/ftcrpersonalstories_cathy.html Our fluoride story until 2006

www.FluorideAction.net All the recent research and happenings world wide on fluoride

www.FluorideAlert.org

www.Slweb.org Go to bibliography and see over 75 pages of listings of damning proven independent science about fluoride.

www.SpotsOnMyTeeth.com Show the detrimental outward showing of the internal poisoning by fluoride consumption

www.KeepersOfTheWell.org Lots of information.

www.youtube.com/watch?v=a14crJyR-qc&feature=related Dr. Paul Connett, PhD, Chemistry seminar in Denver in September 2010.

www.youtube.com/watch?v=995000Y-CQjk My seminar along with Dr. Paul Connett, PhD, Chemistry in Denver in September 2010.

50 Reasons to Oppose Fluoridation

print

Introduction

Fluoridation is the practice of adding a fluoride compound to the public drinking water supply ostensibly for the purpose of fighting tooth decay. The levels used range from 0.6 to 1.2 milligrams of fluoride ion per liter. The practice began in the United States in 1945 and was endorsed by most U.S. medical and dental associations shortly thereafter. Very few countries, however, have adopted the practice to any significant extent. Only eleven countries in the world have more than 50% of their populations drinking artificially fluoridated water (Australia, Brunei, Chile, Hong Kong, Ireland, Israel, Guyana, Malaysia, New Zealand, Singapore, and the United States).

In Europe, only Ireland (73%), Poland (1%), Serbia (3%), Spain (11%), and the U.K. (11%) fluoridate any of their water. Most developed countries, including Japan and 97% of the western European population, do not consume fluoridated water.

In the U.S., about 70% of public water supplies are fluoridated. This equates to approximately 185 million people, which is over half the number of people drinking artificially fluoridated water worldwide. Some countries have areas with high natural fluoride levels in the water. These include India, China and parts of Africa. In these countries measures are being taken to remove the fluoride because of the health problems that fluoride can cause.

Fluoridation is a bad medical practice

1) Fluoride is the only chemical added to water for the purpose of medical treatment. The U.S. Food and Drug Administration (FDA) classifies fluoride as a drug when used to prevent or mitigate disease (FDA 2000). As a matter of basic logic, adding fluoride to water for the sole purpose of preventing tooth decay (a non-waterborne disease) is a form of medical treatment. All other water treatment chemicals are added to improve the water's quality or safety, which fluoride does not do.

2) Fluoridation is unethical. Informed consent is standard practice for all medication, and one of the key reasons why most of Western Europe has ruled against fluoridation. With water fluoridation we are allowing governments to do to whole communities (forcing people to take a medicine irrespective of their consent) what individual doctors cannot do to individual patients.

Put another way: Does a voter have the right to require that their neighbor ingest a certain medication (even if it is against that neighbor's will)?

3) The dose cannot be controlled. Once fluoride is put in the water it is impossible to control the dose each individual receives because people drink different amounts of water. Being able to control the dose a patient receives is critical. Some people (e.g., manual laborers, athletes, diabetics, and people with kidney disease) drink substantially more water than others.

4) The fluoride goes to everyone regardless of age, health or vulnerability. According to Dr. Arvid Carlsson, the 2000 Nobel Laureate in Medicine and Physiology and one of the scientists who helped keep fluoridation out of Sweden:

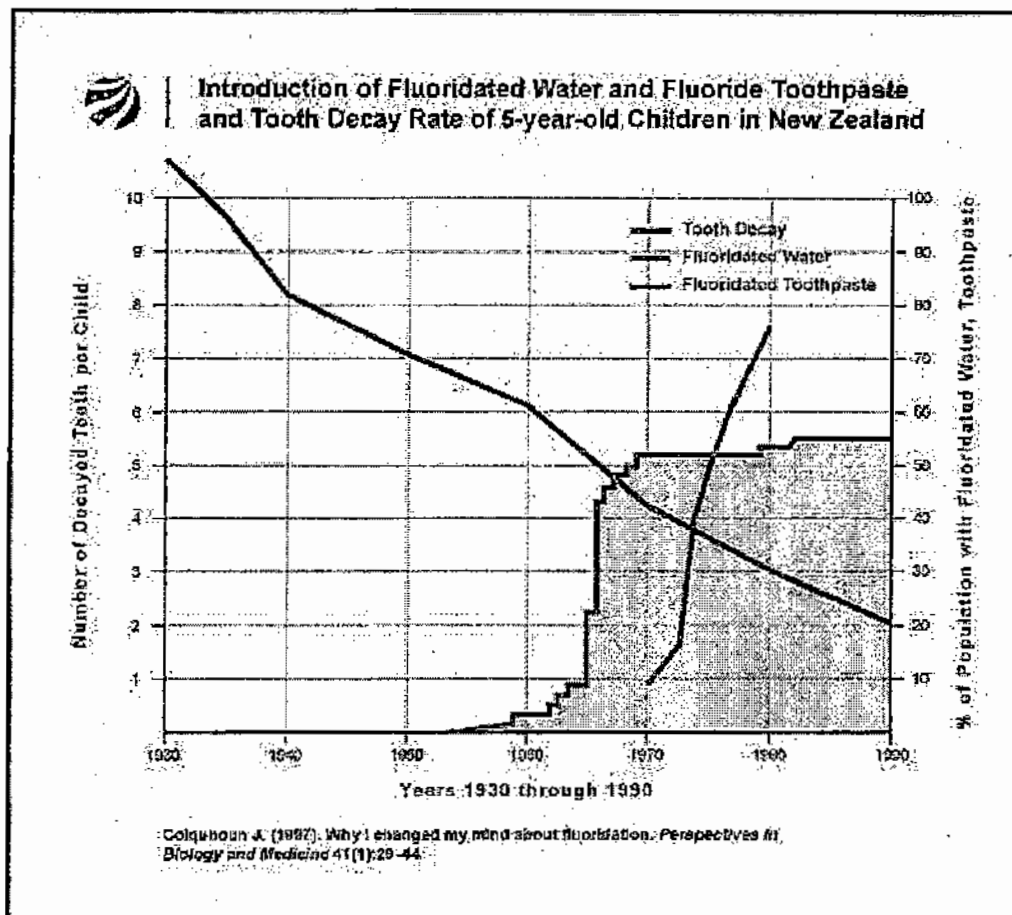
National Institute of Dental Research showed little difference in tooth decay among children in fluoridated and non-fluoridated communities (Hileman 1989). According to NIDR researchers, the study found an average difference of only 0.6 DMFS (Decayed, Missing, and Filled Surfaces) in the permanent teeth of children aged 5-17 residing their entire lives in either fluoridated or unfluoridated areas (Brunelle & Carlos, 1990). This difference is less than one tooth surface, and less than 1% of the 100+ tooth surfaces available in a child's mouth. Large surveys from three Australian states have found even less of a benefit, with decay reductions ranging from 0 to 0.3 of one permanent tooth surface (Spencer 1996; Armfield & Spencer 2004). None of these studies have allowed for the possible delayed eruption of the teeth that may be caused by exposure to fluoride, for which there is some evidence (Komarek 2005). A one-year delay in eruption of the permanent teeth would eliminate the very small benefit recorded in these modern studies.

14) NIH-funded study on individual fluoride ingestion and tooth decay found no significant correlation. A multi-million dollar, U.S. National Institutes of Health (NIH)-funded study found no significant relationship between tooth decay and fluoride intake among children. (Warren 2009) This is the first time tooth decay has been investigated as a function of individual exposure (as opposed to mere residence in a fluoridated community).

15) Tooth decay is high in low-income communities that have been fluoridated for years. Despite some claims to the contrary, water fluoridation cannot prevent the oral health crises that result from rampant poverty, inadequate nutrition, and lack of access to dental care. There have been numerous reports of severe dental crises in low-income neighborhoods of US cities that have been fluoridated for over 20 years (e.g., Boston, Cincinnati, New York City, and Pittsburgh). In addition, research has repeatedly found fluoridation to be ineffective at preventing the most serious oral health problem facing poor children, namely "baby bottle tooth decay," otherwise known as early childhood caries (Barnes 1992; Shiboski 2003).

16) Tooth decay does not go up when fluoridation is stopped. Where fluoridation has been discontinued in communities from Canada, the former East Germany, Cuba and Finland, dental decay has not increased but has generally continued to decrease (Maupomé 2001; Kunzel & Fischer, 1997, 2000; Kunzel 2000; Seppa 2000).

17) Tooth decay was coming down before fluoridation started. Modern research shows that decay rates were coming down before fluoridation was introduced in Australia and New Zealand and have continued to decline even after its benefits would have been maximized. (Colquhoun 1997; Diesendorf 1986). As the following figure indicates, many other factors are responsible for the decline of tooth decay that has been universally reported throughout the western world.

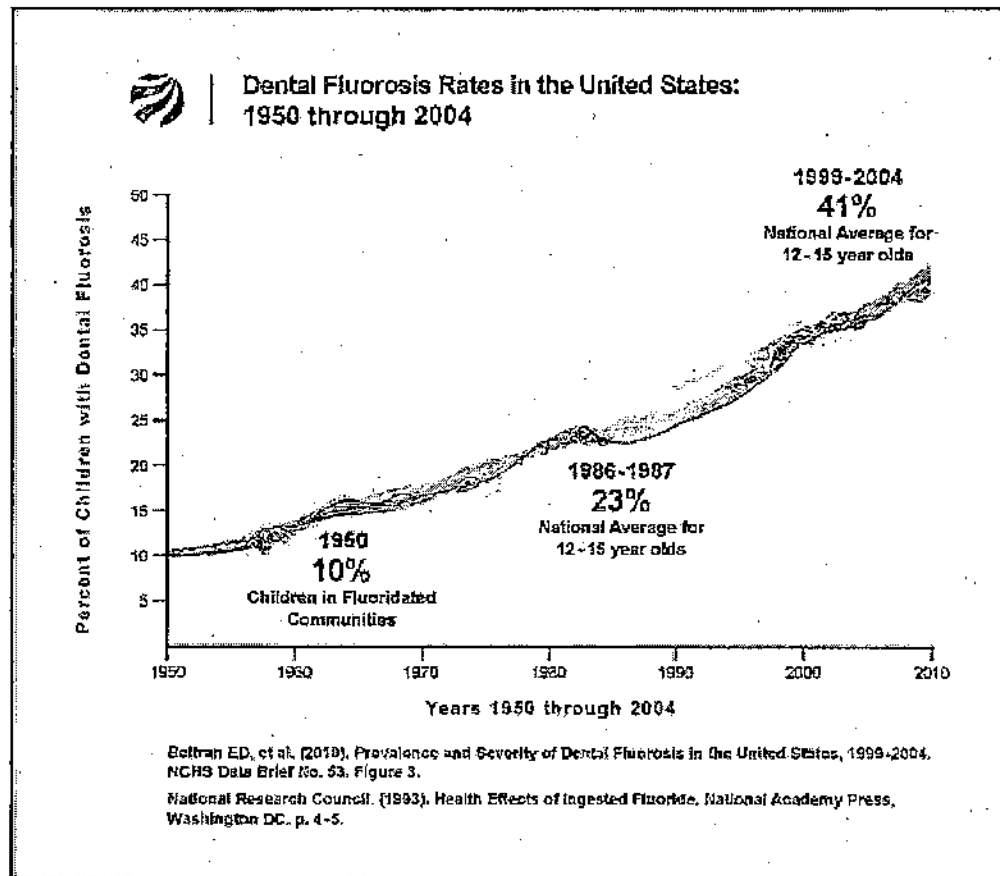


18) **The studies that launched fluoridation were methodologically flawed.** The early trials conducted between 1945 and 1955 in North America that helped to launch fluoridation, have been heavily criticized for their poor methodology and poor choice of control communities (De Stefano 1954; Sutton 1959, 1960, 1996; Ziegelbecker 1970). According to Dr. Hubert Arnold, a statistician from the University of California at Davis, the early fluoridation trials "are especially rich in fallacies, improper design, invalid use of statistical methods, omissions of contrary data, and just plain muddleheadedness and hebetude." Serious questions have also been raised about Trendley Dean's (the father of fluoridation) famous 21-city study from 1942 (Ziegelbecker 1981).

Children are being over-exposed to fluoride

19) **Children are being over-exposed to fluoride.** The fluoridation program has massively failed to achieve one of its key objectives, i.e., to lower dental decay rates while limiting the occurrence of dental fluorosis (a discoloring of tooth enamel caused by too much fluoride). The goal of the early promoters of fluoridation was to limit dental fluorosis (in its very mild form) to 10% of children (NRC 1993, pp. 6-7). In 2010, however, the Centers for Disease Control and Prevention (CDC) reported that 41% of American adolescents had dental fluorosis, with 8.6% having mild fluorosis and 3.6% having either moderate or severe dental fluorosis (Beltran-Aguilar 2010). As the 41% prevalence figure is a national average and includes children living

in fluoridated and unfluoridated areas, the fluorosis rate in fluoridated communities will obviously be higher. The British Government's York Review estimated that up to 48% of children in fluoridated areas worldwide have dental fluorosis in all forms, with 12.5% having fluorosis of aesthetic concern (McDonagh, 2000).



20) The highest doses of fluoride are going to bottle-fed babies. Because of their sole reliance on liquids for their food intake, infants consuming formula made with fluoridated water have the highest exposure to fluoride, by bodyweight, in the population. Because infant exposure to fluoridated water has been repeatedly found to be a major risk factor for developing dental fluorosis later in life (Marshall 2004; Hong 2006; Levy 2010), a number of dental researchers have recommended that parents of newborns not use fluoridated water when reconstituting formula (Ekstrand 1996; Pendrys 1998; Fomon 2000; Brothwell 2003; Marshall 2004). Even the American Dental Association (ADA), the most ardent institutional proponent of fluoridation, distributed a November 6, 2006 email alert to its members recommending that parents be advised that formula should be made with "low or no-fluoride water." Unfortunately, the ADA has done little to get this information into the hands of parents. As a result, many parents remain unaware of the fluorosis risk from infant exposure to fluoridated water.

Evidence of harm to other tissues

21) Dental fluorosis may be an indicator of wider systemic damage. There have

been many suggestions as to the possible biochemical mechanisms underlying the development of dental fluorosis (Matsuo 1998; Den Besten 1999; Sharma 2008; Duan 2011; Tye 2011) and they are complicated for a lay reader. While promoters of fluoridation are content to dismiss dental fluorosis (in its milder forms) as merely a cosmetic effect, it is rash to assume that fluoride is not impacting other developing tissues when it is visibly damaging the teeth by some biochemical mechanism (Groth 1973; Colquhoun 1997). Moreover, ingested fluoride can only cause dental fluorosis during the period before the permanent teeth have erupted (6-8 years), other tissues are potentially susceptible to damage throughout life. For example, in areas of naturally high levels of fluoride the first indicator of harm is dental fluorosis in children. In the same communities many older people develop skeletal fluorosis.

22) Fluoride may damage the brain. According to the National Research Council (2006), "it is apparent that fluorides have the ability to interfere with the functions of the brain." In a review of the literature commissioned by the US Environmental Protection Agency (EPA), fluoride has been listed among about 100 chemicals for which there is "substantial evidence of developmental neurotoxicity." Animal experiments show that fluoride accumulates in the brain and alters mental behavior in a manner consistent with a neurotoxic agent (Mullenix 1995). In total, there have now been over 100 animal experiments showing that fluoride can damage the brain and impact learning and behavior. According to fluoridation proponents, these animal studies can be ignored because high doses were used. However, it is important to note that rats generally require five times more fluoride to reach the same plasma levels in humans (Sawari 2010). Further, one animal experiment found effects at remarkably low doses (Varner 1998). In this study, rats fed for one year with 1 ppm fluoride in their water (the same level used in fluoridation programs), using either sodium fluoride or aluminum fluoride, had morphological changes to their kidneys and brains, an increased uptake of aluminum in the brain, and the formation of beta-amyloid deposits which are associated with Alzheimer's disease. Other animal studies have found effects on the brain at water fluoride levels as low as 5 ppm (Liu 2010).

23) Fluoride may lower IQ. There have now been 33 studies from China, Iran, India and Mexico that have reported an association between fluoride exposure and reduced IQ. One of these studies (Lin 1991) indicates that even just moderate levels of fluoride exposure (e.g., 0.9 ppm in the water) can exacerbate the neurological defects of iodine deficiency. Other studies have found IQ reductions at 1.9 ppm (Xiang 2003a,b); 0.3-3.0 ppm (Ding 2011); 1.8-3.9 ppm (Xu 1994); 2.0 ppm (Yao 1996, 1997); 2.1-3.2 ppm (An 1992); 2.38 ppm (Poureslami 2011); 2.45 ppm (Eswar 2011); 2.5 ppm (Seraj 2006); 2.85 ppm (Hong 2001); 2.97 ppm (Wang 2001, Yang 1994); 3.15 ppm (Lu 2000); 4.12 ppm (Zhao 1996). In the Ding study, each 1 ppm increase of fluoride in urine was associated with a loss of 0.59 IQ points. None of these studies indicate an adequate margin of safety to protect all children drinking artificially fluoridated water from this affect. According to the National Research Council (2006), "the consistency of the results [in fluoride/IQ studies] appears significant enough to warrant additional research on the effects of fluoride on intelligence." The NRC's conclusion has recently been amplified by a team of Harvard scientists whose fluoride/IQ meta-review concludes that fluoride's impact on the developing brain should be a "high research priority." (Choi et al., 2012). Except for one small IQ study from New Zealand (Spittle 1998) no fluoridating country has yet investigated the matter.

24) Fluoride may cause non-IQ neurotoxic effects. Reduced IQ is not the only

neurotoxic effect that may result from fluoride exposure. At least three human studies have reported an association between fluoride exposure and impaired visual-spatial organization (Calderon 2000; Li 2004; Rocha-Amador 2009); while four other studies have found an association between prenatal fluoride exposure and fetal brain damage (Han 1989; Du 1992; Dong 1993; Yu 1996).

25) Fluoride affects the pineal gland. Studies by Jennifer Luke (2001) show that fluoride accumulates in the human pineal gland to very high levels. In her Ph.D. thesis, Luke has also shown in animal studies that fluoride reduces melatonin production and leads to an earlier-onset of puberty (Luke 1997). Consistent with Luke's findings, one of the earliest fluoridation trials in the U.S. (Schlesinger 1956) reported that on average young girls in the fluoridated community reached menstruation 5 months earlier than girls in the non-fluoridated community. Inexplicably, no fluoridating country has attempted to reproduce either Luke's or Schlesinger's findings or examine the issue any further.

26) Fluoride affects thyroid function. According to the U.S. National Research Council (2006), "several lines of information indicate an effect of fluoride exposure on thyroid function." In the Ukraine, Bachinskii (1985) found a lowering of thyroid function, among otherwise healthy people, at 2.3 ppm fluoride in water. In the middle of the 20th century, fluoride was prescribed by a number of European doctors to reduce the activity of the thyroid gland for those suffering from hyperthyroidism (overactive thyroid) (Stecher 1960; Waldbott 1978). According to a clinical study by Galletti and Joyet (1958), the thyroid function of hyperthyroid patients was effectively reduced at just 2.3 to 4.5 mg/day of fluoride ion. To put this finding in perspective, the Department of Health and Human Services (DHHS, 1991) has estimated that total fluoride exposure in fluoridated communities ranges from 1.6 to 6.6 mg/day. This is a remarkable fact, particularly considering the rampant and increasing problem of hypothyroidism (underactive thyroid) in the United States and other fluoridated countries. Symptoms of hypothyroidism include depression, fatigue, weight gain, muscle and joint pains, increased cholesterol levels, and heart disease. In 2010, the second most prescribed drug of the year was Synthroid (sodium levothyroxine) which is a hormone replacement drug used to treat an underactive thyroid.

27) Fluoride causes arthritic symptoms. Some of the early symptoms of skeletal fluorosis (a fluoride-induced bone and joint disease that impacts millions of people in India, China, and Africa), mimic the symptoms of arthritis (Singh 1963; Franke 1975; Teotia 1976; Carnow 1981; Czerwinski 1988; DHHS 1991). According to a review on fluoridation published in Chemical & Engineering News, "Because some of the clinical symptoms mimic arthritis, the first two clinical phases of skeletal fluorosis could be easily misdiagnosed" (Hileman 1988). Few, if any, studies have been done to determine the extent of this misdiagnosis, and whether the high prevalence of arthritis in America (1 in 3 Americans have some form of arthritis – CDC, 2002) and other fluoridated countries is related to growing fluoride exposure, which is highly plausible. Even when individuals in the U.S. suffer advanced forms of skeletal fluorosis (from drinking large amounts of tea), it has taken years of misdiagnoses before doctors finally correctly diagnosed the condition as fluorosis.

28) Fluoride damages bone. An early fluoridation trial (Newburgh-Kingston 1945-55) found a significant two-fold increase in cortical bone defects among children in the fluoridated community (Schlesinger 1956). The cortical bone is the outside layer of the

bone and is important to protect against fracture. While this result was not considered important at the time with respect to bone fractures, it did prompt questions about a possible link to osteosarcoma (Caffey, 1955; NAS, 1977). In 2001, Alarcon-Herrera and co-workers reported a linear correlation between the severity of dental fluorosis and the frequency of bone fractures in both children and adults in a high fluoride area in Mexico.

29) Fluoride may increase hip fractures in the elderly. When high doses of fluoride (average 26 mg per day) were used in trials to treat patients with osteoporosis in an effort to harden their bones and reduce fracture rates, it actually led to a higher number of fractures, particularly hip fractures (Inkovaara 1975; Gerster 1983; Dambacher 1986; O'Duffy 1986; Hedlund 1989; Bayley 1990; Gutteridge 1990, 2002; Orsel 1990; Riggs 1990 and Schnitzler 1990). Hip fracture is a very serious issue for the elderly, often leading to a loss of independence or a shortened life. There have been over a dozen studies published since 1990 that have investigated a possible relationship between hip fractures and long term consumption of artificially fluoridated water or water with high natural levels. The results have been mixed – some have found an association and others have not. Some have even claimed a protective effect. One very important study in China, which examined hip fractures in six Chinese villages, found what appears to be a dose-related increase in hip fracture as the concentration of fluoride rose from 1 ppm to 8 ppm (Li 2001) offering little comfort to those who drink a lot of fluoridated water. Moreover, in the only human epidemiological study to assess bone strength as a function of bone fluoride concentration, researchers from the University of Toronto found that (as with animal studies) the strength of bone declined with increasing fluoride content (Chachra 2010). Finally, a recent study from Iowa (Levy 2009), published data suggesting that low-level fluoride exposure may have a detrimental effect on cortical bone density in girls (an effect that has been repeatedly documented in clinical trials and which has been posited as an important mechanism by which fluoride may increase bone fracture rates).

30) People with impaired kidney function are particularly vulnerable to bone damage. Because of their inability to effectively excrete fluoride, people with kidney disease are prone to accumulating high levels of fluoride in their bone and blood. As a result of this high fluoride body burden, kidney patients have an elevated risk for developing skeletal fluorosis. In one of the few U.S. studies investigating the matter, crippling skeletal fluorosis was documented among patients with severe kidney disease drinking water with just 1.7 ppm fluoride (Johnson 1979). Since severe skeletal fluorosis in kidney patients has been detected in small case studies, it is likely that larger, systematic studies would detect skeletal fluorosis at even lower fluoride levels.

31) Fluoride may cause bone cancer (osteosarcoma). A U.S. government-funded animal study found a dose-dependent increase in bone cancer (osteosarcoma) in fluoride-treated, male rats (NTP 1990). Following the results of this study, the National Cancer Institute (NCI) reviewed national cancer data in the U.S. and found a significantly higher rate of osteosarcoma (a bone cancer) in young men in fluoridated versus unfluoridated areas (Hoover et al 1991a). While the NCI concluded (based on an analysis lacking statistical power) that fluoridation was not the cause (Hoover et al 1991b), no explanation was provided to explain the higher rates in the fluoridated areas. A smaller study from New Jersey (Cohn 1992) found osteosarcoma rates to be

up to 6 times higher in young men living in fluoridated versus unfluoridated areas. Other epidemiological studies of varying size and quality have failed to find this relationship (a summary of these can be found in Bassin, 2001 and Connett & Neurath, 2005). There are three reasons why a fluoride-osteosarcoma connection is plausible: First, fluoride accumulates to a high level in bone. Second, fluoride stimulates bone growth. And, third, fluoride can interfere with the genetic apparatus of bone cells in several ways; it has been shown to be mutagenic, cause chromosome damage, and interfere with the enzymes involved with DNA repair in both cell and tissue studies (Tsutsui 1984; Caspary 1987; Kishi 1993; Mihashi 1996; Zhang 2009). In addition to cell and tissue studies, a correlation between fluoride exposure and chromosome damage in humans has also been reported (Sheth 1994; Wu 1995; Meng 1997; Joseph 2000).

32) Proponents have failed to refute the Bassin-Osteosarcoma study. In 2001, Elise Bassin, a dentist, successfully defended her doctoral thesis at Harvard in which she found that young boys had a five-to-seven fold increased risk of getting osteosarcoma by the age of 20 if they drank fluoridated water during their mid-childhood growth spurt (age 6 to 8). The study was published in 2006 (Bassin 2006) but has been largely discounted by fluoridating countries because her thesis adviser Professor Chester Douglass (a promoter of fluoridation and a consultant for Colgate) promised a larger study that he claimed would discount her thesis (Douglass and Joshipura, 2006). Now, after 5 years of waiting the Douglass study has finally been published (Kim 2011) but in no way does this study discount Bassin's findings. The study, which used far fewer controls than Bassin's analysis, did not even attempt to assess the age-specific window of risk that Bassin identified. Indeed, by the authors' own admission, the study had no capacity to assess the risk of osteosarcoma among children and adolescents (the precise population of concern). For a critique of the Douglass study, [click here](#).

33) Fluoride may cause reproductive problems. Fluoride administered to animals at high doses wreaks havoc on the male reproductive system – it damages sperm and increases the rate of infertility in a number of different species (Kour 1980; Chinoy 1989; Chinoy 1991; Susheela 1991; Chinoy 1994; Kumar 1994; Narayana 1994a,b; Zhao 1995; Elbetieha 2000; Ghosh 2002; Zakrzewska 2002). In addition, an epidemiological study from the US found increased rates of infertility among couples living in areas with 3 ppm or more fluoride in the water (Freni 1994), two studies have found increased fertility among men living in high-fluoride areas of China and India (Liu 1988; Neelam 1987); four studies have found reduced level of circulating testosterone in males living in high fluoride areas (Hao 2010; Chen P 1997; Susheela 1996; Barot 1998), and a study of fluoride-exposed workers reported a "subclinical reproductive effect" (Ortiz-Perez 2003). While animal studies by FDA researchers have failed to find evidence of reproductive toxicity in fluoride-exposed rats (Sprando 1996, 1997, 1998), the National Research Council (2006) has recommended that, "the relationship between fluoride and fertility requires additional study."

34) Some individuals are highly sensitive to low levels of fluoride as shown by case studies and double blind studies. In one study, which lasted 13 years, Feltman and Kosel (1961) showed that about 1% of patients given 1 mg of fluoride each day developed negative reactions. Many individuals have reported suffering from symptoms such as fatigue, headaches, rashes and stomach and gastro intestinal tract problems, which disappear when they avoid fluoride in their water and diet. (Shea

1967; Waldbott 1978; Moolenburgh 1987) Frequently the symptoms reappear when they are unwittingly exposed to fluoride again (Spittle, 2008). No fluoridating government has conducted scientific studies to take this issue beyond these anecdotal reports. Without the willingness of governments to investigate these reports scientifically, should we as a society be forcing these people to ingest fluoride?

35) Other subsets of population are more vulnerable to fluoride's toxicity. In addition to people suffering from impaired kidney function discussed in reason #30 other subsets of the population are more vulnerable to fluoride's toxic effects. According to the Agency for Toxic Substances and Disease Registry (ATSDR 1993) these include: infants, the elderly, and those with diabetes mellitus. Also vulnerable are those who suffer from malnutrition (e.g., calcium, magnesium, vitamin C, vitamin D and iodine deficiencies and protein-poor diets) and those who have diabetes insipidus. See: Greenberg 1974; Klein 1975; Massler & Schour 1952; Marier & Rose 1977; Lin 1991; Chen 1997; Seow 1994; Teotia 1998.

No Margin of Safety

36) There is no margin of safety for several health effects. No one can deny that high natural levels of fluoride damage health. Millions of people in India and China have had their health compromised by fluoride. The real question is whether there is an adequate margin of safety between the doses shown to cause harm in published studies and the total dose people receive consuming uncontrolled amounts of fluoridated water and non-water sources of fluoride. This margin of safety has to take into account the wide range of individual sensitivity expected in a large population (a safety factor of 10 is usually applied to the lowest level causing harm). Another safety factor is also needed to take into account the wide range of doses to which people are exposed. There is clearly no margin of safety for dental fluorosis (CDC, 2010) and based on the following studies nowhere near an adequate margin of safety for lowered IQ (Xiang 2003a,b; Ding 2011; Choi 2012); lowered thyroid function (Galletti & Joyet 1958; Bachinskii 1985; Lin 1991); bone fractures in children (Alarcon-Herrera 2001) or hip fractures in the elderly (Kurtio 1999; Li 2001). All of these harmful effects are discussed in the NRC (2006) review.

Environmental Justice

37) Low-income families penalized by fluoridation. Those most likely to suffer from poor nutrition, and thus more likely to be more vulnerable to fluoride's toxic effects, are the poor, who unfortunately, are the very people being targeted by new fluoridation programs. While at heightened risk, poor families are least able to afford avoiding fluoride once it is added to the water supply. No financial support is being offered to these families to help them get alternative water supplies or to help pay the costs of treating unsightly cases of dental fluorosis.

38) Black and Hispanic children are more vulnerable to fluoride's toxicity. According to the CDC's national survey of dental fluorosis, black and Mexican-American children have significantly higher rates of dental fluorosis than white children (Beltran-Aguilar 2005, Table 23). The recognition that minority children appear to be more vulnerable to toxic effects of fluoride, combined with the fact that low-income families are less able to avoid drinking fluoridated water, has prompted prominent leaders in the environmental-justice movement to oppose mandatory fluoridation in Georgia. In a statement issued in May 2011, Andrew

Young, a colleague of Martin Luther King, Jr., and former Mayor of Atlanta and former US Ambassador to the United Nations, stated:

"I am most deeply concerned for poor families who have babies: if they cannot afford unfluoridated water for their babies' milk formula, do their babies not count? Of course they do. This is an issue of fairness, civil rights, and compassion. We must find better ways to prevent cavities, such as helping those most at risk for cavities obtain access to the services of a dentist...My father was a dentist. I formerly was a strong believer in the benefits of water fluoridation for preventing cavities. But many things that we began to do 50 or more years ago we now no longer do, because we have learned further information that changes our practices and policies. So it is with fluoridation."

39) Minorities are not being warned about their vulnerabilities to fluoride. The CDC is not warning black and Mexican-American children that they have higher rates of dental fluorosis than Caucasian children (see #38). This extra vulnerability may extend to other toxic effects of fluoride. Black Americans have higher rates of lactose intolerance, kidney problems and diabetes, all of which may exacerbate fluoride's toxicity.

40) Tooth decay reflects low-income not low-fluoride intake. Since dental decay is most concentrated in poor communities, we should be spending our efforts trying to increase the access to dental care for low-income families. The highest rates of tooth decay today can be found in low-income areas that have been fluoridated for many years. The real "Oral Health Crisis" that exists today in the United States, is not a lack of fluoride but poverty and lack of dental insurance. The Surgeon General has estimated that 80% of dentists in the US do not treat children on Medicaid.

The largely untested chemicals used in fluoridation programs

41) The chemicals used to fluoridate water are not pharmaceutical grade. Instead, they largely come from the wet scrubbing systems of the phosphate fertilizer industry. These chemicals (90% of which are sodium fluorosilicate and fluorosilicic acid), are classified hazardous wastes contaminated with various impurities. Recent testing by the National Sanitation Foundation suggest that the levels of arsenic in these silicon fluorides are relatively high (up to 1.6 ppb after dilution into public water) and of potential concern (NSF 2000 and Wang 2000). Arsenic is a known human carcinogen for which there is no safe level. This one contaminant alone could be increasing cancer rates – and unnecessarily so.

42) The silicon fluorides have not been tested comprehensively. The chemical usually tested in animal studies is pharmaceutical grade sodium fluoride, not industrial grade fluorosilicic acid. Proponents claim that once the silicon fluorides have been diluted at the public water works they are completely dissociated to free fluoride ions and hydrated silica and thus there is no need to examine the toxicology of these compounds. However, while a study from the University of Michigan (Finney et al., 2006) showed complete dissociation at neutral pH, in acidic conditions (pH 3) there was a stable complex containing five fluoride ions. Thus the possibility arises that such a complex may be regenerated in the stomach where the pH lies between 1 and 2.

43) The silicon fluorides may increase lead uptake into children's blood. Studies by Masters and Coplan (1999, 2000, 2007), and to a lesser extent Macek (2006), show an association between the use of fluorosilicic acid (and its sodium salt) to fluoridate water and an increased uptake of lead into children's blood. Because of lead's acknowledged ability to damage the developing brain, this is a very serious finding. Nevertheless, it is being largely ignored by fluoridating countries. This association received some strong biochemical support from an animal study by Sawan et al. (2010) who found that exposure of rats to a combination of fluorosilicic acid and lead in their drinking water increased the uptake of lead into blood some threefold over exposure to lead alone.

44) Fluoride may leach lead from pipes, brass fittings and soldered joints. In tightly controlled laboratory experiments, Maas et al (2007) have shown that fluoridating agents in combination with chlorinating agents such as chloroamine increase the leaching of lead from brass fittings used in plumbing. While proponents may argue about the neurotoxic effects of low levels of fluoride there is no argument that lead at very low levels lowers IQ in children.

Continued promotion of fluoridation is unscientific

45) Key health studies have not been done. In the January 2008 issue of Scientific American, Professor John Doull, the chairman of the important 2006 National Research Council review, Fluoride in Drinking Water: A Review of EPA's Standards, is quoted as saying:

What the committee found is that we've gone with the status quo regarding fluoride for many years—for too long really—and now we need to take a fresh look . . . In the scientific community people tend to think this is settled. I mean, when the U.S. surgeon general comes out and says this is one of the top 10 greatest achievements of the 20th century, that's a hard hurdle to get over. But when we looked at the studies that have been done, we found that many of these questions are unsettled and we have much less information than we should, considering how long this [fluoridation] has been going on.

The absence of studies is being used by promoters as meaning the absence of harm. This is an irresponsible position.

46) Endorsements do not represent scientific evidence. Many of those promoting fluoridation rely heavily on a list of endorsements. However, the U.S. PHS first endorsed fluoridation in 1950, before one single trial had been completed and before any significant health studies had been published (see chapters 9 and 10 in *The Case Against Fluoride* for the significance of this PHS endorsement for the future promotion of fluoridation). Many other endorsements swiftly followed with little evidence of any scientific rationale for doing so. The continued use of these endorsements has more to do with political science than medical science.

47) Review panels hand-picked to deliver a pro-fluoridation result. Every so often, particularly when their fluoridation program is under threat, governments of fluoridating countries hand-pick panels to deliver reports that provide the necessary re-endorsement of the practice. In their recent book *Fluoride Wars* (2009), which is otherwise slanted toward fluoridation, Alan Freeze and Jay Lehr concede this point when they write:

There is one anti-fluoridationist charge that does have some truth to it. Anti-fluoride forces have always claimed that the many government-sponsored review panels set up over the years to assess the costs and benefits of fluoridation were stacked in favor of fluoridation. A review of the membership of the various panels confirms this charge. The expert committees that put together reports by the American Association for the Advancement of Science in 1941, 1944 and 1954; the National Academy of Sciences in 1951, 1971, 1977 and 1993; the World Health Organization in 1958 and 1970; and the U.S. Public Health Service in 1991 are rife with the names of well-known medical and dental researchers who actively campaigned on behalf of fluoridation or whose research was held in high regard in the pro-fluoridation movement. Membership was interlocking and incestuous.

The most recent examples of these self-fulfilling prophecies have come from the Irish Fluoridation Forum (2002); the National Health and Medical Research Council (NHMRC, 2007) and Health Canada (2008, 2010). The latter used a panel of six experts to review the health literature. Four of the six were pro-fluoridation dentists and the other two had no demonstrated expertise on fluoride. A notable exception to this trend was the appointment by the U.S. National Research Council of the first balanced panel of experts ever selected to look at fluoride's toxicity in the U.S. This panel of twelve reviewed the US EPA's safe drinking water standards for fluoride. After three and half years the panel concluded in a 507- page report that the safe drinking water standard was not protective of health and a new maximum contaminant level goal (MCLG) should be determined (NRC, 2006). If normal toxicological procedures and appropriate margins of safety were applied to their findings this report should spell an end to water fluoridation. Unfortunately in January of 2011 the US EPA Office of Water made it clear that they would not determine a value for the MCLG that would jeopardize the water fluoridation program (EPA press release, Jan 7, 2011. Once again politics was allowed to trump science.

More and more independent scientists oppose fluoridation

48) Many scientists oppose fluoridation. Proponents of fluoridation have maintained for many years— despite the fact that the earliest opponents of fluoridation were biochemists—that the only people opposed to fluoridation are not bona fide scientists. Today, as more and more scientists, doctors, dentists and other professionals, read the primary literature for themselves, rather than relying on self-serving statements from the ADA and the CDC, they are realizing that they and the general public have not been diligently informed by their professional bodies on this subject. As of January 2012, over 4,000 professionals have signed a statement calling for an end to water fluoridation worldwide. This statement and a list of signatories can be found on the website of the Fluoride Action Network. A glimpse of the caliber of those opposing fluoridation can be gleaned by watching the 28-minute video "Professional Perspectives on Water fluoridation" which can be viewed online at the same FAN site.

Proponents' dubious tactics

49) Proponents usually refuse to defend fluoridation in open debate. While pro-fluoridation officials continue to promote fluoridation with undiminished fervor, they usually refuse to defend the practice in open public debate – even when challenged to do so by organizations such as the Association for Science in the Public Interest, the American College of Toxicology, or the U.S. EPA (Bryson 2004). According to Dr.

Michael Easley, a prominent lobbyist for fluoridation in the US, "Debates give the illusion that a scientific controversy exists when no credible people support the fluorophobics' view" (Easley, 1999). In light of proponents' refusal to debate this issue, Dr. Edward Groth, a Senior Scientist at Consumers Union, observed that, "the political profluoridation stance has evolved into a dogmatic, authoritarian, essentially antiscientific posture, one that discourages open debate of scientific issues" (Martin 1991).

50) Proponents use very dubious tactics to promote fluoridation. Many scientists, doctors and dentists who have spoken out publicly on this issue have been subjected to censorship and intimidation (Martin 1991). Dr. Phyllis Mullenix was fired from her position as Chair of Toxicology at Forsythe Dental Center for publishing her findings on fluoride and the brain (Mullenix 1995); and Dr. William Marcus was fired from the EPA for questioning the government's handling of the NTP's fluoride-cancer study (Bryson 2004). Many dentists and even doctors tell opponents in private that they are opposed to this practice but dare not speak out in public because of peer pressure and the fear of recriminations. Tactics like this would not be necessary if those promoting fluoridation were on secure scientific and ethical grounds.

Conclusion

When it comes to controversies surrounding toxic chemicals, vested interests traditionally do their very best to discount animal studies and quibble with epidemiological findings. In the past, political pressures have led government agencies to drag their feet on regulating asbestos, benzene, DDT, PCBs, tetraethyl lead, tobacco and dioxins. With fluoridation we have had a sixty-year delay. Unfortunately, because government officials and dental leaders have put so much of their credibility on the line defending fluoridation, and because of the huge liabilities waiting in the wings if they admit that fluoridation has caused an increase in hip fracture, arthritis, bone cancer, brain disorders or thyroid problems, it will be very difficult for them to speak honestly and openly about the issue. But they must, not only to protect millions of people from unnecessary harm, but to protect the notion that, at its core, public health policy must be based on sound science, not political expediency. They have a tool with which to do this: it's called the Precautionary Principle. Simply put, this says: if in doubt leave it out. This is what most European countries have done and their children's teeth have not suffered, while their public's trust has been strengthened.

Just how much doubt is needed on just one of the health concerns identified above, to override a benefit, which when quantified in the largest survey ever conducted in the US, amounts to less than one tooth surface (out of 128) in a child's mouth?

While fluoridation may not be the greatest environmental health threat, it is one of the easiest to end. It is as easy as turning off a spigot in the public water works. But to turn off that spigot takes political will and to get that we need masses more people informed and organized. Please get these 50 reasons to all your friends and encourage them to get fluoride out of their community and to help ban this practice worldwide.

Postscript

Further arguments against fluoridation, can be viewed at <http://www.fluoridealert.org> and in the book *The Case Against Fluoridation* (Chelsea Green, 2010). Arguments for fluoridation can be found at <http://www.ada.org>

Publication history of the 50 Reasons

The 50 Reasons were first compiled by Paul Connett and presented in person to the Irish Fluoridation Forum in October 2000. The document was refined in 2004 and published in *Medical Veritas*. In the introduction to the 2004 version it was explained that after over four years the Irish authorities had not been able to muster a response to the 50 Reasons, despite agreeing to do so in 2000. Eventually, an anonymous, incomplete and superficial response was posted on the Irish Department of Health and Children's website (see this response and addendum at: http://www.dohc.ie/other_health_issues/dental_research/). Paul Connett's comprehensive response to this response can be accessed at <http://www.fluoridealert.org/50reasons.ireland.pdf>. We learned on August 7, 2011 that this governmental response was prepared by an external contractor at a cost to the Irish taxpayers' of over 30,000 Euros.

Since 2004, there have been many major scientific developments including the publication of the U.S. National Research Council report (NRC, 2006); the publication of Bassin's study on Osteosarcoma (Bassin 2006); and many more studies of fluoride's interaction with the brain, that necessitated a major update of the 50 Reasons in August 2011. This update was made with the generous assistance of James Beck, MD, PhD, Michael Connett, JD, Hardy Limeback, DDS, PhD, David McRae and Spedding Micklem, D.Phil. Additional developments in 2012, including FAN's translation of over 20 Chinese studies on fluoride toxicity and publication of the Harvard team's meta-review of fluoride and IQ (Choi 2012), warranted a further update in August 2012, with the extremely helpful assistance of my son, Michael Connett.

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WHO: Tooth Decay Rates in Fluoridated vs. Non-Fluoridated Countries

[print](#)

The following data from the World Health Organization provides the most recently reported tooth decay rates in 12-old-year children in developed nations. As can be seen, many countries with no water fluoridation at all have lower rates of tooth decay than countries that fluoridate more than 60% of their water. In fact, of the seven countries with the lowest tooth decay rates, six have no water fluoridation programs, while one (England) fluoridates only about 10% of its water. To the extent that water fluoridation has a benefit on teeth, therefore, it is not a discernible benefit when comparing the tooth decay rates of fluoridated vs. non-fluoridated countries.

For a practice ([water fluoridation](#)) hailed as one of the "top ten public health achievements of the 20th century," one would expect to see *some* detrimental effect among the countries that have opted against doing it. As this data shows, however, no such negative effect can be found.

- To see the historical tooth decay trends in these countries, [click here](#).
 - For more information on fluoride and tooth decay, [click here](#).
- World Health Organization Data: DMFT (Decayed, Missing & Filled Teeth)
Status for 12 Year Olds By Country

Country	DMFTs	Year	Status*
<i>Denmark</i>	0.7	2008	No water fluoridation. No salt fluoridation.
<i>Germany</i>	0.7	2005	No water fluoridation. 67% salt fluoridation.
<i>England</i>	0.7	2009	11% water fluoridation. No salt fluoridation.
<i>Netherlands*</i>	0.8	2002	No water fluoridation. No salt fluoridation.
<i>Switzerland**</i>	0.82	2009	No water fluoridation. 88% salt fluoridation.
<i>Belgium</i>	0.9	2009-10	No water fluoridation. No salt fluoridation.
<i>Sweden</i>	0.9	2008	No water fluoridation. No salt fluoridation.
<i>Australia</i>	1.0	2003-2004	80% water fluoridation. No salt fluoridation.
<i>Austria</i>	1.0	2002	No water fluoridation. 6% salt fluoridation.

<i>Ireland</i>	1.1	2002	100% water fluoridation in study. No salt fluoridation.
<i>Italy</i>	1.1	2004	No water fluoridation. No salt fluoridation.
<i>United States</i>	1.19	1999-2004	64% water fluoridation. No salt fluoridation.
<i>Finland</i>	1.2	2006	No water fluoridation. No salt fluoridation.
<i>France</i>	1.2	2006	No water fluoridation. 65% salt fluoridation.
<i>Spain</i>	1.3	2004	11% water fluoridation. 10% salt fluoridation.
<i>Greece</i>	1.35	2005-06	No water fluoridation. No salt fluoridation.
<i>Iceland</i>	1.4	2005	No water fluoridation. No salt fluoridation.
<i>New Zealand</i>	1.4	2009	61% water fluoridation. No salt fluoridation.
<i>Japan</i>	1.7	2005	No water fluoridation. No salt fluoridation.
<i>Norway</i>	1.7	2004	No water fluoridation. No salt fluoridation.

* The Hague | ** Zurich

Tooth Decay data from:

World Health Organization Collaborating Centre for Education, Training, and Research in Oral Health, Malmö University, Sweden. <http://www.mah.se/CAPP/> (accessed on June 10, 2012)

Salt fluoridation data from:

Gotzfried F. (2006). Legal aspects of fluoride in salt, particularly within the EU. *Schweiz Monatsschr Zahnmed* 116:371-75.

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Mayo Clinic: Fluoridation & Bone Disease in Renal Patients

print

[SEE PHOTOCOPY OF STUDY]

American Association for the Advancement of Science (AAAS)

Fluoridation and bone disease in renal patients.

By William J. Johnson, Donald R. Taves and Jenifer Jowsey

About the Authors:

William J. Johnson, director of the Mayo Artificial Kidney Center and professor of medicine with the Division of Nephrology at the Mayo Clinic, has been involved in the study of calcium and phosphorus metabolism and renal osteodystrophy, potassium metabolism, and uremic neuropathy. He is past chairman of the Minnesota State Medical Association's Committee on Dialysis and Transplantation and served on the editorial board of *Nephron*. He has published over 70 papers in his field.

Jenifer Jowsey, director of orthopaedic research at the Mayo Clinic and Mayo Foundation, has worked extensively on metabolic bone disease, particularly the prevention and treatment of osteoporosis. She received the Kappa Delta Award from the American Academy of Orthopaedic Surgeons in 1975. She is the author of some 230 publications including *Metabolic Diseases of Bone* (Saunders, 1977).

Donald R. Taves is associate professor of pharmacology and toxicology and of radiation biology and biophysics at the University of Rochester School of Medicine and Dentistry. He was a member of a subcommittee of the National Academy of Sciences Safe Drinking Water Study which examined the use of fluoride in drinking water and his principal area of specialization is the toxicology and pharmacology of fluoride.

The Department of Nephrology at the Mayo Clinic examines approximately 100 new patients with end-stage renal disease each year. Some of these patients reside in areas where the naturally occurring fluoride concentration in tap water exceeds 1 ppm. During the course of several years, six patients have been seen in whom fluoride may have been the cause of detectable clinical and roentgenographic effects. Two of these cases have been reported previously from our institution (Juncos and Donadio, 1972). One patient had chronic glomerulonephritis, and the others had congenital renal disease of more than 15 years' duration before skeletal symptoms developed (Table 2).

Most of the patients had high urine volumes (>3 L per day), the fluid intake being replaced by copious intake of water or in one instance, tea.

Table 2. Causes of renal failure in six patients exposed to high fluoride before dialysis.

Cause	No.
Congenital defects of bladder, ureters	3
Fanconi syndrome	1
Bilateral polycystic kidneys	1
Chronic glomerulonephritis	1

The most distinctive features suggesting fluorosis were the roentgenographic appearance of the skeleton and the severity of dental mottling (Table 3). The most characteristic roentgenographic finding was a diffuse increase in bone density which, in younger patients, assumed a ground-glass appearance; whereas in older patients, it showed a coarse trabecular pattern that became more obvious as the skeleton became more demineralized over the years and with progression of renal failure. In addition to the increase in bone density and the alteration of trabecular pattern, there was a prominent new subperiosteal bone formation, especially in the long bones in the upper and lower extremities, and calcification of the interosseous ligaments between tibia and fibula and between radius and ulna, as well as of the sacrotuberous ligaments of the pelvis and the longitudinal ligaments of the spinal column in some of the patients. In addition, three patients had pseudofractures, a common feature of osteomalacia.

Table 3. Roentgenographic findings in six patients with renal failure who were exposed to high fluoride (1.7-2.0 ppm) before dialysis

Finding	Patients
Increased bone density	6
Dental mottling	2
Calcified interosseous ligaments	2
Subperiosteal bone	2
Subperiosteal resorption	0
Fractures	3
Pseudofractures	3

Despite having severe symptomatic bone disease, none of the patients showed striking features of hyperparathyroidism, such as subperiosteal resorption or bone cysts, which, in the United States, are the more common manifestations of renal osteodystrophy. Plasma parathyroid hormone concentrations, although elevated in all of the patients, were relatively low considering the severity of the bone disease.

In addition, these patients developed severe skeletal changes or bone pain early in the course of renal failure when creatinine values were approximately 3 mg/dL. Symptoms referable to the skeleton varied. Two of the six patients were asymptomatic; four complained of arthralgia, especially of the knees, and of bone pain on weight-bearing involving the lower extremities; three of the patients had spontaneous fractures of metatarsals, ribs, and hip.

Bone biopsy specimens available from four patients showed a marked increase in the ratio of fluoride to calcium (Table 4). Biopsy specimens studied by quantitative microradiographic techniques showed a large percentage of bone surface covered by osteoid as well as thick osteoid seams with variable degrees of bone resorption and large areas of new bone formation.

Table 4. Patients exposed to fluoride prior to dialysis					
Case	Fluoride			Osteoid on bone biopsy	
	Water (ppm)	Serum (uM)	Bone* (F/Ca)	Surface (%)	Width (uM)
1	1.9	14.1	5.9	65.3	42 ± 2.9
2	2.0	10.1	5.4	46.7	28.8 ± 3.8
3	1.7	5.0	3.5	45.2	21.9 ± 0.8
4	1.7	12.0	3.0	19.4	22.4 ± 2.6
Mean	1.83	10.3	4.4	44.2 ± 9.1	28.8 ± 4.6
Normal	1.0	1.7 ± 0.1	1.0	2.6 ± 0.6	14.3 ± 1.0

* Fluoride is expressed as molar percent relative to calcium (4.4 F/Ca = ~9,000 F bone ash)

Therapeutic measures included the elimination of fluoride from the drinking water, normalization of plasma calcium and phosphate concentrations, and the use of vitamin D analogs. Symptoms were lessened with these measures, but several patients continued to have fractures. Four patients have been free of symptoms or fractures since entering the dialysis program using fluoride-free dialysate and continuing efforts to maintain normal calcium and phosphate levels.

Case of Severest Disease. A 69-year-old man experienced excessive frequent urge to urinate associated with pyuria in 1958. Signs of infection cleared after sulfonamide therapy, but urinary frequency, nocturia, and polyuria persisted. The urine was of fixed specific gravity and showed a trace of protein. Mild azotemia appeared in 1960, followed by bone pain, arthralgia of the knees and feet, and spontaneous "march fractures" of both feet — a total of 13 by 1963.

Examination of the urine revealed no infection, but a 24-hour specimen showed an increased content of glucose and amino acid nitrogen. The urine

was alkaline, while the blood showed some evidence of systemic acidosis. Blood sugar levels were normal, azotemia was mild, and alkaline phosphatase activity was elevated, but values for serum calcium, phosphate, and total protein were normal. An excretory urogram showed small kidneys. Skeletal roentgenograms showed healing fractures of the metatarsals and phalangeal bones of both feet, areas of increased bone density with a coarse trabecular pattern involving predominantly the axial skeleton and the calcification of interosseous ligaments, and new subperiosteal bone formation.

Bone biopsy of the iliac crest showed an increase of uncalcified osteoid tissue on bone surfaces, decreased mineral density around osteocytes, low mineralization of cement lines, and much interstitium with an irregular pattern.

After treatment with oral calcium supplements and vitamin D, bone pain decreased but the patient experienced additional fractures. Osteosclerosis increased, but serum alkaline phosphatase values decreased to normal. A bone biopsy specimen taken in 1968 showed healing of osteomalacia. Chemical values showed a high concentration of fluoride in serum (14 μM) and bone (4.7 to 6.5 moles of fluoride per 100 moles of calcium) and in drinking water (2 ppm or 106 μM) relative to the concentration of fluoride in the urine (78 μM).

At this point, the patient was advised to stop drinking tap water and to use only fluoride-free spring water or distilled water for both drinking and cooking. Serum fluoride concentrations decreased (to 8 μM), and for a period of approximately 8 years, the patient was relatively free of bone pain and did not experience further fractures.

In 1971, renal function temporarily deteriorated further. After peritoneal dialysis, renal function spontaneously improved. In 1974, the patient fell, sustaining a hip fracture that required internal fixation. Osteomalacia has persisted despite vitamin D therapy and reasonable control of systemic acidosis and secondary hyperparathyroidism. These findings were interpreted as representing adult Fanconi's syndrome with osteomalacia and superimposed fluorosis.

Concluding Remarks

The available evidence suggests that some patients with long-term renal failure are being affected by drinking water with as little as 2 ppm fluoride. All of the patients showed increased bone density, and two showed calcification of interosseous ligaments which is thought to be diagnostic of skeletal fluorosis. The average concentration of fluoride in bone of 4.4 moles of fluoride per 100 moles of calcium is equivalent to 9,000 ppm of

fluoride on an ash weight basis and is in the middle range of the values that have been reported for advanced fluorosis. The excessive osteoid formation seen in these patients is probably accentuated by fluoride.

... The meaning of these findings for community fluoridation will depend on whether or not further work will clearly show adverse effects in patients with renal failure drinking water with a concentration of 1 ppm of fluoride and whether these effects can be easily avoided. The finding of adverse effects in patients drinking water with 2 ppm of fluoride suggests that a few similar cases may be found in patients imbibing 1 ppm, especially if large volumes are consumed, or in heavy tea drinkers and if fluoride is indeed the cause.

It would seem prudent, therefore, to monitor the fluoride intake of patients with renal failure living in high fluoride areas. The serum concentration may indicate whether the patient should be advised to drink low fluoride water and will provide a check regarding compliance. Tentatively, a shift to low fluoride water should be made before the serum fluoride concentration reaches 5 uM, since evidence of fluorosis has been reported when the average serum concentrations of fluoride are 8 uM.

[SEE PHOTOCOPY OF STUDY]

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Water Fluoridation

"Fluoridation goes against all principles of pharmacology. It's obsolete." — Dr. Arvid Carlsson, Nobel Laureate in Medicine/Physiology.

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**Overview**

Water fluoridation is the practice of adding industrial-grade fluoride chemicals to water for the purpose of preventing tooth decay. One of the little known facts about this practice is that the United States, which fluoridates over 70% of its water supplies, has more people drinking fluoridated water than the rest of the world combined. Most developed nations, including all of Japan and 97% of western Europe, do not fluoridate their water.

In the United States, the Oral Health Division of the Centers Disease Control (CDC) hails fluoridation as one of the "top ten public health achievements of the 20th century." However, comprehensive data from the World Health Organization reveals that there is no discernible difference in tooth decay between the minority of western nations that fluoridate water, and the majority that do not. In fact, the tooth decay rates in many non-fluoridated countries are now lower than the tooth decay rates in fluoridated ones.

As is becoming increasingly clear, fluoridating water supplies is an outdated, unnecessary, and dangerous relic from a 1950s public health culture that viewed mass distribution of chemicals much differently than scientists do today. The few nations that still fluoridate their water should end the practice. Here's three reasons why:

Three Reasons to End Water Fluoridation**Reason #1: Fluoridation Is an Outdated Form of Mass Medication**

Unlike all other water treatment processes, fluoridation does not treat the water itself, but the person consuming it. The Food & Drug Administration accepts that fluoride is a drug, not a nutrient, when used to prevent disease. By definition, therefore, fluoridating water is a form of medication. This is why most western European nations have rejected the practice — because, in their view, the public water supply is not an appropriate place to be adding drugs, particularly when fluoride is readily available for individual use in the form of toothpaste.

Reason #2: Fluoridation Is Unnecessary and Ineffective

The most obvious reason to end fluoridation is that it is now known that fluoride's main benefit comes from topical contact with the teeth, not from ingestion. Even the CDC's Oral Health Division now acknowledges this. There is simply no need, therefore, to swallow fluoride, whether in the water, toothpaste, or any other form. Further, despite early claims that fluoridated water would reduce cavities by 65%, modern large-scale studies show no consistent or meaningful difference in the cavity rates of fluoridated and non-fluoridated areas.

Reason #3: Fluoridation Is Not a Safe Practice

The most important reason to end fluoridation is that it is simply not a safe practice, particularly for those who have health conditions that render them vulnerable to fluoride's toxic effects.

First, there is no dispute that fluoridation is causing millions of children to develop dental fluorosis, a discoloration of the teeth that is caused by excessive fluoride intake. Scientists from the Centers for Disease Control have even acknowledged that fluoridation is causing "cosmetically objectionable" fluorosis on children's front teeth—an effect that can cause children embarrassment and anxiety at an age when physical appearance is the single most important predictor of self-esteem.

Second, it is known that fluoridated water caused severe bone disease in dialysis patients up until the late 1970s (prior to dialysis units filtering fluoride). While dialysis units now filter out the fluoride, research shows that current fluoride exposures are still resulting in dangerously high bone fluoride levels in dialysis patients and patients with other advanced forms of kidney disease. It is unethical to compromise the health of some members in a population to obtain a purported benefit for another — particularly in the absence of these vulnerable members' knowing consent.

And, finally, a growing body of evidence reasonably indicates that fluoridated water, in addition to other sources of daily fluoride exposure, can cause or contribute to a range of serious effects, including arthritis, damage to the developing brain, reduced thyroid function, and possibly osteosarcoma (bone cancer) in adolescent males.

Communities Are Starting to Get the Message

In recent years, communities throughout the United States and Canada have started to reassess the conventional wisdom of fluoridating their water. Many of these communities, including over 50 since 2010, are reaching the obvious conclusion: when stripped of its endorsements, well-meaning intentions, and PR-praise, fluoridation simply makes no sense.

Europe reached this conclusion a long time ago. It is now time for the U.S. and other English-speaking nations to follow suit. Need More Reasons?

The Absurdities of Water Fluoridation

[print](#)

Paul Connett, PhD

Water fluoridation is a peculiarly American phenomenon. It started at a time when Asbestos lined our pipes, lead was added to gasoline, PCBs filled our transformers and DDT was deemed so "safe and effective" that officials felt no qualms spraying kids in school classrooms and seated at picnic tables. One by one all these chemicals have been banned, but fluoridation remains untouched.

For over 50 years US government officials have confidently and enthusiastically claimed that fluoridation is "safe and effective." However, they are seldom prepared to defend the practice in open public debate. Actually, there are so many arguments against fluoridation that it can get overwhelming.

To simplify things it helps to separate the ethical from the scientific arguments.

For those for whom ethical concerns are paramount, the issue of fluoridation is very simple to resolve. It is simply not ethical; we simply shouldn't be forcing medication on people without their "informed consent". The bad news is that ethical arguments are not very influential in Washington, DC unless politicians are very conscious of millions of people watching them. The good news is that the ethical arguments are buttressed by solid common sense arguments and scientific studies which convincingly show that fluoridation is neither "safe and effective" nor necessary. I have summarized the arguments in several categories:

Fluoridation is UNETHICAL because:

- 1) It violates the individual's right to informed consent to medication.
- 2) The municipality cannot control the dose of the patient.
- 3) The municipality cannot track each individual's response.
- 4) It ignores the fact that some people are more vulnerable to fluoride's toxic effects than others. Some people will suffer while others may benefit.
- 5) It violates the Nuremberg code for human experimentation.

As stated by the recent recipient of the Nobel Prize for Medicine (2000), Dr. Arvid Carlsson:

"I am quite convinced that water fluoridation, in a not-too-distant future, will be consigned to medical history... Water fluoridation goes against leading principles of pharmacotherapy, which is progressing from a stereotyped medication – of the type 1 tablet 3 times a day – to a much more individualized therapy as regards both dosage and selection of drugs. The addition of drugs to the drinking water means exactly the opposite of an individualized therapy."

As stated by Dr. Peter Mansfield, a physician from the UK and advisory board member of the recent government review of fluoridation (*McDonagh et al 2000*):

"No physician in his right senses would prescribe for a person he has never met, whose medical history he does not know, a substance which is intended to create bodily change, with the advice: 'Take as much as you like, but you will take it for the rest of your life because some children suffer from tooth decay. ' It is a preposterous notion."

Fluoridation is UNNECESSARY because:

- 1) Children can have perfectly good teeth without being exposed to fluoride.
- 2) The promoters (*CDC, 1999, 2001*) admit that the benefits are topical not systemic, so fluoridated toothpaste, which is universally available, is a more rational approach to delivering fluoride to the target organ (teeth) while minimizing exposure to the rest of the body.
- 3) The vast majority of western Europe has rejected water fluoridation, but has been equally successful as the US, if not more so, in tackling tooth decay.
- 4) If fluoride was necessary for strong teeth one would expect to find it in breast milk, but the level there is 0.01 ppm, which is 100 times LESS than in fluoridated tap water (*IOM, 1997*).
- 5) Children in non-fluoridated communities are already getting the so-called "optimal" doses from other sources (*Heller et al, 1997*). In fact, many are already being over-exposed to fluoride.

Fluoridation is INEFFECTIVE because:

- 1) Major dental researchers concede that fluoride's benefits are topical not systemic (*Fejerskov 1981; Carlos 1983; CDC 1999, 2001; Limeback 1999; Locker 1999; Featherstone 2000*).
- 2) Major dental researchers also concede that fluoride is ineffective at preventing pit and fissure tooth decay, which is 85% of the tooth decay experienced by children (*JADA 1984; Gray 1987; White 1993; Pinkham 1999*).
- 3) Several studies indicate that dental decay is coming down just as fast, if not faster, in non-fluoridated industrialized countries as fluoridated ones (*Diesendorf, 1986; Colquhoun, 1994; World Health Organization, Online*).
- 4) The largest survey conducted in the US showed only a minute difference in tooth decay between children who had lived all their lives in fluoridated compared to non-fluoridated communities. The difference was not clinically significant nor shown to be statistically significant (*Brunelle & Carlos, 1990*).
- 5) The worst tooth decay in the United States occurs in the poor neighborhoods of our largest cities, the vast majority of which have been fluoridated for decades.
- 6) When fluoridation has been halted in communities in Finland, former East Germany, Cuba and Canada, tooth decay did not go up but continued to go down (*Maupome et al, 2001; Kunzel and Fischer, 1997, 2000; Kunzel et al, 2000 and Seppa et al, 2000*).

Fluoridation is UNSAFE because:

- 1) It accumulates in our bones and makes them more brittle and prone to fracture. The weight of evidence from animal studies, clinical studies and epidemiological studies on this is overwhelming. Lifetime exposure to fluoride will contribute to higher rates of hip fracture in the elderly.
- 2) It accumulates in our pineal gland, possibly lowering the production of melatonin a very important regulatory hormone (*Luke, 1997, 2001*).
- 3) It damages the enamel (dental fluorosis) of a high percentage of children. Between 30 and 50% of children have dental fluorosis on at least two teeth in optimally fluoridated communities (*Heller et al, 1997 and McDonagh et al, 2000*).
- 4) There are serious, but yet unproven, concerns about a connection between fluoridation and osteosarcoma in young men (*Cohn, 1992*), as well as fluoridation and the current epidemics of both arthritis and hypothyroidism.
- 5) In animal studies fluoride at 1 ppm in drinking water increases the uptake of aluminum into the brain (*Varner et al, 1998*).
- 6) Counties with 3 ppm or more of fluoride in their water have lower fertility rates (*Freni, 1994*).
- 7) In human studies the fluoridating agents most commonly used in the US not only increase the uptake of lead into children's blood (*Masters and*

Coplan, 1999, 2000) but are also associated with an increase in violent behavior.

8) The margin of safety between the so-called therapeutic benefit of reducing dental decay and many of these end points is either nonexistent or precariously low.

Fluoridation is INEQUITABLE, because:

- 1) It will go to all households, and the poor cannot afford to avoid it, if they want to, because they will not be able to purchase bottled water or expensive removal equipment.
- 2) The poor are more likely to suffer poor nutrition which is known to make children more vulnerable to fluoride's toxic effects (*Massler & Schour 1952; Marier & Rose 1977; ATSDR 1993; Teotia et al, 1998*).
- 3) Very rarely, if ever, do governments offer to pay the costs of those who are unfortunate enough to get dental fluorosis severe enough to require expensive treatment.

Fluoridation is INEFFICIENT and NOT COST-EFFECTIVE because:

- 1) Only a small fraction of the water fluoridated actually reaches the target. Most of it ends up being used to wash the dishes, to flush the toilet or to water our lawns and gardens.
- 2) It would be totally cost-prohibitive to use pharmaceutical grade sodium fluoride (the substance which has been tested) as a fluoridating agent for the public water supply. Water fluoridation is artificially cheap because, unknown to most people, the fluoridating agent is an unpurified hazardous waste product from the phosphate fertilizer industry.
- 3) If it was deemed appropriate to swallow fluoride (even though its major benefits are topical not systemic) a safer and more cost-effective approach would be to provide fluoridated bottle water in supermarkets free of charge. This approach would allow both the quality and the dose to be controlled. Moreover, it would not force it on people who don't want it.

Fluoridation is UNSCIENTIFICALLY PROMOTED. For example:

- 1) In 1950, the US Public Health Service enthusiastically endorsed fluoridation before one single trial had been completed.
- 2) Even though we are getting many more sources of fluoride today than we were in 1945, the so called "optimal concentration" of 1 ppm has remained unchanged.
- 3) The US Public health Service has never felt obliged to monitor the fluoride levels in our bones even though they have known for years that 50% of the fluoride we swallow each day accumulates there.
- 4) Officials that promote fluoridation never check to see what the levels of dental fluorosis are in the communities before they fluoridate, even

though they know that this level indicates whether children are being overdosed or not.

5) No US agency has yet to respond to Luke's finding that fluoride accumulates in the human pineal gland, even though her finding was published in 1994 (abstract), 1997 (Ph. D. thesis), 1998 (paper presented at conference of the International Society for Fluoride Research), and 2001 (published in Caries Research).

6) The CDC's 1999, 2001 reports advocating fluoridation were both six years out of date in the research they cited on health concerns.

Fluoridation is UNDEFENDABLE IN OPEN PUBLIC DEBATE.

The proponents of water fluoridation refuse to defend this practice in open debate because they know that they would lose that debate. A vast majority of the health officials around the US and in other countries who promote water fluoridation do so based upon someone else's advice and not based upon a first hand familiarity with the scientific literature. This second hand information produces second rate confidence when they are challenged to defend their position. Their position has more to do with faith than it does with reason.

Those who pull the strings of these public health 'puppets', do know the issues, and are cynically playing for time and hoping that they can continue to fool people with the recitation of a long list of "authorities" which support fluoridation instead of engaging the key issues. As Brian Martin made clear in his book *Scientific Knowledge in Controversy: The Social Dynamics of the Fluoridation Debate* (1991), the promotion of fluoridation is based upon the exercise of political power not on rational analysis. The question to answer, therefore, is: "Why is the US Public Health Service choosing to exercise its power in this way?"

Motivations - especially those which have operated over several generations of decision makers - are always difficult to ascertain. However, whether intended or not, fluoridation has served to distract us from several key issues. It has distracted us from:

- a) The failure of one of the richest countries in the world to provide decent dental care for poor people.
- b) The failure of 80% of American dentists to treat children on Medicaid.
- c) The failure of the public health community to fight the huge over consumption of sugary foods by our nation's children, even to the point of turning a blind eye to the wholesale introduction of soft drink machines into our schools. Their attitude seems to be if fluoride can stop dental decay why bother controlling sugar intake.
- d) The failure to adequately address the health and ecological effects of fluoride pollution from large industry. Despite the damage which fluoride

pollution has caused, and is still causing, few environmentalists have ever conceived of fluoride as a 'pollutant.'

e) The failure of the US EPA to develop a Maximum Contaminant Level (MCL) for fluoride in water which can be scientifically defended.

f) The fact that more and more organofluorine compounds are being introduced into commerce in the form of plastics, pharmaceuticals and pesticides. Despite the fact that some of these compounds pose just as much a threat to our health and environment as their chlorinated and brominated counterparts (i.e. they are highly persistent and fat soluble and many accumulate in the food chains and our body fat), those organizations and agencies which have acted to limit the wide-scale dissemination of these other halogenated products, seem to have a blind spot for the dangers posed by organofluorine compounds.

So while fluoridation is neither effective nor safe, it continues to provide a convenient cover for many of the interests which stand to profit from the public being misinformed about fluoride.

Unfortunately, because government officials have put so much of their credibility on the line defending fluoridation, it will be very difficult for them to speak honestly and openly about the issue. As with the case of mercury amalgams, it is difficult for institutions such as the American Dental Association to concede health risks because of the liabilities waiting in the wings if they were to do so.

However, difficult as it may be, it is nonetheless essential – in order to protect millions of people from unnecessary harm – that the US Government begin to move away from its anachronistic, and increasingly absurd, status quo on this issue. There are precedents. They were able to do this with hormone replacement therapy.

But getting any honest action out of the US Government on this is going to be difficult. Effecting change is like driving a nail through wood – science can sharpen the nail but we need the weight of public opinion to drive it home. Thus, it is going to require a sustained effort to educate the American people and then recruiting their help to put sustained pressure on our political representatives. At the very least we need a moratorium on fluoridation (which simply means turning off the tap for a few months) until there has been a full Congressional hearing on the key issues with testimony offered by scientists on both sides. With the issue of education we are in better shape than ever before. Most of the key studies are available on the internet and there are videotaped interviews with many of the scientists and protagonists whose work has been so important to a modern re-evaluation of this issue.

With this new information, more and more communities are rejecting new

fluoridation proposals at the local level. On the national level, there have been some hopeful developments as well, such as the EPA Headquarters Union coming out against fluoridation and the Sierra Club seeking to have the issue re-examined. However, there is still a huge need for other national groups to get involved in order to make this the national issue it desperately needs to be.

I hope that if there are RFW readers who disagree with me on this, they will rebut these arguments. If they can't than I hope they will get off the fence and help end one of the silliest policies ever inflicted on the citizens of the US. It is time to end this folly of water fluoridation without further delay. It is not going to be easy. Fluoridation represents a very powerful "belief system" backed up by special interests and by entrenched governmental power and influence.

All references cited can be found
at <http://www.fluoridealert.org/researchers/fan-bibliography/>

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Why EPA's Headquarters Professionals' Union Opposes Fluoridation

print

The following documents why our union, formerly National Federation of Federal Employees Local 2050 and since April 1998 Chapter 280 of the National Treasury Employees Union, took the stand it did opposing fluoridation of drinking water supplies. Our union is comprised of and represents the approximately 1500 scientists, lawyers, engineers and other professional employees at EPA Headquarters here in Washington, D.C.

The union first became interested in this issue rather by accident. Like most Americans, including many physicians and dentists, most of our members had thought that fluoride's only effects were beneficial – reductions in tooth decay, etc. We too believed assurances of safety and effectiveness of water fluoridation. For a history of how drinking water fluoridation began, see "Fluoride, Teeth and the Atomic Bomb", by investigative reporters Joel Griffiths and Chris Bryson.

Then, as EPA was engaged in revising its drinking water standard for fluoride in 1985, an employee came to the union with a complaint: he said he was being forced to write into the regulation a statement to the effect that EPA thought it was alright for children to have "funky" teeth. It was OK, EPA said, because it considered that condition to be only a cosmetic effect, not an adverse health effect. The reason for this EPA position was that it was under political pressure to set its health-based standard for fluoride at 4 mg/liter. At that level, EPA knew that a significant number of children develop moderate to severe dental fluorosis, but since it had deemed the effect as only cosmetic, EPA didn't have to set its health-based standard at a lower level to prevent it. We tried to settle this ethics issue quietly, within the family, but EPA was unable or unwilling to resist external political pressure, and we took the fight public with a union amicus curiae brief in a lawsuit filed against EPA by a public interest group. The union has published on this initial involvement period in detail (1).

Since then our opposition to drinking water fluoridation has grown, based on the scientific literature documenting the increasingly out-of-control exposures to fluoride, the lack of benefit to dental health from ingestion of fluoride and the hazards to human health from such ingestion. These hazards include acute toxic hazard, such as to people with impaired kidney function, as well as chronic toxic hazards of gene mutations, cancer, reproductive effects, neurotoxicity, bone pathology and dental fluorosis. First, a review of recent neurotoxicity research results.

In 1995, Mullenix and co-workers (2) showed that rats given fluoride in drinking water at levels that give rise to plasma fluoride concentrations in the range seen in humans suffer neurotoxic effects that vary according to

when the rats were given the fluoride – as adult animals, as young animals, or through the placenta before birth. Those exposed before birth were born hyperactive and remained so throughout their lives. Those exposed as young or adult animals displayed depressed activity. Then in 1998, Guan and co-workers (3) gave doses similar to those used by the Mullenix research group to try to understand the mechanism(s) underlying the effects seen by the Mullenix group. Guan's group found that several key chemicals in the brain – those that form the membrane of brain cells – were substantially depleted in rats given fluoride, as compared to those who did not get fluoride.

Another 1998 publication by Varner, Jensen and others (4) reported on the brain- and kidney damaging effects in rats that were given fluoride in drinking water at the same level deemed “optimal” by pro-fluoridation groups, namely 1 part per million (1 ppm). Even more pronounced damage was seen in animals that got the fluoride in conjunction with aluminum. These results are especially disturbing because of the low dose level of fluoride that shows the toxic effect in rats – rats are more resistant to fluoride than humans. This latter statement is based on Mullenix's finding that it takes substantially more fluoride in the drinking water of rats than of humans to reach the same fluoride level in plasma. It is the level in plasma that determines how much fluoride is “seen” by particular tissues in the body. So when rats get 1 ppm in drinking water, their brains and kidneys are exposed to much less fluoride than humans getting 1 ppm, yet they are experiencing toxic effects. Thus we are compelled to consider the likelihood that humans are experiencing damage to their brains and kidneys at the ‘optimal’ level of 1 ppm.

In support of this concern are results from two epidemiology studies from China (5,6) that show decreases in I.Q. in children who get more fluoride than the control groups of children in each study. These decreases are about 5 to 10 I.Q. points in children aged 8 to 13 years. Another troubling brain effect has recently surfaced: fluoride's interference with the function of the brain's pineal gland. The pineal gland produces melatonin which, among other roles, mediates the body's internal clock, doing such things as governing the onset of puberty. Jennifer Luke (7) has shown that fluoride accumulates in the pineal gland and inhibits its production of melatonin. She showed in test animals that this inhibition causes an earlier onset of sexual maturity, an effect reported in humans as well in 1956, as part of the Kingston/Newburgh study, which is discussed below. In fluoridated Newburgh, young girls experienced earlier onset of menstruation (on average, by six months) than girls in non-fluoridated Kingston (8).

From a risk assessment perspective, all these brain effect data are particularly compelling and disturbing because they are convergent. We looked at the cancer data with alarm as well. There are epidemiology studies that are convergent with whole-animal and single-cell studies (dealing with

the cancer hazard), just as the neurotoxicity research just mentioned all points in the same direction. EPA fired the Office of Drinking Water's chief toxicologist, Dr. William Marcus, who also was our local union's treasurer at the time, for refusing to remain silent on the cancer risk issue (9). The judge who heard the lawsuit he brought against EPA over the firing made that finding – that EPA fired him over his fluoride work and not for the phony reason put forward by EPA management at his dismissal. Dr. Marcus won his lawsuit and is again at work at EPA. Documentation is available on request.

The type of cancer of particular concern with fluoride, although not the only type, is osteosarcoma, especially in males. The National Toxicology Program conducted a two-year study (10) in which rats and mice were given sodium fluoride in drinking water. The positive result of that study (in which malignancies in tissues other than bone were also observed), particularly in male rats, is convergent with a host of data from tests showing fluoride's ability to cause mutations (a principal 'trigger' mechanism for inducing a cell to become cancerous) (e.g. 11a, b, c, d and data showing increases in osteosarcomas in young men in New Jersey 12, Washington and Iowa 13) based on their drinking fluoridated water. It was his analysis, repeated statements about all these and other incriminating cancer data, and his requests for an independent, unbiased evaluation of them that got Dr. Marcus fired.

Bone pathology other than cancer is a concern as well. An excellent review of this issue was published by Diesendorf et al. in 1997(14). Five epidemiology studies have shown a higher rate of hip fractures in fluoridated vs. non-fluoridated communities (15a, b, c, d, e). Crippling skeletal fluorosis was the endpoint used by EPA to set its primary drinking water standard in 1986, and the ethical deficiencies in that standard setting process prompted our union to join the Natural Resources Defense Council in opposing the standard in court, as mentioned above.

Regarding the effectiveness of fluoride in reducing dental cavities, there has not been any double-blind study of fluoride's effectiveness as a caries preventative. There have been many, many small scale, selective publications on this issue that proponents cite to justify fluoridation, but the largest and most comprehensive study, one done by dentists trained by the National Institute of Dental Research, on over 39,000 school children aged 5-17 years, shows no significant differences (in terms of decayed, missing and filled teeth) among caries incidences in fluoridated, non-fluoridated and partially fluoridated communities (16). The latest publication(17) on the fifty-year fluoridation experiment in two New York cities, Newburgh and Kingston, shows the same thing. the only significant difference in dental health between the two communities as a whole is that fluoridated Newburgh, N.Y. shows about twice the incidence of dental fluorosis (the

first, visible sign of fluoride chronic toxicity) as seen in non-fluoridated Kingston.

John Colquhoun's publication on this point of efficacy is especially important (18). Dr. Colquhoun was Principal Dental Officer for Auckland, the largest city in New Zealand, and a staunch supporter of fluoridation – until he was given the task of looking at the world-wide data on fluoridation's effectiveness in preventing cavities. The paper is titled, "Why I changed My Mind About Water Fluoridation." In it Colquhoun provides details on how data were manipulated to support fluoridation in English speaking countries, especially the U.S. and New Zealand. This paper explains why an ethical public health professional was compelled to do a 180 degree turn on fluoridation.

Further on the point of the tide turning against drinking water fluoridation, statements are now coming from other dentists in the pro-fluoride camp who are starting to warn that topical fluoride (e.g. fluoride in tooth paste) is the only significantly beneficial way in which that substance affects dental health (19, 20, 21). However, if the concentrations of fluoride in the oral cavity are sufficient to inhibit bacterial enzymes and cause other bacteriostatic effects, then those concentrations are also capable of producing adverse effects in inammalian tissue, which likewise relies on enzyme systems. This statement is based not only on common sense, but also on results of mutation studies which show that fluoride can cause gene mutations in inammalian and lower order tissues at fluoride concentrations estimated to be present in the mouth from fluoridated tooth paste (22). Further, there were tumors of the oral cavity seen in the NTP cancer study mentioned above, further strengthening concern over the toxicity of topically applied fluoride.

In any event, a person can choose whether to use fluoridated tooth paste or not (although finding non-fluoridated kinds is getting harder and harder), but one cannot avoid fluoride when it is put into the public water supplies. So, in addition to our concern over the toxicity of fluoride, we note the uncontrolled – and apparently uncontrollable – exposures to fluoride that are occurring nationwide via drinking water, processed foods, fluoride pesticide residues and dental care products. A recent report in the lay media (23), that, according to the Centers for Disease Control, at least 22 percent of America's children now have dental fluorosis, is just one indication of this uncontrolled, excess exposure. The finding of nearly 12 percent incidence of dental fluorosis among children in un-fluoridated Kingston New York (17) is another. For governmental and other organizations to continue to push for more exposure in the face of current levels of over-exposure coupled with an increasing crescendo of adverse toxicity findings is irrational and irresponsible at best. Thus, we took the stand that a policy which makes the public water supply a vehicle for disseminating this toxic

and prophylactically useless (via ingestion, at any rate) substance is wrong.

We have also taken a direct step to protect the employees we represent from the risks of drinking fluoridated water. We applied EPA's risk control methodology, the Reference Dose, to the recent neurotoxicity data. The Reference Dose is the daily dose, expressed in milligrams of chemical per kilogram of body weight, that a person can receive over the long term with reasonable assurance of safety from adverse effects. Application of this methodology to the Varner et al.(4) data leads to a Reference Dose for fluoride of 0.000007 mg/kg-day. Persons who drink about one quart of fluoridated water from the public drinking water supply of the District of Columbia while at work receive about 0.01mg/kg-day from that source alone. This amount of fluoride is more than 100 times the Reference Dose. On the basis of these results the union filed a grievance, asking that EPA provide un-fluoridated drinking water to its employees.

The implication for the general public of these calculations is clear. Recent, peer-reviewed toxicity data, when applied to EPA's standard method for controlling risks from toxic chemicals, require an immediate halt to the use of the nation's drinking water reservoirs as disposal sites for the toxic waste of the phosphate fertilizer industry (24).

This document was prepared on behalf of the National Treasury Employees Union Chapter 280 by Chapter Senior Vice-President J. William Hirzy, Ph.D.

See also:

- Interview with Dr. Hirzy concerning NTP's Fluoride Cancer study
 - Dr. Hirzy's June 2000 Testimony to the US Senate
- END NOTE LITERATURE CITATIONS:

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January 8, 2011 11:31 AM

U.S. Says too Much Fluoride in Water

By CBSNews

ATLANTA - Fluoride in drinking water — credited with dramatically cutting cavities and tooth decay — may now be too much of a good thing. Getting too much of it causes spots on some kids' teeth.

A reported increase in the spotting problem is one reason the federal government said Friday it plans to lower the recommended levels for fluoride in water supplies — the first such change in nearly 50 years.

About 2 out of 5 adolescents have tooth streaking or spottiness because of too much fluoride — a condition called fluorosis — a surprising government study found recently. In some extreme cases, teeth can even be pitted by the mineral — though many cases are so mild only dentists notice it. The problem is generally considered cosmetic.

Health officials note that most communities have fluoride in their water supplies, and toothpaste has it too. Some kids are even given fluoride supplements.

The U.S. Department of Health and Human Services is proposing changing the recommended fluoride level to 0.7 milligrams per liter of water. And the Environmental Protection Agency will review whether the maximum cutoff of 4 milligrams per liter is too high.

The standard since 1962 has been a range of 0.7 to 1.2 milligrams per liter.

The Centers for Disease Control and Prevention reports that the splotchy tooth condition, fluorosis, is unexpectedly common in kids' ages 12 through 15. And it appears to have grown much more common since the 1980s.

"One of the things that we're most concerned about is exactly that," said an administration official who was not authorized to speak publicly before the release of the report. The official described the government's plans in an interview with The Associated Press.

But there are other concerns, too. A scientific report five years ago said that people who consume a lifetime of too much fluoride — an amount over EPA's limit of 4 milligrams — can lead to crippling bone abnormalities and brittleness.

That and other research issued Friday by the EPA about health effects of fluoride are sure to re-energize groups that still oppose adding it to water supplies.

The American Dental Association released a statement applauding the government announcement to change fluoride guidance.

Fluoride is a mineral that exists naturally in water and soil. About 70 years ago, scientists discovered that people whose supplies naturally had more fluoride also had fewer cavities. Some locales have naturally occurring fluoridation levels above 1.2. Today, most public drinking water is fluoridated, especially in larger cities. An estimated 64 percent of Americans drink fluoridated water.

Portland, Ore., is one of the largest cities that doesn't fluoridate its water.

Bill Zepp of the Oregon Dental Association said the city's anti-fluoridation activists will embrace the recommended fluoride changes "as some type of win."

Maryland is the most fluoridated state, with nearly every resident on a fluoridated system. In contrast, only about 11 percent of Hawaii residents are on fluoridated water, according to government statistics.

Fluoridation has been fought for decades by people who worried about its effects, including conspiracy theorists who feared it was a plot to make people submissive to government power.

Those battles continue.

"It's amazing that people have been so convinced that this is an OK thing to do," said Deborah Catrow said Friday. She successfully fought a ballot proposal in 2005 that would have added fluoride to drinking water in Springfield, Ohio.

Reducing fluoride would be a good start, but she hopes it will be eliminated altogether from municipal water supplies.

Catrow said it was hard standing up to City Hall, the American Dental Association and the state health department. "Anybody who was anti-fluoride was considered crazy at the time," she said.

In New York, the village of Cobleskill in Schoharie County — west of Albany — stopped adding fluoride to its drinking water in 2007 after the longtime water superintendent became convinced the additive was contributing to his knee problems. Two years later, the village reversed the move after dentists and doctors complained.

In March, 2006, the National Academy of Sciences released a report recommending that the EPA lower its maximum standard for fluoride in drinking water to below 4 milligrams. The report warned severe fluorosis could occur at 2 milligrams. Also, a majority of the report's authors said a lifetime of drinking water with fluoride at 4 milligrams or higher could raise the risk of broken bones.

Late last year, lawyers for the Fluoride Action Network, Beyond Pesticides, and Environmental Working Group threatened legal action if the EPA did not lower its ceiling on fluoride.

In Europe, fluoride is rarely added to water supplies. In Britain, only about 10 percent of the population has fluoridated water. It's been a controversial issue there, with critics arguing people shouldn't be forced to have "medical treatment" forced on them. In recent years, the UK has tried to add fluoride to communities with the worst dental health but there's still considerable opposition.

In the early years of fluoridation in the United States, the range of levels was created because people in warmer climates drank more water, therefore getting more fluoride than cooler regions. Over time, that difference leveled out with air conditioning, the senior administration official said.

Fluorosis has generally been seen as the primary down side of fluoride.

According to the CDC, nearly 23 percent of children ages 12-15 had fluorosis in a study done in 1986 and 1987. That rose to 41 percent in the more recent study, which covered the years 1999 through 2004.

"We're not necessarily surprised to see this slow rise in mild fluorosis," Dr. William Kohn, director of the CDC's division of oral health, said in a recent interview.

Health officials have hesitated to call it a problem, however. In most kids, it's barely noticeable; even dentists have trouble seeing it, and sometimes don't bother to tell their unknowing patients.

Meanwhile, the U.S. prevalence of tooth decay in at least one tooth among teens has declined from about 90 percent to 60 percent. Health officials call water fluoridation one of the 10 greatest public health accomplishments of the last century.

"One of water fluoridation's biggest advantages is that it benefits all residents of a community — at home, work, school, or play. And fluoridation's effectiveness in preventing tooth decay is not limited to children, but extends throughout life, resulting in improved oral health," said HHS Assistant Secretary for Health Dr. Howard Koh, in a statement.

Indeed, many health leaders continue to be worried about cavities, particularly among poor families with kids who eat a lot of sweets but don't get much dental care.

Secretary Kathleen Sebelius could make a final decision on details of the changes within a few months, the administration official said.

AP

From: "Deming, Susan (DCH)" <DemingS@michigan.gov>
To: <jwilson@dhd10.org>
Sent: Tuesday, October 02, 2012 11:14 AM
Attach: 2013 Fluoridation RFP Final.pdf
Subject: Fluoridation equipment Grant

Dr. Wilson,

Here is the information on the Fluoridation Equipment grant. Let me know if I can help push this along for Cadillac! I have sent to the water system people there too.

Announcing the 2013 Fluoridation Equipment Grant for Water Systems:

October 1, 2012: The Michigan Department of Community Health (MDCH) Oral Health Program has released their Fluoridation Equipment Request for Proposal. MDCH is primarily looking to promote community water fluoridation by offering to reimburse communities currently not fluoridating for fluoridation equipment purchases for the sole purpose to initiate community water fluoridation in their community. Funds also may be available for those systems looking to replace or upgrade their fluoridation equipment. A generous gift from Delta Dental of Michigan of \$100,000 is once again available. For those systems currently wishing to initiate or continue this basic public health practice in their communities the Michigan Department of Community Health- Oral Health Program is providing grants to assist with the cost of purchasing and installing fluoridation equipment. The funds must be used for new or replacement fluoridation equipment purchased in the contract period of April 1, 2013- September 15, 2013 Notice of Intent due January 31, 2013 and proposals due February 8, 2013.

I have attached the proposal and application. The RFP is also available for download at www.michigan.gov/oralhealth **Grant Opportunities**. It is also available on the Bid4Michigan Grant website: <http://www.govbids.com/scripts/Bid4Michigan/public/OpenBids/ViewSolicitations.asp>

For further information please contact me at the information below:

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Michigan Department of Community Health- Oral Health Program

Request for Proposal Fluoridation Equipment 2013

Notice of Intent Due: January 31, 2013
Proposal Due: February 8, 2013

PROPOSAL BACKGROUND:

Fluoridation of a community water system is one of the most cost effective and efficient ways to reduce dental disease in a population. Over 65 years of research on this topic has proven community water fluoridation to be safe and effective in improving the oral health of the community's citizens.

The Michigan Department of Community Health Oral Health Program is primarily looking to promote community water fluoridation by offering to reimburse communities currently not fluoridating for fluoridation equipment purchases for the sole purpose to initiate community water fluoridation in their community. A generous gift from Delta Dental of Michigan of \$100,000 is once again available.

Close to 7 million people in Michigan are benefiting from community fluoridated water. For those systems currently wishing to initiate this basic public health practice in their communities the Michigan Department of Community Health- Oral Health Program is providing grants to assist with the cost of purchase and installation of fluoridation equipment. The funds must be used for new or replacement fluoridation equipment purchased in the contract period of April 1, 2013- September 15, 2013.

First priority will be given to Michigan water systems currently without a water fluoridation program. If funds allow, reimbursement for replacement fluoridation equipment will be offered to those Michigan communities needing to update their fluoridation equipment for the sole purpose of continuing community water fluoridation in their community.

GRANT PROPOSAL:

Applicants may submit only one Application to request funds to help in the purchase, and engineering costs of fluoridation equipment used in Michigan community water systems that currently are not fluoridating. In addition, if funds allow, communities wishing to replace current fluoridation equipment in need of replacement for the purpose of continuing community water fluoridation may submit an application. Those communities that have received awards in the past 3 years will not be considered.

When requesting fluoridation equipment, those Michigan communities that have gone the longest without active community water fluoridation will be given higher priority. Those systems that had to discontinue fluoridation due to faulty equipment will also be given higher priority.

The funds must be used to purchase new or replacement fluoridation equipment to initiate or continue a fluoridation process for their water system. Testing equipment and engineering costs may also be included in the request. Building costs or fluoride product costs will not be allowed. Installation costs may be considered if funds allow. This will be for purchases of fluoridation equipment made only between April 1, 2013 and Sept 15, 2013.

The applicant can request up to \$24,000 for new or replacement fluoridation equipment costs, including testing equipment and engineering costs. A statement from the water supply owner or a water systems operator/engineer in charge will be required to verify the condition of existing fluoridation equipment and justification for its replacement or addition. The new equipment must be in place and in use for administering appropriate fluoride into the drinking water within 6 months from the invoice submission date. (Systems needing longer to install equipment will have the option of amending their contracts at the Michigan Department of Community Health's discretion).

At least two estimates from two separate established fluoridation equipment vendors must be included with your proposal. The estimates must include costs for each individual type of equipment and/or engineering and installation costs. The estimates need to be from two different sources or companies. An estimate breakdown of the equipment being considered and cost of each piece must be included. Fill out Estimates Page. (Page 11). If you need more space, a separate sheet detailing costs per item can be included. If dry product is being used please add a separate sheet with breakdown of special equipment needed.

Water systems must apply for and receive an Act 399 (Michigan Safe Drinking Water Act) construction permit from the Department of Environmental Quality (DEQ) before installation of any fluoride feed equipment. Evidence that a permit application will be submitted, or if DEQ was contacted and they state that no construction permit is needed, then a statement from DEQ to this fact, must be included.

The applicant should be a water system representative from a Michigan community, city, village or township and must provide evidence that fluoridation had been discussed with the public and a vote was favored for fluoridation either by the council or the public at large in the past or as a new project. If no evidence can be found, then a note from DEQ as to the years of previous fluoridation must be attached.

Community population size serviced by your community water system will be considered. This will be confirmed through DEQ records for 2011-12. The larger the population, the higher priority given.

All terms, conditions and limitations specified in the Abbreviated Grant Application will be reviewed and scored according to relevant review criteria described in Selection Criteria.

Grantees will be notified of the award by March 4, 2013.

Purchases must be made and invoices submitted for reimbursement between April 1, 2013 and September 15, 2013.

INSTRUCTIONS FOR GRANT PROPOSAL SUBMISSION:

Applicants should review all included materials and selection criteria.

Notification of Intent to Apply Due: January 31, 2013

Completed Applications Due: February 8, 2013

Applications should be typed or clearly printed.

3 hard copies must be submitted to:

MDCH - FCH
Oral Health Program
Attn: Susan Deming, R.D.H., B.S.
Education and Fluoridation Coordinator
201 Townsend St.
P.O. Box 30195
Lansing, MI 48909

Phone: (517) 373-3624 Fax: (517) 335-8697 or 8294

E-Mail: demings@michigan.gov

Applicants are responsible for the timely receipt of their proposal. **PROPOSALS RECEIVED AFTER THIS DATE, February 8, 2013, AND TIME, 5:00pm, WILL NOT BE CONSIDERED.**

ELIGIBLE APPLICANTS:

The applicant should be a water system representative from a Michigan community, city, village or township and must provide evidence that fluoridation had been discussed with the public and a vote was favored for fluoridation either by the community council or the public at large in the past or as a new project. If no evidence can be found, then a note from DEQ as to the years of fluoridation must be attached.

AVAILABILITY OF FUNDING:

Awards are contingent upon availability of funds. The number of grants to be awarded will be determined by the number of proposals received and the amount of funds requested.

Award requests **must not exceed \$24,000** for new or replacement project equipment. **Awards will be based on funds and equipment requested per population size and number of chemical feed pumps.**

Awards will be available upon submission of estimates for **equipment to be purchased April 1, 2013-September 15, 2013.**

Any funds received by the recipient of the award but not spent for this specific purpose must be returned to the Michigan Department of Community Health. In submitting the application, the applicant assures that funds will be used exclusively for the intended program. The MDCH will not assume any responsibility or liability for costs incurred by the recipient of the award prior to the signing of an

agreement. Funds will be set-aside for an independent analysis, contracted at the discretion of MDCH to evaluate the relative merits of all programs funded.

CONTRACTOR RESPONSIBILITIES:

The award recipient will be required to assume responsibility for all contractual activities offered in the proposal whether or not that recipient performs them. If any part of the program is to be provided by persons other than the recipient, responses to the RFP must include a list of these persons, including name, address, organization, credentials and services to be provided. The state will consider the selected award recipient to be the sole-point-of-contact with regard to program matters, including payment of any and all charges resulting from the award.

REIMBURSEMENT MECHANISM:

All award recipients must sign-up through the on-line vendor registration process to receive all State of Michigan payments in the form of Electronic Funds Transfers (direct deposits), as mandated by PA 533 of 2004. Vendor registration information is available through the Department of Technology, Management and Budget's web site: <http://www.cpexpress.state.mi.us/>

DISCLOSURE OF PROPOSAL CONTENTS:

All information in an applicant's proposal is subject to disclosure under the provisions of Public Act No. 442 of 1976, known as the "Freedom of Information Act." This act also provides disclosure of contracts and attachments thereto.

ISSUING OFFICE:

This Request for Proposals (RFP) is issued by the Michigan Department of Community Health Oral Health Program, hereafter known as MDCH or the Department. The issuing office is the sole-point-of-contact for persons/organizations who are considering preparing responses to this RFP. The award will be made to the applicant(s) who most successfully meet the criteria of the RFP, up to the total amount of funds available within the funding level stipulated and at the discretion of MDCH.

USE OF FUNDS:

Funds available under this announcement for the Fluoridation Equipment Grant should be used only for costs involved for purchasing fluoridation equipment to initiate a community water fluoridation program or for purchases to replace worn out fluoridation equipment in existing fluoridating communities. Testing equipment and engineering costs are allowed. Building and maintenance costs or fluoride product costs are not allowed. Installation costs may be considered if funds available.

Any funds received by the recipient of the award but not spent for the specific purpose must be returned to MDCH. In submitting the application the applicant assures that funds will only be used for the intended program. The MDCH will not assume any responsibility or liability for costs incurred by the recipient of the award prior to the signing of an agreement. Funds will be set-aside at the discretion of MDCH for an independent analysis of program expenses, staffing and operating expenses of funded programs. Relative merits of all programs funded will be evaluated.

NOTICE OF INTENT:

Notice of Intent must be submitted. Any correspondence regarding the grant will only be sent to those that have submitted a notice of intent which could be submitted through e-mail, fax or regular mail. A statement that your agency intends to apply and approximately how much your agency will be

requesting, is what is needed. Contact information for the person most directly involved with initiating the proposal must be included. **Notice of Intents are due January 31, 2013. A Notice of Intent fillable form is included with the application. (Page 15).**

QUESTION AND ANSWER PERIOD:

A proposal conference will not be held. Questions may be submitted electronically until **February 7, 2013**. E-mail responses will be prepared and sent to all parties who have submitted a notice of intent by January 31, 2013. In addition, questions and responses will be posted on the Department's website at www.michigan.gov/oralhealth. To expedite the answers, include your fax number and e-mail address with your notice of intent.

SPECIFICATIONS:

All proposals must address or comply with the following specifications:

- Applicant must be a water system representative from a Michigan community, city, village or township.
- Evidence of a vote in favor of fluoridation by council or public vote must be attached to the application. Highlight the area of evidence in the attached document. If no document can be found then verification of longevity of fluoridation from DEQ must be included.
- Population of area serviced by community water system will be considered. Extra points awarded for systems with larger populations and those over 10,000. The number of chemical feed pumps/equipment in service will also be considered.
- Must be requesting the award to reimburse for fluoridation equipment and engineering costs only associated with installing, testing or replacing said equipment as to initiate or continue a fluoridation program in the community water supply.
- Request for award cannot exceed **\$24,000** for new or replacement fluoridation equipment to include testing equipment and engineering costs. (Installation costs may be considered if funds available).
- Awards will be based on appropriateness of population size and number of chemical feed pumps servicing the population.
- A statement from the water supply owner or a water systems operator/engineer in charge will be required to verify the condition of existing fluoridation equipment and justification for its replacement and/or addition. Include a detailed description of the need for new or replacement equipment and how this will impact the community. There is a Verification/Justification Page to complete. (Page 12). More pages can be added if needed.
- Two separate estimates for fluoridation equipment must be attached from established fluoridation equipment vendors. These estimates must be from two different sources or vendors.
- The first choice vendor should be identified on the Estimates Page, (page 11), and breakdown of estimated costs per equipment item must be included. Please be specific. An additional sheet can be developed if more space is needed. Please add separate sheet if dry product equipment is to be used.

- Water systems must apply for and receive an Act 399 (Michigan Safe Drinking Water Act) construction permit from the Department of Environmental Quality (DEQ) before installation of any fluoride feed equipment. Evidence that a permit application will be submitted, or if DEQ was contacted and they state that no construction permit is needed, then a statement from DEQ to this fact, must be included.
- The new equipment must be in place and in use for administering appropriate fluoride into the drinking water within 6 months from the invoice submission date. (Systems needing longer to install equipment will have the option of amending their contracts at the Michigan Department of Community Health's discretion).
- Notices of Intent must be received no later than January 31, 2013.
- Grantee contracts will be signed for April 1, 2013-September 15, 2013.
- Purchases and invoices for reimbursement of fluoridation equipment must be purchased and submitted between April 1, 2013- September 30, 2013.
- Building costs and fluoride product costs will be excluded. Installation costs may be considered if funds available.

SELECTION CRITERIA: Based on 100 point system

- **20 Points:** Community water system that have not fluoridated in the past will be given maximum points. Communities that have fluoridated in the past but have discontinued and wish to restart will be considered for higher points. Those systems that had to discontinue fluoridation due to faulty or broken fluoridation equipment will be considered for higher points. Justification for replacement equipment must be detailed.
- **10 Points:** Based on population size. Communities with populations over 10,000 receive maximum points.
- **5 Points:** Application is attached and filled out in entirety. Neatness and readability of application will help earn maximum points.
- **5 Points:** Evidence of council or community vote in favor of fluoridating attached. Area in document is highlighted for fluoridation approval evidence. If no document, then notice from DEQ verifying years of fluoridation must be included.
- **10 Points:** Request for award does not exceed \$24,000 for new or replacement fluoridation equipment. Request appears appropriate for size of population and number of chemical feed pumps servicing population.
- **10 Points:** Award request is for fluoridation equipment and engineering costs only. Building and product costs are not allowed. (Installation costs may be considered if funds available).
- **10 Points:** Need for fluoridation equipment verification from the water system owner or a water system operator/engineer in charge is included. The Verification/Justification Page, (page 12), is included and detailed.
- **5 Points:** Water systems must apply for and receive an Act 399 (Michigan Safe Drinking Water Act) construction permit from the Department of Environmental Quality (DEQ) before installation of any fluoride feed equipment. Evidence that a permit application will be submitted, or if DEQ was contacted and they state that no construction permit is needed, then a statement from DEQ to this fact, must be included.
- **10 Points:** At least two estimates for fluoridation equipment attached. (Either from established fluoridation equipment suppliers or from registered professional engineers in Michigan knowledgeable in fluoride chemical feed systems.) Two separate sources/vendors need to be used.
- **10 Points:** Vendor identified and attachment with breakdown of equipment costs is included. (Estimate Page 11). The more detailed the breakdown the more points earned. You may use your own breakdown attachment if needed.
- **5 Points:** Budget forms are attached and filled out in entirety according to included instructions.

** The award of points will be variable based on the opinion of independent reviewers.

DIRECTIONS FOR COMPLETING THE APPLICATION

- **Water System Name:** Enter name of your Community Water System
- **Number of Population Served by Water System:** Enter the # of people that your water system serves.
- **Community Fluoridation Status:** Check Active if community is currently fluoridating or No Fluoridation and add "Never" or last known date of cessation.
- **Amount of Request:** Enter the amount requested from MDCH for reimbursement for fluoridation equipment; check if for new program equipment or replacement equipment.
- **Name of Applicant Organization:** Enter name of the applicant organization. Enter the name and title of the person officially authorized by the applicant organization to enter into agreements (usually chief administrative officer). Enter the address, including city, county, state and ZIP code. Enter the telephone number, fax number and e-mail address.
- **Federal Tax Identification Number:** Enter Federal Tax Identification Number as assigned by the Internal Revenue Service.
- **Authorized Official:** Enter the name of the authorized official of your agency including name, title, mailing address, telephone, fax, and e-mail address.
- **Contact Person:** Enter the name and title of the contact person who will be responsible for coordinating the project. Enter the mailing address, including city, county, state and ZIP code. Enter the telephone number, fax number and e-mail address.
- **Water System Engineer:** Enter the name and title of your water system engineer who will be responsible for overseeing the engineering and installation of the equipment. Enter the mailing address, including city, county, state and ZIP code. Enter the telephone number, fax number and e-mail address.
- **Check List:** Check all that apply to your application.
- **Authorizing Entity:** Signature of authorizing entity must be included.

FLUORIDATION EQUIPMENT 2013 GRANT APPLICATION

Water System Name: _____

Population Served by Water System: _____

Community Fluoridation Status: ☐ Active ☐ No Fluoridation since _____ (Never or date of cessation)

Amount of Request: \$ _____

☐ New Program ☐ Replacement Equipment

Name of Applicant Organization: _____

Federal Tax ID Number: _____

Authorized Official: _____

Title: _____

Mailing Address: _____

City: _____ **County:** _____ **State:** _____ **Zip:** _____

Telephone: _____ **Fax:** _____

E-mail Address: _____

Contact Person: _____

Title: _____

Mailing Address: _____

City: _____ **County:** _____ **State:** _____ **Zip:** _____

Telephone: _____ **Fax:** _____

E-mail Address: _____

Water System Engineer:

Name: _____

Title: _____

Mailing Address: _____

City: _____ **County:** _____ **State:** _____ **Zip:** _____

Telephone: _____ **Fax:** _____

E-mail Address: _____

Check list:

- ☐ ~~Applicant is a water system representative from a community, city, village or township. Health departments may apply on behalf of their communities.~~
- ☐ Population served by water system is indicated.
- ☐ Evidence of council or public vote in favor of fluoridation attached. (Or DEQ statement).
- ☐ Request is for fluoridation equipment, testing equipment and engineering costs only and not for fluoride additives or building costs.
- ☐ Request for award does not exceed \$24,000 for new or replacement fluoridation program equipment.
- ☐ Two estimates for fluoridation equipment and engineering costs attached.
- ☐ Statement that ACT 399 construction permit from DEQ will be applied for is included. (Or statement from DEQ that permit not required).
- ☐ Breakdown of choice vendor estimated costs per piece of equipment attached. (Estimates Page 11).
- ☐ Verification for new or replacement equipment from water system owner or water system operator/engineer in charge is included. (Verification/Justification Page 12)
- ☐ Information for all contact and supervisory persons included.
- ☐ Authorizing Entity signature included.

Authorizing Entity: I hereby affirm my authority and responsibility for the use of all staff, equipment, supplies and educational training described in this application.

Authorized Individual (*Signature*)

Printed Name

Date: _____

Estimates Page

Estimates for Fluoridation Equipment and Engineering Costs

1st Vendor Choice: _____

-Chemical feed pump(s):	\$ _____
-Scale(s):	\$ _____
-Bulk storage tank:	\$ _____
-Day tank:	\$ _____
-Transfer pump:	\$ _____
-Electrical wiring:	\$ _____
-Engineering costs:	\$ _____
-Lab equipment for measuring Fl levels:	\$ _____
-Misc costs:	\$ _____
- Other:	\$ _____

TOTAL ESTIMATED COSTS: \$ _____

TOTAL AWARD REQUEST: \$ _____

~~Verification and Justification~~

Verification and Justification from water system owner or water system operator/engineer in charge

Please describe the need and justification for the new fluoridation equipment:

1. What is the main purpose of the document?
 2. What are the key findings of the study?
 3. What are the limitations of the study?
 4. What are the implications of the study?
 5. What are the conclusions of the study?
 6. What are the recommendations of the study?
 7. What are the future research directions?
 8. What are the acknowledgments?
 9. What are the references?
 10. What are the appendices?
 11. What are the footnotes?
 12. What are the tables?
 13. What are the figures?
 14. What are the captions?
 15. What are the legends?
 16. What are the abbreviations?
 17. What are the acronyms?
 18. What are the symbols?
 19. What are the units?
 20. What are the dates?
 21. What are the times?
 22. What are the locations?
 23. What are the names?
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Contact information of water system owner/operator/engineer in charge that supplied verification and justification above:

Name: _____
(please print)

Title: _____

Phone number: _____

E-mail: _____

Signature: _____

Instructions for Budget Forms B.1, B.2

Electronic versions of these forms can be obtained by contacting Susan Deming
demings@michigan.gov 517 373-3624

(The Cost Detail form should be filled out first: B.2 -DCH 0386)

B.2: Program Budget-Cost Detail (DCH-0386)

- Program- Enter the title of the program: "Fluoridation Equipment"
- Budget Period: Enter the dates of the contract period; in this case April 1, 2013-Sept 15, 2013.
- Date Prepared: Enter the date form is filled out.
- Contractor Name: Enter the name of the applying agency.
- Budget Agreement: Check "original" agreement.
- Salary and Wages: Leave blank.
- Fringe Benefits: Leave blank.
- Travel: Leave blank.
- Supplies and Materials: Enter request amount here if under \$5000. List types of equipment requesting in available space.
- Contractual: Leave blank.
- Equipment: Enter request amount here if over \$5000. List types of equipment requesting in available space.
- Other Expenses: List if including engineering or installation costs.
- Total Direct Expenditures: Enter total amount here.
- Indirect Cost Calculations: Leave blank.
- Total All Expenditures: Enter total amount again here.

B.1: Program Budget Summary (DCH-0385)

- Program- Enter the title of the program: "Fluoridation Equipment"
- Date Prepared: Enter the date form is filled out.
- Page ___ of ___: Enter the total number of pages comprising the complete budget package; in this case should be 2.
- Contractor Name: Enter the name of the applying agency.
- Budget Period: Enter the dates of the contract period; in this case April 1, 2013-Sept 15, 2013.
- Mailing Address: Enter the complete address for contact purposes.
- Budget Agreement: Check "original" agreement.
- Federal Identification Number: Enter Federal Tax ID number or Employer ID Number (EIN).
- Expenditure Category: Enter the total amount you are spending on fluoridation equipment in the first column under "Supplies and Materials if the amount is less than \$5000. Enter the total amount you are spending on fluoridation equipment in first column under "Equipment" if the total is over \$5000. List "Other Expenses" such as engineering and installation. Then enter the total again in the last column under "Total Budget".
- Total Expenditures: This will be the sum of above.
- Source of Funds: Enter your request total under line 12- State Agreement in first and last columns. If you are receiving additional funding from other sources you can put that here in the appropriate line item. If your agency or community budget is covering the remaining costs put this under "other".
- Total Funding: Enter the sum of lines 11-15 on line 16. The total funding amount should be equal to line 10-total expenditures.

Fillable Budget forms, if not included, may be obtained from Susan Deming at
demings@michigan.gov

Grantee Reporting Requirements

- Grantee is to submit invoices for fluoridation equipment purchased between April 1, 2013 and September 15, 2013 to contract manager by September 30, 2013.
- All award recipients must sign-up through the on-line vendor registration process to receive all State of Michigan payments in the form of Electronic Funds Transfers (direct deposits), as mandated by PA 533 of 2004. Vendor registration information is available through the Department of Management and Budget's web site: <http://www.cpexpress.state.mi.us/>
- A Financial Status Report and an Equipment Inventory Schedule, if indicated, are to be submitted by October 15, 2013 to the oral health program contract manager and MDCH.
- This equipment must be in place and administering appropriate fluoride into the drinking water within 6 months from the invoice submission date. (Systems needing longer to install equipment will have the option of amending their contracts at the Michigan Department of Community Health's discretion).
- Oral health contract manager will follow up on installation and administration of equipment within 6 months of invoice submission date.
- MDCH-Oral Health will be available for any technical assistance.

Notice of Intent to Apply

Date: _____

Name of Agency Applying: _____

Contact person: _____

Title: _____

Address: _____

E-Mail: _____

Phone: _____

Fluoridation Status: New _____ Replacement Equipment _____

Estimated Amount of Request: _____

The Michigan
Oral Health Program

Building a Stronger,
Healthier Michigan

Now that's something to



Community Water Fluoridation Program Report 2009-2010

Michigan Department of Community Health- Oral Health Program



This report is to describe activities of the Oral Health Program regarding their Community Water Fluoridation (CWF) Program. The Education/Fluoridation Coordinator is the person most involved in monitoring the objectives for this program and is the author of this report.

Community water fluoridation is the process of adjusting the natural fluoride concentration of a community's water supply to a level that is best for the prevention of dental caries. In the United States, community water fluoridation has been the basis for the primary prevention of dental caries for many years. Grand Rapids, Michigan was the birthplace of community water fluoridation for the world and for 65 years this preventive practice has been recognized as one of the 10 great achievements in public health of the 20th century. [CDC 1999a].

In 2009 the Michigan population was 9,969,727. A large number of those individuals, 7,616,641, are served by community water systems. There are 551 community water systems providing fluoridated water to 6,898,018 people. Ninety-one percent of people on community water systems have access to fluoridated water.

The goal of the MDCH-Oral Health Community Water Fluoridation Program is to promote a quality Community Water Fluoridation Program through the State of Michigan with the Oral Health Program and the Department of Environmental Quality (DEQ), to reduce dental disease in our state.

There is a three year Interdepartmental Agreement with DEQ and MDCH. This agreement formalizes the collaboration between the two agencies to increase community water fluoridation and fluoridation surveillance measures. Working together, DEQ and MDCH have agreed to meet regularly, collect pertinent information on each water system, promote fluoridation training to all engineers and operators, encourage annual inspections of fluoridation equipment and processes, maintain safety in regards to fluoridation and promote continuation of fluoridation in community water systems.

Of significance for this report is that the State Fluoridation Advisory Committee (FAC) was moved to the Michigan Oral Health Coalition (MOHC) from MDCH for management through the

coalition. It was agreed that having the advisory committee comments and recommendations coming from the coalition instead of the state department would gain credibility for the committee. The FAC is crucial for feedback and support to the Oral Health Program's CWF program.

These were the main objectives/activities for the 09-10 CWF Program:

- A. Develop a State Fluoridation Plan that implements CDC grant requirements and submit requested reports
- B. Monitor fluoride levels on monthly basis consistent with WFRS
- C. Track progress of incorporating CDC EARWF practices
- D. Provide new or replacement equipment to communities looking to add fluoridation
- E. Meet Healthy People 2010/2020 goal of 75% of population on Community Water Fluoridation
- F. Provide education and promotion of Community Water Fluoridation
- G. Participate in Lab Proficiency Testing or equivalent
- H. Maintain all above objectives through management and at a comprehensive level that meets or exceeds Healthy People objectives
- I. Initiate a Fluoridation Coordinator with DEQ
- J. Promote testing of individual wells for fluoride levels
- K. Implement a study on fluorosis levels in the state
- L. Send survey to health departments on private well testing
- M. Develop a CWF Program evaluation plan

This report will describe each objective and give detail on the activities under each, give a time frame activities were carried out, the progress made, and the performance measures. All of these objectives will be monitored and managed by the Fluoridation Coordinator. These objectives are based on the Centers for Disease Control and Prevention (CDC) Cooperative Agreement with MDCH-Oral Health.

Objective A: Develop State Fluoridation Plan that implements CDC grant requirements and submit requested reports

We had developed a CWF workplan listing the requirement objectives but did not realize until the CDC site visit November 2009 that CDC was expecting a State Fluoridation Plan, similar to the State Oral Health Plan, with the workplan as a section of that. The Oral Health Program, with input from key stakeholders, such as the State Advisory Committee, and the DEQ immediately pooled resources and designed a plan which can be found on the Oral Health Program website www.michigan.gov/oralhealth.

This Plan discusses infrastructure, collaborations and partners, evaluation of the program and includes the workplan objectives with activities and time frames clearly addressed. Our performance measure was to have the Plan approved by the State Fluoridation Advisory Committee. This was approved January 2010. The Plan will be updated annually and progress is currently being made to update the 2010-11 Plan. All reports and the status of the State CWF Plan are entered into the CDC reporting system, Management Overview for Logistics Analysis and Reporting, (MOLAR), on a monthly basis.

Objective B: Monitor fluoride levels on monthly basis consistent with WFRS

The state Fluoridation Coordinator currently receives monthly averages for fluoride levels from each community water system once a year from DEQ usually in February for the previous year. This is then entered into WFRS by the Fluoridation Coordinator or a student assistant. The Fluoridation Coordinator has continued to press DEQ for twice a year submissions with no success. The optimal reporting submission would be to receive these readings on a monthly basis from each water system directly to the Oral Health Program but the DEQ does not want more responsibility added to the already burdensome reports each system is currently submitting.

The Fluoridation Coordinator, after receiving the yearly reports, reviews each water system for high and low levels and reports these systems to the DEQ. It is then the DEQ's responsibility to contact the water system and determine ways to correct the levels. Michigan fluoride level range was previously set at .9-1.5. This past year we have reset the range in WFRS to reflect .9-1.2 ppm with the optimal range at 1.0 ppm. The performance measures are to increase the number of communities receiving CDC annual awards, especially those with 12 consecutive months of optimal fluoride levels.

Awards: For 2009 we had 55 communities that achieved the CDC award for having optimal levels of fluoride for 12 consecutive months. These communities each received a certificate from CDC and a congratulatory letter from the Oral Health Program Director. Each of these water system names were displayed on a giant poster displayed at the Michigan AWWA meeting in August 2010. The Village of Dexter received the CDC Certificate of Appreciation 2009 Community Initiative Award for beginning a new fluoridation program in their community. Three systems received the Certificate of Appreciation 2009 50 Year Award: Sheridan, Frankenmuth and Yale.

Objective C: Track Progress of incorporating CDC EARWF practices

EARWF is the acronym for Engineering and Administrative Recommendations for Water Fluoridation. The DEQ has the responsibility for monitoring similar standards set by the State of Michigan. The Michigan standards closely follow the EARWF standards. These can be found in Michigan's *Suggested Practice for Water Works Part 10, Section 9- Fluoridation*. The Oral Health Program receives the *Sanitation Survey Report* from DNRE every three years. This includes information about the status of fluoridating water systems. The annual reports from DEQ also include the names of water systems that have discontinued fluoridation or initiated new fluoridation processes.

Objective D: New or Replacement Equipment to communities looking to add fluoridation

Our first activity was to acquire funding to do this. Delta Dental had given the Varnish! Michigan program funds to help promote fluoride varnish programs across the state. Due to this program not utilizing \$94,000 of the funds in 2009 we were able to move them into a new project- the Fluoridation Equipment Grant. This had full approval from Delta Dental and the MDCH Budget Department.

Our next activity was to identify all non fluoridated communities with populations over 1000. This was easily accomplished by utilizing WFRS and accessing the report on non fluoridated systems. It was much more difficult to determine which systems were in need of replacement

equipment as the DEQ did not have this information. It was decided to just send the RFP out to all systems with the intent to interest those needing replacement equipment.

An RFP was released October 1, 2009 with applications due March 30, 2010. This proposal allowed communities to apply for reimbursement of fluoridation equipment costs purchased between June 1, 2010 and September 30, 2010. The RFP was sent to all systems with 1000 or over populations and with contact names and e-mail addresses. It was also posted on the Oral Health website, the Michigan Section of AWWA website, the State of Michigan website, in the newsletters of the MI AWWA and the Michigan Oral Health Coalition.

Twelve communities sent in applications with one community requesting equipment to initiate a new fluoridation program. A competitive process to review and score the applications took place April 23, 2010. From the scores collected, there were 6 communities that were allocated funds. The one community, Pinckney, that was to initiate a new fluoridation program decided to turn down the funds as it was not the total they requested. Two more communities next in line on the scoring grid were then offered the remaining funds. At the end, we awarded 7 communities fluoridation grants.

2010 Fluoridation Equipment Grantees:

Name of Community:	Award Amount Allocated:	Award Amount Used:
ALPENA	\$17,820	\$16,907
ESCANABA	\$1,780	\$1,712.48
GLADSTONE	\$18,000	\$16,019.68
GREENVILLE	\$11,300	\$11,300
MARINE CITY	\$24,800	\$23,799.95
MARQUETTE	\$890	\$872.39
MUSKEGON	\$20,074	\$20,074
Total:	\$94,664	\$90,686

The grantees have 6 months from the date of invoice submission for reimbursement to have the equipment installed, operational, and their report sent in to MDCH. As of September 30, 2010, 3 of the grantees had everything completed. The Fluoridation Coordinator is following through with the rest of the grantees to insure compliance and reporting within the allotted timeframe.

Objective E: Meet Healthy People 2010/2020 goal of 75% of population on Community Water Fluoridation

According to the 2009 WFRS 510 report for Michigan, we had 91.2% of the population in community water systems drinking fluoridated water. The DEQ reported having 91.7% of the population for this same year. We continue to exceed the target for the Healthy People Objective. Michigan continues to promote and support community water fluoridation in those areas currently not fluoridating. Through the Michigan Oral Health Coalition we had identified those communities not fluoridating and had sent information packets with studies promoting fluoridation and a copy of the Fluoridation Equipment RFP.

Objective F: Education and Promotion of Community Water Fluoridation

One of the activities under this objective was to integrate oral health education into the state trainings for operators, engineers, local water treatment directors, and utility organizations. The Fluoridation Coordinator was able to present at 5 regional meetings across the state in the spring of 2009 and presented on the benefits of a fluoridation program for their water systems. There are currently discussions to include the Fluoridation Coordinator into the state trainings on a yearly basis.

Another activity under this objective is to send at least one state district engineer each year to the CDC fluoridation training offered two times a year. We allow funding for this through the CDC Cooperative Agreement. This is an ongoing project until all district engineers in the state have taken the national training. Two Oral Health Program (OHP) contractors, Jill Moore and Lynda Horsley, were sent to the CDC training in the fall of 2009.

In the spring of 2010 we were able to send Michael Bolf, District Engineer, Grand Rapids District. Here is what Michael had to comment on the training: "As a water supply engineer, I found the training very informative and relevant to my job. The two biggest benefits of the training for me personally were a) the comprehensive examination of unsupported claims from the anti-fluoridating community and b) the explanation of how fluoride is beneficial or detrimental to the body at various concentrations. I feel much better prepared to field questions from the general public, municipal officials, or utility personnel as a result."

In October of 2010 our new Oral Health Program Director, Chris Farrell, attended as well as Tom Kochheiser from the Michigan Dental Association.

The Oral Health Program developed a CWF brochure in 2008. In conjunction with another activity the brochures were sent to all local health departments in Michigan stating they were free while available to these health departments to distribute to the community. The Fluoridation Coordinator has distributed over 2000 of these brochures through requests from health

departments, individual dental offices, and numerous conferences. There are continued requests to continue to provide these for public education.

As another ongoing activity the OHP continues to update CWF fact sheets as needed. We have a special folder in our data base that keeps current research resources, bullet point fact sheets and pertinent information that communities and the public can use to promote CWF. They are reviewed on an annual basis and updated if necessary by the OHP and the State Fluoridation Advisory Committee.

The State Fluoridation Advisory Committee is crucial for promotion and education of community water fluoridation. Our objective was to meet at least twice a year with one of those meetings face to face. The FAC has its own workplan that does, to some extent, follow the OHP workplan. We met twice in the 09-10 year and decided to better promote CWF and step that up to 4x/year for the 10-11 year. Face to face meetings will be in conjunction with the Michigan Oral Health Coalition meeting in June of each year.

Along with the State Fluoridation Advisory Committee, the OHP will continue to give support and education to communities and the public dealing with anti fluoridation issues. This is an ongoing activity depending on the needs of each community. For the 09-10 year the Fluoridation Coordinator and the FAC had representation at a Mt. Pleasant Fluoridation Task Force meeting and a city council meeting. Mt. Pleasant has a history of fighting the fluoridation program and in the summer of 2009 developed a Task Force to spend a year researching all aspects of fluoridation. The Fluoridation Coordinator attended a Task Force meeting in November 2009 and gave each member research materials and addressed questions. The Task Force then issued a report on their findings to the city council on June 14, 2010 with the Fluoridation Coordinator and three members of the FAC present. The city council heard from numerous individuals on the pros and cons of the report and yet, voted to reduce the level of fluoride in their drinking water from 1.0ppm to .4ppm. Letters from MDCH and the FAC were sent describing our disappointment in their decision.

No progress has been made to update the OHP website to include more information on CWF. There is a heading for CWF with a few resources. The 2009-10 RFP was posted as well under Grant Opportunities. Future plans would include a direct box link to store fluoridation resources and FAC agendas and minutes.

Objective G: Participate in Lab Proficiency Testing or Equivalent

The activity of this objective was to acquire the results of the state lab proficiency testing on an annual basis. This is only done in Michigan sporadically so no report was available for the 09-10 year. CDC decided to discontinue this objective for the 10-11 year.

Objective H: Maintain all above objectives through management and at a comprehensive level that meets or exceeds Healthy People objectives

The main activity under this objective was to maintain the Oral Health Program Fluoridation Coordinator position to make sure someone was responsible for carrying out the objectives. We received continued funding through the CDC Collaborative Agreement to further fund this position through 2010. Having a dedicated person follow through with the activities for each objective has been the success of our CWF program. Building relationships with DEQ, the

MOHC and the FAC has been crucial to maintaining our high status for populations served from CWF.

Objective I: Fluoridation Coordinator with DEQ

This is one objective that has been a dream of the OHP. We wish there was state funding that would support the hiring of a full time fluoridation engineer with the DEQ. Other states have this position. This makes it easier to coordinate with the Oral Health program, maintain optimal fluoride levels and monitor the safety of equipment and administration. At this point no funds are available and the state budget for the foreseeable future does not appear to make this objective a reality. This objective may be removed for 2010-11 as not feasible at this time.

Objective J: Testing of individual wells for fluoride levels

Even though the majority of Michigan residents are on community drinking water systems, there are still over 2 million people living in rural areas that may not have access to fluoridated water. In order to encourage private well testing for the public we have encouraged all health departments to carry individual chemical test sample bottles to hand out to the public. A link to the state lab to obtain these sample kits is posted on the Oral Health Program website and on the Michigan Oral Health Coalition website. We sent out a survey in 2009 asking each health department whether they stock these sample kits. (See Objective L). Over 94% of health departments said they do carry these kits.

Another activity we need to pursue is to initiate a public awareness campaign to promote individual well testing in the state. The FAC has initiated some discussion on designing a brochure to inform the public on the importance of this. An informal survey was taken at the Infant Oral Health Summit October 1, 2010 to assess dental and medical care provider's knowledge regarding their practice use of fluoride. Some of the questions asked included:

- Are you aware what percentage of your patients drink regularly from fluoridated or from non-fluoridated water sources?
- Do you regularly evaluate a patient's fluoride intake (water, toothpaste, fluoride vitamins, fluoride rinses) and discuss with the patient?
- Do you feel well-informed enough to make recommendations to your patients regarding their (systemic or topical) fluoride exposure?
- Do you ever prescribe fluoride drops for babies?

Presently, this information is being compiled and will be discussed at the next FAC meeting to help plan next steps. Discussion will also include ways to address this topic with the public such as newspaper articles, letters to legislators, etc.

Objective K: Study on fluorosis levels in the state

First thing we did was add questions regarding fluorosis into the 2010 Count Your Smiles Survey of 3rd graders across Michigan. Screeners were trained in identifying fluorosis and the Dean's fluorosis index was used. Results from the 2010 Count Your Smiles Survey are not available at

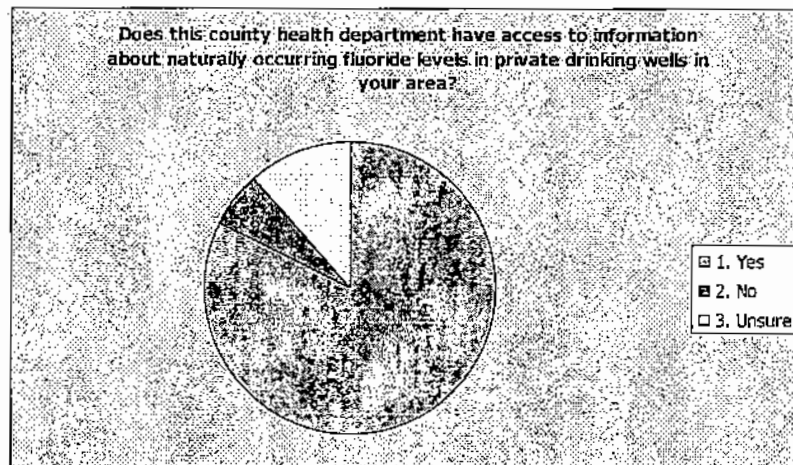
this time. If we discover that fluorosis is higher than the national average (28.5%- very mild) than we will determine whether a future study just on fluoride intake in the state is warranted for our state. This objective will be projected into the new 2010-11 workplan.

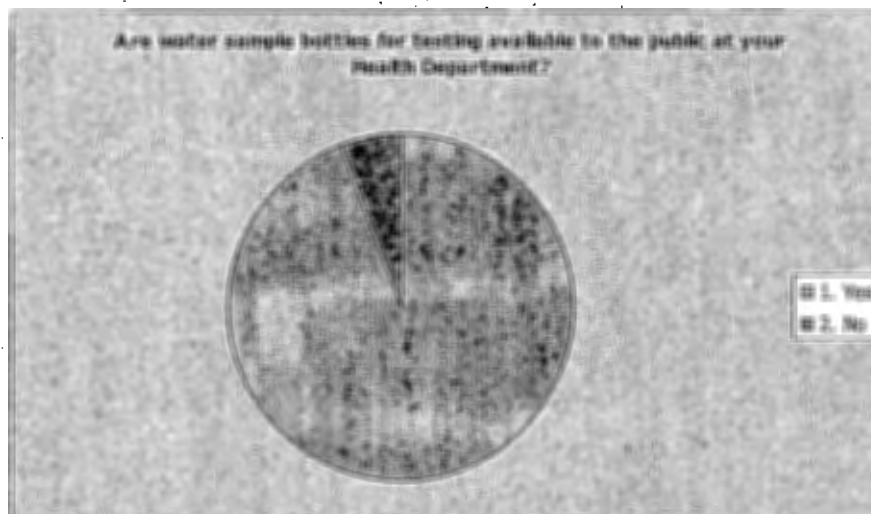
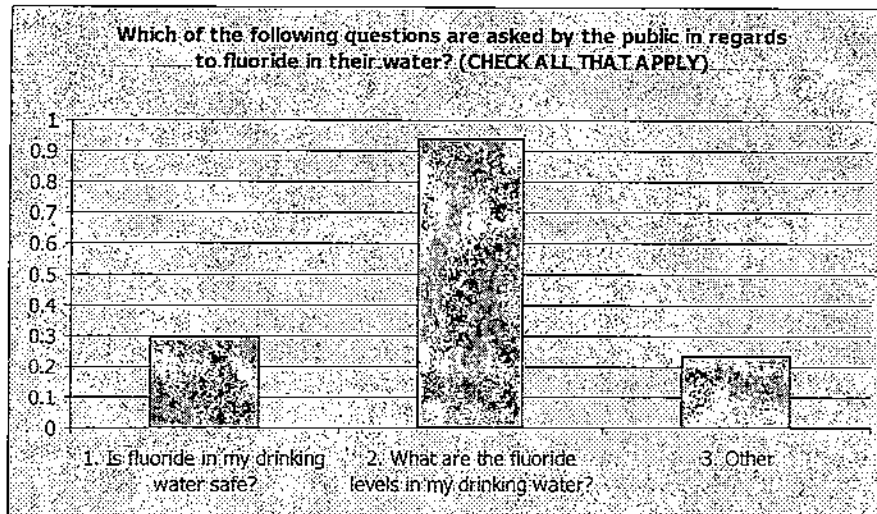
Objective L: Survey to Health Departments on Private Well Testing

We worked with a University of Michigan Dental Hygiene student who designed a survey to assess the current knowledge and procedures of all Michigan local health departments regarding fluoride levels and well water testing. The survey consisted of questions which assessed the knowledge of fluoride levels and well water testing, types of questions asked by the public to health departments regarding water testing, and the availability of the public to obtain water sample bottles and results.

"The residents of Michigan will benefit from this project because it will be identified and promoted where people need to go to gain access to well water testing kits, how to use the kits, and obtain results. The MDCH will benefit because it specifically aligns with the *Michigan's Oral Health Plan's* strategies for preventing oral diseases and their community water fluoridation work plan that has an objective, "Testing of individual wells for fluoride levels." (From the cover letter to the health departments accompanying the survey October 2009). The survey was mailed to all local health departments in October of 2009 accompanied with a CWF brochure described in objective F. The survey was also offered online through Survey Monkey.

Some Results:





This information was shared with the Advisory Committee and the DNRE. No epidemiological support was available at the time to make conclusions or recommendations.

Objective M: CWF Program Evaluation

The activity for this objective was to get an evaluation plan in place for the CWF program. Evaluation objectives were developed for the Oral Health Community Water Fluoridation Program by an Oral Health Program Coordinator and currently our evaluation person. The 09-10 CWF Evaluation Plan was ready by September 2010 and is based on the MDCH- OHP evaluation plan. There are 11 evaluation objectives with three general questions to answer as a summary. Updates to the Plan are under way for 2010-11.

Each objective describes:

- ✓ What type of data is needed
- ✓ Where the data will come from
- ✓ How the data will be collected
- ✓ When the data will be collected
- ✓ What will be done with the data
- ✓ How and when results will be shared
- ✓ Who is responsible for each evaluation objective
- ✓ If and when evaluation objective was completed and by whom

Our performance measure was to have this plan in place by September 2010 and that has been accomplished. In the new 2010-11 CWF workplan more detailed evaluation activities will be described.

**Changes to Community Water Fluoridation in Michigan for the 2009-2010 fiscal year:
(From the DEQ Fluoride Progress Report November 2010)**

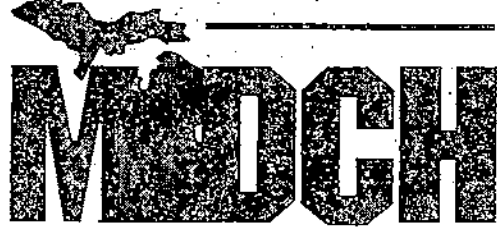
- The City of West Branch started feeding fluoride again in 2010. They had stopped feeding in 2008 when they connected their system to the West Branch Township system, which was non fluoridating.
- Marine City resumed feeding fluoride in September 2010 after having stopped feeding in May 2009.
- Mt. Pleasant did not stop feeding fluoride but reduced the feed rate to 0.4 mg/l on the recommendations of a task force.
- Munising stopped feeding fluoride during a major water system construction project in 2009. The city council has recently voted to resume feeding fluoride but first it will need to purchase new feed equipment.
- Forsyth Township/Gwinn officially stopped feeding fluoride by council vote. They have not feed fluoride for several years.

Looking Ahead:

The work plan for the Oral Health Program Community Water Fluoridation Program for 2010-11 will have similar objectives as this past year:

- We are currently updating the CWF Plan
- We are continuing to collaborate with the Michigan Department of Environmental Quality, the Michigan Oral Health Coalition and the State Fluoridation Advisory Committee
- We will continue to work with DEQ on acquiring fluoride levels for each water system and monitoring of safety issues
- We do have funding for another fluoridation equipment RFP that was released October 1, 2010
- Efforts will continue to exceed the Healthy People objective of 75% population on fluoridated drinking water
- Promotion and education of CWF will continue to remain a top focus
- Plans to begin a public awareness campaign to educate on testing private wells have begun.
- We will determine if a further study to address fluorosis levels in the state needs to be developed.
- From the evaluation of the 09-10 program adjustments and changes will be made to better enable the OHP to improve its CWF program

Michigan Department
of Community Health



ORAL HEALTH PROGRAM

For further information on the Michigan Oral Health Community Water Fluoridation Program please check our website: www.michigan.gov/oralhealth or contact:

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517 373-3624

Meagan Hoblet

From: Jeff Dietlin
Sent: Thursday, September 20, 2012 1:28 PM
To: Marcus Peccia
Cc: Meagan Hoblet
Subject: FW: Floridation Facts
Attachments: fluoridation_facts.pdf

I received this from the DEQ today.

JEFFREY M. DIETLIN

City of Cadillac
Director of Utilities
(231) 779-7346(Direct)
(231)775-0906 (Fax)

From: Conradson, Scott (DEQ) [mailto:CONRADSONS1@michigan.gov]
Sent: Thursday, September 20, 2012 1:25 PM
To: Jeff Dietlin
Cc: Kurt Malzahn (kmalzahn@ci.ludington.mi.us)
Subject: Floridation Facts

Jeff,

I saw the article in the paper that Cadillac is considering adding fluoride to the water. Please feel free to share the attached document regarding "Fluoridation Facts" with city council members and anyone in the public that may be interested.

Also, here is a note DEQ drinking water staff received from Pat Cook, DEQ's Treatment Specialist engineer earlier this year:

2010 STATISTICS SHOW INCREASE IN U.S. RESIDENTS RECEIVING FLUORIDATED DRINKING WATER

At last week's National Oral Health Conference, Dr. Thomas R. Frieden, Director of the U.S. Centers for Disease Control and Prevention, announced that the agency had released the latest statistics for the nation on community water fluoridation. The new statistics are available on its Web site (www.cdc.gov/fluoridation/statistics/2010stats.htm).

The latest data reported by the CDC Division of Oral Health show that in 2010, 73.9% of the U.S. population on community water systems, or a total of 204.3 million people, had access to optimally fluoridated water. This is an increase of about 9 million people from 2008, when 72.4% of the U.S. population on public water systems, or 195.5 million people, received optimally fluoridated water. Twenty-six states plus the District of Columbia have achieved the Healthy People 2010 objective of having 75% of their population on community water systems receive fluoridated water. Studies show that community water fluoridation prevents at least 25% of tooth decay in children and adults throughout the lifespan.

For more information about fluoridation, visit the CDC Web site at www.cdc.gov/fluoridation.

Scott A. Conradson, District Engineer
Resource Management Division, Michigan DEQ

Cadillac District Office 120 W. Chapin, Cadillac 49601
231-876-4461 phone, 231-775-4050 fax

Fluoridation Facts



American Dental Association
www.ada.org



*Celebrating 60 Years
of Water Fluoridation*

This 2005 edition of Fluoridation Facts is dedicated to Dr. Herschel Horowitz, talented researcher, renowned dental epidemiologist and tireless advocate of community water fluoridation.

[illegible]

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[illegible]

1. *Prüfungsinhalt*: Die Prüfung umfasst die Themenbereiche: Grundlagen der Betriebswirtschaftslehre, Marketing, Beschaffung, Produktion, Vertrieb, Finanzierung und Rechnungswesen.

[illegible]

As a result, students will be able to identify the effects of the various factors that affect the rate of a chemical reaction. They will be able to explain the effects of the various factors that affect the rate of a chemical reaction. They will be able to explain the effects of the various factors that affect the rate of a chemical reaction.

The authors have nothing to disclose.

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American Dental Association
www.ada.org

ADA Statement Commemorating the 60th Anniversary of Community Water Fluoridation

Sixty years ago, Grand Rapids, Michigan became the world's first city to adjust the level of fluoride in its water supply. Since that time, fluoridation has dramatically improved the oral health of tens of millions of Americans. Community water fluoridation is the single most effective public health measure to prevent tooth decay. Additionally, the Centers for Disease Control and Prevention proclaimed community water fluoridation as one of 10 great public health achievements of the 20th century.

Fluoridation of community water supplies is simply the precise adjustment of the existing naturally occurring fluoride levels in drinking water to an optimal fluoride level recommended by the U.S. Public Health Service (0.7 – 1.2 parts per million) for the prevention of dental decay. Based on data from 2002, approximately 170 million people (or over two-thirds of the population) in the United States are served by public water systems that are fluoridated.

Studies conducted throughout the past 60 years have consistently indicated that fluoridation of community water supplies is safe and effective in preventing dental decay in both children and adults. It is the most efficient way to prevent one of the most common childhood diseases – tooth decay (5 times as common as asthma and 7 times as common as hay fever in 5- to 17-year-olds).

Early studies, such as those conducted in Grand Rapids, showed that water fluoridation reduced the amount of cavities children get in their baby teeth by as much as 60% and reduced tooth decay in permanent adult teeth nearly 35%. Today, studies prove water fluoridation continues to be effective in reducing tooth decay by 20-40%, even in an era with widespread availability of fluoride from other sources, such as fluoride toothpaste.

The average cost for a community to fluoridate its water is estimated to range from approximately \$0.50 a year per person in large communities to approximately \$3.00 a year per person in small communities. For most cities, every \$1 invested in water fluoridation saves \$38 in dental treatment costs.

The American Dental Association continues to endorse fluoridation of community water supplies as safe and effective for preventing tooth decay. This support has been the Association's position since policy was first adopted in 1950. The ADA's policies regarding community water fluoridation are based on the overwhelming weight of peer-reviewed, credible scientific evidence. The ADA, along with state and local dental societies, continues to work with federal, state, local agencies and community coalitions to increase the number of communities benefiting from water fluoridation.

2005

211 East Chicago Avenue Chicago, Illinois 60611-2678

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EXECUTIVE SUMMARY

- Fluoridation of community water supplies is the single most effective public health measure to prevent dental decay.
- Throughout more than 60 years of research and practical experience, the overwhelming weight of credible scientific evidence has consistently indicated that fluoridation of community water supplies is safe.
- The Centers for Disease Control and Prevention has proclaimed community water fluoridation (along with vaccinations and infectious disease control) as one of ten great public health achievements of the 20th century.
- More than 100 national and international health, service and professional organizations recognize the public health benefits of community water fluoridation for preventing dental decay.
- Studies prove water fluoridation continues to be effective in reducing dental decay by 20-40%, even in an era with widespread availability of fluoride from other sources, such as fluoride toothpaste.
- Community water fluoridation benefits everyone, especially those without access to regular dental care. It is the most efficient way to prevent one of the most common childhood diseases – dental decay (5 times as common as asthma and 7 times as common as hay fever in 5-to-17-year-olds). Without fluoridation, there would be many more than the estimated 51 million school hours lost per year in this country because of dental-related illness.
- Community water fluoridation is the adjustment of fluoride that occurs naturally in water to optimal levels to protect oral health.
- For most cities, every \$1 invested in water fluoridation saves \$38 in dental treatment costs.
- Water that has been fortified with fluoride is similar to fortifying salt with iodine, milk with vitamin D and orange juice with vitamin C.
- Simply by drinking water, people can benefit from fluoridation's cavity protection whether they are at home, work or school.
- The average cost for a community to fluoridate its water is estimated to range from approximately \$0.50 a year per person in large communities to approximately \$3.00 a year per person in small communities.
- More than two-thirds of the population in the United States are served by public water systems that are optimally fluoridated.
- In the past five years (2000 through 2004), more than 125 U.S. communities in 36 states have voted to adopt fluoridation.
- Fluoridation has been thoroughly tested in the United States' court system, and found to be a proper means of furthering public health and welfare. No court of last resort has ever determined fluoridation to be unlawful.
- Be aware of misinformation on the Internet and other junk science related to water fluoridation.
- One of the most widely respected sources for information regarding fluoridation and fluorides is the American Dental Association. The ADA maintains Fluoride and Fluoridation Web pages at <http://www.ada.org/goto/fluoride>.

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Fluoridation Facts

INTRODUCTION

Since 1956, the American Dental Association (ADA) has published *Fluoridation Facts*. Revised periodically, *Fluoridation Facts* answers frequently asked questions about community water fluoridation. In this 2005 edition issued as part of the 60th Anniversary celebration of community water fluoridation, the ADA Council on Access, Prevention and Interprofessional Relations provides updated information for individuals and groups interested in the facts about fluoridation. The United States now has over 60 years of practical experience with community water fluoridation. Its remarkable longevity is testimony to fluoridation's significance as a public health measure. In recognition of the impact that water fluoridation has had on the oral and general health of the public, in 1999, the Centers for Disease Control and Prevention named fluoridation of drinking water as one of ten great public health achievements of the 20th century.^{1,2}

Support for Water Fluoridation

Since 1950, the American Dental Association (ADA), along with the United States Public Health Service (USPHS), has continuously and unreservedly endorsed the optimal fluoridation of community water supplies as a safe and effective public health measure for the prevention of dental decay. The ADA's policy is based on its continuing evaluation of the scientific research on the safety and effectiveness of fluoridation. Since 1950, when the ADA first adopted policy recommending community water fluoridation, the ADA has continued to reaffirm its position of support for water fluoridation and has strongly urged that its benefits be extended to communities served by public water systems.³ The 2005 "ADA Statement Commemorating the 60th Anniversary of Community Water Fluoridation" reinforced that position.⁴ Fluoridation is the most effective public health measure to prevent dental decay for children and adults, reduce oral health disparities and improve oral health over a lifetime.⁵

The American Dental Association, the U.S. Public Health Service, the American Medical Association and the World Health Organization all support community water fluoridation. Other national and international health, service and professional organizations that recognize the public health benefits of community water fluoridation for preventing dental decay are listed on the inside back cover of this publication.

Scientific Information on Fluoridation

The ADA's policies regarding community water fluoridation are based on generally accepted scientific knowledge. This body of knowledge is based on the efforts of nationally recognized scientists who have conducted research

using the scientific method, have drawn appropriate balanced conclusions based on their research findings and have published their results in refereed (peer-reviewed) professional journals that are widely held or circulated. Studies showing the safety and effectiveness of water fluoridation have been confirmed by independent scientific studies conducted by a number of nationally and internationally recognized scientific investigators. While opponents of fluoridation have questioned its safety and effectiveness, none of their charges has ever been substantiated by generally accepted science.

With the advent of the Information Age, a new type of "pseudo-scientific literature" has developed. The public often sees scientific and technical information quoted in the press, printed in a letter to the editor or distributed via an Internet Web page. Often the public accepts such information as true simply because it is in print. Yet the information is not always based on research conducted according to the scientific method, and the conclusions drawn from research are not always scientifically justifiable. In the case of water fluoridation, an abundance of misinformation has been circulated. Therefore, scientific information from all print and electronic sources must be critically reviewed before conclusions can be drawn. (See Figure 1.) Pseudo-scientific literature may peak a reader's interest but when read as science, it can be misleading. The scientific validity and relevance of claims made by opponents of fluoridation might be best viewed when measured against criteria set forth by the U.S. Supreme Court.

Additional information on this topic may be found in Question 52.

History of Water Fluoridation

Research into the beneficial effects of fluoride began in the early 1900s. Frederick McKay, a young dentist, opened a dental practice in Colorado Springs, Colorado, and was surprised to discover that many local residents exhibited brown stains on their permanent teeth. Dr. McKay could find no documentation of the condition in the dental literature and eventually convinced Dr. G.V. Black, dean of the Northwestern University Dental School in Chicago, to join him in studying the condition. Through their research, Drs. Black and McKay determined that mottled enamel, as Dr. Black termed the condition, resulted from developmental imperfections in teeth. (Mottled enamel is a historical term. Today, this condition is called dental or enamel fluorosis.) Drs. Black and McKay wrote detailed descriptions of mottled enamel.^{6,7}

In the 1920s, Dr. McKay, along with others, suspected that something either in or missing from the drinking

Figure 1 Key Elements In Reviewing Research

It is important to review information about fluoridation with a critical eye. Listed below are key elements to consider when reviewing information about fluoridation research.

1. **Credentials:** The author's background and credentials should reflect expertise in the area of research undertaken.
2. **Date:** The year of the publication should be apparent. The information should be relatively current, although well-designed studies can stand the test of time and scientific scrutiny. A review of existing literature can provide insight into whether the results of older studies have been superseded by subsequent studies.
3. **Accuracy:** If the information is a review of other studies, it should be accurate and representative of the original research. Information quoted directly from other sources should be quoted in its entirety.
4. **Statistical Methods:** The methods used to analyze the data should be generally accepted and appropriate.
5. **Comparability:** The research should be applicable to community water fluoridation and use an appropriate type and amount of fluoride. Many research projects investigate the use of fluoride at much higher levels than recommended for community water fluoridation. For example, the results of a study using a concentration of 125 parts per million (ppm) fluoride are not comparable to research findings regarding water fluoridated at 0.7 to 1.2 ppm.
6. **Type of Research:** How the research is conducted is relevant. Research conducted *in vitro* (outside the living body and in a laboratory environment) may not have the same results as research conducted *in vivo* (in a living human or other animal).
7. **Research Model:** A good study will try to replicate real life situations as close as possible. For example, results from animal studies using high doses of fluoride that are injected rather than provided in drinking water should be cautiously interpreted. Such studies are highly questionable as a predictor of the effects of human exposure to low concentrations of fluoride, such as those used to fluoridate water.
8. **Peer Review:** Publications presenting scientific information should be peer reviewed to help ensure that scientifically sound articles are published. Peer review involves evaluation and rating of the scientific and technical merit of an article by other qualified scientists.
9. **Weight of Evidence:** Conclusions from one particular study or one particular researcher should be weighed against the bulk of established, generally accepted, peer-reviewed science. No single study by itself is conclusive. If other researchers have not been able to replicate the results of a particular study or the work of one researcher, the results of that study or body of research should be viewed with some skepticism.
10. **Easily Accessible:** Reputable studies on fluoridation are typically published in peer-reviewed journals and other vehicles that are easily obtainable through a medical/dental library or through *PubMed*, a service of the National Library of Medicine which can be accessed via the Internet at <http://www.nlm.nih.gov/>.

water was causing the mottled enamel. Dr. McKay wrote to the Surgeon General in 1926 indicating that he had identified a number of regions in Colorado, New Mexico, Arizona, California, Idaho, South Dakota, Texas and Virginia where mottled enamel existed. Also in the late 20s, Dr. McKay made another significant discovery – these stained teeth were surprisingly resistant to decay.⁷

Following additional studies completed in the early 1930s in St. David, Arizona⁸ and Bauxite, Arkansas,⁹ it was determined that high levels of naturally occurring fluoride in the drinking water were causing the mottled enamel. In Arizona, researchers scrutinized 250 residents in 39 local families and were able to rule out hereditary factors and environmental factors, except for one – fluoride in the water which occurred naturally at levels of 3.8 to 7.15 ppm. In Bauxite, H. V. Churchill, chief chemist with the Aluminum Company of America (later changed to ALCOA), was using a new method of spectrographic analysis in his laboratory to look at the possibility that the water from an abandoned deep well in the area might have high levels of aluminum-containing bauxite that was causing mottled teeth. What he found was that the water contained a high level of naturally occurring fluoride (13.7 ppm). When Dr. McKay learned of this new form of analysis and Dr. Churchill's findings, he forwarded samples of water from areas where mottled enamel was commonplace to Dr. Churchill. All of the samples were found to have high levels of fluoride when compared to waters tested from areas with no mottled enamel.⁷

During the 1930s, Dr. H. Trendley Dean, a dental officer of the U.S. Public Health Service, and his associates conducted classic epidemiological studies on the geographic distribution and severity of fluorosis in the United States.¹⁰ These early studies were aimed at evaluating how high the fluoride levels in water could be before visible, severe dental fluorosis occurred. By 1936, Dean and his staff had made the critical discovery that fluoride levels of up to 1.0 part per million (ppm) in the drinking water did not cause the more severe forms of dental fluorosis. Dean additionally noted a correlation between fluoride levels in the water and reduced incidence of dental decay.^{11,12}

In 1939, Dr. Gerald J. Cox and his associates at the Mellon Institute evaluated the epidemiological evidence and conducted independent laboratory studies. While the issue was being discussed in the dental research community at the time, they were the first to publish a paper that proposed adding fluoride to drinking water to prevent dental decay.¹³ In the 1940s, four classic, community-wide studies were carried out to evaluate the addition of sodium fluoride to fluoride-deficient water supplies. The first community water fluoridation program, under the

direction of Dr. Dean, began in Grand Rapids, Michigan, in January 1945. The other three studies were conducted in Newburgh, New York (May 1945); Brantford, Ontario (June 1945) and Evanston, Illinois (February 1947).¹³⁻¹⁶ The astounding success of these studies firmly established fluoridation as a practical and safe public health measure to prevent dental decay that would quickly be embraced by other communities.

The history of water fluoridation is a classic example of a curious professional making exacting clinical observations which led to epidemiologic investigation and eventually to a safe and effective community-based public health intervention which even today remains the cornerstone of communities' efforts to prevent dental decay.

"The Centers for Disease Control and Prevention named fluoridation of drinking water one of ten great public health achievements of the 20th century noting that it is a major factor responsible for the decline in dental decay."

Water Fluoridation as a Public Health Measure

Throughout decades of research and more than sixty years of practical experience, fluoridation of public water supplies has been responsible for dramatically improving the public's oral health. In 1994, the U.S. Department of Health and Human Services issued a report which reviewed public health achievements. Along with other successful public health measures such as the virtual eradication of polio and reductions in childhood blood lead levels, fluoridation was lauded as one of the most economical preventive interventions in the nation.¹⁷ A policy statement on water fluoridation reaffirmed in 1995 by the USPHS stated that water fluoridation is the most cost-effective, practical and safe means for reducing the occurrence of dental decay in a community.¹⁸ In 1998, recognizing the ongoing need to improve health and well being, the USPHS revised national health objectives to be achieved by the year 2010. Included under oral health was an objective to significantly expand the fluoridation of public water supplies. Specifically, Objective 21-9 states that at least 75% of the U.S. population served by community water systems should be receiving the benefits of optimally fluoridated water by the year 2010.¹⁹

In 1999, the Centers for Disease Control and Prevention named fluoridation of drinking water one of ten

great public health achievements of the 20th century noting that it is a major factor responsible for the decline in dental decay.^{1,2}

Former U.S. Surgeon General David Satcher issued the first ever Surgeon General report on oral health in May 2000. In *Oral Health in America: A Report of the Surgeon General*, Dr. Satcher stated that community water fluoridation continues to be the most cost-effective, practical and safe means for reducing and controlling the occurrence of dental decay in a community.^{5,20} Additionally, Dr. Satcher noted that water fluoridation is a powerful strategy in efforts to eliminate health disparities among populations. Studies have shown that fluoridation may be the most significant step we can take toward reducing the disparities in dental decay.^{5,20-24}

In the 2003 *National Call to Action to Promote Oral Health*, U.S. Surgeon General Richard Carmona called on policymakers, community leaders, private industry, health professionals, the media and the public to affirm that oral health is essential to general health and well being. Additionally, Surgeon General Carmona urged these groups to apply strategies to enhance the adoption and maintenance of proven community-based interventions such as community water fluoridation.²⁵

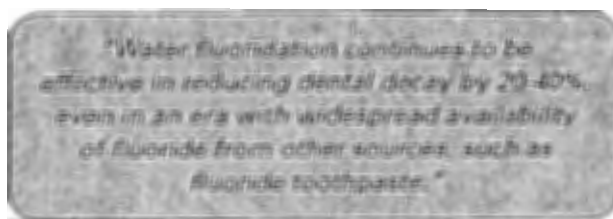
Community water fluoridation is a most valuable public health measure because:

- Optimally fluoridated water is accessible to the entire community regardless of socioeconomic status, educational attainment or other social variables.²⁶
- Individuals do not need to change their behavior to obtain the benefits of fluoridation.
- Frequent exposure to small amounts of fluoride over time makes fluoridation effective through the life span in helping to prevent dental decay.
- Community water fluoridation is more cost effective than other forms of fluoride treatments or applications.²⁷

Water Fluoridation's Role in Reducing Dental Decay

Water fluoridation and the use of topical fluoride have played a significant role in improving oral health. Early studies showed that water fluoridation can reduce the amount of cavities children get in their baby teeth by as much as 60% and can reduce dental decay in permanent adult teeth by nearly 35%. Since that time, numerous studies have been published making fluoridation one of the most widely studied public health measures in history. Later studies prove water fluoridation continues to be effective in reducing dental decay by 20-40%, even in an era with widespread availability of fluoride from other sources, such as fluoride toothpaste.^{28,29} Increasing numbers of adults

are retaining their teeth throughout their lifetimes due in part to the benefits they receive from water fluoridation. Dental costs for these individuals are likely to have been reduced and many hours of needless pain and suffering due to untreated dental decay have been avoided.



It is important to note that dental decay is caused by dental plaque, a thin, sticky, colorless deposit of bacteria that constantly forms on teeth. When sugar and other carbohydrates are eaten, the bacteria in plaque produce acids that attack the tooth enamel. After repeated attacks, the enamel breaks down, and a cavity (hole) is formed. There are a number of factors that increase an individual's risk for dental decay:^{27,30-33}

- Recent history of dental decay
- Elevated oral bacteria count
- Inadequate exposure to fluorides
- Exposed roots
- Frequent intake of sugar and sugary foods
- Poor or inadequate oral hygiene
- Decreased flow of saliva
- Deep pits and fissures in the chewing surfaces of teeth

Exposure to fluoride is not the only measure available to decrease the risk of decay. In formulating a decay prevention program, a number of intervention strategies may be recommended such as changes in diet and placement of dental sealants. However, fluoride is a key component in any recommended strategy.

Ongoing Need for Water Fluoridation

Because of the risk factors for dental decay noted previously, many individuals and communities still experience high levels of dental decay. Although water fluoridation demonstrates an impressive record of effectiveness and safety, only 67.3 % of the United States population on public water supplies receives fluoridated water containing protective levels of fluoride.³⁴ Unfortunately, some people continue to be confused about this effective public health measure. If the number of individuals drinking fluoridated water is to increase, the public must be accurately informed about its benefits.

BENEFITS

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QUESTION 1.

What is fluoride?

Answer.

Fluoride is a naturally occurring compound that can help prevent dental decay.

Fact.

The fluoride ion comes from the element fluorine. Fluorine is an abundant element in the earth's crust in the form of the fluoride ion. As a gas, it never occurs in its free state in nature, but exists only in combination with other elements as a fluoride compound. Fluoride compounds are components of minerals in rocks and soil. Water passes over rock formations and dissolves the fluoride compounds that are present, releasing fluoride ions. The result is that small amounts of fluoride are present in all water sources. Generally, surface water sources such as lakes, rivers and streams have very low levels of fluoride. For example, Lake Michigan's fluoride level is 0.17 ppm.³⁵ As water moves through the earth, it contacts fluoride-containing minerals and carries away fluoride ions. The concentration of fluoride in groundwater varies according to such factors as the depth at which the water is found and the quantity of fluoride bearing minerals in the area.³⁶ In the United States, the natural level of fluoride in ground water varies from very low levels to over 4 ppm. The fluoride level of the oceans ranges from 1.2 to 1.4 ppm.^{37,38} Fluoride is naturally present to some extent in all foods and beverages, but the concentrations vary widely.³⁹⁻⁴¹

QUESTION 2.

How does fluoride help prevent dental decay?

Answer.

Fluoride protects teeth in two ways – systemically and topically.

Fact.

Systemic fluorides are those ingested into the body. During tooth formation, ingested fluorides become incorporated into tooth structures. Fluorides ingested regularly during the time when teeth are developing (preeruptively) are deposited throughout the entire tooth surface and provide longer-lasting protection than those applied topically.⁴² Systemic fluorides can also give topical protection because ingested fluoride is present in saliva, which continually bathes the teeth providing a reservoir of fluoride that can be incorporated into the tooth surface to prevent decay. Fluoride also becomes incorporated into dental plaque and facilitates further remineralization.⁴³ Sources of systemic fluoride in the United States include fluoridated water, dietary fluoride supplements in the forms of tablets, drops or lozenges and fluoride present in food and beverages.

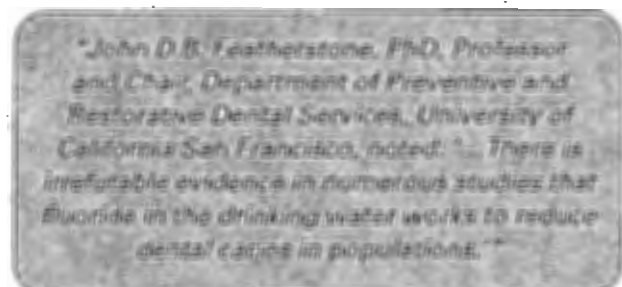
*"Fluoride protects teeth in two ways
– systemically and topically."*

While it was originally believed that fluoride's action was exclusively systemic or preeruptive, by the mid-1950s, there was growing evidence of both systemic and topical benefits of fluoride exposure.⁴⁴

Additional information on this topic may be found in Question 11.

Topical fluorides strengthen teeth already present in the mouth (posteruptively). In this method of delivery, fluoride is incorporated into the surface of teeth making them more decay-resistant. Topically applied fluoride provides local protection on the tooth surface. Topical fluorides include toothpastes, mouthrinses and professionally applied fluoride foams, gels and varnishes. As mentioned previously, systemic fluorides also provide topical protection. Low levels of fluoride in saliva and plaque from sources such as optimally fluoridated water can prevent and reverse the process of dental decay.⁴⁵ In clarifying the effectiveness of water fluoridation, John D.B. Featherstone, PhD, Professor and Chair,

Department of Preventive and Restorative Dental Services, University of California San Francisco, noted: "... There is irrefutable evidence in numerous studies that fluoride in the drinking water works to reduce dental caries in populations. This is still the case."⁴⁶



The remineralization effect of fluoride is important. Fluoride ions in and at the enamel surface result in fortified enamel that is not only more resistant to decay (loss of minerals or demineralization), but enamel that can repair or remineralize early dental decay caused by acids from decay-causing bacteria.^{42,47-51} Fluoride ions necessary for remineralization are provided by fluoridated water as well as various fluoride products such as toothpaste.

The maximum reduction in dental decay is achieved when fluoride is available preeruptively (systemically) for incorporation during all stages of tooth formation and posteruptively (topically) at the tooth surface. Water fluoridation provides both types of exposure.^{44,52-54}

QUESTION 3.

What is water fluoridation?

Answer.

Water fluoridation is the adjustment of the natural fluoride concentration of fluoride-deficient water to the level recommended for optimal dental health.

Fact.

Based on extensive research, the United States Public Health Service (USPHS) established the optimum concentration for fluoride in the water in the United States in the range of 0.7 to 1.2 parts per million. This range effectively reduces dental decay while minimizing the occurrence of dental fluorosis. The optimum level is dependent on the annual average of the maximum daily air temperature in the geographic area.⁵⁵

One milligram per liter (mg/L) of fluoride in water is identical to one part per million (ppm). At 1 ppm, one part of fluoride is diluted in a million parts of water. Large numbers such as a million can be very difficult to visualize. While not exact, the following comparisons can be of assistance in comprehending one part per million:

- 1 inch in 16 miles
- 1 minute in 2 years
- 1 cent in \$10,000

For clarity, the following terms and definitions are used in this booklet:

Community water fluoridation is the adjustment of the natural fluoride concentration in water, up to the level recommended for optimal dental health (a range of 0.7 to 1.2 ppm). Other terms used interchangeably in this booklet are water fluoridation, fluoridation and optimally fluoridated water. Optimal levels of fluoride may be present in the water naturally or by adjusted means.

Additional information on this topic may be found in Question 6.

Sub-optimally fluoridated water is water that naturally contains less than the optimal level (below 0.7 ppm) of fluoride. Other terms used interchangeably in this booklet are nonfluoridated water and fluoride-deficient water.

QUESTION 4.

How much fluoride is in your water?

Answer.

If your water comes from a public/community water supply, the options to learn the fluoride level of the water include contacting the local water supplier or the local/county/state health department, reviewing your Consumer Confidence Report (CCR) and using the Internet based "My Water's Fluoride." If your water source is a private well, it will need to be tested and the results obtained from a certified laboratory.

Fact.

The fluoride content of the local public or community water supply can be obtained by contacting the local water supplier or the local/county/state health department.

In 1999, the U.S. Environmental Protection Agency (EPA) began requiring water suppliers to put annual drinking water quality reports into the hands of its customers. Typically available around July 1st each year, these Water Quality Reports, or Consumer Confidence Reports (CCRs), may be mailed to your home, placed in the local newspaper or made available through the Internet.⁵⁶ To obtain a copy of the report, contact the local water supplier. The name of the water system (often not the name of the city) can be found on the water bill. If the name of the public water system is unknown, contact the local health department.

There are two sites on the Internet that supply information on water quality. The online source for water quality reports or CCRs is the EPA web site at <http://www.epa.gov/safewater/dwinfo/index.html>.⁵⁷

Additionally, the Centers for Disease Control and Prevention's (CDC) fluoridation Web site, "My Water's Fluoride," is available at <http://apns.nccd.cdc.gov/MWF/Index.asp>.⁵⁸ For those states that have provided information to the CDC, the site lists fluoridation status by water system.

The EPA does not have the authority to regulate private drinking water wells. However, the EPA recommends that private well water be tested every year. While the EPA does not specifically recommend testing for the level of fluoride, health professionals will need this information prior to consideration of prescription of dietary fluoride supplements or to counsel patients about alternative water sources to reduce the risk of fluorosis if the fluoride levels are above 2 ppm.⁵⁹

Additional information on this topic may be found in Questions 12, 24, 25 and 42.

Always use a state certified laboratory that conducts drinking water tests.⁵⁹ For a list of state certified labs, contact the local, county or state water/health department.

QUESTION 5.

What additives are used to fluoridate water supplies in the United States?

Answer.

Sodium fluoride, sodium fluorosilicate and fluorosilicic acid are the three additives approved for community water fluoridation in the United States. Sodium fluorosilicate and fluorosilicic acid are sometimes referred to as silicofluoride additives.

Fact.

The three basic additives used to fluoridate water in the United States are: 1) sodium fluoride which is a white, odorless material available either as a powder or crystals; 2) sodium fluorosilicate which is a white or yellow-white, odorless crystalline material and 3) fluorosilicic acid which is a white to straw-colored liquid.^{35,60}

While fluoridation began in 1945 with the use of sodium fluoride, the use of silicofluorides began in 1946 and, by 1951, they were the most commonly used additives.⁶¹ First used in the late 1940s, fluorosilicic acid is currently the most commonly used additive to fluoridate communities in the U.S.^{35,61}

"To ensure the public's safety, standards have been established to ensure the safety of fluoride additives used in water treatment in the U.S."

To ensure the public's safety, standards have been established to ensure the safety of fluoride additives used in water treatment in the U.S. Specifically, additives used in water fluoridation meet standards of the American Water Works Association (AWWA) and NSF International (NSF).

Additional information on the topic of fluoride additives may be found in Fluoridation Practice Section.

QUESTION 6.

Is there a difference in the effectiveness between naturally occurring fluoridated water (at optimal fluoride levels) and water that has fluoride added to reach the optimal level?

Answer.

No. The dental benefits of optimally fluoridated water occur regardless of the fluoride's source.

Fact.

Fluoride is present in water as "ions" or electrically charged atoms.³⁶ These ions are the same whether acquired by water as it seeps through rocks and sand or added to the water supply under carefully controlled conditions. When fluoride is added under controlled conditions to fluoride-deficient water, the dental benefits are the same as those obtained from naturally fluoridated water. Fluoridation is merely an increase of the level of the naturally occurring fluoride present in all drinking water sources.

"Fluoridation is merely an increase of the level of the naturally occurring fluoride present in all drinking water sources."

Some individuals use the term "artificial fluoridation" to imply that the process of water fluoridation is unnatural and that it delivers a foreign substance into a water supply when, in fact, all water sources contain some fluoride. Community water fluoridation is a natural way to improve oral health.⁶²

Additional information on this topic may be found in Question 45.

Prior to the initiation of "adjusted" water fluoridation, several classic epidemiological studies were conducted that compared naturally occurring fluoridated water to fluoride-deficient water. Strikingly low decay rates were found to be associated with the continuous use of water with fluoride content of 1 part per million.¹²

A fluoridation study conducted in the Ontario, Canada, communities of Brantford (optimally fluoridated by adjustment), Stratford (optimally fluoridated naturally) and Sarnia (fluoride-deficient) revealed much lower decay rates in both Brantford and Stratford as compared to nonfluoridated Sarnia. There was no observable difference in decay-reducing effect between the naturally occurring fluoride and adjusted fluoride concentration water supplies, proving that dental benefits were similar regardless of the source of fluoride.¹⁶

QUESTION 7.

Is water fluoridation effective in helping to prevent dental decay?

Answer.

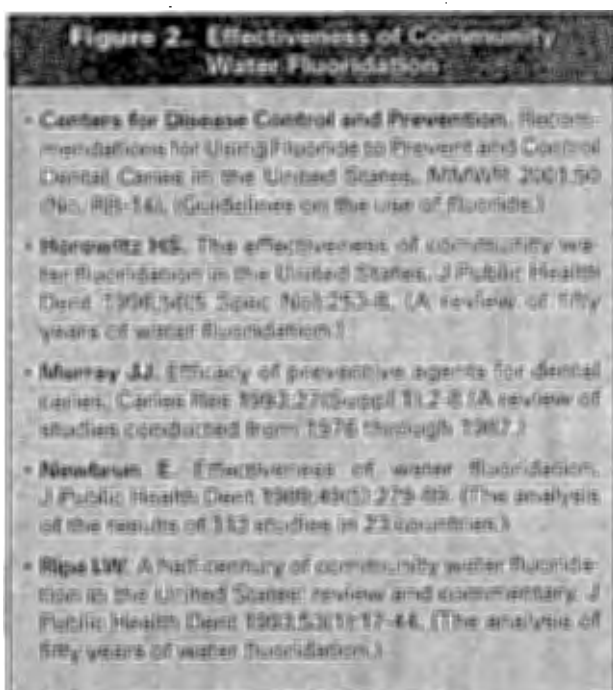
Overwhelming evidence exists to prove the effectiveness of water fluoridation. Water fluoridation is a very effective method for preventing dental decay for children, adolescents and adults. Continued assessment, however, is important as the patterns and extent of dental decay change in populations.

Fact.

The effectiveness of water fluoridation has been documented in scientific literature for over 60 years. (See Figure 2.) Even before the first community fluoridation program began in 1945, epidemiologic data from the 1930s and 1940s revealed lower number of cavities in children consuming naturally occurring fluoridated water compared to children consuming fluoride-deficient water.^{11,12} Since that time, thousands of studies have been done which continue to prove fluoride's effectiveness in decay reduction.

In Grand Rapids, Michigan, the first city in the world to fluoridate its water supply, a 15-year landmark study showed that children who consumed fluoridated water from birth had 50-63% less dental decay than children who had been examined during the original baseline survey completed in nonfluoridated Muskegon, Michigan.⁶³

Ten years after fluoridation in Newburgh, New York, 6- to 9-year-olds had 58% less dental decay than their counterparts in nonfluoridated Kingston, New York, which was fluoride-deficient. After 15 years, 13- to 14-year-olds in Newburgh had 70% less decay than the children in Kingston.⁶⁴



After 14 years of fluoridation in Evanston, Illinois, 14-year-olds had 57% fewer decayed, missing or filled teeth than the control group in Oak Park, Illinois, who drank water low in fluoride.⁶⁵

In 1983, a study was undertaken in North Wales (Great Britain) to determine if the decay rate of fluoridated Anglesey continued to be lower than that of non-fluoridated Arfon, as had been indicated in a previous survey conducted in 1974. Decay rates of life-long residents in Anglesey, aged 5, 12 and 15, were compared with decay rates of identically aged residents in nonfluoridated Arfon. Study results demonstrated that a decline in decay had occurred in both communities since the previous survey in 1974. However, the mean decay rate of the children in fluoridated Anglesey was still 45% lower than that of those living in nonfluoridated Arfon.⁶⁶ These findings indicated a continuing need for fluoridation although decay levels had declined.⁶⁷

In the United States, an epidemiological survey of nearly 40,000 schoolchildren was completed in 1987.²⁹ Nearly 50% of the children in the study aged 5 to 17 years were decay-free in their permanent teeth, which was a major change from a similar survey in 1980 in which approximately 37% were decay-free. This dramatic decline in decay rates was attributed primarily to the widespread use of fluoride in community water supplies, toothpastes, supplements and mouthrinses. Although decay rates had declined overall, data also revealed that the decay rate was 25% lower in children with continuous residence in fluoridated communities when the data was adjusted to control for fluoride exposure from supplements and topical treatments.

A controlled study conducted in 1990 demonstrated that average dental decay experience among schoolchildren who were lifelong residents of communities with low fluoride levels in drinking water was 61-100% higher as compared with dental decay experience among schoolchildren who were lifelong residents of a community with an optimal level of fluoride in the drinking water.⁶⁸ In addition, the findings of this study suggest that community water fluoridation still provides significant public health benefits and that dental sealants can play a significant role in preventing dental decay.

Using data from the dental surveys in 1991-2 and 1993-4, a British study predicted that on average, water fluoridation produces a 44% reduction in dental decay in 5-year-old children. The study further demonstrated that children in lower socioeconomic groups derive an even greater benefit from water fluoridation with an average 54% reduction in dental decay. Therefore, children with the greatest dental need benefit the most from water fluoridation.⁶⁹

In 1993, the results of 113 studies in 23 countries were compiled and analyzed.⁷⁰ (Fifty-nine out of the 113 studies analyzed were conducted in the United States.) This review provided effectiveness data for 66 studies in primary teeth and for 86 studies in permanent teeth. Taken

together, the most frequently reported decay reductions observed were:

- 40-49% for primary teeth or baby teeth; and
- 50-59% for permanent teeth or adult teeth.

In a second review of studies conducted from 1976 through 1987,²⁸ when data for different age groups were separated, reductions in dental decay in fluoridated communities were:

- 30-60% in the primary dentition or baby teeth;
- 20-40% in the mixed dentition* (aged 8 to 12);
(*A mixed dentition is composed of both baby teeth and adult teeth.)
- 15-35% in the permanent dentition or adult teeth (aged 14 to 17); and
- 15-35% in the permanent dentition (adults and seniors).

A comprehensive analysis of the 50-year history of community water fluoridation in the United States further demonstrated that the inverse relationship between higher fluoride concentration in drinking water and lower levels of dental decay discovered a half-century ago continued to be true.⁷¹

Baby bottle tooth decay is a severe type of early childhood decay that seriously affects babies and toddlers in some populations. Water fluoridation is highly effective in preventing decay in baby teeth, especially in children from low socioeconomic groups.⁷² In a 1998 review of the effectiveness of methods currently used to prevent this type of decay, water fluoridation received the highest rating. For very young children, water fluoridation is the only means of prevention that does not require a dental visit or motivation of parents and caregivers.⁷³

In 2001, the National Institutes of Health (NIH) held a consensus development conference, "Diagnosis and Management of Dental Caries Throughout Life." As part of the Consensus Statement issued at the conclusion of the conference, the panel noted that water fluoridation is widely accepted as both effective and of great importance in the primary prevention of tooth decay.⁷⁴

"Children with the greatest dental need benefit the most from water fluoridation...The U.S. Task Force strongly recommended that community water fluoridation be included as part of a comprehensive population-based strategy to prevent or control tooth decay in communities."

A systematic review of published studies conducted in 2001 by a team of experts on behalf of the U.S. Task Force on Community Preventive Services found that fluoridation was effective in reducing tooth decay among populations. Based on strong evidence of effectiveness, the Task Force strongly recommended that community water fluoridation be included as part of a comprehensive population-based strategy to prevent or control tooth decay in communities.⁷⁵⁻⁷⁸

QUESTION 8.

With other forms of fluoride now available, is water fluoridation still an effective method for preventing dental decay?

Answer.

Although other forms of fluoride are available, persons in nonfluoridated communities continue to demonstrate higher dental decay rates than their counterparts in communities with water fluoridation.^{68,70,72,79-83}

Fact.

In the 1940s, children in communities with optimally fluoridated drinking water had reductions in decay rates of approximately 60% as compared to those living in nonfluoridated communities. At that time, drinking water was the only source of fluoride other than fluoride that occurs naturally in foods.

Recent studies reveal that decay rates have declined in naturally or adjusted fluoridated areas and nonfluoridated areas as well. One factor is the high geographic mobility of our populations. In other words, it is becoming increasingly difficult to study large numbers of people in one location who have a history of consuming only fluoridated or nonfluoridated water.

"Even in an era with widespread availability of fluoride from other sources, studies prove water fluoridation continues to be effective in reducing dental decay by 20-40%."

A second factor is the universal availability of fluoride from other sources including food, beverages, dental products (toothpaste, rinses, professionally applied foams, gels and varnish) and dietary supplements.⁸⁴ Foods and beverages processed in optimally fluoridated cities can contain higher levels of fluoride than those processed in nonfluoridated communities. These foods and beverages are consumed not only in the city where processed, but may be distributed to and consumed in nonfluoridated areas.²⁵⁶ This "halo" or "diffusion" effect results in increased fluoride intake by people in nonfluoridated communities, providing them increased protection against dental decay.^{52,71,86} As a result of the widespread availability of these various sources of fluoride, the difference between decay rates in fluoridated areas and nonfluoridated areas is somewhat less than several decades ago but it is still significant.⁸⁷ Failure to account for the diffusion effect may result in an underestimation of the total benefit of water fluoridation especially in areas where large quantities of fluoridated products are brought into nonfluoridated communities.⁸⁸

Even in an era with widespread availability of fluoride from other sources, studies prove water fluoridation continues to be effective in reducing dental decay by 20-40%.^{28,29}

QUESTION 9.

What happens if water fluoridation is discontinued?

Answer.

Over time, dental decay can be expected to increase if water fluoridation in a community is discontinued, even if topical products such as fluoride toothpaste and fluoride rinses are widely used.

Fact.

The following paragraphs provide a summary of key historical studies that have been conducted on the discontinuation of water fluoridation.

Antigo, Wisconsin began water fluoridation in June 1949, and ceased adding fluoride to its water in November 1960. After five and one-half years without optimal levels of fluoride, second grade children had over 200% more decay, fourth graders 70% more, and sixth graders 91% more than those of the same ages in 1960. Residents of Antigo re-instituted water fluoridation in October 1965 on the basis of the severe deterioration of their children's oral health.⁸⁸

Because of a government decision in 1979, fluoridation in the northern Scotland town of Wick was discontinued after eight years. The water was returned to its sub-optimal, naturally occurring fluoride level of 0.02 ppm. Data collected to monitor the oral health of Wick children clearly demonstrated a negative health effect from the discontinuation of water fluoridation. Five years after the cessation of water fluoridation, decay in permanent (adult) teeth had increased 27% and decay in primary (baby) teeth increased 40%. This increase in decay occurred during a period when there had been a reported overall reduction in decay nationally and when fluoride toothpaste had been widely adopted.⁸⁹ These data suggest that decay levels in children can be expected to rise where water fluoridation is interrupted or terminated, even when topical fluoride products are widely used.

In a similar evaluation, the prevalence of decay in 10-year-old children in Stranraer, Scotland increased after the discontinuation of water fluoridation, resulting in a 115% increase in the mean cost of restorative dental treatment for decay and a 21% increase in the mean cost of all dental treatment. These data support the important role water fluoridation plays in the reduction of dental decay.⁹⁰

A U.S. study of 6- and 7-year-old children who had resided in optimally fluoridated areas and then moved to the nonfluoridated community of Coldwater, Michigan, revealed an 11% increase in decayed, missing or filled tooth surfaces (DMFS) over a 3-year period from the time the children moved. These data reaffirm that relying only on topical forms of fluoride is not an effective or prudent public health practice.^{28,91} Decay reductions are greatest where water fluoridation is available in addition to topical fluorides, such as fluoride toothpaste and fluoride rinses.

Finally, a study that reported the relationship between fluoridated water and decay prevalence focused

on the city of Galesburg, Illinois, a community whose public water supply contained naturally occurring fluoride at 2.2 ppm. In 1959, Galesburg switched its community water source to the Mississippi River. This alternative water source provided the citizens of Galesburg a sub-optimal level of fluoride at approximately 0.1 ppm. During the time when the fluoride content was below optimal levels, data revealed a 10% decrease in the number of decay-free 14-year-olds (oldest group observed), and a 38% increase in dental decay. Two years later, in 1961, the water was fluoridated at the recommended level of 1.0 ppm.⁹²

There have been several studies from outside the United States that have reported no increase in dental decay following the discontinuation of fluoridation. However, in all of the cases reported, the discontinuation of fluoridation coincided with the implementation of other measures to prevent dental decay.

For example, in La Salud, Cuba a study on dental decay in children indicated that the rate of dental decay did not increase after fluoridation was stopped in 1990. However, at the time fluoridation was discontinued a new topical fluoride program was initiated where all children received fluoride mouthrinses on a regular basis and children two to five received fluoride varnish once or twice a year.⁹³

In Finland, a longitudinal study of Kuopio (fluoridated from 1959 to 1992) and Jyväskylä (low levels of natural fluoridation) showed little differences in decay rates between the two communities. This was attributed to a number of factors. The populations are extremely similar in terms of ethnic background and social structure. Virtually all children and adolescents used the government-sponsored, comprehensive, free dental care. The dental programs exposed the Finnish children to intense topical fluoride regimes and dental sealant programs. The result was that the effect of water fluoridation appeared minimal. Because of this unique set of factors, it was concluded these results could not be replicated in countries with less intensive preventive dental care programs.⁹⁴

No significant decrease in dental decay was seen after fluoridation was discontinued in 1990 in Chemnitz and Plauen which are located in what was formerly East Germany. The intervening factors in this case include improvements in attitudes toward oral health behaviors, broader availability and increased use of other preventive measures including fluoridated salt, fluoride toothpaste and dental sealants.⁹⁵

A similar scenario is reported from the Netherlands. A study of 15-year-old children in Tiel (fluoridated 1953 to 1973) and Culemborg (nonfluoridated) was conducted comparing dental decay rates from a baseline in 1968 through 1988. The lower dental decay rate in Tiel after the cessation of fluoridation was attributed in part to the initiation of a dental health education program, free dietary fluoride supplements and a greater use of professionally applied topical fluorides.⁹⁶

QUESTION 10.

Is dental decay still a serious problem?

Answer.

Yes. Dental decay or tooth decay is an infectious disease that continues to be a significant oral health problem.

Fact.

Dental decay is, by far, the most common and costly oral health problem in all age groups.⁹⁷ It is one of the principal causes of tooth loss from early childhood through middle age.^{98,99} Decay continues to be problematic for middle-aged and older adults, particularly root decay because of receding gums. Older adults may experience similar or higher levels of dental decay than do children.¹⁰⁰ In addition to its effects in the mouth, dental decay can affect general well-being by interfering with an individual's ability to eat certain foods and by impacting an individual's emotional and social well-being by causing pain and discomfort. Dental decay, particularly in the front teeth, can detract from appearance, thus affecting self-esteem and employability.

"Decay continues to be problematic for middle-aged and older adults, particularly root decay because of receding gums."

Despite a decrease in the overall decay experience of U.S. schoolchildren over the past two decades, dental decay is still a significant oral health problem, especially in certain segments of the population. The 1986-1987 National Institute of Dental Research (NIDR) survey of approximately 40,000 U.S. school children found that 25% of students ages 5 to 17 accounted for 75% of the decay experienced in permanent teeth.⁹⁷ Despite progress in reducing dental decay, individuals in families living below the poverty level experience more dental decay than those who are economically better off.²⁰ Some of the risk factors that increase an individual's risk for decay are inadequate exposure to fluoride, irregular dental visits, deep pits and fissures in the chewing surfaces of teeth, inadequate flow of saliva, frequent sugar intake and very high oral bacteria counts.

Dental decay is one of the most common childhood diseases – five times as common as asthma and seven times as common as hay fever in 5- to 17-year-olds. Without fluoridation, there would be many more than the estimated 51 million school hours lost per year in this country because of dental-related illness.¹⁰¹

In addition to impacting emotional and social well-being, the consequences of dental disease are reflected in the cost of its treatment. According to the Centers for Medicare and Medicaid Services, the nation's total bill (including private and public spending) for dental services in 2003 was estimated to be \$74.3 billion. This figure does not include indirect expenses of oral health

problems or the cost of services by other health care providers.¹⁰² Again, the goal must be prevention rather than repair. Fluoridation is presently the most cost-effective method for the prevention of dental decay for residents of a community in the United States.^{103,104}

QUESTION 11.

Do adults benefit from fluoridation?

Answer.

Fluoridation plays a protective role against dental decay throughout life, benefiting both children and adults. In fact, inadequate exposure to fluoride places children and adults in the high risk category for dental decay.

Fact.

While the early fluoridation trials were not designed to study the possible benefits fluoridation might have for adults, by the mid-1950s, there was growing evidence of both systemic and topical benefits of fluoride exposure. It soon became evident that fluoridation helped prevent decay in adults, too.⁴⁴ Fluoride has both a systemic and topical effect and is beneficial to adults in two ways. The first is through the remineralization process in enamel, in which early decay does not enlarge, and can even reverse, because of frequent exposure to small amounts of fluoride. Studies have clearly shown that the availability of topical fluoride in an adult's mouth during the initial formation of decay can not only stop the decay process, but also make the enamel surface more resistant to future acid attacks. Additionally, the presence of systemic fluoride in saliva provides a reservoir of fluoride ions that can be incorporated into the tooth surface to prevent decay.⁶³

Additional information on this topic may be found in Question 2.

"People in the United States are living longer and retaining more of their natural teeth than ever before."

Another protective benefit for adults is the prevention of root decay.^{100,105-107} Adults with gum recession are at risk for root decay because the root surface becomes exposed to decay-causing bacteria in the mouth. Studies have demonstrated that fluoride is incorporated into the structure of the root surface, making it more resistant to decay.¹¹⁸⁻¹¹² In Ontario, Canada, lifelong residents of the naturally fluoridated (1.6 ppm) community of Stratford had significantly lower root decay experience than those living in the matched, but nonfluoridated, community of Woodstock.¹¹¹

People in the United States are living longer and retaining more of their natural teeth than ever before. Because older adults experience more problems with gum reces-

sion, the prevalence of root decay increases with age. A large number of exposed roots or a history of past root decay places an individual in the high risk category for decay.³⁰ Data from the 1988-1991 National Health and Nutrition Examination Survey (NHANES III) showed that 22.5% of all adults with natural teeth experienced root decay. This percentage increased markedly with age:

- 1) in the 18- to 24-year-old age group, only 6.9% experienced root decay;
- 2) in the 35- to 44-year-old age group, 20.8% experienced root decay;
- 3) in the 55- to 64-year-old age group, 38.2% showed evidence of root decay; and
- 4) in the over-75 age group, nearly 56% had root decay.¹¹³

In addition to gum recession, older adults tend to experience decreased salivary flow, or xerostomia, due to the use of medications or medical conditions.^{114,115} Inadequate flow of saliva places an individual in the high risk category for decay.³⁰ This decrease in salivary flow can increase the likelihood of dental decay because saliva contains calcium, phosphates and fluorides – all necessary for early repair of dental decay.

There are data to indicate that individuals who have consumed fluoridated water continuously from birth receive the maximum protection against dental decay. However, teeth present in the mouth when exposure to water fluoridation begins also benefit from the topical effects of exposure to fluoride. In 1989, a small study in the state of Washington suggested adults exposed to fluoridated water *only during childhood* had similar decay rates as adults exposed to fluoridated water *only after age 14*. This study lends credence to the topical and systemic benefits of water fluoridation. The topical effects are reflected in the decay rates of adults exposed to water fluoridation only after age 14. The study also demonstrates that the preeruptive, systemic effects of fluoridation have lifetime benefits as reflected in the decay rates of adults exposed to fluoridation only during childhood. The same study also noted a 31% reduction of dental disease (based on the average number of decayed or filled tooth surfaces) in adults with a continuous lifetime exposure to fluoridated water as compared to adults with no exposure to water fluoridation.¹¹⁰



A Swedish study investigating decay activity among adults in optimal and low fluoride areas revealed that not only was decay experience significantly lower in the optimal fluoride area, but the difference could not be

explained by differences in oral bacteria, buffer capacity of saliva or salivary flow. The fluoride concentration in the drinking water was solely responsible for decreased decay rates.¹¹⁶

Water fluoridation contributes much more to overall health than simply reducing dental decay: it prevents needless infection, pain, suffering and loss of teeth; improves the quality of life and saves vast sums of money in dental treatment costs.²⁶ Additionally, fluoridation conserves natural tooth structure by preventing the need for initial fillings and subsequent replacement fillings.^{117,118}

Additional information on this topic may be found in Question 2.

QUESTION 12.

Are dietary fluoride supplements effective?

Answer.

For children who do not live in fluoridated communities, dietary fluoride supplements are an effective alternative to water fluoridation for the prevention of dental decay.¹¹⁹⁻¹²²

Fact.

Dietary fluoride supplements are available only by prescription in the United States and are intended for use by children living in nonfluoridated areas to increase their fluoride exposure so that it is similar to that received by children who live in optimally fluoridated areas.^{123,124} Dietary fluoride supplements are available in two forms: drops for infants aged six months or older, and chewable tablets for children and adolescents.¹²⁴ Fluoride supplements should only be prescribed for children living in nonfluoridated areas. The correct amount of a fluoride supplement is based on the child's age and the existing fluoride level in the drinking water.¹²⁵ Because fluoride is so widely available, it is recommended that dietary fluoride supplements be used only according to the recommended dosage schedule and after consideration of all sources of fluoride exposure.^{30,126} For optimum benefits, use of supplements should begin at six months of age and be continued daily until the child is at least 16 years old.¹²⁵ The current dietary fluoride supplement schedule is shown in Table 1 on the next page.

The relatively higher cost and need for compliance over an extended period of time is a major procedural and economic disadvantage of community-based fluoride supplement programs, one that makes them impractical as an alternative to water fluoridation as a public health measure. In a controlled situation, as shown in a study involving children of health professionals, fluoride supplements achieve effectiveness comparable to that of water fluoridation. However, even with this highly educated and motivated group of parents, only half continued to give their children fluoride tablets for the necessary number of years.¹²⁷ Additional studies have verified that

Table 1: Dietary Fluoride Supplement Schedule 1994

Approved by the American Dental Association, American Academy of Pediatrics,
American Academy of Pediatric Dentistry

Age	Fluoride ion level in drinking water (ppm)*		
	<0.3 ppm	0.3-0.6 ppm	>0.6 ppm
Birth – 6 months	None	None	None
6 months – 3 years	0.25 mg/day**	None	None
3 – 6 years	0.50 mg/day	0.25 mg/day	None
6 – 16 years	1.0 mg/day	0.50 mg/day	None

* 1.0 part per million (ppm) = 1 milligram/liter (mg/L) ** 2.2 mg sodium fluoride contains 1 mg fluoride ion.

individual patterns of compliance vary greatly.^{128,129,130} Independent reports from several countries, including the United States, have demonstrated that community-wide trials of fluoride supplements in which tablets were distributed for use at home were largely unsuccessful because of poor compliance.¹³¹

While total costs for the purchase of supplements and administration of a program are small (compared with the initial cost of the installation of water fluoridation equipment), the overall cost of supplements per child is much greater than the per capita cost of community fluoridation.¹⁰⁴ In addition, community water fluoridation provides decay prevention benefits for the entire population regardless of age, socioeconomic status, educational attainment or other social variables.²⁶ This is particularly important for families who do not have access to regular dental services.

Additional information on this topic may be found in Questions 4, 13, 24 and 25.

QUESTION 13.

Does the ADA recommend fluoride for children under six years of age?

Answer.

Yes. The ADA recognizes that lack of exposure to fluoride places individuals of any age at risk for dental decay. Fluoride exposure may take many forms including water fluoridation and dietary fluoride supplements.

Fact.

For children who live in nonfluoridated communities, dietary fluoride supplements are an effective alternative to water fluoridation to help prevent dental decay. Dietary fluoride supplements are available only by prescription and are intended for use by children living in nonfluoridated areas to increase their fluoride exposure so that it is similar to that experienced by children who live in optimally fluoridated areas.¹²⁴

The dietary fluoride supplement schedule is just that – a *supplement* schedule (Table 1). Recognizing

that children will receive fluoride from other sources (food and beverages) even in nonfluoridated areas, the amounts in the table reflect the *additional* amount of fluoride intake necessary to achieve an optimal anti-cavity effect.

"The dietary fluoride supplement schedule is just that – a supplement schedule."

The dietary fluoride supplement schedule should not be viewed as recommending the absolute upper limits of the amount of fluoride that should be ingested each day. In 1997, the Food and Nutrition Board of the Institute of Medicine developed the Dietary Reference Intakes, a comprehensive set of reference values for dietary nutrient values. The new values present nutrient requirements to optimize health and, for the first time, set maximum-level guidelines to reduce the risk of adverse effects from excessive consumption of a nutrient. In the case of fluoride, levels were established to reduce dental decay without causing moderate dental fluorosis.¹²³

For example, the dietary fluoride supplement schedule recommends that a two-year-old child living in a non-fluoridated area (where the primary water source contains less than 0.3 ppm fluoride) should receive 0.25 mg of *supplemental* fluoride per day. This does not mean that this child should ingest exactly 0.25 mg of fluoride per day. On the contrary, a two-year-old child could receive important anti-cavity benefits by taking 0.25 mg of supplemental fluoride a day without causing any adverse effects on health. This child would most probably be receiving fluoride from other sources (foods and beverages) even in a non-fluoridated area and the recommendation of 0.25 mg of fluoride per day takes this into account. In the unlikely event the child did not receive any extra fluoride from food and beverages, the 0.25 mg per day could be inadequate fluoride supplementation to achieve an optimal anti-cavity effect.

The following statement is correct. "The dosage has been lowered two different times as evidenced of too much fluoride has appeared." Rather than being a prob-

lem, as those opposed to the use of fluoride might imply, this is evidence that the ADA is doing the right thing. The ADA continually reviews available scientific evidence, and revises its statements based on the most current scientific information. In 1994, a Dietary Fluoride Supplement Workshop cosponsored by the ADA, the American Academy of Pediatric Dentistry and the American Academy of Pediatrics was held in Chicago. Based on a review of scientific evidence, a consensus was reached on a new dosage schedule developed in recognition that numerous sources of topical and systemic fluoride are available today that were not available many years ago.¹²⁵ The revised dietary fluoride supplement schedule appears as Table 1.

QUESTION 14.

In areas where water fluoridation is not feasible because of engineering constraints, are alternatives to water fluoridation available?

Answer.

Yes. Some countries outside the United States that do not have piped water supplies capable of accommodating community water fluoridation have chosen to use salt fluoridation.

Fact.

Salt fluoridation is used extensively in a number of countries in Europe (examples: France, Hungary, Germany, Spain and Switzerland) and Central and South America (examples: Bolivia, Colombia, Cuba, Dominican Republic, Ecuador, El Salvador, Honduras, Nicaragua, Venezuela, Costa Rica, Jamaica, Mexico, Peru and Uruguay).^{132,133} The Pan American Health Organization (PAHO), a regional division of the World Health Association (WHO), with responsibilities for health matters in North, South and Central America as well as the Caribbean has been active in developing strategies to implement decay prevention programs in the regions of the Americas using both water and salt fluoridation.^{132,134}

Studies evaluating the effectiveness of salt fluoridation outside the U.S. have concluded that fluoride delivered via salt may produce decay reductions similar to that of optimally fluoridated water.¹³⁵ An analysis of published results of studies from some countries shows that, for 12-year-old children, the initial level of decay reduction due to salt fluoridation is between 35% and 80%.^{136,137}

An advantage of salt fluoridation is that it does not require a centralized piped water system. This is of particular use in many developing countries that do not have such water systems. When both domestic salt and bulk salt (used by commercial bakeries, restaurants, institutions, and industrial food production) is fluoridated, the decay-reducing effect may be comparable to that of water fluoridation over an extended period of time.¹³⁵ On the other hand, when only domestic salt is fluoridated, the decay-reducing effect may be diminished.¹³⁵

Salt fluoridation has several disadvantages that do not exist with water fluoridation. Challenges occur with implementation of salt fluoridation when there are multiple sources of drinking water in an area. The natural fluoride level of each source must be determined and, if the level is optimal or excessive, fluoridated salt should not be distributed in that area.¹³⁸ Finally, there is general agreement that a high consumption of sodium is a risk factor for hypertension (high blood pressure).^{139,140} People who have hypertension or must restrict their salt intake may find salt fluoridation an unacceptable method of receiving fluoride.

Additional information on this topic may be found in Question 56.

Fluoridated milk has been suggested as another alternative to community water fluoridation in countries outside the U.S. WHO has supported milk fluoridation feasibility projects in the United Kingdom, People's Republic of China, Peru and Thailand.¹⁴¹ Studies among small groups of children have demonstrated a decrease in dental decay levels resulting from consumption of fluoridated milk; however, these studies were not based on large-scale surveys. More research is needed before milk fluoridation can be recommended as an alternative to water or salt fluoridation.¹⁴² The rationale for adding fluoride to milk is that this method "targets" fluoride directly to children, but the amount of milk consumed by children is quite variable, more so than water. Concerns have been raised about decreased widespread benefits due to the slower absorption of fluoride from milk than from water and the considerable number of persons, especially adults, who do not drink milk for various reasons.¹⁴³ The monitoring of fluoride content in milk is technically more difficult than for drinking water because there are many more dairies than communal water supplies. In addition, because fluoridated milk should not be sold in areas having natural or adjusted fluoridation, regulation would be difficult, and established marketing patterns would be disrupted.¹⁴²

QUESTION 15.

Can the consistent use of bottled water result in individuals missing the benefits of optimally fluoridated water?

Answer.

Yes. The majority of bottled waters on the market do not contain optimal levels (0.7-1.2 ppm) of fluoride.¹⁴⁴⁻¹⁴⁸

Fact.

Individuals who drink bottled water as their primary source of water could be missing the decay preventive effects of optimally fluoridated water available from their community water supply.

The consumption of bottled water in the United States has been growing by at least one gallon per person each year - more than doubling in the last ten years. Consumption rates for the past five years are shown in Table 2.¹⁴

Table 2: U.S. Bottled Water Market¹⁴⁹

Per Capita Consumption 2000-2004

Year	Gallons Per Capita	Annual % Change
2000	17.2	—
2001	18.7	8.7%
2002	20.7	10.8%
2003	22.1	7.0%
2004	23.8	7.6%

In 2004, total U.S. sales of bottled water surpassed 6.8 billion gallons, an 8.6% advance over 2003 with whole-sale dollar sales reaching a record of approximately \$9.2 billion. This category includes sparkling and non-sparkling water, domestic and imported water, water in single-serve bottles and larger packages as well as vended and direct delivered waters. U.S. residents now drink more bottled water annually (23.8 gallons per person in 2004) than any other beverage with the exception of carbonated soft drinks.^{149,150} In 2004, consumption of carbonated soft drinks fell for the sixth straight year after several decades of uninhibited growth (53.7 gallons per person in 2004 compared to 54.8 gallons per person in 1999).¹⁵⁰

16.



In 1994, a small study at two community health centers in Rhode Island showed that 55% of the total households responding used only bottled water for drinking while 59% of the households with children reported using only bottled water for drinking. The vast majority of these bottled waters had less than optimal levels of fluoride. While most of the patient population of the health centers was either on public assistance (60%) or uninsured (20%), families spent their limited resources to purchase bottled water. It was reported that 52% of children on public assistance and 35% of the uninsured children used bottled water.¹⁵¹

The fluoride content of bottled water can vary greatly. A 1989 study of pediatric dental patients and their use of bottled water found the fluoride content of bottled water from nine different sources varied from 0.04 ppm to 1.4 ppm.¹⁵² In a 1991 study of 39 bottled water samples, 34 had fluoride levels below 0.3 ppm. Over the two years the study was conducted, six products showed a two- to four-fold drop in fluoride content.¹⁵³ A similar study of five national brands of bottled water conducted in 2000, showed that significant differences in fluoride concentration existed between the five brands and that three of the

five brands tested demonstrated significant differences between the various batches tested of the same brand.¹⁵⁴

In evaluating how bottled water consumption affects fluoride exposure, there are several factors to consider. First is the amount of bottled water consumed during the day. Second is whether bottled water is used for drinking, in meal preparation and for reconstituting soups, juices and other drinks. Third is whether another source of drinking water is accessed during the day such as an optimally fluoridated community water supply at day-care, school or work.

A final important issue is determining the fluoride content of the bottled water. While drinking water is regulated by the U.S. EPA,¹⁵⁵ bottled water is regulated by the U.S. Food and Drug Administration (FDA) which has established standards for its quality.¹⁵⁶

Additional information on this topic may be found in Question 43.

Bottled water is defined as water that is intended for human consumption sealed in bottles or other containers with no added ingredients except that it may optionally contain safe and suitable antimicrobial agents. The FDA has established maximum allowable levels for physical, chemical, microbiological, and radiological contaminants in the bottled water quality standard regulations. The FDA has also approved standards for the optional addition of fluoride.¹⁵⁶ Effective in 1996, FDA regulations require fluoride content of bottled water to be listed on the label *only if fluoride is added during processing*.¹⁵⁷ If the fluoride level is not shown on the label of the bottled water, the company can be contacted, or the water can be tested to obtain this information.

For additional information on bottled water and fluoride exposure, view the ADA's Web page "Bottled Water, Home Water Treatment Systems and Fluoride Exposure" at <http://www.ada.org/goto/bottledwater>. (Figure 3)

Figure 3: Bottled Water/Home Water Treatment Systems

A MISSING INGREDIENT?

<http://www.ada.org/goto/bottledwater>

- Does your bottled water contain fluoride?
- Does your water filter remove fluoride?



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QUESTION 16.

Can home water treatment systems (e.g. water filters) affect optimally fluoridated water supplies?

Answer.

Yes. Some types of home water treatment systems can reduce the fluoride levels in water supplies potentially decreasing the decay-preventive effects of optimally fluoridated water.

Fact.

There are many kinds of home water treatment systems including water filters (for example: carafe filters, faucet filters, under the sink filters and whole house filters), reverse osmosis systems, distillation units and water softeners. There has not been a large body of research regarding the extent to which these treatment systems affect fluoridated water. Available research is often conflicting and unclear. However, it has been consistently documented that reverse osmosis systems and distillation units remove significant amounts of fluoride from the water supply.^{41,158,159} On the other hand, repeated studies regarding water softeners confirm earlier research indicating the water softening process caused no significant change in fluoride levels.^{160,161} With water filters, the fluoride concentration remaining in the water depends on the type and quality of the filter being used, the status of the filter and the filter's age. Some activated carbon filters containing activated alumina may remove significant amounts of the fluoride.¹⁶² Each type of filter should be assessed individually.¹⁵⁹

Individuals who drink water processed by home water treatment systems as their primary source of water could be losing the decay preventive effects of optimally fluoridated water available from their community water supply. Consumers using home water treatment systems should have their water tested at least annually to establish the fluoride level of the treated water. More frequent testing may be needed. Testing is available through local and state public health departments. Private laboratories may also offer testing for fluoride levels in water.

Information regarding the existing level of fluoride in a community's public water system can be obtained by asking a local dentist, contacting your local or state health department, or contacting the local water supplier.

Additional information on this topic may be found in Question 4.

For additional information on home water treatment systems and fluoride exposure, view the ADA's Web page "Bottled Water, Home Water Treatment Systems and Fluoride Exposure" at <http://www.ada.org/goto/bottledwater>. (Figure 3)

Notes

SAFETY

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QUESTION 17.

Does fluoride in the water supply, at the levels recommended for the prevention of dental decay, adversely affect human health?

Answer.

The overwhelming weight of scientific evidence indicates that fluoridation of community water supplies is safe. (See Figure 4.)

Fact.

For generations, millions of people have lived in areas where fluoride is found naturally in drinking water in concentrations as high or higher than those recommended to prevent dental decay. Research conducted among these persons confirms the safety of fluoride in the water supply.^{84,163-166} In fact, in August 1993, the National Research Council, a branch of the National Academy of Sciences, released a report prepared for the Environmental Protection Agency (EPA) that confirmed that the currently allowed fluoride levels in drinking water do not pose a risk for health problems such as cancer, kidney failure or bone disease.¹⁶⁷ Based on a review of available data on fluoride toxicity, the expert subcommittee that wrote the report concluded that the EPA's ceiling of 4 ppm for naturally occurring fluoride in drinking water was "appropriate as an interim standard."¹⁶⁷ Subsequently, the EPA announced that the ceiling of 4 ppm would protect against adverse health effects with an adequate margin of safety and published a notice of intent not to revise the fluoride drinking water standard in the *Federal Register*.¹⁶⁸

As with other nutrients, fluoride is safe and effective when used and consumed properly. No charge against the benefits and safety of fluoridation has ever been sub-

stantiated by generally accepted scientific knowledge. After 60 years of research and practical experience, the preponderance of scientific evidence indicates that fluoridation of community water supplies is both safe and effective.¹⁶⁹

"After 60 years of research and practical experience, the preponderance of scientific evidence indicates that fluoridation of community water supplies is both safe and effective."

Many organizations in the U.S. and around the world involved with health issues have recognized the value of community water fluoridation. The American Dental Association (ADA) adopted its original resolution in support of fluoridation in 1950 and has repeatedly reaffirmed its position publicly and in its House of Delegates based on its continuing evaluation of the safety and effectiveness of fluoridation.³ The 2005 "ADA Statement Commemorating the 60th Anniversary of Community Water Fluoridation" reinforced that position.⁴ The American Medical Association's (AMA) House of Delegates first endorsed fluoridation in 1951. In 1986, and again in 1996, the AMA reaffirmed its support for fluoridation as an effective means of reducing dental decay.¹⁷⁰ The World Health Organization, which initially recommended the practice of water fluoridation in 1969,¹⁷¹ reaffirmed its support for fluoridation in 1994 stating that: "Providing that a community has a piped water supply, water fluoridation is the most effective method of reaching the whole population, so that all social classes benefit without the need for active participation on the part of individuals."¹³⁸ Following a comprehensive 1991 review and evaluation of

Figure 4. Safety of Community Water Fluoridation

- Institute of Medicine, Food and Nutrition Board. Dietary reference intakes for calcium, phosphorus, magnesium, vitamin D and fluoride. Report of the Standing Committee on the Scientific Evaluation of Dietary Reference Intakes. Washington, DC: National Academy Press, 1997.
- National Research Council. Health effects of ingested fluoride. Report of the Subcommittee on Health Effects of Ingested Fluoride. Washington, DC: National Academy Press, 1993.
- US Department of Health and Human Services, Public Health Service. Review of fluoride benefits and risks. Report of the Ad Hoc Subcommittee on Fluoride. Washington, DC, February 1991.
- World Health Organization. Fluorides and human health. Monograph series no 19. Geneva, Switzerland, 1970.

the public health benefits and risks of fluoride, the U.S. Public Health Service reaffirmed its support for fluoridation and continues to recommend the use of fluoride to prevent dental decay.⁸⁴

Recent statements by five leading health authorities on community water fluoridation can be found in the back of this publication.

National and international health, service and professional organizations that recognize the public health benefits of community water fluoridation for preventing dental decay are listed on the inside back cover of this publication.

QUESTION 18.

Are additional studies being conducted to determine the effects of fluorides in humans?

Answer.

Yes. Since its inception, fluoridation has undergone a nearly continuous process of reevaluation. As with other areas of science, additional studies on the effects of fluorides in humans can provide insight as to how to make more effective choices for the use of fluoride. The American Dental Association and the U.S. Public Health Service support this on-going research.

Fact.

For more than 60 years, thousands of reports have been published on all aspects of fluoridation.^{84,167} The accumulated dental, medical and public health evidence concerning fluoridation has been reviewed and evaluated numerous times by academicians, commit-

tees of experts, special councils of government and most of the world's major national and international health organizations. The verdict of the scientific community is that water fluoridation, at recommended levels, safely provides major oral health benefits. The question of possible secondary health effects caused by fluorides consumed in optimal concentrations throughout life has been the object of thorough medical investigations which have failed to show any impairment of general health throughout life.^{138,163-166}

"The verdict of the scientific community is that water fluoridation, at recommended levels, safely provides major oral health benefits."

In scientific research, there is no such thing as "final knowledge." New information is continuously emerging and being disseminated. Under the Safe Drinking Water Act (SDWA), the U. S. Environmental Protection Agency (EPA) must periodically review the existing National Primary Drinking Water Regulations (NPDWRs) "not less often than every 6 years." This review is a routine part of the EPA's operations as dictated by the SDWA.¹⁷²

In April 2002, the EPA announced the results of its preliminary revise/not revise decisions for 68 chemical NPDWRs. Fluoride was one of the 68 chemicals reviewed. The EPA determined that it fell under the "Not Appropriate for Revision at this Time" category, but noted that it planned to ask the National Academy of Science (NAS) to update the risk assessment for fluoride. The NAS had previously completed a review of fluoride for EPA approximately 12 years ago which was published as "Health Effects of Ingested Fluoride" in 1993 by the National Research Council.

At the request of the NAS, the National Research Council's Committee on Toxicology created the Subcommittee on Fluoride in Drinking Water to review toxicologic, epidemiologic, and clinical data published since 1993 and exposure data on orally ingested fluoride from drinking water and other sources (e.g., food, toothpaste, mouthrinses). Based on this review the Subcommittee will evaluate the scientific and technical basis of the EPA's maximum contaminant level (MCL) of 4 milligram per liter (mg/L or ppm) and secondary maximum contaminant level (SMCL) of 2 mg/L for fluoride in drinking water. The Subcommittee will advise the EPA on the adequacy of its fluoride MCL and SMCL to protect children and others from adverse health effects and identify data gaps and make recommendations for future research relevant to setting the MCL and SMCL for fluoride. The Subcommittee began its work in November 2002 and is currently projected to complete the project in early 2006.¹⁷³

The definition of a contaminant is a function of the National Primary Drinking Water Regulations. The EPA

considers a contaminant to be ANYTHING found in water that may be harmful to human health. The EPA has designated 90 microorganisms, minerals and chemicals as contaminants.^{174,175}

While research continues, the weight of scientific evidence indicates water fluoridation is safe and effective in preventing dental decay in humans.⁸⁴

Additional information on this topic may be found in Questions 7, 8, and 42.

QUESTION 19.

Does the total intake of fluoride from air, water and food pose significant health risks?

Answer.

The total intake of fluoride from air, water and food, in an optimally fluoridated community in the United States, does not pose significant health risks.

Fact.

Fluoride from the Air

The atmosphere normally contains negligible concentrations of airborne fluorides. Studies reporting the levels of fluoride in air in the United States suggest that ambient fluoride contributes little to a person's overall fluoride intake.^{179,180}

Fluoride from Water

In the United States, the natural level of fluoride in ground water varies from very low levels to over 4 ppm. Public water systems in the U.S. are monitored by the Environmental Protection Agency (EPA), which requires that public water systems not exceed fluoride levels of 4 ppm.¹⁶⁸ The optimal concentration for fluoride in water in the United States has been established in the range of 0.7 to 1.2 ppm. This range will effectively reduce dental decay while minimizing the occurrence of mild dental fluorosis. The optimal fluoride level is dependent on the annual average of the maximum daily air temperature in the geographic area.³⁶

Children living in a community with water fluoridation get a portion of their daily fluoride intake from fluoridated water and a portion from dietary sources which would include food and other beverages. When considering water fluoridation, an individual must consume one liter of water fluoridated at 1 part per million (1 ppm) to receive 1 milligram (1 mg) of fluoride.^{42,178} Children under six years of age, on average, consume less than one-half liter of drinking water a day.¹⁷⁸ Therefore, children under six years of age would consume, on average, less than 0.5 mg of fluoride a day from drinking optimally fluoridated water (at 1 ppm).

A ten-year comparison study of long-time residents of Bartlett and Cameron, Texas, where the water supplies contained 8.0 and 0.4 parts per million of fluoride, respectively, included examinations of organs, bones and tissues. Other than a higher prevalence of

dental fluorosis in the Bartlett residents, the study indicated that long term consumption of dietary fluoride (resident average length of fluoride exposure was 36.7 years), even at levels considerably higher than recommended for decay prevention, resulted in no clinically significant physiological or functional effects.¹⁶⁸

Fluoride in Food

Foods and beverages commercially processed (cooked or reconstituted) in optimally fluoridated cities can contain higher levels of fluoride than those processed in nonfluoridated communities. These foods and beverages are consumed not only in the city where processed, but may be distributed to and consumed in nonfluoridated areas.²⁶ This "halo" or "diffusion" effect results in increased fluoride intake by people in nonfluoridated communities, providing them increased protection against dental decay.^{71,85,86} As a result of the widespread availability of these various sources of fluoride, the difference between decay rates in fluoridated areas and nonfluoridated areas is somewhat less than several decades ago but still significant.⁸⁷ Failure to account for the diffusion effect may result in an underestimation of the total benefit of water fluoridation especially in areas where a large amount of fluoridated products are brought into nonfluoridated communities.⁸⁶

Water and water-based beverages are the chief source of dietary fluoride intake. Conventional estimates are that approximately 75% of dietary fluoride comes from water and water-based beverages.¹⁷⁹

The average daily dietary intake of fluoride (expressed on a body weight basis) by children residing in optimally fluoridated (1 ppm) communities is 0.05 mg/kg/day; in communities without optimally fluoridated water, average intakes for children are about 50% lower.¹²³ Dietary fluoride intake by adults in optimally fluoridated (1 ppm) areas averages 1.4 to 3.4 mg/day, and in nonfluoridated areas averages 0.3 to 1.0 mg/day.¹²³

In looking at the fluoride content of food and beverages over time, it appears that fluoride intake from dietary sources has remained relatively constant. Except for samples prepared or cooked with fluoridated water, the fluoride content of most foods and beverages is not significantly different between fluoridated and nonfluoridated communities. When fluoridated water is used to prepare or cook the samples, the fluoride content of foods and beverages is higher as reflected in the intake amounts noted in the previous paragraph. This difference has remained relatively constant over time.^{180,181}

The fluoride content of fresh solid foods in the United States generally ranges from 0.01 to 1.0 part per million.^{102,179} It has long been known that fish, such as sardines, may contribute to higher dietary fluoride intake if the bones are ingested as fluoride has an affinity for calcified tissues. Additionally, brewed teas may also contain fluoride concentrations of 1 ppm to 6 ppm depending on the amount of dry tea used, the water flu-

oride concentration and the brewing time.¹⁸² The fluoride value for unsweetened instant tea powder appears very high when reported as a dry powder because this product is extremely concentrated. However, when one teaspoon of the unsweetened tea powder is added to an eight ounce cup of tap water, the value for prepared instant tea is similar to the values reported for regular brewed tea.¹⁷⁹

Unveiled in 2004, the National Fluoride Database is a comprehensive, nationally representative database of the fluoride concentration in foods and beverages consumed in the United States. The database for fluoride was designed for use by epidemiologists and health researchers to estimate fluoride intake and to assist in the investigation of the relationships between fluoride intake and human health. The database contains fluoride values for beverages, water, and some lower priority foods.¹⁷⁹

QUESTION 20.

How much fluoride should an individual consume each day to reduce the occurrence of dental decay?

Answer.

The appropriate amount of daily fluoride intake varies with age and body weight. As with other nutrients, fluoride is safe and effective when used and consumed properly.

Fact.

In 1997, the Food and Nutrition Board of the Institute of Medicine developed a comprehensive set of reference values for dietary nutrient intakes.¹²³ These new reference values, the Dietary Reference Intakes (DRI), replace the Recommended Dietary Allowances (RDA) which had

been set by the National Academy of Sciences since 1941. The new values present nutrient requirements to optimize health and, for the first time, set maximum-level guidelines to reduce the risk of adverse effects from excessive consumption of a nutrient. Along with calcium, phosphorous, magnesium and vitamin D, DRIs for fluoride were established because of its proven effect on dental decay.

As demonstrated in Table 3, fluoride intake in the United States has a large range of safety.

The first DRI reference value is the Adequate Intake (AI) which establishes a goal for intake to sustain a desired indicator of health without causing side effects. In the case of fluoride, the AI is the daily intake level required to reduce dental decay without causing moderate dental fluorosis. The AI for fluoride from all sources (fluoridated water, food, beverages, fluoride dental products and dietary fluoride supplements) is set at 0.05 mg/kg/day (milligram per kilogram of body weight per day).

Using the established AI of 0.05 mg/kg, the amount of fluoride for optimal health to be consumed each day has been calculated by gender and age group (expressed as average weight). See Table 3 in this Question.

The DRIs also established a second reference value for maximum-level guidelines called tolerable upper intake levels (UL). The UL is higher than the AI and is *not* the recommended level of intake. The UL is the estimated maximum intake level that should not produce unwanted effects on health. The UL for fluoride from all sources (fluoridated water, food, beverages, fluoride dental products and dietary fluoride supplements) is set at 0.10 mg/kg/day (milligram per kilogram of body weight per day) for infants, toddlers, and children through eight years of age. For older children and adults, who are no longer at risk for dental fluorosis, the UL for fluoride is set at 10 mg/day regardless of weight.

Table 3. Dietary Reference Intakes for Fluoride

Food and Nutrition Board of the Institute of Medicine 1997¹²³

Age Group	Reference Weights kg (lbs) *	Adequate Intake (mg/day)	Tolerable Upper Intake (mg/day)
Infants 0-6 months	7 (16)	0.01	0.7
Infants 7-12 months	9 (20)	0.5	0.9
Children 1-3 years	13 (29)	0.7	1.3
Children 4-8 years	22 (48)	1.0	2.2
Children 9-13 years	40 (88)	2.0	10.0
Boys 14-18 years	64 (142)	3.0	10.0
Girls 14-18 years	57 (125)	3.0	10.0
Males 19 years and over	76 (166)	4.0	10.0
Females 19 years and over	61 (133)	3.0	10.0

* Value based on data collected during 1988-94 as part of the Third National Health and Nutrition Examination Survey (NHANES III) in the United States.¹²⁹

Using the established ULs for fluoride, the amount of fluoride that may be consumed each day to reduce the risk of moderate dental fluorosis for children under eight, has been calculated by gender and age group (expressed as average weight). (See Table 3.)

As a practical example, daily intake of 2 mg of fluoride is adequate for a nine to 13-year-old child weighing 88 pounds (40 kg). This was calculated by multiplying 0.05 mg/kg/day (AI) times 40 kg (weight) to equal 2 mg. At the same time, that 88 pound (40kg) child could consume 10 mg of fluoride a day as a tolerable upper intake level.

Children living in a community with water fluoridation get a portion of their daily fluoride intake from fluoridated water and a portion from dietary sources which would include food and other beverages. When considering water fluoridation, an individual must consume one liter of water fluoridated at 1 part per million (1 ppm) to receive 1 milligram (1 mg) of fluoride.^{42,176} Children under six years of age, on average, consume less than one-half liter of drinking water a day.¹⁷⁸ Therefore, children under six years of age would consume, on average, less than 0.5 mg of fluoride a day from drinking optimally fluoridated water (at 1 ppm).

If a child lives in a nonfluoridated area, the dentist or physician may prescribe dietary fluoride supplements. As shown in Table 1 "Dietary Fluoride Supplement Schedule 1994" (See Question 12), the current dosage schedule recommends supplemental fluoride amounts that are below the AI for each age group. The dosage schedule was designed to offer the benefit of decay reduction with margin of safety to prevent mild to moderate dental fluorosis. For example, the AI for a child 3 years of age is 0.7 mg/day. The recommended dietary fluoride supplement dosage for a child 3 years of age in a nonfluoridated community is 0.5 mg/day. This provides leeway for some fluoride intake from processed food and beverages, and other sources.

Decay rates are declining in many population groups because children today are being exposed to fluoride from a wider variety of sources than decades ago. Many of these sources are intended for topical use only; however, some fluoride is ingested inadvertently by children.¹⁸³ Inappropriate ingestion of fluoride can be prevented, thus reducing the risk for dental fluorosis without jeopardizing the benefits to oral health.

For example, it has been reported in a number of studies that young children inadvertently swallow an average of 0.30 mg of fluoride from fluoride toothpaste at each brushing.^{184,185-189} If a child brushes twice a day, 0.60 mg may be ingested inappropriately. This may slightly exceed the Adequate Intake (AI) values from Table 3. The 0.60 mg consumption is 0.10 mg higher than the AI value for children 6 to 12 months and is 0.10 mg lower than the AI for children from 1-3 years of age.¹²³ Although toothpaste is not meant to be swallowed, children may consume the daily recommended Adequate Intake amount of fluoride from toothpaste alone. In order to decrease the risk of dental fluorosis, the American Dental Association since 1992 has recommended that parents and caregivers put only one pea-sized amount

of fluoride toothpaste on a young child's toothbrush at each brushing. Also, young children should be supervised while brushing and taught to spit out, rather than swallow, the toothpaste. Consult with your child's dentist or physician if you are considering using fluoride toothpaste before age two.

Additional information on this topic may be found in Question 25.

It should be noted that the amounts of fluoride discussed here are intake, or ingested, amounts. When fluoride is ingested, a portion is retained in the body and a portion is excreted. This issue will be discussed further in Question 22.

QUESTION 21.

Is there a need for prenatal dietary fluoride supplementation?

Answer.

There is no scientific basis to suggest any need to increase a woman's daily fluoride intake during pregnancy or breastfeeding to protect her health. At this time, scientific evidence is insufficient to support the recommendation for prenatal fluoride supplementation for decay prevention for infants.^{123,190}

Fact.

The Institute of Medicine has determined that, "No data from human studies document the metabolism of fluoride during lactation. Because fluoride concentrations in human milk are very low (0.007 to 0.011 ppm) and relatively insensitive to differences in the fluoride concentrations of the mother's drinking water, fluoride supplementation during lactation would not be expected to significantly affect fluoride intake by the nursing infant or the fluoride requirement of the mother."¹²³

The authors of the only prospective, randomized, double blind study to evaluate the effectiveness of prenatal dietary supplementation have concluded that the data do not support the hypothesis that prenatal fluoride has a strong decay preventive effect.¹⁹⁰ Moreover, prenatal dietary fluoride supplementation will not have an effect on the baby's permanent teeth because permanent teeth do not begin to develop during pregnancy.¹⁹¹

QUESTION 22.

When fluoride is ingested, where does it go?

Answer.

Much of the fluoride is excreted. Of the fluoride retained, almost all is found in calcified (hard) tissues, such as bones and teeth. Fluoride helps to prevent dental decay when incorporated into the teeth.

Fact.

After ingestion of fluoride, such as drinking a glass of optimally fluoridated water, the majority of the fluoride is absorbed from the stomach and small intestine into the blood stream.¹⁹² This causes a short term increase in fluoride levels in the blood. The fluoride levels increase quickly and reach a peak concentration within 20-60 minutes.¹⁹³ The concentration declines rapidly, usually within three to six hours following peak levels, due to the uptake of fluoride by calcified tissues and efficient removal of fluoride by the kidneys.¹⁹² Approximately 50% of the fluoride absorbed each day by young or middle-aged adults becomes associated with hard tissues within 24 hours while virtually all of the remainder is excreted in the urine. Approximately 99% of the fluoride present in the body is associated with hard tissues.¹⁹²

Ingested or systemic fluoride becomes incorporated into forming tooth structures. Fluoride ingested regularly during the time when teeth are developing is deposited throughout the entire surface of the tooth and contributes to long lasting protection against dental decay.⁴²

Additional information on this topic may be found in Question 2.

An individual's age and stage of skeletal development will affect the rate of fluoride retention. The amount of fluoride taken up by bone and retained in the body is inversely related to age. More fluoride is retained in young bones than in the bones of older adults.^{193,192,193}

According to generally accepted scientific knowledge, the ingestion of optimally fluoridated water does not have an adverse effect on bone health.¹⁹⁴⁻¹⁹⁸ Evidence of advanced skeletal fluorosis, or crippling skeletal fluorosis, "was not seen in communities in the United States where water supplies contained up to 20 ppm (natural levels of fluoride)."^{123,199} In these communities, daily fluoride intake of 20 mg/day would not be uncommon.¹²³ Crippling skeletal fluorosis is extremely rare in the United States and is not associated with optimally fluoridated water; only 5 cases have been confirmed during the last 35 years.¹²³

Additional information on this topic may be found in Question 23.

The kidneys play the major role in the removal of fluoride from the body. Normally kidneys are very efficient and excrete fluoride very rapidly. However, decreased fluoride removal may occur among persons with severely impaired kidney function who may not be on kidney dialysis.¹⁶⁷ No cases of dental fluorosis or symptomatic skeletal fluorosis have been reported among persons with impaired kidney function; however, the overall health significance of reduced fluoride removal is uncertain and continued follow-up is recommended especially for children with impaired kidney function.⁸⁴

Additional information on this topic may be found in Question 40.

QUESTION 23.

Will the ingestion of optimally fluoridated water over a lifetime adversely affect bone health?

Answer.

No, the ingestion of optimally fluoridated water does not have an adverse effect on bone health.^{194-198,203-205}

Fact.

The weight of scientific evidence does not provide an adequate basis for altering public health policy regarding fluoridation because of bone health concerns. A number of investigations have studied the effects on bone structure of individuals residing in communities with optimal and higher than optimal concentrations of fluoride in the drinking water. These studies have focused on whether there exists a possible link between fluoride and bone fractures. Additionally, the possible association between fluoride and bone cancer has been studied.

In 1991, a workshop, co-sponsored by the National Institute of Arthritis and Musculoskeletal and Skin Diseases and the then National Institute of Dental Research, addressed the potential relationship of hip fracture and bone health in humans to fluoride exposure from drinking water. Meeting at the National Institutes of Health, researchers examined historic and contemporary research on fluoride exposure and bone health. At that time, participants concluded there was no basis for altering current public health policy regarding current guidelines for levels of fluoride in drinking water. Recommendations were made regarding additional research in several areas.¹⁹⁴

In 1993, two studies were published demonstrating that exposure to fluoridated water does not contribute to an increased risk for hip fractures. One study looked at the risk of hip fractures in residents of two similar communities in Alberta, Canada.¹⁹⁵ In this study, researchers compared a city with fluoridated drinking water optimally adjusted to 1 ppm to a city whose residents drank water containing naturally occurring fluoride at a concentration of only 0.3 ppm. No significant difference was observed in the overall hip fracture hospitalization rates for residents of both cities. "These findings suggest that fluoridation of drinking water has no impact, neither beneficial nor deleterious, on the risk of hip fracture."¹⁹⁵

The second study examined the incidence of hip fracture rates before and after water fluoridation in Rochester, Minnesota.¹⁹⁶ Researchers compared the hip fracture rates of men and women aged 50 and older from 1950 to 1959 (before the city's water supply was fluoridated in 1960) with the ten-year period after fluoridation. Their findings showed that hip fracture rates had decreased, and that the decrease began before fluoridation was introduced, and then continued. These data demonstrate no increase in the risk of hip fracture associated with water fluoridation.

An ecological study conducted in eastern Germany compared the incidence of hip fractures for adults living in Chemnitz (optimally fluoridated) and Halle (fluoride-deficient). The results suggested the consumption of optimally fluoridated water reduced the incidence of hip fractures in elderly individuals, especially women over 84 years of age.²⁰⁰

The ingestion of optimally fluoridated water does not have an adverse effect on bone health.^{194-198,200} Exposure to fluoride at levels considered optimal for the prevention of dental decay appears to have no significant impact on bone mineral density or risk of bone fracture.²⁰¹⁻²⁰⁵ Some studies have reported hip fracture risk increased slightly, decreased slightly or was unchanged in fluoridated areas compared to nonfluoridated areas. A recent systematic review of these studies concluded there was no clear association with water fluoridation and hip fracture.²⁰⁶

"Exposure to fluoride at levels considered optimal for the prevention of dental decay appears to have no significant impact on bone mineral density or risk of bone fracture."

24.

While a number of studies reported findings at a population level, both the Hillier and Phipps studies examined risk on an individual rather than a community basis taking into account other risk factors such as medications, age of menopause, alcohol consumption, smoking, dietary calcium intake and physical activity. Using these more rigorous study designs, Hillier and Phipps reported no change or lower hip fracture risk in those drinking fluoridated water.^{203,204}

In *Bone Health and Osteoporosis: A Report of the Surgeon General* issued in 2004, fluoride is listed as a nutrient that has potentially beneficial effects on bone.²⁰⁷

Lastly, the possible association between fluoride and bone cancer has been studied. In the early 1990s, two studies were conducted to evaluate the carcinogenicity of sodium fluoride in laboratory animals. The first study was conducted by the National Toxicology Program (NTP) of the National Institute of Environmental Health Sciences.²⁰⁸ The second study was sponsored by the Proctor and Gamble Company.²⁰⁹ In both studies, higher than optimal con-

centrations of sodium fluoride (25, 100 and 175 ppm) were consumed by rats and mice. When the NTP and the Proctor and Gamble studies were combined, a total of eight individual sex/species groups became available for analysis. Seven of these groups showed no significant evidence of malignant tumor formation. One group, male rats from the NTP study, showed "equivocal" evidence of carcinogenicity, which is defined by NTP as a marginal increase in neoplasms – i.e., osteosarcomas (malignant tumors of the bone) – that may be chemically related. The Ad Hoc Subcommittee on Fluoride of the U.S. Public Health Service combined the results of the two studies and stated: "Taken together, the two animal studies available at this time fail to establish an association between fluoride and cancer."^{84,210}

Additional information on this topic may be found in Question 28.

QUESTION 24.

What is dental fluorosis?

Answer.

Dental fluorosis is a change in the appearance of teeth and is caused when higher than optimal amounts of fluoride are ingested in early childhood while tooth enamel is forming. The risk of dental fluorosis can be greatly reduced by closely monitoring the proper use of fluoride products by young children.

Fact.

Dental fluorosis is caused by a disruption in enamel formation which occurs during tooth development in early childhood related to a higher than optimal intake of fluoride.¹⁸² Enamel formation of permanent teeth, other than third molars (wisdom teeth), occurs from about the time of birth until approximately five years of age. After tooth enamel is completely formed, dental fluorosis cannot develop even if excessive fluoride is ingested.²¹¹ Older children and adults are not at risk for the development of dental fluorosis. Dental fluorosis becomes apparent only after the teeth erupt. Because dental fluorosis occurs while teeth are forming under the gums, teeth that have erupted are not at risk for dental fluorosis. It should be noted that many other developmental changes that affect the appearance of tooth enamel are not related to fluoride intake.

Table 4. Dental Fluorosis Classification by H. J. Dean, 1942¹⁸

Classification	Criteria-Description of Enamel
Normal	Smooth, glossy, pale creamy-white translucent surface
Questionable	A few white flecks or white spots
Very Mild	Small opaque, paper-white areas covering less than 25% of the tooth surface
Mild	Opaque white areas covering less than 50% of the tooth surface
Moderate	All tooth surfaces affected; marked wear on biting surfaces; brown stain may be present
Severe	All tooth surfaces affected; discrete or confluent pitting; brown stain present

Dental fluorosis has been classified in a number of ways. One of the most universally accepted classifications was developed by H. T. Dean in 1942; its descriptions can be easily visualized by the public (see Table 4).²¹²

In using Dean's Fluorosis Index, each tooth present in an individual's mouth is rated according to the fluorosis index in Table 4. The individual's fluorosis score is based upon the severest form of fluorosis recorded for two or more teeth. Dean's Index, which has been used for more than 60 years, remains popular for prevalence studies in large part due to its simplicity and the ability to make comparisons with findings from a number of earlier studies.²¹³

Very mild to mild fluorosis has no effect on tooth function and may make the tooth enamel more resistant to decay. These types of fluorosis are not readily apparent to the affected individual or casual observer and often require a trained specialist to detect. In contrast, the moderate and severe forms of dental fluorosis, characterized by esthetically (cosmetically) objectionable changes in tooth color and surface irregularities, are typically easy to detect. Most investigators regard even the more advanced forms of dental fluorosis as a cosmetic effect rather than a functional adverse effect.¹²³ The U.S. Environmental Protection Agency, in a decision supported by the U.S. Surgeon General, has determined that objectionable dental fluorosis is a cosmetic effect with no known health effects.¹⁶⁸ Little research on the psychological effects of dental fluorosis on children and adults has been conducted, perhaps because the majority of those who have the milder forms of dental fluorosis are unaware of this condition.⁸⁴

In a 1986-7 national survey of U.S. school children conducted by the National Institute of Dental Research (NIDR), dental fluorosis was present in 22.3% of the children examined using Dean's Index.⁸⁴ These children were exposed to a variety of sources of fluoride (fluoridated water, food, beverages, fluoride dental products and dietary supplements). The prevalence of the types of dental fluorosis observed was:

Very mild fluorosis	17.0%
Mild fluorosis	4.0%
Moderate fluorosis	1.0%
Severe fluorosis	0.3%
Total	22.3%

The incidence of moderate or severe fluorosis comprised a very small portion (6%) of the total amount of fluorosis. In other words, 94% of all dental fluorosis was the very mild to mild form of dental fluorosis.

This survey conducted by NIDR remains the only source of national data regarding the prevalence of dental fluorosis. In a study that compared this data with data recorded by H. Trendley Dean in the 1930s, it was determined that the greatest increase in fluorosis from the 1930s to the 1980s appeared in the group with suboptimally fluoridated water. During the last ten years of this period, children were exposed to fluoride from multiple

sources including water, infant formula, foods, foods and drinks prepared with fluoridated water as well as dietary supplements and the ingestion of fluoride toothpaste making it difficult to pinpoint the effect any one item had on the development of fluorosis. As part of the most recent National Health and Nutrition Examination Survey (NHANES) 1999-2002, new fluorosis data has been collected as a representative sample of the U.S. population. By comparing NIDR and the latest NHANES data, researchers will be able to determine trends in the prevalence and severity of dental fluorosis in the past 15 years and examine if changes in exposure to systemic fluorides such as infant formulas, toothpaste and dietary fluoride supplements have had some effect.²¹⁴

Using the same NIDR study, researchers looked at children aged 12-14 years who had never received dietary fluoride supplements and had only lived in one home. Through their analysis, they found that approximately 2% of U.S. school children may experience perceived esthetic problems which could be attributed to the currently recommended levels of fluoride in drinking water. They reported that dental fluorosis in the esthetically important front teeth occurs less often and is less severe than when looking at all teeth in an individual. While the researchers were not able to provide a cost estimate associated with the treatment of this fluorosis, they did note that such estimates are frequently an overestimation of the actual costs. Additionally, any change recommended to the current fluoridation policy would need to be weighed against fluoridation's lifetime benefits and the feasibility and associated costs of alternative solutions.²¹⁵

As with other nutrients, fluoride is safe and effective when used and consumed properly. The recommended optimum water fluoride concentration of 0.7 to 1.2 ppm was established to maximize the decay preventive benefits of fluoride, and the same time minimize the likelihood of mild dental fluorosis.⁸⁴

"The risk of teeth forming with the very mildest form of fluorosis must be weighed against the benefit that the individual's teeth will also have a lower level of dental decay thus saving dental treatment costs, patient discomfort and tooth loss."

The benefits and risks of community water fluoridation have been examined and are discussed extensively in the Benefits Section and the safety of water fluoridation is discussed in great detail in the remainder of this (Safety) Section of this document. In assessing the risks of dental fluorosis, scientific evidence indicates it is probable that approximately 10% of children consuming optimally fluoridated water, in the absence of fluoride from all other sources, will develop very mild dental fluorosis.¹⁰ As defined in Table 4, very mild fluorosis is characterized by small opaque, paper-white area covering less than 25% of the tooth surface. The risk of teeth forming with the very

mildest form of fluorosis must be weighed against the benefit that the individual's teeth will also have a lower level of dental decay thus saving dental treatment costs, patient discomfort and tooth loss.^{11,12} In addition, the risk of fluorosis may be viewed as an alternative to having dental decay, which is a disease that may cause cosmetic problems much greater than dental fluorosis.²¹⁶

In 1994, a review of five recent studies indicated that the amount of dental fluorosis attributable to water fluoridation was approximately 13%. This represents the amount of fluorosis that might be eliminated if community water fluoridation was discontinued.⁹⁵ In other words, the majority of dental fluorosis can be associated with other risk factors such as the inappropriate ingestion of fluoride products.

Additional information on this topic may be found in Question 25.

The type of fluorosis seen today remains largely limited to the very mild and mild categories; however, the prevalence of dental fluorosis in both fluoridated and nonfluoridated communities in the United States is higher than it was when the original epidemiological studies were conducted approximately 60 years ago.⁸⁴ The inappropriate use of fluoride-containing dental products is the largest risk factor for increased fluorosis as fluoride intake from food and beverages has remained constant over time.^{180,181} The risk of fluorosis can be greatly reduced by following label directions for the use of these fluoride products.^{123,167}

Additional information on this topic may be found in Question 25.

QUESTION 25.

What can be done to reduce the occurrence of dental fluorosis in the U.S.?

Answer.

The vast majority of dental fluorosis in the United States can be prevented by limiting the ingestion of topical fluoride products (such as toothpaste) and the appropriate use of dietary fluoride supplements without denying young children the decay prevention benefits of community water fluoridation.

Fact.

During the period of enamel formation in young children (before teeth appear in the mouth), inappropriate ingestion of high levels of fluoride is the risk factor for dental fluorosis.^{95,217} Studies of fluoride intake from the diet including foods, beverages and water indicate that fluoride ingestion from these sources has remained relatively constant for over half a century and, therefore, is not likely to be associated with an observed increase in dental fluorosis.¹⁸⁰⁻¹⁸²

Additional information on this topic may be found in Question 19.

Dental decay has decreased because children today are being exposed to fluoride from a wider variety of sources than decades ago. Many of these sources are intended for

topical use only; however, some fluoride is ingested inadvertently by children.¹⁸³ Inappropriate ingestion of topical fluoride can be minimized, thus reducing the risk for dental fluorosis without reducing decay prevention benefits.

Since 1992, the American Dental Association (ADA) has required manufacturers of toothpaste to include the phrase "Use only a pea-sized amount (of toothpaste) for children under six" on fluoride toothpaste labels with the ADA Seal of Acceptance. The rationale for choosing six years of age for the toothpaste label is based on the fact that the swallowing reflex is not fully developed in children of preschool age and they may inadvertently swallow toothpaste during brushing. In addition, the enamel formation of permanent teeth is basically complete at six and so there is a decreased risk of fluorosis. Because dental fluorosis occurs while teeth are forming under the gums, individuals whose teeth have erupted are not at risk for dental fluorosis.

Additional information on this topic may be found in Question 24.

Numerous studies have established a direct relationship between young children brushing with more than a pea-sized amount of fluoride toothpaste and the risk of very mild or mild dental fluorosis in both fluoridated and nonfluoridated communities.^{189,218,219} It was noted that 34% of the dental fluorosis cases in a nonfluoridated community were explained by children having brushed more than once per day during the first two years of life. In the optimally fluoridated community, 68% of the fluorosis cases were explained by the children using more than a pea-sized amount of toothpaste during the first year of life.²²⁰ Parents and caregivers should put only one pea-sized amount of fluoride toothpaste on a young child's toothbrush at each brushing. Young children should be supervised while brushing and taught to spit out, rather than swallow, the toothpaste. Consult with your child's dentist or physician if you are considering using fluoride toothpaste before age two.

Additionally, it has been shown that 65% of the fluorosis cases in a nonfluoridated area were attributed to fluoride supplementation under the pre-1994 protocol. Thirteen percent of fluorosis cases in a fluoridated community could be explained by a history of taking dietary fluoride supplements inappropriately.²²⁰ Dietary fluoride supplements should be prescribed as recommended in the dietary fluoride supplement schedule approved by the American Dental Association, the American Academy of Pediatrics and the American Academy of Pediatric Dentistry in 1994 (see Table 1).^{30,125} Fluoride supplements should only be prescribed for children living in nonfluoridated areas. Because of many sources of fluoride in the diet, proper prescribing of fluoride supplements can be complex. It is suggested that all sources of fluoride be evaluated with a thorough fluoride history before supplements are prescribed for a child.¹²² That evaluation should include testing of the home water supply if the fluoride concentration is unknown.

Additional information on this topic may be found in Question 42.

Parents, caretakers and health care professionals should judiciously monitor use of all fluoride-containing dental products by children under age six. As is the case with any therapeutic product, more is not always better. Care should be taken to adhere to label directions on fluoride prescriptions and over-the-counter products (e.g. fluoride toothpastes and rinses). **The ADA recommends the use of fluoride mouthrinses, but not for children under six years of age because they may swallow the rinse.** These products should be stored out of the reach of children.

Finally, in areas where naturally occurring fluoride levels in ground water are higher than 2 ppm, consumers should consider action to lower the risk of dental fluorosis for young children. (Adults are not affected because dental fluorosis occurs only when developing teeth are exposed to elevated fluoride levels.) Families on community water systems should contact their water supplier to ask about the fluoride level. Consumers with private wells should have the source tested yearly to accurately determine the fluoride content. Consumers should consult with their dentist regarding water testing and discuss appropriate dental health care measures. In homes where young children are consuming water with a fluoride level greater than 2 ppm, families should use an alternative primary water source, such as bottled water, for drinking and cooking. It is also important to remember that the ADA recommends dietary fluoride supplements only for children living in areas with less than optimally fluoridated water.

Additional information on this topic may be found in Questions 4, 12 and 42.

QUESTION 26.

Why is there a warning label on a tube of fluoride toothpaste?

Answer.

The American Dental Association originally required manufacturers to place a label on fluoride toothpaste in 1991 to ensure proper use and therefore reduce the risk of dental fluorosis.

Fact.

In 1991, the American Dental Association (ADA) began requiring toothpaste manufacturers to include the following language on all ADA-Accepted toothpastes: "Do not swallow. Use only a pea-sized amount for children under six. To prevent swallowing, children under six years of age should be supervised in the use of toothpaste."

"To ensure children's safety, the ADA limits the total amount of fluoride allowed in ADA-Accepted toothpaste."

The ADA warning labels were adopted to help reduce the risk of mild dental fluorosis. This type of fluorosis is not readily apparent to the affected individual or casual observer and often requires a trained specialist to detect. Dental fluorosis only occurs when more than the optimal daily amount of fluoride is ingested.

Additionally, to ensure children's safety, the ADA limits the total amount of fluoride allowed in any one tube of ADA-Accepted toothpaste.

Since 1997, the U.S. Food and Drug Administration (FDA) has required the label language, "If you accidentally swallow more than used for brushing, seek professional help or contact a poison control center immediately" on all fluoride toothpastes sold in the U.S.

The new FDA labels are consistent with the ADA statements, with the exception of the poison control warning.

The ADA Council on Scientific Affairs believes that the last sentence on the label could unnecessarily frighten parents and children and that this portion of the label overstates any demonstrated or potential danger posed by fluoride toothpastes.

The ADA notes that a child could not absorb enough fluoride from one tube of toothpaste to cause a serious problem and that the excellent safety record on fluoride toothpaste argues against any unnecessary regulation.²²¹

QUESTION 27.

Is fluoride, as provided by community water fluoridation, a toxic substance?

Answer.

No. Fluoride, at the concentrations found in optimally fluoridated water, is not toxic according to generally accepted scientific knowledge.

Fact.

Like many common substances essential to life and good health – salt, iron, vitamins A and D, chlorine, oxygen and even water itself – fluoride can be toxic in excessive quantities. Fluoride in the much lower concentrations (0.7 to 1.2 ppm) used in water fluoridation is not harmful or toxic.

Acute fluoride toxicity occurring from the ingestion of optimally fluoridated water is impossible.¹⁸² The amount of fluoride necessary to cause death for a human adult (155 pound man) has been estimated to be 5-10 grams of sodium fluoride, ingested at one time.²²² This is more than 10,000-20,000 times as much fluoride as is consumed at one time in a single 8 ounce glass of optimally fluoridated water.

Chronic fluoride toxicity may develop after 10 or more years of exposure to very high levels of fluoride, levels not associated with optimal fluoride intake in drinking water. The primary functional adverse effect associated with long term excess fluoride intake is

skeletal fluorosis. The development of skeletal fluorosis and its severity is directly related to the level and duration of fluoride exposure. For example, the ingestion of water naturally fluoridated at approximately 5 ppm for 10 years or more is needed to produce clinical signs of osteosclerosis (a mild form of skeletal fluorosis that can be seen as a change in bone density on x-rays) in the general population. In areas naturally fluoridated at 5 ppm, daily fluoride intake of 10 mg/day would not be uncommon.¹²³ A survey of X-rays from 170,000 people in Texas and Oklahoma whose drinking water had naturally occurring fluoride levels of 4 to 8 ppm revealed only 23 cases of osteosclerosis and no cases of crippling skeletal fluorosis.²²³ Evidence of advanced skeletal fluorosis, or crippling skeletal fluorosis, "was not seen in communities in the United States where water supplies contained up to 20 ppm (natural levels of fluoride)."^{123,139} In these communities, daily fluoride intake of 20mg/day would not be uncommon.¹²³ Crippling skeletal fluorosis is extremely rare in the United States and is not associated with optimally fluoridated water; only 5 cases have been confirmed during the last 35 years.¹²³

Additional information on this topic may be found in Question 20.

The Agency for Toxic Substances and Disease Registry (ATSDR) prepares toxicological profiles for various hazardous substances most commonly found at facilities on the CERCLA National Priorities List (Superfund Sites). The *Toxicological Profile for Fluorides, Hydrogen Fluoride and Fluorine* was revised in 2003. The ATSDR states that existing data indicates that subsets of the population may be unusually susceptible to the toxic effects of fluoride and its compounds at high doses. However, there are no data to suggest that exposure to the low levels associated with community water fluoridation would result in adverse effects in these potentially susceptible populations.²²⁴

"The possibility of adverse health effects from continuous low level consumption of fluoride over long periods has been studied extensively. As with other nutrients, fluoride is safe and effective when used and consumed properly."

The possibility of adverse health effects from continuous low level consumption of fluoride over long periods has been studied extensively. As with other nutrients, fluoride is safe and effective when used and consumed properly. No charge against the benefits and safety of fluoridation has ever been substantiated by generally accepted scientific knowledge. After 60 years of research and practical experience, the preponderance of scientific evidence indicates that fluoridation of community water supplies is both safe and effective.

At one time, high concentrations of fluoride additives were used in insecticides and rodenticides.³⁶ Today fluoride additives are rarely used in pesticides because more effective additives have been developed.¹⁶³

While large doses of fluoride may be toxic, it is important to recognize the difference in the effect of a massive dose of an extremely high level of fluoride versus the recommended amount of fluoride found in optimally fluoridated water. The implication that fluorides in large doses and in trace amounts have the same effect is completely unfounded. Many substances in widespread use are very beneficial in small amounts, but may be harmful in large doses – such as salt, chlorine and even water itself.

QUESTION 28.

Does drinking optimally fluoridated water cause or accelerate the growth of cancer?

Answer.

According to generally accepted scientific knowledge, there is no association between cancer rates in humans and optimal levels of fluoride in drinking water.²²⁵

Fact.

Since community water fluoridation was introduced in 1945, more than 50 epidemiologic studies in different populations and at different times have failed to demonstrate an association between fluoridation and the risk of cancer.⁶⁴ Studies have been conducted in the United States,²²⁶⁻²³¹ Japan,²³² the United Kingdom,²³³⁻²³⁵ Canada²³⁶ and Australia.²³⁷ In addition, several independent bodies have conducted extensive reviews of the scientific literature and concluded that there is no relationship between fluoridation and cancer.^{64,163,165,176,206,230}

The U.S. Environmental Protection Agency (EPA) further commented on the safety of appropriate fluoride exposure in the December 5, 1997, *Federal Register*.²³⁹ In a notice of a final rule relating to fluoride additives; the EPA stated, "...the weight of evidence from more than 50 epidemiological studies does not support the hypothesis of an association between fluoride exposure and increased cancer risk in humans. The EPA is in agreement with the conclusions reached by the National Academy of Sciences (NAS)."

Despite the abundance of scientific evidence to the contrary, claims of a link between fluoridation and increased cancer rates continue. This assertion is largely based on one study comparing cancer death rates in ten large fluoridated cities versus ten large nonfluoridated cities in the United States. The results of this study have been refuted by a number of organizations and researchers.²⁴⁰ Scientists at the National Cancer Institute analyzed the same data and found that the original investigators failed to adjust their findings for variables, such as age and gender differences, that affect cancer rates. A review by other researchers pointed to further shortcomings in

the study. The level of industrialization in the fluoridated cities was much higher than the nonfluoridated cities. Researchers noted that a higher level of industrialization is usually accompanied by a higher incidence of cancer. While the researchers noted that the fluoridated cities did have higher cancer rates over the twenty year study, the rate of increase in the nonfluoridated cities was exactly the same (15%) as the fluoridated cities. Following further reviews of the study, the consensus of the scientific community continues to support the conclusion that the incidence of cancer is unrelated to the introduction and duration of water fluoridation.⁸⁴

In the early 1990s, two studies using higher than optimal levels of fluoride were conducted to evaluate the carcinogenicity of sodium fluoride in laboratory animals. The first study was conducted by the National Toxicology Program (NTP) of the National Institute of Environmental Health Sciences.²⁰⁸ The second study was sponsored by the Proctor and Gamble Company.²⁰⁹ In both studies, higher than optimal concentrations of sodium fluoride (25, 100 and 175 ppm) were consumed by rats and mice. When the NTP and the Proctor and Gamble studies were combined, a total of eight individual sex/species groups became available for analysis. Seven of these groups showed no significant evidence of malignant tumor formation. One group, male rats from the NTP study, showed "equivocal" evidence of carcinogenicity, which is defined by NTP as a marginal increase in neoplasms – i.e., osteosarcomas (malignant tumors of the bone) – that may be chemically related. The Ad Hoc Subcommittee on Fluoride of the U.S. Public Health Service combined the results of the two studies and stated: "Taken together, the two animal studies available at this time fail to establish an association between fluoride and cancer."^{84,210}

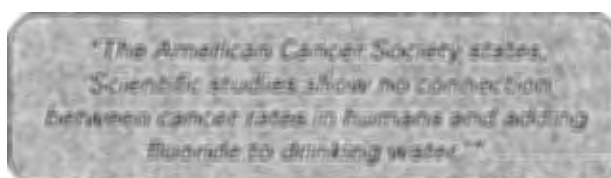
Since that time, a number of studies have examined the hypothesis that fluoride is a risk factor for bone cancer. None of these studies reported an association between optimal levels of fluoride in drinking water and cancer of the bone.²⁴¹⁻²⁴⁴

Additional information on this topic may be found in Question 23.

In a 1990 study, scientists at the National Cancer Institute evaluated the relationship between fluoridation of drinking water and cancer deaths in the United States during a 36 year period, and the relationship between fluoridation and the cancer rate during a 15 year period. After examining more than 2.3 million cancer death records and 125,000 cancer case records in counties using fluoridated water, the researchers saw no indication of a cancer risk associated with fluoridated drinking water.⁸⁴

In 2001, researchers from Japan analyzed data on cancers taken from the International Agency for Research on Cancer World Health Organization in 1987, 1992 and 1997 and concluded that fluoridation may increase the risk for numerous types of cancers.²⁴⁵ However, the methodology used in this analysis was inherently flawed as there are major and obvious differences in a number of factors relevant to the risk

for cancer in the fluoridated and nonfluoridated communities. For example, this analysis did not control for differences in urbanization, socioeconomic status, geographic region, occupations, industries, diet, medical practices or tobacco use between the fluoridated and nonfluoridated communities. Thus any attempt to interpret cancer risk between these communities with this number of uncontrolled variables is scientifically inappropriate.



In a document entitled "Fluoride and Drinking Water Fluoridation," the American Cancer Society states, "Scientific studies show no connection between cancer rates in humans and adding fluoride to drinking water."²²⁵

QUESTION 29.

Does fluoride, as provided by community water fluoridation, inhibit the activity of enzymes in humans?

Answer.

Fluoride, in the amount provided through optimally fluoridated water, has no effect on human enzyme activity according to generally accepted scientific knowledge.

Fact.

Enzymes are organic compounds that promote chemical change in the body. Generally accepted scientific knowledge has not indicated that optimally fluoridated water has any influence on human enzyme activity. There are no available data to indicate that, in humans drinking optimally fluoridated water, the fluoride affects enzyme activities with toxic consequences.²⁴⁶ The World Health Organization report, *Fluorides and Human Health* states, "No evidence has yet been provided that fluoride ingested at 1 ppm in the drinking water affects intermediary metabolism of food stuffs, vitamin utilization or either hormonal or enzymatic activity."²⁴⁷

The concentrations of fluoride used in laboratory studies to produce significant inhibition of enzymes are hundreds of times greater than the concentration present in body fluids or tissues.²²² While fluoride may affect enzymes in an artificial environment outside of a living organism in the laboratory, it is unlikely that adequate cellular levels of fluoride to alter enzyme activities would be attainable in a living organism.²⁵¹ The two primary physiological mechanisms that maintain a low concentration of fluoride ion in body fluids are the rapid excretion of fluoride by the kidneys and the uptake of fluoride by calcified tissues.

QUESTION 30.

Does the ingestion of optimally fluoridated water adversely affect the thyroid gland or its function?

Answer.

There is no scientific basis that shows fluoridated water has an adverse effect on the thyroid gland or its function.

Fact.

In an effort to determine if fluoride in drinking water affects the function, shape and size of the thyroid gland, researchers conducted a study comparing one group of people who consumed water that contained natural fluoride levels of 3.48 ppm and one group who consumed water with extremely low fluoride levels of 0.09 ppm. The researchers noted that all study participants had been residents of their respective communities for more than 10 years. The researchers concluded that prolonged ingestion of fluoride at levels above optimal to prevent dental decay had no effect on thyroid gland size or function. This conclusion was consistent with earlier animal studies.²⁴⁸

In addition, two studies have explored the association between fluoridated water and cancer of the thyroid gland. Both studies found no association between optimal levels of fluoride in drinking water and thyroid cancer.^{226,249}

In an effort to link fluoride and decreased thyroid function, those opposed to fluoridation cite one small study from the 1950's in which 15 patients who had hyperthyroidism (an overactive thyroid) were given relative large amounts of sodium fluoride orally or by injection in an effort to inhibit the thyroid's function. The researchers concluded that efforts to treat hyperthyroidism with fluoride was successful only occasionally among persons subjected to massive doses of fluoride. This study does not support claims that low fluoride levels in drinking water would cause hypothyroidism (an underactive thyroid).²⁵⁰

QUESTION 31.

Does water fluoridation affect the pineal gland causing the early onset of puberty?

Answer.

Generally accepted science does not suggest that water fluoridation causes the early onset of puberty.

Fact.

The pineal gland is an endocrine gland located in the brain which produces melatonin.²⁵¹ Endocrine glands secrete their products into the bloodstream and body tissues and help regulate many kinds of body functions. The hormone, melatonin, plays a role in sleep, aging and reproduction.

A single researcher has published one study in a peer-reviewed scientific journal regarding fluoride accumula-

tion in the pineal gland. The purpose of the study was to discover whether fluoride accumulates in the pineal gland of older adults. This limited study, conducted on only 11 cadavers whose average age at death was 82 years, indicated that fluoride deposited in the pineal gland was significantly linked to the amount of calcium in the pineal gland. It would not be unexpected to see higher levels of calcium in the pineal gland of older individuals as this would be considered part of a normal aging process. As discussed in Question 22, approximately 99% of the fluoride present in the body is associated with hard or calcified tissues.¹⁹² The study concluded fluoride levels in the pineal gland were not indicators of long-term fluoride exposure.²⁵²

The same researcher has theorized in unpublished reports posted on the Internet that the accumulation of fluoride in children's pineal gland leads to an earlier onset of puberty. However, the researcher notes that there is no verification that fluoride accumulates in children's pineal glands. Moreover, a study conducted in Newburgh (fluoridated) and Kingston (non-fluoridated), New York found no statistical significance between the onset of menstruation for girls living in a fluoridated versus non-fluoridated area.²⁵³

QUESTION 32.

Can fluoride, at the levels found in optimally fluoridated drinking water, alter immune function or produce allergic reaction (hypersensitivity)?

Answer.

There is no scientific evidence of any adverse effect on specific immunity from fluoridation, nor have there been any confirmed reports of allergic reaction.²⁵⁴

Fact.

There is no scientific evidence linking problems with immune function such as HIV or AIDS (acquired immune deficiency syndrome) with community water fluoridation.²⁵⁵

There are no confirmed cases of allergy to fluoride, or of any positive skin testing in human or animal models.²⁵⁴ A committee of the National Academy of Sciences evaluated clinical reports of possible allergic responses to fluoride and reported, "The reservation in accepting (claims of allergic reaction) at face value is the lack of similar reports in much larger numbers of people who have been exposed to considerably more fluoride than was involved in the original observations."³⁹ The World Health Organization also judged these cases to represent "a variety of unrelated conditions" and found no evidence of allergic reactions to fluoride.^{256,257}

A 1996 review of the literature on fluoride and white cell function examined numerous studies and concluded that there is no evidence of any harmful effect on specific immunity following fluoridation nor any confirmed reports of allergic reactions.²⁵⁴

QUESTION 33.

Is fluoride, as provided by community water fluoridation, a genetic hazard?

Answer.

Following a review of generally accepted scientific knowledge, the National Research Council of the National Academy of Sciences supports the conclusion that drinking optimally fluoridated water is not a genetic hazard.¹⁶⁷

Fact.

Chromosomes are the DNA-containing bodies of cells that are responsible for the determination and transmission of hereditary characteristics. Genes are the functional hereditary unit that occupies a fixed location on a chromosome. Many studies have examined the possible effects of fluoride on chromosome damage. While there are no published studies on the genotoxic (damage to DNA) effect of fluoride in humans, numerous studies have been done on mice.¹⁶⁷ These studies have shown no evidence that fluoride damages chromosomes in bone marrow or sperm cells even at fluoride levels 100 times higher than that in fluoridated water.²⁵⁸⁻²⁶⁴ Another independent group of researchers reported a similar lack of fluoride-induced chromosomal damage to human white blood cells, which are especially sensitive to agents which cause genetic mutations. Not only did fluoride fail to damage chromosomes, it protected them against the effect of a known mutagen (an agent that causes changes in DNA).^{265,266} The genotoxic effects of fluoride were also studied in hamster bone marrow cells and cultured hamster ovarian cells. Again, the results supported the conclusion that fluoride does not cause chromosomal damage, and therefore, was not a genetic hazard.²⁶⁷ In further tests, fluoride has not caused genetic mutations in the most widely used bacterial mutagenesis assay (the Ames test) over a wide range of fluoride levels.²⁶⁷⁻²⁷⁰

The National Research Council (NRC) of the National Academy of Sciences supports the conclusion that drinking optimally fluoridated water is not a genetic hazard. In a statement summarizing its research, the NRC states, "in vitro data indicate that:

- 1) the genotoxicity of fluoride is limited primarily to doses much higher than those to which humans are exposed,
- 2) even at high doses, genotoxic effects are not always observed, and
- 3) the preponderance of the genotoxic effects that have been reported are of the types that probably are of no or negligible genetic significance."¹⁶⁷

The lowest dose of fluoride reported to cause chromosomal changes in mammalian cells was approximately 170 times that found normally found in human cells in areas where drinking water is fluoridated, which indicates a large margin of safety.¹⁶⁷

QUESTION 34.

Does fluoride at the levels found in water fluoridation affect human reproduction, fertility or birth rates?

Answer.

There is no credible, scientific evidence that fluoridation has an adverse effect on human reproduction, fertility or birth rates.

Fact.

Very high levels of fluoride intake have been associated with adverse effects on reproductive outcomes in many animal species. Based on these findings, it appears that fluoride concentrations associated with adverse reproductive effects in animals are far higher (100-200 ppm) than those to which human populations are exposed. Consequently, there is insufficient scientific basis on which to conclude that ingestion of fluoride at levels found in community water fluoridation (0.7 - 1.2 ppm) would have adverse effects on human reproduction.¹⁶⁷

One human study compared county birth data with county fluoride levels greater than 3 ppm and attempted to show an association between high fluoride levels in drinking water and lower birth rates.²⁷¹ However, because of serious limitations in design and analysis, the investigation failed to demonstrate a positive correlation.²⁷²

A study examining the relative risk of stillbirths and congenital abnormalities (facial clefts and neural tube defects) found no evidence that fluoridation had any effect of these outcomes.²⁷³

The National Research Council (NRC) of the National Academy of Sciences (NAS) supports the conclusion that drinking optimally fluoridated water is not a genetic hazard.¹⁶⁷

Additional information on this topic may be found in Question 33.

QUESTION 35.

Does drinking optimally fluoridated water cause an increase in the rate of children born with Down Syndrome?

Answer.

There is no known association between the consumption of optimally fluoridated drinking water and Down Syndrome.

Fact.

This question originally arose because of two studies published in 1956 and 1963 by a psychiatrist. Data collected in several Midwest states in 1956 formed the basis for his two articles published in French journals, purporting to prove a relationship between fluoride in the water and Down Syndrome.^{274,275}

Experienced epidemiologists and dental researchers from the National Institute of Dental Research and

staff members of the National Institute of Mental Health have found serious shortcomings in the statistical procedures and designs of these two studies. Among the most serious inadequacies is the fact that conclusions were based on the fluoridation status of the communities where the mothers gave birth, rather than the status of the rural areas where many of the women lived during their pregnancies.²²² In addition, the number of Down Syndrome cases found in both fluoridated and nonfluoridated communities were much lower than the rates found in many other parts of the United States and the world, that casting doubt on the validity of findings.

The following paragraphs provide a summary of numerous studies that have been conducted which refute the conclusions of the 1956 studies.

A British physician reviewed vital statistics and records from institutions and school health officers, and talked with public health nurses and others caring for children with Down Syndrome. The findings noted no indication of any relationship between Down Syndrome and the level of fluoride in water consumed by the mothers.²⁷⁶

These findings were confirmed by a detailed study of approximately 2,500 Down Syndrome births in Massachusetts. A rate of 1.5 cases per 1,000 births was found in both fluoridated and nonfluoridated communities, providing strong evidence that fluoridation does not increase the risk of Down Syndrome.²⁷⁷

Another large population-based study with data relating to nearly 1.4 million births showed no association between water fluoridation and the incidence of congenital malformations including Down Syndrome.²⁷⁸

In 1980, a 25-year review of the prevalence of congenital malformations was conducted in Birmingham, England. Although Birmingham initiated fluoridation in 1964, no changes in the prevalence of children born with Down Syndrome occurred since that time.²⁷⁹

A comprehensive study of Down Syndrome births was conducted in 44 U.S. cities over a two-year period. Rates of Down Syndrome were comparable in both fluoridated and nonfluoridated cities.²⁸⁰

QUESTION 36.

Does ingestion of optimally fluoridated water have any neurological impact?

Answer.

There is no generally accepted scientific evidence establishing a causal relationship between consumption of optimally fluoridated water and central nervous system disorders, attention deficit disorders or effects on intelligence.

Fact.

There have been claims that exposure to fluoride presents a neurotoxic (harmful or damaging to nerve tissue) risk or lowered intelligence. Such claims are based

partly on one 1995 study in which rats were fed fluoride at levels up to 125 times greater than that found in optimally fluoridated water.²⁸¹ The study attempted to demonstrate that rats fed extremely high levels of fluoride (75 ppm to 125 ppm in drinking water) showed behavior-specific changes related to cognitive deficits.

In addition, the experiment also studied the offspring of rats who were injected two to three times a day with fluoride during their pregnancies in an effort to show that prenatal exposure resulted in hyperactivity in male offspring.

However, two scientists who reviewed the 1995 study²⁸² have suggested that the observations made can be readily explained by mechanisms that do not involve neurotoxicity. The scientists found inadequacies in experimental design that may have led to invalid conclusions. For example, the results of the experiment were not confirmed by the use of control groups which are an essential feature of test validation and experimental design. In summary the scientists stated, "We do not believe the study by Mullenix et al. can be interpreted in any way as indicating the potential for NaF (sodium fluoride) to be a neurotoxicant." Another reviewer¹⁸² noted, "...it seems more likely that the unusually high brain fluoride concentrations reported in Mullenix et al. were the result of some analytical error."

"A seven-year study compared the health and behavior of children from birth through six years of age in communities with optimally fluoridated water ... The results suggested that there was no evidence to indicate that exposure to optimally fluoridated water had any detectable effect on children's health or behavior."

A seven-year study compared the health and behavior of children from birth through six years of age in communities with optimally fluoridated water with those of children the same age without exposure to optimally fluoridated water. Medical records were reviewed yearly during the study. At age six and seven, child behavior was measured using both maternal and teacher ratings. The results suggested that there was no evidence to indicate that exposure to optimally fluoridated water had any detectable effect on children's health or behavior. These results did not differ even when data was controlled for family social background.²⁸²

The research conducted by Mullenix et al discussed in this question has not been replicated by other researchers.

Additional information on how to critically review research can be found in the Introduction and Figure 1.

QUESTION 37.

Does drinking fluoridated water increase the level of lead in the blood or cause lead poisoning in children?

Answer.

Generally accepted scientific evidence has not shown any association between water fluoridation and blood lead levels.

Fact.

One set of researchers has claimed that the silicofluoride additives used in community water fluoridation may be responsible for acidic drinking water which leaches lead from plumbing systems thereby increasing lead uptake by children. They go on to theorize that communities that use the silicofluorides have greater numbers of children with high levels of lead in their blood than nonfluoridated communities and that the results of the use of silicofluorides are reflected in these communities' residents exhibiting higher rates of learning disabilities, attention deficit disorders, violent crimes and criminals who were using cocaine at the time of arrest.²⁸⁴

From his research, Masters has claimed to be able to predict the estimated cost of increased prison populations due to water fluoridation. For example, in a 2003 appearance before the Palm Beach County (Florida) Commission, Masters stated that if the county fluoridated with silicofluorides, they could expect an additional 819 violent crimes per year directly related to water fluoridation with a minimum additional annual cost of imprisonment of \$14,391,255.²⁸⁴

Scientists from the Environmental Protection Agency (EPA) have reviewed the basic science that was the foundation for the claim that silicofluorides leach lead from plumbing systems and found that many of the chemical assumptions made and statistical methods utilized in the original ecological study were scientifically unjustified. They went on to state that the research was inconsistent with accepted scientific knowledge and the authors of the original studies (Masters et al) failed to identify or account for these inconsistencies. Overall, the EPA scientists concluded that "no credible evidence exists to show that water fluoridation has any quantifiable effects on the solubility, bioavailability, bioaccumulation, or reactivity of lead (0) or lead (II) compounds."²⁸⁵

According to the Centers for Disease Control and Prevention, the average blood lead levels of young children in the U.S. have continued to decline since the 1970s primarily due to the phase-out of leaded gasoline and the resulting decrease in lead emissions. The primary remaining sources of childhood lead exposure are deteriorated leaded paint, house dust contaminated by leaded paint and soil contaminated by both leaded paint and decades of industrial and motor vehicle emissions.²⁸⁶ Approximately 95% of the primary sources of

adult lead exposure are occupational. Adult blood lead levels have continued to decline over the last ten years due largely to improved prevention measures in the workplace and changes in employment patterns.²⁸⁷ It should be noted that since the 1970s, while blood lead levels have continued to decline, the percentage of the population receiving optimally fluoridated water has continued to increase.³⁴

The research conducted by Masters et al discussed in this question has not been replicated by other researchers.

Additional information on how to critically review research can be found in the Introduction and Figure 1.

QUESTION 38.

Does drinking optimally fluoridated water cause Alzheimer's disease?

Answer.

Generally accepted science has not demonstrated an association between drinking optimally fluoridated water and Alzheimer's disease.

Fact.

The exact cause of Alzheimer's disease has yet to be identified. Scientists have identified the major risk factors for Alzheimer's as age and family history. Scientists believe that genetics may play a role in many Alzheimer's cases. Other possible risk factors that are being studied are level of education, diet, environment and viruses to learn what role they might play in the development of this disease.²⁸⁸

A study published in 1998²⁸⁹ raised concerns about the potential relationship between fluoride and Alzheimer's disease. However, several flaws in the experimental design preclude any definitive conclusions from being drawn.²⁹⁰

Interestingly, there is evidence that aluminum and fluoride are mutually antagonistic in competing for absorption in the human body.^{42,291} While a conclusion cannot be made that consumption of fluoridated water has a preventive effect on Alzheimer's, there is no generally accepted scientific knowledge to show consumption of optimally fluoridated water is a risk factor for Alzheimer's disease.

QUESTION 39.

Does drinking optimally fluoridated water cause or contribute to heart disease?

Answer.

Drinking optimally fluoridated water is not a risk factor for heart disease.

Fact.

This conclusion is supported by results of a study conducted by the National Heart and Lung and Blood Institute of the National Institutes of Health. Researchers examined a wide range of data from communities that have optimally fluoridated water and from areas with insufficient fluoride. The final report concluded that:

"Thus, the evidence from comparison of the health of fluoridating and nonfluoridating cities, from medical and pathological examination of persons exposed to a lifetime of naturally occurring fluorides or persons with high industrial exposures, and from broad national experience with fluoridation all consistently indicate no adverse effect on cardiovascular health."²⁹²

"The American Heart Association states: 'No evidence exists that adjusting the fluoride content of public water supplies to a level of about one part per million has any harmful effect on the cardiovascular system.'"

The American Heart Association states: "No evidence exists that adjusting the fluoride content of public water supplies to a level of about one part per million has any harmful effect on the cardiovascular system."²⁹³ The American Heart Association identifies aging, male sex, heredity, cigarette and tobacco smoke, high blood cholesterol levels, high blood pressure, physical inactivity, obesity and diabetes mellitus as major risk factors for cardiovascular disease.²⁹⁴

A number of studies have considered trends in urban mortality in relation to fluoridation status. In one study, the mortality trends from 1950-70 were studied for 473 cities in the United States with populations of 25,000 or more. Findings showed no relationship between fluoridation and heart disease death rates over the 20-year period.²²⁸ In another study, the mortality rates for approximately 30 million people in 24 fluoridated cities were compared with those of 22 nonfluoridated cities for two years. No evidence was found of any harmful health effects, including heart disease, attributable to fluoridation. As in other studies, crude differences in the mortality experience of the cities with fluoridated and nonfluoridated water supplies were explainable by differences in age, gender and race composition.²²⁷

QUESTION 40.

Is the consumption of optimally fluoridated water harmful to kidneys?

Answer.

The consumption of optimally fluoridated water has not been shown to cause or worsen human kidney disease.

Fact.

Approximately 50% of the fluoride ingested daily is removed from the body by the kidneys.^{182,192,193} Because the kidneys are constantly exposed to various fluoride concentrations, any health effects caused by fluoride would likely manifest themselves in kidney cells. However, several large community-based studies of people with long-term exposure to drinking water with fluoride concentrations up to 8 ppm have failed to show an increase in kidney disease.^{166,253,295}

In a report issued in 1993 by the National Research Council, the Subcommittee on Health Effects of Ingested Fluoride stated that the threshold dose of fluoride in drinking water which causes kidney effects in animals is approximately 50 ppm - more than 12 times the maximum level allowed in drinking water by the Environmental Protection Agency. Therefore, they concluded that "ingestion of fluoride at currently recommended concentrations is not likely to produce kidney toxicity in humans."¹⁶⁷

Many people with kidney failure depend on hemodialysis (treatment with an artificial kidney machine) for their survival. During hemodialysis, the patient's blood is exposed to large amounts of water each week (280-560 quarts). Therefore, procedures have been designed to ensure that the water utilized in the process contain a minimum of dissolved substances that could diffuse indiscriminately into the patient's bloodstream.²⁹⁶ Since the composition of water varies in different geographic locations in the United States, the U.S. Public Health Service recommends dialysis units use techniques such as reverse osmosis and de-ionization to remove excess iron, magnesium, aluminum, calcium, and other minerals, as well as fluoride, from tap water before the water is used for dialysis.^{296,297}

Additional information on this topic is available in Question 22.

QUESTION 41.

What are some of the erroneous health claims made against water fluoridation?

Answer:

From sources such as the Internet, newsletters, and personal anecdotes in e-mails, community water fluoridation is frequently charged with causing all of the following adverse health effects:

- AIDS
 - Allergic Reactions (loss of hair, skin that burns and peels after contact with fluoridated water)
 - Alzheimer's disease
 - Arthritis
 - Asthma
 - Behavior Problems (attention deficit disorders)
 - Bone Disease (osteoporosis—increased bone/hip fractures)
 - Cancer (all types including osteosarcoma or bone cancer)
 - Chronic Bronchitis
 - Colic (acute abdominal pain)
 - Down Syndrome
 - Emphysema
 - Enzyme Effects (gene-alterations)
 - Flatulence (gas)
 - Gastrointestinal Problems (irritable bowel syndrome)
 - Harmful Interactions with Medications
 - Heart Disease
 - Increased Infant Mortality
 - Kidney Disease
 - Lead Poisonings
 - Lethargy (lack of energy)
 - Lower IQ (mental retardation)
 - Malpositioned Teeth
 - Pineal Gland (early puberty) (chronic insomnia)
 - Reproductive Organs (damaged sperm) (reduced fertility)
 - Skin Conditions (redness, rash/welts, itching)
 - Sudden Infant Death Syndrome (SIDS)
 - Thyroid Problems (goiter and obesity due to hypothyroidism)
- AND
- Tooth Decay

Fact.

As discussed throughout this booklet, the overwhelming weight of credible scientific evidence has consistently indicated that fluoridation of community water supplies is safe and effective. The possibility of any adverse health effects from continuous low-level consumption of fluoride has been and continues to be extensively studied. It has been determined that approximately 10% of dental fluorosis is attributable to water fluoridation. This type of very mild to mild fluorosis has been determined to be a cosmetic effect rather than an adverse health effect. Of the thousands of credible scientific studies on fluoridation, none has shown health problems associated with the consumption of optimally fluoridated water.

"Of the thousands of credible scientific studies on fluoridation, none has shown health problems associated with the consumption of optimally fluoridated water."

Notes

FLUORIDATION PRACTICE

Q 42. Water quality?	p. 40	Q 45. Source of additives?	p. 43	Q 48. Corrosion?	p. 44
Q 43. Regulation?	p. 41	Q 46. System safety concerns?	p. 43	Q 49. Environment?	p. 45
Q 44. Standards?	p. 42	Q 47. Engineering?	p. 44		

QUESTION 42.

Will the addition of fluoride affect the quality of drinking water?

Answer.

Optimal levels of fluoride do not affect the quality of water. All ground and surface water in the United States contain some naturally occurring fluoride.

Fact.

Nearly all water supplies must undergo various water treatment processes to be safe and suitable for human consumption. During this process, more than 40 chemicals/additives are typically used including aluminum sulfate, ferric chloride, ferric sulfate, activated carbon, lime, soda ash and, of course, chlorine. Fluoride is added only to water that has naturally occurring levels lower than optimal.³⁶

Fluoridation is the adjustment of the fluoride concentration of fluoride-deficient water supplies to the recommended range of 0.7 to 1.2 parts per million of fluoride for optimal dental health. The U.S. Environmental Protection Agency (EPA) recognizes that fluoride in children's drinking water at levels of approximately 1.0 ppm reduces the number of dental cavities.²⁹⁸ The optimal level is dependent on the annual average of the maximum daily air temperature in a given geographic area.^{36,35}

Additional information on this topic may be found in Questions 3 and 6.

Under the Safe Drinking Water Act, the EPA has established drinking water standards for a number of substances, including fluoride, in order to protect the public's health. There are several areas in the United States where the ground water contains higher than optimal levels of naturally occurring fluoride. Therefore, federal regulations were established to require that naturally occurring fluoride levels in a community water supply not exceed a concentration of 4.0 mg/L.²⁹⁸ Under the Safe Drinking Water Act, this upper limit is the Maximum Contaminant Level (MCL) for fluoride. Under the MCL standard, if the naturally occurring level of fluoride in a public water supply exceeds the MCL (4.0 mg/L for fluoride), the water supplier is required to lower the level of fluoride below the MCL. This process is called defluoridation.

The EPA has also set a Secondary Maximum Contaminant Level (SMCL) of 2.0 mg/L, and requires consumer notification by the water supplier if the fluoride

level exceeds 2.0 mg/L. The SMCL, while not federally enforceable, is intended to alert families that regular consumption of water with natural levels of fluoride greater than 2.0 mg/L by young children may cause moderate to severe dental fluorosis in the developing permanent teeth, a cosmetic condition with no known adverse health effect.²⁹⁸ The notice to be used by water systems that exceed the SMCL must contain the following points:

1. The notice is intended to alert families that children under nine years of age who are exposed to levels of fluoride greater than 2.0 mg/liter may develop dental fluorosis.
2. Adults are not affected because dental fluorosis occurs only when developing teeth are exposed to elevated fluoride levels.
3. The water supplier can be contacted for information on alternative sources or treatments that will insure the drinking water would meet all standards (including the SMCL).

The 1993 National Research Council report, "Health Effects of Ingested Fluoride," reviewed fluoride toxicity and exposure data for the EPA and concluded that the current standard for fluoride at 4.0 mg/L (set in 1986) was appropriate as an interim standard to protect the public health.¹⁶⁷ In EPA's judgment, the combined weight of human and animal data support the current fluoride drinking water standard. In December 1993, the EPA published a notice in the *Federal Register* stating the ceiling of 4 mg/L would protect against adverse health effects with an adequate margin of safety and published a notice of intent not to revise the fluoride drinking water standards.¹⁶⁸

The EPA further commented on the safety of fluoride in the December 5, 1997, *Federal Register*.²³⁹ In a notice of a final rule relating to fluoride additives the EPA stated, "There exists no directly applicable scientific documentation of adverse medical effects at levels of fluoride below 8 mg/L (0.23mg/kg/day)." The EPA's Maximum Concentration Limit (MCL) of 4.0 mg/L (0.114 mg/kg/day) is one half that amount, providing an adequate margin of safety.

Under the Safe Drinking Water Act (SDWA), the EPA must periodically review the existing National Primary Drinking Water Regulations (NPDWRs) "not less often than every 6 years." This review is a routine part of the EPA's operations as dictated by the SDWA. NPDWRs, or primary standards, are legally enforceable standards that

apply to public water systems. Primary standards protect public health by limiting the levels of contaminants in drinking water.

In April 2002, the EPA announced the results of its preliminary revise/not revise decisions for 68 chemical NPDWRs. Fluoride was one of the 68 chemicals reviewed. The EPA determined that it fell under the "Not Appropriate for Revision at this Time" category, but noted that it planned to ask the National Academy of Science (NAS) to update the risk assessment for fluoride. The NAS had previously completed a review of fluoride for EPA approximately 12 years ago which was published as "Health Effects of Ingested Fluoride" in 1993 by the National Research Council.

At the request of the NAS, the National Research Council's Committee on Toxicology created the Subcommittee on Fluoride in Drinking Water to review toxicologic, epidemiologic, and clinical data published since 1993 and exposure data on orally ingested fluoride from drinking water and other sources (e.g., food, toothpaste, dental rinses). Based on this review the Subcommittee will evaluate the scientific and technical basis of the EPA's maximum contaminant level (MCL) of 4 milligram per liter (mg/L or ppm) and secondary maximum contaminant level (SMCL) of 2 mg/L for fluoride in drinking water and advise EPA on the adequacy of its fluoride MCL and SMCL to protect children and others from adverse health effects. Additionally, the Subcommittee will identify data gaps and make recommendations for future research relevant to setting the MCL and SMCL for fluoride.

The Subcommittee began its work in November 2002 and is currently projected to complete the project in early 2006.¹⁷³

QUESTION 43.

Who regulates drinking water additives in United States?

Answer.

The United States Environmental Protection Agency regulates drinking water additives.

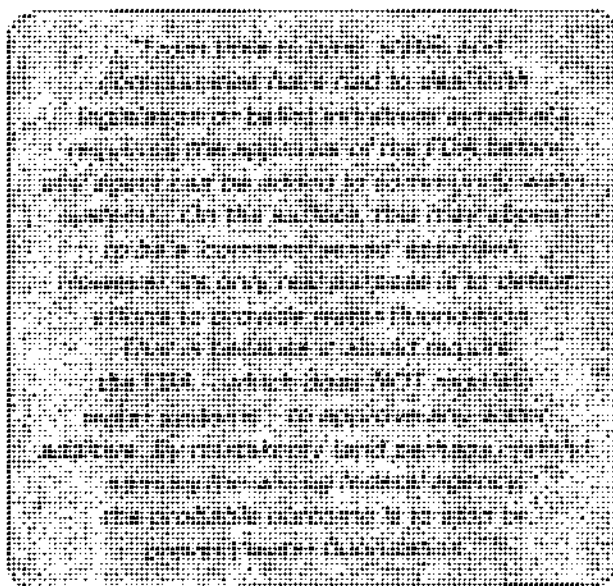
Fact

In 1974, Congress passed the original Safe Drinking Water Act (SDWA) which protects the public's health by regulating the nation's public drinking water supply.²⁹⁹

The SDWA, as amended in 1986 and 1996,²⁹⁹ requires the U.S. Environmental Protection Agency (EPA) ensure the public is provided with safe drinking water.¹⁵⁵

On June 22, 1979, the U.S. Food and Drug Administration (FDA) and the EPA entered into a Memorandum of Understanding (MOU) to clarify their roles and responsibilities in water quality assurance. The stated purpose of the MOU is to "avoid the possibility of overlapping jurisdiction between the EPA and FDA with respect to control of drinking water additives. The two agencies agreed that the SDWA's passage in 1974 implicitly re-

pealed FDA's jurisdiction over drinking water as a 'food' under the Federal Food, Drug and Cosmetic Act (FFDCA). Under the agreement, EPA enjoys exclusive regulatory authority over drinking water served by public water supplies, including any additives in such water. FDA retains jurisdiction over bottled drinking water under Section 410 of the FFDCA and over water (and substances in water) used in food or food processing once it enters the food processing establishment."¹⁵⁵



From time to time, states and communities have had to deal with legislation or ballot initiatives aimed at requiring the approval of the FDA before any agent can be added to community water systems. Often referred to as the Fluoride Product Quality Control Act, Water Product Quality Ordinance or Pure Water Ordinance, the legislation is specifically used by those opposed to water fluoridation as a tool to prevent water systems from providing community water fluoridation. Often this legislation does not mention fluoride or fluoridation. Those supporting this type of legislation may claim that they are not against water fluoridation but are proponents of pure water and do not want anything added to water that has not been approved by the FDA.

On the surface, this may appear to be a "common sense" approach. However, its only real purpose is to defeat efforts to provide water fluoridation. That is because it would require the FDA – which does NOT regulate water systems – to approve any water additive. By mistakenly (and perhaps craftily) naming the wrong federal agency, the probable outcome is to stop or prevent water fluoridation.

QUESTION 44.

What standards have been established to ensure the safety of fluoride additives used in community water fluoridation in the United States?

Answer.

The three fluoride additives used in the U.S. to fluoridate community water systems (sodium fluoride, sodium fluorosilicate, and fluorosilicic acid) meet safety standards established by the American Water Works Association (AWWA) and NSF International (NSF).

Fact.

Additives used in water treatment meet safety standards prepared in response to a request by the Environmental Protection Agency (EPA) to establish minimum requirements to ensure the safety of products added to water for its treatment, thereby ensuring the public's health. Specifically, fluoride additives used in water fluoridation meet standards established by the American Water Works Association (AWWA) and NSF International (NSF). Additionally, the American National Standards Institute (ANSI) endorses both AWWA and NSF standards for fluoridation additives and includes its name on these standards.

The American Water Works Association is an international nonprofit scientific and educational society dedicated to the improvement of drinking water quality and supply. AWWA is the authoritative resource for knowledge, information, and advocacy to improve the quality and supply of drinking water in North America and beyond. Founded in 1881, AWWA is the largest organization of water supply professionals in the world.³⁰⁰

NSF International, a not-for-profit, non-governmental organization, is the world leader in standards development, product certification, education, and risk-management for public health and safety. For 60 years, NSF has been committed to public health, safety, and protection of the environment. NSF is widely recognized for its scientific and technical expertise in the health and environmental sciences. Its professional staff includes engineers, chemists, toxicologists, and environmental health professionals with broad experience both in public and private organizations.³⁰¹

The American National Standards Institute (ANSI) is a private, non-profit organization that administers and coordinates the U.S. voluntary standardization and conformity assessment system. The Institute's mission is to enhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems, and safeguarding their integrity.³⁰²

The purpose of AWWA standards for fluoride additives is to provide purchasers, manufacturers and suppliers with the minimum requirements for fluoride additives, including physical, chemical, packaging, shipping and testing requirements. In part, the AWWA standards for fluoride additives state, "The [fluoride compound] supplied under this standard shall contain

no soluble materials or organic substances in quantities capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with the [fluoride compound]." Certified analyses of the additives must be furnished by the manufacturer or supplier.⁶⁰

NSF Standard 60 ensures the purity of drinking water additives. NSF Standard 61 provides guidance for equipment used in water treatment plants. The NSF/ANSI Standards were developed by a consortium of associations including NSF, AWWA, the Association of State Drinking Water Administrators and the Conference of State Health and Environmental Managers with support from the EPA. In part, they establish minimum requirements for the control of potential adverse human health effects from products added to water for its treatment.^{303,304}

Fluoride additives, like all of the more than 40 additives typically used in water treatment, are "industrial grade" additives. The water supply is an industry and all additives used at the water plant are classified as industrial grade additives. Examples of other "industrial grade" additives which are commonly used in water plant operations are chlorine (gas), ferrous sulfate, hydrochloric acid, sulfur dioxide and sulfuric acid.³⁶

Sometimes antifluoridationists express the view that they are not really opposed to fluoridation, but are opposed to the use of "industrial grade" fluoride additives. They may even go so far as to state that they would support fluoridation if the process was implemented with pharmaceutical grade fluoride additives that were approved by the Food and Drug Administration (FDA). On the surface, this may appear to be a "common sense" approach. In fact, this is usually a ploy whose only real purpose is to stop fluoridation. The EPA, not the FDA, regulates additives in drinking water.

Additional information on this topic may be found in Question 43.

The claim is sometimes made that no studies on safety exist on the additives used in water fluoridation. The scientific community does not study health effects of concentrated additives as put into water; studies are done on the health effects of the treated water. While sodium fluoride was the first additive used in water fluoridation, the use of silicofluoride additives (sodium fluorosilicate and fluorosilicic acid) began in the late 1940s. By 1951, silicofluorides had become the most commonly used fluoride additives in water fluoridation.⁶¹ Many of the early studies on the health effects of fluoridation were completed in communities that were using the silicofluoride additives, most generally fluorosilicic acid.³⁰⁵⁻³¹⁰ However, at that time, the additives used to fluoridate were not always identified in research reports. As the body of research on fluoridation grew, it became evident that there was no adverse health effects associated with water fluoridation regardless of which fluoride additive was used.

Additional information on this topic may be found in Question 5.

Additionally, over time, a number of comprehensive reviews of the health effects of fluoridation have been published. These reviews which support the safety of water fluoridation include many studies conducted in large fluoridated communities which used the silicofluoride additives.^{71,84,163,165,167,311-313}

Beyond the foundation that has been established through the overwhelming weight of credible, peer-reviewed scientific evidence, there is over 60 years of practical experience that lends additional credence to the science that concludes that fluoridation is safe.

QUESTION 45.

What is the source of the additives used to fluoridate water supplies in the United States?

Answer.

Fluoride additives used in the United States are derived from the mineral apatite.

Fact.

The three fluoride additives used in the United States for water fluoridation (sodium fluoride, sodium fluorosilicate, and fluorosilicic acid) are derived from apatite which is a type of limestone deposit used in the production of phosphate fertilizers. Apatite contains 3-7% fluoride and is the main source of fluorides used in water fluoridation.³⁵

During processing, apatite is ground up and treated with sulfuric acid, producing phosphoric acid (the main ingredient in the production of phosphate fertilizer) plus a solid and two gases. The solid, calcium sulfate (also known as gypsum) is the material used to form drywall or sheetrock. The two gases, hydrogen fluoride and silicon tetrafluoride, are captured in water to form fluorosilicic acid which today is the most commonly used fluoride additive in the United States.⁶⁰

The two remaining fluoride additives (sodium fluoride and sodium fluorosilicate) are derived from fluorosilicic acid. Sodium fluoride is produced when fluorosilicic acid is neutralized with caustic soda. Fluorosilicic acid is neutralized with sodium chloride or sodium carbonate to produce sodium fluorosilicate.³⁵

From time to time opponents of fluoridation allege that fluoridation additives are byproducts of the phosphate fertilizer industry in an effort to infer the additives are not safe. Byproducts are simply materials produced as a result of producing something else – they are by no means necessarily bad, harmful or waste products. In the chemical industry, a byproduct is anything other than the economically most important product produced. Byproducts may have certain characteristics which make them valuable resources. For example, in addition to orange juice, various byproducts are obtained from oranges during juice production that are used in cleaners, disinfectants, flavorings and fragrances.³¹⁴



Fluoride additives are valuable byproducts produced as a result of producing phosphate fertilizer. To ensure the public's safety, additives used in water fluoridation meet standards of the American Water Works Association (AWWA) and NSF International (NSF).

Additional information on this topic may be found in Question 44.

QUESTION 46.

Does the process of water fluoridation present unusual safety concerns for water systems and water operators?

Answer.

No. With proper planning, maintenance and monitoring, water fluoridation is a safe process.

Fact.

Water plant facilities and water plant personnel perform a valuable public service by carefully adjusting the level of fluoride in water to improve the oral health of the community. Facilities and personnel are subject to a number of regulations designed to ensure safety. The Occupational Safety and Health Administration (OSHA) provides guidelines for the safety of employees in the workplace.^{60,315} Additionally, the American Water Works Association publishes detailed guidance on safety and safe working conditions for water plant personnel. Furthermore, the Centers for Disease Control and Prevention has established safety procedures designed specifically for water plant operators in charge of implementing fluoridation.³¹⁵ Adherence to these guidelines helps to ensure continuous levels of optimally fluoridated drinking water while maintaining water operator safety.

As part of the safety procedures, water plant personnel receive training on the management of the chemicals/additives in water plants. While the optimal fluoride concentration found in drinking water has been proven safe, water plant operators and engineers may be exposed to much higher fluoride levels when handling fluoride additives at the water treatment facility.³⁵ Fluoride additives present comparable risks as other chemicals/additives in common use at water treatment facilities, such as hypochloride, quicklime, aluminum sulfate, sodium hydroxide and ferrous sulfate. In fact, the fluoride additives are much less dangerous than chlorine gas commonly used in water plant operations.

Today's equipment allows water treatment personnel to easily monitor and maintain the desired fluoride con-

centration. Automatic monitoring technology is available that can help to ensure that the fluoride concentration of the water remains within the recommended range.

It is important that the water treatment operators responsible for monitoring the addition of fluoride to the water supply be appropriately trained and that the equipment used for this process is adequately maintained.³¹⁵ As with any mechanical equipment, water fluoridation equipment should be tested, maintained and replaced as needed. With over 60 years of experience and thousands of water systems in operation, there have been remarkably few untoward incidents.

QUESTION 47.

Does fluoridation present difficult engineering problems?

Answer.

No. Properly maintained and monitored water fluoridation systems do not present difficult engineering problems.

Fact.

With proper planning and maintenance of the system, fluoride adjustment is compatible with other water treatment processes. Today's equipment allows water treatment personnel to easily monitor and maintain the desired fluoride concentration. Automatic monitoring technology is available that can help to ensure that the fluoride concentration of the water remains within the recommended range.

When added to community water supplies the concentrated fluoride additives become greatly diluted. For example, fluorosilicic acid is diluted approximately 180,000 times to reach the recommended range of 0.7 to 1.2 parts per million. At 1 ppm, one part of fluoride is diluted in a million parts of water. Large numbers such as a million can be difficult to visualize. While not exact, the following comparisons can be of assistance in comprehending one part per million:

1 inch in 16 miles
1 minute in 2 years
1 cent in \$10,000

"Because there is more than 60 years of experience with water fluoridation, there is considerable guidance on sound engineering practices to design, construct, operate and maintain water fluoridation systems."

Because there is more than 60 years of experience with water fluoridation, there is considerable guidance on sound engineering practices to design, construct, operate and maintain water fluoridation systems. Fluoride additives are introduced to the water supply as liquids, but are measured by two basic types of devices, dry feeders or

solution feeders (metering pumps). By design, and with proper maintenance and testing, water systems limit the amount of fluoride that can be added to the system (i.e., the use of a day tank that only holds one day's supply of fluoride) so prolonged over-fluoridation becomes a mechanical impossibility.³⁶

QUESTION 48.

Will fluoridation corrode water pipes or add lead, arsenic and other toxic contaminants to the water supply?

Answer.

Allegations that fluoridation causes corrosion of water delivery systems are not supported by current scientific evidence.³⁶ Furthermore, the concentrations of contaminants in water as a result of fluoridation do not exceed, but, in fact, are well below regulatory standards set to ensure the public's safety.

Fact.

Water fluoridation has no impact on the acidity or pH of drinking water and will not cause lead and copper to be leached from water pipes. Corrosion of pipes by drinking water is related primarily to dissolved oxygen concentration, pH, water temperature, alkalinity, hardness, salt concentration, hydrogen sulfide content and the presence of certain bacteria. Under some water quality conditions, a small increase in the acidity of drinking water that is already slightly acidic may be observed after treatment with alum, chlorine, fluorosilicic acid or sodium fluorosilicate. In such cases, further water treatment is indicated by water plant personnel to adjust the pH upward to neutralize the acid. This is part of routine water plant operations. Note that the Water Quality Report or Consumer Confidence Report that all water systems send to customers on a yearly basis, lists the pH of the system's finished water and compares that level against the standard set at a pH of 7.0 (neutral) or higher indicating that the water leaving the plant is non-acidic.

Additional information on this topic may be found in Question 4.

A 1999 study³¹⁶ charged that fluorosilicic acid and sodium silicofluoride did not disassociate completely when added to water systems and may be responsible for lower pH levels of drinking water, leaching lead from plumbing systems and increasing lead uptake by children.

In response to the study, scientists from the U.S. Environmental Protection Agency (EPA) have reviewed the basic science that was the foundation for the claim that silicofluorides leach lead from water pipes and found that many of the chemical assumptions made in the original research were scientifically unjustified. Fluoride additives do disassociate very quickly and completely releasing fluoride ions into the water. The research was inconsistent with accepted scientific knowledge and the authors of the original studies failed to identify or account for these inconsistencies. The EPA scientists discounted

this study and said there was no credible data to suggest any link between fluoridation and lead.²⁸⁵

Fluorosilicic acid is the additive used to fluoridate the vast majority of community water systems in the U.S. Because it is a natural substance derived from apatite which is mined from the earth, fluorosilicic acid may contain minute amounts of contaminants such as lead and arsenic. However, existing regulations and standards require that these contaminants, including arsenic and lead, be at levels considered safe by the EPA when the fluorosilicic acid is diluted to produce optimally fluoridated water.^{317,318} Evidence of testing by the fluoride additive manufacturer documents that the concentrations of these contaminants do not exceed, but, in fact, are well below regulatory standards set to ensure the public's safety. Most batches of the additive do not contain any detectable amount of either lead or arsenic. On average, the concentration of arsenic and lead in optimally fluoridated drinking water created using fluorosilicic acid is less than 0.1 part per billion.³¹⁹

Notes

QUESTION 49.

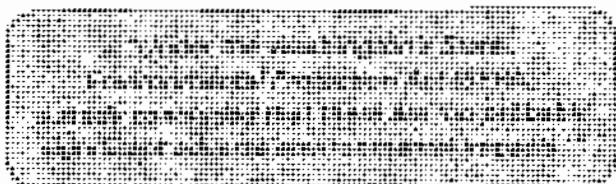
Does fluoridated water harm the environment?

Answer.

Scientific evidence supports the fluoridation of public water supplies as safe for the environment and beneficial for people.

Fact.

The U.S. Environmental Protection Agency (EPA) has set an enforceable Federal drinking water standard for fluoride at 4.0 mg/L. As long as the 4.0 mg/L standard is not exceeded, State and local authorities determine whether or not to fluoridate.³²⁰



Under the Washington's State Environmental Protection Act (SEPA), a study was conducted in Tacoma-Pierce County to investigate the environmental consequences of adding optimal levels of fluoride to drinking water. Noting that the amount of fluoride in the water does not reach levels that are harmful to plants or animals, the SEPA study concluded that there are "no probable significant adverse environmental impacts."³²¹

There is no evidence that optimally fluoridated water has any effect on gardens, lawns or plants.³²²

A comprehensive literature review conducted in 1990 revealed absolutely no negative environmental impacts as a result of water fluoridation. Historically, issues surrounding problems with fluoride and the environment have involved incidents related to industrial pollution or accidents.³²³

PUBLIC POLICY

Q 50. Valuable measure? p. 46

Q 53. Internet? p. 51

Q 56. Banned in Europe? p. 54

Q 51. Courts of law? p. 47

Q 54. Public votes? p. 51

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Q 55. International fluoridation? p. 54

QUESTION 50.

Is water fluoridation a valuable public health measure?

Answer.

Yes. Water fluoridation is a public health measure that benefits people of all ages, is safe and is a community public health program that saves money.

Fact.

Throughout decades of research and more than 60 years of practical experience, fluoridation of public water supplies has been responsible for dramatically improving the public's oral health status. Former Surgeon General of the United States, Dr. Luther Terry, called fluoridation as vital a public health measure as immunization against disease, pasteurization of milk and purification of water.⁷ Another former U.S. Surgeon General Dr. C. Everett Koop stated that fluoridation is the single most important commitment that a community can make to the oral health of its citizens.

"Former U.S. Surgeon General Dr. C. Everett Koop stated that fluoridation is the single most important commitment that a community can make to the oral health of its citizens."

In 1994, the U.S. Department of Health and Human Services issued a report which reviewed public health achievements. Along with other successful public health measures such as the virtual eradication of polio and reductions in childhood blood lead levels, fluoridation was lauded as one of the most economical preventive values in the nation.¹⁷ A policy statement on water fluoridation reaffirmed in 1995 by the U.S. Public Health Service (USPHS) stated that water fluoridation is the most cost-effective, practical and safe means for reducing the occurrence of dental decay in a community.¹⁸ In 1998, recognizing the ongoing need to improve health and well being, the USPHS revised national health objectives to be achieved by the year 2010. Included under oral health was an objective to significantly expand the fluoridation of public water supplies. Specifically, Objective 21-9 states that at least 75% of the U.S. population served by community water systems should be receiving the benefits of optimally fluoridated water by the year 2010.¹⁹

"Former U.S. Surgeon General David Satcher, noted that water fluoridation is a powerful strategy in efforts to eliminate health disparities among populations."

In 1999, the Centers for Disease Control and Prevention named fluoridation of drinking water one of ten great public health achievements of the 20th century noting that it is a major factor responsible for the decline in dental decay.¹² Former U.S. Surgeon General David Satcher, issued the first ever Surgeon General report on oral health in May 2000. In *Oral Health in America: A Report of the Surgeon General*, Dr. Satcher stated that community water fluoridation continues to be the most cost-effective, practical and safe means for reducing and controlling the occurrence of dental decay in a community. Additionally, Dr. Satcher noted that water fluoridation is a powerful strategy in efforts to eliminate health disparities among populations. Studies have shown that fluoridation may be the most significant step we can take toward reducing the disparities in dental decay.²¹⁻²⁴ In the 2003 *National Call to Action to Promote Oral Health*, U.S. Surgeon General Richard Carmona called on policymakers, community leaders, private industry, health professionals, the media and the public to affirm that oral health is essential to general health and well being. Additionally, Surgeon General Carmona urged these groups to apply strategies to enhance the adoption and maintenance of proven community-based interventions such as community water fluoridation.²⁵

Community water fluoridation is a most valuable public health measure because:

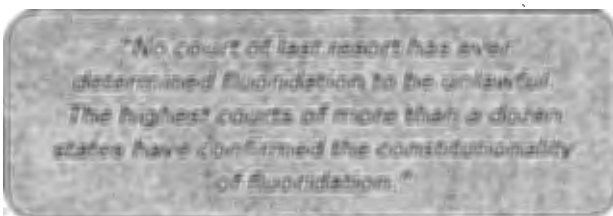
- Optimally fluoridated water is accessible to the entire community regardless of socioeconomic status, educational attainment or other social variables;²⁶
- Individuals do not need to change their behavior to obtain the benefits of fluoridation.
- Frequent exposure to small amounts of fluoride over time makes fluoridation effective through the life span in helping to prevent dental decay.
- Community water fluoridation is more cost effective than other forms of fluoride treatments or applications.²⁷

QUESTION 51.

Has the legality of water fluoridation been upheld by the courts?

Answer.

Yes. Fluoridation has been thoroughly tested in the United States' court system, and found to be a proper means of furthering public health and welfare. No court of last resort has ever determined fluoridation to be unlawful. Moreover, fluoridation has been clearly held not to be an unconstitutional invasion of religious freedom or other individual rights guaranteed by the First, Fifth or Fourteenth Amendments to the U.S. Constitution. And while cases decided primarily on procedural grounds have been won and lost by both pro and anti fluoridation interests, to ADA's knowledge no final ruling in any of those cases has found fluoridation to be anything but safe and effective.

**Fact.**

During the last sixty years, the legality of fluoridation in the United States has been thoroughly tested in our court systems. Fluoridation is viewed by the courts as a proper means of furthering public health and welfare.³²⁴ No court of last resort has ever determined fluoridation to be unlawful. The highest courts of more than a dozen states have confirmed the constitutionality of fluoridation.³²⁵ In 1984, the Illinois Supreme Court upheld the constitutionality of the state's mandatory fluoridation law, culminating 16 years of court action at a variety of judicial levels.³²⁶ Moreover, the U.S. Supreme Court has denied review of fluoridation cases thirteen times, citing that no substantial federal or constitutional questions were involved.³²⁵

It has been the position of the American courts that a significant government interest in the health and welfare of the public generally overrides individual objections to public health regulation.³³³ Consequently, the courts have rejected the contention that fluoridation ordinances are a deprivation of religious or individual freedoms guaranteed under the Constitution.^{325,327} In reviewing the legal aspects of fluoridation, the courts have dealt with this concern by ruling that: (1) fluoride is a nutrient, not a medication, and is present naturally in the environment; (2) no one is forced to drink fluoridated water as alternative sources are available; and (3) in cases where a person believes that fluoridation interferes with religious beliefs, there is a difference between the freedom to believe, which is absolute, and the freedom to practice beliefs, which may be restricted in the public's interest.^{328,329}

Fluoridation is the adjustment of a naturally occurring element found in water in order to prevent dental decay. Courts have consistently ruled that water fluoridation is not a form of compulsory mass medication or socialized medicine.^{325,326,330} Fluoridation is simply the adjustment of a naturally occurring element found in water in order to prevent dental decay. In fact, water that has been fortified with fluoride is similar to fortifying salt with iodine, milk with vitamin D and orange juice with vitamin C – none of which are medications.

"To ADA's knowledge no final ruling in any of those cases has found fluoridation to be anything but safe and effective."

In recent years, challenges to fluoridation have been dismissed for a variety of reasons, including that plaintiffs admitted they could not establish injury by virtue of fluoridation, and that state law supporting fluoridation prevailed over local attempts to oppose fluoridation. Interestingly, pro and anti fluoridation interests have each won and lost legal challenges regarding which state or local agency has regulatory authority over fluoridation, which of course varies by state and locality. State law variances have also led to different rulings on other issues, such as whether downstream end users of fluoridation must be given an opportunity to vote on whether to fluoridate. While cases decided primarily on procedural grounds have been won and lost by both pro and anti fluoridation interests, to ADA's knowledge no final ruling in any of those cases has found fluoridation to be anything but safe and effective.

QUESTION 52.

Why does opposition to community water fluoridation continue?

Answer.

Fluoridation is considered beneficial by the overwhelming majority of the health and scientific communities as well as the general public. However, a small faction continues to speak out against fluoridation of municipal water supplies. Some individuals may view fluoridation of public water as limiting their freedom of choice; other opposition can stem from misinterpretations or inappropriate extrapolations of the science behind the fluoridation issue.

Fact.

A vast body of scientific literature endorses water fluoridation as a safe means of reducing the incidence of dental decay. Support for fluoridation among scientists and health professionals, including physicians and dentists, is nearly universal. Recognition of the benefits of

fluoridation by the American Dental Association, the American Medical Association, governmental agencies and other national health and civic organizations continues as a result of published, peer-reviewed research. (See Compendium at back of booklet.)

The majority of Americans also approves of water fluoridation. In June 1998, the Gallup Organization conducted a national survey of just over 1,000 adults on their attitudes toward community water fluoridation. When asked, "Do you believe community water should be fluoridated?", 70% answered *yes*, 18% answered *no* and 12% responded *don't know* (Figure 5). Results characterized by U.S. Census Region showed the level of support for community water fluoridation to be relatively constant throughout the United States, with 73% in the Northeast, 72% in the Midwest, 68% in the South and 70% in the West favoring community water fluoridation.³³¹ These results are consistent with a December 1991 Gallup survey that asked 1,200 parents, "Whether or not you presently have fluoridated water, do you approve or disapprove of fluoridating drinking water?" More than three-quarters (78%) of the responding parents approved, 10% disapproved and 12% answered *don't know* or refused to answer the question (Figure 6). Disapproval ranged from 4% in communities where water was fluoridated to 16% in communities where it was not.³³²

Of the small faction that opposes water fluoridation for philosophical reasons, freedom of choice probably stands out as the most important single complaint.³³³ Some individuals are opposed to community action on any health issue, others because of environmental or economic arguments and some because they are misinformed.

Opposition to fluoridation has existed since the initiation of the first community programs in 1945 and con-

tinues today with over 60 years of practical experience showing fluoridation to be safe and effective. An article that appeared in the local newspaper shortly after the first fluoridation program was implemented in Grand Rapids, Michigan, noted that the fluoridation program was slated to commence January 1 but did not actually begin until January 25. Interestingly, health officials in Grand Rapids began receiving complaints of physical ailments attributed to fluoridation from citizens weeks before fluoride was actually added to the water.³⁴²

Since that time, antifluoridation leaders and organizations have come and gone, but their basic beliefs have remained the same. These include: fluoride is toxic and causes numerous harmful health effects; fluoride does not prevent dental decay; fluoridation is costly; and fluoridation interferes with freedom of choice and infringes on individual rights.

While the arguments against fluoridation have remained relatively constant over the years, the antifluoridationists have used different approaches that play upon the popular concerns of the public at the time. For example, in the 1950s fluoridation was a Communist plot. With America's growing concern for environmental issues in the 1960s, fluoridation was pollution. After the Vietnam War in the 1970s, the antifluoridationists capitalized on the popularity of conspiracy theories by portraying fluoridation as a conspiracy between the U.S. government, the dental-medical establishment and industry. As Americans became more concerned about their health in the 1980s, antifluoridationists claimed fluoridation caused AIDS and Alzheimer's disease. In the 1990s, claims of hip fractures and cancer were designed to resonate with aging baby boomers. With the new millennium, overexposure and toxicity, in association with lead and arsenic poisoning, have surfaced as

Figure 5. 1998 Consumers' Opinions Regarding Community Water Fluoridation³³¹

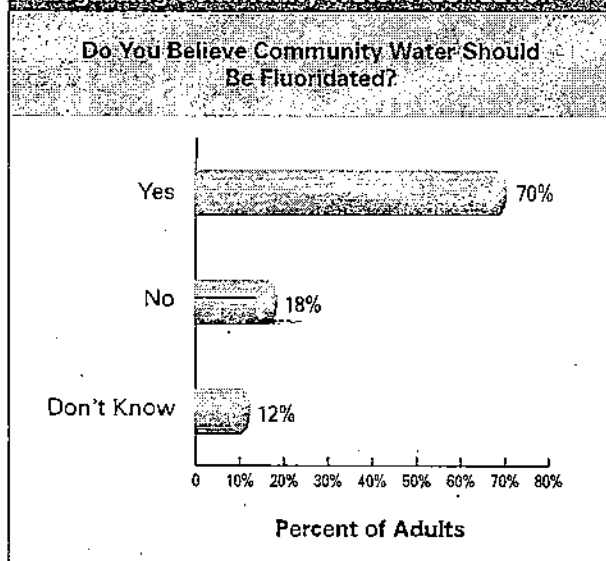
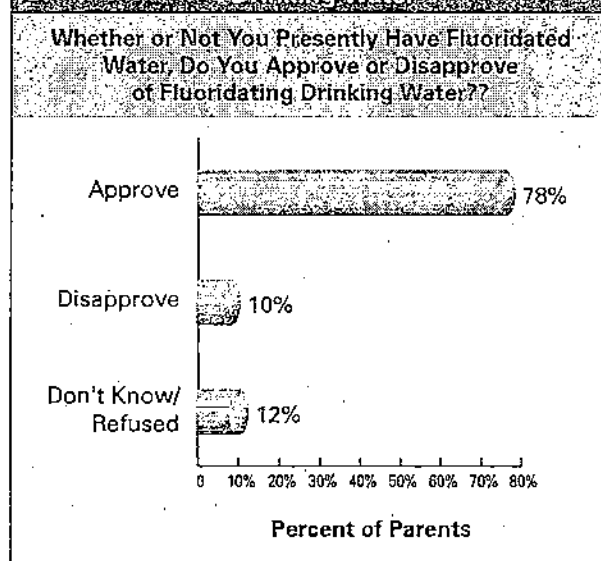


Figure 6. Approval of Fluoridating Drinking Water



common themes. None of these approaches has ever really disappeared, but are often recycled as antifluoridationists choose which approach will have the most effect on the intended audience.³³³

Antifluoridationists have eagerly embraced technology such as videos and the Internet to spread their message to the public. These two venues have allowed the small faction of antifluoridationists to be linked across the country and around the world and promote their message economically.

A number of opposition videos are available from national antifluoridation organizations. These economically-priced videos make it affordable for every campaign to bring an antifluoridationist to the community via local cable access television. However, it has been the Internet that has breathed new life into the antifluoridation effort. The Internet has brought the antifluoridation message into voters' homes. With just a click of the mouse, search engines can locate hundreds of Web sites denouncing fluoridation, which may give the impression that this is a one-sided argument. Individuals who look to the Internet as a source of reliable information may fail to recognize that these sites often contain personal opinion rather than scientific fact. Newspaper stories, press releases and letters to the editor are often posted as documentation of the "science" behind antifluoridationists' claims. All too often, the public accepts this type of information as true simply because it is in print.

The techniques used by antifluoridationists are well known and have been discussed at length in a number of published articles that review the tactics used by antifluoridationists.^{325,327,335-339} Examples of a few of the techniques can be viewed in Figure 7 on the next page.

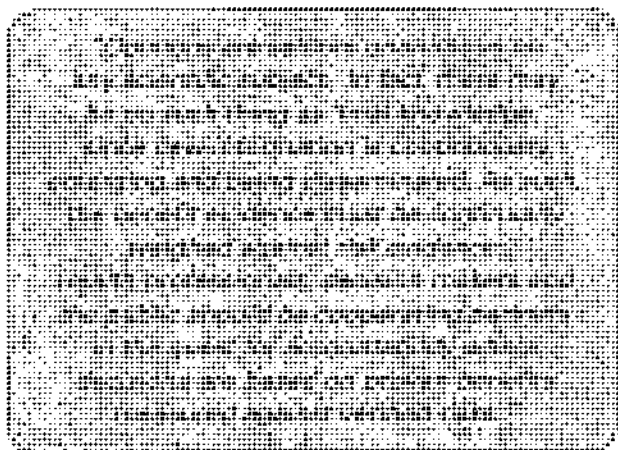
"Reputable science is based on the scientific method of testing hypotheses in ways that can be reproduced and verified by others; junk science, which often provides too-simple answers to complex questions, often cannot be substantiated."

"Junk science," a term coined by the press and used over the past decade to characterize data derived from atypical or questionable scientific techniques, also can play a role in provoking opposition to water fluoridation. In fact, decision makers have been persuaded to postpone action on several cost-effective public health measures after hypothetical risks have made their way into the public media.³⁴⁰ Junk science impacts public policy and costs society in immeasurable ways. More people, especially those involved in policy decisions, need to be able to distinguish junk science from legitimate scientific research. Reputable science is based on the scientific method of testing hypotheses in ways that can be reproduced and verified by others; junk science, which often provides too-simple answers to complex questions, often cannot be substantiated.

In 1993 the U.S. Supreme Court issued a landmark decision that many view as likely to restrict the use of junk science in the federal courts and in those state courts which adopt this reasoning. The Court determined that while "general acceptance" is not needed for scientific evidence to be admissible, federal trial judges have the task of ensuring that an expert's testimony rests on a reasonable foundation and is relevant to the issue in question. According to the Supreme Court, many considerations will bear on whether the expert's underlying reasoning or methodology is scientifically valid and applicable in a given case. The Court set out four criteria judges could use when evaluating scientific testimony:

- (1) whether the expert's theory or technique can be (and has been) tested, using the scientific method,
- (2) whether it has been subject to peer review and publication (although failing this criteria alone is not necessarily grounds for disallowing the testimony),
- (3) its known or potential error rate and the existence and maintenance of standards in controlling its operation and
- (4) whether it has attracted widespread acceptance within a relevant scientific community, since a known technique that has been able to attract only minimal support may properly be viewed with skepticism.

The scientific validity and relevance of claims made by opponents of fluoridation might be best viewed when measured against these criteria.³⁴¹



Opinions are seldom unanimous on any scientific subject. In fact, there may be no such thing as "final knowledge," since new information is continuously emerging and being disseminated. As such, the benefit evidence must be continually weighed against risk evidence. Health professionals, decision makers and the public should be cooperating partners in the quest for accountability where decisions are based on proven benefits measured against verified risks.³³⁵

Additional information on this topic may be found in the Introduction and Figure 1.

Figure 7. Opposition Tactics

Targeting Politicians and Community Leaders

Antifluoridation Web sites contain draft letters to be sent to newspaper publishers, water departments, and community public officials warning them of their "liability" should they support or endorse water fluoridation. Leaders are urged to remain "neutral" and allow fluoridation decisions to be put to a public vote therefore relieving the leaders of any and all responsibility in the matter. Antifluoridationists use the time gained to conduct a public referendum to bombard the public with misinformation designed to turn public opinion against fluoridation.

Unproven Claims

Antifluoridationists have repeatedly claimed fluoridation causes an entire laundry list of human illnesses including AIDS, Alzheimer's disease, cancer, Down Syndrome, genetic damage, heart disease, lower intelligence, kidney disease and osteoporosis (hip fractures). These allegations are often repeated so frequently during campaigns that the public assumes they must be true. Their appearance in print, even if only in letters to the editor of the local newspaper, reinforces the allegation's credibility. With just a small amount of doubt established, the opposition slogan, "If in doubt, vote it out," may ring true with voters.

Innuendo

The statement, "Fifty years ago physicians and dentists posed for cigarette ads," is an example of innuendo or, more specifically, guilt by association. Even though fluoridation is not mentioned, individuals are expected to make the connection that the medical community changed its position on smoking so it is possible health professionals are wrong about fluoridation, too.

Outdated Studies and Statements from "Experts"

Antifluoridation Web sites often offer a list of "respected medical professionals and scientists" who have spoken out against fluoridation. One of those often quoted is Dr. Charles Gordon Heyd who is noted to be a Past President of the American Medical Association (AMA). What is not disclosed is the source of the quote or that Dr. Heyd was President of the AMA in 1936 - almost ten years before water fluoridation trials began. His decades-old quote certainly does not represent the current AMA position of support for water fluoridation and is characteristic of antifluoridationists' use of items that are out of date. Additionally, antifluoridationists have

claimed that fourteen Nobel Prize winners have "opposed or expressed reservations about fluoridation." It should be noted that the vast majority of these individuals were awarded their prizes from 1929 through 1958.

Statements Out of Context

One of the most repeated antifluoridation statements is, "Fluoride is a toxic chemical. Don't let them put it in our water." This statement ignores the scientific principle that toxicity is related to dosage and not just to exposure to a substance. Examples of other substances that can be harmful in the wrong amounts but beneficial in the correct amounts are salt, vitamins A and D, iron, iodine, aspirin and even water itself.

In another example, a press release from the New York State Coalition Opposed to Fluoridation (NYSCOF) posted on the Internet in August 2001, and again in March 2005, stated, "Fluoridation is based more on unproven theories than scientific evidence, according to a revised dental textbook by leaders in the field." The press release also includes a number of items "quoted" from the textbook. The American Dental Association contacted the textbook authors who immediately wrote a letter responding to the press release. Drs. Brian A. Burt and Dr. Stephen A. Eklund responded, "The NYSCOF article takes a series of disconnected quotes from our textbook (Burt BA, Eklund SE. The Dentist, Dental Practice, and the Community 5th edition, Philadelphia: Saunders, 1999) and puts its own interpretation on them. The result is to portray Drs. Burt and Eklund as being opposed to fluoridation, which is most definitely not the case."

Moving Targets

In venues ranging from the media to the courts, opponents have been known to shift their theories of opposition frequently and mid-stream. This often appears to occur when one of their originally advanced points of opposition has been unveiled as being without merit. Some examples: A parent who told the media that he would need to move his family out of town because of past allergies to fluoride had to change his position after it was disclosed that the family had previously lived in a fluoridated community; and opponents filing repeated amendments to their legal complaints, in one case moving from an all-out attack to the position that they are not opposed to fluoridation, but just to one particular chemical - without telling the court that the chemical has been safely and extensively used for decades.

53.

54.

QUESTION 53.

Where can reliable information about water fluoridation be found on the Internet and World Wide Web?

Answer.

The American Dental Association, as well as other reputable health and science organizations, and government agencies have sites on the Internet/Web that provide information on fluorides and fluoridation. These sites provide information that is consistent with generally accepted scientific knowledge.

Fact.

The Internet and World Wide Web are evolving as accessible sources of information. However, not all "science" posted on the Internet and World Wide Web is based on scientific fact. Searching the Internet for "fluoride" or "water fluoridation" directs individuals to a number of Web sites. Some of the content found in the sites is scientifically sound. Other less scientific sites may look highly technical, but contain information based on science that is unconfirmed or has not gained widespread acceptance. Commercial interests, such as the sale of water filters, may also be promoted.

One of the most widely respected sources for information regarding fluoridation and fluorides is the American Dental Association's (ADA) Fluoride and Fluoridation Web site at <http://www.ada.org/goto/fluoride> (Figure 8). From the ADA Web site individuals can link to other Web sites, such as the Centers for Disease Control and Prevention, National Institute of Dental and Craniofacial Research, Institute of Medicine, National Cancer Institute, and state/local health departments for more information about fluoride and water fluoridation.

Figure 8. Fluoride and Fluoridation Web Page.

FLUORIDATION AT YOUR FINGERTIPS!

<http://www.ada.org/goto/fluoride>

- ADA Fluoridation Resources
- Fluoridation Facts Online
- ADA Fluoridation News Stories
- ADA Policy and Statements
- Links to Additional Fluoridation Web Sites

ADA

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QUESTION 54.

Why does community water fluoridation sometimes lose when it is put to a public vote?

Answer.

Voter apathy or low voter turnout due the vote being held as a special election or in an "off" year, confusing ballot language (a "no" vote translates to support for fluoridation), blurring of scientific issues, lack of leadership by elected officials and a lack of political campaign skills among health professionals are some of the reasons fluoridation votes are sometimes unsuccessful.

Fact.

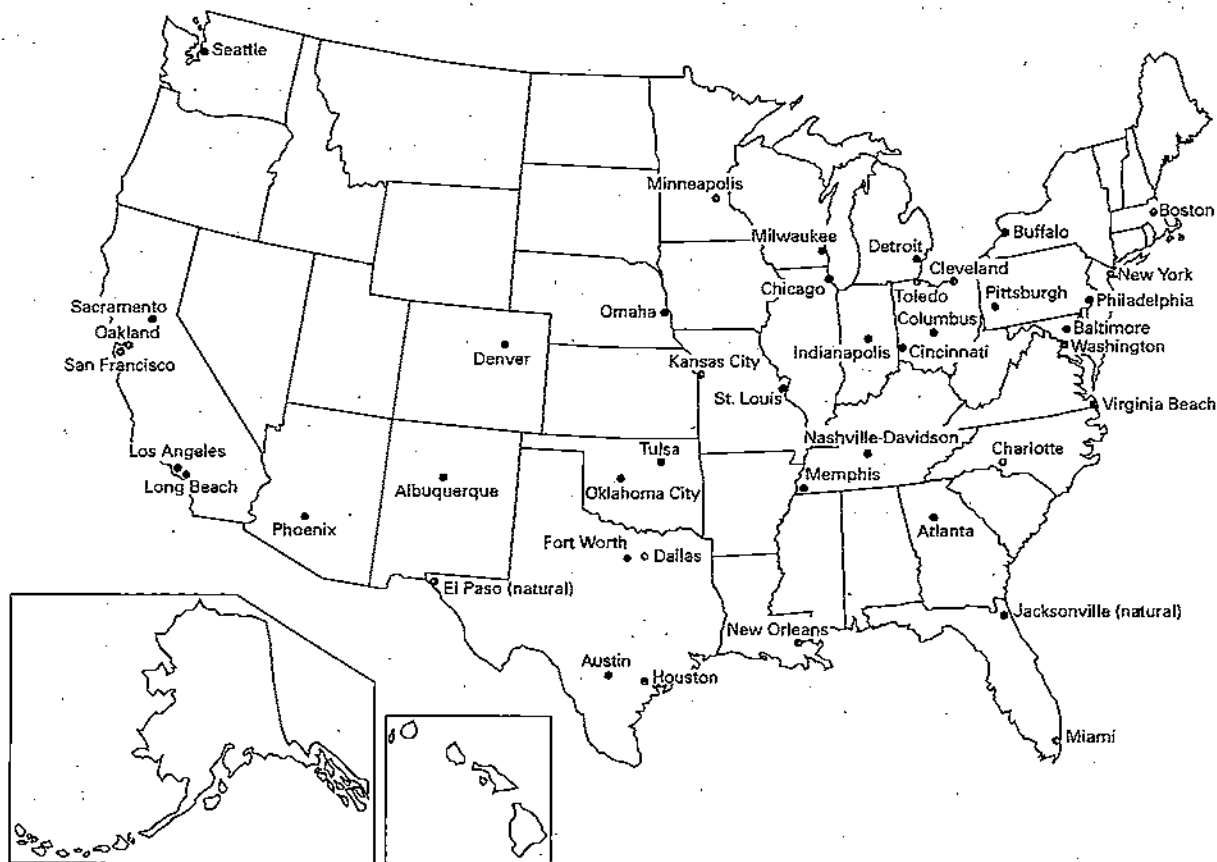
Despite the continuing growth of fluoridation in this country over the past decades, millions of Americans do not yet receive the protective benefits of fluoride in their drinking water. Centers for Disease Control and Prevention (CDC) data from 2002 indicate, only two-thirds (67.3%) of the population served by public water systems have access to fluoridated water.³⁴ Forty-two of the 50 largest cities are fluoridated by adjustment. Another two have natural optimal levels of fluoridation (Figure 9). The remaining six nonfluoridated cities are: Fresno, California; San Jose, California; Colorado Springs, Colorado; Honolulu, Hawaii; Wichita, Kansas and Portland, Oregon. In 1998, recognizing the ongoing need to improve health and well being, the U.S. Public Health Service revised national health objectives to be achieved by the year 2010. Included under oral health was an objective to significantly expand the fluoridation of public water supplies. Specifically, Objective 21-9 states that at least 75% of the U.S. population served by community water systems should be receiving the benefits of optimally fluoridated water by the year 2010.¹⁹ Although water fluoridation reaches some residents in every state, 2002 data indicates that only 24 states are providing these benefits to 75% or more of their residents.³⁴ (Figure 10).

Social scientists have conducted studies to examine why fluoridation fails when put to a public vote. Among the factors noted are lack of funding, public and professional apathy, the failure of many legislators and community leaders to take a stand because of perceived controversy, low voter turnout and the difficulty faced by an electorate in evaluating scientific information in the midst of emotional charges by opponents. Unfortunately, citizens may mistakenly believe their water contains optimal levels of fluoride when, in fact, it does not.

"Clever use of emotionally charged 'scare' propaganda by fluoride opponents creates fear, confusion and doubt within a community when voters consider the use of fluoridation."

Figure 9: Forty-Two of the Fifty Largest Cities in the U.S. are Supplied with Fluoridated Water*

Two cities (Jacksonville, Florida and El Paso, Texas) are naturally fluoridated.



*Data compiled by the American Dental Association and Centers for Disease Control and Prevention/Division of Oral Health. Information current as of May 2005.

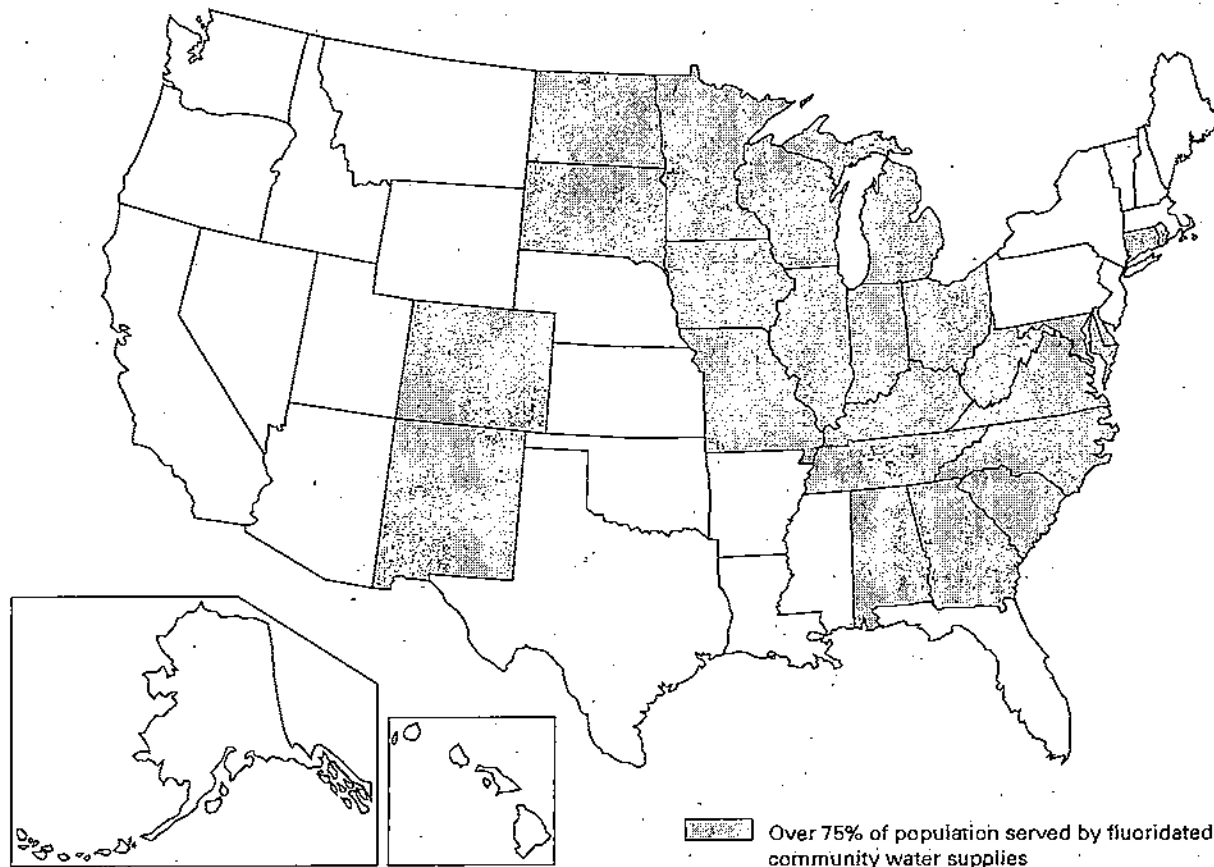
Clever use of emotionally charged "scare" propaganda by fluoride opponents creates fear, confusion and doubt within a community when voters consider the use of fluoridation.^{342,343} Defeats of referenda or the discontinuance of fluoridation have occurred most often when a small, vocal and well organized group has used a barrage of fear-inspiring allegations designed to confuse the electorate. In addition to attempts to influence voters, opponents have also threatened community leaders with personal litigation.³⁴⁴ While no court of last resort has ever ruled against fluoridation, community leaders may be swayed by the threat of litigation due to the cost and time involved in defending even a groundless suit, not to mention threats of political fallout. The American Dental Association (ADA)

knows of no cases in which community leaders have been found liable for their pro-fluoridation efforts. In no instance has fluoridation been discontinued because it was proven harmful in any way.³⁴³⁻³⁴⁵

Adoption of fluoridation is ultimately a decision of state or local decision makers, whether determined by elected officials, health officers or the voting public. Fluoridation can be enacted through state legislation, administrative regulation or a public referendum. While fluoridation is not legislated at the federal level, it is legislated at the state and local level. As with any public health measure, a community has the right and obligation to protect the health and welfare of its citizens, even if it means overriding individual objections to implement fluoridation.

Figure 10. State Fluoridation Status

States Meeting the Healthy People 2010 Goal of 75% of the Population Served by Fluoridated Community Water Supplies*



*Data Source: Centers for Disease Control and Prevention/Division of Oral Health. "Percentage of U.S. Population on Public Water Supply Systems Receiving Fluoridated Water" 2002. Available at <http://www2.cdc.gov/nohss/FluoridationV.asp>

In the past five years, more than 125 communities in 36 states have decided to provide the benefits of fluoridation for their residents.

Each spring as part of the yearly Community Water Fluoridation Awards program, the ADA, Association of State and Territorial Dental Directors and the CDC Division of Oral Health compile a list of water systems/communities in the United States that have adopted community water fluoridation in the past year. This list is posted on the ADA Web site at <http://www.ada.org/goto/fluoride>. In the past five years (2000

through 2004), more than 125 communities in 36 states have decided to provide the benefits of fluoridation for their residents. The size of these water systems/communities varies greatly – from those with a few thousand residents to the Metropolitan Water District of Southern California which will provide fluoridated water to more than 18 million people.

Technical assistance with fluoridation efforts is available from the Council on Access, Prevention and Interprofessional Relations at the ADA. Additional support for fluoridation is available from ADA's Division of Legal Affairs, Division of Communications and Department of State Government Affairs.

QUESTION 55.

Is community water fluoridation accepted by other countries?

Answer.

Over 405 million people in more than 60 countries worldwide enjoy the benefits of fluoridated water.¹³²

"The value of water fluoridation is recognized internationally. Considering the extent to which fluoridation has already been implemented throughout the world, the lack of documentation of adverse health effects is remarkable testimony to its safety."

Fact.

The value of water fluoridation is recognized internationally. Countries and geographic regions with extensive water fluoridation include the U.S., Australia, Brazil, Canada, Chile, Columbia, Ireland, Israel, Malaysia, New Zealand, People's Republic of China (Hong Kong only), Singapore and the United Kingdom.¹³² Thorough investigations of fluoridation have been conducted in Britain and Australia supporting the safety and effectiveness of water fluoridation.^{163,185,346} Considering the extent to which fluoridation has already been implemented throughout the world, the lack of documentation of adverse health effects is remarkable testimony to its safety.^{84,163-167,210} The World Health Organization (WHO) and the Pan American Health Organization have endorsed the practice of water fluoridation since 1964. In 1994, an expert committee of WHO published a report which reaffirmed its support of fluoridation as being safe and effective in the prevention of dental decay, and stated that "provided a community has a piped water supply, water fluoridation is the most effective method of reaching the whole population, so that all social classes benefit without the need for active participation on the part of individuals."¹³⁸ In many parts of the world, fluoridation is not feasible or a high priority, usually due to the lack of a central water supply, the existence of more life threatening health needs or the lack of trained technical personnel or sufficient funds for start-up and maintenance costs.

QUESTION 56.

Is community water fluoridation banned in Europe?

Answer.

No country in Europe has banned community water fluoridation.

Fact.

The claim that fluoridation is banned in Europe is frequently used by fluoridation opponents. In truth, European coun-

tries construct their own water quality regulations within the framework of the 1980 European Water Quality Directive. The Directive provides maximum admissible concentrations for many substances, one of which is fluoride. The Directive does not require or prohibit fluoridation, it merely requires that the fluoride concentration in water does not exceed the maximum permissible concentration.³⁴⁷

Many fluoridation systems that used to operate in Eastern and Central Europe did not function properly and, when the Iron Curtain fell in 1989-90, shut down because of obsolete technical equipment and lack of knowledge as to the benefits of fluoridated water.³⁴⁸ Water fluoridation is not practical in some European countries because of complex water systems with numerous water sources. As an alternative to water fluoridation, many European countries have opted for the use of fluoride supplements or salt fluoridation.

Basel, Switzerland is one such example. Those opposed to water fluoridation claimed a large victory when Basel voted to cease water fluoridation in 2003. The facts are that Basel was the lone city with fluoridated water surrounded by communities that used fluoridated salt. In the mid 90s, trade barriers that had prevented fluoridated salt from being sold to those living in Basel fell and soon it was evident that residents were receiving fluoride from salt as well as through drinking water. The government voted to cease water fluoridation in 2003 in light of availability and use of fluoridated salt in the community. Basel, Switzerland did not stop fluoridating. Officials simply chose another type of fluoridation - salt fluoridation.³⁴⁹

Additional information on this topic may be found in Question 14.

"No European country has imposed a 'ban' on water fluoridation."

Again, no European country has imposed a "ban" on water fluoridation, it has simply not been implemented for a variety of technical, legal, financial or political reasons.

Political actions contrary to the recommendations of health authorities should not be interpreted as a negative response to water fluoridation. For example, although fluoridation is not carried out in Sweden and the Netherlands, both countries support World Health Organization's recommendations regarding fluoridation as a preventive health measure, in addition to the use of fluoride toothpastes, mouthrinses and dietary fluoride supplements.^{138,350}

Notes

COST EFFECTIVENESS

Q 57. Cost effective? p. 56

Q 58. Practical? p. 57

QUESTION 57.

Is water fluoridation a cost-effective means of preventing tooth decay?

Answer.

Yes. Fluoridation has substantial lifelong decay preventive effects and is a highly cost-effective means of preventing tooth decay in the United States, regardless of socioeconomic status.^{97,103,104,351-353}

Fact.

The cost of community water fluoridation can vary in each community depending on the following factors.³⁵⁴

1. Size of the community (population and water usage);
2. Number of fluoride injection points where fluoride additives will be added to the water system;
3. Amount and type of equipment used to add and monitor fluoride additives;
4. Amount and type of fluoride compound used, its price, and its costs of transportation and storage; and
5. Expertise of personnel at the water plant.

The annual cost for a U.S. community to fluoridate its water is estimated to range from approximately \$0.50 per person in large communities to approximately \$3.00 per person in small communities.³⁵⁵

"For most cities, every \$1 invested in water fluoridation saves \$38 in dental treatment costs."

It can be calculated from these data that the average lifetime cost per person to fluoridate a water system is less than the cost of one dental filling. When it comes to the cost of treating dental disease, everyone pays. Not just those who need treatment, but the entire community through higher health insurance premiums and higher taxes. For most cities, every \$1 invested in water fluoridation saves \$38 in dental treatment costs.³⁵⁵ Cutting dental care costs by decreasing dental decay is something a community can do to improve oral health and save money for everyone. With the escalating cost of health care, fluoridation remains a preventive measure that benefits members of the community at minimal cost.²⁵ Fluoridation is a community public health measure that saves money.

School-based dental disease prevention activities (such as fluoride mouthrinse or tablet programs), professionally applied topical fluorides and dental health education are beneficial but have not been found to be as cost-effective in preventing dental decay as community water fluoridation.³⁵¹ Fluoridation remains the most cost-effective and practical form of preventing decay in the United States and other countries with established municipal water systems.^{17,97,104,355}

Because of the decay-reducing effects of fluoride, the need for restorative dental care is typically lower in fluoridated communities. Therefore, an individual residing in a fluoridated community will typically have fewer restorative dental expenditures during a lifetime. Health economists at a 1989 workshop concluded that fluoridation costs approximately \$3.35 per tooth surface when decay is prevented, making fluoridation "one of the very few public health procedures that actually saves more money than it costs."³⁵⁵ Considering the fact that the national average fee for a two surface amalgam (silver) restoration in a permanent tooth placed by a general dentist is \$101.94*, fluoridation clearly demonstrates significant cost savings.³⁵⁶

In a study conducted in Louisiana, Medicaid-eligible children (ages 1-5) residing in communities without fluoridated water were three times more likely than Medicaid-eligible children residing in communities with fluoridated water to receive dental treatment in a hospital and the cost of dental treatment per eligible child was approximately twice as high. In addition to community water fluoridation status, the study took into account per capita income, population and number of dentists per county.³⁵⁸

"The economic importance of fluoridation is underscored by the fact that frequently the cost of treating dental disease is paid not only by the affected individual, but also by the general public through services provided by health departments, community health clinics, health insurance premiums, the military, and other publicly supported medical programs."

The economic importance of fluoridation is underscored by the fact that frequently the cost of treating dental disease is paid not only by the affected individual, but also by the general public through services provided by health departments, community health clinics, health insurance premiums, the military and other publicly supported medical programs.¹⁰³

Indirect benefits from the prevention of dental decay may include:

- freedom from dental pain
- a more positive self image
- fewer missing teeth
- fewer cases of malocclusion aggravated by tooth loss
- fewer teeth requiring root canal treatment
- reduced need for dentures, bridges and implants
- less time lost from school or work because of dental pain or visits to the dentist

These intangible benefits are difficult to measure economically, but are extremely important.^{97,257}

*The survey data should not be interpreted as constituting a fee schedule in any way, and should not be used for that purpose. Dentists must establish their own fees based on their individual practice and market considerations.

QUESTION 58.

Why fluoridate an entire water system when the vast majority of the water is not used for drinking?

Answer.

It is more practical to fluoridate an entire water supply than to attempt to treat individual water sources.

Fact.

It is technically difficult, perhaps impossible, and certainly more costly to fluoridate only the water used for drinking. Community water that is chlorinated, softened, or in other ways treated is also used for watering lawns, washing cars and for most industrial purposes. The cost of additives for fluoridating a community's water supply is inexpensive on a per capita basis; therefore, it is practical to fluoridate the entire water supply.

Fluoride is but one of more than 40 different chemicals/additives that may be used to treat water in the United States. Most are added for aesthetic or convenience purposes such as to improve the odor or taste, prevent natural cloudiness or prevent staining of clothes or porcelain.³⁶

The American Water Works Association, an international nonprofit scientific and educational society dedicated to the improvement of drinking water quality and supply, supports the practice of fluoridation of public water supplies.³⁵⁷

Additional information on this topic may be found in Question 44.

CALL TO ACTION

In April 2003, Surgeon General Richard H. Carmona issued a National Call to Action to Promote Oral Health. The report was a wake-up call, raising a powerful voice against the silence. It called upon policymakers, community leaders, private industry, health professionals, the media, and the public to affirm that oral health is essential to general health and well-being and to take action.

While the effectiveness of preventive interventions such as community water fluoridation have been generally demonstrated, less than half of the 100 states have implemented fluoridation at the level to meet the national health objectives to be achieved by the year 2010. Specifically, Objective 21-9 states that at least 75% of the U.S. population served by commu-

nity water systems should be receiving the benefits of optimally fluoridated water by the year 2010.

Fluoridation efforts at the local and state level can be greatly enhanced and the U.S. Healthy People 2010 Objective reached with the efforts of organizations, agencies and individuals who share a commitment to the benefits of community water fluoridation.

Technical assistance with fluoridation efforts is available from the Council on Access, Prevention and Interprofessional Relations at ADA. Additional support for fluoridation is available from ADA's Division of Legal Affairs, Division of Communications and Department of State Government Affairs.

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Statements from Five Leading Health Organizations Regarding Community Water Fluoridation

AMERICAN DENTAL ASSOCIATION (ADA)

"The Association endorses community water fluoridation as a safe, beneficial and cost-effective public health measure for preventing dental caries. This support has been the Association's policy since 1950."

— ADA Operational Policies and Recommendations Regarding Community Water Fluoridation (Trans. 1997:673).

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

"During the 20th century, the health and life expectancy of persons residing in the United States improved dramatically. To highlight these advances, MMWR will profile 10 public health achievements in a series of reports published through December 1999 (Fluoridation of drinking water was chosen as one of these achievements and profiled in the October 22, 1999 MMWR). Fluoridation safely and inexpensively benefits both children and adults by effectively preventing tooth decay, regardless of socioeconomic status or access to care. Fluoridation has played an important role in the reductions in tooth decay (40%-70% in children) and of tooth loss in adults (40%-60%)."

— CDC, Morbidity and Mortality Weekly Report. "Ten Great Public Health Achievements—United States 1900-1999" April 1999.

AMERICAN MEDICAL ASSOCIATION (AMA)

"The AMA recognizes the important public health benefits of drinking properly fluoridated water and encourages its member physicians and medical societies to work with local and state health departments, dental societies, and concerned citizens to assure the optimal fluoridation of community drinking water supplies."

— AMA Letter to the American Dental Association, March 10, 1995.

U.S. SURGEON GENERAL

"A significant advantage of water fluoridation is that all residents of a community can enjoy its protective benefit – at home, work, school or play – simply by drinking fluoridated water or beverages and foods prepared with it...Water fluoridation is a powerful strategy in our efforts to eliminate differences in health among people and is consistent with my emphasis on the importance of prevention...Fluoridation is the single most effective public health measure to prevent tooth decay and improve oral health over a lifetime, for both children and adults."

While we can be pleased with what has already been accomplished, it is clear that there is much yet to be done. Policymakers, community leaders, private industry, health professionals, the media, and the public should affirm that oral health is essential to general health and well being and *take action to make ourselves, our families, and our communities healthier. I join previous Surgeons General in acknowledging the continuing public health role for community water fluoridation in enhancing the oral health of all Americans.*"

— Surgeon General Richard H. Carmona, Statement on Community Water Fluoridation, July 28, 2004.

NATIONAL INSTITUTE OF DENTAL & CRANIOFACIAL RESEARCH (NIDCR)

"The National Institute of Dental and Craniofacial Research continues to support water fluoridation as a safe and effective method of preventing tooth decay in people of all ages. Community water fluoridation is a public health effort that benefits millions of Americans. For more than half a century, water fluoridation has helped improve the quality of life in the U.S. through reduced pain and suffering related to tooth decay, reduced tooth loss, reduced time lost from school and work, and less money spent on dental care."

— NIDCR: Statement on Water Fluoridation, June 2000.

COMPENDIUM

National and International Organizations That Recognize the Public Health Benefits of Community Water Fluoridation for Preventing Dental Decay

Academy of Dentistry International
 Academy of General Dentistry
 Academy for Sports Dentistry
 Alzheimer's Association
 America's Health Insurance Plans
 American Academy of Family Physicians
 American Academy of Nurse Practitioners
 American Academy of Oral and Maxillofacial Pathology
 American Academy of Orthopaedic Surgeons
 American Academy of Pediatrics
 American Academy of Pediatric Dentistry
 American Academy of Periodontology
 American Academy of Physician Assistants
 American Association for Community Dental Programs
 American Association for Dental Research
 American Association for Health Education
 American Association for the Advancement of Science
 American Association of Endodontists
 American Association of Oral and Maxillofacial Surgeons
 American Association of Orthodontists
 American Association of Public Health Dentistry
 American Association of Women Dentists
 American Cancer Society
 American College of Dentists
 American College of Physicians-American Society of Internal Medicine
 American College of Preventive Medicine
 American College of Prosthodontists
 American Council on Science and Health
 American Dental Assistants Association
 American Dental Association
 American Dental Education Association
 American Dental Hygienists' Association
 American Dietetic Association
 American Federation of Labor and Congress of Industrial Organizations
 American Hospital Association
 American Legislative Exchange Council
 American Medical Association
 American Nurses Association
 American Osteopathic Association
 American Pharmacists Association
 American Public Health Association
 American School Health Association
 American Society for Clinical Nutrition
 American Society for Nutritional Sciences
 American Student Dental Association
 American Veterinary Medical Association
 American Water Works Association
 Association for Academic Health Centers
 Association of American Medical Colleges
 Association of Clinicians for the Underserved
 Association of Maternal and Child Health Programs
 Association of State and Territorial Dental Directors
 Association of State and Territorial Health Officials
 Association of State and Territorial Public Health Nutrition Directors
 British Fluoridation Society
 Canadian Dental Association
 Canadian Dental Hygienists Association
 Canadian Medical Association
 Canadian Nurses Association
 Canadian Paediatric Society
 Canadian Public Health Association
 Child Welfare League of America
 Children's Dental Health Project
 Chocolate Manufacturers Association
 Consumer Federation of America
 Council of State and Territorial Epidemiologists
 Delta Dental Plans Association
 FDI World Dental Federation
 Federation of American Hospitals
 Hispanic Dental Association
 Indian Dental Association (U.S.A.)
 Institute of Medicine
 International Association for Dental Research
 International Association for Orthodontics
 International College of Dentists
 March of Dimes Birth Defects Foundation
 National Association of Community Health Centers
 National Association of County and City Health Officials
 National Association of Dental Assistants
 National Association of Local Boards of Health
 National Association of Social Workers
 National Confectioners Association
 National Council Against Health Fraud
 National Dental Assistants Association
 National Dental Association
 National Dental Hygienists' Association
 National Down Syndrome Congress
 National Down Syndrome Society
 National Eating Disorders Association
 National Foundation of Dentistry for the Handicapped
 National Head Start Association
 National Health Law Program
 National Healthy Mothers, Healthy Babies Coalition
 Oral Health America
 Robert Wood Johnson Foundation
 Society for Public Health Education
 Society of American Indian Dentists
 Special Care Dentistry
 Academy of Dentistry for Persons with Disabilities
 American Association of Hospital Dentists
 American Society for Geriatric Dentistry
 The Children's Health Fund
 The Dental Health Foundation (of California)
 U.S. Department of Defense
 U.S. Department of Veterans Affairs
 U.S. Public Health Service
 Centers for Disease Control and Prevention (CDC)
 National Institute of Dental and Craniofacial Research (NIDCR)
 World Federation of Orthodontists

The list above was current at the time Fluoridation Facts went to press. As organizations and entities continue to be added to the Compendium, the most current Compendium can be viewed on ADA.org at <http://www.ada.org/goto/ffcompendium>.

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April 30, 2012

Fluoridated water reaching more U.S. residents

CDC's 2010 statistics show nearly 9 percent increase since 2000

By Stacie Crozier, ADA News staff

Milwaukee—Almost three-fourths of U.S. residents who receive water from community water systems—about 204 million residents—now receive fluoridated water, according to the latest statistics from the Centers for Disease Control and Prevention.

CDC Director Thomas R. Frieden, M.D., announced the agency's latest water fluoridation statistics April 30 via a taped video presentation at the National Oral Health Conference in Milwaukee. The information is also posted on the CDC website (www.cdc.gov/fluoridation/statistics/2010stats.htm).

Between 2000 and 2010, the percent of the U.S. population on public water supplies receiving fluoridated water increased from 65 percent to 73.9 percent, just a percentage point under the Healthy People 2010 national health initiative objective. A total of 26 states and the District of Columbia have met the objective and state percentages range from more than 99 percent in Kentucky, Maryland and Illinois to 10.8 percent in Hawaii.

Fluoridated water is reaching nearly 9 million more people than in 2008, when 195.5 million or 72.4 percent were receiving fluoridated water, said the CDC.

"These new figures show that since 2008, nearly 9 million additional Americans are now receiving the cavity prevention benefits of fluoridated water," said Dr. William Bailey, acting director, CDC Division of Oral Health. "Water fluoridation continues to be one of the most important community measures to prevent tooth decay. All people can benefit from fluoridation, regardless of age, personal financial resources and access to dental services."

The latest Healthy People fluoridation objective set by the U.S. Department of Health and Human Services is for 79.6 percent of the U.S. population served by community water systems to receive optimally fluoridated water by 2020.

"The American Dental Association is pleased to see that the number of U.S. residents with access to fluoridated water continues to grow," said ADA President William Calnon. "The CDC has identified fluoridation as one of 10 great public health achievements of the 20th century and we hope to see the number of people receiving the benefits of water fluoridation continue to increase to meet the Healthy People 2020 objective."

Visit cdc.gov for more details on the statistics. The ADA also offers a variety of fluoridation resources at ada.org/fluoride.



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American Dental Association Supports Fluoridation

The American Dental Association unreservedly endorses the fluoridation of community water supplies as safe, effective and necessary in preventing tooth decay. This support has been the Association's position since policy was first adopted in 1950.

Fluoridation of Water Supplies (Trans.1950:224)

Resolved, that in the interest of public health, the American Dental Association recommends the fluoridation of municipal water supplies when the fluoridation procedure is approved by the local dental society and utilized in accordance with the standards established by the responsible health authority, and be it further

Resolved, that the American Dental Association recommends the continuation of controlled studies of the benefits derived from the fluoridation of water supplies.

Since the inception of water fluoridation, the American Dental Association has carefully monitored scientific research regarding safety and efficacy. Based on that review, the Association has continually reaffirmed water fluoridation as the most effective public health measure for the prevention of dental caries and strongly urges that its benefits be extended to those served by communal water systems. In 1997, the ADA House of Delegates confirmed its support for fluoridation by setting forth a comprehensive policy statement.

Operational Policies and Recommendations Regarding Community Water Fluoridation (Trans.1997:673)

1. The Association endorses community water fluoridation as a safe, beneficial and cost-effective public health measure for preventing dental caries.
2. The Association supports the position that all communal water supplies that are below the optimum fluoride level recommended by the U.S. Public Health Service (a range from 0.7–1.2 parts per million) should be adjusted to an optimum level.
3. The Association urges individual dentists and dental societies to exercise leadership in all phases of activity which lead to the initiation and continuation of community water fluoridation, including making scientific knowledge and resources available to the community and collaborating with state and local agencies.
4. The Association encourages individual dentists and dental societies to utilize Association materials on the community organization and public education aspects of fluoridation.
5. The Association encourages states to utilize the corps of experts in the area of fluorides and fluoridation that is maintained through appropriate Association agencies in order to promote the safety, benefits and cost-effectiveness of fluoridation.
6. The Association encourages governmental agencies and philanthropic organizations to make funding available to communities seeking to adjust the fluoride content of the community's water supply to the optimal level.
7. The Association supports the following actions to maintain the quality of national community water fluoridation and its infrastructure:
 - o performance of a community water fluoridation infrastructure needs assessment by state health departments where such information is not currently available;
 - o allocation of needed resources to appropriate state agencies to upgrade and maintain the fluoridation infrastructure; and
 - o observance of the Centers for Disease Control and Prevention's Engineering and Administrative Recommendations for Water Fluoridation—1995 by fluoridated water systems in all states.

ADA Statements

- ADA Endorses Water Fluoridation
- ADA Statement Commemorating the 60th Anniversary of Community Water Fluoridation
- ADA Statement on the Effectiveness of Community Water Fluoridation
- ADA Statement on the Safety of Community Water Fluoridation
- ADA Statement on FDA Toothpaste Warning Labels

Statement on the Effectiveness of Community Water Fluoridation

ADA Principles of Ethics and
Code of Professional Conduct

ADA Ethics Resources

ADA Current Policies

Research Agenda

The effectiveness of water fluoridation has been documented in scientific literature for well over 65 years. Even before the first community fluoridation program began in 1945, data from the 1930s and 1940s revealed 50-60% lower tooth decay rates in children consuming naturally occurring, optimally fluoridated water compared to children consuming fluoride-deficient water. Since that time, numerous studies have been published making fluoridation one of the most widely studied public health measures in history. Studies prove water fluoridation continues to be effective in reducing tooth decay by at least 25% in adults and children, even in an era with widespread availability of fluoride from other sources, such as fluoride toothpaste.

In April 1999, the Centers for Disease Control and Prevention (CDC) proclaimed community water fluoridation as one of 10 great public health achievements of the 20th century. The list of achievements, which also includes vaccinations and control of infectious diseases, was developed to highlight significant contributions that impact the health and well being of the public. Additionally, in 2001, the CDC restated, "Community water fluoridation is a safe, effective and inexpensive way to prevent dental caries." The CDC not only recommended continuation of fluoridation but also called for its adoption in additional U.S. communities.

In August 2002, the U.S. Task Force on Community Preventive Services concluded that the evidence for the effectiveness of fluoridation is strong based on the number and quality of studies that have been done, the magnitude of observed benefits and the consistency of the findings. The Task Force issued a strong recommendation that water fluoridation be included as part of a comprehensive population-based strategy to prevent or control tooth decay in communities.

The American Dental Association (ADA) continues to endorse fluoridation of community water supplies as safe and effective for preventing tooth decay. This support has been the Association's position since policy was first adopted in 1950. Based on data for 2010, approximately 204 million people (two-thirds of the population) in the United States are served by public water systems that are fluoridated. The ADA, along with state and local dental societies, continues to work with federal, state, and local agencies to increase the number of communities benefiting from water fluoridation.

For more information regarding fluoride and fluoridation, visit the [American Dental Association's Fluoride and Fluoridation website](http://ada.org/2106.aspx).

Statement on Water Fluoridation Efficacy and Safety

ADA Principles of Ethics and
Code of Professional Conduct

ADA Ethics Resources

ADA Current Policies

Research Agenda

June 29, 2000—The American Dental Association has endorsed fluoridation of community water supplies as safe and effective for preventing tooth decay for more than 40 years. Fluoride is nature's cavity fighter, occurring naturally in the earth's crust, in combination with other minerals in rocks and soil. Small amounts of fluoride occur naturally in all water sources, and varying amounts of the mineral are found in all foods and beverages. Water fluoridation is the process of adjusting the natural level of fluoride to a concentration sufficient to protect against tooth decay, a range of from 0.7 parts per million to 1.2 ppm.

"Water fluoridation has been recognized by the Centers for Disease Control and Prevention as one of the 10 great public health achievements of the 20th Century," said ADA President Richard F. Mascola, D.D.S. "Fluoride's benefits are particularly important for those Americans, especially children, who lack adequate access to dental care. It is safe, effective and by far the best bang for the nation's public health buck."

Thanks in large part to community water fluoridation, half of all children ages 5 to 17 have never had a cavity in their permanent teeth. According to the April 2000 Journal of Dental Research, the use of fluoride in the past 40 years has been the primary factor in saving some \$40 billion in oral health care costs in the United States.

In addition to the ADA, nearly 100 national and international organizations recognize the public health benefits of community water fluoridation for preventing dental decay. They include the World Health Organization, the U.S. Public Health Service, the American Medical Association, the American Academy of Pediatrics, the American Academy of Family Physicians, the International Association for Dental Research, the National PTA and the American Cancer Society. And just last month, Surgeon General David Satcher wrote in his report, Oral Health in America, "Community water fluoridation is safe and effective in preventing dental caries in both children and adults. Water fluoridation benefits all residents served by community water supplies regardless of their social or economic status."

Unfortunately, despite overwhelming evidence of fluoridation's safety and efficacy, more than 100 million Americans still do not benefit from fluoridated water. The ADA, along with state and local dental societies, continues to work with federal, state and local agencies to increase the number of communities that benefit from community water fluoridation.

The ADA's policies regarding community water fluoridation are based on generally accepted scientific knowledge. This body of knowledge is based on the efforts of nationally recognized scientists who have conducted research using the scientific method, have drawn appropriate balanced conclusions based on their research findings and have published their results in refereed (peer-reviewed) professional journals that are widely held or circulated. Confirmation of scientific findings also reinforces the validity of existing studies.

Statement Commemorating the 60th Anniversary of Community Water Fluoridation

ADA Principles of Ethics and
Code of Professional Conduct

ADA Ethics Resources

ADA Current Policies

Research Agenda

Sixty years ago, Grand Rapids, Michigan became the world's first city to adjust the level of fluoride in its water supply. Since that time, fluoridation has dramatically improved the oral health of tens of millions of Americans. Community water fluoridation is the single most effective public health measure to prevent tooth decay. Additionally, the Centers for Disease Control and Prevention proclaimed community water fluoridation as one of 10 great public health achievements of the 20th century.

Fluoridation of community water supplies is simply the precise adjustment of the existing naturally occurring fluoride levels in drinking water to an optimal fluoride level recommended by the U.S. Public Health Service (0.7–1.2 parts per million) for the prevention of dental decay. Based on data from 2002, approximately 170 million people (or over two-thirds of the population) in the United States are served by public water systems that are fluoridated.

Studies conducted throughout the past 60 years have consistently indicated that fluoridation of community water supplies is safe and effective in preventing dental decay in both children and adults. It is the most efficient way to prevent one of the most common childhood diseases—tooth decay (5 times as common as asthma and 7 times as common as hay fever in 5- to 17-year-olds).

Early studies, such as those conducted in Grand Rapids, showed that water fluoridation reduced the amount of cavities children get in their baby teeth by as much as 60 percent and reduced tooth decay in permanent adult teeth nearly 35 percent. Today, studies prove water fluoridation continues to be effective in reducing tooth decay by 20–40 percent, even in an era with widespread availability of fluoride from other sources, such as fluoride toothpaste.

The average cost for a community to fluoridate its water is estimated to range from approximately \$0.50 a year per person in large communities to approximately \$3.00 a year per person in small communities. For most cities, every \$1 invested in water fluoridation saves \$38 in dental treatment costs.

The American Dental Association continues to endorse fluoridation of community water supplies as safe and effective for preventing tooth decay. This support has been the Association's position since policy was first adopted in 1950. The ADA's policies regarding community water fluoridation are based on the overwhelming weight of peer-reviewed, credible scientific evidence. The ADA, along with state and local dental societies, continues to work with federal, state, local agencies and community coalitions to increase the number of communities benefiting from water fluoridation.

Status of Fluoridation in the United States

Approximately 72.4% of the U.S. population served by public water systems receive the benefit of optimally fluoridated water.¹

The Healthy People 2010 Objective 21-9 states that at least 75% of the U.S. population served by community water systems should be receiving the benefits of optimally fluoridated water by 2010. In 2008, 27 states met this objective.²

1. Centers for Disease Control and Prevention. Water Fluoridation. Accessed on 4-18-11 at <http://www.cdc.gov/fluoridation/statistics/2008stats.htm>

2. Centers for Disease Control and Prevention. Populations Receiving Optimally Fluoridated Public Drinking Water — United States, 1992–2006. MMWR 2008;57:737-41.

U.S. Communities Voting to Adopt Fluoridation*

Alabama	
Russellville (To retain)	2008
North Baldwin Utilities (To retain)	2007
Alaska	
Seward	2009
Fairbanks (To retain)	2008
Port Lyons	2004
Arkansas	
El Dorado	2010
Conway (To retain)	2008
Prescott	2003
Monticello (To retain)	2003
Dardanelle	2002
Rector	2002
Kimsy East	2002
Little River	2002
Berryville	2000
Benton-Washington County Water Assoc.	1999
Gentry	1999
Grand Prairie Water District	1999
Siloam Springs	1999
Arizona	
Yuma	2001
Gilbert	2000
Mesa	2000
El Mirage	1999
Mesa	1998
California	
Crescent City (To retain)	2010
Watsonville	2010
Helix Water District (To retain)	2009
San Diego	2008
Arcata (To retain)	2006
West Sacramento	2006
Inglewood	2005

Santa Maria (To retain)	2004
Stockton	2003
Salinas	2003
Metropolitan Water Dist. of Southern CA	2003
Palo Alto (To retain)	2003
Mammoth	2002
Santa Maria	2002
Escondido	2001
Santa Monica	2001
San Francisco Public Utilities Commission	2001
Watsonville	2001
Sacramento County	2000
San Diego	2000
Sunnyvale	2000
Los Angeles	1999
Sacramento	1999
Yuba City	1999
Mountain View	1998
Colorado	
Durango (To retain)	2009
Project 7 Water Treatment Plan (To retain)	2009
Aspen (To retain)	2008
Erie	2008
Boulder (To retain)	2006
Fort Collins (To retain)	2005
Glenwood Springs (To retain)	2005
Fort Collins (To retain)	2003
Superior	2000
Colorado Springs	1999
Fort Morgan	1999
Canon City	1998
Florida	
Plant City	2010
Deland (To retain)	2009
Fellsmere	2009
Gainesville (To retain)	2009
Port Orange (To retain)	2009
Brooksville (To retain)	2008
Stuart (To retain)	2008
Daytona Beach (To retain)	2007
Palm Beach (To retain)	2006
Eustis (To retain)	2005
Stuart	2005
Pinellas County Utilities	2003
Palm Beach County Water Utilities	2003
Jefferson Communities	2002
Martin County	2002
Bartow	2001
Chattahoochee	2001
Orange County	2001

Boynton Beach	2000
Fellsmere	2000
Flagler County	2000
Ocean Ridge	2000
Wellington	2000
Eatonville	1999
North Brevard County	1999
Wellington	1999
Bradenton	1998
Escambia County (Pensacola)	1998
Pompano Beach	1998
Georgia	
Big Canoe	2009
Jeffersonville	2001
Manor Water Authority	2001
Odom	2001
Senoia	2001
Hawaii	
Lanai	2001
Idaho	
Sandpoint (To retain)	2009
Indiana	
Greensburg	2009
Rockville	2001
Seelyville	2001
Connersville	2000
Carlisle	1998
Iowa	
Dubuque (To retain)	2010
Iowa City (To retain)	2010
Vinton City (To retain)	2009
Hampton (To retain)	2006
Rock Valley	2000
Kansas	
Parsons City	2008
Garden City	2005
Leavenworth	2000
Hesston	1999
Kanopolis	1999
Newton	1999
Abilene	1998
Kentucky	
Arlington	2003
Louisiana	
Crowley (To retain)	2009
Walker	2007
Crowley	2004
Plaquemines Parish	1998
Maine	
Island Falls	2009
Vinalhaven	2008

Bangor (To retain)	2007
Jackman (To retain)	2006
Moose River (To retain)	2006
Arundel	2002
Berwick	2002
Biddeford	2002
Boothbay	2002
Boothbay Harbor	2002
Kennebunk	2002
Kennebunkport	2002
Ogunquit	2002
Southport	2002
Wells	2002
York	2002
Monmouth	2001
Dover-Foxcroft	2000
Freeport	1999
South Freeport	1999
Maryland	
Northeast	2009
Cumberland	2000
Frostburg	2000
Loch Lynn	2000
Mountain Lake	2000
Boonesboro	1999
Keedysville	1999
Middletown	1999
Massachusetts	
Athol (To retain)	2009
North Attleboro (To retain)	2007
Long Meadow (To retain)	2007
New Bedford	2006
North Attleboro (To retain)	2005
Woburn	2002
North Attleboro	2000
Rowley	1998
Wayland	1998
Michigan	
Marine City (To retain)	2010
Pinckney	2010
Dexter	2009
Port Huron (To retain)	2008
New Baltimore (To retain)	2008
Grand Ledge	2006
Mt. Pleasant	2005
St. Ignace (To retain)	2005
Grayling	2004
Union City	2004

Mississippi

City of Bay St. Louis	2010
City of Bruce	2010
City of Waveland	2010
D'Iberville Water and Sewer	2010
Hancock Water and Sewer	2010
Harmony Water Association	2010
Hotophia Water Association	2010
Improve Water Association	2010
Kiln Water and Fire	2010
Leesburg Water Association	2010
Naval Construction Battal	2010
New Hope Water Association	2010
Northeast Copiah Water Association	2010
Pearlington Water Association	2010
Rose Hill Water Association	2010
Sparta Water Association	2010
Town of Derma	2010
Kossuth Water Association	2009
Fisher Ferry Water System	2009
Alcorn State University	2009
Beat III Water Association	2007
Central Yazoo Water Association	2007
City of Itta Bena	2007
City of Nettletown	2007
City of Pascagoula	2007
Diamondhead Utilities	2007
Double Ponds Water Association	2007
Glendale Utility District	2007
Hilton Heights Water Association	2007
Hopewell Water Association	2007
Marydell Water Association	2007
Smith's Crossing Water Association	2007
Southwest Leake Water Association	2007
Sunrise Utilities	2007
Town of Ackerman	2007
Town of Baldwyn	2007
Town of Wesson	2007
Westwick Utilities	2007
Guntown	2006
Lebanon Water Association	2006
Puckett	2006
Quincy Water Association	2006
University of MS at Oxford	2005
Collinsville	2005
Pontotoc	2005
Maben	2005
Ashland	2005
Prairie Land Water Assoc.	2005
Alcorn Water Association	2004
Buffalo (To retain)	2004

Cason Water Association	2004
Combined Utilities	2004
Farmington Water Association	2004
Freney Water Association	2004
Greenfield Water Association	2004
City of Iuka	2004
City of McComb	2004
Okatoma Water Association	2004
City of Petal	2004
City of Picayune	2004
Town of Port Gibson	2004
City of Richland	2004
North Lauderdale Water Association	2004
Town of Summitt	2004
Town of Tchula	2004
Topisaw Creek	2004
West Lamar Water Association	2004
Missouri	
Bolivar (To retain)	2010
St. Roberts (To retain)	2009
Keytesville	2006
Stockton (To retain)	2006
Carl Junction	2005
Jefferson City (To retain)	2005
Joplin	2004
Webb City	2004
Osage Beach	2001
Buffalo	2000
Monett	2000
Montana	
Two Medicine Water Project	2008
Chester	2001
Nebraska	
Gretna	2010
Alma	2008
Ashland	2008
Crete	2008
Dakota City	2008
Franklin	2008
North Bend	2008
Seward	2008
Wahoo	2008
Wisner	2008
Wakefield	2008
Yutan	2008
York	2002
Waterloo	1999
Waverly	1998
Nevada	
Clark County/Las Vegas (To retain)	2000

Clark County/Las Vegas (state law passed)	1999
New Hampshire	
Bedford (To retain)	2004
Goffstown (To retain)	2004
Hooksett (To retain)	2004
Londonderry (To retain)	2004
Manchester (To retain)	2004
Manchester	1999
New Jersey	
Atlantic City	2008
Jersey City	2002
South Brunswick	1999
New York	
Walden (To retain)	2010
Cohleskill	2009
Plattsburg (To retain)	2009
Poughkeepsie Joint Water Board	2007
Corning	2006
Middletown	2003
Dansville	2000
North Carolina	
Broad River Water Authority (To retain)	2009
Nano-Filtration Plant, Cape Fear Public Utility Authority	2009
Asheville (To retain)	2008
Hendersonville (To retain)	2008
Franklinton	1998
MOASA/Vass	1998
Richmond County	1998
North Dakota	
Glen Ullin	1998
Hebron	1998
Hettinger	1998
Jud	1998
Monango	1998
New England	1998
Northwood	1998
Reeder	1998
Ohio	
Northern Area Water Authority	2007
Delaware	2000
Oklahoma	
Stigler	2009
Pawhuska (To retain)	2009
Haskell County	2005
Coalgate	2001
Pittsburg	2001
Pittsburg County Rural Water District	2001
City of Woodward	2000
Pittsburg County Public Works Authority	2000
Okemah	1999

Pittsburg County Water Authority	1999
Oregon	
Keizer (To retain)	2010
McMinnville (To retain)	2010
Beaverton	2002
Lebanon	2000
Pennsylvania	
Pottstown (To retain)	2009
Erie	2001
Allentown	1999
Allentown	1998
South Carolina	
Dillion (To retain)	2007
Tennessee	
Selmer (To retain)	2009
Shelbyville City (To retain)	2009
Union City (To retain)	2009
South Blount County	2008
Texas	
Sequin	2009
Sulphur Springs (To retain)	2008
Elgin	2007
Del Rio (To retain)	2006
Alamo Heights	2004
Abilene	2000
San Antonio	2000
Utah	
Davis County (Layton) (To retain)	2004
Salt Lake County (Salt Lake City)	2000
Davis County (Layton)	2000
Vermont	
Proctor (To retain)	2010
Newbury (To retain)	2009
Bradford (To retain)	2008
Randolph (To retain)	2008
Rutland (To retain)	2008
Bellows Falls (To retain)	2006
Montpelier (To retain)	2006
Burlington (To retain)	2005
Pownal	2000
Hinesburg	1999
Randolph	1998
Virginia	
Staunton (To retain)	2009
Timberville (To retain)	2009
Brookneal	2007
Cumberland County	2007
Washington	
Pasco	2009
Skagit County	2006
Lakewood	2004

Sultan	2003
Port Angeles	2003
Pierce County	2002
Puyallup	2002
Aberdeen	1998
Pasco	1998
Yakima County	1999
West Virginia	
Clarksburg (To retain)	2009
Clay Municipal Water Works	2007
Wisconsin	
Amery (To retain)	2010
Poynette	2009
Elroy (To retain)	2008
Fond du Lac (To retain)	2008
Holmen	2008
Antigo (To retain)	2006
Mellen	2002
Arena	2001
Horicon (to retain)	2001
Lake Delton	2001
Hurley	1999
LaValle	1998
Merrimac	1998
Rock Springs	1998

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Community Water Fluoridation: Questions and Answers

The U.S. Department of Health and Human Services is proposing a change to the recommendation for the optimal fluoride level in drinking water to prevent tooth decay. The new recommendation, 0.7 milligrams of fluoride per liter of water, replaces the previous recommended range of 0.7 to 1.2 milligrams per liter. There are several reasons for this change, including that Americans have access to more sources of fluoride than they did when water fluoridation was first introduced in the United States. The new guidance will update and replace original recommendations provided in 1962 by the U.S. Public Health Service.

This fact sheet provides information on community water fluoridation, as well as current federal activities to update guidance and regulations on community water fluoridation.

1. What is fluoride?
2. Why is fluoride added to water and toothpaste?
3. How does fluoride work to prevent tooth decay?
4. What is community water fluoridation?
5. Why is the Department of Health and Human Services (HHS) developing new recommendations for community water fluoridation?
6. How is HHS developing new recommendations?
7. How were the recommended levels previously set for fluoride in drinking water?

Fluoride in drinking water and toothpaste more generally:

8. How does fluoride get into tap water?
9. Does my public water system add fluoride to the water?
10. Why is EPA's drinking water standard (referred to as the MCL or MCLG) different than HHS' recommended optimal fluoridation level for community drinking water systems?
11. What is dental fluorosis?
12. Since the optimal level of 0.7 milligrams per liter of fluoride is a "recommended" level (i.e., not a nationwide level or EPA enforceable level) in community drinking water systems, how do I know whether my community has or will reduce the level of fluoride in my drinking water? Does it have to?
13. Why has exposure to fluoride increased?
14. In addition to water, what are other specific sources of fluoride?
15. Given that we get fluoride from other sources, is it still beneficial to fluoridate drinking water?
16. Why does HHS think that .7 milligrams of fluoride per liter of water is appropriate?

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21. Is my child getting an appropriate amount of fluoride from drinking water and tooth brushing?
22. What are the drinking water standards for maximum levels of fluoride? What do you mean by an MCL, an MCLG, and a secondary standard for fluoride? What is the difference?
23. Has the safety of fluoridation been evaluated?

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26. Should I reduce the number of times I brush my teeth daily?
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29. If they both contain fluoride, how can they work differently?
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31. Are there methods I can use to remove fluoride from my drinking water at home? For example, boiling or use of commercially available water filters and units?
32. Is there fluoride in infant formula? Should I try to remove fluoride from infant formula?
33. Is fluoride present in mouthwash and dental whitening products?
34. Does bottled water contain fluoride?

There is some potential for developing dental fluorosis when children consume fluoride during the time when teeth are forming under the gums (birth through age 8). To help prevent both tooth decay and dental fluorosis, the Centers for Disease Control and Prevention (CDC) recommends the following:

For parents: Children younger than 6 years have a poor swallowing reflex and tend to swallow much of the toothpaste on their brush. Toothpaste that is swallowed (but not toothpaste that is spit out) contributes to a child's total fluoride intake. Therefore:

As soon as the first tooth appears, begin cleaning by brushing without toothpaste with a small, soft-bristled toothbrush and plain water after each feeding. Begin using toothpaste with fluoride when the child is 2 years old. Use toothpaste with fluoride earlier if your child's doctor or dentist recommends it.

- Do not brush your child's teeth more than 2 times a day with a fluoride toothpaste,
- Apply no more than a pea-sized amount of toothpaste to the toothbrush, and
- Supervise your child's tooth brushing, encouraging the child to spit out toothpaste rather than swallow it. Additional information is available on-line:
<http://www.cdc.gov/oralhealth/publications/factsheets/brushup.htm>
- If your child's pediatrician or dentist prescribes a fluoride supplement (or vitamin supplement that contains fluoride), ask him or her about any risk factors your child has for decay and the

potential for dental fluorosis. If you live in an area with fluoridated water, fluoride supplements are not recommended.

- You can use fluoridated water for preparing infant formula. However, if your baby is exclusively consuming infant formula reconstituted with fluoridated water, there is an increased potential for mild dental fluorosis. Additional information can be found in a CDC fact sheet on infant formula: http://www.cdc.gov/fluoridation/safety/infant_formula.htm

For health professionals:

- Fluoride supplements can be prescribed for children at high risk of tooth decay whose primary drinking water has a low fluoride concentration. For children under 8, weigh the risk for decay without fluoride supplements, the decay prevention offered by supplements, and the potential for dental fluorosis.
- Counsel parents and caregivers on the use of fluoride toothpaste by young children, especially those younger than 2 years. Fluoride toothpaste is a cost-effective way to reduce the prevalence of tooth decay. However, because they do not have a well-developed swallowing reflex and may like the taste of the toothpaste, young children often swallow a large portion of the toothpaste put on their brush.
- The prescription dose of fluoride supplements should be consistent with the schedule established by the American Dental Association, the American Academy of Pediatric Dentistry, and the American Academy of Pediatrics.

1. What is fluoride?

Fluoride is a naturally occurring mineral that is proven to protect against tooth decay.

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2. Why is fluoride added to water and toothpaste?

Fluoride's action in preventing tooth decay benefits both children and adults throughout their lives. The health benefits of fluoridation are—

- Fewer cavities and less severe cavities.
- Less need for fillings and tooth extractions.
- Less pain and suffering associated with tooth decay.

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3. How does fluoride work to prevent tooth decay?

Fluoride works by stopping or even reversing the tooth decay process. It keeps tooth enamel strong and solid. Tooth decay is caused by certain bacteria in the mouth. When a person eats sugar and other refined carbohydrates, these bacteria produce acid that removes minerals from the surface of the tooth. Fluoride helps to remineralize tooth surfaces and prevents cavities from continuing to form.

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4. What is community water fluoridation?

Almost all water contains some naturally occurring fluoride, but usually at levels too low to prevent tooth decay. Many communities choose to adjust the fluoride concentration in the water supply to a level beneficial to reduce tooth decay and promote good oral health. This practice is known as community water fluoridation. Given the dramatic decline in tooth decay during the past 65 years, the Centers for Disease Control and Prevention (CDC) named water fluoridation one of **Ten Great Public Health Interventions of the 20th Century**.

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5. Why is the Department of Health and Human Services (HHS) developing new recommendations for community water fluoridation?

Sources of fluoride have increased since the early 1960s. At that time, drinking water and food and beverages prepared with fluoridated water accounted for nearly all of an individual's fluoride intake. Today, water is just one of several sources of fluoride. Other sources include dental products such as toothpaste and mouth rinses, prescription fluoride supplements, and professionally applied fluoride products such as varnish and gels. Recognizing that it is now possible to receive enough fluoride with slightly lower levels of fluoride in water, the HHS set out to develop new recommendations for community water fluoridation.

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6. How is HHS developing new recommendations?

In September 2010, the Department of Health and Human Services convened a panel of scientists from across the U.S. government to review new information related to fluoride intake and to develop new recommendations for community water fluoridation.

The scientists reviewed the best available information on: the prevalence and trends in dental caries, water intake in children in relation to outdoor air temperature, changes in the percentage of U.S. children and adults with dental fluorosis, and the U.S. Environmental Protection Agency's (EPA) new assessments of cumulative sources of fluoride exposure and risks of children developing severe dental fluorosis.

This new information led HHS to propose changing the recommended level for community water systems to 0.7 milligrams per liter.

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7. How were the recommended levels previously set for fluoride in drinking water?

In 1962, based on scientific studies showing that fluoride reduces tooth decay, the U.S. Public Health Service recommended the amount of fluoride in drinking water range from 0.7 to 1.2 milligrams per liter. Scientists set the range by taking into account different levels of children's fluid intake

according to the average annual temperature in different regions of the United States—less fluoride was added in warmer, southern climates where it was believed that people drank more water, and more was added in cooler, northern climates where it was believed that people drank less. Over the past several decades, many factors, including the advent of air conditioning, have reduced geographical differences in water intake.

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8. How does fluoride get into tap water?

Fluoride can occur in drinking water naturally as a result of the geological composition of soils and bedrock. Some areas of the country have high levels of naturally occurring fluoride. Fluoride can also be added to public drinking water supplies as a public health measure for reducing cavities. The decision whether or not to add fluoride to drinking water is made at the state or local level. Consumers served by public water systems who wish to learn about fluoridation of their drinking water can visit the CDC's "My Water's Fluoride" Web site at <http://apps.nccd.cdc.gov/MWF/Index.asp>.

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9. Does my public water system add fluoride to the water?

If you have questions about whether your community has fluoridated water, you can call your public water system. If you live in one of the 39 states that participate in the CDC's "My Water's Fluoride" program, you can go online and find information on your water system's fluoridation status. The best way to find the fluoride level of your local public water system is to contact your water utility provider for more information. Consumers can find the name and contact information of the water utility on their water bill.

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10. Why is EPA's drinking water standard (referred to as the MCL or MCLG) different than HHS' recommended optimal fluoridation level for community drinking water systems?

EPA's drinking water standard differs from HHS' recommended optimal fluoridation level because the two benchmarks have different purposes and are set under different authorities. The EPA's enforceable standard for the highest level of fluoride that is allowed in public water supplies is 4.0 milligrams per liter, and is set to protect against risks from exposure to too much fluoride. The HHS proposed recommended optimal level of 0.7 milligrams per liter is set to promote public health benefits of fluoride for preventing tooth decay while minimizing the chance for dental fluorosis.

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11. What is dental fluorosis?

Dental fluorosis is a change in the appearance of the tooth's enamel. It can result when children regularly consume higher-than-recommended amounts of fluoride during the teeth forming years, age

8 and younger. Most dental fluorosis in the U.S. – about 92 percent – is very mild to mild, appearing as white spots on the tooth surface that in many cases only a dental professional would notice.

Moderate and severe forms of dental fluorosis, which are less common, cause more extensive enamel changes. In the rare, severe form, pits may form in the teeth. The severe form rarely occurs in communities where the level of fluoride in water is less than 2 milligrams per liter.

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12. Since the optimal level of 0.7 milligrams per liter of fluoride is a “recommended” level (i.e., not a nationwide level or EPA enforceable level) in community drinking water systems, how do I know whether my community has or will reduce the level of fluoride in my drinking water? Does it have to?

This optimal level recommendation is voluntary. If your local water system adds fluoride to the water, reducing the level is a simple process that can be completed almost immediately, although it may be several days before the entire water system is at the new level. If you want the most up-to-date information about the current fluoride level in your water, contact your local water system.

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13. Why has exposure to fluoride increased?

Exposures to fluoride have increased since the early 1960s. At that time, drinking water and food and beverages prepared with fluoridated water accounted for nearly all of an individual's fluoride intake. Today, exposure to fluoride comes from more sources including fluoridated dental products such as toothpaste and mouthwash, as well as the voluntary addition of fluoride to drinking water, which some systems do as a public health measure for reducing tooth decay.

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14. In addition to water, what are other specific sources of fluoride?

Fluoridated toothpaste is another main source of fluoride intake. Other fluoride-containing dental products are applied or prescribed by a health care professional such as gels, varnishes, pastes, and restorative materials. These products are used only occasionally on the outside of the tooth and do not contribute much to the total intake of fluoride. Small amounts of fluoride can also come from industrial emissions, pharmaceuticals, and pesticides.

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15. Given that we get fluoride from other sources, is it still beneficial to fluoridate drinking water?

Yes, water fluoridation is beneficial for reducing and controlling tooth decay and promoting oral health in children and adults. Recent estimates of reductions in tooth decay can be credited to community water fluoridation. Fluoride in drinking water provides some protection from tooth decay to all people who drink fluoridated water or eat food or drink beverages prepared in areas with fluoridated water. Additional information is available online at

<http://www.thecommunityguide.org/oral/fluoridation.html>

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16. Why does HHS think that 0.7 milligrams per liter is appropriate?

HHS has reviewed extensively the scientific literature on the relationship between fluoride and oral health. The optimal level of fluoride in drinking water provides enough fluoride to prevent tooth decay in children and adults while limiting the possibility for children to develop dental fluorosis in teeth that are forming under the gums. Analyses of national survey data show a gradual decline in tooth decay as fluoride content in water increases from very low levels to the recommended level of 0.7 milligrams per liter. However, there were limited changes in tooth decay as the level of fluoride in drinking water increased to 1.2 milligrams per liter. In contrast, the percentage of children with dental fluorosis increased as the fluoride concentration in water increased.

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17. What are the adverse health effects of excessive fluoride exposure?

Children under age 8 and younger exposed to excessive amounts of fluoride have an increased chance of developing pits in the tooth enamel. Excessive consumption of fluoride over a lifetime may increase the likelihood of bone fractures, and may result in effects on bone leading to pain and tenderness, a condition called skeletal fluorosis. Severe skeletal fluorosis is a rare condition in the United States. The EPA exposure analysis suggests that the effects on bone in adults are of greatest concern for those living in areas with high natural background levels of fluoride and favoring beverages, such as tea, that are high in fluoride.

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18. Are children or adults exposed to too much fluoride?

Based on the data evaluated in this risk assessment, EPA concludes that it is likely that some children 8 and younger are exposed to too much fluoride at least occasionally while their teeth are forming because of their high fluid intake relative to their body weight and/or because of high natural levels of fluoride in their local drinking water. The impact of overexposure on the risk for pitting of enamel in one or more teeth depends on the frequency and duration of the overexposures.

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19. Who is at risk from excessive fluoride exposure?

Children are most likely to be affected by excessive exposure to fluoride because it impacts teeth while they are still in formative phases (birth through formation of the wisdom teeth). EPA's risk assessment compared age-specific exposure estimates to the fluoride dose associated with pitted enamel and found that children 8 and younger may be those most at risk. The maximum dose that is protective for children will also protect adults from long-term effects on bone.

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20. What are the effects of excess levels of fluoride and why are they different for children and adults different?

Adults exposed to excessive consumption of fluoride over a lifetime may have increased likelihood of bone fractures, and may result in effects on bone leading to pain and tenderness. For effects to teeth, children are most likely to be affected by excessive exposure to fluoride because it impacts teeth while they are still in formative phases. Children aged 8 years and younger exposed to excessive amounts of fluoride have an increased chance of developing pits in the tooth enamel, along with a range of cosmetic effects to teeth. For prevention of tooth decay, the beneficial effects of fluoride extend throughout the life span.

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21. Is my child getting an appropriate amount of fluoride from drinking water and tooth brushing?

Yes, if you and your child are among the 196 million Americans who receive their water from an optimally fluoridated community water system (0.7 to 1.2 milligrams per liter) and you follow guidelines in your child's toothbrushing, then it is highly unlikely that your child is receiving too much fluoride. CDC recommends that children under 6 who are using fluoride toothpaste should use a small, pea-sized amount on the brush, spit out the excess paste, and rinse well after brushing. Begin using toothpaste with fluoride when your child is 2 years old. Use toothpaste with fluoride earlier only if your child's doctor or dentist recommends it. You can discuss the correct use of fluoride treatments and fluoride-containing toothpaste with your child's dentist. In addition, you can go to CDC's website to learn how young children can use fluoride-containing products to prevent dental fluorosis. See **Brush Up on Healthy Teeth**.

In some regions in the U.S., community drinking water and home wells can contain levels of naturally occurring fluoride that are greater than the optimal levels recommended by the CDC for prevention of tooth decay. EPA currently has a non-enforceable recommended guideline for fluoride of 2.0 mg/L that is set to protect against cosmetic effects. If your home is served by a water system that has fluoride levels exceeding this recommended guideline, current EPA recommendations are that children should be provided with alternative sources of drinking water.

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22. What are the drinking water standards for maximum levels of fluoride? What do you mean by an MCL, an MCLG, and a secondary standard for fluoride? What is the difference?

The current enforceable drinking water standard for fluoride is 4.0 mg/L. This is the maximum amount that is allowed in water from public water systems, also called the Maximum Contaminant Level (MCL). The MCL is set to be as close to the public health goal as EPA finds may be achieved with the use of the best available technology, taking cost into consideration.

The public health goal, called a Maximum Contaminant Level Goal (MCLG), is not enforceable and is based solely on possible health risks and exposure over a lifetime. For fluoride, analytical methods or treatment technology do not pose any limitation so the MCL currently equals the MCLG of 4.0.

A secondary standard is a non-enforceable guideline to regulate contaminants that may cause

cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color of drinking water). EPA recommends secondary standards to water systems but does not require systems to comply. For fluoride, the secondary standard is 2.0 mg/L.

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23. Has the safety of community water fluoridation been evaluated?

The safety and effectiveness of fluoride at levels used in community water fluoridation has been thoroughly documented by scientific and public health organizations using scientific reviews and expert panels. These expert panels consist of scientists from the United States and other countries with expertise in various health and scientific disciplines, including oral health, medicine, biophysics, chemistry, toxicological pathology, and epidemiology. Experts have weighed the findings and the quality of the available evidence and found that the weight of peer-reviewed scientific evidence does not support an association between water fluoridation and any adverse health effect or systemic disorders.

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24. What can I do to limit my exposure to fluoride?

Talk with your dentist about the best use of fluoride to prevent tooth decay. In adults in the U.S., there is little concern about unwanted health effects even from the combined level of fluoride from all sources. The main sources of fluoride intake for a child are from swallowing toothpaste and from water. Fluoride toothpaste is effective for preventing tooth decay and does not contribute to fluorosis unless it is swallowed. Because children under 6 have poor control of their swallow reflex, they tend to swallow much of the toothpaste on their brush. Parents or caregivers should supervise their child's tooth brushing, ensuring that the child uses only a small pea-sized amount of paste, spits out the excess paste, and rinses well after brushing.

Water fluoridation is beneficial for reducing and controlling tooth decay and promoting oral health in children and adults. Recent estimates of reductions in tooth decay can be credited to community water fluoridation. You can check with your local water supplier to see how much fluoride is in your drinking water.

Consumers served by private wells may want to have their water tested by a state certified laboratory. You can find one by contacting your state water certification officer. Contact information for your state can be found at <http://water.epa.gov/scitech/drinkingwater/labcert/>

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25. Should my children stop brushing their teeth with fluoride toothpaste?

Children over 2 years old should continue to brush their teeth with their usual fluoride containing toothpaste. Questions specific to your own child should be discussed with your child's dentist or pediatrician. See parent tips at **Brush Up on Healthy Teeth**.

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26. Should I reduce the number of times I brush my teeth daily?

Continue to brush your teeth at least twice a day. Adults and children 2 years of age and older should brush their teeth preferably after each meal or at least twice a day, or as directed by a dentist or doctor.

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27. Should I refuse fluoride treatments at the dentist?

Your dentist will recommend fluoride treatments during a dental visit if it is the right treatment for you or your child. Professionally applied fluoride treatments are an effective way to prevent tooth decay. Discuss with your dentist whether you need fluoride treatments, and if so, how often they are advised for you.

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28. If I am drinking water with fluoride, why do I also need to brush with toothpaste that contains fluoride?

The combined use of fluoride toothpaste and fluoridated water offers protection above using either separately. Toothpaste contains a higher concentration of fluoride. Fluoride in drinking water is diluted, but it comes in contact with the teeth every time you drink tap water or beverages made from tap water, as well as foods prepared with tap water. This provides your teeth with a near constant (or continuous) exposure to fluoride all day. Use of both fluoridated water and fluoridated toothpaste is recommended because fluoride in water and fluoride in toothpaste work differently to help prevent tooth decay.

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29. If they both contain fluoride, how can they work differently?

Both drinking water and toothpaste provide important and complementary benefits. The drinking water provides long low-level protection, but the fluoride in toothpaste is at a high enough concentration that it has additional properties. Whether in water or toothpaste, fluoride works in two main ways: by slowing the activity of bacteria that cause decay, and by combining with the enamel on the surface of the teeth to make it stronger and more resistant to decay. Fluoride in the water, although at a lower concentration than in toothpaste, maintains a constant low level of fluoride in the dental plaque and saliva all day. Toothpaste provides a high level of fluoride, but only for 1-2 hours after brushing, so the water exposure during the remainder of the day takes over after that.

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30. Does toothpaste contain too much fluoride to be recommended for children?

All fluoridated toothpastes that can be purchased without a prescription are safe and effective for individuals ages 2 and older.

Back to Top**31. Are there methods I can use to remove fluoride from my drinking water at home? For example, boiling or use of commercially available water filters and units?**

The typical charcoal-based water filtration systems used in most homes do not remove fluoride from water. Boiling water does not remove fluoride. More costly distillation and reverse osmosis are treatment methods that have proven to be effective for removing fluoride to below 4.0 mg/L. If you choose to use home water treatment, make sure that the filter you use is certified to address your concerns. There are several independent American National Standards Institute (ANSI) certified organizations that test and certify home water treatment units. More information about these organizations and other issues related to your water safety can be found at

http://water.epa.gov/drink/info/upload/2005_11_17_faq_fs_healthseries_filtration.pdf (PDF-1.2M)

Back to Top**32. Is there fluoride in infant formula? Should I try to remove fluoride from infant formula?**

All formulas, either concentrates or ready-to-feed, have some fluoride, but most infant formula manufacturers develop their products to ensure low levels of fluoride. A recent study by the American Dental Association (ADA) confirmed that fluoride concentrations in commercially available infant formulas are very low. It is not possible to remove this small amount of fluoride by filtering or boiling the formula; however, at normal consumption amounts, infant formula alone does not contain fluoride at levels that would be higher than the daily upper limit established by the Institute of Medicine. In liquid or powdered infant formula concentrate, the majority of fluoride comes from the water used to mix the formula. Some parents may choose to use bottled water. To learn more, check out the CDC's **Bottled Water and Fluoride** and FDA's Website:

<http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm203620.htm/>

Back to Top**33. Is fluoride present in mouthwash and dental whitening products?**

Some mouthwashes contain fluoride, and if so, are clearly labeled that way. Fluoride in mouthwashes can be another way to obtain the decay-preventing benefit of fluoride. Fluoride-containing mouth rinses are safe and effective when used as directed. Note that children under 6 should not use fluoride mouth rinses, unless directed by a dentist. Most dental whitening products do not contain fluoride and the decay preventing effectiveness of those that do is not currently known.

Back to Top**34. Does bottled water contain fluoride?**

Bottled water products labeled as de-ionized, purified or distilled have been treated in such a way that they contain no or only trace amounts of fluoride, unless they specifically list fluoride as an added ingredient. Other bottled water products (such as spring water) can contain fluoride that is added or naturally present in the original source of the water. FDA sets limits for fluoride in bottled water

based on several factors, including the source of the water. These limits range from 0.8 to 2.4 milligrams per liter. To learn more, check out the CDC's **Bottled Water and Fluoride** and FDA's Website: <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm203620.htm>

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Page Located on the Web at http://www.cdc.gov/fluoridation/fact_sheets/cwf_qa.htm

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
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Fluoridation Basics

Overview

Nearly all naturally occurring water sources contain fluoride—a mineral that has been proven to prevent, and even reverse, tooth decay.

Tooth decay is caused by certain bacteria in the mouth. When a person eats sugar and other refined carbohydrates, these bacteria produce acid that removes minerals from the surface of the tooth. Fluoride helps to remineralize tooth surfaces and prevents cavities from continuing to form.

Fluoridation Beginnings

In the 1930s, dental scientists documented that the occurrence and severity of tooth decay was lower among people whose water supplies contained higher levels of natural fluoride. Extensive studies followed and discovered that fluoride, when present in the mouth, can become concentrated in plaque and saliva, helping to prevent the breakdown of enamel minerals. In 1945, the city of Grand Rapids, Michigan, added fluoride to its municipal water system. Community water fluoridation—adjusting the amount of fluoride in an area's water supply to a level that helps to prevent tooth decay and promote oral health—had begun. Since then, numerous scientific studies and comprehensive reviews have continually recognized fluoridation as an effective way to prevent tooth decay.

Benefits of Fluoridation

Water fluoridation prevents tooth decay mainly by providing teeth with frequent contact with low levels of fluoride throughout each day and throughout life. Even today, with other available sources of fluoride, studies show that water fluoridation reduces tooth decay by about 25 percent over a person's lifetime.

Community water fluoridation is not only **safe and effective**, but it is also **cost-saving** and the least expensive way to deliver the benefits of fluoride to all residents of a community. For larger communities of more than 20,000 people, it costs about 50 cents per person to fluoridate the water. It is also cost-effective because every \$1 invested in this preventive measure yields approximately \$38 savings in dental treatment costs.

This method of fluoride delivery benefits all people—regardless of age, income, education, or socioeconomic status. A person's income and ability to get routine dental care are not barriers since all residents of a community can enjoy fluoride's protective benefits just by drinking tap water and consuming foods and beverages prepared with it.

Fluoride from other sources prevents tooth decay as well, whether from toothpaste, mouth rinses,

professionally applied fluoride treatments, or prescription fluoride supplements. These methods of delivering fluoride, however, are more costly than water fluoridation and require a conscious decision to use them.

Fluoridation Today

Currently, more than 204 million people in the United States are served by community water supplies containing enough fluoride to protect teeth. Even so, approximately 100 million Americans do not have access to fluoridated water. *Healthy People* is the plan that sets health goals for the nation. This plan calls for 79.6 percent of the population to be served by optimally fluoridated community water systems by 2020. The current population with access to fluoridated water is 73.9 percent.

The widespread availability of fluoride through water fluoridation, toothpaste, mouth rinses, and other sources, however, has resulted in the steady decline of dental caries throughout the U.S.

Related Links

Community Water Fluoridation: Questions and Answers
Community Water Fluoridation Fact Sheets

Date last reviewed: April 27, 2012

Date last updated: April 27, 2012

Content source: **Division of Oral Health, National Center for Chronic Disease Prevention and Health Promotion**

Page Located on the Web at <http://www.cdc.gov/fluoridation/benefits/background.htm>

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™



Preventing Dental Caries with Community Programs

The Reality

- Although dental caries (tooth decay) is largely preventable, it remains the most common chronic disease of children aged 6 to 11 years (25%), and adolescents aged 12 to 19 years (59%). Tooth decay is four times more common than asthma among adolescents aged 14 to 17 years (15%).
- Once established, the disease requires treatment. A cavity only grows larger and more expensive to repair the longer it remains untreated.
- Fewer than 1 of 3 children enrolled in Medicaid received at least one preventive dental service in a recent year. Many states provide only emergency dental services to Medicaid-eligible adults.
- Many adults also have untreated tooth decay (e.g., 28% of those 35 to 44 years and 18% of those 65 and older).

Community-based Strategies Prevent Tooth Decay

Community Water Fluoridation

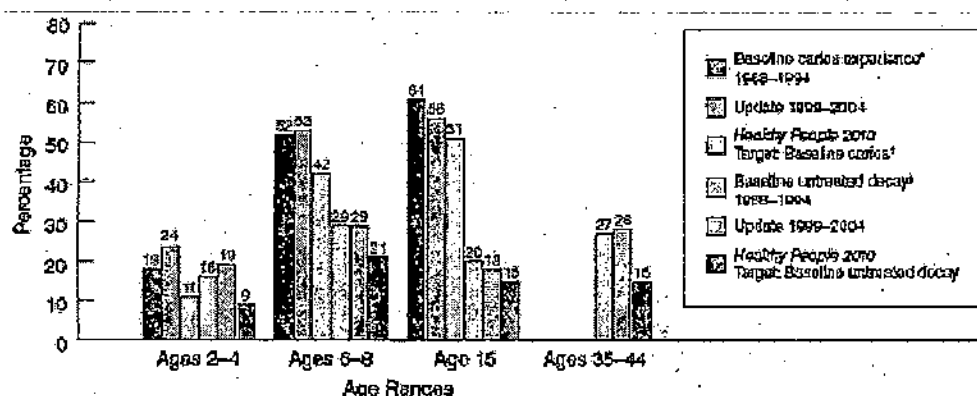
- CDC recognizes community water fluoridation as one of 10 great public health achievements of the 20th century.
- Community water fluoridation still prevents tooth decay even though people now also get fluoride from other sources such as toothpaste, rinses, and other topical applications at the dental office.
- As of 2010, 73.9%—204.3 million Americans—are receiving the benefits of community water fluoridation.

School-based Sealant Programs

- Children receiving dental sealants in school-based programs have 60% fewer new decay in the pit and fissure surfaces of back teeth (90% of decay is in pits and fissures).
- School-based sealant programs provide sealants to children unlikely to receive them otherwise (e.g., children in low-income households). Children of racial and ethnic minority groups have twice as much untreated decay in their permanent teeth, but only receive about half as many dental sealants.
- 36 states reported dental sealant programs serving 258,000 children. This number, however, represents only about 8% of lower income children who could receive sealants.

Page Located on the Web at

Meeting Healthy People 2010 Objectives



* One or more teeth with untreated or filled carious lesions (dental decay).

† There is no Healthy People 2010 objective for adult caries; 95% of adults (aged 20 to 64 years) who have one or more natural teeth have experienced tooth decay.

‡ One or more teeth with untreated carious lesions (dental decay).

Source: Healthy People 2010.

Table I. Meeting Healthy People 2010 Objectives (Source: Healthy People 2010)

	Ages 2-4	Ages 6-8	Age 15	Ages 35-44
Baseline caries experience 1988-1994				
Having one or more teeth with untreated or filled carious lesions (dental decay).	18	52	61	No data
Update 1999-2004	24	53	56	No data
Healthy People 2010 Target: Baseline caries				
(There is no Healthy People 2010 objective for adult caries; 95% of adults [aged 20 to 64 years] who have one or more natural teeth have experienced tooth decay.)	11	42	51	No data
Baseline untreated decay				
(Having one or more teeth with untreated carious lesions [dental decay])	16	29	20	27
Update 1999-2004	19	29	18	28
Health People 2010 Target: Baseline untreated decay	9	21	15	15

Source: Health People 2010

Community-based Strategies to Save Money

- Every dollar spent for community water fluoridation saves from \$8 to \$49 in treatment costs depending on the size of the community. Savings are greatest in large communities.
- Fluoridated water saves more than \$4.6 billion annually in dental costs in the United States.
- School-based dental sealant programs are cost saving when delivered to populations at high-risk for tooth decay, such as children in low-income households.

Effective Strategies

- Community and school partnerships raise awareness of the value of school sealant programs. Healthy Smiles for Wisconsin, a CDC-supported statewide effort to improve the oral health of

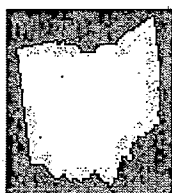
Wisconsin children through school and community partnerships, began in October 2000. This program helped to establish new community-based sealant programs, and in 2007â€“2008 these programs provided sealants to 9,202 children in 19 counties.

- Community coalitions are essential for gaining approval for community water fluoridation. During the past decade, broad-based citizen coalitions in several large U.S. cities have educated residents about the benefits of water fluoridation. Water fluoridation was approved in many of these jurisdictions, including Los Angeles and Sacramento, CA; Manchester, NH; Las Vegas, NV; San Antonio, TX; and Salt Lake City, UT.

Hope for the Future

Many Americans now enjoy markedly better oral health than their parents did. However, certain segments of the population (e.g., those who are poor, who are members of racial or ethnic minority groups, and who are elderly) still have severe tooth decay, much of which remains untreated. *Healthy People 2010* objectives seek to eliminate these disparities so that all Americans receive the benefits of good oral health. Community-based programs, such as community water fluoridation and school-based dental sealant programs, are an effective and cost-saving way to help achieve this goal. For example, increasing the percentage of children at high risk for tooth decay who participate in school sealant programs to 50% would prevent more than half of the caries that these children would otherwise have and save public health dollars.

State Programs in Action: Ohio



School-based sealant programs in Ohio began in 1984 with a single demonstration program in one city. By 2000, 34 of Ohio's 88 counties had programs. These programs target children who are at high risk for tooth decay and least likely to receive dental care.

As the program has expanded, the percentage of 8-year-olds statewide who have dental sealants has increased steadily, from 11% in 1987â€“1988 to 30% in 1998â€“1999 to 43% in 2007. Although this percentage still falls short of the *Healthy People 2010* objective of 50%, children from all demographic groups in schools with sealant programs have achieved or exceeded the objective.

The Ohio program has met only a portion of the need for dental sealants, but has already shown that school-based programs can reach children at high risk for tooth decay and could potentially reduce or eliminate racial and economic disparities in the prevalence of this effective preventive measure.



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Content source: **Division of Oral Health, National Center for Chronic Disease Prevention and**

Health Promotion

http://www.cdc.gov/oralhealth/publications/factsheets/dental_caries.htm

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
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Top Ten Facts

- Fluoride is a community health measure that benefits people of all ages, income levels, and ethnicity.
- Fluoride protects over 300 million people in more than 40 countries worldwide, with over 10,000 communities and 145 million people in the United States alone.
- Fluoride is a naturally occurring mineral in all water supplies and when adjusted to optimal levels, is effective in reducing tooth decay.
- Fluoride is not a medicine. Fluoride is a naturally occurring element and a nutrient. (Reference: Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride, 2004. National Academy Press, Washington DC)
- Multiple studies over the years done in several countries and the United States show that fluoridation can reduce tooth decay by 60% in baby teeth and up to 35% in adult teeth. When fluoride was discontinued, there were large increases in the incident of tooth decay, especially in children. (Reference: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm>)
- Poor children suffer disproportionately more cavities than middle or upper income children. Children from families earning less than \$20,000 annually have 10 times more unmet dental care needs than children from families earning \$50,000 annually.
- Water fluoridation is the best way to get fluoride. Topical application is better than nothing but not nearly as effective as water fluoridation. Pills are expensive and all too often not administered correctly.
- Water fluoridation is SAFE! Multiple studies show that adjustment to appropriate levels does not pose a health risk for the public. Fluoride at recommended levels has been used for more than 50 years with no side effects. Visit www.fluorideinfo.org for more information.
- Water fluoridation saves money! Do the math- it costs approximately 50 cents per person per year to receive fluoridated water in Arcata. One single filling for a cavity can be well over \$100!
- Oral health is a critical component of overall health and well-being. Good oral health is critical for quality of life and psychosocial health.

~~Anti-Fluoride distortions exposed!~~

FLUORIDE INFORMATION: IS FLUORIDE GOOD TO HAVE IN YOUR DRINKING WATER?

Straight Talk about Fluoride

There is a lot of information available about fluoride but the information is also sometimes conflicting. Some leads us to believe fluoride in drinking water is a good thing; and some says just the opposite! Even information in clear opposition claims to have solid scientific backing – how can this be? This situation led us to ask: How can a person make an informed decision about whether fluoride is good or bad when everything they hear is so conflicting?

This web site presents the best known, best substantiated and most truthful information about fluoride.

We are educators, medical and public health practitioners, dentists, parents and concerned citizens who have thoroughly researched the issues of fluoride in community water sources. We deeply care about dental health, safe drinking water, health equity across socio-economic groups and fiscal responsibility in homes and whole communities.

Many American Communities Want To Retain Fluoride in Their Drinking Water

There are many American communities that have had fluoridated drinking water for 50 years or more but recently some oppose having fluoride in community water, and in some cases have even tried to stop fluoridation! We believe the public needs current and reliable information to assist them in making an informed choice regarding this important public health decision, which could especially affect the health of those in our community who are most vulnerable to severe dental disease, and who have the least access to professional preventative and treatment services and who, along with taxpayers, would wind up paying for costly treatment instead of inexpensive prevention. Fluoride provides safe dental prevention in a cost effective way to our most vulnerable citizens. Read on for the truth on Fluoride in drinking water.

We Support Fluoride in our Community Water based on these Values

- It Promotes health for all community members even the disadvantaged and most vulnerable.
- Taking a community-wide and long-term approach to solving problems.
- Using our local and state tax dollars equitably and in a cost effective manner.
- Preventing disease.
- Making informed choices based on available evidence and its relevance to our community's situation.
- Recognizing that public health measures have been of great benefit to the community, but that they need to meet a high standard of safety and efficacy and should not constitute an insurmountable burden to those who object to them for personal reasons.
- Understanding that any policy involves a balance between risk, cost, and benefit.
- Understanding that there can be no absolute certainty in public health matters, but that there

are reasonable standards of evidence that most of our community can accept to use in making policy decisions.

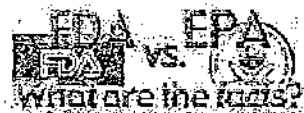
The evidence supporting the safety, efficacy, and cost-effectiveness of fluoridation of community water supplies comes from multiple sources covering 50 years of legitimate research published in peer reviewed journals, including both long term studies on large populations, recent confirmatory studies, and comprehensive literature reviews. Adding fluoride to drinking water is an important element in promotion of dental health along with education and access to dental care. Our group supports the actions of the dental Advisory Group in promoting dental health by all practical means.

We have met with the group opposing fluoride in our community water, and read materials they claim support their cause. Most if not all the material is not scientifically valid and draws conclusions not supported by evidence or not statistically significant. Their claims are inflammatory and largely unfounded.

See "The Claims Versus the Facts"

Does Fluoride in your Drinking Water Expose you to Dangerous Chemicals or Health Risks?

The Environmental Protection Agency and California Department of Health Services Division of Drinking Water and Environmental Management are responsible for setting and enforcing safety standards for community water systems. The proposed referendum calls for approval of additives to Arcata water by the Food and Drug Administration. The Food and Drug Administration does not oversee drinking water; it would take an act of Congress to change regulations to allow FDA to regulate water additives. A small group of people in Arcata (and some other communities across America) are calling for FDA approval to add fluoride to drinking water. This is a thinly veiled attempt to tie the issue up in a bureaucratic process that will cause years of no fluoride in water (which is consistent with their main goal of keeping fluoride out of community water systems)..



Who Deserves Fluoride in their Drinking Water?

All the citizens of our community -- particularly children -- deserve the benefits of fluoride in their drinking water. People who do not wish to drink fluoridated water can obtain other water satisfactory to them or can treat city water to their own personal standards. People who feel they need to severely limit fluoride intake will need to take further measures to limit their fluoride intake if they wish.

Fluoride in Drinking Water is a Fiscally Responsible Action

To provide fluoride in drops or pills is much more expensive and requires each parent to administer thousands of doses, thus providing much less widespread protection to high-risk children.

High-risk children are also less able to access professional preventative services like sealants or fluoride office applications. The scientific evidence shows a benefit of fluoridation to adults and the elderly, not only children. It is our goal to get accurate information about the safety and effectiveness of water fluoridation out to the voters of Arcata and encourage fluoride supporters to speak up and vote for social justice!

Reviewed: 2/21/2012

Fluoridated Water**Key Points**

- Fluoride in water helps to prevent and can even reverse tooth decay.
- More than 60 percent of the U.S. population has access to fluoridated water through public water supply systems.
- The optimal level of fluoride to prevent tooth decay is 0.7 milligrams per liter of water.
- Many studies, in both humans and animals, have shown no association between fluoridated water and cancer risk.

1. What is fluoride, and where is it found?

Fluoride is the name given to a group of compounds that are composed of the naturally occurring element fluorine and one or more other elements. Fluorides are present naturally in water and soil at varying levels.

In the 1940s, scientists discovered that people who lived where drinking water supplies had naturally occurring fluoride levels of approximately 1 part fluoride per million parts water or greater (≥ 1.0 ppm) had fewer dental caries (cavities) than people who lived where fluoride levels in drinking water were lower. Many more recent studies have supported this finding (1).

It was subsequently found that fluoride can prevent and even reverse tooth decay by inhibiting bacteria that produce acid in the mouth and by enhancing remineralization, the process through which tooth enamel is "rebuilt" after it begins to decay (1, 2).

In addition to building up in teeth, ingested fluoride accumulates in bones.

2. What is water fluoridation?

Water fluoridation is the process of adding fluoride to the water supply so the level reaches approximately 0.7 ppm, or 0.7 milligrams of fluoride per liter of water; this is the optimal level for preventing tooth decay (1).

3. When did water fluoridation begin in the United States?

In 1945, Grand Rapids, Michigan, adjusted the fluoride content of its water supply to 1.0 ppm and thus became the first city to implement community water fluoridation. By 2008, more than 72 percent of the U.S. population served by public water systems had access to fluoridated water (3).

The Centers for Disease Control and Prevention (CDC) considers fluoridation of water one of the greatest achievements in public health in the 20th century.

4. Can fluoridated water cause cancer?

A possible relationship between fluoridated water and cancer risk has been debated for years. The debate resurfaced in 1990 when a study by the National Toxicology Program, part of the National Institute of Environmental Health Sciences, showed an increased number of osteosarcomas (bone tumors) in male rats given water high in fluoride for 2 years (4). However, other studies in humans and in animals have not shown an association between fluoridated water and cancer (5–7).



In a February 1991 Public Health Service (PHS) report, the agency said it found no evidence of an association between fluoride and cancer in humans. The report, based on a review of more than 50 human epidemiological (population) studies produced over the past 40 years, concluded that optimal fluoridation of drinking water "does not pose a detectable cancer risk to humans" as evidenced by extensive human epidemiological data reported to date (5).

In one of the studies reviewed for the PHS report, scientists at NCI evaluated the relationship between the fluoridation of drinking water and the number of deaths due to cancer in the United States during a 35-year period, and the relationship between water fluoridation and number of new cases of cancer during a 15-year period. After examining more than 2.2 million cancer death records and 125,000 cancer case records in counties using fluoridated water, the researchers found no indication of increased cancer risk associated with fluoridated drinking water (6).

In 1993, the Subcommittee on Health Effects of Ingested Fluoride of the National Research Council, part of the National Academy of Sciences, conducted an extensive literature review concerning the association between fluoridated drinking water and increased cancer risk. The review included data from more than 50 human epidemiological studies and six animal studies. The Subcommittee concluded that none of the data demonstrated an association between fluoridated drinking water and cancer (6). A 1999 report by the CDC supported these findings. The CDC report concluded that studies to date have produced "no credible evidence" of an association between fluoridated drinking water and an increased risk for cancer (2). Subsequent interview studies of patients with osteosarcoma and their parents produced conflicting results, but with none showing clear evidence of a causal relationship between fluoride intake and risk of this tumor.

Recently, researchers examined the possible relationship between fluoride exposure and osteosarcoma in a new way: they measured fluoride concentration in samples of normal bone that were adjacent to a person's tumor. Because fluoride naturally accumulates in bone, this method provides a more accurate measure of cumulative fluoride exposure than relying on the memory of study participants or municipal water treatment records. The analysis showed no difference in bone fluoride levels between people with osteosarcoma and people in a control group who had other malignant bone tumors (7).

5. Where can people find additional information on fluoridated water?

The CDC has information at <http://www.cdc.gov/fluoridation> on standards for and surveillance of current fluoridated water supplies in the United States.

The Environmental Protection Agency has more information about drinking water and health at <http://water.epa.gov/drink/index.cfm>. The information on this page includes details about drinking water quality and safety standards.

Selected References

1. Centers for Disease Control and Prevention. Public Health Service report on fluoride benefits and risks. *JAMA* 1991; 266(8):1061-1067. [PubMed Abstract]
2. Centers for Disease Control and Prevention. Achievements in public health, 1900-1999: fluoridation of drinking water to prevent dental caries. *Morbidity and Mortality Weekly Report* 1999; 48(41):933-940.
3. Centers for Disease Control and Prevention (August 2010). *2008 Water Fluoridation Statistics*. Retrieved August 10, 2011, from <http://www.cdc.gov/fluoridation/statistics/2008stats.htm>.
4. Bucher JR, Hejtmancik MR, Toft JD, et al. Results and conclusions of the National Toxicology Program's rodent carcinogenicity studies with sodium fluoride. *International Journal of Cancer* 1991; 48(5):733-737. [PubMed Abstract]
5. Committee to Coordinate Environmental Health and Related Programs, Ad Hoc Subcommittee on Fluoride (February 1991). *Review of Fluoride: Benefits and Risks*. Public Health Service, Department of Health and Human Services. Retrieved August 10, 2011, from <http://health.gov/environment/ReviewofFluoride>.
6. National Research Council, Subcommittee on Health Effects of Ingested Fluoride. Carcinogenicity of fluoride. In: *Health Effects of Ingested Fluoride*. Washington, DC: National Academy Press, 1993.

7. Kim FM, Hayes C, Williams PL, et al. An assessment of bone fluoride and osteosarcoma. *Journal of Dental Research* 2011; 90(10):1171-1176. [[PubMed Abstract](#)]

Related Resources

- *Cancer and the Environment: What You Need To Know, What You Can Do* (<http://www.cancer.gov/newscenter/cancer-and-the-environment>)
- *What You Need To Know About™ Cancer* (<http://www.cancer.gov/cancertopics/wyntk/cancer>)

How can we help?

We offer comprehensive research-based information for patients and their families, health professionals, cancer researchers, advocates, and the public.

- **Call** NCI's Cancer Information Service at 1-800-4-CANCER (1-800-422-6237)
- **Visit** us at <http://www.cancer.gov> or <http://www.cancer.gov/espanol>
- **Chat** using LiveHelp, NCI's instant messaging service, at <http://www.cancer.gov/livehelp>
- **E-mail** us at cancergovstaff@mail.nih.gov
- **Order** publications at <http://www.cancer.gov/publications> or by calling 1-800-4-CANCER
- **Get help** with quitting smoking at 1-877-44U-QUIT (1-877-448-7848)

Water Fluoridation in Michigan

A RESOURCE GUIDE FOR POTABLE WATER PRODUCTION FACILITY OPERATORS

SODIUM FLUOROSILICATE and SODIUM FLUORIDE

Your Community Benefits

- Thousands of research studies and 60 years of experience have shown that water fluoridation is safe, effective and the best method of improving oral health in a community.
- Water fluoridation is recognized as a major public health achievement of the 20th century by the Centers for Disease Control and Prevention (CDC).
- Although dental caries (tooth decay) is largely preventable, it remains the most common chronic disease of children aged 5 to 17 years. In the U.S., tooth decay affects:
 - 1 out of 4 elementary school children
 - 2 out of 3 adolescents
 - 9 out of 10 adults
- Both children and adults benefit from water fluoridation. Studies have demonstrated that people in communities with fluoridated water have 20 to 40 percent less tooth decay than those in communities without fluoridated water.
- The cost to fluoridate water for the lifetime of one person is less than the cost to treat one cavity.
- Every dollar spent on fluoridation saves \$38 in avoided dental bills.
- In 2002, the CDC estimated that 66 percent of U.S. residents who receive their water from community water systems, or 170 million people, had access to fluoridated water. The *Healthy People 2010* goal is to increase this to 75 percent. In Michigan, 86.2 percent of the population has access to fluoridated water, resulting in better oral health, less dental pain, and fewer cavities for millions of people living in Michigan.



Optimal Fluoridation

For Michigan, the most benefit to oral health is achieved when waters are fluoridated to 1.0 mg/L.

Optimal fluoridation is achieved when the fluoride level in potable water is maintained in the control range of 0.9 to 1.5 mg/L.

The benefits of fluoridation are quickly lost when fluoride levels drop below the optimal range.

The U.S. Environmental Protection Agency (EPA) has set both the maximum contaminant level (MCL) and the maximum contaminant level goal (MCLG) for fluoride at 4 mg/L. In addition, the secondary maximum contaminant level goal (SMCLOG) of 2 mg/L has been set for fluoride to minimize potential dental fluorosis (staining of the teeth).

Operation

Monitor water fluoride levels daily to ensure optimal fluoridation, and adjust feed rates as necessary.

Send split samples monthly to the state health laboratory to verify your accuracy in measuring fluoride levels.

Saturators and volumetric feeders work best when the correct amount of sodium fluorosilicate or sodium fluoride is maintained. Too much or too little in the saturator bed or hopper results in inconsistent feeds. Therefore, periodically clean saturators and volumetric feeders to remove inert cinders and clear encrustations, and verify that all plumbing and instrumentation is in working order.

In some locations, natural fluoride levels can vary seasonally. Verify the quantity of additive to add to achieve the optimum dosage.

Inspect equipment, connections, and pipes/tubes for wear and replace them as necessary. Also check for possible encrustations and for accumulated air pockets, both of which can restrict flow. Ensure that all replacement parts are fluoride compatible.

Recheck the pump calibration/delivery weekly to verify proper operation of the pump.

Safety Corner

Although fluoride is entirely safe at the recommended optimum dosage levels in potable water, it can be harmful at more concentrated levels.

When handling sodium fluorosilicate or sodium fluoride, always wear Neoprene gloves, an apron, boots, and a NIOSH/MSHA dust respirator with a soft rubber face-to-mask seal and replaceable cartridges.

Inspect all pipes and tubing regularly for leaks, and repair them promptly if necessary.

Always clean equipment and gear after their exposure to sodium fluorosilicate or sodium fluoride. Promptly sweep spills and keep area clean to minimize dust. Do not tear or puncture bags; use a knife to open bags with a clean cut.

Do not consume food or beverages in proximity to the fluoride storage area.

Never store sodium fluorosilicate or sodium fluoride with other chemicals. Store unopened bags on pallets, not directly on concrete floors. When adding sodium fluorosilicate or sodium fluoride to the saturator or hopper, ensure that the ventilation is adequate to evacuate fugitive dust.

Important Contacts

For questions on the Fluoridation Program in Michigan, contact the Division of Family and Community Health, Oral Health Program, 517-335-8388.

For questions on the health effects of fluoridation, contact the Division of Family and Community Health, Oral Health Program, 517-335-8388.

For questions on drinking water in Michigan, contact the Michigan Department of Environmental Quality, Water Bureau, 517-241-1300.

The following Web sites are good sources of information about fluoridation:

American Dental Association:
www.ada.org/public/topics/fluoride/index.asp

Centers for Disease Control and Prevention:
www.cdc.gov/OralHealth/topics/fluoridation.htm

American Water Works Association:
<http://awwa.org/Advocacy/pressroom/fluoride.cfm>

This poster was issued by the State of Michigan, Oral Health Program, Michigan Department of Community Health, 2004.

Recommended fluoride overfeed actions for community water systems, MHW 1995 (CDC)

Fluoride level	Actions Recommended
0.1 mg/L above control range to 2.0 mg/L	1. Leave the fluoridation system on. 2. Determine malfunction and repair.
2.1 mg/L to 4.0 mg/L	1. Leave the fluoridation system on. 2. Determine malfunction and repair. 3. Notify supervisor and report the incident to the appropriate county or state agencies.
4.1 mg/L to 10.0 mg/L	1. Determine malfunction and immediately attempt repair. 2. If the problem is not found and corrected quickly, turn off the fluoridation system. 3. Notify supervisor and report the incident to the appropriate county or state agencies. 4. Take water samples at several points in the distribution system and test the fluoride content. Retest if results are still high. 5. Determine malfunction and repair. Then, with supervisor's permission, restart the fluoridation system.
10.1 mg/L or greater*	1. Turn off the fluoridation system immediately. 2. Notify supervisor and report the incident immediately to the appropriate county or state agencies and follow their instructions. 3. Take water samples at several points in the distribution system and test the fluoride content. Retest if results are still high. Save part of each sample for the state laboratory to test. 4. Determine malfunction and repair. Then, with supervisor's and the state's permission, restart the fluoridation system.

*The state might require public notification to prevent consumption of high levels of fluoridated water.

Fluoridated Water Systems

(Group by County and Water System Name)

My Water's Fluoride Home > Select Jurisdiction > Operational Reports

This report represents all water systems under State Of Michigan jurisdiction:

Water System Name	PWS ID	Region	Primary County	Chemical	Status	Fluoridation Start Date	Population Served	Natural Level	Opt. Level
MI									
ALLEGAN	0000120	0	Allegan	Fluorosilicic Acid	Adj	1/1/1973	5,930	0	1
GUN PLAIN TOWNSHIP	0002925	0	Allegan		Cons		1,017		1
HUNTER'S GLEN	0040660	0	Allegan	Natural	Nat		700	0	1
LAKETOWN TOWNSHIP, ALLEGAN CO.	0003747	0	Allegan		Cons		2,163		1
OTSEGO	0005060	0	Allegan	Fluorosilicic Acid	Adj	1/1/1967	3,933	0	1
PLAINWELL	0005380	0	Allegan	Fluorosilicic Acid	Adj	1/1/1956	3,328	0	1
WAYLAND	0006940	0	Allegan	Fluorosilicic Acid	Adj	1/1/1974	4,003	0	1
County Population Served:							21,074		
ALPENA	0000160	0	Alpena	Sodium Fluoride	Adj	1/1/1958	11,304	0	1
ALPENA TOWNSHIP	0000170	0	Alpena		Cons	1/1/1958	5,380		1
LAKESHORE ESTATES MHP	0040034	0	Alpena	Natural	Nat		85	1.1	1
County Population Served:							16,769		
ELK RAPIDS	0002090	0	Antrim	Fluorosilicic Acid	Adj	1/1/1969	1,700	0	1
MANCELONA AREA WSA - THE CHIEF	0006568	0	Antrim	Natural	Nat		52	0.35	1
MAPLEWOOD RIDGE CONDOS	0004069	0	Antrim	Natural	Nat		64	1.3	1
SUGARTREE APTS	0006575	0	Antrim	Natural	Nat		320	1.3	1
County Population Served:							2,136		
STANDISH	0006350	0	Arenac	Fluorosilicic Acid	Adj	7/17/2008	1,581	0	1
County Population Served:							1,581		
BARAGA	0000410	0	Baraga	Fluorosilicic Acid	Adj	1/1/1972	2,240	0	1
County Population Served:							2,240		
HASTINGS	0003090	0	Barry	Fluorosilicic Acid	Adj	1/1/1951	6,935	0	1
LAKE MICHIGAN SHORLINE WATER & SEWER	0003726	0	Barry		Cons		21,400		1
MCTI FAMILY HOUSING	0006377	0	Barry	Natural	Nat		40	0	1
County Population Served:							28,375		
AUBURN	0000300	0	Bay		Cons		2,033		1
BANGOR MONITOR METRO DISTRICT	0000400	0	Bay		Cons	1/1/1974	3,036		1
BANGOR TOWNSHIP	0000390	0	Bay		Cons	1/1/1958	12,536		1
BAY CITY	0000470	0	Bay	Fluorosilicic Acid	Adj	1/1/1952	36,817	0	1
BAY CO. DEPT OF WATER & SEWER	0000485	0	Bay		Cons		8,128		1
BEAVER ROAD AREA WATER ASSN	0000517	0	Bay		Cons		795		1
BEAVER TOWNSHIP	0000518	0	Bay		Cons		1,121		1
ESSEXVILLE	0002180	0	Bay		Cons	1/1/1958	3,766		1
FRANKENLUST TOWNSHIP	0002410	0	Bay		Cons	1/1/1974	3,242		1
FRASER TOWNSHIP	0002465	0	Bay		Cons		1,153		1
HAMPTON TOWNSHIP	0002960	0	Bay		Cons	1/1/1972	9,902		1
KAWKAWLIN METROPOLITAN DIST	0003570	0	Bay		Cons		1,582		1
KAWKAWLIN TOWNSHIP	0003565	0	Bay		Cons		2,973		1
MERRITT TOWNSHIP	0004280	0	Bay		Cons	1/1/1972	1,404		1
MONITOR TOWNSHIP	0004440	0	Bay		Cons	1/1/1972	4,972		1
PINCONNING	0005330	0	Bay		Cons	1/1/1962	1,386		1
PINCONNING TOWNSHIP	0005335	0	Bay		Cons		1,287		1
PORTSMOUTH TOWNSHIP	0005540	0	Bay		Cons	1/1/1972	535		1
WILLIAMS TOWNSHIP	0007125	0	Bay		Cons	1/1/1971	4,694		1
County Population Served:							101,362		
BENTON HARBOR	0000600	0	Berrien	Fluorosilicic Acid	Adj	1/1/1951	11,218	0	1
BENTON TOWNSHIP	0000605	0	Berrien		Cons	1/1/1972	6,700		1
BRIDGMAN	0000850	0	Berrien	Fluorosilicic Acid	Adj	1/1/1968	2,140	0	1
BUCHANAN	0000960	0	Berrien	Fluorosilicic Acid	Adj	1/1/1952	5,160	0	1
HAGAR TOWNSHIP	0002930	0	Berrien		Cons		72		1

NEW BUFFALO	0004680	0	Berrien	Fluorosillicic Acid	Adj	1/1/1973	2,400	0	1
NILES	0004740	0	Berrien	Fluorosillicic Acid	Adj	1/1/1974	14,815	0	1
NILES TOWNSHIP	0004750	0	Berrien		Cons		2,080		1
ST JOSEPH	0006310	0	Berrien	Fluorosillicic Acid	Adj	1/1/1953	8,789	0	1
County Population Served:							53,374		
BRONSON	0000910	0	Branch	Fluorosillicic Acid	Adj	1/1/1967	2,421	0	1
COLDWATER	0001500	0	Branch	Fluorosillicic Acid	Adj	1/1/1956	10,550	0	1
QUINCY	0005580	0	Branch	Fluorosillicic Acid	Adj		2,040	0	1
UNION CITY	0006720	0	Branch	Fluorosillicic Acid	Adj		1,825	0	1
County Population Served:							16,836		
ALBION	0000100	0	Calhoun	Fluorosillicic Acid	Adj	1/1/1966	9,144	0	1
BATTLE CREEK - VERONA SYSTEM	0000450	0	Calhoun	Fluorosillicic Acid	Adj	1/1/1951	43,975	0	1
EMMET TOWNSHIP	0002125	0	Calhoun		Cons		3,475		1
MARSHALL	0004150	0	Calhoun	Fluorosillicic Acid	Adj	1/1/1961	7,459	0	1
PENNFIELD TWP-CONVIS/VERONA	0005232	0	Calhoun		Cons		1		1
SPRINGFIELD	0006240	0	Calhoun		Cons		5,189		1
County Population Served:							69,243		
CASSOPOLIS	0001250	0	Cass	Fluorosillicic Acid	Adj		1,950	0	1
DOWAGIAC	0001860	0	Cass	Fluorosillicic Acid	Adj	1/1/1970	6,147	0	1
HOWARD TOWNSHIP	0003245	0	Cass		Cons		700		1
PENN TOWNSHIP	0005234	0	Cass		Cons		575		1
County Population Served:							9,372		
BOYNE CITY	0000800	0	Charlevoix	Fluorosillicic Acid	Adj	1/1/1973	3,231	0	1
BOYNE FALLS	0000810	0	Charlevoix	Natural	Nat		370	1	1
CHARLEVOIX	0001330	0	Charlevoix	Fluorosillicic Acid	Adj	1/1/1953	2,994	0	1
CHARLEVOIX TOWNSHIP	0001335	0	Charlevoix	Natural	Nat		1,612	1.7	1
EAST JORDAN	0001970	0	Charlevoix	Fluorosillicic Acid	Adj	1/1/1958	2,507	0	1
GRANDVUE MEDICAL CARE FACILITY	0062810	0	Charlevoix		Cons		113		1
HEMINGWAY POINTE CONDOS	0003115	0	Charlevoix	Natural	Nat		195	1.4	1
HORTON BAY CLUB	0003229	0	Charlevoix	Natural	Nat		60	1.6	1
LAKE MICHIGAN HEIGHTS MHP	0040106	0	Charlevoix	Natural	Nat		270	0.8	1
MELROSE-CHANDLER WATER COMPANY	0004215	0	Charlevoix	Natural	Nat		298	1	1
WALLOON LAKE WATER SYSTEM	0006880	0	Charlevoix	Natural	Nat		460	1.3	1
County Population Served:							12,110		
BURT VIEW CONDOS	0001005	0	Cheboygan	Natural	Nat		42	0.9	1
CHEBOYGAN	0001360	0	Cheboygan	Natural	Nat		5,295	1	1
INDIAN RIVER MHP	0040108	0	Cheboygan	Natural	Nat		50	0.8	1
County Population Served:							5,387		
DRUMMOND APARTMENT COMPANY	0001865	0	Chippewa	Natural	Nat		50	1.3	1
SAULT STE MARIE	0005950	0	Chippewa	Fluorosillicic Acid	Adj	1/1/1955	14,689	0	1
County Population Served:							14,739		
CLARE	0001420	0	Clare	Fluorosillicic Acid	Adj	1/1/1970	3,173	0	1
County Population Served:							3,173		
CAPITOL CROSSINGS	0040675	0	Clinton	Natural	Nat		695	0	1
DEWITT	0001805	0	Clinton		Cons		2,300		1
MEADOWS OF ST JOHNS	0040119	0	Clinton	Natural	Nat		387	1.2	1
ST JOHNS	0006300	0	Clinton	Fluorosillicic Acid	Adj	6/1/2009	7,900	0.3	1
County Population Served:							11,282		
GRAYLING	0002840	0	Crawford	Fluorosillicic Acid	Adj	1/1/1970	1,952	0	1
County Population Served:							1,952		
ESCANABA WATER DEPT.	0002170	0	Delta	Fluorosillicic Acid	Adj	1/1/1955	13,659	0	1
GARDEN	0002540	0	Delta	Natural	Nat		270	1.7	1
GLADSTONE WATER DEPT	0002640	0	Delta	Fluorosillicic Acid	Adj	1/1/1954	4,396	0	1
County Population Served:							18,325		
NORWAY	0004860	0	Dickinson	Fluorosillicic Acid	Adj		3,449	0	1
County Population Served:							3,449		
CHARLOTTE	0001340	0	Eaton	Fluorosillicic Acid	Adj	1/1/1965	8,089	0.7	1
DELTA TOWNSHIP	0001790	0	Eaton		Cons		22,300		1
EATON RAPIDS	0002020	0	Eaton	Fluorosillicic Acid	Adj	1/1/1971	5,330	0	1

GRAND LEDGE	0002770	0	Eaton	Fluorosilicic Acid	Adj	9/17/2007	7,813	0.1	1
MISTY COVE APARTMENTS	0004428	0	Eaton	Natural	Nat		66	0	1
County Population Served:							43,598		
BAY SHORE ESTATES MHP	0040128	0	Emmet	Natural	Nat		208	1.2	1
FOXFIELD APARTMENTS	0002403	0	Emmet	Natural	Nat		60	0	1
HARBOR SPRINGS	0003010	0	Emmet	Fluorosilicic Acid	Adj	1/1/1963	1,567	0	1
LAKEVIEW CLUB CONDOS	0003744	0	Emmet	Natural	Nat		290	1.7	1
PETOSKEY PARK APTS	0005305	0	Emmet	Natural	Nat		112	1.6	1
RADIO CITY VILLAGE M H P	0040127	0	Emmet	Natural	Nat		110	1	1
SPRING LAKE CLUB CONDOS	0006232	0	Emmet	Natural	Nat		70	1.7	1
TANNERY CREEK CONDOS	0006537	0	Emmet	Natural	Nat		102	1.8	1
WEST TRAVERSE TOWNSHIP	0007057	0	Emmet		Cons		405		1
WOODFIELD MH COMMUNITY	0040680	0	Emmet	Natural	Nat		100	0	1

County Population Served: 3,024

BEECHER METROPOLITAN DISTRICT	0000540	0	Genesee	Natural	Nat		12,793	1	1
BURTON	0001010	0	Genesee		Cons		20,900		1
CHATEAU OLD ORCHARD MHP	0040156	0	Genesee	Natural	Nat		500	0.8	1
CLAYTON TOWNSHIP	0001455	0	Genesee		Cons	1/1/1972	1,380		1
CLIO	0001490	0	Genesee		Cons	1/1/1970	2,483		1
CRYSTAL CREEK APARTMENTS	0001697	0	Genesee	Natural	Nat		50	0	1
DAVISON	0001720	0	Genesee	Fluorosilicic Acid	Adj		5,536	0	1
DAVISON HILLS M H P	0040148	0	Genesee	Natural	Nat		260	1	1
DAVISON TOWNSHIP	0001725	0	Genesee		Cons	1/1/1971	3,835		1
DELTA MOBILE HOME PARK	0040146	0	Genesee	Natural	Nat		120	1	1
FENTON	0002270	0	Genesee	Fluorosilicic Acid	Adj	1/1/1963	12,000	0	1
FLINT	0002310	0	Genesee		Cons	1/1/1966	124,943		1
FLINT TOWNSHIP	0002320	0	Genesee		Cons	1/1/1970	20,142		1
FLUSHING	0002340	0	Genesee		Cons	1/1/1966	8,751		1
FLUSHING TOWNSHIP	0002345	0	Genesee		Cons	1/1/1970	5,681		1
GAINES TOWNSHIP	0002525	0	Genesee		Cons	1/1/1975	1,227		1
GENESEE COUNTY WATER SYSTEM	0002615	0	Genesee		Cons		76,500		1
GENESEE TOWNSHIP	0002617	0	Genesee		Cons	1/1/1970	9,500		1
GLEN DEVON CONDOS	0002654	0	Genesee	Natural	Nat		260	0.7	1
GRAND BLANC	0002740	0	Genesee	Natural	Nat		8,242	0.7	0.7
GRAND BLANC TWP - CENTRAL	0002745	0	Genesee		Cons		18,000		1
GUNTHER MOBILE HOME COURT	0040138	0	Genesee	Natural	Nat		91	1.2	1
HI-WAY TRAILER COURT	0040140	0	Genesee	Natural	Nat		140	0.8	1
LAKE FENTON MHP	0040158	0	Genesee	Natural	Nat		335	0.8	1
LINDEN	0003890	0	Genesee	Fluorosilicic Acid	Adj		2,801	0	1
MONTROSE	0004480	0	Genesee		Cons		1,619		1
MONTROSE TOWNSHIP	0004484	0	Genesee		Cons		663		1
MONTROSE TRAILER PARK	0040152	0	Genesee	Natural	Nat		125	0.9	1
MOUNT MORRIS	0004520	0	Genesee		Cons	1/1/1970	3,194		1
MOUNT MORRIS TOWNSHIP	0004525	0	Genesee		Cons	1/1/1970	9,088		1
MUNDY TOWNSHIP	0004555	0	Genesee		Cons	1/1/1970	1,190		1
NORTH DORT MANOR M H P	0040154	0	Genesee	Natural	Nat		142	1.4	1
NORTH MORRIS ESTATES M H P	0040155	0	Genesee	Natural	Nat		1,495	1	1
ORCHARD COVE	0040647	0	Genesee	Natural	Nat		230	0	1
OTISVILLE	0005050	0	Genesee	Natural	Nat		882	1.1	1
PINEHURST APTS	0005353	0	Genesee	Natural	Nat		65	0.9	1
PLEASANT VIEW MANOR	0005396	0	Genesee	Natural	Nat		32	1	1
RICHFIELD TOWNSHIP	0005665	0	Genesee		Cons		486		1
SWARTZ CREEK	0006505	0	Genesee		Cons	1/1/1970	6,800		1
SWARTZ CREEK MEADOWS	0040164	0	Genesee	Natural	Nat		1,520	0.9	1
THETFORD TOWNSHIP	0006576	0	Genesee		Cons		25		1
TRADEWIND MOBILE HOME COURT	0040131	0	Genesee	Natural	Nat		72	0.9	1
TWIN MEADOWS MHP	0040163	0	Genesee	Natural	Nat		262	0.9	1
TWIN MEADOWS MHP	0040160	0	Genesee	Natural	Nat		90	0.9	1
VIENNA TOWNSHIP	0006795	0	Genesee		Cons	1/1/1970	1,425		1
WEST COURT RANCHES	0007015	0	Genesee	Natural	Nat		175	0.9	1
WESTERN PINES APTS	0004754	0	Genesee	Natural	Nat		50	0.9	1
WESTHAVEN MOBILE COURT	0040162	0	Genesee	Natural	Nat		192	1.1	1

County Population Served: 366,292

KEY MOBILE HOME COURT	0040166	0	Gladwin	Natural	Nat	80	0.9	1
LAKESHORE VILLAGE MHP	0040169	0	Gladwin	Natural	Nat	118	0.9	1
PLEASANT BEACH MH RESORT	0040167	0	Gladwin	Natural	Nat	253	0.7	1
RIVERVIEW TRAILER PARK	0040168	0	Gladwin	Natural	Nat	120	0.7	1
County Population Served:						571		
BESSEMER	0000660	0	Gogebic	Natural	Adj	2,272	0	1
BESSEMER TOWNSHIP	0005600	0	Gogebic		Cons	950		1
GOGEBIC RANGE WATER AUTH	0002685	0	Gogebic		Cons	46		1
WAKEFIELD	0006830	0	Gogebic	Fluorosilicic Acid	Adj 1/1/1972	2,318	0.12	1
WAKEFIELD TOWNSHIP	0003343	0	Gogebic		Cons	177		1
County Population Served:						5,763		
GARFIELD TOWNSHIP	0002565	0	Grand Traverse		Cons 1/1/1977	10,764		1
KINGS COURT MHP	0040171	0	Grand Traverse	Natural	Nat	2,773	0.8	1
PENINSULA TOWNSHIP	0005233	0	Grand Traverse		Cons	1,161		1
SUBURBAN ESTATES M H P	0040177	0	Grand Traverse	Natural	Nat	188	1	1
TRAVERSE CITY	0006640	0	Grand Traverse	Fluorosilicic Acid	Adj 1/1/1952	14,532	0.15	1
TRAVERSE MANOR AFC	0006646	0	Grand Traverse	Natural	Nat	32	0	1
County Population Served:						29,450		
ALMA	0000140	0	Gratiot	Fluorosilicic Acid	Adj 1/1/1965	9,275	0	1
ST LOUIS	0006320	0	Gratiot	Natural	Nat	6,976	0.9	1
County Population Served:						16,251		
HILLSDALE	0003170	0	Hillsdale	Fluorosilicic Acid	Adj 1/1/1954	9,000	0	1
JONESVILLE	0003490	0	Hillsdale	Fluorosilicic Acid	Adj 1/1/1975	2,337	0	1
SOMERSET CENTRE ESTATES M H P	0040184	0	Hillsdale	Natural	Nat	368	0.8	1
WALDRON	0006850	0	Hillsdale	Natural	Nat	560	0.9	1
County Population Served:						12,265		
BAYSIDE ESTATES M H P	0040190	0	Huron	Natural	Nat	185	0.7	1
HARBOR BEACH	0003000	0	Huron	Fluorosilicic Acid	Adj 1/1/1976	1,837	0.8	1
HURON TOWNSHIP	0003323	0	Huron		Cons	625		1
OWENDALE	0005110	0	Huron	Natural	Nat	296	0.8	1
PORT HOPE-GORE-RUBICON UT. AUT	0005475	0	Huron		Cons	1,493		1
SAND BEACH TOWNSHIP	0005903	0	Huron		Cons	464		1
SEBEWAING	0005990	0	Huron	Natural	Nat	1,974	0.8	1
SUNNY ACRES NURSING CENTER	0066475	0	Huron	Natural	Nat	30	1	1
County Population Served:						6,904		
E LANSING MERIDIAN TWP W AUTH	0001995	0	Ingham	Fluorosilicic Acid	Adj 1/1/1955	62,550	0	1
EAST LANSING	0001990	0	Ingham		Cons 1/1/1955	30,500		1
LANSING BOARD OF WATER & LIGHT	0003760	0	Ingham	Sodium Fluorosilicate	Adj 1/1/1963	142,000	0	1
LANSING TOWNSHIP	0003770	0	Ingham		Cons	5,000		1
MASON	0004170	0	Ingham	Fluorosilicic Acid	Adj 1/1/1964	7,164	0	1
MERIDIAN TOWNSHIP	0004260	0	Ingham		Cons 1/1/1956	35,000		1
MICHIGAN STATE UNIVERSITY	0004340	0	Ingham	Fluorosilicic Acid	Adj 1/1/1965	16,300	0	1
SUNSET TRAILER PARK	0040200	0	Ingham	Natural	Nat	88	0.8	1
County Population Served:						298,602		
BELDING	0000560	0	Ionia	Fluorosilicic Acid	Adj 1/1/1971	5,877	0	1
IONIA	0003370	0	Ionia	Fluorosilicic Acid	Adj	12,000	0.9	1
LAKE ODESSA	0003730	0	Ionia	Fluorosilicic Acid	Adj 1/1/1970	2,288	0	1
SUNSET RIDGE MHC	0040662	0	Ionia	Natural	Nat	360	0	1
County Population Served:						20,525		
AU SABLE TOWNSHIP	0000290	0	Iosco		Cons	2,230		1
BALDWIN TOWNSHIP	0000355	0	Iosco		Cons	670		1
EAST TAWAS	0002010	0	Iosco		Cons 1/1/1973	2,951		1
HURON SHORE REG. UTIL. AUTH.	0003319	0	Iosco	Fluorosilicic Acid	Adj	15,100	0	1
OSCODA TOWNSHIP	0005040	0	Iosco		Cons	7,268		1
TAWAS CITY	0006540	0	Iosco		Cons 1/1/1973	2,005		1
County Population Served:						30,224		
Mt. Pleasant	0004530	0	Isabella	Sodium Fluoride	Adj 1/1/1959	25,983	0.4	1
OAKVIEW MOBILE ESTATES	0040222	0	Isabella	Natural	Nat	115	0.8	1
County Population Served:						26,098		
ARBOR RIDGE CONDOMINIUMS	0000236	0	Jackson	Natural	Nat	65	0	0.7

BLACKMAN TOWNSHIP	0000740	0	Jackson	Cons	1/1/1951	8,288		1
BROOKLYN	0000920	0	Jackson	Fluorosilicic Acid	Adj	1/1/1974	1,200	0 1
HIGHLAND HOME	0063100	0	Jackson	Natural	Nat		32	0 1
HILLANLAKE MOBILE HOME PARK	0040231	0	Jackson	Natural	Nat		372	0.8 1
JACKSON	0003470	0	Jackson	Fluorosilicic Acid	Adj	1/1/1951	37,873	0.3 1
PARMA, VILLAGE OF	0005204	0	Jackson	Natural	Nat		600	0 1
SPRING ARBOR TOWNSHIP	0006227	0	Jackson	Cons			2,833	1
STATE PRISON OF SOUTHERN MICH.	0006370	0	Jackson	Cons	1/1/2009	8,187		1
SUMMIT TOWNSHIP	0006450	0	Jackson	Fluorosilicic Acid	Adj	1/1/1976	21,544	0 1

County Population Served: 80,994

CHARLESTON TOWNSHIP	0001327	0	Kalamazoo	Natural	Nat		30	0 1
GALESBURG	0002530	0	Kalamazoo	Fluorosilicic Acid	Adj	1/1/1967	1,988	0 1
KALAMAZOO	0003520	0	Kalamazoo	Fluorosilicic Acid	Adj	1/1/1951	150,000	0 1
PARCHMENT	0005200	0	Kalamazoo	Fluorosilicic Acid	Adj	1/1/1956	3,008	0.8 1
PORTAGE	0005520	0	Kalamazoo	Cons	1/1/1973	44,897		1
SCHOOLCRAFT	0005970	0	Kalamazoo	Fluorosilicic Acid	Adj	1/1/1975	1,587	0 1

County Population Served: 201,510

RAPID RIVER MEADOWS	0005607	0	Kalkaska	Natural	Nat		28	0 1

County Population Served: 28

ADA TOWNSHIP	0000012	0	Kent	Cons		6,531		1
ALTO MEADOWS	0040681	0	Kent	Natural	Nat		250	0 1
APPLE GROVE ESTATES	0040664	0	Kent	Natural	Nat		125	0 1
BYRON/GAINS TOWNSHIPS	0001023	0	Kent	Cons	1/1/1974	23,000		1
CALEDONIA TOWNSHIP	0001039	0	Kent	Fluorosilicic Acid	Adj		3,132	0 1
CEDAR SPRINGS	0001260	0	Kent	Fluorosilicic Acid	Adj	1/1/1958	3,112	0.4 1
COURTLAND CROSSINGS	0040678	0	Kent	Natural	Nat		342	0 1
EAST GRAND RAPIDS	0001960	0	Kent	Cons	1/1/1955	10,764		1
GRAND RAPIDS	0002790	0	Kent	Fluorosilicic Acid	Adj	1/1/1945	249,069	0 1
GRANDVILLE	0002820	0	Kent	Cons	1/1/1954	16,263		1
KENTWOOD	0003620	0	Kent	Cons	1/1/1955	30,000		1
LAKE BELLA VISTA	0003695	0	Kent	Fluorosilicic Acid	Adj		3,480	0.7 1
LOWELL	0003950	0	Kent	Fluorosilicic Acid	Adj	1/1/1957	4,013	0 1
LOWELL TOWNSHIP	0003955	0	Kent	Cons		1,668		1
PLAINFIELD TOWNSHIP	0005370	0	Kent	Fluorosilicic Acid	Adj	1/1/1964	29,502	0.8 1
ROCKFORD	0005730	0	Kent	Fluorosilicic Acid	Adj	1/1/1954	5,400	0 1
SPARTA	0006200	0	Kent	Fluorosilicic Acid	Adj	1/1/1956	4,522	0 1
WYOMING	0007220	0	Kent	Fluorosilicic Acid	Adj	1/1/1960	70,122	0.8 1

County Population Served: 461,295

DUVERNAY PARK APARTMENTS	0001915	0	Lake	Natural	Nat		68	0 1

County Population Served: 68

ALMONT	0000150	0	Lapeer	Cons	1/1/1976	2,803		1
CLIFFORD	0001460	0	Lapeer	Natural	Nat		354	0.9 1
COLUMBIANVILLE	0001570	0	Lapeer	Natural	Nat		815	1.1 1
DEERFIELD PINES MHP	0040644	0	Lapeer	Natural	Nat		308	1.4 1
DRYDEN	0001870	0	Lapeer	Natural	Nat		825	1 1
IDEAL VILLA M H P	0040299	0	Lapeer	Natural	Nat		420	0.7 1
IMLAY CITY	0003340	0	Lapeer	Cons	1/1/1971	3,869		1
LAPEER	0003780	0	Lapeer	Cons	1/1/1970	9,072		1
MAYFIELD TOWNSHIP	0004178	0	Lapeer	Cons		800		1
NORTH BRANCH	0004770	0	Lapeer	Natural	Nat		1,023	0.7 1
RIVER RIDGE	0040672	0	Lapeer	Natural	Nat		538	0 1
SANDHILL MOBILE HOME ESTATES	0040592	0	Lapeer	Natural	Nat		67	0.9 1

County Population Served: 20,894

ELMWOOD TOWNSHIP	0002115	0	Leelanau	Cons		125		1
HARBOR WEST MARINA VILLAGE	0003017	0	Leelanau	Natural	Nat		100	0.8 0.7
MAPLE VALLEY NURSING HOME	0064067	0	Leelanau	Natural	Nat		25	1 1
SUGARLOAF MOUNTAIN VILLAGE	0006445	0	Leelanau	Natural	Nat		200	1.1 1

County Population Served: 450

ADRIAN	0000040	0	Lenawee	Fluorosilicic Acid	Adj	1/1/1960	22,275	0 1
BLISSFIELD	0000750	0	Lenawee	Fluorosilicic Acid	Adj	1/1/1973	3,223	0 1
BRITTON	0000890	0	Lenawee	Natural	Nat		700	1.4 1
LEFFINGWELL ESTATES MHP	0040311	0	Lenawee	Natural	Nat		210	0.7 1
MANNOR FARM SUBDIVISION	0005180	0	Lenawee	Natural	Nat		193	1.4 1

MORENCI	0004490	0	Lenawee	Natural	Nat	2,390	0.9	1
RAISIN VALLEY ESTATES M H P	0040309	0	Lenawee	Natural	Nat	65	0.8	1
RIGA TOWNSHIP	0005675	0	Lenawee		Cons	381		1
ROBIN HOOD MOBILE COURT	0040310	0	Lenawee	Natural	Nat	62	0.8	1
SUNSET MOBILE HOME PARK	0040313	0	Lenawee	Natural	Nat	142	0.9	1
TECUMSEH	0006560	0	Lenawee	Fluorosillicic Acid	Adj 1/1/1957	8,574	0	1

County Population Served: 38,215

BRIGHTON	0000860	0	Livingston	Fluorosillicic Acid	Adj 1/1/1964	7,000	0	1
BRIGHTON COUNTRY CLUB ANNEX	0000870	0	Livingston		Cons 1/1/1973	650		1
CAMBRIA ROAD APARTMENTS	0004057	0	Livingston	Natural	Nat	38	0	1
CIDERMILL CROSSINGS	0040679	0	Livingston	Natural	Nat	500	0	1
COVENTRY WOODS MOBILE HOME PARK	0040649	0	Livingston	Natural	Nat	438	0	1
FOWLerville	0002400	0	Livingston	Fluorosillicic Acid	Adj 1/1/1973	2,972	0	1
GENOA TOWNSHIP	0002618	0	Livingston		Cons	2,730		1
HARTLAND HILLS CONDOMINIUMS	0003073	0	Livingston	Natural	Nat	100	0	1
HARTLAND MEADOWS	0040654	0	Livingston	Natural	Nat	1,600	0	1
HARTLAND TOWNSHIP	0003075	0	Livingston	Fluorosillicic Acid	Adj	1,500	0	1
HOWELL	0003250	0	Livingston	Fluorosillicic Acid	Adj 1/1/1968	9,232	1.1	1
HOWELL TOWNSHIP	0003255	0	Livingston		Cons	987		1
LIVINGSTON COMMUNITY WATER AUTHORITY	0003929	0	Livingston	Natural	Nat	1,682	0	1
LO-RAE APTS	0003942	0	Livingston	Natural	Nat	46	1	1
MARION TOWNSHIP	0004105	0	Livingston		Cons	1,834		1
MHOG SEWER & WATER AUTHORITY	0004098	0	Livingston	Fluorosillicic Acid	Adj	13,944	0	1
MYSTIC RIDGE L.L.C.	0004595	0	Livingston	Natural	Nat	90	0	1
NORTH BAY HARBOR CLUB MHP	0040616	0	Livingston	Natural	Nat	235	1.2	1
OCEOLA TOWNSHIP	0004930	0	Livingston		Cons	4,449		1
SILVER LAKE MOBILE HOME PARK	0040322	0	Livingston	Natural	Nat	68	0.7	1
THE PENINSULA DEVELOPMENT LLC	0005229	0	Livingston	Natural	Nat	270	0	1
TYRONE WOODS	0040658	0	Livingston	Natural	Nat	733	0	1
WHITMORE LAKE APARTMENTS	0007101	0	Livingston	Natural	Nat	250	0	1
WOODLAND RIDGE	0040669	0	Livingston	Natural	Nat	1,082	0	1

County Population Served: 52,430

ENGADINE HOUSING	0002145	0	Mackinac	Natural	Nat	50	0.9	1
MACKINAC ISLAND	0003970	0	Mackinac	Sodium Fluoride	Adj	469	0	1
ST IGNACE	0006290	0	Mackinac	Fluorosillicic Acid	Adj	2,900	0	1

County Population Served: 3,419

ARMADA	0000240	0	Macomb	Natural	Nat	1,563	0.9	1
CENTER LINE	0001290	0	Macomb		Cons 1/1/1967	8,308		1
CHESTERFIELD TOWNSHIP	0001390	0	Macomb		Cons 1/1/1974	40,000		1
CLINTON TOWNSHIP	0001480	0	Macomb		Cons 1/1/1970	98,500		1
EASTPOINTE	0001950	0	Macomb		Cons	33,851		1
FRASER	0002460	0	Macomb		Cons 1/1/1967	16,500		1
HARRISON TOWNSHIP	0003040	0	Macomb		Cons 1/1/1970	25,000		1
LENOX TOWNSHIP	0003836	0	Macomb		Cons	3,000		1
MACOMB TOWNSHIP	0003990	0	Macomb		Cons 1/1/1969	83,500		1
NEW BALTIMORE	0004670	0	Macomb	Fluorosillicic Acid	Adj	12,720	0	1
NEW HAVEN	0004690	0	Macomb		Cons	4,000		1
RICHMOND	0005670	0	Macomb	Natural	Nat	5,800	1.2	1
RIDGEWAY ADULT FOSTER CARE	0005673	0	Macomb	Natural	Nat	31	0	1
ROSEVILLE	0005820	0	Macomb		Cons 1/1/1967	48,125		1
SHELBY TOWNSHIP	0006010	0	Macomb		Cons 1/1/1967	72,000		1
ST CLAIR SHORES	0006280	0	Macomb		Cons 1/1/1967	63,098		1
STERLING HEIGHTS	0006385	0	Macomb		Cons 1/1/1970	127,000		1
STOCKBRIDGE	0006420	0	Macomb	Natural	Nat	1,202	0.9	1
UTICA	0006760	0	Macomb		Cons 1/1/1967	4,577		1
WARREN	0006900	0	Macomb		Cons 1/1/1967	138,247		1
WASHINGTON TOWNSHIP	0006905	0	Macomb		Cons 1/1/1976	22,577		1

County Population Served: 809,599

MANISTEE	0004030	0	Manistee	Fluorosillicic Acid	Adj	6,586	0	1
OAKS CORRECTIONAL FACILITY	0004910	0	Manistee		Cons	1,040		1

VALLEYWOOD COVE CONDOS	0006765	0	Manistee	Natural	Adj	25	0	1
County Population Served:						7,651		
ISHPEMING	0003440	0	Marquette		Cons 1/1/1972	7,200		1
ISHPEMING TWP - NORTH	0004775	0	Marquette		Cons	305		1
K I SAWYER	0003510	0	Marquette	Fluorosilicic Acid	Adj 1/1/1965	2,015	0	1
MARQUETTE	0004120	0	Marquette	Fluorosilicic Acid	Adj 1/1/1951	22,196	0	1
MARQUETTE TOWNSHIP	0004140	0	Marquette		Cons 1/1/1974	2,700		1
NEGAUNEE	0004650	0	Marquette		Cons 1/1/1951	4,741		1
NEGAUNEE-ISHPEMING AUTHORITY	0004653	0	Marquette	Fluorosilicic Acid	Adj	11,941	0	1
County Population Served:						51,098		
HOLIDAY VILLAGE M H P	0040335	0	Mason		Cons	185		1
LUDINGTON	0003960	0	Mason	Fluorosilicic Acid	Adj 1/1/1949	8,357	0	1
PERE MARQUETTE CHARTER TWP	0005267	0	Mason		Cons	250		1
PERE MARQUETTE TOWNSHIP	0005268	0	Mason	Natural	Nat	50	1	1
SCOTTVILLE	0005980	0	Mason		Cons 1/1/1978	1,266		1
County Population Served:						10,108		
BIG RAPIDS	0000710	0	Mecosta	Fluorosilicic Acid	Adj 1/1/1961	10,858	0	1
ROYAL VIEW RETIREMENT VILLAGE	0005841	0	Mecosta	Natural	Nat	80	0	1
County Population Served:						10,938		
MENOMINEE WATER DEPT	0004250	0	Menominee	Fluorosilicic Acid	Adj 1/1/1957	9,398	0	1
County Population Served:						9,398		
COUNTRY ACRES MOBILE HOME PARK	0040345	0	Midland	Natural	Nat	178	1.3	1
HOMER TOWNSHIP	0003223	0	Midland		Cons	2,967		1
LARKIN TOWNSHIP	0003794	0	Midland		Cons	2,271		1
MIDLAND	0004370	0	Midland	Fluorosilicic Acid	Adj 1/1/1946	41,054	0	1
MIDLAND CHARTER TOWNSHIP	0004377	0	Midland		Cons	1,426		1
MILLS TOWNSHIP	0004404	0	Midland		Cons	280		1
WATER DIST NO 1 OF MIDLAND CO	0004375	0	Midland		Cons 1/1/1978	7,030		1
WHISPERING PINES	0040347	0	Midland	Natural	Nat	263	0.8	1
County Population Served:						55,469		
BELLE OAKS ASSISTED LIVING CENTER	0000575	0	Missaukee	Natural	Nat	39	0	1
LAKE CITY	0003700	0	Missaukee	Natural	Nat	923	1.1	1
County Population Served:						962		
ASH TOWNSHIP	0000245	0	Monroe		Cons 1/1/1970	5,304		1
BENNETT MOBILE HOME PARK	0040348	0	Monroe	Natural	Nat	70	1.4	1
BERLIN TOWNSHIP	0000635	0	Monroe		Cons 1/1/1970	9,700		1
DUNDEE	0001880	0	Monroe		Cons 1/1/1972	4,537		1
FLAT ROCK VILLAGE MHP	0040350	0	Monroe	Natural	Nat	830	1.1	1
FRENCHTOWN TOWNSHIP	0002500	0	Monroe	Fluorosilicic Acid	Adj 1/1/1970	17,374	0	1
MONROE	0004450	0	Monroe	Fluorosilicic Acid	Adj 1/1/1951	42,960	0	1
PETERSBURG	0005290	0	Monroe		Cons	1,278		1
SOUTH ROCKWOOD	0006130	0	Monroe		Cons 1/1/1970	1,543		1
County Population Served:						83,596		
CARSON CITY	0001170	0	Montcalm	Fluorosilicic Acid	Adj 1/1/1966	3,553	0	1
GREENVILLE	0002850	0	Montcalm	Fluorosilicic Acid	Adj 1/1/1966	8,333	0	1
SHERIDAN	0006040	0	Montcalm	Fluorosilicic Acid	Adj 1/1/1959	705	0	1
County Population Served:						12,591		
BUTTERFIELD WOODS SUBDIVISION	0001018	0	Muskegon	Natural	Nat	65	0	1
FRUITPORT TOWNSHIP	0002507	0	Muskegon		Cons 1/1/1977	8,870		1
MUSK CO NORTHSIDE WATER SYSTEM	0004577	0	Muskegon		Cons	3,778		1
MUSKEGON	0004570	0	Muskegon	Fluorosilicic Acid	Adj 1/1/1951	39,402	0	1
MUSKEGON CHARTER TOWNSHIP	0004590	0	Muskegon		Cons	6,540		1
MUSKEGON HEIGHTS	0004580	0	Muskegon	Fluorosilicic Acid	Adj 1/1/1952	11,741	0	1
NORTH MUSKEGON	0004780	0	Muskegon		Cons 1/1/1951	4,031		1
NORTON SHORES	0004850	0	Muskegon		Cons 1/1/1952	20,878		1
RAVENNA	0005610	0	Muskegon	Fluorosilicic Acid	Adj 1/1/1972	1,206	0.4	1
ROOSEVELT PARK	0005800	0	Muskegon		Cons 1/1/1952	3,890		1
County Population Served:						100,401		

FREMONT	0002490	0	Newaygo	Fluorosilicic Acid	Adj	1/1/1968	4,300	0	1
County Population Served:							4,300		
AUBURN HILLS	0005450	0	Oakland		Cons		20,274		1
BERKLEY	0000630	0	Oakland		Cons	1/1/1967	15,531		1
BEVERLY HILLS	0000690	0	Oakland		Cons	1/1/1967	10,451		1
BINGHAM FARMS	0000715	0	Oakland		Cons		1,126		1
BIRMINGHAM	0000730	0	Oakland		Cons	1/1/1967	19,293		1
BLOOMFIELD HILLS	0000775	0	Oakland		Cons	1/1/1970	3,869		1
BLOOMFIELD TOWNSHIP	0000790	0	Oakland		Cons	1/1/1967	43,023		1
CLAWSON	0001440	0	Oakland		Cons	1/1/1967	12,732		1
COLUMBIERE CENTER	0001572	0	Oakland	Natural	Nat		60	0	1
COMMERCE TOWNSHIP	0001573	0	Oakland		Cons		17,400		1
FARMINGTON	0002230	0	Oakland		Cons	1/1/1967	10,300		1
FARMINGTON HILLS	0002240	0	Oakland		Cons	1/1/1967	72,460		1
FERNDALE	0002280	0	Oakland		Cons	1/1/1967	22,105		1
HAZEL PARK	0003100	0	Oakland		Cons	1/1/1967	18,506		1
HOLLY	0003200	0	Oakland	Fluorosilicic Acid	Adj		8,557	0	1
HUNTINGTON WOODS	0003310	0	Oakland		Cons	1/1/1967	6,200		1
KEEGO HARBOR	0003595	0	Oakland		Cons	1/1/1970	3,283		1
LAKE ORION	0003740	0	Oakland		Cons		2,762		1
LATHRUP VILLAGE	0003800	0	Oakland		Cons	1/1/1967	4,236		1
MADISON HEIGHTS	0004000	0	Oakland		Cons	1/1/1967	31,101		1
MILFORD	0004390	0	Oakland	Fluorosilicic Acid	Adj	1/1/1962	7,520	0	1
NOVI	0004870	0	Oakland		Cons	1/1/1970	41,581		1
OAK PARK	0004880	0	Oakland		Cons	1/1/1967	32,399		1
ORCHARD LAKE VILLAGE	0005031	0	Oakland		Cons		2,806		1
ORION TOWNSHIP	0005035	0	Oakland		Cons		33,000		1
PINECREST APARTMENTS	0005345	0	Oakland	Natural	Nat		57	0	1
PLEASANT RIDGE	0005390	0	Oakland		Cons	1/1/1967	2,594		1
PONTIAC	0005440	0	Oakland		Cons	1/1/1967	66,337		1
RIDGEWOOD MOBILE HOME PARK INC	0040671	0	Oakland	Natural	Nat		783	0	1
ROCHESTER HILLS	0000325	0	Oakland		Cons		69,739		1
ROCHESTER-EAST	0005723	0	Oakland		Cons		1,500		1
ROYAL OAK	0005830	0	Oakland		Cons	1/1/1967	60,062		1
ROYAL OAK TOWNSHIP	0005840	0	Oakland		Cons	1/1/1967	2,531		1
SOUTH LYON	0006110	0	Oakland	Fluorosilicic Acid	Adj	1/1/1972	11,055	0	1
SOUTHEASTERN OAKLAND CO W AUTH	0006150	0	Oakland		Cons	1/1/1972	217,103		1
SOUTHFIELD	0006160	0	Oakland		Cons		78,250		1
SYLVAN LAKE	0006530	0	Oakland		Cons		1,850		1
TROY	0006690	0	Oakland		Cons	1/1/1967	85,000		1
TWIN LAKES	0006696	0	Oakland	Natural	Nat		397	0	1
WALLED LAKE	0006875	0	Oakland		Cons		6,815		1
WEST BLOOMFIELD TOWNSHIP	0006975	0	Oakland		Cons	1/1/1974	49,429		1
WIXOM, CITY OF	0007135	0	Oakland		Cons		9,220		1
WOODLAND MOBILE HOME ESTATES	0040404	0	Oakland	Natural	Nat		938	0.9	1
County Population Served:							1,104,235		
BERGLAND	0000620	0	Ontonagon	Natural	Nat		210	0.62	1
County Population Served:							210		
BEAVER CREEK RESORT	0000514	0	Otsego	Natural	Nat		84	0	1
TREETOPS RESORT (TREETOPS NORTH)	0006647	0	Otsego	Natural	Nat		50	0	1
County Population Served:							134		
ALLENDALE TOWNSHIP	0000127	0	Ottawa		Cons		17,543		1
COOPERSVILLE	0001610	0	Ottawa		Cons		4,481		1
CROCKERY TOWNSHIP	0001664	0	Ottawa		Cons		1,012		1
FERRYSBURG	0002285	0	Ottawa		Cons		3,268		1
GEORGETOWN TOWNSHIP	0002620	0	Ottawa		Cons	1/1/1966	39,584		1
GRAND HAVEN	0002750	0	Ottawa		Cons	1/1/1952	11,268		1
GRAND HAVEN TOWNSHIP	0002760	0	Ottawa		Cons	1/1/1972	13,819		1
HOLLAND	0003190	0	Ottawa	Fluorosilicic Acid	Adj	1/1/1966	35,048	0	1
HOLLAND TOWNSHIP	0003195	0	Ottawa		Cons	1/1/1972	35,519		1
HUDSONVILLE	0003290	0	Ottawa		Cons	1/1/1966	7,750		1
JAMESTOWN TOWNSHIP	0003474	0	Ottawa		Cons		2,094		1

NORTHWEST OTTAWA WTP	0004847	0	Ottawa	Fluorosilicic Acid	Adj		41,000	0	1
OLIVE/BLENDON TWPS	0004989	0	Ottawa		Cons		499		1
PARK TOWNSHIP	0005203	0	Ottawa		Cons	1/1/1972	11,009		1
POLKTON TOWNSHIP	0005427	0	Ottawa		Cons		135		1
PORT SHELTON TOWNSHIP	0006026	0	Ottawa		Cons		73		1
SPRING LAKE	0006230	0	Ottawa		Cons	1/1/1957	2,512		1
SPRING LAKE TOWNSHIP	0006235	0	Ottawa		Cons		9,385		1
ZEELAND	0007270	0	Ottawa		Cons	1/1/1966	7,470		1

County Population Served: 243,469

MILLERSBURG	0004397	0	Presque Isle	Natural	Nat		263	1.6	1
ONAWAY	0005010	0	Presque Isle	Natural	Nat		993	1.6	1
PRESQUE ISLE HARBOR WATER CO	0005575	0	Presque Isle	Natural	Nat		742	1.1	1
ROGERS CITY	0005770	0	Presque Isle	Fluorosilicic Acid	Adj	1/1/1961	3,322	0	1
U A W FAMILY EDUCATION CENTER	0006705	0	Presque Isle	Natural	Nat		490	1.7	1
VILLAGE OF POSEN	0005543	0	Presque Isle	Natural	Nat		264	0	1

County Population Served: 6,074

BIRCH RUN	0000720	0	Saginaw		Cons	1/1/1976	1,653		1
BIRCH RUN TOWNSHIP	0000722	0	Saginaw		Cons		2,080		1
BLUMFIELD-REESE WATER AUTH	0000798	0	Saginaw		Cons		3,257		1
BRIDGEPORT TOWNSHIP	0000840	0	Saginaw		Cons	1/1/1976	11,709		1
BUENA VISTA TOWNSHIP	0000980	0	Saginaw		Cons	1/1/1973	10,318		1
CARROLLTON TOWNSHIP	0001160	0	Saginaw		Cons	1/1/1976	6,602		1
FRANKENMUTH	0002420	0	Saginaw		Cons	1/1/1959	4,838		1
FRANKENMUTH TOWNSHIP	0002425	0	Saginaw		Cons		1,389		1
JAMES TOWNSHIP	0003475	0	Saginaw		Cons	1/1/1976	1,930		1
KOCHVILLE TOWNSHIP	0003667	0	Saginaw		Cons	1/1/1976	4,652		1
SAGINAW	0005850	0	Saginaw	Fluorosilicic Acid	Adj	1/1/1974	61,799	0	1
SAGINAW TOWNSHIP	0005860	0	Saginaw		Cons	1/1/1967	39,657		1
SPAULDING TOWNSHIP	0006210	0	Saginaw		Cons	1/1/1974	2,399		1
ST CHARLES	0006260	0	Saginaw		Cons	1/1/1976	2,215		1
SWAN CREEK TOWNSHIP	0006502	0	Saginaw		Cons	1/1/1974	2,222		1
TAYMOUTH TOWNSHIP	0006552	0	Saginaw		Cons		2,015		1
THOMAS TOWNSHIP	0006580	0	Saginaw		Cons	1/1/1974	11,877		1
TITTABAWASSEE TOWNSHIP	0002470	0	Saginaw		Cons		7,968		1
WHISPERING PINES MHP	0040440	0	Saginaw	Natural	Nat		38	0.8	1
ZILWAUKEE	0007280	0	Saginaw		Cons	1/1/1974	1,811		1

County Population Served: 180,429

BROWN CITY	0000930	0	Sanilac	Natural	Nat		1,334	1.7	1
DECKERVILLE	0001760	0	Sanilac	Natural	Nat		944	0.8	1
LEXINGTON	0003850	0	Sanilac	Sodium Fluoride	Adj		1,146	0	1
LEXINGTON-WORTH TWPS	0003856	0	Sanilac		Cons		3,750		1
MARLETTE	0004110	0	Sanilac	Natural	Nat		2,104	1.2	1
MINDEN CITY	0004410	0	Sanilac	Natural	Nat		242	1.3	1
PINE TERRACE ESTATES MHP	0040446	0	Sanilac	Natural	Nat		93	1.6	1
SANDPIPER MOBILE ESTATES	0040447	0	Sanilac	Natural	Nat		225	1.3	1
SANILAC TOWNSHIP	0005925	0	Sanilac		Cons		525		1
SEABREEZE MOBILE HOME PARK	0040448	0	Sanilac	Natural	Nat		165	1.4	1
SUNSET MOBILE HOME PARK	0040449	0	Sanilac	Natural	Nat		225	1.1	1

County Population Served: 10,753

MANISTIQUE	0004040	0	Schoolcraft	Fluorosilicic Acid	Adj	1/1/1961	3,874	0	1

County Population Served: 3,874

ALAN'S PARK MOBILE HOME PARK	0040458	0	Shiawassee	Natural	Nat		98	0.9	1
CDRUNNA	0001640	0	Shiawassee		Cons		3,391		1
COUNTRY MANOR M H P	0040457	0	Shiawassee	Natural	Nat		87	0.8	1
COUNTRYSIDE VILLAGE	0040450	0	Shiawassee	Natural	Nat		900	1	1
LAKEVIEW ESTATES M H P	0040451	0	Shiawassee	Natural	Nat		598	0.9	1
OWOSSO	0005120	0	Shiawassee	Fluorosilicic Acid	Adj	1/1/1972	15,713	0	1
PLEASANT VALLEY TRAILER PARK	0040454	0	Shiawassee	Natural	Nat		94	0.9	1

County Population Served: 20,871

ALGONAC	0000110	0	St. Clair	Fluorosilicic Acid	Adj	1/1/1949	4,800	0	1
BURTVILLE TOWNSHIP	0001008	0	St. Clair		Cons		3,000		1
CAPAC	0001110	0	St. Clair	Natural	Nat		1,775	1.1	1

CLAY TOWNSHIP	0001450	0	St. Clair		Cons	1/1/1972	9,800		1
CLYDE TOWNSHIP	0001493	0	St. Clair		Cons		2,400		1
COTTRELLVILLE TOWNSHIP	0001650	0	St. Clair		Cons	1/1/1961	2,500		1
FORT GRATIOT TOWNSHIP	0002385	0	St. Clair		Cons	1/1/1974	11,153		1
KIMBALL TOWNSHIP	0003628	0	St. Clair		Cons		3,900		1
MARINE CITY	0004090	0	St. Clair	Sodium Fluorosilicate	Adj	1/1/1961	4,652	0	1
MARYSVILLE	0004160	0	St. Clair	Fluorosilicic Acid	Adj	1/1/1952	10,000	0	1
MEMPHIS	0004230	0	St. Clair	Natural	Nat		1,130	0.9	1
PINEWOOD ON THE LAKE	0040464	0	St. Clair	Natural	Nat		950	1	1
PORT HURON	0005480	0	St. Clair	Sodium Fluorosilicate	Adj	1/1/1974	33,800	0	1
PORT HURON TOWNSHIP	0005490	0	St. Clair		Cons	1/1/1974	8,615		1
ST. CLAIR TOWNSHIP	0006282	0	St. Clair		Cons		3,270		1
ST. CLAIR	0006270	0	St. Clair	Sodium Fluorosilicate	Adj	1/1/1956	5,802	0	1
ST. CLAIR WATER AND SEWER AUTHORITY	0006284	0	St. Clair	Sodium Fluorosilicate	Adj		4,200	0	1
SUNRISE MOBILE HOME PARK	0040466	0	St. Clair	Natural	Nat		120	1	1
YALE	0007230	0	St. Clair	Fluorosilicic Acid	Adj	1/1/1959	2,066	0	1

County Population Served: 113,933

STURGIS	0006440	0	St. Joseph	Fluorosilicic Acid	Adj	1/1/1971	11,920	0	1

County Population Served: 11,920

AKRON	0000070	0	Tuscola	Natural	Nat		461	1.6	1
CARO	0001130	0	Tuscola	Natural	Nat		4,145	1	1
CARO REGIONAL CENTER	0001140	0	Tuscola	Natural	Nat		574	0.9	1
KINGSTON	0003660	0	Tuscola	Natural	Nat		450	0.9	1
PEBBLE CREEK MOBILE HOME PARK	0040479	0	Tuscola	Natural	Nat		252	1.2	1
PINECREST MOBILE ESTATES	0040481	0	Tuscola	Natural	Nat		172	0.8	1
RIVERVIEW MOBILE HOME PARK	0040482	0	Tuscola	Natural	Nat		248	0.8	1
UNIONVILLE	0006730	0	Tuscola	Natural	Nat		615	1.2	1
VASSAR	0006780	0	Tuscola	Natural	Nat		2,823	1.3	1
VAUGHN VILLAGE M H P	0040484	0	Tuscola	Natural	Nat		232	0.7	1
VILLAGESIDE MOBILE HOME PARK	0040642	0	Tuscola	Natural	Nat		38	1.6	1

County Population Served: 10,010

APPLEWOOD	0040668	0	Van Buren	Natural	Nat		75	0	1
BANGOR	0000380	0	Van Buren	Fluorosilicic Acid	Adj	1/1/1973	2,033	0	1
COVERT TOWNSHIP	0001661	0	Van Buren	Cons		1,540		1	
HARTFORD	0003070	0	Van Buren	Fluorosilicic Acid	Adj	1/1/1966	2,476	0	1
SOUTH HAVEN	0006100	0	Van Buren	Fluorosilicic Acid	Adj	1/1/1952	5,021	0.8	1
SOUTH HAVEN/CASCO TWP AUTHORITY	0006103	0	Van Buren	Cons		2,802		1	

County Population Served: 13,947

ANN ARBOR	0000220	0	Washtenaw	Fluorosilicic Acid	Adj	1/1/1949	114,000	0	1
ANN ARBOR TOWNSHIP	0000221	0	Washtenaw	Cons		1,800		1	
AUGUSTA TOWNSHIP	0000321	0	Washtenaw	Cons		3,642		1	
CHELSEA	0001370	0	Washtenaw	Fluorosilicic Acid	Adj	1/1/1961	5,000	0	1
ELLSWORTH LAKE HOMEOWNERS ASSOCIATION	0002108	0	Washtenaw	Natural	Nat		88	0	1
MANCHESTER	0004020	0	Washtenaw	Fluorosilicic Acid	Adj	1/1/1973	2,250	0	1
PITTSFIELD TOWNSHIP	0005360	0	Washtenaw	Cons	1/1/1972	20,000		1	
RIVER RIDGE - SALINE	0040663	0	Washtenaw	Natural	Nat		720	0	1
SALINE	0005900	0	Washtenaw	Fluorosilicic Acid	Adj	1/1/1966	8,940	0	1
SCIO TOWNSHIP	0005977	0	Washtenaw	Cons		9,400		1	
SISTERS OF MARY, MOTHER OF EUCARIST	0006074	0	Washtenaw	Natural	Nat		61	0	1
ST. LOUIS CENTER	0006325	0	Washtenaw	Natural	Nat		93	0	1
SUPERIOR TOWNSHIP	0006490	0	Washtenaw	Cons	1/1/1972	13,000		1	
SYLVAN TOWNSHIP	0006531	0	Washtenaw	Natural	Nat		200	0	1
YPSILANTI COMMUNITY UTILITIES	0007260	0	Washtenaw	Cons	1/1/1964	92,876		1	

County Population Served: 272,070

ALLEN PARK	0000130	0	Wayne	Cons	1/1/1970	29,376		1	
BELLEVILLE	0000580	0	Wayne	Cons	1/1/1970	4,300		1	
BROWNSTOWN TWP	0000940	0	Wayne	Cons	1/1/1970	29,000		1	
CANTON TWP	0001100	0	Wayne	Cons	1/1/1967	89,000		1	
DEARBORN	0001730	0	Wayne	Cons	1/1/1967	97,775		1	
DEARBORN HEIGHTS	0001740	0	Wayne	Cons	1/1/1967	58,264		1	

DETROIT	0001800	0	Wayne	Fluorosillicic Acid	Adj	1/1/1967	899,387	0	1
DETROIT METROPOLITAN WAYNE CO. AIRPORT	0001798	0	Wayne		Cons		6,001		1
ECORSE	0002050	0	Wayne		Cons	1/1/1970	11,229		1
FLAT ROCK	0002300	0	Wayne		Cons		9,100		1
GARDEN CITY	0002550	0	Wayne		Cons	1/1/1967	27,922		1
GIBRALTAR	0002630	0	Wayne		Cons	1/1/1970	4,600		1
GROSSE ILE TWP	0002870	0	Wayne		Cons	1/1/1970	11,039		1
GROSSE POINTE	0002880	0	Wayne		Cons	1/1/1974	5,670		1
GROSSE POINTE FARMS	0002890	0	Wayne	Fluorosillicic Acid	Adj	1/1/1974	9,764	0	1
GROSSE POINTE PARK	0002900	0	Wayne		Cons	1/1/1967	12,450		1
GROSSE POINTE SHORES	0002910	0	Wayne		Cons	1/1/1967	2,748		1
GROSSE POINTE WOODS	0002920	0	Wayne		Cons	1/1/1967	17,085		1
HAMTRAMCK	0002970	0	Wayne		Cons	1/1/1967	22,994		1
HARPER WOODS	0003020	0	Wayne		Cons	1/1/1967	14,254		1
HIGHLAND PARK	0003140	0	Wayne	Fluorosillicic Acid	Adj	1/1/1952	16,746	0	1
HURON TWP	0003320	0	Wayne		Cons	1/1/1970	14,485		1
INKSTER	0003360	0	Wayne		Cons	1/1/1967	30,115		1
LINCOLN PARK	0003870	0	Wayne		Cons	1/1/1971	40,010		1
LIVONIA	0003930	0	Wayne		Cons	1/1/1967	96,900		1
MELVINDALE	0004220	0	Wayne		Cons	1/1/1970	10,735		1
NORTHVILLE	0004830	0	Wayne		Cons	1/1/1967	6,249		1
NORTHVILLE TOWNSHIP	0004845	0	Wayne		Cons	1/1/1970	25,511		1
PLYMOUTH	0005400	0	Wayne		Cons	1/1/1961	9,413		1
PLYMOUTH TWP	0005420	0	Wayne		Cons	1/1/1970	27,798		1
REDFORD TWP	0005640	0	Wayne		Cons	1/1/1967	51,475		1
RIVER ROUGE	0005690	0	Wayne		Cons	1/1/1970	9,851		1
RIVERVIEW	0005710	0	Wayne		Cons	1/1/1970	13,189		1
ROCKWOOD	0005750	0	Wayne		Cons		3,442		1
ROMULUS	0005785	0	Wayne		Cons	1/1/1967	22,944		1
SOUTHGATE	0006170	0	Wayne		Cons	1/1/1970	31,880		1
SUMPTER TWP	0006460	0	Wayne		Cons	1/1/1970	12,100		1
TAYLOR	0006545	0	Wayne		Cons	1/1/1970	65,868		1
TRENTON	0006650	0	Wayne		Cons	1/1/1970	19,584		1
VAN BUREN TWP	0006770	0	Wayne		Cons	1/1/1970	23,559		1
WAYNE	0006950	0	Wayne		Cons	1/1/1967	19,093		1
WESTLAND	0007040	0	Wayne		Cons	1/1/1970	86,602		1
WOODHAVEN	0007180	0	Wayne		Cons	1/1/1970	13,000		1
WYANDOTTE	0007210	0	Wayne	Fluorosillicic Acid	Adj	1/1/1951	28,006	0	1

County Population Served: 2,040,513

Population Served for State MI: 7,300,202

Total Population Served for Jurisdiction MI: 7,300,202



2010 Water Fluoridation Statistics

These statistics were prepared using water system data reported by states to the CDC Water Fluoridation Reporting System as of December 31, 2010, and the U.S. Census Bureau estimates from 2010.

National Water Fluoridation Statistics

Total U.S. population, persons ^a	308,745,538
U.S. population on community water systems, persons ^b	276,607,387
Total U.S. population on fluoridated CWS, persons ^b	204,283,554
Percentage of U.S. population receiving fluoridated water ^c	66.2%
Percentage of U.S. population on CWS receiving fluoridated water ^d	73.9%
Total number of CWS in United States ^b	54,293
Number of CWS providing fluoridated water ^b	18,427
Number of CWS adjusting fluoride ^b	6,042
Number of CWS consecutive to systems with optimal fluoride levels ^b	6,795
Number of CWS with naturally occurring fluoride at or above optimal levels ^b	5,590
Population served by CWS with naturally occurring fluoride ^b	10,077,922

State Fluoridation Percentage Calculations and States Ranked by Fluoridation Percentage

State	%	Persons receiving fluoridated water	Persons served by CWS	State	Rank
United States	73.9	204,283,554	276,607,387	Kentucky	1
Alabama ^e	80.0	3,821,766	4,779,736	Maryland	2
Alaska	62.8	404,039	643,373	Illinois	3
Arizona	56.7	3,114,799	5,493,584	Minnesota	4
Arkansas	64.7	1,724,131	2,666,306	North Dakota	5

California ^f	62.1	22,812,721	36,756,666	Virginia	6
Colorado ^e	70.1	3,523,554	5,029,196	South Dakota	7
Connecticut	91.0	2,370,423	2,604,427	Indiana	8
Delaware	86.2	705,344	818,110	West Virginia	9
District of Columbia	100.0	595,000	595,000	Iowa	10
Florida	78.0	13,377,651	17,156,553	Georgia	11
Georgia ^c	92.1	8,924,598	9,687,653	Michigan	Tied for 12
Hawaii ^f	10.8	139,598	1,290,549	Tennessee	Tied for 12
Idaho	30.5	335,127	1,099,561	Connecticut	14
Illinois	99.3	11,325,132	11,403,176	Wisconsin	15
Indiana	94.4	4,326,732	4,582,296	Ohio	16
Iowa	92.3	2,344,818	2,541,455	North Carolina	17
Kansas	65.1	1,155,071	1,775,588	South Carolina	18
Kentucky ^e	99.9	4,334,223	4,339,367	Delaware	19
Louisiana ^e	40.7	1,846,149	4,533,372	Rhode Island	20
Maine	79.0	521,414	660,367	Texas	21
Maryland	99.8	5,140,618	5,151,947	Alabama	22
Massachusetts ^e	70.7	4,626,859	6,547,629	Missouri	23
Michigan	91.6	7,322,410	7,996,744	Maine	24
Minnesota	98.8	4,117,266	4,166,424	Florida	25
Mississippi ^e	55.2	1,639,348	2,967,297	New Mexico	26
Missouri	79.8	3,966,102	4,966,951	New York	27
Montana	29.6	233,221	788,705	Nevada	28
Nebraska	70.2	1,001,665	1,425,929	Massachusetts	29
Nevada	72.9	1,855,460	2,544,079	Nebraska	30
New Hampshire	42.9	357,262	832,631	Colorado	31
New Jersey	13.5	1,111,624	8,221,293	Kansas	32
New Mexico	77.0	1,210,777	1,571,600	Arkansas	Tied for 33
					Tied for

New York ^e	74.7	14,468,141	19,378,102	Oklahoma	33
North Carolina	87.3	6,174,598	7,072,012	Washington	35
North Dakota	96.9	559,246	577,325	Alaska	36
Ohio	87.7	8,772,683	10,005,412	California	37
Oklahoma	64.7	2,296,459	3,547,668	Arizona	38
Oregon	22.6	833,227	3,688,540	Vermont	39
Pennsylvania	54.6	5,802,260	10,636,421	Mississippi	40
Rhode Island	85.3	853,580	1,000,413	Pennsylvania	41
South Carolina	87.1	3,434,565	3,944,594	New Hampshire	42
South Dakota	94.8	642,942	678,028	Louisiana	43
Tennessee	91.6	5,336,600	5,827,549	Wyoming	44
Texas	80.4	19,362,219	24,080,084	Utah	45
Utah ^e	33.2	918,473	2,763,885	Idaho	46
Vermont	56.6	256,006	452,116	Montana	47
Virginia	95.6	6,124,274	6,403,141	Oregon	48
Washington	64.6	3,490,031	5,402,328	New Jersey	49
West Virginia	92.4	1,208,015	1,307,369	Hawaii	50
Wisconsin	87.9	3,300,037	3,755,613		
Wyoming	36.8	165,296	449,223		

Footnotes

a. Census Population Count 2010. Intercensal Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2010. Source: Population Estimates Program, U.S. Census Bureau. Internet release date: December 21, 2011. Available at <http://www.census.gov/popest/data/intercensal/state/state2010.html>.

b. Reported in CDC Water Fluoridation Reporting System (WFRS). For purposes of this report, a water system is considered a community water system if so designated by the state drinking water administrator in accordance with the regulatory requirements of the U.S. Environmental Protection Agency. In general, public water systems provide water for human consumption through pipes or other constructed conveyances to at least 15 service connections, or serves an average of at least 25 people for at least 60 days a year. A community water system is a public water system that supplies water to the same population year-round. Available at <http://water.epa.gov/infrastructure/drinkingwater/pws/factoids.cfm>.

c. Fluoridated population divided by total population.

d. Fluoridated population divided by population served by community water systems.

e. Population served by CWS exceeded the U.S. Census state population estimate; number of persons was reduced by the ratio of the population estimate to the CWS population estimate.

f. Complete data were not available from WFRS; state provided additional information.

Additional Resources

More detail on U.S. Census Bureau estimates can be found at **Calculating Fluoridation Statistics**

Historical fluoridation statistics are available at **Reference Statistics**

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Content source: **Division of Oral Health, National Center for Chronic Disease Prevention and Health Promotion**

Page Located on the Web at <http://www.cdc.gov/fluoridation/statistics/2010stats.htm>

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Strengthening Community Water Fluoridation to Prevent Cavities

Cavities (tooth decay) are one of the **most common** chronic diseases among American children and adolescents. In 1945, Grand Rapids, Michigan **made history** as the first U.S. city to combat cavities by fluoridating its public water supplies. Water fluoridation prevents tooth decay by providing frequent and consistent contact with low levels of fluoride. By keeping the tooth surface strong, fluoride stops cavities from forming. Even before the 15-year study was complete, the results were clear: Compared to children born before the study started, those who were born after had 60% fewer cavities.

Jurisdictions across the country followed Grand Rapids' lead, and now almost three-quarters of U.S. residents on public water systems benefit from fluoridated water.

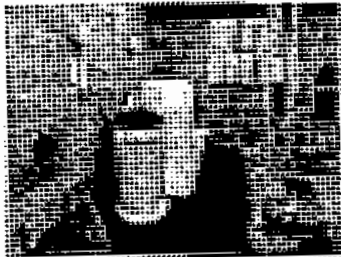
According to the **Centers for Disease Control and Prevention (CDC)**, children living in communities with fluoridated water have about 25% fewer cavities than children in communities without fluoridation. With rising health care costs, community water fluoridation is a cost-effective intervention to prevent oral health complications for people of all backgrounds, regardless of age, education, or income levels.



In partnership with the CDC, NACCHO began supporting local organizations in their community water fluoridation initiatives in January 2017. The **pilot program** offered funding and technical assistance to local communities to support either the replacement of aging water fluoridation equipment or the installation of new equipment.

The six grantees from the pilot, "Building Capacity for Oral Health: Fluoridation Equipment in Local Communities" completed their projects in June 2017.

"Our previous system would have to be taken offline several times a quarter due to maintenance issues, but since the new system we have not had to shut it down once. We are helping the community by now providing a constant and correct dosage of fluoride for dental health." – Pilot Grantee



*New water fluoridation equipment
in the City of Fircrest, Washington*

Five of the six original grantees said the program was "very impactful" in their ability to maintain their water fluoridation systems, noting that replacing old equipment and adding extra equipment for backup has ensured constant and reliable fluoridation for the community.

All grantees said the program was impactful in their promotion of water fluoridation benefits to the public. Increasing community comprehension of these benefits was an integral component of the pilot program.

"Our equipment was very old and not in good working order. The purchase of the new equipment provided much needed improvements to maintain our fluoride residuals and improve space in our well houses." – Pilot Grantee

Given the success of the pilot program, the CDC funded a second cohort, and NACCHO awarded 17 new grants in December 2017:

- City of Burnsville, MN: \$40,000 (pop. served 61,000)
- Oldham County Water District, KY: \$40,000 (pop. served 11,500)
- Town of Forest City, NC: \$40,000 (pop. served 16,600)
- Glacial Lakes Sanitary Sewer and Water District, MN: \$38,279.73 (pop. served 3,839)
- City of Parsons, KS: \$35,000 (pop. served 10,500)

- City of West Liberty, KY: \$27,775 (pop. served 3,500)
- Auburn Water District, City of Lewiston Water Division, ME: \$26,600 (pop. served 51,765)
- City of South Bend, WA: \$25,000 (pop. served 10,500)
- City of Barre, VT: \$21,200 (pop. served 14,000)
- Morehead Utility Plant Board, KY: \$14,740 (pop. served 33,095)
- Sterling Water and Sewer, KY: \$14,676 (pop. served 16,298)
- Bellows Falls Water Department, VT: \$14,170.85 (pop. served 5,000)
- Jefferson Parish, LA: \$12,800 (pop. served 150,000)
- Town of Cathlamet, WA: \$6,600 (pop. served 2,500)
- City of LaSalle, MN: \$4,100 (pop. served 85)
- West Virginia Oral Health Coalition, WV: \$2,585 (pop. served 5,695)
- City of Fairbury, IL: \$1,712.95 (pop. served 3,900)

As part of their applications, the awardees submitted letters of support from partners expressing encouragement for the installation or continuation of community water fluoridation:

"The Minnesota Department of Health Oral Health Program strongly supports the Centers for Disease Control and Prevention in their recognition of community water fluoridation as one of 10 great public health achievements of the 20th century... We commend the City of Burnsville for its commitment to maintain this important evidence-based community investment which benefits both children and adults." – Prasida Khanal, State Oral Health Program Director, Minnesota Department of Health

"Improvements to oral health in our village will have a significant impact on those who have the greatest need." – Charles H. Wise Jr., Town Health Officer, Bellows Falls, VT

"According to the county health rankings for 2015, the ratio of dentists to the population for the county is 1:2,973. This is double what the ratio is for the state (1:1,453), thus creating an access issue for dental care for our citizens. Prevention is the key!" – MaLinda Hillman, Administrator, Livingston County Public Health Department

5/16/2018

The 17 new grantees are currently installing new or replacing aging fluoridation equipment with all projects scheduled to be completed by June 30, 2018.

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[<http://essentialelements.naccho.org/archives/9600>]

Fluoridation Practice

47. Who regulates drinking water additives in United States?

Answer.

The United States Environmental Protection Agency (EPA) regulates drinking water additives.

Fact.

In 1974, Congress passed the Safe Drinking Water Act (SDWA) which protects the public's health by regulating the nation's public drinking water supply.¹ The SDWA, as amended in 1986 and 1996,¹ requires the Environmental Protection Agency (EPA) to ensure the public is provided with safe drinking water.¹ On June 22, 1979, the Food and Drug Administration (FDA) and the EPA entered into a Memorandum of Understanding (MOU) to clarify their roles and responsibilities in water quality assurance.² The stated purpose of the MOU is to "avoid the possibility of overlapping jurisdiction between the USEPA and FDA with respect to control of drinking water additives." The two agencies agreed that the Safe Drinking Water Act's passage in 1974 implicitly repealed FDA's jurisdiction over drinking water as a 'food' under the Federal Food, Drug and Cosmetic Act (FFDCA). Under the MOU, EPA enjoys exclusive regulatory authority over drinking water provided by public water systems, including any additives in such water. FDA retains jurisdiction over bottled drinking water under Section 410 of the FFDCA and "over water (and substances in water) used in food or food processing once it enters the food processing establishment."²

While drinking water from the tap is regulated by the EPA, bottled water is regulated by the FDA which has established standards for its quality.² The FDA has noted that fluoride can occur naturally in source waters used for bottled water or may be added by a

bottled water manufacturer. Recognizing the benefit of fluoride in water, the FDA has stated that bottled water that meets specific standards of identity and quality set forth by FDA, and the provisions of the authorized health claim related to fluoride, may be labeled with the following health claim: "Drinking fluoridated water may reduce the risk of [dental caries or tooth decay]."³

While drinking water from the tap is regulated by the EPA, bottled water is regulated by the FDA which has established standards for its quality. The FDA has noted that fluoride can occur naturally in source waters used for bottled water or may be added by a bottled water manufacturer. Recognizing the benefit of fluoride in water, the FDA has stated that bottled water that meets specific standards of identity and quality set forth by FDA, and the provisions of the authorized health claim related to fluoride, may be labeled with the following health claim: "Drinking fluoridated water may reduce the risk of [dental caries or tooth decay]."

From time to time, states and communities have had to deal with legislation or ballot initiatives aimed at requiring the approval of the FDA before any agent can be added to community water systems. Often referred to as the Fluoride Product Quality Control Act, Water Product Quality Ordinance or Pure Water Ordinance, the legislation is specifically used by those opposed to water fluoridation as a tool to prevent water systems from providing community water fluoridation. Often this legislation does not specifically

mention fluoride or fluoridation. Those supporting this type of legislation may claim that they are not against water fluoridation but are proponents of pure water and do not want anything added to water that has not been approved by the FDA. On the surface, this may appear to be a "common sense" approach. However, its only real purpose is to defeat efforts to provide water fluoridation. That is because this proposed legislation would require the FDA — which does NOT regulate public water systems — to approve any water additive. By mistakenly (and perhaps craftily) naming the wrong federal agency, the probable outcome is to stop or prevent water fluoridation.

48. What standards have been established to ensure the safety of fluoride additives used in community water fluoridation in the United States?

Answer.

The three fluoride additives used in the U.S. to fluoridate community water systems (sodium fluoride, sodium fluorosilicate, and fluorosilicic acid) meet safety standards established by the American Water Works Association (AWWA) and NSF International (NSF).⁴

The three fluoride additives used in the U.S. to fluoridate community water systems (sodium fluoride, sodium fluorosilicate, and fluorosilicic acid) meet safety standards established by the American Water Works Association (AWWA) and NSF International (NSF).

Fact.

Additives used in water treatment meet safety standards prepared in response to a request by the Environmental Protection Agency to establish minimum requirements to ensure the safety of products added to water for its treatment, thereby ensuring the public's health.⁴ Specifically, fluoride additives used in water fluoridation meet standards established by the American Water Works Association (AWWA) and NSF International (NSF).⁴ Additionally, the American National Standards Institute (ANSI) endorses both AWWA and NSF standards for fluoridation additives and includes its name on these standards.⁴

The American Water Works Association⁵ is an international nonprofit scientific and educational society dedicated to providing total water solutions to assure the effective management of water. Founded in 1881, the AWWA is the largest organization of water supply professionals in the world. The membership represents the full spectrum of the water community: public water and wastewater systems, environmental advocates, scientists, academicians, and others who hold a genuine interest in water. AWWA unites the diverse water community to advance public health, safety, the economy, and the environment.⁵

NSF International,⁶ an independent, accredited organization, is dedicated to being the leading global provider of public health and safety-based risk management solutions. Manufacturers, regulators and consumers look to NSF to develop public health standards and certifications that help protect food, water, consumer products and the environment. Its professional staff includes microbiologists, toxicologists, chemists, engineers, and environmental and public health professionals. Founded in 1944 as the National Sanitation Foundation, NSF's mission is to protect and improve global human health.⁶

The American National Standards Institute (ANSI)⁷ is a private, non-profit organization that administers and coordinates the U.S. voluntary standardization and conformity assessment system. The Institute's mission is to enhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems, and safeguarding their integrity.⁷

The AWWA documents provide manufacturers, suppliers and purchasers with standards for the manufacturing, quality and verification for each of the three fluoride additives listed below. The AWWA standards set the physical, chemical and impurities standards including information on verification of the standard requirements and requirements for delivery.⁴

- ANSI/AWWA B701 Sodium Fluoride
- ANSI/AWWA B702 Sodium Fluorosilicate
- ANSI/AWWA B703 Fluorosilicic Acid⁴

NSF/ANSI Standard 60^{4,6} provides for purity of drinking water additives as it limits an additive's contribution of harmful contaminants to drinking water. The Standard also provides for safety assurances from production through distribution to ensure product quality is maintained. Additionally, the Standard requires documentation of the purity of the additives including specific criteria for products imported from other countries. NSF/ANSI Standard 61^{4,6} is a related standard that provides guidance for equipment/products used in water treatment plants that come in contact with drinking water. Both NSF/ANSI standards were developed by a consortium of associations including NSF, AWWA, the Association of State Drinking Water Administrators and the Conference of State Health and Environmental Managers with support from the U.S. Environmental Protection Agency.⁴

Fluoride additives, like all of the more than 40 additives typically used in water treatment, are "water grade" additives. All additives used at the water plant are classified as water grade additives meeting NSF Standard 60 requirements. Examples of other "water grade" additives which are commonly used in water plant operations are chlorine (gas), ferrous sulfate, hydrochloric acid, sulfur dioxide and sulfuric acid.⁸

Sometimes antifuoridationists express the view that they are not really opposed to fluoridation, but are opposed to the use of "industrial grade" fluoride additives. They may even go so far as to state that they would support fluoridation if the process was implemented with pharmaceutical grade fluoride additives that were approved by the U.S. Food and Drug Administration (FDA). On the surface, this may appear to be a "common sense" approach. In fact, this is usually a ploy whose only real purpose is to stop fluoridation. First, the EPA, not the FDA, has regulatory authority for additives used in public water systems. Second, and perhaps most importantly, the U.S. Pharmacopeia (USP) monograph on sodium fluoride does not provide for certification of quality by an independent credentialing body.^{4,9} Third, the USP and The National Formulary (USP-NF) standards used to formulate prescription drugs are not appropriate for water fluoridation additives as they could actually allow higher levels of contaminants to be introduced into drinking water than is allowed by the current EPA standards.^{4,9} According to the CDC:⁹

The USP does not provide specific protection levels for individual contaminants, but establishes a relative maximum exposure level for a group of related contaminants. Some potential impurities have no restrictions by the USP, including arsenic, some heavy metals regulated by the U.S. EPA, and radionuclides. Given the volumes of chemicals used in water fluoridation, a pharmaceutical grade of sodium fluoride for fluoridation could potentially contain much higher levels of arsenic, radionuclides, and regulated heavy metals than an NSF/ANSI Standard 60-certified product.

Additional information about this topic can be found in this Section, Question 49.

Lastly, USP-grade sodium fluoride product is more likely to result in water plant personnel being exposed to fluoride dust as it is more powder-like than the preferred AWWA-grade sodium fluoride which is crystalline and so minimizes dusting when handled.⁴

Additional information about this topic can be found in this Section, Question 52.

- * 49. Does fluoridating the community water supply raise concerns about lead, arsenic and other toxic contaminants to the water supply?

Answer.

No. The concentrations of contaminants in drinking water as a result of fluoridation do not exceed, but are in fact, well below regulatory standards set to ensure the public's safety.

Fact.

Fluorosilicic acid is used to fluoridate the majority of community water systems in the United States.¹⁰ Because the additive is derived from ore mined from the earth, fluorosilicic acid may contain minute amounts of contaminants such as lead and arsenic. However, existing regulations and standards require that these contaminants, and others, be at levels considered acceptable by the U.S. Environmental Protection Agency when the fluorosilicic acid or other fluoridation additives are diluted to produce optimally fluoridated water.⁶ NSF International and the American National Standards Institute (NSF/ANSI) Standard 60 as well as AWWA standards are applicable to all fluoride additives.^{4,6}

Testing of fluoride additives provides evidence that the levels of these contaminants do not exceed, but are in fact, well below regulatory standards set to ensure the public's safety. NSF has prepared a detailed fact sheet, *NSF Fact Sheet on Fluoridation Products* (2013)¹¹ that provides the documented quality of fluoride additives based on product samples analyzed. The NSF reports that the majority of fluoridation products as a class, based on NSF test results, do not add measurable amounts of arsenic, lead, or other heavy metals, or radionuclides to drinking water.^{9,11}

50. Have fluoride additives been tested for safety?

Answer.

The claim is sometimes made that no studies on safety exist on the additives used in water fluoridation. This statement is a ruse because the scientific community does not study the health effects of the concentrated additives; studies are done on the health effects of the treated water.

Fact.

A 1999 study¹² charged that fluorosilicic acid and sodium silicofluoride did not disassociate (break down) completely when added to water systems and may be responsible for lower pH (acid) levels of drinking water, leaching lead from plumbing systems and increasing lead uptake by children. Scientists from the U.S. Environmental Protection Agency (EPA) evaluated the disassociation of fluoride additives¹³ and concluded that at the typical pH level of drinking water (which is normally slightly alkaline) and the fluoride levels used in drinking water, the fluoride additives quickly and completely broke down to fluoride ions and silica.

Published in 2006,¹⁴ researchers at the University of Michigan verified for the EPA that theoretical predictions that hexafluorosilicate completely hydrolyzed (broke down) when added to water separating into free fluoride ions and silica ions were confirmed. The research demonstrated that there was no hexafluorosilicate that could be measured in the finished water.¹⁴

While sodium fluoride was the first additive used in water fluoridation, the use of silicofluoride additives (sodium fluorosilicate and fluorosilicic acid) began in the late 1940s. By 1951, silicofluorides had become

the most commonly used fluoride additives in water fluoridation.¹⁵ Many of the early studies on the health effects of fluoridation were completed in communities that were using the silicofluoride additives, most generally fluorosilicic acid.¹⁶⁻²¹ However, at that time, the additives used to fluoridate were not always identified in research reports. As the body of research on fluoridation grew, it became evident that there were no adverse health effects associated with water fluoridation regardless of which fluoride additive was used. Additionally, over time, a number of comprehensive reviews of the health effects of fluoridation were published. These reviews which support the safety of water fluoridation include many studies conducted in large fluoridated communities which used the silicofluoride additives.²²⁻²⁹

There is now more than 70 years of practical experience that lends additional credence to the best available science that concludes that fluoridation is safe.

51. What is the source of the additives used to fluoridate water supplies in the United States?

Answer.

The majority of fluoridation additives used in the United States are derived from the mineral apatite (a component of calcium phosphate).

Fact.

About 95% of the fluoridation additives used in water fluoridation are by-products which come from the processing of calcium phosphate into phosphate fertilizer. About 4% are derived from the processing of calcium fluoride and the remaining 1% derived from the production of high-purity silica.*

In the production of phosphate fertilizer, calcium phosphate ore (which contains apatite) is mixed with sulfuric acid resulting in a calcium sulfate (gypsum) slurry. The gaseous phosphoric acid released from this process is collected by vacuum extraction, condensed and then desiccated (dried) and formed into phosphate fertilizer pellets. Fluoride is a trace constituent (3-7%) of the mineral apatite found in calcium phosphate ore. Silica tetrafluoride is also released as a gas in the creation of the calcium sulfate slurry and is collected by vacuum extraction along with the gaseous phosphoric acid. In about half the phosphate fertilizer plants in the U.S., the silica tetrafluoride gas is condensed and

processed along with the phosphoric acid and becomes a trace component of the phosphate fertilizer. In the other plants, the silica tetrafluoride gas is separated from the phosphoric acid. Roughly 60% of the fluoride recovered from processing calcium phosphate ore is sold for use as fluoridation additives. The fluoridation additive produced by this process is fluorosilicic acid. While most of the product is sold as fluorosilicic acid, some of the product is partially neutralized to sodium fluorosilicate salt and some is fully neutralized to sodium fluoride salt. In the U.S., 77% of the fluoridation additives used are fluorosilicic acid, 15% are sodium fluorosilicate and 8% are sodium fluoride.*

About 4% of the fluoridation additives used are derived from the processing of calcium fluoride into hydrogen fluoride using a gas separation technique to recover the fluorosilicic acid from the hydrogen fluoride.*

About 1% of the fluoridation additives used are derived from the production of high-purity silica. Fluorosilicic acid is produced as part of the purification of the silica.*

**The preceding paragraphs were developed using references 4, 30 through 35 and personal communication from Mr. Kip Duchon, P.E., national fluoridation engineer, CDC.*

From time to time, opponents of fluoridation allege that fluoridation additives are by-products of the phosphate fertilizer industry in an effort to suggest the additives are not safe. By definition, by-products are materials produced as a result of producing something else. In the chemical industry, a byproduct (secondary product) is anything other than the principal product produced. The fact that a product is a secondary product of a manufacturing process should not suggest the item is bad, harmful or a waste product. On the contrary, by-products may have certain characteristics which make them valuable resources. In the production of phosphate fertilizer, the fluoridation additive, fluorosilicic acid, is a by-product along with gypsum.³⁶ Gypsum is commonly used in manufacturing wall board used in construction. The production of orange juice provides another example of valuable by-products. In addition to orange juice, various by-products are obtained from oranges during juice production that are used in cleaners, fragrances and flavorings.³⁷

Fluoridation additives are valuable by-products produced as a result of producing phosphate fertilizer. To ensure the public's safety, additives used in water fluoridation meet standards of the American Water Works Association (AWWA) and NSF International (NSF).⁴

***52. Does the process of water fluoridation present unusual safety concerns for water systems and water facility operators?**

Answer.

No. With proper monitoring, maintenance, water facility operator training and systems planning, water fluoridation is a safe and reliable process.

Fact.

Water facilities and water facility operators perform a valuable public service by carefully adjusting the level of fluoride in water to improve the oral health of the community. Facilities and personnel are subject to a number of regulations designed to ensure safety.

Employers must conform to Occupational Safety and Health Administration (OSHA) requirements.³⁸ OSHA's mission is to assure safe and healthful workplaces by setting and enforcing standards, and by providing training, outreach, education and assistance. Under the OSH Act, employers are responsible for providing a safe and healthful workplace. Employers must comply with all applicable OSHA standards.³⁸

Additionally, in order to assist in protecting the professionals who produce sustainable supplies of high-quality drinking water, the American Water Works Association publishes detailed guidance on safety and safe working conditions for water plant personnel.³⁹

Furthermore, OSHA requires that Safety Data Sheets (SDS), previously known as Material Safety Data Sheets (MSDS), be readily available to all employees for potentially harmful substances handled in the workplace under the Hazard Communication regulation.⁴⁰ A SDS may include instructions for the safe use and potential hazards associated with a particular material and are typically made available in the area where the material is stored or used. Information contained in a SDS focuses on the potential hazards of working with the material in an occupational setting. Adherence to the SDS guidelines for handling fluoride additives helps to ensure the

recommended level of fluoride in drinking water flows through the water system while maintaining water operator safety. In the case of fluoride, the potential hazards faced by a water facility employee in dealing with concentrated fluoride additives before they enter the water system are not related to the level of fluoride in water as used by consumers. The information found in the SDS for fluoride additives is not applicable to water with fluoride at the recommended level. Therefore, SDS sheets should not be used by consumers to gauge potential hazards of community water fluoridation.

As part of safety procedures, water facility personnel receive training on the management of the additives in water plants. While the recommended fluoride level found in drinking water has been proven safe, water facility operators and engineers may be exposed to much higher fluoride levels when handling fluoride additives at the water treatment facility.⁴ Fluoride additives present risks comparable to other water additives in common use at water facilities, such as hypochlorite, quicklime, aluminum sulfate, sodium hydroxide and ferrous sulfate. In some cases, the fluoride additives are much less dangerous than many other additives, including chlorine gas commonly used in many water plants.³⁹

Today's equipment allows water facility personnel to easily monitor and maintain the desired fluoride concentration. Automatic monitoring technology is also available that can help to ensure that the fluoride concentration of the water remains within the recommended range.⁴

It is important that the water facility personnel responsible for monitoring the addition of fluoride to the water supply are appropriately trained and that the equipment used for this process is adequately maintained.⁴ With over 70 years of experience and thousands of water systems adding fluoride every day, water facility personnel have an excellent safety record related not only to their personal safety but in providing safe drinking water to their customers.

* 53. Does fluoridation present difficult engineering problems?

Answer.

No. Adding fluoride products to water is no different than adding other commonly used water treatment additive products using the same equipment and techniques.

Fact.

Fluoride additives used to adjust the fluoride level in drinking water are compatible with other water treatment processes often using the same type of equipment and other standard materials designed for the safe handling of other water treatment additive products in drinking water treatment facilities. Fluoride additives are introduced to the water supply as liquids. There are many control devices, some in use for decades and some newer equipment, that allow water facility personnel to easily monitor and maintain the desired fluoride level as well as levels of other water treatment additives and naturally occurring substances that may be in the water. Automatic monitoring technology is available that can help to ensure that the fluoride concentration of the water remains within the recommended range.⁴

When added to community water supplies, the concentrated fluoride additives become greatly diluted. For example, typically fluorosilicic acid is diluted approximately 315,000 times to reach the recommended target concentration of 0.7 mg/L. The exact dilution factor depends on the concentration of the fluoride additive and the amount of additive being used to reach the concentration of 0.7mg/L. At 0.7mg/L (or 0.7 parts per million), seven-tenths of one part of fluoride is diluted in is diluted in 999,999.3 parts of water. To place this concentration in perspective, the following comparisons can be of assistance.

- 1 inch in approximately 23 miles
- 1 minute in approximately 1,000 days
- 1 cent in approximately \$14,000
- 1 seat in more than 34 Wrigley Field baseball parks (seating capacity 41,268)

With more than 70 years of experience with water fluoridation, there is considerable guidance on sound engineering practices to design, construct, operate and maintain water fluoridation systems. By design, and with proper maintenance and testing, water

systems can provide the recommended level of fluoride within a narrow control range of the target of 0.7mg/L.^{41,42} Additional design features such as the use of a day tank (that holds only one day's supply of fluoride) can limit the amount of fluoride that can be added to a water system in a 24-hour period and is the most reliable method to ensure overfeed protection.⁴ The State Office of Drinking Water, or similar state agency, will normally establish engineering requirements for safety. Additional standards and references on best engineering practice are available from the American Water Works Association and the Centers for Disease Control and Prevention.^{4,43}

* 54. Does fluoride at levels used in fluoridation corrode water pipes?

Answer.

No. Allegations that fluoridation causes corrosion of water pipes are not supported by the best available scientific evidence.

Fact.

The process of adding fluoride to water has minimal impact on the acidity or pH of drinking water and therefore will not corrode water pipes. Corrosion of drinking water pipes is related primarily to induced electrical current between dissimilar metals. Other contributing factors include the dissolved oxygen concentration, water temperature, acidity/alkalinity (pH), hardness, salt concentration, hydrogen sulfide content and the presence of certain bacteria. Under some water quality conditions, a small increase in the acidity of drinking water that is already slightly acidic may be observed after treatment with alum, chlorine, fluorosilicic acid or sodium fluorosilicate. In such cases, further water treatment to adjust the pH to neutralize the acid for corrosion control in water distribution systems is standard procedure in water plants.⁴⁴

The process of adding fluoride to water has minimal impact on the acidity or pH of drinking water and therefore will not corrode water pipes.

Note that the Water Quality Report or Consumer Confidence Report that all water systems must make available to customers on a yearly basis, may list the pH of the system's finished water.⁴⁵ Control of neutral pH (7.0) is essential as part of corrosion control requirements. Water facilities typically maintain a pH of between 7.0 and 8.0 as good practice indicating that the water leaving the plant is slightly alkaline and non-acidic.⁴⁶

* 55. Does fluoride at levels used in water fluoridation corrode glass, concrete or other surfaces in water plants?

Answer.

No. A correctly engineered and maintained system will not result in damage to the water plant.

Fact.

Fluorosilicic acid in a concentrated form can be corrosive if not correctly handled. The concentrated fluorosilicic acid is 75% water, and 25% fluorosilicic acid. Up to 1% of the fluorosilicic acid can be other acids including hydrogen fluoride. Hydrogen fluoride is volatile near room temperature so it will evaporate from the solution if the system is not properly engineered and maintained. The evaporation process occurs at an extremely slow rate. Less than 1% of fluorosilicic acid will be lost over a month from the evaporation of hydrogen fluoride. However, only a small release of hydrogen fluoride may be very corrosive to concrete, glass, and electrical components.³⁰

If a water system is reporting problems with corrosion from evaporating hydrogen fluoride in the storage room or fluoride handling room (i.e. the glass in the facility has become "frosted"), the system is being inadequately maintained. The storage tank and other locations in the fluorosilicic acid feed system may not be sealed or correctly vented and hydrogen fluoride gas can be released (leaked) at those points. All fluoride products storage, handling, and feed systems should be vented to the outside of the building and the system and piping should be pressure tested (low pressure is sufficient) to identify possible locations of leaks. Leaks should be promptly corrected.³⁰

With no system leaks and proper venting to outside the building, there will be no corrosion problems.³⁰

56. Does fluoridated water harm the environment?

Answer.

No. Scientific evidence supports the fluoridation of public water supplies as safe for the environment and beneficial for people.

Fact.

Fluoride is naturally occurring in the environment and is the 13th most abundant element in the earth's crust. It is found in naturally in all water sources as noted below.⁴⁷

Rain — between 0.1 to 0.2 mg/L

Streams and lakes — between 0.1 to 0.3 mg/L

Groundwaters — between 0.1 to 10 mg/L

Oceans and seawater — between 1.2 to 1.4 mg/L

A comprehensive literature review published in 2004 revealed no negative environmental impacts as a result of water fluoridation.⁴⁸ A 1990 study concluded that fluoridation has little or no impact on surrounding aquatic environment or soil.⁴⁹ Historically, issues surrounding problems with fluoride and the environment have involved incidents related to serious industrial pollution or accidents.⁴⁹

Under the Washington's State Environmental Protection Act (SEPA), a study was conducted in Tacoma-Pierce County to investigate the environmental consequences of adding optimal levels of fluoride to drinking water. Noting that the amount of fluoride in the water does not reach levels that are harmful to plants or animals, the SEPA study concluded that there are "no probable significant adverse environmental impacts."⁵⁰

There is no evidence that the recommended level of fluoride in drinking water has any adverse effect on gardens, lawns or plants.⁵⁰

Additional information regarding water fluoridation additives and engineering issues can be found on the CDC's fluoridation website, "Water Operators and Engineers" at <https://www.cdc.gov/fluoridation/engineering/index.htm>.

In discussing the contribution of fluoridation, the October 22, 1999 MMWR⁶ noted fluoridation of community drinking water was a major factor responsible for the decline in tooth decay during the second half of the 20th century. Although other fluoride-containing products are available, water fluoridation remains the most equitable and cost-effective method of delivering fluoride to all members of communities, regardless of age, educational attainment, or income level.⁶

✶ 58. Is water fluoridation a valuable public health measure?

Answer.

Yes. Community water fluoridation is a public health measure that benefits people of all ages and is a public health program that saves money for families and the health care system. Because fluoridation reaches large numbers of people where they live, learn, work and play, it is more effective than other forms of fluoride delivery. Water fluoridation reaches everyone in the community regardless of age, race, education, income level or access to routine dental care. Because of the important role it has played in the reduction of tooth decay, the Centers for Disease Control and Prevention (CDC) has proclaimed community water fluoridation one of 10 great public health achievements of the 20th century.^{5,6}

Community water fluoridation is a public health measure that benefits people of all ages and is a public health program that saves money for families and the health care system.

Fact.

Throughout decades of research and more than 70 years of practical experience, fluoridation of public water supplies has been responsible for dramatically improving the public's oral health status.

It has been said that those who cannot remember the past are condemned to repeat it. As generations pass, details from life in the 1930s and 1940s fade.

The oral health of Americans suffered greatly during the time of the Great Depression and into the era of World War II. There were no public health programs in place that addressed tooth decay and the loss of teeth was viewed as an eventuality. In fact, as World War II approached, those joining the U.S. Army were required to have six back teeth (three on the top and three on the bottom) that opposed each other to serve the function of chewing food and six front teeth (three on the top and three on the bottom) that opposed each other for the purpose of biting into food. The number of men disqualified for dental reasons far exceeded all expectations as "dental disease" became the most common reason for military deferment. One out of eleven registrants examined was disqualified for military service due to dental issues.⁷ After Pearl Harbor it was apparent that the manpower needed to fight a global war could be obtained only if dental standards for induction were drastically relaxed. By March 1942, the standards had been revised so that a man who was "well nourished, of good musculature, and free from gross dental infections" but who was completely edentulous (without any teeth) could be inducted if his condition was corrected or could be corrected with dentures.⁷

Because fluoridation reaches large numbers of people where they live, learn, work and play, it is more effective than other forms of fluoride delivery.

In January 1945, a community water fluoridation trial began in Grand Rapids, Michigan followed within months by trials in Newburgh, NY (May 1945), Brantford, Ontario (June 1945) and Evanston, IL (February 1947). Reductions in tooth decay were dramatic leading to the rapid adoption of fluoridation in cities across the U.S. As a result, tooth decay declined sharply during the second half of the 20th century. Tooth loss was no longer considered inevitable.

Former U.S. Surgeon General, Dr. Luther Terry, called fluoridation as vital a public health measure as immunization against disease, pasteurization of milk and purification of water.⁸

Another former U.S. Surgeon General, Dr. C. Everett Koop, wrote:

...this preventive measure (fluoridation) is the single most important commitment that a community can make to the oral health of its children and to future generations. I urge all health officials and concerned citizens to join me in supporting this commitment and in the task of achieving water fluoridation for all community drinking water supplies which lack the fluoride content needed for the prevention of dental caries.⁹

In 1999, because of the dramatic role it played in the reduction of tooth decay, the Centers for Disease Control and Prevention (CDC) proclaimed community water fluoridation one of 10 great public health achievements of the 20th century.^{5,6}

In May 2000, U.S. Surgeon General Dr. David Satcher issued the first ever Surgeon General's report on oral health titled, *Oral Health in America: A Report of the Surgeon General*.¹⁰ In 2001, Dr. Satcher issued a statement on fluoridation in which he noted:

...community water fluoridation continues to be the most cost-effective, practical and safe means for reducing and controlling the occurrence of dental decay in a community...water fluoridation is a powerful strategy in efforts to eliminate health disparities among populations.¹¹

In the 2003 *National Call to Action to Promote Oral Health*,¹² U.S. Surgeon General Dr. Richard Carmona called on individuals and groups who are most concerned and in a position to act to apply strategies to enhance the adoption and maintenance of proven community-based interventions such as community water fluoridation.¹² In his 2004 *Statement on Community Water Fluoridation*,¹³ Dr. Carmona wrote:

While we can be pleased with what has already been accomplished, it is clear that there is much yet to be done. Policymakers, community leaders, private industry, health professionals, the media, and the public should affirm that oral health is essential to general health and well-being and take action to make ourselves, our families, and our communities healthier. I join previous Surgeons General in acknowledging the continuing public health role for community water fluoridation in enhancing the oral health of all Americans.¹³

In 2013, U.S. Surgeon General Dr. Regina M. Benjamin wrote:¹⁴

...As Surgeon General I have been working hard to encourage individuals and communities to make healthy choices because I believe it is better to prevent illness and disease rather than treat it after it occurs. Community water fluoridation is one of the most effective choices communities can make to prevent health problems while actually improving the oral health of their citizens... Fluoridation's effectiveness in preventing tooth decay is not limited to children, but extends throughout life, resulting in fewer and less severe cavities. In fact, each generation born since the implementation of water fluoridation has enjoyed better dental health than the generation that preceded it...¹⁴

U.S. Surgeon General Dr. Vivek H. Murthy issued a video statement supporting community water fluoridation in December 2015.¹⁵ In his video and written statement on fluoridation issued in 2016,^{15, 16} Surgeon General Murthy emphasized:

Our progress on this issue over the past 70 years has been undeniable. But we still have work to do. Because we know that so much of our health is determined by zip code rather than genetic code. That's why creating a culture of disease prevention through community efforts — and ensuring health equity for all — is one of my highest priorities. Community water fluoridation helps us meet these goals; as it is one of the most cost-effective, equitable, and safe measures communities can take to prevent tooth decay and improve oral health.^{15,16}

Today, the focus in achieving and maintaining health is on prevention. Established by the U.S. Department of Health and Human Services, Healthy People 2020¹⁷ provides a science-based, comprehensive set of ambitious, yet achievable, ten-year national objectives for improving the health of the public. Included under oral health is an objective to expand the fluoridation of public water supplies. Objective 13 states that at least 79.6% of the U.S. population served by community water systems should be receiving the benefits of optimally fluoridated water by the year 2020.¹⁸ Data from the CDC indicate that in 2014, 74.4% of the U.S. population on public water systems, or a total of 211.4 million people, had access to fluoridated water.¹⁹

Established by the U.S. Department of Health and Human Services in 1996, the Community Preventive Services Task Force develops and disseminates guidance on which community-based health promotion and disease prevention intervention approaches work, and which do not work, based on available scientific evidence. The Task Force issues findings based on systematic reviews of effectiveness and economic evidence. The Guide to Community Preventive Services ("The Community Guide") is a collection of evidence-based findings of the Community Preventive Services Task Force and is designed to assist decision makers in selecting interventions to improve health and prevent disease.²⁰

The Community Guide reviews are designed to answer three questions:

1. What has worked for others and how well?
2. What might this intervention approach cost, and what am I likely to achieve through my investment?
3. What are the evidence gaps?²⁰

The Community Preventive Services Task Force recommends community water fluoridation to reduce tooth decay.²¹

Reports have been released by the U.S. Department of Health and Human Services that encourage the use of preventive interventions to improve the overall and oral health of the nation.^{22,23} Specific to oral health, two reports issued in 2011 by the Institute of Medicine acknowledge water fluoridation is an effective intervention for the prevention of tooth decay. *Advancing Oral Health in America*²⁴ referred to water fluoridation as an effective prevention intervention, while *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*²⁵ acknowledged that evidence regarding community water fluoridation programs continues to validate its effectiveness, safety and cost-saving benefits.

*59. Does water fluoridation reduce disparities in dental health?

Answer.

Yes, evidence indicates water fluoridation helps to reduce the disparities in dental health at the community level. Populations with lower socioeconomic status (SES) who live in fluoridated communities have less tooth decay than their peers in nonfluoridated communities.

Fact.

In the first ever Surgeon's General Report on Oral Health issued in May 2000, U.S. Surgeon General David Satcher noted that community water fluoridation is safe and effective in preventing dental caries in both children and adults. Fluoridation benefits all residents served by community water supplies regardless of their social or economic status.¹⁰ In 2001, Dr. Satcher issued a statement on fluoridation in which he noted:

...community water fluoridation continues to be the most cost-effective, practical and safe means for reducing and controlling the occurrence of dental decay in a community...water fluoridation is a powerful strategy in efforts to eliminate health disparities among populations.¹¹

"...water fluoridation is a powerful strategy in efforts to eliminate health disparities among populations."

Established by the U.S. Department of Health and Human Services, Healthy People 2020 provides a science-based, comprehensive set of ambitious, yet achievable, ten-year national objectives for improving the health of the public and reducing health disparities.¹⁷ Starting with Healthy People 2000, one of the overarching goals of Healthy People has focused on disparities. With Healthy People 2020, that goal was expanded to achieve health equity, eliminate disparities, and improve the health of all groups.²⁵ Healthy People 2020 provides the following definitions.

Health disparity — a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic

group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.²⁵

Health equity — the attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities.²⁵

The association between social class and disparities in dental health has been established through extensive studies and reviews.^{26–28} Studies in communities both with and without fluoridated water consistently have shown higher levels of tooth decay in lower socioeconomic groups. Additional studies have evaluated the differences in children's tooth decay experience among socioeconomic groups and the effect that community water fluoridation has had on that experience.^{29–35} In areas with water fluoridation, children with low socioeconomic status (SES) had greater cavity experience than those with high SES. However, the tooth decay rates were higher for children with low SES who had no exposure to fluoridation compared to children with low SES who had exposure to fluoridated water.^{29–35} These studies demonstrate the positive effects that fluoridation has in reducing oral health disparities.

In 2011, a report by the Institute of Medicine, *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*,³⁶ acknowledged that evidence regarding community water fluoridation programs continues to validate its effectiveness, safety and cost-saving benefits.

Under the topic "Oral Health," Healthy People 2020 includes an objective to expand the fluoridation of public water supplies. Objective 13 states that at least 79.6% of the U.S. population served by community water systems should be receiving the benefits of optimally fluoridated water by the year 2020.¹⁸ Data from the CDC indicate that in 2014, 74.4% of the U.S. population on public water systems, or a total of 211.4 million people, had access to fluoridated water.¹⁹ Conversely, approximately 25% or more than 72.7 million people on public water systems do not receive the decay preventing benefits of fluoridation — a powerful strategy communities can implement in efforts to eliminate health disparities.

60 Along with the American Dental Association, who supports community water fluoridation?

Answer.

Many organizations, such as the National Dental Association, Hispanic Dental Association, American Academy of Pediatrics, American Medical Association, American Public Health Association and the World Health Organization also have policies that support community water fluoridation.

Many organizations, such as the National Dental Association, Hispanic Dental Association, American Academy of Pediatrics, American Medical Association, American Public Health Association and the World Health Organization also have policies that support community water fluoridation.

Fact.

The American Dental Association (ADA) adopted its original resolution in support of fluoridation in 1950³⁷ and has repeatedly reaffirmed its position publicly and in its House of Delegates based on its continuing evaluation of the safety and effectiveness of fluoridation.²⁷

The National Dental Association (NDA) is the largest and oldest organization of minority oral health professionals in the world.³⁹ Representing more than 7,000 minority dentists, nationally and abroad,³⁹ the NDA seeks to provide continued advancement of the highest quality of oral health care and safety for the public.⁴⁰ In 2012, the NDA adopted the following position:⁴⁰

It is therefore, the position of the National Dental Association that Community Water Fluoridation is safe, beneficial and cost-effective and should be encouraged and supported under the following conditions:

- Community water supplies should contain the optimal fluoride levels as recommended by the U.S. Public Health Service (a range from 0.7 – 1.2 parts per million)
- Local communities and dental societies should be in agreement with and support the fluoridation project in their communities.

- Appropriate resources monitoring capabilities should be available to ensure that the appropriate water fluoride monitoring infrastructures are in place at all times in the impacted communities.⁴⁰

In a policy position released in 2012,⁴¹ the Hispanic Dental Association (HDA) noted that the HDA mission works toward the elimination of oral health disparities in the Hispanic community and that the benefits of fluoridation are critical to HDA's endorsement. The HDA position statement⁴¹ includes the following item:

Therefore, it is the position of the Hispanic Dental Association to:

1. Endorse community water fluoridation in all communities — especially the Hispanic and underserved communities — as a safe, beneficial and cost-effective public health measure based on science for preventing dental caries and to aid in the reduction of oral health disparities.⁴¹

As part of its core values⁴² the American Academy of Pediatrics (AAP) is dedicated to promoting optimal health and wellbeing for every child. With a strong emphasis on policy, advocacy and education,⁴² the AAP is a strong advocate for community water fluoridation. In support of water fluoridation⁴³ the AAP states:

Water fluoridation is a community-based intervention that optimizes the level of fluoride in drinking water, resulting in preeruptive and posteruptive protection of the teeth. Water fluoridation is a cost-effective means of preventing dental caries, with the lifetime cost per person equaling less than the cost of 1 dental restoration.⁴³

The American Medical Association's (AMA) mission is to promote the art and science of medicine and the betterment of public health.⁴⁴ Its House of Delegates first endorsed fluoridation in 1951⁴⁵ and the AMA reaffirmed its support for water fluoridation in 2011.⁴⁶

The American Public Health Association (APHA) champions the health of all people and all communities and speaks out for public health issues and policies backed by science.⁴⁷ It has supported community water fluoridation as a safe and effective public health measure for the prevention of tooth decay since 1950.⁴⁸ The APHA reaffirmed its support in 2008 by stating that it strongly endorses and recommends

"the fluoridation of all community water systems as a safe and effective public health measure for the prevention of tooth decay."⁴⁹

The goal⁵⁰ at the World Health Organization (WHO) is to build a better, healthier future for people all over the world. The WHO, which initially adopted policy recommending the practice of water fluoridation in 1969,⁵¹ reaffirmed its support for fluoridation in 1994⁵² stating:

Providing that a community has a piped water supply, water fluoridation is the most effective method of reaching the whole population, so that all social classes benefit without the need for active participation on the part of individuals.⁵²

In 2004, the WHO once again affirmed its support stating that "Water fluoridation, where technically feasible and culturally acceptable, has substantial public health benefits."⁵³ In 2007, the Sixtieth World Health Assembly adopted *WHA60.17—Oral health action plan for promotion and integrated disease prevention*⁵⁴ which urges member states to:

(4) for those countries without access to optimal levels of fluoride, and which have not yet established systematic fluoridation programmes, to consider the development and implementation of fluoridation programmes, giving priority to equitable strategies such as the automatic administration of fluoride, for example, in drinking water, salt or milk, and to the provision of affordable fluoride toothpaste;⁵⁴

In 2016, WHO officials wrote:

The use of fluoride is a major breakthrough in public health. Controlled addition of fluoride to drinking water supplies in communities where fluoride concentration is below optimal levels to have a cariostatic effect began in the 1940s and since then extensive research has confirmed the successful reduction in dental caries in many countries.⁵⁵

Additionally a list of more than 35 organizations with positions/policies supporting community water fluoridation can be viewed on ADA's website at www.ADA.org/fluoride in the section marked "Fluoridation Links." Each organization is listed with a link to their specific fluoridation position/policy. Below are just a few of the organizations listed on the website.

- American Association of Dental Research
- American Association of Public Health Dentistry
- American Water Works Association
- Association of State and Territorial Dental Directors
- Centers for Disease Control and Prevention
- International Association of Dental Research
- National Institute of Dental and Craniofacial Research

Many organizations in the United States and around the world recognize the benefits of community water fluoridation. The ADA has developed a list of "National and International Organizations that Recognize the Public Health Benefits of Community Water Fluoridation for Preventing Dental Decay." Please see the ADA website at www.ADA.org/fluoride for the most current listing as well as information on reproduction and distribution of the list.

However, support for fluoridation doesn't end with a list of organizations. In many cases, local newspaper editorial boards support fluoridation. Perhaps the most notable of these efforts occurred when the 2013 Pulitzer Prize for Journalism — Editorial Writing⁵⁶ was awarded to Tim Nickens and Daniel Ruth of the *Tampa Bay Times*, St. Petersburg, Florida, for their diligent campaign that helped reverse a decision to end fluoridation of the water supply for the 700,000 residents of the newspaper's home (Pinellas) county. Copies of their 10 editorials from 2012 can be viewed at <http://www.pulitzer.org/winners/tim-nickens-and-daniel-ruth>.

61. Has the legality of water fluoridation been upheld by the courts?

Answer.

Yes. Fluoridation has been thoroughly tested in the United States' court system, and found to be a proper means of furthering public health and welfare. No court of last resort has ever determined fluoridation to be unlawful. Moreover, fluoridation clearly has been held not to be an unconstitutional invasion of religious freedom or other individual rights guaranteed by the First, Fifth or Fourteenth Amendments to the U.S. Constitution. And while cases decided primarily on procedural grounds have been won and lost by both pro- and anti-fluoridation interests, to ADA's knowledge, no final ruling in any of those cases has found fluoridation to be anything but safe and effective.

Fact.

The legality of fluoridation in the United States has been thoroughly tested in our court systems. Fluoridation is viewed by the courts as a proper means of furthering public health and welfare.⁵⁷ No court of last resort has ever determined fluoridation to be unlawful. The highest courts of more than a dozen states have confirmed the constitutionality of fluoridation.⁵⁸ In 1984, the Illinois Supreme Court upheld the constitutionality of the state's mandatory fluoridation law, resolving 16 years of court action at a variety of judicial levels.⁵⁹ Moreover, the U.S. Supreme Court has denied review of fluoridation cases thirteen times, citing that no substantial federal or constitutional questions were involved.⁵⁸

Fluoridation is viewed by the courts as a proper means of furthering public health and welfare. No court of last resort has ever determined fluoridation to be unlawful.

It has been the position of the American courts that a significant government interest in the health and welfare of the public generally overrides individual objections to public health regulation.⁵⁸ Consequently, the courts have rejected the contention that fluoridation ordinances are a deprivation of religious or individual freedoms guaranteed under the Constitution.^{58,60} In reviewing the legal aspects of fluoridation, the courts have dealt with this concern by ruling that: (1) fluoride is a nutrient, not a medication, and is present naturally in the environment; (2) no one is forced to drink fluoridated water as alternative sources are available; and (3) in cases where a person believes that fluoridation interferes with religious beliefs, there is a difference between the freedom to believe, which is absolute, and the freedom to practice beliefs, which may be restricted in the public's interest.^{61,62}

Fluoridation is the adjustment of the level of a naturally occurring mineral found in water in order to prevent tooth decay. Courts have consistently ruled that water fluoridation is not a form of compulsory mass medication or socialized medicine.^{58,61,63} In fact, water that has been fortified with fluoride is similar to fortifying salt with iodine, milk with vitamin D and orange juice with calcium — none of which are medications.

In recent years, challenges to fluoridation have been dismissed for a variety of reasons, including that plaintiffs admitted they could not establish injury by virtue of fluoridation and that state law supporting fluoridation prevailed over local attempts to oppose fluoridation.

Interestingly, pro- and anti- fluoridation interests have each won and lost legal challenges regarding which state or local agency has regulatory authority over fluoridation, which of course varies by state and locality.

State law variances have also led to different rulings on other issues, such as whether downstream end-users of fluoridation must be given an opportunity to vote on whether to fluoridate. While cases decided primarily on procedural grounds have been won and lost by both pro- and anti- fluoridation interests, to the ADA's knowledge no final ruling in any of those cases has found fluoridation to be anything but safe and effective.

For additional information regarding the legal status of community water fluoridation in the United States, refer to *The Fluoride Legislative User Information Database (FLUID)* which is a comprehensive database containing historical information on legal cases decided by U.S. courts. The database also contains current information on federal and state policies regarding community water fluoridation. The website can be accessed at: <http://fluidlaw.org>.

62. Why does opposition to community water fluoridation continue?

Answer.

Public health controversies sometimes exist regarding public health interventions. In public health there can be tension between "public good" and "individual freedoms." Because public health deals with populations it is all but impossible to resolve issues to achieve approval from 100 percent of the individuals within the population. When looking at fluoridation, some individuals opposed to fluoridation are sincere in their beliefs. Others ignore what constitutes reputable scientific evidence as defined by the vast majority of the scientific community and choose instead to base their beliefs on personal opinions and studies with flawed methodologies.

Fact.

Fluoridation is considered beneficial by the overwhelming majority of the health and scientific communities as well as the general public. A vast body of scientific literature endorses water fluoridation as a safe means of reducing the incidence of tooth decay. Support for fluoridation among scientists and health professionals, including physicians and dentists, is nearly universal. Recognition of the benefits of fluoridation by the American Dental Association, the American Medical Association, the American Academy of Pediatrics, governmental agencies and other national health and civic organizations continues as a result of published, peer-reviewed research.

Fluoridation has a long history of being a political issue, as well as a scientific one, with opposition including activists from both the right and the left of the political spectrum. In the late 40s, opposition to fluoridation began to appear nationwide. Reportedly, one of the first public votes on fluoridation occurred in 1950 in Stevens Point, Wisconsin,⁶⁴ when a local activist initiated a campaign to stop the introduction of what he called "poison" into the water system. The campaign quickly moved from being a discussion of the science to a political campaign that included the involvement of a large number of civic groups, unofficial public petitions, calls for a debate, campaign rallies and numerous letters to the editor that "kept typesetters busy preparing for print the thousands of words that poured into the editor's desk." After 1950 when the U.S. Public Health Service and ADA endorsed fluoridation, proponents became more organized in their efforts to promote fluoridation while the opposition capitalized on the political nature of the struggle and used lessons learned in Stevens Point.

Of the small faction that opposes water fluoridation for philosophical reasons, freedom of choice probably is one of the most frequently cited issues. People take the stance that society should not "force" individuals to act in ways that are beneficial to their own health or the health of others. They are opposed to "government interference" in their lives.⁶⁵ Some individuals are opposed to community action on any health issue, others are opposed due to environmental or economic concerns and some are opposed because they are simply misinformed.

Opposition to fluoridation has existed since the initiation of the first programs in 1945 and continues today despite over 70 years of practical experience

showing fluoridation to be safe and effective. An article⁵⁵ that appeared in the local newspaper shortly after the first fluoridation program was implemented in Grand Rapids, Michigan, noted that the fluoridation program was slated to commence January 1, but did not actually begin until January 25. Interestingly, health officials in Grand Rapids began receiving complaints of physical ailments, including "teeth falling out and enamel peeling off their teeth," attributed to fluoridation from citizens weeks before fluoride was actually added to the water.⁶⁶ In 1992 a community in Finland opted to stop their fluoridation program at the end of the year in December. However, it was discontinued at the end of November without the public being told. Public surveys conducted in November and December and again in March the following year revealed the occurrence and mean number of symptoms (the most common being itching and dryness of skin) were fairly similar during the periods of actual and supposed fluoridation indicating the symptoms were not caused by fluoride in the water. Interestingly, those who claimed to be able to taste the fluoride in the water made this claim equally often during actual and supposed fluoridation. A significant reduction in the symptoms occurred after those responding to the surveys became aware that fluoridation had stopped. The authors concluded that the prevalence rates of the symptoms were connected to the psychological rather than the physical effects of exposure to fluoride in water.⁶⁷

Over time, antifluoridation leaders and organizations have come and gone, but their basic beliefs have remained the same. These include: fluoride is toxic and causes numerous harmful health effects; fluoride does not prevent tooth decay; fluoridation is costly; and fluoridation interferes with freedom of choice and infringes on individual rights.

Opinions are seldom unanimous on any scientific subject. In fact, there really is no such thing as "final knowledge," since new information is continuously emerging and being disseminated. As such, the benefit evidence must be continually weighed against risk evidence. Health professionals, decision makers and the public should be cooperating partners in the quest for accountability where decisions are based on proven benefits measured against verified risks.⁶⁸ Dentists are a valuable source of accurate information regarding water fluoridation for both their patients and their communities.

63. What are the tactics fluoridation opponents use to provoke opposition to water fluoridation?

Answer.

Fluoridation opponents use numerous tactics to disseminate misinformation and raise the fears of the public about the safety of water fluoridation. Routinely, they use scare techniques,⁶⁹ present half-truths, downplay the significance of science-based evidence and use selective reporting of results and studies to support their false allegations.⁵⁹

Fact.

While many of the arguments against fluoridation have remained relatively constant over the years, antifluoridationists have used different approaches that play upon the popular concerns of the public at the time.⁶⁵ For example, in the 1950s fluoridation was said to be a Communist plot. With America's growing concern for environmental issues in the 1960s, fluoridation was called pollution. After the Vietnam War in the 1970s, the antifluoridationists capitalized on the popularity of conspiracy theories by portraying fluoridation as a conspiracy between the U.S. government, the dental-medical establishment and industry. As the population became more concerned about their health in the 1980s, antifluoridationists claimed fluoridation caused AIDS and Alzheimer's disease. In the 1990s, claims of hip fractures and cancer were designed to resonate with aging baby boomers. With the new millennium, overexposure and toxicity, in association with lead poisoning, surfaced as common themes. Since the economic crisis of 2008, discussions about the cost of fluoridation are more commonplace. In the 2010s, neurotoxicity became a constant theme with charges of lower IQ and autism. Over the years, none of these approaches have ever really disappeared, but instead are often recycled as antifluoridationists choose which approach will have the greatest effect on the intended audience.⁶⁵

The internet has breathed new life into the antifluoridation effort bringing the antifluoridation message into voters' homes.^{71,72} With just a click of the mouse, search engines can locate a large number of websites denouncing fluoridation, which can give the impression that this is a one-sided argument. Individuals who look to the internet as a source of valid and reliable information often fail to recognize that these sites frequently contain personal opinion rather than scientific fact. Newspaper stories,

press releases and letters to the editor are often posted as documentation of the "science" behind antifluoridationists' claims. All too often, the public accepts this type of information as true simply because it is in print. Opposition videos are available from national antifluoridation organizations and are shared at no cost via vehicles such as YouTube making it possible for every campaign to bring an antifluoridationist to the community. Social media such as Facebook and Twitter are used to spread antifluoridation messaging to the public and to assist in organizing local efforts. These venues have allowed the small faction of antifluoridationists to be linked across the country and around the world and promote their message quickly, repeatedly and economically.

X Spreading misinformation impacts public policy and costs society in immeasurable ways. The opponents' claims and opinions can escalate to emotional arguments that, in the end, can delay, or prevent the introduction of a water fluoridation program or stop an existing program.⁷⁰ More people, especially those involved in policy decisions, need to be better informed about these tactics. In making decisions that affect the health of the community, it is important to distinguish between someone's personal opinion disguised as science and information based on the best available scientific evidence. It is perfectly acceptable to have your own opinion but it is unacceptable to have your own "facts" derived from something less than reputable science.

In making decisions that affect the health of the community, it is important to distinguish between someone's personal opinion disguised as science and information based on the best available scientific evidence.

In 1993 the U.S. Supreme Court issued a landmark decision that many view as likely to restrict the use of information inferred as science in the federal courts and in those state courts which adopt this reasoning. The Court determined that while "general acceptance" is not needed for scientific evidence to be admissible, federal trial judges have the task of ensuring that an expert's testimony rests on a reasonable foundation and is relevant to the issue in question.⁷³ According to the Supreme Court, many considerations will bear on whether the expert's underlying reasoning or methodology is scientifically valid and applicable in a given case. The Court set out four criteria that judges could use when evaluating scientific testimony:

1. whether the expert's theory or technique can be (and has been) tested, using the scientific method,
2. whether it has been subject to peer review and publication (although failing this criteria alone is not necessarily grounds for disallowing the testimony),
3. its known or potential error rate and the existence and maintenance of standards in controlling its operation and
4. whether it has attracted widespread acceptance within a relevant scientific community, since a known technique that has been able to attract only minimal support may properly be viewed with skepticism.⁷³

The scientific validity and relevance of claims made by opponents of fluoridation might be best viewed when measured against these criteria.⁷³ The techniques used by antifluoridationists are well known and have been discussed at length in a number of published articles that review the tactics used by antifluoridationists.^{58,65,68-70,74-77} Examples of a few of the techniques can be viewed in Figure 5.

Treating Correlation as Causation: Many people have heard the phrase that “correlation does not imply causation.” In other words, just because two events seem to fluctuate in tandem does not prove that they are meaningfully related to one another. For example, statistics show that sales of ice cream increase in warm summer months. Statistics also show that crime goes up in large cities in the summer. However, it would be ludicrous to draw the conclusion that ice cream causes an increase in crime. Yet this is exactly the type of logic exercised in some arguments and studies promoted by those opposed to fluoridation. For example, the opposition often points to Kentucky as having a large portion of the population on public water supplies receiving fluoridated water. And that’s correct. In 2014, Kentucky was ranked the number one state in the U.S. as 99.9% of its public water systems were fluoridated. But the opposition also points to the fact that Kentucky suffers from a large number of people who have lost their teeth. They draw the conclusion that this proves fluoridation does not work — without looking at other factors that influence this outcome. For example, while there is a large number of public water systems that are fluoridated, Kentucky has a large rural population that does not have access to public water supplies. Additionally, and perhaps most importantly, Kentucky’s population has a high rate of tobacco use which is known to be a risk factor for periodontal (gum) disease which can lead to the loss of teeth.

X 64. Where can valid, evidence-based information about water fluoridation be found on the internet?

Answer.

There are many reputable sites on the internet that provide information on fluorides and fluoridation including the American Dental Association as well as other reputable health and science organizations and government agencies. These sites provide information that is consistent with the best available scientific evidence.

Fact.

One of the most widely respected sources for information regarding fluoridation and fluorides is the American Dental Association’s (ADA) Fluoride and Fluoridation website at www.ADA.org/fluoride. (See Figure 6.) From the ADA website individuals can link to other fluoridation websites such as:

- Centers for Disease Control and Prevention at www.cdc.gov/fluoridation
- The Community Guide at <https://www.thecommunityguide.org>
- Fluoride Science at <http://fluoridescience.org>

The internet contains numerous sources of information on fluoridation. However, not all

“science” posted on the internet is based on scientific fact. Searching the internet for “fluoride” or “water fluoridation” directs individuals to numerous websites. Some of the content found in the sites is scientifically sound. Other less scientific sites look highly technical, but contain information based on science that is unconfirmed or has not gained widespread acceptance. In many cases, the information is largely opinion. While everyone is entitled to their opinion, they are not entitled to make that opinion appear as scientific fact. Commercial interests, such as the sale of water filters, are often promoted.

Today’s technology can put the world at your fingertips but search engine technology can influence what is returned in searches. The first time the search for “fluoridation” is made, it is likely that the returns will include both pro- and anti- fluoridation websites. When you click to view a website, the search engine takes note and on subsequent searches for the same term, the search engine will return items similar to what you chose initially. For example, if you choose a pro-fluoridation website initially, the next time you search for “fluoridation,” the search engine will likely return a selection of other pro-fluoridation websites for your review. Of course the converse is also true. Clicking on anti-fluoridation websites will allow you to see a search laden with similar anti-fluoridation sites.



FLUORIDATION AT YOUR FINGERTIPS!

<http://www.ADA.org/fluoride>

- ADA Fluoridation Resources
- ADA Fluoridation Videos
- ADA Fluoridation News Stories
- ADA Policy and Statements
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65. Why does community water fluoridation sometimes lose when it is put to a public vote?

Answer.

Voter apathy or low voter turnout due to the vote being held as a special election or in an "off" year, confusing ballot language (a "no" vote translates to support for fluoridation), blurring of scientific issues, the use of scare tactics by those opposed to fluoridation, long campaigns that lead to "fluoridation fatigue," lack of leadership by elected officials and a lack of political campaign skills among health professionals are some of the reasons fluoridation votes are sometimes unsuccessful.

Fact.

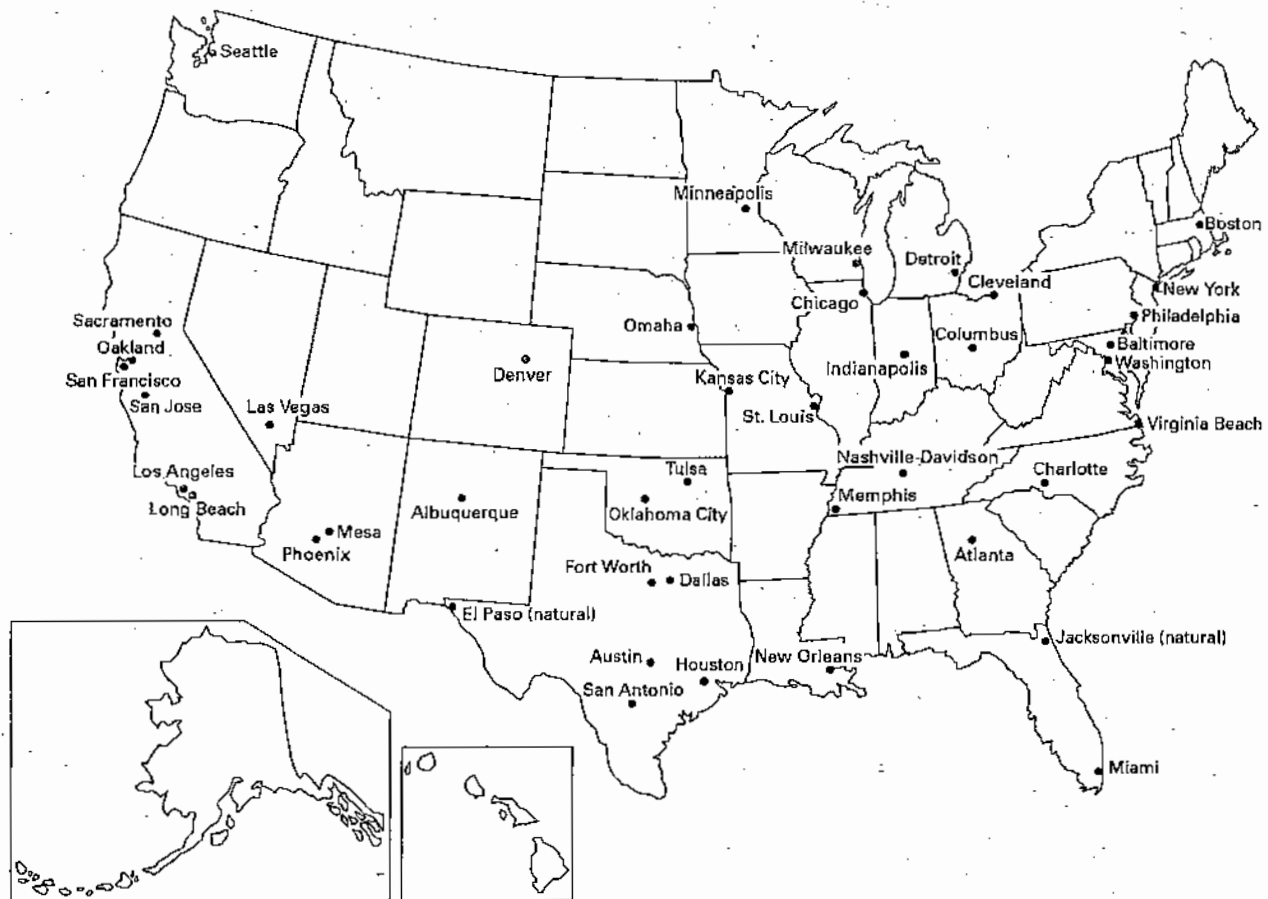
The fact is that fluoridation votes in the U.S. are more often successful than not. In 2016, it was common to see those opposed to fluoridation make statements such as "450 communities had rejected fluoridation since 2000" or similar statements using different numbers. What is not made clear is that the number of communities in these statements is a global number. Many of these communities are outside the United States.⁷⁸ In fact from 2000 through 2016, more than 515 U.S. communities in 42 states voted to adopt or retain successful fluoridation programs.⁷⁹ In the five years from 2012 to 2016, U.S. communities voted in favor of fluoridation programs by a two to one margin.^{78,79}

The fact is that fluoridation votes in the U.S. are more often successful than not...In the five years from 2012 to 2016, U.S. communities voted in favor of fluoridation programs by a two to one margin.

Since 2000, nearly 50 million people have been added to the population on public water systems in the United States that enjoys the benefit of optimally fluoridated water.⁸⁰ In 2000, 65% of the public on public water systems received fluoridated water.⁸¹ In 2014, the percentage had increased nearly 10% to 74.4% of the population.¹⁹ But despite the continuing growth of fluoridation in this country over the past several decades, millions of people in the U.S. do not yet receive the protective benefit of fluoride in their drinking

Figure 7. Largest Fluoridated Cities

Two cities (Jacksonville, Florida and El Paso, Texas) are naturally fluoridated.*

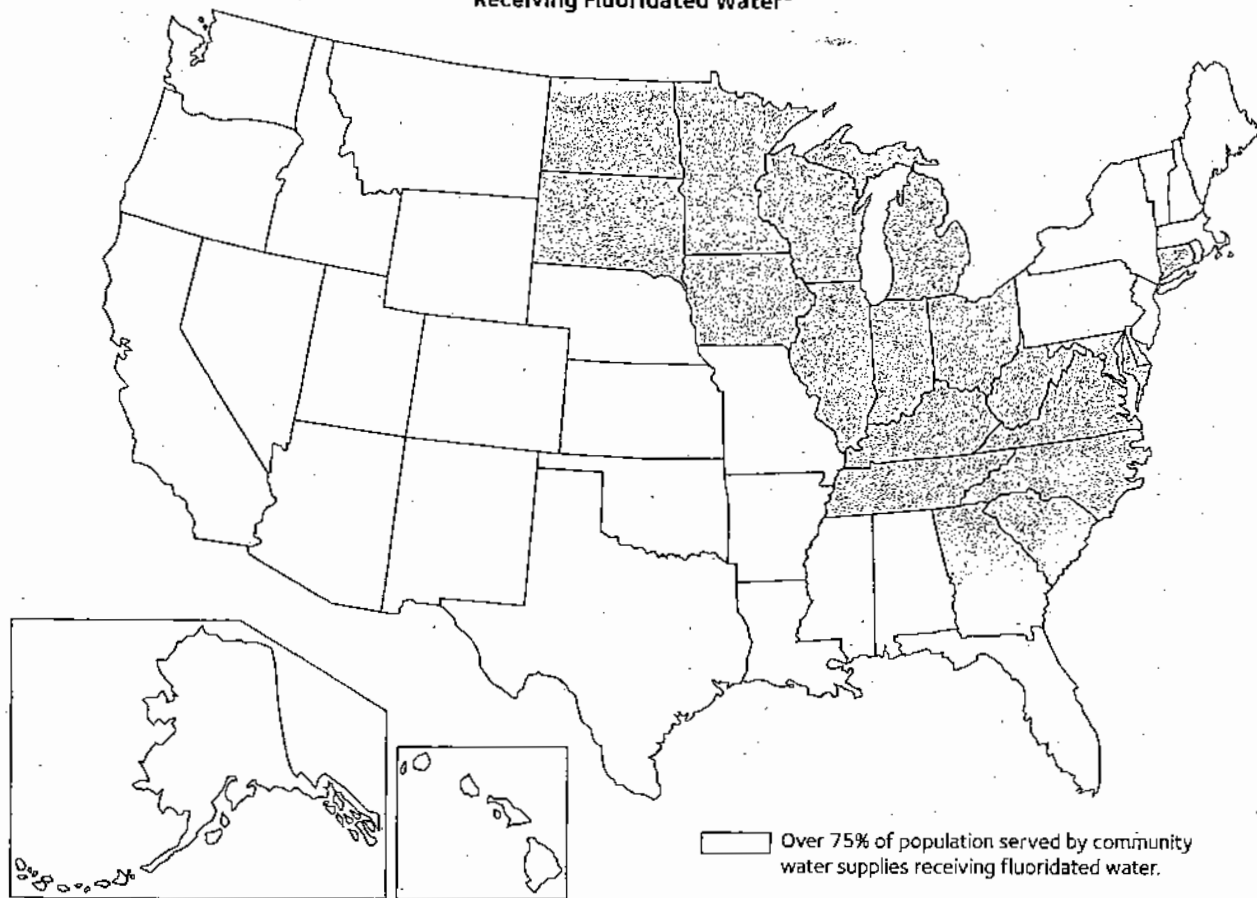


* Data compiled by the American Dental Association and Centers for Disease Control and Prevention/Division of Oral Health. Information current as of October 2017.

water. Centers for Disease Control and Prevention (CDC) data from 2014 indicated more than 25% of the population served by public water systems did not have access to fluoridated water.¹⁹ In 2017, 44 of the 50 largest cities were fluoridated.⁸² Of the 44 cities, 42 were fluoridated by adjustment and two had naturally occurring fluoride at the recommended levels (Figure 7). The remaining six largest nonfluoridated cities (in order of population largest to smallest) were: Portland, Oregon; Albuquerque, New Mexico; Tucson, Arizona; Fresno, California; Colorado Springs, Colorado; and Wichita, Kansas. In October 2017, the Albuquerque Bernalillo County Water Utility Authority authorized budget monies to restore fluoridation to their customers. It is estimated that fluoridated water will be available in six to eight months.

In 2010, recognizing the ongoing need to improve health and well-being, the U.S. Department of Health and Human Services revised national health objectives to be achieved by the year 2020.¹⁷ Included under oral health was an objective to significantly expand the fluoridation of public water supplies. Specifically, Objective 13 of Healthy People 2020 states that at least 79.6% of the U.S. population served by community water systems should be receiving the benefits of optimally fluoridated water by the year 2020.¹⁸ This replaced the Healthy People 2010 objective of 75%.⁸³ As of 2014, twenty states met or exceeded the 2020 objective.¹⁹ (See Figure 8.) Although water fluoridation reaches some residents in every state the coverage is uneven. Data from 2014 indicated that 26 states provided fluoridation benefits to 75% or more of their residents on community water systems while eight states were at or below 50%.¹⁹ (See Figure 9.)

States Meeting the Healthy People 2020 Goal Of 79.6% of the Population Served by Community Water Supplies Receiving Fluoridated Water*



* Data Source: Centers for Disease Control and Prevention/Division of Oral Health. "National Fluoridation Statistics" 2014. Available at <https://www.cdc.gov/fluoridation/statistics/2014stats.htm>

Fluoridation campaigns can vary greatly from community to community. To paraphrase an old saying, "If you've seen one fluoridation campaign, you've seen one fluoridation campaign." A number of factors commonly come into play when fluoridation is put to a public vote and does not succeed. Among those factors are a lack of funding, public and professional apathy, the failure of many legislators and community leaders to take a stand because of perceived controversy, low voter turnout and the difficulty faced by an electorate in evaluating scientific information in the midst of emotional charges by opponents. Voters are often unaware of the fluoride content of their water. Unfortunately, citizens sometimes mistakenly believe their water contains the recommended level of fluoride when, in fact, it does not. On the other hand, people sometimes say they have great teeth and don't need fluoridation

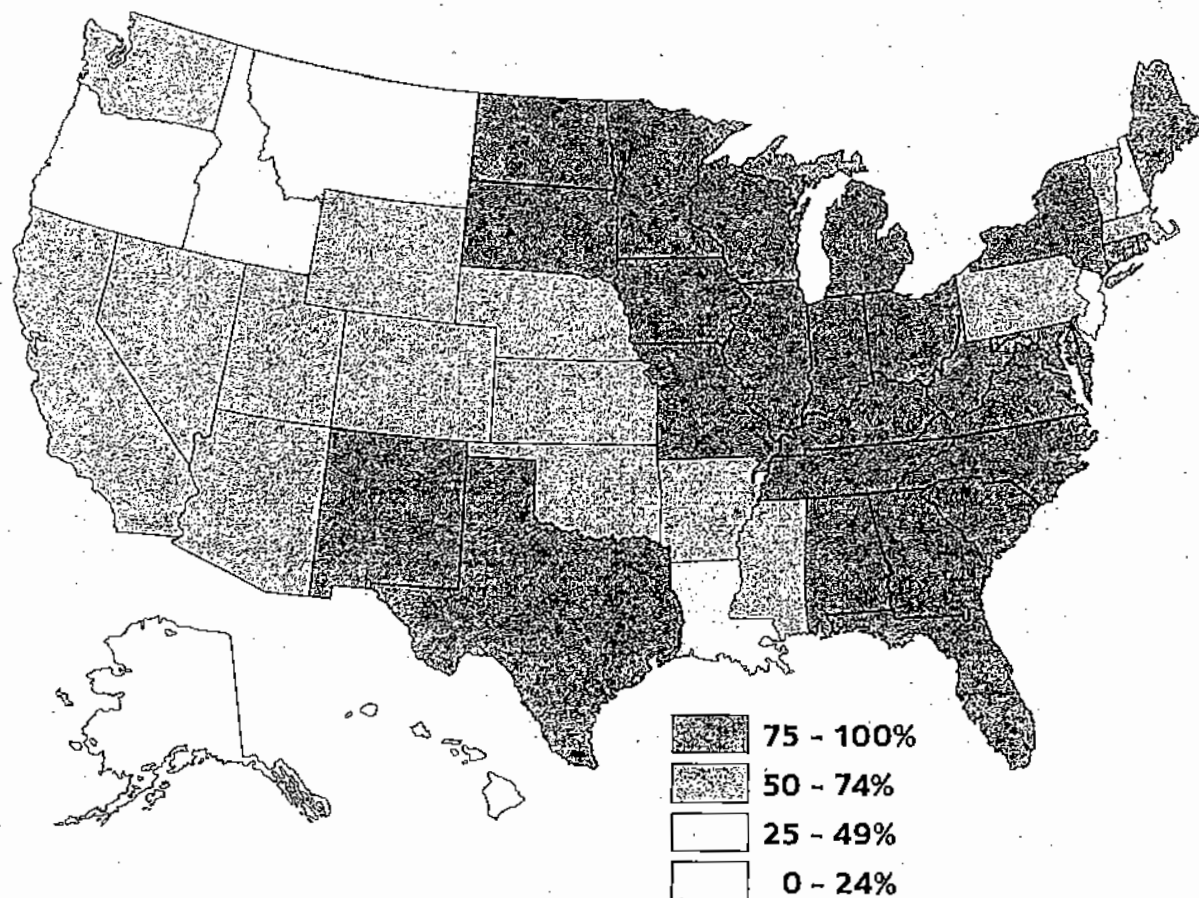
when in fact, the major reason they have such good teeth is because they've had the benefit of fluoride in the water their entire lives. And, in some cases, because fluoridation campaigns often become political campaigns, there are political factors that can sway a vote that have nothing at all to do with fluoridation.

Clever use of emotionally charged “scare” propaganda by fluoride opponents creates fear, confusion and doubt within a community when voters consider the use of fluoridation.^{84,85}

Defeats of referenda or the discontinuance of fluoridation have occurred most often when a small, vocal and well organized group has used a barrage of fear-inspiring allegations designed to confuse the electorate. In addition to attempts to influence voters, opponents have threatened community leaders with

Figure 9 State Fluoridation Status

Percentage of population on community water systems receiving fluoridated water.*



* Data Source: Centers for Disease Control and Prevention/Division of Oral Health. "National Fluoridation Statistics" 2014. Available at <https://www.cdc.gov/fluoridation/statistics/2014stats.htm>

personal litigation.⁸⁶ While no court of last resort has ever ruled against fluoridation, community leaders can be swayed by the threat of litigation due to the cost and time involved in defending even a groundless suit, not to mention threats of political fallout. The American Dental Association (ADA) knows of no cases in which community leaders have been found liable for their pro-fluoridation efforts. In no instance has fluoridation been discontinued because it was proven harmful in any way.⁸⁵⁻⁸⁷

Defeats of referenda or the discontinuance of fluoridation have occurred most often when a small, vocal and well organized group has used a barrage of fear-inspiring allegations designed to confuse the electorate.

Adoption of fluoridation is ultimately a decision of state or local decision makers, whether determined by elected officials, health officers or the voting public. Fluoridation can be enacted through state legislation, administrative regulation, ordinance or a public referendum. While fluoridation is not legislated at the federal level, it is legislated at the state and local level. As with any public health measure, a community has the right and obligation to protect the health and welfare of its citizens, even if it means overriding individual objections to implement fluoridation.

Those opposed to fluoridation sometimes comment that "the government is forcing fluoridation" on the community. But who is "the government?" The fact is that since fluoridation is implemented by state or local votes (by city councils or public vote), the people are "the government." Voters elect officials at the

The astounding success of these comparison studies firmly established the practice of water fluoridation as a practical, safe and effective public health measure to prevent tooth decay that would quickly be embraced by other communities.

The history of water fluoridation is a classic example of a curious professional making exacting clinical observations which led to epidemiologic investigation and eventually to a safe and effective community-based public health intervention which even today remains the cornerstone of communities' efforts to prevent tooth decay.

In addition to the studies noted above, a number of reviews on fluoride in drinking water have been issued over the years. For example, in 1951 the National Research Council (NRC), of the National Academies, issued its first report stating fluoridation was safe and effective. The NRC has continued to issue reports on fluoride in drinking water (1977²¹ and 1993²²) with the most recent review published in 2006.²³ Additional reviews completed over the ten year period from 2007-2017 include:

- 2017 Australian Government. National Health and Medical Research Council (NHMRC). *Information Paper — Water Fluoridation: Dental and Other Human Health Outcomes.*²⁴
- 2016 O'Mullane DM, Baez RJ, Jones S, Lennon MA, Petersen PE, Rugg-Gunn AJ, Whelton H, Whitford GM. *Fluoride and Oral Health.*²⁵
- 2016 American Water Works Association. *Water Fluoridation Principles and Practices.* AWWA Manual M4. Sixth edition.²⁶
- 2015 Water Research Foundation. *State of the Science: Community Water Fluoridation.*²⁷
- 2015 The Network for Public Health Law. *Issue Brief: Community Water Fluoridation.*²⁸
- 2015 Ireland Health Research Board. *Health Effects of Water Fluoridation: An Evidence Review.*²⁹
- 2015 U.S. Department of Health and Human Services Federal Panel on Community Water Fluoridation. *U.S. Public Health Service Recommendation for Fluoride Concentration in Drinking Water for the Prevention of Dental Caries.*³⁰
- 2014 Public Health England. *Water Fluoridation: Health Monitoring Report for England.*³¹
- 2014 Royal Society of New Zealand and the Office of the Prime Minister's Chief Science Advisor. *Health Effects of Water Fluoridation: a Review of the Scientific Evidence.*³²
- 2013 U.S. Community Preventive Services Task Force. The Guide to Community Preventive Services. *Preventing Dental Caries: Community Water Fluoridation.*³³
- 2011 European Commission of the European Union Scientific Committee on Health and Environmental Risks (SCHER). *Fluoridation.*³⁴
- 2008 Health Canada. *Findings and Recommendations of the Fluoride Expert Panel.*³⁵
- 2007 Australian Government. National Health and Medical Research Council A *Systematic Review of the Efficacy and Safety of Fluoridation; Part A: Review Methodology and Results.*³⁶



Water Fluoridation as a Public Health Measure

Throughout decades of research and more than 70 years of practical experience, fluoridation of public water supplies has been responsible for dramatically improving the public's oral health. In 1994, the U.S. Department of Health and Human Services (HHS) issued a report which reviewed public health achievements.³⁷ Along with other successful public health measures such as the virtual eradication of polio and reductions in childhood blood lead levels, fluoridation was lauded as one of the most economical preventive interventions in the nation.³⁷

Because of the important role fluoridation has played in the reduction of tooth decay, the Centers for Disease Control and Prevention proclaimed community water fluoridation one of ten great public health achievements of the 20th century.^{1, 2} Other public health achievements included in the 1999 announcement were vaccinations (which have been responsible for the elimination of polio in the Americas), recognition of tobacco use as a health hazard and the decline in deaths from coronary heart disease and stroke. In 2000, U.S. Surgeon General Dr. David Satcher issued the first ever Surgeon General

report on oral health, *Oral Health in America: a Report of the Surgeon General*.³⁸ In the report, Dr. Satcher stated that community water fluoridation continues to be the most cost-effective, practical and safe means for reducing and controlling the occurrence of tooth decay in a community. Additionally, Dr. Satcher noted that water fluoridation is a powerful strategy in efforts to eliminate health disparities among populations. Studies have shown that fluoridation is the most significant strategy employed to reduce disparities in tooth decay.³⁸⁻⁴²

Additional information about this topic can be found in the Public Policy Section, Question 59.

Because of the important role fluoridation has played in the reduction of tooth decay, the Centers for Disease Control and Prevention proclaimed community water fluoridation one of ten great public health achievements of the 20th century.^{1,2}

In the 2003 *National Call to Action to Promote Oral Health*,⁴³ U.S. Surgeon-General Dr. Richard Carmona called on policymakers, community leaders, private industry, health professionals, the media and the public to affirm that oral health is essential to general health and well-being. Additionally, Dr. Carmona urged these groups to apply strategies to enhance the adoption and maintenance of proven community-based interventions such as community water fluoridation.

Writing in *Public Health Reports* in 2010, Surgeon General Dr. Rebecca Benjamin noted that, "Community water fluoridation continues to be a vital, cost-effective method of preventing dental caries."⁴⁴

In a 2015 Surgeon's General Perspective⁴⁵ issued to coincide with the release of the updated USPHS recommendation on fluoride levels in drinking water to prevent tooth decay, Surgeon General Dr. Vivek H. Murthy stated, "As Surgeon General, I encourage all Americans to make choices that enable them to prevent illness and promote well-being. Community water fluoridation is one of the most practical, cost-effective, equitable, and safe measures communities can take to prevent tooth decay and improve oral health."⁴⁵

Established by the U.S. Department of Health and Human Services (DHHS), Healthy People 2020⁴⁶ provides a science-based, comprehensive set of ambitious, yet achievable, ten-year national objectives for improving the health of the public. Included under oral health is an objective to expand the fluoridation of public water supplies. Objective 13 states that at least 79.6% of the U.S. population served by community water systems should be receiving the benefits of optimally fluoridated water by the year 2020.⁴⁷ In 2014, the CDC indicated that 74.4% of the U.S. population on public water systems, or a total of 211.4 million people, had access to fluoridated water.⁴⁸

After more than four years of additional research and review following the initial notice of intent, in 2015 the DHHS announced that the U.S. Public Health Service had made a final recommendation on the fluoride level in drinking water³⁰ that updated and replaced the 1962 Drinking Water Standards related to community water fluoridation. In this guidance, the optimal concentration of fluoride in drinking water of 0.7 mg/L (milligrams per liter) was defined as "the concentration that provides the best balance of protection from dental caries while limiting the risk of dental fluorosis."³⁰

Additional information about this topic can be found in the Safety Section, Question 19.

Water Fluoridation's Role in Reducing Tooth Decay

Water fluoridation has played a significant role in improving oral health. Numerous studies and reviews have been published making fluoridation one of the most widely studied public health measures in history. Fluoridation of community water supplies is the single most effective public health measure to prevent tooth decay. Studies show that community water fluoridation prevents at least 25 percent of tooth decay in children⁴⁹ and adults,⁵⁰ even in an era with widespread availability of fluoride from other sources, such as fluoride toothpaste. Fluoridation helps to prevent, and in some cases, reverse tooth decay across the life span. Increasing numbers of adults are retaining their teeth throughout their lifetimes due in part to the benefits they receive from water fluoridation. Dental costs for these individuals are likely to have been reduced and many

hours of needless pain and suffering due to untreated tooth decay have been avoided. By preventing tooth decay, community water fluoridation has been shown to save money, both for families and the health care system. The return on investment for community water fluoridation varies with size of the community, and in general, increases as the community size increases. Community water fluoridation is cost-saving, even for small communities.

Additional information about this topic can be found in the Cost Section, Question 68.

Fluoridation of community water supplies is the single most effective public health measure to prevent tooth decay. Studies show that community water fluoridation prevents at least 25 percent of tooth decay in children and adults, even in an era with widespread availability of fluoride from other sources, such as fluoride toothpaste.

Community water fluoridation is a most valuable public health measure because:

- Optimally fluoridated water is accessible to the entire community regardless of socioeconomic status, educational attainment or other social variables.⁵¹
- Individuals do not need to change their behavior to obtain the benefits of fluoridation.
- Frequent exposure to small amounts of fluoride over time makes fluoridation effective through the life span in helping to prevent tooth decay.⁵²
- Community water fluoridation is more cost-effective and cost-saving than other forms of fluoride treatments or applications.^{53,54}

Tooth decay is caused by sugars in snacks, food and beverages being converted into acid by the bacteria in dental plaque, a thin, sticky, colorless deposit on teeth. The acid attacks the tooth enamel (the hard surface of the tooth) or root surface. After repeated attacks, the enamel or root surface loses minerals (demineralization) and the acids and bacteria penetrate the dentin and finally the pulp. The soft

tissue of the pulp contains nerves and blood vessels. Once the decay enters the pulp, it becomes infected and without treatment, the infection progresses and travels into the surrounding tissues. It can enter the bloodstream and potentially spread the infection to other parts of the body which can be life-threatening.

Additional information about this topic can be found in the Benefits Section, Question 2.

There are a number of factors that increase an individual's risk for tooth decay:⁵⁴⁻⁵⁹

- Recent history of tooth decay
- Elevated oral bacteria count
- Inadequate exposures to fluorides
- Exposed roots
- Frequent intake of sugar/sugary foods and sugar-sweetened beverages
- Poor or inadequate oral hygiene
- Decreased flow of saliva
- Deep pits and fissures on the chewing surfaces of teeth

Exposure to fluoride is a key component in any recommended decay prevention strategy; however, the use of fluoride alone will not prevent all tooth decay. In formulating a decay prevention program, in addition to consuming fluoridated tap water, a number of intervention strategies may be considered such as improved daily home care, reducing sugar in the diet, placement of dental sealants and prescription strength fluoride toothpaste for home use and professionally applied topical treatments.

Ongoing Need for Water Fluoridation

Because of the risk factors for tooth decay noted previously, many individuals and communities still experience high levels of tooth decay. Although water fluoridation demonstrates an impressive record of effectiveness and safety, only 74.4% of the United States population on public water supplies in 2014 received fluoridated water containing protective levels of fluoride.⁴⁸ Unfortunately, some people continue to be confused about this effective public health measure. If the number of individuals drinking fluoridated water is to increase, the public must be accurately informed about its benefits and safety.

decay rates between the two communities that are extremely similar in terms of ethnic background and social structure.⁵² This was attributed to a number of factors. The dental programs exposed the Finnish children to intense topical fluoride regimes and dental sealant programs. Virtually all children and adolescents used the government-sponsored, comprehensive, free dental care. As a result, the effect of water fluoridation appeared minimal. Because of this unique set of factors, it was concluded that these results could not be replicated in countries with less intensive preventive dental care programs.⁵²

No significant decrease in tooth decay was seen after fluoridation was discontinued in 1990 in Chemnitz and Plauen, located in what was formerly East Germany.⁵³ The intervening factors in these communities include improvements in attitudes toward oral health behaviors, and broader availability and increased use of other preventive measures including fluoridated salt, fluoride toothpaste and dental sealants.⁵³

A similar situation was reported from the Netherlands. A study was conducted of 15-year-old children in Tiel (fluoridated 1953 to 1973) and Culemborg (nonfluoridated) comparing tooth decay rates from a baseline in 1968 through 1988. The lower tooth decay rate in Tiel after the cessation of fluoridation was attributed in part to the initiation of a dental health education program, free dietary fluoride supplements and a greater use of professionally applied topical fluorides.⁵⁴

In the preceding examples, communities that discontinued fluoridation either found higher tooth decay rates in their children or a lack of an increase that could be attributed to the availability and use of free dental services for all children or the implementation of wide-spread decay prevention programs that require significant professional and administrative support and are less cost-effective than fluoridation.

* 10. Is tooth decay still a serious problem in the United States?

Answer.

Yes. Tooth decay is an infectious disease that continues to be a significant oral health problem.

Fact.

Good oral health is often taken for granted by many people in the U.S. Yet, while largely preventable, tooth decay, cavities or dental caries (a term used by health professionals) remains a common, debilitating, chronic condition for many children and adults.

Tooth decay begins with a weakening and/or breakdown (loss of minerals) of the enamel (the hard outer layer of teeth) caused by acids produced by bacteria that live in plaque. Dental plaque is a soft, sticky film that is constantly forming on teeth. Eating foods or drinking beverages that contain sugars or other refined carbohydrates allow the bacteria in the plaque to produce acids that attack the enamel. The plaque helps to keep these acids in contact with the tooth surface and demineralization (loss of mineral) occurs. After repeated acid attacks, the enamel can breakdown creating a cavity. Left unchecked, bacteria and acid can penetrate the dentin (the next, inner layer of teeth) and then finally the pulp, which contains nerves and blood vessels. Once the bacteria enter the pulp, the tooth becomes infected (abscessed) and, without treatment, the infection can progress and travel into the surrounding tissues. The infection can enter the bloodstream and potentially spread the infection to other parts of the body which, in rare cases, becomes life-threatening.

✦ *Additional information on this topic can be found in this Section, Question 2.*

Tooth decay can negatively affect an individual's quality of life and ability to succeed. Tooth decay can cause pain — pain that can affect how we eat, speak, smile, learn at school or succeed at work. Children with cavities often miss more school and receive lower grades than children who are cavity-free.⁵⁵ More than \$6 billion of productivity is lost each year in the U.S., because people miss work to get dental care.⁵⁵

While cavities are often thought of as a problem for children, adults in the U.S. are keeping their teeth longer (partially due exposure to fluoridation) and this increased retention of teeth means more adults are at risk for cavities — especially decay of exposed root surfaces.^{57,58} Tooth root surfaces are covered with cementum (a softer surface than the enamel) and so are susceptible to decay. As Baby Boomers age, root decay experience is expected to increase in future years possibly to the point where older adults experience similar or higher levels of new cavities than do school children.⁵⁷

◆ *Additional information on this topic can be found in this Section, Question 11.*

Additionally, once an individual has a cavity repaired with a filling (restoration), that filling can break down over time especially around the edges. These rough edges (or margins) can harbor bacteria that start the cavity process over again or leak which allows the bacteria to enter the tooth below the existing filling. These fillings often need to be replaced — sometimes multiple times over decades — each time growing larger to the point where the best restoration for the tooth is a crown that covers the entire tooth surface. Preventing cavities and remineralizing teeth at the earliest stages of decay is very important not only in saving tooth structure but also in reducing the cost for dental care. Community water fluoridation is an effective public health measure that is a cost-saving and cost-effective approach to preventing tooth decay.

◆ *Additional information on this topic can be found in the Cost Section, Question 68.*

Oral health disparities exist in the United States and have been documented through extensive studies and reviews.⁵⁹⁻⁶¹ Despite the fact that millions of people in the U.S. enjoy good dental health, disparities exist for many racial and ethnic groups, as well as by socioeconomic status, sex, age and geographic location.⁶² Water fluoridation helps to reduce the disparities in oral health at the community level as it benefits all residents served by community water supplies. In his 2001 Statement on Community Water Fluoridation,⁶³ former Surgeon General Dr. David Satcher noted:

...community water fluoridation continues to be the most cost-effective, practical and safe means for reducing and controlling the occurrence of

dental decay in a community...water fluoridation is a powerful strategy in efforts to eliminate health disparities among populations.⁶³

◆ *Additional information on this topic can be found in the Public Policy Section, Question 59.*

Today, the major focus for achieving and maintaining oral health is on prevention. Established by the U.S. Department of Health and Human Services, Healthy People 2020⁶⁴ provides a science-based, comprehensive set of ambitious, yet achievable, ten-year national objectives for improving the health of the public. Included under oral health is an objective to expand the fluoridation of public water supplies. Objective 13 states that at least 79.6% of the U.S. population served by community water systems should be receiving the benefits of optimally fluoridated water by the year 2020.⁶⁵ Data from the CDC indicate that, in 2014, 74.4% of the U.S. population on public water systems, or a total of 211.4 million people, had access to fluoridated water.⁶⁶ Conversely, approximately 25% or more than 72.7 million people on public water systems do not receive the decay preventing benefits of fluoridation.

While cavities are often thought of as a problem for children, adults in the U.S. are keeping their teeth longer (partially due exposure to fluoridation) and this increased retention of teeth means more adults are at risk for cavities — especially decay of exposed root surfaces.

new dosage schedule developed acknowledging that numerous sources of topical and systemic fluoride are available today that were not available many years ago.⁸¹

The supplement schedule was reviewed and reissued in December 2010. At that time, the American Dental Association Council on Scientific Affairs (CSA) published evidence-based clinical recommendations for the schedule of dietary fluoride supplements.⁸ The evidence-based review recommended that the age stratification established in the ADA's 1994 supplement schedule remain unchanged. The review also recommended that prior to prescribing fluoride supplements, the prescribing provider should assess the patient's risk for cavities and only those at high risk should receive supplements.⁸ If at high risk, then the fluoride level of the patient's primary drinking water source should be assessed.⁸ It should be noted that an accurate assessment of the patient's primary drinking water source can be difficult due to the various sources of fluoridated water. For example, the patient might not have access to fluoridated water in the home, but may drink fluoridated water while at day care or school. The current dietary fluoride supplement schedule appears as Table 1.⁸

 *Additional information on this topic can be found in this Section, Question 12.*

14. What are salt and milk fluoridation and where are they used?

Answer.

Salt and milk fluoridation are fluoridation methods used to provide community-based fluoridation in countries outside of the United States where various political, geographical, financial or technical reasons prevent the use of water fluoridation.

Fact.

The practice of salt fluoridation began in the 1950s, approximately 10 years after water fluoridation was initiated in the United States.⁸² Based on the success several decades earlier of the use of iodized salt for the prevention of goiter, fluoridated salt was first introduced in Switzerland in 1956.⁸³

According to a review published in 2013, salt fluoridation is available in a number of countries in Europe but its coverage varies greatly.⁸² Germany

and Switzerland have attained a coverage exceeding two-thirds of their populations (67% and 85% respectively). In other European countries including Austria, the Czech Republic, France, Slovakia and Spain, salt fluoridation is reportedly used on a very limited scale.⁸² Additional countries, such as Hungary, Romania, Slovenia, Croatia and Poland, have considered salt fluoridation but have failed to take action.⁸⁴

European regulations (current as of 2017) permit the addition of fluoride to salt and water.⁸² However, it appears that the majority of European countries favor the twice daily use of fluoride toothpaste as the most important measure for improving the public's dental health.⁸⁴ In Europe, toothpaste sold over the counter typically contains 1,500 ppm fluoride,⁸⁵ while toothpaste in the United States typically contains 1,000 to 1,100 ppm fluoride.⁸⁶

On a historical note, prior to the political changes that occurred in the late 1980s and early 1990s in Europe, water fluoridation was widely available in the German Democratic Republic and the Czechoslovak Republic and to a lesser extent in Poland. With the end of the Communist regimes, efforts related to public health dentistry were largely discontinued. While fluoridation continued in several small towns until 1993, in general, it was abandoned.⁸⁴

In North and South America, salt fluoridation is available in Belize, Bolivia, Colombia, Costa Rica, Dominican Republic, Ecuador, Mexico, Peru, Uruguay and Venezuela. Like in Europe, the extent of salt fluoridation varies between countries. Columbia, Costa Rica, Jamaica, Mexico and Uruguay provide fluoridated salt to nearly their entire populations while there is less coverage in other countries.⁸²

In 2013, it was estimated that approximately 60 million people in Europe and 160 million in the Americas had access to fluoridated salt.⁸²

The Pan American Health Organization (PAHO), a regional division of the World Health Association (WHO) with responsibilities for health matters in North, South and Central America and the Caribbean, has been active in developing strategies to implement decay prevention programs in the regions of the Americas using water and salt fluoridation.⁸⁷ In order to achieve the greatest reduction in tooth decay while minimizing the risk of dental fluorosis, it is advisable that a country implement only one of these two

A specific FDA regulation⁹⁵ applies to "Anticaries Drug Products for Over-The-Counter Human Use" which provides the exact language for the warning label to be used on "fluoride dentifrice (gel, paste, and powder) products." The regulation requires the following language appear on these products under the heading "Warning":

"Keep out of reach of children under 6 years of age. [highlighted in bold type] If more than used for brushing is accidentally swallowed, get medical help or contact a Poison Control Center right away."⁹⁶

The over-the-counter (OTC) drugs listed in these regulations are generally recognized as safe and effective by the FDA.⁹⁴ Fluoride toothpaste is just one of a long list of OTC products that carries a warning label.

The over-the-counter (OTC) drugs listed in these regulations are generally recognized as safe and effective by the FDA. Fluoride toothpaste is just one of a long list of OTC products that carries a warning label.

While the FDA has required such label language since 1997, the ADA has required manufacturers seeking the ADA Seal of Acceptance to place a label on fluoride toothpaste since 1991 to help ensure proper use and thereby reduce the risk of dental fluorosis. At that time, the ADA required the label to include: "Do not swallow. Use only a pea-sized amount for children under six. To prevent swallowing, children under six years of age should be supervised in the use of toothpaste."

Additionally, to ensure children's safety, the ADA limits the total amount of fluoride allowed in any one tube of ADA-Accepted toothpaste. If a child were to ingest an entire tube of fluoride toothpaste at one time, the total fluoride content of a single tube is not enough to cause a fatal event. In fact, because of some of the (non-fluoride) additives in toothpaste, a child attempting to ingest a tube of toothpaste would most likely vomit before they could eat enough to become seriously ill.

* 31. Is fluoride, as provided by community water fluoridation, a toxic substance?

Answer.

No. Fluoride in water at the recommended level is not toxic according to the best available scientific evidence.

Fact.

Toxicity is related to dose. While large doses of fluoride could be toxic, it is important to recognize the difference between the effect of a massive dose of an extremely high level of fluoride versus the fluoride level currently recommended for public water systems. Like many common substances essential to life and good health — salt, iron, vitamins A and D, chlorine, oxygen and even water itself — fluoride can be toxic in massive quantities. Fluoride at the much lower recommended concentrations (0.7 mg/L) used in community water fluoridation is not harmful or toxic.¹⁶

Fluoride at the much lower recommended concentrations (0.7 mg/L) used in community water fluoridation is not harmful or toxic.

The single dose (consumed all at one time) of fluoride that could cause acute fluoride toxicity is 5 mg/kg of body weight (11mg/kg of body weight of sodium fluoride).⁹⁷ This dose is considered the probably toxic dose (PTD) which "is defined as the minimum dose that could cause serious or life-threatening systemic signs and symptoms and that should trigger immediate therapeutic intervention and hospitalization."⁹⁷ Acute fluoride toxicity occurring from the ingestion of optimally fluoridated water is impossible.⁹⁷ With water fluoridated at 1 mg/L, an individual would need to drink five (5) liters of water for every kilogram of body weight. For example, for an adult male (155-pound/70.3 kilogram man), it would require that he consume more than 350 liters (nearly 93 gallons) of water at one time to reach an acute fluoride dose. With optimally fluoridated water now set at 0.7 mg/L, it would take almost 30% more, or nearly 120 gallons (more than 1,900 eight ounce glasses) of water at one time to reach the acute dose.

fluoridation, exist. It was additionally noted that the findings could be broadly relevant to other countries with similar populations and water fluoridation.¹²⁸

In 2015, a study was published in which the authors claimed to have found a positive association between fluoride levels in drinking water and hypothyroidism. Drawing immediate criticism, the published critiques noted that a major weakness of this study was the failure to consider a number of potential confounding factors. The only confounders taken into consideration were age, sex and socioeconomic status. While acknowledging that iodine intake is associated with thyroid health, the authors failed to consider iodine as a factor along with the impacts of smoking and medications. The strong conclusion of the paper was not supported by the work of the authors or other published literature.¹³⁰⁻¹³³

In addition, two studies have explored the association between fluoridated water and cancer of the thyroid gland. Both studies found no association between optimal levels of fluoride in drinking water and thyroid cancer.^{106,110}

36. Does water fluoridation affect the pineal gland causing the early onset of puberty?

Answer.

The best available scientific evidence indicates that water fluoridation does not cause the early onset of puberty.

Fact.

The pineal gland is an endocrine gland located in the brain which produces melatonin.¹³³ Endocrine glands secrete their products into the bloodstream and body tissues and help regulate many kinds of body functions. The hormone, melatonin, plays a role in sleep, aging and reproduction.¹³⁴

A single researcher has published one study in a peer-reviewed scientific journal regarding fluoride accumulation in the pineal gland. The purpose of the study was to discover whether fluoride accumulates in the pineal gland of older adults. This limited study, conducted on only 11 cadavers whose average age at death was 82 years, indicated that fluoride deposited in the pineal gland was significantly linked to the amount of calcium in the pineal gland.¹³⁵ It would not be unexpected to see higher levels of calcium in the pineal gland of

older individuals as this would be considered part of a normal aging process. As discussed in Question 25, approximately 99% of the fluoride present in the body is associated with hard or calcified tissues.⁵² The study concluded fluoride levels in the pineal gland were not indicators of long-term fluoride exposure.¹³⁵

The same researcher had theorized in her 1997 dissertation, portions of which are posted on numerous internet sites opposed to fluoridation, that the accumulation of fluoride in children's pineal glands leads to an earlier onset of puberty. However, the researcher notes in the dissertation that there is no verification that fluoride accumulates in children's pineal glands. Moreover, a study conducted in Newburgh (fluoridated) and Kingston (nonfluoridated), New York found no statistically significant difference between the onset of menstruation for girls living in a fluoridated versus nonfluoridated area.¹³⁶ The National Research Council's 2006 report, *Fluoride in Drinking Water: A Scientific Review of EPA's Standards*, stated that a connection between fluoride pineal function in humans remains to be demonstrated.⁹

*37. Can fluoride, at the levels found in drinking water that is fluoridated to the recommended levels, alter immune function or produce an allergic reaction (hypersensitivity)?

Answer.

There is no scientific evidence of any adverse effect from fluoridation on any specific immunity, nor have there been any medically confirmed reports of allergic reaction from drinking or being in contact with optimally fluoridated water.

Fact.

There is no scientific evidence linking health conditions related to immune function such as HIV or AIDS (acquired immune deficiency syndrome) with community water fluoridation.¹³⁷

There are no confirmed cases of allergy to fluoride, or of any positive skin testing in human or animal models.¹³⁸ A committee of the National Academy of Sciences evaluated clinical reports of possible allergic responses to fluoride in 1977 and stated, "The reservation in accepting (claims of allergic reaction) at face value is the lack of similar reports in much larger numbers of people who have been exposed to considerably more fluoride than was involved in the

original observations.⁷⁷ The World Health Organization also judged these cases to represent "a variety of unrelated conditions" and found no evidence of allergic reactions to fluoride.^{139,140}

38. Is fluoride, as provided by community water fluoridation, a genetic hazard?

Answer.

The best available scientific evidence indicates that drinking water fluoridated at the recommended levels is not a genetic hazard.

Fact.

Chromosomes are the DNA-containing bodies of cells that are responsible for the determination and transmission of hereditary characteristics. A single chromosome contains many genes which are the functional hereditary units that occupy a fixed location on a chromosome. Many studies have examined the possible effects of fluoride on chromosome damage.

In 1993, the National Research Council (NRC) of the National Academies issued a report⁸ that supported the conclusion that drinking optimally fluoridated water is not a genetic hazard. In a statement summarizing its research⁸, the NRC stated, "in vitro data indicate that:

1. the genotoxicity of fluoride is limited primarily to doses much higher than those to which humans are exposed,
2. even at high doses, genotoxic effects are not always observed, and
3. the preponderance of the genotoxic effects that have been reported are of the types that probably are of no or negligible genetic significance."⁸

The lowest dose of fluoride reported to cause chromosomal changes in mammalian cells was approximately 170 times that normally found in human cells in areas where drinking water was fluoridated at 1.0 mg/L, which indicates a large margin of safety.⁸ (Note that this would be 242 times greater with fluoridation now set at 0.7 mg/L.)

In its subsequent 2006 report,⁹ the NRC stated after reviewing the evidence available since its 1993 report, that the weight of evidence from studies on rodents indicated a very low probability that fluoride presents a risk of genetic mutation for humans.⁹

In addition, the 2006 NRC report⁹ indicated that the results of human studies related to fluoride and its effect on genotoxicity since its 1993 report are inconsistent and do not strongly indicate the presence or absence of genotoxic potential for fluoride. Continued research and evaluation are recommended.⁹

39. Does fluoride at the levels found in water fluoridation affect human reproduction, fertility or birth rates?

Answer.

According to the best available scientific evidence, water fluoridation does not have an adverse effect on human reproduction, fertility or birth rates.

Fact.

In 2011, the European Commission requested the European Scientific Committee on Health and Environmental Risks (SCHER) perform a critical review of fluoridating agents of drinking water. A portion of that report looked at reproductive issues. The report concluded that there is no new evidence from human studies indicating that fluoride in drinking water influences male and female reproductive capacity.²⁰

In its 2006 report,⁹ the National Research Council (NRC) indicated that since 1990, the quality and number of reproductive and developmental studies using laboratory animals have improved significantly. These high-quality studies indicate adverse reproductive and developmental effects occur only at levels of fluoride much higher than 4 mg/L.⁹ The NRC also indicated that a few studies conducted with human populations have suggested that fluoride might be associated with alterations in reproductive hormones and fertility. However, the report continued on to explain that limitations in study design, such as the lack of control of reproductive variables, make these studies of little value for risk evaluation.⁹

A study examining the relative risk of stillbirths and congenital abnormalities (facial clefts, Down syndrome and neural tube defects) found no evidence that fluoridation had any influence on the rates of congenital abnormalities or stillbirths.¹⁴¹ The study, conducted in 2003, analyzed data from two population based registries to identify all stillbirths and congenital abnormalities occurring in northeastern England between 1989 and 1998 and compared the rates of stillbirths and

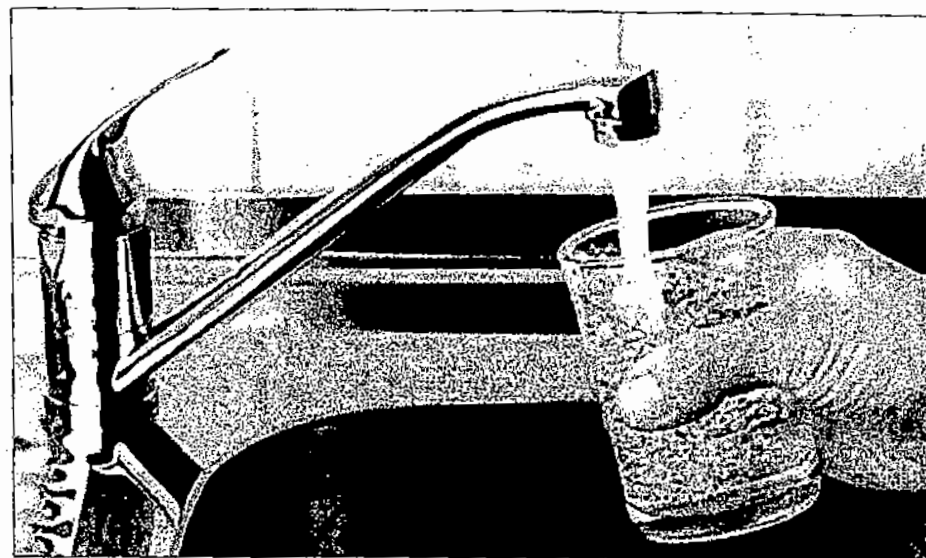
4 Reasons Water Is the Best Beverage for Your Teeth

It doesn't matter if your glass is half-empty or half-full: Drinking water is always good for your health. Our bodies are made of 60% water, and staying hydrated helps your system distribute healthy nutrients, gets rid of waste, gives your skin a healthy glow and keeps your muscles moving. Sipping water is also one of the best things you can do for your teeth – especially if it's fluoridated. Read on to find out why water is always a winner for your dental health.

It Strengthens Your Teeth

Drinking water with fluoride (called "nature's cavity fighter") is one of the easiest and most beneficial things you can do to help prevent cavities.

A modern-day tale of two cities shows what a difference fluoride makes, especially in community water systems. In 2011, the Canadian city of Calgary stopped adding fluoride to its water. Curious about the impact, researchers compared Calgary second graders with kids in the same age group in Edmonton, a Canadian city that has had fluoridated water since 1967. Their research, published in the February 2016 journal Community Dentistry and Oral Epidemiology, found children in non-fluoridated Calgary had more tooth decay than children in the city with uninterrupted fluoridation.



It Keeps Your Mouth Clean

Drinking juice, soda or sports drinks may help you wash down your dinner, but they can leave unwanted sugar behind on your teeth. The cavity-causing bacteria in your mouth love to eat sugar and produce acid that wears away enamel, which is the outer shell of your teeth. Many of these drinks also have added acids (phosphoric, citrus or malic acid) to make them taste less sweet, but those acids also cause trouble by eroding away

enamel.

Water, however, cleans your mouth with every sip. It washes away leftover food and residue that cavity-causing bacteria are looking for. It also dilutes the acids produced by the bacteria in your mouth. You'll still need to brush twice a day for two minutes and clean between your teeth, but drinking water through the day will go a long way toward keeping your smile cavity-free.

It Fights Dry Mouth

Saliva is your mouth's first defense against tooth decay. It washes away leftover food, helps you swallow with ease and keeps your teeth strong by washing them with calcium, phosphate and fluoride.

When your saliva supply runs low, dry mouth may put you at risk for tooth decay. Drinking water can help cut your risk as you and your dentist work to find the best long-term solution for you.

It's Calorie-Free

Sweetened drinks that are high in sugar and calories, create a perfect storm that puts you at risk for cavities and other unhealthy consequences like weight gain. In fact, studies have shown that drinking water can actually help you lose weight. So the next time you need a drink, go guilt-free with water to take care of your body and your smile.

More from MouthHealthy

- [The truth about juice \(and 5 more ways to cut sugary snacking\)](#)
- [The best foods for your smile](#)
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Seventeen communities receive grants to support water fluoridation

BY MICHELLE MANCHIR

Seventeen U.S. communities are getting financial assistance to install or continue water fluoridation programs thanks to financial support from The National Association of County and City Health Officials and the Centers for Disease Control and Prevention, the groups announced earlier this year.

The grants, totaling more than \$365,000, are going to communities that are currently installing new or replacing aging fluoridation equipment, according to the National Association of County and City Health Officials, or NACCHO. Projects in each community are scheduled to be completed by June 30.

The grantees include the City of Burnsville, Minnesota; Oldham County Water District, Kentucky; Town of Forest City, North Carolina; Glacial Lakes Sanitary Sewer and Water

tion; and the City of Fairbury, Illinois.

The grants account for a second round of funding of this kind from NACCHO and the CDC. The groups began supporting fluoridation initiatives in January 2017 with a pilot program, offering funding and technical assistance to local communities. Six grantees were awarded funding,

and all completed their projects by June 2017.

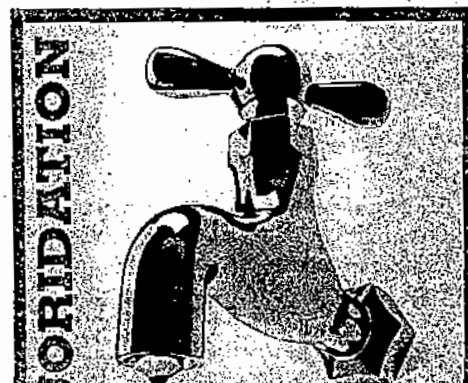
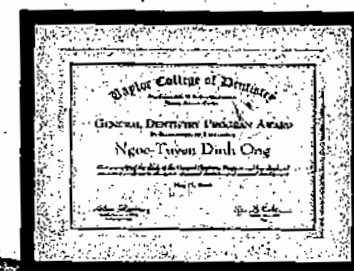
For more information on this program, visit <http://essentialelements.naccho.org/archives/9600>.

The ADA supports the fluoridation of community water supplies as an effective public health measure to prevent tooth decay. Stud-

ies prove water fluoridation continues to be effective in reducing dental decay by at least 25 percent in children and adults, even in the of era widespread availability of fluoride from other sources, such as fluoride toothpaste.

For more information visit ADA.org/fluoride. ■

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*According to "Dosimetry of Orthodontic Diagnostic FOVs Using Low Dose CBCT Protocol" by JB Ludlow and J Koivisto.

N / Programs / Community Health / Community Water Fluoridation Share:     

Community Water Fluoridation

Community water fluoridation is the most cost-effective way to deliver fluoride to people of all ages, education levels, and income levels who live in a community.

Recognized by the CDC as one of the great public health achievements of the 20th century, community water fluoridation is recommended by nearly all public health, medical, and dental organizations, including the American Dental Association, American Academy of Pediatrics, U.S. Public Health Service, and World Health Organization. For over 70 years, people in the U.S. have benefited from drinking water with fluoride, leading to better dental health.

Equal access to sufficient levels of community water fluoridation must be ensured. Currently, community water fluoridation—the adjustment of water fluoride that occurs naturally in water to protect oral health—reaches 66 percent of Americans, or 211 million people, on public water supplies; however, over 100 million Americans do not receive fluoridated water. The fluoridation of water at levels for optimal dental health is a proper means of protecting and furthering the public's health.



COMMUNICATIONS TOOLKIT



Local health departments play a critical role in educating their communities and promoting effective strategies to improve and maintain oral health. The resources below are for health departments and other local organizations to educate and inform their communities about the benefits of fluoridation.



9 Reasons to Fluoridate Public Water

Single most effective public health measure to prevent tooth decay. The Centers for Disease Control and Prevention (CDC) has proclaimed community water fluoridation one of 10 great public health achievements of the 20th century.

Safe and effective. For more than 70 years, the best available scientific evidence consistently indicates that community water fluoridation is safe and effective.

Prevents dental disease. It is the most efficient way to prevent one of the most common childhood diseases – dental decay. An estimated 51 million school hours are lost each year due to dental-related illness.

Availability of fluoridation continues to grow. In 2014, 74.4 percent of the U.S. population on public water systems (211.4 million people) received fluoridated water. This is an increase of almost nine percent from 2000. The Healthy People 2020 goal is for 79.6 percent of the population on public water systems to have access to fluoridated water.

Natural. Fluoride is already present in all water sources, even the oceans. Water fluoridation is simply the adjustment of fluoride that occurs naturally to a recommended level for preventing tooth decay.

Similar to fortifying other foods and beverages. Water that has been fluoridated is similar to fortifying salt with iodine, milk with vitamin D, orange juice with calcium and bread with folic acid.

Protects all ages against cavities. Studies show that community water fluoridation prevents up to 25 percent of tooth decay in children and adults, even in an era with widespread availability of fluoride from other sources, such as fluoride toothpaste.

Saves money. The average lifetime cost per person to fluoridate a water supply is less than the cost of one dental filling. For most cities, every \$1 invested in water fluoridation saves \$20 in dental treatment costs.

Recognized by more than 100 organizations. The American Dental Association (ADA) as well as the Centers for Disease Control and Prevention, the American Medical Association, the World Health Organization and more than 125 national and international organizations recognize the public health benefits of water fluoridation for preventing dental decay.

Source: American Dental Association, 2016

