

**DEFERRED** to a future meeting of Council  
to allow for the Windsor Utilities Commission (WUC)  
to provide an additional report  
**by Council at its meeting held March 19, 2012 [M114-2012]**  
/AA  
Windsor, Ontario March 19, 2012

**REPORT NO. 45** of the  
**ENVIRONMENT & TRANSPORTATION STANDING COMMITTEE**  
of its meeting held January 25, 2012

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**Present:**

**Councillor Hatfield, Chair**  
**Councillor Payne**  
**Councillor Sleiman**  
**Councillor Halberstadt**  
**Councillor Valentinis**

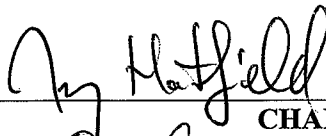
That the following recommendations of the Environment and Transportation Standing Committee **BE APPROVED:**

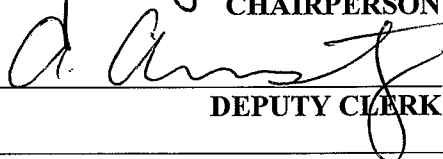
Moved by Councillor Halberstadt, seconded by Councillor Sleiman,  
**THAT** Report No. 59 of the Windsor-Essex County Environment Committee regarding the fluoridation of the water system **BE RECEIVED** for information, and forwarded to City Council; and further

**THAT** the City Solicitor **BE REQUESTED** to investigate further and provide a legal opinion as to the validity of the claim that individual Councillors may be liable if no action is taken regarding the artificial water fluoridation prior to January 2013.

Carried.

Clerk's Note: The Windsor-Essex County Environment Committee Report No. 59 is **attached** as background information.

  
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**CHAIRPERSON**

  
\_\_\_\_\_  
**DEPUTY CLERK**

<b>NOTIFICATION:</b>				
<b>Name</b>	<b>Address</b>	<b>Email Address</b>	<b>Telephone</b>	<b>FAX</b>
WECEC members		on file		
Laura Moy	Town of Tecumseh	<a href="mailto:lmoy@tecumseh.ca">lmoy@tecumseh.ca</a>		
Brenda Andreatta	Town of LaSalle	<a href="mailto:bandreat@town.lasalle.on.ca">bandreat@town.lasalle.on.ca</a>		
John Wladarski	WUC	<a href="mailto:jwladarski@enwin.com">jwladarski@enwin.com</a>		
John Stuart	WUC	<a href="mailto:jstuart@enwin.com">jstuart@enwin.com</a>		
Donna Mayne	Fluoride Action Network	<a href="mailto:donnajeanmayne@gmail.com">donnajeanmayne@gmail.com</a>		
Mary Brennan	County of Essex	<a href="mailto:mbrennan@countyofesses.on.ca">mbrennan@countyofesses.on.ca</a>		



# ENVIRONMENT & TRANSPORTATION STANDING COMMITTEE

REPORT NO. 59

of the

WINDSOR-ESSEX COUNTY ENVIRONMENT COMMITTEE (WECEC)

of its meeting held

December 1, 2011

at 5:30 o'clock p.m.

YQG International Airport – Board Room

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**Members Present at the December 1, 2011 meeting:**

Charlie Wright, Co-Chair  
Councillor Alan Halberstadt, Co-Chair  
Shahbaz Ahmed  
Dean Clevett  
Derek Coronado  
Rick Coronado  
Roger Dzugan (alternate for Mark Bartlett)  
Karen Fallon  
Paul Henshaw  
John Miller  
Juliet Mohammed  
Phil Roberts  
Tamara Stomp

**Members Absent with regrets at the December 1, 2011 meeting:**

Mark Bartlett  
Pauline Cheslock  
Radwan Tamr

**Your Committee submits the following recommendation:**

Moved by T. Stomp, seconded by R. Coronado,

That the Councils of the Town of Tecumseh, the Town of LaSalle and the City of Windsor **BE URGED** to create a by-law to cease fluoridation of the water system as there are valid concerns regarding the potential adverse impact of fluoridation on the environment.

Carried.

Shahbaz Ahmed, Matthew Child and Dean Clevett voting nay.

Note: *The presentation by Kimberly DeYong, Windsor's Fluoride Action Network and Heather Gingerich, Director, International Medical Geology Association entitled "Artificial Water Fluoridation – Environmental Effects & Legal Implications" is attached for information.*

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**Councillor Halberstadt, Co-Chair**

\_\_\_\_\_  
**Charlie Wright, Co-Chair**

\_\_\_\_\_  
**Committee Coordinator (A)**

**Notification:**

<b>Name</b>	<b>Email Address</b>
WECEC Committee	ON FILE
Laura Moy, Director Staff Services/Clerk – Town of Tecumseh	<a href="mailto:lmoy@tecumseh.ca">lmoy@tecumseh.ca</a>
Brenda Andreatta, Clerk – Town of LaSalle	<a href="mailto:bandreat@town.lasalle.on.ca">bandreat@town.lasalle.on.ca</a>
John Wladarski, General Manager Windsor Utilities Commission	<a href="mailto:jwladarski@enwin.com">jwladarski@enwin.com</a>
John Stuart, Chief Operating Officer, Windsor Utilities Commission	<a href="mailto:jstuart@enwin.com">jstuart@enwin.com</a>
Donna Mayne, Fluoride Action Network	<a href="mailto:donnajeanmayne@gmail.com">donnajeanmayne@gmail.com</a>
Mary Brennan, Director of Council Services/Clerk, County of Essex	<a href="mailto:mbrennan@countyofessex.on.ca">mbrennan@countyofessex.on.ca</a>

# Artificial Water Fluoridation

## Environmental Effects & Legal Implications

**Kimberly DeYong**

Windsor's Fluoride Action Network

**Heather Gingerich**

B.Sc. Biological Science (Guelph)

M.Sc. Earth Science (Waterloo)

International Medical Geology Association

(Director, Canada)

# What is Artificial Water Fluoridation?

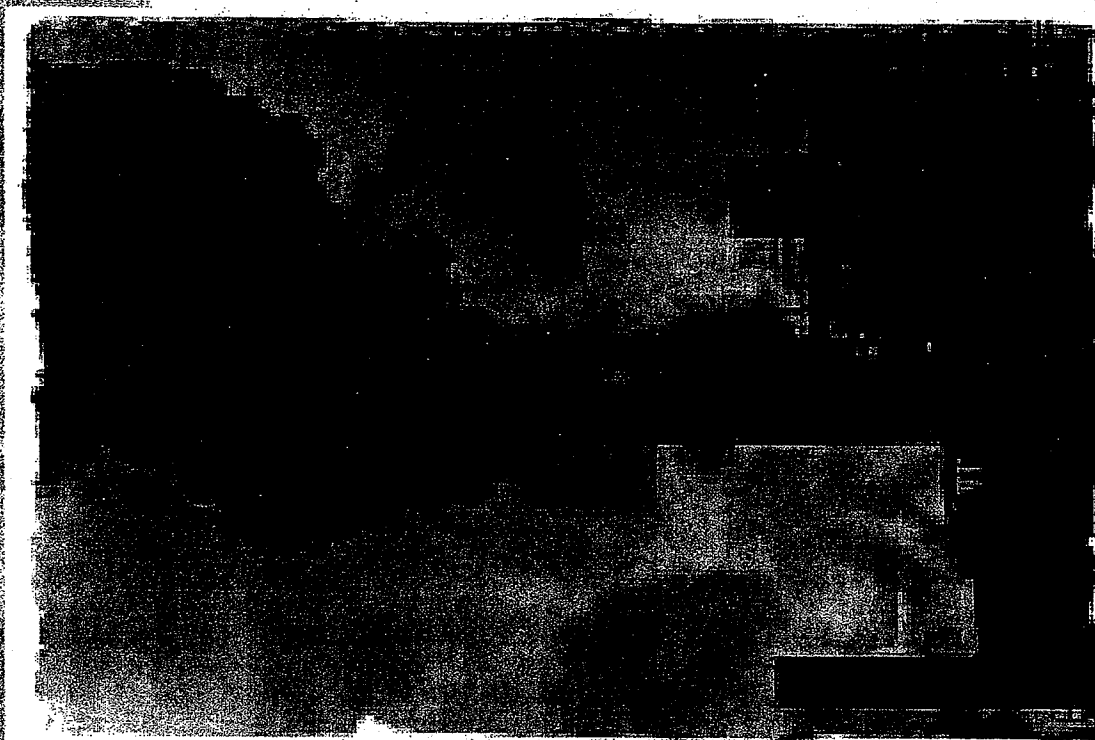
- \* Artificial water fluoridation is the addition of fluorosilicates to drinking water. Unlike all other additives that eliminate water-borne pathogens, only fluoride is intended as a medical treatment, presumably to prevent tooth decay.
- \* At the behest of the public health unit in 1953, the City of Windsor began fluoridating our water with sodium fluoride and then changed to hydrofluorosilicic acid (a substance more readily absorbed by the body) in the early '60s.

# Hydrofluorosilicic Acid

**H<sub>2</sub>SiF<sub>6</sub>:**  
**hazardous toxic waste**  
**derived from scrubbers of**  
**phosphate fertilizer**  
**industries**

Contaminants include trace amounts of:

- Arsenic (As)
- Lead (Pb)
- Mercury (Hg)
- Cadmium (Cd)
- Chromium (Cr)
- Radionuclides (Ra, Po)



# Calcium Fluoride vs. Hydrofluosilicic Acid



## CaF<sub>2</sub>

- Naturally occurring
- Safe to hold with bare hands
- Sparingly soluble in neutral pH water
- Fluoride toxicity reduced by calcium
- LD 50 = oral rat, **4250** ppm

Source: REAGENTS, INC.--MSDS--CALCIUM FLUORIDE



## H<sub>2</sub>SiF<sub>6</sub>

- Man-made toxic waste product
- Highly corrosive liquid that requires full personal protective equipment to handle legally
- Fluoride toxicity enhanced by co-contaminants

Acute oral toxicity

-LD 100 = guinea pig, **80** ppm (2 % solution)

Source: Issuing date 06.07.2009 SOLVAY Chemicals



# Dilution is Not a Solution to Pollution

## “Hazardous Waste”

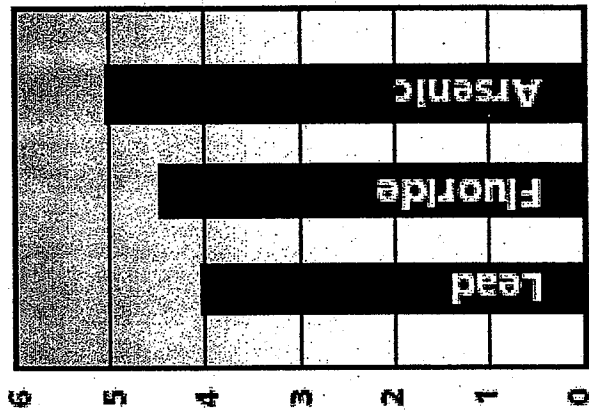
Hazardous Waste Act

## “Toxic Substance”

Canadian Environmental Protection Act:

- Bioaccumulative
- Toxic
- Anthropogenic
- Persistent

Relative Toxicity



- 1 Practically nontoxic
- 2 Slightly toxic
- 3 Moderately toxic
- 4 Very toxic
- 5 Extremely toxic

“Dangerous good/class 8 corrosive substance.”

Transport Canada

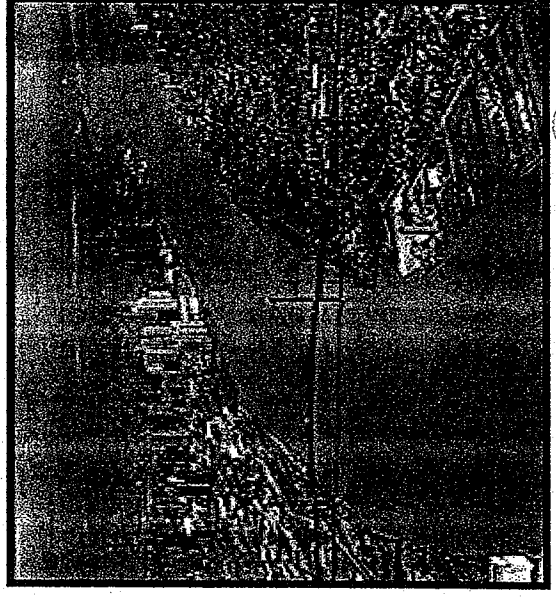
It is illegal to dump H<sub>2</sub>SiF<sub>6</sub> anywhere in the environment! Health Canada failed to consider long-term or combined effects on the environment, infrastructure or general health of adding HFSA to municipal water supplies

# Fluoride not removed by wastewater treatment

“Fluoride passes through the wastewater treatment process unchanged...The West end of Lake Erie gets a huge fluoride injection as a result of these sources.”

Peter van Caulart, Environmental Training Institute in Ontario

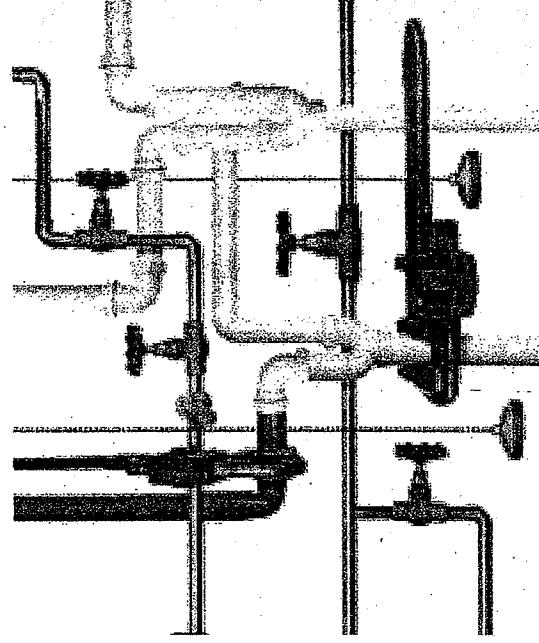
- H<sub>2</sub>SiF<sub>6</sub> added to the Detroit River annually
- \* Windsor/Detroit area >4.2 million lbs/year (calculated at 1lb/person/year)
  - \* **PLUS** permitted loading from the MISA site
  - \* **PLUS** discharged from other fluoridating communities along the river & Lake St. Clair



# Water Fluoridation Increases Toxic Elements in Municipal Water

W.U.C. currently fluoridates to a level of 0.52-0.75 ppm (taken from the 2010 Annual Water Report)

ppm	EC	HC
F	0.12	1.50
Na	±10%	20.0
Cu	0.002	1.0
Pb*	0.001	0.010
Zn	0.030	0.5
Cd*	0.000017	0.005
As*	0.005	0.010
radio-nuclide	NA	0.02 (as U)
Cr*	0.001	0.05
Hg	0.000004	0.001



1. Added from municipal and industrial sources
2. Infrastructure corrosion products of AWF
3. Contaminants in HFSA

\*Both contaminant of HSFA + corrosion product

# Species at Risk Act

S.C. 2002, c. 29

## Assented to 2002-12-12

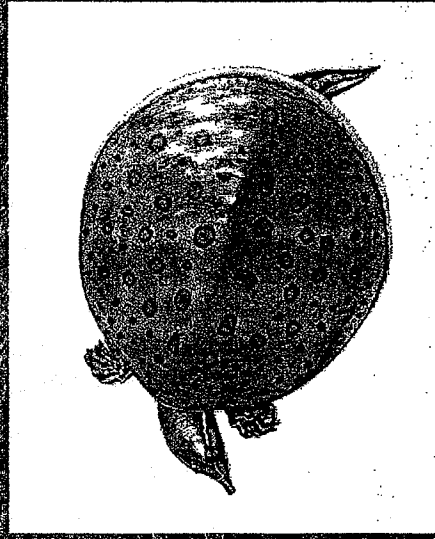
- \* the Government of Canada is committed to conserving biological diversity and to the principle that, if there are threats of serious or irreversible damage to a wildlife species, cost-effective measures to prevent the reduction or loss of the species should not be postponed for a lack of full scientific certainty;
- \* stewardship activities contributing to the conservation of wildlife species and their habitat should be supported to prevent species from becoming at risk;
- \* the habitat of species at risk is key to their conservation;
- \* "habitat" means (a) in respect of aquatic species, spawning grounds and nursery, rearing, food supply, migration and any other areas on which aquatic species depend directly or indirectly in order to carry out their life processes, or areas where aquatic species formerly occurred and have the potential to be reintroduced;

**FLUORIDE IS NOT REMOVED FROM WASTEWATER & DISRUPTS THE FOOD WEB OF PROTECTED SPECIES**

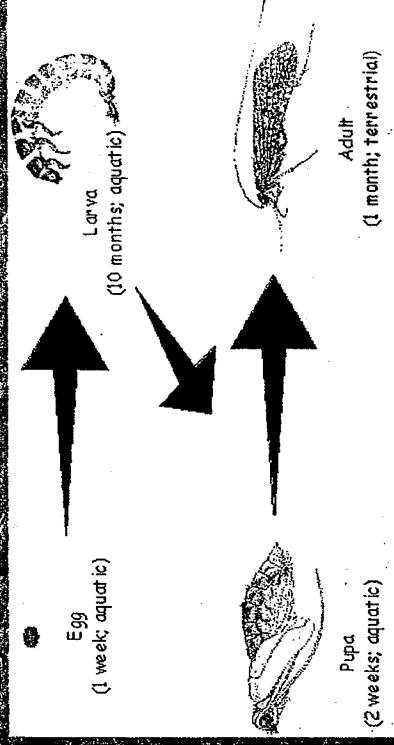
**= AGAINST FEDERAL LAW**

# 7 of 8 Indigenous Ontario Turtles Species at Risk Listed

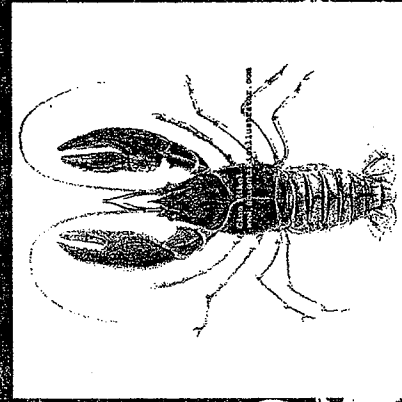
SARA Protected



Keystone F sensitive feeder's



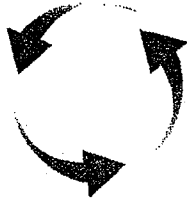
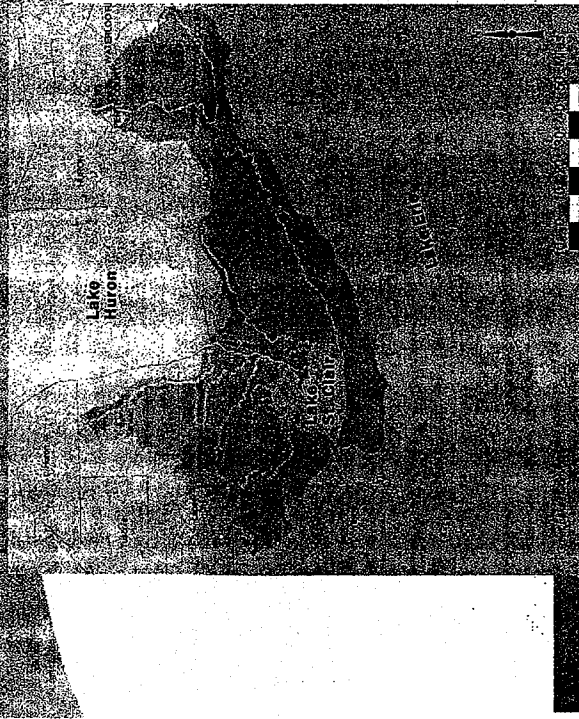
Fluoride < 0.12 ppm



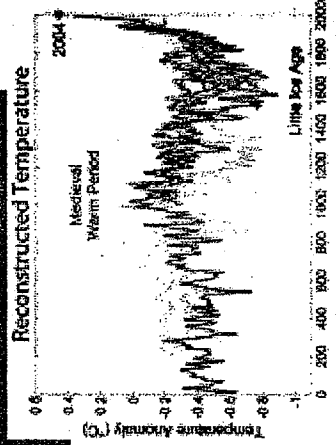
SARA Protected



# How Fluoridation Is Slowly Killing Lake St. Clair & Lake Erie



1. AWF increases the mass of water
2. “Heavy” water has an increased heat capacity
3. Lake Erie and Lake St. Clair are shallow and warm to begin with
4. Warm water with a heavy load of dissolved constituents (potential food) grows bacteria and algae
5. Overgrowth starves higher aquatic organisms of oxygen, increases CO2
6. Dead Lakes warm air & release GHGs

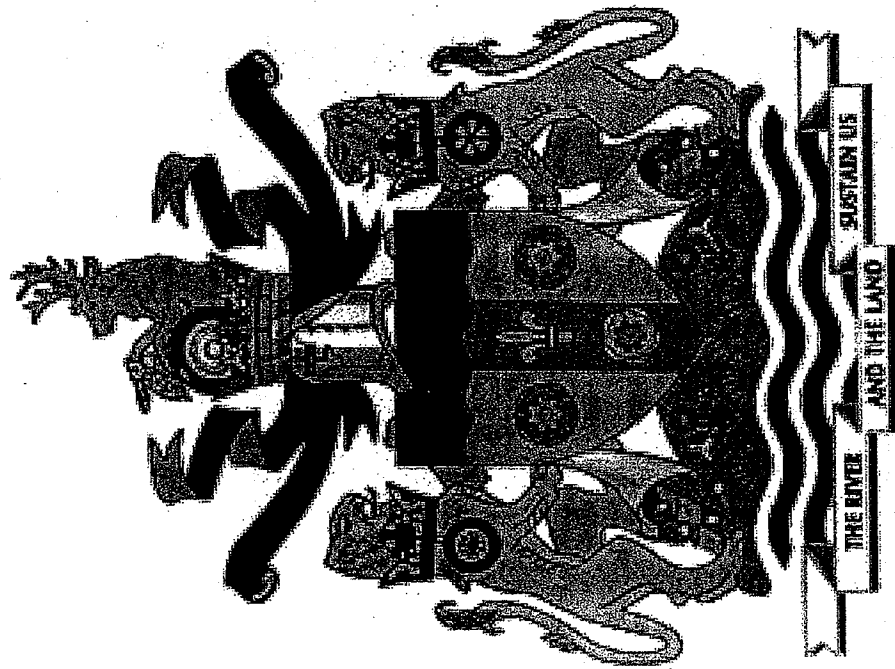


# We Have a Duty to Protect the Environment That Sustains Us

- \* The City of Windsor is licensed to conduct fluoridation. With this comes culpability in the event of environmental damage.
- \* Health Canada does not regulate H<sub>2</sub>SiF<sub>6</sub>. As such, the agency has no standing in the matter. Its endorsements will not shield the City of Windsor from liability.

## Legal Implications of Fluoridation:

- \* Violates the federal Species At Risk Act
- \* Damages the environment & livelihood
  - \* First Nations (Nanfan Treaty 1701)
  - \* Agri-food Industries
  - \* Fisheries
- \* Damage to private property
  - \* Homeowners
  - \* Insurance providers



# WUC Has the Power to End AWF Under the Clean Water Act of 2006

- \* Ontario's Clean Water Act helps protect drinking water from source to tap with a multi-barrier approach that stops contaminants from entering sources of drinking water - lakes, rivers and aquifers.
- \* Ontario's Clean Water Act requires that local communities - through local Source Protection Committees - assess existing and potential threats to their water, and that they set out and implement the actions needed to reduce or eliminate these threats.
- \* Empowers communities to take action to prevent threats from becoming significant.
- \* Requires public participation on every local source protection plan - the planning process for source protection is open to anyone in the community.
- \* Requires that all plans and actions are based on sound science.



# Recommendations

## **The Precautionary Principle**

\*If an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is not harmful falls on those taking the action.

## **We recommend the Environmental Committee insist on:**

1. Provision of a full environmental assessment and baseline study that was conducted prior to initiation of Artificial Water Fluoridation. None? Stop AWF
2. Continuous downstream monitoring to ensure that levels do not exceed water quality guidelines of 0.12 ppm. Not feasible? Stop AWF
3. A guarantee that chemistry of the water discharged into the Detroit River from the Windsor sewage treatment plant is the same or better than the water that is taken out in terms of protection of aquatic life. Not possible? Stop AWF

# Environmental Organizations Opposing Artificial Water Fluoridation

- \* Canadian Association of Physicians for the Environment
- \* Council of Canadians
- \* EPA Headquarters Professionals' Union
- \* Great Lakes United
- \* National Research Council
- \* International Society of Doctors for the Environment
- \* American Academy of Environmental Medicine
- \* Environmental Working Group
- \* Environmental Health Foundation
- \* Science and Environmental Health Network
- \* Center for Health, Environment, and Justice
- \* Goldman Prize winners (2006, 2003, 1997, 1995, 1990)

Thank you for your time