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Level Playing Field

- Arsenic (As) is Bad.... All of a sudden...
- Forget the decades of use, the hundreds of thousands over the decades who have drunk from this well.
- Forget the fact NO one has received skin lesions, vomiting issues, have diarrhea or cancer as per the claims of drinking this type of water.
- So for a minute – let's agree **As** is bad.

Units in PPB

Jan 1, 2018 Drinking Water Guidelines set out in Canada for Arsenic levels	Parts Per Billion	Parts Per Million	Milligrams Per Litre	Micro- grams Per Litre
	PPB	PPM	Mg/L	ug/L
W.H.O. guidelines for Drinking Water	10	0.01	0.01	10

Regulations

- Would it surprise you to learn that...
 - Regulatory body for Bottled Water is different than that for drinking water?
 - Bottled Water vs Bottled Mineral Water vs Bottled Fruit Juice MAL: Maximum Allowable Limits are 50 -100 PPB?
 - Other MCL's (Max. Contaminant Level) – e-coli? Fluoride?
- **Why the double standard?**
- What's wrong with 'our' bottled water @17- 23 PPB?

Drinking vs Bottled Water

Guidelines for Arsenic levels	Parts Per Billion	Parts Per Million	Milligrams Per Litre	Micrograms Per Litre
	PPB	PPM	Mg/L	ug/L
WHO guidelines for Drinking Water est. 2006	10	0.01	0.01	10
Hamilton's Drinking Water standards 2017	20			
Ancaster Wells / Artesian Spring	17-23	.017-.023	.017-.023	17-23
Canada's Food and Drug Regulation for Bottled water (tap)	50		<div style="border: 1px solid black; padding: 5px;"> <p>MCL or MAL: 9.2 organisms E-coli / 100ml</p> <p>Fluoride up to 200 PPB (industrial waste by product)</p> <p>?????????? Maximum Contaminant Limit or Maximum Allowable Limit</p> </div>	
Canada's Food and Drug Regulation for Bottled Mineral water	100			
Canada's Food and Drug Regulation for Bottled Fruit juice	100			
source				

What and Who is really behind all this?

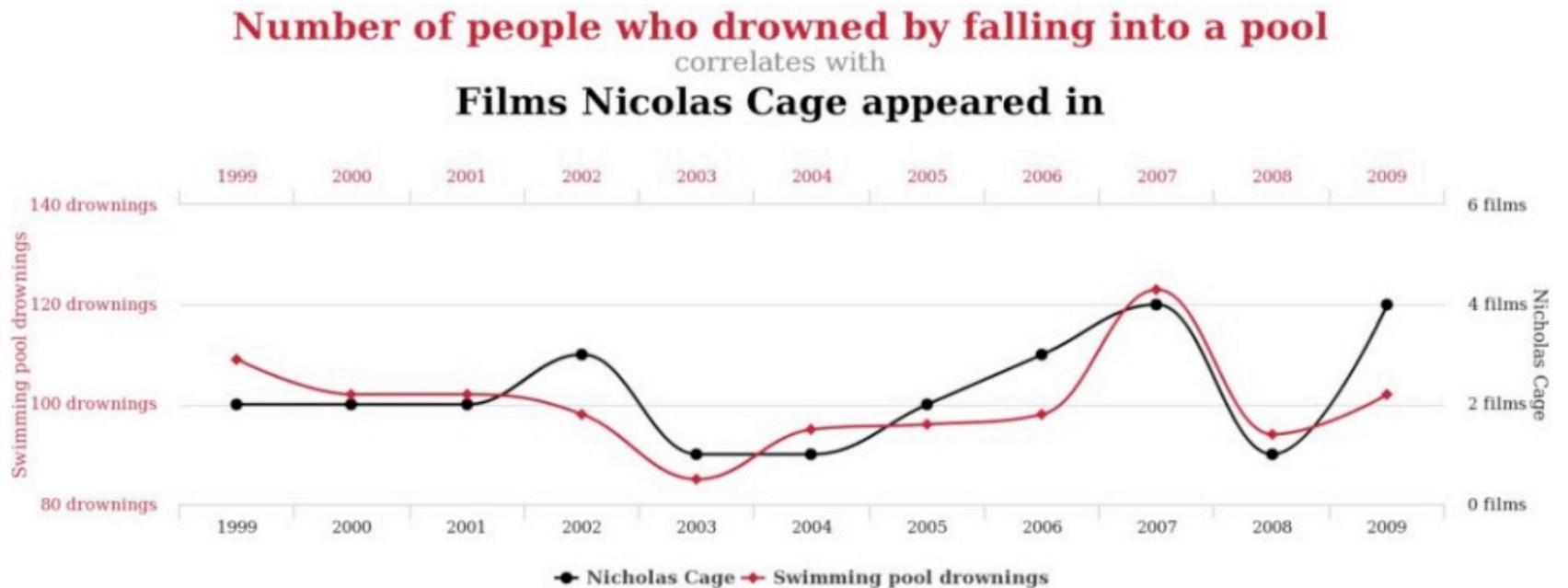
- 1990s this well transferred ownership
- Source: HCA
- Bottled Water Company?

What else do Bottled Water companies know that we don't?

- What about the Science?

Epidemiological Data

- Most research is based on epidemiological data that can only show correlations, or connections, and cannot determine causation between two variables. For example, the number of films Nicolas Cage has been in correlates with the number of people who have drowned falling into a pool.



Science vs Facts

Questioning the Science

Scientific research is an ongoing process:

- - Epidemiological = correlations or connections = most easily falsified research.
- – Causational = cause and effect = most people perceive scientific research is causational and controlled.
- – Funded by a Corporation with a specific conclusion in mind OR Peer reviewed.
- – Peer Reviewed is the significant reports that we as lay people should be relying on.

Therefore NOT all scientific research is based on conclusive evidence establishing a fact.

What else should we know?

- If Water is a Human right why not just put up a sign indicating high levels of As?
- Who's the legal authority ? Is there any legal authority, at any level of government, over water in Canada?
- Guidelines / Standards / Requirements?
- What exactly defines a 'Drinking water system'?
- In the Clean Water Act Isn't ACCESS > quality?

Purpose of the Clean Water Act

- The first barrier in this 'multi-barrier approach' is protecting drinking water at the source, which involves selecting the best available source (e.g., lake, river, aquifer) and protecting it from contamination. The purpose of the Clean Water Act, 2006 is to protect current and future sources of drinking water. As a result of this Act, communities in Ontario are required to develop Source Protection Plans to protect their municipal sources of drinking water.

ACCESS > Quality

“While the safe quality of water supplied to communities is an important consideration in the protection of human health and well-being, it is not the only factor that affects consumers. **Access** to water is of paramount concern and other factors, such as the population served, the reliability of the supply and the cost to the consumer, must therefore be taken into account.:

“all peoples, whatever their stage of development and social and economic condition, have the right to have access to drinking-water in quantities and of a quality equal to their basic needs.”

Source: W.H.O. - **Guidelines for drinking-water quality** SECOND EDITION page 1.

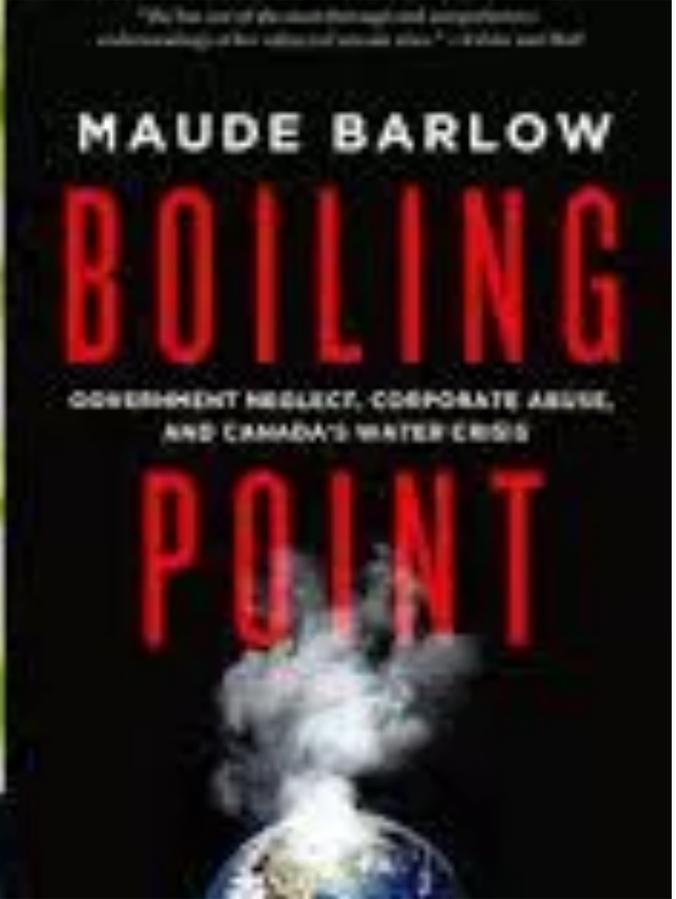
Support Local Farmers

- Our farmers need access – they grow our food.
- Climate change is causing our local farmers challenges, for instance: when their wells dry up, 1109 Sulphur Springs Rd is their only access to water in the area.

Water is a Human Right

- 2010 – the UN declares Water is a Fundamental Human Right.
- Maude Barlow (Water Warrior) et al delegated strongly and fiercely to the UN for years. Why such resistance?
- Special Advisor to the UN that was against this. *Peter Brabeck-Letmathe*
- Shouldn't our city representatives protect our water and our rights?
- Why not give us choice? With a disclaimer?

Maude Barlow – Canada's Water Warrior



Ex CEO Nestle – special advisor to UN



Brabeck-Letmathe (credited as Peter Brabeck) appeared in the 2005 documentary [We Feed the World](#) and while speaking on the subject of water, he said "It's a question of whether we should privatize the normal water supply for the population. And there are two different opinions on the matter. The one opinion, which I think is extreme, is represented by the NGOs, who bang on about declaring water a public right. That means that as a human being you should have a right to water. That's an extreme solution. The other view says that water is a foodstuff like any other, and like any other foodstuff it should have a market value."

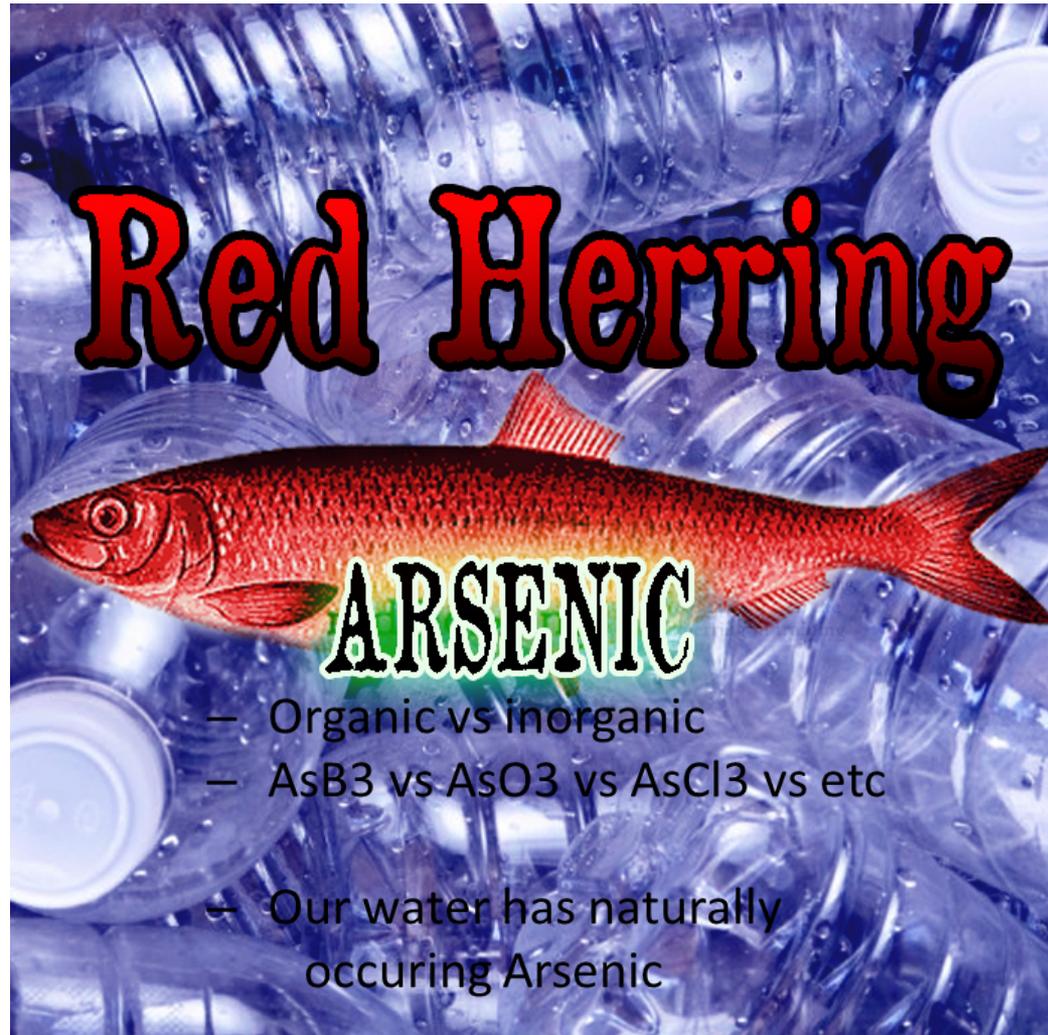
Guidelines / Standards / Requirements

Legalese:

- W.H.O. clearly states they set the guidelines as standards NOT requirements. “..... because of the importance to public health of adequate access to safe water, the adoption of standards in this area is [only] strongly recommended.”

Arsenic?

Shouldn't we be asking more questions?



Red Herring

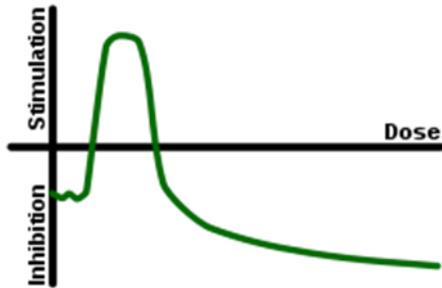
ARSENIC

- Organic vs inorganic
- AsB_3 vs AsO_3 vs AsCl_3 vs etc
- Our water has naturally occurring Arsenic

The 'Dose' makes the poison..

- "...Since ancient times, it has been known that "the dose makes the poison." In other words, the mere presence of a substance that is harmful at some level does not imply that small amounts are toxic or deleterious."
- Ex.: - Isn't **Botox** a dose of botulism?
 - 'Botox ultimately is made from the same toxin that causes a life-threatening type of food poisoning called botulism. Since 1991

Hormesis



A low dose of a chemical agent/
[element] may trigger
an opposite response to a very
high dose.
Wikipedia.

- Source: Forbes article: using Hormesis argument supporting Arsenic @100 PPB necessary in Bottled Mineral/Spring Water – Mother Nature’s synergistic blend.
- And then another report:
 - “...**In practical terms then, at modest exposures around 50 ppb, arsenic is a potent anti-carcinogen.** Lowering the exposure level to 10 ppb or below would be calculated to cause a significant increase in the cancer (and from the Utah data set where it was reported on, the heart disease) mortality rate.” Source: [https://yosemite.epa.gov/sab/sabproduct.nsf/0B633607F3BB6E4A85257177007A707A/\\$File/kayajania_02-13-06_hormesis_arsenic_comments.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/0B633607F3BB6E4A85257177007A707A/$File/kayajania_02-13-06_hormesis_arsenic_comments.pdf)
- A mild stress of a system in the body can have an overall beneficial health effect .
- **Mitochondrial hormesis links low-dose arsenic exposure to lifespan extension**
- Source: <http://onlinelibrary.wiley.com/doi/10.1111/accel.12076/full>

A real advertisement from 1970 that the sugar industry put in National Geographic magazine promoting that people drink a sugar filled soft drink before meals to curb your appetite.

Diet hint:



Have a soft drink before your main meal.

Sugar just might be the willpower you need to curb your appetite.

We know it sounds odd—but it can work.
Spoil your appetite by eating something with sugar.
Sugar works faster than any other food to turn your appetite down, your energy up.

Then when mealtime comes, you're less apt to overeat.
Willpower never tasted so good.
Sugar . . . only 18 calories per teaspoon, and it's all energy.

Sugar Information
Central Post Office Box 94, New York, N.Y. 10001

Is there a Bigger Picture?

- Why is this happening?
- Ontario holds more than 65% of fresh water of the world. Corporate Vultures like Nestle want to mine this 'Blue Gold'. Water is the new oil.
- [“There is simply no way to overstate the water crisis of the planet today.”](#) Maude Barlow
- Are we going to be played? Are you going to be a pawn in this game of theirs?

Protect Our Water

- It is paramount that we protect our valuable resource which is a **life sustaining system** from corporate Vultures.
- Climate change is causing our local farmers challenges, and when their wells dry up, 1109 Sulphur Springs Rd is their only access to water.
- Treating the water, is questionable... 'Don't fool Mother Nature'. Mother Nature's synergistic blend.
- Ultimately, as I have discovered, Liability at the end of the day could be worse if this water source is shut down. The people will rise!
- I hope this presentation has given you some food for thought... or rather water to drink.

**Water is
not a Game**



Let's Stand Together for what is right.

Water is our

HCA Board Members

Hamiltonians

Water Warriors

Farmers

Future Generations

RIGHT



Thank you !

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.”

Margaret Mead

The END

- What follows are sources:

Bottled water includes:

- “Substances that may be present in the source water include any of the following:
- 1. Inorganic substances, including, but not limited to, salts and metals, that can be naturally occurring or result from farming, urban storm water runoff, industrial or domestic wastewater discharges, or oil and gas production.
- 2. Pesticides and herbicides that may come from a variety of sources, including, but not limited to, agriculture, urban storm water runoff, and residential uses.
- 3. Organic substances that are by-products of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff, agricultural application, and septic systems.
- 4. Microbial organisms that may come from wildlife, agricultural livestock operations, sewage treatment plants, and septic systems.
- 5. Substances with radioactive properties that can be naturally occurring or be the result of oil and gas production and mining activities.”
- Source: Nestle_San_Peregrino_mineralwater_report.pdf

Bottled Water at 50 PPB

- A Health Canada survey (Dabeka et al. 2002. Food Additives and Contaminants 19:721-732) indicates that with few exceptions bottled water meets the maximum acceptable limit ... [50 PPB] **Higher levels of arsenic are sometimes found in mineral waters, as they generally contain higher levels of all minerals.**
- Consequently, the slightly higher levels of arsenic in bottled mineral water are not expected to pose a risk to human health..

Fruit Juice

- latter list has a limit for arsenic in bottled water of 0.1 ppm, which is 0.1 mg/L or 100 ug/L (micrograms per L of water) = 100 PPB
- Fruit juice; Fruit nectar; Beverages when ready-to-serve; Water in sealed containers other than mineral water or spring water
- Source: <https://www.canada.ca/en/health-canada/services/food-nutrition/food-safety/chemical-contaminants/contaminants-adulterating-substances-foods.html>

Government Data for Bottled Mineral Water

- AT the time of this report MCL for Arsenic was 50 PPB
- A Health Canada survey (Dabeka et al. 2002. *Food Additives and Contaminants* 19:721-732) indicates that with few exceptions bottled water meets the maximum acceptable limit set out in the *Guidelines for Canadian Drinking Water Quality*. Higher levels of arsenic are sometimes found in mineral waters, as they generally contain higher levels of all minerals. **Consequently, the slightly higher levels of arsenic in bottled mineral water are not expected to pose a risk to human health..**
- Data from Health Canada's Total Diet Study show that the arsenic concentrations in fruit juices that are available for retail sale in Canada are well below the 0.1 ppm (100 PPB) tolerance level, ranging from less than 0.0001 ppm to a maximum of 0.03 ppm(30 PPB)
- Source: http://www.oag-bvg.gc.ca/internet/English/pet_187_e_28923.html

How Arsenic Affects People's Health

- Exposure to levels of **inorganic** arsenic can cause symptoms ranging from **nausea, vomiting, and diarrhea to dehydration and shock**.
- **Long-term** exposure to high levels of **inorganic** arsenic in drinking water has been associated with skin disorders and increased risks for diabetes, high blood pressure, and several types of cancer.
- Inorganic arsenic and arsenic compounds are considered to be cancer-causing chemicals NOT naturally occurring arsenic that is in living water.
- **Forms of organic arsenic are not known to be toxic to humans**
- wikipedias entry for arsenic:
 - Trace quantities of arsenic are an essential [dietary element](#) in rats, hamsters, goats, chickens, and presumably many other species, including humans.
- Arsenic is not accumulative in the body, as easily metabolized.
- SOURCE:
https://webcache.googleusercontent.com/search?q=cache:9JaEg8v7HrwJ:https://www.cdc.gov/biomonitoring/pdf/arsenic_factsheet.pdf+&cd=1&hl=en&ct=clnk&gl=ca

Bottled Water Companies in the Area

- Documents on a ministry website show Nestlé Canada has three permits to take up to 8.3 million litres of water every day for bottling, while Nestlé Waters Canada -- a division of Nestlé Canada -- has a half dozen Ontario permits allowing it to take an additional 12 million litres a day.

Other bottled water companies with large water-taking permits in Ontario include:

- Gold Mountain Springs at 6.1 million litres a day,
- Gott Enterprises at 5.8 million litres and
- St. Joseph Natural Spring Water at 5.5 million litres.

Legality of Enforcing a Guideline

W.H.O. and IARC

- Basis of guideline derivation
- There remains considerable uncertainty over the actual risks at low concentrations, and available data on mode of action do not provide a biological basis for using either linear or non-linear extrapolation. In view of the significant uncertainties surrounding the risk assessment for arsenic carcinogenicity, the practical quantification limit in the region of 1–10 µg/litre and the practical difficulties in removing arsenic from drinking-water, a guideline value of 10 µg/litre is retained. In view of the scientific uncertainties, the guideline value is designated as provisional.
- Source: <https://www.greenfacts.org/en/arsenic/l-3/arsenic-9.htm#0p0>
- - please review Hormesis and “The Dose makes the poison”