

## Central Lake County Joint Action Water Agency

Paul M. Neal Water Treatment Plant  
200 Rockland Road  
Lake Bluff, Illinois 60044



June 16, 2023

### Response to Lake Zurich Village Board Public Comment on May 15, 2023

Comment #1 - *"The water quality in Michigan Lake is not bad, terrible - it is real poisonous swamp."*

#### **Response #1 - This comment is false.**

Lake Michigan is part of the Great Lakes that contain 90% of the United States' fresh water and provide drinking water to 40 million people<sup>1</sup>. The lakes are so large that their health is a matter of interest between both the U.S. and Canada. Periodically the two countries publish a State of the Great Lakes Report. Most recently this report was published in 2022.<sup>2</sup> **The report concludes that the Great Lakes and Lake Michigan in particular, remain a source of high-quality drinking water when treated.** It should be noted that the International Joint Commission<sup>3</sup>, as established in the Boundary Waters Treaty<sup>4</sup> of 1910 between the U.S. and Canada, works to assure each government is upholding their commitment to water quality through the Great Lakes Water Quality Agreement between the two countries.

Comment #2 - *"Maximum contaminant level (MCL) of mg/L for Arsenic, Dissolved Iron, Radon, Nitrate concentrations, standards for Simazine and Alachlor, concentrations of Cadmium, Copper, Mercury, Nickel, Lead and Zinc and of many toxic synthetic organic compound were highest and exceeded in huge percentage of th examples."*

#### **Response #2 - This statement is completely false.**

**Arsenic** is a mineral found in rocks. Natural levels of arsenic have not been detected in CLCJAWA water since 2017. The highest levels detected were in 2000 and 2001 when the levels were 1.2 parts per billion. This is 8 times lower than the maximum allowed level of 10 parts per billion.

**Dissolved iron is not detected** in Lake Michigan water. It is detected in Lake Zurich water at about 0.24 parts per million or four times lower than the MCL.

**Radon is not detected** in Lake Michigan water.

**Nitrate is detected** in Lake Michigan water at about 0.3 parts per million or more than 33 times lower than the MCL of 10 parts per million. Nitrate is detected in most surface waters.

**Simazine and Alachlor** have never been detected in CLCJAWA's water.

**Cadmium** has never been detected in CLCJAWA's water.

**Copper** is rarely detected in CLCJAWA water. It has been detected once at a level of 1.5 parts per billion. This is more than 800 times lower than the maximum allowed level of 1,300 parts per billion. When copper is found in tap water, it is usually from in-home plumbing.

**Mercury** has not been detected in CLCJAWA water since 2004. Out of 54 samples since 1992 it has been detected twice. The highest level detected was 0.110 parts per billion, 18 times lower than the allowed level. The maximum allowed level is 2 parts per billion.

**Lead** has never been detected in CLCJAWA water. When lead is detected in water, it typically comes from a home's plumbing. CLCJAWA adds a common food ingredient called phosphorus to the water that thinly coats plumbing materials to reduce metals from dissolving into the water as required by the Illinois Environmental Protection Agency.

**Zinc** has not been detected in CLCJAWA water since 2003. Since 1992 it has been detected twice. The highest level detected was in 1992 at 68 parts per billion, 73 times lower than the recommended maximum level in water. Zinc is not regulated, but EPA suggests a maximum level of 5,000 parts per billion because excess zinc affects the taste of water.

**Synthetic organic compounds (SOC's) are not detected** in CLCJAWA's drinking water, even with repeated testing year after year. The list of SOC's includes dozens of substances from DDT to PCB.

*Comment #3 - "Over the past 13 years, the previous indicators of all this diversity have increased not by percentages, but by several times."*

**Response #3 - This comment is exaggerated.**

CLCJAWA and numerous other entities monitor lake water quality. Our samples are analyzed by independent testing laboratories. Our monitoring program is more rigorous than required by regulations. With a 31-year history of testing, we can demonstrate that the concentration of compounds that we detect in water are not increasing. We do however detect more compounds than in the past because testing equipment has improved and we can now detect incredibly small concentration as low as one part per quadrillion. This analytical improvement has revealed compounds in water that previously went undetected. According to the 2022 State of the Great Lakes Report, the status of the Great Lakes ecosystem health with regards to drinking water is good and the trend is unchanging.<sup>2</sup>

*Comment #4 - "At the moment, the water quality in LZ has terrible characteristics...the presence of chlorine in the THM treatment mixture provokes Bladder cancer."*

**Response #4 - The level of THM in Lake Zurich water is well below allowable levels.**

TTHM (total trihalomethanes) are formed when water is chlorinated. In the United States (and much of the world), public water supplies are chlorinated so that people do not contract water borne diseases. The maximum contaminant level allowed for TTHM is 80 parts per billion. This is the level of TTHM below which, with a built-in safety factor, individuals will not suffer adverse health effects when consuming water over their lifetime. Lake Zurich water is more than 2 times lower than this level of concern and most recently, contained 39 parts per billion of TTHM. CLCJAWA's water is more than six times lower at 13 parts per billion.

Comment #5 - "Our water contains toxins like Fluoride and Arsenic".

**Response #5 - At the levels found in drinking water, fluoride and arsenic are not toxic.**

Municipally treated well water in Illinois and most of the U.S. requires the addition of fluoride when natural levels are inadequate to protect dental health<sup>5</sup>. When levels exceed 4 parts per million, fluoride must be removed. In Lake Zurich, the level is 1 part per million. In CLCJAWA water it is typically 0.7 parts per million.

Fluoride, arsenic, alcohol and even water<sup>6</sup> itself are toxic in high concentration. Using the word "toxins" to label normally non-toxic compound levels found in air, food and water confuses people and scares them. It twists word definitions and establishes a false premise that is the cornerstone of fluoride pseudo-science<sup>7</sup>. For example, vitamin D is toxic at high levels and can cause death.<sup>8</sup> However, vitamin D is critical to human health at the levels we ingest and synthesize it in our bodies. Natural foods also contain toxins that at normal levels, are simply not toxic.<sup>9</sup> The levels of fluoride and arsenic that are found in CLCJAWA or Lake Zurich water are simply not toxic.

Comment #6 - *"How to increase the Debit & improve the quality of drinking water. Use Illinois law (65 ILCS 5/) Illinois Municipal Code for Consolidated municipality. Around the LZ are several small villages that have huge water sources..."*

**Response #6 - The Village of Lake Zurich is essentially doing just that, consolidating their water source supply and treatment with 17 other water systems.**

Lake Zurich is seeking to use Illinois Municipal code ( 5 ILCS 220/3.1) to join an existing municipal joint action water agency (JAWA) and in so doing, consolidate their water supply with numerous other villages around Lake Zurich. This consolidation would provide adequate supplies of water on an economical and efficient basis for all of the member municipalities and other incorporated and unincorporated areas within the county. JAWA's are a great example of how municipalities partner to do something together, that they could not as effectively or as cost efficiently, do alone. CLCJAWA Members face the changing regulatory landscape and water demand changes together, rather than on their own.

#### References:

1. [About the Great Lakes](#), Great Lakes Commission, retrieved 5/19/2023.
2. [State of the Great Lakes 2022](#), retrieved 5/19/2023.
3. [Great Lakes Water Quality](#), International Joint Commission.
4. [Boundary Waters Treaty of 1910](#).
5. [Harvard School of Public Health](#), retrieved 6/15/2023.
6. [Hyponatremia](#), Mayo Clinic, retrieved 6/16/2023.
7. [Bad Science: To fluoridate or not to fluoridate: the saga continues](#). British Dental Journal, 2018.
8. [Vitamin D](#), retried from the National Institutes of Health website, 6/15/2023.
9. [Natural Toxins in Food](#), retrieved from the World Health Organization website, 6/15/2023.

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