

Community Water Fluoridation

Board of County Commissioners Meeting

April 8, 2025

Presented by: Johnny Edwards, PE – Utilities Director

PURPOSE

- Update the Board of County Commissioners (BCC) about community water fluoridation (CWF)

AGENDA

- Seminole County Utilities' Responsibilities
- Background Information
- Operational Considerations

Seminole County Utilities' Responsibility

- Own, operate and maintain five water treatment plants and the connected water distribution systems.
- Own, operate and maintain eight consecutive water distribution systems (water is provided by other utilities)
- Treat water to comply with State and Federal drinking water standards; verify through sampling and analysis
- Obtain State permits; submit compliance reports
- Distribute Consumer Confidence Reports (water quality) to customers

Seminole County Utilities' Responsibility

- Utilities Department does not
 - Generate toxicity reports
 - Perform health studies
 - Establish drinking water quality standards, or health advisory levels

Seminole County Utilities' Responsibility

- United States Environmental Protection Agency (USEPA) and Florida Department of Environmental Protection (FDEP) promulgate and enforce the primary and secondary drinking water standards
- Florida Department of Health (FDOH) – Guidance and advisories
- Other organizations provide the science in support
 - National Institutes of Health (NIH)
 - Centers for Disease Control and Prevention (CDC)
 - Health and Human Services – National Toxicology Program (NTP)

Background

- CWF became a public health initiative shortly after World War II
- Grand Rapids Michigan was first US city to fluoridate water supply in 1945; reported 60% reduction in cavities in children born thereafter
- FDOH officially endorsed CWF in 1949
- In 1956, Crest endorsed by the American Dental Association (ADA) as first cavity-preventing toothpaste
- Seminole County has been fluoridating since 1988, when it became an owner/operator of water utilities
- In 2008, BCC discussed CWF; decided to continue

Background

- In 2015, FDOH responded to Federal guidance by lowering the standard in water from 1.0 mg/L to 0.7 mg/L
 - Concerns with fluorosis (staining of teeth, bone deformities, GI problems)
 - Concerns with joint pain
- In August 2024, an NTP study reported moderate confidence of inverse relationship between fluoride exposure and children's IQ
- 9/24/24 – Federal Court in CA rules against USEPA citing “substantial and scientifically credible evidence establishing that fluoride poses a risk to human health”; orders USEPA to regulate “unreasonable risk”

Background

- 11/22/24 – FDOH revises guidance; now recommends against community water fluoridation citing numerous worldwide studies and associated risk, resulting from total fluoride dosage, of
 - Lower IQ in children
 - Increased risk of ADHD
 - Decreased child inhibitory control and cognitive flexibility
 - Increased child neurobehavioral problems
- ADA and CDC continue to advocate for CWF and list studies that indicate CWF reduces dental caries in children
- Many studies indicate data is limited old

Background

- Prevalence of fluoride products – toothpaste, mouthwash, gels, floss varnishes, drops, chewing gum, bottled water
- Several Florida utilities have stopped CWF since FDOH policy change including Longwood and Lake Mary in February
- Utah recently banned CWF
- SB-700:

(19) "Water quality additive" means any chemical or additive which is used in a public water system for the purpose of removing contaminants or increasing water quality. The term does not include additives used for health-related purposes.



Operational Considerations

- In Seminole, the Floridan aquifer provides natural fluoride ranging from 0.15 to 0.3 mg/L
- USEPA and FDEP enforce primary drinking water standards (DWS) for fluoride
 - Primary DWS of 4.0 mg/L - Exceedance may result in civil penalties
 - Secondary DWS of 2.0 mg/L – Must notify customers of exceedance

Operational Considerations

- Projected R&R expenses within the next two years: \$500,000
- Annual cost of chemicals and monitoring is about \$100,000
- The American Water Works Association identifies three sources of supplemental fluoride for CWF; we use the most common, hydrofluorosilicic acid, a byproduct phosphate fertilizer production.

QUESTIONS?