Weekly Update
Apalachicola City Water
October 3rd, 2025

Progress:

Carbon dioxide (CO2) injection system installation and well maintenance work is set to resume the week of October 6.th.

Aerator/scrubber shipment is still anticipated by mid-October.

City Water Sample Test Results:

- **Daily residual chlorine** (September 26th through October 3rd, 2025)**:**
    - At the plant, levels ranged from 3.27 - 3.52 ppm.
    - At the remote location, levels ranged from 0.31 - 0.67 ppm.
    - Residual chlorine is the amount of chlorine that remains in the water after treatment at the drinking water plant. Chlorine reacts with organic material and hydrogen sulfide as it travels down the water distribution system–so chlorine levels decrease with increased distance from the plant. This decrease is normal for every water treatment system. *State regulations say that chlorine levels cannot be above 4 ppm, or below 0.20 ppm.* ***Levels above 4 ppm exceed the EPA Maximum Contaminant Level (MCL). Levels at or above 0.2 ppm indicate there is enough chlorine to kill bacteria.***

- **Disinfectant Byproducts Quarterly Monitoring Period July - September 2025**

  BOTTOM LINE: The City is in compliance with State and Federal Drinking Water Regulations.
    - **Total Trihalomenthanes (TTHM)** Locational Running Annual Average (LRAA) levels continue to be below the EPA Maximum Contaminant Level (MCL) of 80 ppb.[1]
        - Bay City Lodge location: 61.51 ppb (LLRA)
        - Roberts Fish Dock location: 64.85 ppb (LLRA)
    - **Haloacetic Acids Five (HAA5)** Locational Running Annual Average (LLRA) levels continue to be below the EPA Maximum Contaminant Level (MCL) of 60 ppb.[1]
        - Bay City Lodge location: 27.68 ppb LLRA
        - Roberts Fish Dock location: 26.49 ppb LLRA

[1] ppb is parts per billion. For a contaminant in water, it is also expressed as ug/L, or one microgram (ug) contaminant in one liter (L) of water. An example of a ppb is one drop of water in an Olympic size swimming pool.

City Water Sample Test Results, continued

The following tables display the same information shown on page 1.

TTHM LRAA Sample Results, July - September, 2025		
Sample Location	**TTHM (ppb or ug/L)**	**MCL Standard (ppb)**
Bay City Lodge	61.5	80.0
Roberts Fish Dock	64.8	80.0
TTHM=total trihalomethanes; LLRA=locational running annual average–an average of 4 quarterly sample results; ppb=parts per billion; ug/L=micrograms contaminant/liter of water; MCL=EPA and FDEP's Maximum Contaminant Level.		

HAA5 LRAA Sample Results, July - September, 2025		
Sample Location	**HAA5 (ppb or ug/L)**	**MCL Standard (ppb)**
Bay City Lodge	27.68	60.0
Roberts Fish Dock	26.49	60.0
HAA5=Haloacetic Acids 5; LLRA=locational running annual average–an average of 4 quarterly sample results; ppb=parts per billion; ug/L=micrograms contaminant/liter of water; MCL=EPA and FDEP's Maximum Contaminant Level.		

NOTE: The City is required to sample two locations quarterly (every three months). To monitor water quality more closely, the City tests the water for TTHMs and HAA5 once every month.

Every new quarter, the TTHM results are averaged to provide what is called a rolling annual average result.

Rolling annual average=
(Current quarter result+previous quarter+2 quarters ago+3 quarters ago)/4 quarters

The same happens for HAA5 results. That result is averaged with the results from the three previous quarters to give a Running Annual Average result. When there are different sampling points, like Apalachicola has, each location calculates a Locational Running Annual Average (LRAA).

The LRAA's values are what is compared to the Maximum Contaminant Level (MCL) legal standard. If the LRAA exceeds 80 ppb for TTHMs or 60 ppb for HAA5, the water treatment system is out of compliance with EPA standards.

City Water Sample Test Results, continued

Another number that is calculated is called the Operational Evaluation (OE) level. This result gives the water treatment system operators an idea of the trends in TTHM and HAA5 concentrations so, if possible, they can adjust levels of chlorine being added to keep TTHM and HAA5 values low. Some of the same information used to calculate the LRAA is used to calculate an OE. Instead of averaging all four quarters of test results, the OE is calculated by doubling the most recent result, adding the previous two quarters, and dividing by four.

Operational Evaluation (OE) level=
(2x the current quarter result+previous quarter+2 quarters ago)/4 quarters

Exceeding an OE does NOT mean the MCL is exceeded and the system is out of compliance. That is only determined by the LRAA.

The following tables display the OE results .

TTHM OE Sample Results, August - September, 2025		
Sample Location	**TTHM (ppb or ug/L)**	**MCL Standard** (ppb)**
Bay City Lodge	74.3	80.0
Roberts Fish Dock	79.8	80.0
TTHM=total trihalomethanes; OE=operational evaluation; ppb=parts per billion; ug/L=micrograms contaminant/liter of water; MCL=EPA and FDEP's Maximum Contaminant Level. ** An OE exceeding an MCL is not a drinking water violation.		

HAA5 OE Sample Results, August - September, 2025		
Sample Location	**HAA5 (ppb or ug/L)**	**MCL Standard** (ppb)**
Bay City Lodge	25.0	60.0
Roberts Fish Dock	23.5	60.0
HAA5=Haloacetic Acids 5; OE=operational evaluation; ppb=parts per billion; ug/L=micrograms contaminant/liter of water; MCL=EPA and FDEP's Maximum Contaminant Level. ** An OE exceeding an MCL is not a drinking water violation.		

What to know about TTHMs and HAA5 (byproducts of disinfection):

Levels of TTHM and HAA5 generally increase in the summer months due to the warmer temperatures. Levels can also be affected by seasonal changes in well water quality or by changing amounts of chlorine added.

Reducing the levels of byproducts of disinfection while maintaining effective disinfection of the water is challenging. When chlorine levels are increased, so do the levels of chlorination byproducts (TTHMs and HAA5). Stopping disinfection is not an option, as the risk of illness from drinking untreated water is greater than the risks from exposure to the byproducts.

What to know about EPA Maximum Contaminant Level Regulations:

An EPA Maximum Contaminant Level (MCL) is the maximum level of a contaminant in drinking water delivered to any user of a public water system allowed by EPA. MCLs are enforceable. EPA sets MCLs at levels that are economically and technologically feasible. States can set MCLs lower than Federal EPA values.

For contaminants that may possibly cause cancer, MCLs are set by EPA at levels that may result in **one additional case of cancer 1 in 10,000 to 1 in 1,000,000 (one in a million) people drinking two liters of water at the MCL every day for 70 years.** This value is conservative.

Both TTHM and HAA5 MCLs are based on the possible cancer risk. So taking TTHM as an example, drinking two liters of water every day containing 80 ppb TTHM for 70 years could result in one case of cancer in one person out of 10,000 to one person out of a million people exposed,

MCLs for contaminants that are not possible carcinogens are based on non-cancer effects assuming drinking two liters of water per day with the contaminant level at the MCL over a lifetime (70 years).