



INSPECTION REPORT

OF THE

**APALACHICOLA PUBLIC WATER SYSTEM
DRINKING WATER TREATMENT PLANT
APALACHICOLA, FLORIDA**

By

**U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ENFORCEMENT AND COMPLIANCE ASSURANCE DIVISION
WATER ENFORCEMENT BRANCH
DRINKING WATER ENFORCEMENT SECTION**

February 2 - 3, 2022

Introduction

A Drinking Water inspection to evaluate compliance with the Safe Drinking Water Act (SDWA) was performed at the Apalachicola Public Water System (PWS), PWS ID: FL1190150 in Apalachicola, Florida on February 2 and 3, 2022. The inspection was conducted under the authority of Section 1445(b)(1) of the Safe Drinking Water Act (SDWA).

An entrance briefing was held on February 2, 2022, where U.S. Environmental Protection Agency (EPA) inspectors presented their credentials and discussed the purpose of the onsite inspection. Personnel from Florida Department of Environmental Protection (FDEP) were also present at the time of the inspection. Following the briefing; EPA, FDEP, and Apalachicola PWS staff visited the wells, proposed location for booster station, water treatment plant (WTP), and the distribution system assets. A document review was conducted prior to the closing briefing, which took place on February 3, 2022. At the closing, a preliminary list of observations was presented to System staff.

Purpose

In FY20, the EPA began a National Compliance Initiative (NCI) with the goal of reducing noncompliance with drinking water standards at community water systems. One of the goals of the NCI is to support the Agency's Strategic Plan, which calls for a 25 percent reduction in the number of community water systems that are out of compliance with health-based standards by the end of FY 2022.

Apalachicola PWS was targeted for a drinking water inspection due to being out of compliance with the Disinfection Byproduct Rule (DBPR). During the inspection, EPA discussed PWS's processes, issues the PWS has experienced, steps taken to address their violations and ongoing efforts to return to compliance.

Participants

Apalachicola Public Water System:

Brenda Ash – Mayor

Travis Wade – Administrator

Rhett Butler – Field Crew Supervisor and Distribution System Operator

Dewberry, Consulting Firm:

Philip Jones – Project Manager

Florida Department of Environmental Protection:

Erin Rasnake – Assistant District Director

Loran Jordan – Environmental Specialist II

Katie Downey – Program Consultant

EPA:

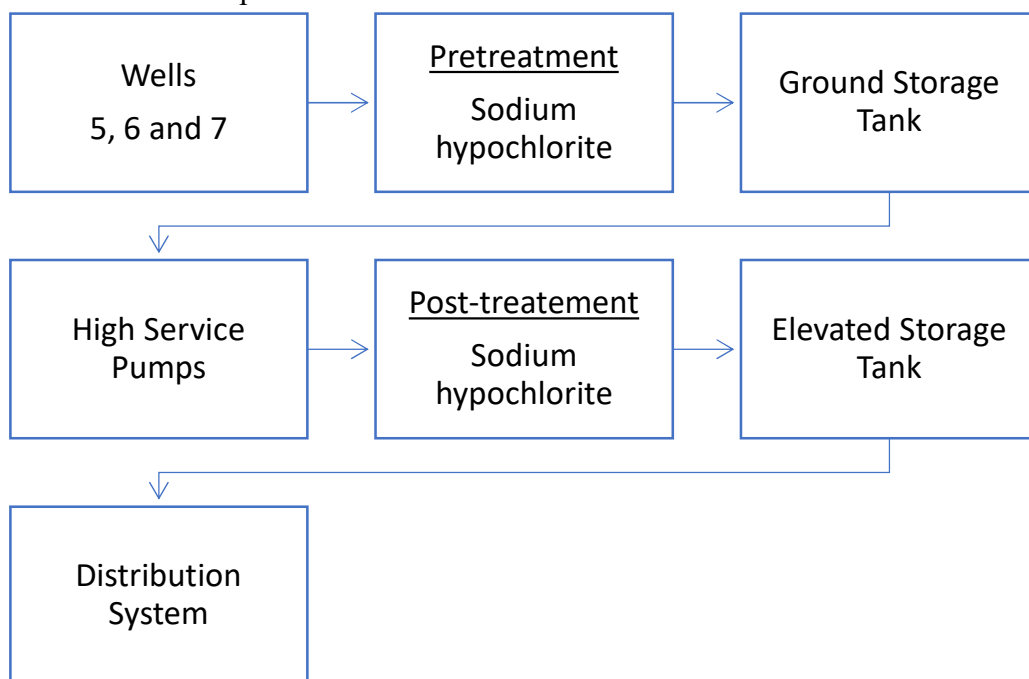
Rebecca Quiñones – Senior Enforcement Officer
Whitney Lehrer – Inspector in Training

Facility Description

The Apalachicola Public Water System (System) is located at 29 Chapman Road, Apalachicola, Florida 32320. The System serves a population of approximately 4,710 with 2,048 service connections and has the capacity of producing about 2.16 million gallons a day (MGD). Storage consists of one ground and one elevated storage tank for a total of 700,000 (MG) of storage capacity. The System has two weekend operators. A part-time operator has recently been hired to operate the WTP a few days during the week and the distribution system operator is currently working towards obtaining his operator certification. When the WTP operators are not onsite, the field crew supports the System performing daily tasks such as; chlorine residual and flow measurements.

At the WTP, the water is pre/post treated with sodium hypochlorite, NSF certified, which it is fed via three peristaltic metering pumps. There are two aerators connected to the ground storage tank that are used to control the iron and hydrogen sulfide odor. At this location, there is a control room used to operate four high service pumps that push water from the ground storage tank into the elevated storage tank and distribution system. Flow meters are used throughout the System and the water flow is recorded every morning on the Daily Rounds Sheet. The ground water storage tank has a capacity of 600,000 MG and the elevated storage tank has a capacity of 100,000 MG. All wells and WTP have a designated generator. These generators are serviced by JJ's Generator and are exercised every Thursday for an hour.

The flow of water at Apalachicola PWS is as follows:



The System doesn't have a laboratory onsite. All compliance samples are sent to The Water Spigot, Inc. laboratory located in Panama City, Florida. Apalachicola staff use Flovac monitoring system and Diamond Maps GIS/mapping application to monitor the different zones within the System. The distribution system operator administers these applications and is authorized to make changes. The accounts of other personnel that have access to the applications are set as read only.

The System is currently in noncompliance with the Disinfection and Disinfectant By-products Rule (DBPR) as it has had numerous maximum concentration level (MCL) exceedances. The System had developed a pilot project using hydrogen peroxide with the objective of reducing DBPs through the System and returning to compliance; however, the project wasn't successful. Recently, the System contracted Dewberry to act as a consultant to evaluate the DBP issues and propose a plan of action to assist the System in returning to compliance. This collaboration was established as a result of the State's enforcement efforts. During the tour, the consultant accompanied the inspection team to the Bluff Road location, which is the proposed location to build a booster station for a chlorine injection point. The goal for building the booster station is to be able to reduce the chlorine feed rate at the WTP and boost it at this location. This will keep the proper chlorine residual all along the distribution system and aid in reducing DBPs. Other options such as a carbon filter are also being evaluated.

Personnel

System is currently being operated by the following personnel;

WTP weekend staff:

Michael P. Wahlquist – Class A

Page Wahlquist - Certificate was not located in the records

WTP part-time staff:

Hank Garrett – Certificate was not located in the records

Distribution System (DS) staff:

Rhett Butler – Level 3

Field crew – several employees that support the DS operations

The City has experienced challenges hiring a full-time operator for the WTP. Currently, Rhett Butler is working towards obtaining his WTP operator certification. Once certification is achieved, he will become the WTP full time operator. Members of the field crew are working towards obtaining DS operator certification and are in training to be able to cover the DS operator tasks once Rhett Butler becomes the WTP operator.

Documentation reviewed

Prior to the inspection, EPA inspectors reviewed the following documentation:

- Last two sanitary surveys performed by FDEP

- Corrective action plans submitted in response to sanitary surveys' findings
- Violation history
- Latest warning letter issued by FDEP on 12/21/2021
- Consent Order issued by FDEP on 07/13/2020
- Enforcement Targeting Tool historical data

While on site, EPA inspectors reviewed the following documentation:

State records:

- 2021 Monthly Operating Reports
- Draft Bacteriological Sampling Plan
- Draft Lead and Copper Sampling Plan
- 2021 Bacteriological Data
- 2020 Lead and Copper Data

System records:

- Workorders for customer complaints, water main breaks and repairs
- Operator Certifications
- Risk and Resilience Assessment
- Daily Rounds Sheets – flow data
- 2020 Storage tanks inspection report
- 2020 LCR Customer Collection Forms
- Valve Exercising Plan
- Generator maintenance records
- Flushing Plan

Comments and Observations

Comments

System staff was welcoming and cooperative during the inspection. The WTP and DS tour were comprehensive, and staff was diligent in informing the inspection team of the current challenges the System is facing, and steps being taken to implement improvements.

Observations

1. **Observation:** Housekeeping - The storage area and control room at the WTP were used to store boxes, chemical drum, unused chemicals and other items (refer to Appendix A, Photographs 1 and 2).
Comment: Staff should keep the storage area and control room at the WTP clean and organized to prevent cross contamination of chemicals and tripping hazards.
2. **Observation:** Vegetative growth along the fence and/or in the vertical plane was noted at Well 6, WTP, and elevated storage tank (refer to Appendix A, Photographs 3-7).

Comment: The vertical plane should be kept free of vegetation to prevent damage to the tanks and entry of contaminants or animals to the finished water.

3. **Observation:** The elevated storage tank overflow pipe lacked size-24 mesh at the time of the inspection (refer to Appendix A, Photograph 8).

Comment: Tank overflows must have appropriately attached screens to prevent contamination of the finished water.

Findings

1. **Finding:** Wells 5 – 7 (refer to Appendix A, Photographs 9-12)

a. Well 5

- i. The blowoff pipe is corroded and the corrosion is causing loose particles from the pipe to accumulate on the screen.
- ii. Sampling line at raw water tap is corroded.

b. Well 6

- i. The blowoff pipe is corroded and the corrosion is causing loose particles from the pipe to accumulate on the screen.
- ii. The threading on the overflow pipe connecting plate is corroded.

c. Well 7

- i. The well is leaking. The drainage line is not working properly, and water is being accumulated on the pad.

Florida Administrative Code (F.A.C.) 62-555.350 (2) Operation and Maintenance of Public Water Systems – “Suppliers of water shall keep all necessary public water system components in operation and shall maintain such components in good operating condition, so the components function as intended.... blistering, chipped, or cracked coatings and linings on treatment or storage facilities in contact with raw, partially treated, or finished drinking water shall be rehabilitated or repaired.”

Comment: Blowoff pipe at Well 5 and 6 needs to be replaced and 24-mesh screen installed. Sampling line at Well 5 needs to be replaced. Well 6 overflow pipe connecting plate needs to be replaced and 24-mesh screen installed. Leak and drainage line at Well 7 needs to be repaired. Leak and drainage line at Well 7 need to be repaired.

2. **Finding:** Unsecured access was observed at the elevated storage tank and WTP.

- a. WTP fence was bent down in one location (refer to Appendix A, Photo 4) .
- b. Ladders on the aerator towers adjacent to the ground water tank were not locked (refer to Appendix A, Photo 13).
- c. Ground water tank had a rope hanging from its roof.
- d. The elevated storage tank is located in a multi-use City property. Personnel not working for the System also have access to the location. State noticed the gate was left opened on February 3, 2022, which defeats its purpose.

F.A.C. 62-555.320 (5) Security - “Drinking water treatment or pumping facilities shall be enclosed by fences with lockable access gates, housed in lockable buildings or enclosures, or otherwise protected to prevent tampering, vandalism, and sabotage. Finished-drinking-water storage facilities shall be enclosed by fences with lockable access gates, shall have lockable access openings and lockable cages or enclosures

obstructing access to ladders, or shall be otherwise protected to prevent tampering, vandalism, and sabotage.”

Comment: Fence at WTP needs to be repaired to prevent entry of unauthorized people. Access to aerator tower ladders must be restricted to authorized personnel. Rope hanging from ground storage tank needs to either be removed or secured to prevent potential access to tank. Access to the elevated storage tank must be limited to water treatment personnel.

3. **Finding:** Storage Tanks

- a. Ground storage tank at WTP – (refer to Appendix A, Photo 14-17)
 - i. Significant cracking observed on the structure’s exterior.
 - ii. Concrete base of tank showed significant deterioration and is not sealed.
- b. Elevated storage tank – (refer to Appendix A, Photo 18-19)
 - i. Tree branches extending from the adjacent property are touching the support structure of the tank.
 - ii. Extensive biogrowth observed on tank exterior.

F.A.C. 62-555.350 (2) Operation and Maintenance of Public Water Systems – “Suppliers of water shall keep all necessary public water system components in operation and shall maintain such components in good operating condition so the components function as intended.... blistering, chipped, or cracked coatings and linings on treatment or storage facilities in contact with raw, partially treated, or finished drinking water shall be rehabilitated or repaired.”

Comment: Storage tanks must be maintained to ensure their integrity. Ground storage tank concrete base needs to be sealed. Cracks on the exterior of structure need to be evaluated and repaired. Vegetation obstructing the support structure of the elevated storage tank needs to be removed. Biogrowth on elevated storage tank needs to be removed.

4. **Finding:** System is not adhering to the required retention policy for records as required in 40 CFR 141.31-141.33 and 141.91. Many records were not available for review during the inspection and the inspection team had to rely on the State online records to review sampling plans, data, and monthly operation reports.

Comment: System must ensure that records are maintained in accordance with federal and state regulations. Protocols must be implemented to ensure the preservation and availability of records.

5. **Finding:** Flushing records were unavailable during the inspection.

F.A.C. 62-555.350 (12) (c) - All suppliers of water shall keep records documenting that their finished-drinking-water storage tanks... In addition, all suppliers of water shall keep records documenting that their isolation valves are being exercised, and their water mains conveying finished drinking water are being flushed, in accordance with subsection 62-555.350(2), F.A.C.”

Comment: Flushing events must be documented, and records need to be readily available.

6. **Finding:** Monthly Operation Reports (MOR)

- a. July 2021 MOR was not located in the System as required per 40 CFR 141.31 and F.A.C 62.555.350 (12) (b).
- b. Upon review of the 2021 MORs, the inspection team noticed that several MORs were missing required information.
 - i. Total population served at the end of the month is not being documented as required by form 62-555.900 (3).
 - ii. April – June and August – November 2021 didn't include disinfection residual at first customer.

F.A.C 62-555.350 (12) (b) Operation and Maintenance of Public Water Systems – “For all public water systems except transient non-community water systems using only ground water and serving only businesses other than public food service establishments, suppliers of water shall submit monthly operation reports to the appropriate Department of Environmental Protection District Office or Approved County Health Department within ten days after each month of operation per paragraph 62-550.730(1)(d), F.A.C...”

F.A.C. 62-555.350 (5) (a) Operation and Maintenance of Public Water Systems – “For each day a supplier of water serving 3,300 or more persons serves water to the public from a drinking water treatment plant that includes chemical disinfection for virus inactivation, the supplier of water shall continuously monitor the residual disinfectant concentration (C) before or at the first customer and shall record in the logs and reports required under subsection (12) below the lowest C measured before or at the first customer during peak flow, the corresponding disinfectant contact time (T) at the C monitoring point during peak flow, and the resulting lowest CT provided before or at the first customer during peak flow...”

Comment: MORs must be completed and submitted to the State according to federal and state regulations. The MORs must include the total population served at the end of each month and the disinfection residual at first customer.

7. **Finding:** Chlorine residual measurements less than 0.2 mg/L were noticed in multiple instances for the months of April – June 2021.

F.A.C. 62-555.350 (6) Operation and Maintenance of Public Water Systems – Suppliers of water shall maintain a minimum free chlorine residual of 0.2 mg/L, or a minimum combined chlorine residual of 0.6 mg/L or an equivalent chlorine dioxide residual, throughout their drinking water distribution system at all times.

Comment: Chlorine residual must be maintained within the required range. Protocols must be implemented to ensure chlorine residual requirements are being met throughout the System.

8. **Finding:** Bacteriological and Lead and Copper Sampling Plans have not been approved by the State.

- a. Bacteriological (Bacti) – 40 CFR 141.853 (a)
 - i. A Bacti sampling plan was not located in the System's records. State records included a 3/31/2016 draft. The draft is titled Standard Operating Procedure and lists the instructions and the order in which samples need to be collected per month.

- ii. Upon review of the July – December 2021 Bacti data records against the 3/31/2016 draft, the inspection team identified several discrepancies.
 - 1. July 2021
 - a. Two of the sampling points used for sample collection were not listed as July locations.
 - 2. August 2021
 - a. Five of the sampling points used for sample collection were not listed as August locations.
 - 3. September 2021 – not located in State records.
 - 4. October 2021
 - a. Two of the sampling points used for sample collection are not listed as October locations.
 - 5. November 2021
 - a. Three of the sampling points used for sample collection are not listed as November locations.
 - 6. December 2021
 - a. One of the sampling points used for sample collection are not listed as December locations.
- b. Lead and Copper (LCR) – 40 CFR 141.90 (a) (1) (iii) (A)
 - i. State records had an original LCR draft sampling plan dated 1993 and a revised draft dated 1994.
 - ii. There were no records of an approved plan or a more updated version.
 - 1. During the inspection, a list of sampling sites from 2008 was presented to the inspection team. This list was not located within State records as an approved plan.
 - 2. When comparing the 2020 sampled sites against all the draft sampling plans mentioned above, out of the 20 samples collected, five of the addresses were not listed on any of the sampling plans.

Comment: The Bacteriological and Lead and Copper sampling plans need to be updated with the applicable information and corresponding sampling locations and submitted to the State for approval. Once approved, the System must properly follow the plans. When revisions are needed, they must be sent to the State for approval prior to implementing changes.

- 9. **Finding:** The Rivercrest hydrant that is currently being used to collect compliance samples under the Disinfectants and Disinfection Byproducts Rule has not been approved as a sampling site by the State. Per 40 CFR 141.622 Subpart V, State needs to be consulted prior to revising sampling plans.
 - a. State approved sampling plan dated 1/2022 lists two sampling locations;
 - i. Robert's Fish Dock – Market Street
 - ii. Bay City Lodge
 - 1. Sampling site that has measured the highest level of total trihalomethanes (TTHM).
 - 2. Identified during the inspection as the old TTHM sampling site, which was moved to the Rivercrest fire hydrant during the 2021 summer.

3. Inspection tour included a visit to the Rivercrest fire hydrant (refer to Appendix A, Photograph 20), where the DBP samples are currently being collected from.
4. Upon review of the System records, there was no documentation stating that the State approved the sampling site location change. State personnel that joined the EPA inspection team confirmed that the change had not been approved by FDEP.
5. Chain of custodies for the October – December 2021 monitoring period list Robert's Fish Dock and Bay City Lodge as the sampling points used to collect the samples sent to the laboratory.

Comment: Compliance samples can only be collected from State approved sampling sites. If revisions to the sampling plan are needed, the System needs to submit them to the State for approval prior to implementing the changes.

10. **Finding:** LCR sampling results are not being sent the customers as required by 40 CFR 141.85.

Comment: Results from LCR monitoring periods must be sent to the customers.

11. **Finding:** System has not developed an Emergency Response Plan (ERP) as required by the America's Water Infrastructure Act of 2018 (AWIA) and F.A.C. 62-555.335. The AWIA certification deadline for the Emergency Response Plan was December 31, 2021. Certification of ERP completion was submitted to the EPA on 6/30/2021; however, the System hasn't developed an ERP.

F.A.C. 62-555.350 (15) Operation and Maintenance of Public Water Systems – "Suppliers of water who own or operate a community water system serving, or designed to serve, 350 or more persons or 150 or more service connections shall develop a written emergency preparedness/response plan in accordance with Emergency Planning for Water Utilities, AWWA Manual M19, as adopted in Rule 62-555.335, F.A.C., by no later than December 31, 2004, and shall update and implement the plan as necessary thereafter."

Comment: An ERP must be developed for the System.

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Appendix A: Photograph Log



Photograph 1: Water Treatment Plant Storage Area



Photograph 2: Water Treatment Plant Control Room



Photograph 3: Vegetation on Well 6 fence



Photograph 4: Vegetation on Water Treatment Plant fence



Photograph 5: Vegetation on Water Treatment Plant fence



Photograph 6: Vegetation on Water Treatment Plant fence



Photograph 7: Vegetation on Elevated Storage Tank fence



Photograph 8: Overflow pipe at Elevated Storage Tank
Provided by FDEP staff – taken on February 3, 2022



Photograph 9: Well 5 Blowoff pipe corrosion



Photograph 10: Well 6 - Blowoff pipe corrosion



Photograph 11: Well 6 - Overflow pipe connecting plate



Photograph 12: Well 7 – Water accumulation on pad



Photograph 13: Aerator ladders



Photograph 14: Ground storage tank with cracked exterior



Photograph 15: Ground storage tank with cracked exterior



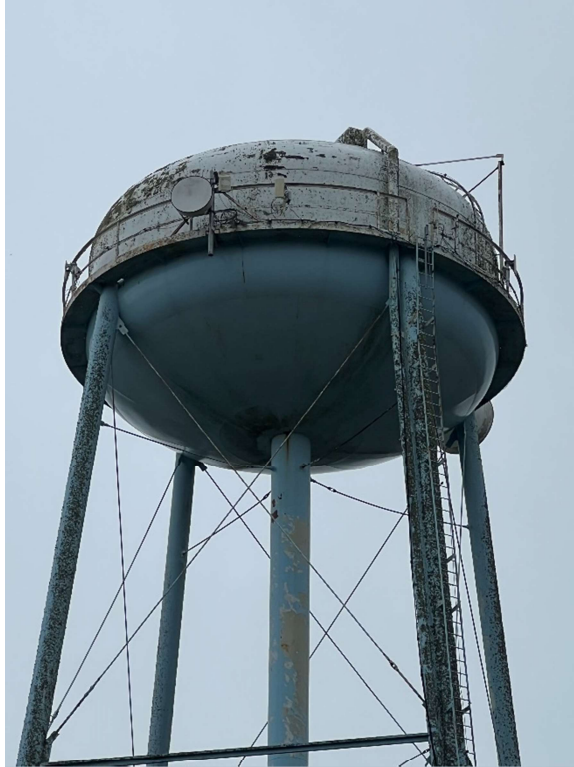
Photograph 16: Ground storage tank deteriorated concrete base



Photograph 17: Ground storage tank concrete base lacking seal



Photograph 18: Branches touching support structure
Provided by FDEP staff – taken on February 3, 2022



Photograph 19: Excessive biogrowth on tank
Provided by FDEP staff – taken on February 3, 2022



Photograph 20: Rivercrest Hydrant