



Thallium Minimization Plan

Walnut Creek WWTP

AL0032310

January 2026

Prepared for:
City of Troy - Utilities
301 Charles W. Meeks Avenue
Troy, Alabama 36081

Prepared by:
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Appendix A – 2025 Thallium Sampling Results

Engineer's Certification

I certify that the enclosed Thallium Minimization plan has been prepared under my direct supervision and is based upon accessible data at the time of the report development and relevant communications with Permittee.

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1.0 Facility Information

Facility Name: Walnut Creek Wastewater Treatment Plant
Permit No: AL0032310
Facility Address: 588 County Road 3355
City: Troy
State: Alabama
Zip Code: 36081
County: Pike

The Walnut Creek WWTP is a mechanical treatment plant with surface water discharge to Walnut Creek with average design flow of 4.99 MGD and average design BOD loading of 6,245 lbs/day.

2.0 Background

The NPDES permit for the Walnut Creek Wastewater Treatment Plant (WWTP) was last issued with an effective date of December 1, 2024. Part IV, Item (I) Item (1) of the permit required the development of a Thallium Minimization Plan (TMP) to be submitted by January 31, 2026. Additionally, Item (2) requires an annual update to be submitted on January 31 of each year following permit issuance to make updates and track progress as it relates to the LMP. This report is being submitted in accordance with the requirements of the permit.

The Clean Water Act prohibits anyone from discharging pollutants, including thallium, through a point source into a water of the United States unless they have a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits contain limits on what you can discharge, monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or people's health. In addition to direct discharges, wastewaters may be indirectly discharged into waters of the U.S.

- Through sewer systems connected to publicly owned treatment works (POTW) that discharge directly to waters of the U.S.; or
- By being introduced by truck or rail into a POTW that discharges directly.

Typically, pretreatment standards are applied to industrial users by the POTW under pretreatment permits.

The United States Environmental Protection Agency (EPA) has identified thallium as one of 15 pollutants often found in POTW sludge and effluent that it considers a potential pollutant of concern. EPA recommends that each POTW, at a minimum, screen for the presence of these pollutants.

3.0 Source Inventory

Potential generators of thallium into the City of Troy's wastewater system are identified in Table 1. The primary sources that will be monitored are industrial users identified through permits or known activity.

Table 1: Potential Thallium Generators

Source	Sector
K W Plastics	Industry
Kimber Manufacturing	Industry
Sanders Lead Co., Inc.	Industry
Walnut Creek WWTP	Municipal
Troy Wastewater Collection System	Municipal
Troy Water Distribution System	Municipal

4.0 Monitoring Plan

Previous monitoring efforts focused on thallium concentration throughout the entire collection system yielded data indicating that constituent levels were best characterized at certain, single finite points. As a result, monitoring efforts were reduced to these most valuable points. Appendix A displays results from sampling activities completed in 2025. Similarly, 2026 sampling will utilize automated composite samplers over multiple day sampling periods. Table 2 lists the locations that have been selected for monitoring of thallium concentrations in 2026.

Table 2: Sampling Locations

Location	Sample Date	Sample Result
Collection System – Lift Station 67	Q2 2026	TBD
Walnut Creek WWTP – Influent	Q2 2026	TBD
Walnut Creek WWTP – Effluent	Q2 2026	TBD

5.0 Public Education and Outreach

Public Education and outreach control measures will be completed through the development of documents to define the problem and establish the reason for the concern. These documents will outline best management practices targeting residential, commercial, and industrial operations to minimize the potential for each user to generate elevated thallium levels in wastewater flows. Where available, information produced by the Alabama Department of Environmental Management (ADEM), Alabama Rural Water Association (ARWA), the United States Environmental Protection Agency (USEPA), and similar sources are utilized. Distribution of the documents may include social media, web-based platforms, and hard copy documents located at City Hall and other central locations to maximize exposure of the public to the information.

6.0 Summary

This Thallium Minimization Plan has been developed to define primary thallium concentrations within the system. Data collected and analyzed following this plan will be utilized to identify potential emitters of the thallium within each tributary area. Following the identification, the proper control measures will be identified and schedules for implementation developed. As the plan is further revised, communications with ADEM will be kept open to achieve the best possible outcomes as the facility works to meet future permit limitations.



Appendix A

2025 Thallium Sampling Results

WWTP West

Tl, T

Date ug/L

8/19/2025	2.2
8/20/2025	ND
8/21/2025	ND
8/22/2025	ND
8/23/2025	0.80
8/24/2025	ND
8/25/2025	0.60
8/26/2025	ND
8/27/2025	ND

WWTP East

Tl, T

Date ug/L

8/19/2025	ND
8/20/2025	ND
8/21/2025	ND
8/22/2025	ND
8/23/2025	ND
8/24/2025	ND
8/25/2025	ND
8/26/2025	ND
8/27/2025	ND

WWTP Outfall

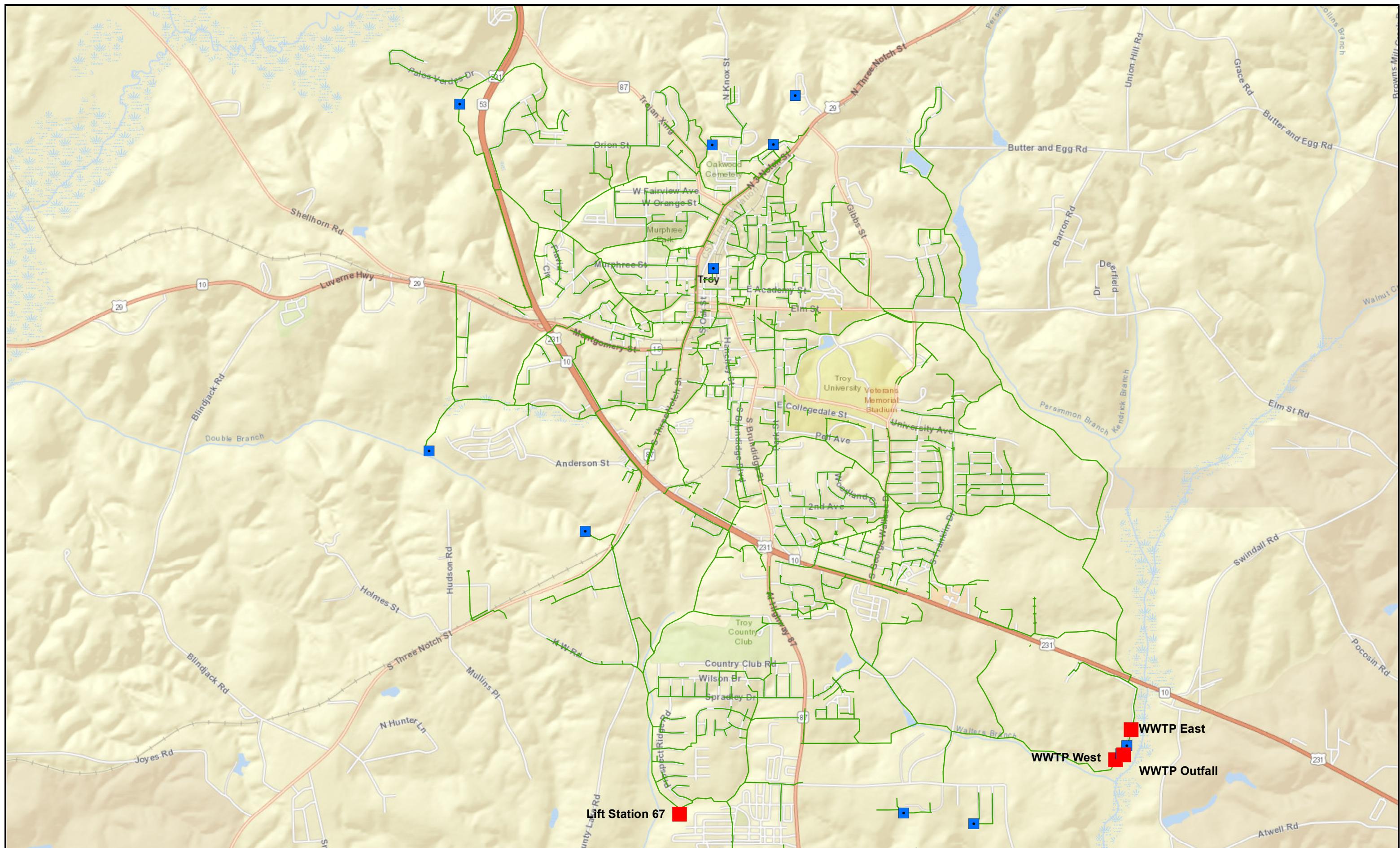
Tl, T

Date ug/L

8/19/2025	ND
8/20/2025	ND
8/21/2025	ND
8/22/2025	ND
8/23/2025	ND
8/24/2025	ND
8/25/2025	ND
8/26/2025	ND
8/27/2025	ND

Average	1.20			ND			ND
Maximum	2.20			ND			ND

* ND = non-detect





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Let's connect.

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