
STORMWATER MANAGEMENT PROGRAM MS4 ANNUAL REPORT



“Protecting, preserving, and restoring our local water resources.”

PERMIT YEAR

April 2022 – March 2023



City of Auburn

SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

PERMIT NUMBER ALR040003

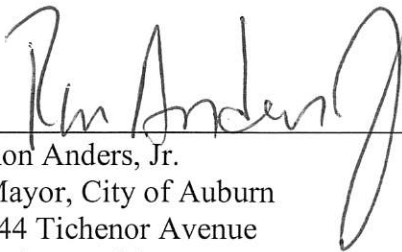
CITY OF AUBURN

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEMS (NPDES)

PERMIT NUMBER ALR040003

MUNICIPAL STORMWATER PROGRAM ANNUAL REPORT

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FOREWORD

FOREWORD:

The mission of the Watershed Division of the Water Resource Management Department of the City of Auburn is, first and foremost, to *protect, preserve, and restore the chemical, biological, and physical integrity of our local water resources*. And, although the City's comprehensive Stormwater Management Program is managed by the Watershed Division, the long-term success of the program will ultimately be determined by its ability to strengthen the resolve and desire of the entire community toward this same objective. This report is drafted with this understanding and therefore reflects the summary of the efforts of the community of Auburn as much as it does those of the staff of the City of Auburn. While there are many success stories and much progress made in 2022 within the City's MS4 program, many challenges still exist such as the continued status of impairment of three of the City's principal water resources: Saugahatchee Creek (Nutrients and Pathogens), Parkerson Mill Creek (Pathogens), and Moores Mill Creek (Siltation and Pathogens) with the pathogen impairment added to Moores Mill Creek in 2022. We will continue to improve upon and develop our Stormwater Management Plan in the coming years, focusing on building and expanding upon the program's strengths and identifying and implementing strategies for addressing threats to our local water resources.

STORMWATER MANAGEMENT PROGRAM ANNUAL REPORT



City of Auburn

PERMIT YEAR

April 2022 - March 2023

PROGRAM EVALUATION & EXECUTIVE SUMMARY

The City of Auburn is now entering its twentieth year as a regulated owner/operator of a small municipal separate storm sewer system, with the current reporting year representing the second under the current Statewide General Permit ALR040003. Over these past twenty years, the City's Stormwater Management Program (SWMP) has been managed and operated with a minimal number of staff and with the same operational budget. The City's physical infrastructure and population has continued to experience rapid growth during this same time period, with the population increasing by approximately 25% every ten years. This rapid urbanization, which began many years before the promulgation of Phase II of the NPDES program, has presented challenges to the City's SWMP, both in the form of legacy impacts to our water resources and in the form of the ever-evolving dynamics of the impacts of urban and suburban growth on local hydrologic conditions. The most outward physical evidence of these challenges is the continued status of impairment of three of the City's principal water resources; Saugahatchee Creek, Moores Mill Creek, and Parkerson Mill Creek. Furthermore, the diversity of impairment (nutrients and pathogens, siltation and pathogens, & pathogens respectively) between these waters highlights the complexity and uniqueness of the impacts of urbanization on our watersheds and underscores the need for prescriptive and strategic plans for protection, preservation, and restoration. The City's SWMP provides the framework for accomplishing this through both targeted regulations and policies (e.g. requirement of Water Quality Plans for developments discharging to impaired waters) and through the implementation of other targeted structural and non-structural control measures as required by the City's MS4 Permit and/or as outlined in the City's Stormwater Management Plan or any of the three approved Watershed Management Plans.

This report outlines, in detail, how the City is operating its SWMP and how it records and documents measurable success. Additionally, this report demonstrates how innovation, partnerships, collaboration, and dedication to a common mission have permitted the City to expand the capacity of its SWMP services to a growing population at little to no increased costs for over a decade. These partnerships, many of which started in the formative years of the program, are the foundation of the City's SWMP and have grown to include Auburn University, Save our Saugahatchee (SOS), Alabama Water Watch (AWW), the City of Opelika, the City of Smiths

April 2022 – March 2023

Station, Lee County Highway Department, and Auburn City Schools. Some of the successes and accomplishments of the program in 2022-2023, many of which would not be possible without these partners, include:

- Green Infrastructure Master Plan—In 2019, the Green Infrastructure Master Plan transitioned to the City’s Integration of Green Infrastructure Guidance Document and was accepted by the City. During this reporting period, the City looked at ways to incorporate Green Infrastructure/Low Impact Development (GI/LID) into City projects such as the City’s Lake Wilmore Community Center, MLK Streetscape, and the Public Safety Training Facility. The City’s Public Works and Environmental Services project is near completion, and the City is looking to implement GI/LID through curb cuts/landscaping activities.
- Integrated multiple Green Infrastructure practices into the design of the City’s Fire Station 6 which was completed in the winter of 2023. The GI/LID at Fire Station 6 includes permeable pavers and a bioretention swale.
- Gave 9 public presentations on stormwater and watershed management related topics to a variety of different groups and organizations.
- Visually screened 350 storm sewer outfalls within the City’s MS4, which represents 24% of all the outfalls within the City and is just above the mandated 15% inspection requirement identified in the City’s MS4 Permit.
- Responded and investigated 21 citizen water resource concerns received by citizens and resolved 21 either through investigation or referring the concern to the proper City Department.
- Published 14 articles directly or indirectly related to stormwater and watershed management in the City’s OpenLine Newsletter, which is distributed monthly to approximately 22,000 customers.
- Merged the Auburn University’s Comprehensive Stormwater Management Policy Initiative regarding opportunities for developing programmatic and regulatory consistency between the two programs into the ALOAS Citizen Advisory Committee.
- Continued to look at ways to make improvements to the Watershed Division webpage, including how to provide information about how citizens can get involved with various stormwater programs (ex. Water Festival, Storm Drain Marking, Stream Clean-ups, etc.).
- Continued discussions with Alabama Water Watch (AWW) to explore a partnership to sponsor the training of citizens interested in performing water quality monitoring in the City of Auburn-
-Did a joint training workshop with AWW in February 2023.

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- Continued meetings of the ALOAS organization with in-person meetings on June 2, 2022, October 5, 2022, November 30, 2022, and February 1, 2023, and have quarterly meetings scheduled for the remainder of 2023-2024.
- City swept streets and parking lots within the City, thereby removing approximately 735 tons of debris from the road. Additionally, the City removed 7,451 bags of litter from the right-of-way through community service.
- Recycled almost 36 Tons of household hazardous waste, a combined total of ~536 tons of newspaper, cardboard, glass and over 1,657 gallons of used cooking oil/grease.
- Performed ~1,442 Erosion and Sediment Control site inspections on developments >1 acre, resulting in 721 inspection reports and sixteen (16) 72-Hour Notices of Violation (NOV's) and two (2) cease and desist orders.
- Maintained, implemented, and enforced lot-level erosion and sediment control standards for single-family residential lots less <1 acre.
- Performed 874 Initial Erosion and Sediment Control inspections on construction sites <1 acre. Of these inspections, 533 resulted in required corrective action prior to issuance of a building permit.
- Supported and participated in numerous community education and outreach opportunities, including the Easter Egg Hunt, Lee County Water Festival, Hometown Heroes, Downtown Trick or Treat, Bark in the Park, After School Program and clean-up events, etc.
- Performed Stream Cleanups that resulted in the removal of 8+ garbage bags full of trash/debris from Town Creek/Graham McTeer Park and Parkerson Mill Creek.
- Performed ~283 detention pond inspections.
- Performed 63 stormwater inspections of City-owned facilities.
- Continued to implement the illicit discharge detection and elimination training module for City staff during this reporting period.
- Continued to implement numerous recommendations outlined in the Natural Systems section of the City's Comp Plan 2030.
- Continued routine monitoring of 52 stations throughout the City for turbidity, dissolved oxygen, temperature, pH, and specific conductance.
- Continued the City's in-sourcing Source Water Monitoring Plan.

- Continued to jointly fund and operate two USGS stream gaging operations on Saugahatchee and Chewacla Creeks.
- Completed the nineteenth year of conservation measures outlined in the Chewacla Creek Safe Harbor Agreement.
- Continue to have a substantial reduction in sanitary sewer overflows since implementing a strategic maintenance and prevention program.
- Continued using the newly acquired IDEXX system for E. coli enumeration that replaced the Coliscan Easygel method previously utilized by the City. The Coliscan Easygel method may be subjective in determining the colony color, and the IDEXX system appears to have removed this subjectivity.
- Continued to use the Water Resource Management Stormwater Interns to assist the Watershed personnel on various jobs to include, but not limited to, water quality sampling, construction site inspections, municipal facility inspections and detention pond inspections.

Progress Update of Specific Goals Established for 2022-2023 and New Goals for 2023-2024

The Watershed Division regularly evaluates the effectiveness and efficiency of its operations, both from a permit compliance perspective as well as a mission/objectives and budgetary perspective. This allows staff to identify elements of the SWMP that are working, those that are not, and those that need or warrant modification. Staff work to continue those services that they determine effective, eliminate those that are not, and establish goals for improving those that could be. Below is an update of progress made toward goals established for 2022-2023 and a list of new goals established for 2023-2024.

2022-2023 Goals - Progress Updates

- Continue to increase public education and awareness through storm water activities, involvement with our local schools and other education and outreach initiatives.
 - During this reporting period, City personnel added two additional events for educating citizens regarding stormwater runoff impacts to include the City's Hometown Heroes Event hosted at the City's Library and the City's first annual Neighborhood Conference. City personnel continued to participate in the City's Easter Egg Hunt, After School Program, Lee County Water Festival, Alabama Water Watch and Neighborhood Conference
- Continue the City's new Stream Gaging Program through the installation of one (1) real-time stream gage per year until all major waterways are gaged and/or install additional rain gauges (Hobolink).

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- City staff purchased a rain gauge (Hobolink) during this reporting period and have plans to install it during 2023-2024 near Moores Mill Creek (Ogletree Road). The staff continued to use the rain gauges (Hobolink) “rain-events” (3/4” within 24-hours) for construction site inspections and are looking to install additional rain gauges.
- Review the City’s Illicit Discharge Ordinance and make any changes that may be deemed necessary for compliance with the City’s MS4 permit.
 - City personnel reviewed the Illicit Discharge Ordinance during this reporting period, but no changes were deemed necessary at this time.
- Continue to promote the city-wide online education program for Illicit Discharge Detection and Elimination
 - City staff were able to provide Illicit Discharge Detection and Elimination (IDDE) training to citizens during the Alabama Water Watch Training Field Day. The event trained approximately 24 individuals for IDDE. The City will continue to promote the city-wide online education program for Illicit Discharge Detection and Elimination during the next reporting period. In addition, City staff was able to provide IDDE training to City Personnel during the City Academy, and more Auburn citizens during both the neighborhood conference and Citizen Academy.
- Continue to improve and promote the City’s Water Quality Monitoring Public Viewer Application.
 - City Staff is currently working with the City’s IT Department to improve and promote the City’s Water Quality Monitoring Public Viewer Application.
- Continue to assess City properties and facilities and perform annual inspections and improvements for stormwater management.
 - During this reporting period, several City projects were being constructed and/or were completed during the reporting period of 2022-2023. Some examples include Dinius Park, Town Creek Playground, and Fire Station Number 6. The SWMPP Municipal Facilities list will be revised to include the “new” name of the properties. During the 2022-2023 reporting period, City Staff inspected 63 City properties with minimal to no deficiencies.
- Continue to implement the City’s Green Infrastructure Master Plan where feasible with the goal to install at least one Green Infrastructure practice within the City.

- During this reporting period, City personnel observed the implementation of the GI/LID within the City’s Fire Station 6. Also, during this reporting period, the City is integrating green infrastructure practices within the final stages (landscaping) of the City’s Public Works and Environmental Services Facility.
- Complete the design and implementation of the H.C Morgan Stream Restoration Project in conjunction with the National Fish and Wildlife Federation (NFWF) Five Star and Urban Waters Restoration Grant.
 - This project, in conjunction with the bioretention cell project, began during the 2022-2023 reporting period and will continue into the 2023-2024 reporting period with an anticipated completion date of late fall 2023 (bioretention cells). The City was awarded the NFWF Five Star and Urban Waters Restoration Grant to install four bioretention cells at stormwater outfalls, restore two acres of native forest and provide outreach through two professional development workshops and tours at the H.C. Morgan Pollution Control Facility.
- Complete Phase IA of the Saugahatchee Greenway + Blueway Project, which includes the first 1.5 miles of greenway trail, two kayak put-in/take-out facilities, a small pocket park, and associated parking facilities.
 - This project is in the bid status as it went to bid in March of 2023. Commencement activities is anticipated during the 2023-2024 reporting period.
- Make improvements to the Watershed Division website.
 - Improvements to the Watershed Division website began in Winter 2022 and should be completed by Fall of 2023.
- Plan and host an erosion and sediment control workshop to help educate local engineers and contractors and/or City personnel on proper methods for the implementation of stormwater best management practices.
 - The City hosted two ESC events: One in the fall for Developers and Contractors and another ESC event in the Spring for Engineers and Designers.
 - The City’s Watershed Division hosted a lunch and learn in the Fall of 2022 (August) to discuss Low Impact Development (LID)/Green Infrastructure (GI) and the cost effectiveness of these practices. In addition, Dr. Francis O’Donnell, with Auburn University was invited to discuss a green infrastructure tool she has developed that can be used to determine the cost effectiveness of LID/GI and provided examples of LID/GI practices for construction sites. The event hosted 23 attendees.

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- The City, partnered with ALOAS, hosted an ESC workshop to provide Engineers/Designers ESC updates from the ALOAS group and a demonstration from the NRCS Rain Simulator. In addition, Mr. Perry Oakes and Mr. Earl Norton gave presentations on updates/revisions to the Alabama Handbook (Blue Book) and on the use and installation of ESC practices/vegetation 101. The total number of individuals that attended was thirty-nine (39).

Goals For 2023-2024

- Complete the design and implementation of a Low Impact Development (LID)/Green Infrastructure (GI) Map of the City's LID/GI projects based on the City's existing LID/GI inventory.
- Continue to evaluate options to improve tracking and reporting features of stormwater program components of CityWorks.
- Promote the City's new Auburn Street Tree Explorer App launched in 2021. This APP continues to raise awareness to the Auburn's tree canopy and of the multiple benefits that trees bring to the community.
- Continue to evaluate areas to implement additional rain gauges (Hobolink) at strategic areas within Auburn to help calculate rain events (3/4" within 24 hours) for construction site inspections.
- Continue to increase public education and awareness through storm water activities, involvement with our local schools and other education and outreach initiatives.
- Continue the City's new Stream Gaging Program through the installation of one (1) real-time stream gage per year until all major waterways are gaged and/or install additional rain gauges (Hobolink).
- Review the City's Illicit Discharge Ordinance and make any changes that may be deemed necessary for compliance with the City's MS4 permit.
- Continue to promote the city-wide online education program for Illicit Discharge Detection and Elimination
- Continue to improve and promote the City's Water Quality Monitoring Public Viewer Application.
- Continue to assess City properties and facilities and perform annual inspections and improvements for stormwater management.

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- Continue to implement the City’s Green Infrastructure Master Plan where feasible with the goal to install at least one Green Infrastructure practice within the City.
- Continue to implement ESC workshops, at a minimum of once a year, with subjects that help to resolve issues experiencing on job sites within the community.
- Continue to install four bioretention cells at stormwater outfalls, restore two acres of native forest and provide outreach through two professional development workshops and tours at the H.C. Morgan Pollution Control Facility per the NFWF Five Star and Urban Waters Restoration Grant.

I. INTRODUCTION

In response to the National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Regulations, the City of Auburn (City) applied for and received an NPDES permit for stormwater discharges from the Alabama Department of Environmental Management (ADEM) on May 14, 2003. The current permit was issued September 16, 2021 and became effective October 1, 2021. A copy of this permit (ALR040003) is included in this report.

This report is being submitted to the ADEM pursuant to Part VI; paragraph 1 of NPDES Permit ALR040003. This annual report is the City's twentieth report, and 2nd under the reissued permit, and covers the reporting period from April 2022 through March 2023. The stormwater program outlined in this report is patterned after the program submitted ADEM in July 2021 in the City of Auburn's Notice of Intent (NOI) and in accordance with the City's revised Stormwater Management Plan (SWMPP) submitted to the Department in May 2022. The City's SWMPP is currently under revision and will be submitted to the Department by September 30, 2023.

II. SITE DESCRIPTION

The City of Auburn is located in East Central Alabama. A map of the City is provided in Appendix B. The Auburn, Alabama land area encompasses 58.07 square miles per the U.S. Census. Approximately 26.80 square miles of the Auburn City Limits are located within this urbanized area. The current population of Auburn is approximately 76,429 per the 2020 U.S. Census. There are approximately 466 miles of creeks and streams flowing through Auburn, approximately 667 lakes, ponds, and other open waters, and +/- 370 acres of wetland. From the most recent City storm drainage system inventory, the storm drainage system contains approximately 165 linear miles of storm pipe (144 miles of which are owned by the City). The City is updating its stormwater infrastructure inventory on a routine basis using the City's survey crew, as well as private surveyors.

Geographic Context

The City of Auburn is situated within a unique transitional zone between the Piedmont and Coastal Plain physiographic regions of the Southeastern United States (see link below). More specifically, the City is located within the Level IV sub-ecoregion known as the Southern Outer Piedmont. This ecoregion is generally characterized as having lower elevations, less relief, and less precipitation than that exhibited in other regions of the Piedmont. Overstory cover type within this region consists mostly of mixed deciduous (oak, gum, hickory) and mixed coniferous (pines, firs, spruces, etc.) with the presence of numerous monotypic pine plantations scattered throughout. Specific to these transitional areas in the southeast is the presence of the “fall line”, the geographic divide between the Piedmont and Coastal Plain. More information can be found at the link provided below. The City's presence within this transitional area between the piedmont and coastal plain regions provides for a unique hydrogeomorphic diversity of water features within a relatively small geographic area. This diversity is exemplified in the abundance and variety of stream channel features, varying substrate composition, and variety of aquatic habitats. For example, streams in central Auburn generally exhibit piedmont characteristics, such as strong riffle/pool complex formation and cobble/gravel substrate composition, yet they cascade to a coastal plain dynamic of long runs and sandy substrates as they flow to the western and southern extents of the City. Similarly, the topography of each of the contributing watersheds follows the same pattern of increasing coastal plain-like features to the west and south of the City.

Link to a map of Alabama's physiographic regions:

http://alabamamaps.ua.edu/contemporarymaps/alabama/physical/al_physio.pdf

III. KNOWN OR SUSPECTED WATER QUALITY PROBLEMS

The City's MS4 discharges into streams located in three primary (10-digit HUC) watersheds; Saugahatchee Creek Watershed, Uphapee Creek Watershed, and Chewacla Creek Watershed. Smaller watersheds of the Saugahatchee Creek Watershed to which portions of the City's MS4 discharge include the Loblockee Creek Watershed and the Little Loblockee Creek Watershed. Smaller watersheds of the Chewacla Creek Watershed to which portions of the City's MS4 discharge include Parkerson Mill Creek, Moores Mill Creek, and Town Creek. The only sub-watershed of the Uphapee Creek Watershed to which portions of the City's MS4 discharge is the Choctafaula Creek Watershed.

Moores Mill Creek was placed on the draft 303(d) list in 1998 and has been listed on the final 303(d) lists from 2002 to present for a siltation impairment. Known water quality concerns within the jurisdictional area were identified as stream siltation resulting from sedimentation deriving from local development within the Moores Mill Creek watershed and in-stream erosion. Also, in 2022, Moores Mill Creek was placed on ADEM's final 303(d) for pathogens (E.Coli). Known water quality concerns were identified from collection system failures and urban runoff/storm sewer. The ADEM final 2022 303(d) list identifies Moores Mill Creek as a Low Priority for Total Maximum Daily Load (TMDL) development for both the siltation and pathogen (E. Coli) impairments. The City included pathogen monitoring of the Moores Mill Creek Watershed in the summer of 2022 as detailed in the Water Quality Monitoring Report found in Appendix D.

The Saugahatchee Embayment, where Saugahatchee Creek flows into Yates Lake, was placed on the final 303(d) lists from 1996 to 2008. The Embayment was listed on the 303(d) list primarily for nutrient enrichment (Organic Enrichment/Dissolved Oxygen). ADEM and the USEPA issued the final Total Maximum Daily Load (TMDL) for nutrients and organic enrichment/dissolved oxygen for Pepperell Branch and the Saugahatchee Embayment in April 2008. Implementation of the stormwater TMDL is addressed in the City's Phase II Permit that was issued on September 6, 2016 (effective on October 1, 2016) and the City's updated Stormwater Management Plan that was submitted to ADEM in December 2019. Saugahatchee was again listed on the final 2020 303(d) list for pathogens (E. Coli). The City included pathogen monitoring of the Saugahatchee Watershed in the summer of 2019 as detailed in the Water Quality Monitoring Report found in Appendix D.

Parkerson Mill Creek, from its source to Chewacla Creek, was placed on the final 303(d) list in 2008 and 2010. Known water quality concerns within the jurisdictional area were identified as pathogens resulting from urban runoff, storm sewers, and illicit discharges. A TMDL for Parkerson Mill Creek was issued by ADEM in September 2011. Implementation of this stormwater TMDL is addressed in the City's Phase II Permit issued on September 6, 2016 (effective on October 1, 2016) and the City's updated Stormwater Management Plan that was submitted to ADEM in December 2019. The Parkerson Mill Creek Watershed Management Plan was drafted and finalized in December of 2011. A detailed map of the hydrology and all watersheds with approved TMDLs is found in Appendix E of this report.

IV. RESPONSIBLE PARTY

The City's Stormwater Management Program (SWMP) is implemented through a diversity of programs operating under various departments within the City's organization. The City, in 2018, experienced a re-organization. As a result, components of the SWMP and each department's respective responsibilities may have changed from previous years, but are currently as follows:

- Environmental Services Department – Operates the collection of garbage, bulky waste (trash) and recycling, along with animal control services and the maintenance of the City's vehicles and equipment fleet; Hosts the household hazardous waste event, shredding event, and the Amnesty Trash Month.
- Parks and Recreation Department – Hosts annual Earth Day activities along with several other community events; Manages the City's Greenway/Greenspace Program and the Pet Waste Stations.
- Planning Services Department – Assists with reviewing and approving low impact development projects; Manages CompPlan 2030 and future land use planning efforts (CompPlan 2040).
- Inspection Services Department – Monitors residential and commercial construction, including construction stormwater inspection and enforcement for those entities.
- Public Works Department – Provides construction and maintenance services of the City's streets, sidewalks, storm drains, right-of-ways and public facilities. Within Public Works, several divisions play a role implementing the SWMP:
 - Landscape and Sustainability – Incorporates green infrastructure concepts and water quality management into the design and renovations of City facilities. The City's urban forestry program is managed through this division, thus supporting the Integration of Green Infrastructure Guidance Document, Urban Forestry Master Plan, and Tree Giveaway Program (Arbor Day and Christmas Parade).
 - Maintenance – Maintains the street network and storm drainage system by repairing streets that have been damaged by construction and assessing existing streets, curb and gutter, drain inlets and stormwater conveyance systems to identify defects and develop maintenance recommendations for the renewal and replacement of assets.
 - Right of Way Maintenance – Provides maintenance of public right of way to include streets and sidewalks to keep grass mowed, weeds maintained, trees cut back and sidewalks and curbs edged. Also, provides litter control within the right of way and street sweeping.
- Engineering Services Department – provides engineering and project management services for construction and improvements to roads, sidewalks, drainage structures and bridges

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within the City and coordinates the plan review process for engineering and utility construction proposed by the local development community. Also, performs detention pond inspections.

- Water Resource Management Department – Monitors residential and commercial construction and conducts erosion and sediment control inspections; Manages water quality sampling program; Manages public education and outreach program; Assists Engineering Services with annual detention pond inspections; Manages the overall SWMP and compliance with the MS4 Phase II Stormwater Permit.

When the City began its Phase II program, coordination and implementation of the individual SWMP was the responsibility of the Public Works Department. In October 2005, management of the stormwater program was transferred from the Public Works Department to the Water Resource Management Department, under a newly created Watershed Division. The intent of the move was to manage water supply operations, wastewater operations, and stormwater operations from a watershed perspective for all components that impact water quality within the City.

The following group is responsible for the coordination and implementation of the individual SWMP:

Water Resource Management Department
City of Auburn
1501 West Samford Avenue
Auburn, AL 36832
(334) 501-3060

V. STORMWATER MANAGEMENT PROGRAM COMPONENTS

The Phase II stormwater regulations require operators of small Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas to develop and implement stormwater management programs employing best management practices (BMPs) to adequately address five minimum control measures. The control measures include:

- Public Education and Public Involvement on Stormwater Impacts
- Illicit Discharge Detection and Elimination
- Construction Site Stormwater Runoff Control
- Post-Construction Stormwater Management and
- Pollution Prevention/Good Housekeeping for Municipal Operations.

In March 2003, the City submitted to ADEM a Notice of Intent (NOI) to implement a SWMP under the Phase II stormwater regulations. The City's most recent update to its SWMP was in March 2023 to comply with the current Phase II. The goals and details of the City's program are outlined in the revised SWMP. At the end of permit year twenty (2nd) year under the reissued permit) all program components outlined in the SWMP have been implemented. The City is currently re-evaluating and proposing additional revisions to its SWMP Plan, which will be submitted to the Department by September 30, 2023.

VI. PUBLIC EDUCATION AND PUBLIC INVOLVEMENT ON STORMWATER IMPACTS

A. Articles in the City Newsletter “Open Line”

Open Line is a monthly newsletter mailed to Auburn citizens through their utility bill. Articles and messages contained in the newsletter reach a large and diverse group of citizens. The goal for articles in Open Line is to produce five (5) articles per year. During the current reporting year, a total of fourteen (14) articles were published in which stormwater related issues were highlighted or affected:

- *Household Hazardous Waste Day – April 2022*
- *Picking Up After Your Pup – May 2022*
- *Connect with City Staff Through Auburn FixIt – May 2022*
- *Construction Regulation Reminders – June 2022*
- *Water Consumer Confidence Report – July 2022*
- *Summertime Watering Tips—August 2022*
- *A Better Way to Get Rid of Used Cooking Oil – September 2022*
- *Fall Household Hazardous Waste Collection Day – October 2022*
- *Improving Water Quality and Expanding Outreach – November 2022*
- *Holiday Recycling Tips – December 2022*
- *Get A Free Tree This Arbor Day - February 2023*
- *Soccer Complex Roundabout – February 2023*
- *Arbor Day Celebration, Tree Giveaway – March 2022*
- *Household Hazardous Waste Collection Day – March 2023*

Copies of these articles can be downloaded from the City’s website at:

<http://www.auburnalabama.org/openline/>

B. Brochure Publications

Improving water quality & expanding outreach
City receives grant to improve water quality at Parkerson Mill Creek

Our Public Works and Water Resource Management departments are teaming up to improve water quality in one of our local creeks while engaging residents in maintaining Auburn's natural resources – all thanks to a grant from the National Fish and Wildlife Foundation.

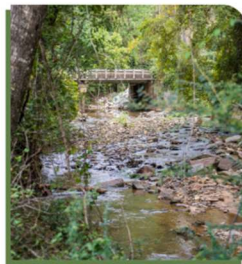
In early September, the foundation announced the winners of its 2022 Five Star and Urban Waters grant that “seeks to develop nationwide community stewardship of local natural resources.” The program focuses on improving water quality, watersheds and habitats through local partnerships and outreach.

The City of Auburn was the sole Alabama recipient, receiving \$45,200 toward a project at the H.C. Morgan Water Pollution Control Facility. The treatment facility is located in the Parkerson Mill Creek Watershed, and stormwater from the property flows into Parkerson Mill Creek. In 2019, we began planting landscape buffers to help filter the runoff water before it reaches the creek, reducing pollution and lowering property maintenance costs.

The grant-funded project will include expanding the landscape buffer and building bioretention cells at four strategic points where stormwater leaves the facility. More than three acres of native plants will be planted, filtering stormwater and providing habitat for native pollinators and birds while reducing maintenance costs at the facility.

A key element of the project will be community involvement. We’re partnering with Auburn University’s Water Resources Center and Bee Lab as well as Westervelt Ecological Resources to design and install the landscaping and provide workshops for the public about bioretention, stormwater management, water quality monitoring and more. Local Girl Scouts will lend a hand in planting over 2,000 longleaf pine seedlings at the site as they contribute to the Girl Scouts’ Million Tree Challenge, and other volunteer opportunities will be available for the community to pitch in.

Work is expected to begin this winter. For more info, contact Water Resource Management’s Watershed Division at 334-501-3060 or web@trsvr.auburnalabama.org.



Pamphlets and brochures can be an effective way to present and explain stormwater issues. Unlike other communication methods, pamphlets and brochures can be distributed in many locations without requiring staffing and the location of distribution can specifically target the audience of interest. The City has produced various brochures over the past

decade and the City’s goal is to continue to promote these previously developed brochures to the public by distributing at least one (1) stormwater brochure per year, at a minimum. The City will use these brochures to target a specific educational component (i.e. grass clippings) and make the brochures available to the public by distributing the brochures at City facilities, City functions and the City’s Phase II stormwater website. In March

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2023, the City distributed 85 of the “Protect Our Waters: Pick Up Pet Waste” to Auburn’s citizens during the Bark in Park public event to help educate the importance of properly disposing of pet waste. The City continues to promote the impacts of stormwater runoff by providing information and/or brochures for citizens to read and/or take with them within different City Departments. For example, information on the “City’s Cooking Oil/Grease Recycling Program” along with the current CCR Brochures that citizens may take with them are provided in the lobby of the Bailey-Alexander Water and Sewer Complex. In addition, brochures provided by the City over the past several years can be downloaded from the City’s website at:

<https://www.auburnalabama.org/water-resource-management/watershed/aloas/>

Additional Brochures Made Available:

- Washing Cars (Alabama Clean Water Partnership (ALCWP))
- Changing Oil (ALCWP)
- Pets (ALCWP)
- Fertilizing (ALCWP)
- Saugahatchee Creek Watershed: Past, Present and Future (Saugahatchee Watershed Management Plan Group (SWaMP))
- Fats, Oils and Grease Recycling Program (City of Auburn)
- ALOAS brochures from previous years
- Alabama Scenic River Trail maps and information
- Protect Our Waters: Pick Up Pet Waste



C. Social Media

The City of Auburn takes advantage of social media as a communication tool with the citizens to let them know about upcoming stormwater events and festivals in the community, news articles involving stormwater issues, as well as updates to the City’s MS4 stormwater program. The following networks are currently utilized by the City of Auburn:

- Facebook – The City currently has 22,000 followers. That is an increase of 1,497 followers from last year.
- Twitter – The City currently has 9,113 followers which is an increase of 260 followers from last year. Also, the City



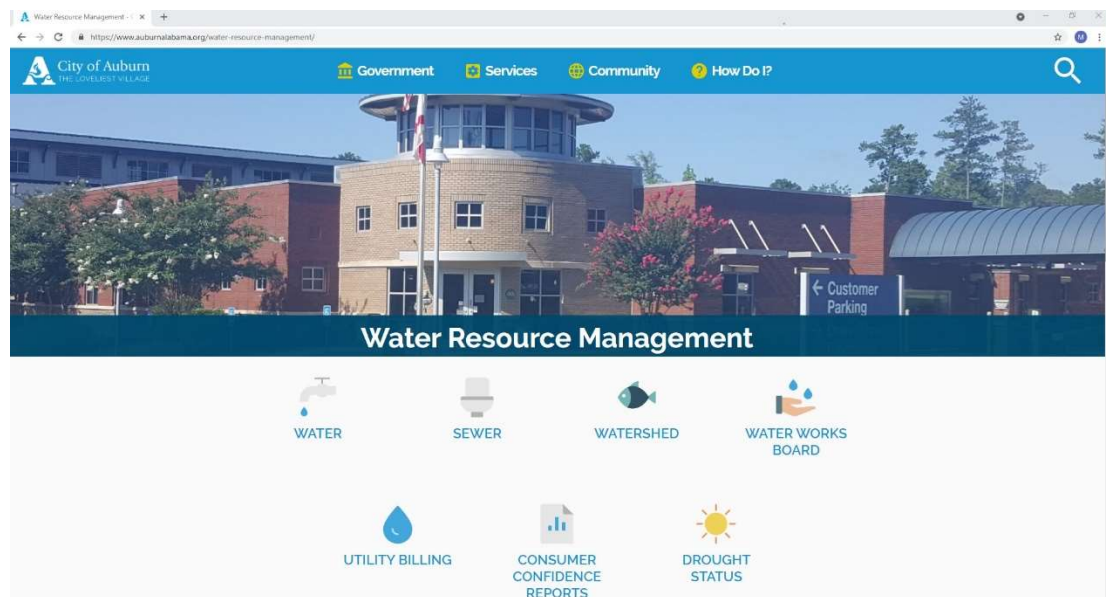
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had 5,228 Tweets during this reporting period which is an increase of 425 Tweets from the previous year.

- Instagram – The City currently has 11,700 followers which increased by 959 followers from the previous year. The City currently has 4,131 posts.
- Youtube – Currently, the City has 6,440 subscribers which increased by 300 subscribers from last year.
- Next Door Neighbor – Since the start of this network (March 2019), the City has reached 13,684 members. The number of members has increased by 1,326 members from the previous year.

D. Website

The City of Auburn is in the process of redesigning its Watershed portion of the Water Resource Management website, which houses the City's stormwater information. The intent is to launch a newly designed website by the end of 2023 that will continue to improve access and functionality for a more user-friendly experience. Currently, citizens can go to the City's website to obtain information on items of local interests. The web page is accessible 24 hours per day and can serve citizens that do not have the time or the ability to physically meet with staff during normal working hours.



During this reporting period, the Stormwater website was visited 586 times.

For more information on the website please visit:

<https://www.auburnalabama.org/water-resource-management/watershed/>

E. Public Water Quality Viewer Application

This application, developed and launched in 2015 (updated in 2018), allows the public to view water quality data from forty (40) monitoring locations on streams throughout the City. These stations are monitored routinely by Watershed Division staff using modern water quality monitoring equipment, with the viewer application updated monthly to reflect current data. Water quality parameters analyzed and presented include Turbidity, Dissolved Oxygen, Temperature, Specific Conductance, and pH. More information about these parameters can be found through various webpage links provided in the application. This application helps to provide transparency in our monitoring operations, facilitate educational and research opportunities for students and teachers, and provide an additional tool for citizens to become aware and involved in helping to preserve and protect our local water resources. This application can be found at:

<http://webgis.auburnalabama.org/waterqualitypublic/#openModal#openModal#openModal>

F. Public Presentations

The City provides staff and/or resources to perform presentations for various groups and public meetings. Typically, presentations are offered in PowerPoint format and the topics are chosen by the organization requesting the information.

Nine (9) public presentations were made during the 2022-2023 reporting year. Presentations were given to various groups, including Auburn University students from various departments, City officials, and public service organizations.

- City Academy – City of Auburn – May 2022
 - A. Topic – Illicit Discharge Detection and Elimination Training Program
Preparing You to Help Protect, Preserve, and Restore Our Local Water Resources
 - 1. Presenter – Dusty Kimbrow
- Lions Club – June 2022
 - B. Topic – Stormwater Impacts on Local Water Quality
 - 1. Presenter – Marla Smith
- City of Auburn Hometown Heroes – June 2022

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- A. Topic – Water Resource Management Department: Water, Sewer and Watershed Operations
 - 1. Presenter – Tim Johnson
- City of Auburn Neighborhood Conference – August 2022
 - A. Topic – Stormwater Impacts on Local Water Quality
 - 1. Presenter – Marla Smith
- Erosion and Sediment Control Workshop – August 2022
 - A. Topic – City of Auburn Erosion and Sediment Control Program Updates
 - 1. Presenter –Dustin Rogers
- Citizen Academy – City of Auburn – August 2022
 - A. Topic – Illicit Discharge Detection and Elimination Training Program – Preparing You to Help Protect, Preserve, and Restore Our Local Water Resources
 - 1. Presenter – Dusty Kimbrow
- AU Urban Hydraulic System Design Class - Auburn University Civil Engineering Dept. – September 2022
 - A. Topic – City of Auburn Water Resource Management Department; Designing, Operating, and Maintaining Drinking Water Distribution System
 - 1. Presenter – Tim Johnson
- AWW Monitor Training Field Day – Auburn University – February 2023
 - A. Topic – Stormwater Impacts on Local Water Quality
 - 1. Presenter – Marla Smith
- Sunrise Rotary Club – March 2023
 - A. Topic - City of Auburn Water Supply Resources, Treatment, and Distribution
 - 1. Presenter – Tim Johnson

G. Workshops/Training Hosted

In an effort to educate contractors, developers, engineers, and staff, the City has initiated a series of workshops. The content of the workshops focuses on local stormwater issues of concern. Workshops/training hosted by the City over the past year include:

- **City Academy (May 18, 2022)** – Watershed personnel provided a drone construction site inspection to City Personnel at the Bucee’s construction site along with demonstrating a mini-filtration experiment with the individuals. The event ended with an illicit discharge training presentation at the Bailey-Alexander Complex. The number of City Personnel attending the City Academy was between ten and fifteen (10-15) people.
- **Neighborhood Clean-up Day (June 6, 2022)** – Watershed personnel set up in the Twin Forks Avenue/Shelton Mill Road Area to host a question-and-answer session for citizens that wanted to learn more about the impacts of stormwater runoff and what they could do to assist in alleviating the impacts. Watershed personnel distributed twenty-five (25) “Pick up your pet waste” Brochures to citizens along with five (5) pet waste bags. In addition, Watershed Personnel were able to place sixteen (16) storm drain markers within the area.
- **Erosion and Sediment Control (ESC) Lunch and Learn (August 11, 2022)** – The City’s Watershed Division hosted a lunch and learn to discuss Low Impact Development (LID)/Green Infrastructure (GI) and the cost effectiveness of these practices. In addition, Dr. Francis O’Donnell, with Auburn University was invited to discuss a green infrastructure tool she has developed that can be used to determine the cost effectiveness of LID/GI and provided examples of LID/GI practices for construction sites. The event hosted 23 attendees.
- **Citizen Academy (August 24, 2022)** – Watershed Personnel provided an Illicit Discharge Detection and Elimination (IDDE) training to approximately twelve (12) Auburn citizens by providing a lunch and learn presentation.
- **Alabama Water Watch (AWW) Training Field Day (February 16, 2023)** – The City’s Watershed Division partnered with AWW to provide a lunch and learn and field day with citizens who were interested in learning about illicit discharge detection and elimination, water chemistry monitoring and bacteria monitoring. Approximately, 24 individuals attended the lunch and learn IDDE training, that included a water chemistry workshop and a bacteria monitoring workshop.
- **Erosion and Sediment Control (ESC) Lunch and Learn (March 15, 2023)** – ALOAS hosted an ESC workshop to provide Contractors/Developers ESC updates from the ALOAS group and a demonstration from the NRCS Rain Simulator. In addition, Mr. Perry Oakes and Mr. Earl Norton gave presentations on updates/revisions to the Alabama Handbook (Blue Book) and on the use and installation of ESC

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practices/vegetation 101. The total number of individuals that attended was thirty-nine (39).

- **Webcasts & Webinars** – The Water Resource Management Department regularly schedules and participates in online webinars and webcasts training opportunities. During this reporting year, stormwater and watershed-related webinars/webcasts attended by City staff included topics such as monitoring instrumentation, water treatment and distribution, and source water protection and are listed below:
 - Distribution and Collection Systems with HDPE – HDPE as installed in potable water distribution and wastewater collection systems– 4/18/2022
 - PVC Pipe Association Virtual Open House - Specifying, Designing and Installing PVC Water and Sewer Pipe– 6/1/2022
 - PVC Pipe Association Virtual Open House - Specifying, Designing and Installing PVC Water and Sewer Pipe – 6/2/2022
 - New Drinking Water Health Advisories for PFAS Chemicals– 6/23/2022
 - Water Quality: A Real-time Opportunity Part 3: Securing Tap Water Quality - The Right Quality for the Right Use– 07/12/2022
 - Water Sector Cyber Threat Web Briefing– 7/27/2022
 - Getting the Lead Out: Guidance for Developing Service Line Inventories and Funding Information on BIL– 8/10/2022
 - EPA Wastewater Emergency Response Planning Webinar: Important Participation Information and Final Agenda– 10/19/2022
 - UCMR 5 Webcast for Large PWSs – 10/27/2022
 - The Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) Webinar– 02/22/2023

H. Household Grease Recycling Program and Composting

The Water Resource Management Department initiated a Household Grease Recycling Program in 2009 with containers and bins located at the recycling center. This program provides citizens with a mechanism to properly dispose of household grease and is targeted at reducing potential sanitary sewer overflows. In 2011, the Water Resource Management Department launched a curbside household grease recycling

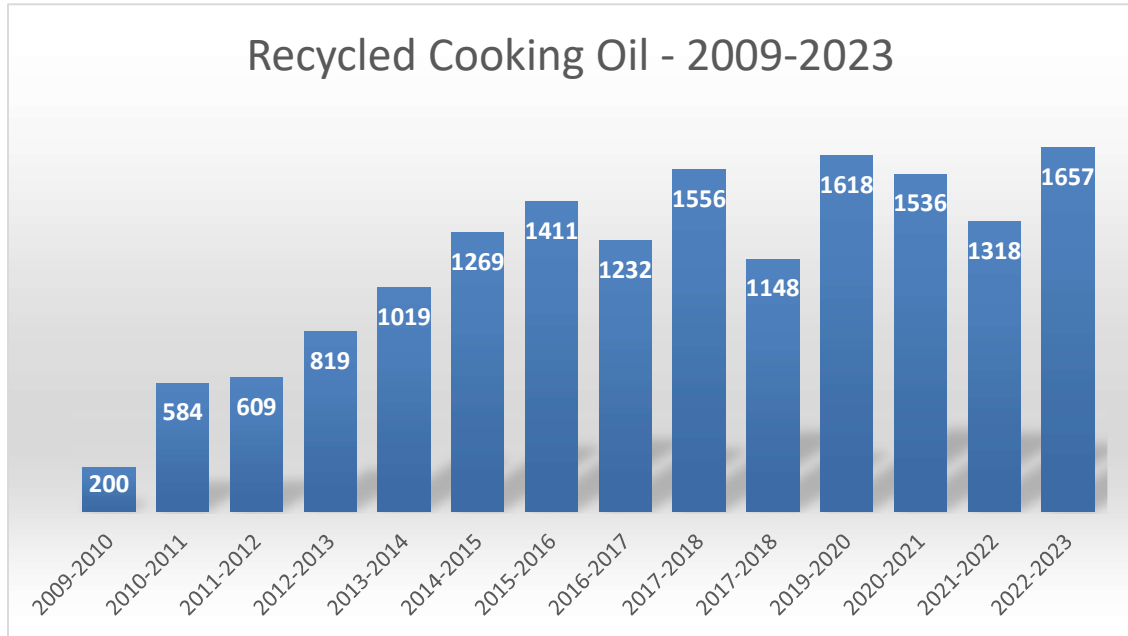


program that provides residents with an opportunity to collect their household grease and have it picked up by City personnel at their residence. **Approximately 16,052 gallons of used cooking oil/grease have been collected since implementation of the program**

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began in March 2009, with 1,657 of those gallons collected during this reporting period. For more information on our household grease recycling program, please visit:

<https://www.auburnalabama.org/water-resource-management/fog-recycling/>.



I. Educational Field Activities

Earth Day Activities (April 2022)

On April 6-7, 2022, students had the opportunity to experience a hands-on Earth Day activity by working with a water Enviroscope. An Enviroscope is a molded plastic model of a watershed complete with various types of landuse including residential, transportation, agricultural, construction, recreation and forestry areas. The interaction with the Enviroscope allowed the children to visually see how soil erosion, pesticides, and stormwater runoff impact a watershed and helped them learn ways to protect the environment. In 2022, Earth Day In-Person Activities were held at the Frank Brown Recreation Center. Four elementary schools within the



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Auburn City School System participated with approximately 400 2nd grade students observing stormwater runoff impacts and learning ways to protect the environment.

Lee County Water Festival (May 2022)



Normally, the annual Lee County Water Festival is held at the Opelika SportsPlex during the first part of May. **Fourth graders from schools in the Lee County area usually attend the two-day event along with 50+ volunteers.** The primary purpose of the event is to educate young people on the importance of our water resources and the role each of us plays in conserving our water. During the event, students learn about water filtration, aquifers, and the water cycle through hands-on activities such as

building an edible aquifer, making a water cycle bracelet, and building a mini-filtration unit. **For 2022, the Lee County Water Festival became transient and mini-filtration, enviroscape, water cycle bracelet and rainfall simulator presentations were performed at the following elementary schools from May 2nd-May 6th and May 12th, 2022: West Smiths Station, East Smiths Station, Beauregard, West Forest, Morris Ave, and Wacoochee. Approximately one thousand eighty (1080) students were able to learn the importance of our water resources and the role that they can play in conserving our water.** Volunteers from the City of Auburn, the City of Opelika, DCNR and other local groups helped make this past year's event a huge success.

Easter Egg Hunt (April 2022)

On April 17, 2022, the City's Watershed Division personnel donated 100 Easter goodie bags for the Easter Bunny Breakfast promoting the City's Illicit Discharge Elimination (IDDE) program, to include reporting information



along with the slogan "Think Blue Auburn, Only Rain Down the Drain." Each

bag included goodies and a pencil with a slogan, "Think Blue Auburn and Don't Pollute". Also, 200 Easter Eggs were donated for the Easter Egg Hunt.



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Each egg also contained IDDE reporting information and small amount of candy.

Camp Chewacla-Ogletree Elementary School (May 2022)

On May 3-5, 2022, the City's Watershed Division personnel participated in teaching approximately 260 students about filtering turbid water that may be a result of failed construction site best management practices (BMPs). Providing a hands-on experience with the filtration units allowed the students to visually see how storm water runoff can impact a watershed and help them learn ways to protect the environment.



City of Auburn Hometown Heroes (June 2022)

Water Resource Management and Watershed personnel provided a presentation of the overview of the City's Water, Sewer, and Watershed Operations. Watershed personnel demonstrated the Enviroscope where the citizens could visually see how soil erosion, pesticides, and stormwater runoff impact a watershed and helped them learn ways to protect the environment. In addition, the Watershed Personnel discussed Erosion and Sediment Control inspections using a drone. While the event was held inside due to inclement weather, personnel were still able to demonstrate the use of the drone, etc. Approximately thirty (30) City of Auburn citizens, both kids and adults, were in attendance.



Downtown Trick or Treating Event (October 2022)



On October 31, 2022, Watershed personnel participated in the City’s downtown trick or treating event. Watershed personnel handed out 475 Halloween goodie bags promoting the City’s Illicit Discharge (IDDE) program, to include reporting information along with the slogan “Think Blue Auburn Only Rain Down the Drain”. In addition, kids were able to spin the Watershed Wheel to win prizes.



Yarbrough After-School Program (December 2022)

On December 15, 2022, Watershed Personnel taught approximately 40 students ranging from 4th-5th grade the importance of reducing stormwater runoff into waterbodies to help maintain clean water. Maintaining clean water can help flourish the macroinvertebrate habitat and maintain a balance within the food chain. Personnel presented the students with why it is important to maintain a healthy stream by playing the food web cup game and discussing the function and role of different consumers and producers and what would happen if one of those consumers/producers was eliminated. Watershed Personnel also provided live macroinvertebrate for a “show and tell” with the kids, who seemed to be very interested in the small critters! There were four twenty-to-thirty-minute rotations with approximately 10 kids in each rotation. Providing the hands-on interaction with the kids helped them to visualize the impact stormwater run-off potentially has on our waterbodies.



Bark in the Park (March 2023)

On March 18, 2023, Watershed Division personnel participated in the City's Bark in the Park event. Watershed personnel handed out 85 pet waste brochures and 180 pet waste bags and talked with citizens about the importance of properly disposing of your pet waste. Watershed Division personnel also handed out 125 Bark in the Park goodie bags for dogs, with an



important message for the dog owners regarding illicit discharges and where to report potential illicit discharges to the proper City Department. The kids were able to spin the Watershed Wheel to win additional prizes.

Public Clean-Ups

Stream Clean Up on Parkerson Mill Creek (February 2023)

On February 1, 2023, in a collaborative effort, the ALOAS group volunteered to clean up a portion of Parkerson Mill Creek. A total of 9 individuals collected 8 bags of trash and other debris (i.e. phone, pipe, and battery). The City of Auburn provided waters, gloves, trash bags, trash-tongs and safety vests.



The Big Event (March 2023)

In conjunction with Auburn University’s BIG Event, the City of Auburn Watershed Division sponsored a stream cleanup event in Town Creek at Graham McTeer Park on March 25, 2022. The City’s Watershed Division provided gloves, trash-tongs, and plastic garbage bags. Trash was removed from the creek and disposed of properly.



J. Integration of Green Infrastructure Guidance Document

In 2016 the City began the process of planning for the future incorporation of Green Infrastructure as a “standard operating procedure”. The first step in this process is to develop a strategic plan that identifies impediments to the use of Green Infrastructure and specific opportunities for the incorporation of Green Infrastructure. The City selected a team of consultants in 2017, led by the Wood Group, Inc., to develop this guidance document. **During this reporting period, the City incorporated some of these practices within City projects such as the City’s Public Works and Environmental Service Building landscaping activities. City personnel also discussed LID/GI for future projects such as the Blueway/Greenway project that recently went to bid.** For more information regarding this guidance document, please visit:

<https://www.auburnalabama.org/water-resource-management/watershed/green-infrastructure-master-plan>

K. Comprehensive Stormwater Management Committee

In 2016 Auburn University formed an internal team to begin discussions about ways to modernize its stormwater management policy and programs and to identify areas for the development of consistency between its MS4 program and the City’s. City staff have participated in these discussions since May of 2016, with meetings occurring quarterly to semi-annually. To date, this group has identified several ways in which each program can more effectively, and consistently, approach stormwater management within and between our respective jurisdictional areas. One such example includes joint annual review of our respective SWMP’s, thus identifying opportunities for developing program consistency and collaboration. During this reporting period, the City decided to merge the Auburn University’s Comprehensive Stormwater Management Policy Initiative regarding

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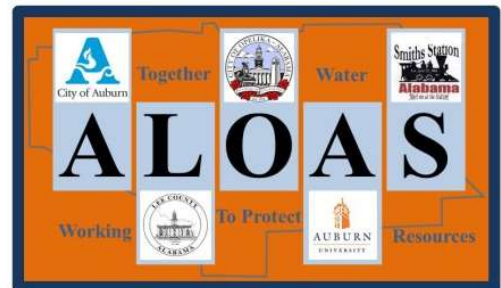
opportunities for developing programmatic and regulatory consistency between the two programs into the ALOAS Citizen Advisory Committee.

L. Advisory Committee

Both the EPA and ADEM recommend that the public be included in developing, implementing, and reviewing stormwater management programs through the establishment of an advisory committee. Communities that encourage citizens representing diverse backgrounds and interests to participate in the development of stormwater management programs are far more likely to gain community support during the implementation process.

ALOAS STORMWATER ADVISORY COMMITTEE (2001-present) - **ALOAS** is an Advisory Committee that serves Auburn, Lee County, Opelika, Auburn University and Smiths Station. This advisory group began as a citizen adversary group, but overtime, has transitioned to a stormwater advisory committee made up of the City and County employees of the Phase II MS4 area communities. It meets on a quarterly basis to review and provide public input on current policies, brochure content, educational material, and proposed ordinances. Prior to 2012, the Advisory Group was known as ALOA. In 2012, the City of Smiths Station joined the group and the group renamed itself ALOAS to include the addition of Smiths Station. ALOAS meets once per year at a minimum. ALOAS members participated in multiple meetings during this reporting period. The ALOAS group met on June 2, 2022, October 5, 2022, November 30, 2022, and February 1, 2023, and have quarterly meetings scheduled for the remainder of 2023-2024.

ALOAS members utilized educational materials that were either created by MS4 entities or obtained from other sources. These brochures and other materials are available to the citizens of Auburn and can be obtained at City Hall, the Bailey-Alexander Water and Sewer Complex or by contacting the Water Resource Management Department at (334) 501-3060. The brochures can also be downloaded from the City's website at



<https://www.auburnalabama.org/water-resource-management/watershed/aloas/>.

M. Watershed Organizations

Regional watershed organizations bring together representatives from utilities, private industry, environmental awareness groups, farmers and branches of government to coordinate individual efforts, share information and plan for water resource and aquatic life protection. The regional approach allows participating entities to expand upon individual efforts to maximize limited resources. These organizations also allow for the sharing of ideas, lessons-learned, and development of professional networks.



Save our Saugahatchee and Alabama Water Watch Citizen Water Quality Monitoring Program (2014 - Present) – Beginning in 2014, the City of Auburn, the City of Opelika, and the Lee County Highway Department have contributed \$350 each to pay for material aid to the volunteer water quality monitoring programs operated by Save our Saugahatchee and the Alabama Water Watch organization. **In 2022, the City’s contribution was \$400.** These funds are used for both physical-chemical monitoring of local waters as well as bacteriological monitoring used to guide illicit discharge detection and elimination efforts. **In 2022 the City’s contribution to these organizations financed routine monitoring of ~30 sites in the Saugahatchee Watershed, resulting in water chemistry and bacteriological monitoring.** All data collected is made available to the public via the Alabama Water Watch Data Portal at:

<https://web.auburn.edu/aww/charts/DG/awwSiteGrid.aspx>

Parkerson Mill Creek (PMC) Watershed Management Plan Group (March 2010 – present) - Parkerson Mill Creek was placed on Alabama’s 303(d) List of Impaired Waters for pathogens in 2007 and a pathogen TMDL for the Parkerson Mill Creek Watershed was subsequently approved by ADEM in July 2011. The PMC Group continues to assist by supporting the bacteriological monitoring in Parkerson Mill Creek by Auburn University undergraduates students (ex. Sydney Smith), which in turn supports investigative illicit discharge detection and elimination activities for the City of Auburn and Auburn University. For more information on the Parkerson Mill Creek Watershed Management Plan, please visit <http://www.aces.edu/waterquality/pmc.htm>.

N. Household Hazardous Waste Collection Day/Document Shredding Event

The City hosted the Household Hazardous Waste Collection Day twice this reporting period. This event is a favorite among Auburn residents and was on October 22, 2022, and March 25, 2023. The City allowed its customers to drop off hazardous household chemicals at a collection site free of charge. The items are then disposed of in a safe manner, eliminating the possibility of these items being improperly dumped in local creeks and streams. **The 2022-2023 Household Hazardous Waste Collection Days combined days yielded approximately 36 Tons (Combined MXI and River Mill).** In addition to the collection of household hazardous waste, the City also provided document shredding events during these two days as well as electronic recycling. **The October 2022 Hazardous Waste Collection day yielded 459-car participants and the March 2023 Hazardous Waste Collection day yielded 397-car participants.**



City of Auburn, AL @CityofAuburnAL · Mar 24

Tomorrow is the day! 🌞🗑️ Our spring Household Hazardous Waste Collection event will be held from 9 a.m.-1 p.m. at Environmental Services (365-A N. Donahue Drive.)

Register and find a full list of what's accepted 📄
auburnalabama.org/hhw.



O. Website Hotline

In an effort to provide the general public with an additional means of reporting potential erosion control violations, the City launched the “On-Line Hotline” in March 2003. Citizens now have the ability to log on to the website 24 hours a day and provide information on suspected violations. The information is forwarded to the Water Resource Management Department and an investigation is initiated. The website hotline has proven to be a valuable tool over the course of the past seventeen years by assisting City personnel in responding to citizen concerns. For more information concerning the hotline, please visit:

<https://www.auburnalabama.org/water-resource-management/watershed/illicit-discharges/>

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In addition to the website hotline, the City is continuing to promote the Auburn FixIt app launched in 2021-2022. This online/mobile app allows citizens to request City services and report non-emergency concerns directly to City staff. Citizens can even track the progress of their concerns from the moment it is reported to resolution. In addition, the app includes useful

resources such as links to pay your utility bill, FAQs, and quick access to the City's downtown parking app. **For the 2022-2023 reporting period, the Watershed Division received twenty-one (21) citizen concerns regarding either IDDE, ESC, or Other Watershed Concerns via the FixIt App.**



P. Tree Give Away

The planting of trees improves water quality by reducing stormwater runoff and erosion while facilitating nutrient removal. To encourage the reforestation of the City's urban landscape, the City distributed 20 trees on Earth Day, held in April 2022. Also, the City

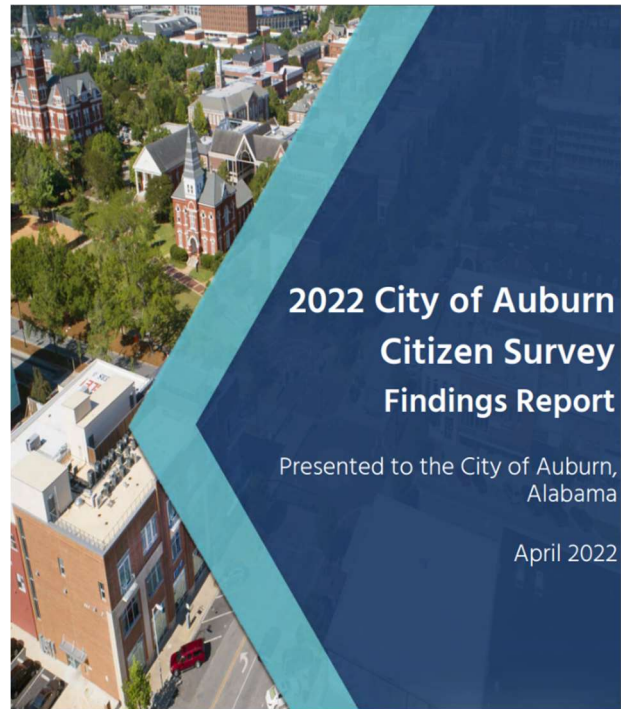


distributed 900 trees during the City's Christmas Parade held in December of 2022. During the Alabama Arbor Day celebration, held during the month of February 2023, 950 trees were distributed. A total of 1870 trees were distributed to the City of Auburn citizens during this reporting period.

Q. City of Auburn Citizen Survey

In years past, the Citizen Survey was facilitated on an annual basis; however, starting in 2018, the survey began being conducted every other year. The last survey, sent in February 2022, contained several questions that were directly or indirectly related to stormwater issues. The questions covered issues such as infrastructure maintenance, trash collection, yard waste disposal, recycling, natural resource protection, greenspace initiatives and future growth planning. In 2022, the City received very high satisfaction levels in most areas. **The 2022 Citizen Survey found that 95% of residents surveyed, rated the City as an “excellent” or “good” place to live.**

To view the 2022 Citizen survey results, please visit:



<https://static.auburnalabama.org/media/apps/www/survey/2022-Survey-Report.pdf>

The next Citizen Survey will not be mailed to Auburn residents until 2024.

R. Newspaper Articles

Newspaper articles covering local stormwater/environmental issues are a means for disseminating information to a large and diverse group of residents most directly impacted by these issues. Informative articles provide the reader with an independent point of view. The reader is not forced to rely on information generated by a single source (i.e. City through the newsletter Open Line or brochures).

The City is fortunate to have a local daily publication. The Opelika-Auburn News is a regional daily newspaper that covers local events and is widely read by residents of Lee County. A weekly newspaper publication, the Auburn Villager, began circulation in 2007. **A total of 11 stormwater related newspaper articles were published during the reporting year.** A listing of articles and publication dates is included in Appendix C of this report.

S. Greenspace Advisory Board/Greenspace Master Plan

The Auburn Greenspace Advisory Board (GAB) was created by a City Council resolution in 2002. Its objective was to identify potential areas for future property acquisitions for parks, recreation facility projects, and greenways. Once identified, these properties could be purchased and/or protected from development.

In 2003, the GAB recommended a Greenspace/Greenway Master Plan for the City. It was adopted in December 2003 by the City Council and has been utilized by the Planning Commission in connection with approval of projects. The GAB revised the initial Plan to include a vast expansion of the proposed greenspace/greenway areas. This first amendment to the Greenspace/Greenway Master Plan was adopted by the City Council in October 2004.

This plan has resulted in the acquisition of several hundred acres of property located in environmentally sensitive areas. The greenspace/greenway areas include proposed bikeways and trails along existing and new roads and along waterways located within the City's growth boundary. Areas along waterways may be improved with natural trails and will be preserved by the dedication of conservation easements in developments or the acquisition of property by the City. **Additionally, the City continued its feasibility analysis, planning, and design work associated with a combined Blueway/Greenway along Saugahatchee Creek (general alignment as identified in Greenway Master Plan) during the 2022-2023 reporting period.**

T. Auburn Interactive Growth Model

In 2007 – 2008, the City, through its Planning Department, contracted with a firm to develop the Auburn Interactive Growth Model (AIGM), a tool the City utilizes annually to make informed planning decisions. Detailed inventories were conducted for current development such as housing unit by type, population by age groups and retail space by gross area. A demographic forecasting model was developed as well as models for other uses that will provide guidance for future land use allocations. The AIGM also forecasts the spatial distribution of the population over time and the apportionment of land uses necessary to meet the needs of the population. The Planning Department updates the AIGM annually. Since its initial completion, the AIGM's population projections have been used in projecting water and sewer demand, future traffic, regional growth, school growth and as the foundations of the Future Land Use Plan component of CompPlan 2030.

U. **CompPlan 2030**

In 2009, the City's Planning Department began development of CompPlan 2030, a comprehensive plan to guide future development in Auburn. CompPlan 2030 focuses on the following key areas: current and future land use, and how land use and the built environment affects our natural resources,

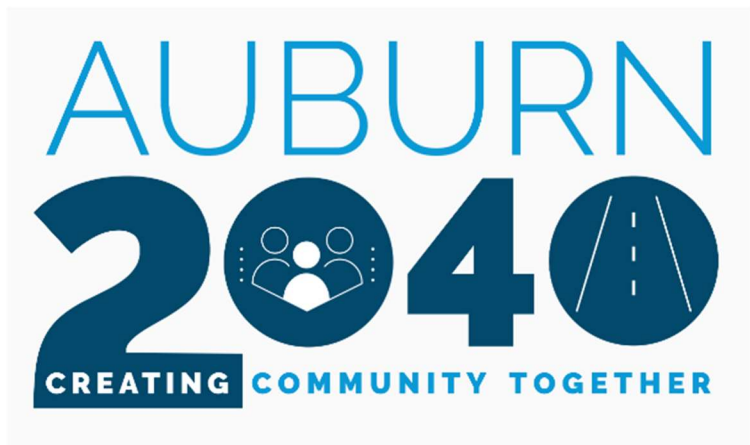


schools, parks, utilities, civic facilities and transportation. The Plan provides guidance for future planning based on public input, analysis of current and future conditions, and best practices. A series of public meetings was held in 2009 and 2010 to allow citizens to share their ideas for Auburn's future, giving citizens a voice in the development of the plan. The Future Land Use Plan provides parcel-level recommendations for the type and scale of new development for the next twenty years, and is the product of a strategy to promote infill development and growth in downtown Auburn. The Future Land Use Plan element of CompPlan 2030 replaces the 2004 Future Land Use Plan. The Natural Systems and Utility sections of CompPlan 2030 provide recommendations for water conservation and stormwater management. The plan was adopted by the Auburn City Council on October 4, 2011 and City Departments are now working to integrate components of the Plan into their operations. Revisions to the CompPlan 2030 were completed and adopted by the City in February of 2018. **For this reporting period, the Watershed Division is continuing to integrate components of the revised CompPlan into its operations.** For more information on CompPlan 2030, please visit:

<https://www.auburnalabama.org/CompPlan2030/>

V. **CompPlan 2040**

While originally slated to kickoff in April 2020, the 2040 planning process was postponed because of the COVID-19 pandemic. Eight community teams will be put together to discuss the future of Auburn known as Auburn 2040, Creating Community Together. These eight teams consist of Education, Public Safety, Intergovernmental, Growth and Development,



Utilities, Environment and Technology, Citizen Engagement, and Family and Community.

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Captains have been selected for the eight teams and member selection was open until June 13, 2021. The kickoff for all committees was held on Thursday, July 15, 2021. The planning process was placed on hold on August 13, 2021, due to COVID-19. In January 2022, the Auburn 2040 community-wide planning initiative was postponed until at least early 2023 considering the upcoming municipal election and continued uncertainty surrounding COVID-19. It is anticipated for the planning process to continue during the 2023-2024 reporting period. For more information on CompPlan 2040, please visit:

<https://www.auburnalabama.org/2040/>

W. Pet Waste Stations

Pet Waste Stations have been installed within the City of Auburn, especially within the City Parks such as Town Creek Park, Kiesel Park and the newly added Dinius Park that are frequented by residents and visitors with their furry companions. The pet waste stations are emptied, and bags replenished twice a week except those stations



placed at Town Creek Park and Kiesel Park which are maintained daily. If pet waste is not removed from the ground, there is the potential for the waste to be carried in stormwater runoff to nearby waterbodies causing possible pathogen impairments. The installation, maintenance and promoting the use of these stations, will help to reduce the potential presence of harmful bacteria due to pet waste from entering our waterbodies.



X. Streambank Stabilization Projects

During this reporting period, no streambank stabilization projects were implemented. The City of Auburn is continuing to assess streambanks for future stabilization projects.

Y. Auburn Street Tree Explorer

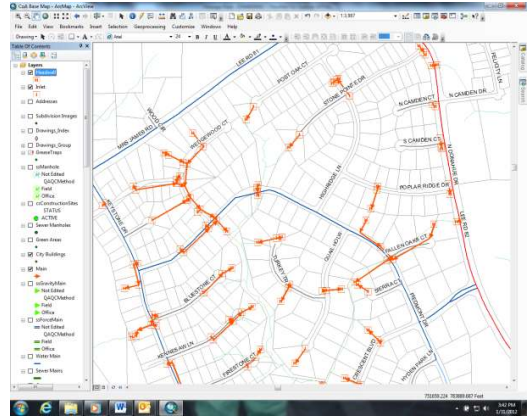
In early January 2021, the City of Auburn launched the Auburn Street Tree Explorer which calculates the stormwater uptake of all the City trees that have been inventoried within the City. During rain events, trees can physically intercept rainwater with their leaves preventing runoff from reaching the ground and flowing over impervious surfaces, like asphalt and concrete, potentially overwhelming stormwater collection systems and polluting our natural waterways and waterbodies.

<https://www.auburnalabama.org/public-works/landscape-and-sustainability/urban-forestry/explore-auburn's-tree-canopy/>

VII. ILLICIT DISCHARGE DETECTION AND ELIMINATION

A. Storm Sewer Mapping

The City of Auburn completed the initial mapping of its storm sewer system in 2003. The mapping is maintained in a Geographical Information Systems Database (GIS). Detailed information on pipe size, pipe material, direction of flow, inlets, manholes, bridges, box culverts, detention ponds, and headwalls are maintained in the City's GIS database. The City is currently working to collect stormwater infrastructure data throughout the entire City Limits. In 2013, the City began a Utility Mapping Project utilizing City survey crews and several outside surveying firms. This project, the initial inventorying phase, was completed in 2017. **In 2022-2023, the City added approximately 10.0 linear miles of storm sewer main. The GIS files are updated annually as new work is added or as old work is modified to current standards.** The latest revisions of the maps can be obtained through the Engineering Services Department located at 171 North Ross Street.



B. Illicit Discharge Ordinance

The Environmental Protection Agency (EPA) recommends municipalities implement an ordinance that provides the means to identify and enforce correction of illicit discharges. In the City's NOI, submitted to ADEM in March 2003, the stated goal was to develop and implement an Illicit Discharge Ordinance by December 2005. This goal was met two years ahead of schedule.

A draft copy of the Illicit Discharge Ordinance was reviewed by the ALOA (now ALOAS) Citizens Advisory Committee in November of 2003. A revised draft was forwarded to the City Attorney and Municipal Judge for review in December 2003.



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The Auburn City Council adopted the Illicit Discharge Ordinance on January 20, 2004. **Revisions were made in 2017 and City Council adopted these revisions in May of 2018. No changes were made to the IDDE ordinance during this reporting period.**

The City's IDDE Ordinance may be found at the following link:

https://library.municode.com/al/auburn/codes/code_of_ordinances

C. Stormwater Outfall Reconnaissance Inventory

In 2009, the Water Resource Management Department began a stormwater outfall reconnaissance inventory (ORI) program. The purpose of this ORI program is to familiarize staff with all receiving waters within the City limits, conduct an inspection of each stormwater outfall and



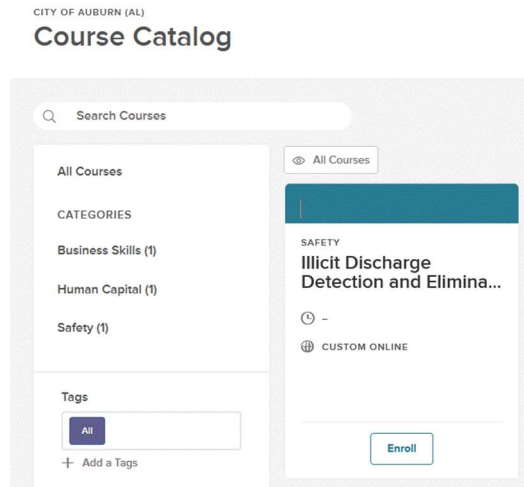
prepare detailed documentation of each stormwater outfall in that basin so that water quality concerns are documented, and corrective actions planned. City staff can document any current illicit discharges and provide more detailed location information concerning existing outfalls. The City's ORI program is patterned on recommendations outlined in the *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments* (Center for Watershed Protection and Dr. Robert Pitt, October 2004). The City's goal is to inspect (or screen) all of its outfalls every five years (and/or 15% per year). In calendar year 2015 Watershed Division staff began planning for the second phase of its ORI Program. This included purchasing of a LaMotte Smart 3 Colorimeter for enhanced source identification and tracking, development of plans for a small laboratory at the WRM offices, and updates to the ORI tracking application. Upon the initial completion of its inventory, the WRM Department documented and inspected approximately two hundred forty (240) miles of stream and documented approximately one thousand two hundred twenty-eight (1,228) stormwater outfalls in the Saugahatchee, Parkerson Mill, Moores Mill and Town Creek Watersheds. Staff also inspected approximately one hundred fifty (150) sanitary sewer aerial creek crossings and identified approximately eight hundred fifty-eight (858) concerns or potential concerns during the ORI program. Since 2015, the number of outfalls has increased significantly. **During the current reporting year, staff re-screened and/or performed water quality analyses at 350 of the City's one thousand four hundred thirty-six (1,436) outfalls representing 24% of all outfalls in the City.** This list is included in Appendix G.

D. Public Education on Illicit Discharges and Improper Disposal

The City of Auburn created an illicit discharge brochure and has made it available to the public for review and/or download via the City's website:

<https://www.auburnalabama.org/water-resource-management/watershed/aloas/>

In addition, the City routinely places articles in the City newsletter, Open Line and social media to educate citizens on illicit discharges. In 2018, the City also began working with its IT Department to develop an employee and citizen online training program for recognizing and responding to illicit discharges. This online training program was made available to all City employees in March 2019. **During this reporting period, the Water and Sewer Divisions within the City's Water Resource Management Department were trained on IDDE. A combined total of 37 City employees were IDDE trained. In addition, 25 citizens were trained during the Alabama Water Watch Field Day in February 2022. The City is continuing to develop and implement an online training program for citizens.**



E. Hazardous Waste Emergency Response Team

The City maintains a mutual aid agreement with the City of Opelika to share some of the cost of operating an emergency response vehicle equipped to handle hazardous waste spills. The agreement provides the City with the ability to properly identify and address hazardous or potentially hazardous spills. **The mutual aid agreement is still in effect and no revisions were made to the mutual aid agreement during this reporting period.**

F. Illicit Discharge Hotline and Reporting Form

In 2008, the Water Resource Management Department developed an illicit discharge reporting form that residents can download, complete and e-mail back to the Department upon discovering a potential illicit discharge. This document is located on the Illicit Discharge Website, giving residents instant and 24-hour access to the form. This form assists the Department in tracking and responding to illicit discharges. This form can be downloaded from the City's website at <https://www.auburnalabama.org/water-resource-management/watershed/illicit-discharges/>.

The form is titled "City of Auburn Illicit Discharge Notification Form". It includes fields for "First Name", "Last Name", "Address", "City", "State", "Zip Code", "Phone No.", and "Email". Below these are sections for "Incident/Discharge Information" and "Description of Discharge". The "Incident/Discharge Information" section includes "Date Discharge Observed", "Time Discharge Observed", "Street Location", "Nearest Major Intersection", "Nearest Waterbody (if known)", and "Nature of Discharge" with checkboxes for "Spill", "Intermittent", "Continuous", and "Pooling". The "Description of Discharge" section includes "Color", "Smell", "Sound/Level", "Substance/Other", "Gas/Vapor/Steam", "Drinking OR", "Appearance", "Clear", "Shiny", "Cloudy", "White", "Other", "Solid/Liquid/Gas", "Hot", "Cold", "Faint", "Strong", "Taste", "Other", and "Other Notes/Comments". At the bottom, there is a disclaimer: "Please submit this form as soon as you can to the Water Resource Management Department, 1000 W. Northford Ave., Auburn, AL 36822. If you have any questions, please call 204-301-2017. If this is an emergency and/or you feel the substance being discharged may be a hazardous or toxic substance, please contact the City of Auburn Police and Fire Departments."

Zero forms were submitted during this reporting period. The City hopes that the Auburn FixIt app will continue to phase out the reporting illicit discharge hotline and reporting form in the future.

The City of Auburn responded to several cases of reported illicit discharges during the current reporting year that were reported by phone. In each instance, the potential illicit discharge was investigated and if necessary, was traced back to its source and the violator was given a notice of violation and informed of the penalties for violating the City's Illicit Discharge Ordinance. In each incident, the City was able to ensure proper cleanup and corrective actions taken. **During this reporting period, the City received a total of twenty-one (21) potential illicit discharge complaints.** Below is a summary table of the complaints received:

Type of Complaint	# of Complaints	Corrective Action	Resolved
Illicit Discharge	9	9 investigations; 9 investigations performed; 2 sent to another Department for corrective action, 7 resolved by Watershed Personnel	Yes
Erosion and Sediment Control (Construction Site Runoff)	7	7 investigations with correction of deficiencies performed on site	Yes
Stream Erosion/Other Watershed Concern	5	5 investigations performed; 1 sent to another Department for corrective action, 4 resolved by Watershed Personnel	Yes

G. Water Quality Monitoring Programs

In 2004, the City of Auburn began a water quality monitoring program in an effort to analyze the effectiveness of stormwater best management practices (BMPs) on active construction sites within the City. This program has been significantly expanded over the past 16 years to include a diverse range of monitoring programs and more in-depth water quality monitoring.

The City of Auburn continues its water quality monitoring programs in accordance with its mission and Stormwater Quality Monitoring Plan. Altogether, thousands of data points are collected by City staff and are used to make data-driven decisions for the protection, preservation, and restoration of our local water resources. **For additional information concerning the City's Water Quality**

Monitoring Program, please see the 2022-2023 Annual Water Quality Monitoring Report included in Appendix D. This Water Quality Monitoring Report is being submitted in accordance with Part V of NPDES General Permit ALR040003.



VIII. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

A. Erosion and Sediment Control Ordinance

The City, in conjunction with the City of Opelika and Auburn University, adopted the Erosion and Sediment Control Policy drafted by the ALOA (now ALOAS) Citizens Advisory Committee in 2003. The policy provides for a regional set of rules that can be applied to contractors, developers and engineers in the area.

The Auburn City Council approved additions to the City’s Erosion and Sediment Control Ordinance in 2005 to establish protocol for enforcement of the Ordinance and to enable City personnel to issue citations to developers/contractors in violation of the Ordinance. The enforcement mechanisms have proven to be a valuable tool in ensuring compliance with the Ordinance.

For more information on the City of Auburn’s Erosion and Sediment Control Ordinance, please visit the following:

https://library.municode.com/al/auburn/codes/code_of_ordinances

B. Erosion Control Inspections

The City, in an effort to patrol the management of erosion and sediment control measures on active construction sites, initiated a construction site inspection program in 2003. The inspection program is designed to identify deficiencies in erosion control and initiate corrective action.

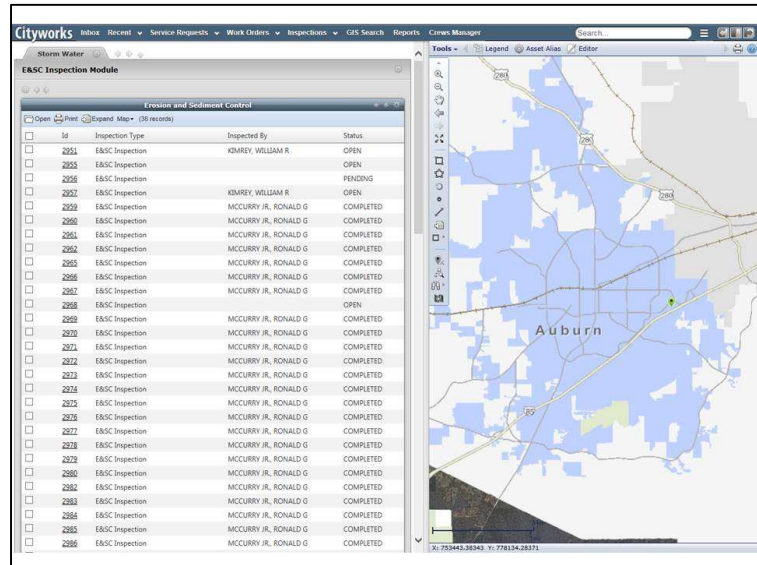
Approximately 1,442 site erosion and sediment control inspections

were performed on 117 sites during the current reporting year (includes follow-up inspections), resulting in 721 inspection reports, sixteen (16) 72-Hour Notices of Violation and two (2) Cease and Desist Orders. The number of inspections performed is relative to development activity and annual rainfall intensity and accumulation patterns. The City’s Water Resource Management Department maintains copies of the inspection reports in an electronic format and are available upon request.



C. Erosion Control Inspection Software

In 2011, staff from the City’s Water Resource Management Department and Information Technology Department created an electronic erosion and sediment control inspection software program. This software gives staff the ability to fill out electronic copies of the erosion control inspection checklist using handheld units while in the field performing inspections. In 2015 Watershed Division staff began working with the



City’s IT staff to migrate the erosion and sediment control inspection and enforcement tracking into CityWorks, a GIS-centric asset management software. **Watershed Division staff began using this software exclusively in 2016 and continued to use this software during the 2022-2023 reporting year.**

D. Residential Erosion Control

The City now issues an Erosion and Sediment Control Permit that allows for minimal clearing to install the approved BMPs onsite. This minimizes the clearing and grading work that sometimes occurred in the past prior to getting the site BMPs installed. The City’s Inspection Services Department conducts an initial site inspection for all building construction in Auburn. Lots requesting the initial inspection must have a construction entrance and other



necessary best management practices (BMPs) in place prior to authorizing foundation construction. Deficiencies noted during the initial inspection are relayed to the building permit applicant for correction. **During the current reporting year, 680 pre-ESC lot level inspections were performed and of those inspections, 191 failed the pre-**

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permitting inspection which in turn held the permit issuance until the BMPs were properly implemented.

The City’s Inspection Services Department also inspects stormwater BMPs during the building phase inspections. If there is a minor deficiency with the stormwater BMPs, then the inspector will require the contractor to correct the issue prior to the next inspection. If the issue has not been corrected by the next inspection, the subsequent inspection will not be performed. If there is a major deficiency with the stormwater BMPs, then the inspector will not perform the requested inspection and have the contractor correct the deficiency immediately. **During the current reporting year, 874 soil erosion lot level inspections were performed and of those inspections, 533 failed the soil erosion inspection which in turn held the permit issuance until the BMPs were properly implemented.**

E. Rainfall Data Collection

In 2005, the City began maintaining historical rainfall data records. The data is obtained through a subscription to the Agricultural Weather Information System (AWIS) website. AWIS records daily weather data from the NOAA weather station at the Auburn University Regional Airport. Daily rainfall data is also collected at the City’s two water pollution control facilities, as



well as at Lake Ogletree and the James Estes Water Treatment Plant. During 2021, the Watershed Division implemented additional rain gauges (HOBOLINK) at strategic areas within Auburn to help calculate rain events (3/4” within 24-hour period) to commence construction site “rain-event” inspections. Watershed staff will continue to assess areas within Auburn to implement additional rain gauges during this next reporting period. Details regarding rainfall during this reporting period can be found in the Water Quality Monitoring Report included in Appendix D of this report. **For the 2022 year, the City of Auburn received 70.67” of rain continuing our recent pattern of wet years.**

IX. POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

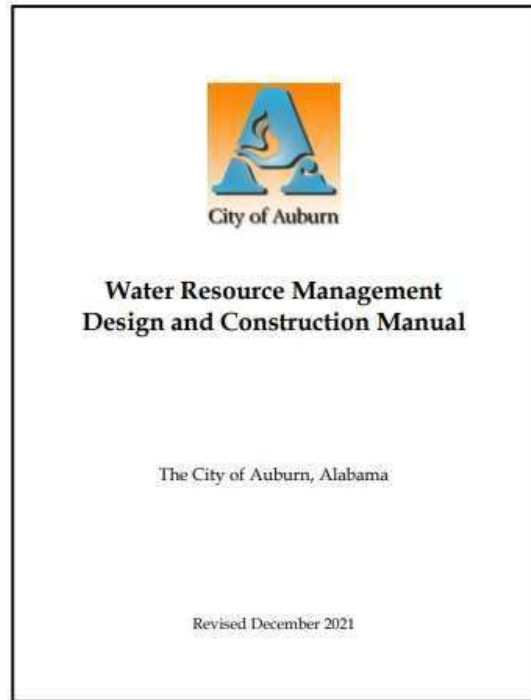
A. Engineering Design and Construction Manuals

In April 2003, the City of Auburn published a Stormwater Design Manual that effectively addressed stormwater runoff controls required for sites greater than one acre. The manual identified project requirements and specifications for new infrastructure and also addressed the requirements for stormwater system sizing and stormwater runoff control/detention. During its implementation, the manual proved to be a very successful tool for the City and developers. The Water Resource Management Department contracted with CH2M Hill to develop an Engineering Design Manual in 2008 that includes engineering design criteria for sewer and water infrastructure, as well as stormwater BMPs for water quality protection such as rain gardens and stormwater wetlands. The Water Resource Management Design Manual also simplifies the City's regulations regarding restrictions on

development in steep slope areas. The Public Works Department also developed a comprehensive Engineering Design Manual. The Stormwater Design Manual has been updated and included as an appendix in the Public Works Manual. Both the Public Works and Water Resource Management Design and Construction Manuals were adopted by the City Council in November 2010 and became effective on January 1, 2011. Reviews of these manuals have been performed annually during the first fiscal quarter (October-December) prior to January 2022. After January 2022, reviews will be done annually, but revisions will be made biennial. **Revisions for the current Water Resource Management Design and Construction Manual were made in October 2021 and were adopted by City Council in December of 2021.**

For more information on the City of Auburn's Water Resource Management Design and Construction Manual, please visit the following:

<https://www.auburnalabama.org/water-resource-management/design-and-construction-manual/>



B. Stream Buffer Regulations

As part of the Erosion and Sediment Control Ordinance adopted by the City Council in July 2002, a minimum 25-foot non-disturbed vegetative buffer zone was required for new developments on “blue line” streams and creeks identified on USGS 7.5-minute topographic maps. In May 2006, the City Council adopted new Stream Buffer regulations. The 2006 buffer regulations were based on a managed-use type buffer rather than a strict non-disturbed buffer approach. The 2006 regulations implement a 3-zoned buffer (streamside zone, managed use zone and upland zone) with the width of the buffer being based on the drainage area of the stream. A copy of the 2006 regulations can be found under Article IV in the City’s Zoning Ordinance on the City’s website. Greater than 656 acres of riparian corridors have been set aside since the adoption of the new regulations. **During this reporting period, the City reviewed 13 development plans for compliance with the stream buffer ordinance.** The table below provides the City’s current stream buffer requirements.



Stream Buffer Requirements				
Drainage Area (Watershed) Designation	Streamside Zone	Managed Use Zone	Upland Zone	Total Buffer Width on each side of Stream
< 100 acres	25 feet	None	10 feet	35 feet
≥ 100 acres and ≤ 300 acres	25 feet	None	20 feet	45 feet
≥ 300 acres and ≤ 640 acres	25 feet	20 feet	10 feet	55 feet
≥ 640 acres	25 feet	50 feet	25 feet	100 feet

C. Post-Construction BMP Inspections

Existing post-construction BMPs need periodic inspections to evaluate the maintenance and operation of these vital components of the City’s drainage system. Because vast quantities of stormwater are collected and passed through detention ponds every year, inspections of these facilities can identify potential problems and illicit discharges.



The Engineering Services Department and the Water Resource Management Department conduct annual inspections of all detention ponds (public and private) listed in the stormwater database. Upon inspection, the owner of the pond is notified of any corrective action needed. Enforcement measures are taken if the owner does not address the items listed in the report. **The number of detention ponds that were inspected by the City within the 2022-2023 reporting period was two hundred eighty-three (283) ponds. This number is less than last year’s reporting number since the City is now inspecting detention ponds annually and biennially. The detentions ponds that were accepted by the City after February 2013 are on an annual inspection rotation, and the detention ponds accepted by the City prior to February 2013 are on a biennial inspection rotation. A list of the detention ponds is available upon request.**

D. Conservation Subdivision Regulations

In 2006, staff members from the Planning Department, Water Resource Management Department, Public Works Department and Parks and Recreation Department began developing conservation subdivision regulations to aid in the protection of local water resources. These regulations were approved by the Auburn City Council in 2007. The regulations promote water resource protection through the setting aside of open space and concentrating development away from water resources. The ordinance and subdivision regulations promote the use of low impact design concepts to protect natural resources in the Auburn area. While developer interest for conservation subdivisions has not been strong to this point, the City continues to promote conservation subdivisions and low impact development principles for developments within the City of Auburn. These

ARTICLE VI. CONSERVATION SUBDIVISION

A. Purposes of Conservation Subdivision

1. To promote efficient uses of the land to protect and preserve environmentally sensitive areas and Auburn’s portable water supply source.
2. To preserve in perpetuity unique or sensitive natural resources such as groundwater, floodplains, wetlands, streams, watersheds, woodlands and wildlife habitat.
3. To permit clustering of buildings and structures on less environmentally sensitive soils in order to reduce the amount of infrastructure, including paved surfaces and utility easements, necessary for residential development.
4. To reduce erosion and sedimentation by minimizing land disturbance and removal of vegetation in residential development.
5. To promote interconnected greenways and corridors throughout the community.
6. To provide flexibility to allow for creativity in developments.
7. To encourage a more efficient form of development that consumes less open land and conforms to existing topography and natural features.
8. To protect water quality in the Lake Ogeetee Subwatershed.
9. To reduce cost associated with infrastructure (roads, sidewalks, and utilities) and land preparation required by compact conservation designs (Mohamed, 2006; Fowler & Wenger, 2001; Avenit, 1996).

B. General Regulations

1. **Applicability of Regulations.** From and after the effective date of the Conservation Subdivision Regulations, all divisions of land in the subdivision jurisdiction which lie within the Lake Ogeetee Subwatershed that are ten (10) acres or more, and where the division creates more than four lots, shall have the option of being prepared and presented for approval in accordance with these regulations. These regulations shall also be available as an option in other areas of the planning jurisdiction. Land within the corporate limits must be zoned as Conservation Overlay District (COD) to apply the conservation subdivision regulations (See the City of Auburn Zoning Ordinance, Section 518, Conservation Overlay District). Applicant shall comply with all other provisions of the zoning ordinance in zoned areas and all other applicable laws, except those that are incompatible with the provisions contained herein.
2. **Minimum Land Area for a Conservation Subdivision.** The minimum land area for a conservation subdivision is 10 contiguous acres. The Planning Commission and/or City Council may consider smaller parcels, greater than or equal to five acres but less than 10 acres, if the applicant can demonstrate one of the following: (1) the proposed Open Space provides a connection between unconnected existing open space, greenspace, or other protected natural resource areas and will not result in isolated fragments of open space; or (2) the proposed Conservation Subdivision would ensure a unique natural or historical significant area will be protected.
3. **Housing Density Determination.** The maximum number of lots in the Conservation Subdivision shall be determined by the density of the underlying zoning district or by dividing the gross area of the proposed conservation subdivision by the minimum lot size allowed for a subdivision within the Planning Jurisdiction or the watershed as set forth in Article IV, Section E (2) of these regulations.

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regulations can be downloaded from the City's website at <https://www.auburnalabama.org/planning/development-services/subdivision-regulations/>.

E. Site Development Review Tool

In 2006, the Water Resource Management Department contracted with CH2M Hill to develop a Site Development Review Tool (Tool) that could be utilized by local engineers when designing stormwater BMPs on developments within the City. This Tool was modeled on a similar tool created by CH2M Hill for Gwinnett County, Georgia.

The Tool was developed using a Microsoft Excel platform and can be used by engineers and developers to design and incorporate structural stormwater BMPs for developments within Auburn's planning jurisdiction boundaries and to maximize the efficiency of runoff pollutant management following construction of developments. This Tool can also be used to meet the target pollutant removal efficiencies outlined in the City's Conservation Subdivision Regulations.

The Tool provides pollutant removal estimates for site specific conditions based on removal efficiencies for a variety of stormwater BMPs including detention ponds, bioretention areas (i.e., rain gardens) and stormwater wetlands. This Tool analyzes a variety of stormwater pollutants including nutrients (phosphorus and nitrogen) and total suspended solids. City staff utilize the Tool during the plan review process to analyze development impacts on water quality within its water supply protection area (Lake Ogletree watershed). This Tool is also used by engineers when submitting water quality plans for developments located in the Saugahatchee Creek Watershed, the Parkerson Mill Creek Watershed, or the Lake Ogletree Watershed to assist them in determining if their post-development stormwater controls meet the City's applicable pollutant removal criteria. A copy of the Tool can be downloaded at <https://www.auburnalabama.org/water-resource-management/standard-development-forms/>. During the 2022-2023 reporting year, the City reviewed approximately seventeen (17) stormwater quality site development review tools.

City of Auburn
Stormwater Quality Site Development Review Tool

General Information

Name of Developer:	SOUTHERN STATES BANK	Date Submitted:	11/5/2014
Development Name:	SOUTHERN STATES BANK	Permit Number:	
Site Location / Address:	INTERSECTION OF N DEAN AND JOELICA ROAD	Developer Contact:	
Development Type:	Commercial/Retail	Phone Number:	
Area of Development (acres):	1.03	Name of Engineer(s):	
	Land Use Distribution Error	Maintenance Responsibility:	

Summary of Site and Structural Control Information

Number of Drainage Areas: 1
Sum of Drainage Areas (ac): 1.07

Land Use Distribution Pie:

Land Use	Percentage
UC (Urban)	32%
IC (Industrial)	42%
OP (Office/Professional)	26%

Total (RI) Impervious Area (ac): 0.55
Total (DP) Disturbed Pervious Area (ac): 0.33
Total (NC) Natural Conservation Area (ac): 0.41
Percent Imperviousness (%): 51%

TSS Reduction

Total TP Reduction (%): 51% Meets Goal: TP

Official Use Only

Tracking #:
Reviewed By:
Date Approved:
Conditions of Approval:

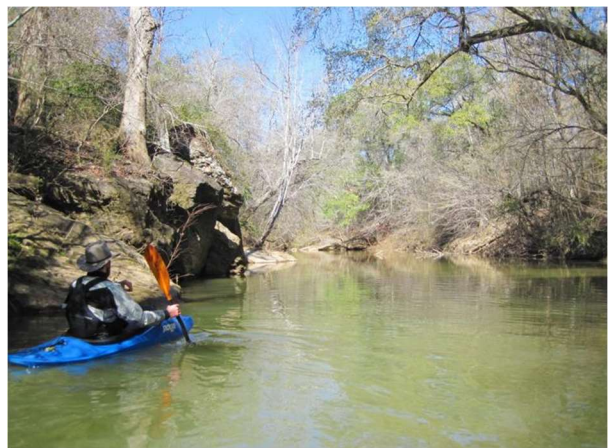
F. Student Chapter of American Society of Civil Engineers Constructed Wetland

In 2015, the student chapter of the American Society of Civil Engineers (ASCE) of Auburn University worked to design and construct an Outdoor Civil Engineering Learning Lab (Auburn OutCELL) featuring educational displays and interactive exhibits meant to appeal to students of all ages. This project involved a collaborative effort with the City, which provided access to a city-owned site for developing the proposed learning center and design and construction feedback to the student-led team. The Auburn OutCELL will serve as a center where local K-12 students can come (free of charge) with family or school groups to interactively engage and learn about the various disciplines of civil engineering, specifically highlighting elements of environmental, geotechnical, hydraulics, hydrology, materials, structural, and transportation engineering.

The main feature of Auburn OutCELL is a constructed stormwater wetland, which includes an improved sediment basin and constructed treatment wetland system. Not only does this stormwater treatment system provide an ideal setup for lessons on erosion control, water quality, watershed hydrology and native Alabama vegetation, but it also serves to actively improve the quality of stormwater flowing into the Saugahatchee Creek. The site's location just off the unpaved Miracle Road leads to extremely turbid stormwater flowing through the site, which formerly deposited large amounts of sediment into the Saugahatchee Creek. **Due to other developments in the area, the OutCELL project will be re-instated during the construction of the Saugahatchee Greenway + Blueway project anticipated to begin in late 2023 into early 2024.**

G. Saugahatchee Greenway + Blueway Project

Saugahatchee Creek is identified as a Primary Greenway Corridor in the City's Greenway and Greenspace Master Plan. In 2015 the City began performing the necessary feasibility assessments for the development of both a greenway and blueway component of this corridor. Staff have evaluated approximately six (6) miles of Saugahatchee for floatability and over six (6) miles of existing sanitary sewer easement for trail alignment. **The Saugahatchee Creek Phase 1a, which is the section from Donahue Drive to Yarborough Farms, was advertised for bid in March 2023. Commencement for this phase which includes a trailhead, parking, and a canoe/kayak drop in is anticipated to begin during late 2023 to early 2024.**



X. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

A. Stormwater Management Training

The City of Auburn continues to develop a training program that provides the Water Resource Management Department and other City departments with information on the proper methods for implementing site control measures on all municipal projects. City personnel also attend a variety of stormwater/water quality related conferences, workshops, and seminars annually.



Training opportunities during this reporting year included:

- **Alabama Water Resource Association (AWRA) Conference** - In September 2022, three City Watershed members (Dusty Kimbrow, Dustin Rogers, and Ron McCurry) attended this conference.
- **Water Environment Federation (WEF) Conference** – Stormwater Summit 2022. Marla Smith attended this conference on June 28 -29, 2022.
- **Alabama Rural Water Association (ARWA)** – NPDES Keys to Compliance was held on July 27, 2022. Dusty Kimbrow attended this training.
- **Leading Edge** – Engaging, Developing, Growing, and Empowering Your Local Government through Leadership and High Performance. In July 2022, Marla Smith attended this workshop in South Carolina.
- **Qualified Credentialed Inspector Training** – The City of Auburn, over various Departments, has numerous City employees that maintain Qualified Credentialed Inspector (QCI) certification. This certification requires annual refresher training, for which all QCI certified personnel must perform to retain certification. In addition to QCI certified staff, the City has numerous professionals who qualify as Qualified Credentialed Professionals (QCP) through existing certifications. **In 2022, eight (8) WRM staff have maintained their QCI certifications. Also, two Watershed Division personnel have maintained their Certified Professional Erosion and Sediment Control (CPESC) certifications.**

B. Spill Response and Prevention Training

The City of Auburn has developed an in-house spill response training program. Staff from Water Resource Management and Public Works' Construction Management and Fleet

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Services Divisions routinely inspect their respective facilities for proper containment and signage associated with storage of petroleum products. Additionally, staff attend annual training on Spill Prevention, Control, and Countermeasure (SPCC) to ensure that they are prepared to respond to discharges in an appropriate manner.

C. Risk Management Manual

The City's Human Resources Department has developed a manual outlining specific requirements/policies for dealing with hazardous chemicals. Topic 12 (titled Hazard Communication Program) of the City's Risk Management Manual specifically requires City personnel to receive training on hazardous chemicals used. Safety Data Sheets (SDS) identifying personal protective equipment, permissible exposure limits (PEL) and Threshold Limit Values (TLV) are required for all hazardous chemicals used. The Hazard Communication Program was adopted as part of the Risk Management Manual.

D. Municipal Operations Recycling

It has been standard policy to encourage individual Departments to participate in the City's recycling program. Recyclable waste generated through City activities is collected and processed through the City's recycling center located on Donahue Drive. This recycling center accepts the following recyclables 24 hours a day, 365 days a year: aluminum cans; flattened cardboard; paper (all types); steel/tin cans; batteries (transistor only up to size D); cellular phones; cooking grease/oil; green glass; magazines/telephone books; mixed office paper; and plastics #1-#7. Computer equipment and other electronics (not TVs) may also be recycled, but an appointment must be made as these items require special handling.

In 2017, the City transitioned to single-stream recycling with 5,600 containers. Using 95-gallon containers/carts, citizens can place all recyclables into one container and place them at the curbside on their scheduled garbage collection day. Acceptable single-stream materials include: aluminum cans; flattened cardboard; paper (all types); plastic #1 through #7 and steel/tin cans. **As of March 2023, the City services a total of 15,624 curbside**

Recycle Auburn Tonnage Report	
April 2022 - March 2023	
Item	Total Tons
Newspaper	33.60
Green Glass	93.82
Clear Glass	55.85
Brown Glass	38.02
Aluminum Cans	5.12
Cardboard	314.48
Steel	6.28
Magazines	14.28
Mixed Paper	41.79
Plastics	0.00
Computers/Electronics	0.00
Batteries Transistors	3.32
Batteries Automotive	0.15
Used Motor Oil	1.18
Scrap Metal	36.45
Downtown Grease	13.31
Single Stream	1912.02
Total	2569.67
Monthly Average	214.14

recycling households. During this reporting period, the City recycled approximately 1,912 tons of single-stream recyclables.

E. Street Sweeping & Litter Control

Regular street sweeping has been proven as an effective means to reduce overall pollutant loading from roads and storm sewer systems. The Right of Way Maintenance Division of the City's Public Works Department currently performs street sweeping measures on a 4-week rotating basis, barring uncontrollable circumstances. **During this reporting period, the City swept streets and parking lots within the City, thereby removing approximately 735 tons of debris from the road. Additionally, the City removed 7,451 bags of litter from the right-of-way through community service.**



F. Alabama Certified Pesticides Applicator

The Parks and Recreation Department of the City maintains trained and certified personnel in the application of pesticides, including restricted-use pesticides. Although qualified to do so, the Parks and Recreation Department has not used any restricted-use pesticides in the previous decade. In order to maintain certification with the State of Alabama, the staff must document and complete 30 continuing education units (CEUs) over a three-year period. CEUs are earned at various conferences and workshops such as the Alabama Turfgrass Conference, Alabama Department of Transportation workshops, the Sports Turf Short Course and the Alabama Urban Forestry Association's Annual Conference. The CEUs cover the application of pesticides, information on the proper use of fertilizers and other chemicals typically used to maintain athletic fields, and best management practices for trees/shrubs/turf that are intended to reduce the need for pesticides, fertilizers, and irrigation.

G. Municipal Facilities Inventory and Good Housekeeping Inspections

In 2017 the City completed an initial inventory and desktop assessment of all its properties and physical facilities, including an assessment of stormwater knowledge of the persons responsible for management and upkeep. The purpose of this inventory and assessment is to evaluate each property's respective potential to contribute to stormwater pollution, and to identify site-specific best management practices to improve maintenance and operation of these properties and facilities to reduce that potential. A total of 128 properties are currently owned and managed by the City. Of these 128 properties, 76 are developed

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(varying intensity) and 52 are in an undeveloped/natural condition. In 2018, the City re-evaluated the 128 properties, and determined that of the 128 properties, a total of 63 City properties have the potential to discharge pollutants via stormwater runoff. An updated table of City facilities and/or properties may be found in Appendix F. Several City projects are under construction at this time and will be added to the municipal facilities list once completed. The current SWMPP is under revision and will be submitted to the Department by September 30, 2023. The number of facilities did not change as the original list had the property listed with a road description, but now has the property listed by the building name or park name. **During this reporting period, all 63 City properties were inspected with minimal deficiencies which have since been addressed.**

XI. ENVIRONMENTAL PROJECTS

In the 2022-2023 report year, the City continued to make considerable progress toward incorporating low impact development and green infrastructure for its projects within the City of Auburn. A listing of projects completed is included below, along with projects under construction, and projects under design and/or consideration.

A. Stormwater Projects Completed during the 2022-2023 reporting period

- Fire Station 6
 - Permeable Pavers
 - Bioretention Cell

B. Stormwater Projects Scheduled for construction during the 2023-2024 reporting period

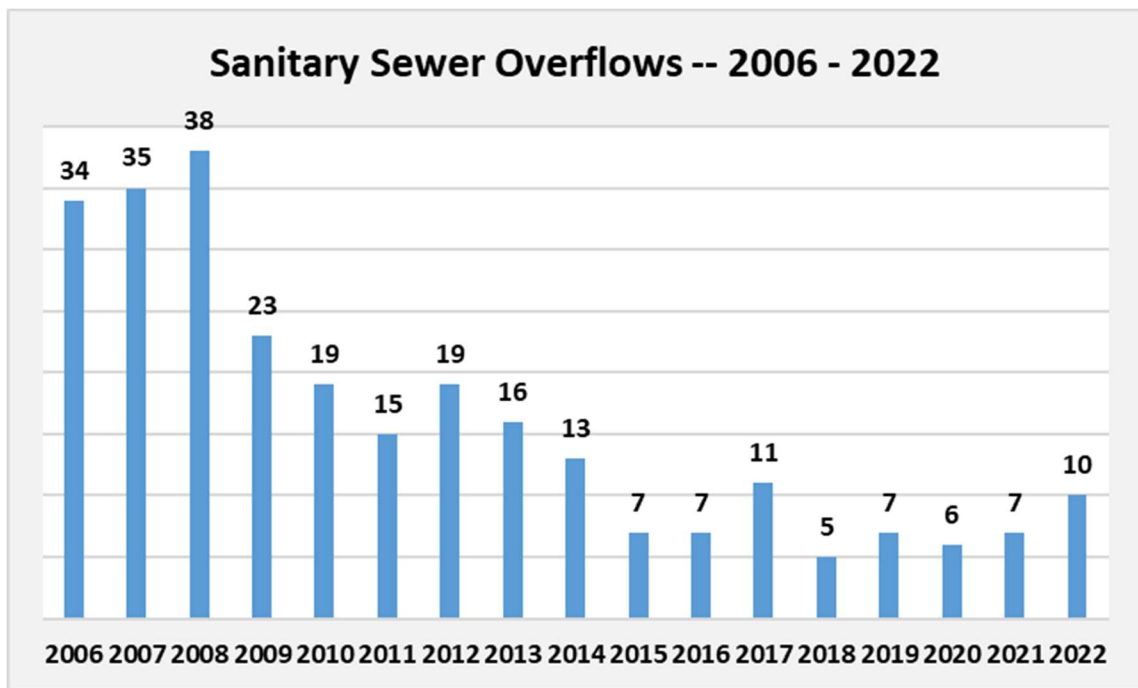
- Martin Luther King Drive Streetscape—Shug to Donahue
 - Grassed/shrub/tree islands
- Environmental Services and Public Works Complex Relocation
 - Curb cuts
 - Bioretention Cells
 - Rain Gardens
- Lake Wilmore Community Center
 - Bioretention cells
 - Rain Gardens
- HC Morgan Stream Restoration Project
 - Bioretention Cells
- Saugahatchee Blueway Greenway Phase 1a
 - Constructed Wetland
 - Bioretention Cells
 - Pervious Parking Area

C. Stormwater Projects Under Design and/or Consideration

- Boykin Donahue Campus
 - Bioretention Cells
 - Rain Gardens

D. Sanitary Sewer Rehabilitation Projects

Several years ago, the City began implementation of a program to identify and rehabilitate aging sanitary sewer infrastructure in the City of Auburn. The primary purpose of this program is to rehabilitate aging infrastructure, prevent sanitary sewer overflows (SSOs) and reduce inflow and infiltration (I/I). The City actively addresses these issues through various sanitary sewer evaluation surveys and rehabilitation projects. **Efforts to rehabilitate gaining infrastructure have reduced SSOs substantially since 2006. During this reporting period, the City had ten (10) reportable SSOs.**



APPENDIX A

2021 PHASE II STORMWATER PERMIT



Alabama Department of Environmental Management
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

September 12, 2016

Honorable Bill Ham, Jr.
Mayor, City of Auburn
144 Tichenor Ave., Suite 1
Auburn, Alabama 36830

Re: Municipal Separate Storm Sewer System (MS4) Phase II General Permit
NPDES Permit No. ALR040003
Lee County (081)

Dear Mayor Ham:

The Department has made a final determination to reissue General NPDES Permit No. ALR040000 for discharges from regulated small municipal separate storm sewer systems. The reissued permit will become effective on October 1, 2016 and will expire on September 30, 2021.

The Department notified the public of its tentative determination to reissue General NPDES Permit No. ALR040000 on November 18, 2015. Interested persons were provided the opportunity to submit comments on the Department's tentative decision through December 18, 2015. In accordance with ADEM Admin Code r. 335-6-6-.21(7), a response to all comments received during the public comment period will be available on the Department's efile system.

Based on your request, as evidenced by the submittal of a Notice of Intent, coverage under the General NPDES Permit No. ALR040003 is granted. The effective date of issuance coverage is October 1, 2016.

Coverage under this permit does not authorize the discharge of pollutant or non-stormwater that is not specifically identified in the permit and by the Notice of Intent which resulted in granting this coverage.

You are responsible for compliance with all provisions of the permit, including, but not limited to, the performance of any monitoring (if applicable), the submittal of any reports, and the preparation and implementation of any plans required by the permit. Part II.A.4. of the re-issued permit requires the submittal of an updated Stormwater Management Program Plan (SWMPP) within three months of the issuance date of this permit (January 1, 2017).

If you have any additional questions or concerns, please contact Marla Smith by email at mssmith@adem.state.al.us or by phone at 334-270-5616.

Sincerely,

Jeffery W. Kitchens, Chief
Stormwater Management Branch
Water Division

JWK/mss

File: FPER/1207

Enclosure: Final Permit ALR040003

Cc: Ms. Kacy Sable, EPA (via email)
Mr. Dan Ballard, City of Auburn (via email)





NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

DISCHARGE AUTHORIZED: STORMWATER DISCHARGES FROM REGULATED
SMALL MUNICIPAL SEPARATE STORM SEWER
SYSTEMS

AREA OF COVERAGE: THE STATE OF ALABAMA

PERMIT NUMBER: ALR040003

RECEIVING WATERS: ALL WATERS OF THE STATE OF ALABAMA

In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1378 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-15, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.

ISSUANCE DATE: SEPTEMBER 6, 2016

EFFECTIVE DATE: OCTOBER 1, 2016

EXPIRATION DATE: SEPTEMBER 30, 2021

GIENNA L. DEAN

Alabama Department of Environmental Management

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PART I Coverage Under This General Permit

A. Permit Coverage

This permit covers the urbanized areas designated as a Phase II Municipal Separate Storm Sewer System (MS4) within the State of Alabama.

B. Authorized Discharges

1. This permit authorizes discharges of storm water from small MS4s, as defined in 40 CFR Part 122.26(b)(16). An entity may discharge under the terms and conditions of this general permit if the entity:
 - a. Owns or operates a small MS4 within the permit area described in Section A;
 - b. Is not a “large” or “medium” MS4 as described in 40 CFR Part 122.26(b)(4) or (7);
 - c. Submits a Notice of Intent (NOI) in accordance with Part II of this general permit; and
 - d. Either:
 - i. Is located fully or partially within an urbanized area as determined by the latest Decennial Census by the Bureau of Census, or
 - ii. Is designated for permit authorization by the Department pursuant to 40 CFR Part 122.32(a)(2).
2. This permit authorizes the following non-storm water discharges provided that they do not cause or contribute to a violation of water quality standards and that they have been determined not to be substantial contributors of pollutants to a particular small MS4 applying for coverage under this permit and that is implementing the storm water management program (SWMP) set forth in this permit:
 - a. Water line flushing
 - b. Landscape irrigation
 - c. Diverted stream flows
 - d. Uncontaminated ground water infiltration
 - e. Uncontaminated pumped groundwater
 - f. Discharges from potable water sources
 - g. Foundation drains
 - h. Air conditioning condensate
 - i. Irrigation water (not consisting of treated, or untreated, wastewater)
 - j. Rising ground water
 - k. Springs
 - l. Water from crawl space pumps
 - m. Footing drains
 - n. Lawn watering runoff
 - o. Individual residential car washing, to include charitable carwashes

- p. Residual street wash water
- q. Discharge or flows from firefighting activities (including fire hydrant flushing)
- r. Flows from riparian habitats and wetlands
- s. Dechlorinated swimming pool discharges, and
- t. Discharges authorized and in compliance with a separate NPDES permit.

C. Prohibited Discharges

The following discharges are not authorized by this permit:

1. Discharges that are mixed with sources of non-storm water unless such non-storm water discharges are:
 - a. In compliance with a separate NPDES permit; or
 - b. Determined by the Department not to be a significant contributor of pollutants to waters of the State;
2. Storm water discharges associated with industrial activity as defined in 40 CFR Part 122.26(b)(14)(i)-(ix) and (xi);
3. Storm water discharges associated with construction activity as defined in 40 CFR Part 122.26(b)(14)(x) or 40 CFR 122.26(b)(15) and subject to Alabama Department of Environmental Management (ADEM) Code r. 335-6-12;
4. Storm water discharges currently covered under another NPDES permit;
5. Discharges to territorial seas, contiguous zone, and the oceans unless such discharges are in compliance with the ocean discharge criteria of 40 CFR Part 125, Subpart M;
6. Discharges that would cause or contribute to instream exceedances of water quality standards; Your storm water management program plan (SWMPP) must include a description of the Best Management Practices (BMPs) that you will be using to ensure that this will not occur. The Department may require corrective action or an application for an individual permit if an MS4 is determined to cause an instream exceedance of water quality standards;
7. Discharges of any pollutant into any water for which a total maximum daily load (TMDL) has been approved or developed by EPA unless your discharge is consistent with the TMDL; This eligibility condition applies at the time you submit a NOI for coverage. If conditions change after you have permit coverage, you may remain covered by the permit provided you comply with the applicable requirements of Part V. You must incorporate any limitations, conditions and requirements applicable to your discharges, including monitoring frequency and reporting required, into your SWMPP in order to be eligible for permit coverage. For discharges not eligible for coverage under this permit, you must apply for and receive an individual or other applicable general NPDES permit prior to discharging;
8. This permit does not relieve entities that cause illicit discharges, including spills, of oils or hazardous substances, from responsibilities and liabilities under State and Federal law and regulations pertaining to those discharges.

D. Obtaining Authorization

1. To be authorized to discharge storm water from small MS4s, you must submit a Notice of Intent (NOI) and a description of your storm water management program (SWMP) in accordance with the deadlines presented in Part II of this permit.
2. You must submit the information required in Part II on the latest version of the NOI form (or photocopy thereof). Your NOI must be signed and dated in accordance with Part VII of this permit.
3. No discharge under the general permit may commence until the discharger receives the Department's acknowledgement of the NOI and approval of the coverage of the discharge by the general permit. The Department may deny coverage under this permit and require submittal of an application for an individual NPDES permit based on a review of the NOI.
4. Where the operator changes, or where a new operator is added after submittal of an NOI under Part II, a new NOI must be submitted in accordance with Part II within thirty (30) days of the change or addition.
5. For areas extended within your MS4 by the latest census or annexed into your MS4 area after you received coverage under this general permit, the first annual report submitted after the annexation must include the updates to your SWMP, as appropriate.

Note: If the Department notifies the dischargers (directly, by the public notice, or by making information available on the Internet) of other NOI form options that become available at a later date (e.g., electronic submission of forms), you may take advantage of those options to satisfy the NOI use and submittal requirements in Part II.

E. Implementation

1. This permit requires implementation of the MS4 Program under the State and Federal NPDES Regulations. MS4s shall modify their programs if and when water quality considerations warrant greater attention or prescriptiveness in specific components of the municipal program.
2. If a small MS4 operator implements the minimum control measures in 40 CFR 122.34(b) and the discharges are determined to cause or contribute to non-attainment of an applicable water quality standard as evidenced by the State of Alabama's 303(d) list or an EPA-approved or developed Total Maximum Daily Load (TMDL), the operator must tailor its BMPs within the scope of the six minimum control measures to address the pollutants of concern and implement permit requirements outlined in Part IV.D. and Part V of this permit.
3. Existing MS4s, unless otherwise stated within this permit, shall implement each of the minimum control measures outlined in Part III.B. of this permit immediately upon the effective date of coverage. Newly designated MS4s, unless otherwise stated in this permit, shall implement the minimum control measures outlined in Part III.B. of this permit within

365 days of the effective date of coverage. However, for newly designated MS4s, where new or revised ordinances are required to implement any of the minimum control measures, such ordinances shall be enacted within 730 days from the effective date of coverage.

PART II Notice of Intent (NOI) Requirements

A. Deadlines of Applications

1. If you are automatically designated under 40 CFR Part 122.32(a)(1) or designated by the Department, then to request recoverage, you are required to submit an NOI or an application for an individual permit and a description of your SWMP at least 90 days before the expiration of this permit.
2. If you are designated by the Department after the date of permit issuance, then you are required to submit an NOI or an application for an individual permit and a description of your SWMP within 180 days upon notification. Within six months of initial issuance, the operator of the regulated small MS4 shall submit a storm water management program plan (SWMPP) to the Department for review. A SWMPP can be submitted electronically in a .PDF format, or in another prescribed manner acceptable to the Department that contains all necessary components
3. You are not prohibited from submitting an NOI after the dates provided in Part II.A.1-2. If a NOI is submitted after the dates provided in Part II.A.1-2., your authorization is only for discharges that occur after permit coverage is granted. The Department reserves the right to take appropriate enforcement actions for any unpermitted discharges.
4. Within three months of the date of re-issuance of coverage under this permit, all operators of regulated small MS4s shall submit a revised storm water management program plan (SWMPP) to the Department for review.
5. **On or after December 21, 2020, all NOIs shall be made electronically in a prescribed manner acceptable to the Department.**

B. Continuation of the Expired General Permit

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the ADEM Code r. 335-6-6 and remain in force and effect if the Permittee re-applies for coverage as required under Part II of this Permit. Any Permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until the earlier of:

1. Reissuance or replacement of this permit, at which time you must comply with the Notice of Intent conditions of the new permit to maintain authorization to discharge; or
2. Issuance of an individual permit for your discharges; or
3. A formal permit decision by the Department not to reissue this general permit, at which time you must seek coverage under an alternative general permit or an individual permit.

C. Contents of the Notice of Intent (NOI)

The Notice of Intent must be signed in accordance with Part VII.G of this permit and must include the following information:

1. Information on the Permittee:
 - a. The name of the regulated entity, specifying the contact person and responsible official, mailing address, telephone number and email address; and
 - b. An indication of whether you are a Federal, State, County, Municipal or other public entity.
2. Information on the MS4:
 - a. the name of your organization, county, city, or town and the latitude/longitude of the center or the MS4 location;
 - b. The name of the major receiving water(s) and an indication of whether any of your receiving waters are included on the latest 303(d) list, included in an EPA-approved and/or EPA developed total maximum daily load (TMDL) or otherwise designated by the Department as being impaired. If you have discharges to 303(d) or TMDL waters, a certification that your SWMPP complies with the requirements of Part V;
 - c. If you are relying on another governmental entity, regulated under the storm water regulations (40 CFR Part 122.26 & 122.32) to satisfy one or more of your permit obligations (see Part III), the identity of that entity(ies) and the elements(s) they will be implementing. The Permittee remains responsible for compliance if the other entity fails to fully perform the permit obligation, and may be subject to enforcement action if neither the Permittee nor the other entity fully performs the permit obligation; and
 - d. Must include if you are relying on the Department for enforcement of erosion and sediment controls on qualifying construction sites in accordance with Part III.B.3.b.
3. Include a brief summary of the best management practices (BMPs) for the minimum control measures in Part III of this permit (i.e. a brief summary of the MS4's SWMPP), your timeframe for implementing each of the BMPs, and the person or persons responsible for implementing or coordinating your SWMPP.

D. Where to Submit MS4 Documents

You are to submit your NOI or individual application, and a description of your SWMP as allowed under Part II.A., signed in accordance with the signatory requirements of Section VII of this permit, to the Department at the following address:

**Alabama Department of Environmental Management
Water Division
Storm Water Management Branch
Post Office Box 301463
Montgomery, Alabama 36130-1463**

Certified and Registered Mail shall be addressed to:

**Alabama Department of Environmental Management
Water Division
Storm Water Management Branch
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059**

On or after December 21, 2020, all NOIs shall be made electronically in a prescribed manner acceptable to the Department.

PART III Storm Water Pollution Prevention and Management Program for Small MS4s

A. Storm Water Management Program (SWMP)

1. The Permittee is required to develop, revise, implement, maintain and enforce a storm water management program (SWMP) which shall include controls necessary to reduce the discharge of pollutants from its MS4 consistent with Section 402(p)(3)(B) of the Clean Water Act and 40 CFR Parts 122.30-122.37. These requirements shall be met by the development and implementation of a storm water management program plan (SWMPP) which addresses the best management practices (BMPs), control techniques and systems, design and engineering methods, public participation and education, monitoring, and other appropriate provisions designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP).
2. The Permittee shall provide and maintain adequate finance, staff, equipment, and support capabilities necessary to implement the SWMPP and comply with the requirements of this permit.
3. The SWMPP must address the minimum storm water control measures referenced in Part III.B. to include the following:
 - a. A map of the Permittee's MS4 urbanized areas;
 - b. The BMPs that will be implemented for each control measure. Low impact development/green infrastructure shall be considered where feasible. Information on LID/Green Infrastructure is available on the following websites: <http://www.adem.alabama.gov/programs/water/waterforms/LIDHandbook.pdf> and <http://epa.gov/polwaste/green/index.cfm>.
 - c. The measureable goals for each of the minimum controls outlined in Part III.B.;
 - d. The proposed schedule—including interim milestones, as appropriate, inspections, and the frequency of actions needed to fully implement each minimum control; and
 - e. The person and/or persons responsible for implementing or coordination the BMPs for each separate minimum control measure.

4. Once the initial SWMPP is acknowledged by ADEM, activities and associated schedules outlined by the SWMPP or updates to the SWMPP are conditions of the permit.
5. Unless otherwise specified in this permit, the Permittee shall be in compliance with the conditions of this permit by the effective date of coverage.

B. Minimum Storm Water Control Measures

1. Public Education and Public Involvement on Storm Water Impacts

- a. The Permittee must develop and implement a public education and outreach program to inform the community about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff to the MEP. The Permittee shall continuously implement this program in the areas served by the MS4. The Permittee shall also comply, at a minimum, with applicable State and local public notice requirements when implementing a public involvement/participation program.
- b. The Permittee shall include within the SWMPP the methods for how it will:
 - i. Seek and consider public input in the development, revision, and implementation of the SWMPP;
 - ii. Identify targeted pollutant sources the Permittee's public education program is intended to address;
 - iii. Specifically address the reduction of litter, floatables and debris from entering the MS4, that may include, but is not limited to:
 1. Establishing a program to support volunteer groups for labeling storm drain inlets and catch basins with "no dumping" message; and
 2. Posting signs referencing local codes that prohibit littering and illegal dumping at selected designated public access points to open channels, creeks, and other relevant waterbodies;
 - iv. Inform and involve individuals and households about the steps they can take to reduce storm water pollution; and
 - v. Inform and involve individuals and groups on how to participate in the storm water program (with activities that may include, but not limited to, local stream and lake restoration activities, storm water stenciling, advisory councils, watershed associations, committees, participation on rate structures, stewardship programs and environmental related activities). The target audiences and subject areas for the education program that are likely to have significant storm water impacts should include, but is not limited to, the following:
 1. General Public
 - a. General impacts litter has on water bodies, how trash is delivered to streams via the MS4 and ways to reduce the litter;

- b. General impacts of storm water flows into surface water from impervious surface; and
 - c. Source control BMPs in areas of pet waste, vehicle maintenance, landscaping and rain water reuse.
 - 2. General Public, Businesses, Including Home-Based and Mobile Businesses
 - a. BMPs for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials; and
 - b. Impacts of illicit discharges and how to report them.
 - 3. Homeowners, Landscapers, and Property Managers
 - a. Yard care techniques that protect water quality;
 - b. BMPs for use and storage of pesticides and fertilizers;
 - c. BMPs for carpet cleaning and auto repair and maintenance;
 - d. Runoff reduction techniques, which may include but not limited to site design, pervious paving, retention of forests, and mature trees; and
 - e. Storm water pond maintenance.
 - 4. Engineers, Contractors, Developers, Review Staff and Land Use Planners
 - a. Technical standards for construction site sediment and erosion control;
 - b. Storm water treatment and flow control BMPs;
 - c. Impacts of increased storm water flows into receiving water bodies; and
 - d. Run-off reduction techniques and low impact development (LID)/green infrastructure (GI) practices that may include, but not limited to, site design, pervious pavement, alternative parking lot design, retention of forests and mature trees to assist in storm water treatment and flow control BMPS.
 - vi. Evaluation of the effectiveness of the public education and public involvement program.
- c. The Permittee shall report each year in the annual report the following information:
 - i. A description of the activities used to involve groups and/or individuals in the development and implementation of the SWMPP;
 - ii. A description of the individuals and groups targeted and how many groups and/or individuals participated in the programs;
 - iii. A description of the activities used to address the reduction of litter, floatables and debris from entering the MS4 as required in Part III.B.1.b.iii.;

- iv. A description of the communication mechanisms or advertisements used to inform the public and the quantity that were distributed (i.e. number of printed brochures, copies of newspapers, workshops, public service announcements, etc); and
 - v. Results of the evaluation of the public education and public involvement program as required in Part III.B.1.b.vi.
- d. The Permittee shall make their SWMPP and their annual reports required under this permit available to the public when requested. The current SWMPP and the latest annual report should be posted on the Permittee's website, if available.

2. Illicit Discharge Detection and Elimination (IDDE) Program

- a. The Permittee shall implement an ongoing program to detect and eliminate illicit discharges into the MS4, to the maximum extent practicable. The program shall include, at a minimum, the following:
 - i. An initial map shall be provided in the SWMPP with updates, if any, provided each year in the annual report. The map shall include, at a minimum:
 - 1. The latitude/longitude of all known outfalls;
 - 2. The names of all waters of the State that receive discharges from these outfalls; and,
 - 3. Structural BMPs owned, operated, or maintained by the Permittee.
 - ii. To the extent allowable under State law, an ordinance or other regulatory mechanism that effectively prohibits non-storm water discharges to the MS4. The ordinance or other regulatory mechanism shall be reviewed annually and updated as necessary and shall:
 - 1. Include escalating enforcement procedures and actions; and
 - 2. Require the removal of illicit discharges and the immediate cessation of improper disposal practices upon identification of responsible parties. Where the removal of illicit discharge within ten (10) working days is not possible, the ordinance shall require an expeditious schedule for removal of the discharge. In the interim, the ordinance shall require the operator of the illicit discharge to take all reasonable and prudent measures to minimize the discharge of pollutants to the MS4.
 - iii. A dry weather screening program designed to detect and address non-storm water discharges to the MS4. This program must address, at a minimum, dry weather screening of fifteen percent (15%) of the outfalls once per year with all (100 percent) screened at least once per five years. Priority areas, as described by the Permittee in the SWMPP, will be dry weather screened on a more frequent schedule as outlined in the SWMPP. If any indication of a suspected illicit discharge, from an unidentified

source, is observed during the dry weather screening, then the Permittee shall follow the screening protocol as outlined in the SWMPP.

- iv. Procedures for tracing the source of a suspect illicit discharge as outlined in the SWMPP. At a minimum, these procedures will be followed to investigate portions of the MS4 that, based on the results of the field screening or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.
- v. Procedures for eliminating an illicit discharge as outlined in the SWMPP;
- vi. Procedures to notify ADEM of a suspect illicit discharge entering the Permittee's MS4 from an adjacent MS4 as outlined in the SWMPP;
- vii. A mechanism for the public to report illicit discharges discovered within the Permittee's MS4 and procedures for appropriate investigation of such reports;
- viii. A training program for appropriate personnel on identification, reporting, and corrective action of illicit discharges;
- ix. Address the following categories of non-storm discharges or flows (i.e., illicit discharges) only if the Permittee or the Department identifies them as significant contributors of pollutants to your small MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (infiltration is defined as water other than wastewater that enters a sewer system, including foundation drains, from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering run-off, individual residential car washing, flows from riparian habitats and wetlands, discharge or flows from firefighting activities (to include fire hydrant flushing); dechlorinated swimming pool discharges, and residual street wash water, discharge authorized by and in compliance with a separate NPDES permit; and
- x. The Permittee may also develop a list of other similar occasional incidental non- storm water discharges (e.g. non-commercial or charity car washes, etc.) that will not be addressed as illicit discharges. These non- storm water discharges must not be reasonably expected (based on information available to the Permittees) to be significant sources of pollutants to the municipal separate storm sewer system, because of either the nature of the discharges or conditions you have established for allowing these discharges to your MS4 (e.g., a charity car wash with appropriate controls on frequency, proximity to impaired waterbodies, BMPs on the wash water, etc.). You must document in your SWMPP any local controls or conditions placed on the discharges. The Permittee must include a provision prohibiting any individual non- storm water discharge that is

determined to be contributing significant amounts of pollutants to your MS4.

- b. The Permittee shall report each year in the annual report the following information:
 - i. List of outfalls observed during the dry weather screening;
 - ii. Updated MS4 map(s) unless there are no changes to the map that was previously submitted. When there are no changes to the map, the annual report must state this;
 - iii. Copies of, or a link to, the IDDE ordinance or other regulatory mechanism; and
 - iv. The number of illicit discharges investigated, the screening results, and the summary of corrective actions taken to include dates and timeframe of response.

3. Construction Site Storm Water Runoff Control

- a. The Permittee must develop/revise, implement and enforce an ongoing program to reduce, to the maximum extent practicable, the pollutants in any storm water runoff to the MS4 from qualifying construction sites. The program shall include the following at a minimum:
 - i. Specific procedures for construction site plan (including erosion prevention and sediment controls) review and approval: The MS4 procedures must include an evaluation of plan completeness and overall BMP effectiveness;
 - ii. To the extent allowable under State law, an ordinance or other regulatory mechanism to require erosion and sediment controls, sanctions to ensure compliance, and to provide all other authorities needed to implement the requirements of Part III.B.3 of this permit;
 - iii. A training program for MS4 site inspection staff in the identification of appropriate construction best management practices (example: QCI training in accordance with ADEM Admin Code. R. 335-6-12 or the Alabama Construction Site General Permit);
 - iv. Procedures for the periodic inspection of qualifying construction sites to verify the use of appropriate erosion and sediment control practices that are consistent with the Alabama Handbook for Erosion Control, Sediment Control, And Stormwater Management on Construction Sites and Urban Areas published by the Alabama Soil and Water Conservation Committee (hereinafter the "Alabama Handbook"). The frequency and prioritization of inspection activities shall be documented in the SWMPP and must include a minimum inspection frequency of once each month for priority construction sites;
 - v. Procedures, as outlined in the SWMPP, to notify ADEM of construction sites that do not have a NPDES permit or ineffective BMPs that are discovered during the periodic inspections. The notification must provide,

at a minimum, the specific location of the construction project, the name and contact information from the owner or operator, and a summary of the site deficiencies; and

- vi. A mechanism for the public to report complaints regarding discharges from qualifying construction sites.
- b. ADEM implements a State-wide NPDES construction storm water regulatory program. As provided by 40 CFR Part 122.35(b), the Permittee may rely on ADEM for the setting of standards for appropriate erosion controls and sediment controls for qualifying construction sites and for enforcement of such controls, and must document this in its SWMPP. If the Permittee elects not to rely on ADEM's program, then the Permittee must include the following, at a minimum, in its SWMPP:
 - i. Requirements for construction site operators to implement appropriate erosion and sediment control BMPs consistent with the Alabama Handbook for Erosion Control, Sediment Control, And Stormwater Management on Construction Sites and Urban Areas published by the Alabama Soil and Water Conservation Committee (hereinafter the "Alabama Handbook");
 - ii. Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
 - iii. Development and implementation of an enforcement strategy that includes escalating enforcement remedies to respond to issues of non-compliance;
 - iv. An enforcement tracking system designed to record instances of non-compliance and the MS4's responding actions. The enforcement case documentation should include:
 - 1. Name of owner/operator
 - 2. Location of construction project or industrial facility
 - 3. Description of violations
 - 4. Required schedule for returning to compliance
 - 5. Description of enforcement response used, including escalated responses if repeat violation occur or violations are not resolved in a timely manner;
 - 6. Accompanying documentation of enforcement response (e.g., notices of noncompliance, notices of violation, etc);
 - 7. Any referrals to different departments or agencies; and
 - 8. Date violation was resolved
 - v. The Permittee must keep records of all inspections (i.e. inspection reports) and employee training required by Part III.3.a.
- c. The Permittee shall include within the SWMPP the following information:
 - i. Procedures for site plan reviews as required by Part III.B.3.a.i;
 - ii. A copy or link of the ordinance or other regulatory mechanism required by Part III.B.3.a.ii.;

- iii. Plans for the training of MS4 site inspection staff as required by Part III.B.3.a.iii; and
 - iv. A site inspection plan meeting the requirements of Part III.B.3.a.iv; and
- d. The Permittee shall maintain the following information and make it available upon request:
 - i. Documentation of all inspections conducted of qualifying construction sites as required by Part III.B.3.a.iv. The inspection documentation shall include, at a minimum, the following:
 - 1. Facility type;
 - 2. Inspection date;
 - 3. Name and signature of inspector;
 - 4. Location of construction project;
 - 5. Owner/operator information (name, address, phone number, email);
 - 6. Description of the storm water BMP condition that may include, but not limited to, the quality of vegetation and soils, inlet and outlet channels and structures, embankments, slopes and safety benches, spillways, weirs, and other control structures; and sediment and debris accumulation in storage and forebay areas as well as in and around inlet and outlet structures; and
 - 7. Photographic documentation of any issues and/or concerns.
 - ii. Documentation of referrals of noncompliant construction sites and/or enforcement actions taken at construction sites to include, at a minimum, the following:
 - 1. Name of owner/operator
 - 2. Location of construction project;
 - 3. Description of violation;
 - 4. Required schedule for returning to compliance;
 - 5. Description of enforcement response used, including escalated responses if repeat violations occur; and
 - 6. Accompanying documentation of enforcement responses (e.g. notices of non-compliance, notices of violations, etc).
 - iii. Records of public complaints including:
 - 1. Date, time and description of the complaint;
 - 2. Location of subject construction sites; and
 - 3. Identification of any actions taken (e.g. inspections, enforcement, corrections). Identifying information must be sufficient to cross-reference inspection and enforcement records.
- e. The Permittee shall report each year in the annual report the following information:
 - i. A description of any completed or planned revisions to the ordinance or regulatory mechanism required by Part III.B.3.a.i and the most recent copy, or a link to the ordinance; and
 - ii. List of all active construction sites within the MS4 to include the following summary:

1. Number of construction site inspections;
2. Number of non-compliant construction site referrals and/or enforcement actions and description of violations;
3. Number of construction site runoff complaints received; and
4. Number of MS4 staff/inspectors trained.

4. Post-Construction Storm Water Management in New Development and Redevelopment

- a. Post-construction storm water management refers to the activities that take place after construction occurs, and includes structural and non-structural controls including low-impact development and green infrastructure practices to obtain permanent storm water management over the life of the property's use. These post construction controls should be considered during the initial site development planning phase.
 - i. The Permittee must develop/revise, implement, and enforce a program to address storm water runoff from qualifying new development and redevelopment projects, to the maximum extent practicable. This program shall ensure that controls are in place to prevent or minimize water quality impacts. Specifically, the Permittee shall:
 1. Develop/revise and outline in the SWMPP procedures for the site-plan review and approval process and a required re-approval process when changes to post-construction controls are required; and
 2. Develop/revise and outline in the SWMPP procedures for a post-construction process to demonstrate and document that post-construction storm water measures have been installed per design specifications, which includes enforceable procedures for bringing noncompliant projects into compliance.
 - ii. The Permittee must develop and implement strategies which may include a combination of structural and/or non-structural BMPs designed to ensure, to the maximum extent practicable, that the volume and velocity of pre-construction stormwater runoff is not significantly exceeded. A design rainfall event with an intensity up to that of a 2yr-24hr storm event shall be the basis for the design and implementation of post- construction BMPs.
 - iii. To the extent allowable under State law, the Permittee must develop and institute the use of an ordinance or other regulatory mechanism to address post-construction runoff from qualifying new development and redevelopment projects.
 - iv. The Permittee must require adequate long-term operation and maintenance of BMPs. One or more of the following as applicable:

1. The developer's signed statement accepting responsibility for maintenance until the maintenance responsibility is legally transferred to another party; and/or
 2. Written conditions in the sales or lease agreement that require the recipient to assume responsibility for maintenance; and/or
 3. Written conditions in project conditions, covenants and restrictions for residential properties assigning maintenance responsibilities to a home owner's association, or other appropriate group, for maintenance of structural and treatment control management practices; and/or
 4. Any other legally enforceable agreement that assigns permanent responsibility for maintenance of structural or treatment control management practices.
- v. The Permittee shall perform or require the performance of post-construction inspections, at a minimum of once per year, to confirm that post-construction BMP's are functioning as designed. The Permittee shall include an inspection schedule, to include inspection frequency, within the SWMPP.
 - vi. The Permittee shall maintain or require the developer/owner/operator to keep records of post-construction inspections, maintenance activities and make them available to the Department upon request and require corrective actions to poorly functioning or inadequately maintained post-construction BMP's.
 - vii. The Permittee shall review and evaluate policies and ordinances related to building codes, or other local regulations, with a goal of identifying regulatory and policy impediments to the installation of green infrastructure and low-impact development techniques.
- b. The Permittee shall report each year in the annual report the following information:
 - i. Copies of, or link to, the ordinance or other regulatory mechanism required by Part III.B.4.a.iii;
 - ii. A list of the post-construction structural controls installed and inspected during the permit year;
 - iii. Updated inventory of post-construction structural controls including those owned by the Permittee;
 - iv. Number of inspections performed on post-construction structural controls; and,
 - v. Summary of enforcement actions.

5. Pollution Prevention/Good Housekeeping for Municipal Operations

- a. The Permittee shall develop, implement, and maintain a program that will prevent or reduce the discharge of pollutants in storm water run-off from municipal operations to the maximum extent practicable. The program elements shall include, at a minimum, the following:

- i. An inventory of all municipal facilities, including municipal facilities that have the potential to discharge pollutants via storm water runoff;
 - ii. Strategies for the implementation of BMPs to reduce litter, floatables and debris from entering the MS4 and evaluate those BMPs annually to determine their effectiveness. If a BMP is determined to be ineffective or infeasible, then the BMP must be modified. The Permittee shall also develop a plan to remove litter, floatable and debris material from the MS4, including proper disposal of waste removed from the system;
 - iii. A Standard Operating Procedures (SOP) detailing good housekeeping practices to be employed at appropriate municipal facilities and during municipal operations that may include, but not limited to, the following:
 - 1. Equipment washing;
 - 2. Street sweeping;
 - 3. Maintenance of municipal roads including public streets, roads, and highways, including but not limited to unpaved roads, owned, operated, or under the responsibility of the Permittee;
 - 4. Storage and disposal of chemicals, Pesticide, Herbicide and Fertilizers (PHFs) and waste materials;
 - 5. Vegetation control, cutting, removal, and disposal of the cuttings;
 - 6. Vehicle fleets/equipment maintenance and repair;
 - 7. External Building maintenance; and
 - 8. Materials storage facilities and storage yards.
 - iv. A program for inspecting municipal facilities for good housekeeping practices, including BMPs. The program shall include checklists and procedures for correcting noted deficiencies;
 - v. A training program for municipal facility staff in good housekeeping practices as outlined in the SOP developed pursuant to Part III.B.5.a.iii; and
- b. The Permittee shall include within the SWMPP the following information:
 - i. The inventory of municipal facilities required by Part III.B.5.a.i;
 - ii. Schedule for developing the SOP of good housekeeping practices required by Part III.B.5.a.iii;
 - iii. An inspection plan and schedule, including checklists and any other materials needed to comply with Part III.B.5.a.iv; and
 - iv. A description of the training program and training schedule required by Part III.B.5.a.v.
- c. The Permittee shall report each year in the annual report the following information:
 - i. Any updates to the municipal facility inventory;
 - ii. An estimated amount of floatable material collected from the MS4 as required by Part III.B.5.a.ii;
 - iii. Any updates to the inspection plan
 - iv. The number of inspections conducted; and
 - v. Any updates to the SOP of good housekeeping practices.

d. The Permittee shall maintain the following information and make it available upon request:

- i. Records of inspections and corrective actions, if any; and
- ii. Training records including the dates of each training activities and names of personnel in attendance.

PART IV Special Conditions

A. Responsibilities of the Permittee

1. If the Permittee is relying on another entity to satisfy one or more requirements of this permit, then the Permittee must note that fact in the SWMPP. The Permittee remains responsible for compliance with all requirements of this permit, except as provided by Part III.B.3.b and reliance on another entity will not be a defense or justification for non-compliance if the entity fails to implement the permit requirements.
2. If the Permittee is relying on the Department for the enforcement of erosion and sediment controls on qualifying construction sites and has included that information in the SWMPP as required by Part III.A.3.e., the Permittee is not responsible for implementing the requirements of Part III.B.3.b of this permit as long as the Department receives notification of non-compliant qualifying constructions sites from the Permittee as required by Part III.B.3.a.v.

B. SWMPP Plan Review and Modification

1. The Permittee shall submit a SWMPP and/or revised SWMPP to the Department as required by Part II.A of the permit. The Permittee shall implement plans to seek and consider public input in the development, revision and implementation of this SWMPP, as required by Part III.B.1.b.i. Thereafter, the Permittee shall perform an annual review of the current SWMPP and must revise the SWMPP, as necessary, to maintain compliance with the permit. Any revisions to the SWMPP shall be submitted to the Department at the time a revision is made for the Department review. Revisions made to the SWMPP may include, but are not limited to, the replacement of ineffective or infeasible BMPs or the addition of components, controls and requirements; and
2. The Permittee shall implement the SWMPP on all new areas added to their municipal separate storm sewer system (or for which they become responsible for implementation of storm water quality controls) as soon as practicable, but not later than one (1) year from addition of the new areas. Implementation of the program in any new area shall consider the plans of the SWMPP of the previous MS4 ownership, if any.

C. Discharge Compliance with Water Quality Standards

This general permit requires, at a minimum, that the Permittee develop, implement and enforce a storm water management program designed to reduce the discharge of pollutants to the

maximum extent practicable. Full implementation of BMPs, using all known, available, and reasonable methods of prevention, control and treatment to prevent and control storm water pollution from entering waters of the State of Alabama is considered an acceptable effort to reduce pollutants from the municipal storm drain system to be the maximum extent practicable.

D. Impaired Waters and Total Maximum Daily Loads (TMDLs)

1. The Permittee must determine whether the discharge from any part of the MS4 contributes directly or indirectly to a waterbody that is included on the latest §303(d) list or designated by the Department as impaired;
2. If the Permittee's MS4 discharges to a waterbody included on the latest §303(d) or designated by the Department as impaired, it must demonstrate the discharges, as controlled by the Permittee, do not cause or contribute to the impairment. The SWMPP must detail the BMPs that are being utilized to control discharges of pollutants associated with the impairment. If existing BMPs are not sufficient to achieve this demonstration, the Permittee must, within six (6) months following the publication of the latest final §303(d) list, Department designation, or the effective date of this permit, submit a revised SWMPP detailing new or modified BMPs. The SWMPP must be revised as directed by the Department and the new or modified BMPs must be implemented within one year from the publication of the latest final §303(d) list or Department designation.
3. Permittees discharging from MS4s into waters with EPA-Approved TMDLs and/or EPA-Established TMDLs
 - a. The Permittee must determine whether its MS4 discharges to a waterbody for which a total maximum daily load (TMDL) has been established or approved by EPA. If an MS4 discharges into a water body with an EPA approved or established TMDL, then the SWMPP must include BMPs targeted to meet the assumptions and requirements of the TMDL. If additional BMPs will be necessary to meet the requirements of the TMDL, the SWMPP must include a schedule for installation and/or implementation of such BMPs. A monitoring component to assess the effectiveness of the BMPs in achieving the TMDL requirements must also be included in the SWMPP. Monitoring can entail a number of activities including, but not limited to: outfall monitoring, in-stream monitoring, and/or modeling. Monitoring data, along with an analysis of this data, shall be included in the Annual Report.
 - b. If, during this permit cycle, a TMDL is approved by EPA or a TMDL is established by EPA for any waterbody into which an MS4 discharges, the Permittee must review the applicable TMDL to see if it includes requirements for control of storm water discharges from the MS4.
 1. If it is found that the Permittee must implement specific allocations of the TMDL, it must assess whether the assumptions and requirements of the TMDL are being met through implementation of existing BMPs or if additional BMPs are necessary. The SWMPP must include BMPs targeted to meet the assumptions and requirements of the TMDL. If existing BMPs are not sufficient, the Permittee must, within six (6)

months following the approval or establishment of the TMDL by EPA, submit a revised SWMPP detailing new or modified BMPs to be utilized along with a schedule of installation and/or implementation of such BMPs. Any new or modified BMPs must be implemented within one year, unless an alternate date is approved by the Department, from the establishment or approval of the TMDL by EPA. A monitoring component to assess the effectiveness of the BMPs in achieving the TMDL requirements must also be included in the SWMPP. Monitoring can entail a number of activities including, but not limited to: outfall monitoring, in-stream monitoring, and/or modeling. Monitoring data, along with an analysis of this data, shall be included in the Annual Report.

E. Requiring an Individual Permit

The Department may require any person authorized by this permit to apply for and/or obtain an individual NPDES permit. When the Department requires application for an individual NPDES permit, the Department will notify the Permittee in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form and a statement setting a deadline for the Permittee to file the application.

PART V Monitoring and Reporting

1. If there are no 303(d) listed or TMDL waters located within the Permittee's MS4 area, no monitoring shall be required. The SWMPP shall include a determination stating if monitoring is required.
2. If a waterbody within the MS4 jurisdiction is listed on the latest final §303(d) list, or otherwise designated impaired by the Department, or for which a TMDL is approved or established by EPA, during this permit cycle, then the Permittee must implement a monitoring program, within 6 months, to include monitoring that addresses the impairment or TMDL. A monitoring plan shall be included in the SWMPP and any revisions to the monitoring program shall be documented in the SWMPP and Annual Report.
3. Proposed monitoring locations, and monitoring frequency shall be described in the monitoring plan with actual locations described in the annual report;
4. The Permittee must include in the monitoring program any parameters attributed with the latest final §303(d) list or otherwise designated by the Department as impaired or are included in an EPA-approved or EPA-established TMDL;
5. Analysis and collection of samples shall be done in accordance with the methods specified at 40 CFR Part 136. Where an approved 40 CFR Part 136 does not exist, then a Department approved alternative method may be used;
6. If the Permittee is unable to collect samples due to adverse conditions, the Permittee must submit a description of why samples could not be collected, including available documentation of the event. An adverse climatic condition which may prohibit the collection of samples includes weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.)

or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.);

7. Monitoring results must be reported with the subsequent Annual Report and shall include the following monitoring information:
 - a. The date, latitude/longitude of location, and time of sampling;
 - b. The name(s) of the individual(s) who performed the sampling;
 - c. The date(s) analysis were performed;
 - d. The name(s) of individuals who performed the analysis;
 - e. The analytical techniques or methods used; and
 - f. The results of such analysis.

PART VI Annual Reporting Requirements

1. The Permittee shall submit to the Department an annual report (1 hardcopy and 1 electronic copy) no later than May 31st of each year. The annual report shall cover the previous April 1 to March 31. If an entity comes under coverage for the first time after the issuance of this permit, then the first annual report should cover the time coverage begins until March 31st of subsequent year.
2. **On or after December 21, 2020, all annual reports shall be submitted to the Department electronically in a prescribed manner acceptable to the Department.**
3. The Permittee shall sign and certify the annual report in accordance with Part VII.G.
4. The annual report shall include the following information, at a minimum, and in addition to those requirements referenced in Part III-V:
 - a. A list of contacts and responsible parties (e.g.: agency, name, phone number, address, & email address) who had input to and are responsible for the preparation of the annual report;
 - b. Overall evaluation of the storm water management program developments and progress for the following:
 - i. Major accomplishments;
 - ii. Overall program strengths/weaknesses;
 - iii. Future direction of the program;
 - iv. Overall determination of the effectiveness of the SWMPP taking into account water quality/watershed improvements;
 - v. Measureable goals that were not performed and reasons why the goals were not accomplished; and
 - vi. If monitoring is required, evaluation of the monitoring data.
 - c. Narrative report of all minimum storm water control measures referenced in Part III.B of this permit. The activities shall be discussed as follows:
 - i. Minimum control measures completed and in progress;
 - ii. Assessment of the controls; and
 - iii. Discussion of proposed BMP revisions or any identified measureable goals that apply to the minimum storm water control measures.

- d. Summary table of the storm water controls that are planned/scheduled for the next reporting cycle;
- e. Results of information collected and analyzed, if any, during the reporting period, including any monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP.
- f. Notice of reliance on another entity to satisfy some of your permit obligations; and
- g. If monitoring is required, all monitoring results collected during the previous year in accordance with Part V, if applicable. The monitoring results shall be submitted in a format acceptable to the Department.

PART VII Standard and General Permit Conditions

A. Duty to Comply

You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of CWA and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

B. Continuation of the Expired General Permit

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the ADEM Code r. 335-6-6 and remain in force and effect if the Permittee re-applies for coverage as required under Part II of this Permit. Any Permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until the earlier of:

- 1. Reissuance or replacement of this permit, at which time you must comply with the Notice of Intent conditions of the new permit to maintain authorization to discharge; or
- 2. Issuance of an individual permit for your discharges; or
- 3. A formal permit decision by the Department not to reissue this general permit, at which time you must seek coverage under an alternative general permit or an individual permit.

C. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for you in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate

You must take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to Provide Information

The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, suspending, or terminating the permit or to determine compliance with the permit. The Permittee shall also furnish to the Director upon request, copies of records required to be kept by the permit.

F. Other Information

If you become aware that you have failed to submit any relevant facts in your Notice of Intent or submitted incorrect information in the Notice of Intent or in any other report to the Department, you must promptly submit such facts or information.

G. Signatory Requirements

All Notices of Intent, reports, certifications, or information submitted to the Department, or that this permit requires be maintained by you shall be signed and certified as follows:

1. Notice of Intent. All Notices of Intent shall be signed by a responsible official as set forth in ADEM Admin. Code r. 335-6-6-.09.
2. Reports and other information. All reports required by the permit and other information requested by the Department or authorized representative of the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. Signed authorization. The authorization is made in writing by a person described above and submitted to the Department.
 - b. Authorization with specified responsibility. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility for environmental matters for the regulated entity.
3. Changes to authorization. If an authorization is no longer accurate because a different operator has the responsibility for the overall operation of the MS4, a new authorization satisfying the requirement of Part VII.G.2.b. above must be submitted to the Department prior to or together with any reports or information, and to be signed by an authorized representative.
4. Certification. Any person signing documents under Part VII.G.1-2. above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege, nor it does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

I. Proper Operation and Maintenance

You must at all time properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by you to achieve compliance with the conditions of this permit and with the conditions of your SWMPP. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary

facilities or similar systems, installed by you only when the operation is necessary to achieve compliance with the conditions of the permit.

J. Inspection and Entry

1. You must allow the Department or an authorized representative upon the presentation of credentials and other documents as may be required by law, to do any of the following:
 - a. Enter your premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
 - b. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment) practices, or operations regulated or required under this permit; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

K. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. Your filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

L. Permit Transfers

This permit is not transferable to any person except after notice to the Department. The Department may require modification or revocation and reissuance of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Act.

M. Anticipated Noncompliance

You must give advance notice to the Department of any planned changes in the permitted small MS4 or activity which may result in noncompliance with this permit.

N. Compliance with Statutes and Rules

1. The permit is issued under ADEM Admin. Code r. 335-6-6. All provisions of this chapter that are applicable to this permit are hereby made a part of this permit.
2. This permit does not authorize the noncompliance with or violation of any laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws.

O. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall be affected thereby.

P. Bypass Prohibition

Bypass (see 40 CFR 122.41(m)) is prohibited and enforcement action may be taken against a regulated entity for a bypass; unless:

1. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during the normal periods of equipment downtime. This condition is not satisfied if the regulated entity should, in the exercise of reasonable engineering judgment, have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance.
3. The Permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the Permittee is granted such authorization, and the Permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.

The Permittee has the burden of establishing that each of the conditions of Part VII.P. have been met to qualify for an exception to the general prohibition against bypassing and an exemption, where applicable, from the discharge specified in this permit.

Q. Upset Conditions

An upset (see 40 CFR 122.41(n)) constitutes an affirmative defense to an action brought for noncompliance with technology-based permit limitations if a regulated entity shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence, that:

1. An upset occurred and the Permittee can identify the specific cause(s) of the upset;
2. The Permittee's facility was being properly operated at the time of the upset; and
3. The Permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.

The Permittee has the burden of establishing that each of the conditions of Part VII.Q. of this permit have been met to qualify for an exemption from the discharge specified in this permit.

R. Procedures for Modification or Revocation

Permit modification or revocation will be conducted according to ADEM Admin. Code r. 335-6-6-.17.

S. Re-opener Clause

If there is evidence indicating potential or realized impacts on water quality due to storm water discharge covered by this permit, the regulated entity may be required to obtain an individual permit or an alternative general permit or the permit may be modified to include different limitations and/or requirements.

T. Retention of Records

1. The Permittee shall retain the storm water quality management program developed in accordance with Part III-V of this permit until at least five years after coverage under this permit terminates.
2. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
3. The Permittee shall retain records of all monitoring information including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of reports required by this permit, and records of all data used to

complete the application of this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended at the request of the Director at any time.

U. Monitoring Methods

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

V. Additional Monitoring by the Permittee

If the Permittee monitors more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the monitoring report. Such increased monitoring frequency shall also be indicated on the monitoring report.

W. Definitions

1. Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
2. Control Measure as used in this permit, refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the State.
3. CWA or The Act means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et.seq.
4. Department means the Alabama Department of Environmental Management or an authorized representative.
5. Discharge, when used without a qualifier, refers to “discharge of a pollutant” as defined as ADEM Admin. Code r. 335-6-6-.02(m).
6. Green Infrastructure refers to systems and practices that use or mimic natural processes to infiltrate, evapotranspire (the return of water to the atmosphere either through evaporation or by plants), or reuse storm water or runoff on the site where it is generated.
7. Illicit Connection means any man-made conveyance connecting an illicit discharge directly to municipal separate storm sewer.
8. Illicit Discharge is defined at 40 CFR Part 122.26(b)(2) and refers to any discharge to a municipal separate storm sewer that is not entirely composed of storm water, except discharges authorized under an NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire fighting activities.
9. Indian Country, as defined in 18 USC 1151, means (a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation; (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State, and (c) all Indian allotments, the Indian titles to which have

not been extinguished, including rights-of-way running through the same. This definition includes all land held in trust for an Indian tribe.

10. Infiltration means water other than wastewater that enters a sewer system, including foundation drains, from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.
11. Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.
12. Large municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) located in an incorporated place (city) with a population of 250,000 or more as determined by the latest decennial census.
13. Low Impact Development (LID) is an approach to land development (or re-development) that works with nature to manage storm water as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat storm water as a resource rather than a waste product.
14. Medium municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) located in an incorporated place (city) with a population of 100,000 or more but less than 250,000 as determined by the latest decennial census.
15. MEP is an acronym for "Maximum Extent Practicable," the technology-based discharge standard for municipal separate storm sewer systems to reduce pollutants in storm water discharges that was established by CWA Section 402(p). A discussion of MEP as it applies to small MS4s is found at 40 CFR Part 122.34.
16. MS4 is an acronym for "Municipal Separate Storm Sewer System" and is used to refer to either a large, medium, or small municipal separate storm sewer system. The term is used to refer to either the system operated by a single entity or a group of systems within an area that are operated by multiple entities.
17. Municipal Separate Storm System is defined at 40 CFR Part 122.26(b)(8) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined in ADEM Admin. Code r. 335-6-6-.02(nn).
18. NOI is an acronym for "Notice of Intent" to be covered by this permit and is the mechanism used to "register" for coverage under a general permit.
19. Permittee means each individual co-applicant for an NPDES permit who is only responsible for permit conditions relating to the discharge that they own or operate.
20. Point Source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling

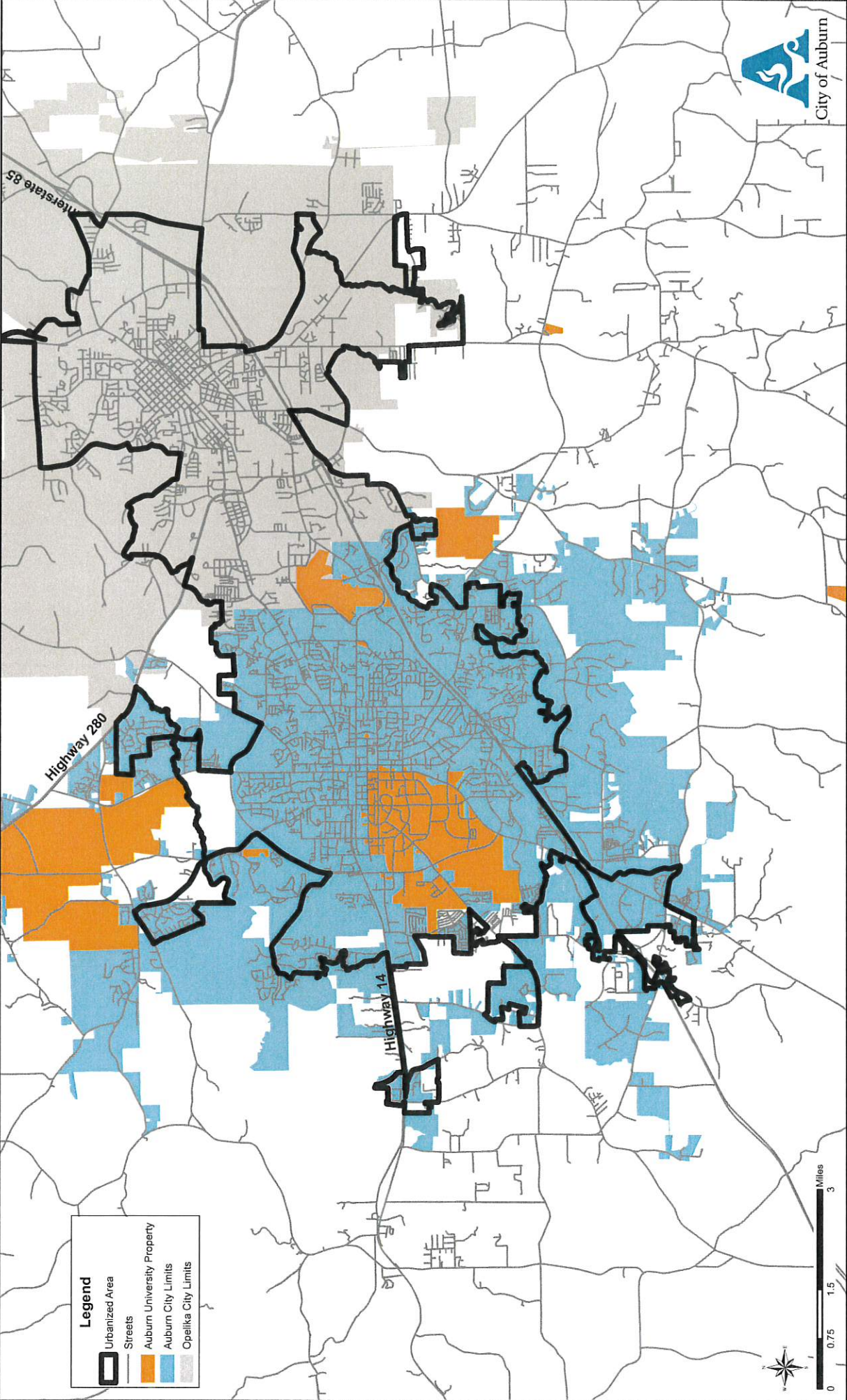
stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

21. Priority construction site means any qualifying construction site in an area where the MS4 discharges to a waterbody which is listed on the most recently approved 303(d) list of impaired waters for turbidity, siltation, or sedimentation, any waterbody for which a TMDL has been finalized or approved by EPA for turbidity, siltation, or sedimentation, and any waterbody assigned specific water quality criteria, such as Outstanding Alabama Water use classification, in accordance with ADEM Admin. Code r. 335-6-10-.09 and any waterbody assigned a special designation in accordance with ADEM Admin. Code r. 335-6-10-.10.
22. Qualifying Construction Site means any construction activity that results in a total land disturbance of one or more acres and activities that disturb less than one acre but are part of a larger common plan of development or sale that would disturb one or more acres. Qualifying construction sites do not include land disturbance conducted by entities under the jurisdiction and supervision of the Alabama Public Service Commission.
23. Qualifying New Development and Redevelopment means any site that results from the disturbance of one acre or more of land or the disturbance of less than one acre of land if part of a larger common plan of development or sale that is greater than one acre. Qualifying new development and redevelopment does not include land disturbances conducted by entities under the jurisdiction and supervision of the Alabama Public Service Commission.
24. Small municipal separate storm sewer system is defined at 40 CFR Part 122.26(b)(16) and refers to all separate storm sewers that are owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to water of the United States, but is not defined as "large" or "medium" municipal separate storm sewer system. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.
25. Storm water is defined at 40 CFR Part 122.26(b) (13) and means storm water runoff, snow melt runoff, and surface runoff and drainage.
26. Storm Water Management Program (SWMP) refers to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system.
27. SWMP is an acronym for "Storm Water Management Program."
28. Total Maximum Daily Load (TMDL) means the calculated maximum permissible pollutant loading to a waterbody at which water quality standards can be maintained. The sum of wasteload allocations (WLAs) and load allocations (LAs) for any given pollutant.

29. You and Your as used in this permit is intended to refer to the Permittee, the operator, or the discharger as the context indicates and that party's responsibilities (e.g., the city, the country, the flood control district, the U.S. Air Force, etc.).

APPENDIX B

URBANIZED AREA MAP



APPENDIX C

NEWSPAPER PUBLICATIONS – 2022-2023

Auburn Villager Newspaper		
Title	Publication Date	Hyperlink
Residents give City high marks in Citizens Survey	June 18, 2020	https://www.auburnvillager.com/news/residents-give-city-high-marks-in-citizens-survey/article_b1296b4a-b16d-11ea-98e1-47e736489acc.html
Auburn Roundup: Household Hazardous Waste Collection Day set for Oct 22	October 6, 2022	https://www.auburnvillager.com/news/auburn-roundup-household-hazardous-waste-collection-day-set-for-oct-22/article_b5d1a518-459a-11ed-a203-0bc322044e25.html
Council OKs Lake Wilmore Community Center, multipurpose fields	October 20, 2022	https://www.auburnvillager.com/news/council-oks-lake-wilmore-community-center-multipurpose-fields/article_de7460a8-5087-11ed-98f7-2f1f626370e7.html
Final Notice and Public Explanation of Proposed Activity - 100-year Floodplain	March 9, 2023	Final Notice and Public Explanation of Proposed Activity - 100-year Floodplain Legals auburnvillager.com

Opelika Auburn News (OANOW)		
Title	Publication Date	Hyperlink
“We’re coming”: Auburn City Council approves Buc-ee’s Auburn developer agreement	June 23, 2022	https://oanow.com/news/local/were-coming-auburn-city-council-approves-buc-ees-auburn-developer-agreement/article_52521ba0-b82c-11eb-962c-cf11e92f381a.html
Auburn Planning Commission recommends CompPlan 2030 amendments	August 16, 2022	https://oanow.com/news/local/govt-and-politics/auburn-planning-commission-recommends-compplan-2030-amendments/article_cfadb1d2-e044-11eb-85cc-93161cd93271.html
Not in my subdivision: the Preserve residents ask planning commission to deny townhomes	November 20, 2022	https://oanow.com/news/local/govt-and-politics/not-in-my-subdivision-the-preserve-residents-ask-planning-commission-to-deny-townhomes/article_293aec52-2dec-11ec-983e-cb2a583efddc.html

Opelika Auburn News (OANOW)		
Title	Publication Date	Hyperlink
Jan Dempsey Community Arts Center to Undergo \$4.6 million renovation	December 5, 2022	https://oanow.com/news/local/jan-dempsey-community-arts-center-to-undergo-4-6-million-renovation/article_5f4dadfa-6b55-11ed-a168-f76b225b6930.html
Auburn Board approves dorm and facility renovations and Duncan Drive Infrastructure project	December 18, 2022	https://oanow.com/news/local/govt-and-politics/auburn-board-approves-dorm-and-facility-renovations-and-duncan-drive-infrastructure-project/article_9c2c2d50-43f1-11ec-85b4-4712a8d93671.html
Auburn Council to consider rezoning land for the largest housing community they've ever seen	January 23, 2023	https://oanow.com/news/local/auburn-council-to-consider-rezoning-land-for-the-largest-housing-community-theyve-ever-seen/article_1e0eed86-6034-11ec-8181-7b267ad46a90.html

APPENDIX D

2022-2023 STORMWATER QUALITY MONITORING REPORT



City of Auburn

City of Auburn, Alabama Phase II MS4

Annual Surface Water Quality Monitoring Report Monitoring Period: April 1, 2022 – March 31, 2023

Permit # ALR040003
Effective: October 1, 2021
Expiration: September 30, 2026

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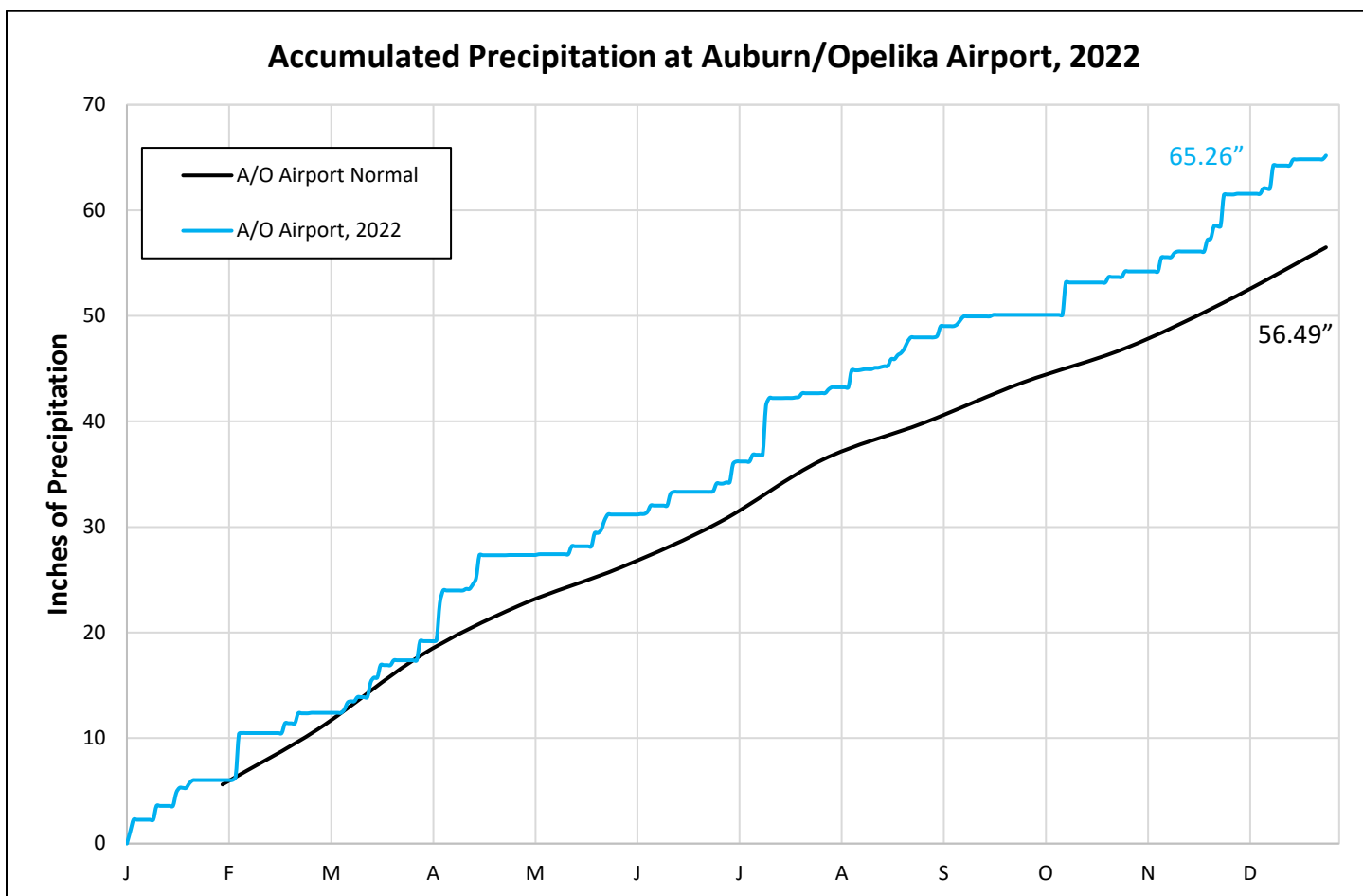
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1.0 Introduction

The City of Auburn has been voluntarily collecting water quality data on its local water resources since the 1970's. Although initial efforts were primarily concentrated on source water quality monitoring in the Lake Ogletree watershed of Chewacla Creek, the City's water quality monitoring has expanded to include a wide variety of monitoring programs that are used to guide efforts of assessment, protection, and restoration of our local water resources. These programs include monitoring for physical, chemical, and biological indicators of water quality, with all monitoring efforts managed and operated in-house. This report presents the results of water quality monitoring and analyses conducted for the period of April 1, 2022, to March 31, 2023. Comments by staff in the City's Water Resource Management Department (WRM) are also included in the water quality results.

1.1 Precipitation Data 2022

The City of Auburn experienced another exceptionally wet year in 2022. According to the rain gauge at the Auburn/Opelika Airport, 65.26 inches of precipitation fell during 2022. This was the 7th highest amount recorded at the airport since 1976. Rainfall was above normal for the entire year, but large rain events in April, July, and October greatly added to the surplus. The year ended 8.77 inches above normal.



Accumulated Precipitation at Auburn/Opelika Airport, 2022

2.0 Monitoring Required Under ADEM Phase II NPDES General Permit ALR040003

2.1 Background

The City of Auburn has three (3) streams within its jurisdiction that fail to meet the state's minimum water quality standards for their designated uses. Two streams have a finalized Total Maximum Daily Load (TMDL), and two streams are included on the 2022 final 303(d) list. A TMDL was approved for the Saugahatchee Creek watershed in 2008, with the pollutants of concern being total phosphorus (TP) and organic enrichment/dissolved oxygen (OE/DO). In 2020, Saugahatchee Creek was listed on the 303(d) list for pathogens. A TMDL was finalized for Parkerson Mill Creek in 2011 for pathogens, with *E. coli* as the indicator bacteria. Moore's Mill Creek was included on the 303(d) list of impaired streams in 2000 for siltation, and 2022 for pathogens. Currently, there is no TMDL for Moore's Mill Creek. The monitoring results included in this report were collected from April 1, 2022, to March 31, 2023 in compliance with the Phase II NPDES General Permit ALR040003 as outlined in the City of Auburn's Stormwater Quality Monitoring Plan.

2.2 Compliance Requirements

According to ADEM Phase II NPDES General Permit ALR040003, if a waterbody within the MS4 jurisdiction is listed on the latest final 303(d) list, or otherwise designated impaired by ADEM, or for which a TMDL is approved or established by EPA, the MS4 permittee shall comply with the following:

1. Include a statement in the SWMPP stating if monitoring is required.
2. Implement a monitoring program within 6 months of permit coverage that addresses the impairment or TMDL. Include the monitoring plan in the SWMPP and document the revisions to the monitoring plan in the SWMPP and SWMPP Annual Report.
3. Describe proposed monitoring locations and proposed monitoring frequency in the monitoring plan, with actual locations described in the SWMPP Annual Report.
4. Include in the monitoring program any parameters attributed with the latest final 303(d) list, or otherwise designated by ADEM as impaired, or are included in an EPA-approved or EPA-established TMDL.
5. Perform analysis and collection of samples in accordance with the methods specified at 40 CFR Part 136. If an approved 40 CFR Part 136 method does not exist, then an ADEM approved method may be used.
6. If samples cannot be collected due to adverse conditions, permittee must submit a description of why samples could not be collected, including available documentation of the event (e.g., weather conditions that create dangerous conditions for personnel, or impracticable conditions such as drought or ice).
7. Monitoring results must be reported with the subsequent SWMPP Annual Report and shall include the following:
 - a. The date, latitude/longitude of location, and time of sampling.
 - b. The name(s) of the individual(s) who performed the sampling.

- c. The date(s) analysis was performed.
- d. The name(s) of the individual(s) who performed the analysis.
- e. The analytical techniques or methods used.
- f. The results of such analysis.

The pages that follow include the sampling and reporting requirements outlined above for Saugahatchee Creek, Parkerson Mill Creek, and Moore's Mill Creek.

2.3 Water Sampling Methods

The City of Auburn understands that quality control and quality assurance are critical to a successful environmental monitoring program. To develop a dependable and credible database of water quality measurements, WRM staff employ a stringent field and laboratory protocol. WRM staff are required to wear nitrile gloves when handling sample bottles, cleaning sample bottles, plating bacterial samples, handling bacterial plates and growth media, calibrating instruments, and collecting water samples. Before visiting a monitoring site, water sample collection bottles are placed in clean, sealable plastic bags. They are carried to the monitoring site in a cooler, and after the water samples are collected the bottles are immediately placed back into the bag and into the cooler to be chilled to 4 degrees Celsius. WRM staff calibrate all water quality instruments prior to field use every three days. Calibration standards are never used outside the expiration date. A detailed calibration log is filled out each time an instrument is calibrated. Sampling devices are cleaned using Liquinox™ phosphate-free detergent, followed by a tap water rinse, and then a final rinse with deionized water. At all sample sites, WRM staff utilize field sheets to document site characteristics and observations such as stream color, geomorphic setting (riffle, pool, etc.), and weather conditions. The field sheets are also used to document water quality data measured in-situ at each site. These in-situ data are collected using a YSI ProPlus instrument and include temperature (F), pH, specific conductance ($\mu\text{S}/\text{cm}$), and dissolved oxygen (mg/L). Water samples are analyzed for turbidity in the field using a LaMotte 2020we portable turbidimeter. Streamflow is determined using the mid-section method, where the channel is divided into segments along a cross-section and width, depth, and velocity are recorded at each segment. The sum of flows of all the segments along a cross-section equals the total streamflow. Velocity is measured at the center of each segment using either a Sontek Flowtracker 2 acoustic doppler velocimeter or a Price Pygmy Meter.

2.4 Saugahatchee Creek Compliance Monitoring

The Saugahatchee Creek Embayment on Yates Reservoir was originally placed on the ADEM 303(d) list of impaired waterbodies in 1996 for OE/DO and nutrients. It remained on the State's 303(d) list after each consecutive two-year water quality assessment until 2008, at which time the Saugahatchee Creek Embayment (Yates Reservoir) TMDL was finalized. Additionally, Pepperell Branch, a tributary of Saugahatchee Creek which originates in Opelika, also remained on the State's 303(d) list for nutrient impairment until 2008. The impairment of Pepperell Branch was also addressed in the Saugahatchee Creek Embayment TMDL. To address water quality concerns within the Saugahatchee Creek Embayment, ADEM and the EPA jointly developed a "watershed based" TMDL, which would in turn address nutrient loading from both the main stem of Saugahatchee Creek and Pepperell Branch. The final Saugahatchee Creek Watershed TMDL was issued in April of 2008, identifying TP as the primary pollutant of concern (expressed as chlorophyll-a to satisfy numeric target

criteria for assessing eutrophication in lakes). The Saugahatchee Creek Embayment TMDL establishes the TP limits in stormwater runoff of equal to or less than 0.1 mg/L (see Table 5-2 of the Saugahatchee Creek Embayment TMDL).

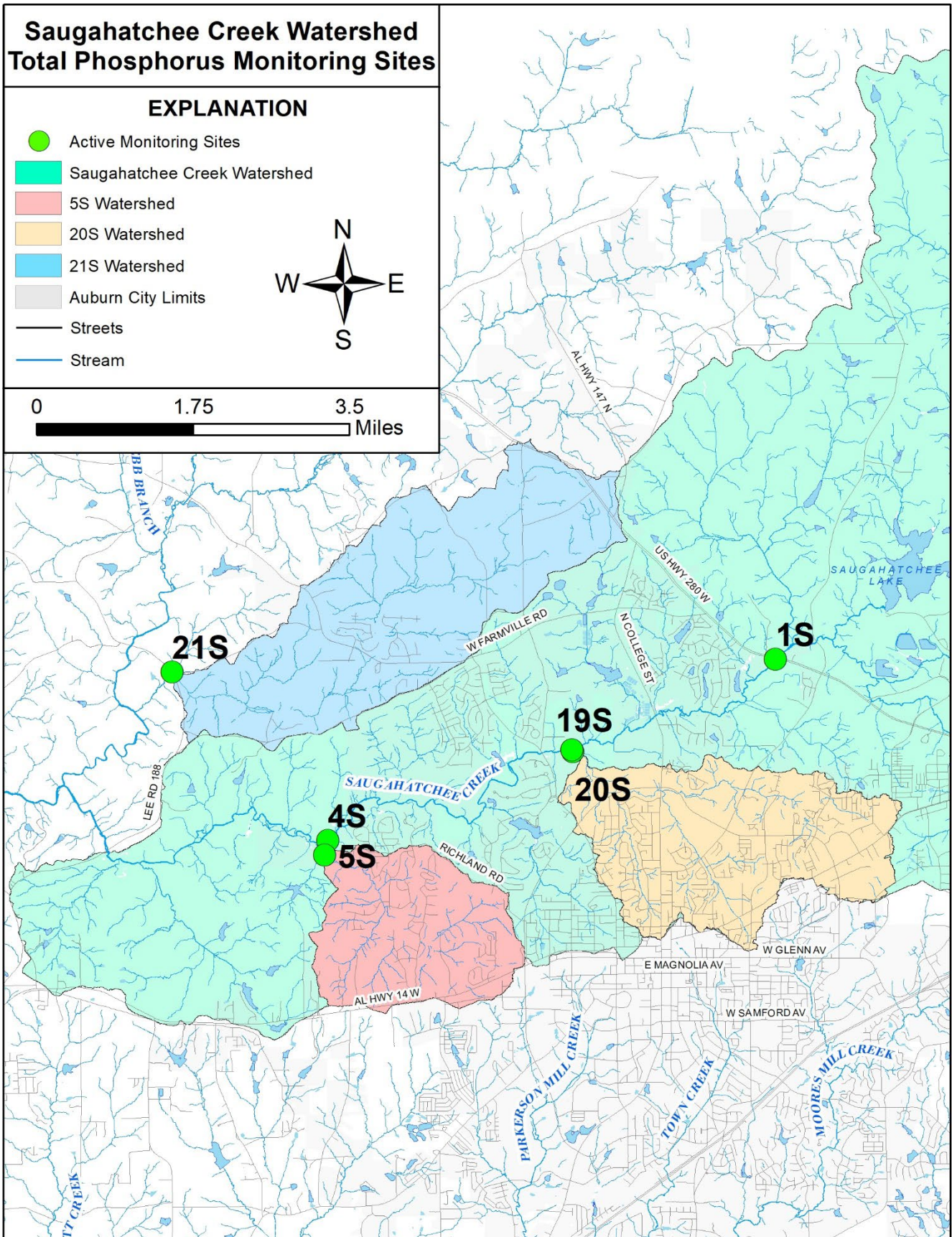
Monitoring TP at strategic locations along the main stem of Saugahatchee Creek and on tributaries within the Saugahatchee Creek watershed that drain portions of the City's MS4 provides data to evaluate the success of efforts to reduce TP in stormwater and meet TMDL concentrations. The City conducted quarterly sampling for TP, water temperature, pH, dissolved oxygen, specific conductance, and turbidity at three locations along the main stem of Saugahatchee Creek, and also at three tributaries within the Saugahatchee Creek watershed during this reporting period. Streamflow in cubic feet per second (cfs) and million gallons per day (MGD) was determined at each sample site. Streamflow at sites 1S, 4S, and 19S was recorded by either the City's streamgage located at site 4S on Saugahatchee Creek at the City's Northside Water Pollution Control Facility (WPCF), or the USGS gage at Lee County Rd. 188. City staff measured streamflow in-situ at sites 5S, 20S, and 21S when flow conditions permitted.

In 2018, Saugahatchee Creek was placed on the ADEM 303(d) list for pathogen impairment. The impaired reach is 33.42 mi. long and includes waters from Saugahatchee Lake Dam to the confluence with Sycamore Creek in Tallapoosa County. ADEM considered collection system failure and pasture grazing as potential sources of the impairment. According to the 2018 303(d) list Fact Sheet <https://adem.alabama.gov/programs/water/wquality/2018AL303dFactSheet.pdf>, ADEM collected samples at stations SOGL-1 and SOGL-11 to determine the basis for adding Saugahatchee Creek to the 303(d) list. Because of the impairment, the City monitored *E. coli* concentrations in Saugahatchee Creek through intensive *E. coli* sampling at seven (7) sites within the watershed in 2022.

The goal of annual monitoring of *E. coli* at strategic locations along the main stem of Saugahatchee Creek and on tributaries within the Saugahatchee Creek watershed that drain portions of the City's MS4 is to provide further insight into the high *E. coli* concentrations that were observed by ADEM and eventually led to the 2018 303(d) listing. In 2022, single samples were collected for *E. coli* once per month for April, May, July, September, and October. Weekly samples were collected at those sites during June and August. The 5-week geometric mean concentrations provided in the following charts were calculated based on the results of the weekly sampling.

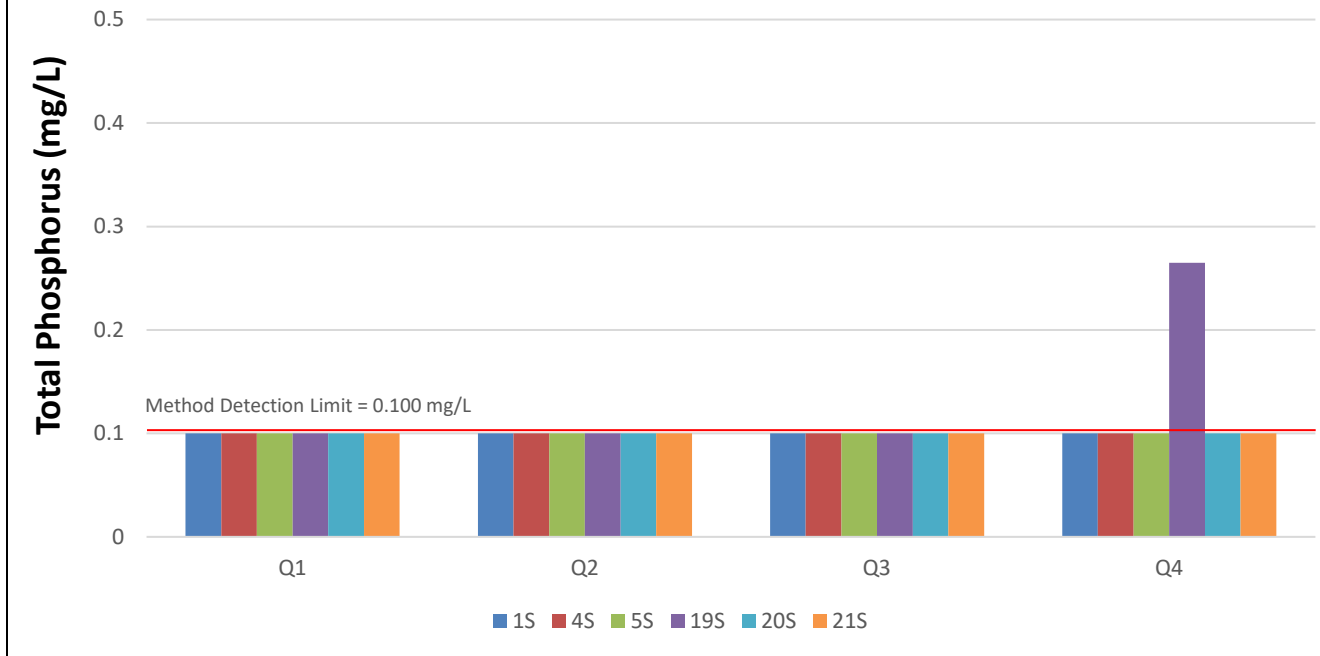
2.4.1 Saugahatchee Creek Total Phosphorus Monitoring Results

Of the 24 samples collected for TP during this reporting period, only 1 of the samples had a concentration above the laboratory method detection limit of 0.100 mg/L. The highest TP concentration was 0.265 mg/L. These results suggest that the City's post-development water quality requirements are reducing the TP pollutant load in Saugahatchee Creek to very low numbers. The City requires new developments and re-developments within the Saugahatchee Creek watershed to remove 50% of the TP from stormwater runoff leaving the site. Examples of bmp's that developers typically utilize to meet these requirements are wet detention ponds, bioretention cells, and proprietary water quality grit traps. The tables and chart included in this report show results from TP monitoring conducted during the reporting period 4/1/2022 to 3/31/2023.



Saugahatchee Creek Watershed Total Phosphorus Monitoring Sites

Saugahatchee Creek Watershed Results of Total Phosphorus Monitoring 4/1/2022 - 3/31/2023

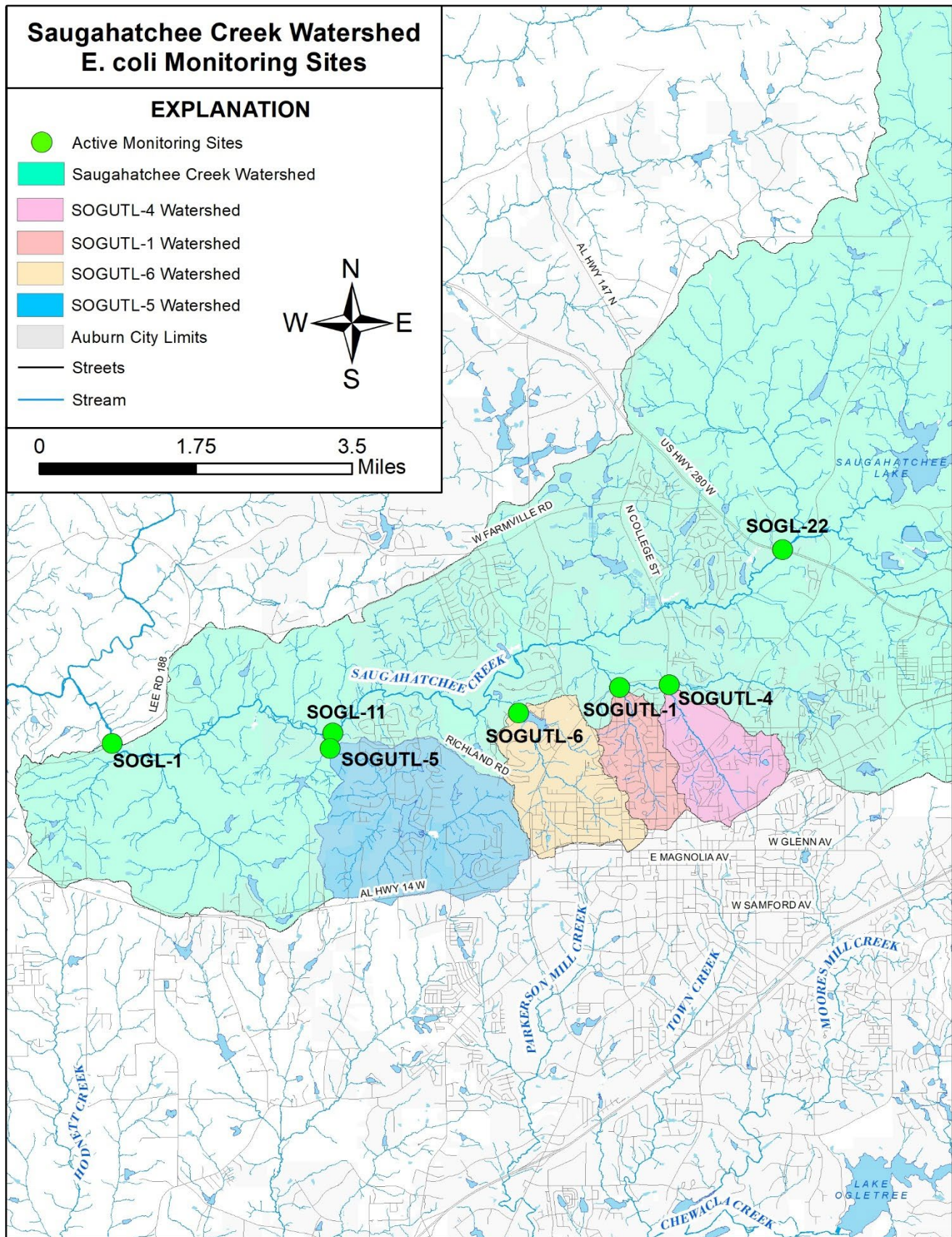


2.4.2 Saugahatchee Creek *E. coli* Monitoring Results

In 2022, streamflow was determined from the USGS streamgage 02418230 for site SOGL-1, SOGL-11, and SOGL-22. The City made a reasonable effort to measure streamflow (recorded in cfs and MGD) in-situ at sites SOGUTL-1, SOGUTL-4, SOGUTL-5, and SOGUTL-6 when flow conditions permitted. Water temperature, pH, dissolved oxygen, specific conductance, and turbidity were also measured in-situ at each site.

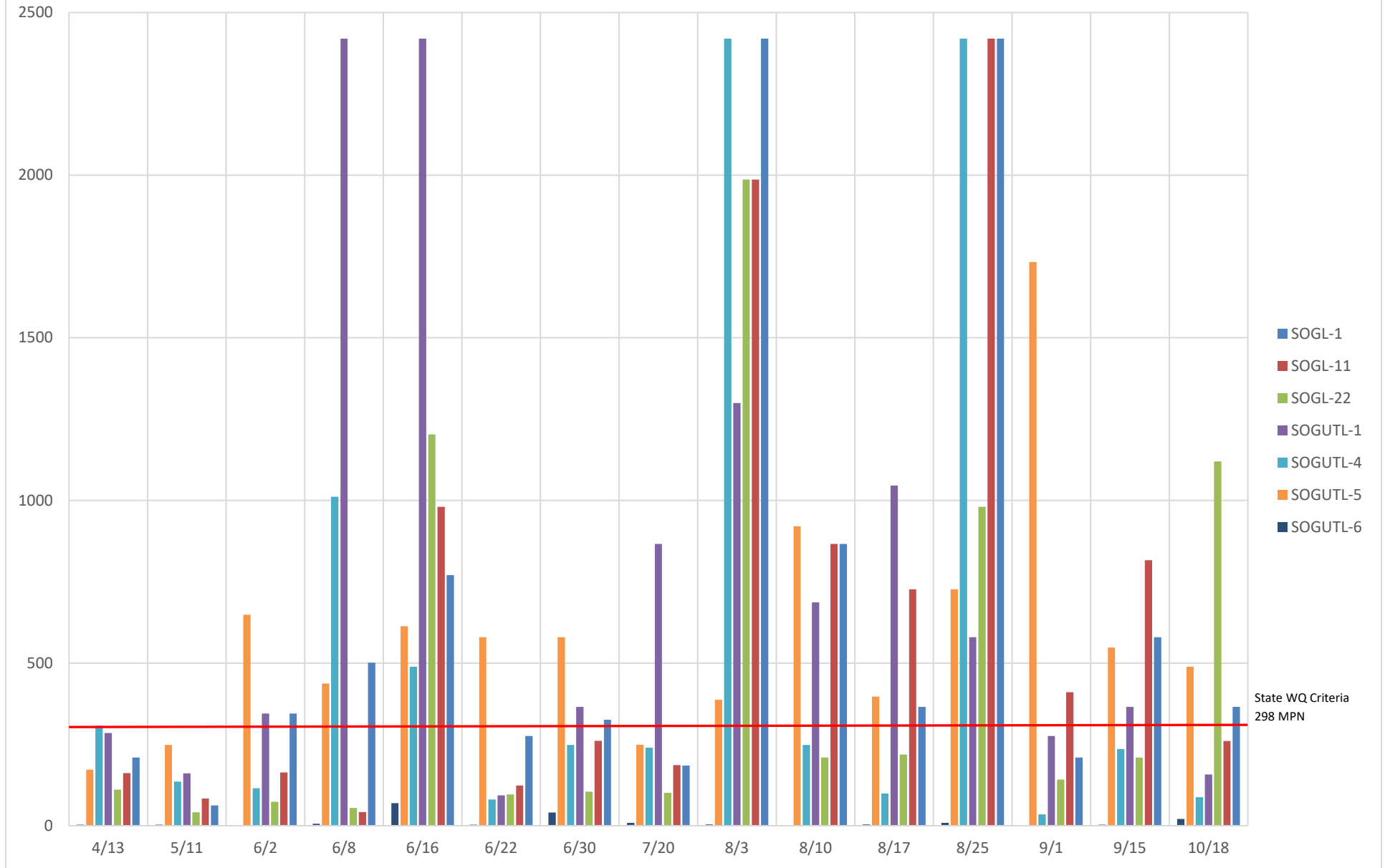
The June geomean data showed six (6) of seven (7) sites above the state water quality criteria for Saugahatchee Creek's designated use of Fish and Wildlife (126 MPN). Forty-six percent of the June single samples were above the State criteria for the single sample maximum of 298 MPN. Single sample maximum concentrations were the greatest on June 16th, however the area experienced a storm event that dropped 1.3 inches of rain within the previous 72 hours which may have contributed to the high numbers. There was much rain during the 5-week geomean period, with 3 out of 5 weeks experiencing at least 0.25 inches of 72-hour antecedent precipitation. SOGUTL-6 had the lowest geomean concentration (9 MPN), and SOGL-22 had a geomean concentration of 137 MPN, which is just above the Fish & Wildlife criteria.

For the August geomean, again only SOGUTL-6 (3 MPN) was below state water quality criteria. Sixty-three percent (63%) of single samples collected during August were above the State water quality criteria. *E. coli* concentrations in 2022 were higher than in 2021 in the Saugahatchee Creek watershed.

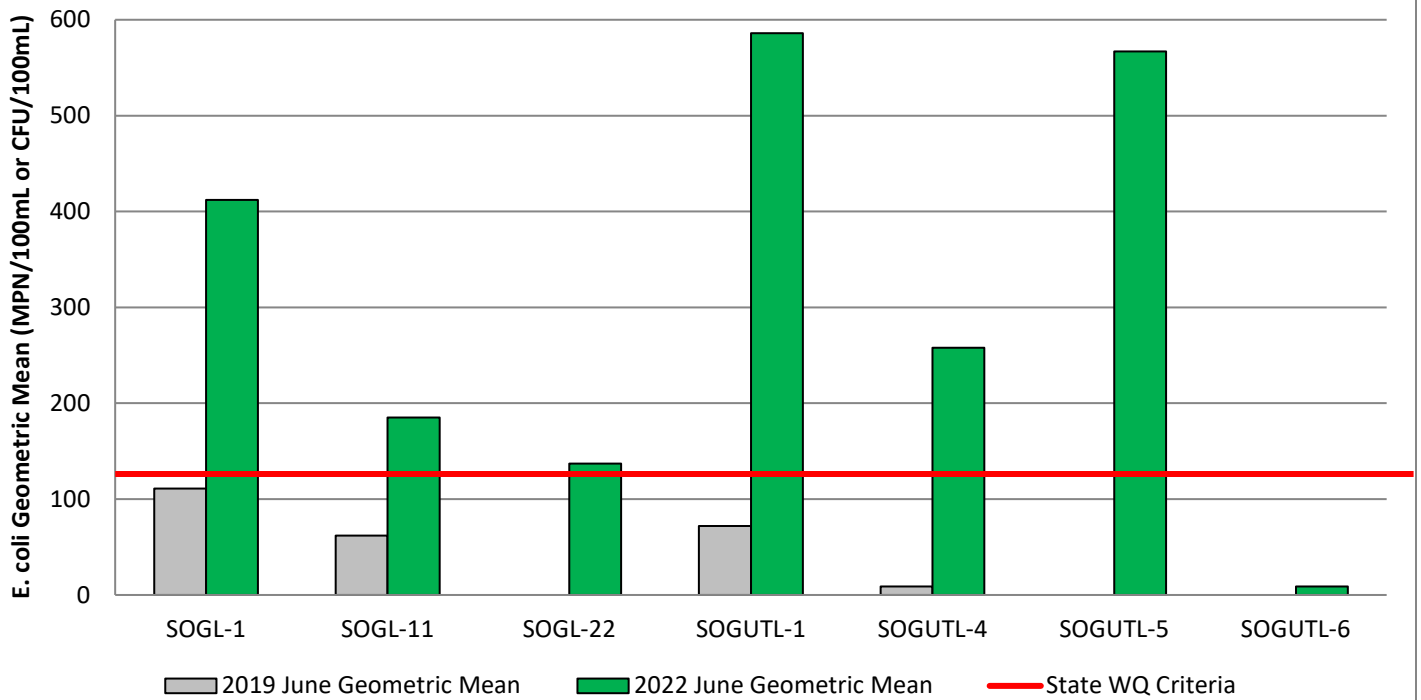


Saugahatchee Creek Watershed *E. coli* Monitoring Sites

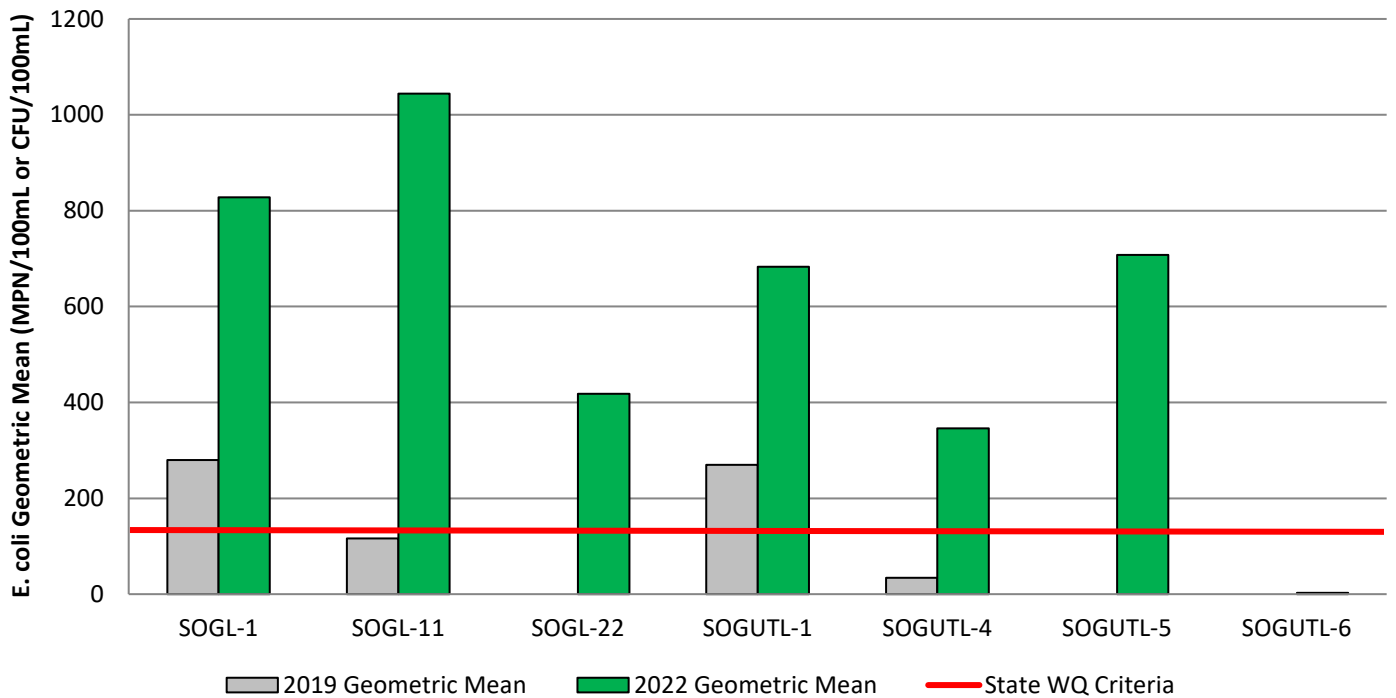
Saugahatchee Creek E. coli Single Sample Results for 2022



Saugahatchee Creek E. coli Geomean Results for June 2022



Saugahatchee Creek E. coli Geomean Results for August 2022



Saugahatchee Creek Watershed Monitoring Data

Site Number	Pollutant of Concern	Site Location	Site Coordinates
1S	Total Phosphorus	Saugahatchee Creek at US HWY 280	32.657413 N, 85.459656 W
19S	Total Phosphorus	Saugahatchee Creek 0.35 mi upstream of N. Donahue Dr.	32.642777 N, 85.498761 W
4S	Total Phosphorus	Saugahatchee Creek at Northside WPCF	32.628185 N, 85.545705 W
5S	Total Phosphorus	Unnamed Tributary to Saugahatchee Creek	32.625847 N, 85.546404 W
20S	Total Phosphorus	Unnamed Tributary to Saugahatchee Creek	32.642492 N, 85.498606 W
21S	Total Phosphorus	Swingle Creek above Lee Rd. 188	32.655618 N, 85.575517 W
SOGL-1	<i>E. coli</i>	Saugahatchee Creek at Lee Rd. 188	32.626569 N, 85.588019 W
SOGL-11	<i>E. coli</i>	Saugahatchee Creek at Northside WPCF	32.628185 N, 85.545705 W
SOGL-22	<i>E. coli</i>	Saugahatchee Creek at HWY 280	32.657756 N, 85.459302 W
SOGUTL-1	<i>E. coli</i>	Unnamed Tributary to Saugahatchee Creek	32.635379 N, 85.490675 W
SOGUTL-4	<i>E. coli</i>	Unnamed Tributary to Saugahatchee Creek	32.635890 N, 85.481219 W
SOGUTL-5	<i>E. coli</i>	Unnamed Tributary to Saugahatchee Creek	32.625511 N, 85.545895 W
SOGUTL-6	<i>E. coli</i>	Unnamed Tributary to Saugahatchee Creek	32.631421 N, 85.510145 W

Water Quality Parameter	Analytical Method
Temperature (F)	YSI 5560
pH (Standard Units)	YSI 1001
Dissolved Oxygen (mg/L)	YSI 2003
Specific Conductance (µS/cm)	YSI 5560
Turbidity (NTU)	SM 2130 B
Total Phosphorus (mg/L)	EPA 365.4
<i>E. coli</i> (MPN)	IDEXX

Saugahatchee Creek Watershed Total Phosphorus Sampling Results												
Site Number	Sample Date	Sample Time	Sample Collected By & In-situ Parameters Analyzed By	Total Phosphorus (mg/L)	Temperature (F)	pH	Dissolved Oxygen (mg/L)	Specific Conductance (µS/cm)	Turbidity (NTU)	Streamflow (cfs)	Streamflow (MGD)	Total Phosphorus Sample Analyzed By & Date
19S	3/30/2023	14:40	D. Kimbrow	< 0.1	63.1	7.17	9.36	99	5.35	83.1	53.68	BG (ERA) 3/31
20S	3/30/2023	14:40	D. Kimbrow	< 0.1	64.3	7.06	9.37	121.1	4.94	-	-	BG (ERA) 3/31
1S	3/23/2023	10:45	D. Kimbrow	< 0.1	55.9	7.42	10.75	100.3	5.74	83.1	53.68	BG (ERA) 3/31
21S	3/23/2023	11:15	D. Kimbrow	< 0.1	55.7	7.14	10.89	58.4	8.35	5.7971	3.74	BG (ERA) 3/31
4S	3/23/2023	14:00	D. Kimbrow	< 0.1	61.9	7.11	9.73	102.1	10.55	81.5	52.65	BG (ERA) 3/31
5S	3/23/2023	13:30	D. Kimbrow	< 0.1	60.7	6.93	10.54	68.3	9.43	3.6151	2.34	BG (ERA) 3/31
19S	12/28/2022	11:20	D. Kimbrow	< 0.1	41	7.17	13.19	107.5	6.79	46.9	30.30	BG (ERA) 1/4
1S	12/28/2022	10:20	D. Kimbrow	< 0.1	41.3	7.3	13.87	106.1	5.95	46.9	30.30	BG (ERA) 1/4
20S	12/28/2022	10:55	D. Kimbrow	< 0.1	38.3	7.17	13.84	121.6	4.83	2.0597	1.33	BG (ERA) 1/4
21S	12/28/2022	9:30	D. Kimbrow	< 0.1	36.5	6.93	14.87	67.8	7.46	5.3994	3.49	BG (ERA) 1/4
4S	12/28/2022	12:10	D. Kimbrow	< 0.1	41.8	7.08	13.45	113.4	7.64	45.8	29.59	BG (ERA) 1/4
5S	12/28/2022	11:55	D. Kimbrow	< 0.1	41.4	6.94	13.48	80.3	17.1	-	-	BG (ERA) 1/4
19S	9/27/2022	13:05	D. Kimbrow	< 0.1	66.8	7.31	7.58	128.1	5.78	31.4	20.28	BG (ERA) 9/30
1S	9/27/2022	13:40	D. Kimbrow	< 0.1	70.7	7.5	8.28	143.8	6.04	29.5	19.06	BG (ERA) 9/30
20S	9/27/2022	12:50	D. Kimbrow	< 0.1	63.3	7.26	8.17	124.1	4.64	0.7609	0.49	BG (ERA) 9/30
21S	9/27/2022	10:55	D. Kimbrow	< 0.1	61.4	7.24	9.3	63.4	11.51	-	-	BG (ERA) 9/30
4S	9/27/2022	10:25	D. Kimbrow	< 0.1	63.7	7.35	8.27	177.9	9.77	30.4	19.64	BG (ERA) 9/30
5S	9/27/2022	10:05	D. Kimbrow	< 0.1	60.9	7.23	8.36	107.6	9.83	-	-	BG (ERA) 9/30
19S	6/13/2022	12:25	D. Kimbrow	0.265	76.5	7.3	6.99	134.9	6.37	21.9	14.15	BG (ERA) 6/24
1S	6/13/2022	14:40	D. Kimbrow	< 0.1	79	7.67	8.02	163.1	6.21	21.9	14.15	BG (ERA) 6/24
20S	6/13/2022	12:00	D. Kimbrow	< 0.1	74.8	7.25	7.24	122.9	6.54	2.2478	1.45	BG (ERA) 6/24
21S	6/13/2022	10:55	D. Kimbrow	< 0.1	72.1	7.14	8.02	63.7	13.7	1.6813	1.09	BG (ERA) 6/24
4S	6/13/2022	14:00	D. Kimbrow	< 0.1	82	7.28	7.13	138.9	8.45	21.9	14.15	BG (ERA) 6/24
5S	6/13/2022	13:40	D. Kimbrow	< 0.1	74.5	7.08	7.54	82.5	11.56	0.7763	0.50	BG (ERA) 6/24

**Saugahatchee Creek Watershed
E. coli Sampling Results**

Site Number	Sample Date	Sample Time	Sample Collected By & In-situ Parameters Analyzed By	E. coli (MPN)	Temperature (F)	pH	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Turbidity (NTU)	Streamflow (cfs)	Streamflow (MGD)	E. coli Sample Analyzed By & Date
SOGL-1	10/18/2022	9:35	R. McCurry	365.4	55.8	6.89	8.91	128	8.92	35.3	22.8	DR 10/19
SOGL-1	9/15/2022	9:05	D. Kimbrow	579.4	65.3	7.4	8.31	127.3	12.41	26	16.8	DK 9/16
SOGL-1	9/1/2022	12:15	D. Kimbrow	209.8	74.5	7.38	7.75	137.3	10.25	26.9	17.4	DK 9/2
SOGL-1	8/25/2022	9:00	D. Kimbrow	2419.6	73.3	7.48	7.31	113.8	68.2	52.3	33.8	DK 8/26
SOGL-1	8/17/2022	14:40	D. Kimbrow	365.4	74.2	7.47	7.33	127.8	10.88	20.5	13.2	DK 8/18
SOGL-1	8/10/2022	14:15	D. Kimbrow	866.4	78.2	7.35	7.37	109.1	16.9	32.3	20.9	DK 8/11
SOGL-1	8/3/2022	9:20	D. Kimbrow	2419.6	74.8	7.37	6.92	93.4	118	51.1	33.0	DK 8/4
SOGL-1	7/20/2022	10:10	D. Kimbrow	185	76.1	7.5	7.34	93.6	16.7	41.6	26.9	DK 7/21
SOGL-1	6/30/2022	10:15	D. Kimbrow	325.5	73.9	7.15	7.21	103.4	23.2	27.7	17.9	DK 7/1
SOGL-1	6/22/2022	10:55	D. Kimbrow	275.5	74.6	7.48	7.57	122.3	12	17.7	11.4	DK 6/23
SOGL-1	6/16/2022	8:30	D. Kimbrow	770.1	74.9	7.22	7.37	107.6	25.6	63.1	40.8	DK 6/17
SOGL-1	6/8/2022	13:40	D. Kimbrow	501.2	71.9	6.89	7.96	100.5	8.2	39.4	25.5	RM 6/9
SOGL-1	6/2/2022	9:50	D. Kimbrow	344.8	70.7	7.46	8.1	110.8	13.3	35.3	22.8	DK 6/3
SOGL-1	5/11/2022	9:10	D. Kimbrow	62	62.4	7.47	9.09	94.4	9.67	71.9	46.4	DK 5/12
SOGL-1	4/13/2022	9:35	D. Kimbrow	209.8	62.2	7.38	8.87	81.8	20	105	67.8	DK 4/14
SOGL-11	10/18/2022	10:55	R. McCurry	260.3	56.7	7.25	9.14	143.7	7.38	36.3	23.4	DR 10/19
SOGL-11	9/15/2022	10:20	D. Kimbrow	816.4	68.1	7.3	8.21	141.9	10.43	27.7	17.9	DK 9/16
SOGL-11	9/1/2022	13:35	D. Kimbrow	410.6	79.9	7.36	7.24	160.1	7.76	26	16.8	DK 9/2
SOGL-11	8/25/2022	10:05	D. Kimbrow	2419.6	73.5	7.21	7.26	96.1	64.1	19.4	12.5	DK 8/26
SOGL-11	8/17/2022	13:05	D. Kimbrow	727	75.3	7.33	7	149.3	7.25	6	3.9	DK 8/18
SOGL-11	8/10/2022	12:00	D. Kimbrow	866.4	77	7.32	7.16	119	16.1	26.6	17.2	DK 8/11
SOGL-11	8/3/2022	10:55	D. Kimbrow	1986.3	74.6	7.31	7.22	97.3	92.8	49.4	31.9	DK 8/4
SOGL-11	7/20/2022	11:35	D. Kimbrow	186	77.2	7.26	7.31	97.9	14.1	69.5	44.9	DK 7/21
SOGL-11	6/30/2022	12:35	D. Kimbrow	261.3	78.2	7.19	7.16	124.1	20	45.2	29.2	DK 7/1
SOGL-11	6/22/2022	12:20	D. Kimbrow	123.6	81.4	7.32	7.18	143.4	10.73	32.3	20.9	DK 6/23
SOGL-11	6/16/2022	9:30	D. Kimbrow	980.4	76.6	7.42	7.49	112.6	64.7	88.9	57.4	DK 6/17
SOGL-11	6/8/2022	15:18	D. Kimbrow	41.6	74.3	7.25	7.52	126.8	22.8	57.6	37.2	RM 6/9
SOGL-11	6/2/2022	11:20	R. McCurry	163.8	75	7.36	7.75	127.7	10.39	23.9	15.4	DK 6/3
SOGL-11	5/11/2022	11:55	D. Kimbrow	83.6	66.1	7.33	9.17	102.8	7.21	40.5	26.2	DK 5/12
SOGL-11	4/13/2022	11:10	D. Kimbrow	161.6	62.3	7.17	8.87	89.5	18.2	82.5	53.3	DK 4/14
SOGL-22	10/18/2022	14:00	D. Kimbrow	1119.9	61.7	7.54	9.41	140.1	5.4	37.3	24.1	DR 10/19
SOGL-22	9/15/2022	11:15	D. Kimbrow	209.8	69.7	7.62	8.73	145.3	7.89	27.7	17.9	DK 9/16
SOGL-22	9/1/2022	14:20	D. Kimbrow	142.1	77.7	7.8	8.06	195.3	5.53	26.9	17.4	DK 9/2
SOGL-22	8/25/2022	11:10	D. Kimbrow	980.4	73	7.51	7.84	129.9	30.8	21.4	13.8	DK 8/26
SOGL-22	8/17/2022	14:20	D. Kimbrow	218.7	74.9	7.71	7.97	186.1	4.6	5.7	3.7	DK 8/18
SOGL-22	8/10/2022	13:50	D. Kimbrow	209.8	77.6	7.55	7.8	137.9	10.32	25.5	16.5	DK 8/11
SOGL-22	8/3/2022	14:10	D. Kimbrow	1986.3	78.5	7.53	7.79	129.7	24.3	41.1	26.6	DK 8/4
SOGL-22	7/20/2022	12:40	D. Kimbrow	101.2	78	7.43	7.84	95	11.9	68.7	44.4	DK 7/21
SOGL-22	6/30/2022	14:25	D. Kimbrow	104.6	77.3	7.5	8.03	149.7	10.7	45.2	29.2	DK 7/1
SOGL-22	6/22/2022	14:35	D. Kimbrow	95.9	80.5	7.79	8.02	161.3	9.13	33.5	21.6	DK 6/23
SOGL-22	6/16/2022	12:10	D. Kimbrow	1203.3	77.5	7.54	8.26	113.3	20.3	73.7	47.6	DK 6/17
SOGL-22	6/8/2022	16:40	D. Kimbrow	54.5	73.3	7.52	8.53	131	33	58.3	37.7	RM 6/9
SOGL-22	6/2/2022	14:30	R. McCurry	73.3	76.1	7.78	8.45	145.9	6.43	23.4	15.1	DK 6/3
SOGL-22	5/11/2022	13:25	D. Kimbrow	41.1	67.9	7.47	9.54	96.6	4.1	30.5	19.7	DK 5/12
SOGL-22	4/13/2022	13:30	D. Kimbrow	111.2	63.2	7.47	9.93	82.7	14.1	83.4	53.9	DK 4/14
SOGUTL-1	10/18/2022	13:25	D. Kimbrow	157.6	54.1	7.15	9.15	119.7	3.57	-	-	DR 10/19
SOGUTL-1	9/15/2022	10:40	D. Kimbrow	365.4	70	7.14	8.17	113	4.62	-	-	DK 9/16
SOGUTL-1	9/1/2022	13:55	D. Kimbrow	275.5	74.9	7.25	7.76	114.2	3.86	-	-	DK 9/2
SOGUTL-1	8/25/2022	10:25	D. Kimbrow	579.4	71.4	7.06	6.89	106	6.08	-	-	DK 8/26
SOGUTL-1	8/17/2022	13:45	D. Kimbrow	1046.2	72.8	7.05	6.36	105.1	3.8	-	-	DK 8/18
SOGUTL-1	8/10/2022	13:10	D. Kimbrow	686.7	75.4	7.11	7.2	102.3	4.67	-	-	DK 8/11
SOGUTL-1	8/3/2022	13:20	D. Kimbrow	1299.7	75.4	7.32	8.83	115	4.63	-	-	DK 8/4
SOGUTL-1	7/20/2022	11:55	D. Kimbrow	866.4	77.1	7.17	7.9	124.5	2.8	-	-	DK 7/21
SOGUTL-1	6/30/2022	13:30	D. Kimbrow	365.4	74.8	7.07	7.99	110.5	4.4	0.3834	0.2	DK 7/1
SOGUTL-1	6/22/2022	13:45	R. McCurry	93.3	76.5	7.26	8.2	111.9	2.93	0.193	0.1	DK 6/23
SOGUTL-1	6/16/2022	11:25	D. Kimbrow	2419.6	75.8	7.1	8.06	109.4	-	0.8528	0.6	DK 6/17
SOGUTL-1	6/8/2022	15:46	D. Kimbrow	2419.6	72.5	6.9	7.34	66.9	2.92	1.7727	1.1	RM 6/9
SOGUTL-1	6/2/2022	13:30	D. Kimbrow	344.8	72.2	7	8.34	107.3	5.59	0.6935	0.4	DK 6/3
SOGUTL-1	5/11/2022	12:20	D. Kimbrow	160.7	65.3	7.09	9.41	109.8	2.71	0.5178	0.3	DK 5/12
SOGUTL-1	4/13/2022	12:40	D. Kimbrow	285.1	63.2	7	9.91	114.9	4.62	1.0284	0.7	DK 4/14
SOGUTL-4	10/18/2022	13:35	D. Kimbrow	87.8	54.5	7.3	9.39	146.1	5.73	-	-	DR 10/19
SOGUTL-4	9/15/2022	10:50	D. Kimbrow	235.9	67.1	7.32	8.43	139.4	7.62	-	-	DK 9/16
SOGUTL-4	9/1/2022	14:05	D. Kimbrow	34.5	73.2	7.41	7.84	157.4	3.16	-	-	DK 9/2
SOGUTL-4	8/25/2022	10:55	D. Kimbrow	2419.6	71.6	7.3	7.58	138.4	4.01	-	-	DK 8/26
SOGUTL-4	8/17/2022	13:55	D. Kimbrow	98.7	72.6	7.31	7.22	134.1	3.65	-	-	DK 8/18
SOGUTL-4	8/10/2022	13:20	D. Kimbrow	248.1	74.2	7.32	7.6	130.2	4.08	0.5837	0.4	DK 8/11
SOGUTL-4	8/3/2022	13:35	D. Kimbrow	2419.6	74.7	7.24	7.25	101.9	6.11	0.5268	0.3	DK 8/4
SOGUTL-4	7/20/2022	12:10	D. Kimbrow	240	75	7.36	7.99	149.7	2.71	0.5684	0.4	DK 7/21

Site Number	Sample Date	Sample Time	Sample Collected By & In-situ Parameters Analyzed By	<i>E. coli</i> (MPN)	Temperature (F)	pH	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Turbidity (NTU)	Streamflow (cfs)	Streamflow (MGD)	<i>E. coli</i> Sample Analyzed By & Date
SOGUTL-4	6/30/2022	13:55	D. Kimbrow	248.1	73.9	7.18	7.8	127	3.55	0.6143	0.4	DK 7/1
SOGUTL-4	6/22/2022	14:10	D. Kimbrow	80.9	75.1	7.42	7.95	142.5	3.79	0.4614	0.3	DK 6/23
SOGUTL-4	6/16/2022	11:40	D. Kimbrow	488.4	74.1	7.21	7.67	125.9	5.86	0.9613	0.6	DK 6/17
SOGUTL-4	6/8/2022	16:10	R. McCurry	1011.2	74.6	7.04	7.4	68.7	16.9	2.8161	1.8	RM 6/9
SOGUTL-4	6/2/2022	13:55	D. Kimbrow	115.3	71.9	7.33	8.14	144.1	5.12	0.6878	0.4	DK 6/3
SOGUTL-4	5/11/2022	12:45	D. Kimbrow	135.4	63.7	7.27	9.13	143.6	3.63	0.9919	0.6	DK 5/12
SOGUTL-4	4/13/2022	13:00	D. Kimbrow	307.6	63.5	7.25	9.7	141.4	3.94	2.2147	1.4	DK 4/14
SOGUTL-5	10/18/2022	10:30	D. Kimbrow	488.4	54.6	7.01	8.72	183.3	13.6	0.6271	0.4	DR 10/19
SOGUTL-5	9/15/2022	9:55	D. Kimbrow	547.5	66.4	7.18	8.13	86.9	11.42	-	-	DK 9/16
SOGUTL-5	9/1/2022	13:25	D. Kimbrow	1732.9	72.4	7.25	7.42	97.1	10.4	-	-	DK 9/2
SOGUTL-5	8/25/2022	9:45	D. Kimbrow	727	73.4	7.28	7.06	79.6	12.7	1.2407	0.8	DK 8/26
SOGUTL-5	8/17/2022	12:40	D. Kimbrow	396.8	71.1	7.33	7.04	98.4	0.77	0.9793	0.6	DK 8/18
SOGUTL-5	8/10/2022	11:25	D. Kimbrow	920.8	73.3	7.28	7.28	85.6	14.6	0.9208	0.6	DK 8/11
SOGUTL-5	8/3/2022	10:25	D. Kimbrow	387.3	71.8	7.29	7.2	104.1	8.86	0.7266	0.5	DK 8/4
SOGUTL-5	7/20/2022	11:10	D. Kimbrow	248.9	75.5	7.23	7.4	85.7	11.14	1.1703	0.8	DK 7/21
SOGUTL-5	6/30/2022	12:00	D. Kimbrow	579.4	75.4	7.06	7.15	76.6	15.9	1.6513	1.1	DK 7/1
SOGUTL-5	6/22/2022	11:55	D. Kimbrow	579.4	72.9	7.16	7.23	84.9	12.1	0.7982	0.5	DK 6/23
SOGUTL-5	6/16/2022	9:15	D. Kimbrow	613.1	76.2	7.24	7.24	75.3	15.8	3.1833	2.1	DK 6/17
SOGUTL-5	6/8/2022	14:40	R. McCurry	437.4	72.6	6.96	7.19	69.5	103.1	5.3708	3.5	RM 6/9
SOGUTL-5	6/2/2022	10:50	D. Kimbrow	648.8	71	7.4	7.86	69.3	18.9	1.9245	1.2	DK 6/3
SOGUTL-5	5/11/2022	10:25	D. Kimbrow	248.1	62.1	7.14	8.99	77.5	11.67	1.2375	0.8	DK 5/12
SOGUTL-5	4/13/2022	10:45	D. Kimbrow	172.3	61.9	7.2	8.75	66.6	18.4	5.7055	3.7	DK 4/14
SOGUTL-6	10/18/2022	10:05	D. Kimbrow	20.6	65.6	7.13	8.49	108.3	10.19	-	-	DR 10/19
SOGUTL-6	9/15/2022	9:35	D. Kimbrow	3.1	78	7.26	6.62	105.9	4.9	-	-	DK 9/16
SOGUTL-6	9/1/2022	12:45	D. Kimbrow	1	88.1	8.36	8.85	109	3.12	-	-	DK 9/2
SOGUTL-6	8/25/2022	9:20	D. Kimbrow	8.6	80.4	7.22	5.67	104.8	5.15	-	-	DK 8/26
SOGUTL-6	8/17/2022	13:30	D. Kimbrow	4.1	84	7.94	8.04	104.7	4.88	-	-	DK 8/18
SOGUTL-6	8/10/2022	11:00	D. Kimbrow	2	86.1	8.24	9.1	101.1	4.53	-	-	DK 8/11
SOGUTL-6	8/3/2022	9:55	D. Kimbrow	4.1	84.2	7.66	6.8	97.8	6.5	-	-	DK 8/4
SOGUTL-6	7/20/2022	10:35	D. Kimbrow	8.6	86.2	8.33	8.58	86.7	7.47	-	-	DK 7/21
SOGUTL-6	6/30/2022	10:55	D. Kimbrow	40.4	84.7	7.39	6.62	126.9	5.59	1.0591	0.7	DK 7/1
SOGUTL-6	6/22/2022	11:25	D. Kimbrow	3.1	88.8	8.37	9.21	121.6	3.66	-	-	DK 6/23
SOGUTL-6	6/16/2022	8:55	D. Kimbrow	69.5	84.5	7.55	7.22	119.1	7.92	-	-	DK 6/17
SOGUTL-6	6/8/2022	14:09	R. McCurry	6.2	81.6	7.9	8.84	121.6	3.61	-	-	RM 6/9
SOGUTL-6	6/2/2022	10:20	D. Kimbrow	1	82.6	8.52	9.4	115.8	3.73	-	-	DK 6/3
SOGUTL-6	5/11/2022	9:45	D. Kimbrow	3	74	8.01	9.36	130.4	4.11	-	-	DK 5/12
SOGUTL-6	4/13/2022	10:00	D. Kimbrow	3.1	66.4	7.23	7.75	109.9	21.7	1.4709	1.0	DK 4/14
SOGUTL-4	6/30/2022	13:55	D. Kimbrow	248.1	73.9	7.18	7.8	127	3.55	0.6143	0.4	DK 7/1
SOGUTL-4	6/22/2022	14:10	D. Kimbrow	80.9	75.1	7.42	7.95	142.5	3.79	0.4614	0.3	DK 6/23
SOGUTL-4	6/16/2022	11:40	D. Kimbrow	488.4	74.1	7.21	7.67	125.9	5.86	0.9613	0.6	DK 6/17
SOGUTL-4	6/8/2022	16:10	R. McCurry	1011.2	74.6	7.04	7.4	68.7	16.9	2.8161	1.8	RM 6/9
SOGUTL-4	6/2/2022	13:55	D. Kimbrow	115.3	71.9	7.33	8.14	144.1	5.12	0.6878	0.4	DK 6/3
SOGUTL-4	5/11/2022	12:45	D. Kimbrow	135.4	63.7	7.27	9.13	143.6	3.63	0.9919	0.6	DK 5/12
SOGUTL-4	4/13/2022	13:00	D. Kimbrow	307.6	63.5	7.25	9.7	141.4	3.94	2.2147	1.4	DK 4/14

2.5 Parkerson Mill Creek Compliance Monitoring

Parkerson Mill Creek was placed on the ADEM 303(d) list of impaired waterbodies for pathogens in 2008. The impaired reach is 6.85 mi. long and includes all waters from its source (near the intersection of N. College St. and Glenn Ave. in downtown Auburn) to its confluence with Chewacla Creek. Potential sources of pathogens were listed as sanitary sewer overflows and urban runoff. In 2010, ADEM collected samples at stations PM3, PKML-1, PKML-5, and PKML-2 to determine the basis for the TMDL. The final Parkerson Mill Creek TMDL was issued in September 2011, identifying *E. coli* as the pollutant of concern. The Parkerson Mill Creek TMDL established the *E. coli* limits in stormwater at 3.42E+09 colonies/day, also expressed as a 61% reduction in non-point sources. This TMDL was established using the geometric mean criterion of 126 cfu/100mL or MPN.

Because of the impairment and subsequent TMDL, the City has been monitoring *E. coli* concentrations in Parkerson Mill Creek through intensive *E. coli* sampling at the same four (4) monitoring sites used by ADEM since 2015. The City added two (2) sites (PKML-6 and PKML-7) to the sampling schedule in 2021 to further refine the possible sources of high *E. coli* concentrations in the watershed.

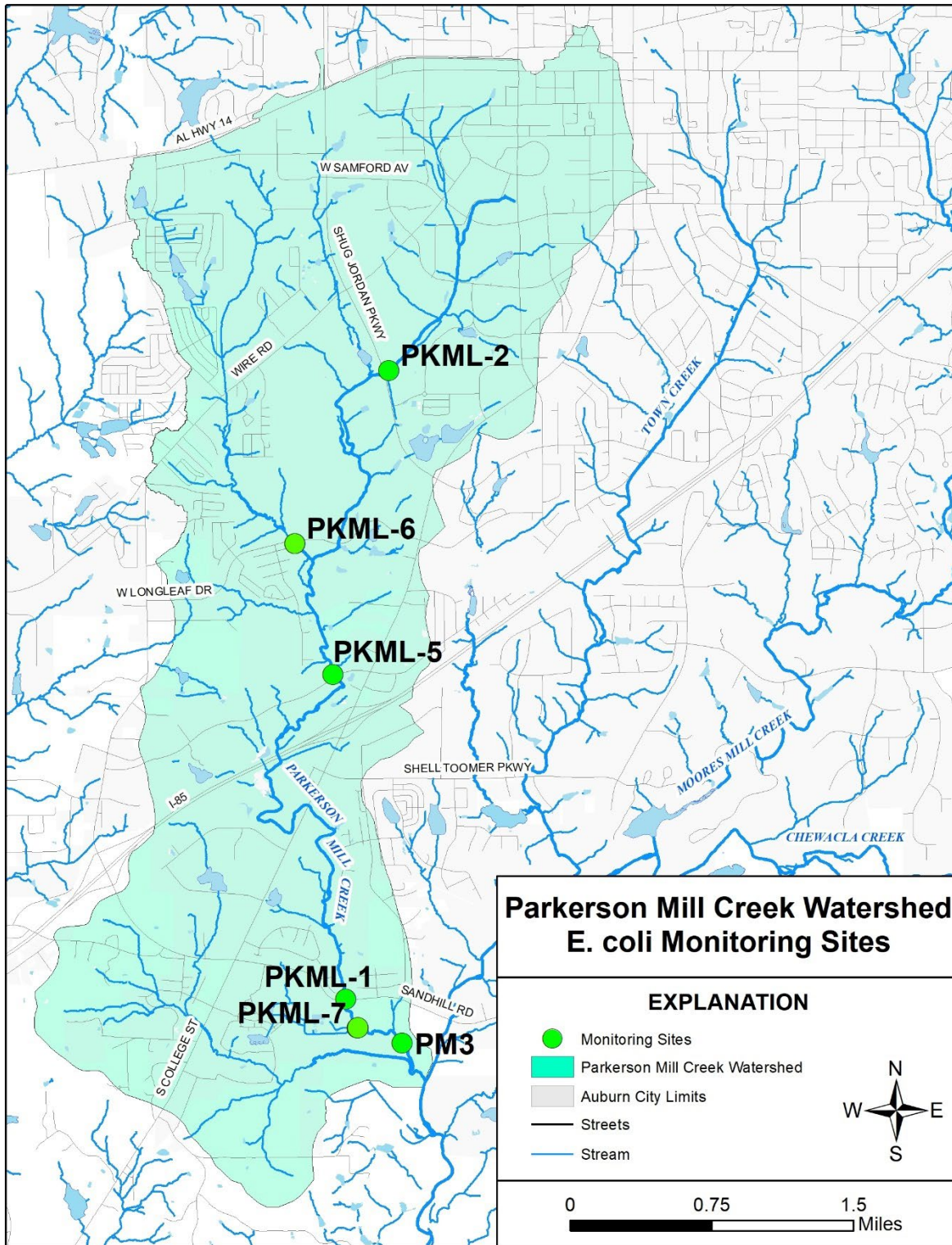
Site PKML-6 is located at W. Longleaf Dr. on an unnamed tributary to Parkerson Mill Creek that drains an area where many mobile home parks are located. Some of these communities are on private sewer systems, and the infrastructure includes septic lagoons and lift stations that have a history of failure. This tributary enters the main stem of Parkerson Mill Creek between sites PKML-2 and PKML-5.

Site PKML-7 is located on a small unnamed tributary that drains the H.C. Morgan Water Pollution Control Facility. This tributary enters Parkerson Mill Creek between sites PKML-1 and PM3. Sampling at this location will determine if the runoff from the WPCF is contributing to the rise in concentrations between PKML-1 and PM3.

Single samples are collected for *E. coli* once per month for April, May, July, September, and October. Weekly samples are collected at those sites during June and August. The 5-week geometric mean *E. coli* concentrations are calculated based on the results of the weekly sampling. The City also makes a reasonable effort to measure streamflow in-situ (recorded in cfs and MGD) at each sample site after water samples are collected when flow conditions permit. Water temperature, pH, dissolved oxygen, specific conductance, and turbidity are also measured in-situ at each site.

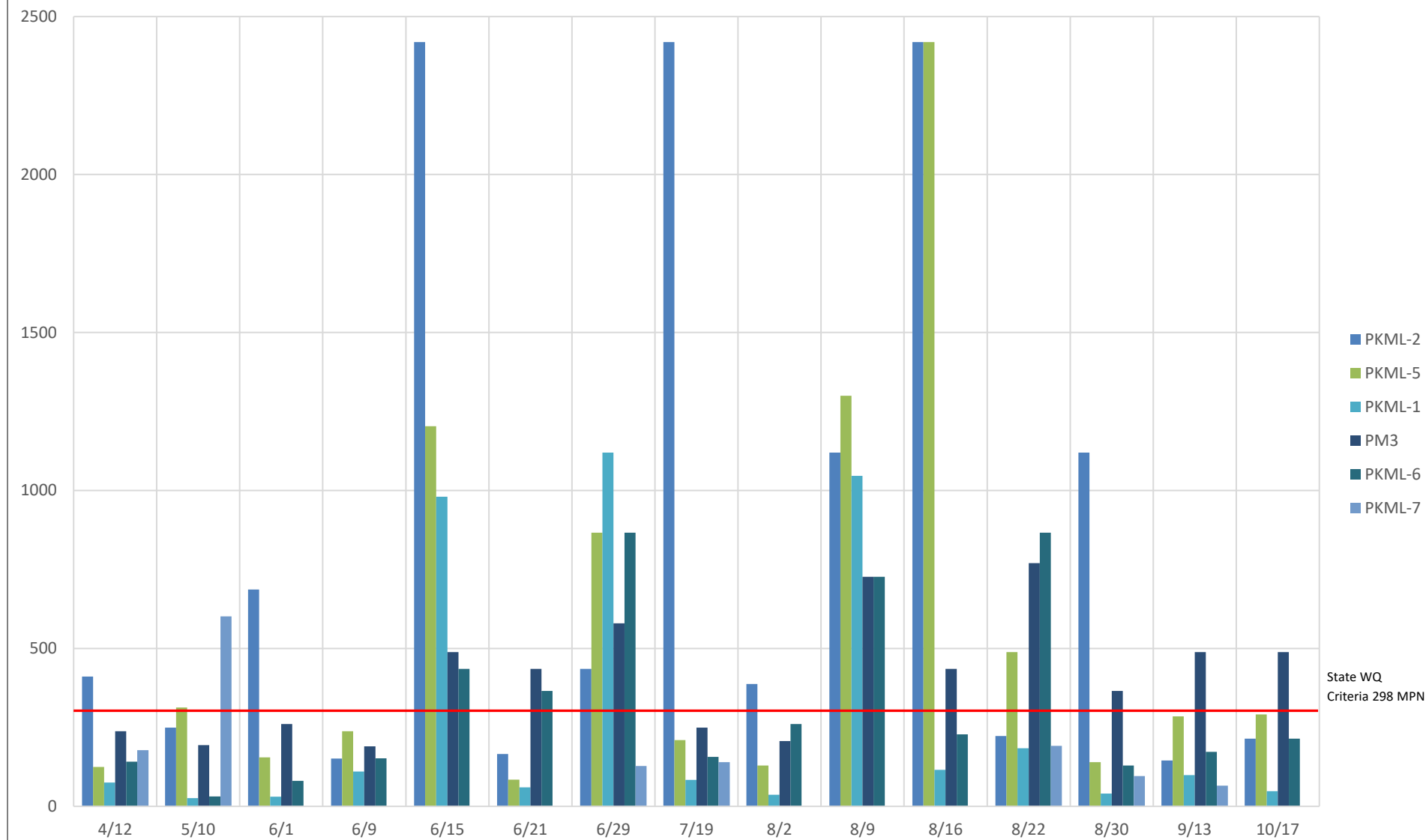
2.5.1 Parkerson Mill Creek *E. coli* Monitoring Results

In general, over the last decade *E. coli* concentrations in Parkerson Mill Creek are higher in the upper reaches near sample sites PKML-2 and PKML-5. *E. coli* concentrations are lower near sample site PKML-1, and then increase again at site PM3 as the creek nears its confluence with Chewacla Creek. This trend has generally been predictable going back to the ADEM study in 2010. In 2022, the June geomean sample data showed five sites above state water quality criteria for Parkerson Mill Creek's designated use of Fish and Wildlife (126 MPN). No samples were collected at site PKML-7 due to the lack of water in the stream channel. In June, PKML-1 was had the lowest geomean concentration (186 MPN), and PKML-2 had the highest concentration (449 MPN). Data results from August showed an increase in *E. coli* concentrations across all sites in the watershed except for PKML-1, which exhibited a slightly lower geomean (127 MPN). In both June and August, 52% of single samples exceeded the State criteria for single sample maximum (298 MPN). *E. coli* concentrations were higher in 2022 than in 2021 in the Parkerson Mill Creek watershed.

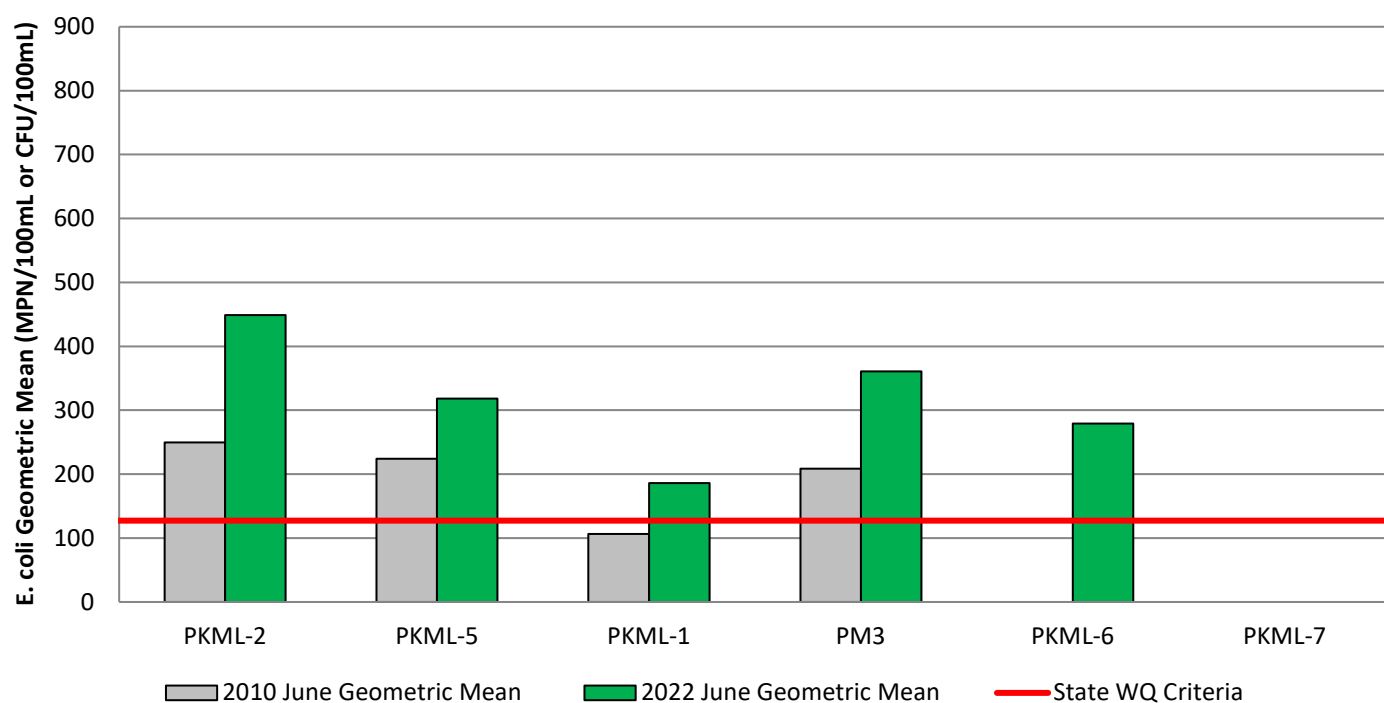


Parkerson Mill Creek Watershed Monitoring Sites

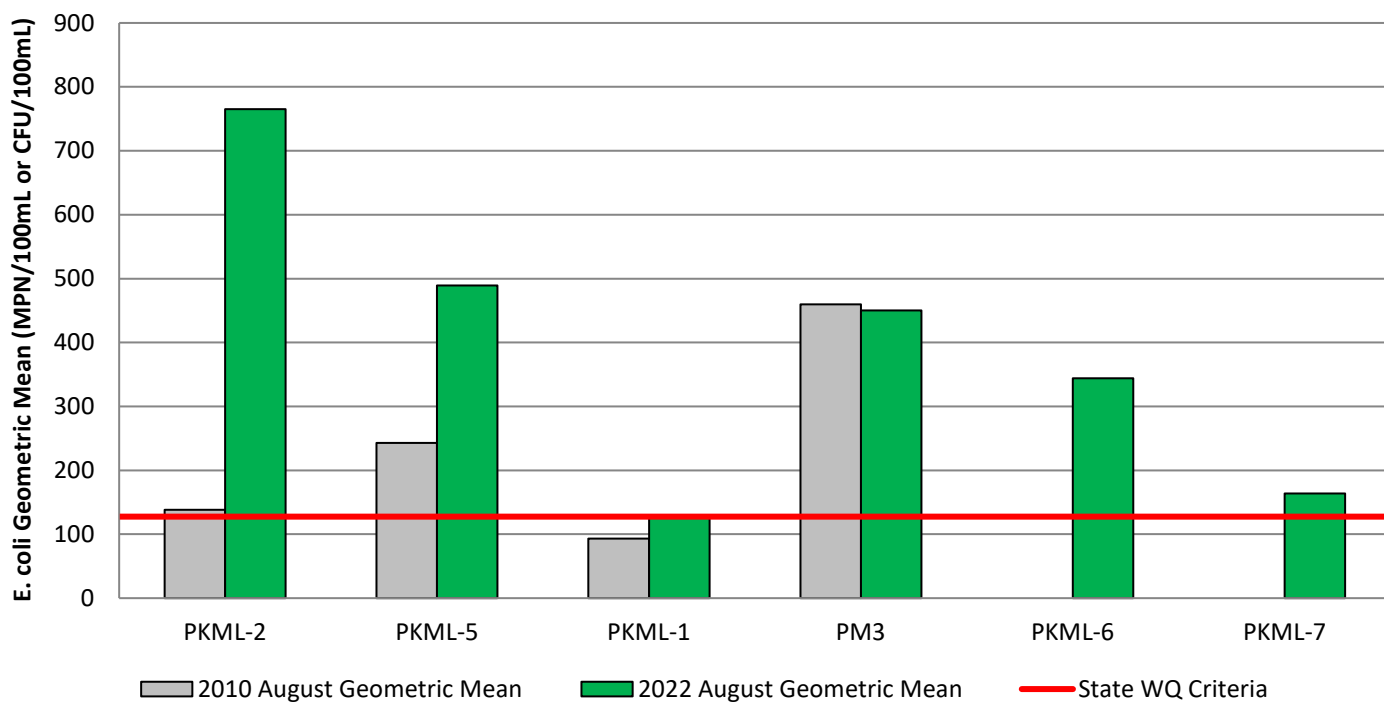
Parkerson Mill Creek E. coli Single Sample Results for 2022



Parkerson Mill Creek E. coli Geomean Results for June 2022



Parkerson Mill Creek E. coli Geomean Results for August 2022



Parkerson Mill Creek Watershed Monitoring Data

Site Number	Site Location	Site Coordinates
PKML-1	Parkerson Mill Creek at Sand Hill Rd	32.53744 N, 85.50601 W
PKML-2	Parkerson Mill Creek at Shug Jordan Pkwy	32.58551 N, 85.50249 W
PKML-5	Parkerson Mill Creek at W. Veterans Blvd	32.56243 N, 85.50716 W
PKML-6	Unnamed Tributary to Parkerson Mill Creek	32.57266 N, 85.51073 W
PKML-7	Unnamed Tributary to Parkerson Mill Creek	32.53539 N, 85.50560 W
PM-3	Parkerson Mill Creek below HC Morgan WPCF	32.53427 N, 85.50156 W

Water Quality Parameter	Analytical Method
Temperature (F)	YSI 5560
pH (Standard Units)	YSI 1001
Dissolved Oxygen (mg/L)	YSI 2003
Specific Conductance (µS/cm)	YSI 5560
Turbidity (NTU)	SM 2130 B
<i>E. coli</i> (MPN)	IDEXX

Parkerson Mill Creek Watershed <i>E. coli</i> Sampling Results												
Site Number	Sample Date	Sample Time	Sample Collected By & In-situ Parameters Analyzed By	<i>E. coli</i> (MPN)	Temperature (F)	pH	Dissolved Oxygen (mg/L)	Specific Conductance (µS/cm)	Turbidity (NTU)	Streamflow (cfs)	Streamflow (MGD)	<i>E. coli</i> Sample Analyzed By & Date
PKML-1	10/17/2022	14:55	D. Kimbrow	48	66.3	8.18	9.51	156.7	3.42	1.5	0.97	DK 10/18
PKML-2	10/17/2022	14:35	D. Kimbrow	214.3	64.3	7.82	9.82	315.1	3.21	-	-	DK 10/18
PKML-5	10/17/2022	14:00	D. Kimbrow	290.9	63.1	7.62	9.6	178.2	2.25	-	-	DK 10/18
PKML-6	10/17/2022	14:20	D. Kimbrow	214.3	62.7	7.41	8.86	149.4	1.96	-	-	DK 10/18
PKML-7	10/17/2022	13:35	D. Kimbrow	65.7	65.2	7.12	8.07	56.5	6.21	-	-	DK 10/18
PM3	10/17/2022	12:55	D. Kimbrow	488.4	73.2	7.22	7.85	320.9	2.43	14.8517	9.59	DK 10/18
PKML-1	9/13/2022	12:05	D. Kimbrow	98.7	71.6	7.92	9.3	132.7	2.92	4	2.58	DK 9/14
PKML-2	9/13/2022	15:00	D. Kimbrow	145.5	71.1	7.97	9.28	256	7.36	0.4684	0.30	DK 9/14
PKML-5	9/13/2022	14:00	D. Kimbrow	285.1	71.9	7.58	8.56	145	3.78	1.5608	1.01	DK 9/13
PKML-6	9/13/2022	14:35	D. Kimbrow	172.3	69.6	7.36	8.13	120.3	3.67	-	-	DK 9/14
PKML-7	9/13/2022	11:40	D. Kimbrow	95.9	72.6	7.29	8	48.4	3.85	-	-	DK 9/13
PM3	9/13/2022	11:00	D. Kimbrow	488.4	76.3	7.28	7.29	294.1	2.99	13.9374	9.00	DK 9/14
PKML-1	8/30/2022	10:50	D. Kimbrow	40.2	77.6	7.83	8.09	153.3	1.9	2.3	1.49	DK 8/31
PKML-2	8/30/2022	14:15	D. Kimbrow	1119.9	76.6	7.97	8.29	311.5	4.05	1.3307	0.86	DK 8/31
PKML-5	8/30/2022	11:10	D. Kimbrow	140.1	75.6	7.57	7.4	188.5	1.53	1.2697	0.82	DK 8/31
PKML-6	8/30/2022	14:00	D. Kimbrow	129.1	75.1	7.38	7.59	136.5	2.31	-	-	DK 8/31
PKML-7	8/30/2022	10:30	D. Kimbrow	191.8	75.8	6.97	6.88	65.7	5.09	-	-	DK 8/31
PM3	8/30/2022	9:45	D. Kimbrow	365.4	78.3	7.29	6.74	309.6	3.1	11.6608	7.53	DK 8/31
PKML-7	8/22/2022	11:35	No sample	-	-	-	-	-	-	-	-	-
PKML-1	8/22/2022	11:50	D. Kimbrow	184.2	75.5	7.87	8.35	121.2	6.63	4.8	3.10	DK 8/23
PKML-2	8/22/2022	13:10	D. Kimbrow	222.4	74.2	7.8	8.12	289.6	5.79	0.7671	0.50	DK 8/23
PKML-5	8/22/2022	12:05	D. Kimbrow	488.4	74.9	7.46	7.8	121.4	4.97	2.785	1.80	DK 8/23
PKML-6	8/22/2022	12:40	D. Kimbrow	866.4	73.6	7.31	7.47	102.6	4.86	0.5444	0.35	DK 8/23
PM3	8/22/2022	11:10	D. Kimbrow	770.1	77.6	7.32	7.26	283.9	6.89	16.4804	10.65	DK 8/23
PKML-1	8/16/2022	10:25	D. Kimbrow	115.3	76	8	8.27	185.8	2.62	4	2.58	DK 8/17
PKML-2	8/16/2022	12:00	D. Kimbrow	2419.6	75.6	7.39	7	151	9.76	0.519	0.34	DK 8/17
PKML-5	8/16/2022	10:55	D. Kimbrow	2419.6	74.5	7.39	6.91	174	6.18	1.4019	0.91	DK 8/17
PKML-6	8/16/2022	11:30	D. Kimbrow	228.2	72.9	7.44	7.5	154.2	2.82	0.1729	0.11	DK 8/17
PKML-7	8/16/2022	10:05	No sample	-	-	-	-	-	-	-	-	-
PM3	8/16/2022	9:35	D. Kimbrow	435.2	77.5	7.36	7.04	298.4	4.73	16.3218	10.54	DK 8/17
PKML-1	8/9/2022	12:30	D. Kimbrow	1046.2	77.3	7.86	8.32	95.9	17.8	6	3.88	DK 8/10
PKML-2	8/9/2022	14:05	D. Kimbrow	1119.9	76.3	7.66	7.89	170.6	10.6	0.6788	0.44	DK 8/9
PKML-5	8/9/2022	12:45	D. Kimbrow	1299.7	76.7	7.5	7.73	118.9	12.28	3.2588	2.11	DK 8/10
PKML-6	8/9/2022	13:40	D. Kimbrow	727	74.3	7.2	7.37	106.2	9.4	0.4757	0.31	DK 8/9
PKML-7	8/9/2022	12:00	No sample	-	-	-	-	-	-	-	-	-
PM3	8/9/2022	11:20	D. Kimbrow	727	78.2	7.46	7.5	249.3	11.9	19.1463	12.37	DK 8/10
PKML-1	8/2/2022	10:55	D. Kimbrow	36.4	77.9	8.1	8.4	195.1	1.45	1.4	0.90	DK 8/3
PKML-2	8/2/2022	14:40	D. Kimbrow	387.3	77.2	7.79	8.2	293.5	30.4	0.3692	0.24	DK 8/3

**Parkerson Mill Creek Watershed
E. coli Sampling Results**

Site Number	Sample Date	Sample Time	Sample Collected By & In-situ Parameters Analyzed By	E. coli (MPN)	Temperature (F)	pH	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Turbidity (NTU)	Streamflow (cfs)	Streamflow (MGD)	E. coli Sample Analyzed By & Date
PKML-5	8/2/2022	11:10	D. Kimbrow	129.6	76	7.63	7.69	213.7	1.64	0.8535	0.55	DK 8/3
PKML-6	8/2/2022	14:10	D. Kimbrow	260.3	75	7.44	7.91	116.7	1.87	-	-	DK 8/3
PKML-7	8/2/2022	10:25	D. Kimbrow	140.1	78.3	7.18	7.79	74.4	5.54	-	-	DK 8/3
PM3	8/2/2022	9:45	D. Kimbrow	206.4	78	7.4	7.26	311.4	1.84	9.8255	6.35	DK 8/3
PKML-1	7/19/2022	12:30	D. Kimbrow	83.6	79	8.14	8.01	167.6	2.77	2.3	1.49	DK 7/20
PKML-2	7/19/2022	13:50	D. Kimbrow	2419.6	75.3	7.79	8.27	313.1	3.58	3.5687	2.31	DK 7/20
PKML-5	7/19/2022	12:45	D. Kimbrow	209.8	77.4	7.61	8	184.3	2.4	2.0879	1.35	DK 7/20
PKML-6	7/19/2022	13:20	D. Kimbrow	156.5	74.6	7.28	7.57	141.9	3.21	0.4664	0.30	DK 7/20
PKML-7	7/19/2022	12:15	D. Kimbrow	128.1	81.9	7.2	6.76	61.9	5.83	-	-	DK 7/20
PM3	7/19/2022	11:45	D. Kimbrow	248.9	78.7	7.46	7.67	289.1	2.34	11.6488	7.53	DK 7/20
PKML-1	6/29/2022	12:20	D. Kimbrow	1119.9	77.8	7.96	8.13	111	12.47	6	3.88	DK 6/30
PKML-2	6/29/2022	15:25	D. Kimbrow	435.2	76.6	7.73	7.92	179.3	6.61	0.7171	0.46	DK 6/30
PKML-5	6/29/2022	14:10	D. Kimbrow	866.4	78.7	7.59	8.02	114.9	10.84	3.1317	2.02	DK 6/30
PKML-6	6/29/2022	15:00	D. Kimbrow	866.4	75.2	7.34	7.33	92.9	11.16	0.8307	0.54	DK 6/30
PM3	6/29/2022	11:25	D. Kimbrow	579.4	76.8	7.42	7.38	245.1	10.56	19.1022	12.34	DK 6/30
PKML-1	6/21/2022	11:00	D. Kimbrow	60.2	74.9	7.96	8.61	183.1	1.62	0.4	0.26	DK 6/22
PKML-2	6/21/2022	14:05	D. Kimbrow	165.8	75.6	8.16	9.35	336.3	0.76	0.3502	0.23	DK 6/22
PKML-5	6/21/2022	13:00	D. Kimbrow	84.2	76.9	7.71	8.5	214.8	1.34	0.8755	0.57	DK 6/22
PKML-6	6/21/2022	13:35	D. Kimbrow	365.4	73.4	7.44	7.67	125.5	2.91	0.2151	0.14	DK 6/22
PKML-7	6/21/2022	10:45	No sample	-	-	-	-	-	-	-	-	-
PM3	6/21/2022	10:15	D. Kimbrow	435.2	76.2	7.45	6.99	321	3.7	8.5253	5.51	DK 6/22
PKML-1	6/15/2022	12:15	D. Kimbrow	980.4	78.9	7.9	7.89	119.2	15.1	4	2.58	DK 6/16
PKML-2	6/15/2022	10:20	D. Kimbrow	2419.6	74.2	7.71	8.15	224.8	11.9	1.1394	0.74	DK 6/16
PKML-5	6/15/2022	9:15	D. Kimbrow	1203.3	74.3	7.52	7.27	126	13.8	3.1817	2.06	DK 6/16
PKML-6	6/15/2022	9:50	D. Kimbrow	435.2	72.9	7.27	7.35	91.7	23.7	0.4778	0.31	DK 6/16
PKML-7	6/15/2022	12:05	No sample	-	-	-	-	-	-	-	-	-
PM3	6/15/2022	11:30	D. Kimbrow	488.4	77.1	7.41	7.41	270.2	9.86	15.6779	10.13	DK 6/16
PKML-1	6/9/2022	10:50	R. McCurry	110.6	74.7	7.69	7.3	117.1	7.56	4.5	2.91	DR 6/10
PKML-2	6/9/2022	14:15	R. McCurry	151.5	75.1	7.88	7.2	239.3	3.02	0.7523	0.49	DR 6/10
PKML-5	6/9/2022	11:15	R. McCurry	238.2	74.2	7.45	7.8	116.7	7.14	3.1083	2.01	DR 6/10
PKML-6	6/9/2022	11:45	R. McCurry	152.3	72.3	7.18	7.92	106.2	5.49	0.5571	0.36	DR 6/10
PKML-7	6/9/2022	-	No sample	-	-	-	-	-	-	-	-	-
PM3	6/9/2022	10:07	R. McCurry	190.4	74.3	7.27	7.48	254.1	4.3	14.4071	9.31	DR 6/10
PKML-1	6/1/2022	10:45	D. Kimbrow	30.5	73.9	7.9	8.49	176.1	5.24	3.4	2.20	DK 6/2
PKML-2	6/1/2022	13:50	D. Kimbrow	686.7	72.7	7.93	9.2	306.3	1.8	0.837	0.54	DK 6/2
PKML-5	6/1/2022	11:15	D. Kimbrow	155.3	72.5	7.59	8.6	183.8	4.38	2.4118	1.56	DK 6/2
PKML-6	6/1/2022	11:50	D. Kimbrow	80.9	71	7.29	7.94	129.8	5.33	0.4862	0.31	DK 6/2
PKML-7	6/1/2022	10:30	No sample	-	-	-	-	-	-	-	-	-
PM3	6/1/2022	9:35	D. Kimbrow	260.3	72.8	7.15	7.79	288	4.42	12.7228	8.22	DK 6/2
PKML-1	5/10/2022	10:50	D. Kimbrow	26.2	65.4	7.89	9.03	188	3.06	0.8	0.52	DK 5/11
PKML-2	5/10/2022	13:55	D. Kimbrow	248.9	66.1	7.92	9.99	324.1	1.59	0.55	0.36	DK 5/11
PKML-5	5/10/2022	13:10	D. Kimbrow	313	68	7.69	9.59	195.1	null	2.0631	1.33	DK 5/11
PKML-6	5/10/2022	12:40	D. Kimbrow	31.7	64.1	7.39	8.97	145.7	3.63	0.5683	0.37	DK 5/11
PKML-7	5/10/2022	10:35	D. Kimbrow	601.5	72.1	7.37	7.56	98.7	17	-	-	DK 5/11
PM3	5/10/2022	9:50	D. Kimbrow	193.5	68.1	7.33	7.46	311.7	6.98	14.3882	9.29	DK 5/11
PKML-1	4/12/2022	10:45	D. Kimbrow	75.4	59.9	7.95	10.43	154.3	4.87	7	4.52	DK 4/13
PKML-2	4/12/2022	14:05	D. Kimbrow	410.6	62.6	7.79	11.25	262.4	3.42	1.566	1.01	DK 4/13
PKML-5	4/12/2022	11:00	D. Kimbrow	125	60.3	7.54	10.52	159.7	4.64	7.2943	4.71	DK 4/13
PKML-6	4/12/2022	13:35	D. Kimbrow	141.4	62	7.26	9.99	135.3	5.05	2.0947	1.35	DK 4/13
PKML-7	4/12/2022	10:15	D. Kimbrow	178	64.9	7.41	9.5	89.1	14.2	-	-	DK 4/13
PM3	4/12/2022	9:25	D. Kimbrow	238.2	61.9	7.38	9.28	230.2	6.04	24.8975	16.08	DK 4/13

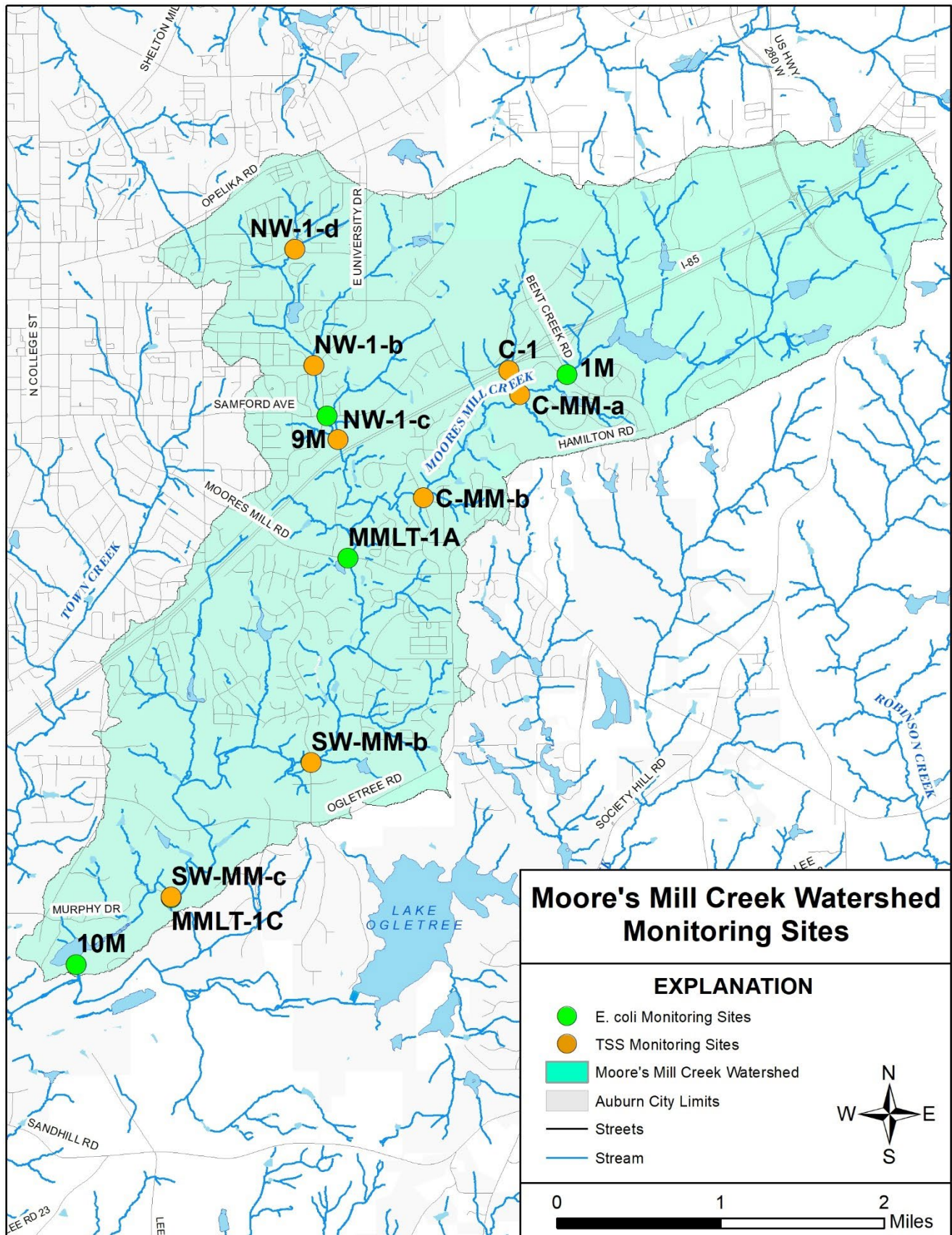
2.6 Moore's Mill Creek Compliance Monitoring

Moore's Mill Creek was placed on the draft 303(d) list for siltation in 1998 and has been on the Final 303(d) list since 2000. The impaired reach is 10.51 mi. and includes all waters from its source to the confluence with Chewacla Creek at Chewacla State Park. Habitat degradation due to sedimentation/siltation is the impairment in Moore's Mill Creek. Potential sources of the impairment are listed as land development and urban runoff/storm sewers. The Moore's Mill Creek Watershed Management Plan was completed in 2008. This plan outlined several objectives aimed to reduce sedimentation and mitigate habitat degradation. Included in the plan were geomorphic surveys and Bank Erosion Hazard Index (BEHI) assessments of stream reaches on both the main stem and tributaries throughout the watershed. Findings from these geomorphic surveys and BEHI assessments identified in-stream sediment loading from streambank erosion as a significant contributor to the impairment. The watershed management plan recommended continued monitoring of these sites to evaluate the success of future efforts aimed to reduce bank erosion.

2.6.1 Moore's Mill Creek *E. coli* Monitoring Results

Moore's Mill Creek was placed on the Final ADEM 303(d) list for pathogen impairment in 2022. The impaired reach is 10.51 mi. long and includes waters from its source to the confluence with Chewacla Creek. ADEM considered collection system failure and urban runoff/storm sewers as potential sources of the impairment. According to the 2022 303(d) List Fact Sheet <https://adem.alabama.gov/programs/water/wquality/2022AL303dFactSheet.pdf>, ADEM collected samples at stations MMLT-1A and MMLT-1C in 2020 to determine the basis for adding Moore's Mill Creek to the 303(d) list. Their records indicate that 4 of 8 samples at MMLT-1A and 3 of 8 samples at MMLT-1C exceeded the single sample criterion of 235 MPN. Moore's Mill Creek has a State Use Classification of both Swimming and Fish & Wildlife. The Swimming classification has a more stringent *E. coli* concentration criteria than the Fish and Wildlife classification (235 MPN versus 298 MPN). The City monitored *E. coli* concentrations in the Moore's Mill Creek watershed through intensive *E. coli* sampling at five (5) sites in 2022. The City also made a reasonable effort to measure streamflow in-situ (recorded in cfs and MGD) at sites 1M, MMLT-1A, and MMLT-1C after water samples were collected when flow conditions were appropriate. Water temperature, pH, dissolved oxygen, specific conductance, and turbidity were also measured in-situ at each site. In 2022, weekly samples were collected in August, and monthly samples were collected in September and October. The 5-week geometric mean was calculated based on the results of the weekly August sampling.

In 2022, the August geomean sample data showed three (3) of five (5) sites above state water quality criteria for Moore's Mill Creek's designated use of Fish and Wildlife and Swimming (126 MPN). In August, 10M had the lowest geomean concentration (12 MPN), and 9M had the highest concentration (711 MPN). Thirty-six percent (36%) of single samples exceeded the State criteria for single sample maximum (235 MPN).



Moore's Mill Creek Watershed Monitoring Sites

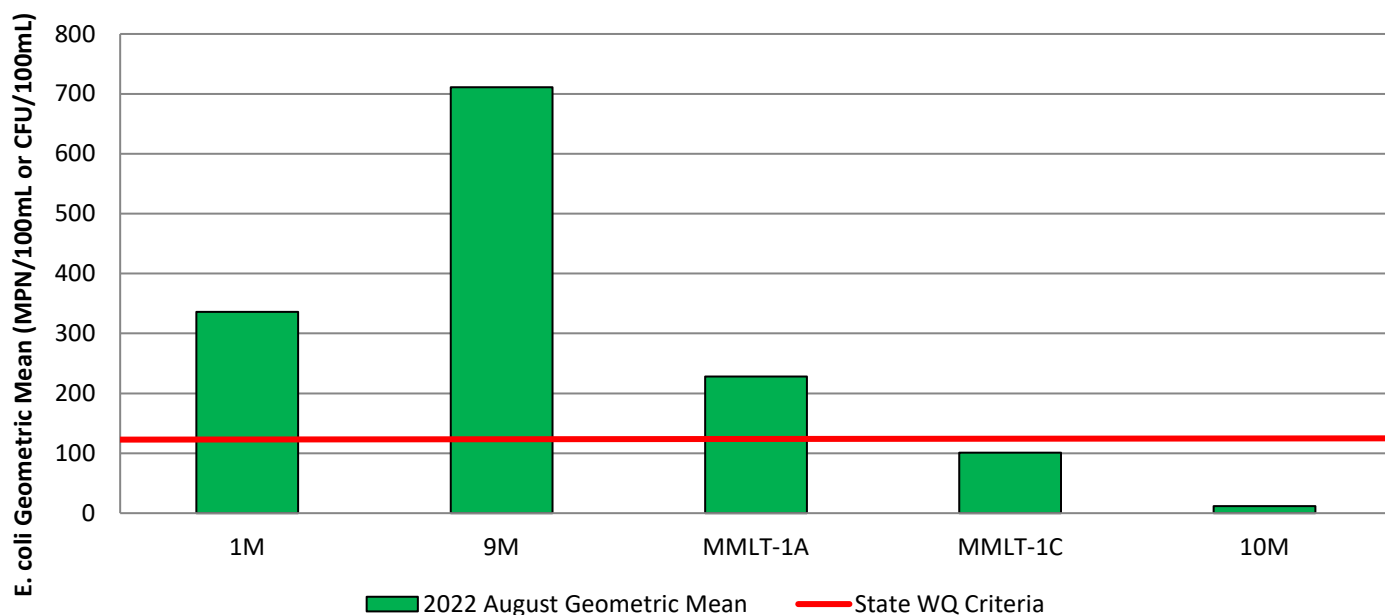
Moore's Mill Creek Watershed Monitoring Data

Site Number	Pollutant of Concern	Sample Point Coordinates	Reach Length	Upstream Coordinates	Downstream Coordinates
C-1	Total Suspended Solids	32.601317 N, 85.432751 W	550 ft.	32.601404 N, 85.432698 W	32.600192 N, 85.432044 W
C-MM-a	Total Suspended Solids	32.600547 N, 85.431499 W	950 ft.	32.600874 N, 85.428538 W	32.600530 N, 85.431463 W
C-MM-b	Total Suspended Solids	32.591393 N, 85.441716 W	1100 ft.	32.591034 N, 85.442119 W	32.590912 N, 85.444596 W
NW-1-b	Total Suspended Solids	32.603218 N, 85.453167 W	600 ft.	32.603946 N, 85.453310 W	32.602333 N, 85.453047 W
NW-1-c	Total Suspended Solids	32.596551 N, 85.450685 W	850 ft.	32.597506 N, 85.451326 W	32.595712 N, 85.450483 W
NW-1-d	Total Suspended Solids	32.613251 N, 85.455441 W	950 ft.	32.613527 N, 85.455178 W	32.611580 N, 85.456570 W
SW-MM-b	Total Suspended Solids	32.567913 N, 85.453569 W	650 ft.	32.568631 N, 85.451830 W	32.567873 N, 85.453612 W
SW-MM-c	Total Suspended Solids	32.555958 N, 85.468278 W	1350 ft.	32.559094 N, 85.463712 W	32.558760 N, 85.466685 W
1M	<i>E. coli</i>	32.602314 N, 85.426609 W	N/A	N/A	N/A
9M	<i>E. coli</i>	32.598475 N, 85.451829 W	N/A	N/A	N/A
MMLT-1A	<i>E. coli</i>	32.586139 N, 85.449657 W	N/A	N/A	N/A
MMLT-1C	<i>E. coli</i>	32.555958 N, 85.468278 W	N/A	N/A	N/A
10M	<i>E. coli</i>	32.549943 N, 85.478181 W	N/A	N/A	N/A

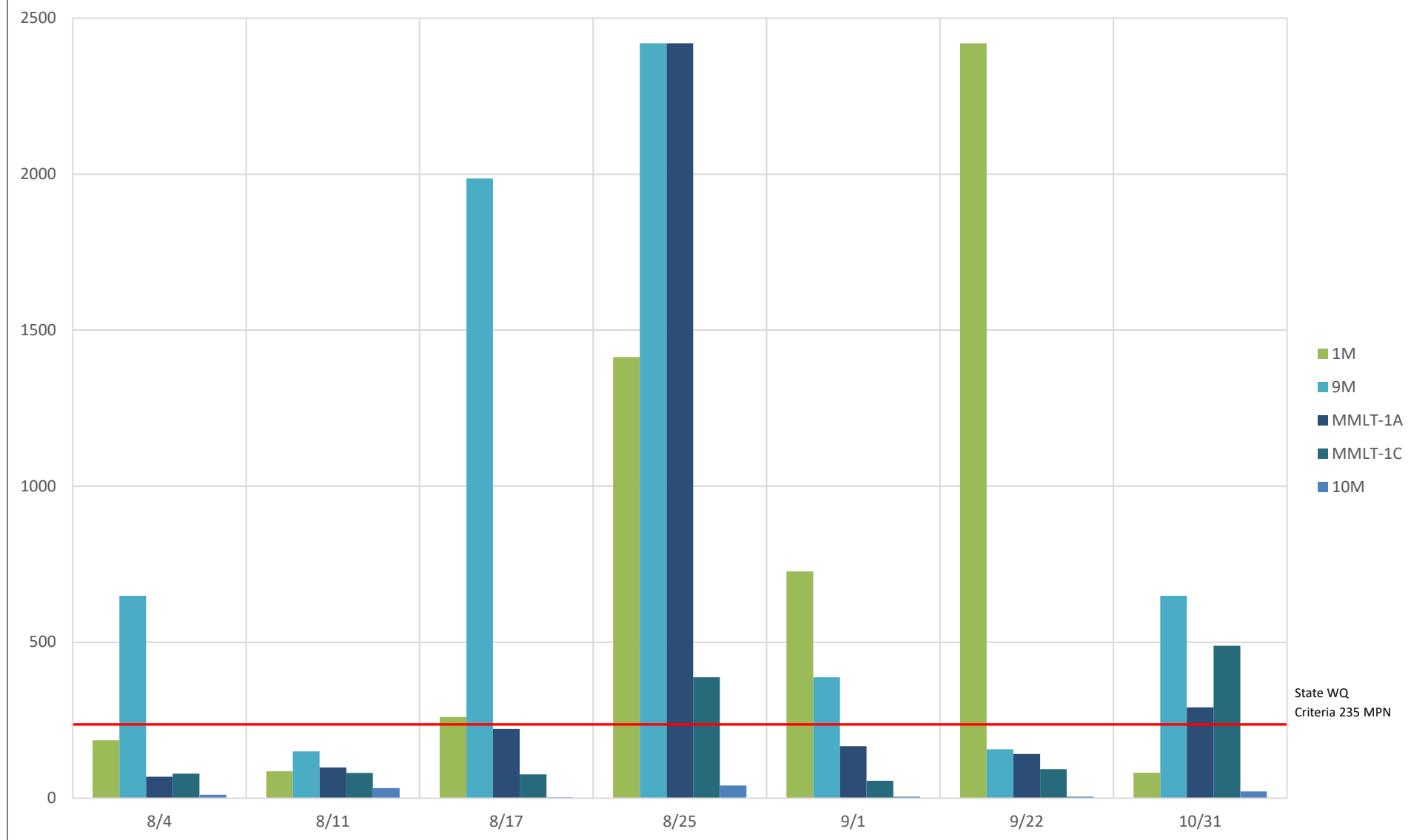
Moore's Mill Creek Watershed Total Suspended Solids Sampling Results										
Site Number	Sample Date	Sample Time	Sample Collected By & In-situ Parameters Analyzed By	Total Suspended Solids (mg/L)	Temperature (F)	pH	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Turbidity (NTU)	Total Suspended Solids Sample Analyzed By & Date
NW-1-d	3/30/2023	10:15	D. Kimbrow	0	57.4	7.13	9.84	205.5	3.63	CR (ERA) 3/31
NW-1-b	3/30/2023	10:25	D. Kimbrow	0	56.8	7.37	10.69	137.1	5.99	NG (ERA) 4/3
NW-1-c	3/30/2023	10:40	D. Kimbrow	2.6	55.3	7.3	10.64	137.1	5.02	CR (ERA) 3/31
C-1	3/30/2023	10:55	D. Kimbrow	0	55.3	7.23	10.74	133.1	4.02	CR (ERA) 3/31
C-MM-a	3/30/2023	11:00	D. Kimbrow	17.4	60.5	7.11	9.15	67	32.3	NG (ERA) 4/3
C-MM-b	3/30/2023	11:20	D. Kimbrow	16	59.1	7.12	9.98	77.1	28	NG (ERA) 4/3
SW-MM-b	3/30/2023	11:35	D. Kimbrow	9.38	58.7	7.12	9.97	100	18.5	NG (ERA) 4/3
SW-MM-c	3/30/2023	11:55	D. Kimbrow	9.24	58.6	7.32	10.67	96.7	16.3	NG (ERA) 4/3
NW-1-d	12/29/2022	8:40	D. Kimbrow	0	49.9	7.33	10.47	170.1	1.66	CR (ERA) 12/30
NW-1-b	12/29/2022	8:50	D. Kimbrow	0	44.7	7.49	12.66	136.1	2.09	CR (ERA) 12/30
NW-1-c	12/29/2022	9:05	D. Kimbrow	0	44.3	7.35	12.03	137.5	1.87	CR (ERA) 12/30
C-1	12/29/2022	9:35	D. Kimbrow	0	46.8	7.34	12.21	135.7	1.75	CR (ERA) 12/30
C-MM-a	12/29/2022	9:50	D. Kimbrow	0	42.7	7.23	12.66	88.8	6.87	CR (ERA) 12/30
C-MM-b	12/29/2022	10:10	D. Kimbrow	0	44	7.32	13	97.4	5.61	CR (ERA) 12/30
SW-MM-b	12/29/2022	10:25	D. Kimbrow	0	43.8	7.31	12.87	124.4	4.85	CR (ERA) 12/30
SW-MM-c	12/29/2022	10:45	D. Kimbrow	0	44	7.78	13.55	132.3	4.42	CR (ERA) 12/30
NW-1-c	9/28/2022	10:05	D. Kimbrow	0	80.1	7.12	7.32	135.3	3.47	RP (ERA) 9/30
C-1	9/28/2022	10:30	D. Kimbrow	0	60.1	7.43	8.75	166.1	2.4	RP (ERA) 9/30
C-MM-a	9/28/2022	10:45	D. Kimbrow	3.16	61	7.13	4.67	175.7	3.87	RP (ERA) 9/30
SW-MM-b	9/28/2022	11:20	D. Kimbrow	0	63.5	7.16	5.8	152.9	4.67	RP (ERA) 9/30
NW-1-b	9/28/2022	9:45	D. Kimbrow	0	58.6	7.63	8.88	131.6	1.76	RP (ERA) 9/30
C-MM-b	9/28/2022	11:00	D. Kimbrow	0	60.3	7.33	8.11	132.5	2.48	RP (ERA) 9/30
NW-1-d	9/28/2022	13:40	D. Kimbrow	0	62.3	7.4	8.95	160.7	1.13	RP (ERA) 9/30
SW-MM-c	9/28/2022	14:10	D. Kimbrow	0	64.3	8.02	9.86	150.3	2.56	RP (ERA) 9/30
C-MM-a	6/23/2022	11:55	D. Kimbrow	0	76.9	7.09	3.28	182.3	6.77	DS (ERA) 6/24
SW-MM-c	6/23/2022	15:05	D. Kimbrow	0	83.7	8.55	9.18	144.3	4.32	DS (ERA) 6/24
C-1	6/23/2022	11:40	D. Kimbrow	7.98	72.7	7.43	7.92	164.9	11.1	DS (ERA) 6/24
NW-1-b	6/23/2022	10:20	D. Kimbrow	0	76.4	7.72	8.05	132.5	2.55	DS (ERA) 6/24
NW-1-d	6/23/2022	10:35	D. Kimbrow	0	73.2	7.44	7.82	181.6	1.67	DS (ERA) 6/24
NW-1-c	6/23/2022	11:15	D. Kimbrow	0	78.2	7.34	7.34	138.8	2.58	DS (ERA) 6/24
C-MM-b	6/23/2022	14:30	D. Kimbrow	0	78.3	7.58	8.1	133.1	5.01	DS (ERA) 6/24
SW-MM-b	6/23/2022	14:45	D. Kimbrow	0	83.6	7.28	5.97	161.4	6.48	DS (ERA) 6/24

Moore's Mill Creek Watershed E. coli Sampling Results												
Site Number	Sample Date	Sample Time	Sample Collected By & In-situ Parameters Analyzed By	E. coli (MPN)	Temperature (F)	pH	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Turbidity (NTU)	Streamflow (cfs)	Streamflow (MGD)	E. coli Sample Analyzed By & Date
10M	10/31/2022	13:10	D. Kimbrow	21.6	64.3	7.76	9.91	111.1	4.76	-	-	DK 11/1
MMLT-1C	10/31/2022	13:25	D. Kimbrow	488.4	64.2	7.68	9.77	124.3	4.82	-	-	DK 11/1
MMLT-1A	10/31/2022	13:50	D. Kimbrow	290.9	65	7.54	9.69	96	4.47	-	-	DK 11/1
1M	10/31/2022	14:05	D. Kimbrow	81.6	64.6	7.31	8.81	91.6	5.88	-	-	DK 11/1
9M	10/31/2022	14:20	D. Kimbrow	648.8	64.1	7.36	9.22	104.5	4.56	-	-	DK 11/1
10M	9/22/2022	9:30	D. Kimbrow	5.2	77.1	7.44	8.12	112.8	5.02	-	-	DK 9/23
1M	9/22/2022	11:05	D. Kimbrow	2419.6	72.9	7.2	6.45	116.6	2.85	-	-	DK 9/23
9M	9/22/2022	11:20	D. Kimbrow	156.5	72.3	7.59	7.47	133.1	2.16	-	-	DK 9/23
MMLT-1C	9/22/2022	9:55	D. Kimbrow	93.4	70.4	7.7	8.22	146.3	2.82	1.1125	0.72	DK 9/23
MMLT-1A	9/22/2022	10:35	D. Kimbrow	141.4	72.8	7.54	8.45	147.8	2.15	1.266	0.82	DK 9/23
9M	9/1/2022	8:25	D. Kimbrow	387.3	71	7.71	7.86	141.4	1.98	-	-	MS 9/2
1M	9/1/2022	8:40	D. Kimbrow	727	72.5	7.34	6.09	128.5	1.88	-	-	MS 9/2
MMLT-1C	9/1/2022	11:05	D. Kimbrow	55.6	74.1	7.96	8.62	134	2.72	-	-	MS 9/2
10M	9/1/2022	10:50	D. Kimbrow	5.2	81.9	8.56	10.31	101.5	4.12	-	-	MS 9/2
MMLT-1A	9/1/2022	11:30	D. Kimbrow	166.4	77	7.83	9.31	135.8	2.59	-	-	MS 9/2
10M	8/25/2022	13:30	D. Kimbrow	40.4	77	7.74	7.79	97.4	10.81	-	-	DK 8/26
MMLT-1C	8/25/2022	13:50	D. Kimbrow	387.3	73.9	7.76	8.18	102.2	4.99	-	-	DK 8/26
MMLT-1A	8/25/2022	14:10	D. Kimbrow	2419.6	73.8	7.44	7.91	69.3	40.4	-	-	DK 8/26
1M	8/25/2022	14:25	D. Kimbrow	1413.6	77.7	7.17	7.02	67	16.4	-	-	DK 8/26
9M	8/25/2022	14:40	D. Kimbrow	2419.6	74.2	7.4	7.86	55.6	49.3	-	-	DK 8/26
10M	8/17/2022	8:45	D. Kimbrow	3.1	80.8	7.96	7.43	99.4	5.82	-	-	DK 8/18
MMLT-1C	8/17/2022	9:15	D. Kimbrow	76.3	74.6	7.88	8.24	128.3	3.33	1.804	1.17	DK 8/18
MMLT-1A	8/17/2022	10:05	D. Kimbrow	222.4	74.8	7.57	7.48	123.3	2.57	1.6174	1.04	DK 8/18
1M	8/17/2022	10:35	D. Kimbrow	260.3	76.9	7.19	5.88	96.7	2.43	-	-	DK 8/18
9M	8/17/2022	15:20	D. Kimbrow	1986.3	74.2	7.68	8.21	126.2	2.75	-	-	DK 8/18
10M	8/11/2022	8:55	D. Kimbrow	32.3	79.5	7.29	6.47	86.5	9.93	-	-	DK 8/12
MMLT-1C	8/11/2022	9:20	D. Kimbrow	81.3	75.3	7.86	8.08	103.9	4.82	5.755	3.72	DK 8/12
MMLT-1A	8/11/2022	14:05	D. Kimbrow	98.5	80	8.12	8.78	95.3	4.5	3.7273	2.41	DK 8/12
1M	8/11/2022	14:35	D. Kimbrow	86	82.3	7.24	6.51	76.6	5.61	1.9322	1.25	DK 8/12
9M	8/11/2022	14:55	D. Kimbrow	150	79.6	8.02	9.03	126.9	2.66	-	-	DK 8/12
10M	8/4/2022	10:05	D. Kimbrow	10.9	82.2	8.02	7.48	103.4	7.46	-	-	DK 8/5
MMLT-1A	8/4/2022	12:45	D. Kimbrow	69.1	81.8	8.03	8.1	96.6	4.73	3.7776	2.44	DK 8/5
MMLT-1C	8/4/2022	10:25	D. Kimbrow	78.9	77.1	7.79	8.05	94.9	5.13	4.1758	2.70	DK 8/5

Moore's Mill Creek E. coli Geomean Results for August 2022



Moore's Mill Creek E. coli Single Sample Results for 2022



2.6.2 Moore's Mill Creek Geomorphic Surveys and Total Suspended Solids Compliance Monitoring Results

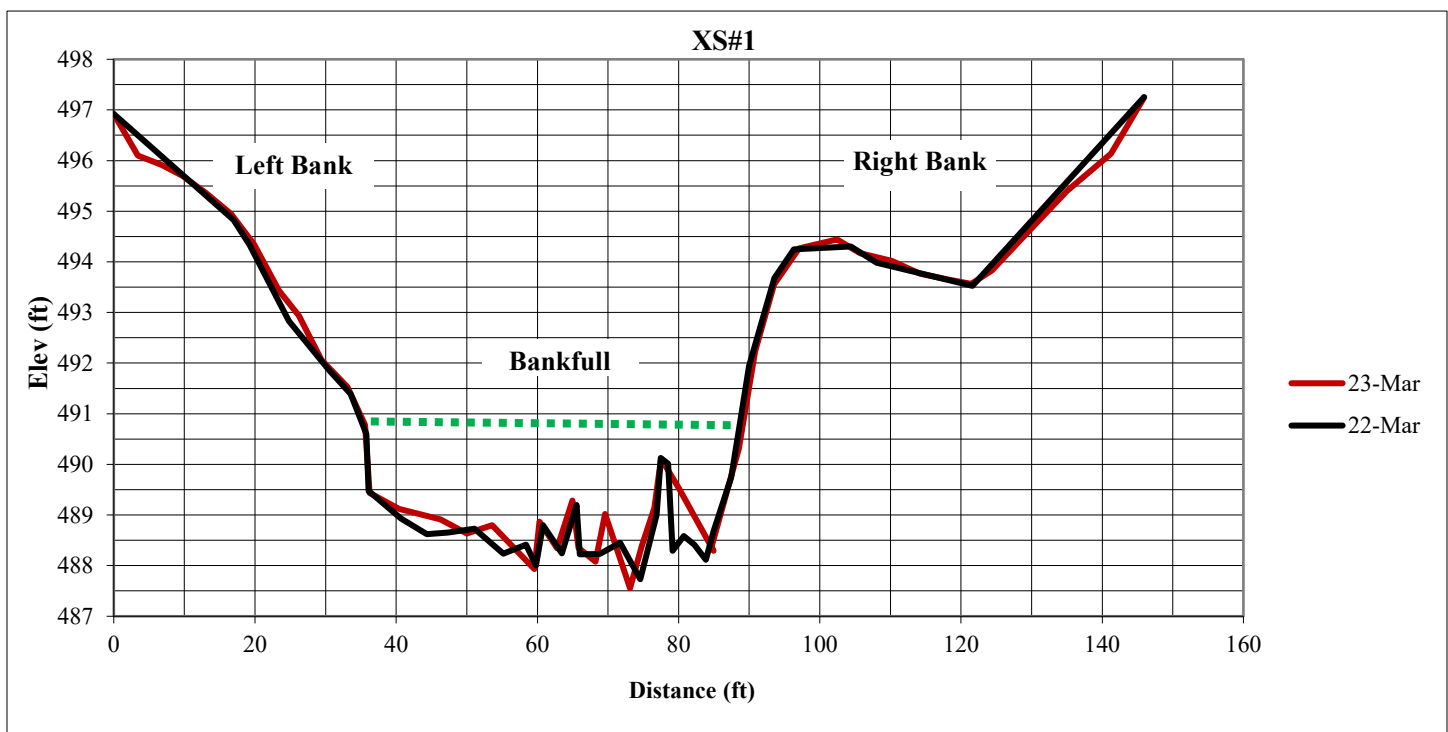
The City monitored streambank erosion at eight (8) reaches in the Moore's Mill Creek watershed with stream geomorphic surveys conducted in March 2023. These annual surveys measure geomorphic parameters that are used as indicators of the stability of a stream reach. A stream condition rapid assessment was performed at each of the 8 reaches. The stream condition rapid assessment was developed with a grant from EPA (EPA Region IV Wetlands Program Development Grant CD00D01412, "Eco-Morphological Mitigation Design and Assessment Tools for the Alabama and Tennessee Appalachian Plateau"), and rates stream condition and function based on eco-geomorphic indicators. The cross-sections at each stream reach site in the Moore's Mill Creek watershed are shown in the following charts. Each cross-section chart compares this year's survey to the previous year. Erosion occurred where the 2023 cross-section line (red) is below or outside of the 2022 cross-section line (black). Deposition occurred where the 2023 line is above or inside of the 2022 cross-section line.

Data from the geomorphic surveys conducted in March 2023 show that most sites were relatively stable from 2022 to 2023. The most notable exception is site NW-1-c. At this site there was over 1 foot of deposition in the upstream cross-section. The downstream cross-section exhibited about 4 feet of erosion on the left bank. There have been numerous development projects in the watershed upstream of NW-1-c over the last several years. The increased urban development combined with the rise in duration and intensity of local rain events is likely a contributor to the severe deposition and bank erosion at this site. Although several of the other sites exhibited moderate to high geometric BEHI indices, most of the sites had stable streambanks during this reporting period.

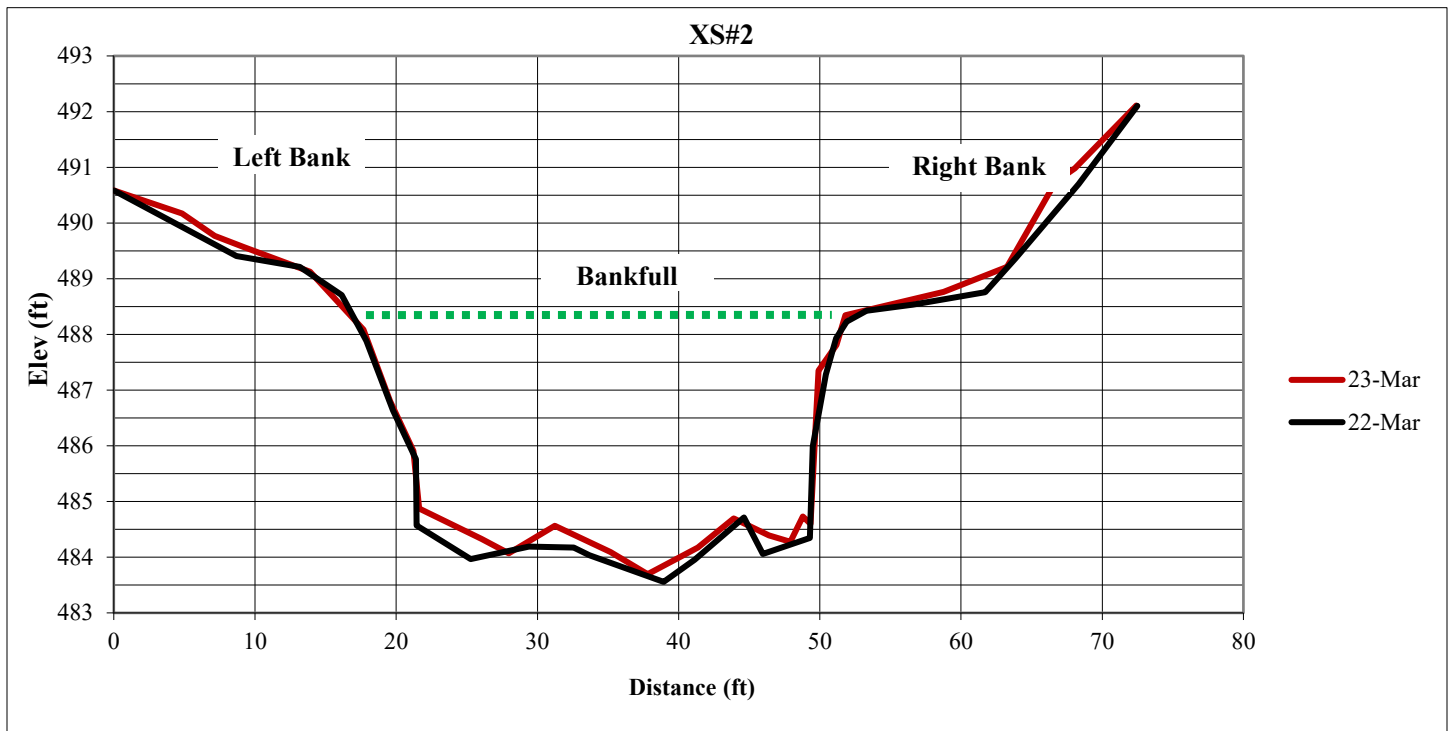
Quarterly samples of total suspended solids (TSS), water temperature, pH, dissolved oxygen, specific conductance, and turbidity were measured in-situ at each of the eight (8) streambank erosion monitoring sites. TSS values were relatively low at all sites, with site C-MM-a exhibiting the highest concentrations. This site was impacted by a beaver dam downstream, which reduced velocities through the reach and encouraged the settling of fine deposits. It is hypothesized that storm events re-suspended the fine deposits and led to the higher values of TSS in this reach.

Site	Stream Condition and Function	Score (0 – 2)*
SW-MM-c	Upstream watershed impacts from stormwater, wastewater, or sediment	1
	Local stream reach impacts from ditches, pipes, livestock, utilities, or roads	2
	Channel dimension related to bankfull cross-section measurements	2
	Channel pattern related to planform measurements	2
	Channel bed profile related to longitudinal profile measurements	2
	Streambank stability and protection from erosion	2
	Floodplain connection for bankfull flood access	1
	Floodplain morphology to dissipate flood energy and minimize erosion	2
	Riparian vegetation to provide shade, nutrient uptake, and food sources	2
	Habitats including diverse bedform, large woody debris, leaf packs, root hairs	2
	Water quality and stream bed sediments	2
	Presence of desirable fish and macroinvertebrates expected for watershed	1
*Score indicates natural function and health: 2 = Good; 1 = Fair; 0 = Poor		
TOTAL		21

Site	Cross-Section	Geomorphic Parameter	Value	Units
SW-MM-c	1	Bankfull Area	100	ft. ²
		Bankfull Width	53	ft.
		Bankfull Depth	1.9	ft.
		Maximum Bankfull Depth	3.22	ft.
		Low Bank Height	6.89	ft.
		Width of the Flood-prone Area	140	ft.
		Width to Depth Ratio	28	n/a
		Bank Height Ratio	2.1	n/a
		Entrenchment Ratio	2.6	n/a
		Right Bank BEHI	Low	n/a
		Left Bank BEHI	Low	n/a

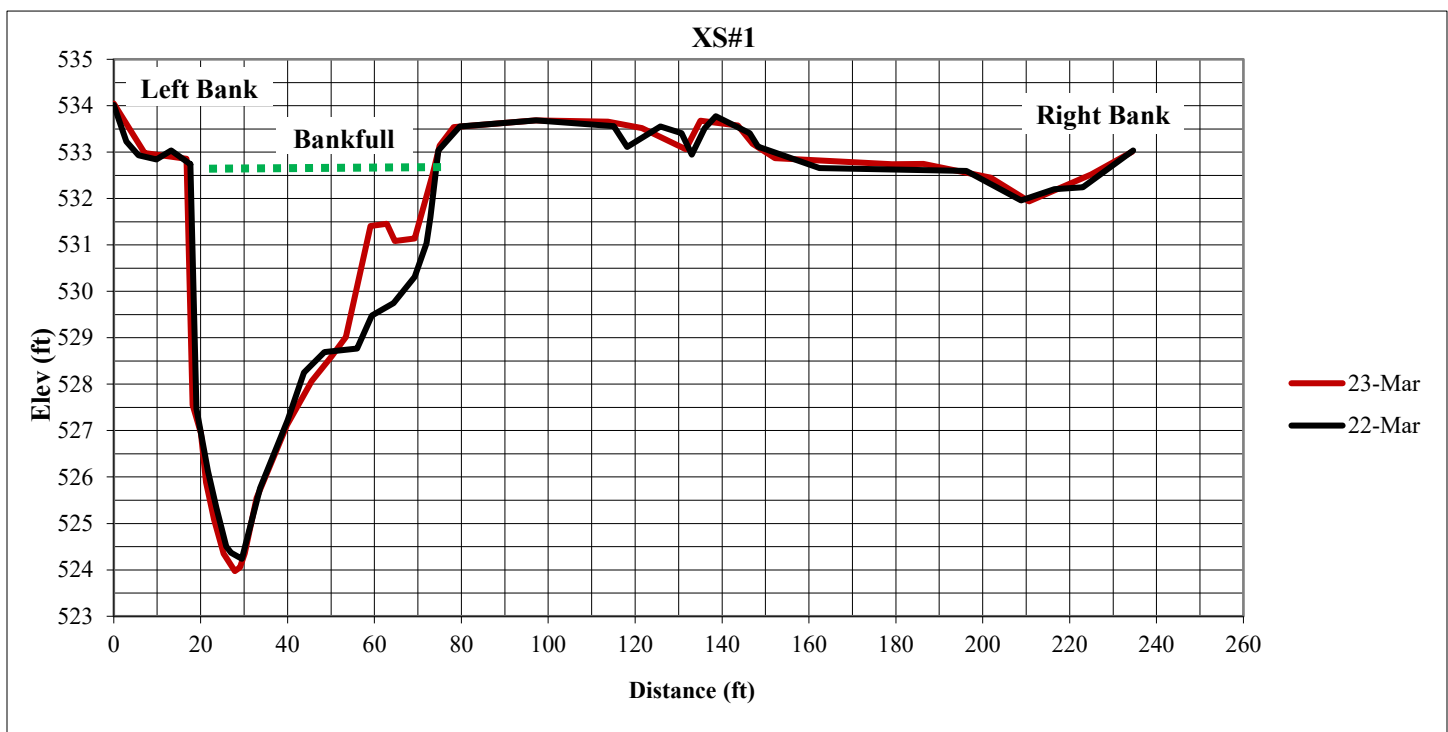


Site	Cross-Section	Geomorphic Parameter	Value	Units
SW-MM-c	2	Bankfull Area	110	ft. ²
		Bankfull Width	34	ft.
		Bankfull Depth	3.2	ft.
		Maximum Bankfull Depth	4.39	ft.
		Low Bank Height	5.43	ft.
		Width of the Flood-prone Area	220	ft.
		Width to Depth Ratio	10.6	n/a
		Bank Height Ratio	1.2	n/a
		Entrenchment Ratio	6.4	n/a
		Right Bank BEHI	Low	n/a
		Left Bank BEHI	Low	n/a

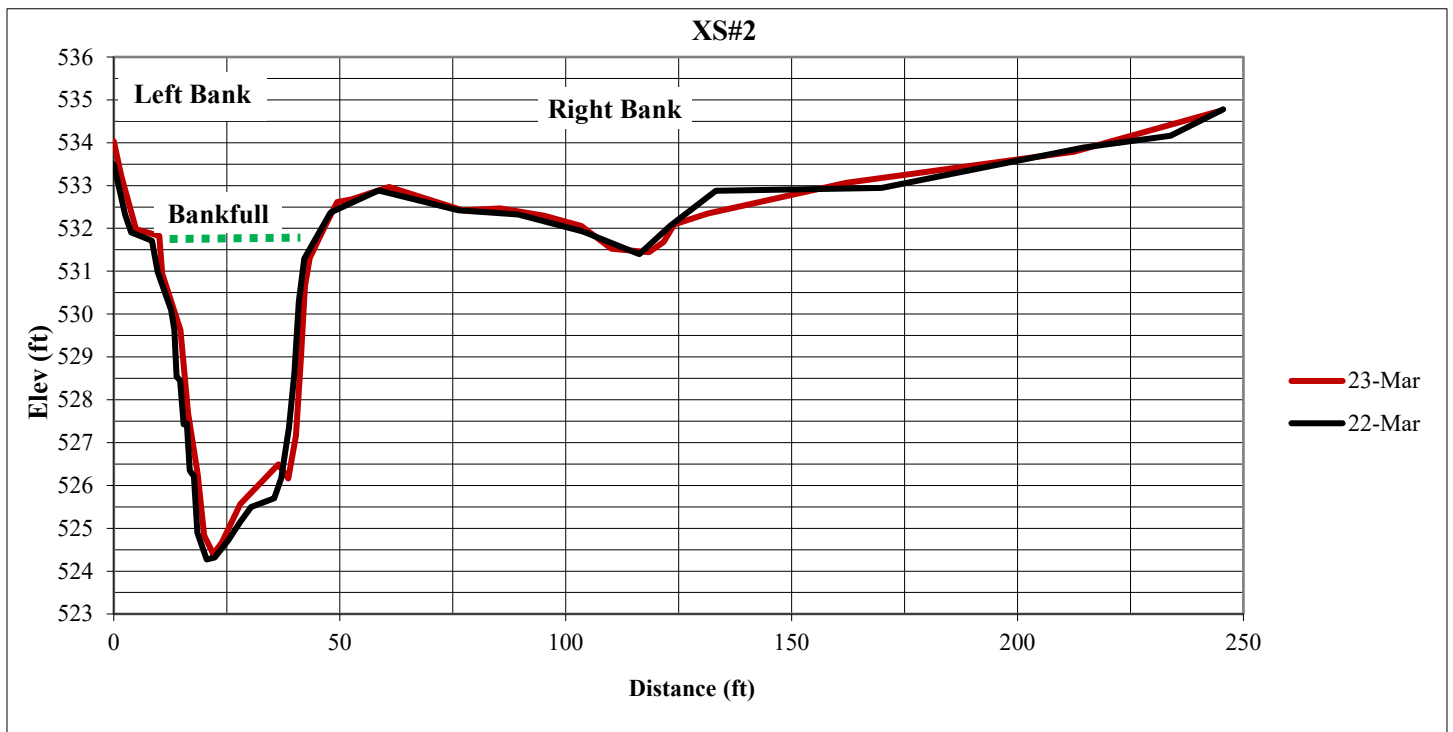


Site	Stream Condition and Function	Score (0 – 2)*
SW-MM-b	Upstream watershed impacts from stormwater, wastewater, or sediment	1
	Local stream reach impacts from ditches, pipes, livestock, utilities, or roads	2
	Channel dimension related to bankfull cross-section measurements	1
	Channel pattern related to planform measurements	2
	Channel bed profile related to longitudinal profile measurements	1
	Streambank stability and protection from erosion	1
	Floodplain connection for bankfull flood access	2
	Floodplain morphology to dissipate flood energy and minimize erosion	1
	Riparian vegetation to provide shade, nutrient uptake, and food sources	2
	Habitats including diverse bedform, large woody debris, leaf packs, root hairs	1
	Water quality and stream bed sediments	1
	Presence of desirable fish and macroinvertebrates expected for watershed	1
*Score indicates natural function and health: 2 = Good; 1 = Fair; 0 = Poor		
TOTAL		16

Site	Cross-Section	Geomorphic Parameter	Value	Units
SW-MM-b	1	Bankfull Area	324	ft. ²
		Bankfull Width	71	ft.
		Bankfull Depth	4.6	ft.
		Maximum Bankfull Depth	9.6	ft.
		Low Bank Height	9.71	ft.
		Width of the Flood-prone Area	450	ft.
		Width to Depth Ratio	15.6	n/a
		Bank Height Ratio	1.0	n/a
		Entrenchment Ratio	6.3	n/a
		Right Bank BEHI	Low	n/a
		Left Bank BEHI	Moderate	n/a

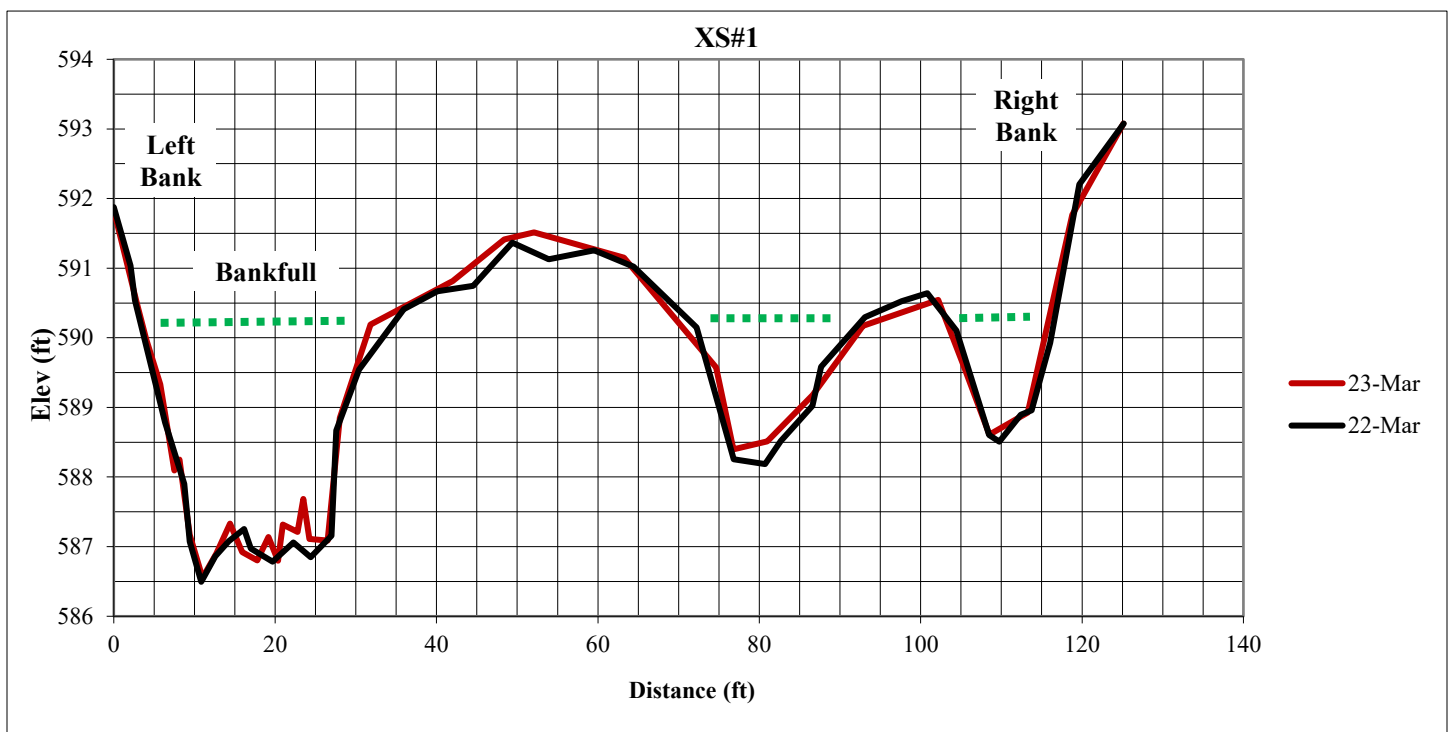


Site	Cross-Section	Geomorphic Parameter	Value	Units
SW-MM-b	2	Bankfull Area	166	ft. ²
		Bankfull Width	33	ft.
		Bankfull Depth	5.0	ft.
		Maximum Bankfull Depth	7.4	ft.
		Low Bank Height	8.24	ft.
		Width of the Flood-prone Area	425	ft.
		Width to Depth Ratio	6.7	n/a
		Bank Height Ratio	1.1	n/a
		Entrenchment Ratio	12.8	n/a
		Right Bank BEHI	Moderate	n/a
		Left Bank BEHI	Moderate	n/a

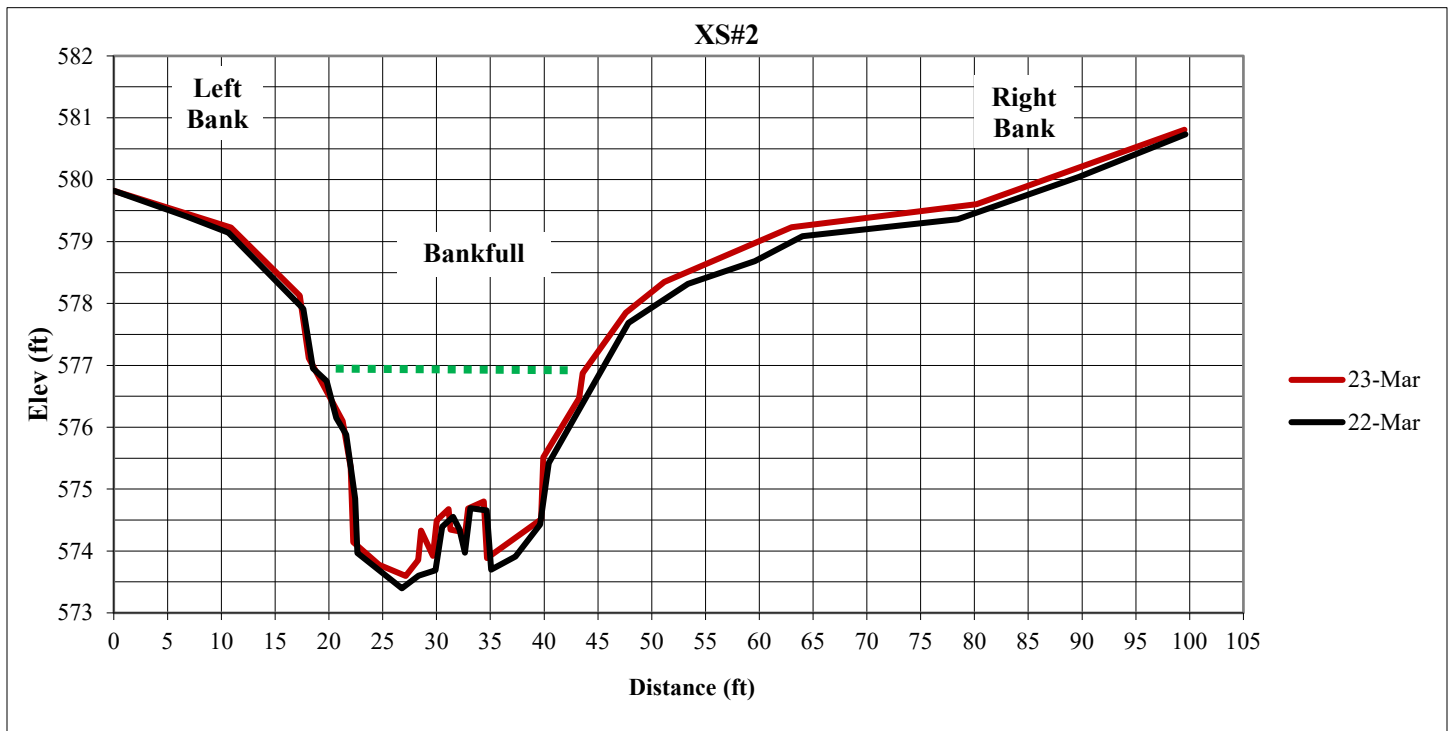


Site	Stream Condition and Function	Score (0 – 2)*
C-MM-b	Upstream watershed impacts from stormwater, wastewater, or sediment	1
	Local stream reach impacts from ditches, pipes, livestock, utilities, or roads	2
	Channel dimension related to bankfull cross-section measurements	1
	Channel pattern related to planform measurements	1
	Channel bed profile related to longitudinal profile measurements	2
	Streambank stability and protection from erosion	2
	Floodplain connection for bankfull flood access	1
	Floodplain morphology to dissipate flood energy and minimize erosion	2
	Riparian vegetation to provide shade, nutrient uptake, and food sources	1
	Habitats including diverse bedform, large woody debris, leaf packs, root hairs	2
	Water quality and stream bed sediments	2
	Presence of desirable fish and macroinvertebrates expected for watershed	1
*Score indicates natural function and health: 2 = Good; 1 = Fair; 0 = Poor		
TOTAL		18

Site	Cross-Section	Geomorphic Parameter	Value	Units
C-MM-b	1	Bankfull Area	69	ft. ²
		Bankfull Width	28	ft.
		Bankfull Depth	2.5	ft.
		Maximum Bankfull Depth	3.6	ft.
		Low Bank Height	4.96	ft.
		Width of the Flood-prone Area	135	ft.
		Width to Depth Ratio	11.2	n/a
		Bank Height Ratio	1.4	n/a
		Entrenchment Ratio	4.9	n/a
		Right Bank BEHI	Moderate	n/a
		Left Bank BEHI	Low	n/a

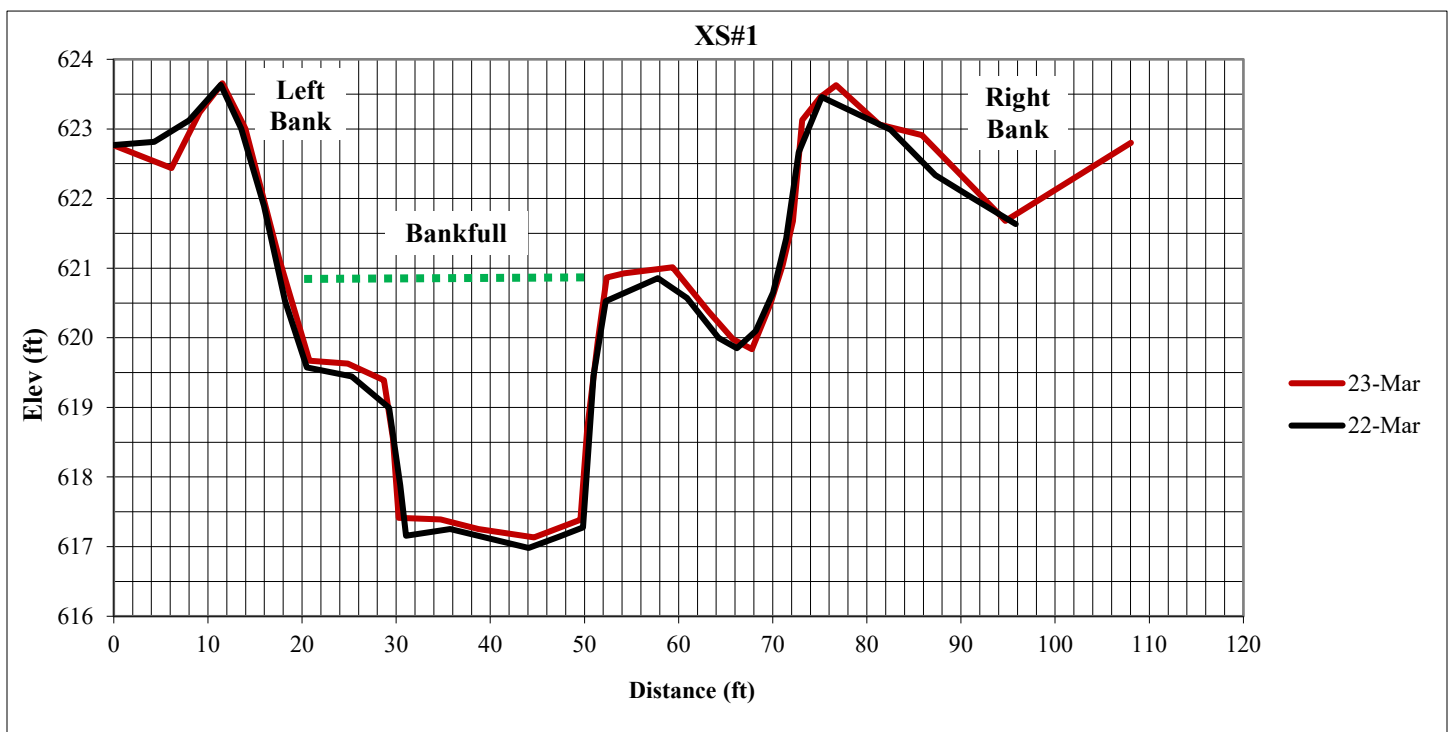


Site	Cross-Section	Geomorphic Parameter	Value	Units
C-MM-b	2	Bankfull Area	91	ft. ²
		Bankfull Width	30	ft.
		Bankfull Depth	3.0	ft.
		Maximum Bankfull Depth	4.5	ft.
		Low Bank Height	5.63	ft.
		Width of the Flood-prone Area	315	ft.
		Width to Depth Ratio	10.1	n/a
		Bank Height Ratio	1.2	n/a
		Entrenchment Ratio	10.4	n/a
		Right Bank BEHI	Moderate	n/a
		Left Bank BEHI	Low	n/a

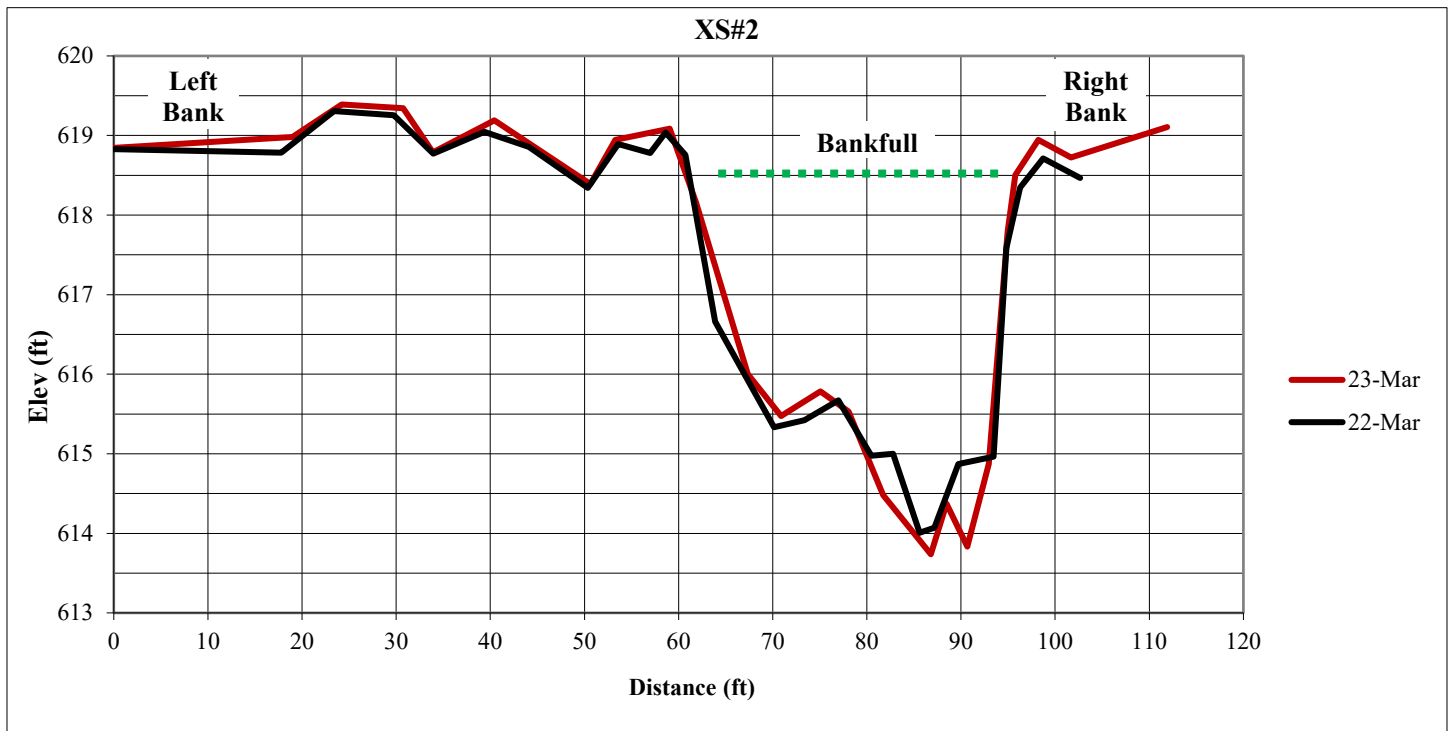


Site	Stream Condition and Function	Score (0 – 2)*
C-MM-a	Upstream watershed impacts from stormwater, wastewater, or sediment	1
	Local stream reach impacts from ditches, pipes, livestock, utilities, or roads	2
	Channel dimension related to bankfull cross-section measurements	1
	Channel pattern related to planform measurements	1
	Channel bed profile related to longitudinal profile measurements	1
	Streambank stability and protection from erosion	2
	Floodplain connection for bankfull flood access	1
	Floodplain morphology to dissipate flood energy and minimize erosion	1
	Riparian vegetation to provide shade, nutrient uptake, and food sources	2
	Habitats including diverse bedform, large woody debris, leaf packs, root hairs	2
	Water quality and stream bed sediments	1
	Presence of desirable fish and macroinvertebrates expected for watershed	1
*Score indicates natural function and health: 2 = Good; 1 = Fair; 0 = Poor		
TOTAL		16

Site	Cross-Section	Geomorphic Parameter	Value	Units
C-MM-a	1	Bankfull Area	86	ft. ²
		Bankfull Width	35	ft.
		Bankfull Depth	2.5	ft.
		Maximum Bankfull Depth	3.7	ft.
		Low Bank Height	6.5	ft.
		Width of the Flood-prone Area	365	ft.
		Width to Depth Ratio	14.0	n/a
		Bank Height Ratio	1.7	n/a
		Entrenchment Ratio	10.5	n/a
		Right Bank BEHI	High	n/a
		Left Bank BEHI	Moderate	n/a

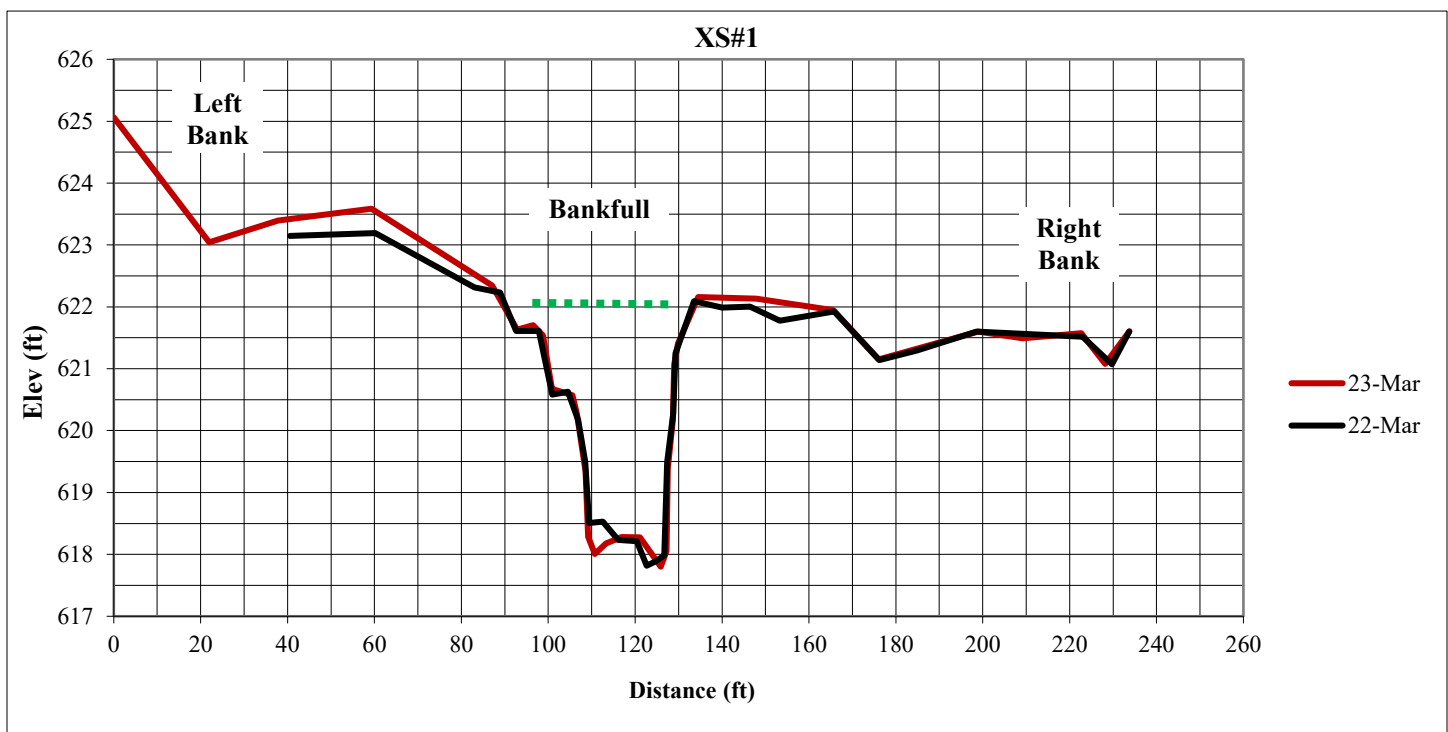


Site	Cross-Section	Geomorphic Parameter	Value	Units
C-MM-a	2	Bankfull Area	98	ft. ²
		Bankfull Width	34	ft.
		Bankfull Depth	2.9	ft.
		Maximum Bankfull Depth	4.8	ft.
		Low Bank Height	3.61	ft.
		Width of the Flood-prone Area	320	ft.
		Width to Depth Ratio	11.7	n/a
		Bank Height Ratio	0.8	n/a
		Entrenchment Ratio	9.4	n/a
		Right Bank BEHI	Moderate	n/a
		Left Bank BEHI	Moderate	n/a

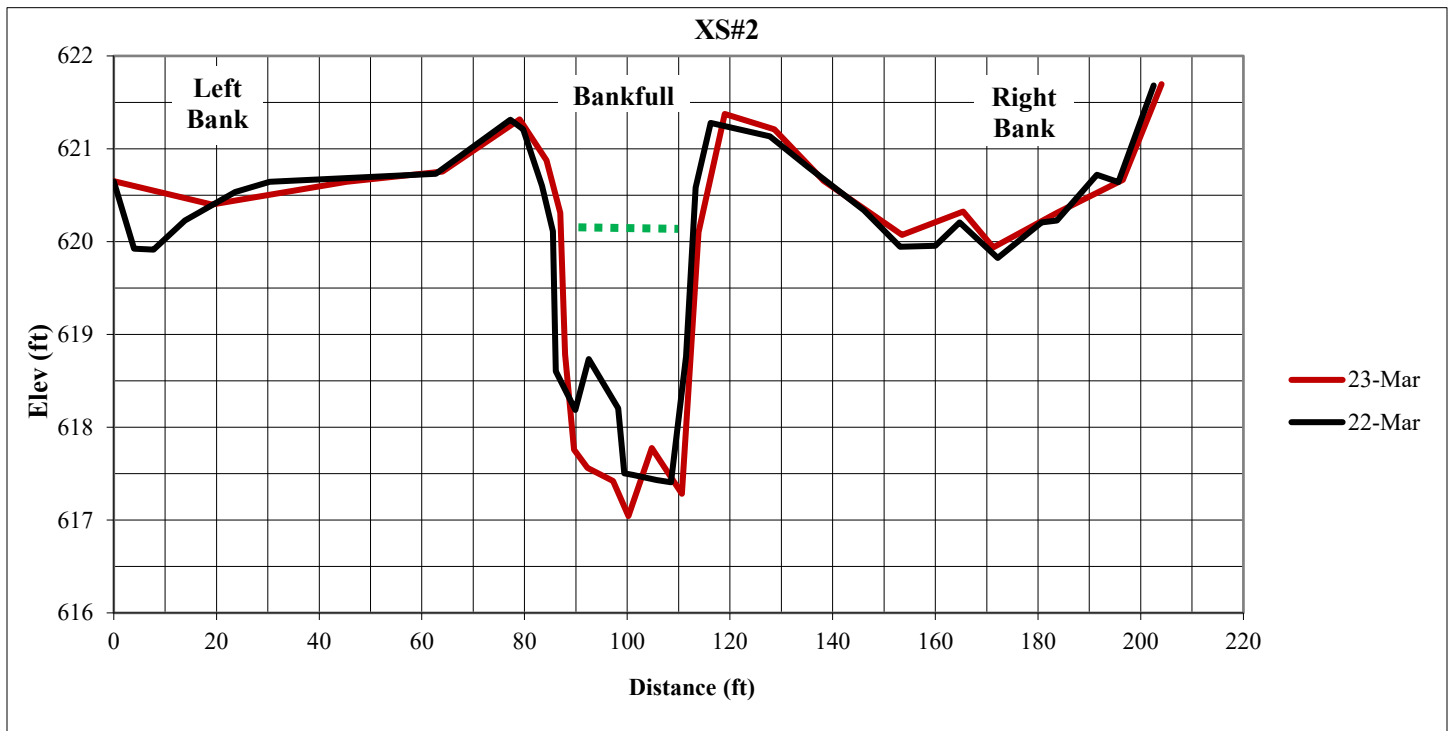


Site	Stream Condition and Function	Score (0 – 2)*
C-1	Upstream watershed impacts from stormwater, wastewater, or sediment	1
	Local stream reach impacts from ditches, pipes, livestock, utilities, or roads	1
	Channel dimension related to bankfull cross-section measurements	2
	Channel pattern related to planform measurements	1
	Channel bed profile related to longitudinal profile measurements	2
	Streambank stability and protection from erosion	1
	Floodplain connection for bankfull flood access	1
	Floodplain morphology to dissipate flood energy and minimize erosion	1
	Riparian vegetation to provide shade, nutrient uptake, and food sources	2
	Habitats including diverse bedform, large woody debris, leaf packs, root hairs	2
	Water quality and stream bed sediments	2
	Presence of desirable fish and macroinvertebrates expected for watershed	1
*Score indicates natural function and health: 2 = Good; 1 = Fair; 0 = Poor		
TOTAL		17

Site	Cross-Section	Geomorphic Parameter	Value	Units
C-1	1	Bankfull Area	112	ft. ²
		Bankfull Width	43	ft.
		Bankfull Depth	2.6	ft.
		Maximum Bankfull Depth	4.5	ft.
		Low Bank Height	4.36	ft.
		Width of the Flood-prone Area	180	ft.
		Width to Depth Ratio	16.3	n/a
		Bank Height Ratio	1.0	n/a
		Entrenchment Ratio	4.2	n/a
		Right Bank BEHI	Moderate	n/a
		Left Bank BEHI	Low	n/a

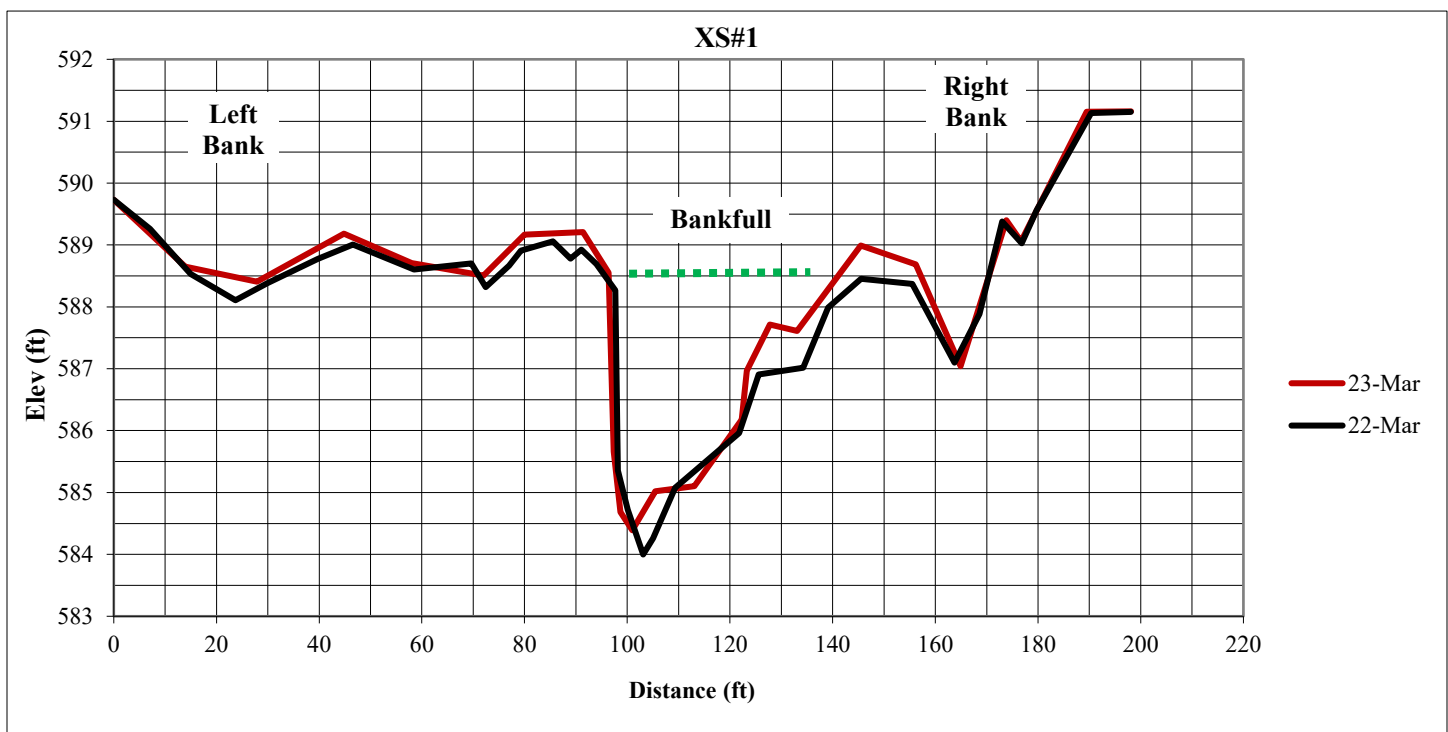


Site	Cross-Section	Geomorphic Parameter	Value	Units
C-1	2	Bankfull Area	86	ft. ²
		Bankfull Width	27	ft.
		Bankfull Depth	3.2	ft.
		Maximum Bankfull Depth	3.8	ft.
		Low Bank Height	4.27	ft.
		Width of the Flood-prone Area	232	ft.
		Width to Depth Ratio	8.4	n/a
		Bank Height Ratio	1.1	n/a
		Entrenchment Ratio	8.6	n/a
		Right Bank BEHI	Moderate	n/a
		Left Bank BEHI	Moderate	n/a

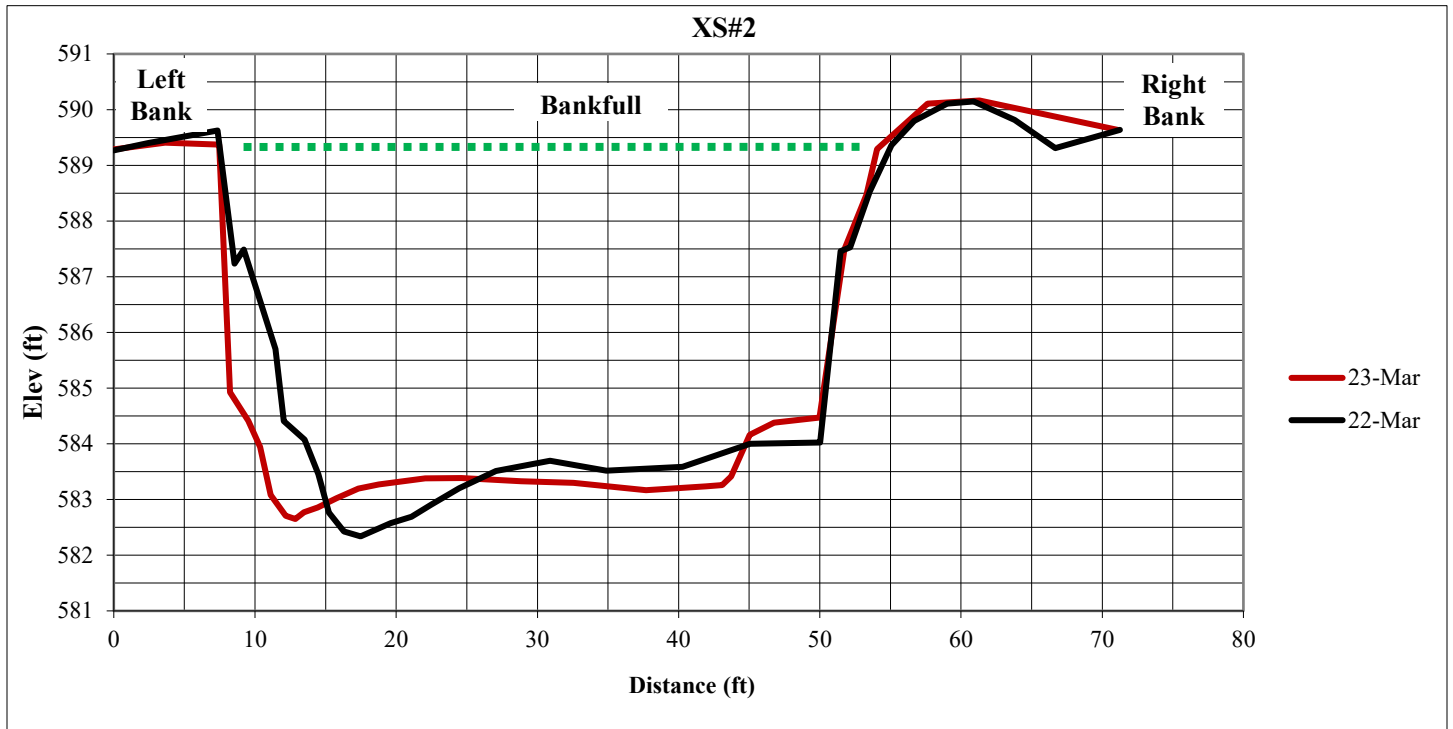


Site	Stream Condition and Function	Score (0 – 2)*
NW-1-c	Upstream watershed impacts from stormwater, wastewater, or sediment	1
	Local stream reach impacts from ditches, pipes, livestock, utilities, or roads	0
	Channel dimension related to bankfull cross-section measurements	0
	Channel pattern related to planform measurements	1
	Channel bed profile related to longitudinal profile measurements	1
	Streambank stability and protection from erosion	0
	Floodplain connection for bankfull flood access	1
	Floodplain morphology to dissipate flood energy and minimize erosion	1
	Riparian vegetation to provide shade, nutrient uptake, and food sources	1
	Habitats including diverse bedform, large woody debris, leaf packs, root hairs	0
	Water quality and stream bed sediments	1
	Presence of desirable fish and macroinvertebrates expected for watershed	1
*Score indicates natural function and health: 2 = Good; 1 = Fair; 0 = Poor		
TOTAL		8

Site	Cross-Section	Geomorphic Parameter	Value	Units
NW-1-c	1	Bankfull Area	110	ft. ²
		Bankfull Width	54	ft.
		Bankfull Depth	2.0	ft.
		Maximum Bankfull Depth	4.6	ft.
		Low Bank Height	4.82	ft.
		Width of the Flood-prone Area	570	ft.
		Width to Depth Ratio	26.6	n/a
		Bank Height Ratio	1.0	n/a
		Entrenchment Ratio	10.5	n/a
		Right Bank BEHI	Low	n/a
		Left Bank BEHI	Moderate	n/a

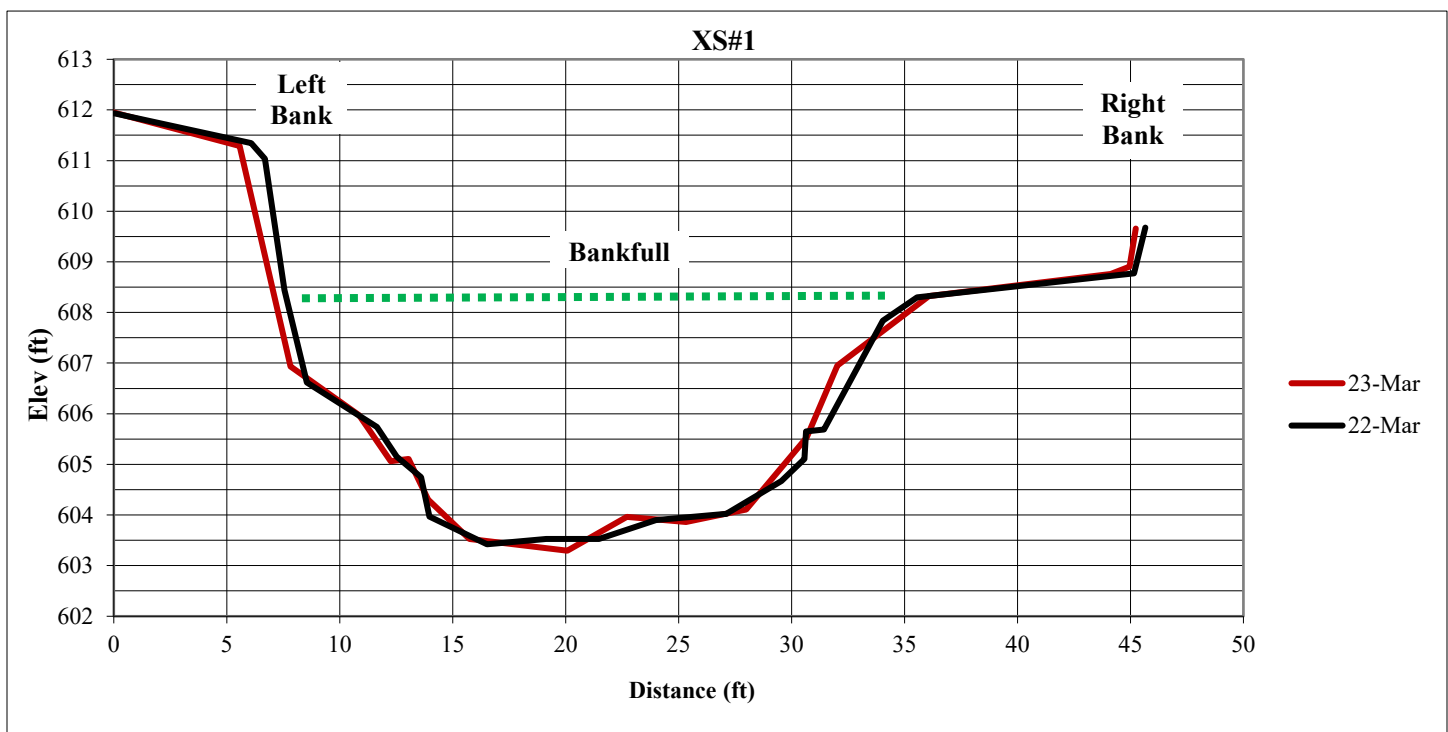


Site	Cross-Section	Geomorphic Parameter	Value	Units
NW-1-c	2	Bankfull Area	256	ft. ²
		Bankfull Width	50	ft.
		Bankfull Depth	5.1	ft.
		Maximum Bankfull Depth	6.7	ft.
		Low Bank Height	6.72	ft.
		Width of the Flood-prone Area	479	ft.
		Width to Depth Ratio	9.9	n/a
		Bank Height Ratio	1.0	n/a
		Entrenchment Ratio	9.5	n/a
		Right Bank BEHI	Low	n/a
		Left Bank BEHI	Low	n/a

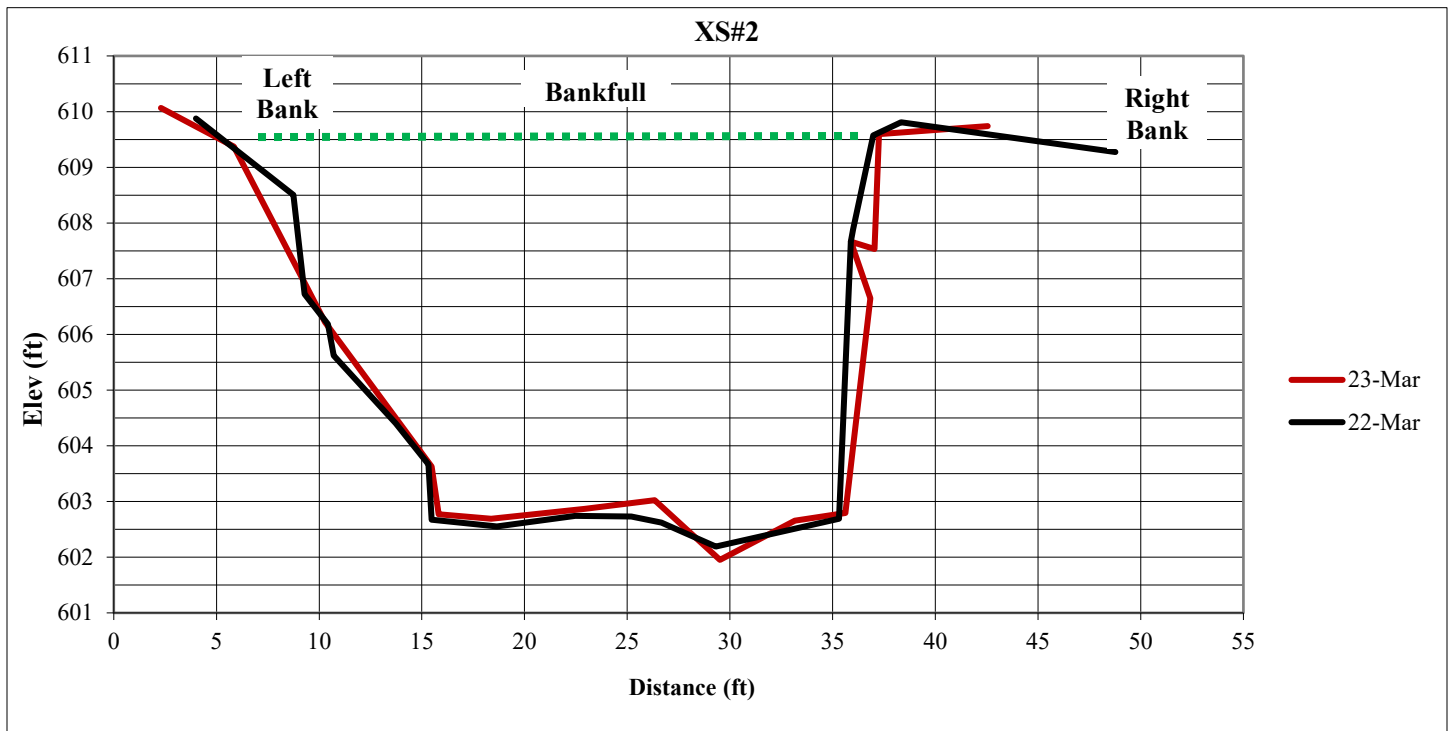


Site	Stream Condition and Function	Score (0 – 2)*
NW-1-b	Upstream watershed impacts from stormwater, wastewater, or sediment	0
	Local stream reach impacts from ditches, pipes, livestock, utilities, or roads	0
	Channel dimension related to bankfull cross-section measurements	0
	Channel pattern related to planform measurements	1
	Channel bed profile related to longitudinal profile measurements	1
	Streambank stability and protection from erosion	0
	Floodplain connection for bankfull flood access	0
	Floodplain morphology to dissipate flood energy and minimize erosion	0
	Riparian vegetation to provide shade, nutrient uptake, and food sources	1
	Habitats including diverse bedform, large woody debris, leaf packs, root hairs	1
	Water quality and stream bed sediments	1
	Presence of desirable fish and macroinvertebrates expected for watershed	1
*Score indicates natural function and health: 2 = Good; 1 = Fair; 0 = Poor		
TOTAL		6

Site	Cross-Section	Geomorphic Parameter	Value	Units
NW-1-b	1	Bankfull Area	98	ft. ²
		Bankfull Width	28	ft.
		Bankfull Depth	3.5	ft.
		Maximum Bankfull Depth	5.0	ft.
		Low Bank Height	8.65	ft.
		Width of the Flood-prone Area	192	ft.
		Width to Depth Ratio	8.1	n/a
		Bank Height Ratio	1.7	n/a
		Entrenchment Ratio	6.8	n/a
		Right Bank BEHI	Low	n/a
		Left Bank BEHI	Moderate	n/a

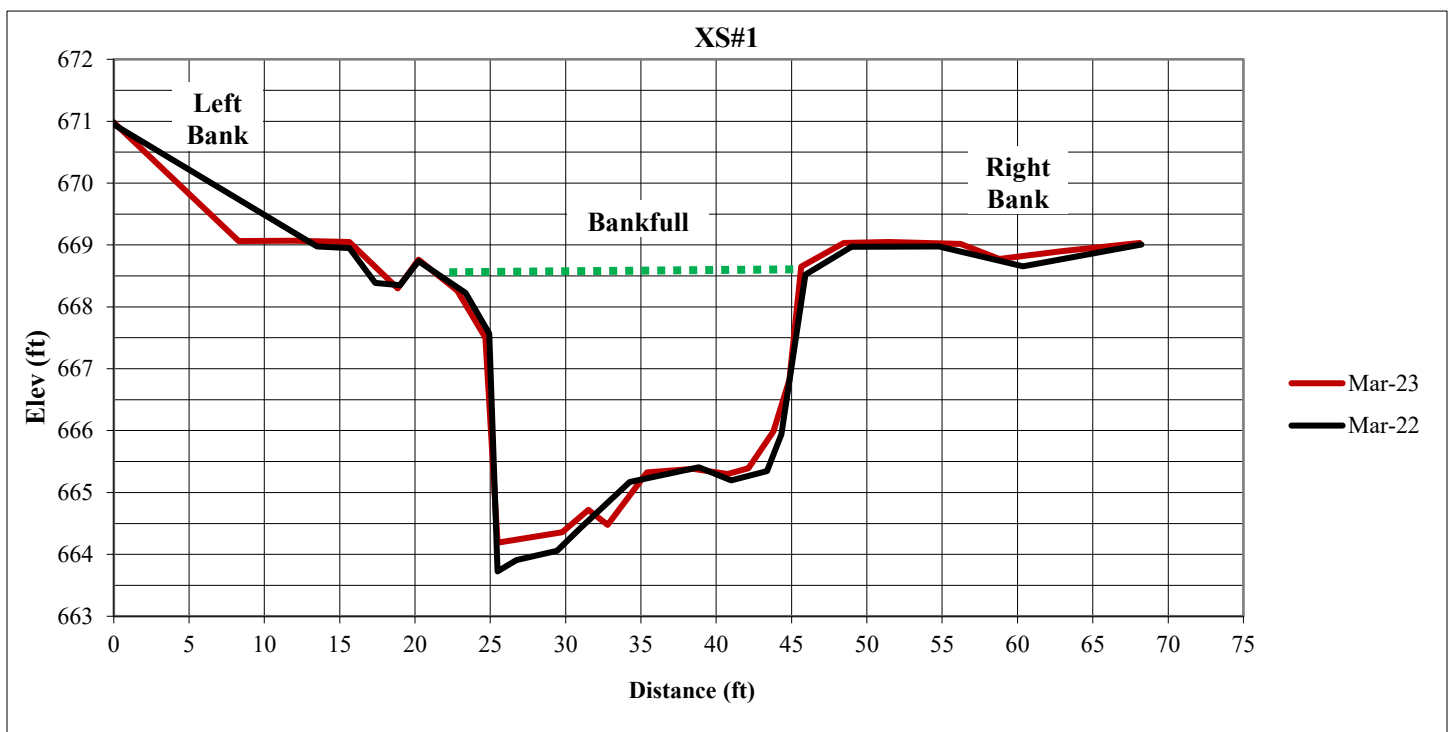


Site	Cross-Section	Geomorphic Parameter	Value	Units
NW-1-b	2	Bankfull Area	182	ft. ²
		Bankfull Width	31	ft.
		Bankfull Depth	5.8	ft.
		Maximum Bankfull Depth	7.4	ft.
		Low Bank Height	8.11	ft.
		Width of the Flood-prone Area	215	ft.
		Width to Depth Ratio	5.4	n/a
		Bank Height Ratio	1.1	n/a
		Entrenchment Ratio	6.8	n/a
		Right Bank BEHI	Low	n/a
		Left Bank BEHI	Low	n/a

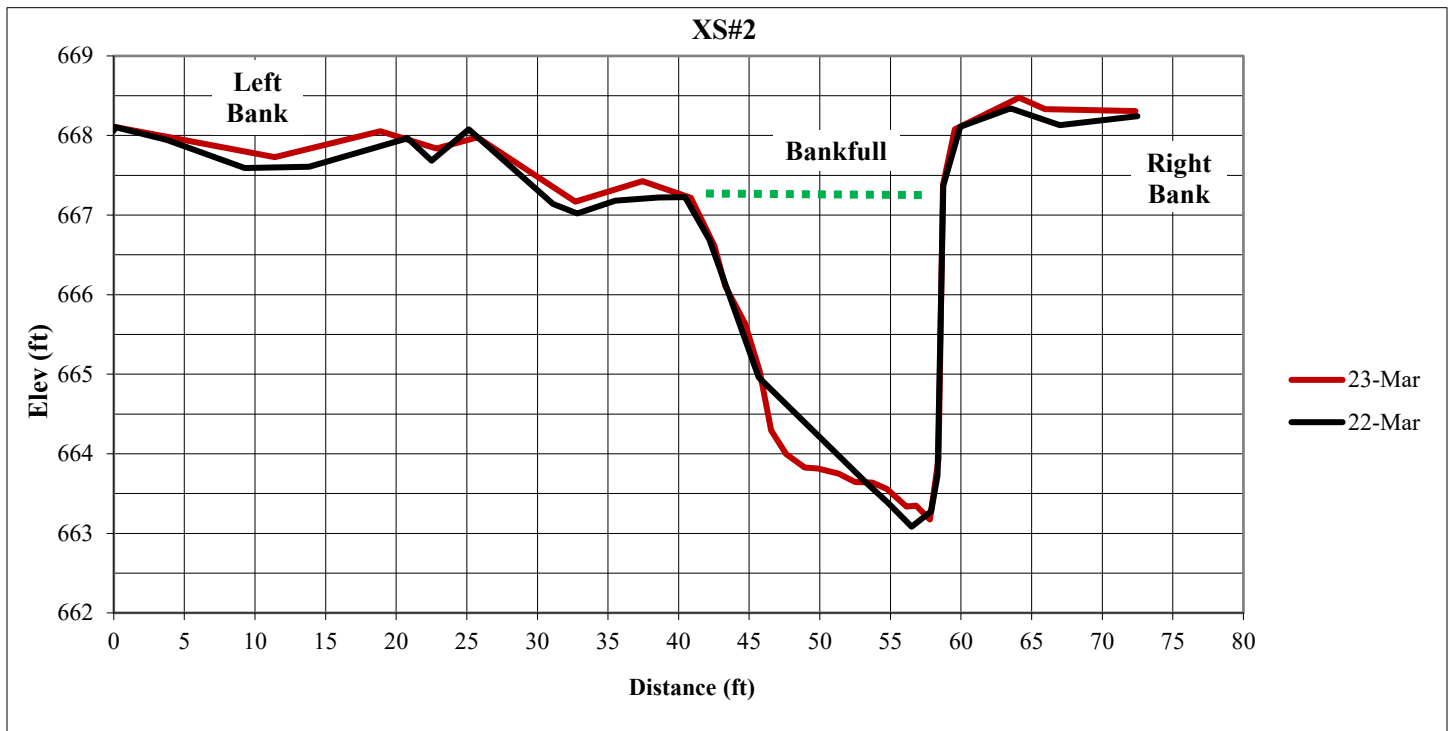


Site	Stream Condition and Function	Score (0 – 2)*
NW-1-d	Upstream watershed impacts from stormwater, wastewater, or sediment	1
	Local stream reach impacts from ditches, pipes, livestock, utilities, or roads	0
	Channel dimension related to bankfull cross-section measurements	1
	Channel pattern related to planform measurements	1
	Channel bed profile related to longitudinal profile measurements	2
	Streambank stability and protection from erosion	0
	Floodplain connection for bankfull flood access	0
	Floodplain morphology to dissipate flood energy and minimize erosion	0
	Riparian vegetation to provide shade, nutrient uptake, and food sources	2
	Habitats including diverse bedform, large woody debris, leaf packs, root hairs	1
	Water quality and stream bed sediments	1
	Presence of desirable fish and macroinvertebrates expected for watershed	0
*Score indicates natural function and health: 2 = Good; 1 = Fair; 0 = Poor		
TOTAL		9

Site	Cross-Section	Geomorphic Parameter	Value	Units
NW-1-d	1	Bankfull Area	77	ft. ²
		Bankfull Width	25	ft.
		Bankfull Depth	3	ft.
		Maximum Bankfull Depth	4.6	ft.
		Low Bank Height	3.38	ft.
		Width of the Flood-prone Area	140	ft.
		Width to Depth Ratio	8.3	n/a
		Bank Height Ratio	0.7	n/a
		Entrenchment Ratio	5.5	n/a
		Right Bank BEHI	Low	n/a
		Left Bank BEHI	Moderate	n/a



Site	Cross-Section	Geomorphic Parameter	Value	Units
NW-1-d	2	Bankfull Area	51	ft. ²
		Bankfull Width	18	ft.
		Bankfull Depth	2.9	ft.
		Maximum Bankfull Depth	4.0	ft.
		Low Bank Height	4.88	ft.
		Width of the Flood-prone Area	100	ft.
		Width to Depth Ratio	6.2	n/a
		Bank Height Ratio	1.2	n/a
		Entrenchment Ratio	5.6	n/a
		Right Bank BEHI	Moderate	n/a
		Left Bank BEHI	Low	n/a



3.0 Water Quality at Short-term Monitoring Sites

3.1 Purpose

In 2016, the City updated the Stormwater Quality Monitoring Plan to reflect changes in the ADEM Phase II NPDES General Permit ALR040003. Water quality monitoring at these short-term sites was not included in the City's Water Quality Monitoring Plan and is not required under the Phase II NPDES General Permit ALR040003. Currently, the City conducts monitoring at various sites within the MS4 jurisdiction if there are suspected illicit discharges or other water quality concerns in the area. The table below shows the monitoring data from these short-term monitoring sites. The location of each sample site is included within the site name (e.g. SAUG326173854965 is within the Saugahatchee watershed and located at 32.6173 N, 85.4965 S).

3.2 Monitoring Data

Site Number	Sample Date	Water Temp. (F)	pH	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Turbidity (NTU)	Ammonia (mg/L)	Nitrate (mg/L)	Surfactants (mg/L)	<i>E. coli</i> (MPN or cfu/100mL)
SAUG326025855323	4/20/2022	-	-	-	-	-	-	-	-	50.4
SAUG326025855323	4/20/2022	-	-	-	-	-	-	-	-	39.9

4.0 Lake Ogletree Source Water Monitoring Program

4.1 Purpose

Lake Ogletree, located southeast of Auburn, is the City of Auburn's primary drinking water source. At full pool its surface area is approximately 300 acres with a capacity of approximately 1.6 billion gallons of water. Chewacla Creek is the primary stream that feeds Lake Ogletree, which has a 33 square mile watershed. Although composed of mostly forested and agricultural lands, the Lake Ogletree watershed also includes industrial, commercial/retail, and residential land-uses which are all predicted to increase as the population of Lee County increases. Although a recently updated Source Water Assessment Program determined Lake Ogletree to be at low to moderate risk from stormwater-driven pollutants, it is imperative that water quality monitoring be performed to identify potential threats to water quality and to protect the health of Chewacla Creek and the surrounding watershed. Therefore, the Water Works Board of the City of Auburn (AWWB) is committed to performing monitoring and analysis of a wide range of physical, chemical, and mineral water quality parameters both in Lake Ogletree and its contributing watershed.

4.2 Methods

AWWB conducts water quality sampling and analysis at 14 locations throughout the Lake Ogletree Watershed. Water quality assessment includes sampling at locations along the main stem of Chewacla Creek ("C-Sites"), its smaller tributaries ("T-Sites"), and Lake Ogletree ("L-Sites"). Parameters monitored once every two months at these locations include *E. coli*, orthophosphate, total phosphorus, nitrate-nitrite, Kjeldahl-N, pH, temperature, turbidity, specific conductance, and dissolved oxygen. A QA/QC field blank for orthophosphate, total phosphorus, nitrate-nitrite, and kjeldahl-N is collected at a single randomly selected site during each sampling round. Bi-weekly monitoring is also conducted at select sites for temperature, pH, specific conductance, dissolved oxygen, and turbidity. The following are the parameters which are included in this program and the method of analysis.

- Temperature – YSI 5560
- Specific Conductance – YSI 5560
- Dissolved Oxygen – YSI 2003 polarographic
- pH – YSI 1001
- Turbidity – LaMotte 2020WE turbidimeter
- Nitrate + Nitrite – EPA 353.2
- Total Kjeldahl Nitrogen – EPA 351.2
- Orthophosphate – SM 4500 PE-1999
- Total Phosphorus – EPA 365.4
- *E. coli* - SM 9223B-2004

4.3 Monitoring Stations and Data

T11 – Station T11 is located on lower Robinson Creek at Moore's Mill Road (CR 146). Latitude 32, 33, 48.221 N; Longitude 85, 23, 23.423 W

T12N – Station T12N is located upper Robinson Creek, just upstream of Highway 51 and downstream from an Opelika sanitary sewer lift station. Latitude 32, 37, 1.72 N; Longitude 85, 22, 9.316 W

T19 – Station T19 is located on an unnamed tributary upstream of Emerald Lake. Latitude 32, 35, 36.364 N; Longitude 85, 20, 37.00 W

T22 – Station T22 is located on upper Robinson Creek, just downstream of Highway 51 and downstream from three Opelika sanitary sewer lift stations. Latitude 32, 36, 2.361 N; Longitude 85, 22, 45.426 W

T32 – Station T32 is located near the mouth of Nash Creek just before the confluence with Chewacla Creek. Latitude 32, 33, 18.484 N; Longitude 85, 25, 30.655 W

T34 – Station T34 is located on Chewacla Creek, upstream of Station C8. Latitude 32, 34, 32.672 N; Longitude 85, 21, 49.692 W

C1 – Station C1 is located at the forebay of Lake Ogletree, immediately downstream of the Society Hill Road bridge crossing. Latitude 32, 33, 20.161 N; Longitude 85, 25, 36.026 W

C2 – Station C2 is located at the bridge crossing of CR 027 with Chewacla Creek. Latitude 32, 33, 21.387 N; Longitude 85, 24, 46.384 W

C5 – Station C5 is located at the bridge crossing of Lee Road. 112 with Chewacla Creek. Latitude 32, 33, 6.291 N; Longitude 85, 23, 41.151 W

C7 – Station C7 is located at the bridge crossing of Highway 51 (Marvyn Parkway) with Chewacla Creek. Latitude 32, 33, 41.868 N; Longitude 85, 22, 20.559 W

C8 – Station C8 is located upstream of the bridge crossing of CR 146 (Moore's Mill Road) with Chewacla Creek. Latitude 32, 34, 5.715 N; Longitude 85, 21, 42.033 W

L1 – Station L1 is located in Lake Ogletree, immediately northeast of the Lake Ogletree spillway. Latitude 32, 32, 50.846 N; Longitude 85, 26, 52.83 W

L2 – Station L2 is located in Lake Ogletree near the water intake pump house. Latitude 32, 33, 5.626 N; Longitude 85, 26, 45.038 W

L5 – Station L5 is located along the northwest finger of Lake Ogletree, near the confluence with the East Lake/Green Chapel tributary. Latitude 32, 33, 37.961 N; Longitude 85, 25, 38.369 W

Site Number	Sample Date	Water Temp. (F)	pH	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Turbidity (NTU)	Nitrate + Nitrite (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Orthophosphate (mg/L)	Total Phosphorus (mg/L)	<i>E. coli</i> (MPN)
L2	3/28/2023	65.6	7.17	9.72	54.8	31.4	-	-	-	-	-
L2	3/13/2023	63.4	7.4	9.47	59	3.64	-	-	-	-	-
L1	2/27/2023	62.7	8.34	9.7	80.2	5.32	0	0	0	0	0
L2	2/27/2023	62.4	7.98	10.85	77.1	-	0	0	0	0	0
C5	2/27/2023	61.2	7.32	9.81	83.8	6.6	0.109	1.03	0	0	203
C7	2/27/2023	61.2	7.16	8.83	85.8	9.17	0.183	0.705	0	0	132
C8	2/27/2023	62.8	7.18	9.26	88.4	5.65	0.108	0	0	0	169
T34	2/27/2023	-	-	-	-	-	-	-	-	-	-
T12N	2/27/2023	61	7.26	10.82	125.7	2.91	0.208	0	0	0	279
T19	2/27/2023	63.5	7.23	9	113.1	11.47	0	0.939	0	0	278
T11	2/27/2023	61.2	7.24	10.16	84.2	5.29	0	0	0	0	158

Site Number	Sample Date	Water Temp. (F)	pH	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Turbidity (NTU)	Nitrate + Nitrite (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Orthophosphate (mg/L)	Total Phosphorus (mg/L)	E. coli (MPN)
C2	2/27/2023	62.4	7.05	9.61	83.4	6.6	0.113	0	0	0	161
L5	2/27/2023	65.6	7.65	10.76	80.4	5.66	0	0	0	0	0
C1	2/27/2023	65.1	7.44	10.58	81	6.87	0	0	0	0	52
T32	2/27/2023	62.8	7.4	10.08	82.3	7.09	0	0	0	0	132
L2	2/20/2023	54	7.26	10.89	72.4	5.86	-	-	-	-	-
L2	2/7/2023	55.6	7.75	12.22	68.3	3.45	-	-	-	-	-
L2	1/25/2023	51	7.07	10.45	65	9.16	-	-	-	-	-
L2	1/9/2023	53.9	6.95	9.65	70.5	13.5	-	-	-	-	-
T32	12/21/2022	47.1	7.36	11.98	73.5	9.81	0.129	0	0	0	96
C1	12/21/2022	46.6	7.25	12.05	68.5	11.29	0.129	0	0	0	355
L5	12/21/2022	47.4	7.18	10.91	75.4	8.2	0.111	0	0	0	98
C2	12/21/2022	47	7.18	11.14	69.6	11.37	0.127	0	0	0	231
T11	12/21/2022	46.9	7.21	11.4	85	10.17	0.108	0	0	0	1396
T19	12/21/2022	46.5	7.2	11.31	96.2	13.5	0.153	0	0	0	2723
T12N	12/21/2022	49.7	7.22	11.01	136.4	6.41	0.248	0	0	0	369
T34	12/21/2022	48	7.08	11.18	81.9	12.1	0	0	0	0	275
C8	12/21/2022	48	7.05	10.88	84	11.3	0.134	0	0	0	74
C7	12/21/2022	46.4	6.94	10.85	73.3	11.8	0.17	0	0	0	428
C5	12/21/2022	46.5	7.18	11.6	72.7	11.8	0.125	0	0	0	301
L2	12/21/2022	51.9	7.18	8.52	68.1	11.4	0	0	0	0	84
L1	12/21/2022	51.7	7.47	9.41	67.6	27.5	0	0	0	0	63
L2	12/13/2022	58.8	8.9	11.22	67.1	10.54	-	-	-	-	-
L2	11/29/2022	59.7	9.26	12.41	72.7	9.33	-	-	-	-	-
L2	11/14/2022	61.7	9.11	10.87	79	9.87	-	-	-	-	-
L1	10/27/2022	63.4	9.42	11.66	67.8	15.5	0	0	0	0	20
L2	10/27/2022	63.2	9.46	11.19	63.2	33.1	0	0	0	0	160
C5	10/27/2022	56.4	7.64	9.7	90.6	7.61	0	0	0	0.238	410
C7	10/27/2022	58.2	7.32	8.72	89.5	10.39	0	0	0	0	299
C8	10/27/2022	59.8	7.47	8.91	91.3	8.45	0	0	0	0	288
T34	10/27/2022	60.5	7.48	9.22	90.5	8.72	0	0.719	0	0	121
T12N	10/27/2022	54.4	7.34	9.56	143.7	3.25	0	0	0	0	122
T19	10/27/2022	58.4	7.19	7.97	97.1	9.08	0	0	0	0	771
T11	10/27/2022	56.4	7.11	9.58	90.2	10.37	0	0	0	0	228
C2	10/27/2022	57.4	7.16	9.78	89.8	6.79	0	0	0	0	420
C1	10/27/2022	58.1	7.36	10.34	88.1	8.56	0	0.743	0	0	435
T32	10/27/2022	56.1	7.47	10.15	77.4	6.67	0	0	0	0	63
L5	10/27/2022	58.9	7.28	9.45	91.5	2	0.181	0	0	0	189
L2	10/24/2022	68.6	7.72	12.84	72.4	7.17	-	-	-	-	-
L2	10/12/2022	69.5	8.59	9.85	69	8.61	-	-	-	-	-
L2	9/26/2022	80.2	8.6	9.05	70.2	4.38	-	-	-	-	-
L2	9/14/2022	81	8.1	8.44	69.1	3.87	-	-	-	-	-
L2	8/23/2022	83.1	8.06	7.87	69.8	2.78	-	-	-	-	-
L5	8/18/2022	82.8	8.03	8.04	73.9	3.23	0	0	0	0.27	41
C1	8/18/2022	83	8.08	7.98	73	3.8	0	0	0	0	20
T32	8/18/2022	81.7	7.73	7.65	72.9	4.71	0	0	0	0	10
L2	8/18/2022	83.7	8.04	7.42	71.5	3.21	0	0	0	0.307	0
L1	8/18/2022	83.8	8.27	7.67	71.8	3.11	0	0	0	0	0
C5	8/18/2022	74	7.2	7.11	69.9	6.27	0.146	0	0	0.235	275
C7	8/18/2022	72.8	6.96	7.06	68.8	11.67	0.236	0	0	0	776
C8	8/18/2022	75.2	7.13	7.24	83.2	5.39	0.116	0	0	0	231
T34	8/18/2022	76.4	7.07	6.65	79.4	5.37	0	0	0	0	272
T12N	8/18/2022	70.2	7.43	8.13	159.5	2.32	0.244	0	0	0.259	857
T19	8/18/2022	72.8	7.08	7.14	121.5	6.99	0.191	0	0	0.251	256
T11	8/18/2022	71.6	7.18	8.09	70.4	8.25	0	0	0	0	480
C2	8/18/2022	74.5	7.01	7.39	69	21.7	0.195	0	0	0.35	11199
L2	8/8/2022	89.1	8.51	8.33	76.8	2.78	-	-	-	-	-
L2	7/25/2022	88.8	8.58	8.49	78.6	2.37	-	-	-	-	-
L2	7/13/2022	86.3	8.76	8.83	79.2	3.11	-	-	-	-	-
L5	6/28/2022	83.9	7.33	6.23	80.1	5.09	0	0	0	0.365	0
C1	6/28/2022	83.5	7.77	7.92	77.3	6.77	0	0	0	0	0
T32	6/28/2022	82.4	7.63	7.66	77.8	5.86	0	0.727	0	0	41
L2	6/28/2022	85	8.66	7.42	79.5	4.28	0	0.857	0	0	0
L1	6/28/2022	85	8.75	7.59	79.6	4.83	0	0.814	0	0.347	0

Site Number	Sample Date	Water Temp. (F)	pH	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Turbidity (NTU)	Nitrate + Nitrite (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Orthophosphate (mg/L)	Total Phosphorus (mg/L)	<i>E. coli</i> (MPN)
C5	6/28/2022	73.8	7.5	7.6	88.2	6.88	0.16	0	0	0	213
C8	6/28/2022	75.2	7.3	6.88	88.7	5.06	0.174	0	0	0.234	41
T34	6/28/2022	76.1	7.22	6.4	79.2	5.38	0.154	0	0	0	31
T12N	6/28/2022	72	7.44	8.01	150	2.23	0.3	0	0	0	121
T19	6/28/2022	71.6	6.77	4.95	94.5	10.27	0.143	0	0	0	282
C7	6/28/2022	74.2	7.03	6.11	81.8	10.16	0.205	0	0	0.342	146
T11	6/28/2022	74	7.36	8.11	75	5	0.118	0	0	0	52
C2	6/28/2022	75.1	6.71	7.36	100.6	7.2	0.15	0	0	0	144
L2	6/27/2022	88.5	8.79	8.09	78.5	4.64	-	-	-	-	-
L2	6/14/2022	89.2	9.37	10.7	74.6	4.49	-	-	-	-	-
L2	5/31/2022	85.1	9.05	9.86	67.7	5.08	-	-	-	-	-
L2	5/16/2022	80.2	9.19	10.82	61	6.51	-	-	-	-	-
L2	5/2/2022	76.9	8.7	10.07	50.9	5.14	-	-	-	-	-
L5	4/27/2022	69.5	7.22	9.34	52.3	5.62	0	0	0	0	10
T32	4/27/2022	69.3	-	9.4	51	7.99	0	0	0	0	41
T34	4/27/2022	64.6	7.07	8.71	62.1	9.01	0	0	0	0	63
T12N	4/27/2022	59.4	7.12	10.01	126.4	3.28	0.278	0	0	0	109
T19	4/27/2022	59.8	7.29	9.65	93.1	15.1	0.212	0	0	0	448
T11	4/27/2022	61	7.23	9.72	62.2	7.11	0.128	0	0	0	3076
C2	4/27/2022	63.5	7.2	9.3	57.8	8.39	0.123	0	0	0	108
C1	4/27/2022	70.3	7.58	9.04	51.3	7.57	0	0	0	0	0
L2	4/27/2022	70	8.4	9.68	48.4	6.6	0	0	0	0	0
L1	4/27/2022	70.7	8.37	9.37	48.5	6.77	0	0	0	0	0
C5	4/27/2022	61.4	7.36	9.94	58.3	9	0.127	0	0	0	173
C7	4/27/2022	60.8	7.16	9.22	59.8	9.46	0.175	0	0	0	110
C8	4/27/2022	63.7	7.12	9.15	64.1	9.08	0	0	0	0	86
L2	4/19/2022	68.1	7.33	9.48	44.2	17.7	-	-	-	-	-
L2	4/4/2022	68.1	8	10.41	53.2	6.2	-	-	-	-	-

5.0 WPCF Dissolved Oxygen Monitoring

5.1 Purpose

Staff have been collecting in-stream dissolved oxygen data upstream and downstream of both WPCF's effluent discharge points since August of 2006. This monitoring provides valuable data assuring that the effluent discharged from Auburn's WPCF is not having a negative impact on dissolved oxygen content of Parkerson Mill Creek during the critical summer months. Monitoring at the Northside WPCF was discontinued in 2013 due to closure of the plant, however data collection resumed in 2015. Monitoring is performed on a frequent basis (almost daily) using a YSI (Clark Cell) and/or Hach (LDO) dissolved oxygen probe at points both upstream and downstream of each effluent discharge location.

5.2 Methods

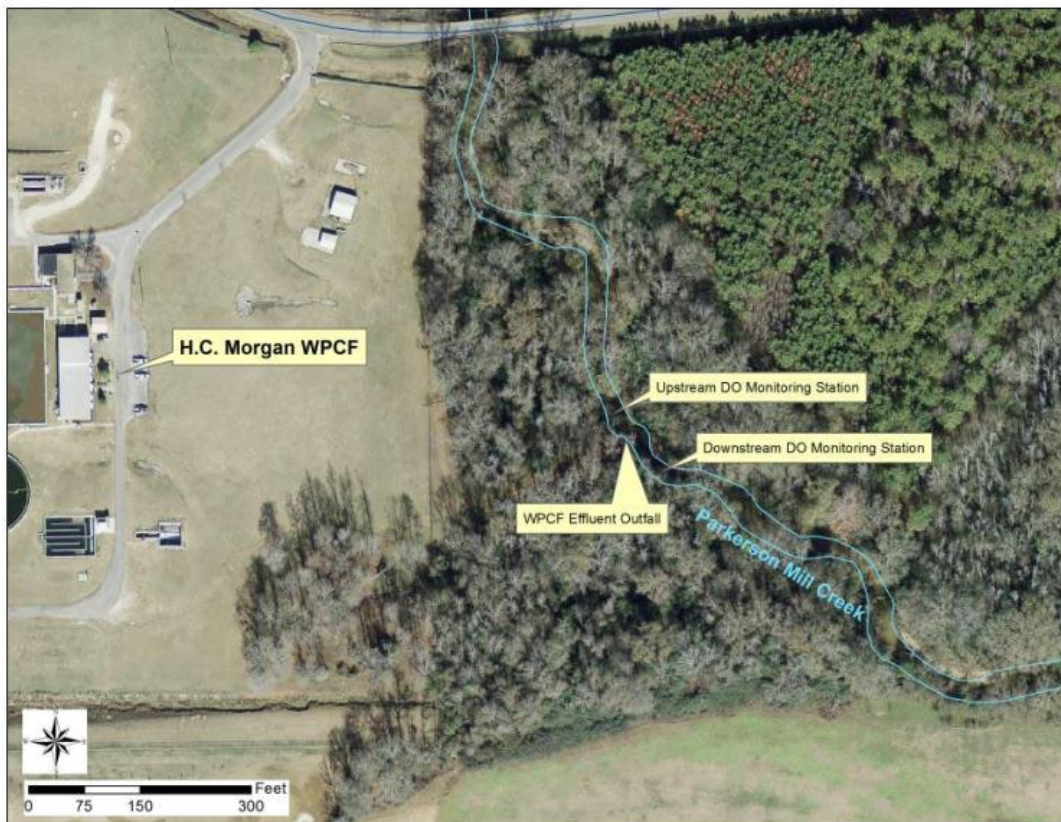
As noted above, dissolved oxygen measurements are taken with a YSI (Clark Cell) and/or HACH (Luminescent Dissolved Oxygen) probe.

- Dissolved Oxygen – The amount of oxygen in the water column from both atmospheric deposition and photosynthesis by aquatic plants and algae.

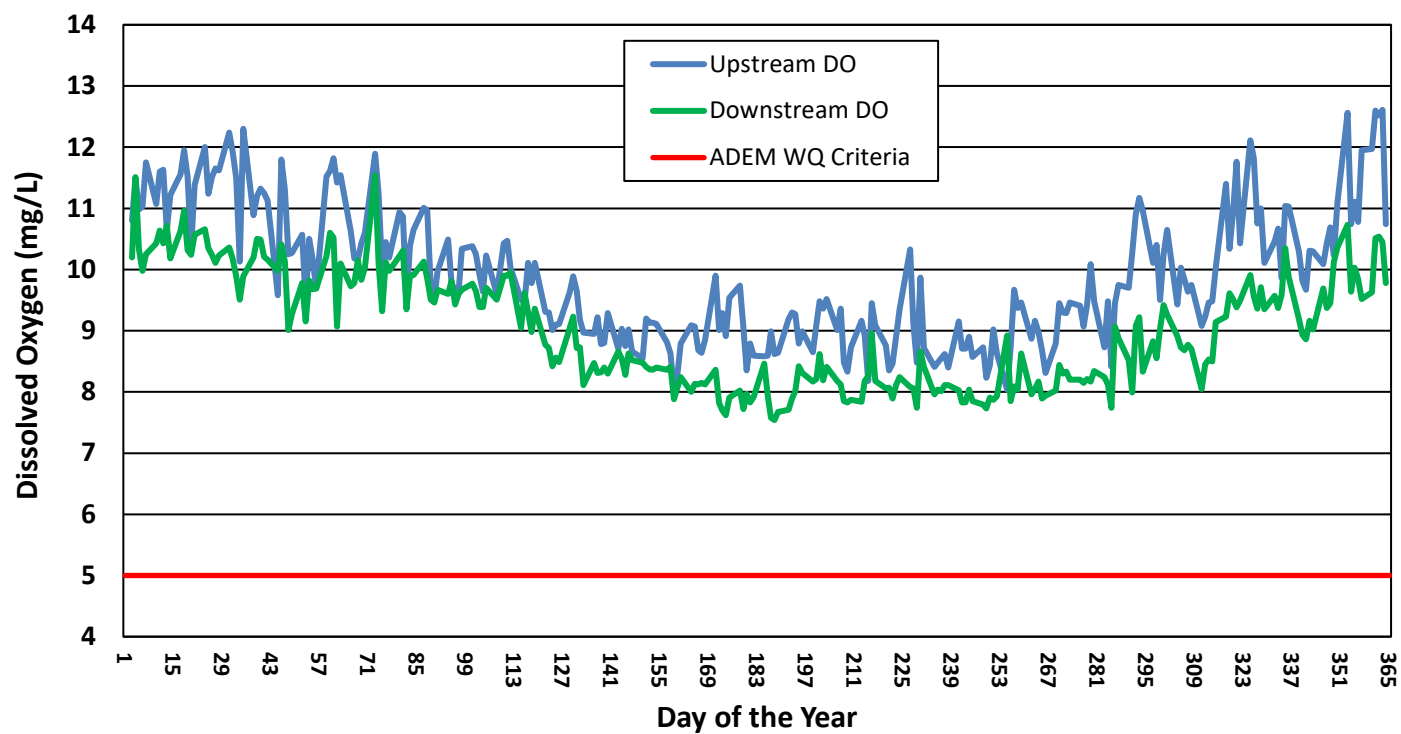
5.3 Monitoring Stations and Data

H.C. Morgan WPCF Upstream Latitude 32, 32, 9.890 N; Longitude 85, 30, 20.443 W

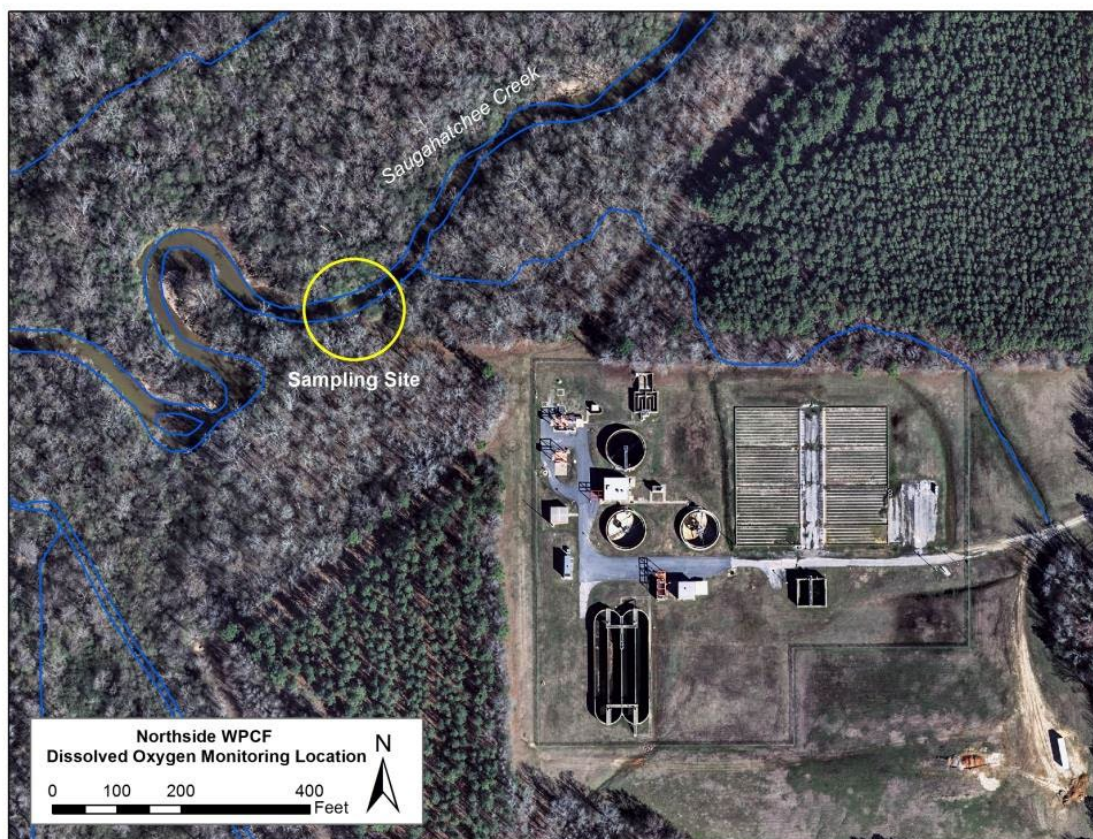
H.C. Morgan WPCF Downstream Latitude 32, 33, 9.077 N; Longitude 85, 30, 19.699 W

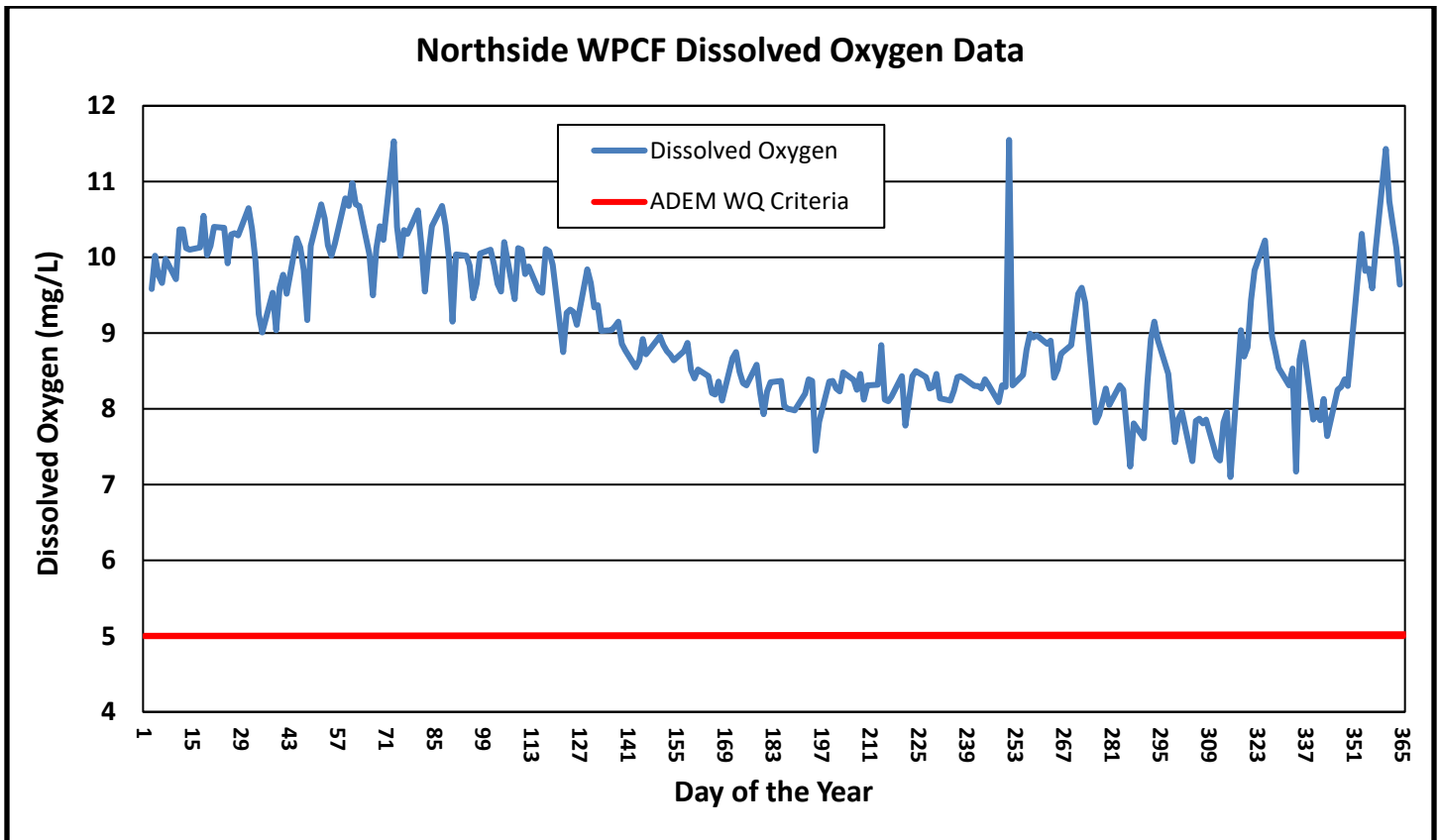


H.C. Morgan WPCF Dissolved Oxygen Data



Northside WPCF Latitude 32, 37, 41.32 N; Longitude 85, 32, 44.75 W





6.0 Outfall Screening

6.1 Purpose

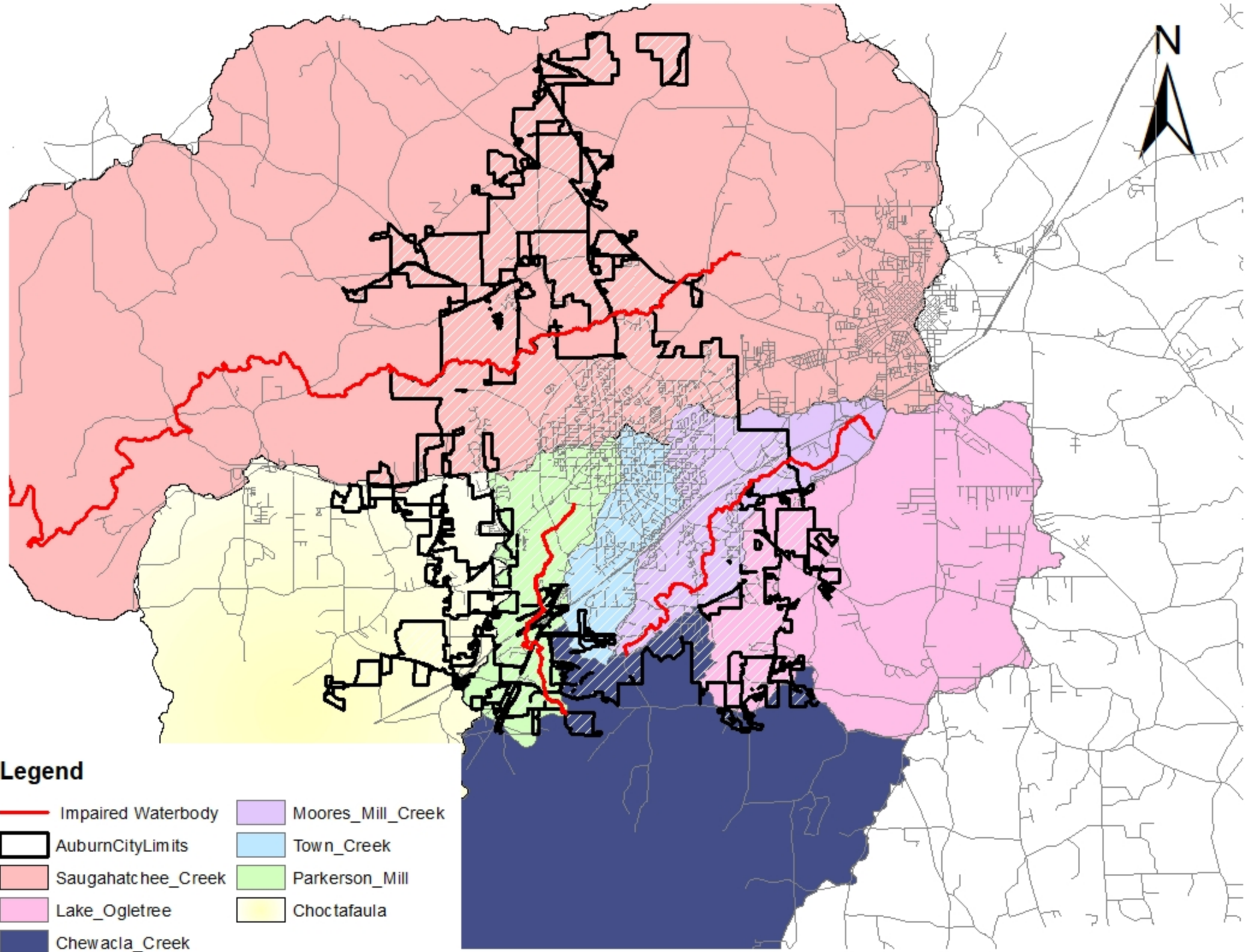
According to the ADEM Phase II NPDES General Permit ALR040003, the permittee shall implement an ongoing program to detect and eliminate illicit discharges to the MS4 to the maximum extent practicable. The permit requires a dry weather screening program to detect and address non-stormwater discharges to the MS4. The table that follows includes the water quality monitoring data that were collected at stormwater outfalls from April 1, 2022 to March 31, 2023.

6.2 Monitoring Data

Site	Sample Date	E-Coli (MPN)
S543	10/18/2022	2.0
S6	10/25/2022	55.6
T16	11/7/2022	328.2

APPENDIX E

HYDROLOGY AND WATERSHEDS WITH APPROVED TMDLs MAP



APPENDIX F

MUNICIPAL FACILITIES

City Properties/Facilities	
Public Safety Training Facility	Lake Wilmore
Ambulance Properties	Lee County Humane Society
Auburn Public Library	Fire Station 6
Baptist Hill Cemetery	Lynn St. Properties
Bowden Park	Mall Parkway Parking Lot
Boy Scout Hut Property	Martin Luther King Park
Boykin Community Center	Memorial Cemetery
Town Creek Inclusive Playground	Moore's Mill @ Society Hill Property
Choctawhatchee Lift Station	Moore's Mill Park
City Hall	N Gay St. Parking Lot
City Meeting Room	N Ross @ Opelika Rd Property
Dean Road Rec Center	Northside WPCF
Dekalb St. Regional DP	Parking Deck
Doug Watson Municipal Complex	Pine Hill Cemetery
Duck Samford Park	Public Safety Training Facility
Dumas Drive Property	Public Works
E Glenn Municipal Parking Lot	Dinius Park
Environmental Services	S Donahue @ EUD Property
Felton Little Park	Sam Harris Park
Fire Station 2 & Fields	School Bus Depot
Fire Station 3	Soccer Complex
Fire Station 4	Softball Complex
Firing Range	Summertrees Properties
Fleet Services	Tacoma Dr Regional DP
Forestdale@ Moore's Mill Property	Tennis Center
Frank Brown Rec Center	Town Creek Cemetery
Graham McTeer Park	Town Creek Drive Trailhead
HC Morgan WPCF	Town Creek Park and Greenway
Hickory Dickory Park	Veterans Memorial Property
Human Resources	Westview Properties
Indian Pines Golf Course	White St Regional DP
Keisel Park	

APPENDIX G

OUTFALL SCREENINGS 2022-2023

InspectionId	Inspection Type	Date Inspected	Inspected By	Finish Date
108128	SW Outfall Inspection	2022-10-25 02:09 AM	MCCURRY JR, RONALD G	2022-10-25 02:10 AM
108129	SW Outfall Inspection	2022-10-10 10:57 AM	ROGERS, DUSTIN M	2022-10-10 11:00 AM
108130	SW Outfall Inspection	2022-11-04 10:45 AM	ROGERS, DUSTIN M	2022-11-04 10:46 AM
108131	SW Outfall Inspection	2022-12-08 02:28 AM	KIMBROW, DUSTIN R	2022-12-08 02:29 AM
108132	SW Outfall Inspection	2022-11-03 10:54 AM	ROGERS, DUSTIN M	2022-11-03 10:55 AM
108133	SW Outfall Inspection	2022-12-19 01:22 AM	MCCURRY JR, RONALD G	2022-12-19 01:30 AM
108134	SW Outfall Inspection	2022-10-18 10:18 AM	ROGERS, DUSTIN M	2022-10-18 10:25 AM
108135	SW Outfall Inspection	2022-12-09 03:20 AM	KIMBROW, DUSTIN R	2022-12-09 03:21 AM
108136	SW Outfall Inspection	2022-11-10 09:47 AM	KIMBROW, DUSTIN R	2022-11-10 09:47 AM
108137	SW Outfall Inspection	2022-11-21 12:39 PM	ROGERS, DUSTIN M	2022-11-21 12:39 PM
108138	SW Outfall Inspection	2022-10-10 10:48 AM	ROGERS, DUSTIN M	2022-10-10 10:55 AM
108139	SW Outfall Inspection	2022-11-21 08:05 AM	ROGERS, DUSTIN M	2022-11-21 08:05 AM
108140	SW Outfall Inspection	2022-11-22 09:30 AM	ROGERS, DUSTIN M	2022-11-22 09:30 AM
108141	SW Outfall Inspection	2022-12-08 11:14 AM	KIMBROW, DUSTIN R	2022-12-08 11:14 AM
108142	SW Outfall Inspection	2022-10-25 01:26 AM	ROGERS, DUSTIN M	2022-10-25 01:27 AM
108143	SW Outfall Inspection	2022-11-21 11:32 AM	MCCURRY JR, RONALD G	2022-11-21 11:35 AM
108144	SW Outfall Inspection	2022-11-09 03:40 AM	MCCURRY JR, RONALD G	2022-11-09 03:43 AM
108145	SW Outfall Inspection	2022-11-04 10:24 AM	ROGERS, DUSTIN M	2022-11-04 10:25 AM
108146	SW Outfall Inspection	2022-12-09 03:30 AM	KIMBROW, DUSTIN R	2022-12-09 03:34 AM
108147	SW Outfall Inspection	2022-12-09 02:53 AM	KIMBROW, DUSTIN R	2022-12-09 02:53 AM
108148	SW Outfall Inspection	2022-10-18 10:18 AM	ROGERS, DUSTIN M	2022-10-18 10:22 AM
108149	SW Outfall Inspection	2022-11-04 10:25 AM	ROGERS, DUSTIN M	2022-11-04 10:26 AM
108150	SW Outfall Inspection	2022-12-08 02:53 AM	KIMBROW, DUSTIN R	2022-12-08 02:53 AM
108151	SW Outfall Inspection	2022-12-09 02:30 AM	KIMBROW, DUSTIN R	2022-12-09 02:30 AM
108152	SW Outfall Inspection	2022-11-09 02:40 AM	MCCURRY JR, RONALD G	2022-11-09 02:42 AM
108153	SW Outfall Inspection	2022-11-21 10:17 AM	MCCURRY JR, RONALD G	2022-11-21 10:20 AM
108154	SW Outfall Inspection	2022-11-22 09:08 AM	ROGERS, DUSTIN M	2022-11-22 09:08 AM
108155	SW Outfall Inspection	2022-11-09 09:09 AM	ROGERS, DUSTIN M	2022-11-09 09:12 AM
108156	SW Outfall Inspection	2022-11-10 10:40 AM	ROGERS, DUSTIN M	2022-11-10 10:50 AM
108157	SW Outfall Inspection	2022-12-09 02:25 AM	KIMBROW, DUSTIN R	2022-12-09 02:26 AM
108158	SW Outfall Inspection	2022-11-21 10:08 AM	MCCURRY JR, RONALD G	2022-11-21 10:13 AM
108159	SW Outfall Inspection	2022-11-21 01:13 AM	MCCURRY JR, RONALD G	2022-11-22 01:16 AM
108160	SW Outfall Inspection	2022-10-10 11:19 AM	ROGERS, DUSTIN M	2022-10-10 11:19 AM
108161	SW Outfall Inspection	2022-11-09 02:20 AM	MCCURRY JR, RONALD G	2022-11-09 02:21 AM
108162	SW Outfall Inspection	2022-12-08 02:38 AM	KIMBROW, DUSTIN R	2022-12-08 02:39 AM
108163	SW Outfall Inspection	2022-11-09 02:39 AM	MCCURRY JR, RONALD G	2022-11-09 02:42 AM
108164	SW Outfall Inspection	2022-12-09 02:20 AM	KIMBROW, DUSTIN R	2022-12-09 02:20 AM
108165	SW Outfall Inspection	2022-11-09 03:22 AM	MCCURRY JR, RONALD G	2022-11-09 03:25 AM
108166	SW Outfall Inspection	2022-11-21 01:13 AM	MCCURRY JR, RONALD G	2022-11-22 01:15 AM
108167	SW Outfall Inspection	2022-10-10 11:13 AM	ROGERS, DUSTIN M	2022-10-10 11:14 AM
108168	SW Outfall Inspection	2022-12-08 02:42 AM	KIMBROW, DUSTIN R	2022-12-08 02:43 AM
108169	SW Outfall Inspection	2022-11-09 02:45 AM	MCCURRY JR, RONALD G	2022-11-09 02:50 AM
108170	SW Outfall Inspection	2022-12-19 02:25 AM	MCCURRY JR, RONALD G	2022-12-19 02:30 AM
108171	SW Outfall Inspection	2022-10-25 11:57 AM	ROGERS, DUSTIN M	2022-10-25 11:58 AM
108172	SW Outfall Inspection	2022-11-09 03:10 AM	MCCURRY JR, RONALD G	2022-11-09 03:12 AM
108173	SW Outfall Inspection	2022-11-21 01:28 AM	MCCURRY JR, RONALD G	2022-11-21 01:31 AM
108174	SW Outfall Inspection	2022-10-10 11:07 AM	ROGERS, DUSTIN M	2022-10-10 11:09 AM
108175	SW Outfall Inspection	2022-11-21 10:33 AM	MCCURRY JR, RONALD G	2022-11-21 10:38 AM
108176	SW Outfall Inspection	2022-12-08 01:30 AM	KIMBROW, DUSTIN R	2022-12-08 01:30 AM
108177	SW Outfall Inspection	2022-11-21 08:14 AM	ROGERS, DUSTIN M	2022-11-21 08:15 AM
108178	SW Outfall Inspection	2022-10-25 11:51 AM	ROGERS, DUSTIN M	2022-10-25 11:54 AM
108179	SW Outfall Inspection	2022-11-09 03:09 AM	MCCURRY JR, RONALD G	2022-11-09 03:10 AM
108180	SW Outfall Inspection	2022-10-25 11:44 AM	ROGERS, DUSTIN M	2022-10-25 11:49 AM
108181	SW Outfall Inspection	2022-11-21 01:31 AM	MCCURRY JR, RONALD G	2022-11-21 01:34 AM
108182	SW Outfall Inspection	2022-10-18 09:57 AM	ROGERS, DUSTIN M	2022-10-18 10:03 AM
108183	SW Outfall Inspection	2022-11-21 10:24 AM	MCCURRY JR, RONALD G	2022-11-21 10:25 AM
108184	SW Outfall Inspection	2022-12-09 02:55 AM	KIMBROW, DUSTIN R	2022-12-09 02:55 AM
108185	SW Outfall Inspection	2022-12-08 10:16 AM	KIMBROW, DUSTIN R	2022-12-08 03:43 AM
108186	SW Outfall Inspection	2022-11-03 09:58 AM	ROGERS, DUSTIN M	2022-11-03 10:03 AM
108187	SW Outfall Inspection	2022-12-19 11:54 AM	MCCURRY JR, RONALD G	2022-12-19 11:58 AM
108188	SW Outfall Inspection	2022-11-21 01:31 AM	MCCURRY JR, RONALD G	2022-11-21 01:35 AM

InspectionId	Inspection Type	Date Inspected	Inspected By	Finish Date
108189	SW Outfall Inspection	2022-11-21 07:54 AM	ROGERS, DUSTIN M	2022-11-21 07:54 AM
108190	SW Outfall Inspection	2022-11-04 01:22 AM	ROGERS, DUSTIN M	2022-11-04 01:23 AM
108191	SW Outfall Inspection	2022-12-08 10:30 AM	KIMBROW, DUSTIN R	2022-12-08 10:30 AM
108192	SW Outfall Inspection	2022-11-21 11:49 AM	MCCURRY JR, RONALD G	2022-11-21 11:51 AM
108193	SW Outfall Inspection	2022-11-04 11:37 AM	MCCURRY JR, RONALD G	2022-11-04 11:40 AM
108194	SW Outfall Inspection	2022-11-03 10:09 AM	ROGERS, DUSTIN M	2022-11-03 10:18 AM
108195	SW Outfall Inspection	2022-10-25 02:17 AM	MCCURRY JR, RONALD G	2022-10-25 02:18 AM
108196	SW Outfall Inspection	2022-11-09 02:58 AM	LOCKLIER, DAWSON G	2022-11-09 02:00 AM
108197	SW Outfall Inspection	2022-11-09 04:20 AM	MCCURRY JR, RONALD G	2022-11-09 04:23 AM
108198	SW Outfall Inspection	2022-10-18 10:10 AM	ROGERS, DUSTIN M	2022-10-18 10:13 AM
108199	SW Outfall Inspection	2022-12-08 10:36 AM	KIMBROW, DUSTIN R	2022-12-08 10:37 AM
108200	SW Outfall Inspection	2022-11-04 01:20 AM	ROGERS, DUSTIN M	2022-11-04 01:20 AM
108201	SW Outfall Inspection	2022-11-09 03:30 AM	MCCURRY JR, RONALD G	2022-11-09 03:36 AM
108202	SW Outfall Inspection	2022-10-11 03:02 AM	MCCURRY JR, RONALD G	2022-10-11 03:22 AM
108203	SW Outfall Inspection	2022-11-03 10:19 AM	ROGERS, DUSTIN M	2022-11-03 10:20 AM
108204	SW Outfall Inspection	2022-11-09 02:57 AM	MCCURRY JR, RONALD G	2022-11-09 02:57 AM
108205	SW Outfall Inspection	2022-11-03 11:10 AM	MCCURRY JR, RONALD G	2022-11-03 11:15 AM
108206	SW Outfall Inspection	2022-12-19 01:00 AM	MCCURRY JR, RONALD G	2022-12-19 01:15 AM
108207	SW Outfall Inspection	2022-10-19 02:34 AM	MCCURRY JR, RONALD G	2022-10-19 02:35 AM
108208	SW Outfall Inspection	2022-10-25 02:58 AM	MCCURRY JR, RONALD G	2022-10-25 03:00 AM
108209	SW Outfall Inspection	2022-10-11 04:43 AM	MCCURRY JR, RONALD G	2022-10-11 04:44 AM
108210	SW Outfall Inspection	2022-10-11 03:43 AM	MCCURRY JR, RONALD G	2022-10-11 03:43 AM
108211	SW Outfall Inspection	2022-12-19 12:00 PM	MCCURRY JR, RONALD G	2022-12-19 12:20 PM
108212	SW Outfall Inspection	2022-11-07 03:03 AM	KIMBROW, DUSTIN R	2022-11-07 03:04 AM
108213	SW Outfall Inspection	2022-11-23 11:18 AM	ROGERS, DUSTIN M	2022-11-23 11:22 AM
108214	SW Outfall Inspection	2022-11-09 02:55 AM	MCCURRY JR, RONALD G	2022-11-09 02:57 AM
108215	SW Outfall Inspection	2022-11-08 02:43 AM	KIMBROW, DUSTIN R	2022-11-08 02:44 AM
108216	SW Outfall Inspection	2022-10-11 03:44 AM	MCCURRY JR, RONALD G	2022-10-11 03:45 AM
108217	SW Outfall Inspection	2022-10-19 02:40 AM	MCCURRY JR, RONALD G	2022-10-19 02:45 AM
108218	SW Outfall Inspection	2022-10-25 03:20 AM	MCCURRY JR, RONALD G	2022-10-25 03:30 AM
108219	SW Outfall Inspection	2022-11-23 11:24 AM	ROGERS, DUSTIN M	2022-11-23 11:27 AM
108220	SW Outfall Inspection	2022-11-04 01:40 AM	ROGERS, DUSTIN M	2022-11-04 01:40 AM
108221	SW Outfall Inspection	2022-10-25 03:15 AM	KIMBROW, DUSTIN R	2022-10-25 03:17 AM
108222	SW Outfall Inspection	2022-10-19 02:48 AM	MCCURRY JR, RONALD G	2022-10-19 02:53 AM
108223	SW Outfall Inspection	2022-11-08 02:41 AM	KIMBROW, DUSTIN R	2022-11-08 02:42 AM
108224	SW Outfall Inspection	2022-10-25 02:46 AM	MCCURRY JR, RONALD G	2022-10-25 02:48 AM
108225	SW Outfall Inspection	2022-10-25 10:18 AM	KIMBROW, DUSTIN R	2022-10-25 10:18 AM
108226	SW Outfall Inspection	2022-10-11 02:51 AM	MCCURRY JR, RONALD G	2022-10-11 02:52 AM
108227	SW Outfall Inspection	2022-10-25 10:52 AM	KIMBROW, DUSTIN R	2022-10-25 10:52 AM
108228	SW Outfall Inspection	2022-11-23 11:32 AM	ROGERS, DUSTIN M	2022-11-23 11:32 AM
108229	SW Outfall Inspection	2022-10-17 11:15 AM	MCCURRY JR, RONALD G	2022-10-17 11:20 AM
108230	SW Outfall Inspection	2022-10-19 02:55 AM	MCCURRY JR, RONALD G	2022-10-19 03:00 AM
108231	SW Outfall Inspection	2022-11-10 08:48 AM	KIMBROW, DUSTIN R	2022-11-10 08:49 AM
108232	SW Outfall Inspection	2022-11-03 12:02 PM	MCCURRY JR, RONALD G	2022-11-03 12:15 PM
108233	SW Outfall Inspection	2022-10-25 03:13 AM	KIMBROW, DUSTIN R	2022-10-25 03:14 AM
108234	SW Outfall Inspection	2022-10-11 03:54 AM	MCCURRY JR, RONALD G	2022-10-11 03:56 AM
108235	SW Outfall Inspection	2022-10-11 03:56 AM	KIMBROW, DUSTIN R	2022-10-11 03:56 AM
108236	SW Outfall Inspection	2022-10-10 10:12 AM	ROGERS, DUSTIN M	2022-10-10 10:15 AM
108237	SW Outfall Inspection	2022-11-03 10:34 AM	MCCURRY JR, RONALD G	2022-11-03 10:37 AM
108238	SW Outfall Inspection	2022-11-21 01:00 AM	MCCURRY JR, RONALD G	2022-11-21 01:05 AM
108239	SW Outfall Inspection	2022-10-17 10:59 AM	MCCURRY JR, RONALD G	2022-10-17 11:15 AM
108240	SW Outfall Inspection	2022-11-10 08:41 AM	KIMBROW, DUSTIN R	2022-11-10 08:42 AM
108241	SW Outfall Inspection	2022-10-19 10:59 AM	MCCURRY JR, RONALD G	2022-10-19 11:05 AM
108242	SW Outfall Inspection	2022-10-25 09:37 AM	KIMBROW, DUSTIN R	2022-10-25 09:38 AM
108243	SW Outfall Inspection	2022-11-08 02:31 AM	KIMBROW, DUSTIN R	2022-11-08 02:33 AM
108244	SW Outfall Inspection	2022-10-25 10:33 AM	KIMBROW, DUSTIN R	2022-10-25 10:33 AM
108245	SW Outfall Inspection	2022-11-03 10:39 AM	MCCURRY JR, RONALD G	2022-11-03 10:41 AM
108246	SW Outfall Inspection	2022-10-19 11:07 AM	MCCURRY JR, RONALD G	2022-10-19 11:10 AM
108247	SW Outfall Inspection	2022-11-10 08:37 AM	KIMBROW, DUSTIN R	2022-11-10 08:37 AM
108248	SW Outfall Inspection	2022-11-09 03:52 AM	KIMBROW, DUSTIN R	2022-11-09 03:52 AM
108249	SW Outfall Inspection	2022-10-25 09:35 AM	KIMBROW, DUSTIN R	2022-10-25 09:36 AM

InspectionId	Inspection Type	Date Inspected	Inspected By	Finish Date
108250	SW Outfall Inspection	2022-10-25 10:13 AM	KIMBROW, DUSTIN R	2022-10-25 10:13 AM
108251	SW Outfall Inspection	2022-10-19 02:17 AM	MCCURRY JR, RONALD G	2022-10-19 02:25 AM
108252	SW Outfall Inspection	2022-10-25 02:14 AM	KIMBROW, DUSTIN R	2022-10-25 02:15 AM
108253	SW Outfall Inspection	2022-11-10 08:28 AM	KIMBROW, DUSTIN R	2022-11-10 08:29 AM
108254	SW Outfall Inspection	2022-10-11 03:45 AM	KIMBROW, DUSTIN R	2022-10-11 03:47 AM
108255	SW Outfall Inspection	2022-11-08 01:42 AM	KIMBROW, DUSTIN R	2022-11-08 01:42 AM
108256	SW Outfall Inspection	2022-11-03 10:48 AM	MCCURRY JR, RONALD G	2022-11-03 10:51 AM
108257	SW Outfall Inspection	2022-10-25 10:03 AM	KIMBROW, DUSTIN R	2022-10-25 10:03 AM
108258	SW Outfall Inspection	2022-10-25 03:01 AM	KIMBROW, DUSTIN R	2022-10-25 03:01 AM
108259	SW Outfall Inspection	2022-10-25 02:16 AM	KIMBROW, DUSTIN R	2022-10-25 02:17 AM
108260	SW Outfall Inspection	2022-10-11 03:34 AM	KIMBROW, DUSTIN R	2022-10-11 03:35 AM
108261	SW Outfall Inspection	2022-12-09 09:39 AM	MCCURRY JR, RONALD G	2022-12-09 09:43 AM
108262	SW Outfall Inspection	2022-10-25 09:46 AM	KIMBROW, DUSTIN R	2022-10-25 09:46 AM
108263	SW Outfall Inspection	2022-11-09 03:44 AM	KIMBROW, DUSTIN R	2022-11-09 03:44 AM
108264	SW Outfall Inspection	2022-11-03 10:54 AM	MCCURRY JR, RONALD G	2022-11-03 10:57 AM
108265	SW Outfall Inspection	2022-11-08 01:39 AM	KIMBROW, DUSTIN R	2022-11-08 01:40 AM
108266	SW Outfall Inspection	2022-10-25 10:00 AM	KIMBROW, DUSTIN R	2022-10-25 10:00 AM
108267	SW Outfall Inspection	2022-10-25 02:10 AM	KIMBROW, DUSTIN R	2022-10-25 02:10 AM
108268	SW Outfall Inspection	2022-10-25 10:47 AM	KIMBROW, DUSTIN R	2022-10-25 10:47 AM
108269	SW Outfall Inspection	2022-11-09 03:43 AM	KIMBROW, DUSTIN R	2022-11-09 03:43 AM
108270	SW Outfall Inspection	2022-10-25 10:34 AM	KIMBROW, DUSTIN R	2022-10-25 10:35 AM
108271	SW Outfall Inspection	2022-10-25 10:42 AM	KIMBROW, DUSTIN R	2022-10-25 10:43 AM
108272	SW Outfall Inspection	2022-10-25 03:03 AM	MCCURRY JR, RONALD G	2022-10-25 03:07 AM
108273	SW Outfall Inspection	2022-10-19 03:05 AM	MCCURRY JR, RONALD G	2022-10-19 03:10 AM
108274	SW Outfall Inspection	2022-11-08 01:43 AM	KIMBROW, DUSTIN R	2022-11-08 01:43 AM
108275	SW Outfall Inspection	2022-10-25 02:33 AM	KIMBROW, DUSTIN R	2022-10-25 02:34 AM
108276	SW Outfall Inspection	2022-11-09 03:13 AM	MCCURRY JR, RONALD G	2022-11-09 03:18 AM
108277	SW Outfall Inspection	2022-10-11 03:28 AM	KIMBROW, DUSTIN R	2022-10-11 03:28 AM
108278	SW Outfall Inspection	2022-10-25 10:24 AM	KIMBROW, DUSTIN R	2022-10-25 10:24 AM
108279	SW Outfall Inspection	2022-11-09 03:58 AM	KIMBROW, DUSTIN R	2022-11-09 03:58 AM
108281	SW Outfall Inspection	2022-10-25 11:26 AM	KIMBROW, DUSTIN R	2022-10-25 11:27 AM
108282	SW Outfall Inspection	2022-11-08 01:50 AM	KIMBROW, DUSTIN R	2022-11-08 01:52 AM
108283	SW Outfall Inspection	2022-10-25 02:30 AM	KIMBROW, DUSTIN R	2022-10-25 02:30 AM
108284	SW Outfall Inspection	2022-11-21 11:18 AM	MCCURRY JR, RONALD G	2022-11-21 11:20 AM
108285	SW Outfall Inspection	2022-10-25 10:36 AM	KIMBROW, DUSTIN R	2022-10-25 10:36 AM
108286	SW Outfall Inspection	2022-10-25 02:44 AM	KIMBROW, DUSTIN R	2022-10-25 02:44 AM
108287	SW Outfall Inspection	2022-10-25 02:32 AM	MCCURRY JR, RONALD G	2022-10-25 02:35 AM
108288	SW Outfall Inspection	2022-10-11 04:30 AM	MCCURRY JR, RONALD G	2022-10-11 04:33 AM
108289	SW Outfall Inspection	2022-11-21 12:28 PM	ROGERS, DUSTIN M	2022-11-21 12:31 PM
108290	SW Outfall Inspection	2022-11-03 10:56 AM	ROGERS, DUSTIN M	2022-11-03 10:56 AM
108291	SW Outfall Inspection	2022-11-09 09:02 AM	ROGERS, DUSTIN M	2022-11-09 09:04 AM
108292	SW Outfall Inspection	2022-11-21 11:35 AM	MCCURRY JR, RONALD G	2022-11-21 11:38 AM
108293	SW Outfall Inspection	2022-12-08 11:12 AM	KIMBROW, DUSTIN R	2022-12-08 11:12 AM
108294	SW Outfall Inspection	2022-11-08 01:54 AM	KIMBROW, DUSTIN R	2022-11-08 01:55 AM
108295	SW Outfall Inspection	2022-11-10 09:17 AM	KIMBROW, DUSTIN R	2022-11-10 09:19 AM
108296	SW Outfall Inspection	2022-10-18 10:38 AM	ROGERS, DUSTIN M	2022-10-18 10:45 AM
108297	SW Outfall Inspection	2022-11-10 09:46 AM	KIMBROW, DUSTIN R	2022-11-10 09:46 AM
108298	SW Outfall Inspection	2022-10-19 03:12 AM	MCCURRY JR, RONALD G	2022-10-19 03:15 AM
108299	SW Outfall Inspection	2022-10-11 04:54 AM	MCCURRY JR, RONALD G	2022-10-11 04:58 AM
108300	SW Outfall Inspection	2022-11-21 08:31 AM	ROGERS, DUSTIN M	2022-11-21 08:31 AM
108301	SW Outfall Inspection	2022-10-10 10:49 AM	ROGERS, DUSTIN M	2022-10-10 10:53 AM
108302	SW Outfall Inspection	2022-10-25 02:48 AM	KIMBROW, DUSTIN R	2022-10-25 02:48 AM
108303	SW Outfall Inspection	2022-11-03 10:25 AM	ROGERS, DUSTIN M	2022-11-03 10:29 AM
108304	SW Outfall Inspection	2022-10-11 04:25 AM	MCCURRY JR, RONALD G	2022-10-11 04:26 AM
108305	SW Outfall Inspection	2022-11-21 12:57 PM	ROGERS, DUSTIN M	2022-11-21 01:02 AM
108306	SW Outfall Inspection	2022-10-24 04:25 AM	MCCURRY JR, RONALD G	2022-10-24 04:27 AM
108307	SW Outfall Inspection	2022-10-11 04:45 AM	MCCURRY JR, RONALD G	2022-10-11 04:50 AM
108308	SW Outfall Inspection	2022-11-09 08:54 AM	ROGERS, DUSTIN M	2022-11-09 08:59 AM
108309	SW Outfall Inspection	2022-12-19 12:30 PM	ROGERS, DUSTIN M	2022-12-19 12:31 PM
108310	SW Outfall Inspection	2022-11-07 02:56 AM	KIMBROW, DUSTIN R	2022-11-07 02:56 AM
108311	SW Outfall Inspection	2022-10-24 04:40 AM	MCCURRY JR, RONALD G	2022-10-24 04:41 AM

InspectionId	Inspection Type	Date Inspected	Inspected By	Finish Date
108313	SW Outfall Inspection	2022-11-21 12:47 PM	MCCURRY JR, RONALD G	2022-11-21 12:53 PM
108314	SW Outfall Inspection	2022-11-21 08:29 AM	ROGERS, DUSTIN M	2022-11-21 08:29 AM
108315	SW Outfall Inspection	2022-10-25 01:33 AM	ROGERS, DUSTIN M	2022-10-25 01:36 AM
108316	SW Outfall Inspection	2022-11-09 01:40 AM	MCCURRY JR, RONALD G	2022-11-09 01:45 AM
108317	SW Outfall Inspection	2022-10-18 10:33 AM	ROGERS, DUSTIN M	2022-10-18 10:35 AM
108318	SW Outfall Inspection	2022-11-09 12:40 PM	ROGERS, DUSTIN M	2022-11-09 12:49 PM
108319	SW Outfall Inspection	2022-10-11 05:00 AM	MCCURRY JR, RONALD G	2022-10-11 05:05 AM
108320	SW Outfall Inspection	2022-11-10 10:01 AM	KIMBROW, DUSTIN R	2022-11-10 10:01 AM
108321	SW Outfall Inspection	2022-10-25 02:38 AM	KIMBROW, DUSTIN R	2022-10-25 02:39 AM
108322	SW Outfall Inspection	2022-10-25 11:24 AM	KIMBROW, DUSTIN R	2022-10-25 11:25 AM
108323	SW Outfall Inspection	2022-11-09 04:12 AM	MCCURRY JR, RONALD G	2022-11-09 04:15 AM
108324	SW Outfall Inspection	2022-10-11 04:09 AM	MCCURRY JR, RONALD G	2022-10-11 04:09 AM
108325	SW Outfall Inspection	2022-11-21 01:04 AM	ROGERS, DUSTIN M	2022-11-21 01:04 AM
108326	SW Outfall Inspection	2022-11-03 11:56 AM	MCCURRY JR, RONALD G	2022-11-03 12:00 PM
108327	SW Outfall Inspection	2022-10-11 05:05 AM	MCCURRY JR, RONALD G	2022-10-11 05:15 AM
108328	SW Outfall Inspection	2022-11-08 03:09 AM	MCCURRY JR, RONALD G	2022-11-08 03:15 AM
108329	SW Outfall Inspection	2022-10-25 01:25 AM	ROGERS, DUSTIN M	2022-10-25 01:25 AM
108330	SW Outfall Inspection	2022-11-03 10:33 AM	ROGERS, DUSTIN M	2022-11-03 10:38 AM
108331	SW Outfall Inspection	2022-11-03 10:25 AM	MCCURRY JR, RONALD G	2022-11-03 10:30 AM
108332	SW Outfall Inspection	2022-11-09 08:52 AM	ROGERS, DUSTIN M	2022-11-09 08:52 AM
108333	SW Outfall Inspection	2022-11-04 01:43 AM	ROGERS, DUSTIN M	2022-11-04 01:43 AM
108334	SW Outfall Inspection	2022-12-08 04:42 AM	MCCURRY JR, RONALD G	2022-12-08 04:43 AM
108335	SW Outfall Inspection	2022-11-07 02:43 AM	KIMBROW, DUSTIN R	2022-11-07 02:44 AM
108336	SW Outfall Inspection	2022-11-09 12:19 PM	ROGERS, DUSTIN M	2022-11-09 12:19 PM
108337	SW Outfall Inspection	2022-11-21 08:33 AM	ROGERS, DUSTIN M	2022-11-21 08:33 AM
108338	SW Outfall Inspection	2022-10-24 04:42 AM	MCCURRY JR, RONALD G	2022-10-24 04:43 AM
108339	SW Outfall Inspection	2022-11-07 02:53 AM	KIMBROW, DUSTIN R	2022-11-07 02:53 AM
108340	SW Outfall Inspection	2022-12-08 11:30 AM	MCCURRY JR, RONALD G	2022-12-08 11:53 AM
108341	SW Outfall Inspection	2022-12-19 12:58 PM	ROGERS, DUSTIN M	2022-12-19 12:59 PM
108342	SW Outfall Inspection	2022-11-22 08:47 AM	ROGERS, DUSTIN M	2022-11-22 08:57 AM
108343	SW Outfall Inspection	2022-11-21 07:37 AM	ROGERS, DUSTIN M	2022-11-21 07:43 AM
108344	SW Outfall Inspection	2022-11-08 03:50 AM	MCCURRY JR, RONALD G	2022-11-08 03:53 AM
108345	SW Outfall Inspection	2022-10-25 11:04 AM	KIMBROW, DUSTIN R	2022-10-25 11:04 AM
108346	SW Outfall Inspection	2022-11-22 02:20 AM	ROGERS, DUSTIN M	2022-11-22 02:23 AM
108347	SW Outfall Inspection	2022-11-10 10:15 AM	KIMBROW, DUSTIN R	2022-11-10 10:16 AM
108348	SW Outfall Inspection	2022-11-09 01:27 AM	MCCURRY JR, RONALD G	2022-11-09 01:30 AM
108349	SW Outfall Inspection	2022-12-08 10:09 AM	KIMBROW, DUSTIN R	2022-12-08 10:10 AM
108350	SW Outfall Inspection	2022-11-22 03:00 AM	ROGERS, DUSTIN M	2022-11-22 03:00 AM
108351	SW Outfall Inspection	2022-12-08 02:09 AM	KIMBROW, DUSTIN R	2022-12-08 02:10 AM
108352	SW Outfall Inspection	2022-10-11 05:17 AM	MCCURRY JR, RONALD G	2022-10-11 05:20 AM
108353	SW Outfall Inspection	2022-11-03 11:28 AM	MCCURRY JR, RONALD G	2022-11-03 11:32 AM
108354	SW Outfall Inspection	2022-11-03 10:41 AM	ROGERS, DUSTIN M	2022-11-03 10:44 AM
108355	SW Outfall Inspection	2022-11-09 04:05 AM	MCCURRY JR, RONALD G	2022-11-09 04:10 AM
108356	SW Outfall Inspection	2022-11-09 12:55 PM	ROGERS, DUSTIN M	2022-11-09 12:55 PM
108357	SW Outfall Inspection	2022-11-07 02:46 AM	KIMBROW, DUSTIN R	2022-11-07 02:46 AM
108358	SW Outfall Inspection	2022-12-08 01:16 AM	KIMBROW, DUSTIN R	2022-12-08 01:17 AM
108359	SW Outfall Inspection	2022-11-10 10:51 AM	ROGERS, DUSTIN M	2022-11-10 10:52 AM
108360	SW Outfall Inspection	2022-10-10 11:25 AM	ROGERS, DUSTIN M	2022-10-10 11:26 AM
108361	SW Outfall Inspection	2022-12-09 03:02 AM	KIMBROW, DUSTIN R	2022-12-09 03:03 AM
108362	SW Outfall Inspection	2022-11-22 09:37 AM	ROGERS, DUSTIN M	2022-11-22 09:39 AM
108363	SW Outfall Inspection	2022-11-21 12:34 PM	MCCURRY JR, RONALD G	2022-11-21 12:40 PM
108364	SW Outfall Inspection	2022-11-10 08:54 AM	KIMBROW, DUSTIN R	2022-12-08 03:45 AM
108365	SW Outfall Inspection	2022-10-25 10:57 AM	KIMBROW, DUSTIN R	2022-10-25 10:57 AM
108366	SW Outfall Inspection	2022-11-21 12:11 PM	ROGERS, DUSTIN M	2022-11-21 12:16 PM
108367	SW Outfall Inspection	2022-10-25 02:31 AM	KIMBROW, DUSTIN R	2022-10-25 02:32 AM
108368	SW Outfall Inspection	2022-10-24 04:34 AM	MCCURRY JR, RONALD G	2022-10-24 04:36 AM
108369	SW Outfall Inspection	2022-12-08 10:05 AM	KIMBROW, DUSTIN R	2022-12-08 10:06 AM
108370	SW Outfall Inspection	2022-11-22 03:01 AM	ROGERS, DUSTIN M	2022-11-22 03:02 AM
108371	SW Outfall Inspection	2022-11-03 04:58 AM	MCCURRY JR, RONALD G	2022-11-03 05:02 AM
108372	SW Outfall Inspection	2022-10-11 04:14 AM	MCCURRY JR, RONALD G	2022-10-11 04:19 AM
108373	SW Outfall Inspection	2022-11-10 11:13 AM	ROGERS, DUSTIN M	2022-11-10 11:14 AM

InspectionId	Inspection Type	Date Inspected	Inspected By	Finish Date
108374	SW Outfall Inspection	2022-12-08 12:05 PM	MCCURRY JR, RONALD G	2022-12-08 12:08 PM
108375	SW Outfall Inspection	2022-11-03 11:35 AM	MCCURRY JR, RONALD G	2022-11-03 11:37 AM
108376	SW Outfall Inspection	2022-12-19 03:15 AM	MCCURRY JR, RONALD G	2022-12-19 03:30 AM
108377	SW Outfall Inspection	2022-10-25 12:05 PM	ROGERS, DUSTIN M	2022-10-25 12:09 PM
108378	SW Outfall Inspection	2022-11-21 10:39 AM	MCCURRY JR, RONALD G	2022-11-21 10:40 AM
108379	SW Outfall Inspection	2022-11-22 09:14 AM	ROGERS, DUSTIN M	2022-11-22 09:15 AM
108380	SW Outfall Inspection	2022-11-09 12:28 PM	ROGERS, DUSTIN M	2022-11-09 12:28 PM
108381	SW Outfall Inspection	2022-12-09 02:17 AM	KIMBROW, DUSTIN R	2022-12-09 02:18 AM
108382	SW Outfall Inspection	2022-11-04 10:47 AM	ROGERS, DUSTIN M	2022-11-04 10:48 AM
108383	SW Outfall Inspection	2022-11-07 02:40 AM	KIMBROW, DUSTIN R	2022-11-07 02:41 AM
108384	SW Outfall Inspection	2022-11-21 12:22 PM	MCCURRY JR, RONALD G	2022-11-21 12:30 PM
108385	SW Outfall Inspection	2022-11-09 04:00 AM	MCCURRY JR, RONALD G	2022-11-09 04:02 AM
108386	SW Outfall Inspection	2022-11-10 09:00 AM	KIMBROW, DUSTIN R	2022-11-10 09:01 AM
108387	SW Outfall Inspection	2022-10-28 02:03 AM	MCCURRY JR, RONALD G	2022-10-28 02:05 AM
108388	SW Outfall Inspection	2022-10-25 10:08 AM	KIMBROW, DUSTIN R	2022-10-25 10:09 AM
108389	SW Outfall Inspection	2022-11-08 03:32 AM	MCCURRY JR, RONALD G	2022-11-08 03:37 AM
108390	SW Outfall Inspection	2022-12-19 11:49 AM	ROGERS, DUSTIN M	2022-12-19 11:49 AM
108391	SW Outfall Inspection	2022-11-03 11:42 AM	MCCURRY JR, RONALD G	2022-11-03 11:45 AM
108392	SW Outfall Inspection	2022-11-21 01:58 AM	MCCURRY JR, RONALD G	2022-11-21 02:03 AM
108393	SW Outfall Inspection	2022-11-08 02:49 AM	MCCURRY JR, RONALD G	2022-11-08 02:55 AM
108394	SW Outfall Inspection	2022-11-21 12:18 PM	ROGERS, DUSTIN M	2022-11-21 12:22 PM
108395	SW Outfall Inspection	2022-10-25 12:11 PM	ROGERS, DUSTIN M	2022-10-25 12:16 PM
108396	SW Outfall Inspection	2022-11-22 09:15 AM	ROGERS, DUSTIN M	2022-11-22 09:16 AM
108397	SW Outfall Inspection	2022-11-10 11:03 AM	ROGERS, DUSTIN M	2022-11-10 11:03 AM
108398	SW Outfall Inspection	2022-12-08 01:44 AM	KIMBROW, DUSTIN R	2022-12-08 01:45 AM
108399	SW Outfall Inspection	2022-11-22 09:44 AM	ROGERS, DUSTIN M	2022-11-22 09:49 AM
108400	SW Outfall Inspection	2022-11-04 11:27 AM	MCCURRY JR, RONALD G	2022-11-04 11:31 AM
108401	SW Outfall Inspection	2022-11-04 10:49 AM	ROGERS, DUSTIN M	2022-11-04 10:50 AM
108402	SW Outfall Inspection	2022-11-21 10:49 AM	MCCURRY JR, RONALD G	2022-11-21 10:55 AM
108403	SW Outfall Inspection	2022-11-22 09:57 AM	ROGERS, DUSTIN M	2022-11-22 09:57 AM
108404	SW Outfall Inspection	2022-12-09 03:11 AM	KIMBROW, DUSTIN R	2022-12-09 03:12 AM
108405	SW Outfall Inspection	2022-10-25 03:02 AM	KIMBROW, DUSTIN R	2022-10-25 03:02 AM
108406	SW Outfall Inspection	2022-11-09 03:57 AM	MCCURRY JR, RONALD G	2022-11-09 04:00 AM
108407	SW Outfall Inspection	2022-11-03 11:47 AM	MCCURRY JR, RONALD G	2022-11-03 11:51 AM
108408	SW Outfall Inspection	2022-11-03 11:00 AM	MCCURRY JR, RONALD G	2022-11-03 11:05 AM
108409	SW Outfall Inspection	2022-11-22 09:16 AM	ROGERS, DUSTIN M	2022-11-22 09:17 AM
108410	SW Outfall Inspection	2022-11-21 12:04 PM	MCCURRY JR, RONALD G	2022-11-21 12:10 PM
108411	SW Outfall Inspection	2022-11-10 11:08 AM	ROGERS, DUSTIN M	2022-11-10 11:08 AM
108412	SW Outfall Inspection	2022-12-08 01:55 AM	KIMBROW, DUSTIN R	2022-12-08 01:55 AM
108413	SW Outfall Inspection	2022-11-08 03:39 AM	MCCURRY JR, RONALD G	2022-11-08 03:45 AM
108414	SW Outfall Inspection	2022-10-25 11:30 AM	ROGERS, DUSTIN M	2022-10-25 11:35 AM
108415	SW Outfall Inspection	2022-10-25 03:03 AM	KIMBROW, DUSTIN R	2022-10-25 03:04 AM
108416	SW Outfall Inspection	2022-11-04 12:10 PM	MCCURRY JR, RONALD G	2022-11-04 12:15 PM
108417	SW Outfall Inspection	2022-11-03 04:58 AM	MCCURRY JR, RONALD G	2022-11-03 05:02 AM
108418	SW Outfall Inspection	2022-10-25 11:40 AM	ROGERS, DUSTIN M	2022-10-25 11:41 AM
108419	SW Outfall Inspection	2022-11-04 10:51 AM	ROGERS, DUSTIN M	2022-11-04 10:51 AM
108420	SW Outfall Inspection	2022-12-09 03:10 AM	KIMBROW, DUSTIN R	2022-12-09 03:11 AM
108421	SW Outfall Inspection	2022-11-04 11:44 AM	MCCURRY JR, RONALD G	2022-11-04 11:48 AM
108422	SW Outfall Inspection	2022-11-21 02:08 AM	MCCURRY JR, RONALD G	2022-11-21 02:15 AM
108423	SW Outfall Inspection	2022-12-19 11:52 AM	ROGERS, DUSTIN M	2022-12-19 12:01 PM
108424	SW Outfall Inspection	2022-11-21 12:11 PM	MCCURRY JR, RONALD G	2022-11-21 12:15 PM
108425	SW Outfall Inspection	2022-12-19 12:47 PM	MCCURRY JR, RONALD G	2022-12-19 12:56 PM
108426	SW Outfall Inspection	2022-11-10 09:40 AM	KIMBROW, DUSTIN R	2022-11-10 09:41 AM
108427	SW Outfall Inspection	2022-10-28 02:07 AM	MCCURRY JR, RONALD G	2022-10-28 02:13 AM
108428	SW Outfall Inspection	2022-11-08 02:58 AM	MCCURRY JR, RONALD G	2022-11-08 03:05 AM
108429	SW Outfall Inspection	2022-11-10 11:09 AM	ROGERS, DUSTIN M	2022-11-10 11:09 AM
108430	SW Outfall Inspection	2022-11-22 09:22 AM	ROGERS, DUSTIN M	2022-11-22 09:23 AM
108431	SW Outfall Inspection	2022-11-09 12:38 PM	ROGERS, DUSTIN M	2022-11-09 12:39 PM
108432	SW Outfall Inspection	2022-11-22 02:01 AM	ROGERS, DUSTIN M	2022-11-22 02:14 AM
108433	SW Outfall Inspection	2022-10-10 10:40 AM	ROGERS, DUSTIN M	2022-10-10 10:43 AM
108434	SW Outfall Inspection	2022-12-08 02:22 AM	KIMBROW, DUSTIN R	2022-12-08 02:23 AM

InspectionId	Inspection Type	Date Inspected	Inspected By	Finish Date
108435	SW Outfall Inspection	2022-11-04 01:35 AM	ROGERS, DUSTIN M	2022-11-04 01:37 AM
108436	SW Outfall Inspection	2022-10-11 03:57 AM	KIMBROW, DUSTIN R	2022-10-11 03:58 AM
108437	SW Outfall Inspection	2022-12-08 02:58 AM	KIMBROW, DUSTIN R	2022-12-08 02:59 AM
108438	SW Outfall Inspection	2022-10-11 04:37 AM	MCCURRY JR, RONALD G	2022-10-11 04:39 AM
108439	SW Outfall Inspection	2022-12-08 12:23 PM	MCCURRY JR, RONALD G	2022-12-08 12:30 PM
108440	SW Outfall Inspection	2022-11-09 02:25 AM	MCCURRY JR, RONALD G	2022-11-09 02:30 AM
108441	SW Outfall Inspection	2022-11-09 09:23 AM	ROGERS, DUSTIN M	2022-11-09 09:24 AM
108442	SW Outfall Inspection	2022-11-10 09:42 AM	KIMBROW, DUSTIN R	2022-11-10 09:42 AM
108443	SW Outfall Inspection	2022-10-25 03:12 AM	MCCURRY JR, RONALD G	2022-10-25 03:15 AM
108444	SW Outfall Inspection	2022-11-08 03:18 AM	MCCURRY JR, RONALD G	2022-11-08 03:24 AM
108445	SW Outfall Inspection	2022-11-10 10:37 AM	ROGERS, DUSTIN M	2022-11-10 10:38 AM
108446	SW Outfall Inspection	2022-11-22 09:24 AM	ROGERS, DUSTIN M	2022-11-22 09:27 AM
108447	SW Outfall Inspection	2022-10-10 10:40 AM	ROGERS, DUSTIN M	2022-10-10 10:45 AM
108448	SW Outfall Inspection	2022-11-08 02:12 AM	KIMBROW, DUSTIN R	2022-11-08 02:12 AM
108449	SW Outfall Inspection	2022-10-10 10:30 AM	ROGERS, DUSTIN M	2022-10-10 10:34 AM
108450	SW Outfall Inspection	2022-12-08 03:05 AM	KIMBROW, DUSTIN R	2022-12-08 03:06 AM
108451	SW Outfall Inspection	2022-11-09 03:50 AM	MCCURRY JR, RONALD G	2022-11-09 03:53 AM
108452	SW Outfall Inspection	2022-11-08 02:28 AM	KIMBROW, DUSTIN R	2022-11-08 02:28 AM
108453	SW Outfall Inspection	2022-11-04 01:33 AM	ROGERS, DUSTIN M	2022-11-04 01:35 AM
108454	SW Outfall Inspection	2022-11-09 02:34 AM	MCCURRY JR, RONALD G	2022-11-09 02:37 AM
108455	SW Outfall Inspection	2022-11-10 09:43 AM	KIMBROW, DUSTIN R	2022-11-10 09:44 AM
108456	SW Outfall Inspection	2022-11-04 11:55 AM	MCCURRY JR, RONALD G	2022-11-04 12:00 PM
108457	SW Outfall Inspection	2022-11-21 12:41 PM	ROGERS, DUSTIN M	2022-11-21 12:50 PM
108458	SW Outfall Inspection	2022-12-08 04:11 AM	MCCURRY JR, RONALD G	2022-12-08 04:12 AM
108459	SW Outfall Inspection	2022-11-22 01:42 AM	ROGERS, DUSTIN M	2022-11-22 01:56 AM
108460	SW Outfall Inspection	2022-11-08 02:10 AM	KIMBROW, DUSTIN R	2022-11-08 02:11 AM
108461	SW Outfall Inspection	2022-10-25 01:28 AM	ROGERS, DUSTIN M	2022-10-25 01:28 AM
108462	SW Outfall Inspection	2022-10-10 10:25 AM	ROGERS, DUSTIN M	2022-10-10 10:32 AM
108463	SW Outfall Inspection	2022-11-04 01:23 AM	ROGERS, DUSTIN M	2022-11-04 01:23 AM
108464	SW Outfall Inspection	2022-11-09 03:47 AM	MCCURRY JR, RONALD G	2022-11-09 03:48 AM
108465	SW Outfall Inspection	2022-12-08 04:25 AM	MCCURRY JR, RONALD G	2022-12-08 04:30 AM
108466	SW Outfall Inspection	2022-10-18 10:47 AM	ROGERS, DUSTIN M	2022-10-18 10:53 AM
108467	SW Outfall Inspection	2022-11-09 03:43 AM	MCCURRY JR, RONALD G	2022-11-09 03:45 AM
108468	SW Outfall Inspection	2022-11-08 02:00 AM	KIMBROW, DUSTIN R	2022-11-08 02:01 AM
108469	SW Outfall Inspection	2022-11-04 11:15 AM	MCCURRY JR, RONALD G	2022-11-04 11:20 AM
108654	SW Outfall Inspection	2022-10-18 12:18 PM	ROGERS, DUSTIN M	2022-10-18 12:20 PM
108655	SW Outfall Inspection	2022-10-18 12:20 PM	ROGERS, DUSTIN M	2022-10-18 01:00 AM
108656	SW Outfall Inspection	2022-10-25 12:17 PM	ROGERS, DUSTIN M	2022-10-25 12:18 PM
108752	SW Outfall Inspection	2022-11-07 03:12 AM	KIMBROW, DUSTIN R	2022-11-07 02:53 AM
108754	SW Outfall Inspection	2022-11-08 04:06 AM	KIMBROW, DUSTIN R	2022-11-08 04:07 AM
108775	SW Outfall Inspection	2022-11-10 08:44 AM	KIMBROW, DUSTIN R	2022-11-10 02:42 AM
108779	SW Outfall Inspection	2022-10-25 02:25 AM	KIMBROW, DUSTIN R	2022-11-10 02:40 AM
108932	SW Outfall Inspection	2022-11-21 01:05 AM	ROGERS, DUSTIN M	2022-11-21 01:06 AM
108941	SW Outfall Inspection	2022-11-21 10:24 AM	MCCURRY JR, RONALD G	2022-11-21 10:25 AM