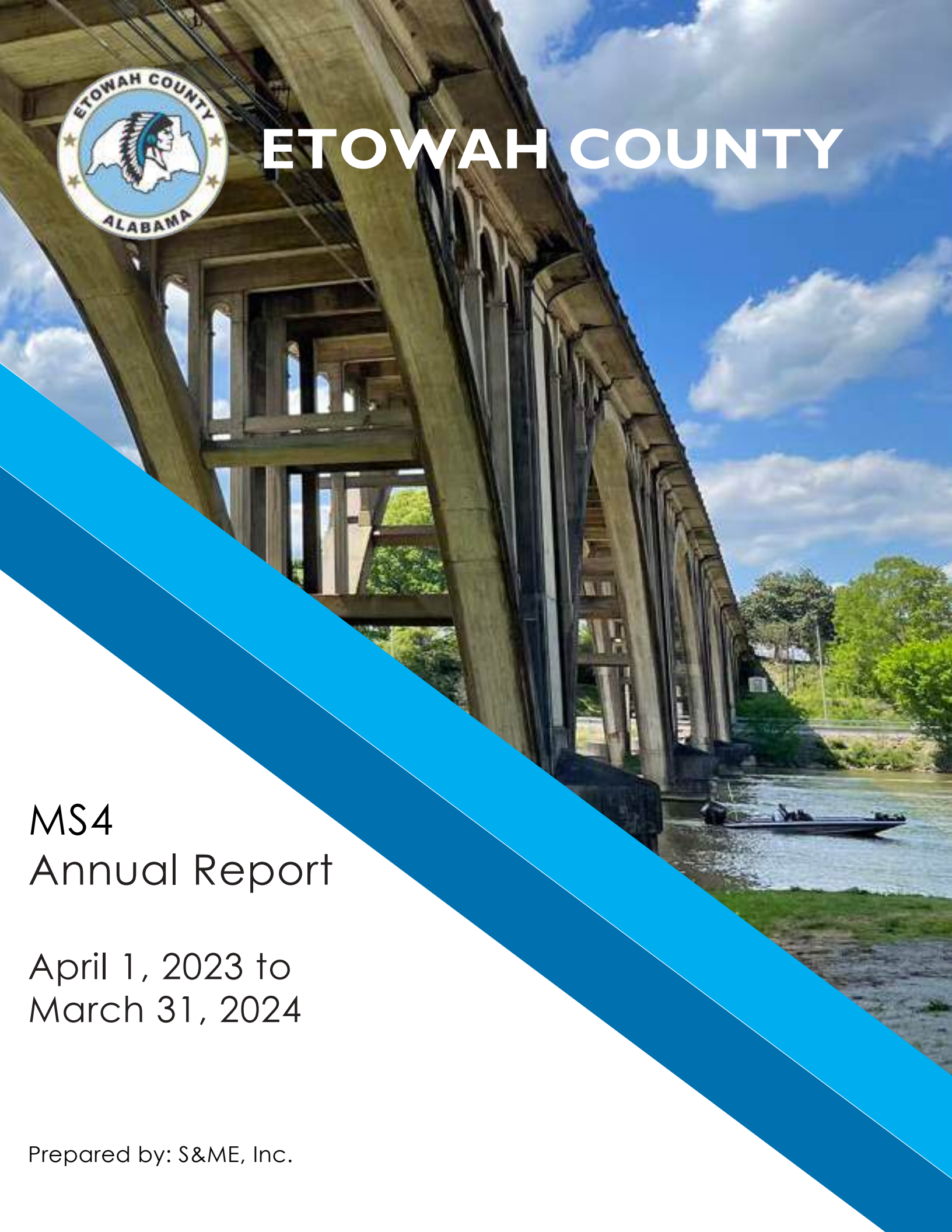

ETOWAH COUNTY

MS4
Annual Report

April 1, 2023 to
March 31, 2024

Prepared by: S&ME, Inc.

May 31, 2024

Etowah County Commission
800 Forrest Avenue
Gadsden, Alabama 35901

Attention: Mr. Tim Ramsey, Commission President

Reference: **Annual Report: April 1, 2023 to March 31, 2024**
Etowah County MS4
Etowah County, Alabama
S&ME Project No. 23820129G
NPDES Permit No. ALR040009

Dear Mr. Ramsey:

S&ME has prepared the attached Annual Report for the Etowah County Phase II Small Municipal Separate Storm Sewer System in accordance with S&ME Proposal No. 23820129G, dated August 24, 2023 and approved on September 28, 2023. The Annual Report covers the April 1, 2023 to March 31, 2024 reporting period.

S&ME appreciates the opportunity to provide our services to Etowah County. Should you have questions concerning this report, or if additional information is required, please contact the undersigned.

Sincerely,

S&ME, Inc.

Sarah L. Yeldell, P.E.
Project Manager

Deborah J. Jones, P.E.
Senior Engineer

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Appendices

1.0 Introduction

S&ME, Inc. has prepared this Annual Report for the Etowah County, Alabama Urbanized Area Phase II Small Municipal Separate Storm Sewer System in accordance with S&ME Proposal No. 23820129G, dated August 24, 2023 and approved on September 28, 2023.

The Annual Report is required by Part VI of the Alabama Department of Environmental Management (ADEM) National Pollutant Discharge Elimination System (NPDES) General Permit ALR040000 for discharges from regulated small municipal separate storm sewer systems (MS4).

1.1 Gadsden, Alabama Urbanized Area

The Storm Water Phase II Final Rule issued by the United States Environmental Protection Agency (USEPA) in 1999 required nationwide coverage of all operators of small MS4s located within the boundaries of an "urbanized area" as defined by the latest decennial Census. Based on the results of the 2010 census, the Bureau of the Census designated the *Gadsden, Alabama Urbanized Area* to include the City of Attalla, the City of Gadsden, the City of Glencoe, the City of Hokes Bluff, City of Rainbow City, the City of Southside, and portions of unincorporated Etowah County.

In March 2022, the Bureau of the Census discontinued the practice of defining "urbanized areas." On June 7, 2023, USEPA issued a final rule clarifying the designation criteria for small MS4s. The rule replaced the term "urbanized area" in the Phase II regulations with the phrase "urban areas with a population of at least 50,000" to assist in identifying new MS4s. In December 2023, revised maps showing the 2020 urban area boundaries were released; however, ADEM has not provided guidance on the application of the 2020 maps in determining boundaries of existing MS4s. As a result, revised MS4 boundaries based on the 2020 Census were not available during the April 1, 2023 to March 31, 2024 reporting period.

A map outlining the approximate boundary of the 2010 *Gadsden, Alabama Urbanized Area* is included in **Appendix A** as **Figure 1**.

1.2 Permit History

The City of Attalla, the City of Gadsden, the City of Glencoe, the City of Hokes Bluff, City of Rainbow City, the City of Southside, and Etowah County initially applied for and received a NPDES MS4 Phase II General Permit from ADEM in 2003, with the seven entities as co-permittees under authorization number ALR040009. The five-year permit expired on March 9, 2008. A Notice of Intent for renewal of the permit was submitted 180 days prior to expiration and permit coverage was administratively continued until the re-issuance of the MS4 Phase II General Permit with an effective date of February 1, 2011.

The 2011 permit expired on February 1, 2016. A Notice of Intent for renewal of the permit was submitted by each entity 180 days prior to expiration; therefore, the permit coverage was extended until the re-issuance of the MS4 Phase II General Permit in September. To assist in compliance tracking, the Gadsden-Etowah MS4 entities were

each issued a separate permit, although the entities agreed to continue under a joint SWMPP and monitoring plan. The Etowah County MS4 was authorized to discharge under authorization number ALR040009 with an effective date of October 1, 2016.

The 2016 permit expired on September 30, 2021. A Notice of Intent for renewal of the permit was submitted 180 days prior to expiration, and the MS4 Phase II General Permit was re-issued with an effective date of October 1, 2021. The current permit will expire on September 30, 2026. Under the new permitting system, Etowah County was required to prepare a separate SWMPP detailing the individual actions taken by the County to comply with the 2021 permit, as well as the joint activities shared with the remaining Gadsden-Etowah MS4 entities.

A copy of the NPDES General Permit is included in the 2022 SWMPP.

1.3 Storm Sewer System

A Municipal Separate Storm Sewer System (MS4) is defined by 40 CFR Part 122.26(b)(8) to be a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is:

(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 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 waters of the United States;

(ii) Designed or used for collecting or conveying storm water;

(iii) Not a combined sewer; and,

(iv) Not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

1.4 Etowah County MS4 Area

The Etowah County Municipal Separate Storm Sewer System (Etowah County MS4) is defined as the unincorporated area within both the county and the urbanized area boundary. As defined by the 2010 Census, the *Gadsden, Alabama Urbanized Area* encompasses approximately 74.8 square miles. The Etowah County MS4 comprises approximately 12.7 square miles (17%) of the 2010 *Gadsden, Alabama Urbanized Area*. A map depicting the Etowah County MS4 limits is located in **Appendix A** as **Figure 2**.

1.4.1 *Hydrologic Units in the Urbanized Area*

Neely Henry Lake (Coosa River) is the primary receiving water for the Etowah County MS4. Hydrologic Hierarchy, Watersheds, and Subwatersheds are provided in the tables below.

Table 1-1 Hydrologic Hierarchy

Type	Code	Name
REGION	03	South Atlantic-Gulf
SUBREGION	03-15	Alabama River Basin
BASIN	0315-01	Coosa-Tallapoosa: Above the confluence of and including the Coosa and Tallapoosa River Basins
SUBBASIN	031501-06	Middle Coosa

Table 1-2 Watersheds in the MS4 Area

Watershed	10 Digit HUC
Big Wills Creek	03150106-01
Black Creek-Coosa River	03150106-02
Big Canoe Creek- Coosa River	03150106-03

Table 1-3 Subwatersheds in the Etowah County MS4 Area

Subwatershed	12 Digit HUC	Total Area (Acres)	Area within Etowah County MS4 (Acres)
Big Cove Creek	03150106-02-03	18,082	178
Black Creek	03150106-01-07	40,879	554
Coosa River-H. Neely Henry Lake	03150106-03-09	46,439	4,084
Horton Creek	03150106-01-08	16,902	1,823
Little Wills Creek	03150106-01-06	18,151	279
Lower Big Canoe Creek	03150106-03-06	33,306	52
Thorton Lakes-Dry Creek	03150106-02-02	9,777	24
Turkey Town Creek	03150106-02-04	57,474	1,126

A map showing the HUC12 subwatersheds in relation to the Etowah County MS4 boundary is included in the 2022 SWMPP.

1.5 Responsible Party

The **Etowah County Engineering Department** is responsible for the coordination and implementation of the Storm Water Management Program Plan. Coordination between County departments is established in each section of the SWMPP.

The **Storm Water Steering Committee** is responsible for the implementation of the monitoring plan.

1.6 Annual Report Components

Part VI of the NPDES General Permit requires that the Etowah County MS4 prepare and submit annual reports to the ADEM each year by May 31. The Annual Report must cover the year prior to the submittal date (April 1 through March 31) and is required to include the following:

1. Contacts and responsible parties who had input to and are responsible for the preparation of the annual report

2. Overall evaluation of the SWMPP-developments and progress on the following:
    a. Major accomplishments
    b. Overall program strengths/weaknesses
    c. Future direction of the program
    d. Overall determination of the effectiveness of the SWMPP considering water quality/watershed improvements
    e. Measurable goals that were not performed and reasons why the goals were not accomplished
    f. Evaluation of the monitoring data

3. A narrative report of all minimum storm water control measures referenced in the permit to include the following:
    a. Minimum control measures completed and in progress
    b. Assessment of the controls
    c. Discussion of proposed BMP revisions or any identified measurable goals that apply to the minimum storm water control measures

4. Summary table of the storm water controls that are planned/scheduled for the next reporting cycle

5. Results of information collected and analyzed during the reporting period including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the Maximum Extent Practical (MEP)

6. Notice of reliance on another entity to satisfy some of your permit obligations

7. Results of the evaluation to determine whether discharges from any part of the MS4 contributes directly or indirectly to a waterbody that is included on the latest 303(d) list or for which a TMDL has been established or approved by EPA

8. All monitoring results collected during the reporting period

This Annual Report covers activities performed during the April 1, 2023 to March 31, 2024 reporting period under the SWMPP dated April 2022.

2.0 Contacts List

Reference Part VI.B.1

Part VI.B.1 of the NPDES Permit requires that the Etowah County provide a list of contacts and responsible parties involved in the preparation of the Annual Report. The following personnel were directly responsible for the preparation of the 2023-2024 Annual Report:

Mr. Robert Nail
Etowah County Engineer
402 Tuscaloosa Ave
Gadsden, AL 35901
(256) 549-5358
rnail@etowahcounty.org

Mr. Mel Smith
402 Tuscaloosa Ave
Gadsden, AL 35901
(256) 549-5358
msmith@etowahcounty.org

Ms. Sarah Yeldell, P.E.
Consultant
S&ME, Inc.
360D Quality Circle NW, Suite 450
Huntsville, Alabama 35806
256-837-8882
syeldell@smeinc.com

Questions concerning the 2023-2024 Annual Report should be directed to the **Engineering Department**.

3.0 Evaluation of Water Quality Concerns

Reference Part VI.B.7

Section 303(d) of the Clean Water Act (CWA), as amended by the Water Quality Act of 1987, and EPA's Water Quality Planning and Management Regulations (40CFR130) require states to identify waterbodies not in compliance with the water quality standards applicable to their designated use classifications. The identified waters are prioritized based on severity of the pollution. Section 303(d) then requires that total maximum daily loads (TMDLs) be determined for all pollutants causing violation of applicable water quality standards in each identified segment. The TMDL process establishes the allowable loading of pollutants, or other quantifiable parameters for a waterbody, based on the relationship between pollution sources and in-stream water quality conditions.

Maps showing the impaired waterbodies in relation to the Etowah County MS4 is provided in **Appendix A** as **Figure 3** and **Figure 4**.

3.1.1 *Impaired Waterbodies Within the MS4*

Table 3-1 identifies the impaired waterbodies located within the Etowah County MS4 boundary.

Table 3-1 Impaired Waterbodies within the MS4

Waterbody	Impaired Segment	Type	Causes	Use
Black Creek Embayment (Neely Henry Lake)	AL03150106-0107-111	303(d)	Nutrients	F&W
Big Wills Creek Embayment (Neely Henry Lake)	AL03150106-0108-111	303(d)	Nutrients	F&W
Big Wills Creek	AL03150106-0108-102	303(d)	Pathogens (E. coli)	S F&W
Coosa River (Neely Henry Lake)	AL03150106-0204-102	TMDL	Nutrients pH Organic Enrichment (CBOD, NBOD)	PWS S F&W
Coosa River (Neely Henry Lake)	AL03150106-0309-102	TMDL	Nutrients pH Organic Enrichment (CBOD, NBOD)	F&W

Waterbody	Impaired Segment	Type	Causes	Use
Cove Creek Embayment (Neely Henry Lake)	AL03150106-0203-111	TMDL	Nutrients pH Organic Enrichment (CBOD, NBOD)	F&W

3.1.2 *Impaired Watersheds Intersecting the MS4*

In addition to the impaired waterbodies, the Etowah County MS4 encompasses portions of watersheds for the following impaired waterbodies:

Table 3-2 Portions of Impaired Watersheds within the MS4

Watershed	Impaired Segment	Type	Causes	Use
Black Creek Embayment (Neely Henry Lake)	AL03150106-0107-111	303(d)	Nutrients	F&W
Big Wills Creek Embayment (Neely Henry Lake)	AL03150106-0108-111	303(d)	Nutrients	F&W
Big Wills Creek	AL03150106-0108-102	303(d)	Pathogens (E. coli)	S F&W
Coosa River (Neely Henry Lake)	AL03150106-0204-102	TMDL	Nutrients pH Organic Enrichment (CBOD, NBOD)	PWS S F&W
Coosa River (Neely Henry Lake)	AL03150106-0204-101	TMDL	Nutrients pH Organic Enrichment (CBOD, NBOD)	F&W
Coosa River (Neely Henry Lake)	AL03150106-0309-102	TMDL	Nutrients pH Organic Enrichment (CBOD, NBOD)	F&W

3.1.3 *Neely Henry Lake TMDL*

In 2008, the EPA approved TMDLs for Neely Henry Lake related to Nutrients (Total Phosphorous), pH, and Organic Enrichment/Dissolved Oxygen. The Etowah County MS4 directly and indirectly discharges to Neely Henry Lake; therefore, **the Etowah County MS4 is required to achieve a 30% reduction in Total Phosphorus discharge loading**.

Sources of nutrient and organic enrichment from non-point sources within the Coosa River watershed include:

- Runoff from pastures
- Runoff from animal operations
- Direct discharge to streams due to cattle
- Improper land application of animal waste
- Failing septic systems
- Urban runoff

Point source contributors of storm water pollution within the Coosa River watershed include:

- Discharge from wastewater treatment plants
- Discharge from industrial operations

Part IV.D of the NPDES General Permit requires that the County implement Best Management Practices (BMPs) and control measures specifically targeted to achieve the waste load allocations prescribed in the TMDL. The County must also implement a monitoring program to document that the waste load allocations prescribed in the TMDL are being achieved.

4.0 Overall Program Evaluation

Reference Part VI.B.2

4.1 Major Accomplishments

During the 2023-2024 reporting period, the County completed 70 out of 71 planned strategies and 11 additional strategies. The number of completed activities (81) demonstrates the County's commitment to implement the SWMPP and Phase II Permit by going beyond the strategies they committed to in the 2022 SWMPP.

1. Decreased littering

During the 2022-2023 reporting period, inmate litter crews collected 67.87 tons of litter over 279.30 miles. During the 2023-2024 reporting period, crews collected 34.97 tons of litter over 385.6 miles. The decrease in the amount of litter collected indicates that the County's efforts to prevent littering and to educate the public on proper disposal are succeeding.

2. Increased public involvement

The County partnered with several groups to promote public education and involvement. Numerous events were held through Keep Etowah Beautiful. Over 1,200 students and 122 teachers and adult volunteers participated in the *Etowah County Water Festival*. When compared to the same events held during the previous reporting period, an additional 151 volunteers participated in *Renew Our Rivers* and an additional 40 volunteers participated in the Great American Cleanup.

3. Performed outfall inspections

Etowah County continued to perform outfall inspections as required by the MS4 permit. During the 2023-2024 reporting period, 29 of the 48 known outfalls were inspected, all of which were located in Priority Areas. Dry weather flows were observed at five outfalls, but no suspect illicit discharges were identified.

4.2 Overall Programs Strengths and Weaknesses

The County continues to evaluate the processes and procedures in which it accomplishes the objectives of the SWMPP. Their strengths and weaknesses remain very similar as in past years.

The biggest strength is Keep Etowah County Beautiful (KEB). The County created KEB to plan, coordinate, document, and complete public educational and involvement activities to create a love for the county and to increase participation in cleanup activities. KEB is a significant strength of the Public Education and Involvement Control Measure. KEB not only contributes to the County's success, but also contributes to the success of the Cities within the County.

In Etowah County, Home Rule is limited by the State constitution. Counties have no general grant of power in the State Constitution and must go to the Alabama Legislature for authority to engage in any activity not currently

authorized by the State Constitution. Authority may be granted through constitutional amendments or by an act of the legislature known as "local legislation." Etowah County currently does not have the authority to enact an illicit discharge ordinance and would require action from the Alabama Legislature to gain that ability. This is a weakness to the program that is unavoidable at this time.

Another weakness of the program is the small number of staff that can be dedicated exclusively to the performance of the duties required by the Phase II Permit. The County currently employs two individuals who are the primary executives of the storm water program. The County has an Engineering Department to assist with the storm water program responsibilities but does not currently have the ability to expand the Engineering Department for the storm water program; therefore, this weakness is expected to remain for several years.

4.3 Future Direction of the Program

During the upcoming reporting period, the County will continue to maintain partnerships with KEB, Alabama People Against a Littered State (ALPALS), the National Resources Conservation Service (NRCS), and the Alabama Cooperative Extension Office (ACES), as well as the surrounding communities. The County will also continue participation in the Alabama Stormwater Association (ASA) and the Gadsden-Etowah MS4 Steering Committee.

Etowah County is committed to educating citizens on the SWMPP Program and how their actions can impact storm water and the Coosa River.

4.4 Overall Effectiveness of the SWMPP

Etowah County is proud of their efforts to achieve the objectives of the SWMPP. Based on this evaluation, the 2022 SWMPP appears to have been effective in meeting the objectives and requirements of the 2021 Phase II Permit.

4.5 Measurable Goals Not Performed

The County did not develop a written SOP for the fueling of County vehicles. The County will develop and implement a written fueling SOP by March 31, 2025.

5.0 Storm Water Monitoring Data Evaluation

Reference Part VI.B.5 and 8

5.1 Rationale Statement

As discussed in Section 3.0, the Etowah County MS4 currently discharges to an impaired waterbody for which a TMDL has been approved. Part V.A of the 2021 MS4 Permit requires that the SWMPP include a monitoring plan to assess the effectiveness of the BMPs in achieving the waste load reductions/allocations outlined in the TMDL.

The intent of the monitoring program is to evaluate the effectiveness of the County's BMPs in achieving the required phosphorous reduction as established in the TMDL and to generally evaluate overall water quality. Where deviations are documented and/or expected, the collected monitoring data will be used to determine the extent and cause of the pollutant of concern.

The 2022 *Gadsden-Etowah Wet Weather Monitoring Plan* is included as Appendix C of the SWMPP dated April 1, 2022. The plan details monitoring parameters, monitoring locations, field documentation, and sampling procedures.

5.2 Monitoring Events

Beginning in January 2013, S&ME was retained by the Gadsden-Etowah Storm Water Steering Committee to collect the required quarterly surface water samples and provide analyses of the sampling events. On March 24, 2015, the cities of Attalla, Gadsden, Glencoe, Hokes Bluff, Rainbow City, and Southside and Etowah County entered into a Cooperative Agreement to jointly perform the quarterly monitoring.

Beginning in October 2023, the City of Gadsden elected to separate from the joint monitoring agreement and perform their own monitoring. Monitoring events conducted since October 2023 do not include monitoring points CO 15, GD 6, GD 7, GD 8, or GD 9.

Table 5-1 Monitoring Events to Date

MS4 Reporting Period	Monitoring Event	Date(s) Monitoring Conducted
April 1, 2012 – March 31, 2013	2013 Q1	March 12 & 13, 2013
April 1, 2013 – March 31, 2014	2013 Q2	May 8 & 20, 2013
	2013 Q3	September 23, 2013
	2013 Q4	December 10, 2013
	2014 Q1	February 6, 2014

MS4 Reporting Period	Monitoring Event	Date(s) Monitoring Conducted
April 1, 2014 – March 31, 2015	2014 Q2	June 26, 2014
	2014 Q3	September 30, 2014
	2014 Q4	November 19, 2014
	2015 Q1	March 23, 2015
April 1, 2015 – March 31, 2016	2015 Q2	April 22, 2015
	2015 Q3	September 30, 2015
	2015 Q4	November 19, 2015
	2016 Q1	March 15, 2016
April 1, 2016 – March 31, 2017	2016 Q2	June 29, 2016
	2016 Q3	August 9, 2016
	2016 Q4	December 7, 2016
	2017 Q1	March 2, 2017
April 1, 2017 – March 31, 2018	2017 Q2	June 21, 29, 30 and July 5, 2017
	2017 Q3	August 16-17, 2017
	2017 Q4	October 25-26, 2017
	2018 Q1	March 27-28, 2018
April 1, 2018 – March 31, 2019	2018 Q2	June 26 and 29, 2018
	2018 Q3	August 1-2, 2018
	2018 Q4	December 10-11, 2018
	2019 Q1	April 15 and 17, 2019
April 1, 2019 – March 31, 2020	2019 Q2	June 11-12, 2019
	2019 Q3	August 27-28, 2019
	2019 Q4	October 29-30, 2019
	2020 Q1	March 30-31, 2020
April 1, 2020 – March 31, 2021	2020 Q2	June 10, 2020
	2020 Q3	September 21, 2020
	2020 Q4	December 17, 2020
	2021 Q1	March 18, 2021
April 1, 2021 – March 31, 2022	2021 Q2	May 5, 2021
	2021 Q3	September 2, 2021
	2021 Q4	November 23, 2021
	2022 Q1	January 10-11, 2022

MS4 Reporting Period	Monitoring Event	Date(s) Monitoring Conducted
April 1, 2022 – March 31, 2023	2022 Q2	April 7, 2022
	2022 Q3	August 2-3, 2022
	2022 Q4	November 16, 2022
	2023 Q1	February 13-14, 2023
April 1, 2023 – March 31, 2024	2023 Q2	May 24-25, 2023
	2023 Q3	August 7, 2023
	2023 Q4	December 12, 2023
	2024 Q1	January 10, 2024

A monitoring report was issued to the members of the Steering Committee following each monitoring event. Copies of the reports for the monitoring events conducted during the April 1, 2023 to March 31, 2024 reporting period are provided in **Appendix C**.

5.3 Addition and Removal of Monitoring Points

No monitoring points were added or removed from the program during the April 1, 2023 to March 31, 2024 reporting period; however, in October 2023, the City of Gadsden began sampling monitoring points CO 15, GD 6, GD 7, GD 8, or GD 9 separately. The data collected by Gadsden during the fourth quarter of 2023 and the first quarter of 2024 has not been provided, and the five points were not included in the statistical analysis.

5.4 Statistical Analysis

A total of 45 quarterly monitoring events have been conducted since the Monitoring Program was first implemented in March of 2013. Charts 1 through 9 in **Appendix B** summarize the analytical data collected during these monitoring events.

Statistical analysis was performed on the cumulative monitoring data to evaluate trends and to determine whether there has been a statistically significant increase (SSI) of concentrations between specific monitoring points.

For the current statistical analysis, S&ME performed the statistical evaluation using the ChemStat Version 6.5 software produced by Starpoint Software. The appropriate statistical procedure used in this evaluation was determined by the characteristics of the data set. The approach used to determine the appropriate statistical evaluation and the results of the statistical evaluation are summarized in the following paragraphs.

Specific monitoring points were chosen for comparison based on their location within the MS4 area respective to other monitoring point locations and trend of collected data. Detailed results are given in **Appendix B**.

5.4.1 *Approach to Statistical Analysis*

Essentially, there are two sets of data to be compared during this statistical evaluation. Sen's non-parametric estimator of slope is a method of estimating the slope (change in concentration over time) of the data. Because this method is non-parametric, it is suitable for high percentage of non-detects and is not significantly affected by outliers. The result indicates whether there is an upward, downward, or no trend in the concentration data.

The Wilcoxon rank-sum test evaluates potential differences in the medians of two populations. The Wilcoxon rank-sum test can be used to compare a single data group against another data group. In this evaluation, we compared the specific monitoring points to determine if a statistically significant difference is present in a monitoring point using a statistical significance value (alpha) of 0.01. If a statistically significant difference was observed, we then compared the median values of each point to evaluate whether a point had a statistically significant increase (SSI) over the background point.

The following laboratory parameters were evaluated in the statistical analysis:

- Total Suspended Solids (TSS)
- Total Phosphorous
- Orthophosphate
- Nitrate-Nitrite
- Total Kjeldahl Nitrogen (TKN)

5.4.2 *Change in Concentration Over Time*

Table 5-2 below lists the points and parameters for which a trend was indicated by the Sen's Slope Analysis. The remaining assessed parameters have no trend in the slope.

Table 5-2 Summary of Results of Slope Analysis

Point Analyzed	Parameter	Trend
SME 7	Ortho-phosphate	Upward
SS 13	TKN	Upward
SME 4	TKN	Upward

5.4.3 *Statistically Significant Increases*

Table 5-3 below reports the statistical evaluation for statistically significant increases (SSIs) for a summary of parameters and monitoring point comparisons.

Table 5-3 Summary of Results of SSIs

Point Analyzed	Point of Comparison	SSI Identified	Parameters w/ SSI
AT 5	SME 7	No	-
GD 5	SME 4	No	-
GD 12	SME 4	No	-
HB 3	SME 4	No	-
RC 2	SME 1	No	-
RC 2	SME 4	No	-
RC 14	SME 4	No	-
SME 1	SME 4	Yes	Ortho-phosphate, Total Phosphorus
SME 1	AT 5	No	-
SME 3	SME 4	No	-
SME 5	SME 4	No	-
SME 6	SME 4	No	-
SME 6	SME 5	No	-
SME 7	SME 4	Yes	Nitrate-Nitrite, Ortho-phosphate, Total Phosphorus
SME 9	HB 3	No	-
SME 9	SME 4	No	-
SME 10	GD 5	Yes	TKN
SME 10	SME 4	Yes	TKN
SS 5	SME 4	Yes	TKN
SS 13	SME 4	Yes	TKN
SS 14	SME 4	Yes	TKN, Ortho-phosphate, Total Phosphorus

5.5 Evaluation of Monitoring Results

The results of the slope analysis indicate that, although fluctuations occur from one monitoring event to another, pollutant concentrations in the MS4 waterbodies have remained generally consistent over the past 10 years. The exception is SME 7 (Big Wills Creek) and SME 4 (Neely Henry Lake), where an upward trend was identified for ortho-phosphate and TKN respectively. These locations are entry points for their respective waterbodies to the MS4. An upward trend was also identified at SS 13 (unnamed tributary to Neely Henry Lake) for TKN.

5.5.1 *Monitoring Points SME 4, SME 5, and SME 6*

Monitoring points SME 4, 5, and 6 were sited to assess water quality in the Coosa River where it enters the urbanized area, in the central portion of the urbanized area, and where it leaves the urbanized area, respectively. The points were first sampled in December 2020, and a total of fourteen monitoring events have been completed since, with the exception of SME 4 which was not sampled in September 2021.

Over the past fourteen monitoring events, turbidity increased between monitoring points SME 4 and SME 6 nine times and decreased four times, with one event not sampled. Total nitrogen increased in seven of the thirteen monitoring events and TSS increased in ten of the thirteen events. Ortho-phosphate was detected in two events at monitoring points SME 4 and SME 5 and was detected once at SME 6. Total phosphorous increased in four of the thirteen events.

As shown in Table 5-3, no SSIs were observed when the downstream Coosa River points were compared to the upstream river points. **These results indicate that no statistically significant increase in pollutants is occurring in the Coosa River due to runoff from the Gadsden-Etowah MS4.**

The Attalla, Glencoe, Hokes Bluff, Rainbow City, Southside, and Etowah County MS4s will continue to monitor points SME 4, SME 5, and SME 6 during the April 1, 2024 to March 31, 2025 reporting period.

5.5.2 *Monitoring Points AT 5 and SME 7*

Monitoring point SME 7 is located in Big Wills Creek, upstream of monitoring point AT 5. Monitoring point AT 5 is located in Big Wills Creek, downstream of its confluence with Little Wills Creek. Monitoring point SME 7 was first sampled in December 2020, and a total of fourteen monitoring events have been completed.

Nitrate-nitrite decreased between SME 7 and AT 5 in twelve out of the last fourteen monitoring events, ortho-phosphate decreased ten out of the last fourteen monitoring events, and total phosphorus decreased between the two points in twelve of the last fourteen events.

As shown in Table 5-3, no SSIs were observed when AT 5 was compared to SME 7 upstream, indicating that an increase in pollutant concentrations is not occurring as Big Wills Creek passes through the Attalla and Etowah County MS4s, possibly due to dilution as other waterbodies and runoff enter Big Wills Creek. The pollutants in Big Wills Creek are generally from outside of the MS4, and the urbanized area does not appear to be contributing additional pollution to the waterbody.

As shown in Table 5-3, SSIs for nitrate-nitrite, ortho-phosphate, and total phosphorus were noted when SME 7 was compared to the Coosa River (SME 4), indicating that the pollutant concentrations in Big Wills Creek are higher than the concentrations in the Coosa; however, as previously discussed, no SSIs were observed when the downstream Coosa River points were compared to the upstream river points. **These results indicate that although Big Wills Creek is a source of pollutants to the Coosa River, the flow is not sufficient to cause an observable impact on the Coosa River.**

The Attalla, Glencoe, Hokes Bluff, Rainbow City, Southside, and Etowah County MS4s will continue to monitor points SME 7 and AT 5 during the April 1, 2024 to March 31, 2025 reporting period.

5.5.3 *Monitoring Point SME 1*

Monitoring point SME 1 was sited to observe water quality at the location where the combined flow from Big Wills Creek, Black Creek, and Horton Creek enters the Coosa River. Monitoring point AT 5 is located in Big Wills Creek, monitoring point GD 8 (which is currently monitored by the City of Gadsden) is located in Black Creek, and monitoring point RC 2 is located in Horton Creek. The monitoring points were first sampled in March 2013, and a total of 45 monitoring events have been completed.

Generally, nitrogen and phosphorous results at AT 5 are higher than those recorded downstream at SME 1, whereas nitrogen and phosphorous values at RC 2 are lower than those recorded at downstream SME 1. As shown in Table 5-3, no SSIs were observed when SME 1 was compared to upstream point AT 5, indicating that an increase in pollutant concentrations is not occurring before the combined flow from AT 5, GD 8, and RC 2 discharges to the Coosa River.

These results indicate that the Big Wills Creek watershed is the primary source of nitrogen and phosphorous approaching SME 1. A portion of the observed reduction between AT 5 and SME 1 may come from dilution as other waterbodies and runoff join Big Wills Creek. This further indicates that the urbanized area is not contributing additional pollution to the waterbody.

The Attalla, Glencoe, Hokes Bluff, Rainbow City, Southside, and Etowah County MS4s will continue to monitor points AT 5, RC 2, and SME 1 during the April 1, 2024 to March 31, 2025 reporting period.

5.5.4 *Total Kjeldahl Nitrogen*

As previously discussed, monitoring points SME 4, 5, and 6 were sited to assess water quality in the Coosa River where it enters the urbanized area, in the central portion of the urbanized area, and where it leaves the urbanized area, respectively. As shown in Table 5-2, an upward trend for TKN was observed at monitoring point SME 4. This appears to indicate that concentrations of TKN in the Coosa River flowing into the Gadsen-Etowah MS4 are generally increasing, although a corresponding upward trend was not observed at SME 5 or SME 6.

An upward trend was also observed for TKN concentrations at SS 13. Monitoring point SS 13 was sited to observe water quality in an unnamed tributary to the Coosa River in Southside. The drainage area for SS 13 includes portions of the Southside and Etowah County MS4s. Land uses in the SS 13 drainage area include residential, recreational, and agricultural.

As shown in Table 5-3, SSIs for TKN were observed at points SME 10, SS 5, SS 13, and SS 14, when compared to SME 4. This indicates that TKN concentrations in the tributaries to the Coosa River are generally higher than TKN concentrations in the river as it enters the Gadsden-Etowah MS4; however, there is no clear increase in the levels of TKN in the receiving water between SME 4 (Coosa River upstream) and SME 6 (Coosa River downstream). This seems to indicate that although levels of TKN are elevated at SME 10, SS 5, SS 13, and SS 14, the flow from the associated drainage areas is not sufficient to cause a statistically significant impact on the Coosa River.

5.6 Summary of Recommendations

The entities that comprise the Gadsden-Etowah MS4 initially took a watershed approach regarding their Storm Water Monitoring Plan. This approach has allowed the entities to evaluate how the overall watershed is responding to the established BMPs and to generally evaluate water quality across the MS4. The current *Wet-Weather Monitoring Program* went into effect April 2022.

The City of Gadsden opted to discontinue the 2015 Cooperative Agreement in October 2023. As a result, the watershed approach may no longer be feasible. During the April 1 2024, to March 31, 2025 reporting period, the Gadsden-Etowah MS4 entities will meet to discuss changes to the 2022 *Wet-Weather Monitoring Program*, including:

- Whether to continue the watershed approach or evaluate each MS4 separately
- Addition of monitoring parameters in waterbodies identified as being impaired due to pathogens

6.0 Narrative Report of Minimum Storm Water Control Measures

Reference Part VI.B.3 and 4

6.1 Public Education and Public Involvement on Storm Water Impacts

6.1.1 *Implementation Status*

During the April 1, 2023 to March 31, 2024 reporting period, Etowah County completed sixteen (16) of the sixteen (16) Public Education and Public Involvement strategies identified in the previous Annual Report and the 2022 SWMPP.

The County also completed nine (9) strategies beyond those proposed in the previous Annual Report and the 2022 SWMPP. These strategies included:

- Partnering with The Great American Cleanup (Strategy 17)
- Sponsoring a Drug Collection Day (Strategy 18)
- Partnering with Cawaco RC&D and USFWS to restore aquatic habitat for the endangered trispot darter (Strategy 19)
- Enforcing a Litter Ordinance (Strategy 20)
- Providing dead animal removal from roadside (Strategy 21)
- Providing a recycling program for aluminum cans and scrap metal (Strategy 22)
- Clearing drainage structures of trees and brush (Strategy 23)
- Working to reduce runoff by monitoring areas of erosion and providing solutions (Strategy 24)
- Allowing a cardboard collection trailer to be placed at the Courthouse in support of Gadsden's cardboard recycling program (Strategy 25)

A table identifying each Public Education and Public Involvement strategy planned for the 2023-2024 reporting period, a description of actions taken by Etowah County, and a description of activities planned for the next reporting period is provided at the end of this section. Supporting documentation is included in **Appendix D.**

6.1.2 *Proposed Activities for the April 1, 2024 to March 31, 2025 Reporting Period*

The County will implement the strategies listed in the 2022 SWMPP and in the following table as part of their Public Education and Public Involvement Program during the 2024-2025 reporting period. The County will evaluate the success of the program to aid in preparing the required Annual Report based on the evaluation criteria established for each strategy.

6.1.3 *Assessment of Controls*

The strategies enacted during the reporting period appear to be effective in meeting the objectives of the Public Education and Public Involvement Control Measure as outlined in the 2021 permit. The strategies are adequate to

educate the community about the impacts of storm water runoff, identify steps the community can take to help reduce pollutants, and provide opportunities for public involvement.

6.1.4 *Proposed Changes*

Etowah County requests no changes to the Public Education and Public Involvement strategies identified in the 2022 SWMPP.

6.1.5 *Responsible Parties*

The **Engineering Department** is responsible for overseeing, developing, and coordinating the Public Education and Public Involvement efforts. The Engineering Department is also responsible for providing content for the Storm Water Webpage and performing plat review regarding drainage and flood control.

Etowah County MS4

Table 6-1 Control Measure 1 - Public Education and Involvement

See Section 5.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
1	**Maintain the Storm Water Webpage:** Maintain the webpage and provide additional educational materials each reporting period.	The County reconstructed and expanded the information on Storm Water Management on the web page. The 2022-2023 Annual Report was added to the webpage. The number of views is unknown. In 2023, Google phased out Universal Analytics and implemented GA4 Analytics. As a result, all web traffic data for the County website was lost.	The County will maintain the webpage as well as adding additional information such as the 2023-2024 Annual Report, articles, pictures, and links to partner organization web pages.	Screenshots of the Stormwater Webpage are attached. Copies of educational materials provided on the website are also attached. (See Documents 1-1, 1-2, and 1-3).	IT representatives for Etowah County have set-up a new GA4 Analytics account to access the necessary data moving forward and this information will again be available for the 2024-2025 report. https://etowahcounty.org/engineering/stormwater/	NO
2	**Distribute Storm Water Educational Material on Litter Impacts:** Partner with Keep Etowah Beautiful and/or Clean Water Partnership of Alabama to distribute storm water educational material on storm water impacts specifically related to litter, floatables, and debris. Maintain brochures in various County buildings.	The County partnered with Alabama People Against a Littered State (ALPALS) to distribute educational materials on litter impacts. ALPALS distributed an anti-litter brochure. ALPALS published a newsletter for ALPALS members.	The County will continue to partner with KEB and ALPALS to distribute storm water educational material on litter impacts. The County will increase public education on litter reduction.	Copies of litter educational materials are attached. (See Documents 1-4 and 1-5)	Inmate crews worked an additional 106 miles, but collected 33 tons less litter compared to the 2022-2023 reporting period, indicating a reduction in roadside litter during the 2023-2024 reporting period.	NO
3	**Distribute Storm Water Educational Material on Agricultural Best Practices:** Partner with the US Department of Agriculture (USDA) and/or the Natural Resources Conservation Service (NRCS) to distribute storm water educational material on nutrient and pathogen pollution from crop and animal production. Maintain brochures in various County buildings.	The County maintained a brochure discussing pathogens and nutrients on the Stormwater Webpage and in the lobby of the Engineer Department. The County partnered with the National Resources Conservation Service (NRCS) and the Alabama Cooperative Extension Office (ACES) to provide educational materials related to storm water and agricultural topics. Inquiries are directed to NRCS and/or ACES.	The County will continue to maintain hardcopy educational materials in the lobby of the Engineering Department. The County will continue to partner with and utilize the resources of the NRCS and ACES, as well as maintain the information available on the expanded Stormwater Webpage.	A copy of the brochure and photos of the brochure location are attached. Copies of agricultural educational materials are attached. (See Documents 1-3, 1-6, 1-7, 1-8, 1-9, and 1-10).		NO
4	**Provide Information on Construction Site Storm Water Impacts:** Provide information on how construction site runoff can impact storm water quality to developers and/or engineers requesting a preliminary design review for a subdivision plat.	0 plat reviews requested 0 permits issued	The County will continue to have information available to provide to developers and/or engineers. The County will continue to maintain construction runoff information on the Stormwater Webpage.	Copies of educational materials are attached. (See Documents 1-11, 1-12, 1-13, and 1-14)		NO

Etowah County MS4

Table 6-1 Control Measure 1 - Public Education and Involvement

See Section 5.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
5	**Provide Information on Low Impact/Green Development:** Provide information on green development to individuals requesting plan review and building/development permits.	0 plat reviews requested 0 permits issued	The County will continue to have this information available to provide to developers as well as maintain the information on the Stormwater webpage.	A copy of the GI/LID handout is attached. (See Document 1-15)		NO
6	**Annual Report and SWMPP Availability:** Provide the SWMPP and the current Annual Report on the Storm Water Management webpage.	The 2022-2023 Annual Report and the 2022 SWMPP were added to the Storm Water webpage. The number of views is unknown. In 2023, Google phased out Universal Analytics and implemented GA4 Analytics. As a result, all web traffic data for the County website was lost.	The County will provide the current Annual Report and SWMPP for public viewing on the County's website.	Screenshots of the Stormwater Webpage are attached. (See Document 1-1)	IT representatives for Etowah County have set-up a new GA4 Analytics account to access the necessary data moving forward and this information will again be available for the 2024-2025 report. https://etowahcounty.org/engineering/stormwater/	NO
7	**Seek Public Input:** Announce publication of the SWMPP and/or each year's Annual Report at the following County Commission Meeting. Encourage stakeholders to provide comments or questions regarding the implementation of the SWMPP.	The 2022-2023 Annual Report was added to the County's website. The 2022 SWMPP was maintained on the website. 0 comments received 0 questions received The availability of the Annual Report online was included in the announcement of Water Quality Awareness Week.	The County will continue to provide the Annual Report to the public by posting it on the County's website after each reporting period.	Screenshots of the links for the 2022-2023 Annual Report and the 2022 SWMPP on the Storm Water page are attached. (See Document 1-1)		NO
8	**Gadsden-Etowah MS4 Steering Committee Meetings:** Coordinate and/or participate in meetings of the Gadsden-Etowah Storm Water Steering Committee.	Robert Nail and Mel Smith attended the meeting held on September 13, 2023. Robert Nail and Brian Rosenbalm attended the meeting held on January 18, 2024.	The County will continue to participate in meetings of the Gadsden-Etowah Storm Water Steering Committee.	The attendance records for the meetings are attached. (See Document 1-16)		NO
9	**Alabama Stormwater Association Participation:** County personnel will participate in meetings, seminars, or other events held by the Alabama Stormwater Association.	Brian Rosenbalm and Mel Smith attended the 2023 Alabama Stormwater Association Fall Meeting on November 30, 2023.	Etowah County Engineering Department personnel will continue to participate in programs offered by the Alabama Stormwater Association.	Attendance roster, program slides, and attendance record for the meeting is attached. (See Document 1-17)		NO

Etowah County MS4

Table 6-1 Control Measure 1 - Public Education and Involvement

See Section 5.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
10	**Promote and participate in the Etowah County Water Festival:** Promote and participate in the annual *Etowah County Water Festival*.	The 2024 festival was held on **February 16, 2024** at Gadsden State Community College. The event was advertised on the Gadsden State Community College Calendar, Instagram, and Flickr. 2 County employees participated in 5 planning meetings. 5 County employees volunteered at the festival	The County will promote and participate in the 2025 *Etowah County Water Festival*.	The water festival planning meeting sign-in sheet, agendas, photos, and social media posts are attached. Participation totals are listed on the Keep Etowah Beautiful Community Programs for 2023-2024 Summary Page. (See Documents 1-18, 1-19, 1-20, 1-21, and 1-22)	Adult Volunteers: 58 High School and College Presenters: 162 4th Grade Teachers: 64 4th Grade Students: 1212	NO
11	**Public Reporting and Tracking System:** Promote the reporting number and form for reporting non-compliant construction sites, illicit discharges, impaired waterways, and violations of ordinances related to storm water pollution. Evaluate the public reporting and tracking methods annually.	The County maintained an online complaint form on the stormwater webpage. 4 complaints received 4 complaints addressed 2 complaints resolved 2 complaints directed to cities	The County will continue to promote the reporting form to the public and evaluate its efficacy.	A screenshot of the online complaint form and the 2023-2024 Online Stormwater Complaint Tracking Log are attached. (See Documents 1-23 and 1-24)	https://etowahcounty.org/report-storm-water-issues/	NO
12	**Promote and Participate in Anti-Litter/Cleanup Events:** Partner with Keep Etowah Beautiful, Clean Water Partnership of Alabama, and/or Alabama Power to support, sponsor, and/or promote anti-litter and cleanup events. County personnel will participate in at least one event.	Etowah County provided support to Keep Etowah Beautiful for Renew Our Rivers, the Great American Cleanup, and the Clean Campus Certification Program. The Etowah County Sheriff's Dept provided a boat for Renew Our Rivers and oversaw inmate litter crews. The Etowah County Road Dept disposed of tires collected during Renew Our Rivers. Etowah County Engineering employees participated in planning meetings for Renew Our Rivers.	The County will continue to partner with Keep Etowah Beautiful, Clean Water Partnership of Alabama, and/or Alabama Power to support, sponsor, and/or promote anti-litter and cleanup events.	The Keep Etowah Beautiful Community Programs Summary, the Greater Gadsden Tourism event notice, and a screenshot of the Keep Alabama Beautiful webpage advertising the Great American Cleanup are attached. (See Documents 1-22, 1-25, 1-26, 1-27, 1-28, and 1-30)	**Renew our Rivers:** September 26 - September 30, 2023 423 Volunteers 6.19 tons of litter collected **Great American Cleanup:** April 3 - May 31, 2023 535 volunteers 9.87 tons of litter collected	NO

Etowah County MS4

Table 6-1 Control Measure 1 - Public Education and Involvement

See Section 5.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
13	**Adopt-A-Mile Program support:** Maintain Adopt-a-Mile signs, provide trash bags to supporters, and dispose of collected litter.	0 miles adopted 0 streams adopted	Etowah County will continue to encourage the Adopt-A-Mile program and assist with individuals and/or groups with participation.	The ALPALS Adopt-A-Mile webpage and application are attached. (See Documents 1-31 and 1-32)		NO
14	**Disposal Days:** Provide quarterly free disposal days.	Disposal days were held on May 6, 2023, August 5, 2023, November 4, 2023 and February 3, 2024. Disposal days were advertised via Public Notice and additional coverage by the Gadsden Messenger.	The County will continue to support this effort in order to reduce illegal dumping of materials.	The disposal day public notices are attached. (See Document 1-33)		NO
15	**No Dumping Signs:** Maintain and add "No dumping" signs as necessary.	8 No Dumping signs were signs added.	The County will continue to place or maintain these signs in problem areas.	Photos of signs are attached. (See Document 1-34)	The County maintains "No Dumping $500 fine" signs and some of these No Dumping areas are under video surveillance. These are put out in the County through Keep Etowah Beautiful as part of the effort to eliminate/reduce unauthorized disposal of waste.	NO
16	**Program Evaluation:** Utilize collected information to evaluate the effectiveness of the Public Education and Involvement Program.	The program was evaluated and no changes were currently deemed necessary.	We will continue to assess Public Education and Involvement.			NO
17	**Additional Strategy:** Partnerships in Educational and Public Involvement Events: The Great American Cleanup	April 3 - May 31, 2023 535 Volunteers 9.87 tons of trash collected Promoted by Etowah County's funding of Keep Etowah Beautiful.	The County will continue support of Keep Etowah Beautiful efforts and participation in the Great American Cleanup.	Participation totals are listed on the Keep Etowah Beautiful Community Programs for 2023-2024 Summary Page. (See Documents 1-22)		
18	**Additional Strategy:** Drug Collection Day	The County sponsored a Drug Collection Day at the Etowah County Courthouse on October 27, 2023. The event was advertised on print media, social media, and County bulletin boards. The Etowah County Sheriff's Department also maintains a Drug Take Back box to allow drug drop off at any time.	Etowah County and the Sheriff's Department will continue the Drug Take Back programs.	Countywide announcements and news story are attached. A social media post following event is also attached. (See Documents 1-35 and 1-36)		NO

Etowah County MS4

Table 6-1 Control Measure 1 - Public Education and Involvement

See Section 5.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
19	**Additional Strategy:** Preservation of Endangered Trispot Darter	Partnered with Cawaco RC&D (CAWACO) and the U.S. Fish and Wildlife Service (USFWS) to improve/restore aquatic habitat conditions for the endangered Trispot darter on unnamed tributary to Ballplay Creek at Jones Chapel Road. A bottomless culvert was built and the project was successfully completed.	The County plans to continue to assist CAWACO and the USFWS to improve/restore aquatic habitat conditions for wildlife.	Documentation of partnership with CAWACO and the USFWS are attached. Reports for manpower and equipment to complete the project as well as photos of the completed structure are attached. (See Document 1-38)		NO
20	**Additional Strategy:** Litter Ordinance	The Etowah County Sheriff Department enforced the litter ordinance. The number of citations is not available, because the office does not log litter violations separately from other investigations.	The Sheriff's office will continue to enforce the State littering code.	The Littering Code can be viewed at the following link: http://alisondb.legislature.state.al.us/alison/codeofalabama/1975/coatoc.htm The web page for the Environmental/Agriculture Unit of the Etowah County Sheriff's Department is attached. (See Document 1-39)		NO
21	**Additional Strategy:** Dead Animal Removal	The County removed dead animals from the roadside.	The County will continue the Dead Animal program.	Documentation of dead animal disposal is attached. (See Document 1-40)		NO
22	**Additional Strategy:** Recycling Program - Manage a recycling program for aluminum cans, scrap metal, and used oil	8.01 tons of scrap metal were collected at Etowah County's Gadsden shop.	Etowah County will continue to collect and recycle scrap metals and used oil.	Photos of collection areas and invoices attached. (See Documents 1-41, 1-42, and 1-43)	The County recycles aluminum cans in the break room at the maintenance shop. The County recycles metal from County projects and damaged street signs/posts.	NO
23	**Additional Strategy:** Clearing of drainage structures	The County cleared and removed trees and brush from drainage ways/rights-of-way as needed.	The County will continue clearing trees and brush from the right-of-way.	Report of hours and dates for brush removal is attached. (See Document 1-44)		NO
24	**Additional Strategy:** Highway Erosion Control	Etowah County worked to reduce runoff within our right-of way and monitor areas for erosion. The County utilized riprap in areas resistant to permanent vegetation.	The County will continue the use of riprap for erosion control within the right-of-way.	Reports of hours and dates for erosion control is attached. (See Document 1-45)	The County will continue to use riprap and grassing as erosion countermeasures when applicable.	NO

Etowah County MS4

Table 6-1 Control Measure 1 - Public Education and Involvement

See Section 5.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
25	**Additional Strategy:** Cardboard Recycling	The Etowah County Commission participates in the City of Gadsden's cardboard recycling by allowing a cardboard collection trailer to be placed at the Etowah County Courthouse for public use.	Etowah County will continue to participate in this program as long as it is available through the City of Gadsden.	Photos of the cardboard collection trailer at the Etowah County Courthouse are attached. (See Document 1-46)		NO

6.2 Illicit Discharge Detection and Elimination

6.2.1 *Implementation Status*

During the April 1, 2023 to March 31, 2024 reporting period, Etowah County completed seventeen (17) of the seventeen (17) Illicit Discharge Detection and Elimination strategies identified in the previous Annual Report and the 2022 SWMPP.

A table identifying each Illicit Discharge Detection and Elimination strategy planned for the 2023-2024 reporting period, a description of actions taken by Etowah County, and a description of activities planned for the next reporting period is provided at the end of this section. Supporting documentation is included in **Appendix E**.

6.2.2 *Proposed Activities for the April 1, 2024 to March 31, 2025 Reporting Period*

The County will implement the strategies listed in the 2022 SWMPP and in the following table as part of their Illicit Discharge Detection and Elimination Program during the 2024-2025 reporting period. The County will evaluate the success of the program to aid in preparing the required Annual Report based on the evaluation criteria established for each strategy.

6.2.3 *Assessment of Control*

The strategies enacted during the reporting period appear to be effective in meeting the objectives of the Illicit Discharge Detection and Elimination Control Measure as outlined in the 2021 permit. The strategies are adequate to prevent or correct illicit discharges to the Gadsden-Etowah MS4.

6.2.4 *Proposed Changes*

Etowah County requests no changes to the Illicit Discharge Detection and Elimination strategies identified in the 2022 SWMPP.

6.2.5 *Responsible Party*

The **Engineering Department** is responsible for overseeing, developing, and coordinating the IDDE program in the Etowah County regulated MS4 area.

Etowah County MS4

Table 6-2 Control Measure 2 - Illicit Discharge Detection and Elimination

See Section 6.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
1	**IDDE Regulatory Mechanism:** Evaluate the possibility of developing an IDDE ordinance.	Etowah County currently does not have the authority to enact an illicit discharge ordinance, and would require action from the Alabama Legislature to gain that ability	The County will evaluate the potential for an Ordinance annually.		In Etowah County, Home Rule is limited by the State constitution. Counties have no general grant of power in the State Constitution and must go to the Alabama Legislature for authority to engage in any activity not currently authorized by the State Constitution. Authority may be granted through constitutional amendments or by an act of the legislature known as "local legislation." Etowah County currently does not have the authority to enact an illicit discharge ordinance, and would require action from the Alabama Legislature to gain that authority.	NO
2	**MS4 Map:** Maintain and update the MS4 Map showing known outfalls from the Etowah County MS4.	0 civil plans provided to County 48 outfalls 0 verified new outfalls	The existing storm water system map will be updated as features are identified.	The updated Storm Water System Map and current outfall inventory are attached. (See Documents 2-1 and 2-2)		NO
3	**Identify Priority Areas:** Identify which drainage basins are considered Priority Areas for each reporting period.	. 2 Priority Areas were identified: Whorton Bend and Tillison Bend	The County will continue to evaluate the development of areas within the MS4.	Maps of the priority areas are attached. (See Document 2-3)	The County designates Priority Areas within the Etowah County MS4 based on population density.	NO
4	**Outfall Reconnaissance Inventory for New MS4 Areas:** Implement a stream-walking program designed to identify outfalls to the MS4 within the newly-added MS4 areas if Urbanized Area Boundary changes.	No new areas were added to the Etowah County MS4 during the reporting period.	Should the MS4 boundary change, the County will implement a stream-walking program designed to identify outfalls to the MS4 within the newly-added MS4 areas.		Updated urban area boundaries were provided by the Census Bureau, but ADEM has not issued revised MS4 boundaries.	NO

Etowah County MS4

Table 6-2 Control Measure 2 - Illicit Discharge Detection and Elimination

See Section 6.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
5	**Outfall Reconnaissance Inventory for Previously Unidentified Outfalls:** Identify, inspect, and screen previously unknown outfalls at time of discovery. Add the outfalls to the MS4 outfall inventory and map.	0 new outfalls identified	Previously unknown outfalls encountered during dry-weather inspections of known outfalls will be identified, inspected, and screened at the time of discovery. Outfalls encountered during other field observations will be reported to the Engineering Department to be added to the outfall database for verification and inspection.	The updated Storm Water System Map and current outfall inventory are attached. (See Documents 2-1 and 2-2)		NO
6	**Verification of Potential Outfalls Identified During Final Plat Approval:** Verify outfalls identified prior to acceptance of the major subdivision infrastructure for County maintenance.	0 new outfalls identified	Outfalls identified during review of the as-built drawings or from the final inspection will be added to the outfall inventory and map as "Potential Outfalls" and will be inspected during the scheduled ORI activities.			NO
7	**Outfall Reconnaissance Inventory (ORI) During Dry Weather:** Conduct dry weather ORI inspections on a minimum of 15% of known outfalls during each reporting period. Inspect priority outfalls once every 3 years.	29 priority outfalls inspected 0 non-priority outfalls inspected 60% of total outfalls	The County will continue to inspect a minimum of 15% of all known outfalls during each reporting period. Outfalls in Priority Areas will be inspected once every 3 years.	The 2023-2024 Inspection Log and an example outfall inspection field sheet are attached. (See Documents 2-4 and 2-5)	22 priority outfalls in Whorton Bend 7 priority outfalls in Tillison Bend	NO
8	**Suspect Discharge Screening:** Screen dry-weather flows that are observed at an outfall during inspection.	5 dry weather flows observed 0 suspect discharges determined	The County will continue to screen dry-weather flows observed during outfall inspections as detailed in Section 8.9 of the IDDE Program.	Inspection field sheets for the 5 observed dry weather flows are attached. (See Documents 2-6, 2-7, 2-8, 2-9, and 2-10)		NO
9	**Suspect Discharge Sampling:** Sample dry weather flows that have a severity index of 3 on one or more indicators in Section 4 of the ORI Field Sheet.	5 dry weather flows 0 suspect discharges determined 0 samples collected 0 confirmed illicit discharges	The County will collect samples of suspect discharges for further analysis as detailed in Section 8.10 of the IDDE Program.			NO

Etowah County MS4

Table 6-2 Control Measure 2 - Illicit Discharge Detection and Elimination

See Section 6.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
10	**Outfall Ranking:** Analyze data from the outfall inspections to designate outfalls as having obvious, suspect, possible, or unlikely discharge potential.	0 obvious illicit discharges 0 suspect illicit discharges	The County will continue to analyze data from each ORI Field Sheet to designate the observed outfall as having obvious, suspect, possible, or unlikely discharge potential.	The 2023-2024 Inspection Log showing outfall rankings is attached. (See Document 2-4)		NO
11	**Illicit Discharge Investigation:** Perform illicit discharge investigations to determine the source of a discharge problem and the responsible party.	0 illicit discharge investigations 0 illicit discharges confirmed 0 illicit discharges eliminated	Where illicit discharges are identified, the County will conduct an illicit discharge investigation to determine the source.			NO
12	**Corrective Action Record Keeping:** Create a case log detailing pertinent information when a suspect illicit discharge or illicit connection is identified.	0 illicit discharges confirmed 0 illicit discharges eliminated 0 illicit discharge corrective action pending	When a suspect illicit discharge or illicit connection is identified, a case log will be created to track information related to the incident or report.	Corrective action case log is attached. (See Document 2-11)		NO
13	**Illicit Discharge Elimination:** Report identified illicit discharges to the appropriate County department or agency for corrective action.	4 complaints received 4 complaints addressed 2 complaints resolved 2 complaints directed to cities	Identified illicit discharges will be reported to the appropriate department or agency for corrective action.	Documentation of 2023-2024 Online Stormwater Complaint Tracking Log and the submitted complaints are attached. (See Documents 2-12 and 2-13)		NO
14	**Public Reporting and Tracking System:** Promote the reporting number and form for reporting non-compliant construction sites, illicit discharges, impaired waterways, and violations of ordinances related to storm water pollution. Evaluate the efficacy of the program.	4 complaints received 4 complaints addressed 2 complaints resolved 2 complaints directed to cities	The County will publicize the reporting number on the County's website and track received complaints and the County's responses to the received complaints. The County will evaluate the current public reporting and tracking methods.	Documentation of 2023-2024 Online Stormwater Complaint Tracking Log and the submitted complaints are attached. (See Documents 2-12 and 2-13)	https://etowahcounty.org/report-storm-water-issues/	NO
15	**Annual County Employee Training:** Train County employees in the identification of illicit discharges annually.	S&ME addressed illicit discharge identification and reporting in the Annual Training conducted on March 20, 2024. 36 County employees attended the training.	The County will train personnel on the identification of illicit discharges and procedures for reporting illicit discharges within the County organization.	Attendance records and training materials are attached. (See Documents 2-14 and 2-15)		NO

Etowah County MS4

Table 6-2 Control Measure 2 - Illicit Discharge Detection and Elimination

See Section 6.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
16	**Notify ADEM of Illicit Discharges from an Adjacent MS4:** Notify the appropriate MS4 and the ADEM Water Division within 48 hours of observation of a suspect illicit discharge from an adjacent MS4.	0 suspect illicit discharges reported to other agencies	The County will continue to notify the ADEM Water Division of observation of any suspect discharge from an adjacent MS4.		No illicit discharges in adjacent MS4 permit areas were observed or reported.	NO
17	**Notify ADEM of Unpermitted Industrial Sites:** Report unpermitted facilities that require an NPDES permit to the Industrial Section of ADEM.	2 unpermitted industrial facilities were reported to the ADEM during the reporting period	Unpermitted facilities will be reported to the Industrial Permits Section of ADEM.	Copies of the complaint records are attached. (See Documents 2-16 and 2-17)	Etowah County continues to rely on ADEM for NPDES permitting enforcement	NO

6.3 Construction Site Storm Water Runoff

6.3.1 *Implementation Status*

During the April 1, 2023 to March 31, 2024 reporting period, Etowah County completed eleven (11) of the eleven (11) Construction Site Storm Water Runoff strategies identified in the previous Annual Report and the 2022 SWMPP.

A table identifying each Construction Site Storm Water Runoff strategy planned for the 2023-2024 reporting period, a description of actions taken by Etowah County, and a description of activities planned for the next reporting period is provided at the end of this section. Supporting documentation is included in **Appendix F**.

6.3.2 *Proposed Activities for the April 1, 2024 to March 31, 2025 Reporting Period*

The County will implement the strategies listed in the 2022 SWMPP and in the following table as part of their Construction Site Storm Water Runoff Control Measure during the 2024-2025 reporting period. The County will evaluate the success of the program to aid in preparing the required Annual Report based on the evaluation criteria established for each strategy.

6.3.3 *Assessment of Controls*

The strategies enacted during the reporting period appear to be effective in meeting the objectives of the Construction Site Storm Water Runoff Control Measure as outlined in the 2021 permit. The strategies are adequate to monitor and control pollutants associated with land disturbing activities.

6.3.4 *Proposed Changes*

Etowah County requests no changes to the Construction Site Storm Water Runoff strategies identified in the 2022 SWMPP.

6.3.5 *Responsible Party*

The **Engineering Department** is responsible for implementing the Construction Site Storm Water Runoff Control Program.

Etowah County MS4

Table 6-3 Control Measure 3 - Construction Site Storm Water Runoff

See Section 7.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
1	**Erosion and Sediment Control Regulations:** County's Subdivision Regulations, Article V, Section 5-4-4 (Road Construction Requirements) regulates storm water management within the County Evaluate the effectiveness of the Regulations each reporting period.	The County evaluated the Ordinance on its effectiveness in addressing erosion and sediment control and no changes were deemed necessary	The County will evaluate the Subdivision Regulations annually.	The County's Subdivision Regulations can be viewed at the link below: http://etowahcounty.org/department/engineering/ Subdivision Regulations are attached. (See Document 3-1)		NO
2	**BMP Training Program:** Maintain QCI certification for County employees tasked with conducting BMP inspections.	1 employee received QCI training (William Vaughn QCI T7888) Robert Nail is a Registered Professional Engineer and therefore a QCP, and he completed continuing education throughout the reporting period.	County personnel tasked with conducting BMP inspections will be certified under an ADEM- approved QCI training program and will attend annual refreshers.	QCI certification is attached. (See Document 3-2)		NO
3	**Require Plat Submittal:** Require submission of a Proposed Plat Application Assembly to the County Engineer for major subdivisions.	0 plats were reviewed	The County will continue to require submission of a Proposed Plat Application Assembly for review prior to approval by the County Commission.		No Proposed Plat Application Assemblies were submitted.	NO
4	**Sediment and Erosion Control Plan Review Procedures:** Sediment and erosion control measures certified by a Qualified Credentialed Professional will be deemed adequate.	0 plats were reviewed	The County will not review submitted plats for erosion and sediment control measures and will instead rely on the designated Qualified Credentialed Professionals preparing the Construction Best Management Practices Plans.		No Proposed Plat Application Assemblies were submitted.	NO
5	**Maintain Inventory of Qualifying Construction Sites:** Maintain a list of active qualifying construction sites within the MS4 boundary.	0 active qualifying construction sites	The County will continue to maintain a list of active qualifying construction sites within the MS4 boundary.			NO

Etowah County MS4

Table 6-3 Control Measure 3 - Construction Site Storm Water Runoff

See Section 7.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
6	**Inspection of Qualifying Non-Priority Sites:** Inspect qualifying construction sites using the BMP Inspection Form every three months until permit termination.	0 inspections completed 0 non-compliant construction site 0 enforcement actions 0 non-compliant sites reported to ADEM 0 repeat offenders	The County will continue to inspect qualifying construction sites.	The blank inspection form is attached. (See Document 3-3)	The County does not currently have authority over construction activities beyond the initial infrastructure, nor does the County have the authority to regulate private developments such as commercial sites, individual home sites, or private subdivisions.	NO
7	**Inspection of Priority Construction Sites:** If a site is a Priority Site inspect the site once a month using the BMP Inspection Form until permit termination.	0 BMP inspections conducted at Primary Construction Sites	The County will continue to inspect qualifying construction sites.	The blank inspection form is attached. (See Document 3-3)	The Etowah County MS4 does not currently incorporate any waterbodies or watersheds that are impaired for siltation or turbidity.	NO
8	**Re-inspection of Sites:** Re-inspect sites where deficiencies are noted and cannot be corrected during inspection. Use the BMP Inspection Form to complete re-inspections.	0 re-inspections completed 0 non-compliant construction site 0 enforcement actions 0 non-compliant sites reported to ADEM 0 repeat offenders	The County will continue to re-inspect sites with noted deficiencies.	The blank inspection form is attached. (See Document 3-3)		NO
9	**Public Reporting and Tracking System:** Promote the reporting number and form for reporting non-compliant construction sites, illicit discharges, impaired waterways, and violations of ordinances related to storm water pollution. Evaluate the efficacy of the program.	4 complaints received 4 complaints addressed 2 complaints resolved 2 complaints directed to cities	The County will continue to promote the reporting form to the public and evaluate its efficacy.	Documentation of 2023-2024 Online Stormwater Complaint Tracking Log and the submitted complaints are attached. (See Documents 2-12 and 2-13)	https://etowahcounty.org/report-storm-water-issues/	NO
10	**Notify ADEM of Unpermitted Sites:** Notify ADEM of any construction site that is not permitted under to Alabama Construction General Permit.	5 unpermitted construction sites reported to ADEM	The County will rely on ADEM for construction NPDES enforcement when a permit is required but has not been obtained or of situations where the County's enforcement actions have not resulted in compliance.	Copies of the 5 reports are attached. (See Documents 3-4, 3-5, 3-6, 3-7, and 3-8)		NO
11	**Notify ADEM of Non-Compliant Sites:** Notify ADEM of non-compliant sites where the County's enforcement actions did not result in compliance.	0 non-compliant sites reported to ADEM	The County will continue to notify ADEM of non-compliant sites not following enforcement actions provided by the County.		No communication records were generated.	NO

6.4 Post-Construction Storm Water Management in New Development and Redevelopment

6.4.1 *Implementation Status*

During the April 1, 2023 to March 31, 2024 reporting period, Etowah County completed twelve (12) of the twelve (12) Post-Construction Storm Water Management strategies identified in the previous Annual Report and the 2022 SWMPP.

A table identifying each Post-Construction Storm Water Management strategy planned for the 2023-2024 reporting period, a description of actions taken by Etowah County, and a description of activities planned for the next reporting period is provided at the end of this section. Supporting documentation is included in **Appendix G**.

6.4.2 *Proposed Activities for the April 1, 2024 to March 31, 2025 Reporting Period*

The County will implement the strategies listed in the 2022 SWMPP and in the following table as part of their Post-construction Storm Water Management Control Measure during the 2024-2025 reporting period. The County will evaluate the success of the program to aid in preparing the required Annual Report based on the evaluation criteria established for each strategy.

6.4.3 *Assessment of Control*

The strategies enacted during the reporting period appear to be effective in meeting the objectives of the Post-construction Storm Water Management Control Measure as outlined in the 2021 permit. The strategies are adequate to address post-construction storm water runoff from new development and re-development.

6.4.4 *Proposed Changes*

Etowah County requests no changes to the Pollution Prevention and Good Housekeeping for Municipal Operations strategies identified in the 2022 SWMPP.

6.4.5 *Responsible Party*

The **Engineering Department** is responsible for establishing design criteria for subdivision storm drainage systems, evaluating the Subdivision Regulations, reviewing submitted subdivision plats, and performing inspections of County-owned post-construction BMPs.

Etowah County MS4

Table 6-4 Control Measure 4 - Post-Construction Storm Water Management

See Section 8.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
1	**Post-Construction Storm water Management Ordinance:** County's Subdivision Regulations, Article V, Section 5-4-4 (Road Construction Requirements) regulates post-construction storm water management within the County. Evaluate the effectiveness of the Regulations each reporting period	The County evaluated the Ordinance on its effectiveness in reducing runoff from new development or redevelopment and no changes were deemed necessary.	The County will evaluate the Subdivision Regulations annually.	The County's Subdivision Regulations can be viewed at the link below: http://etowahcounty.org/department/engineering/ Subdivision Regulations are attached. (See Document 3-1)		NO
2	**Encourage Low-Impact Development/Green Infrastructure Practices:** Provide information on green development to individuals requesting plan review and building/development permits.	0 plat reviews requested 0 people received education materials.	The County will continue to provide information on green development to individuals requesting plan review.	A copy of the GI/LID handout is attached. (See Document 1-15)		NO
3	**Require Plat Submittal:** Require submission of a Proposed Plat Application Assembly to the County Engineer for major subdivisions.	0 plats were reviewed	The County will continue to require submission of a Proposed Plat Application Assembly for major subdivisions.		No Proposed Plat Application Assemblies were submitted.	NO
4	**Plan Review Procedures:** Review Proposed Plat Application Assemblies for major subdivisions within 30 days of submittal.	0 plats were reviewed 0 additional metrics were deemed necessary	The County will continue to review any submitted Proposed Plat Application Assemblies.		No Proposed Plat Application Assemblies were submitted.	NO
5	**Require As-Built Certification:** Require as-built plans following completion of infrastructure construction for a major subdivision or following approval of the proposed plat for a minor subdivision or large acreage tract.	0 as-built plans were provided	The County will continue to require as-built plans following completion of infrastructure construction for a major subdivision or following approval of the proposed plat for a minor subdivision or large acreage tract.			NO
6	**Post-Installation Inspections:** Poorly-functioning post-construction controls that result in illicit discharges will be reported to ADEM.	0 illicit discharges reported to ADEM	The County will report illicit discharges from poorly-functioning privately-owned post-construction controls to ADEM.		The County does not currently have authority to inspect post-construction controls located on private property.	NO

Etowah County MS4

Table 6-4 Control Measure 4 - Post-Construction Storm Water Management

See Section 8.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
7	**Require long-term maintenance on storm water controls:** Post-construction controls must be located on private property and the parcel of land must be retained by the developer of HOA.	0 plats were reviewed	The County will continue to require that the developer or HOA be responsible for long-term maintenance on private storm water controls.			NO
8	**Inventory of Post-Construction Structural Controls:** Compile an inventory of post-construction structural controls located within the Etowah County MS4. Update the inventory annually.	0 new structural BMPs added 0 total structural BMPs	The County will continue to maintain an inventory of post-construction structural controls within the Etowah County MS4.		The Etowah County Subdivision Regulations require that post-construction structural controls be maintained by the developer.	NO
9	**Annual Inspection of County-owned Post-Construction Storm Water Controls:** Inspect post-construction BMPs within the MS4 a minimum of once per year.	0 post-construction County-owned storm water controls 0 inspections performed	The County will inspect County-owned or managed post-construction BMPs within the Etowah County MS4 at a minimum of once per year.	The blank Post-Construction BMP Inspection Form is attached. (See Document 4-1)		NO
10	**Annual Inspection of Privately-owned Post-Construction Storm Water Controls:** Poorly-functioning post-construction controls that result in illicit discharges will be reported to ADEM.	0 illicit discharges reported to ADEM	The County will report illicit discharges from poorly-functioning privately-owned post-construction controls to ADEM.		The County does not currently have authority to inspect post-construction controls located on private property.	NO
11	**Corrective Actions for County-Owned Post-Construction Controls:** Perform maintenance or repairs if an inspection identifies a maintenance issue.	0 post-construction County-owned storm water controls 0 corrective actions taken	The County will perform necessary maintenance or repairs for county-owned post-construction controls with identified maintenance issues.	The blank Post-Construction BMP Inspection Form is attached. (See Document 4-1)		NO
12	**Procedures to Address Non-Compliant Post-Construction BMPs:** Poorly-functioning post-construction controls that result in illicit discharges will be reported to ADEM.	0 illicit discharges reported to ADEM	The County will report illicit discharges from poorly-functioning privately-owned post-construction controls to ADEM.		The County does not currently have authority to inspect post-construction controls located on private property.	NO

6.5 Pollution Prevention and Good Housekeeping for County Operations

6.5.1 *Implementation Status*

During the April 1, 2023 to March 31, 2024 reporting period, Etowah County completed fourteen (14) of the fifteen (15) Pollution Prevention and Good Housekeeping for County Operations strategies identified in the previous Annual Report and the 2022 SWMPP. The County partially completed one (1) strategy:

- County personnel performing fueling activities were following a standard operating procedure, but it was not in writing. The County did not develop a written fueling SOP during the reporting period (Strategy 11).

Etowah County also completed two (2) strategies beyond those proposed in the previous Annual Report and the 2022 SWMPP. These strategies include:

- Providing oil waste recycling for county vehicles and equipment (Strategy 16)
- Providing a vehicle maintenance program for routine inspections of municipal vehicles and equipment (Strategy 17)

A table identifying each Pollution Prevention and Good Housekeeping for County Operations strategy planned for the 2023-2024 reporting period, a description of actions taken by Etowah County, and a description of activities planned for the next reporting period is provided at the end of this section. Supporting documentation is included in **Appendix H**.

6.5.2 *Proposed Activities for the April 1, 2024 to March 31, 2025 Reporting Period*

The County will implement the activities listed in the 2022 SWMPP and in the following table as part of their Pollution Prevention and Good Housekeeping for Municipal Operations Control Measure during the 2024-2025 reporting period. The County will evaluate the success of the program to aid in preparing the required Annual Report based on the evaluation criteria established for each strategy.

6.5.3 *Assessment of Control*

The strategies enacted during the reporting period appear to be effective in meeting the objectives of the Pollution Prevention and Good Housekeeping for County Operations Control Measure as outlined in the 2021 permit. The strategies are adequate to address storm water pollution prevention from county operations.

6.5.4 *Proposed Changes*

Etowah County requests no changes to the Pollution Prevention and Good Housekeeping for County Operations strategies identified in the 2022 SWMPP.

6.5.5 *Responsible Party*

The **Engineering Department** will be responsible for conducting the County facility evaluations and maintaining records of the facility inspections. The Engineering Department is also responsible for coordinating the annual reviews of the SOPs, performing roadway maintenance, and coordinating litter reduction efforts.

Etowah County MS4

Table 6-5 Control Measure 5 - Pollution Prevention and Good Housekeeping for Municipal Operations

See Section 9.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
1	**County Facilities Inventory:** Maintain an inventory of all county facilities, including facilities that have the potential to discharge pollutants. Update the inventory annually.	3 County facilities total 1 County facility with pollution potential	The County will continue to maintain the inventory listing all County facilities, including County facilities that have the potential to discharge pollutants via storm water runoff.	An updated inventory of County facilities is attached. (See Document 5-1)	All employees have now been relocated to the Gadsden facility. The Attalla shop no longer has pollution potential.	NO
2	**Promote and Participate in Anti-Litter/Cleanup Events:** Partner with Keep Etowah Beautiful, Clean Water Partnership of Alabama, and/or Alabama Power to support, sponsor, and/or promote anti-litter and cleanup events.	Etowah County provided support to Keep Etowah Beautiful for Renew Our Rivers, the Great American Cleanup, and the Clean Campus Certification Program. The Etowah County Sheriff's Dept provided a boat for Renew Our Rivers and oversaw inmate litter crews. The Etowah County Road Dept disposed of tires collected during Renew Our Rivers. Etowah County Engineering employees participated in planning meetings for Renew Our Rivers.	The County will continue to partner with Keep Etowah Beautiful, Clean Water Partnership of Alabama, and/or Alabama Power to support, sponsor, and/or promote anti-litter and cleanup events.	The Keep Etowah Beautiful Community Programs Summary, the Greater Gadsden Tourism event notice, and a screenshot of the Keep Alabama Beautiful webpage advertising the Great American Cleanup are attached. (See Documents 1-22, 1-25, 1-26, 1-27, 1-28, and 1-30)	**Renew our Rivers:** September 26 - September 30, 2023 423 Volunteers 6.19 tons of litter collected **Great American Cleanup:** April 3 - May 31, 2023 535 volunteers 9.87 tons of litter collected	NO
3	**Adopt-A-Mile Program support:** Maintain Adopt-a-Mile signs and provide trash bags to supporters.	0 miles adopted 0 streams adopted	Etowah County will continue to encourage the Adopt-A-Mile program and assist with individuals and/or groups with participation.	The ALPALS Adopt-A-Mile webpage and application are attached. (See Documents 1-31 and 1-32)		NO
4	**Disposal Days:** Provide quarterly free disposal days.	Disposal days were held on May 6, 2023, August 5, 2023, November 4, 2023, and February 3, 2024. Disposal days were advertised via Public Notice.	The County will continue to support this effort in order to reduce illegal dumping of materials.	The disposal day public notices are attached. (See Document 1-33)		NO
5	**No Dumping Signs:** Maintain and add "No Dumping" signs as necessary.	8 No Dumping signs were signs added.	The County will continue to place or maintain these signs in problem areas.	Photos of signs are attached. (See Document 1-34)	The County maintains "No Dumping $500 fine" signs and some of these No Dumping areas are under video surveillance. These are put out in the County through Keep Etowah Beautiful as part of the effort to eliminate/reduce unauthorized disposal of waste.	NO

Etowah County MS4

Table 6-5 Control Measure 5 - Pollution Prevention and Good Housekeeping for Municipal Operations

See Section 9.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
6	**Scrap Tire Collection:** Collected tires from other activities will disposed of properly.	The County disposed of the tires collected during Renew Out Rivers: 74 passenger tires 4 tractor tires 1 truck tire	The County will continue to manage scrap tires collected by County litter crews from public right of ways, as well as tires collected during Renew Our Rivers cleanups.	Documentation from Keep Etowah Beautiful is attached. (See Document 1-27)		NO
7	**Inmate Cleanup Crews:** Inmate crews will be used to remove litter among roadways when possible.	Days - 145 Miles - 385.6 Tons - 34.97 tons of litter collected Recyclable Litter - 59.9 tons	The Etowah County Sheriff's Department will continue this program.	Influence Program documentation from Keep Etowah Beautiful is attached. (See Document 1-22)	279.30 miles and 67.87 tons of litter collected in 2022-2023 reporting period	NO
8	**Evaluate Effectiveness of Litter Reduction Program:** Evaluate the litter reduction program.	The County has evaluated the program and identified that no changes are necessary.	The County will track the metrics identified in the 2022 SWMPP and evaluate the effectiveness of the program each reporting period.		Inmate crews worked an additional 106 miles, but collected 33 fewer tons of litter compared to the 2022-2023 reporting period, indicating that existing litter reduction programs are reducing litter on roadsides and in the Coosa River. More outreach and education is needed for commercial industries.	NO
9	**Vehicle and Equipment Maintenance SOP:** Evaluate the SOP for vehicle and equipment maintenance by March 31 each year.	The County evaluated the SOP and determined it to be compliant at this time.	The County will evaluate the Vehicle and Equipment Maintenance SOP by March 31, 2025.	A copy of the Fleet Maintenance and Wash Area SOP is attached. (See Document 5-2)		NO
10	**Equipment and Vehicle Washing SOP:** Evaluate the SOP by March 31 each year.	1 designated washing area maintained The County evaluated the SOP and determined it to be compliant at this time.	The County will evaluate the Equipment and Vehicle Washing SOP by March 31, 2025.	A copy of the Fleet Maintenance and Wash Area SOP and photos of the vehicle washing area are attached. (See Documents 5-2 and 5-3)		NO
11	**County Vehicle Fueling SOP:** Develop a county vehicle fueling SOP by March 31, 2024. Evaluate the SOP by March 31 each year.	**PARTIALLY COMPLETE** County personnel performing fueling activities were following a standard operating procedure, but it was not in writing. The County did not develop a written fueling SOP during the reporting period.	The County will develop an SOP for the fueling of County vehicles by March 31, 2025.		The County developed a written vehicle fueling SOP in May 2024. This activity will be reflected in the 2024-2025 Annual Report.	NO

Etowah County MS4

Table 6-5 Control Measure 5 - Pollution Prevention and Good Housekeeping for Municipal Operations

See Section 9.0 of the 2022 SWMPP

STRATEGY NO.	STRATEGIES	2023-2024 IMPLEMENTATION STATUS	2024-2025 PROPOSED EFFORTS	SUPPORTING DOCUMENTATION	COMMENTS	PROPOSED CHANGES
12	**Herbicide SOP:** Develop a herbicide SOP by March 31, 2024. Evaluate the SOP by March 31 each year.	The County developed a written herbicide SOP during the reporting period. The County requires that all personnel handling or applying herbicides are certified by the State of Alabama and that all materials are handled and applied according to state and manufacturer requirements.	The County will evaluate the herbicide SOP by March 31, 2025. The County will continue to recertify County employees as required Should other pesticide applications be needed, the County will review applicator certifications and licensing during the bid process.	The Herbicide SOP and copies of herbicide certifications are attached. (See Documents 5-4 and 5-5)	The County requires that all personnel handling or applying herbicides are certified by the State of Alabama and that all materials are handled and applied according to state and manufacturer requirements	NO
13	**Quarterly Inspection of County Facilities:** Inspect county facilities that have the potential to discharge pollutants once per quarter.	1 facility with potential to discharge 4 inspections performed 2 deficiencies noted	County facilities with potential to discharge pollutants will be inspected for good housekeeping practices once per quarter.	The quarterly inspection forms are attached. (See Document 5-6)		NO
14	**Corrective Actions at County Facilities:** Address noted deficiencies from quarterly inspections within 72 hours of the inspection.	2 deficiencies noted 2 deficiencies corrected 2 deficiencies re-inspected. The deficiencies were corrected immediately after inspection.	The County will address deficiencies from quarterly inspections within 72 hours of the inspection.	The quarterly inspection forms are attached. (See Document 5-6)		NO
15	**Annual Employee Training:** Conduct annual training for County personnel.	S&ME addressed good housekeeping practices and potential threats to storm water quality from County operations in the Annual Training conducted on March 20, 2024. 36 County employees attended the training.	Appropriate County personnel will undergo annual training on good housekeeping practices, the developed SOPs, and potential threats to storm water quality.	Attendance records and training materials are attached. (See Documents 2-14 and 2-15)		NO
16	**Additional Strategy:** Oil Waste Recycling - The Etowah County Shop collects used oil and filters from County vehicles and equipment.	438 gallons of oil were collected and disposed of 0 filters were recycled	Etowah County will continue to collect and recycle waste oil and filters.	Photos of the collected oil filters and the manifest for the used oil collection are attached. (See Document 1-43)	The County collects used oil and filters at the Maintenance Shop. The used oil filters collected during the 2023-2024 reporting period were disposed of in May 2024.	
17	**Additional Strategy:** Vehicle Maintenance Program: Conduct routine inspections of municipal vehicles and equipment	Daily inspections were performed on vehicles before they were driven. 13 vehicle or equipment leaks identified and corrected during the reporting period	The County will conduct routine inspections of municipal vehicles and equipment.	Garage Repair Orders for leaks are attached. (See Document 5-7)		

7.0 Notice of Reliance

Reference Part VI.B.6

7.1 Steering Committee

The Gadsden-Etowah Steering Committee was first established in 2011 following re-issuance of the joint permit. The intent of the steering committee was to provide for coordination between the co-permittees. When the joint permit was superseded by the separate permits in 2016, the committee continued to work together to produce and implement a joint SWMPP and monitoring program.

The Steering Committee will continue under the 2021 permit, although each entity currently operates under individual SWMPPs and the City of Gadsden has discontinued their participation in the joint monitoring program. The cities of Attalla, Glencoe, Hokes Bluff, Rainbow City, and Southside and Etowah County remain committed to partnership and joint implementation of the monitoring program.

Each of the seven entities provide at least one member to the Gadsden-Etowah Storm Water Steering Committee. Each entity is responsible for providing the required annual updates and monitoring data to the Steering Committee.

Table 7-1 Gadsden-Etowah Storm Water Steering Committee

Entity	Contact	Phone No.	Email
City of Gadsden	Heath Williamson	256-549-4520	hwilliamson@cityofgadsden.com
City of Gadsden	Keener Morrow	256-549-4524	kmorrow@cityofgadsden.com
City of Attalla	Jason Nicholson	256-441-9200	jnicholson@attallacity.org
City of Rainbow City	Joel Garmon	256-413-1230	jgarmon@rbcalabama.com
City of Southside	Judd Rich	256-442-9775 Ext. 103	juddrich@cityofsouthside.com
City of Glencoe	Todd Means	256-492-1424	toddmeans@cityofglencoe.org
City of Hokes Bluff	Lisa Lowman	256-492-2414	lisa.lowman@cityofhokesbluff.com
Etowah County	Robert Nail	256-549-5358	rnail@etowahcounty.org

8.0 Agency Certification

Reference Parts VI.A.2 and VII.G

I certify under penalty of law that this document and all attachments pertaining to Etowah County 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, 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 or imprisonment for knowing violations.

Shane Ellison, Chief Administrative Officer
Etowah County, Alabama

5-29-2024
Date

Appendices

Appendix A – Figures

GADSDEN-ETOWAH MS4 BOUNDARIES

GADSDEN ALABAMA URBANIZED AREA
PHASE II SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM
NPDES GENERAL PERMIT ALR040009

ETOWAH COUNTY
ST. CLAIR COUNTY
CALHOUN COUNTY

GADSDEN
ATTALLA
HOKES BLUFF
RAINBOW CITY
SOUTHSIDE
GLENCOE

Line Creek
Brown Creek
Clear Creek
Big Wills Creek
Little Wills Creek
Black Creek
Town Creek
Turkeytown Creek
Coosa River
Ballplay Creek
Rook Creek
Dry Creek
Coal Creek
Little Cove Creek
Big Cove Creek
Horton Creek
Lake Canoe Creek
Big Canoe Creek
Permeter Creek
Greens Creek
Ohatchee Creek
Coffee Creek

11 431 278 59 211 77 759 411

N

0 1.5 3 Miles

Legend

- Gadsden, AL Urbanized Area Outline
- Unincorporated Etowah County MS4

City Limits

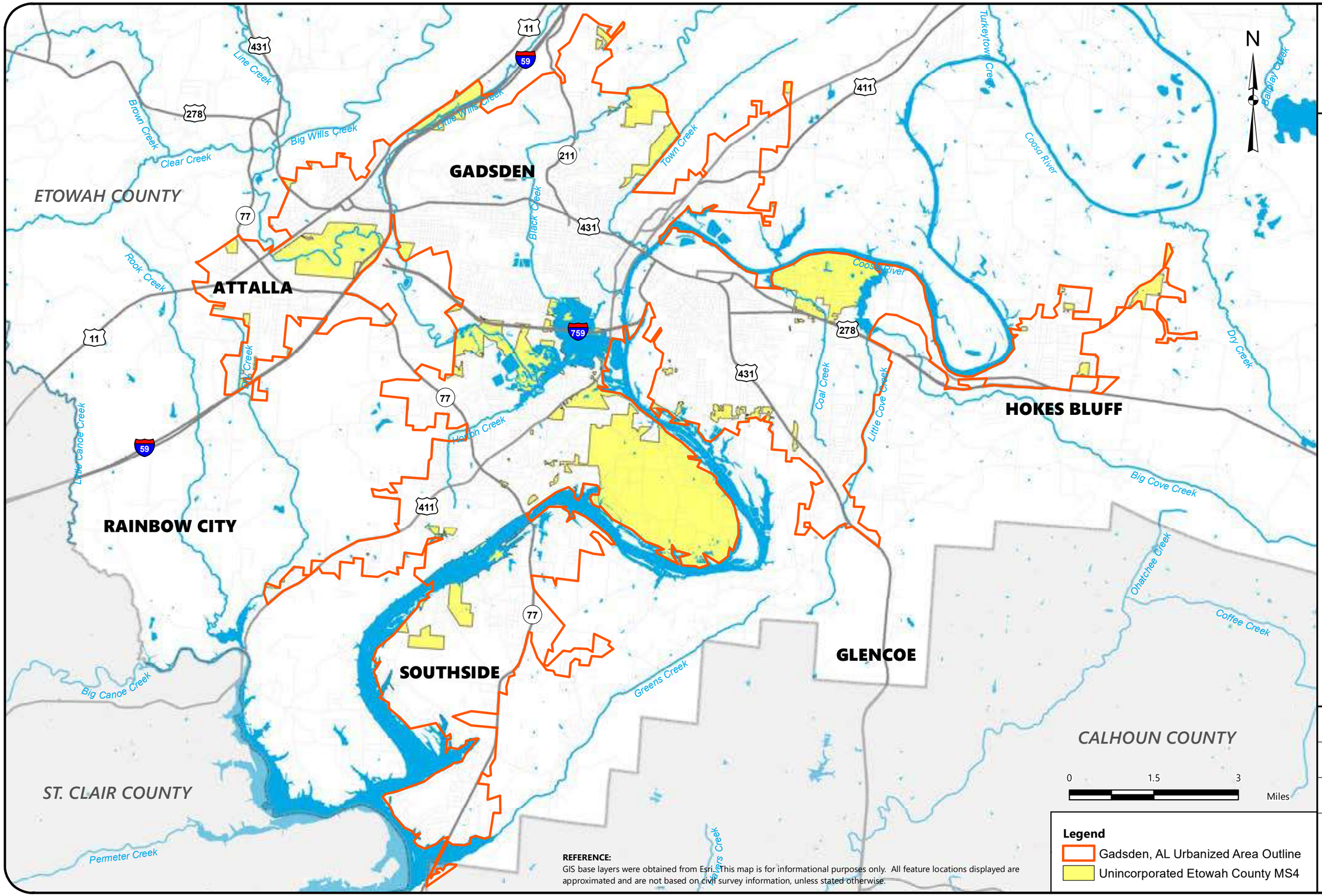
- Attalla
- Gadsden
- Glencoe
- Hokes Bluff
- Rainbow City
- Southside

REFERENCE:
GIS base layers were obtained from Esri. This map is for informational purposes only. All feature locations displayed are approximated and are not based on civil survey information, unless stated otherwise.

SCALE: 1:100,000
DATE: 05/21/2024
PROJECT NUMBER 23820129
FIGURE NO. 1

ETOWAH COUNTY MS4 BOUNDARIES

ETOWAH COUNTY MS4
PHASE II SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM
NPDES GENERAL PERMIT ALR040009

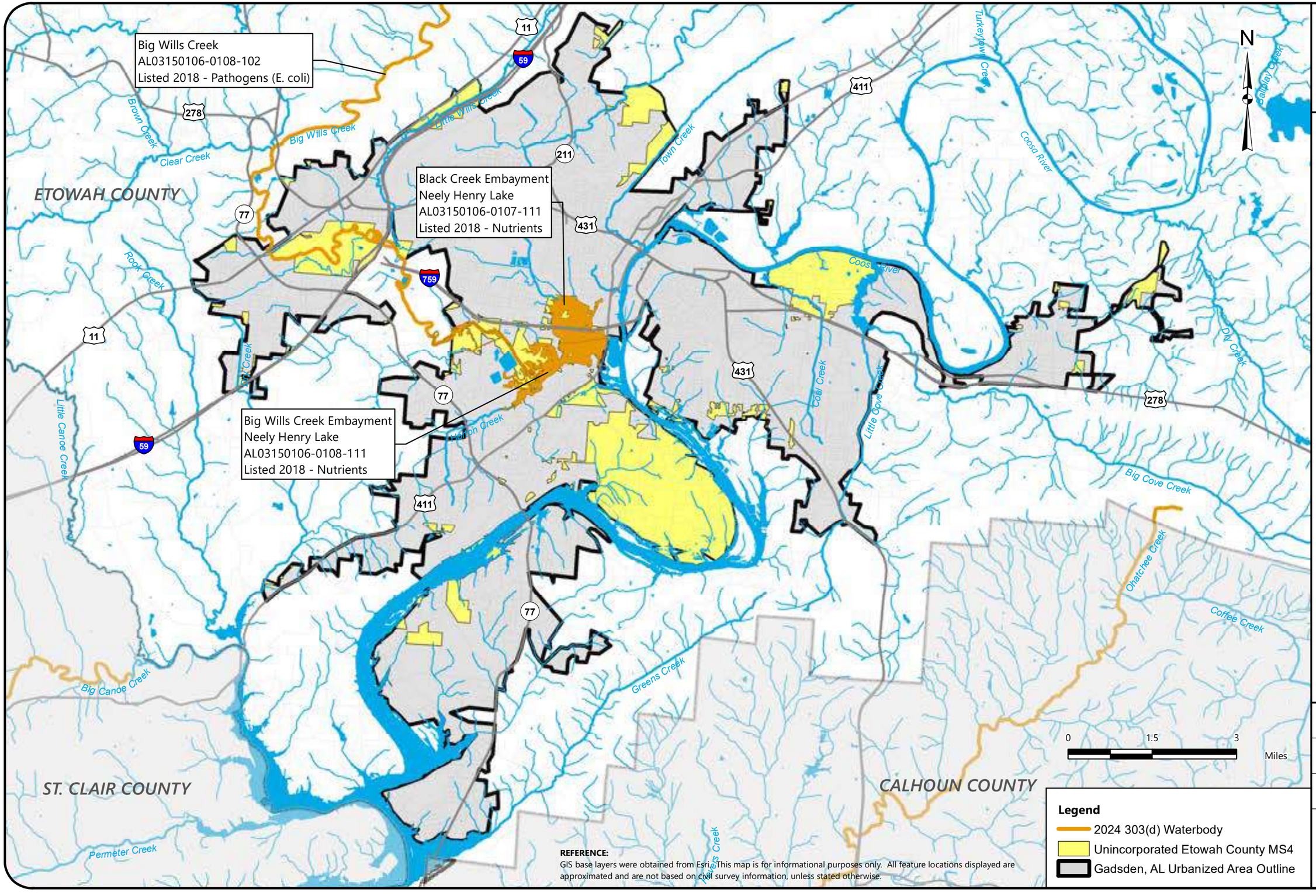


Legend

- Gadsden, AL Urbanized Area Outline
- Unincorporated Etowah County MS4

REFERENCE:
GIS base layers were obtained from Esri. This map is for informational purposes only. All feature locations displayed are approximated and are not based on civil survey information, unless stated otherwise.

SCALE:	1:100,000
DATE:	05/24/2024
PROJECT NUMBER	23820129G
FIGURE NO.	2



IMPAIRED WATERBODIES - 2024 303(d) LIST

ETOWAH COUNTY MS4
PHASE II SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM
NPDES GENERAL PERMIT ALR040009

SCALE:
1:100,000

DATE:
05/24/2024

PROJECT NUMBER
23820129G

FIGURE NO.
4

IMPAIRED WATERBODIES - TMDL

ETOWAH COUNTY MS4
PHASE II SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM
NPDES GENERAL PERMIT ALR040009

Black Creek Embayment
Neely Henry Lake
AL03150106-0107-111
2008 TMDL - Total Phosphorous, pH,
Organic Enrichment (CBOD, NBOD)

Coosa River (Neely Henry Lake)
AL03150106-0204-101
2008 TMDL - Total Phosphorous, pH,
Organic Enrichment (CBOD, NBOD)

Big Wills Creek Embayment
Neely Henry Lake
AL03150106-0108-111
2008 TMDL - Total Phosphorous, pH,
Organic Enrichment (CBOD, NBOD)

Coosa River (Neely Henry Lake)
AL03150106-0204-102
2008 TMDL - Total Phosphorous, pH,
Organic Enrichment (CBOD, NBOD)

Cove Creek Embayment
Neely Henry Lake
AL03150106-0203-111
2008 TMDL - Total Phosphorous, pH,
Organic Enrichment (CBOD, NBOD)

Coosa River (Neely Henry Lake)
AL03150106-0309-102
2008 TMDL - Total Phosphorous, pH,
Organic Enrichment (CBOD, NBOD)

Coosa River (Neely Henry Lake)
AL03150106-0309-101
2008 TMDL - Total Phosphorous, pH,
Organic Enrichment (CBOD, NBOD)

ETOWAH COUNTY
ST. CLAIR COUNTY
CALHOUN COUNTY

Brown Creek
Clear Creek
Big Wills Creek
Little Wills Creek
Black Creek
Town Creek
Turkeytown Creek
Coosa River
Gaylay Creek
Rook Creek
Little Canoe Creek
Big Canoe Creek
Perimeter Creek
Coal Creek
Little Cove Creek
Dry Creek
Ohatchee Creek
Coffee Creek
Greens Creek

N

0 1.5 3 Miles

SCALE: 1:100,000
DATE: 05/24/2024
PROJECT NUMBER 23820129G
FIGURE NO. 4

Legend
- 2024 TMDL Waterbody
- Unincorporated Etowah County MS4
- Gadsden, AL Urbanized Area Outline

REFERENCE:
GIS base layers were obtained from Esri. This map is for informational purposes only. All feature locations displayed are approximated and are not based on civil survey information, unless stated otherwise.

Appendix B – Charts and Statistics

CHART 1 - TURBIDITY ANALYTICAL DATA
MS4 WET-WEATHER MONITORING

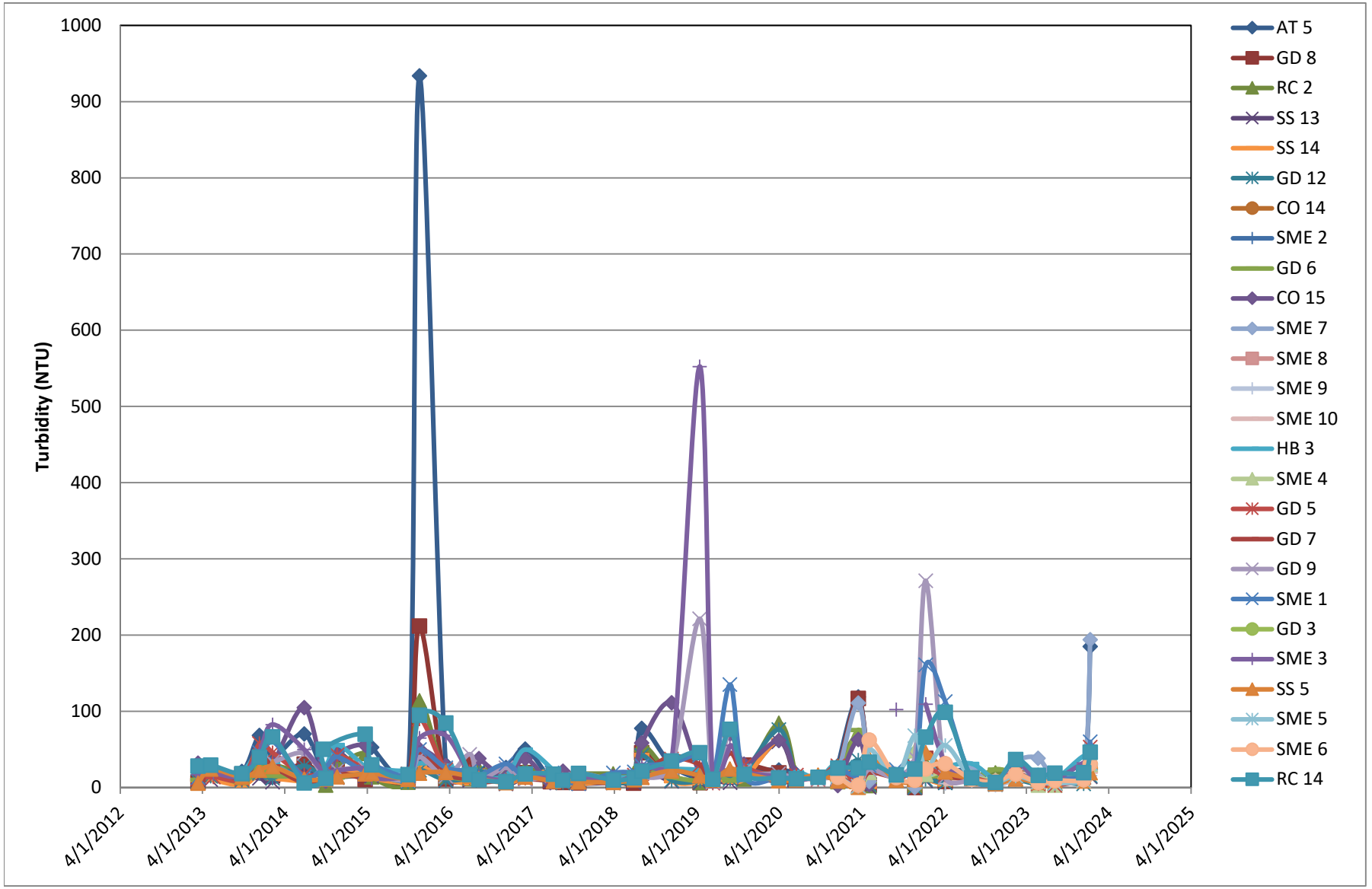


CHART 2 - pH ANALYTICAL DATA
MS4 WET-WEATHER MONITORING

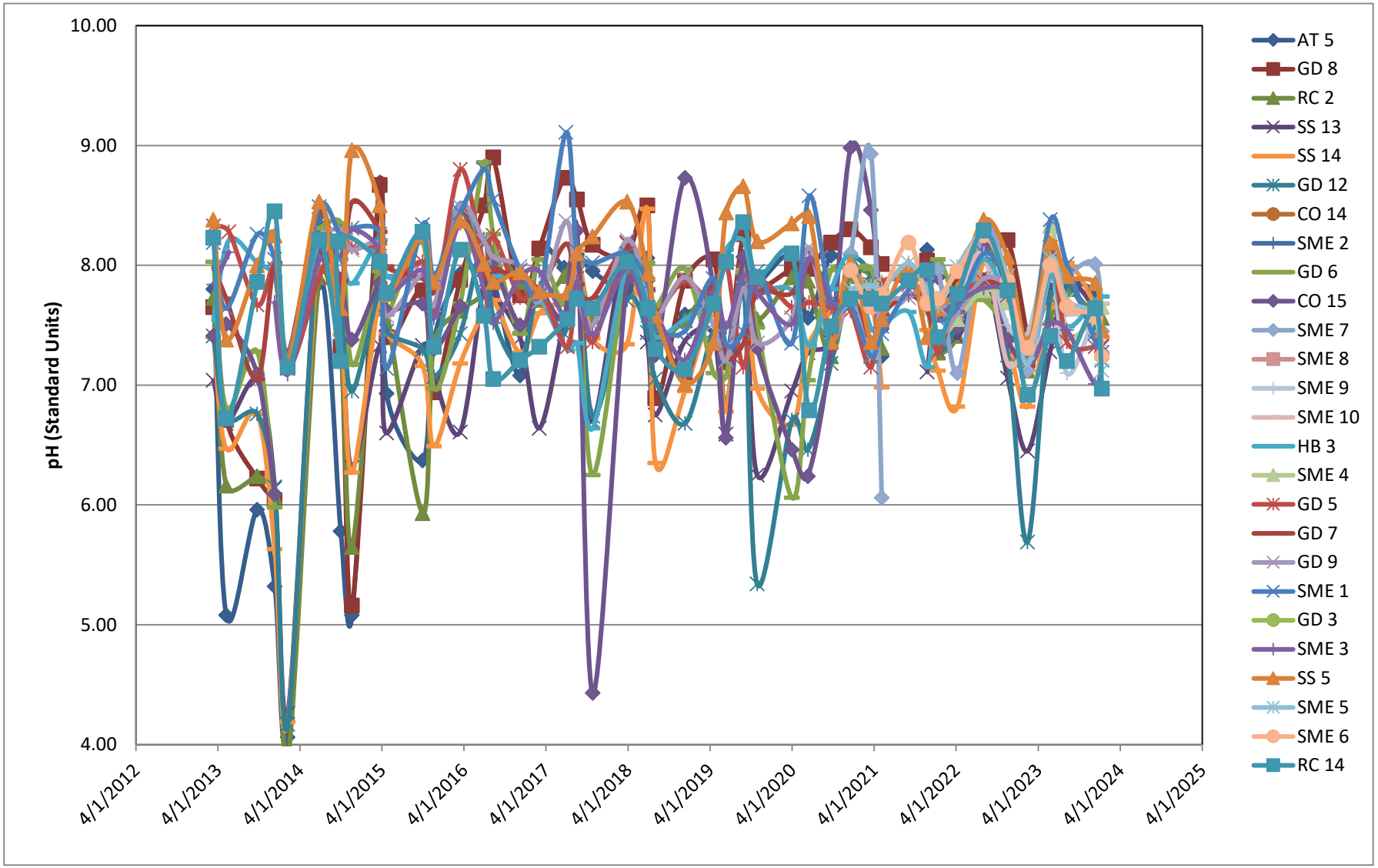


CHART 3 - DISSOLVED OXYGEN ANALYTICAL DATA
MS4 WET-WEATHER MONITORING

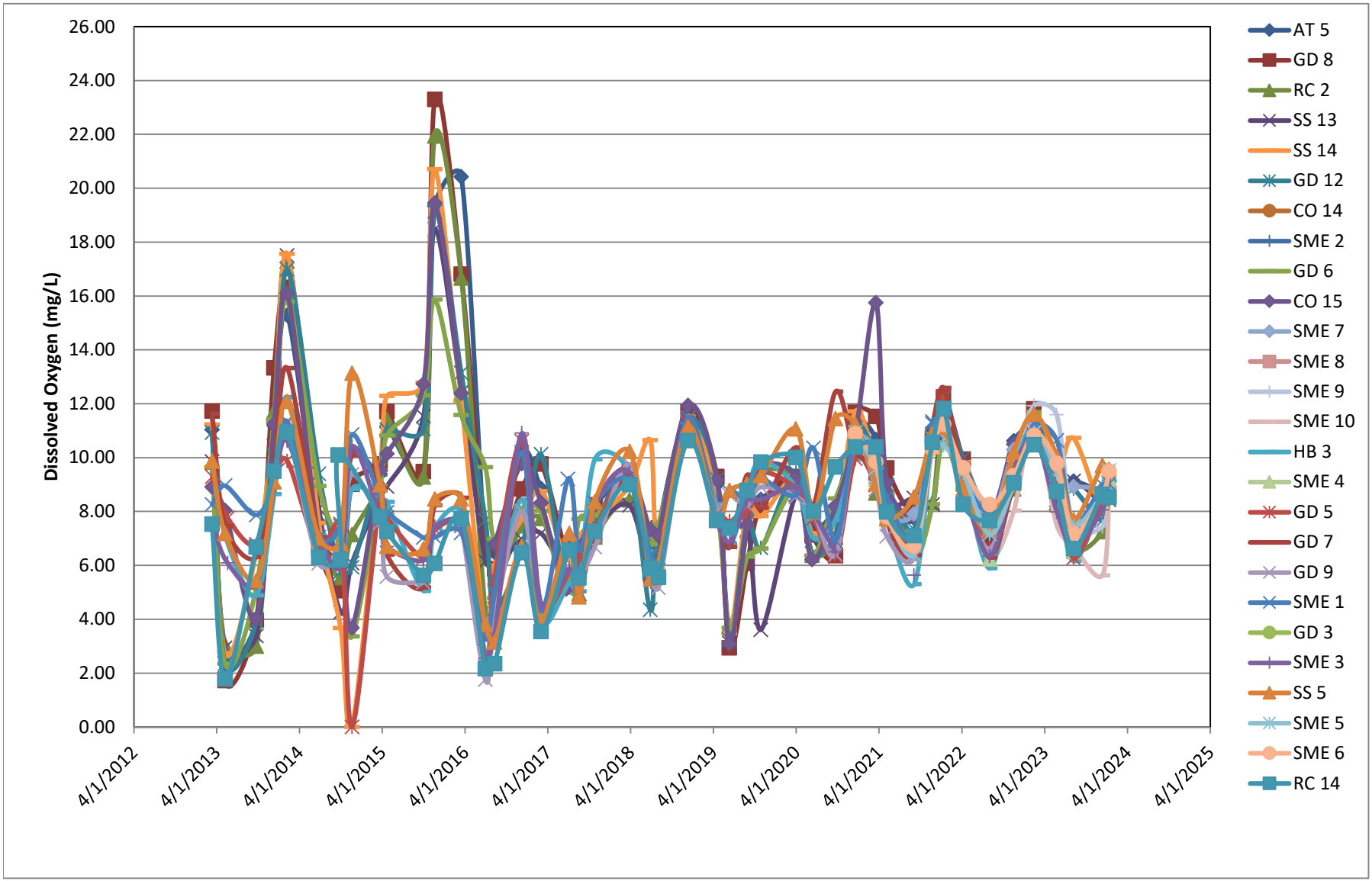


CHART 4 - TEMPERATURE ANALYTICAL DATA
MS4 WET-WEATHER MONITORING

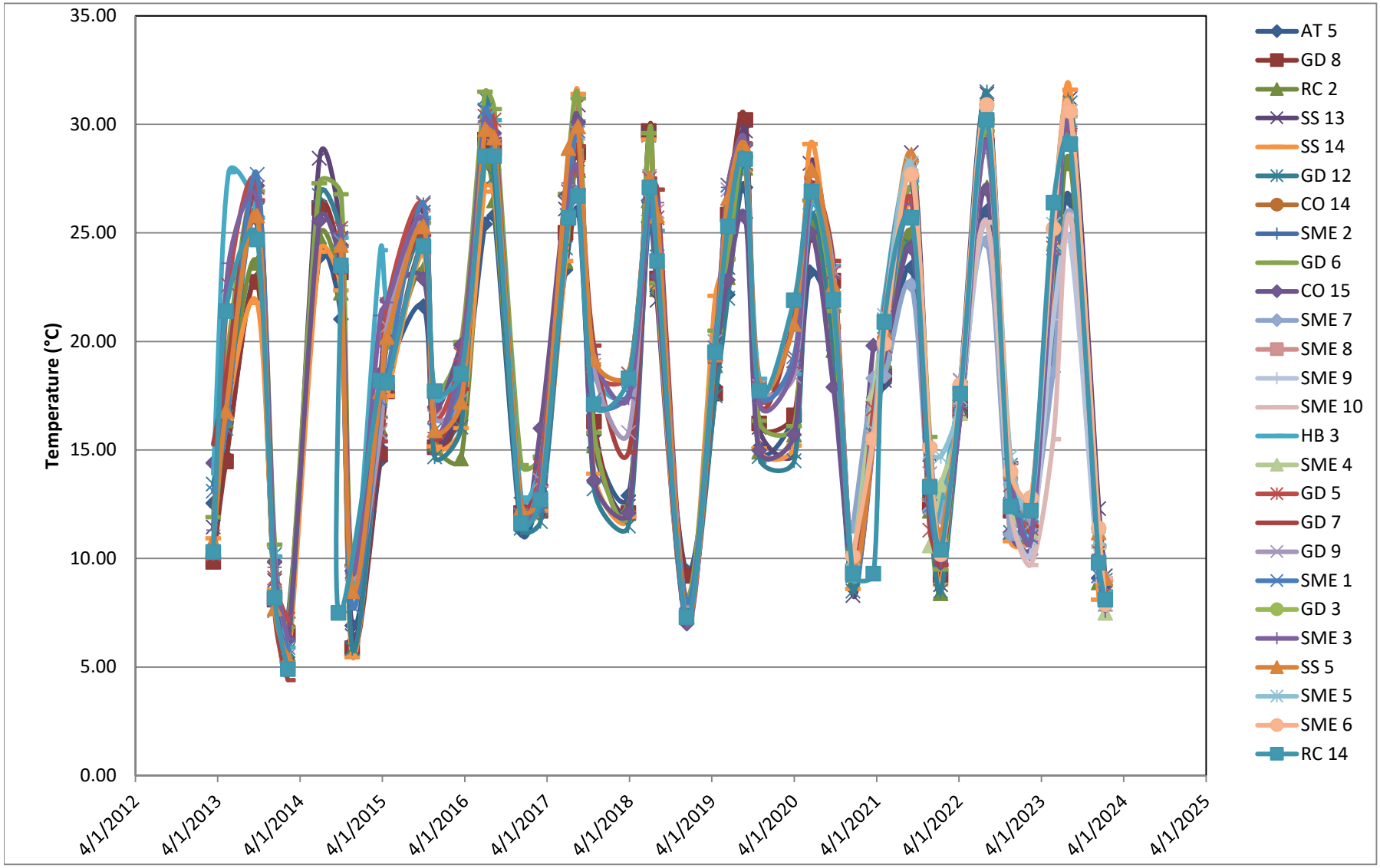


CHART 5 - TOTAL SUSPENDED SOLIDS ANALYTICAL DATA
MS4 WET-WEATHER MONITORING

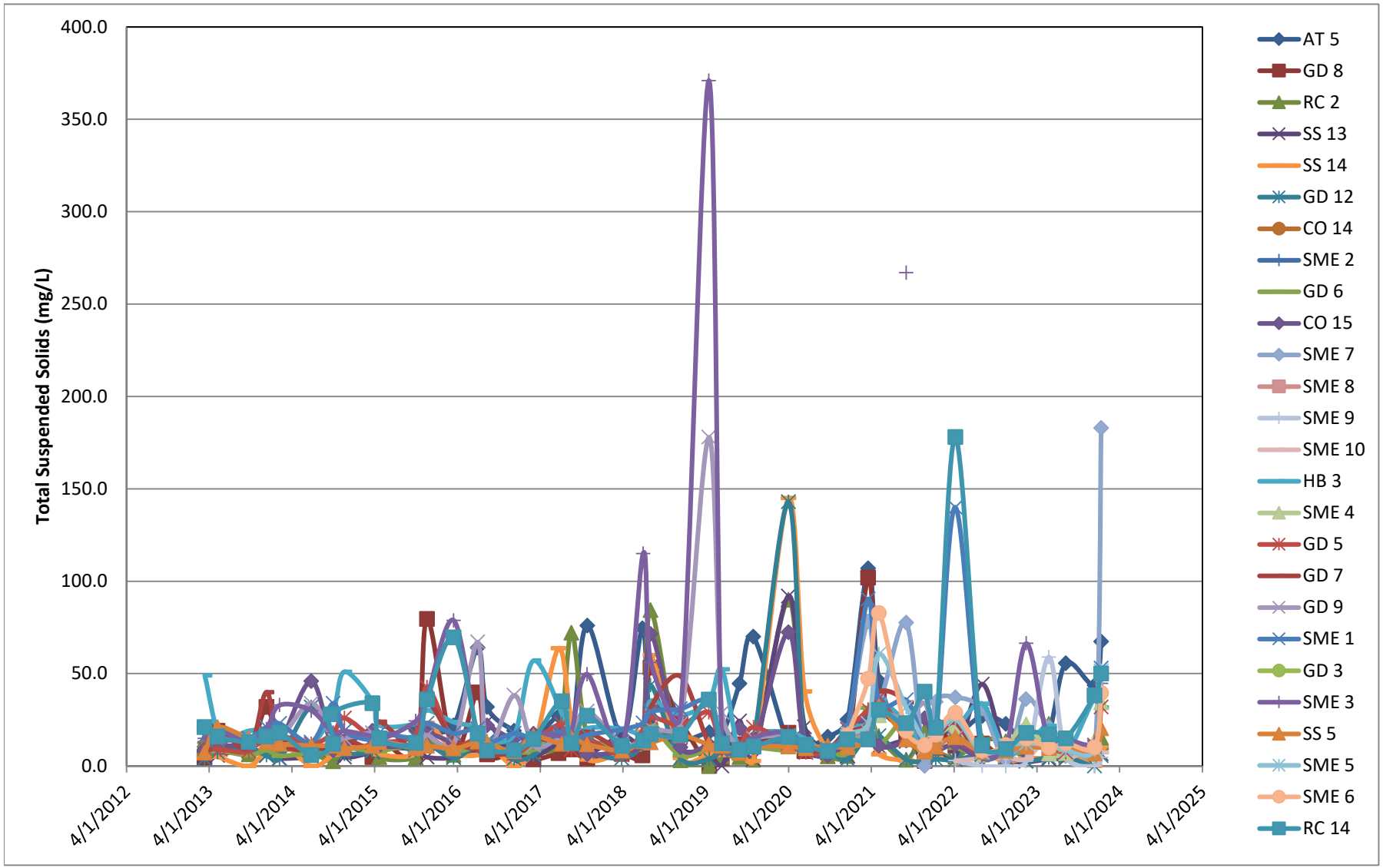


CHART 6 - TOTAL KJELDAHL ANALYTICAL DATA
MS4 WET-WEATHER MONITORING

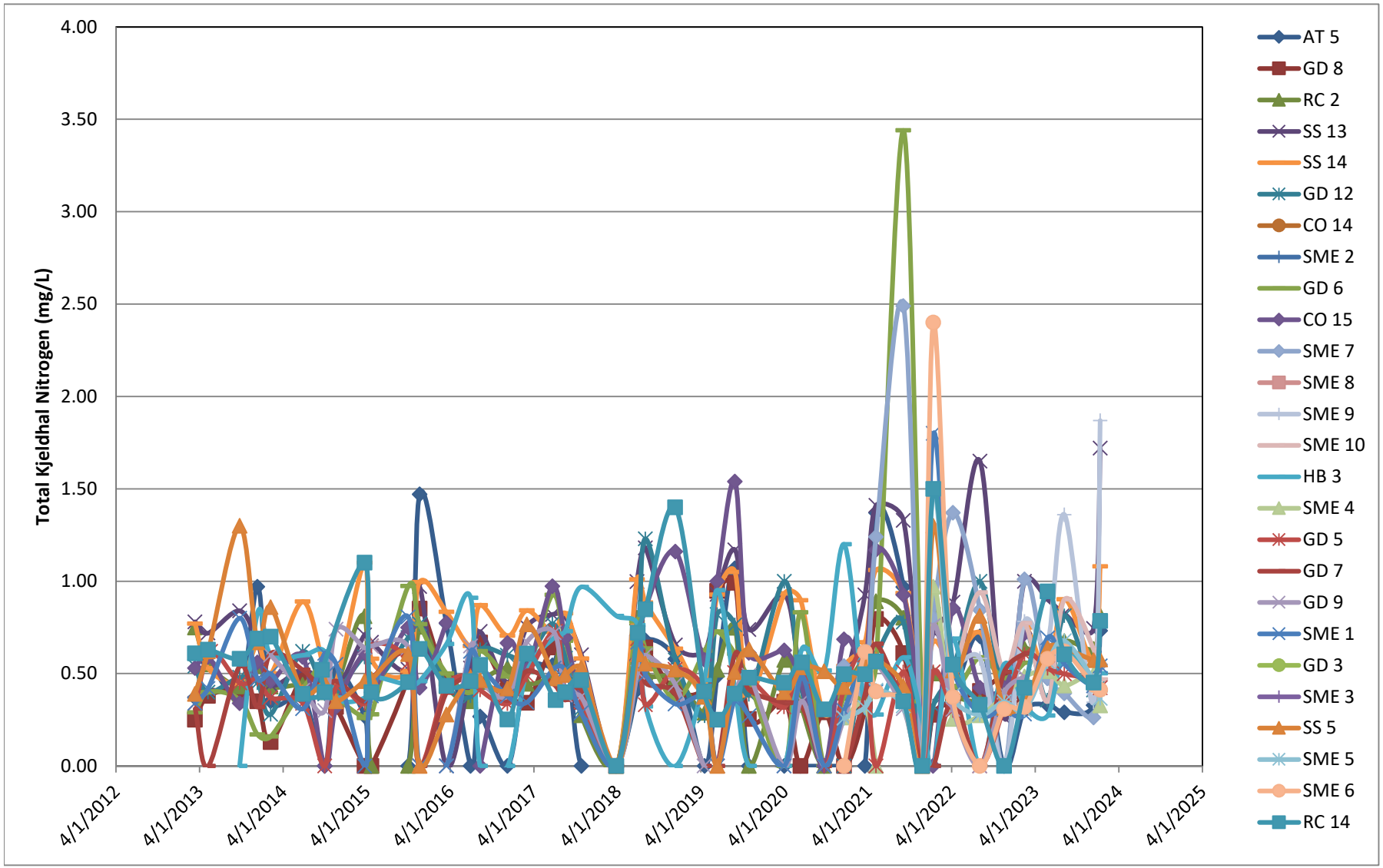


CHART 7 - NITRATE-NITRITE ANALYTICAL DATA
MS4 WET-WEATHER MONITORING

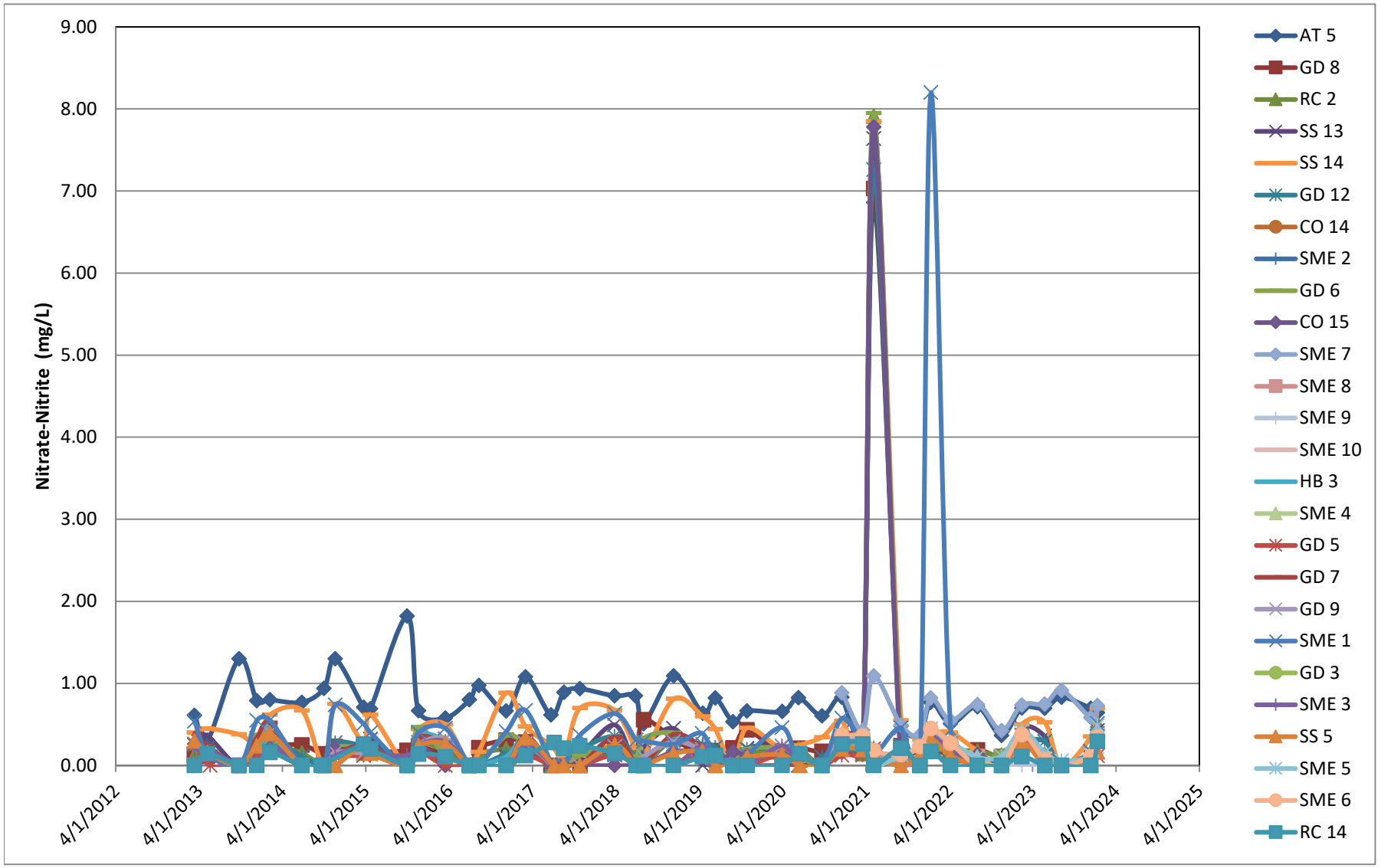


CHART 8 - TOTAL PHOSPHORUS ANALYTICAL DATA
MS4 WET-WEATHER MONITORING

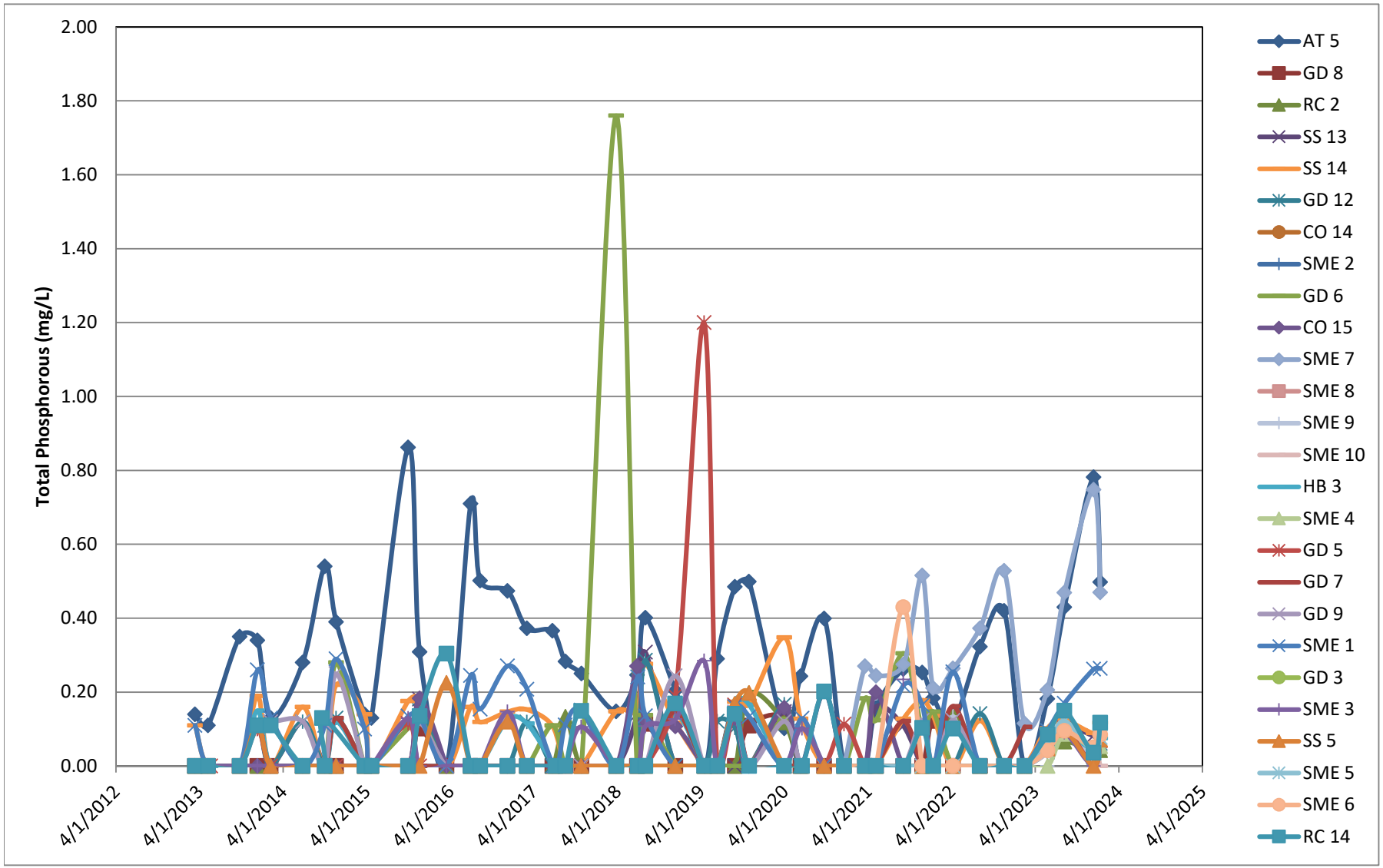
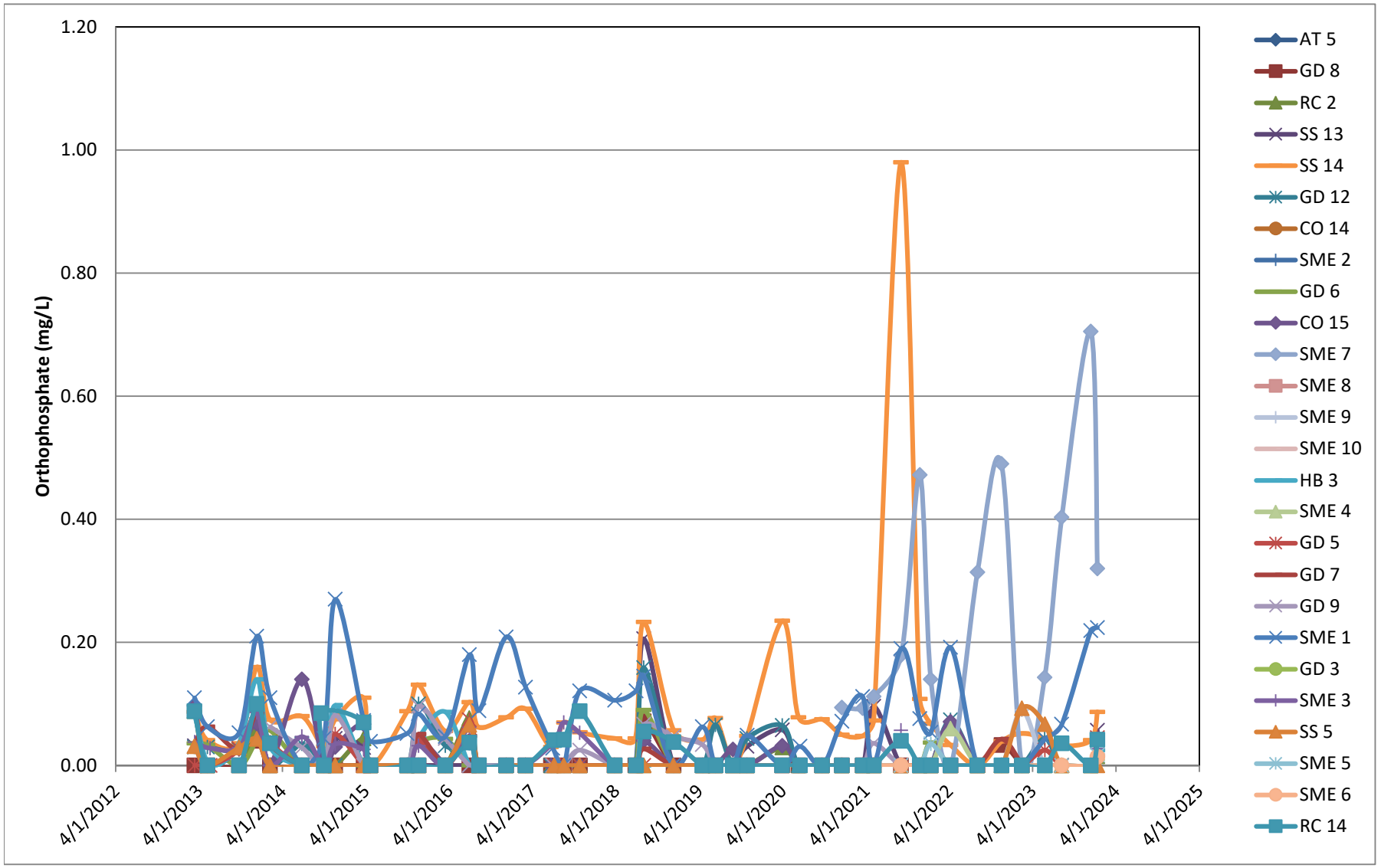


CHART 9 -ORTHOPHOSPHATE ANALYTICAL DATA
MS4 WET-WEATHER MONITORING



Full supporting documentation is available upon request.

Etowah County Engineering Department
256-549-5358

Appendix C – Monitoring Reports

Full supporting documentation is available upon request.

Etowah County Engineering Department
256-549-5358

TABLE B.1 - FIELD OBSERVATIONS
2024 Q1 MS4 WET-WEATHER MONITORING

Monitoring Point	Date	Time	Sample Depth (ft)	Personnel	Weather Conditions	Waterbody Conditions
AT 5	1/10/2024	10:36	-2	AH/GK	Sunny	Smooth
GD 12	1/10/2024	12:30	-2	AH/GK	Sunny	Smooth
RC 2	1/10/2024	10:53	-2	AH/GK	Sunny	Smooth
SME 7	1/10/2024	10:20	-2	AH/GK	Sunny	Fast Flowing
SME 9	1/10/2024	11:25	-2	AH/GK	Sunny	Smooth
SME 10	1/10/2024	11:35	-2	AH/GK	Sunny	Smooth
SS 13	1/10/2024	12:20	-2	AH/GK	Sunny	Smooth
SS 14	1/10/2024	12:00	-2	AH/GK	Sunny	Smooth
GD 5	1/10/2024	11:05	-5	NW	Sunny	Smooth, Fast Flowing
HB 3	1/10/2024	10:40	-5	NW	Sunny	Smooth, Fast Flowing
RC 14	1/10/2024	13:10	-5	NW	Sunny	Smooth
SME 1	1/10/2024	11:35	-5	NW	Sunny	Rough
SME 3	1/10/2024	11:15	-5	NW	Sunny	Rough
SME 4	1/10/2024	10:45	-5	NW	Sunny	Smooth, Fast Flowing
SME 5	1/10/2024	12:30	-5	NW	Sunny	Rough
SME 6	1/10/2024	12:55	-5	NW	Sunny	Rough
SS 5	1/10/2024	12:20	-5	NW	Sunny	Smooth

TABLE B.2 - ANALYTICAL DATA
2024 Q1 MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	**Date**	**Turbidity (NTU)**	**pH**	**DO (mg/L)**	**Sample Temp (°C)**	**TSS (mg/L)**	**TKN (mg/L)**	**Nitrate-Nitrite (mg/L)**	**Total Phosphorus (mg/L)**	**Ortho-Phosphate (mg/L)**
AT 5	1/10/2024	185.14	7.45	8.57	8.8	220.0	0.732	0.642	0.498	0.299
GD 12	1/10/2024	15.55	7.21	8.93	9.0	5.60	0.437	0.389	0.0611	0.0410
RC 2	1/10/2024	32.58	7.56	8.81	8.3	15.2	0.816	0.511	0.0428	0.0150
SME 7	1/10/2024	194.24	7.45	8.84	9.1	183	0.548	0.729	0.470	0.320
SME 12	1/10/2024	*DUPLICATE OF AT 5*				*200*	*0.774*	*0.640*	*0.512*	*0.304*
SME 9	1/10/2024	15.74	7.33	8.58	8.9	4.70	1.87	0.152	0.0388	0.0160
SME 10	1/10/2024	20.90	7.68	8.60	9.1	7.30	0.468	0.433	<0.0350	0.0170
SS 13	1/10/2024	14.16	7.33	8.43	9.2	6.71	1.72	0.426	0.0934	0.0570
SS 14	1/10/2024	25.10	7.40	8.91	9.0	9.60	1.08	0.693	0.117	0.0870
GD 5	1/10/2024	53.3	7.32	8.56	8.4	32.0	0.424	0.118	0.0681	0.0450
HB 3	1/10/2024	30.5	7.74	9.14	8.5	31.7	0.305	0.354	0.0752	0.0250
RC 14	1/10/2024	46.4	6.97	8.53	8.1	50.0	0.785	0.294	0.117	0.0420
SME 1	1/10/2024	60.2	7.27	9.03	7.9	53.0	0.542	0.511	0.264	0.224
SME 3	1/10/2024	33.1	7.27	9.25	7.6	44.8	0.392	0.348	0.0956	0.0270
SME 4	1/10/2024	30.4	7.65	9.21	7.5	34.4	0.327	0.354	0.0532	0.0200
SME 11	1/10/2024	*DUPLICATE OF SME 4*				*70.8*	*0.498*	*0.401*	*0.0991*	*0.0210*
SME 5	1/10/2024	31.4	7.12	9.53	7.9	51.5	0.366	0.488	0.0773	0.0170
SME 6	1/10/2024	31.0	7.24	9.50	7.9	39.5	0.413	0.344	0.0849	0.0140
SS 5	1/10/2024	19.5	7.46	9.56	9.1	20.4	0.576	0.166	0.0715	<0.0140

NTU - Nephelometric Turbidity Units
mg/L - milligrams per liter
NS - Not Sampled

Bold - maximum reading for constituent
NA - not availabe at this time
* - value unknown due to equipment malfuction

TABLE B.3 - HISTORICAL ANALYTICAL DATA - AT 5
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
AT 5	3/12/2013	15	7.80	11.04	12.55	20.0	0.37	0.61	0.14	0.150
AT 5	5/8/2013	25	5.08	2.59	14.69	19.0	0.56	0.31	0.11	0.099
AT 5	9/23/2013	21	5.96	3.95	22.88	22.0	0.37	1.30	0.35	0.400
AT 5	12/10/2013	68	5.32	11.43	8.21	64.0	0.97	0.79	0.34	0.290
AT 5	2/6/2014	40	4.06	15.29	7.28	32.0	0.35	0.80	0.13	0.130
AT 5	6/26/2014	70	7.85	7.61	23.89	19.0	0.38	0.77	0.28	0.340
AT 5	9/30/2014	15	5.78	6.63	21.03	14.0	<0.25	0.94	0.54	0.490
AT 5	11/19/2014	47	5.08	10.23	6.91	27.0	0.50	1.30	0.39	0.410
AT 5	3/23/2015	17	8.69	9.39	14.5	15.0	0.27	0.71	0.14	0.130
AT 5	4/22/2015	53	6.93	11.13	18.4	76.0	<0.25	0.69	0.13	0.110
AT 5	9/30/2015	15	6.37	9.45	21.63	16.4	<0.25	1.82	0.86	0.664
AT 5	11/19/2015	934	7.38	19.33	14.98	74.6	1.47	0.67	0.31	0.261
AT 5	3/15/2016	30.2	7.93	20.43	16.86	26.7	0.772	0.578	<0.100	0.068
AT 5	6/29/2016	18.1	7.99	6.57	25.4	14.5	<0.250	0.800	0.71	0.598
AT 5	8/9/2016	17.1	7.89	6.47	25.8	18.3	0.268	0.975	0.502	0.482
AT 5	12/7/2016	26.5	7.08	10.19	11.3	16.9	<0.250	0.663	0.474	0.450
AT 5	3/2/2017	50.8	8.14	8.86	13.4	44.6	0.529	1.08	0.373	0.267
AT 5	6/21/2017	11.7	7.98	6.74	23.3	70.0	0.544	0.616	0.366	0.226
AT 5	8/17/2017	9.5	8.09	6.77	26.0	12.0	0.690	0.890	0.283	0.258
AT 5	10/26/2017	9.8	7.95	8.25	15.7	9.4	<0.250	0.936	0.250	0.226
AT 5	3/27/2018	14.5	7.79	9.03	12.9	15.9	<0.250	0.849	0.148	0.162
AT 5	6/26/2018	16.4	8.06	6.89	25.5	25.2	0.411	0.849	0.246	0.230
AT 5	8/1/2018	77.9	7.33	7.16	22.3	107.0	0.680	0.510	0.401	0.285
AT 5	12/11/2018	29.2	7.59	10.73	9.4	46.2	0.579	1.09	0.204	0.066

TABLE B.3 - HISTORICAL ANALYTICAL DATA - AT 5
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
AT 5	4/17/2019	12.2	7.63	8.99	17.9	14.4	<0.250	0.638	<0.100	0.061
AT 5	6/11/2019	24.6	7.18	3.48	22.2	15.9	0.486	0.822	0.290	0.206
AT 5	8/28/2019	20.7	7.84	7.42	27.1	23.5	1.070	0.534	0.485	0.404
AT 5	10/28/2019	22.5	7.84	8.45	15.1	17.0	<0.250	0.665	0.499	0.523
AT 5	3/31/2020	23.1	8.09	9.07	16.6	27.1	<0.250	0.657	0.102	0.032
AT 5	6/10/2020	19.4	7.56	7.35	23.2	22.8	<0.250	0.825	0.243	0.248
AT 5	9/21/2020	NS	8.08	8.21	20.6	11.3	<0.250	0.603	0.399	0.491
AT 5	12/17/2020	28.7	7.91	11.21	9.6	18.6	<0.250	0.831	<0.100	0.087
AT 5	3/18/2021	119.0	7.82	10.68	17.2	55.6	<0.250	0.310	<0.100	0.050
AT 5	5/5/2021	6.5	7.24	8.45	18.1	43.7	1.37	6.86	0.157	0.121
AT 5	9/2/2021	EF	EF	7.75	23.4	67.4	0.969	0.482	0.262	0.131
AT 5	11/23/2021	<1.0	8.13	11.09	12.9	2.6	<0.250	0.343	0.253	<0.0300
AT 5	1/10/2022	20.8	7.39	11.46	10.0	29.7	0.279	0.769	0.184	0.126
AT 5	4/7/2022	21.9	7.53	9.30	16.6	33.8	0.380	0.509	0.121	0.101
AT 5	8/3/2022	21.7	8.17	7.50	26.0	30.8	0.702	0.715	0.323	0.271
AT 5	11/16/2022	6.4	7.80	10.62	11.1	7.3	<0.250	0.366	0.420	0.448
AT 5	2/13/2023	32.6	7.29	11.01	11.5	38.0	0.301	0.699	<0.100	0.081
AT 5	5/24/2023	14.4	7.80	8.94	20.0	20.0	0.331	0.697	0.182	0.127
AT 5	8/7/2023	10.54	7.87	9.13	26.5	12.4	0.291	0.832	0.430	0.373
AT 5	12/12/2023	22.78	7.77	8.71	9.1	10.9	0.329	0.696	0.782	0.752
AT 5	1/10/2024	185.14	7.45	8.57	8.8	220.0	0.732	0.642	0.498	0.299

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.4 - HISTORICAL ANALYTICAL DATA - GD 12
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
GD 12	3/12/2013	8.5	7.41	10.93	13.43	3.9	0.54	0.25	<0.100	0.030
GD 12	5/8/2013	15.0	6.73	2.35	16.53	7.5	0.40	0.21	<0.100	0.030
GD 12	9/23/2013	9.8	6.76	3.94	26.07	9.0	0.48	<0.10	<0.100	0.026
GD 12	12/10/2013	18.8	6.15	10.09	10.18	5.9	0.45	0.22	0.11	0.079
GD 12	2/6/2014	12.3	4.17	16.99	5.76	3.9	0.28	0.31	<0.100	<0.025
GD 12	6/26/2014	28.5	8.38	9.40	26.72	32.0	0.62	0.11	0.12	0.035
GD 12	9/30/2014	10.6	7.68	5.77	24.68	11.0	0.39	<0.100	<0.100	<0.025
GD 12	11/19/2014	14.7	6.95	5.93	5.85	6.6	0.39	0.28	0.13	<0.025
GD 12	3/23/2015	17.6	7.80	9.56	16.80	8.1	0.59	0.24	<0.100	<0.025
GD 12	4/22/2015	17.3	7.45	11.04	19.80	14.0	0.43	0.25	<0.100	<0.025
GD 12	9/30/2015	7.4	7.30	11.07	24.67	8.5	0.695	<0.100	<0.100	<0.025
GD 12	11/19/2015	22.9	7.07	19.14	14.68	12.0	0.769	0.281	0.15	0.100
GD 12	3/15/2016	9.8	7.43	13.14	16.05	4.6	0.434	0.254	<0.100	0.032
GD 12	6/29/2016	12.9	8.22	7.68	31.20	12.0	0.380	<0.100	<0.100	0.036
GD 12	8/9/2016	22.1	7.57	4.39	27.60	13.3	0.629	<0.100	<0.100	<0.025
GD 12	12/7/2016	10.3	7.18	6.65	11.4	4.0	0.599	0.142	<0.100	<0.025
GD 12	3/2/2017	15.4	7.79	10.12	11.70	6.1	0.583	0.223	0.12	<0.025
GD 12	6/21/2017	16.1	7.43	5.12	24.3	16.8	0.770	<0.100	<0.100	<0.025
GD 12	8/17/2017	6.3	8.13	5.80	29.90	13.3	0.583	<0.100	<0.100	<0.025
GD 12	10/26/2017	9.8	6.74	7.53	13.2	7.8	0.312	0.19	<0.100	<0.025
GD 12	3/27/2018	6.3	7.71	9.24	11.5	4.2	<0.25	0.356	<0.100	<0.025
GD 12	6/26/2018	9.9	7.44	4.35	26.1	13.2	0.528	0.102	<0.100	<0.025
GD 12	8/1/2018	42.3	7.05	7.33	22.7	43.8	1.230	0.108	0.286	0.159
GD 12	12/11/2018	9.5	6.68	11.46	7.8	4.3	0.574	0.313	<0.100	<0.025

TABLE B.4 - HISTORICAL ANALYTICAL DATA - GD 12
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
GD 12	4/17/2019	9.1	7.45	9.20	17.5	4.0	0.272	0.257	<0.100	<0.025
GD 12	6/11/2019	19.0	7.20	3.25	22.0	8.2	0.820	0.223	0.121	0.066
GD 12	8/28/2019	11.0	7.83	7.61	28.2	9.4	0.764	<0.100	0.103	<0.025
GD 12	10/28/2019	18.9	5.34	6.65	14.7	12.3	0.387	0.197	<0.100	0.044
GD 12	3/31/2020	76.3	6.71	9.44	14.5	143	1.00	0.177	0.167	0.0650
GD 12	6/10/2020	12.3	6.46	6.44	25.8	11.4	0.438	<0.100	<0.100	<0.030
GD 12	9/21/2020	NS	7.18	7.15	19.9	7.6	<0.250	0.103	<0.100	<0.030
GD 12	12/17/2020	13.1	8.03	11.10	8.5	3.7	<0.250	0.268	<0.100	<0.030
GD 12	3/18/2021	36.2	7.92	10.04	17.1	17.6	0.621	0.163	<0.100	<0.030
GD 12	5/5/2021	4.1	7.49	8.97	18.9	16.4	0.610	7.26	<0.100	<0.030
GD 12	9/2/2021	EF	EF	7.34	24.4	3.5	0.779	0.245	<0.100	<0.030
GD 12	11/23/2021	<1.0	7.80	11.27	12.5	2.8	<0.250	<0.100	<0.100	<0.0300
GD 12	1/10/2022	10.7	7.29	12.18	8.5	3.7	0.325	0.230	<0.100	<0.0300
GD 12	4/7/2022	6.19	7.51	9.97	17.0	3.4	0.522	0.177	<0.100	0.0740
GD 12	8/3/2022	11.8	8.09	8.02	31.5	6.4	0.999	<0.100	0.142	<0.0300
GD 12	11/16/2022	3.9	7.25	9.67	11.2	4.5	0.407	<0.100	<0.100	<0.0300
GD 12	2/13/2023	10.0	5.69	11.45	12.2	2.9	0.750	0.277	<0.100	<0.0300
GD 12	5/24/2023	4.3	7.73	9.20	20.5	4.60	0.357	0.293	0.0372	0.0440
GD 12	8/7/2023	8.17	7.85	8.85	31.0	5.20	0.813	<0.100	0.0945	<0.0300
GD 12	12/12/2023	4.80	7.44	7.67	9.8	<2.50	0.412	0.164	0.0233	<0.0140
GD 12	1/10/2024	15.55	7.21	8.93	9.0	5.60	0.437	0.389	0.0611	0.0410

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.5 - HISTORICAL ANALYTICAL DATA - RC 2
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
RC 2	3/12/2013	29.1	7.73	9.83	10.53	14.0	0.75	0.12	<0.100	0.088
RC 2	5/8/2013	18.9	6.16	3.06	16.36	12.0	0.55	0.19	<0.100	<0.025
RC 2	9/23/2013	11.4	6.24	3.00	23.61	6.3	0.43	<0.100	<0.100	<0.025
RC 2	12/10/2013	33.6	6.07	11.71	8.38	10.0	0.54	0.11	<0.100	0.062
RC 2	2/6/2014	30.4	3.89	17.28	5.62	9.6	0.43	0.26	<0.100	<0.025
RC 2	6/26/2014	17.6	7.90	6.81	24.81	7.2	0.44	0.15	<0.100	<0.025
RC 2	9/30/2014	3.4	7.27	5.55	22.25	2.5	0.40	<0.100	<0.100	<0.025
RC 2	11/19/2014	27.4	5.65	7.14	5.72	11.0	0.43	0.17	<0.100	<0.025
RC 2	3/23/2015	45.0	8.23	9.07	16.00	18.0	0.81	0.15	<0.100	0.044
RC 2	4/22/2015	14.1	7.64	11.42	18.40	4.8	<0.25	0.26	<0.100	<0.025
RC 2	9/30/2015	7.1	5.93	9.28	23.33	4.6	<0.25	<0.100	<0.100	<0.025
RC 2	11/19/2015	114.0	7.36	21.94	15.29	14.4	0.75	0.271	0.133	<0.025
RC 2	3/15/2016	14.5	7.62	16.67	14.61	6.0	0.43	0.181	<0.100	<0.025
RC 2	6/29/2016	12.1	7.78	4.31	28.30	10.9	0.35	<0.100	<0.100	0.077
RC 2	8/9/2016	24.5	8.12	5.05	26.50	9.9	0.45	0.140	<0.100	<0.025
RC 2	12/7/2016	17.2	7.86	7.47	12.0	11.9	0.53	0.200	<0.100	<0.025
RC 2	3/2/2017	25.3	7.71	7.74	13.10	8.0	0.45	0.166	<0.100	<0.025
RC 2	6/21/2017	14.2	7.91	5.61	23.7	12.3	0.51	<0.100	<0.100	<0.025
RC 2	8/17/2017	18.2	8.08	4.94	27.90	72.2	0.72	<0.100	0.133	<0.025
RC 2	10/26/2017	18.1	7.57	7.05	15.2	17.5	0.27	<0.100	<0.100	<0.025
RC 2	3/27/2018	18.2	7.91	8.43	12.4	12.5	<0.25	0.146	<0.100	<0.025
RC 2	6/26/2018	18.8	7.94	6.19	26.5	13.0	0.802	0.101	<0.100	<0.025
RC 2	8/1/2018	56.8	7.40	7.10	22.4	84.4	0.506	<0.100	<0.100	<0.025
RC 2	12/11/2018	16.0	7.54	11.41	7.7	3.1	0.479	0.316	<0.100	<0.025

TABLE B.5 - HISTORICAL ANALYTICAL DATA - RC 2
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
RC 2	4/17/2019	7.0	7.77	8.67	18.9	<5.00	0.288	0.165	<0.100	<0.025
RC 2	6/11/2019	14.3	6.83	3.78	23.0	5.2	0.520	<0.100	<0.100	<0.025
RC 2	8/28/2019	14.4	8.01	7.30	28.0	4.8	0.748	<0.100	<0.100	<0.025
RC 2	10/28/2019	11.4	7.55	9.42	14.9	3.4	<0.250	0.132	0.197	<0.025
RC 2	3/31/2020	84.5	7.90	9.10	15.7	90.0	0.574	0.190	0.118	0.0290
RC 2	6/10/2020	20.5	7.87	6.37	25.6	10.8	0.330	0.210	<0.100	<0.030
RC 2	9/21/2020	NS	7.24	7.03	19.6	5.2	<0.250	<0.100	<0.100	<0.030
RC 2	12/17/2020	28.1	7.91	11.23	8.9	5.4	0.396	0.218	<0.100	<0.030
RC 2	3/18/2021	67.5	7.90	8.68	16.7	26.8	0.611	0.145	<0.100	<0.030
RC 2	5/5/2021	2.8	7.31	8.95	19.1	15.6	0.892	7.91	<0.100	<0.030
RC 2	9/2/2021	EF	EF	6.52	25.0	3.4	0.802	0.122	<0.100	<0.030
RC 2	11/23/2021	3.5	7.66	8.33	12.2	19.2	0.340	0.124	<0.100	<0.0300
RC 2	1/10/2022	32.1	7.27	11.50	8.4	9.0	0.501	0.185	<0.100	<0.0300
RC 2	4/7/2022	10.96	7.41	9.02	17.5	5.0	0.386	0.186	0.144	<0.0300
RC 2	8/3/2022	15.1	8.26	7.41	27.1	13.8	0.352	0.175	<0.100	<0.0300
RC 2	11/16/2022	19.4	7.35	8.84	11.2	13.4	0.434	0.126	<0.100	<0.0300
RC 2	2/13/2023	20.0	7.12	11.58	10.9	5.3	0.636	0.273	<0.100	<0.0300
RC 2	5/24/2023	16.0	7.56	8.31	20.5	22.8	0.542	0.142	0.0469	<0.0140
RC 2	8/7/2023	5.75	7.80	6.55	28.2	6.20	0.676	<0.100	0.0662	<0.0300
RC 2	12/12/2023	21.62	7.58	7.25	8.9	6.60	0.634	0.166	0.0448	<0.0140
RC 2	1/10/2024	32.58	7.56	8.81	8.3	15.2	0.816	0.511	0.0428	0.0150

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.6 - HISTORICAL ANALYTICAL DATA - SME 7
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SME 7	12/17/2020	16.8	8.10	11.01	11.5	19.4	0.541	0.884	<0.100	0.094
SME 7	3/18/2021	111.0	8.93	10.25	18.3	78.2	0.407	0.429	0.270	0.093
SME 7	5/5/2021	8.2	6.06	8.01	18.4	36.4	1.240	1.090	0.244	0.112
SME 7	9/2/2021	EF	EF	7.91	22.6	77.6	2.490	0.491	0.275	0.179
SME 7	11/23/2021	<1.0	7.78	10.45	12.2	<2.50	<0.250	0.367	0.516	0.472
SME 7	1/10/2022	19.2	7.97	10.98	11.9	34.7	0.805	0.823	0.211	0.140
SME 7	4/7/2022	EF	7.10	9.27	18.0	37.2	1.37	0.549	0.264	<0.0300
SME 7	8/3/2022	24.8	8.32	7.69	24.6	31.0	0.844	0.742	0.373	0.314
SME 7	11/16/2022	4.9	7.87	10.30	11.1	3.8	<0.250	0.424	0.528	0.490
SME 7	2/13/2023	34.3	7.12	11.11	11.4	36.2	1.01	0.737	0.115	<0.0300
SME 7	5/24/2023	38.5	7.92	8.86	18.6	21.0	0.474	0.749	0.206	0.143
SME 7	8/7/2023	11.40	7.93	8.93	25.8	12.3	0.393	0.916	0.469	0.403
SME 7	12/12/2023	23.45	8.01	8.85	9.6	6.80	0.262	0.584	0.748	0.705
SME 7	1/10/2024	194.24	7.45	8.84	9.1	183	0.548	0.729	0.470	0.320

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.7 - HISTORICAL ANALYTICAL DATA - SME 9
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SME 9	4/7/2022	5.17	7.78	9.32	17.0	2.90	0.529	<0.100	0.135	<0.0300
SME 9	8/3/2022	9.20	8.10	7.97	25.4	<2.50	0.582	<0.100	<0.100	<0.0300
SME 9	11/16/2022	2.90	7.50	9.86	12.2	<2.50	<0.250	<0.100	<0.100	<0.0300
SME 9	2/13/2023	10.3	7.43	11.93	10.2	2.60	0.783	<0.100	<0.100	0.0900
SME 9	5/24/2023	16.3	8.07	11.59	21.0	59.0	0.660	<0.0500	<0.0350	<0.0140
SME 9	8/7/2023	10.4	7.10	7.41	24.6	5.60	1.360	<0.100	0.087	<0.0300
SME 9	12/12/2023	8.1	7.57	7.44	8.9	<2.50	0.345	<0.0500	0.019	<0.0140
SME 9	1/10/2024	15.7	7.33	8.58	8.9	4.70	1.870	0.152	0.039	0.0160

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.8 - HISTORICAL ANALYTICAL DATA - SME 10
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SME 10	4/7/2022	4.94	7.82	9.16	18.0	2.800	0.477	<0.100	<0.100	<0.0300
SME 10	8/3/2022	10.3	8.08	6.35	25.5	4.1	0.9400	<0.100	<0.100	<0.0300
SME 10	11/16/2022	9.80	7.18	8.03	12.2	4.6	0.5160	<0.100	<0.100	<0.0300
SME 10	2/13/2023	19.1	7.32	11.34	9.7	4.000	0.773	0.185	<0.100	<0.0300
SME 10	5/24/2023	13.4	7.42	7.50	15.5	15.0	0.349	0.143	0.0371	<0.0140
SME 10	8/7/2023	13.32	7.59	6.69	25.8	4.40	0.903	<0.100	0.0918	<0.0300
SME 10	12/12/2023	18.09	7.57	5.63	10.5	10.6	0.633	<0.0500	0.0471	<0.0140
SME 10	1/10/2024	20.90	7.68	8.60	9.1	7.30	0.468	0.433	<0.0350	0.0170

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.9 - HISTORICAL ANALYTICAL DATA - SS 13
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SS 13	3/12/2013	8	7.04	9.85	11.45	4.7	0.78	0.34	<0.10	0.032
SS 13	5/8/2013	10	6.68	2.94	18.75	5.7	0.72	0.36	<0.10	<0.050
SS 13	9/23/2013	12	7.04	3.38	25.31	9.6	0.84	<0.10	<0.10	0.028
SS 13	12/10/2013	12.2	6.14	10.93	8.99	5.6	0.67	0.33	0.12	0.077
SS 13	2/6/2014	7.2	4.26	17.50	5.14	4.1	0.44	0.42	<0.100	<0.025
SS 13	6/26/2014	23.2	8.33	8.09	28.44	5.4	0.52	<0.100	0.12	<0.025
SS 13	9/30/2014	12.4	7.41	4.26	24.77	12.0	0.44	<0.100	<0.100	<0.025
SS 13	11/19/2014	13.4	6.31	6.08	6.44	4.8	0.40	0.22	<0.100	0.044
SS 13	3/23/2015	15.9	7.33	8.57	15.4	7.6	0.71	0.22	<0.100	0.029
SS 13	4/22/2015	15.3	6.60	8.93	20.8	10.0	0.67	0.32	<0.100	<0.025
SS 13	9/30/2015	9.5	7.33	11.54	25.95	9.0	0.52	<0.100	<0.100	<0.025
SS 13	11/19/2015	35.8	7.07	18.48	15.31	4.8	0.97	0.242	0.181	<0.025
SS 13	3/15/2016	9.1	6.61	12.42	17.37	4.7	<0.25	0.323	<0.100	<0.025
SS 13	6/29/2016	9.7	7.86	6.15	30.6	9.8	0.53	<0.100	<0.100	<0.025
SS 13	8/9/2016	20.3	7.77	5.92	29.1	24.0	0.73	<0.100	<0.100	<0.025
SS 13	12/7/2016	4.8	7.39	6.97	12.5	3.6	0.45	0.108	<0.100	<0.025
SS 13	3/2/2017	12.0	6.64	7.19	13.4	4.6	0.75	0.249	<0.100	<0.025
SS 13	6/21/2017	8.7	7.54	5.82	26.1	12.8	0.82	<0.100	<0.100	<0.025
SS 13	8/17/2017	9.3	7.93	6.54	30.9	18.6	0.81	<0.100	<0.100	<0.025
SS 13	10/26/2017	5.2	6.70	7.41	15.4	7.2	0.60	0.122	<0.100	<0.025
SS 13	3/27/2018	6.4	8.19	8.23	12.4	16.2	<0.25	0.495	<0.100	<0.025
SS 13	6/26/2018	6.8	7.36	5.67	29.5	10.2	0.998	<0.100	0.140	<0.025
SS 13	8/1/2018	24.2	6.75	6.86	21.9	20.2	1.180	0.226	0.308	0.206
SS 13	12/11/2018	8.2	7.37	10.79	7.4	8.6	0.655	0.451	<0.100	<0.025

TABLE B.9 - HISTORICAL ANALYTICAL DATA - SS 13
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SS 13	4/17/2019	6.4	7.42	9.23	19.1	6.8	0.624	<0.100	<0.100	<0.025
SS 13	6/11/2019	8.9	6.59	3.12	23.4	<6.25	0.929	<0.100	<0.100	<0.025
SS 13	8/28/2019	6.7	7.93	7.33	29.7	24.4	1.170	<0.100	<0.100	<0.025
SS 13	10/28/2019	12.3	6.25	3.61	16.0	3.7	0.739	0.211	<0.100	0.031
SS 13	3/31/2020	60.4	6.95	8.64	14.9	92.0	0.928	0.233	0.147	0.0580
SS 13	6/10/2020	10.1	7.27	7.08	28.2	21.2	0.492	<0.100	<0.100	<0.030
SS 13	9/21/2020	NS	7.36	6.58	21.9	7.8	<0.250	<0.100	0.200	<0.030
SS 13	12/17/2020	12.3	8.04	10.83	8.3	5.3	0.432	0.405	<0.100	<0.030
SS 13	3/18/2021	26.8	7.61	9.23	16.9	16.5	0.926	0.163	<0.100	<0.030
SS 13	5/5/2021	0.5	7.77	8.13	18.2	10.5	1.41	7.64	0.160	0.0960
SS 13	9/2/2021	EF	EF	8.50	28.7	13.4	1.33	0.189	0.108	<0.030
SS 13	11/23/2021	<1.0	7.11	8.26	14.8	5.3	0.331	0.16	<0.100	<0.0300
SS 13	1/10/2022	9.1	7.71	11.23	8.8	7.0	0.725	0.295	<0.100	<0.0300
SS 13	4/7/2022	6.7	7.40	8.72	18.2	5.3	0.886	0.304	<0.100	<0.0300
SS 13	8/3/2022	14.2	7.92	7.03	31.4	44.4	1.650	<0.100	<0.100	<0.0300
SS 13	11/16/2022	4.4	7.06	9.81	13.1	5.5	0.263	<0.100	<0.100	<0.0300
SS 13	2/13/2023	10.6	6.45	11.05	10.9	2.5	1.000	0.459	<0.100	<0.0300
SS 13	5/24/2023	5.2	7.28	8.44	21.7	3.73	0.903	0.358	0.0655	<0.0140
SS 13	8/7/2023	4.90	7.85	9.14	31.2	4.00	0.825	<0.100	0.111	<0.0300
SS 13	12/12/2023	14.46	7.62	8.32	12.3	5.50	0.744	0.0980	0.0822	<0.0140
SS 13	1/10/2024	14.16	7.33	8.43	9.2	6.71	1.72	0.426	0.0934	0.0570

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.10 - HISTORICAL ANALYTICAL DATA - SS 14
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SS 14	3/12/2013	9.7	7.40	11.23	10.93	4.7	0.77	0.40	0.11	0.087
SS 14	5/8/2013	10.3	6.47	2.75	16.42	5.0	0.53	0.45	<0.100	0.041
SS 14	9/23/2013	3.1	6.76	6.49	21.77	<2.5	0.45	0.38	<0.100	0.036
SS 14	12/10/2013	17.6	5.63	11.33	8.56	9.2	0.66	0.28	0.19	0.160
SS 14	2/6/2014	12.4	4.19	17.56	5.16	14.0	0.50	0.62	<0.100	0.074
SS 14	6/26/2014	7.9	8.18	7.58	24.14	<2.5	0.89	0.67	0.16	0.080
SS 14	9/30/2014	7.9	7.42	3.67	22.35	6.1	0.52	<0.100	<0.100	0.031
SS 14	11/19/2014	16.0	6.27	7.50	5.48	9.2	0.46	0.75	0.22	0.075
SS 14	3/23/2015	21.3	7.75	9.53	16.5	11.0	1.10	0.27	0.14	0.110
SS 14	4/22/2015	12.3	7.43	12.29	17.5	6.3	0.58	0.620	<0.100	<0.025
SS 14	9/30/2015	7.3	7.16	12.79	24.02	6.6	0.514	<0.10	0.176	0.088
SS 14	11/19/2015	27.0	6.49	20.71	15.16	23.3	0.996	0.442	0.183	0.131
SS 14	3/15/2016	11.3	7.18	12.11	16.01	8.1	0.834	0.50	<0.100	0.056
SS 14	6/29/2016	6.0	7.62	3.61	27.2	6.0	0.650	<0.100	0.160	0.103
SS 14	8/9/2016	22.3	7.71	5.99	26.9	12.7	0.871	0.164	0.119	0.062
SS 14	12/7/2016	7.6	7.27	7.72	11.9	<2.5	0.705	0.885	0.147	0.078
SS 14	3/2/2017	12.6	7.60	8.76	12.2	9.2	0.842	0.475	0.153	0.092
SS 14	6/21/2017	21.5	7.74	6.24	23.7	63.7	0.725	0.249	0.109	0.030
SS 14	8/17/2017	6.0	8.12	7.11	31.4	24.8	0.827	0.118	<0.100	0.070
SS 14	10/26/2017	4.3	7.39	7.66	13.9	3.6	0.582	0.699	<0.100	0.054
SS 14	3/27/2018	8.8	7.34	8.96	11.9	8.2	<0.25	0.673	0.148	0.044
SS 14	6/26/2018	7.7	8.47	10.65	29.3	18.7	1.010	0.206	0.148	0.044
SS 14	8/1/2018	42.9	6.35	7.04	22.5	60.0	0.885	0.109	0.276	0.233
SS 14	12/11/2018	8.4	6.95	11.53	7.4	4.3	0.635	0.812	0.117	0.057

TABLE B.10 - HISTORICAL ANALYTICAL DATA - SS 14
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SS 14	4/17/2019	6.6	7.60	8.28	22.1	6.7	0.414	0.598	<0.100	0.042
SS 14	6/11/2019	12.6	6.78	3.47	23.8	5.9	0.928	0.444	<0.100	0.077
SS 14	8/28/2019	8.1	7.96	8.18	27.9	8.5	1.050	<0.100	0.174	<0.025
SS 14	10/28/2019	10.9	6.97	7.83	15.1	2.7	0.381	0.458	0.167	0.048
SS 14	3/31/2020	62.4	6.67	9.31	15.2	145	0.934	0.190	0.348	0.235
SS 14	6/10/2020	17.0	7.32	7.20	29.1	40.4	0.897	0.246	0.128	0.078
SS 14	9/21/2020	NS	7.62	7.59	20.7	8.4	0.281	0.345	<0.100	0.075
SS 14	12/17/2020	11.4	7.94	11.72	8.6	5.4	0.540	0.546	<0.100	0.050
SS 14	3/18/2021	31.4	7.73	9.77	16.8	19.8	0.670	0.189	<0.100	0.048
SS 14	5/5/2021	1.2	6.98	8.62	19.4	6.27	1.06	7.85	<0.100	0.073
SS 14	9/2/2021	EF	EF	7.80	26.3	3.0	0.935	0.552	0.128	0.980
SS 14	11/23/2021	<1.0	7.46	10.28	12.7	2.6	0.370	0.315	0.178	0.108
SS 14	1/10/2022	9.8	7.12	11.84	8.8	4.4	0.674	0.385	0.136	0.068
SS 14	4/7/2022	4.4	6.82	9.83	17.8	2.9	0.566	0.402	<0.100	0.033
SS 14	8/3/2022	10.0	8.03	7.77	30.2	6.5	0.723	0.176	0.123	<0.0300
SS 14	11/16/2022	4.3	7.37	9.76	10.8	2.5	0.406	<0.100	<0.100	0.039
SS 14	2/13/2023	12.0	6.82	11.64	10.8	4.3	0.749	0.501	<0.100	0.052
SS 14	5/24/2023	4.6	7.65	9.57	21.3	4.40	0.506	0.528	0.102	0.0440
SS 14	8/7/2023	6.56	8.02	10.73	31.6	8.20	0.903	<0.100	0.124	0.032
SS 14	12/12/2023	10.06	7.66	8.00	8.1	<2.50	0.573	0.352	0.0890	0.0410
SS 14	1/10/2024	25.10	7.40	8.91	9.0	9.60	1.08	0.693	0.117	0.0870

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.11 - HISTORICAL ANALYTICAL DATA - GD 5
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
GD 5	3/13/2013	11.6	8.33	9.29	10.20	9.6	0.34	0.26	<0.10	<0.025
GD 5	5/20/2013	14.0	8.28	7.76	22.60	9.0	0.62	<0.100	<0.10	<0.025
GD 5	9/23/2013	11.5	7.67	6.78	27.10	8.0	0.45	<0.100	<0.10	0.027
GD 5	12/10/2013	57.9	7.97	9.10	9.10	18.0	0.47	0.10	0.10	0.088
GD 5	2/6/2014	45.9	7.14	9.88	7.20	17.0	0.37	0.17	<0.100	0.038
GD 5	6/26/2014	17.0	7.90	6.54	NS	12.0	0.34	<0.100	<0.100	<0.025
GD 5	9/30/2014	22.5	8.28	7.53	25.22	18.0	<0.25	<0.100	<0.100	<0.025
GD 5	11/19/2014	42.9	8.15	9.30	9.40	26.0	0.43	0.11	<0.100	0.051
GD 5	3/23/2015	24.0	8.14	8.58	15.90	15.0	0.34	0.12	<0.100	<0.025
GD 5	4/22/2015	25.0	7.81	7.78	21.70	13.0	0.65	0.14	<0.100	<0.025
GD 5	9/30/2015	18.0	8.03	6.27	26.30	17.3	0.557	<0.100	0.115	<0.025
GD 5	11/19/2015	90.0	7.63	7.34	16.60	42.8	<0.250	0.168	<0.100	0.042
GD 5	3/15/2016	23.7	8.80	7.47	19.40	13.2	0.435	<0.100	<0.100	<0.025
GD 5	6/29/2016	21.0	8.02	2.27	30.37	15.0	0.490	<0.100	<0.100	0.074
GD 5	8/9/2016	11.8	8.25	5.55	30.20	11.0	0.412	<0.100	<0.100	<0.025
GD 5	12/7/2016	10.0	7.73	10.61	11.96	6.8	0.337	<0.100	<0.100	<0.025
GD 5	3/2/2017	12.3	7.81	4.49	14.26	13.0	0.491	0.118	<0.100	<0.025
GD 5	7/5/2017	15.0	7.32	5.83	26.9	22.7	0.730	<0.100	<0.100	<0.025
GD 5	8/16/2017	8.0	7.89	6.22	28.0	9.0	0.404	<0.100	<0.100	<0.025
GD 5	10/25/2017	9.2	7.36	7.35	18.7	14.6	0.347	<0.100	<0.100	<0.025
GD 5	3/28/2018	6.1	8.18	9.47	18.5	6.06	<0.250	0.127	<0.100	<0.025
GD 5	6/29/2018	16.3	7.76	5.66	27.5	19.60	0.689	<0.100	<0.100	<0.025
GD 5	8/2/2018	18.4	7.59	6.02	25.7	26.40	0.332	<0.100	<0.100	<0.025
GD 5	12/10/2018	37.7	7.87	11.30	7.3	22.3	0.523	<0.100	0.190	<0.025

TABLE B.11 - HISTORICAL ANALYTICAL DATA - GD 5
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
GD 5	4/15/2019	29.7	7.69	8.02	19.3	29.0	0.411	0.128	1.20	<0.025
GD 5	6/12/2019	6.0	8.02	7.64	27.2	9.3	<0.250	<0.100	<0.100	<0.025
GD 5	8/27/2019	75.2	7.15	7.98	28.7	10.9	0.506	<0.100	0.165	<0.025
GD 5	10/29/2019	29.0	7.85	9.42	17.8	21.0	0.477	<0.100	<0.100	<0.025
GD 5	3/30/2020	14.5	7.65	8.86	19.1	12.1	0.320	0.130	<0.100	<0.025
GD 5	6/16/2020	16.4	7.69	7.75	27.2	7.4	0.561	<0.100	<0.100	<0.030
GD 5	9/21/2020	10.8	7.65	6.33	23.2	7.9	<0.250	<0.100	<0.100	<0.030
GD 5	12/17/2020	28.7	7.62	9.96	9.7	19.8	0.422	0.122	0.113	<0.030
GD 5	3/18/2021	3.4	7.15	8.98	16.9	30.6	0.600	0.127	<0.100	<0.030
GD 5	5/5/2021	36.10	7.84	7.74	19.8	36.8	<0.250	0.204	<0.100	<0.030
GD 5	9/2/2021	10.28	7.84	6.90	26.5	16.1	0.510	<0.100	<0.100	<0.030
GD 5	11/23/2021	27.7	7.70	10.54	11.3	8.8	<0.250	<0.100	<0.100	<0.0300
GD 5	1/11/2022	26.8	7.28	12.25	10.1	12.1	0.510	0.300	<0.10	<0.0300
GD 5	4/7/2022	16.4	7.72	9.32	17.2	14.4	0.300	0.157	<0.100	<0.0300
GD 5	8/2/2022	13.0	7.86	6.60	29.1	6.4	<0.250	<0.100	<0.100	<0.0300
GD 5	11/16/2022	7.0	7.75	9.56	13.4	8.7	0.312	<0.100	<0.100	<0.0300
GD 5	2/14/2023	18.8	7.18	10.85	11.4	11.5	0.606	0.255	<0.100	<0.0300
GD 5	5/25/2023	5.1	8.15	9.33	24.3	10.0	0.528	0.0534	0.0462	0.0250
GD 5	8/7/2023	3.0	7.36	6.27	29.5	7.54	0.499	<0.100	0.103	<0.0300
GD 5	12/12/2023	13.5	7.32	8.45	10.3	11.3	0.468	0.0820	<0.0350	<0.0140
GD 5	1/10/2024	53.3	7.32	8.56	8.4	32.0	0.424	0.118	0.0681	0.0450

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.12 - HISTORICAL ANALYTICAL DATA - HB 3
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
HB 3	3/12/2013	33.3	7.54	9.48	13.90	49.0	0.83	0.19	<0.100	0.081
HB 3	5/20/2013	14.5	8.21	6.82	27.80	17.0	0.60	0.17	<0.100	<0.025
HB 3	9/23/2013	21.3	8.02	4.89	25.70	19.0	0.60	<0.100	<0.100	0.037
HB 3	12/10/2013	48.4	7.90	8.65	10.10	20.0	0.62	<0.100	0.15	0.140
HB 3	2/6/2014	32.0	7.22	12.24	5.90	13.0	0.37	0.48	<0.100	0.030
HB 3	6/26/2014	12.0	8.20	7.12	NS	12.0	0.37	<0.100	<0.100	<0.025
HB 3	9/30/2014	29.5	8.05	6.01	24.78	30.0	0.48	<0.100	<0.100	<0.025
HB 3	11/19/2014	56.1	7.85	8.83	8.80	51.0	0.44	0.11	0.12	0.098
HB 3	3/23/2015	27.0	8.21	8.40	24.20	35.0	0.46	0.26	<0.100	<0.025
HB 3	4/22/2015	25.0	7.91	8.36	21.90	22.0	0.66	0.20	<0.100	<0.025
HB 3	9/30/2015	22.0	7.89	5.05	25.70	23.0	0.91	<0.100	<0.100	<0.025
HB 3	11/19/2015	32.0	7.83	7.37	17.40	30.2	<0.25	0.377	<0.100	0.045
HB 3	3/15/2016	28.8	8.52	7.97	19.10	23.8	<0.25	0.295	<0.100	0.087
HB 3	6/29/2016	17.3	8.02	2.77	30.61	20.9	0.51	<0.100	<0.100	<0.025
HB 3	8/9/2016	11.3	7.91	4.31	30.19	14.3	0.703	<0.100	<0.100	<0.025
HB 3	12/7/2016	16.0	7.93	8.44	12.81	17.0	0.730	0.111	0.126	<0.025
HB 3	3/2/2017	50.0	7.75	3.90	14.33	57.1	0.969	0.334	0.115	<0.025
HB 3	7/5/2017	23.1	7.29	5.36	27.00	28.5	0.812	<0.100	<0.100	<0.025
HB 3	8/16/2017	13.7	7.35	5.04	27.00	12.7	0.763	<0.100	<0.100	<0.025
HB 3	10/25/2017	11.7	6.64	9.93	18.5	20.4	0.322	<0.100	<0.100	<0.025
HB 3	3/28/2018	13.2	7.99	9.47	17.6	20.2	<0.25	0.359	<0.100	<0.025
HB 3	6/29/2018	14.6	7.67	5.55	26.0	18.2	0.464	<0.100	<0.100	<0.025
HB 3	8/2/2018	28.3	7.40	5.64	25.1	35.3	0.952	<0.100	<0.100	<0.025
HB 3	12/10/2018	24.8	7.55	10.98	7.9	27.6	0.426	0.363	0.141	<0.025

TABLE B.12 - HISTORICAL ANALYTICAL DATA - HB 3
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
HB 3	4/15/2019	22.4	7.73	8.27	19.6	35.5	<0.250	0.233	<0.100	<0.025
HB 3	6/12/2019	12.4	8.13	6.77	26.6	52.3	<0.250	0.129	<0.100	<0.025
HB 3	8/27/2019	78.1	8.21	8.75	29.1	7.30	0.634	<0.100	0.179	<0.025
HB 3	10/29/2019	28.2	7.82	9.88	18.3	17.6	0.517	<0.100	0.166	<0.025
HB 3	3/30/2020	8.9	7.79	8.91	18.5	18.4	1.20	0.234	<0.100	<0.025
HB 3	6/16/2020	20.4	7.33	7.01	26.3	14.6	0.30	<0.100	<0.100	<0.030
HB 3	9/21/2020	12.1	7.80	7.69	23.5	8.30	0.28	<0.100	<0.100	<0.030
HB 3	12/17/2020	31.16	8.07	9.94	9.1	20.4	0.588	0.195	<0.100	<0.030
HB 3	3/18/2021	1.80	7.47	9.62	16.0	23.0	0.252	0.369	<0.100	<0.030
HB 3	5/5/2021	28.31	7.50	7.71	22.0	35.1	<0.250	0.207	<0.100	<0.030
HB 3	9/2/2021	19.2	7.61	5.30	27.4	23.6	0.689	<0.100	<0.100	<0.030
HB 3	11/23/2021	51.55	7.15	10.59	11.2	10.5	<0.250	0.137	<0.100	<0.0300
HB 3	1/11/2022	26.9	7.75	11.26	12.8	23.6	0.550	0.200	<0.10	<0.0300
HB 3	4/7/2022	27.8	7.61	9.40	18.1	21.0	0.329	0.268	<0.100	<0.0300
HB 3	8/2/2022	31.2	8.05	5.89	28.9	33.7	0.273	<0.100	<0.100	<0.0300
HB 3	11/16/2022	10.7	7.71	9.53	12.9	7.4	0.604	<0.100	<0.100	<0.0300
HB 3	2/14/2023	15.0	7.25	11.10	11.7	11.6	0.471	0.414	<0.100	<0.0300
HB 3	5/25/2023	14.0	7.92	8.75	24.1	21.7	0.502	0.0574	0.0588	<0.0140
HB 3	8/7/2023	10.9	7.49	6.16	29.3	6.80	0.578	<0.100	0.0895	<0.0300
HB 3	12/12/2023	41.3	7.71	8.45	10.6	36.8	0.383	0.126	0.0444	<0.0140
HB 3	1/10/2024	30.5	7.74	9.14	8.5	31.7	0.305	0.354	0.0752	0.0250

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.13 - HISTORICAL ANALYTICAL DATA - RC 14
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
RC 14	3/12/2013	28.3	8.23	7.53	10.3	21.0	0.61	<0.100	<0.100	0.088
RC 14	5/8/2013	29.5	6.72	1.78	21.4	16.0	0.63	0.14	<0.100	<0.12
RC 14	9/23/2013	18.4	7.86	6.68	24.7	13.0	0.58	<0.100	<0.100	<0.025
RC 14	12/10/2013	40.0	8.45	9.50	8.2	16.0	0.69	<0.100	0.11	0.100
RC 14	2/6/2014	66.6	7.15	10.94	4.9	18.0	0.70	0.16	0.11	0.036
RC 14	6/26/2014	6.2	8.21	6.30	NS	5.9	0.39	<0.100	<0.100	<0.025
RC 14	9/30/2014	12.4	7.20	6.20	23.5	12.0	0.40	<0.100	<0.100	<0.025
RC 14	9/19/2014	50.3	8.20	10.10	7.5	28.0	0.52	<0.100	0.13	0.085
RC 14	3/23/2015	70.0	8.03	7.80	18.2	34.0	1.10	0.26	<0.100	0.070
RC 14	4/22/2015	30.0	7.77	7.25	18.1	15.0	0.40	0.20	<0.100	<0.025
RC 14	9/30/2015	17.0	8.28	5.63	24.4	12.6	0.454	<0.100	<0.100	<0.025
RC 14	11/19/2015	95.0	7.32	6.07	17.71	36.0	0.633	0.137	0.135	<0.025
RC 14	3/15/2016	85.0	8.13	7.73	18.5	69.6	0.434	0.106	0.304	<0.025
RC 14	6/29/2016	17.2	7.58	2.17	28.53	17.5	0.460	<0.100	<0.100	0.037
RC 14	8/9/2016	10.4	7.05	2.35	28.53	8.5	0.547	<0.100	<0.100	<0.025
RC 14	12/7/2016	7.9	7.21	6.47	11.62	8.6	0.252	<0.100	<0.100	<0.025
RC 14	3/2/2017	18.0	7.32	3.55	12.69	14.6	0.608	0.12	<0.100	<0.025
RC 14	7/5/2017	17.7	7.55	6.56	25.7	35.0	0.357	0.279	<0.100	0.041
RC 14	8/16/2017	9.8	7.72	5.54	26.7	12.4	0.400	0.21	<0.100	0.042
RC 14	10/25/2017	18.7	7.64	7.26	17.1	27.2	0.465	0.24	0.149	0.088
RC 14	3/28/2018	9.9	8.03	9.00	18.3	10.9	<0.25	0.148	<0.100	<0.025
RC 14	6/29/2018	12.9	7.64	5.89	27.1	13.8	0.722	<0.100	<0.100	<0.025
RC 14	8/2/2018	21.7	7.30	5.56	23.7	17.3	0.848	<0.100	<0.100	0.055
RC 14	12/10/2018	35.1	7.13	10.63	7.3	16.9	1.400	<0.100	0.169	0.038

TABLE B.13 - HISTORICAL ANALYTICAL DATA - RC 14
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
RC 14	4/15/2019	45.8	7.68	7.67	19.5	36.0	0.403	0.108	<0.100	<0.025
RC 14	6/12/2019	11.0	8.03	7.39	25.3	12.3	0.250	0.120	<0.100	<0.025
RC 14	8/27/2019	76.4	8.36	8.78	28.4	8.8	0.391	<0.100	0.141	<0.025
RC 14	10/29/2019	17.4	7.90	9.83	17.7	10.6	0.478	<0.100	<0.100	<0.025
RC 14	3/30/2020	12.9	8.10	10.01	21.9	15.7	0.451	<0.100	<0.100	<0.025
RC 14	6/16/2020	11.5	6.79	8.01	26.9	11.4	0.560	0.141	<0.100	<0.030
RC 14	9/21/2020	13.7	7.49	9.65	21.9	8.2	0.307	<0.100	0.202	<0.030
RC 14	12/17/2020	25.8	7.72	10.40	9.3	14.4	0.497	0.261	<0.100	<0.030
RC 14	3/18/2021	25.8	7.72	10.40	9.3	14.4	0.497	0.261	<0.100	<0.030
RC 14	5/5/2021	33.45	7.68	7.99	20.9	30.4	0.566	<0.100	<0.100	<0.030
RC 14	9/2/2021	16.75	7.87	7.11	25.7	23.2	0.350	0.210	<0.100	0.040
RC 14	11/23/2021	24.6	7.96	10.57	13.3	40.2	<0.250	<0.100	0.103	<0.0300
RC 14	1/11/2022	66.4	7.40	11.82	10.4	20.6	1.500	0.170	<0.10	<0.0300
RC 14	4/7/2022	99.0	7.76	8.27	17.6	178	0.548	<0.100	0.101	<0.0300
RC 14	8/2/2022	12.9	8.29	7.67	30.2	11.1	0.332	<0.100	<0.100	<0.0300
RC 14	11/16/2022	6.8	7.79	9.06	12.4	9.2	<0.250	<0.100	<0.100	<0.0300
RC 14	2/14/2023	36.9	6.92	10.48	12.2	17.9	0.423	0.107	<0.100	<0.0300
RC 14	5/25/2023	16.0	7.41	8.75	26.4	17.2	0.945	<0.0500	0.0850	<0.0140
RC 14	8/7/2023	19.1	7.20	6.63	29.1	15.0	0.604	<0.100	0.150	0.0360
RC 14	12/12/2023	19.8	7.64	8.64	9.8	38.2	0.451	<0.0500	0.0358	<0.0140
RC 14	1/10/2024	46.4	6.97	8.53	8.1	50.0	0.785	0.294	0.117	0.0420

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.14 - HISTORICAL ANALYTICAL DATA - SME 1
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SME 1	3/12/2013	13.1	8.19	8.26	13.10	16.0	0.34	0.54	0.11	0.110
SME 1	5/8/2013	24.0	7.64	8.96	16.00	14.0	0.42	0.15	<0.100	0.063
SME 1	9/23/2013	14.2	8.26	7.87	27.70	15.0	0.80	<0.100	<0.100	0.053
SME 1	12/10/2013	46.3	8.05	9.15	7.60	21.0	0.47	0.55	0.26	0.210
SME 1	2/6/2014	61.0	7.22	11.34	5.90	23.0	0.50	0.55	0.13	0.110
SME 1	6/26/2014	14.0	8.49	7.05	NS	13.0	0.31	<0.100	<0.100	<0.025
SME 1	9/30/2014	27.6	8.25	7.46	24.67	34.0	0.61	<0.100	0.11	0.044
SME 1	11/19/2014	40.1	8.31	10.86	7.80	19.0	0.55	0.74	0.29	0.270
SME 1	3/23/2015	21.0	8.26	8.52	17.30	14.0	<0.250	0.51	0.10	0.073
SME 1	4/22/2015	29.0	7.14	7.97	18.50	18.0	0.38	0.40	<0.100	0.039
SME 1	9/30/2015	15.0	8.34	7.03	26.40	15.3	0.807	<0.100	0.135	0.052
SME 1	11/19/2015	50.0	7.92	7.04	15.90	23.2	<0.250	0.401	0.134	0.084
SME 1	3/15/2016	26.2	8.44	7.21	18.30	17.7	<0.250	0.454	<0.100	0.047
SME 1	6/29/2016	21.2	8.80	3.29	30.67	20.3	0.620	<0.100	0.245	0.180
SME 1	8/9/2016	15.3	8.55	4.98	28.87	12.6	0.547	<0.100	0.154	0.089
SME 1	12/7/2016	31.0	7.96	10.20	11.98	17.7	0.378	0.413	0.271	0.209
SME 1	3/2/2017	14.0	7.75	4.31	12.34	15.0	0.345	0.671	0.208	0.127
SME 1	6/29/2017	19.2	9.11	9.21	25.8	18.3	0.530	<0.100	0.000	0.028
SME 1	8/16/2017	10.6	8.12	6.58	29.7	12.7	0.520	<0.100	0.111	<0.025
SME 1	10/25/2017	5.4	8.02	8.32	17.3	16.9	0.288	0.368	0.151	0.121
SME 1	3/28/2018	19.3	8.10	9.18	17.6	19.8	<0.250	0.633	0.000	0.106
SME 1	6/29/2018	20.7	7.84	6.37	26.2	23.3	0.670	0.312	0.241	0.121
SME 1	8/2/2018	28.5	7.48	5.82	23.9	29.5	0.495	0.296	0.136	0.145
SME 1	12/10/2018	32.0	7.45	11.48	8.0	31.0	0.336	0.259	<0.100	<0.025

TABLE B.14 - HISTORICAL ANALYTICAL DATA - SME 1
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SME 1	4/15/2019	42.2	7.89	7.89	19.7	35.0	0.360	0.390	<0.100	0.063
SME 1	6/12/2019	12.2	7.34	8.73	27.2	9.7	<0.250	<0.100	<0.100	<0.025
SME 1	8/27/2019	135.2	7.45	8.51	28.8	7.1	0.356	<0.100	0.161	<0.025
SME 1	10/29/2019	14.5	7.95	9.21	17.6	11.0	0.272	0.129	0.134	0.049
SME 1	3/30/2020	13.3	7.35	8.61	19.3	13.3	<0.250	0.462	<0.100	<0.025
SME 1	6/16/2020	11.6	8.58	10.36	27.0	11.4	0.485	<0.100	0.129	0.031
SME 1	9/21/2020	13.8	7.71	6.92	22.2	9.0	<0.250	<0.100	<0.100	<0.030
SME 1	12/17/2020	23.19	7.66	10.68	9.2	20.9	0.300	0.577	<0.100	0.072
SME 1	3/18/2021	14.10	7.24	9.54	15.7	90.4	0.580	0.263	<0.100	0.112
SME 1	5/5/2021	28.83	7.43	8.53	20.1	34.0	0.402	0.122	<0.100	<0.030
SME 1	9/2/2021	23.89	7.80	6.93	25.8	35.8	0.353	0.458	0.218	0.190
SME 1	11/23/2021	18.42	7.91	11.34	12.4	12.7	<0.250	<0.100	0.165	0.076
SME 1	1/11/2022	161.2	7.55	11.29	10.2	17.0	1.800	8.200	<0.10	0.054
SME 1	4/7/2022	112.9	7.65	9.26	17.2	140	0.544	0.431	0.255	0.192
SME 1	8/2/2022	12.0	8.10	7.98	29.2	6.3	0.281	<0.100	<0.100	<0.0300
SME 1	11/16/2022	5.78	7.86	9.45	14.3	7.9	0.306	<0.100	<0.100	<0.0300
SME 1	2/14/2023	15.5	7.26	11.23	11.0	11.3	0.281	0.372	<0.100	<0.0300
SME 1	5/25/2023	6.6	8.38	10.64	24.5	10.6	0.694	<0.0500	0.0961	0.0430
SME 1	8/7/2023	11.7	8.01	7.58	30.2	13.9	0.552	<0.100	0.170	0.0670
SME 1	12/12/2023	17.2	7.36	8.99	9.2	10.4	0.434	0.172	0.262	0.219
SME 1	1/10/2024	60.2	7.27	9.03	7.9	53.0	0.542	0.511	0.264	0.224

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.15 - HISTORICAL ANALYTICAL DATA - SME 3
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SME 3	3/13/2013	17.1	7.84	7.44	11.30	15.0	0.69	0.20	<0.100	0.038
SME 3	5/20/2013	18.5	8.11	6.09	23.60	19.0	0.69	0.17	<0.100	0.028
SME 3	9/23/2013	15.3	EF	5.32	26.50	13.0	0.53	<0.100	<0.100	0.029
SME 3	12/10/2013	48.3	7.69	8.85	9.60	20.0	0.62	<0.100	<0.100	0.086
SME 3	2/6/2014	82.7	7.09	10.62	6.30	33.0	0.69	0.25	<0.100	<0.025
SME 3	6/26/2014	50.0	8.04	7.03	NS	30.0	0.53	<0.100	<0.100	0.047
SME 3	9/30/2014	17.3	8.08	5.98	25.33	18.0	0.66	<0.100	<0.100	<0.025
SME 3	11/19/2014	22.4	8.30	10.40	9.30	19.0	<0.250	0.12	<0.100	0.035
SME 3	3/23/2015	25.0	8.13	7.72	21.20	16.0	0.46	0.24	<0.100	0.026
SME 3	4/22/2015	12.0	7.76	6.70	21.80	14.0	0.45	0.15	<0.100	<0.025
SME 3	9/30/2015	18.0	7.96	6.19	25.60	24.4	0.42	0.125	0.129	<0.025
SME 3	11/19/2015	65.0	7.56	7.44	15.80	37.8	<0.250	0.253	<0.100	0.032
SME 3	3/15/2016	68.4	8.35	7.51	19.20	78.8	<0.250	0.295	<0.100	<0.025
SME 3	6/29/2016	17.7	7.80	2.56	30.16	15.3	0.37	<0.100	<0.100	0.062
SME 3	8/9/2016	14.8	7.52	3.43	29.53	10.8	0.564	<0.100	<0.100	<0.025
SME 3	12/7/2016	8.5	7.90	10.91	11.85	9.4	1.780	<0.100	0.147	<0.025
SME 3	3/2/2017	14.6	7.95	4.60	13.64	17.0	0.733	0.272	<0.100	<0.025
SME 3	7/5/2017	12.5	7.54	5.88	27.3	16.3	0.628	<0.100	<0.100	0.039
SME 3	8/16/2017	11.5	7.86	5.00	28.1	18.5	0.446	<0.100	<0.100	0.07
SME 3	10/25/2017	15.3	7.42	8.23	19.4	49.7	0.376	<0.100	0.106	0.053
SME 3	3/28/2018	8.9	7.98	9.44	17.4	11.2	<0.250	0.220	<0.100	<0.025
SME 3	6/29/2018	15.8	7.53	5.39	26.9	115.0	0.800	<0.100	<0.100	<0.025
SME 3	8/2/2018	30.0	7.59	5.66	26.4	56.0	0.981	<0.100	0.108	<0.025
SME 3	12/10/2018	33.1	7.21	10.68	7.0	27.1	0.433	<0.100	0.127	<0.025

TABLE B.15 - HISTORICAL ANALYTICAL DATA - SME 3
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SME 3	4/15/2019	552.6	7.78	7.65	19.7	371	0.271	0.234	0.285	<0.025
SME 3	6/12/2019	7.8	7.48	6.87	27.1	10.7	<0.250	<0.100	<0.100	<0.025
SME 3	8/27/2019	55.3	7.91	8.41	29.2	7.0	0.389	<0.100	0.149	<0.025
SME 3	10/29/2019	22.4	7.77	8.44	17.2	15.4	0.390	<0.100	<0.100	<0.025
SME 3	3/30/2020	14.4	7.51	8.91	18.8	18.2	0.657	0.239	<0.100	<0.025
SME 3	6/16/2020	9.2	8.06	7.95	27.1	10.1	0.466	<0.100	0.102	<0.030
SME 3	9/21/2020	15.3	7.67	6.50	23.0	10.7	0.660	<0.100	<0.100	<0.030
SME 3	12/17/2020	NS	NS	NS	NS	NS	NS	NS	NS	NS
SME 3	3/18/2021	NS	NS	NS	NS	NS	NS	NS	NS	NS
SME 3	5/5/2021	NS	NS	NS	NS	NS	NS	NS	NS	NS
SME 3	9/2/2021	102.33	7.75	5.64	26.3	267	1.24	<0.100	0.234	0.057
SME 3	11/23/2021	NS	NS	NS	NS	NS	NS	NS	NS	NS
SME 3	1/11/2022	109.4	7.58	11.17	9.9	15.4	0.520	0.390	<0.10	<0.0300
SME 3	4/7/2022	32.3	7.69	8.99	16.6	27.0	0.406	0.181	<0.100	<0.0300
SME 3	8/2/2022	11.0	7.81	6.35	29.2	5.6	<0.250	<0.100	<0.100	<0.0300
SME 3	11/16/2022	7.3	7.76	9.28	13.6	10.3	0.294	<0.100	<0.100	<0.0300
SME 3	2/14/2023	33.2	7.18	10.81	10.8	66.4	0.351	0.325	<0.100	<0.0300
SME 3	5/25/2023	7.6	7.51	7.99	24.0	11.0	0.515	<0.0500	0.0569	<0.0140
SME 3	8/7/2023	9.9	7.46	6.74	29.7	14.4	0.424	<0.100	0.0912	<0.0300
SME 3	12/12/2023	32.5	7.01	8.06	10.2	13.4	0.502	0.103	<0.0350	<0.0140
SME 3	1/10/2024	33.1	7.27	9.25	7.6	44.8	0.392	0.348	0.0956	0.0270

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.16 - HISTORICAL ANALYTICAL DATA - SME 4
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SME 4	12/17/2020	17.70	7.69	10.82	9.80	17.8	0.263	0.387	<0.10	<0.03
SME 4	3/18/2021	2.20	7.25	9.20	17.60	21.6	0.331	0.319	<0.100	<0.030
SME 4	5/5/2021	20.02	7.86	7.81	21.0	27.5	<0.250	0.213	<0.100	<0.030
SME 4	9/2/2021	NS	NS	NS	NS	NS	NS	NS	NS	NS
SME 4	11/23/2021	48.51	7.64	10.41	10.6	9.2	<0.250	0.164	<0.100	<0.0300
SME 4	1/11/2022	17.30	7.39	11.35	13.40	15.6	0.97	0.44	<0.10	<0.0300
SME 4	4/7/2022	21.6	7.55	9.30	16.7	20.9	0.254	0.273	<0.100	0.060
SME 4	8/2/2022	14.0	7.79	6.24	29.1	6.00	0.274	0.102	<0.100	<0.0300
SME 4	11/16/2022	9.91	7.69	9.45	12.5	10.5	0.382	<0.100	<0.100	<0.0300
SME 4	2/14/2023	15.8	7.27	10.99	11.3	22.5	0.484	0.416	<0.100	<0.0300
SME 4	5/25/2023	3.4	8.33	9.53	24.6	6.71	0.513	<0.0500	<0.0350	<0.0140
SME 4	8/7/2023	3.2	7.44	6.51	29.7	7.00	0.436	<0.100	0.0866	<0.0300
SME 4	12/12/2023	14.0	7.57	8.33	10.8	13.8	0.497	0.140	0.0454	<0.0140
SME 4	1/10/2024	30.4	7.65	9.21	7.5	34.4	0.327	0.354	0.0532	0.0200

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.17 - HISTORICAL ANALYTICAL DATA - SME 5
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SME 5	12/17/2020	15.24	7.80	10.94	10.00	17.7	0.258	0.371	<0.100	<0.030
SME 5	3/18/2021	1.70	7.83	9.59	15.90	23.0	0.317	0.316	<0.100	<0.030
SME 5	5/5/2021	50.11	7.80	7.96	21.2	60.6	0.410	<0.100	<0.100	<0.030
SME 5	9/2/2021	15.15	8.02	6.42	28.2	31.8	0.325	0.128	<0.100	<0.030
SME 5	11/23/2021	68.29	7.78	10.42	14.9	14.0	<0.250	0.231	<0.100	<0.0300
SME 5	1/11/2022	24.90	7.66	10.46	14.7	16.6	1.50	0.450	<0.10	0.035
SME 5	4/7/2022	55.4	7.99	9.43	17.4	25.4	0.385	0.290	<0.100	<0.0300
SME 5	8/2/2022	12.0	8.26	7.16	30.4	7.30	0.277	0.102	<0.100	<0.0300
SME 5	11/16/2022	7.26	7.91	9.00	14.7	11.1	0.347	0.113	<0.100	<0.0300
SME 5	2/14/2023	15.1	7.17	10.93	12.2	12.3	0.302	0.425	<0.100	<0.0300
SME 5	5/25/2023	7.1	8.06	9.41	25.4	11.4	0.564	0.155	0.0593	<0.0140
SME 5	8/7/2023	5.6	7.71	7.47	30.6	8.60	0.677	0.0568	0.122	<0.0300
SME 5	12/12/2023	9.1	7.58	8.67	10.9	8.93	0.465	0.127	0.0370	<0.0140
SME 5	1/10/2024	31.4	7.12	9.53	7.9	51.5	0.366	0.488	0.0773	0.0170

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.18 - HISTORICAL ANALYTICAL DATA - SME 6
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SME 6	12/17/2020	13.6	7.96	10.89	10.1	16.7	<0.25	0.368	<0.10	<0.03
SME 6	3/18/2021	3.3	7.65	9.84	15.5	47.2	0.618	0.358	<0.100	<0.030
SME 6	5/5/2021	62.3	7.75	7.80	19.9	82.8	0.403	0.183	<0.100	<0.030
SME 6	9/2/2021	13.3	8.19	6.72	27.7	19.0	0.353	0.131	0.430	<0.030
SME 6	11/23/2021	9.8	7.68	10.35	15.1	11.2	<0.250	0.231	<0.100	<0.0300
SME 6	1/11/2022	24.4	7.72	11.24	10.2	16.9	2.40	0.450	<0.10	<0.0300
SME 6	4/7/2022	31.4	7.95	9.63	18.0	28.8	0.373	0.270	<0.100	<0.0300
SME 6	8/2/2022	11.1	8.25	8.26	30.9	8.40	<0.250	<0.100	<0.100	<0.0300
SME 6	11/16/2022	8.0	7.87	9.34	14.0	11.3	0.308	<0.100	<0.100	<0.0300
SME 6	2/14/2023	17.7	7.31	10.83	12.8	14.9	0.319	0.374	<0.100	<0.0300
SME 6	5/25/2023	6.7	8.00	9.79	25.2	10.0	0.580	0.0655	0.0424	<0.0140
SME 6	8/7/2023	9.2	7.66	7.19	30.6	12.4	0.620	<0.100	0.095	<0.0300
SME 6	12/12/2023	10.3	7.57	8.62	11.4	10.1	0.440	0.110	0.0507	<0.0140
SME 6	1/10/2024	31.0	7.24	9.50	7.9	39.5	0.413	0.344	0.0849	0.0140

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

TABLE B.19 - HISTORICAL ANALYTICAL DATA - SS 5
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SS 5	3/12/2013	5.98	8.38	9.87	10.80	7.2	0.39	0.30	<0.100	0.031
SS 5	5/8/2013	24.4	7.38	7.19	16.80	21.0	0.62	0.16	<0.100	<0.12
SS 5	9/23/2013	13.8	8.00	5.44	25.80	15.0	1.30	<0.100	<0.100	0.029
SS 5	12/10/2013	22.8	8.25	9.10	7.70	13.0	0.67	0.24	0.11	0.043
SS 5	2/6/2014	27.5	7.20	12.09	5.40	12.0	0.86	0.39	<0.100	<0.025
SS 5	6/26/2014	11.0	8.53	7.01	NS	11.0	0.40	<0.100	<0.100	<0.025
SS 5	9/30/2014	11.2	7.64	6.82	24.44	11.0	0.45	<0.100	<0.100	<0.025
SS 5	11/19/2014	14.1	8.96	13.13	8.50	9.6	0.35	<0.100	<0.100	<0.025
SS 5	3/23/2015	18.0	8.50	8.99	17.70	11.0	0.46	0.26	<0.100	<0.025
SS 5	4/22/2015	19.0	7.76	6.71	20.20	13.0	0.47	0.15	<0.100	<0.025
SS 5	9/30/2015	11.0	8.26	6.61	25.30	9.9	0.606	<0.100	<0.100	<0.025
SS 5	11/19/2015	19.0	7.86	8.47	15.90	11.0	<0.250	0.239	<0.100	<0.025
SS 5	3/15/2016	20.0	8.37	8.47	17.20	9.5	0.279	0.264	0.225	<0.025
SS 5	6/29/2016	14.7	8.01	3.81	29.77	13.2	0.480	<0.100	<0.100	0.066
SS 5	8/9/2016	11.6	7.86	3.16	29.40	12.6	0.464	<0.100	<0.100	<0.025
SS 5	12/7/2016	6.6	7.94	6.70	12.30	8.0	0.420	<0.100	0.12	<0.025
SS 5	3/2/2017	14.0	7.78	3.92	12.77	16.0	0.766	0.334	<0.100	<0.025
SS 5	7/5/2017	8.4	7.77	7.19	28.90	12.0	0.474	<0.100	<0.100	<0.025
SS 5	8/16/2017	10.2	8.10	4.83	29.90	15.1	0.493	<0.100	<0.100	<0.025
SS 5	10/25/2017	7.5	8.24	8.36	19.2	11.8	0.531	<0.100	<0.100	<0.025
SS 5	3/28/2018	7.0	8.53	10.23	18.5	8.33	<0.250	0.248	<0.100	<0.025
SS 5	6/29/2018	10.4	7.93	5.50	27.5	13.3	0.605	<0.100	<0.100	<0.025
SS 5	8/2/2018	13.5	7.58	6.04	25.8	12.8	0.554	<0.100	<0.100	<0.025
SS 5	12/10/2018	21.9	7.01	11.15	7.3	16.7	0.522	0.146	<0.100	<0.025

TABLE B.19 - HISTORICAL ANALYTICAL DATA - SS 5
MS4 WET-WEATHER MONITORING

		FIELD PARAMETERS				LABORATORY ANALYSIS				
Monitoring Point	Date	Turbidity (NTU)	pH	DO (mg/L)	Sample Temp (°C)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrite (mg/L)	Total Phosphorous (mg/L)	Ortho-Phosphate (mg/L)
SS 5	4/15/2019	15.5	7.35	7.77	19.4	11.7	0.374	0.168	<0.100	<0.025
SS 5	6/12/2019	10.0	8.44	8.78	26.6	11.0	<0.250	<0.100	<0.100	<0.025
SS 5	8/27/2019	24.5	8.66	9.02	28.9	7.1	0.508	<0.100	0.168	<0.025
SS 5	10/29/2019	18.7	8.20	9.33	18.1	10.4	0.631	0.105	0.198	<0.025
SS 5	3/30/2020	9.2	8.35	11.07	20.8	10.6	0.399	0.127	<0.100	<0.025
SS 5	6/16/2020	10.5	8.41	7.99	27.9	9.7	0.534	<0.100	<0.100	<0.030
SS 5	9/21/2020	16.5	7.36	11.45	22.6	11.0	0.512	<0.100	<0.100	<0.030
SS 5	12/17/2020	8.64	8.02	11.24	9.6	10.1	0.428	0.200	<0.100	<0.030
SS 5	3/18/2021	0.60	7.36	9.03	15.7	14.6	0.570	0.191	<0.100	<0.030
SS 5	5/5/2021	38.40	7.55	7.72	20.5	32.2	0.576	0.108	<0.100	<0.030
SS 5	9/2/2021	9.62	8.00	8.54	28.6	14.4	0.431	<0.100	<0.100	<0.030
SS 5	11/23/2021	10.84	7.40	10.89	13.7	7.7	<0.250	0.126	<0.100	<0.0300
SS 5	1/11/2022	46.0	7.64	11.13	11.1	10.4	1.300	0.320	<0.10	<0.0300
SS 5	4/7/2022	20.7	7.80	8.85	17.9	15.6	0.516	0.122	<0.100	<0.0300
SS 5	8/2/2022	11.90	8.38	7.32	30.6	7.8	0.812	<0.100	<0.100	<0.0300
SS 5	11/16/2022	5.32	8.07	10.21	14.0	8.3	0.314	<0.100	<0.100	<0.0300
SS 5	2/14/2023	11.20	7.35	11.62	12.7	10.4	0.344	0.284	<0.100	0.093
SS 5	5/25/2023	7.0	8.19	10.03	25.5	9.80	0.638	<0.0500	0.0486	0.0670
SS 5	8/7/2023	9.1	7.91	7.70	30.7	11.5	0.636	<0.100	0.0971	<0.0300
SS 5	12/12/2023	8.7	7.85	9.72	11.2	6.80	0.573	<0.0500	<0.0350	<0.0140
SS 5	1/10/2024	19.5	7.46	9.56	9.1	20.4	0.576	0.166	0.0715	<0.0140

NTU - Nephelometric Turbidity Units

mg/L - milligrams per liter

NS - Not Sampled

EF - meter malfunctioned in field

Appendix D – Public Education and Involvement

Full supporting documentation is available upon request.

Etowah County Engineering Department
256-549-5358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LOITERING
NO
PUBLIC
RESTROOM
COUNTY COMMISSION


What is a Watershed?
Let's Look
Sediment!
Web Soil Survey
Define
Collect
What Do You Do With Yours?
THINK TWICE
ADEM

ETOWAH COUNTY MS4 STEERING COMMITTEE MEETING

SIGN IN SHEET

WEDNESDAY, SEPTEMBER 13, 2023, 10:00 A.M.

NAME	REPRESENTING	TELEPHONE/EMAIL
Heath Williamson	City of Gadsden	256-504-9436 / hwilliamson@cityofgadsden.com
Jason Nicholson	City of Attalla	208-441-9200 jnicholson@attallacity.org
Judd Rich	City of Southside	256-613-9161 juddrich@cityofsouthside.com
Jason Rose	City of Southside	256-458-1011 jasonrose@cityofsoutside.com
ROBERT NAEL	ETOWAH COUNTY	
Mel Smith	Etowah County	256-549-5358 msmith@etowahcounty.org
Lisa Lowman	Hokes Bluff	256-490-1352 lisa.lowman@cityofhokesbluff.com
Todd Means	City of Glencoe	256-492-1424 toddmeans@cityofglencoe.org
Keener Morris	City of Gadsden	256 543 4504 kmorris@cityofgadsden
Jael Garmon	City of Rainbow City	256-413-1250 jgarmon@rbcalabama.com

MS4 Steering Committee

Gadsden/Etowah MS4 Region

1/18/2024

Location: Gadsden City Hall

Name:	Agency:
ROBERT NAIL	ETOWAH CO
Jason Nicholson	Attalla
BRIAN ROSENBALM	ETOWAH CO.
Heath Hill	Gadsden.
Scott Ryan	Hokes Bluff
Judd Rich	Southside
Keener Morrow	GADSDEN
JOSH CLIFTON	GADSDEN
Lisa Lowma	Hokes Bluff

Alabama Stormwater Association

"The Important & Emerging Concerns of MS4s: A National Perspective"

Nov. 30, 2023 1:30 PM - 3:00 PM

***** Final Registration Roster *****

Last Name	First Name	Organization	Email
Ammons	John	ALDOT (retired)	johnammons765@gmail.com
Armstrong	Megan	Auburn University	mla0055@auburn.edu
Arriaga	Alejandra	City of Decatur	aarriaga@decatur-al.gov
Ashmore	Cammie	ADEM	cammie.ashmore@adem.alabama.gov
Bareford	Karen	Cahaba River Society	karenb@cahabariversociety.org
Berres	Hana	Jefferson County Commission	hana.berres@jccal.org
Bertils	Julie	Oldcastle Infrastructure	julie.bertils@oldcastle.com
Bissot	Gregg	Barge Design Solutions	gregg.bissot@bargedesign.com
Brady	Christopher	City of Vestavia Hills	cbrady@vhal.org
Brown	Seth	National Municipal Stormwater Alliance	seth.brown@nationalstormwateralliance.org
Bryant	Gregory	Alabama A&M University	gregory.bryant@aamu.edu
Buck	Ranee	Lane Enterprises	rbuck@lane-enterprises.com
Burmeister	Kim	City of Fairhope	kim.burmeister@fairhopeal.gov
Campbell	Ashley	Baldwin County	ashley.campbell@baldwincountyal.gov
Carlson	Jimbo	ADEM	jhc@adem.alabama.gov
Christian	Chad	City of Foley	cchristian@cityoffoley.org
Connell	Brett	Trutta Environmental Solutions	brett.connell@truttasolutions.com
Cooley	Laura	AU Water Resources Center	lbc@auburn.edu
Cooper	Direcus	City of Birmingham	direcus.cooper@birminghamal.gov
Crowe	David	City of Moody	dcrowe@moodyalabama.gov
DiClemente	Lyn	Jefferson County	lyn.diclemente@jccal.org
Dominguez	Mona	AU Water Resources Center / AL Water Watch	srs0013@auburn.edu
Dunson	Michelle	City of Madison	michelle.dunson@madisonal.gov
Eastburn	Mary	City of Mobile	mary.eastburn@cityofmobile.org
Elledge	Mandy	Jefferson County Commission	elledgem@jccal.org
Fagan	Barry	Fagan Consulting	barry@faganllc.com
Fisher	Ethan	City of Vestavia Hills	efisher@VHAL.org
Folmar	Wilson	Thompson Engineering	wfolmar@thompsonengineering.com
Fouts	Kevin	City Of Hueytown	kfouts@hueytownal.gov
Freeman	Michael	Auburn University RMS	freemms@auburn.edu
Gibson	Parthenia	WSP	parthenia.gibson@wsp.com
Ginn	Rosemary	City of Mobile	rosemary@cityofmobile.org
Gonzalez Perez	Sebastian	City of Phenix City	sgonzalezperez@phenixcityal.us
Gossett	Daniel	LaBella Associates	dgossett@labellapc.com
Gulledge	Rhonda	Mobile County Engineering Department	rhonda.gulledge@mobilecountyal.gov
Hall	Chance	Mobile County Commission	chance.hall@mobilecountyal.gov
Halley	Mary	WSP	mary.halley@wsp.com
Hamilton	Brandon	Shelby County Commission	bhamilton@shelbyal.com
Harris	John	City of Opelika	jharris@opelika-al.gov
Henderson	Ashley	ALSWCC	ashley.henderson@swcc.alabama.gov
Henry	Kerry	AMCO, Inc.	kerryhenry@amcoinc.com
Hester	Christie	Shelby County Commission	chester@shelbyal.com
Hofer	Scott	Jefferson County Department of Health	Scott.hofer@jcdh.org
Holzer	Meredith	Oxford Water Works & Sewer Board	mholzer@oxfordwater.com
Ibanez	Jesus	ALDOT	ibanezj@dot.state.al.us
Jenkins	Devin	ADEM	dmjenkins@adem.alabama.gov
Johnson	Richard	City of Fairhope	richard.johnson@fairhopeal.gov
Jones	Matthew	Mobile County Commisison	matthew.jones@mobilecountyal.gov

Alabama Stormwater Association

"The Important & Emerging Concerns of MS4s: A National Perspective"

Nov. 30, 2023 1:30 PM - 3:00 PM

***** Final Registration Roster *****

Last Name	First Name	Organization	Email
Kearley	Lori Beth	City of Vestavia Hills	lbkearley@vhal.org
Kennedy	Kenton	City of Irondale	kkennedy@cityofirondaleal.gov
Kitchens	Jeffery	ADEM	jwk@adem.alabama.gov
Kuo	Mary	EPA Region 4	kuo.mary@epa.gov
Ladd	George	City Of Fairhope Public Works	george.ladd@fairhopeal.gov
Landers	Joel	City of Opelika	jlanders@opelika-al.gov
Larkin	Jonathan	City of Prattville	jonathan.larkin@prattvilleal.gov
Lee	Dongjun	Auburn University	dzl0096@auburn.edu
LeJeune	Christina	City of Fairhope	christina.lejeune@fairhopeal.gov
Love	Nicole	City of Fairhope	nicole.love@fairhopeal.gov
Martin	Erin	City of Huntsville	erin.martin@huntsvilleal.gov
McGlynn	Shannon	ADEM	smcglynn@adem.alabama.gov
McGuyer	Katie	Volkert, Inc.	katie.mcguyer@volkert.com
Means	Todd	City of Glencoe	toddmeans@cityofglencoe.org
Merchant	Glen	City of Mountain Brook	merchantg@mtnbrook.org
Moody	Vince	Madison County	vmoody@madisoncountyal.gov
Morrow	Keener	City of Gadsden Engineering Department	kmorrow@cityofgadsden.com
Norton	Earl	ALSWCC	earl_norton@yahoo.com
Nowell	Casey	Volkert, Inc.	casey.nowell@volkert.com
Oakes	Perry	ALSWCC	poakes4@charter.net
Osborne	Josh	Shelby County Development Services	josborne@shelbyal.com
Parrish	Darby	OMI, Inc.	dparrish@omi-eng.com
Perez	Michael	Auburn University	map0032@auburn.edu
Perry	Troy	City of Birmingham	troy.perry@birminghamal.gov
Phillips	Holly	City of Northport	hphillips@cityofnorthport.org
Powell	Richard	The University of Alabama	rcpowell2@ua.edu
Presley	Don	Presley Natural Resources	drpresley45@gmail.com
Ragsdale	Skip	Sunshine Supplies, Inc.	sragsdale@sunshinesupplies.com
Ratcliffe	Melanie	ADEM	melanie.ratcliffe@adem.alabama.gov
Reeves	Jeffrey	City of Hoover	chris.reeves@hooveralabama.gov
Rich	Judd	City of Southside	juddrich@cityofsouthside.com
Rogers	Dustin	City of Auburn	dmrogers@auburnalabama.org
Rogers	Scott	ALDOT	rogerssc@dot.state.al.us
Romine	Gina	City of Madison	Gina.romine@madisonal.gov
Rosenbalm	Brian	Etowah County Engineering Department	brosenbalm@etowahcounty.org
Smith	Dewayne	Hydro Engineering Solutions	dsmith@hydro-engineering.net
Smith	Marla	City of Auburn	msmith@auburnalabama.org
Smith	Mel	Etowah County Engineering	msmith@etowahcounty.org
Smith	Ryne	City of Mobile	ryne.smith@cityofmobile.org
Spain	Jenny	City of Madison	jenny.spain@madisonal.gov
Stephens	Scott	City of Prattville	scott.stephens@prattvilleal.gov
Stewart	Beth	Cahaba River Society	beths@cahabariversociety.org
Thomas	David	City of Fairhope	david.thomas@fairhopeal.gov
Thomas	William	Schoel Engineering	wthomas@schoel.com
Trammell	Raymond	Jefferson County Commission	waynetrammell@bellsouth.net
Visone	Lori	CDM Smith	visoneld@cdmsmith.com
Webb	Hannah	The University of Alabama in Huntsville	hu0003@uah.edu
Wegleitner	Ben	The Nature Conservancy	benjamin.wegleitner@tnc.org
Wright	Charles	Shelby County	cwright@shelbyal.com
Wynboom	Alexandra	Madison County	awynboom@madisoncountyal.gov

Alabama Stormwater Association

"The Important & Emerging Concerns of MS4s: A National Perspective"

Nov. 30, 2023 1:30 PM - 3:00 PM

***** Final Registration Roster *****

Last Name	First Name	Organization	Email
Yawn	Jesse	City of Mobile	jesse.yawn@cityofmobile.org
Yeldell	Sarah	S&ME, Inc.	syeldell@smeinc.com
Zwissler	Angela	University of North Alabama	azwissler@una.edu

10/26/23

Date:_____

Keep Etowah Beautiful
Water Festival
Sign In Sheet

NAME	BUSINESS	EMAIL
Kim Reed	Etowah County Schools	Kim-Reed@ecboe.org
Todd Means	City of Glencoe	toddmeans@cityofglencoe.org
Scott Reeves	City of HB	
Robert Nail	Etowah Co.	
Brian Rosenbaum	Etowah Co.	
Jennifer Jones	Attalla City Transportation	jonesjg@attalla.k12.al.us
Sarah Maroney	Attalla City Sch. Special Ed.	smaroney@attalla.k12.al.us
Mekah Williams	Gadsden Water	mwilliams@gadsdenwater.org
Jerry Sparks	Etowah Co. Bd. of Ed Transp.	jerry-sparks@ecboe.org
Mike Lankford	Gadsden Water	mlankford@gadsdenwater.org
John Jayroe	Rainbow City Bld Dept.	jjayroe@rbcalabama.com
Beth Enders	GSCC	benders@gadsdenstate.edu


SCHOOL BUS

Gadsden State
2mo ago

Water Festival

58 views


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Of Our Coosa River
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RIVERS


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SEPTEMBER 25 –
SEPTEMBER 30, 2023
For more information contact:
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INDIAN CAMP ROAD


NO
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MAX. PENALTY
$500 FINE AND
90 DAYS IN JAIL
ETOWAH COUNTY
HEALTH DEPARTMENT
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INDIAN CAMP ROAD

Salmon of the South?


Trispot Darter

Not exactly...but this rare fish swims miles upstream into tributaries of the Coosa River to spawn (lay eggs) during winter in just the right habitat

TRISPOT DARTER PROFILE

- Less than 2 in. long
- Uses winter flood pulses to migrate over stream obstacles 10 times its size

HEADWATER HUNT

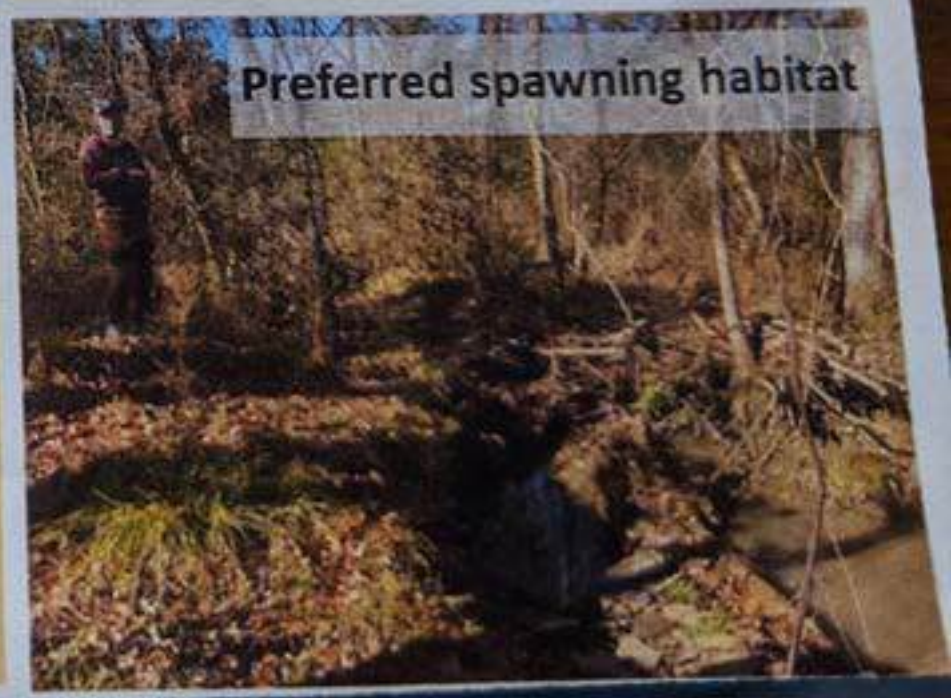
Help us gain access to these small streams so we can help expand the range of this rare fish

WE NEED YOUR HELP...if you live in/near:

- St. Clair, Etowah, Cherokee, DeKalb counties
- Ballplay, Big Canoe, Little Canoe, Beaver, Big Wills creeks

PLEASE CONTACT: Rebecca Bearden

- beardra@gmail.com
- 205-614-1887
- www.alh2o.org


Preferred spawning habitat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photarium
a product of Wild Fish Conservancy
for information: 425-788-1167
photarium@wildfishconservancy.org


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BRIDGE OUT
AHEAD


SPEED
LIMIT
25

Mel Smith <msmith@etowahcounty.org>

Cardboard Recycling Trailer Available Now

Jeff Little <jlittle@etowahcounty.org> Fri, Oct 27, 2023 at 4:55 PM
To: Everyone <qwerty31@etowahcounty.org>

Courtesy of the City of Gadsden, the Commission now has the use of a cardboard recycling trailer stationed along the south edge of the west Courthouse lot.

Our Building Service Workers are using it now.

We are all welcome to use it to recycle our personal-from-home corrugated cardboard materials as well. Please take advantage of it.

Jeff

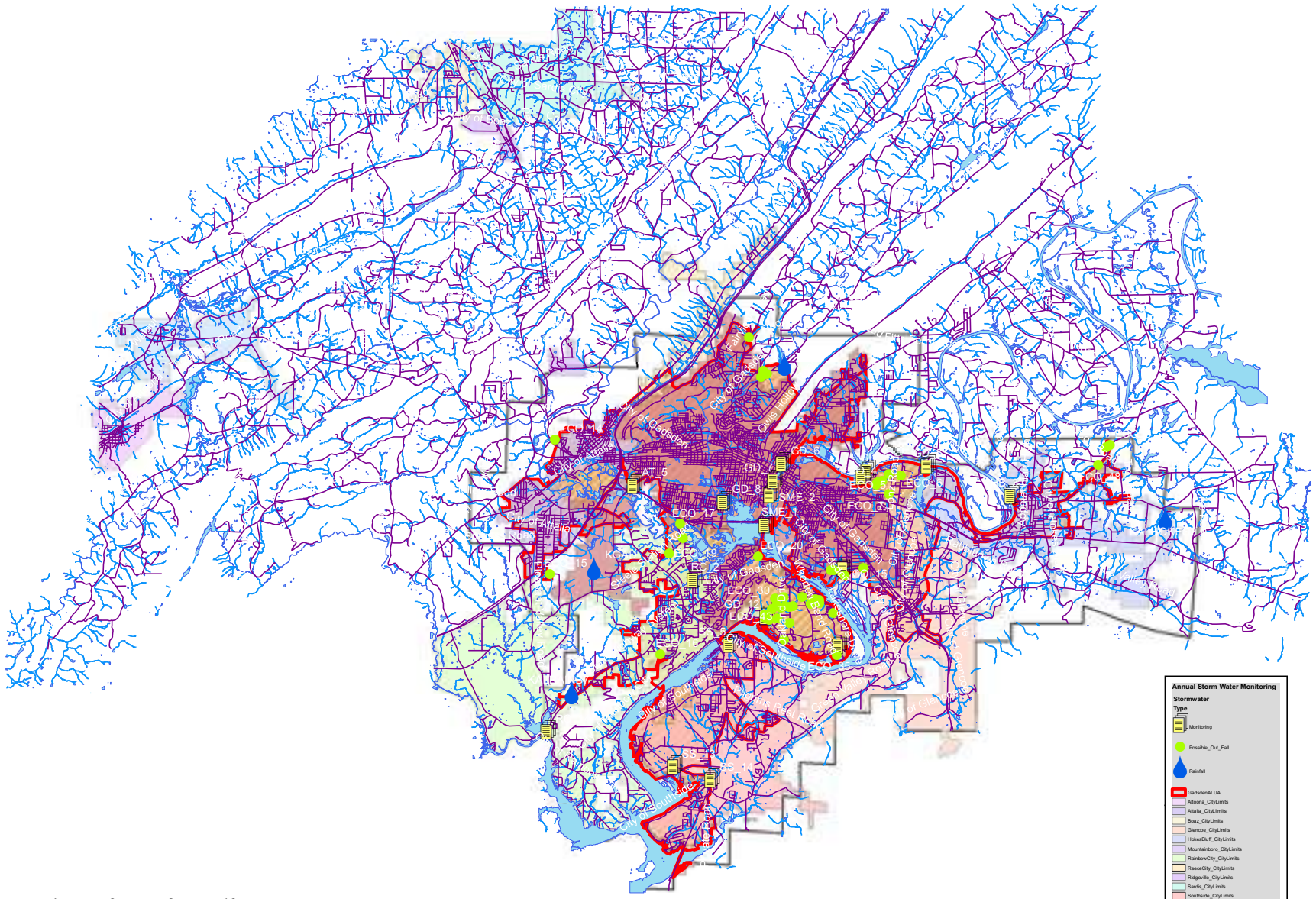
Cardboard Recycling Trailer.jpg
1319K

Appendix E - Illicit Discharge Detection and Elimination

Full supporting documentation is available upon request.

Etowah County Engineering Department
256-549-5358

ANNUAL STORM WATER REPORT

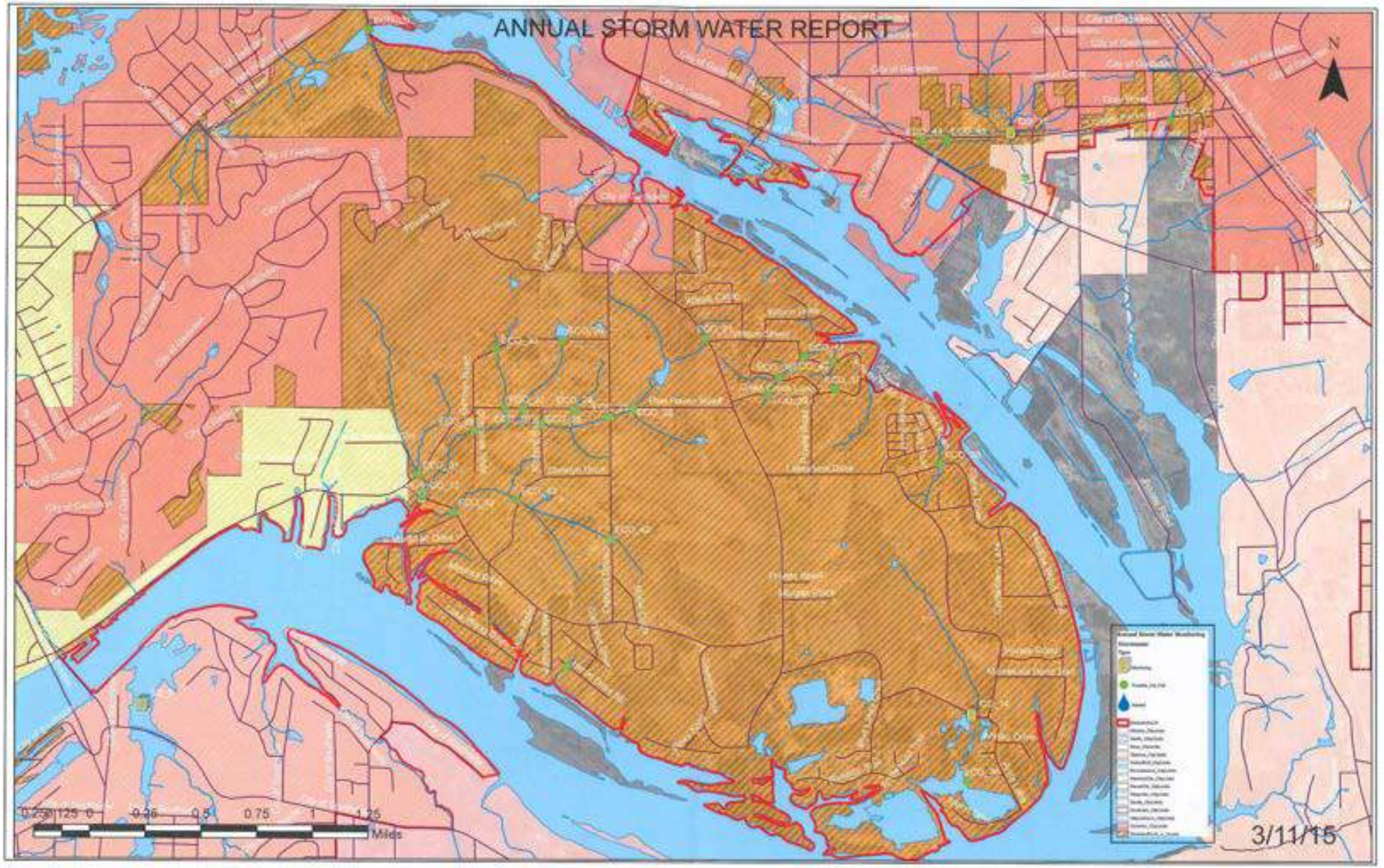


4/30/24

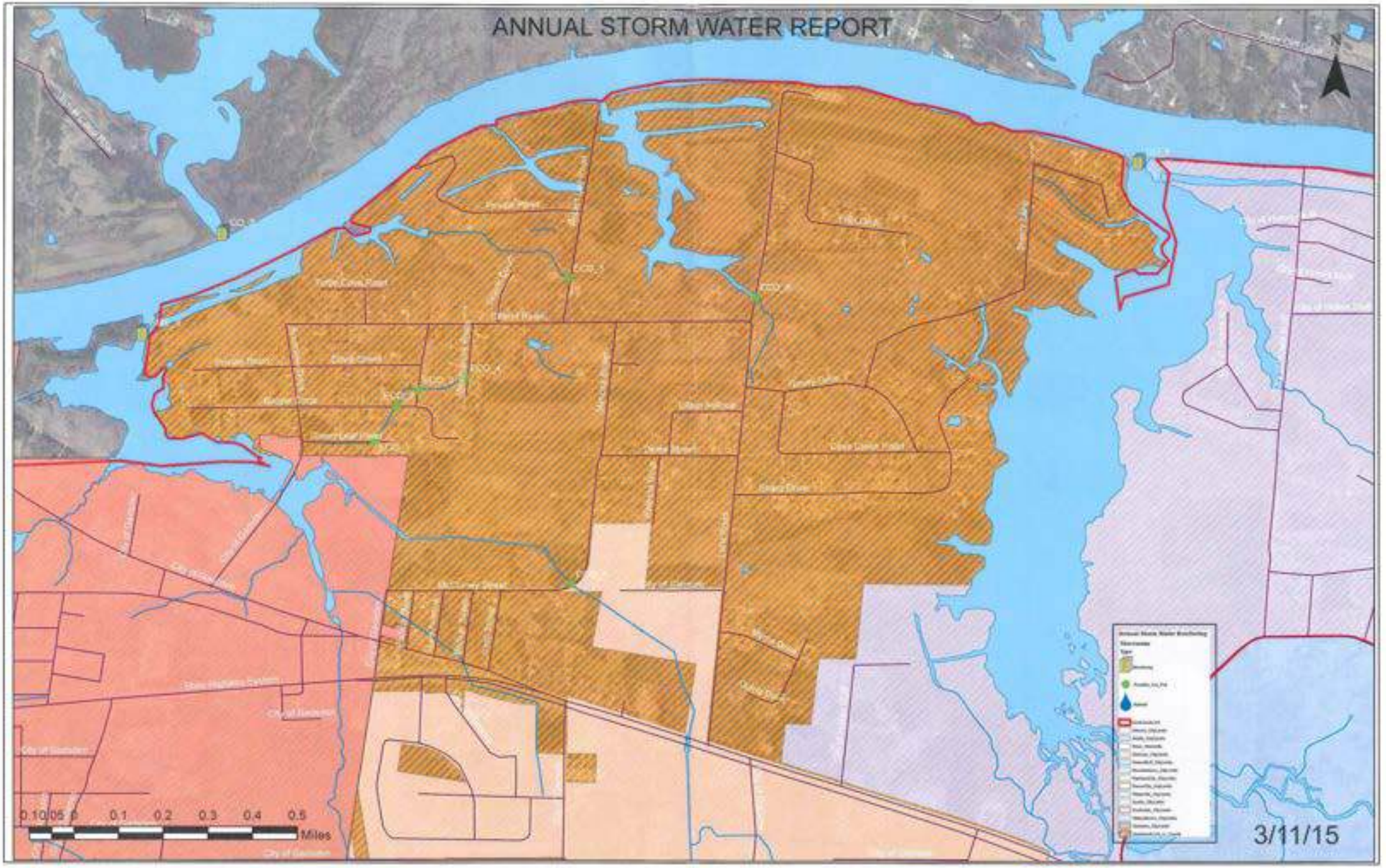
OUTFALL INVENTORY TABLE

TYPE	LOCATION	OUTFALL ID	LATITUDE	LONGITUDE	ACCESS
Rainfall	Rainbow_City_AL	KALRAINB7	33.922	-86.099	Land
Rainfall	Gadsden Municipal Airport	KGAD	33.973	-86.088	Land
Rainfall	Noccalula_Falls	KALGADSD3	34.056	-85.994	Land
Rainfall	Hokes Bluff_AL	KALHOKES2	33.993	-85.806	Land
Monitoring	Big Wills Creek	AT 5	34.006446	-86.069061	Land
Monitoring	Black Creek	GD_8	33.999535	-86.024463	Land
Monitoring	Horton Creek	RC_2	33.967683	-86.039476	Land
Monitoring	Neely Henry_Lake	SS_13	33.891352	-86.049229	Land
Monitoring	U.T._to_Neely Henry Lake	SS 14	33.885921	-86.030683	Land
Monitoring	U.T._to_Neely Henry Lake	GD_12	33.952567	-86.003495	Land
Monitoring	U.T._to_Neely Henry_Lake	CO_14	33.940904	-85.967704	Land
Monitoring	U.T._to_Coosa_River	SME 2	34.002461	-86.001571	Land
Monitoring	Storm Sewer Outfall_Coosa	GD_7	34.008361	-85.999777	Boat
Monitoring	Town_Creek	GD_6	34.01535	-85.995617	Land
Monitoring	U.T._to_Neely Henry Lake	CO_15	33.97228	-85.965354	Land
Monitoring	Rock Creek/Dry_Creek/Coosa	RC 14	33.905786	-86.111656	Boat
Monitoring	U.T._to_Coosa_River	SS_5	33.941329	-86.021569	Boat
Monitoring	Big Wills Crek/Black_Creek	SME_1	33.990184	-86.004048	Boat
Monitoring	Cove_Creek	GD_5	34.014324	-85.924013	Boat
Monitoring	U.T._to_Neely Henry_Lake	GD_3	34.01238	-85.953651	Boat
Monitoring	Coal Creek	SME_3	34.009698	-85.95623	Boat
Monitoring	U.T._to_Neely Henry_Lake	HB_3	34.002129	-85.882808	Boat
Pos Out_FL	Green_Leaf_Road	ECO_1	34.00685	-85.948693	Land
Pos Out FL	Burger_Circle_1	ECO_2	34.007804	-85.947988	Land
Pos Out FL	Burger Circle_2	ECO_3	34.008225	-85.947277	Land
Pos Out FL	Meadowlark Place	ECO_4	34.008547	-85.94576	Land
Pos Out FL	Robert_Lee_Road	ECO_5	34.011229	-85.942422	Land
Pos Out FL	Lonz Road	ECO_6	34.010724	-85.93638	Land
Pos Out FL	McCluney_St_&_Mimosa_St	ECO_7	34.003013	-85.942328	Land
Pos Out FL	Centre Road	ECO_48	34.014913	-85.839036	Land
Pos Out FL	Day Circle_1	ECO_8	34.022324	-85.83502	Land
Pos Out FL	Day Circle_2	ECO_9	34.023231	-85.833318	Land
Pos Out FL	Lay_Springs Road_1	ECO 10	34.052228	-86.002485	Land
Pos Out FL	Lay Springs Road_2	ECO_11	34.050849	-86.005427	Land
Pos Out FL	Delmont Drive@Black Creek	ECO_12	34.053495	-86.004431	Land
Pos Out FL	Fairview Road	ECO_13	34.067154	-86.01146	Land
Pos Out FL	Morgan Drive_Northwest	ECO_14	34.025493	-86.10732	Land
Pos Out FL	Pine View Circle	ECO_15	33.970462	-86.109709	Land
Pos Out FL	Township Road	ECO_16	33.937567	-86.055204	Land
Pos Out FL	Sutton Bridge_Rd@Big Will	ECO_17	33.990894	-86.045406	Land
Pos Out FL	Sutton_Bridge RD_2	ECO_18	33.985223	-86.044002	Land
Pos Out FL	Steele Station RD	ECO_19	33.978874	-86.050866	Land
Pos Out FL	Whorton_Bend_RD_1	ECO_20	33.977681	-86.007028	Land
Pos Out FL	Whorton_Bend_RD_2	ECO_21	33.961145	-85.985072	Land
Pos Out FL	Pine_Haven_Road_1	ECO_22	33.957385	-85.989847	Land
Pos Out FL	Pine_Haven_Road_2	ECO_24	33.957286	-85.993604	Land
Pos Out FL	Richard Road	ECO_25	33.956505	-85.995781	Land

Pos Out FL	Pine_Haven_Road_3	ECO 26	33.957294	-85.99696	Land
Pos Out FL	Pine_Haven_Road_4	ECO_27	33.957317	-85.99813	Land
Pos Out FL	Cherokee Road	ECO_28	33.956127	-86.000088	Land
Pos Out FL	Garmon_Road_1	ECO_29	33.961028	-85.994342	Land
Pos Out FL	Garmon Road_2	ECO_30	33.960485	-85.998639	Land
Pos Out FL	Garmon_Road_3	ECO_31	33.953754	-86.003692	Land
Pos Out FL	Whorton_Bend_Road_3	ECO_32	33.952565	-86.003479	Land
Pos Out FL	Whorton_Bend_Road_4	ECO_33	33.951737	-86.001405	Land
Pos Out FL	Heron Drive_NW	ECO_34	33.9435	-85.994128	Land
Pos Out FL	Lakeshore_Drive	ECO_35	33.94089	-85.967656	Land
Pos Out FL	Clokey Drive	ECO_36	33.954425	-85.969839	Land
Pos Out FL	Beech Ridge Road	ECO_38	33.959115	-85.980312	Land
Pos Out FL	Cross Creek Lane	ECO_39	33.958153	-85.981076	Land
Pos Out FL	River Ridge_Road_2	ECO_40	33.959924	-85.976839	Land
Pos Out FL	River_Ridge Road_1	ECO_37	33.958435	-85.976669	Land
Pos Out FL	River Ridge_Road_3	ECO_41	33.9602	-85.978686	Land
Pos Out FL	Oakland_Drive 1	ECO_23	33.956893	-85.991416	Land
Pos Out FL	Oakland Drive_2	ECO_42	33.950314	-85.991278	Land
Pos Out FL	Chrislyn Drive	ECO_43	33.952385	-85.997343	Land
Pos Out FL	College Parkway_1	ECO_44	33.971805	-85.971048	Land
Pos Out FL	College Parkway_2	ECO_45	33.971852	-85.969514	Land
Pos Out FL	College Parkway_3	ECO_46	33.971904	-85.965338	Land
Pos Out FL	College Parkway_4	ECO_47	33.972949	-85.954938	Land



WHORTON BEND PRIORITY AREA 1



TILLISON BEND PRIORITY AREA 2

MS4 STORM WATER OUTFALL MONITORING 2023 - 2024 INSPECTION LOG

ID	LOCATION	BASIN	DATE OF INSPECTION	ILLICIT DISCHARGE	FLOW (Y/N)
ECO_1	GREENLEAF ROAD	TILLISON BEND	10/4/2023	UNLIKELY	N
ECO_2	BURGER CIRCLE 1	TILLISON BEND	10/4/2023	UNLIKELY	N
ECO_3	BURGER CIRCLE 2	TILLISON BEND	10/4/2023	UNLIKELY	N
ECO_4	MEADOWLARK PLACE	TILLISON BEND	10/4/2023	UNLIKELY	N
ECO_5	ROBERT LEE ROAD	TILLISON BEND	10/4/2023	UNLIKELY	N
ECO_6	LONZ ROAD	TILLISON BEND	10/4/2023	UNLIKELY	Y
ECO_7	MCCLUNEY ST & MIMOSA ST	TILLISON BEND	10/4/2023	UNLIKELY	Y
ECO_21	WHORTON BEND ROAD 2	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_22	PINEHAVEN ROAD 1	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_23	OAKLAND DRIVE 1	WHORTON BEND	9/27/2023	UNLIKELY	N
ECO_24	PINEHAVEN ROAD 2	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_25	RICHARD ROAD	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_26	PINEHAVEN ROAD 3	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_27	PINEHAVEN ROAD 4	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_28	CHEROKEE ROAD	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_29	GARMON ROAD 1	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_30	GARMON ROAD 2	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_31	GARMON ROAD 3	WHORTON BEND	9/26/2023	UNLIKELY	Y
ECO_33	WHORTON BEND ROAD 4	WHORTON BEND	9/26/2023	UNLIKELY	Y
ECO_34	HERON DRIVE NW	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_35	LAKESHORE DRIVE	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_36	CLOKEY DRIVE	WHORTON BEND	9/27/2023	UNLIKELY	Y
ECO_37	RIVER RIDGE ROAD 1	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_38	BEECH RIDGE ROAD	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_39	CROSS CREEK LANE	WHORTON BEND	9/27/2023	UNLIKELY	Y
ECO_40	RIVER RIDGE ROAD 2	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_41	RIVER RIDGE ROAD 3	WHORTON BEND	9/26/2023	UNLIKELY	N
ECO_42	OAKLAND DRIVE 2	WHORTON BEND	9/27/2023	UNLIKELY	N
ECO_43	CHRISLYN DRIVE	WHORTON BEND	9/26/2023	UNLIKELY	N

ETOWAH COUNTY

MS4 ANNUAL AWARENESS TRAINING

GADSDEN-ETOWAH MS4

MARCH 20, 2024

	PRINT NAME	SIGNATURE
1	Thomas Guthrey TAC 2nd DOE	
2	Adam Gipson	
3	ROBERT NAIL	
4	Donnie Kelley	
5	Collin Sims	
6	Rick Kuhn	
7	Danny Thornhill	
8	[illegible]	
9	Jim Mays	
10	Tommy B	
11	William Sutton	
12	Bobby Driskill	
13	Larry J. Banks	
14	Dale Tolton	
15	BRIAN ROSENBALM	

ETOWAH COUNTY

MS4 ANNUAL AWARENESS TRAINING

GADSDEN-ETOWAH MS4

MARCH 20, 2024

	PRINT NAME	SIGNATURE
16	Brad Berry	
17	Darin Terry	
18	Andrew Vayek	
19	Harold Smith	
20	Tim Broom	
21	Jayman Stowers	
22	Steve Johnson	
23	Keith McCathia	
24	Tommy Winn	
25	Trevor	Trevor Johnson
26	Bruce Granger	
27	Joe Patterson	
28	Tony Holland	
29	Eric Heard	Eric Heard
30	Chris Frost	Chris Frost

ETOWAH COUNTY

MS4 ANNUAL AWARENESS TRAINING

GADSDEN-ETOWAH MS4

MARCH 20, 2024

	PRINT NAME	SIGNATURE
31	William Vaughn	
32	Brian Hutt	
33	Mel Smith	
34	Clay Zaharsak	
35	Jordan Hannah	
36	Tyson Burwell	
37		
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Appendix F – Construction Site Storm Water Runoff

Full supporting documentation is available upon request.

Etowah County Engineering Department
256-549-5358

Appendix G – Post-Construction Storm Water Management

ETOWAH COUNTY DEVELOPMENT POST-CONSTRUCTION BMP INSPECTION FORM

NAME OF DEVELOPMENT _____ **INSPECTOR** _____

TYPE OF DEVELOPMENT _____ **SIGNATURE** _____

LOCATION _____ **OWNER NAME** _____

SIZE (IN AC) _____ **OWNER ADDRESS** _____

INSPECTION DATE/TIME _____ **OWNER PHONE** _____

WEATHER _____ **OWNER EMAIL** _____

OWNER FAX _____

IS THERE A MAINTENANCE AGREEMENT FOR LONG-TERM BMP'S? _____

ARE BMPS WORKING PROPERLY? _____

ARE BMPS BEING PROPERLY MAINTAINED AT THE TIME OF INSPECTION? _____

ARE ADDITIONAL BMPS NEEDED? _____

HAVE PHOTOGRAPHS OF ALL CRITICAL STORM WATER BMP COMPONENTS BEEN TAKEN AS PART OF THIS INSPECTION? _____

HAVE ALL PREVIOUS ISSUES BEEN ADDRESSED AND CORRECTED? _____

ADDITIONAL COMMENTS: _____

BMP	CONDITION: SATISFACTORY, NEEDS IMPROVEMENT, TURBID DISCHARGE, SEDIMENT LOSS	REMARKS

Appendix H – Pollution Prevention for Municipal Operations

Full supporting documentation is available upon request.

Etowah County Engineering Department
256-549-5358

ETOWAH COUNTY FACILITIES

ETOWAH COUNTY COURTHOUSE
800 FORREST AVENUE
GADSDEN, AL 35901

GADSDEN SHOP
402 TUSCALOOSA AVENUE
GADSDEN, AL 35901

ATTALLA LOCATION
1950 US HIGHWAY 431 NORTH
ATTALLA, AL 35954