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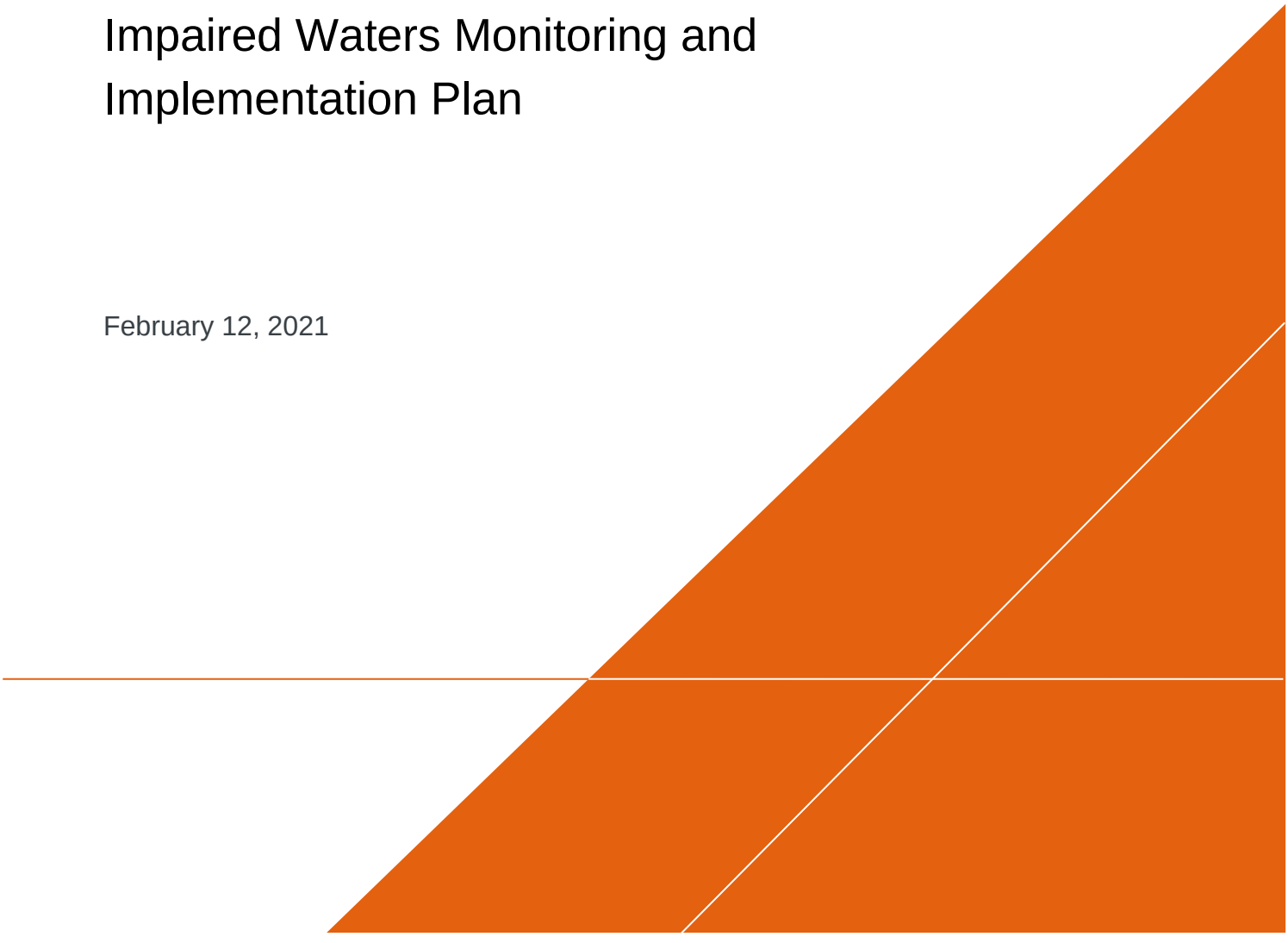
Athens-Clarke County, Georgia

FINAL 2020 ANNUAL REPORT

Impaired Waters Monitoring and Implementation Plan

February 12, 2021



FINAL 2020 ANNUAL REPORT

Impaired Waters Monitoring and Implementation Plan

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EXECUTIVE SUMMARY

Athens-Clarke County, Georgia developed and implemented an Impaired Waters Monitoring and Implementation Plan and Sampling Quality Assurance Plan in October 2015 as part of its Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System permit requirements. As part of the Plan, fecal coliform bacteria, total suspended solids, and pH are regularly measured at sampling stations representative of impaired reaches within the permit area.

Data collected from initiation of monitoring efforts in October 2015 through fourth quarter 2016 were presented in the 2016 Annual Report. Data collected in 2017 were presented in the 2017 Annual Report, data collected in 2018 was presented in the 2018 Annual Report, and data collected in 2019 was presented in the 2019 Annual Report. This annual report includes sampling results from four quarters of 2020: two from November to April, and two from May to October. This report also includes analysis of pollutant of concern (POC) trends since initiation of monitoring.

Results collected from February 2020 through September 2020 indicated that all but one of the 28 pH levels measured for Kingswood Branch sampling stations attained state water quality standards. Most pH measurements for Kingswood Branch attained state standards until mid-2018; therefore, the pH impairment on Kingswood Branch was removed in EPD's 2018 303(d) List which was approved on June 14, 2019. However, pH levels were consistently below the state standard in late 2018 and throughout 2019. Therefore, pH monitoring on Kingwood Branch was continued in 2020. pH levels in 2020 were consistently within the state standards. Athens-Clarke County will continue on Kingswood Branch in 2021.

For Noketchee Creek, all but two of the pH levels met state standards. For East Sandy Creek, all but one pH level measurement met standards. For Carr Creek, three of the ten measurements were below the state minimum standard.

Results for TSS at the station on Middle Oconee were significantly higher than the other stations. The cause of the high TSS results on the Middle Oconee is unclear but could be due to runoff from agricultural lands. Results for the station on Carr Creek were low except for one spike in February. Results for Noketchee Creek were consistently low between 3 and 7 mg/L, except for one spike in April.

Fecal coliform results in February and April consistently exceeded the state standard. Almost all fecal coliform results exceeded the state standard in June and September (except for stations UT-1 and WTR-1 in June and UT-1 in September). A definitive reason for the frequent exceedances of state standards for fecal coliform for the May to October season and fewer exceedances during the November to April season cannot be determined. In some cases, the exceedances from May to October were due to lower geometric mean criteria. During the May – October season, the state standard for geometric mean is 200 CFU/100 mL. During the November – April season, the state standard for geometric mean is 1,000 CFU/100 mL. Rainfall may have been a factor in the high fecal coliform results in February, April, and September.

Athens-Clarke County Government (ACCGOV) has implemented best management practices, including initiatives in pet waste management, sewer evaluations, septic system management, and bacteria source tracking, to help reduce fecal coliform and sediment loads to receiving waters, as well as to maintain

acceptable levels of pH. Best management practices are considered effective given that substantial progress has been made by ACCGOV over the reporting period. Examples of this progress include: millions of feet of sewer lines have been cleaned, sewer inflow and infiltration studies have been completed to detect areas of potential leaks, approximately 918 miles of roadways were swept as part of street sweeping programs (resulting in removal of 8,700 cubic feet of debris), construction sites were inspected for proper erosion and sediment controls, pet waste education materials were distributed, and septic system education and outreach programs continued to gain momentum. A bacterial source tracking study was also conducted from 2015 through 2017, and results are being used to target appropriate fecal coliform reduction strategies. Results from this study suggest that human sources of fecal coliform are a consistent contributor in Tanyard Creek, Brooklyn Creek, and Trail Creek, and are either not a contributor or are a negligible contributor of fecal coliform in Carr Creek, Cedar Creek, Hunnicut Creek, Kingswood Branch, and unnamed tributary to Middle Oconee River. In 2018, nine Watershed Management Plans (WMPs) were completed for Bear Creek, East Fork Trail Creek, Malcolm Branch, Middle Oconee River, North Oconee River, Sandy Creek, Sulphur Spring Branch, Turkey Creek, and Walton Creek.

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ACRONYMS AND ABBREVIATIONS

ACC	Athens-Clarke County, Georgia
ACCGOV	Athens-Clarke County Government
BioF	biota - fish communities
BioM	biota - macroinvertebrates
BMP	best management practice
BST	bacteria source tracking
CFU	colony forming units
EPA	U.S. Environmental Protection Agency
EPD	Georgia Environmental Protection Division
FC	fecal coliform bacteria
GIS	geographic information system
IWMIP	Impaired Waters Monitoring and Implementation Plan
mg	milligrams
mL	milliliter
MPN	most probable number
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
POC	pollutant of concern
PUD	Public Utilities Department
QA/QC	quality assurance/quality control
RDII	rainfall-dependent inflow and infiltration
SQAP	Sampling Quality Assurance Plan
SSES	sanitary sewer field evaluations and survey
TSS	total suspended solids
WMP	Watershed Management Plan

1 INTRODUCTION

Athens-Clarke County (ACC) is classified as a small Municipal Separate Storm Sewer System (MS4) community with a population greater than 10,000 and is permitted under the General National Pollutant Discharge Elimination System (NPDES) Stormwater Permit No. GAG610000 (Georgia Department of Natural Resources 2017). The General NPDES Stormwater Permit for small MS4s (Permit) requires MS4 communities such as ACC to develop and implement an Impaired Waters Monitoring and Implementation Plan (IWMIP) for impaired waters within the permitted area. Permittees must identify impaired waters located within its permitted area using the latest approved 305(b)/303(d) List of Waters, which contains MS4 outfalls or waters within 1 linear mile downstream of MS4 outfalls. Permittees are also required to identify POCs, which are the water quality parameter(s) for which the identified impaired waters are listed as not meeting its designated uses, such as fishing or drinking water.

Athens-Clarke County Government (ACCGOV) identified a total of 19 impaired reaches in the ACC Permit area (i.e., ACC jurisdictional area). Seventeen of the 19 reaches are listed as impaired for fecal coliform bacteria (FC), three reaches are listed as impaired for sediment impacts to fish biota (BioF), two reaches are listed and impaired for sediment impacts to macroinvertebrate biota, and three reaches are listed as impaired for pH (Table 1; Georgia Department of Natural Resources 2016). Thus, the POCs identified for the ACC MS4 Permit area are FC, pH, and sediment (BioF and BioM). The reach names, locations, designated uses, impairment parameters (or POCs), extent (length of impaired reach), and potential causes are listed in Table 1.

Table 1. Impaired Stream Reaches with MS4 Outfalls within 1 Linear Mile in Athens-Clarke County, Georgia

Reach Name	Location	Designated Use	Impairment Parameter(s)	Extent (miles)	Potential Causes
Brooklyn Creek	Headwaters to Middle Oconee River, Athens	Fishing	FC	2	Urban runoff
Carr Creek	Headwaters to North Oconee River, Athens	Fishing	BioF, Bio M, FC, pH	2	Industrial facility, urban runoff
Cedar Creek	Headwaters to Oconee River, Athens	Fishing	FC, Bio F*	4	Urban runoff
Cloverhurst Branch	Headwaters to Tanyard Branch (Athens)	Fishing	FC	2	Urban runoff
East Fork Trail Creek	Headwaters to West Fork Trail Creek, Athens	Fishing	FC	3	Urban runoff
East Sandy Creek	Long Branch to Sandy Creek	Fishing	pH	4	Non-point sources
Hunnicutt Creek	Headwaters to Middle Oconee River, Athens	Fishing	FC	1	Urban runoff
Kingswood Branch	Tributary to McNutt Creek, Athens	Fishing	FC**	1	Urban runoff

Reach Name	Location	Designated Use	Impairment Parameter(s)	Extent (miles)	Potential Causes
McNutt Creek	Headwaters at GA 316 and Dials Mill Road to Middle Oconee River	Fishing	FC	12	Non-point sources, urban runoff
Middle Oconee River	Big Bear Creek to McNutt Creek	Fishing	FC, BioM	12	Non-point sources
Middle Oconee River	McNutt Creek to North Oconee River	Fishing	FC	4	Urban runoff
Noketchee Creek	Headwaters to Sandy Creek	Fishing	pH, BioF	5	Non-point sources, urban runoff
North Oconee River	Sandy Creek to Trail Creek	Drinking Water	FC	2	Non-point sources
North Oconee River	Trail Creek to Oconee River	Fishing	FC	8	Municipal facility, urban runoff
Oconee River	Confluence of North and Middle Oconee Rivers, Athens to Barnett Shoals Dam	Fishing	FC	4	Urban runoff
Tanyard Creek	Upstream North Oconee River, Athens	Fishing	FC	1	Urban runoff
Trail Creek	East Fork Trail Creek to North Oconee River, Athens	Fishing	FC	2	Urban runoff
Tributary to Middle Oconee River	Downstream closed UGA Botanical Gardens Landfill (Milledgeville Ave. Site), Athens	Fishing	FC	1	Non-point sources, urban runoff
West Fork Trail Creek	Athens	Fishing	FC	3	Urban runoff

*BioF impairment was added for Cedar Creek in the 2020 list.

**The pH impairment for Kingswood Branch was removed from the 2018 305(b)/303(d) List of Impaired Waters.

Source: Georgia Department of Natural Resources 2018

In 2015, ACCGOV developed and implemented an IWMIP and Sampling and Quality Assurance Plan (SQAP), referred to collectively as the Plan, to monitor and track POCs and to select initial best management practices (BMPs) to help reduce concentrations of the identified POCs. The Georgia Environmental Protection Division (EPD) approved the final IWMIP and SQAP in January 2016. ACCGOV began implementation of the Plan in October 2015, and implementation is ongoing. Combined with ACCGOV's ongoing Watershed Improvement Program, the Plan ultimately helps improve water quality and monitors progress toward removing the impaired waters from the 303(d) List.

In addition to satisfying MS4 Permit requirements, impaired water monitoring data are being collected in accordance with the SQAP component of the Plan (January 2016) to be submitted to EPD for consideration in 305(b)/303(d) listing decisions. Impaired waters monitoring data will be evaluated annually to help identify potential concentration trends and sources of POCs. Furthermore, the monitoring data are being used to help assess current watershed conditions and develop Watershed

Management Plans (WMPs), as well as to help guide appropriate stormwater public education and outreach efforts. Results will be evaluated regularly to monitor progress toward delisting the streams from the Georgia 303(d) list.

2 METHODS

Impaired waters were sampled and tested for identified POCs according to the detailed methods described in the ACC IWMIP and SQAP (Arcadis-Tetra Tech January 2016). Data collection began in October 2015 and is ongoing. As mentioned in the Executive Summary, the 2020 Annual Report includes detailed results from February to September 2020 but also includes an analysis of POC trends since initiation of data collection.

The data collected and evaluated as part of this annual report extends from February 2020 to September 2020. Sampling results were compared to applicable Georgia numeric criteria to determine compliance with water quality standards. In addition to sampling data collection and evaluation, ACCGOV implemented BMPs designed to improve water quality for the identified POCs and impaired reaches.

2.1 Impaired Waters Sampling

2.1.1 Study Area

The study area includes the following 19 impaired reaches within the ACC permitted area (Figure 1):

1. Brooklyn Creek
2. Carr Creek
3. Cedar Creek
4. East Fork Trail Creek
5. East Sandy Creek
6. Hunnicutt Creek
7. Kingswood Branch
8. McNutt Creek
9. Middle Oconee River (section one)
10. Middle Oconee River (section two)
11. Noketchee Creek
12. North Oconee River (section one)
13. North Oconee River (section two)
14. Oconee River
15. Tanyard Creek
16. Cloverhurst Branch
17. Trail Creek
18. West Fork Trail Creek
19. Unnamed tributary to Middle Oconee River.

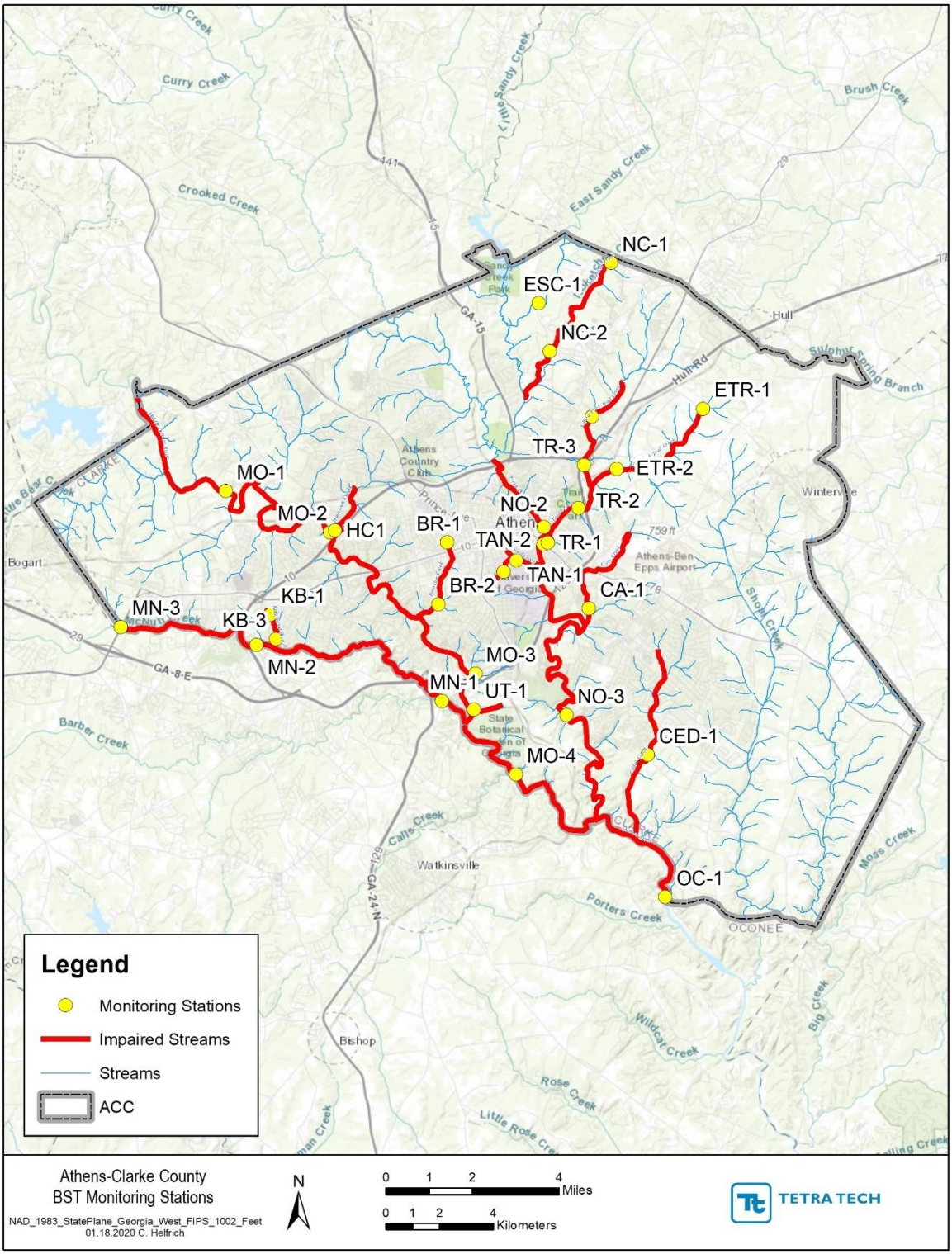

Figure 1. Impaired Stream Reaches within 1 Linear Mile of MS4 Outfalls and Sampling Stations in Athens-Clarke County, Georgia

2.1.2 Sampling Stations

The sampling station locations were selected to represent the 19 impaired reaches within 1 linear mile of MS4 outfalls and where water quality data were collected historically. The impaired streams are sampled at 29 stations. The sampling stations, along with their geographic coordinates, are listed in Table 2.

Table 2. Sampling Stations in Impaired Stream Reaches in Athens-Clarke County, Georgia

Station ID	Impaired Reach	Criterion Exceeded	Latitude	Longitude
BR-1	Brooklyn Creek	FC	33.9547	-83.3993
BR-2	Brooklyn Creek	FC	33.9376	-83.4021
CA-1	Carr Creek	BioF, FC, pH	33.9364	-83.3518
CED-1	Cedar Creek	FC	33.8958	-83.3321
ETR-1	East Fork Trail Creek	FC	33.9918	-83.3136
ETR-2	East Fork Trail Creek	FC	33.975	-83.3426
ESC-1	East Sandy Creek	pH	34.0211	-83.3686
HC-1	Hunnicutt Creek	FC	33.9581	-83.4367
KB-1	Kingswood Branch	FC, pH	33.9347	-83.4584
KB-3	Kingswood Branch	FC, pH	33.9279	-83.4565
MN-1	McNutt Creek	FC	33.9107	-83.401
MN-2	McNutt Creek	FC	33.9263	-83.463
MN-3	McNutt Creek	FC	33.9314	-83.5098
MO-1	Middle Oconee	FC, BioM	33.969	-83.4733
MO-2	Middle Oconee	FC	33.9576	-83.4383
MO-3	Middle Oconee	FC	33.9183	-83.3898
MO-4	Middle Oconee	FC	33.8904	-83.3763
NC-1	Noketchee Creek	BioF, pH	34.0322	-83.3444
NC-2	Noketchee Creek	BioF, pH	34.0077	-83.3649
NO-2	North Oconee River	FC	33.959	-83.3669
NO-3	North Oconee River	FC	33.9068	-83.3593
OC-1	Oconee River	FC	33.8563	-83.3263
TAN-1	Tanyard Creek	FC	33.9497	-83.3761
TAN-2	Cloverhurst Branch	FC	33.9466	-83.3804
TR-1	Trail Creek	FC	33.9642	-83.3553
TR-3	Trail Creek	FC	33.9542	-83.3671
WTR-1	West Fork Trail Creek	FC	33.9896	-83.3509
WTR-2	West Fork Trail Creek	FC	33.9761	-83.3534
UT-1	Unnamed tributary to Middle Oconee River	FC	33.908	-83.386

2.1.3 Sampling Parameters and Schedule

Sampling methods include in-situ pH measurements for stations KB-1, KB-3, NC-1, NC-2, CA-1, and ESC-1; grab sampling for FC analytical testing at all stations except NC-1, NC-2, and ESC-1; and sampling for total suspended solids (TSS) at stations CA-1, NC-1, NC-2, and MO-1. Sample parameters, sample types, sampling stations, total number of stations sampled, and sampling schedule are listed in Table 3.

Table 3. Sampling Parameters and Schedule

Parameter	Sample Type	Stations Sampled	Total Number of Stations Sampled	Sampling Schedule
FC	Grab	BR-1, BR-2, CA-1, CED-1, ETR-1, ETR-2, HC-1, KB-1, KB-3, MN-1, MN-2, MN-3, MO-1, MO-2, MO-3, MO-4, NO-2, NO-3, OC-1, TAN-1, TAN-2, TR-1, TR-3, WTR-1, WTR-2, UT-1	26	4 geometric means/year = 16 grab samples = (4 grab samples/1 geometric mean) x (4 samples/year)
pH	In-situ	KB-1, KB-3, NC-1, NC-2, CA-1, ESC-1	6	20 samples per year
TSS	Grab	CA-1, NC-1, NC-2, MO-1	4	4 samples per year (1 sample collected each calendar quarter)

Georgia water quality standards for the sampled parameters and impaired reaches designated uses are provided in Table 4. Sampling results are compared to the state standards to evaluate attainment of these criteria.

Table 4. Georgia Water Quality Standards for Sampled Parameters

Parameter	Standard	Source
Fecal Coliform Bacteria	May–Oct <200 colonies/100 mL as geometric mean and 4,000 colonies/100 mL as a single sample maximum	GA Water Quality Standards
	Nov–Apr <1,000 colonies/100 mL and 4,000 as a single sample maximum	
pH	Between 6.0 and 8.5	GA Water Quality Standards
TSS	No quantitative standard in Georgia	NA

2.1.4 Sampling Methods

Sampling methods included in-situ water quality measurements for pH and grab samples for laboratory analyses of FC and TSS. Sampling protocols are described in detail in Section 3.1, Sampling Methods, of the ACC Plan (Arcadis-Tetra Tech January 2016) and adhere to the requirements of the Water Protection Branch Quality Assurance Manual (Georgia Department of Natural Resources 1999) and Title 40 of the Code of Federal Regulations, Part 136. Sampling included quality assurance/quality control (QA/QC) procedures such as the collection of blank and duplicate samples and the completion

of chain-of-custody forms for grab samples submitted to the laboratory for analysis. These QA/QC protocols are described in the SQAP (Section 3 of the IWMIP and SQAP).

Sampling personnel maintained field records during sampling events. Field records include completed field forms that provide information on sample location, date, time, weather conditions at the time of sampling, names of sampling personnel, observed field conditions, problems encountered, and any corrective actions taken as a result. Refer to Section 3.3.2, Field Records, of the Plan for additional details on the field records collected for each sampling event.

2.2 Best Management Practices

BMPs have been implemented in ACC to control and reduce POC concentrations. ACCGOV has many ongoing programmatic BMPs in place to reduce FC levels and prevent other POCs from entering streams in ACC. These BMPs and associated efforts are documented in the Unified Government of Athens-Clarke County Watershed Protection Plan 2019-2020 Annual Report (Jacobs 2019), ACC's NPDES Phase II 2020 Annual Report, and in the ACC Plan. In addition to ongoing programmatic BMPs, ACCGOV has conducted bacteria source tracking (BST) to assist in identifying the primary sources of FC measured in streams. Results will be used to focus management efforts in a cost-effective manner. BST commenced in November 2015 and was completed in October 2017.

The summaries below describe BMP progress made by ACCGOV in 2020. Progress made before 2020 is described previous IWMIP Annual Reports.

2.2.1 Pet Waste Management Initiatives

This section discusses the activities ACC has undertaken to document, understand, and address pet waste management in ACC.

- During the reporting period, ACCGOV staff distributed brochures on pet waste/bag dispensers to promote public education on proper pet waste management. ACCGOV staff continues to actively monitor for pet waste "hot spots" in downtown Athens and beyond and will install additional pet waste stations or move current stations based on needs.
- The Stormwater Department passes out pet waste bag dispensers with bags for dog owners to clip to their leashes. They give these out at any tabling events they attend, and they supply animal shelters and hospitals with boxes of pet waste bags for dog adoption goody bags.
- The Leisure Services Department installs pet waste stations in public parks and at public trailheads. They maintain approximately 20 stations weekly.
- The ACC Stormwater Department is currently working with the ACC Solid Waste Department to find a pedestrian trash can design for downtown Athens that incorporates a pet waste bag dispenser. New cans will be installed in 2021.

2.2.2 Sanitary Sewer Evaluation

Due to the high levels of FC in ACC, a key source control measure for 303(d)-listed streams identified in the ACCGOV Public Utilities' Department (PUD) Watershed Protection Plan was maintenance and evaluation of sanitary sewer lines. Consequently, the following activities were undertaken to maintain and evaluate sanitary sewer lines in ACC.

2.2.2.1 Sewer Maintenance

- In 2020, PUD used Rodder trucks to clean 1,591,891 feet of sewer line, flush/vacuum trucks to clean 1,588,400 feet of sewer line, and camera trucks to inspect 168,579 feet of sewer line. In addition, 476,626 feet of easements and right-of-way were cleared, and 30,142 feet of sewer line were treated for root control in April 2020.
- ACC PUD made condition and capacity upgrades to approximately 4,160 linear feet of 8 inch and 12 inch and 18-inch gravity sewer line and appurtenances within the Tanyard Creek watershed.
- ACC PUD's contractor is digging a tunnel under the Loop between Alexander Street and Dairy Pac to upsize and realign the Upper North Oconee sewer main.
- ACC PUD's on-call contractor will install new sewer in Rear Arch Street.
- ACC PUD's on-call contractor will soon install upgrades to the sewer at Atlanta Highway and Timothy to improve this sewer line section.
- ACC PUD is finalizing construction plans for the Brooklyn Creek Interceptor Improvements. This project includes replacing the sewer interceptor from the trunk line at the Middle Oconee River up to King Street and increasing pipe size to provide greater capacity based on population projections for the future.

2.2.2.2 Sewer Evaluation Studies

- In 2015, PUD conducted a Flow Monitoring Study to identify rainfall-dependent inflow and infiltration (RDII) within the wastewater collection system.
- In 2015 and 2016, PUD performed detailed field as-built surveys of critical portions of the wastewater collection system. This information was used to update PUD's geographic information system (GIS) with accurate pipe locations, pipe materials, pipe diameters, and pipe slopes and depths.
- In 2015 and 2016, PUD updated and calibrated dynamic dry-weather and wet-weather models for most of the wastewater collection system. The entire wastewater collection system will be modeled in 2017. The results of the forecasting, flow monitoring, and modeling efforts have been used to identify both short- and long-term Service Delivery Plan Capital Improvement Projects to ensure that the wastewater collection system has adequate capacity.
- In 2016, PUD performed sanitary sewer field evaluations and surveys (SSESs) on that portion of the wastewater collection system that has the highest RDII for the purpose of identifying pipes that are in poor condition and need rehabilitation and/or replacement.
- In 2017, PUD continued to analyze results of SSES efforts to identify causes of inflow and infiltration and subsequent capital improvement projects to reduce inflow and infiltration. PUD continues to perform flow monitoring comparisons between pre-rehabilitation and post-construction activities to determine the effectiveness of the SSES program on the wastewater collection system.

2.2.3 Septic System Management

Another key source control measure for FC identified in the Watershed Protection Plan was septic system management. The following activities were undertaken to support proper management of septic systems in ACC.

- The ACC Planning Department is currently responsible for maintaining the GIS septic system inventory. This inventory is updated regularly with newly built septic systems.
- ACCGOV uses the Manual for On-Site Sewage Management Systems (Department of Human Resources, Public Health, Chapter 290-5-26, 2016) to regulate sewer management systems and septic tanks. This includes minimum design and construction standards and minimum volume requirements.
- ACCGOV continues to enforce Sections 8-6-6 and 8-6-7 of the Protected Environmental Areas Ordinance, which prohibit septic tanks in floodplains and riparian zones, respectively.
- ACC maintained a Septic System Education Program, which includes a website (http://www.accgov.com/5317/Septic-System-Education-Program) and a phone number for questions. ACC continued targeted septic tank education efforts, including continued distribution of informational materials, and a targeted social media campaign during the U.S. Environmental Protection Agency's 2020 Septic Smart Week in September. An ACCGOV Public Utilities Department Staff member presented on Septic Tanks to a neighborhood in October 2020.
- ACCGOV has adopted a General Sewer Use ordinance to regulate discharges to public sewers, septic tanks, and private wastewater systems. On October 5, 2018, ACC Mayor & Commission revised the Sewer Use Ordinance to include a recommendation from ACC PUD. Section 5-1-2 (b)(6) now reads "Athens-Clarke County recommends that septic tank disposal systems be inspected on intervals of not less than every five years, and maintenance performed as needed, at the owner's expense."
- ACCGOV is considering a credit to the Stormwater Utility Fee for regular septic tank pumping. This consideration is part of a larger utility fee and credit review that started in late 2018. The new credit program has not yet gone into effect.

2.2.4 Street Sweeping

ACCGOV conducted the following street sweeping activities in 2020.

- In 2020, approximately 918 miles of roadways were swept, resulting in removal of 8,700 cubic feet of debris from roadways. ACC contracts street sweeping services on major urban roadways (approximately 6.86 curb miles per month and 46.64 curb miles per quarter) and throughout the Central Business District (approximately 8.88 curb miles per week).
- In 2020, ACCGov's street sweeping contract was expanded, increasing the quarterly sweeping routes to a monthly frequency during the Fall months. Further expansions are anticipated in future years, focused on increased sweepings along roadways with bicycle facilities.

2.2.5 Bacterial Source Tracking

- ACCGOV implemented BST in 2015 to determine the primary source(s) of fecal bacteria in streams that are impaired due to FC. BST analysis is being undertaken as a phased approach. Phase two of the BST work was completed in October 2017.
- Results from this study suggest that human sources of FC are a consistent contributor of FC in Tanyard Creek, Brooklyn Creek, and Trail Creek, and are either not a contributor or are a negligible contributor of FC in Carr Creek, Cedar Creek, Hunnicutt Creek, Kingswood Branch, and an unnamed tributary to Middle Oconee River.
- Results from all FC samples collected from Tanyard Creek, Brooklyn Creek, and Trail Creek as a part of the BST study exceeded the May-October state standard of 200 colony forming units (CFU)/100 milliliters (mL) of drinking water supply and recreational designated uses with the highest reporting limit (16,000 most probable number [MPN]/100 mL) for all three stations from the wet weather samples. However, the wet weather samples detected the same human gene biomarker levels as the dry weather samples. These results suggest that species other than humans are also contributing to the FC levels in Tanyard Creek, Brooklyn Creek, and Trail Creek.
- Because samples from Carr Creek, Hunnicutt Creek, Kingswood Branch, and an unnamed tributary to Middle Oconee River did not detect the human gene biomarker, species other than humans are contributing to the FC levels in those Creeks.
- Potential animal sources of FC were noted during stream walks and upland evaluations conducted in 2016 and 2017 as part of the Watershed Management Planning efforts and include dog, goose, and deer throughout most parts of ACC, and livestock in rural/agricultural areas.
- Based on the results of this study, next steps for consideration include:
    - Use data and analysis from the 2016/2017 Watershed Management Planning efforts to identify the most likely species and locations contributing to FC pollution in the listed streams.
    - Conduct BST to identify non-human species contributing to FC pollution. These may include species such as dog, goose, deer, and others as needed.

2.2.6 TSS Reduction BMPs

- Construction sites were inspected for watersheds with impairments for BioF to reduce sediment loads to receiving waters.
- During the reporting period, ACCGOV continued to increase the number of inspections in the Noketchee Creek and Carr Creek watersheds (which are listed as impaired for impacts to BioF) as well as the Middle Oconee watershed (which is listed as having impaired macroinvertebrate biota [BioM] above the confluence with Big Bear Creek). Street sweeping in watersheds with impairments for BioM are being evaluated by ACCGOV. ACCGOV's current street sweeping contract includes up to 35 additional miles of street sweeping to be used as necessary. ACCGOV continues to evaluate the allocation of these miles during fiscal year planning. A typical street sweeping program involves the deployment of street sweeper fleets on targeted routes based on schedules defined by desired load reduction goals and/or effectiveness. In ACC, the main objective is to target streets based on effectiveness.

2.2.7 Watershed Management Plans

Before 2018, the Arcadis, Tetra Tech, and ACC partnership completed watershed management documents for Brooklyn Creek, Hunnicutt Creek, Trail Creek, Tanyard Creek, Cedar Creek, Shoal Creek, Big Creek, Carr Creek, and McNutt Creek in accordance with the overarching goals of the Watershed Improvement Program. In 2018, the partnership completed WMPs for nine more watersheds, including Bear Creek, East Fork Trail Creek, Malcolm Branch, Middle Oconee River, North Oconee River, Sandy Creek, Sulphur Spring Branch, Turkey Creek, and Walton Creek. These recently completed plans will likely lead to additional initiatives to improve water quality.

The WMPs discuss the impaired water monitoring and results as they relate to characterizing the existing watershed and discussing water quality. Some of the watershed management needs and recommended management measures are tied to known impairments and/or the water quality data collected under the impaired waters monitoring program. For instance, the Middle Oconee is impaired for FC. Sampling as of the timeframe during which the WMP was being prepared (2017, finalized early 2018) confirmed issues with this. A recommended management measure identified in the WMP was MO-Res-01, also known as the Ben Burton Park Pet Waste and Managed Access Project. The project involves the augmentation of pet waste collection measures through the installation of pet waste stations and additional signage to reduce FC pollution in conjunction with construction of managed access points to the Middle Oconee River that include steps and a vegetated buffer to mitigate bank erosion. It would potentially deter park users from using unofficial access points through fencing and strategic vegetation. Benefits include nutrient uptake, runoff sediment reduction, and beautification.

3 RESULTS

Water quality monitoring data results collected during the study period are summarized below and are included in Appendix A.

3.1 Fecal Coliform

3.1.1 All Data

During the February 2020 to September 2020 period of record, a total of 523 grab samples (including duplicates and blanks) were tested for FC. Individual grab sample results were compiled and used to calculate three geometric means for 26 stations following sampling protocols (Table 5, Figure 2). Each geometric mean was computed based on results from four grab samples collected within a 30-day period, with no one grab sample collected less than 24 hours from the time of the previously collected sample. Grab samples used to compute geometric means did not overlap between the months of April and May or October and November to ensure that the results could be compared to Georgia FC water quality standards, which are presented as geometric mean criteria (Table 4).

Geometric means calculated for each station were plotted by date (Figure 2). The 2020 data set does not support statistically sound trend analysis; however, analysis that incorporates all geomeans collected since 2015 will be discussed in Section 4.2.

In Table 5, the Exceedances of Standard column indicates whether a geometric mean exceeded the standard. Each tick mark corresponds to a geometric mean in chronological order from left to right. A red tick mark indicates an exceedance, and a green tick mark indicates no exceedance of the applicable standard. In Table 5, the red and green colors of the cells containing geometric mean results indicate

whether sample results exceeded the water quality standard; red values indicate an exceedance, and green values indicate no exceedance.

Table 5. Fecal Coliform Bacteria Geometric Means (February 2020 - September 2020) and Comparison to State Standards

Date	Feb-20	Apr-20	Jun-20	Sep-20	
Station	FC Geometric Mean (#17) cfu/100 mL (Nov-Apr)	FC Geometric Mean (#18) cfu/100 mL (Nov-Apr)	FC Geometric Mean (#19) cfu/100 mL (May-Oct)	FC Geometric Mean (#20) cfu/100 mL (May-Oct)	Exceedences of Standard
BR-1	1287.6	2073.4	2744.1	3029.6	
BR-2	3279.0	2492.7	1756.5	964.1	
CA-1	599.1	1718.0	693.3	1017.3	
CED-1	1391.6	4267.0	939.8	906.0	
ETR-1	338.0	101.4	266.6	276.6	
ETR-2	1995.0	583.1	514.5	11018.4	
HC-1	591.5	17000.0	1663.1	932.5	
KB-1	465.0	1889.6	401.6	1922.1	
KB-3	591.5	1195.1	2559.3	4951.5	
MN-1	482.5	1418.6	714.1	2188.3	
MN-2	523.0	1355.4	431.0	993.7	
MN-3	305.4	1816.2	479.9	1054.3	
MO-1	1572.9	603.3	311.0	749.2	
MO-2	738.2	930.0	259.8	672.1	
MO-3	994.8	1565.1	271.6	411.1	
MO-4	1081.1	1071.9	570.4	727.9	
NO-2	1667.0	4112.8	405.3	851.7	
NO-3	1396.3	2224.3	849.2	397.5	
OC-1	998.6	1417.0	306.6	335.7	
TAN-1	1363.5	2559.3	3917.9	4263.7	
TAN-2	362.2	2414.7	1654.2	2190.9	
TR-1	1519.5	628.5	635.6	1269.8	
TR-3	2099.5	1671.2	882.7	875.1	
UT-1	651.4	1062.6	134.1	188.4	
WTR-1	328.5	321.7	195.0	488.0	
WTR-2	462.3	471.7	330.8	711.3	
State Standard	**1,000**	**1,000**	**200**	**200**	

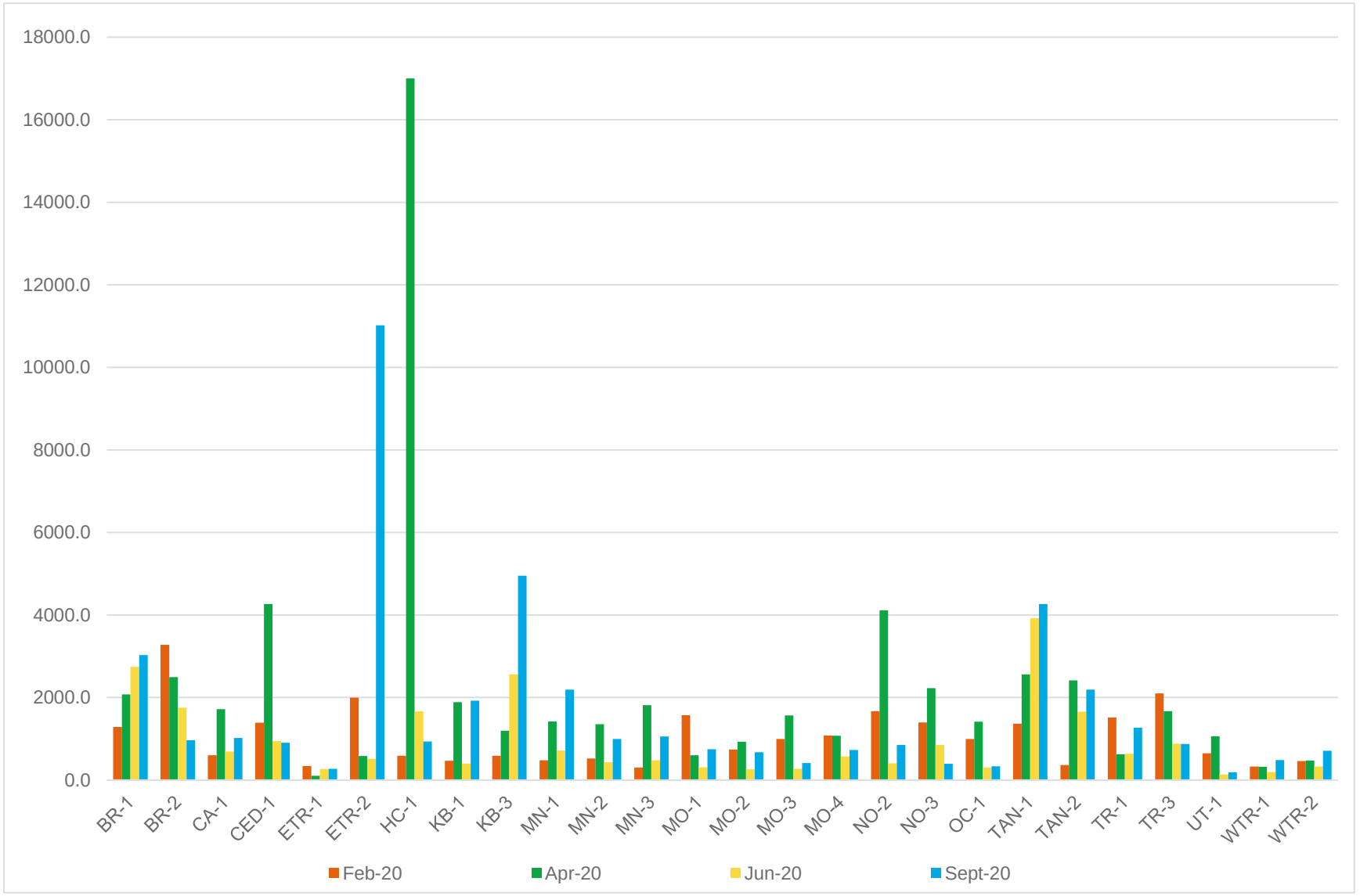

Figure 2. Fecal Coliform Geometric Means (February 2020 – September 2020)

Geometric means exceeded the state standard of 1,000 CFU/100 mL for 11 of the 26 stations for the February sampling event and for 19 of the 26 stations for the April sampling event. In June 2020, results from all stations except UT-1 and WTR-1 exceeded the FC geometric mean standard of no greater than 200 CFU/100 mL. In September 2020, results from all stations except UT-1 exceeded the standard.

FC results measured for individual grab samples were compared to the state water quality standard for FC single samples: <4,000 CFU/100 mL. The stations that exhibited exceedances, as well as the percentage of station samples that exceeded the standard, are listed below:

- 39% of samples for station TAN-1 exceeded the standard.
- 29% of samples for station HC-1 exceeded the standard.
- 28% of samples for station TAN-2 exceeded the standard.
- 26% of samples for station BR-1 exceeded the standard.
- 25% of samples for station BR-2 exceeded the standard.
- 22% of samples for station CED-1 exceeded the standard.
- 21% of samples for station ETR-2 exceeded the standard.
- 19% of samples for station NO-3 exceeded the standard.
- 18% of samples for stations KB-3, MN-1, and MN-2 exceeded the standard.
- 15% of samples for station MN-3 exceeded the standard.
- 12% of samples for station CA-1 exceeded the standard.
- 11% of samples for station KB-1, TR-1, and TR-3 exceeded the standard.
- 10% or less of samples for stations ETR-1, MO-1, MO-3, MO-4, NO-2, and OC-1 exceeded the standard.
- 0% of samples for all other stations exceeded the standard.

Individual grab sample FC data for the February 2020-September 2020 study period are provided in Appendix A. Results exceeding the standard are highlighted in red in the appendix.

3.1.2 November–April Data

Geometric means computed for FC grab samples were differentiated by either November–April or May-October timeframes to evaluate POC trends in these seasons and to compare them to applicable Georgia water quality standards. Results for the November – April period, which include data collected in February 2020 and April 2020, are presented in Table 6 and on Figure 3. In Table 6, the red and green colors of the cells containing geometric mean results indicate whether a sample exceeded the water quality standard; green values indicate no exceedance. Geometric means exceeded the state standard of 1,000 CFU/100 mL for 11 of the 26 stations in February and for 19 of the 26 stations in April.

Table 6. Fecal Coliform Bacteria Geometric Means (February 2020 and April 2020) and Exceedance of State Standards

Date	Feb-20	Apr-20	
Station	FC Geometric Mean (#17) cfu/100 mL (Nov-Apr)	FC Geometric Mean (#18) cfu/100 mL (Nov-Apr)	Exceedences of Standard
BR-1	1287.6	2073.4	
BR-2	3279.0	2492.7	
CA-1	599.1	1718.0	
CED-1	1391.6	4267.0	
ETR-1	338.0	101.4	
ETR-2	1995.0	583.1	
HC-1	591.5	17000.0	
KB-1	465.0	1889.6	
KB-3	591.5	1195.1	
MN-1	482.5	1418.6	
MN-2	523.0	1355.4	
MN-3	305.4	1816.2	
MO-1	1572.9	603.3	
MO-2	738.2	930.0	
MO-3	994.8	1565.1	
MO-4	1081.1	1071.9	
NO-2	1667.0	4112.8	
NO-3	1396.3	2224.3	
OC-1	998.6	1417.0	
TAN-1	1363.5	2559.3	
TAN-2	362.2	2414.7	
TR-1	1519.5	628.5	
TR-3	2099.5	1671.2	
UT-1	651.4	1062.6	
WTR-1	328.5	321.7	
WTR-2	462.3	471.7	
State Standard	**1,000**	**1,000**	

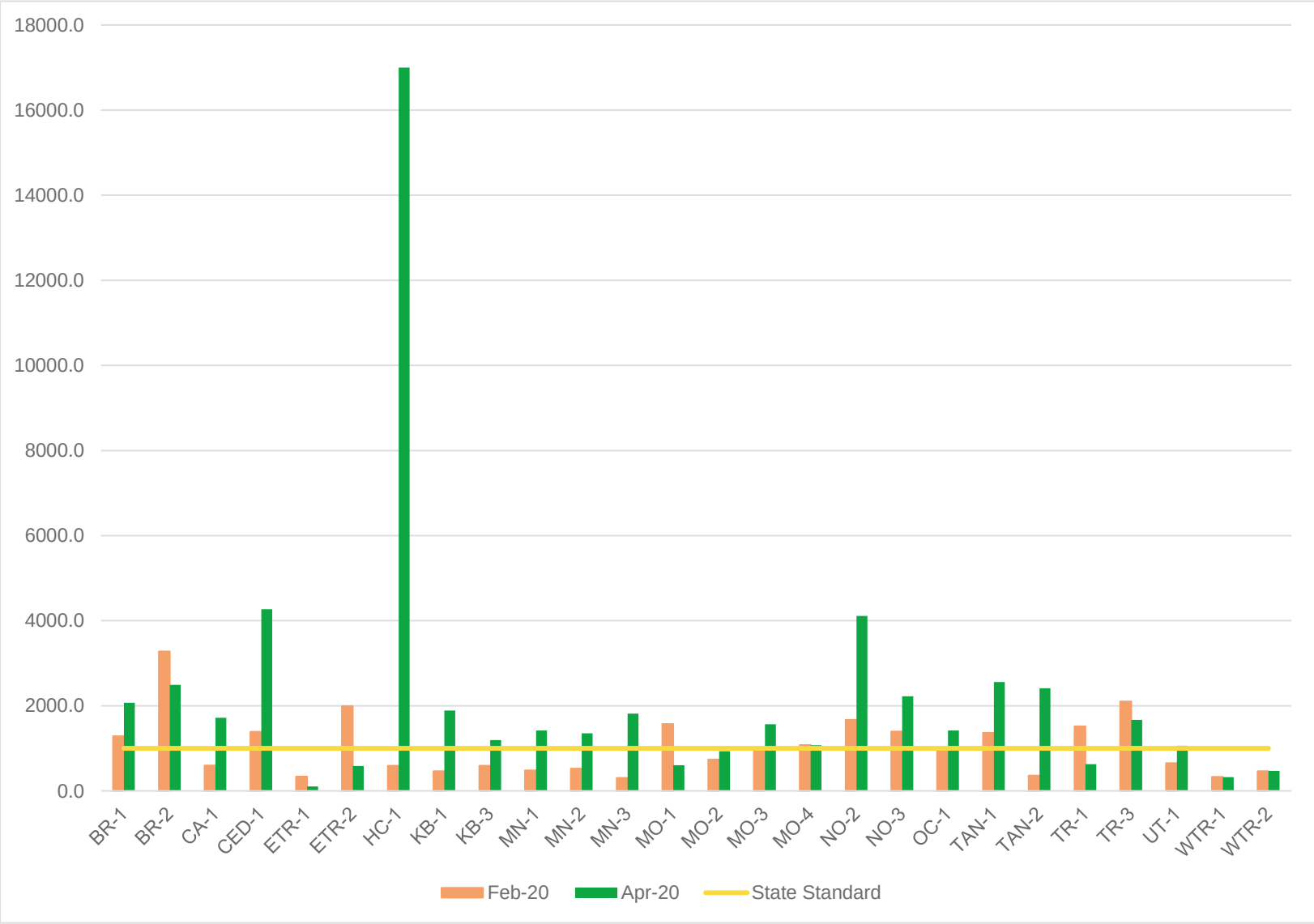

Figure 3. Fecal Coliform Geometric Means (February 2020 and April 2020)

3.1.3 May–October Data

Results for the May–October period, which include data collected in June 2020 and September 2020, are presented in Table 7 and on Figure 4. In Table 7, the red and green colors of the cells containing geometric mean results indicate whether results from a sample exceeded the water quality standard; red values indicate an exceedance, and green values indicate no exceedance. Two FC geometric means were computed during May-October for the 2020 study period. For the June sampling period, results from all stations exceeded the 200 CFU/100 mL state standard except UT-1 and WTR-1. For the September sampling period, results from all stations exceeded the state standard except UT-1.

Table 7. Fecal Coliform Bacteria Geometric Means (June 2020 and September 2020) and Exceedance of State Standards

Date	Jun-20	Sep-20	
Station	FC Geometric Mean (#19) cfu/100 mL (May-Oct)	FC Geometric Mean (#20) cfu/100 mL (May-Oct)	Exceedences of Standard
BR-1	2744.1	3029.6	
BR-2	1756.5	964.1	
CA-1	693.3	1017.3	
CED-1	939.8	906.0	
ETR-1	266.6	276.6	
ETR-2	514.5	11018.4	
HC-1	1663.1	932.5	
KB-1	401.6	1922.1	
KB-3	2559.3	4951.5	
MN-1	714.1	2188.3	
MN-2	431.0	993.7	
MN-3	479.9	1054.3	
MO-1	311.0	749.2	
MO-2	259.8	672.1	
MO-3	271.6	411.1	
MO-4	570.4	727.9	
NO-2	405.3	851.7	
NO-3	849.2	397.5	
OC-1	306.6	335.7	
TAN-1	3917.9	4263.7	
TAN-2	1654.2	2190.9	
TR-1	635.6	1269.8	
TR-3	882.7	875.1	
UT-1	134.1	188.4	
WTR-1	195.0	488.0	
WTR-2	330.8	711.3	
State Standard	**200**	**200**	

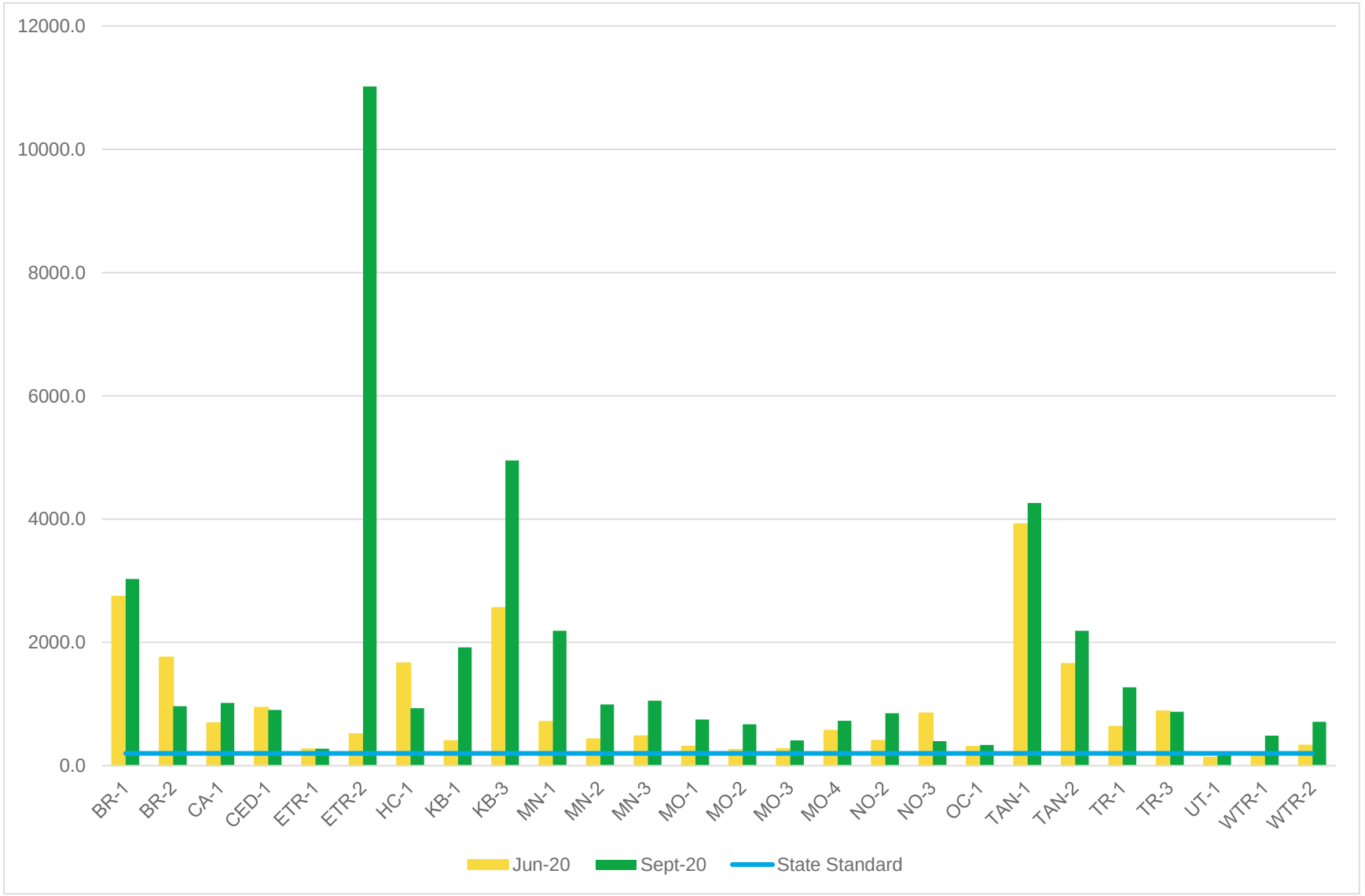

Figure 4. Fecal Coliform Geometric Means (June 2020 and September 2020)

3.2 pH

pH measurements collected for six stations during the study period are shown in Table 8 and on Figure 5. Results in green represent measurements within the standard limit, while results in red represent measurements outside of standard limits of 6.0 to 8.5. For KB-1, all measurements fell within the Georgia standard range for pH. For KB-3, ESC-1, NC-1, and NC-2, all but one measurement were within the standard range. For CA-1, three of the ten measurements fell below the standard range.

Table 8. pH Measurements

Date	KB-1	KB-3	CA-1	ESC-1	NC-1	NC-2
2/4-2/5/2020	6.20	6.54		6.41	6.63	6.57
2/12-2/13/2020	6.45	6.79	7.00	7.22	6.30	6.62
2/18-2/19/2020	7.61	7.17	7.19	6.81	6.83	6.47
2/25/2020	6.13	6.64				
4/13/2020	6.13	6.64		6.63	6.91	6.87
4/22-4/23/2020	6.60	7.20	7.04	6.87	6.70	6.97
6/8-6/9/2020	6.45	6.74	6.84	6.01	6.46	6.72
6/10-6/11/2020	6.10	6.40	6.88	6.05	7.09	6.44
6/15-6/16/2020	6.77	6.64	5.80	6.81	6.92	6.84
6/17-6/18/2020	6.83	6.34	6.02	6.87	6.70	6.91
9/2-9/3/2020	7.30	6.03	6.12	7.13	6.59	6.87
9/8-9/9/2020	6.63	7.01		6.91	6.72	6.71
9/10/2020	7.52	5.58	5.45	6.02	6.64	6.82
9/15-9/16/2020	7.01	6.78	5.77	5.82	5.47	5.65
Number of Samples	14	14	10	13	13	13
Min	6.10	5.58	5.45	5.82	5.47	5.65
Max	7.61	7.20	7.19	7.22	7.09	6.97
Median	6.53	6.64	6.86	6.81	6.70	6.72
Standard Deviation	0.5	0.3	0.5	0.4	0.2	0.2

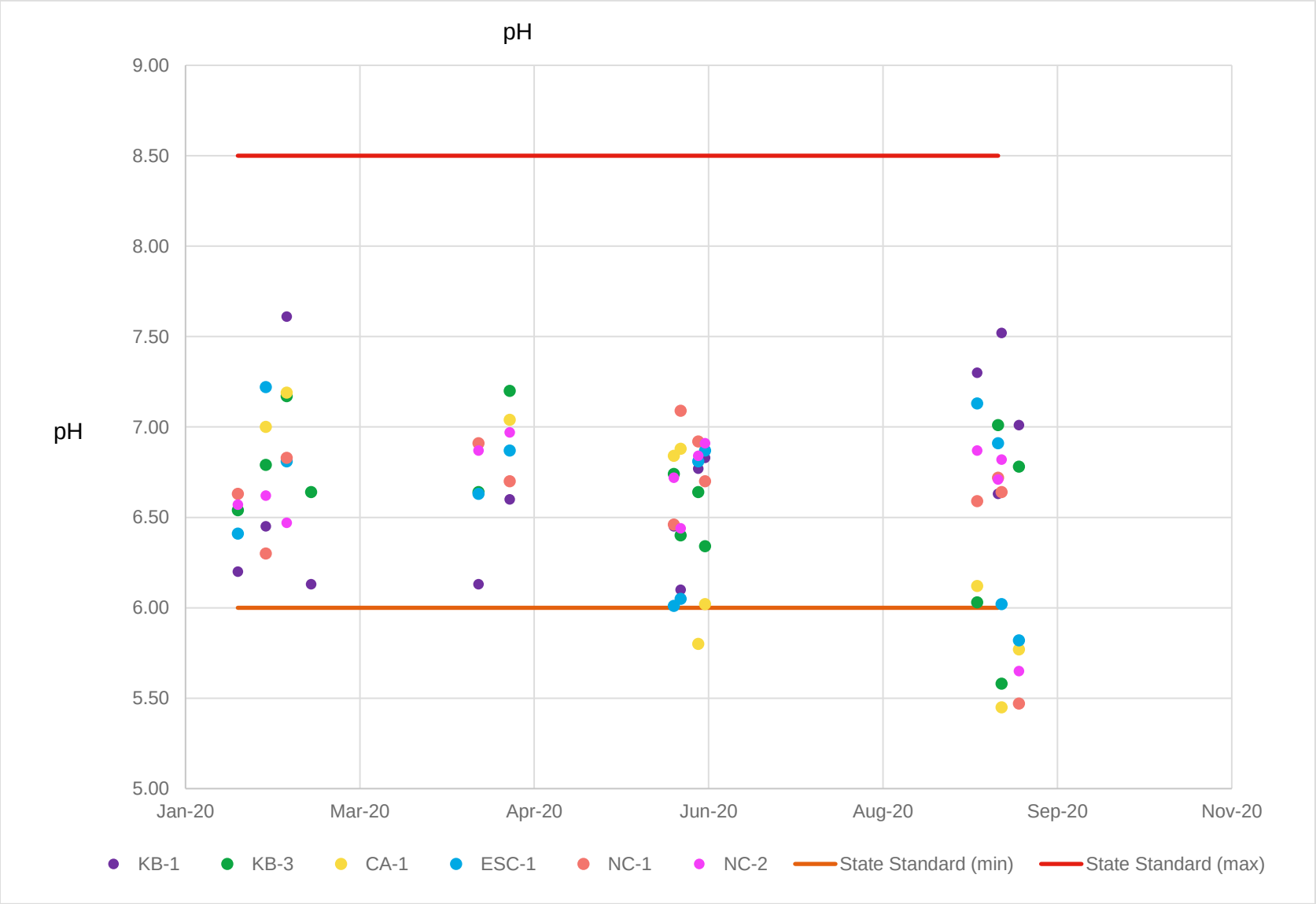

Figure 5. pH Measurements

3.3 Total Suspended Solids

TSS concentrations (milligrams [mg]/L) measured for CA-1, NC-1, NC-2, and MO-1 for the study period are presented in Table 9 and on Figure 6. Results for station MO-1 were significantly higher than the other stations. April TSS sampling at MO-1 was not performed as a result of an oversight in field sampling. Results for station CA-1 were high in February but were low for the rest of the year. Results for NC-1 and NC-2 were consistently between 3 and 7 mg/L, except for one spike at NC-1 in April.

Table 9. Total Suspended Solids (mg/L) Measured at CA-1, NC-1, NC-2, MO-1

Date	CA-1	NC-1	NC-2	MO-1
2/2020	11.70	4.29	5.00	35.20
4/2020	4.30	13.30	6.67	
6/2020	6.00	4.92	4.40	19.40
9/2020	4.60	6.50	3.53	13.80

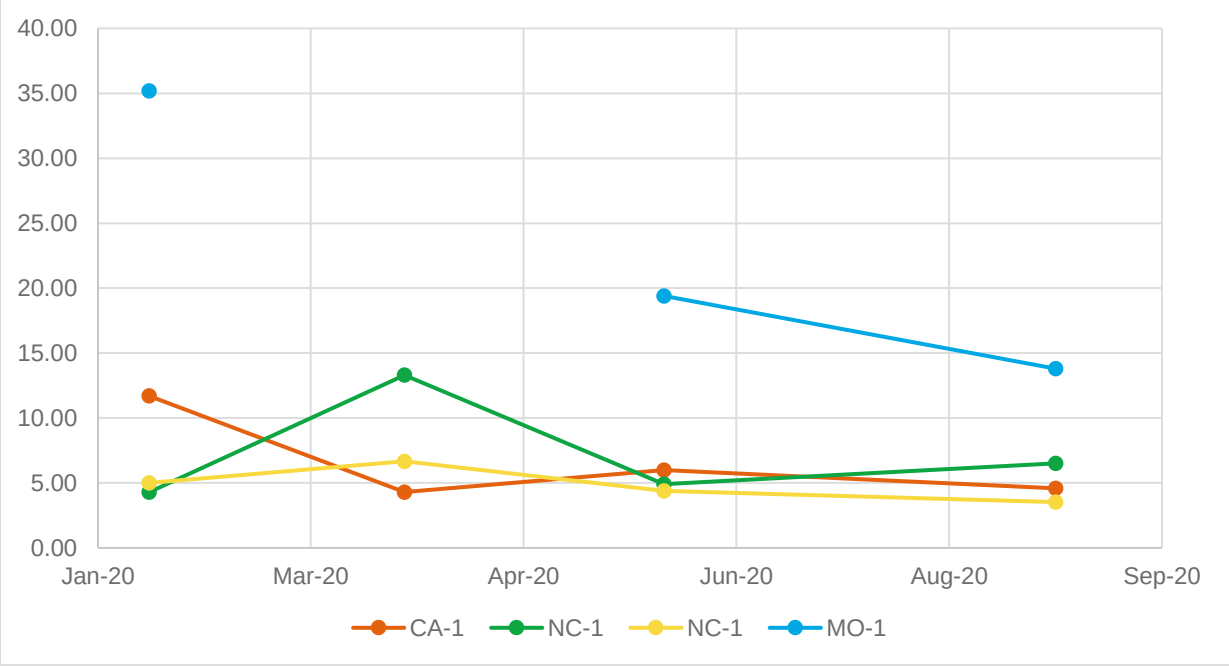

Figure 6. Total Suspended Solids Measured at CA-1, NC-1, NC-2, and MO-1

3.4 Quality Assurance/Quality Control

QA/QC procedures were followed during the data collection, data entry, and data analysis components of the project according to the protocols described in the Plan (January 2016). The QA/QC procedures included the collection of blank and duplicate samples throughout the data collection period, completion of chain-of-custody forms for grab samples delivered to the laboratory for analyses, calibration of the

water quality meter used to measure pH in-situ before each pH sampling event, and data entry and data verification checks on the data entered into the master Excel spreadsheet. In total, 34 blank samples and 35 duplicate samples were collected and analyzed during the study period of record.

4 DISCUSSION

4.1 Sampling Results

The reason exceedances of state standards for FC were more frequent for the May–October season compared to the November–April season is unclear. In some cases, it was due to the lower geometric mean criteria. During the May – October season, the state standard for geometric mean is 200 CFU/100 mL. During the November – April season, the state standard for geometric mean is 1,000 CFU/100 mL. Geometric means exceeded the state standard of 1,000 CFU/100 mL for 11 of the 26 stations in February and for 19 of the 26 stations in April. In June 2020, results from all stations except UT-1 and WTR-1 exceeded the FC geometric mean standard of no greater than 200 CFU/100 mL. In September 2020, results from all stations except UT-1 exceeded the standard.

The rainfall total for February is much higher than the 30-year average. The totals for April and September exceed the average as well. High rainfall could have contributed to high results in these months. The rainfall total for June did not exceed the average. Rainfall data in 2020 compared with the 30-year average (1981 – 2010) are shown in Table 10.

In addition, in March of 2020 the global COVID-19 pandemic resulted in a change in demand on sewer systems and septic systems serving residential dwellings as more of the population worked and learned from home. As these systems are often sources of fecal impairments, the increase loading on these systems might contribute to more exceedances of state standards as seen in the April, June, and September results.

Table 10. Monthly Rainfall Totals for Athens, Georgia (National Weather Service 2020)

	2020 Rainfall (in)	30-year Average (in)
February	11.05	4.48
April	3.85	3.15
June	2.66	4.18
September	6.08	3.94

All pH measurements for KB-1 fell within the Georgia standard range. For KB-3, ESC-1, NC-1, and NC-2, all but one measurement were within the standard range. For CA-1, three of the ten measurements fell below the standard range.

TSS levels for station MO-1 were significantly higher than the other stations. The cause of the high TSS results on the Middle Oconee is unclear but could be due to runoff from agricultural lands. Results for

station CA-1 were low except for a spike in February. Results for NC-1 and NC-2 were consistently low between 3 and 7 mg/L, except for one spike at NC-1 in April.

4.2 BMP Effectiveness Evaluation

The effectiveness of the BMPs described in Section 2.2 was evaluated in relation to water quality monitoring results collected since implementation of the Plan in October 2015. A summary of the effectiveness evaluations completed for each BMP is provided in Table 10. In general, BMPs are considered to be successful because of the implementation progress made by ACCGOV during the reporting period. However, many variables regarding BMP effectiveness and associated uncertainties are unknown and unmeasured. As a result, the evaluation of BMP effectiveness summarized in Table 11 is considered preliminary and qualitative.

Table 11. Best Management Practices Effectiveness Evaluation

BMP Type	Targeted POCs	Implementation Status	Effectiveness Evaluation	Rationale
Pet waste stations	FC	Implemented, ongoing	Effective	ACC staff continues to actively monitor for pet waste "hot spots" and will install additional pet waste stations or move current stations based on needs.
Sewer evaluation	FC	Implemented, ongoing	Effective	About 3,180,291 feet of sewer lines cleaned by Rodder trucks and flash/vacuum trucks.
Septic system management	FC	Implemented, ongoing	Effective	ACC continued public education and outreach efforts for proper septic system management.
Street sweeping	FC and TSS	Implemented, ongoing	Effective	In 2020, approximately 918 miles of roadways were swept, resulting in removal of 8,700 cubic feet of debris from roadways.
TSS reduction: increased construction inspections in Noketchee Creek, Carr Creek, and Middle Oconee watersheds	TSS	Implemented, ongoing	Effective	In 2020, ACCGOV continued inspections in the Noketchee Creek and Carr Creek watersheds, as well as the Middle Oconee watershed. TSS results measured for NC-1 and NC-2 during the 2020 reporting period were low. Most results ranged from 3 mg/L to 7 mg/L.

Arcadis also looked at data trends over the entire monitoring period to assess general BMP effectiveness. Appendix B contains charts showing FC by stream, pH measurements, and TSS results since sampling began. Each dataset was fitted with a trendline. TSS results for MO-1 and pH results for CA-1, ESC-1, NC-1, and NC-2 were not analyzed for data trends as 2020 was the first year these samples were taken. Table 12 contains statements concerning the trend of water quality in each stream. It is difficult to make statements about water quality trends based on these trendlines. The data are scattered, producing very low R-squared values. For FC, results at all stations are fluctuating. For pH, measurements at both stations on Kingswood Branch are fluctuating. For TSS, measurements at all stations are fluctuating.

Table 12. Trends in Water Quality by Stream

Reach	FC	pH	TSS
Brooklyn Creek	Fluctuating		
Carr Creek	Fluctuating		Fluctuating
Cedar Creek	Fluctuating		
East Fork Trail Creek	Fluctuating		
Hunnicut Creek	Fluctuating		
Kingswood Branch	Fluctuating	Fluctuating	
McNutt Creek	Fluctuating		
Middle Oconee River	Fluctuating		
Noketchee Creek	Fluctuating		Fluctuating
North Oconee River	Fluctuating		
Oconee River	Fluctuating		
Tanyard Creek	Fluctuating		
Trail Creek	Fluctuating		
West Fork Trail Creek	Fluctuating		

Water quality in all stream reaches appears to be fluctuating. Sample measurements for all POCs are scattered around linear trendlines. Population growth, development, and aging infrastructure are possible explanations for fluctuating water quality.

5 CONCLUSIONS

The MS4 Permit requires permittees to review the Georgia 303(d) List annually to determine if additional impaired waters within the Permit area have been listed. A BioF impairment was added to the approved 2020 list for Cedar Creek. BioF impairments indicate an issue with TSS. ACC will evaluate the monitoring plan in 2021 and consider adding TSS monitoring at station CED-1.

It is difficult to evaluate BMP effectiveness and trends in water quality due to the limited and scattered data sets and many other unstudied variables and uncertainties. ACCGOV has made significant progress

on BMP initiatives since the implementation of the Plan in October 2015. Water quality appears to be fluctuating, and ACCGOV plans to continue with significant BMP initiatives in 2020 to reduce the impacts of POCs and ultimately achieve water quality standards for receiving waters. It is possible that the fluctuating water quality improvement could be due to population growth; development; aging infrastructure; and an increase in the pet population, use of parks, and waste despite the pet waste management program. One project ACCGOV is implementing to address aging infrastructure and a growing population is the Brooklyn Creek Interceptor Improvements. The project includes replacing the sewer interceptor from the trunk line at the Middle Oconee River up to King Street, as well as increasing pipe size to provide greater capacity based on population projections for the future. Another project ACCGOV is considering is to retrofit an existing underground detention basin located on the Firefly Trail near the intersection with E. Broad Street. Runoff from Clayton Street between Pulaski and Thomas Streets and surrounding areas would be directed here and treated with a proprietary water quality practice.

ACCGOV also plans to begin implementing projects suggested in the nine WMPs completed in 2018.

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APPENDIX A

Water Quality Sample Results (February 2020 – September 2020)

FC Raw Data

Date collected	Time collected	Stream	Station	Blank or duplicate	Less or greater than	Reported value	Value for geomean	Weather notes	Water notes	Other notes	Geomean number	Season
2/4/2020	0918	McNutt Creek	MN3			900	900	Overcast. 60s	Clear water, moderate flow		17	November-April
2/4/2020	0918	McNutt Creek	MN3	Duplicate		230	#N/A	Overcast. 60s	Clear water, moderate flow		17	November-April
2/4/2020	1000	Middle Oconee	MO1			500	500	Overcast. 60s	Turbid brown. Visibility 1'		17	November-April
2/4/2020	1000	Middle Oconee	MO1	Blank	<	20	#N/A	Overcast. 60s	Turbid brown. Visibility 1'		17	November-April
2/4/2020	1015	Hunnicutt Creek	HC1			800	800	Overcast. 60s	Clear water, moderate flow		17	November-April
2/4/2020	1020	Middle Oconee	MO2			500	500	Overcast. 60s	Turbid brown. Visibility 1.5'. Moderate flow		17	November-April
2/4/2020	1050	Kingswood Branch	KB1			1700	1700	Overcast. 60s	Clear, low flow		17	November-April
2/4/2020	1058	Kingswood Branch	KB3			1700	1700	Overcast. 60s	Surface sheen. No flow		17	November-April
2/4/2020	1106	McNutt Creek	MN2			1100	1100	Overcast. 60s	Clear water, moderate flow. Visibility 2'		17	November-April
2/4/2020	1125	McNutt Creek	MN1			220	220	Overcast. 60s	Clear water, moderate flow. Visibility 3'		17	November-April
2/4/2020	1135	Middle Oconee	MO3			170	170	Overcast. 60s	Clear water, moderate flow		17	November-April
2/4/2020	1200	Unnamed Tributary	UT1			2400	2400	Overcast. 60s	Clear water, moderate flow		17	November-April
2/4/2020	1225	Middle Oconee	MO4			230	230	Overcast. 60s	Clear water, moderate flow		17	November-April
2/4/2020	1240	Oconee River	OC1			500	500	Overcast. 60s	Clear water, moderate flow		17	November-April
2/4/2020	1255	Cedar Creek	CED1			5000	5000	Overcast. 60s	Clear water, moderate flow		17	November-April
2/4/2020	1310	Carr Creek	CA1			230	230	Overcast. 60s	Clear water, moderate flow		17	November-April
2/5/2020	0905	North Oconee	NO3			220	220	Overcast, intermittent rain. 60s	Turbid, olive/green-brown. Mod-high flow		17	November-April
2/5/2020	0920	Brooklyn Creek	BR2			800	800	Overcast, intermittent rain. 60s	Clear water, moderate flow		17	November-April
2/5/2020	0920	Brooklyn Creek	BR2	Blank	<	20	#N/A	Overcast, intermittent rain. 60s	Clear water, moderate flow		17	November-April
2/5/2020	0940	Brooklyn Creek	BR1			700	700	Overcast, intermittent rain. 60s	Clear water, moderate flow		17	November-April
2/5/2020	0940	Brooklyn Creek	BR1	Duplicate		1300	#N/A	Overcast, intermittent rain. 60s	Clear water, moderate flow		17	November-April
2/5/2020	0955	Tanyard Creek	TAN2			220	220	Overcast, intermittent rain. 60s	Clear water, moderate-slow flow		17	November-April
2/5/2020	1005	Tanyard Creek	TAN1			80	80	Overcast, intermittent rain. 60s	Faint gray/brown tint. Moderate flow		17	November-April
2/5/2020	1130	West Trail Creek	WTR1			40	40	Overcast, intermittent rain. 60s	Clear water, moderate flow		17	November-April
2/5/2020	1140	East Trail Creek	ETR1			120	120	Overcast, intermittent rain. 60s	Faintly turbid. Moderate flow		17	November-April
2/5/2020	1200	East Trail Creek	ETR2			3000	3000	Overcast, intermittent rain. 60s	Clear water, moderate flow		17	November-April
2/5/2020	1215	West Trail Creek	WTR2			170	170	Overcast, intermittent rain. 60s	Brown/green slight turbidity. Moderate flow		17	November-April
2/5/2020	1230	Trail Creek	TR1			1400	1400	Overcast, intermittent rain. 60s	Brown/green moderate turbidity. Moderate flow		17	November-April
2/5/2020	1240	Trail Creek	TR3			2400	2400	Overcast, intermittent rain. 60s	Brown/green turbid. Moderate flow		17	November-April
2/5/2020	1245	North Oconee	NO2			130	130	Overcast, intermittent rain. 60s	Turbid, moderate flow. Visibility ~1'		17	November-April
2/12/2020	0835	McNutt Creek	MN3			230	230	Partly cloudy. 50s	Slightly murky, brown, opaque, fast flowing.		17	November-April
2/12/2020	0835	McNutt Creek	MN3	Duplicate		230	#N/A	Partly cloudy. 50s	Slightly murky, brown, opaque, fast flowing.		17	November-April
2/12/2020	0900	Middle Oconee	MO1			2400	2400	Partly cloudy. 50s	Orange, very fast flowing. High water level.	Sand on bank.	17	November-April
2/12/2020	0900	Middle Oconee	MO1	Blank	<	20	#N/A	Partly cloudy. 50s	Orange, very fast flowing. High water level.		17	November-April
2/12/2020	0935	Hunnicutt Creek	HC1			300	300	Partly cloudy. 50s	Gray tint. Faster flow than normal		17	November-April
2/12/2020	0945	Middle Oconee	MO2			3000	3000	Partly cloudy. 50s	Brown/orange water, very high water level. Low visibility	Sand all oeer park.	17	November-April
2/12/2020	1000	Kingswood Branch	KB1			110	110	Partly cloudy. 50s	Clear, low flow.	Recently mowed banks	17	November-April
2/12/2020	1015	Kingswood Branch	KB3			300	300	Partly cloudy. 50s	Gray tint. No movement in water, higher than normal water level		17	November-April
2/12/2020	1020	McNutt Creek	MN2			500	500	Partly cloudy. 50s	Slight brown tint, normal water level. Fast flowing		17	November-April
2/12/2020	1045	McNutt Creek	MN1			800	800	Partly cloudy. 50s	Brown tint. Fast flowing. High water level		17	November-April
2/12/2020	1055	Middle Oconee	MO3			2400	2400	Partly cloudy. 50s	Very high water level. Fast flowing, brown		17	November-April
2/12/2020	1120	Unnamed Tributary	UT1			300	300	Partly cloudy. 50s	Flow normal, clear		17	November-April
2/12/2020	1145	Middle Oconee	MO4			3000	3000	Partly cloudy. 50s	Very high water level. Fast flow, brown/orange		17	November-April
2/12/2020	1205	Oconee River	OC1			9000	9000	Partly cloudy. 50s	Very high water level. Fast flow, brown/orange		17	November-April
2/12/2020	1215	Cedar Creek	CED1			300	300	Partly cloudy. 50s	Slight gray tint, normal flow		17	November-April
2/12/2020	1230	Carr Creek	CA1			140	140	Partly cloudy. 50s	Grey tint		17	November-April
2/13/2020	0925	North Oconee	NO3			2400	2400	Heavy rain. 60s	Very high flow. Brown water		17	November-April
2/13/2020	0945	Brooklyn Creek	BR2		>	16000	17000	Heavy rain. 60s	Very high flow. Brown water		17	November-April
2/13/2020	0956	Brooklyn Creek	BR1		>	16000	17000	Heavy rain. 60s	Very high flow. Brown water	Combined sewer strong sewage smell. Black pipe nearby was leaking	17	November-April
2/13/2020	1015	Tanyard Creek	TAN2		>	16000	17000	Heavy rain. 60s	Very high flow. Brown/gray water		17	November-April
2/13/2020	1024	Tanyard Creek	TAN1			16000	16000	Heavy rain. 60s	Very high flow. Brown water		17	November-April
2/13/2020	1140	West Trail Creek	WTR1			2800	2800	Heavy rain. 60s	High flow. Brown water		17	November-April
2/13/2020	1140	West Trail Creek	WTR1	Duplicate		1700	#N/A	Heavy rain. 60s	High flow. Brown water		17	November-April
2/13/2020	1150	East Trail Creek	ETR1			16000	16000	Heavy rain. 60s	High flow. Brown water		17	November-April
2/13/2020	1150	East Trail Creek	ETR1	Blank	<	20	#N/A	Heavy rain. 60s	High flow. Brown water		17	November-April
2/13/2020	1210	East Trail Creek	ETR2			16000	16000	Heavy rain. 60s	High flow. Brown water		17	November-April
2/13/2020	1230	West Trail Creek	WTR2			2400	2400	Heavy rain. 60s	High flow. Brown water		17	November-April

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Date collected	Time collected	Stream	Station	Blank or duplicate	Less or greater than	Reported value	Value for geomean	Weather Notes	Water Notes	Other Notes	Geomean	Season
2/13/2020	1245	Trail Creek	TR1			16000	16000	Heavy rain. 60s	High flow. Brown water		17	November-April
2/13/2020	1300	Trail Creek	TR3			16000	16000	Heavy rain. 60s	High flow. Brown water		17	November-April
2/13/2020	1300	North Oconee	NO2			3000	3000	Heavy rain. 60s	High flow. Brown water		17	November-April
2/18/2020	0910	McNutt Creek	MN3			140	140	Overcast w/ showers. 60s	Turbid, moderate flow. Light brown		17	November-April
2/18/2020	0910	McNutt Creek	MN3	Duplicate		230	#N/A	Overcast w/ showers. 60s	Turbid, moderate flow. Light brown		17	November-April
2/18/2020	0940	Middle Oconee	MO1			1700	1700	Overcast w/ showers. 60s	Very turbid, low visibility. Moderate flow, brown		17	November-April
2/18/2020	0940	Middle Oconee	MO1	Blank	<	20	#N/A	Overcast w/ showers. 60s	Very turbid, low visibility. Moderate flow, brown		17	November-April
2/18/2020	1000	Hunnicutt Creek	HC1			170	170	Overcast w/ showers. 60s	Slightly turbid. High visibility, moderate flow		17	November-April
2/18/2020	1005	Middle Oconee	MO2			90	90	Overcast w/ showers. 60s	Very turbid brown. Visibility 1', moderate flow		17	November-April
2/18/2020	1020	Kingswood Branch	KB1			500	500	Overcast w/ showers. 60s	Clear, moderate flow		17	November-April
2/18/2020	1035	Kingswood Branch	KB3			800	800	Overcast w/ showers. 60s	Green tint, moderate turbidity		17	November-April
2/18/2020	1040	McNutt Creek	MN2			170	170	Overcast w/ showers. 60s	Low-moderate turbidity, slightly brown, moderate flow		17	November-April
2/18/2020	1055	McNutt Creek	MN1			110	110	Overcast w/ showers. 60s	Modreate turbidity, moderate flow, slight brown		17	November-April
2/18/2020	1110	Middle Oconee	MO3			800	800	Overcast w/ showers. 60s	Turbid, brown, low visibility, moderate flow		17	November-April
2/18/2020	1125	Unnamed Tributary	UT1			500	500	Overcast w/ showers. 60s	Clear/low turbidity, moderate flow		17	November-April
2/18/2020	1145	Middle Oconee	MO4			220	220	Overcast w/ showers. 60s	Very turbid, brown, 1' visibility, moderate flow		17	November-April
2/18/2020	1200	Oconee River	OC1			130	130	Overcast w/ showers. 60s	Very turbid, brown, 1' visibility, moderate flow		17	November-April
2/18/2020	1215	Cedar Creek	CED1			500	500	Overcast w/ showers. 60s	Low turbidity, slight tan/brown, moderate flow		17	November-April
2/18/2020	1230	Carr Creek	CA1			5000	5000	Overcast w/ showers. 60s	Slight turbidity, gray/brown, moderate flow		17	November-April
2/19/2020	0915	North Oconee	NO3			9000	9000	Overcast, occasional sprinkles. 50s	Very turbid, brown, high flow		17	November-April
2/19/2020	0935	Brooklyn Creek	BR2		>	16000	17000	Overcast, occasional sprinkles. 50s	Low-moderate turbidity, slightly brown, moderate-high flow		17	November-April
2/19/2020	0945	Brooklyn Creek	BR1			1100	1100	Overcast, occasional sprinkles. 50s	Low turbidity, slightly brown, moderate flow		17	November-April
2/19/2020	1000	Tanyard Creek	TAN2			230	230	Overcast, occasional sprinkles. 50s	Moderate turbidity, slight green/brown, moderate flow		17	November-April
2/19/2020	1010	Tanyard Creek	TAN1			9000	9000	Overcast, occasional sprinkles. 50s	Light turbidity, green/gray, moderate flow		17	November-April
2/19/2020	1110	West Trail Creek	WTR1			1300	1300	Overcast, occasional sprinkles. 50s	Very turbid, brown, moderate flow. Visibility ~1'		17	November-April
2/19/2020	1130	East Trail Creek	ETR1			170	170	Overcast, occasional sprinkles. 50s	Slight brown/green turbidity, moderate-high flow		17	November-April
2/19/2020	1130	East Trail Creek	ETR1	Duplicate		500	#N/A	Overcast, occasional sprinkles. 50s	Slight brown/green turbidity, moderate-high flow		17	November-April
2/19/2020	1150	East Trail Creek	ETR2			1100	1100	Overcast, occasional sprinkles. 50s	Moderate turbidity, brown, moderate flow		17	November-April
2/19/2020	1150	East Trail Creek	ETR2	Blank	<	20	#N/A	Overcast, occasional sprinkles. 50s	Moderate turbidity, brown, moderate flow		17	November-April
2/19/2020	1200	West Trail Creek	WTR2			1400	1400	Overcast, occasional sprinkles. 50s	Turbid, brown, moderate flow		17	November-April
2/19/2020	1210	Trail Creek	TR1			1700	1700	Overcast, occasional sprinkles. 50s	Very turbid, brown. Moderate-high flow		17	November-April
2/19/2020	1225	Trail Creek	TR3			2200	2200	Overcast, occasional sprinkles. 50s	Very turbid, brown. Moderate-high flow		17	November-April
2/19/2020	1230	North Oconee	NO2			9000	9000	Overcast, occasional sprinkles. 50s	Very turbid, brown. Moderate-high flow		17	November-April
2/25/2020	0925	McNutt Creek	MN3			300	300	Rain prevous day. Overcast. 50s	Moderate turbidity, slightly brown. >1' visibility		17	November-April
2/25/2020	0925	McNutt Creek	MN3	Duplicate		500	#N/A	Rain prevous day. Overcast. 50s	Moderate turbidity, slightly brown. >1' visibility		17	November-April
2/25/2020	0950	Middle Oconee	MO1			3000	3000	Rain prevous day. Overcast. 50s	Moderate turbidity, brown. >1' visibility		17	November-April
2/25/2020	0950	Middle Oconee	MO1	Blank	<	20	#N/A	Rain prevous day. Overcast. 50s	Moderate turbidity, brown. >1' visibility		17	November-April
2/25/2020	1010	Hunnicutt Creek	HC1			3000	3000	Rain prevous day. Overcast. 50s	Slight turbidity, tan/brown		17	November-April
2/25/2020	1015	Middle Oconee	MO2			2200	2200	Rain prevous day. Overcast. 50s	Moderate-high turbidity. Visibility ~1'. Brown		17	November-April
2/25/2020	1025	Kingswood Branch	KB1			500	500	Rain prevous day. Overcast. 50s	Very slight turbidity, brown		17	November-April
2/25/2020	1035	Kingswood Branch	KB3			300	300	Rain prevous day. Overcast. 50s	Slight turbidity, brown/green		17	November-April
2/25/2020	1045	McNutt Creek	MN2			800	800	Rain prevous day. Overcast. 50s	Moderate turbidity, brown. Visibility >1'		17	November-April
2/25/2020	1055	McNutt Creek	MN1			2800	2800	Rain prevous day. Overcast. 50s	Turbid, brown. Visibility ~1'		17	November-April
2/25/2020	1110	Middle Oconee	MO3			3000	3000	Rain prevous day. Overcast. 50s	Turbid, brown. Lot of woody debris/particles. Visibility 1'		17	November-April
2/25/2020	1130	Unnamed Tributary	UT1			500	500	Rain prevous day. Overcast. 50s	Clear/low-no turbidity. Moderate flow		17	November-April
2/25/2020	1145	Middle Oconee	MO4			9000	9000	Rain prevous day. Overcast. 50s	Turbid. Woody debris/particles. Moderate flow, visibility ~1'		17	November-April
2/25/2020	1200	Oconee River	OC1			1700	1700	Rain prevous day. Overcast. 50s	Turbid, moderate flow. Woody debris/particles. Visibility ~1'		17	November-April
2/25/2020	1215	Cedar Creek	CED1			5000	5000	Rain prevous day. Overcast. 50s	Low-moderate turbidity, slightly brown, moderate flow		17	November-April
2/25/2020	1230	Carr Creek	CA1			800	800	Rain prevous day. Overcast. 50s	Low turbidity, gray/green tint, moderate flow		17	November-April
2/26/2020	0935	North Oconee	NO3			800	800	Overcast, mostly cloudy. Low 50s	Very fast flowing, brown water, high water level		17	November-April
2/26/2020	0935	North Oconee	NO3	Duplicate		500	#N/A	Overcast, mostly cloudy. Low 50s	Very fast flowing, brown water, high water level		17	November-April
2/26/2020	0952	Brooklyn Creek	BR2			500	500	Overcast, mostly cloudy. Low 50s	Gray tint, normal flow		17	November-April
2/26/2020	0952	Brooklyn Creek	BR2	Blank	<	20	#N/A	Overcast, mostly cloudy. Low 50s	Gray tint, normal flow		17	November-April
2/26/2020	1005	Brooklyn Creek	BR1			210	210	Overcast, mostly cloudy. Low 50s	Clear, normal flow		17	November-April
2/26/2020	1020	Tanyard Creek	TAN2			20	20	Overcast, mostly cloudy. Low 50s	Clear, normal flow		17	November-April
2/26/2020	1027	Tanyard Creek	TAN1			300	300	Overcast, mostly cloudy. Low 50s	Slight gray tint, normal flow		17	November-April
2/26/2020	1105	West Trail Creek	WTR1			80	80	Overcast, mostly cloudy. Low 50s	Slightly brown water, normal flow		17	November-April
2/26/2020	1114	East Trail Creek	ETR1			40	40	Overcast, mostly cloudy. Low 50s	Slightly gray tint. Normal flow		17	November-April
2/26/2020	1145	East Trail Creek	ETR2			300	300	Overcast, mostly cloudy. Low 50s	Slightly brown, normal flow		17	November-April
2/26/2020	1213	West Trail Creek	WTR2			80	80	Overcast, mostly cloudy. Low 50s	Slightly brown, normal flow		17	November-April
2/26/2020	1227	Trail Creek	TR1			140	140	Overcast, mostly cloudy. Low 50s	Brown tint, fast flow		17	November-April

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Date collected	Time collected	Stream	Station	Blank or duplicate	Less or greater than	Reported value	Value for geomean	Weather Notes	Water Notes	Other Notes	Geomean	Season
2/26/2020	1247	Trail Creek	TR3			230	230	Overcast, mostly cloudy. Low 50s	Brown tint, normal flow		17	November-April
2/26/2020	1254	North Oconee	NO2			2200	2200	Overcast, mostly cloudy. Low 50s	Brown, high flow		17	November-April
4/13/2020	0720	McNutt Creek	MN3			16000	16000	Clear, 60s	Very turbid, "chocolate milk". Moderate flow, 1' visibility		18	November-April
4/13/2020	0720	McNutt Creek	MN3	Duplicate		5000	#N/A	Clear, 60s	Very turbid, "chocolate milk". Moderate flow, 1' visibility		18	November-April
4/13/2020	0745	Middle Oconee	MO1			800	800	Clear, 60s	Turbid brown. Mod-high flow, 1' visibility		18	November-April
4/13/2020	0810	Hunnicutt Creek	HC1		>	16000	17000	Clear, 60s	Slightly turbid, tan. High flows		18	November-April
4/13/2020	0815	Middle Oconee	MO2			800	800	Clear, 60s	Turbid brown, mod-high flows. 1' visibility		18	November-April
4/13/2020	0830	Kingswood Branch	KB1			3000	3000	Clear, 60s	No turbidity. Moderate flow, clear.		18	November-April
4/13/2020	0840	Kingswood Branch	KB3			3000	3000	Clear, 60s	Moderate flow. Slight gray/brown turbidity		18	November-April
4/13/2020	0850	McNutt Creek	MN2			5000	5000	Clear, 60s	Very turbid, "chocolate milk". Mod-high flow, low visibility 0.5'		18	November-April
4/13/2020	0905	McNutt Creek	MN1			5000	5000	Clear, 60s	Very turbid, "chocolate milk". Mod-high flow, low visibility		18	November-April
4/13/2020	0915	Middle Oconee	MO3			3000	3000	Clear, 60s	Turbid brown. Moderate flow, visibility 1'		18	November-April
4/13/2020	0935	Unnamed Tributary	UT1			3000	3000	Clear, 60s	Clear, no turbidity. Mod flow		18	November-April
4/13/2020	0955	Middle Oconee	MO4			800	800	Clear, 60s	Turbid brown. Moderate flow, visibility 1'	A lot of fine debris	18	November-April
4/13/2020	1015	Oconee River	OC1			3000	3000	Clear, 60s	Very turbid, "chocolate milk", mod flow	Lots of med-fine debris	18	November-April
4/13/2020	1025	Cedar Creek	CED1		>	16000	17000	Clear, 60s	Mod turbidity, mod flow, brown		18	November-April
4/13/2020	1045	Carr Creek	CA1			1100	1100	Clear, 60s	Low/slight turbidity, gray, mod flow		18	November-April
4/13/2020	1045	Carr Creek	CA1	Blank	<	20	#N/A	Clear, 60s	Low/slight turbidity, gray, mod flow		18	November-April
4/14/2020	0800	North Oconee	NO3			16000	16000		Mod turb brown, moderate flow. Visibility 1-2'		18	November-April
4/14/2020	0800	North Oconee	NO3	Duplicate		5000	#N/A		Mod turb brown, moderate flow. Visibility 1-2'		18	November-April
4/14/2020	0815	Brooklyn Creek	BR2			9000	9000		Clear/low turbidity, faintly brown/gray moderate flow		18	November-April
4/14/2020	0815	Brooklyn Creek	BR2	Blank	<	20	#N/A		Clear/low turbidity, faintly brown/gray moderate flow		18	November-April
4/14/2020	0825	Brooklyn Creek	BR1			2400	2400		Clear, mod flow		18	November-April
4/14/2020	0835	Tanyard Creek	TAN2			5000	5000		Clear, mod flow		18	November-April
4/14/2020	0840	Tanyard Creek	TAN1			5000	5000		Clear/low turbidity, very faintly gray. Mod flow		18	November-April
4/14/2020	0930	West Trail Creek	WTR1			300	300		Slightly turbid brown. Mod flow		18	November-April
4/14/2020	0940	East Trail Creek	ETR1			40	40		Clear, mod flow	Faint dead animal smell? No animal	18	November-April
4/14/2020	1000	East Trail Creek	ETR2			170	170		Slight turbidity, brown, mod flow		18	November-April
4/14/2020	1010	West Trail Creek	WTR2			130	130		Mod turbidity, gray/brown. Mod flow		18	November-April
4/14/2020	1020	Trail Creek	TR1			300	300		Mod turbidity, gray/brown. Mod flow		18	November-April
4/14/2020	1030	Trail Creek	TR3			2400	2400		Turbid brown, slight gray. Mod flow		18	November-April
4/14/2020	1035	North Oconee	NO2		>	16000	17000		Turbid brown, mod flow. Visibility 1'		18	November-April
4/15/2020	0745	McNutt Creek	MN3			170	170		Clear, no turbidity. Baseflow		18	November-April
4/15/2020	0745	McNutt Creek	MN3	Duplicate		800	#N/A		Clear, no turbidity. Baseflow		18	November-April
4/15/2020	0805	Middle Oconee	MO1			2400	2400		Turbid brown, baseflow. Visibility 1'		18	November-April
4/15/2020	0805	Middle Oconee	MO1	Blank	<	20	#N/A		Turbid brown, baseflow. Visibility 1'		18	November-April
4/15/2020	0825	Hunnicutt Creek	HC1		>	16000	17000		No turbidity, clear. Baseflow		18	November-April
4/15/2020	0830	Middle Oconee	MO2			1700	1700		Turbid brown, baseflow. Visibility 1'		18	November-April
4/15/2020	0840	Kingswood Branch	KB1			500	500		Clear, baseflow		18	November-April
4/15/2020	0845	Kingswood Branch	KB3			800	800		Clear, baseflow	Flowing and not backed up as before	18	November-April
4/15/2020	0850	McNutt Creek	MN2			270	270		Clear, no/very little turbidity. Baseflow		18	November-April
4/15/2020	0905	McNutt Creek	MN1			300	300		Slightly turbid brown. Baseflow		18	November-April
4/15/2020	0910	Middle Oconee	MO3			5000	5000		Turbid brown, baseflow. Visibility >1'		18	November-April
4/15/2020	0930	Unnamed Tributary	UT1			500	500		Clear, no turbidity. Baseflow		18	November-April
4/15/2020	0950	Middle Oconee	MO4			3000	3000		Turbid brown, baseflow. Visibility >1'		18	November-April
4/15/2020	1005	Oconee River	OC1			800	800		Turbid brown, baseflow. Visibility >1'	Minor debris floating	18	November-April
4/15/2020	1015	Cedar Creek	CED1			5000	5000		Clear no turbidity. Baseflow		18	November-April
4/15/2020	1030	Carr Creek	CA1			1100	1100		Slight gray turbidity. Baseflow		18	November-April
4/16/2020	0825	North Oconee	NO3			300	300		Mod turbidity, brown, mod flow. Visibility 1-2'		18	November-April
4/16/2020	0825	North Oconee	NO3	Duplicate		800	#N/A		Mod turbidity, brown, mod flow. Visibility 1-2'		18	November-April
4/16/2020	0843	Brooklyn Creek	BR2			1100	1100		Low flow. Clear, low turbidity		18	November-April
4/16/2020	0850	Brooklyn Creek	BR1			700	700		Clear, low flow		18	November-April
4/16/2020	0810	Tanyard Creek	TAN2			800	800		Clear, low flow		18	November-April
4/16/2020	0815	Tanyard Creek	TAN1			1300	1300		Clear, low flow		18	November-April
4/16/2020	1004	West Trail Creek	WTR1			300	300		Mod turbidity, mod flow		18	November-April
4/16/2020	1014	East Trail Creek	ETR1			80	80		Mod turbidity, mod flow, brown		18	November-April
4/16/2020	1040	East Trail Creek	ETR2			500	500		Mod turbidity, mod flow, brown		18	November-April
4/16/2020	1050	West Trail Creek	WTR2			170	170		Low turbidity, low flow		18	November-April
4/16/2020	1101	Trail Creek	TR1			1300	1300		Mod turbidity, mod flow, brown		18	November-April

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Date collected	Time collected	Stream	Station	Blank or duplicate	Less or greater than	Reported value	Value for geomean	Weather Notes	Water Notes	Other Notes	Geomean	Season
4/16/2020	1112	Trail Creek	TR3			1300	1300		Mod turbidity, mod flow		18	November-April
4/16/2020	1120	North Oconee	NO2			1700	1700		Mod turbidity, mod flow		18	November-April
4/16/2020	1120	North Oconee	NO2	Blank	<	20	#N/A		Mod turbidity, mod flow		18	November-April
4/20/2020	0835	McNutt Creek	MN3			5000	5000	Partly sunny rain overnight	High, fast flow. Turbid. Vis < 1'		18	November-April
4/20/2020	0835	McNutt Creek	MN3	Blank	<	20	#N/A	Partly sunny rain overnight	High, fast flow. Turbid. Vis < 1'		18	November-April
4/20/2020	0855	Middle Oconee	MO1			230	230	Partly sunny rain overnight	High, fast flow. Turbid. Vis < 1'		18	November-April
4/20/2020	0920	Hunnicutt Creek	HC1		>	16000	17000	Partly sunny rain overnight	High, fast flow. Turbid. Vis < 1'	Faint sewage odor	18	November-April
4/20/2020	0920	Middle Oconee	MO2			1100	1100	Partly sunny rain overnight	High, fast flow. Turbid. Vis < 1'		18	November-April
4/20/2020	0935	Kingswood Branch	KB1		>	16000	17000	Partly sunny rain overnight	High, fas flow. Moderately turbid. Depth 0.25'	Heavy sand deposits	18	November-April
4/20/2020	0940	Kingswood Branch	KB3			1700	1700	Partly sunny rain overnight	High, fas flow. Moderately turbid. Depth 0.25'	Heavy sand deposits	18	November-April
4/20/2020	0950	McNutt Creek	MN2			5000	5000	Partly sunny rain overnight	High, fast flow. Turbid. Vis < 1'		18	November-April
4/20/2020	1005	McNutt Creek	MN1			9000	9000	Partly sunny rain overnight	High, fast flow. Turbid. Vis < 1'		18	November-April
4/20/2020	1015	Middle Oconee	MO3			800	800	Partly sunny rain overnight	High, fast flow. Turbid. Vis < 1'		18	November-April
4/20/2020	1035	Unnamed Tributary	UT1			1700	1700	Partly sunny rain overnight	Moderate flow, turbidity. Depth 0.25'		18	November-April
4/20/2020	1100	Middle Oconee	MO4			1100	1100	Partly sunny rain overnight	High flow. Turbid. Vis <1'		18	November-April
4/20/2020	1110	Oconee River	OC1			2400	2400	Partly sunny rain overnight	High flow. Turbid. Vis <1'		18	November-April
4/20/2020	1125	Cedar Creek	CED1			3000	3000	Partly sunny rain overnight	High flow. Moderately turbid. Vis 1'		18	November-April
4/20/2020	1135	Carr Creek	CA1			9000	9000	Partly sunny rain overnight	High flow. Moderately turbid. Vis 1'		18	November-April
4/20/2020	1135	Carr Creek	CA1	Duplicate		800	#N/A	Partly sunny rain overnight	High flow. Moderately turbid. Vis 1'		18	November-April
4/21/2020	0805	North Oconee	NO3		>	16000	17000		Mod flow, turbid brown. Vis >1'		18	November-April
4/21/2020	0805	North Oconee	NO3	Duplicate	>	16000	#N/A		Mod flow, turbid brown. Vis >1'		18	November-April
4/21/2020	0820	Brooklyn Creek	BR2			1300	1300		Slight gray/brown turbidity. Mod flow		18	November-April
4/21/2020	0820	Brooklyn Creek	BR2	Blank	<	20	#N/A		Slight gray/brown turbidity. Mod flow		18	November-April
4/21/2020	0830	Brooklyn Creek	BR1			5000	5000		Clear, no turbidity. Mod flow		18	November-April
4/21/2020	0840	Tanyard Creek	TAN2			5000	5000		Clear, mod flow		18	November-April
4/21/2020	0845	Tanyard Creek	TAN1			3000	3000		Clear, mod flow		18	November-April
4/21/2020	0930	West Trail Creek	WTR1			700	700		Very slight brown turbidity		18	November-April
4/21/2020	0945	East Trail Creek	ETR1			110	110		Very slight brown/gray turbidty		18	November-April
4/21/2020	1005	East Trail Creek	ETR2			1700	1700		Light-mod turbidity, brown/gray		18	November-April
4/21/2020	1015	West Trail Creek	WTR2			800	800		Gray/brown light-mod turbidity. Mod flows		18	November-April
4/21/2020	1020	Trail Creek	TR1			500	500		Turbid brown/gray/green. Mod flow		18	November-April
4/21/2020	1030	Trail Creek	TR3			500	500		Light brown/gray turbidity. Mod flow		18	November-April
4/21/2020	1040	North Oconee	NO2			9000	9000		Turbid brown. Mod flow		18	November-April
4/22/2020	0815	McNutt Creek	MN3			800	800	Sunny, 60s to 70s	Modrerate flow, gray tint		18	November-April
4/22/2020	0815	McNutt Creek	MN3	Blank	<	20	#N/A	Sunny, 60s to 70s	Modrerate flow, gray tint		18	November-April
4/22/2020	0845	Middle Oconee	MO1			300	300	Sunny, 60s to 70s	Low flow, brown/orange water		18	November-April
4/22/2020	0845	Middle Oconee	MO1	Duplicate		260	#N/A	Sunny, 60s to 70s	Low flow, brown/orange water		18	November-April
4/22/2020	0915	Hunnicutt Creek	HC1		>	16000	17000	Sunny, 60s to 70s	Normal flow, slight gray tint		18	November-April
4/22/2020	0920	Middle Oconee	MO2			500	500	Sunny, 60s to 70s	Low flow, orange/brown		18	November-April
4/22/2020	0930	Kingswood Branch	KB1			500	500	Sunny, 60s to 70s	Low flow, clear.		18	November-April
4/22/2020	0935	Kingswood Branch	KB3			500	500	Sunny, 60s to 70s	Low flow, clear.		18	November-April
4/22/2020	0945	McNutt Creek	MN2			500	500	Sunny, 60s to 70s	Slight grayish/brown tint. Normal flow		18	November-April
4/22/2020	1000	McNutt Creek	MN1			300	300	Sunny, 60s to 70s	Low flow, slight brown tint		18	November-April
4/22/2020	1015	Middle Oconee	MO3			500	500	Sunny, 60s to 70s	Normal/low flow. Brown/orange		18	November-April
4/22/2020	1040	Unnamed Tributary	UT1			500	500	Sunny, 60s to 70s	Normal flow, slight gray tint		18	November-April
4/22/2020	1055	Middle Oconee	MO4			500	500	Sunny, 60s to 70s	Normal flow, brown		18	November-April
4/22/2020	1110	Oconee River	OC1			700	700	Sunny, 60s to 70s	Normal flow, brown		18	November-April
4/22/2020	1120	Cedar Creek	CED1			1300	1300	Sunny, 60s to 70s	Normal flow, slight gray tint		18	November-April
4/22/2020	1135	Carr Creek	CA1			800	800	Sunny, 60s to 70s	Gray tint, normal flow		18	November-April
4/23/2020	0825	North Oconee	NO3			300	300	Overcast, drizzling	Turbid brown, mod flows. Vis >1'		18	November-April
4/23/2020	0825	North Oconee	NO3	Duplicate		800	#N/A	Overcast, drizzling	Turbid brown, mod flows. Vis >1'		18	November-April
4/23/2020	0840	Brooklyn Creek	BR2			3000	3000	Overcast, drizzling	Very slight gray brown turbidity. Mod flow		18	November-April
4/23/2020	0840	Brooklyn Creek	BR2	Blank	<	20	#N/A	Overcast, drizzling	Very slight gray brown turbidity. Mod flow		18	November-April
4/23/2020	0850	Brooklyn Creek	BR1			2200	2200	Overcast, drizzling	Clear, mod flow		18	November-April
4/23/2020	0900	Tanyard Creek	TAN2			1700	1700	Overcast, drizzling	Clear, mod flow		18	November-April
4/23/2020	0905	Tanyard Creek	TAN1			2200	2200	Overcast, drizzling	Clear, mod flow		18	November-April
4/23/2020	0950	West Trail Creek	WTR1			170	170	Overcast, drizzling	Clear, mod flow		18	November-April
4/23/2020	1000	East Trail Creek	ETR1			300	300	Overcast, drizzling	Slight gray/brown turbidity. Mod-high flow		18	November-April
4/23/2020	1015	East Trail Creek	ETR2			800	800	Overcast, drizzling	Slight brown turbidity. Mod flow		18	November-April
4/23/2020	1025	West Trail Creek	WTR2			2800	2800	Overcast, drizzling	Green/brown light turbidity, mod flow		18	November-April
4/23/2020	1035	Trail Creek	TR1			800	800	Overcast, drizzling	Light brown turbidity. Mod flows		18	November-April

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Date collected	Time collected	Stream	Station	Blank or duplicate	Less or greater than	Reported value	Value for geomean	Weather Notes	Water Notes	Other Notes	Geomean	Season
4/23/2020	1045	Trail Creek	TR3			5000	5000	Overcast, drizzling	Light brown turbidity. Mod flows		18	November-April
4/23/2020	1050	North Oconee	NO2			1100	1100	Overcast, drizzling	Turbid brown. Low-mod flow. Visibility ~1'		18	November-April
6/8/2020	0800	McNutt Creek	MN3			170	170	Cloudy	Low flow, brown		19	May-October
6/8/2020	0800	McNutt Creek	MN3	Duplicate		700	#N/A	Cloudy	Low flow, brown		19	May-October
6/8/2020	0823	Middle Oconee	MO1			300	300	Cloudy	Mod flow, brown		19	May-October
6/8/2020	0830	Hunnicutt Creek	HC1			3000	3000	Cloudy	Low flow, clear		19	May-October
6/8/2020	0838	Middle Oconee	MO2			220	220	Cloudy	Mod flow, brown		19	May-October
6/8/2020	0850	Kingswood Branch	KB1			800	800	Cloudy	Low flow, clear		19	May-October
6/8/2020	0900	Kingswood Branch	KB3			3000	3000	Cloudy	Low flow, clear		19	May-October
6/8/2020	0909	McNutt Creek	MN2			70	70	Cloudy	Mod flow, clear		19	May-October
6/8/2020	0940	McNutt Creek	MN1			500	500	Cloudy	Mod flow, clear		19	May-October
6/8/2020	0950	Middle Oconee	MO3			80	80	Cloudy	Mod flow, brown		19	May-October
6/8/2020	1020	Unnamed Tributary	UT1			220	220	Cloudy	Low flow, clear		19	May-October
6/8/2020	1037	Middle Oconee	MO4			210	210	Cloudy	Mod flow, brown		19	May-October
6/8/2020	1050	Oconee River	OC1			130	130	Cloudy	Mod flow, brown		19	May-October
6/8/2020	1105	Cedar Creek	CED1			1300	1300	Cloudy	Low flow, brown		19	May-October
6/8/2020	1105	Cedar Creek	CED1	Blank	<	20	#N/A	Cloudy	Low flow, brown		19	May-October
6/8/2020	1120	Carr Creek	CA1			700	700	Cloudy	Low flow, clear		19	May-October
6/9/2020	0718	North Oconee	NO3			16000	16000		High flow, brown turbidity		19	May-October
6/9/2020	0732	Brooklyn Creek	BR2		>	16000	17000		Mod flow, brown		19	May-October
6/9/2020	0732	Brooklyn Creek	BR2	Duplicate	>	16000	#N/A		Mod flow, brown		19	May-October
6/9/2020	0745	Brooklyn Creek	BR1			9000	9000		Mod flow, slight brown		19	May-October
6/9/2020	0753	Tanyard Creek	TAN2			9000	9000		Clear, mod flow		19	May-October
6/9/2020	0810	Tanyard Creek	TAN1		>	16000	17000		Clear, mod flow		19	May-October
6/9/2020	0900	West Trail Creek	WTR1			220	220		Brown, mod flow		19	May-October
6/9/2020	0907	East Trail Creek	ETR1			500	500		Brown, mod flow		19	May-October
6/9/2020	0925	East Trail Creek	ETR2			1100	1100		Brown, mod flow		19	May-October
6/9/2020	0938	West Trail Creek	WTR2			800	800		Brown, mod flow		19	May-October
6/9/2020	0950	Trail Creek	TR1			2400	2400		Brown, mod flow		19	May-October
6/9/2020	1000	Trail Creek	TR3			3000	3000		Brown, mod flow		19	May-October
6/9/2020	1005	North Oconee	NO2			1700	1700		Brown, mod flow		19	May-October
6/9/2020	1005	North Oconee	NO2	Blank	<	20	#N/A		Brown, mod flow		19	May-October
6/10/2020	0750	McNutt Creek	MN3			300	300	Cloudy, light rain	Slight brown, mod flow		19	May-October
6/10/2020	0820	Middle Oconee	MO1			300	300	Cloudy, light rain	Brown, mod flow		19	May-October
6/10/2020	0842	Hunnicutt Creek	HC1		>	16000	17000	Cloudy, light rain	Clear, mod flow		19	May-October
6/10/2020	0844	Middle Oconee	MO2			300	300	Cloudy, light rain	Brown, mod flow		19	May-October
6/10/2020	0855	Kingswood Branch	KB1			500	500	Cloudy, light rain	Clear, low flow		19	May-October
6/10/2020	0855	Kingswood Branch	KB1	Duplicate		500	#N/A	Cloudy, light rain	Clear, low flow		19	May-October
6/10/2020	0902	Kingswood Branch	KB3			5000	5000	Cloudy, light rain	Slight brown, low flow		19	May-October
6/10/2020	0910	McNutt Creek	MN2			800	800	Cloudy, light rain	Mod flow, brown		19	May-October
6/10/2020	0925	McNutt Creek	MN1			800	800	Cloudy, light rain	Mod flow, brown		19	May-October
6/10/2020	0932	Middle Oconee	MO3			500	500	Cloudy, light rain	Mod flow, brown		19	May-October
6/10/2020	0104	Unnamed Tributary	UT1			300	300	Cloudy, light rain	Low flow, slight brown		19	May-October
6/10/2020	1020	Middle Oconee	MO4			700	700	Cloudy, light rain	Mod flow, brown		19	May-October
6/10/2020	1030	Oconee River	OC1			500	500	Cloudy, light rain	Mod flow, brown		19	May-October
6/10/2020	1045	Cedar Creek	CED1			500	500	Cloudy, light rain	Mod flow, brown		19	May-October
6/10/2020	1100	Carr Creek	CA1			2200	2200	Cloudy, light rain	Mod flow, clean/slight brown		19	May-October
6/11/2020	0800	North Oconee	NO3			500	500	Sunny	High flow, brown		19	May-October
6/11/2020	0800	North Oconee	NO3	Duplicate		1300	#N/A	Sunny	High flow, brown		19	May-October
6/11/2020	0812	Brooklyn Creek	BR2			1400	1400	Sunny	Mod flow, clear		19	May-October
6/11/2020	0822	Brooklyn Creek	BR1			3000	3000	Sunny	Low flow, clear		19	May-October
6/11/2020	0830	Tanyard Creek	TAN2			800	800	Sunny	Mod flow, clear		19	May-October
6/11/2020	0840	Tanyard Creek	TAN1			1400	1400	Sunny	Low flow, clear		19	May-October
6/11/2020	0935	West Trail Creek	WTR1			130	130	Sunny	Slight brown, mod flow		19	May-October
6/11/2020	0948	East Trail Creek	ETR1			170	170	Sunny	Slight brown, mod flow		19	May-October
6/11/2020	1000	East Trail Creek	ETR2			700	700	Sunny	Slight brown, mod flow		19	May-October
6/11/2020	1015	West Trail Creek	WTR2			800	800	Sunny	Slight brown, mod flow		19	May-October
6/11/2020	1025	Trail Creek	TR1			500	500	Sunny	Slight brown, mod flow		19	May-October
6/11/2020	1035	Trail Creek	TR3			1100	1100	Sunny	Slight brown, mod flow		19	May-October
6/11/2020	1045	North Oconee	NO2			230	230	Sunny	Brown, mod flow		19	May-October
6/11/2020	1045	North Oconee	NO2	Blank	<	20	#N/A	Sunny	Brown, mod flow		19	May-October

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Date collected	Time collected	Stream	Station	Blank or duplicate	Less or greater than	Reported value	Value for geomean	Weather Notes	Water Notes	Other Notes	Geomean	Season
6/15/2020	0740	McNutt Creek	MN3			1300	1300	Sunny	Brown, mod flow		19	May-October
6/15/2020	0740	McNutt Creek	MN3	Duplicate		3000	#N/A	Sunny	Brown, mod flow		19	May-October
6/15/2020	0810	Middle Oconee	MO1			80	80	Sunny	Brown, mod flow		19	May-October
6/15/2020	0825	Hunnicutt Creek	HC1			300	300	Sunny	Clear, mod flow		19	May-October
6/15/2020	0830	Middle Oconee	MO2			300	300	Sunny	Brown, mod flow		19	May-October
6/15/2020	0840	Kingswood Branch	KB1			500	500	Sunny	Clear, low flow		19	May-October
6/15/2020	0845	Kingswood Branch	KB3			2200	2200	Sunny	Slight brown, mod flow		19	May-October
6/15/2020	0850	McNutt Creek	MN2			2800	2800	Sunny	Brown, mod flow		19	May-October
6/15/2020	0905	McNutt Creek	MN1			1300	1300	Sunny	Brown, mod flow		19	May-October
6/15/2020	0910	Middle Oconee	MO3			170	170	Sunny	Brown, mod flow		19	May-October
6/15/2020	0935	Unnamed Tributary	UT1			70	70	Sunny	Clear, mod flow		19	May-October
6/15/2020	0940	Middle Oconee	MO4			2400	2400	Sunny	Brown, mod flow		19	May-October
6/15/2020	0955	Oconee River	OC1			800	800	Sunny	Brown, mod flow		19	May-October
6/15/2020	1005	Cedar Creek	CED1			2400	2400	Sunny	Clear, low flow		19	May-October
6/15/2020	1020	Carr Creek	CA1			500	500	Sunny	Clear, mod flow		19	May-October
6/15/2020	1020	Carr Creek	CA1	Blank	<	20	#N/A	Sunny	Clear, mod flow		19	May-October
6/16/2020	0714	North Oconee	NO3			130	130		Brown, high flow		19	May-October
6/16/2020	0714	North Oconee	NO3	Duplicate		300	#N/A		Brown, high flow		19	May-October
6/16/2020	0725	Brooklyn Creek	BR2			500	500		Clear, mod flow		19	May-October
6/16/2020	0735	Brooklyn Creek	BR1			3000	3000		Clear, mod flow		19	May-October
6/16/2020	0745	Tanyard Creek	TAN2			800	800		Clear, mod flow		19	May-October
6/16/2020	0755	Tanyard Creek	TAN1			9000	9000		Clear, mod flow		19	May-October
6/16/2020	0850	West Trail Creek	WTR1			230	230		Slight brown, mod flow		19	May-October
6/16/2020	0904	East Trail Creek	ETR1			270	270		Slight brown, mod flow		19	May-October
6/16/2020	0915	East Trail Creek	ETR2			130	130		Slight brown, mod flow		19	May-October
6/16/2020	0930	West Trail Creek	WTR2			110	110		Brown, mod flow		19	May-October
6/16/2020	0940	Trail Creek	TR1			800	800		Slight brown, mod flow		19	May-October
6/16/2020	0950	Trail Creek	TR3			800	800		Slight brown, mod flow		19	May-October
6/16/2020	1000	North Oconee	NO2			230	230		Brown, mod flow		19	May-October
6/16/2020	1000	North Oconee	NO2	Blank	<	20	#N/A		Brown, mod flow		19	May-October
6/17/2020	0740	McNutt Creek	MN3			800	800	Sunny, low 60s	Slight brown, mod flow		19	May-October
6/17/2020	0740	McNutt Creek	MN3	Duplicate		1700	#N/A	Sunny, low 60s	Slight brown, mod flow		19	May-October
6/17/2020	0740	McNutt Creek	MN3			800	800	Sunny, low 60s	Slight brown, mod flow		19	May-October
6/17/2020	0740	McNutt Creek	MN3	Duplicate		1700	#N/A	Sunny, low 60s	Slight brown, mod flow		19	May-October
6/17/2020	0800	Middle Oconee	MO1			1300	1300	Sunny, low 60s	Brown, mod flow		19	May-October
6/17/2020	0810	Hunnicutt Creek	HC1			500	500	Sunny, low 60s	Clear, mod flow		19	May-October
6/17/2020	0813	Middle Oconee	MO2			230	230	Sunny, low 60s	Brown, mod flow		19	May-October
6/17/2020	0822	Kingswood Branch	KB1			130	130	Sunny, low 60s	Clear, mod flow		19	May-October
6/17/2020	0830	Kingswood Branch	KB3			1300	1300	Sunny, low 60s	Slight brown, mod flow		19	May-October
6/17/2020	0835	McNutt Creek	MN2			220	220	Sunny, low 60s	Clear, mod flow		19	May-October
6/17/2020	0847	McNutt Creek	MN1			500	500	Sunny, low 60s	Slight brown, mod flow		19	May-October
6/17/2020	0855	Middle Oconee	MO3			800	800	Sunny, low 60s	Brown, mod flow		19	May-October
6/17/2020	0921	Unnamed Tributary	UT1			70	70	Sunny, low 60s	Clear, mod flow		19	May-October
6/17/2020	0930	Middle Oconee	MO4			300	300	Sunny, low 60s	Brown, mod flow		19	May-October
6/17/2020	0940	Oconee River	OC1			170	170	Sunny, low 60s	Brown, mod flow		19	May-October
6/17/2020	0953	Cedar Creek	CED1			500	500	Sunny, low 60s	Slight brown, mod flow		19	May-October
6/17/2020	1010	Carr Creek	CA1			300	300	Sunny, low 60s	Clear, mod flow		19	May-October
6/17/2020	1010	Carr Creek	CA1	Blank	<	20	#N/A	Sunny, low 60s	Clear, mod flow		19	May-October
6/18/2020	0740	North Oconee	NO3			500	500	Low 60s, sunny/partly cloudy	Brown, mod flow		19	May-October
6/18/2020	0740	North Oconee	NO3	Duplicate		230	#N/A	Low 60s, sunny/partly cloudy	Brown, mod flow		19	May-October
6/18/2020	0755	Brooklyn Creek	BR2			800	800	Low 60s, sunny/partly cloudy	Clear, mod flow		19	May-October
6/18/2020	0805	Brooklyn Creek	BR1			700	700	Low 60s, sunny/partly cloudy	Clear, mod flow		19	May-October
6/18/2020	0815	Tanyard Creek	TAN2			1300	1300	Low 60s, sunny/partly cloudy	Clear, mod flow		19	May-October
6/18/2020	0824	Tanyard Creek	TAN1			1100	1100	Low 60s, sunny/partly cloudy	Clear/Slight green & gray, mod flow		19	May-October
6/18/2020	0920	West Trail Creek	WTR1			220	220	Low 60s, sunny/partly cloudy	Slight brown, mod flow		19	May-October
6/18/2020	0930	East Trail Creek	ETR1			220	220	Low 60s, sunny/partly cloudy	Slight brown, mod flow		19	May-October
6/18/2020	0945	East Trail Creek	ETR2			700	700	Low 60s, sunny/partly cloudy	Slight brown, mod flow		19	May-October
6/18/2020	1000	West Trail Creek	WTR2			170	170	Low 60s, sunny/partly cloudy	Slight brown, mod flow		19	May-October
6/18/2020	1010	Trail Creek	TR1			170	170	Low 60s, sunny/partly cloudy	Clear, mod flow		19	May-October
6/18/2020	1020	Trail Creek	TR3			230	230	Low 60s, sunny/partly cloudy	Brown, mod flow		19	May-October
6/18/2020	1030	North Oconee	NO2			300	300	Low 60s, sunny/partly cloudy	Brown, mod flow		19	May-October
6/18/2020	1030	North Oconee	NO2	Blank	<	20	#N/A	Low 60s, sunny/partly cloudy	Brown, mod flow		19	May-October
9/2/2020		North Oconee	NO3			130	130	Sunny	Brown, high flow		20	May-October

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Date collected	Time collected	Stream	Station	Blank or duplicate	Less or greater than	Reported value	Value for geomean	Weather Notes	Water Notes	Other Notes	Geomean	Season
9/2/2020		North Oconee	NO3	Duplicate		1700	#N/A	Sunny	Brown, high flow		20	May-October
9/2/2020		Brooklyn Creek	BR2			300	300	Sunny	Mod flow, slight brown		20	May-October
9/2/2020		Brooklyn Creek	BR1			2400	2400	Sunny	Low flow, clear		20	May-October
9/2/2020		Tanyard Creek	TAN2			2400	2400	Sunny	Low flow, clear		20	May-October
9/2/2020		Tanyard Creek	TAN1			1700	1700	Sunny	Low flow, clear		20	May-October
9/2/2020		West Trail Creek	WTR1			300	300	Sunny	Low flow, slight brown		20	May-October
9/2/2020		East Trail Creek	ETR1			300	300	Sunny	Low flow, slight brown		20	May-October
9/2/2020		East Trail Creek	ETR2		>	16000	17000	Sunny	Mod flow, slight brown		20	May-October
9/2/2020		West Trail Creek	WTR2			800	800	Sunny	Low flow, slight brown		20	May-October
9/2/2020		Trail Creek	TR1			5000	5000	Sunny	Mod flow, slight brown		20	May-October
9/2/2020		Trail Creek	TR3			3000	3000	Sunny	Mod flow, slight brown		20	May-October
9/2/2020		North Oconee	NO2			230	230	Sunny	Mod flow, brown		20	May-October
9/2/2020		North Oconee	NO2	Blank	<	20	#N/A	Sunny	Mod flow, brown		20	May-October
9/3/2020		McNutt Creek	MN3			1300	1300	Sunny	Clear, mod flow		20	May-October
9/3/2020		McNutt Creek	MN3	Duplicate		500	#N/A	Sunny	Clear, mod flow		20	May-October
9/3/2020		Middle Oconee	MO1			500	500	Sunny	Brown, mod flow		20	May-October
9/3/2020		Hunnicutt Creek	HC1			2400	2400	Sunny	Slight brown, mod flow	Slight sewer smell	20	May-October
9/3/2020		Middle Oconee	MO2			500	500	Sunny	Brown, mod flow		20	May-October
9/3/2020		Kingswood Branch	KB1			3000	3000	Sunny	Clear, low flow		20	May-October
9/3/2020		Kingswood Branch	KB3			1700	1700	Sunny	Clear, low flow		20	May-October
9/3/2020		McNutt Creek	MN2			500	500	Sunny	Slight brown, mod flow		20	May-October
9/3/2020		McNutt Creek	MN1			2800	2800	Sunny	Slight brown, mod flow		20	May-October
9/3/2020		Middle Oconee	MO3			800	800	Sunny	Turbid brown, mod flow		20	May-October
9/3/2020		Unnamed Tributary	UT1			500	500	Sunny	Clear, low flow		20	May-October
9/3/2020		Middle Oconee	MO4			300	300	Sunny	Turbid brown, mod flow		20	May-October
9/3/2020		Oconee River	OC1			300	300	Sunny	Brown, mod flow		20	May-October
9/3/2020		Cedar Creek	CED1			800	800	Sunny	Clear, low flow		20	May-October
9/3/2020		Carr Creek	CA1			700	700	Sunny	Turbid brown	Constructing new culvert	20	May-October
9/3/2020		Carr Creek	CA1	Blank	<	20	#N/A	Sunny	Turbid brown	Constructing new culvert	20	May-October
9/8/2020		North Oconee	NO3			300	300	Sunny	High flow, very turbid, brown		20	May-October
9/8/2020		North Oconee	NO3	Duplicate		220	#N/A	Sunny	High flow, very turbid, brown		20	May-October
9/8/2020		Brooklyn Creek	BR2			500	500	Sunny	Clear, low flow		20	May-October
9/8/2020		Brooklyn Creek	BR1			1300	1300	Sunny	Clear, low flow		20	May-October
9/8/2020		Tanyard Creek	TAN2			800	800	Sunny	Clear, low flow		20	May-October
9/8/2020		Tanyard Creek	TAN1			2400	2400	Sunny	Clear, low flow		20	May-October
9/8/2020		West Trail Creek	WTR1			300	300	Sunny	Brown/green, low flow		20	May-October
9/8/2020		East Trail Creek	ETR1			500	500	Sunny	Slight brown, low flow		20	May-October
9/8/2020		East Trail Creek	ETR2		>	16000	17000	Sunny	Brown, mod flow		20	May-October
9/8/2020		West Trail Creek	WTR2			500	500	Sunny	Green/brown, mod flow		20	May-October
9/8/2020		Trail Creek	TR1			800	800	Sunny	Slight brown, mod flow		20	May-October
9/8/2020		Trail Creek	TR3			230	230	Sunny	Brown, mod flow		20	May-October
9/8/2020		North Oconee	NO2			800	800	Sunny	Green/brown, mod flow		20	May-October
9/8/2020		North Oconee	NO2	Blank	<	20	#N/A	Sunny	Green/brown, mod flow		20	May-October
9/9/2020		McNutt Creek	MN3			220	220		Slight brown, low flow		20	May-October
9/9/2020		McNutt Creek	MN3	Duplicate		170	#N/A		Slight brown, low flow		20	May-October
9/9/2020		Middle Oconee	MO1			500	500		Brown, mod flow		20	May-October
9/9/2020		Hunnicutt Creek	HC1			500	500		Clear, mod flow		20	May-October
9/9/2020		Middle Oconee	MO2			300	300		Brown, mod flow		20	May-October
9/9/2020		Kingswood Branch	KB1			700	700		Clear, low flow		20	May-October
9/9/2020		Kingswood Branch	KB3			1300	1300		Clear, low flow		20	May-October
9/9/2020		McNutt Creek	MN2			300	300		Clear, mod flow		20	May-October
9/9/2020		McNutt Creek	MN1			700	700		Clear, mod flow		20	May-October
9/9/2020		Middle Oconee	MO3			170	170		Slight brown, mod flow		20	May-October
9/9/2020		Unnamed Tributary	UT1			300	300		Clear, mod flow		20	May-October
9/9/2020		Middle Oconee	MO4			1300	1300		Brown, mod flow		20	May-October
9/9/2020		Oconee River	OC1			230	230		Brown, mod flow		20	May-October
9/9/2020		Cedar Creek	CED1			2400	2400		Slight brown, mod flow		20	May-October
9/9/2020		Carr Creek	CA1			300	300		Clear, mod flow	Construction drained the water at this location. Sampled farthe upstream, could not get pH	20	May-October

FC Raw Data

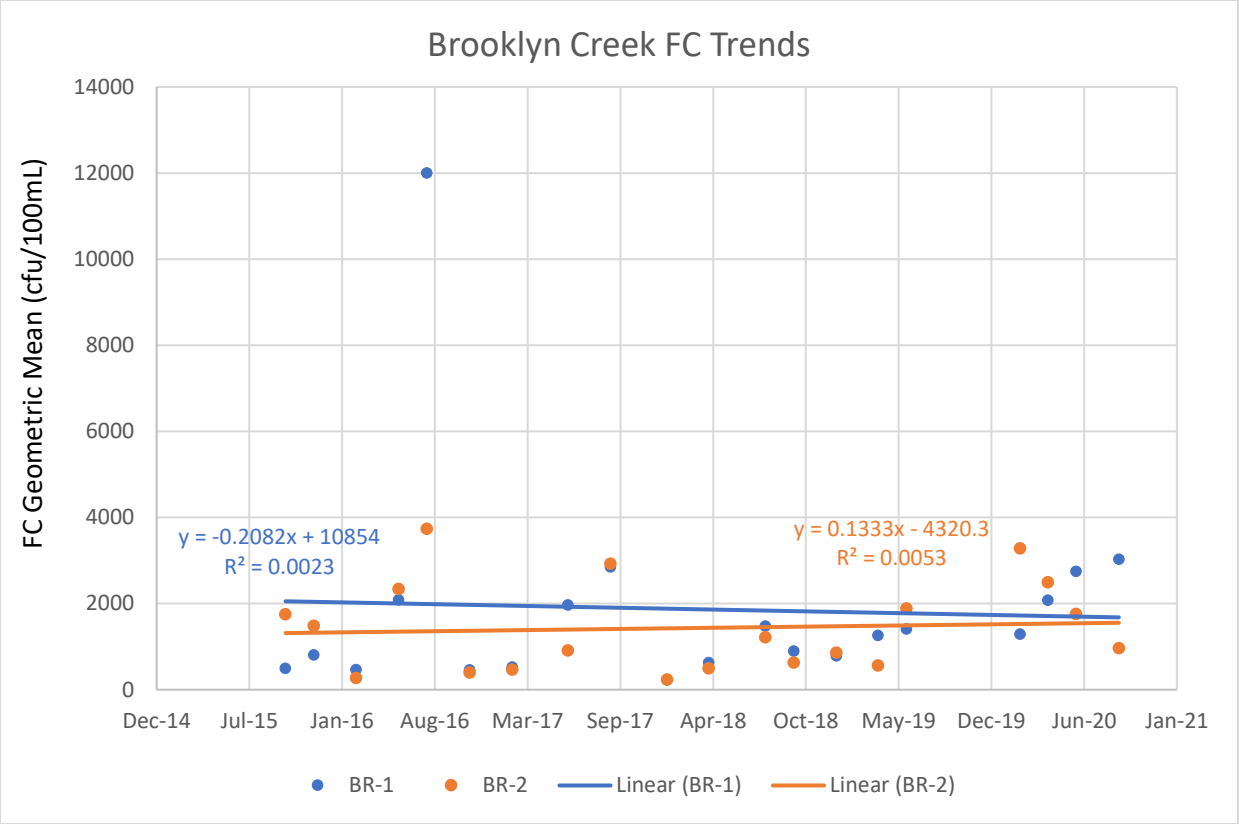
Date collected	Time collected	Stream	Station	Blank or duplicate	Less or greater than	Reported value	Value for geomean	Weather Notes	Water Notes	Other Notes	Geomean	Season
9/9/2020		Carr Creek	CA1	Blank	<	20	#N/A		Clear, mod flow	Construction drained the water at this location. Sampled farthe upstream, could not get pH	20	May-October
9/10/2020		McNutt Creek	MN3			270	270		Slight brown, low flow		20	May-October
9/10/2020		McNutt Creek	MN3	Duplicate		500	#N/A		Slight brown, low flow		20	May-October
9/10/2020		Middle Oconee	MO1			140	140		Brown, mod flow		20	May-October
9/10/2020		Hunnicutt Creek	HC1			900	900		Clear, mod flow		20	May-October
9/10/2020		Middle Oconee	MO2			800	800		Brown, turbid and mod flow		20	May-October
9/10/2020		Kingswood Branch	KB1			5000	5000		Clear, mod flow		20	May-October
9/10/2020		Kingswood Branch	KB3		>	16000	17000		Clear, mod flow		20	May-October
9/10/2020		McNutt Creek	MN2			1300	1300		Slight brown, mod flow		20	May-October
9/10/2020		McNutt Creek	MN1			1300	1300		Slight brown, mod flow		20	May-October
9/10/2020		Middle Oconee	MO3			300	300		Brown, mod flow		20	May-October
9/10/2020		Unnamed Tributary	UT1			210	210		Clear, low flow		20	May-October
9/10/2020		Middle Oconee	MO4			300	300		Brown, mod flow		20	May-October
9/10/2020		Oconee River	OC1			230	230		Brown, mod flow		20	May-October
9/10/2020		Cedar Creek	CED1			270	270		Slight brown, mod flow		20	May-October
9/10/2020		Carr Creek	CA1			300	300		Clear, low flow	Culvert construction, sampled upstream	20	May-October
9/10/2020		Carr Creek	CA1	Blank	<	20	#N/A		Clear, low flow	Culvert construction, sampled upstream	20	May-October
9/14/2020		North Oconee	NO3			800	800	Sunny	High flow, brown, turbid		20	May-October
9/14/2020		North Oconee	NO3	Duplicate		300	#N/A	Sunny	High flow, brown, turbid		20	May-October
9/14/2020		Brooklyn Creek	BR2			2400	2400	Sunny	Mod flow, slight brown		20	May-October
9/14/2020		Brooklyn Creek	BR1			3000	3000	Sunny	Clear, low flow		20	May-October
9/14/2020		Tanyard Creek	TAN2			2400	2400	Sunny	Clear, low flow		20	May-October
9/14/2020		Tanyard Creek	TAN1			9000	9000	Sunny	Clear, low flow		20	May-October
9/14/2020		West Trail Creek	WTR1			700	700	Sunny	Slight brown, low flow		20	May-October
9/14/2020		East Trail Creek	ETR1			300	300	Sunny	Brown, low flow		20	May-October
9/14/2020		East Trail Creek	ETR2			3000	3000	Sunny	Brown, mod flow		20	May-October
9/14/2020		West Trail Creek	WTR2			800	800	Sunny	Brown/green, mod flow		20	May-October
9/14/2020		Trail Creek	TR1			1300	1300	Sunny	Clear, mod flow		20	May-October
9/14/2020		Trail Creek	TR3			500	500	Sunny	Turbid brown, mod flow		20	May-October
9/14/2020		North Oconee	NO2			1300	1300	Sunny	Brown/green, mod flow		20	May-October
9/14/2020		North Oconee	NO2	Blank	<	20	#N/A	Sunny	Brown/green, mod flow		20	May-October
9/15/2020		McNutt Creek	MN3			16000	16000	Cloudy/Slight rain	Brown, mod flow		20	May-October
9/15/2020		McNutt Creek	MN3	Duplicate		16000	#N/A	Cloudy/Slight rain	Brown, mod flow		20	May-October
9/15/2020		Middle Oconee	MO1			9000	9000	Cloudy/Slight rain	Brown, mod flow		20	May-October
9/15/2020		Hunnicutt Creek	HC1			700	700	Cloudy/Slight rain	Clear, high flow		20	May-October
9/15/2020		Middle Oconee	MO2			1700	1700	Cloudy/Slight rain	Brown, mod flow		20	May-October
9/15/2020		Kingswood Branch	KB1			1300	1300	Cloudy/Slight rain	Clear, mod flow		20	May-October
9/15/2020		Kingswood Branch	KB3			16000	16000	Cloudy/Slight rain	Slight brown, mod flow		20	May-October
9/15/2020		McNutt Creek	MN2			5000	5000	Cloudy/Slight rain	Brown, high flow		20	May-October
9/15/2020		McNutt Creek	MN1			9000	9000	Cloudy/Slight rain	Brown, high flow		20	May-October
9/15/2020		Middle Oconee	MO3			700	700	Cloudy/Slight rain	Brown, high flow		20	May-October
9/15/2020		Unnamed Tributary	UT1			40	40	Cloudy/Slight rain	Clear, mod flow		20	May-October
9/15/2020		Middle Oconee	MO4			2400	2400	Cloudy/Slight rain	Brown, high flow		20	May-October
9/15/2020		Oconee River	OC1			800	800	Cloudy/Slight rain	Brown, high flow		20	May-October
9/15/2020		Cedar Creek	CED1			1300	1300	Cloudy/Slight rain	Clear, mod flow		20	May-October
9/15/2020		Carr Creek	CA1		>	16000	17000	Cloudy/Slight rain	Clear, mod flow		20	May-October
9/15/2020		Carr Creek	CA1	Blank	<	20	#N/A	Cloudy/Slight rain	Clear, mod flow		20	May-October
9/16/2020		North Oconee	NO3			800	800	Cloudy	Brown, high flow		20	May-October
9/16/2020		North Oconee	NO3	Duplicate		300	#N/A	Cloudy	Brown, high flow		20	May-October
9/16/2020		Brooklyn Creek	BR2			2400	2400	Cloudy	Clear, mod flow		20	May-October
9/16/2020		Brooklyn Creek	BR1			9000	9000	Cloudy	Clear, mod flow		20	May-October
9/16/2020		Tanyard Creek	TAN2			5000	5000	Cloudy	Clear, mod flow		20	May-October
9/16/2020		Tanyard Creek	TAN1			9000	9000	Cloudy	Clear, mod flow		20	May-October
9/16/2020		West Trail Creek	WTR1			900	900	Cloudy	Brown/slight green, mod flow		20	May-October
9/16/2020		East Trail Creek	ETR1			130	130	Cloudy	Clear, mod flow		20	May-October
9/16/2020		East Trail Creek	ETR2		>	16000	17000	Cloudy	Slight brown, mod flow		20	May-October
9/16/2020		West Trail Creek	WTR2			800	800	Cloudy	Brown/slight green, mod flow		20	May-October
9/16/2020		Trail Creek	TR1			500	500	Cloudy	Clear, mod flow		20	May-October

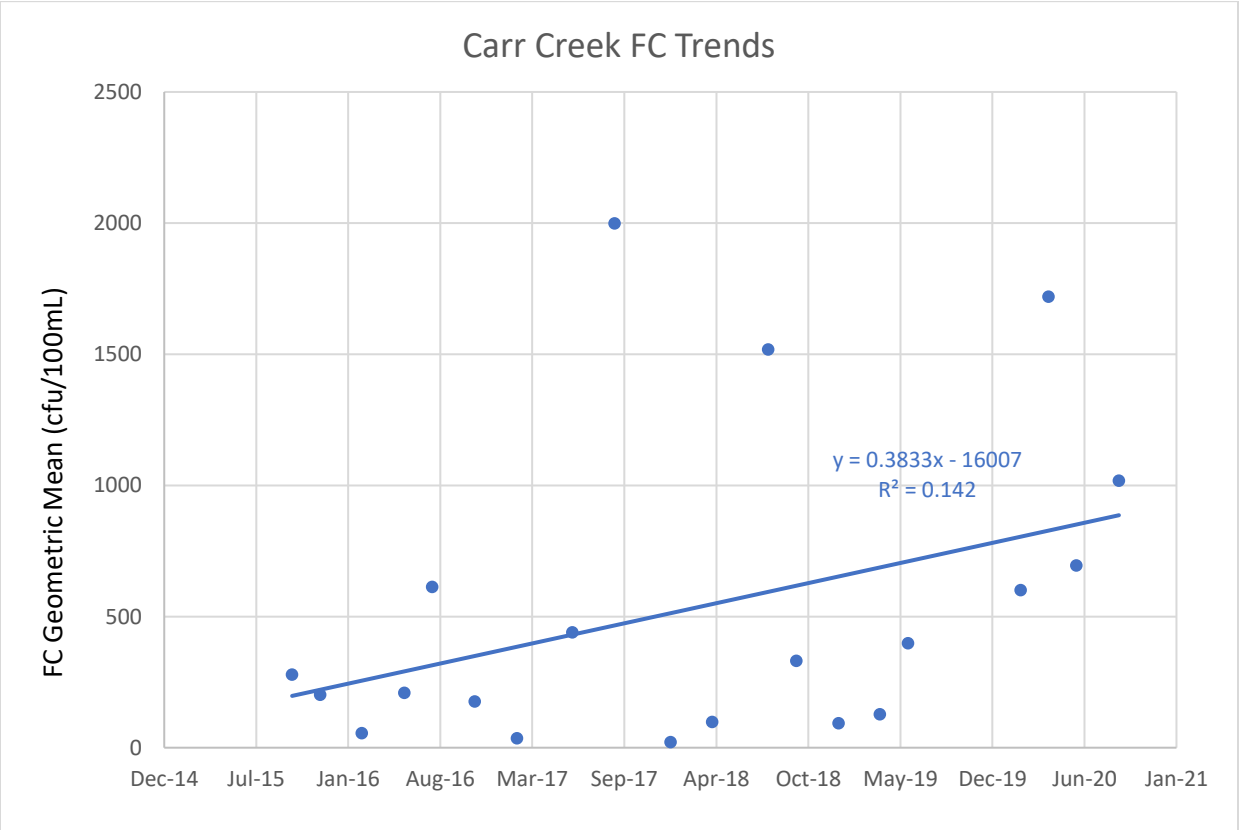
FC Raw Data

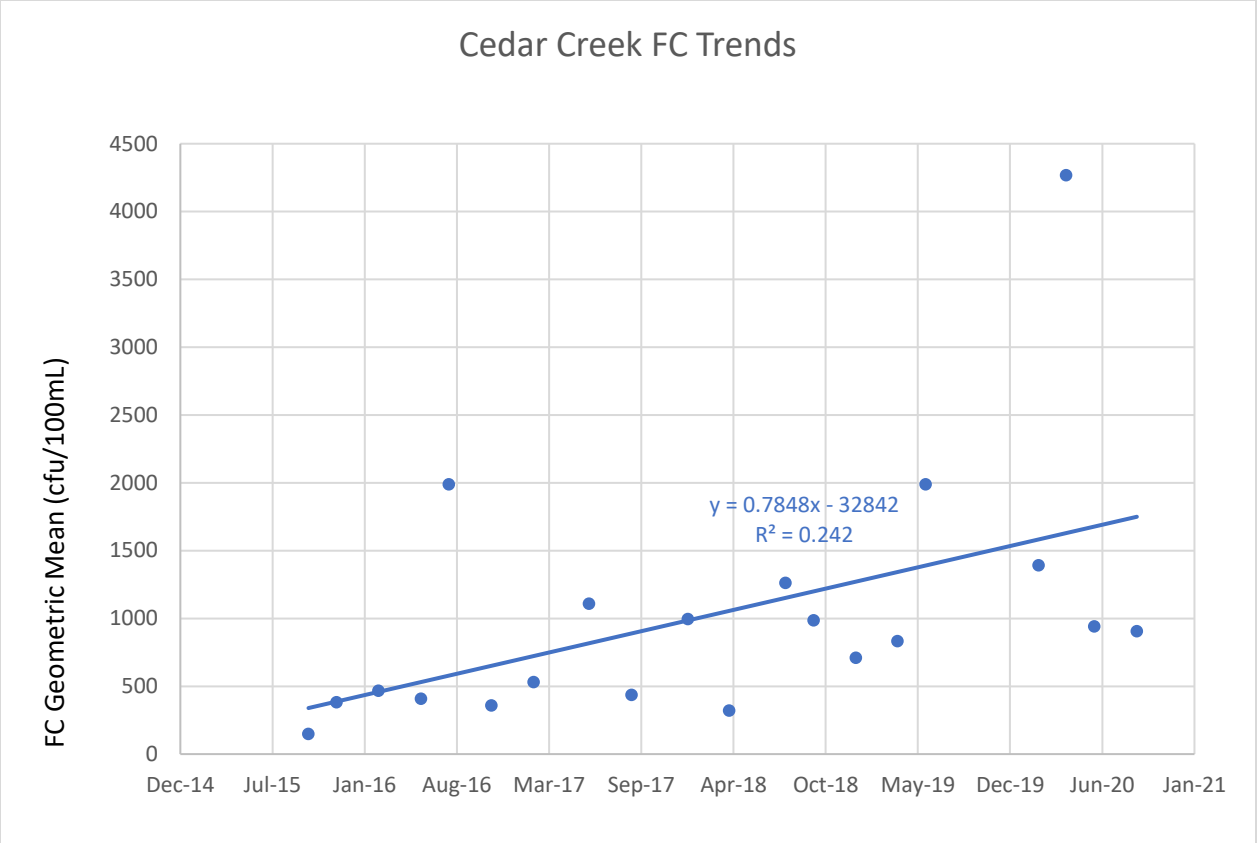
Date collected	Time collected	Stream	Station	Blank or duplicate	Less or greater than	Reported value	Value for geomean	Weather Notes	Water Notes	Other Notes	Geomean	Season
9/16/2020		Trail Creek	TR3			1700	1700	Cloudy	Brown, mod flow		20	May-October
9/16/2020		North Oconee	NO2			2200	2200	Cloudy	Green/brown, mod flow		20	May-October
9/16/2020		North Oconee	NO2	Blank	<	20	#N/A	Cloudy	Green/brown, mod flow		20	May-October
11/9/2020		North Oconee	NO3			40	40				21	November-April
11/9/2020		North Oconee	NO3	Duplicate		80	#N/A				21	November-April
11/9/2020		Brooklyn Creek	BR2			270	270				21	November-April
11/9/2020		Brooklyn Creek	BR1			1700	1700				21	November-April
11/9/2020		Tanyard Creek	TAN2			300	300				21	November-April
11/9/2020		Tanyard Creek	TAN1			220	220				21	November-April
11/9/2020		West Trail Creek	WTR1			800	800				21	November-April
11/9/2020		East Trail Creek	ETR1			220	220				21	November-April
11/9/2020		East Trail Creek	ETR2			40	40				21	November-April
11/9/2020		West Trail Creek	WTR2			500	500				21	November-April
11/9/2020		Trail Creek	TR1			700	700				21	November-April
11/9/2020		Trail Creek	TR3			230	230				21	November-April
11/9/2020		North Oconee	NO2			800	800				21	November-April
11/9/2020		North Oconee	NO2	Blank	<	20	#N/A				21	November-April
11/10/2020		McNutt Creek	MN3			1300	1300				21	November-April
11/10/2020		McNutt Creek	MN3	Duplicate		1100	#N/A				21	November-April
11/10/2020		Middle Oconee	MO1			300	300				21	November-April
11/10/2020		Hunnicutt Creek	HC1			170	170				21	November-April
11/10/2020		Middle Oconee	MO2			70	70				21	November-April
11/10/2020		Kingswood Branch	KB1			140	140				21	November-April
11/10/2020		Kingswood Branch	KB3			500	500				21	November-April
11/10/2020		McNutt Creek	MN2			500	500				21	November-April
11/10/2020		McNutt Creek	MN1			300	300				21	November-April
11/10/2020		Middle Oconee	MO3			300	300				21	November-April
11/10/2020		Unnamed Tributary	UT1			340	340				21	November-April
11/10/2020		Middle Oconee	MO4			300	300				21	November-April
11/10/2020		Oconee River	OC1			110	110				21	November-April
11/10/2020		Cedar Creek	CED1			800	800				21	November-April
11/10/2020		Carr Creek	CA1			170	170				21	November-April
11/10/2020		Cedar Creek	CED1			800	800				21	November-April
11/10/2020		Carr Creek	CA1			170	170				21	November-April
11/10/2020		Carr Creek	CA1	Blank	<	20	#N/A				21	November-April
11/11/2020		North Oconee	NO3			300	300				21	November-April
11/11/2020		North Oconee	NO3	Duplicate		500	#N/A				21	November-April
11/11/2020		Brooklyn Creek	BR2			9000	9000				21	November-April
11/11/2020		Brooklyn Creek	BR1			5000	5000				21	November-April
11/11/2020		Tanyard Creek	TAN2			2400	2400				21	November-April
11/11/2020		Tanyard Creek	TAN1			3000	3000				21	November-April
11/11/2020		West Trail Creek	WTR1			270	270				21	November-April
11/11/2020		East Trail Creek	ETR1			500	500				21	November-April
11/11/2020		East Trail Creek	ETR2			500	500				21	November-April
11/11/2020		West Trail Creek	WTR2			500	500				21	November-April
11/11/2020		Trail Creek	TR1			700	700				21	November-April
11/11/2020		Trail Creek	TR3			1300	1300				21	November-April
11/11/2020		North Oconee	NO2			230	230				21	November-April
11/11/2020		North Oconee	NO2	Blank	<	20	#N/A				21	November-April

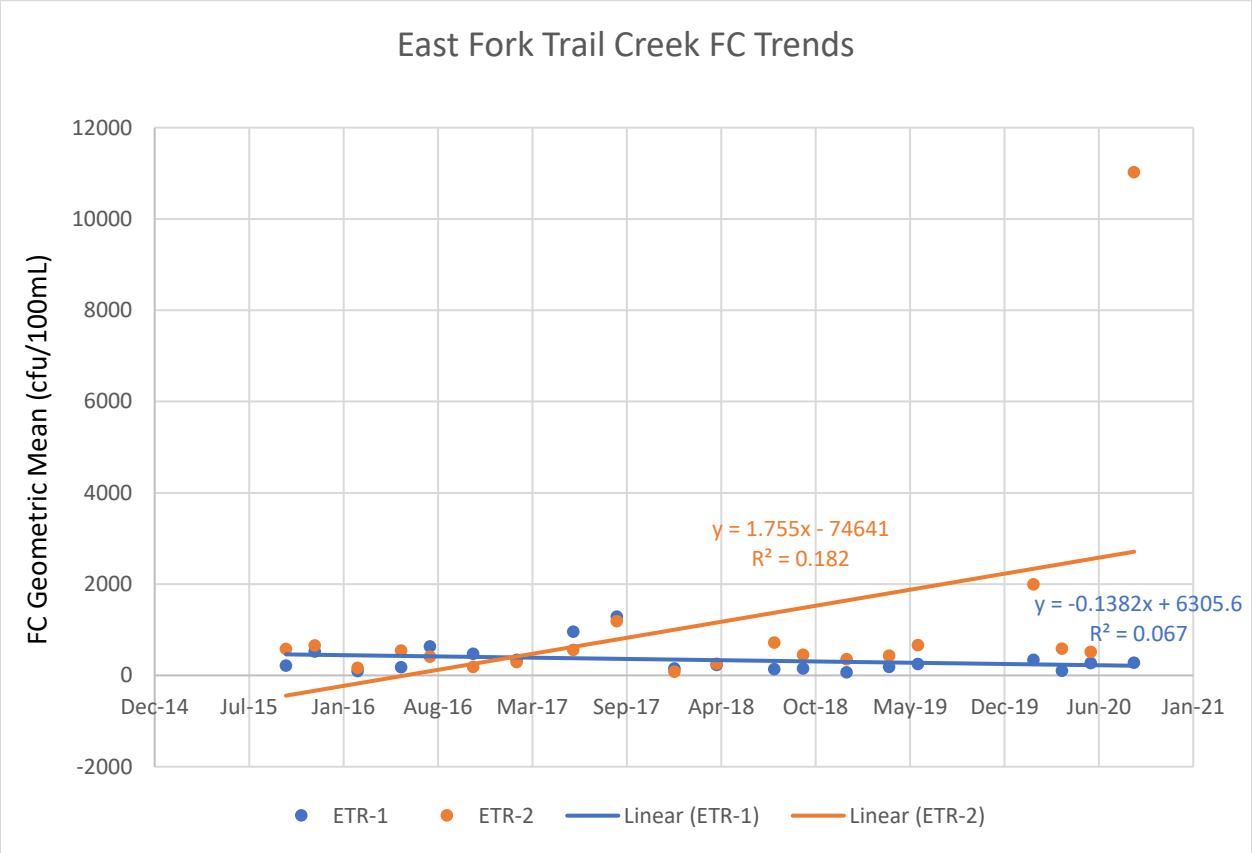
APPENDIX B

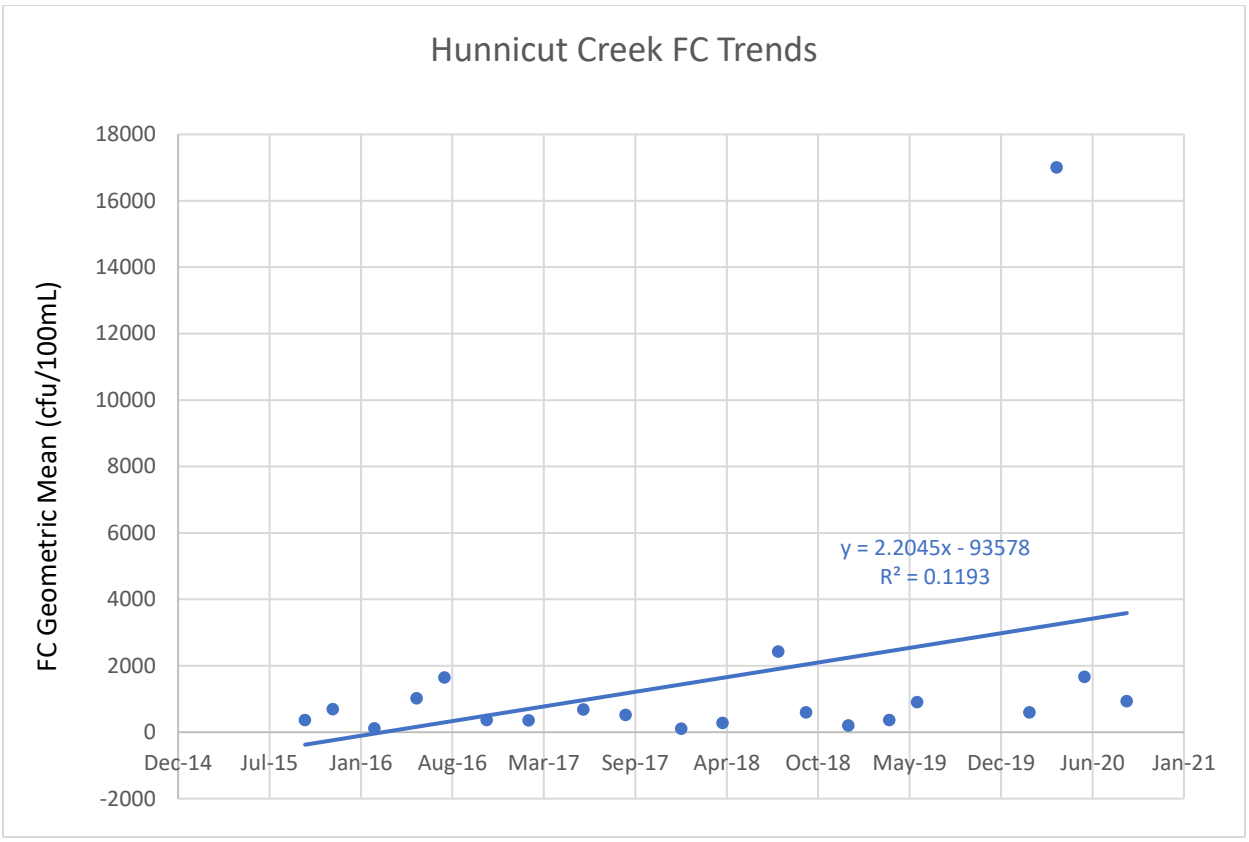
Water Quality Trends (October 2015 – September 2020)

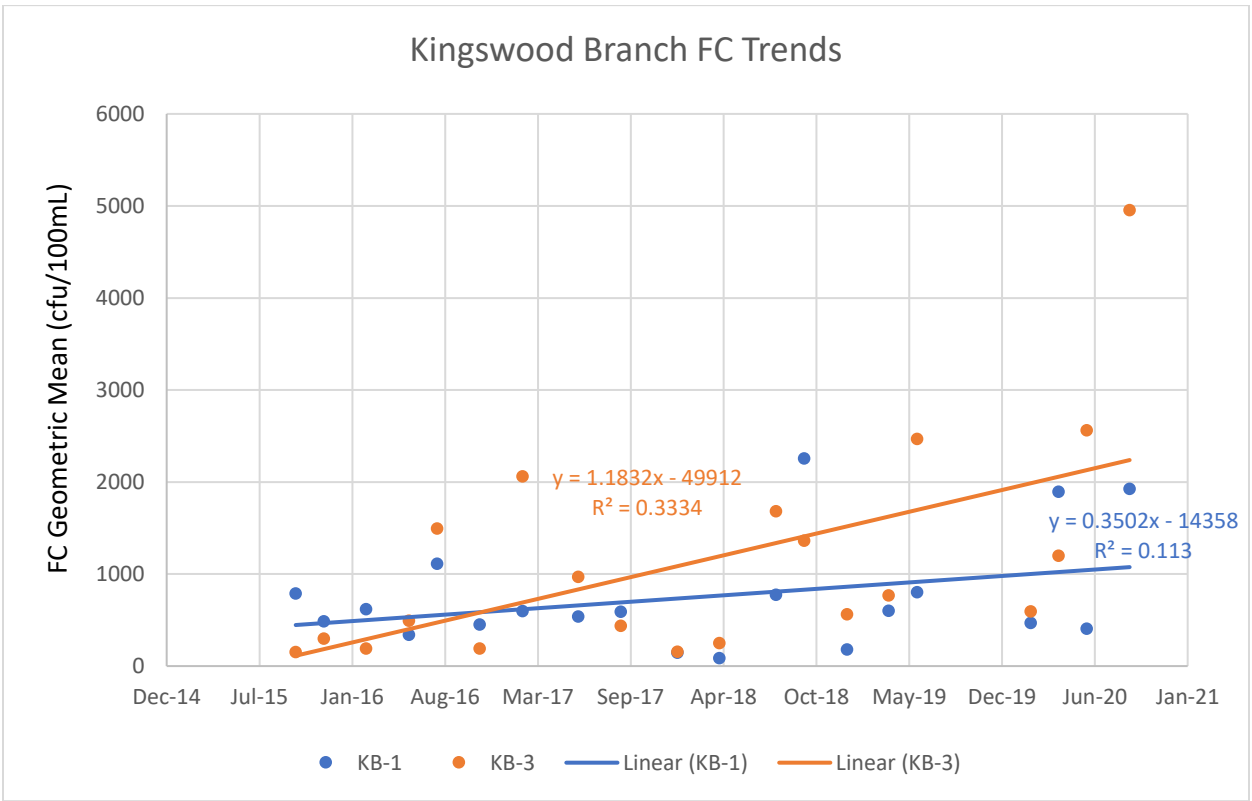

Brooklyn Creek FC Trends
FC Geometric Mean (cfu/100mL)
14000
12000
10000
8000
6000
4000
2000
0
y = -0.2082x + 10854
R² = 0.0023
y = 0.1333x - 4320.3
R² = 0.0053
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
BR-1
BR-2
Linear (BR-1)
Linear (BR-2)

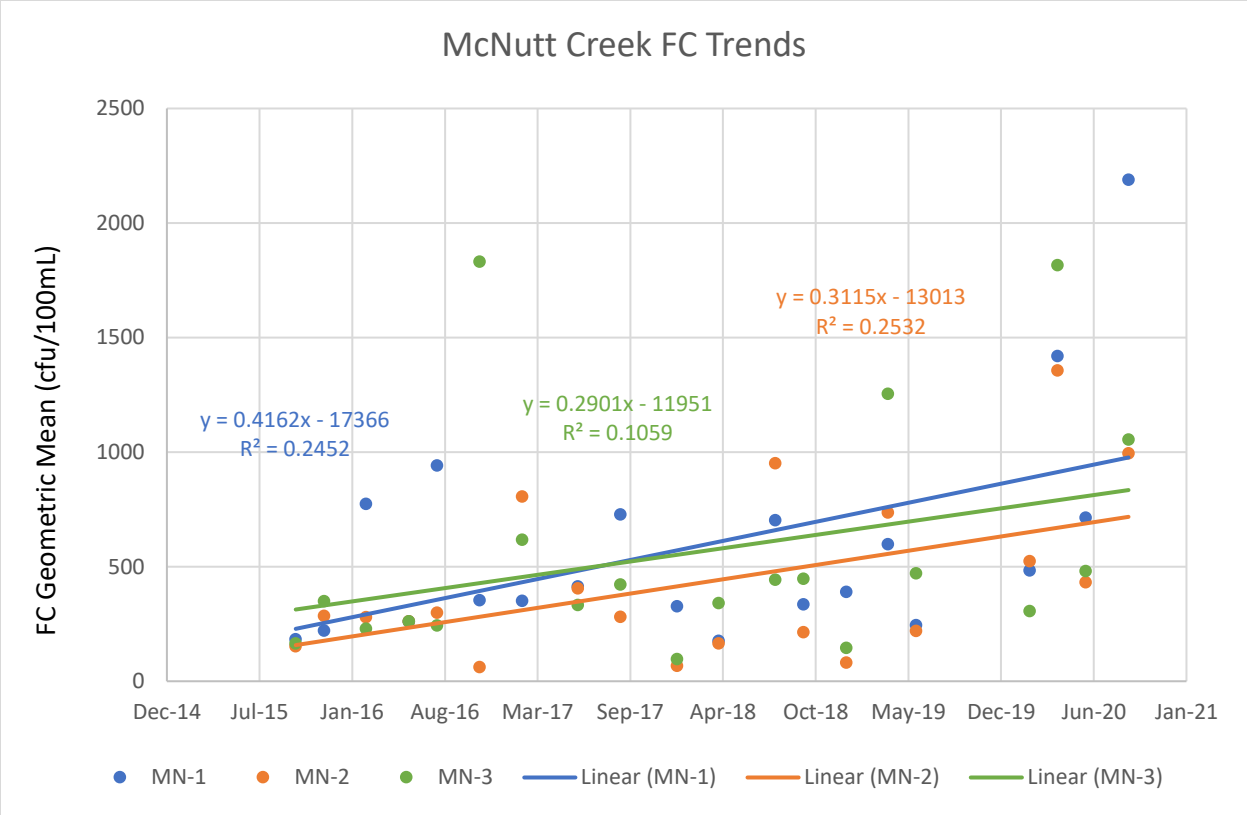

Carr Creek FC Trends
FC Geometric Mean (cfu/100mL)
2500
2000
1500
1000
500
0
y = 0.3833x - 16007
R² = 0.142
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21

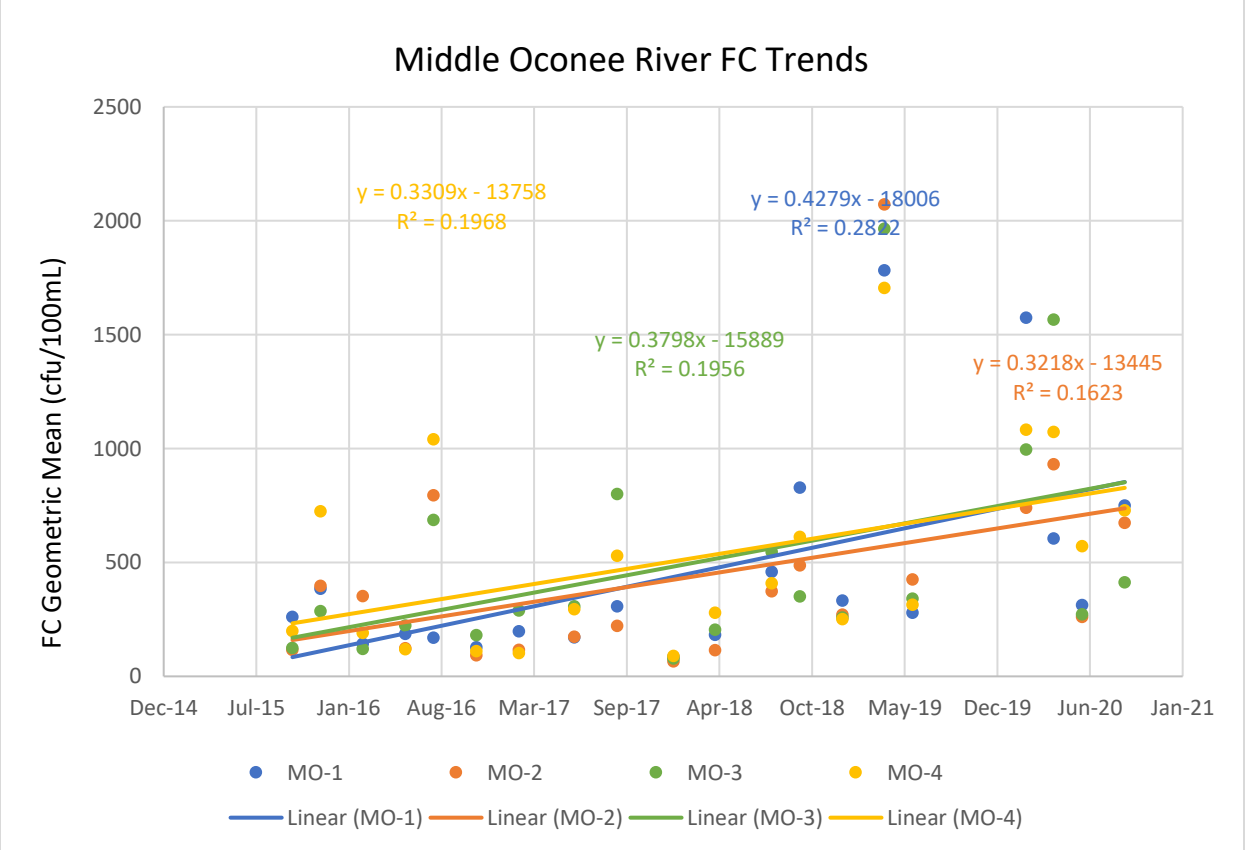

Cedar Creek FC Trends
FC Geometric Mean (cfu/100mL)
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
y = 0.7848x - 32842
R² = 0.242

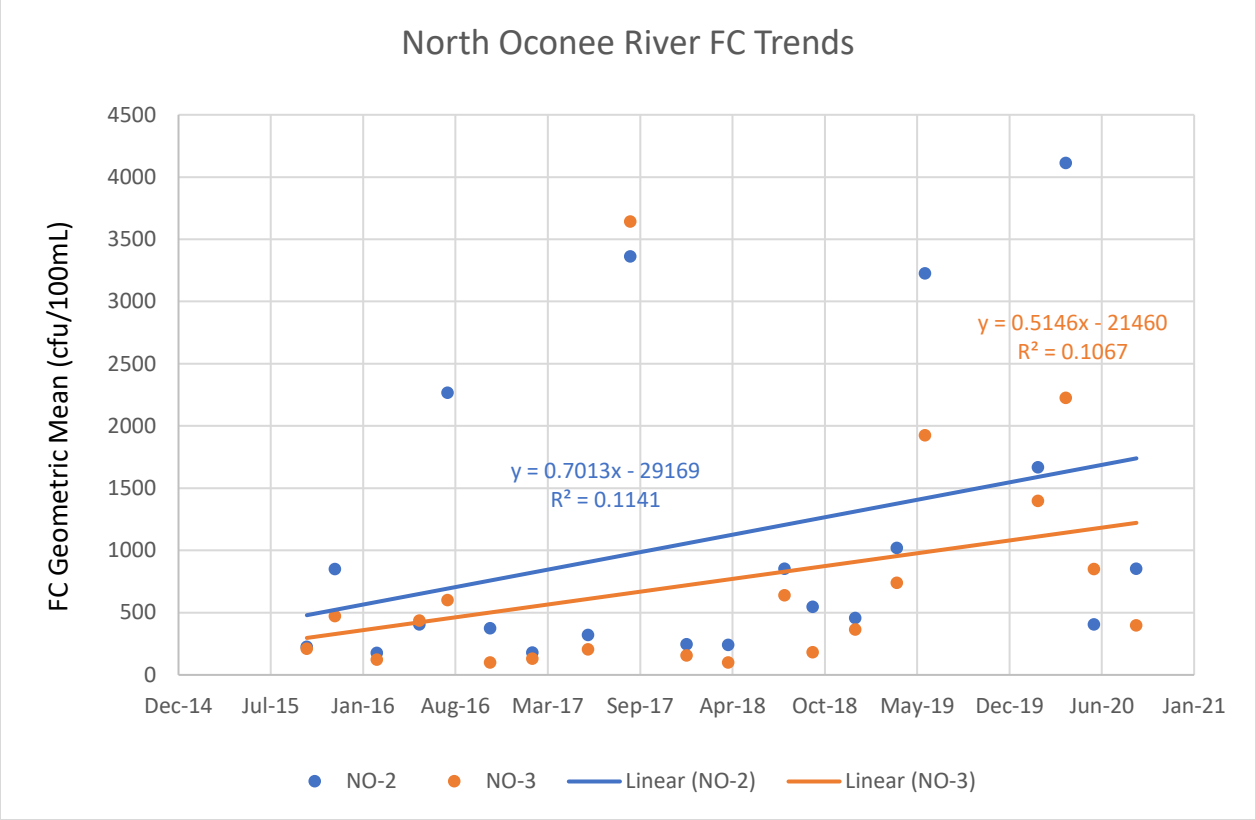

East Fork Trail Creek FC Trends
FC Geometric Mean (cfu/100mL)
12000
10000
8000
6000
4000
2000
0
-2000
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
y = 1.755x - 74641
R² = 0.182
y = -0.1382x + 6305.6
R² = 0.067
ETR-1
ETR-2
Linear (ETR-1)
Linear (ETR-2)

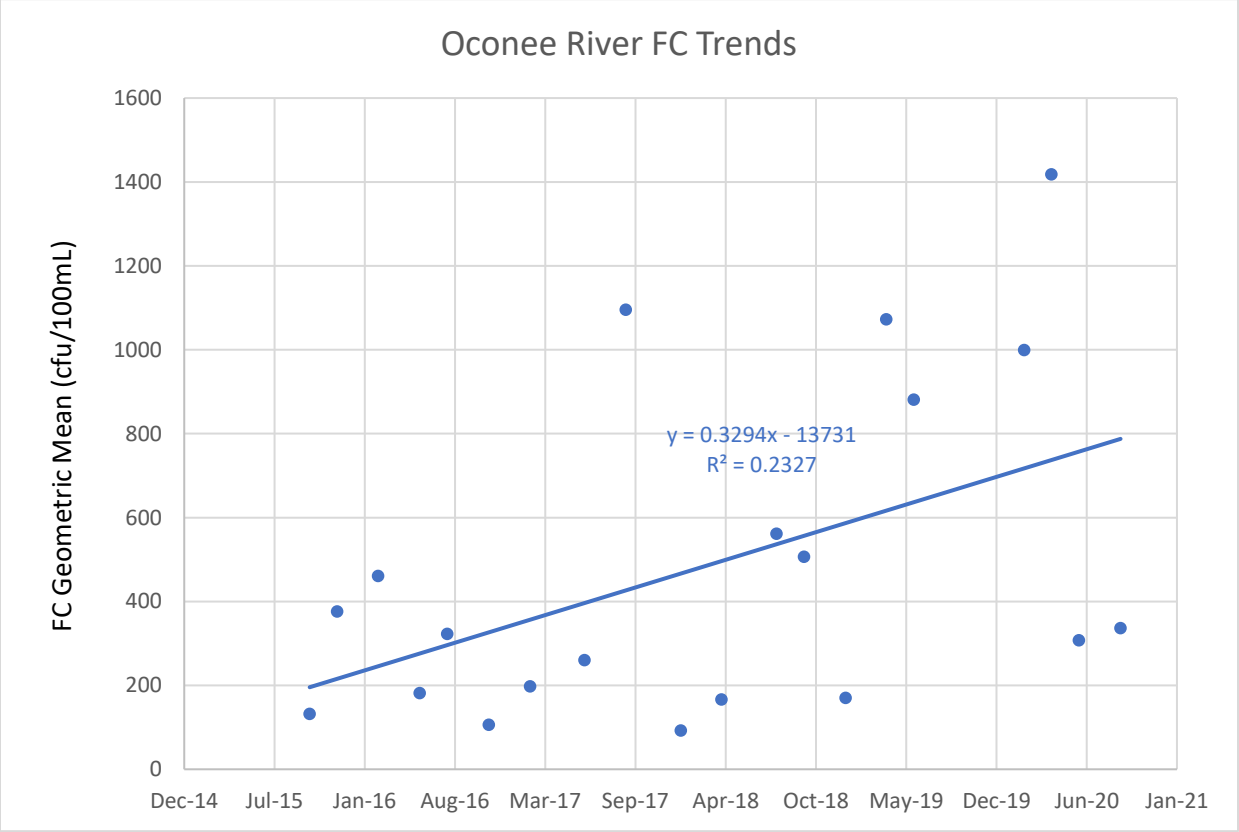

Hunnicut Creek FC Trends
FC Geometric Mean (cfu/100mL)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
y = 2.2045x - 93578
R² = 0.1193

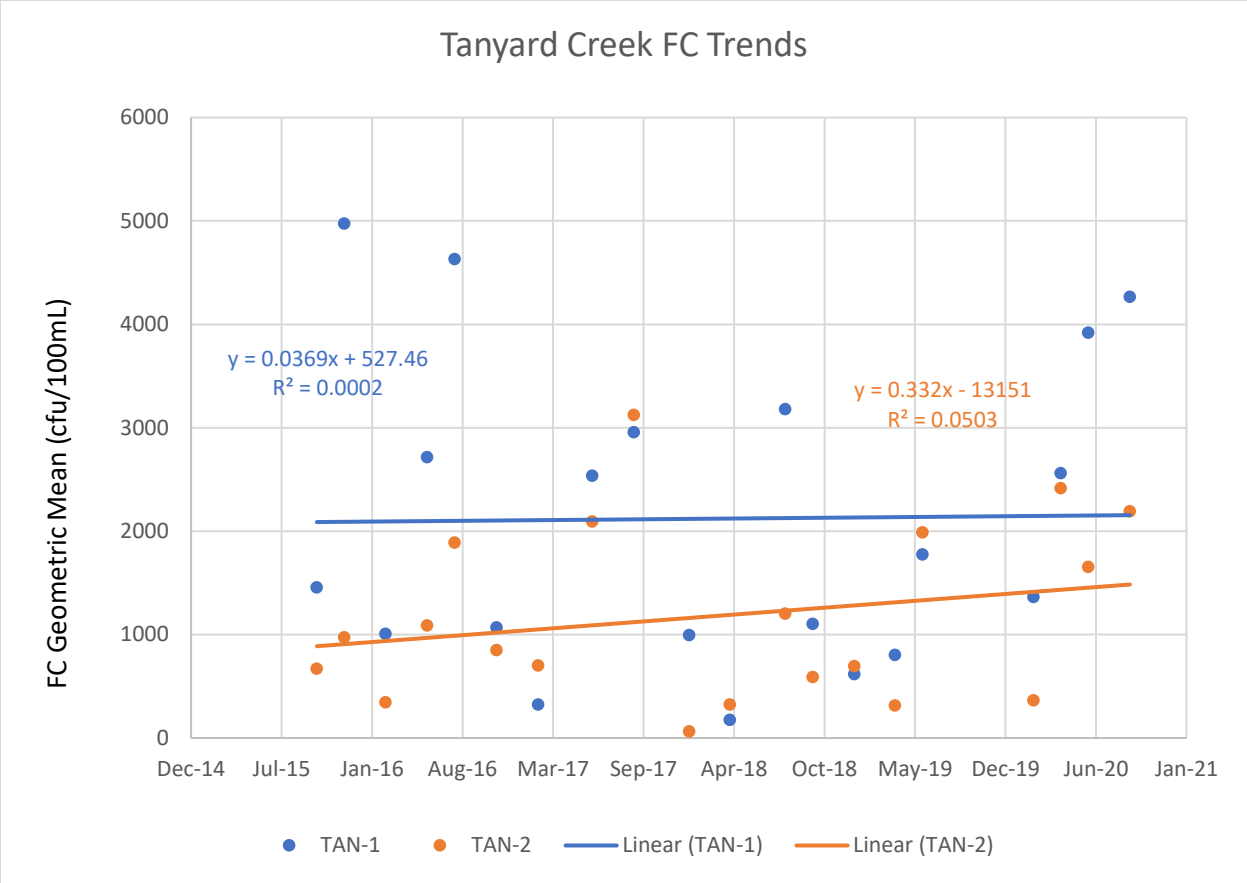

Kingswood Branch FC Trends
FC Geometric Mean (cfu/100mL)
6000
5000
4000
3000
2000
1000
0
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
y = 1.1832x - 49912
R² = 0.3334
y = 0.3502x - 14358
R² = 0.113
KB-1
KB-3
Linear (KB-1)
Linear (KB-3)

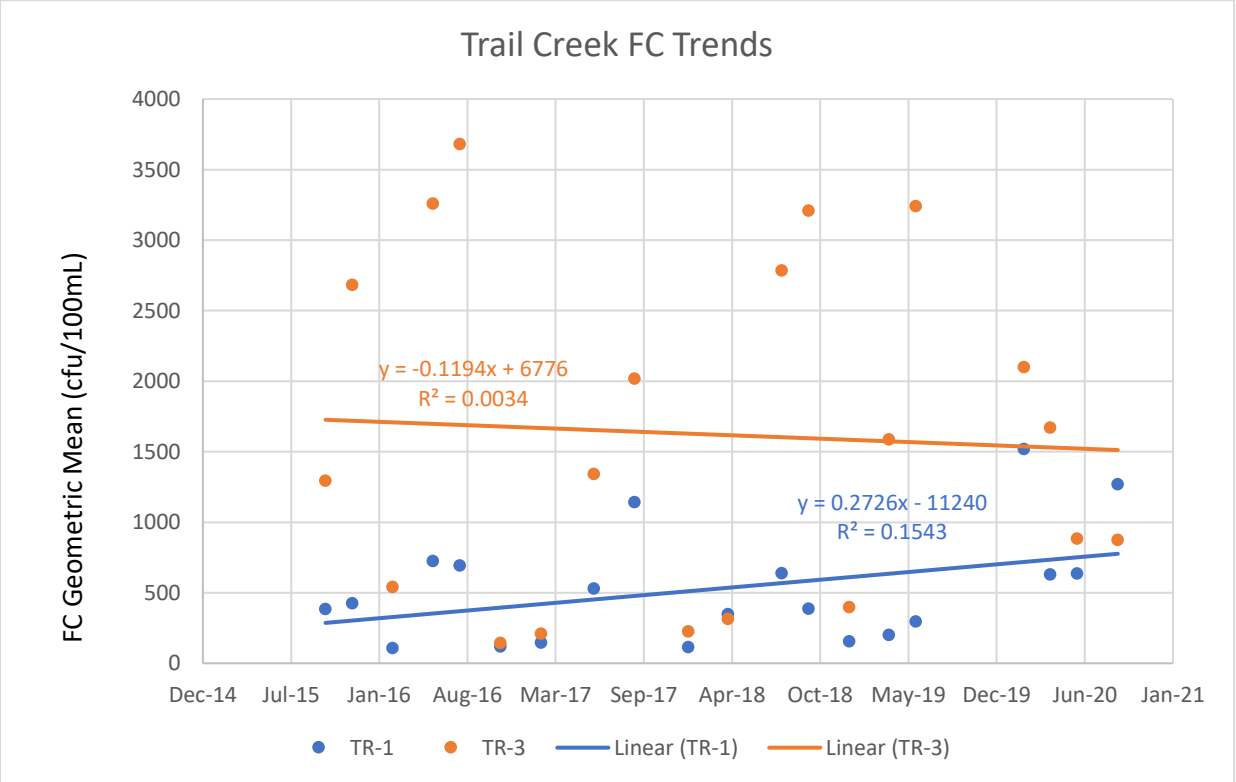

McNutt Creek FC Trends
FC Geometric Mean (cfu/100mL)
2500
2000
1500
1000
500
0
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
y = 0.4162x - 17366
R² = 0.2452
y = 0.2901x - 11951
R² = 0.1059
y = 0.3115x - 13013
R² = 0.2532
MN-1
MN-2
MN-3
Linear (MN-1)
Linear (MN-2)
Linear (MN-3)

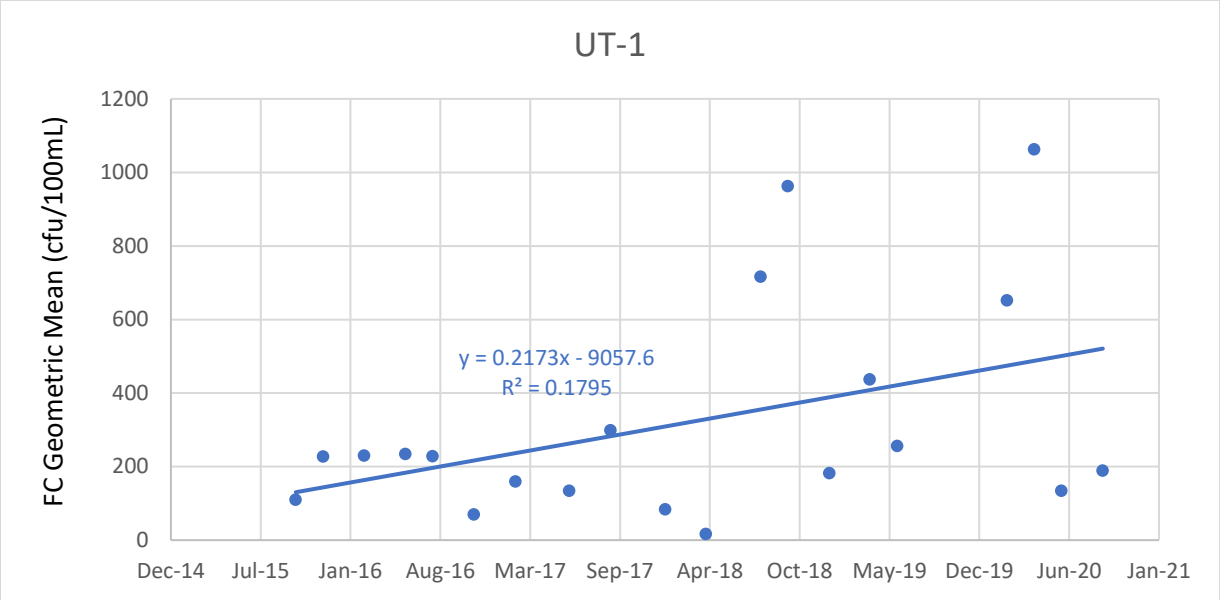

Middle Oconee River FC Trends
FC Geometric Mean (cfu/100mL)
2500
2000
1500
1000
500
0
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
y = 0.3309x - 13758
R² = 0.1968
y = 0.4279x - 18006
R² = 0.2832
y = 0.3798x - 15889
R² = 0.1956
y = 0.3218x - 13445
R² = 0.1623
MO-1
MO-2
MO-3
MO-4
Linear (MO-1)
Linear (MO-2)
Linear (MO-3)
Linear (MO-4)

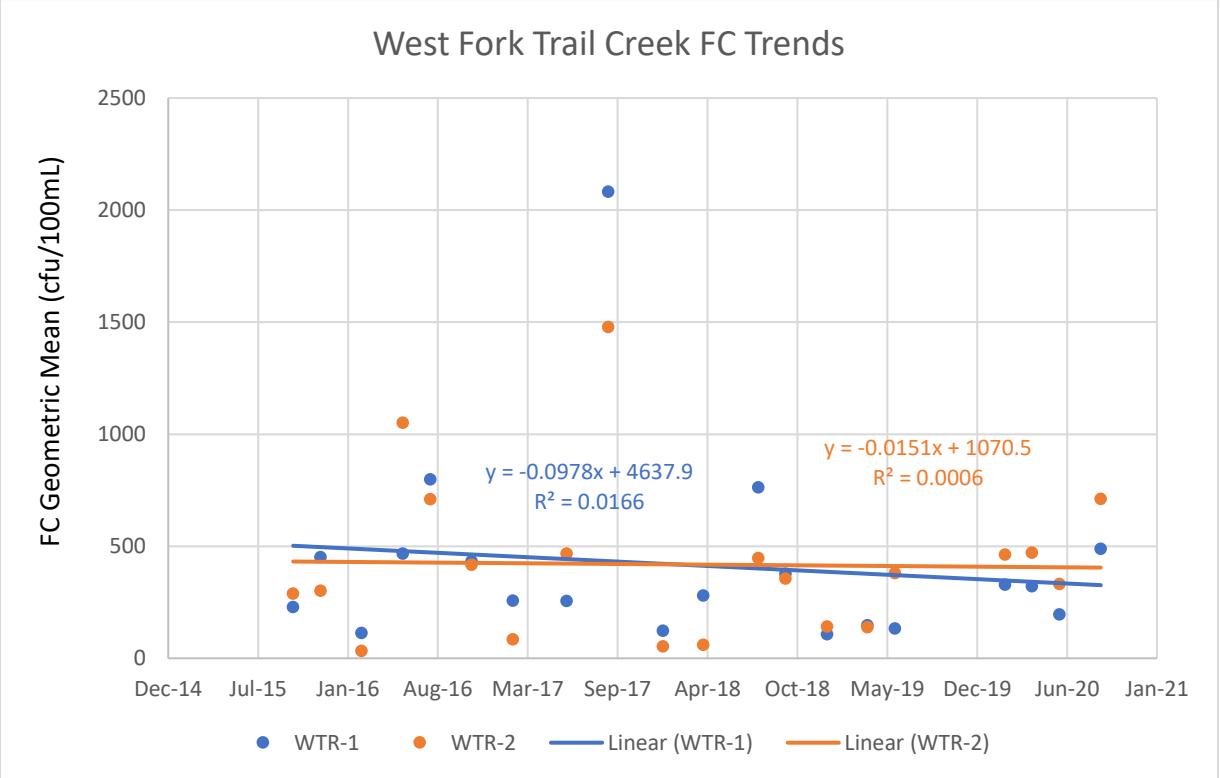

North Oconee River FC Trends
FC Geometric Mean (cfu/100mL)
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
y = 0.5146x - 21460
R² = 0.1067
y = 0.7013x - 29169
R² = 0.1141
NO-2
NO-3
Linear (NO-2)
Linear (NO-3)

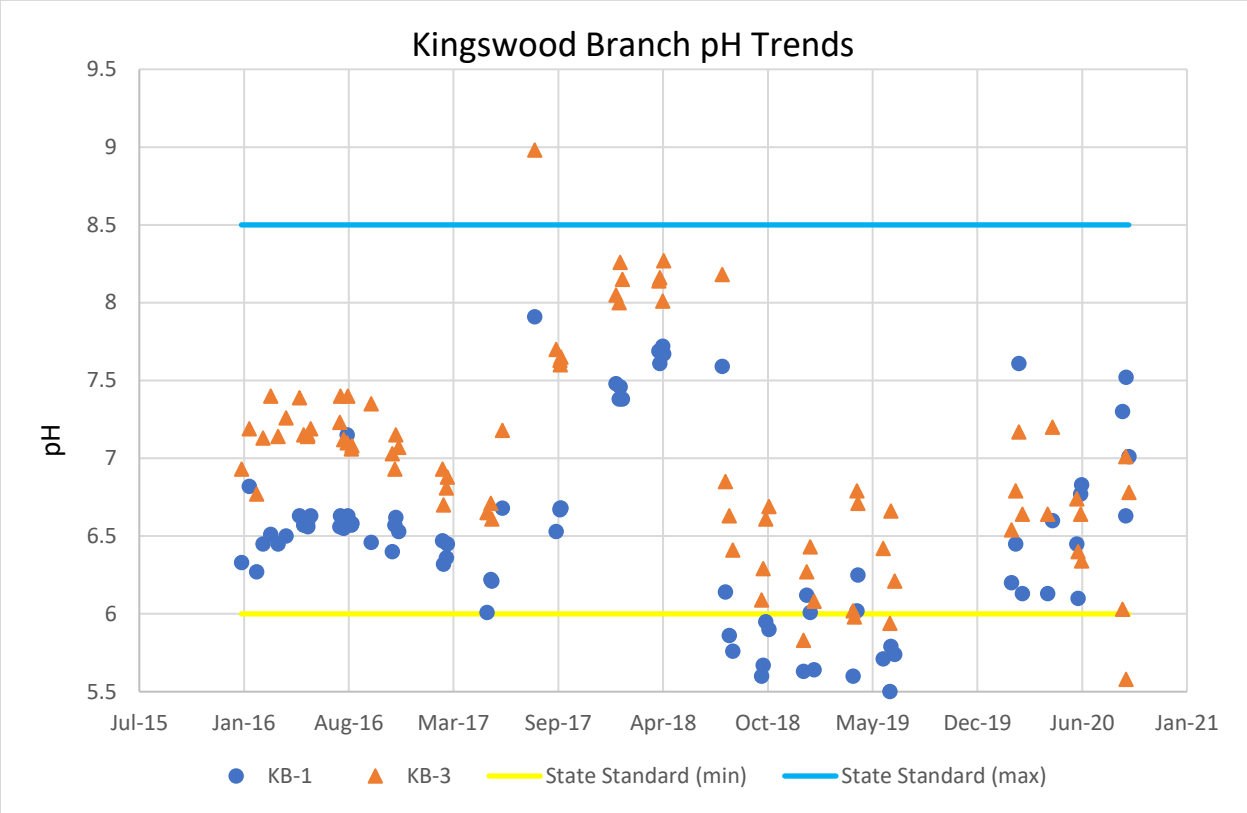

Oconee River FC Trends
FC Geometric Mean (cfu/100mL)
1600
1400
1200
1000
800
600
400
200
0
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
y = 0.3294x - 13731
R² = 0.2327

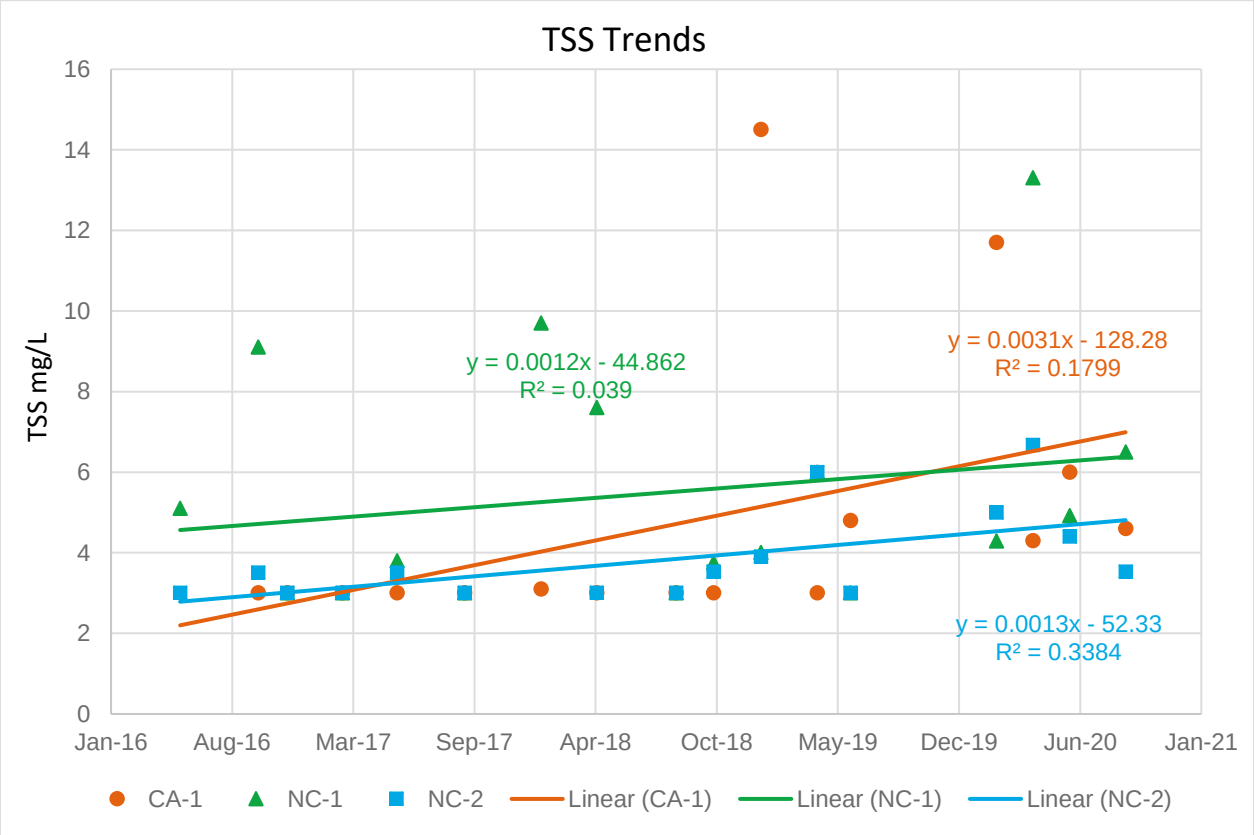

Tanyard Creek FC Trends
FC Geometric Mean (cfu/100mL)
6000
5000
4000
3000
2000
1000
0
y = 0.0369x + 527.46
R² = 0.0002
y = 0.332x - 13151
R² = 0.0503
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
TAN-1
TAN-2
Linear (TAN-1)
Linear (TAN-2)


Trail Creek FC Trends
FC Geometric Mean (cfu/100mL)
4000
3500
3000
2500
2000
1500
1000
500
0
y = -0.1194x + 6776
R² = 0.0034
y = 0.2726x - 11240
R² = 0.1543
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
TR-1
TR-3
Linear (TR-1)
Linear (TR-3)


UT-1
FC Geometric Mean (cfu/100mL)
1200
1000
800
600
400
200
0
y = 0.2173x - 9057.6
R² = 0.1795
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21


West Fork Trail Creek FC Trends
FC Geometric Mean (cfu/100mL)
2500
2000
1500
1000
500
0
y = -0.0978x + 4637.9
R² = 0.0166
y = -0.0151x + 1070.5
R² = 0.0006
Dec-14
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
WTR-1
WTR-2
Linear (WTR-1)
Linear (WTR-2)


Kingswood Branch pH Trends
pH
9.5
9
8.5
8
7.5
7
6.5
6
5.5
Jul-15
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
KB-1
KB-3
State Standard (min)
State Standard (max)


TSS Trends
TSS mg/L
16
14
12
10
8
6
4
2
0
Jan-16
Aug-16
Mar-17
Sep-17
Apr-18
Oct-18
May-19
Dec-19
Jun-20
Jan-21
y = 0.0012x - 44.862
R² = 0.039
y = 0.0031x - 128.28
R² = 0.1799
y = 0.0013x - 52.33
R² = 0.3384
CA-1
NC-1
NC-2
Linear (CA-1)
Linear (NC-1)
Linear (NC-2)

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