Water Quality Monitoring for the Bayou Bartholomew Watershed (Hydrologic Unit Code 8040205) Project# 17-400

Prepared For:

Arkansas Department of Agriculture
Natural Resources Division

Prepared By:

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EXECUTIVE SUMMARY

Bayou Bartholomew is listed by the Arkansas Department of Energy and Environment, Division Environmental Quality (DEQ) as impaired for not meeting established water quality standards set in *Regulation 2*. These impairments and water quality degradation maybe associated with non-point source pollution within the watershed. From November 2017 through September 2021, *Equilibrium*, a 501(c)3 non-profit organization, monitored water quality for parameters associated with non-point source pollution at ten permanent water quality monitoring stations previous established within sub-basins (12-digit HUCs) of the Bayou Bartholomew watershed (8-digit HUC). These stations are representative of the water quality found throughout the upper Bayou Bartholomew, Cousart Bayou and Deep Bayou watersheds.

Attempts were made to collect weekly water samples at each monitoring station during the project period, samples were analyzed for total phosphorus, nitrate-nitrite nitrogen, total Kjeldahl nitrogen, ammonia nitrogen, total suspended solids, turbidity, chloride, and sulfate (total nitrogen was calculated). At the time of sample extraction, the recording of in-situ parameters (dissolved oxygen, pH, temperature, and specific conductance) was made. As suggested by EPA, statistical trend analyses of parameter concentrations were conducted using the Mann-Kendall Statistical Test and reported (EPA, 2011).

Continuous water level measurements were attempted at each monitoring station with pressure transducers. Stream surveys and discharge measurements were made during an array of flow events. From these data, rating curves were established by regression analyses with "best-fit" curves for the estimation of discharge at monitoring stations. These rating curves were reported along with their ANOVA components.

Period weighted loadings for total phosphorus, nitrate-nitrite nitrogen, total Kjeldahl nitrogen, ammonia nitrogen, total nitrogen, total suspended solids, chloride, and sulfate at each monitoring station were estimated. Computations of linear regression analysis for monthly loads were calculated to indicate whether linear equations resulted in positively or negatively sloped lines, these were reported as trends. Furthermore, unit area loads derived from the drainage areas upstream of each monitoring station were calculated and reported.

Most all parameter loadings increased longitudinally as water moved downstream from station to station. This is greatly apparent in both the Cousart Bayou and Deep Bayou watersheds. However, results from this project indicate degradation in water quality is occurring between the D4 and D5 stations.

Water quality data from this project has been uploaded and will be maintained in the EPA administered Water Quality eXchange (WQX) database.

Equilibrium owes gratitude to Clark Kuyper at the Ouachita Baptist University Water Lab and staff at the Arkansas Department of Agriculture, Natural Resource Division. Their support enabled this project's success.

FUNDING AND COLLABORATION

Funding to support this project was provided by the Arkansas Natural Resources Commission and the Environmental Protection Agency based on Section 319 of the Clean Water Act.

This project was dependent on the coordination of multiple partnerships whose combined efforts and resources ensured successful project implementation and execution. Below is a list of key partners and a brief description of their roles in the project:

- U.S. Environmental Protection Agency (EPA) provided funding for this project. Their funding has been vital to the project's existence and implementation.
- Arkansas Department of Agriculture, Natural Resource Division (NRD) distributed funding, project oversight and management, and technical assistance to ensure project success.
- Ouachita Baptist University (OBU) committed technical assistance through its science department and provided analytical laboratory services through the OBU State Certified Water Chemistry Laboratory during the project. Additionally, OBU provided match that has been vital to the project's existence and implementation.
- Equilibrium was responsible for project oversight, field data collection, quality control, data analysis, and reporting.

GOALS AND OBJECTIVES

The primary goal of this project was to collect, analyze, and report water quality and discharge data at the selected monitoring stations; to provide monthly and annual parameter loadings; as well as unit area loadings in numerous 12-digit HUCs of the Bayou Bartholomew Watershed for a four-year period. This goal was accomplished through the development and implementation of a monitoring scheme by collecting water quality and discharge data; analysis of water quality samples with a verifiable level of accuracy and precision; estimation of daily average discharge throughout the project period; evaluation of data by way of statistical analysis and models; and finally, the reporting of the monitoring results as constituent loadings.

PROJECT SCHEDULE

Equilibrium conducted this project between October 2017 to December 2021. The following table details the anticipated period for individual project tasks. Equilibrium completed this Final Report after the initial anticipated period. Two factors mostly contributed to this: a delay in an approved QAPP and the lag time between final sample collections and the reporting of their analytical results.

Task	Subtask Number	Description	Start Date	Completion Date
1	**1.1**	Conduct fiscal audit of project revenues	1/1/2018	9/30/2021
2	**2.1**	Develop draft the QAPP	10/1/2017	10/1/2017
	2.2	Edit and revise the QAPP per NRD comments.	10/1/2017	10/1/2017
	2.3	Finalize QAPP	10/1/2017	10/1/2017
3	**3.1**	Install pressure transducers at ten monitoring stations	10/1/2017	11/1/2017
	3.2	Collect grab samples and routine QAQC samples (approximately 2496) on scheduled basis and deliver to lab	10/1/2017	9/30/2021
	3.3	Record in-situ data at each monitoring station	10/1/2017	9/30/2021
	3.4	Record any deviations from sampling protocols including possible sample contamination or sampler error	10/1/2017	9/30/2021
	3.5	Analyze approximately 2496 samples	10/1/2017	9/30/2021
4	**4.1**	Survey the streams' profile at the monitoring stations	10/1/2017	3/31/2021
	4.2	Collect velocity measurements at the monitoring stations	10/1/2017	3/31/2021
	4.3	Continually collect stage height data at the monitoring stations	10/1/2017	8/31/2021
5	**5.1**	Statistical analysis between discharge and stage data at monitoring stations	4/1/2021	9/30/2021
	5.2	Statistical analysis comparing results between each monitoring station	4/1/2021	9/30/2021
6	**6.1**	Annually prepare data into a compatible format that meets the requirements of WQX	8/31/2018	9/30/2021
	6.2	Annually import the collected water quality data into the data warehouse via WQX	8/31/2018	9/30/2021
	6.3	Annually validate the imported water quality data in the data warehouse via WQX	8/31/2018	9/30/2021
7	**7.1**	Quarterly reports	10/1/2017	9/30/2021
	7.2	Quarterly QAPP report	10/1/2017	9/30/2021
	7.3	Final report	7/1/2021	9/30/2021
	7.4	Annual Report	7/1/2018	9/30/2021
	7.5	Attend and present project outcomes at Annual 319 Meeting	9/1/2018	9/1/2021

Table 1 Anticipated Project Schedule

BACKGROUND

Bayou Bartholomew begins northwest of the city of Pine Bluff, Arkansas and flows approximately 360 miles into Louisiana, eventually draining into the Ouachita River. The Bayou Bartholomew Alliance claims Bayou Bartholomew is the longest bayou in the world. Until construction of railroad lines (ca. 1890), Bayou Bartholomew was one of the most important waterways for transportation in the interior Delta and provided a navigable route into an otherwise landlocked area, which allowed the development of one of the richest timber and agricultural tracts in the Delta (DeArmond-Huskey 2001). Although fragmented, Bayou Bartholomew is lined with a matrix of bottomland forest containing cypress and tupelo swamps. The entire watershed encompasses a total of 1,157 square miles square miles and flows through parts of seven counties in Arkansas. The western side, located in the Southern Coastal Plain is dominated by forest, while the eastern side, located in the Alluvial Plain, is predominately cropland.

Water quality can be impacted from agricultural practices. Much of the eastern Bayou Bartholomew watershed has been deforested and converted to agriculture lands. Agriculture and unknown sources are listed as sources of impairment. The entire length of Bayou Bartholomew's main stem was placed on the 1998 federal 303(d) list (and subsequent lists) of impaired waters in Arkansas because of its elevated turbidity levels. The DEQ 305(b) Water Quality Assessment Report lists the Bayou Bartholomew designated uses as impaired for fish consumption and aquatic life. The NRD designated Bayou Bartholomew as a priority watershed through the Nonpoint Source Program.

Because of these impairments and the potential for elevated non-point source pollution within the Bayou Bartholomew watershed, the need for collection, analysis, and reporting of water quality and discharge data was identified. Therefore, Equilibrium established and implemented a water quality sampling approach focused on quantifying parameter loads associated with small sub-basins at the 12-digit HUC scale. Results of these surveys may assist in watershed management and conservation planning, and over time, may measure the success of non-point source reduction initiatives. Sampling activities were focused in the upper Bayou Bartholomew, the Cousart Bayou-Deep Bayou watersheds.

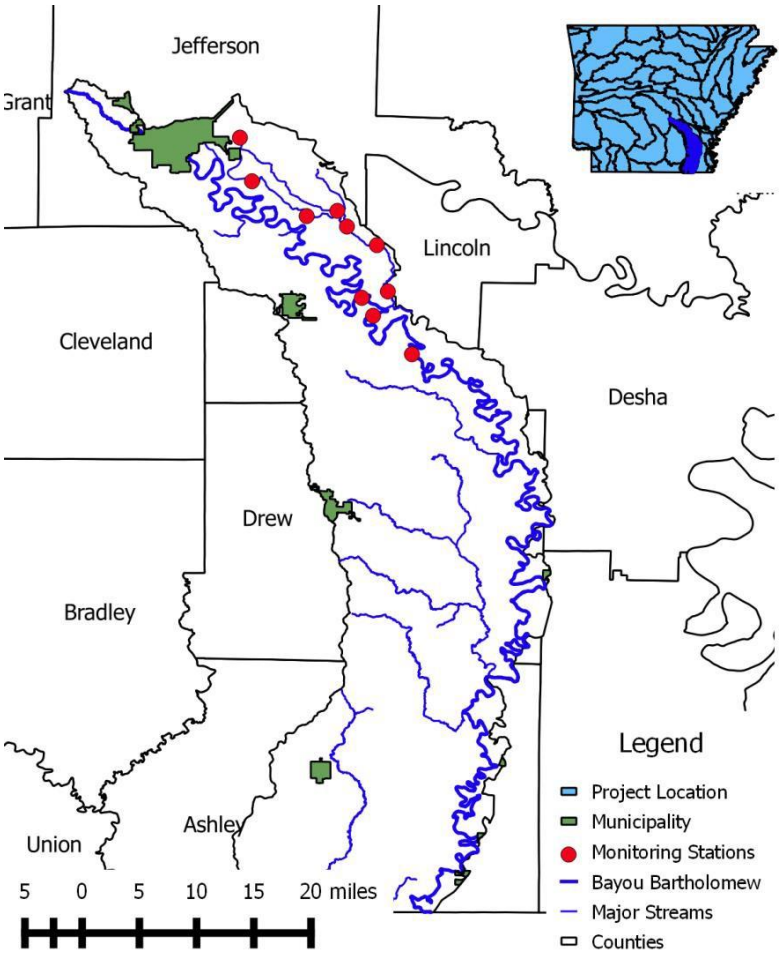

Figure 1 Bayou Bartholomew Watershed

Geologic Description

The Bayou Bartholomew watershed is a part of the alluvial plain of the Arkansas and Mississippi Rivers. This physiographic province is characterized by low-relief topography dissected by meandering rivers and streams. The alluvial plain east of Bayou Bartholomew is typified by sluggish, meandering streams. Other surface features include abandoned meanders, oxbow lakes, and natural levees. Natural levees along the streams provide local relief of 10-15 feet (Broom 1973). The alluvial plain west of Bayou Bartholomew rises abruptly 20 feet or more to alluvial terraces. Farther west the alluvial terraces abut outcropping rock of the Jackson Group. The outcropping Jackson forms the Monticello Ridge (Broom 1973). The natural-drainage network is inefficient, and flooding is caused by surface backwater during and after periods of heavy rainfall. The backwater areas support lush wetland forests that provide habitats for wildlife. Canals have been dug and streams cleared and straightened through many of the backwater areas to alleviate flooding and to reclaim land for farming (Broom 1973).

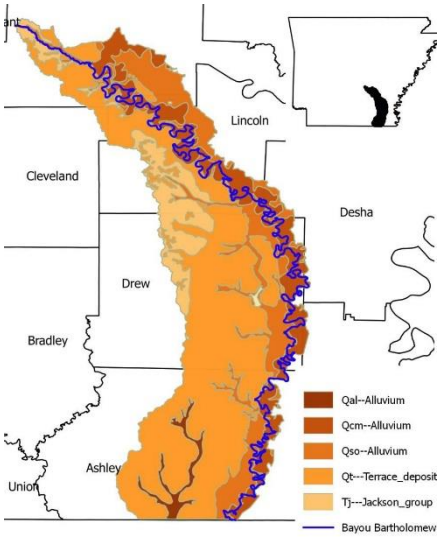

Figure 2 Surficial Geology Bayou Bartholomew Watershed

Land Use and Topography

Land use in 2006 data showed the Bayou Bartholomew watershed within Arkansas as predominately forest (58.7%), crops (22.1%), and herbaceous (11.0%). Reports from the Arkansas State Highway and Transportation Department in 2006 classify 66% of the roads in the watershed as gravel type and 34% as paved. A population of 73,256 lived within the watershed. Within the watershed are several populated areas, most notably Pine Bluff and Monticello, followed by White Hall, Star City Dermott, Portland, and Wilmot.

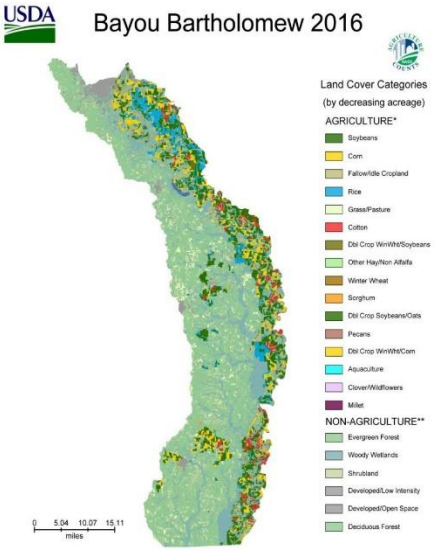

Figure 3 Land Use Imagery of the Bayou Bartholomew Watershed

PROJECT AREA

Bayou Bartholomew

The streams in the Bayou Bartholomew watershed are dendritic drainage systems, characterized by contributing streams joining together into the tributaries of the main river. The Bayou Bartholomew is the main stem or primary draining vessel of the watershed; it flows from north to south. The low-gradient bayou originates on the west- side of the City of Pine Bluff and flows approximately 360 miles to its confluence at the Ouachita River (BBA 2017). In Arkansas, the Bayou Bartholomew's 8-digit HUC is derived from forty-four 12-digit HUC. Attempts were made to isolate drainage from the upper Bayou Bartholomew, Cousart Bayou and Deep Bayou for analytical purposes within this project.

This project focused on an upper portion of the Bayou Bartholomew watershed, an area representing approximately 380 square miles (USGS 2017). The project area receives drainage from portions of Cleveland, Jefferson, and Lincoln Counties. Sampling stations received drainage originating in fourteen 12-digit HUC, a representation of 32% of the Bayou Bartholomew's 8-digit HUC within Arkansas.

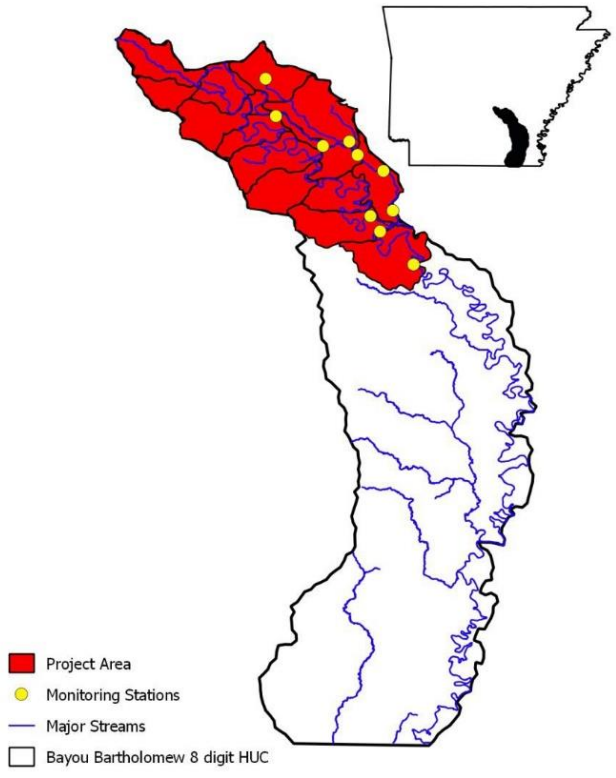

Figure 4 Project Area

Cousart Bayou

The Cousart Bayou flows through two 12-digit HUCs, the Cousart Bayou Headwaters– Lake Alice (HUC 080402050201) and the Cousart Bayou –Little Cypress Bayou (HUC 080402050202). Their acreage is approximated at 19,097 and 28,541 respectively (ANRC 2010). Cousart Bayou ends at its confluence with Deep Bayou.

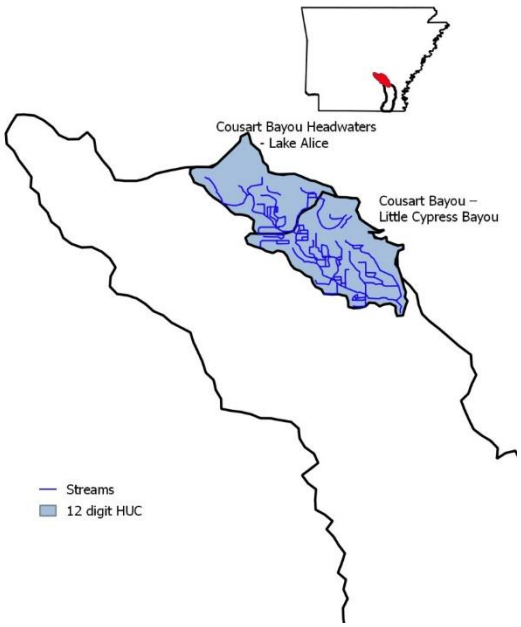

Figure 5 Cousart Bayou

According to 2006 CAST data, the Cousart Bayou Headwaters – Lake Alice HUC land uses were mixed and primarily consisted of crops (44.5%), forest (21.8%), pasture (8.3%), and herbaceous (6.7%) (CAST 2006). The Cousart Bayou–Little Cypress Bayou HUC land uses were mixed and primarily consisted of crops (74.9%), forest (12.1%), herbaceous (4.6%), and pasture (4.5%) (CAST 2006). Based on results from the SWAT model, Cousart Bayou was listed by ANRC as high priority based on sediment concentration (NRCS 2017).

Deep Bayou

The Deep Bayou flows through two 12-digit HUCs, the Upper Deep Bayou (HUC 080402050203) and the Lower Deep Bayou (HUC 080402050204), the combined acreage is approximated at 33,369 (ANRC 2010). Deep Bayou ends at its confluence with Bayou Bartholomew.

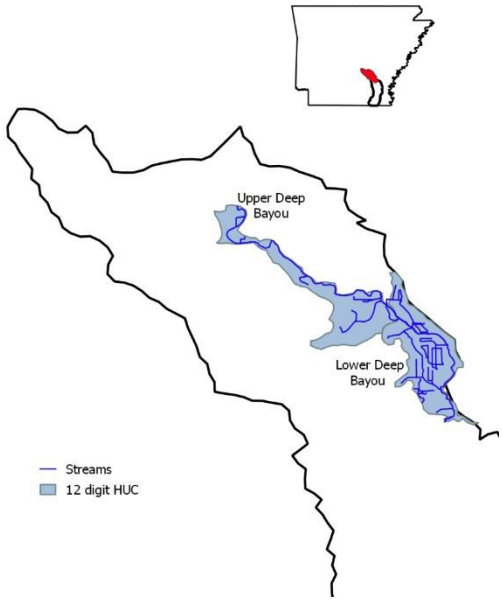

Figure 6 Deep Bayou

The Upper Deep Bayou HUC land uses were mixed and primarily consisted of crops (45.8%), forest (31.6%), herbaceous (11.4%) and pasture (6.4%). The Lower Deep Bayou HUC land uses were mixed and primarily consisted of crops (69.0%), forest (16.1%), herbaceous (10.1%) and pasture (2.8%) (CAST 2006). Based on SWAT results, the Lower Deep Bayou watershed was listed by ANRC as high priority based on total phosphorus concentration. (NRCS 2017)

MONITORING STATIONS

Ten monitoring stations were established throughout the Bayou Bartholomew watershed to quantify the parameter loadings and unit area loadings based on the drainage area upstream of the monitoring station. Site selections were based on a previous project and selected from physical characteristics, accessibility, and flow characteristics, and 12-digit HUC boundaries. Monitoring efforts focused on the upper Bayou Bartholomew, Cousart Bayou and Deep Bayou watersheds in consideration of the Saraswat *et al.* 2011 SWAT model. Monitoring stations were designed to allow a simultaneous longitudinal analysis of parameters within each basin.

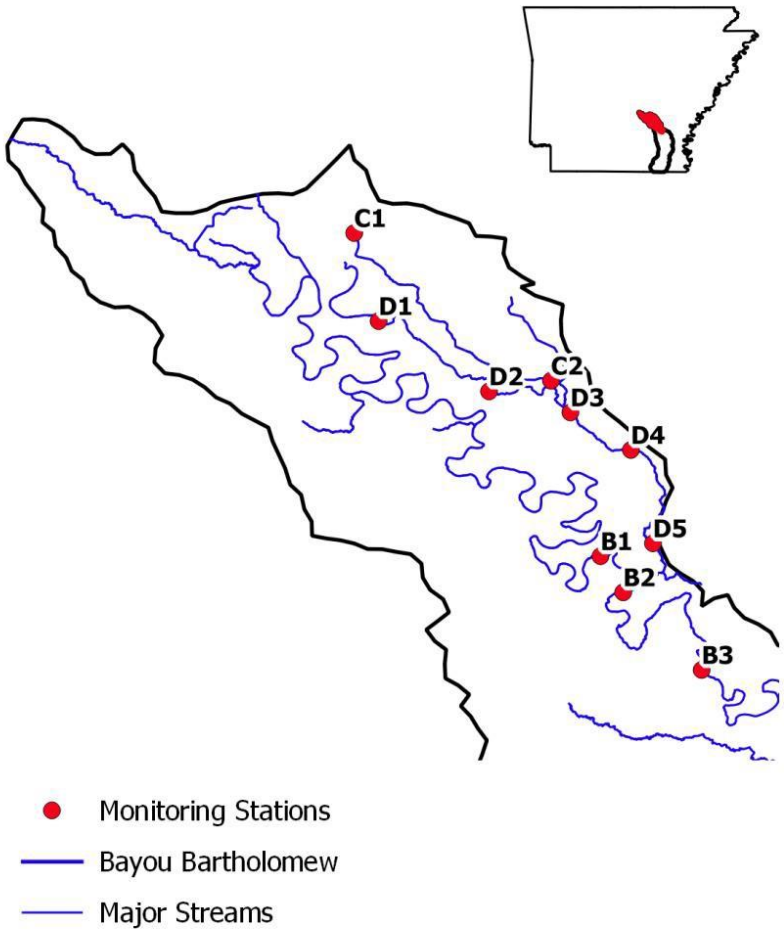

Figure 7 Monitoring Stations Within the Bayou Bartholomew Watershed

B1 – Bayou Bartholomew Monitoring Station

The B1 monitoring station collected water from the Bayou Bartholomew and consisted of the most northwestern portion of the Bayou Bartholomew watershed. The monitoring station received drainage from approximately 159,448 acres, it was made up of eight 12-digit HUCs. Its drainage consisted of a portion of urban runoff from Pine Bluff, Star City, and White Hall. The monitoring station was located at Arkansas Highway 293, near the Arkansas Highway 11 intersection. It was found at latitude 33°57'11.97"N and longitude 91°44'0.41"W. Data from USDA, National Agricultural Statistics Services suggested that during 2016 evergreen forest covered approximately 32% of this area, while soybeans and corn combined covered approximately 8.8% of this area. The B1 monitoring station was the farthest most upstream station on the Bayou Bartholomew and was upstream from the Bayou Bartholomew - Deep Bayou confluence. Previously, the USGS established a stream flow station at B1; however, they did not include discharge in their analyzed parameters, therefore it was necessary to establish a rating curve at the station.

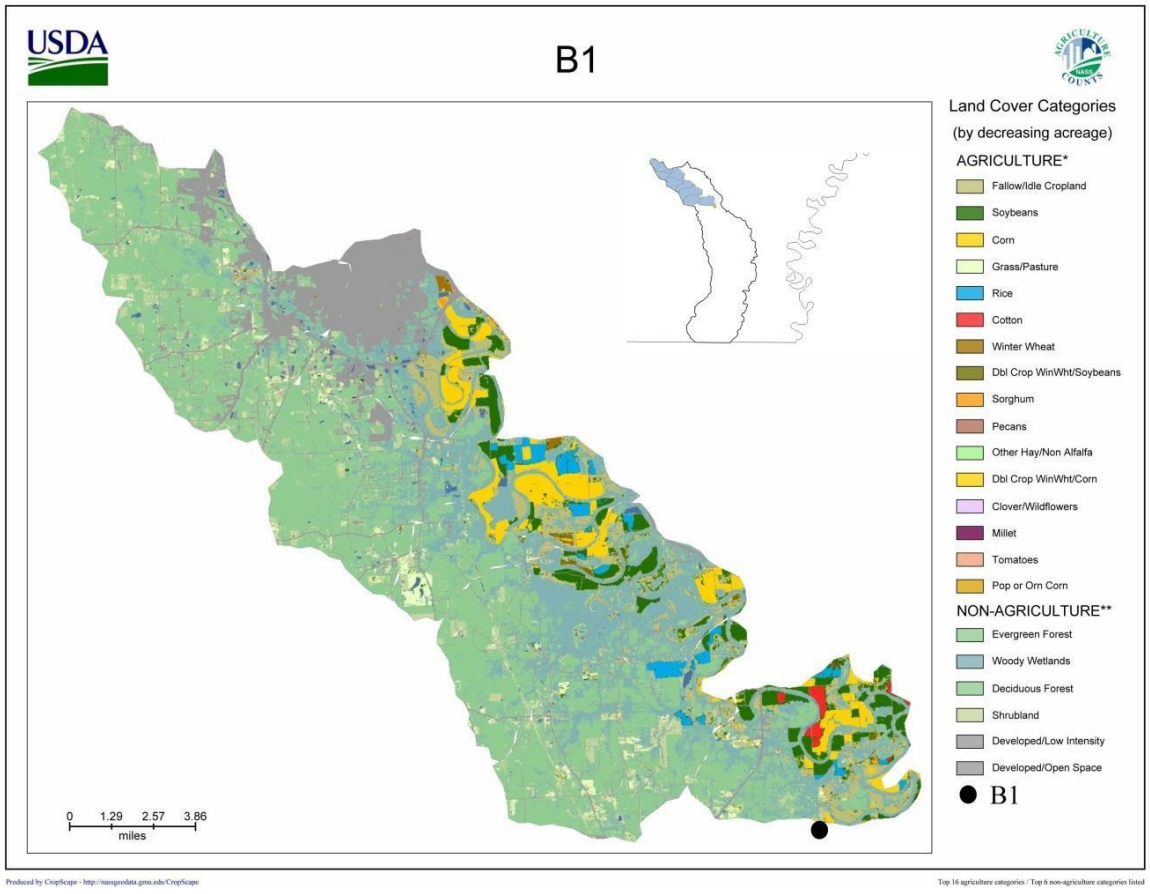

Figure 8 B1 Drainage Area Land Use

B2 – Bayou Bartholomew Monitoring Station

The B2 monitoring station collected water from the Bayou Bartholomew. The monitoring station received drainage from approximately 234,349 acres. B2 was downstream from the B1 monitoring station and the Bayou Bartholomew – Deep Bayou confluence. B2 received drainage from thirteen 12-digit HUCs. Eight stations were upstream from B2; which include B1, C1, C2, D1, D2, D3, D4, and D5. The monitoring station was located at the Arkansas Highway 293 bridge crossing, near Sorrels Ferry Road. It was found at latitude 33°55'33.38"N and longitude 91°42'57.14"W. Data from USDA, National Agricultural Statistics Services suggested that during 2016 forested lands consisted of approximately 44.8% of this area; while soybeans, rice, corn, and cotton combined covered approximately 28.9% of this area.

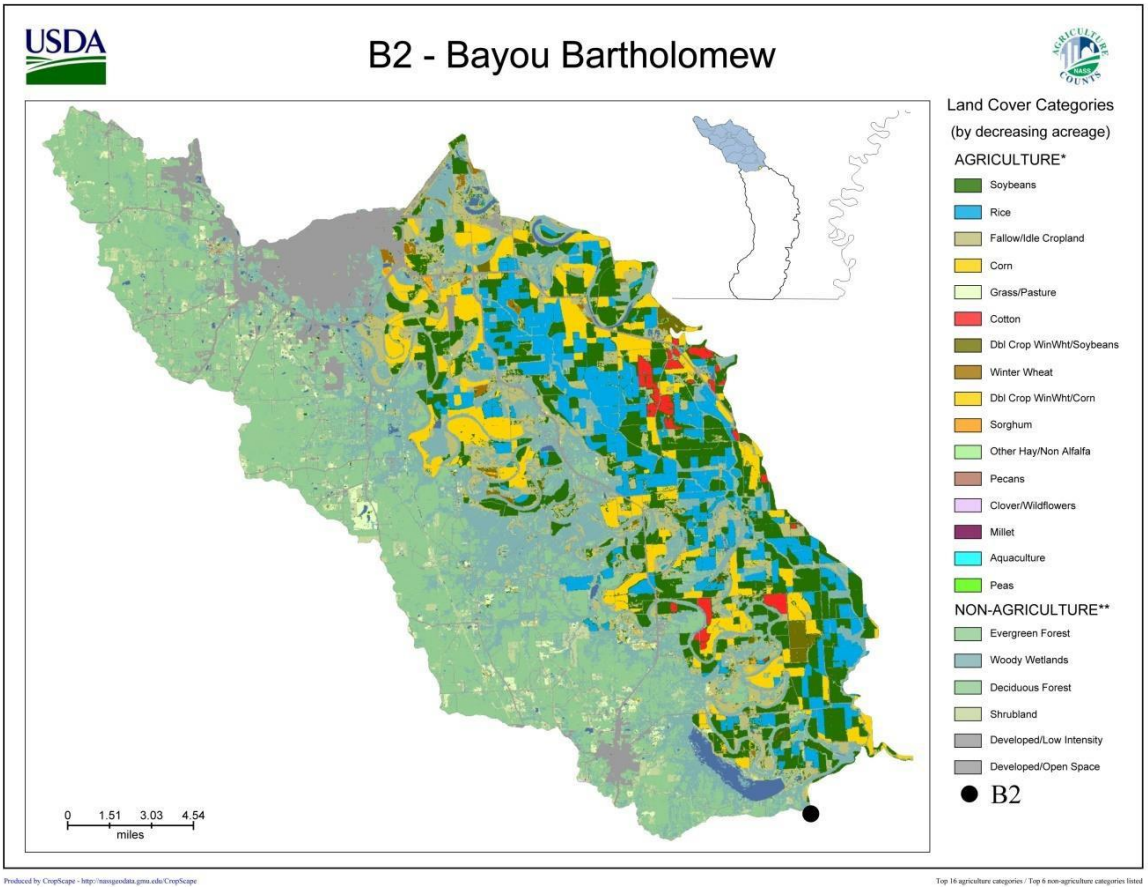

Figure 9 B2 Drainage Area Land Use

B3 – Bayou Bartholomew Monitoring Station

The B3 monitoring station collected water from the Bayou Bartholomew. The monitoring station received drainage from approximately 252,292 acres. B3 was downstream from all other monitoring stations. B3 received drainage from fourteen 12-digit HUCs. The monitoring station was located at the Arkansas Highway 54 bridge crossing, locally known as Garrett Bridge. It was found at latitude 33°51'59.26"N and longitude 91°39'22.92"W. Data from USDA, National Agricultural Statistics Services suggest that during 2016 woody wetlands covered approximately 14.0% of this area; while soybeans, rice, corn, and cotton combined covered approximately 60.9% of this area. USGS has an established stream flow station at B3.

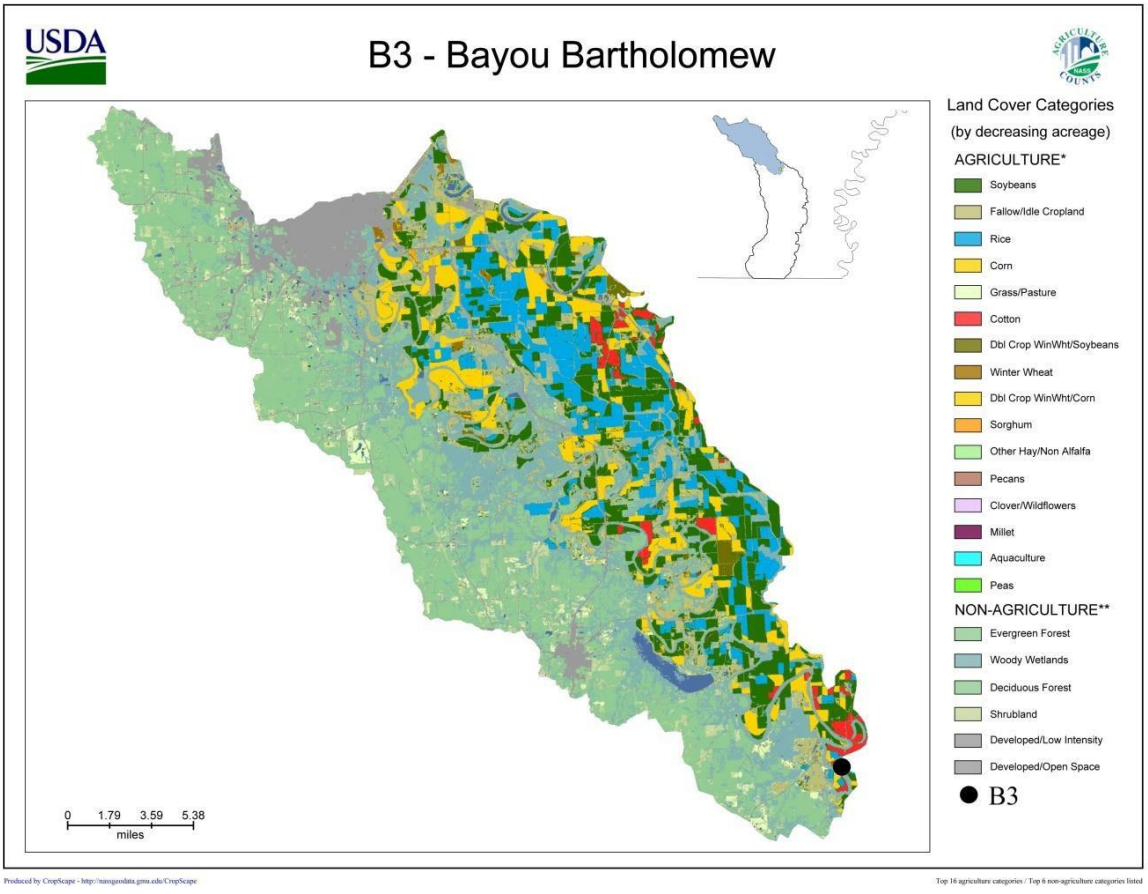

Figure 10 B3 Drainage Area Land Use

C1 – Cousart Bayou Monitoring Station

The C1 monitoring station collected water from the Cousart Bayou and was in the Cousart Bayou Headwaters – Lake Alice 12-digit HUC. The monitoring station received drainage from approximately 8, 946 acres. Its drainage consisted of a portion of urban runoff from Pine Bluff. The monitoring station was located at Arkansas Highway 81. It was found at latitude 34°12'2.00"N and longitude 91°55'17.97"W. Data from USDA, National Agricultural Statistics Services, suggested that during 2016 woody wetlands covered approximately 22.3% of this area; while soybeans, corn, and rice combined covered approximately 23.7% of this area. The C1 monitoring station was the farthest most upstream station in the Cousart Bayou.

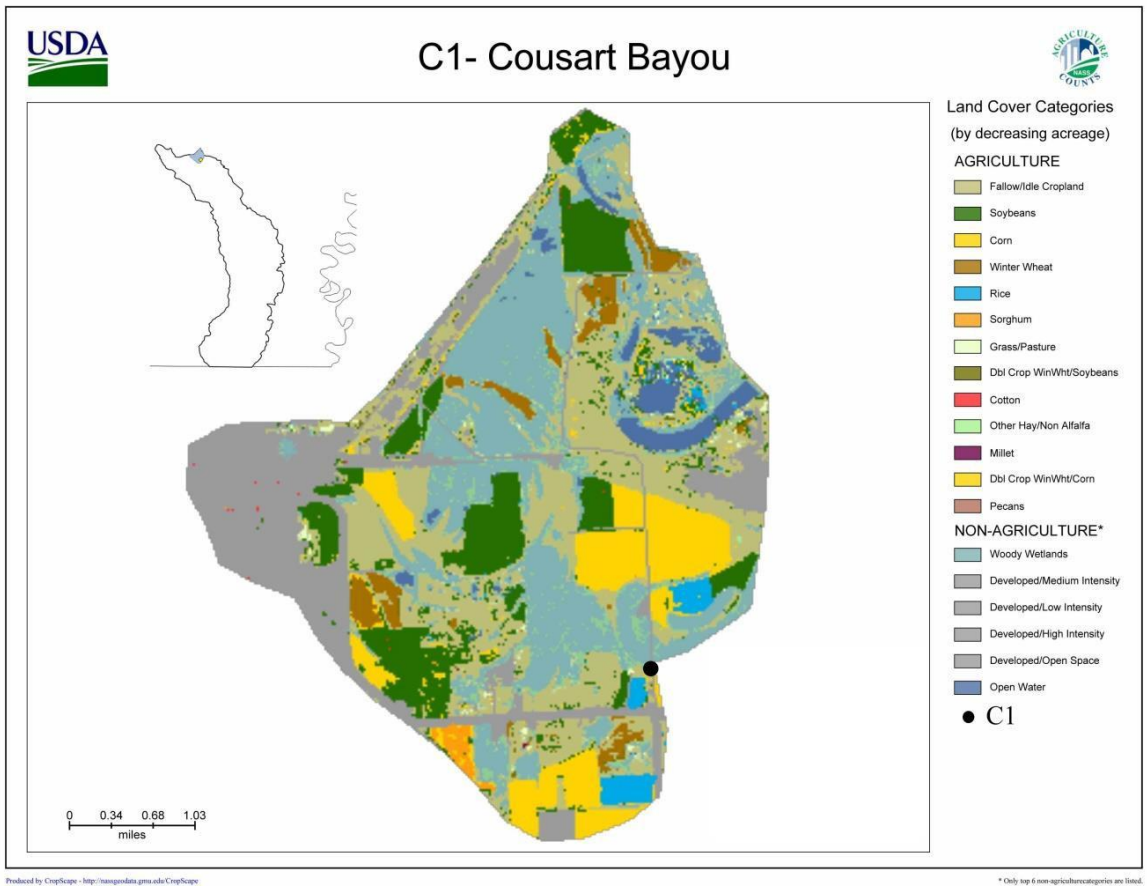

Figure 11 C1 Drainage Area Land Use

C2 – Cousart Bayou Monitoring Station

The C2 monitoring station collected water from the Cousart Bayou and was located in the Cousart Bayou– Little Cypress Bayou 12-digit HUC. The monitoring station received drainage from approximately 34,609 acres. The C2 station was downstream from C1. The monitoring station was located at the Black Bottom Lane bridge crossing. It was found at latitude 34° 5'15.06"N and longitude 91°46'15.60"W. Data from USDA, National Agricultural Statistics Services suggested that during 2016 woody wetland covered approximately 11.7% of this area; while soybeans, rice, corn, and cotton combined covered approximately 63.3% of this area. The C2 monitoring station included drainage from the C1 station and was the farthest downstream station in the Cousart Bayou before its confluence with Deep Bayou.

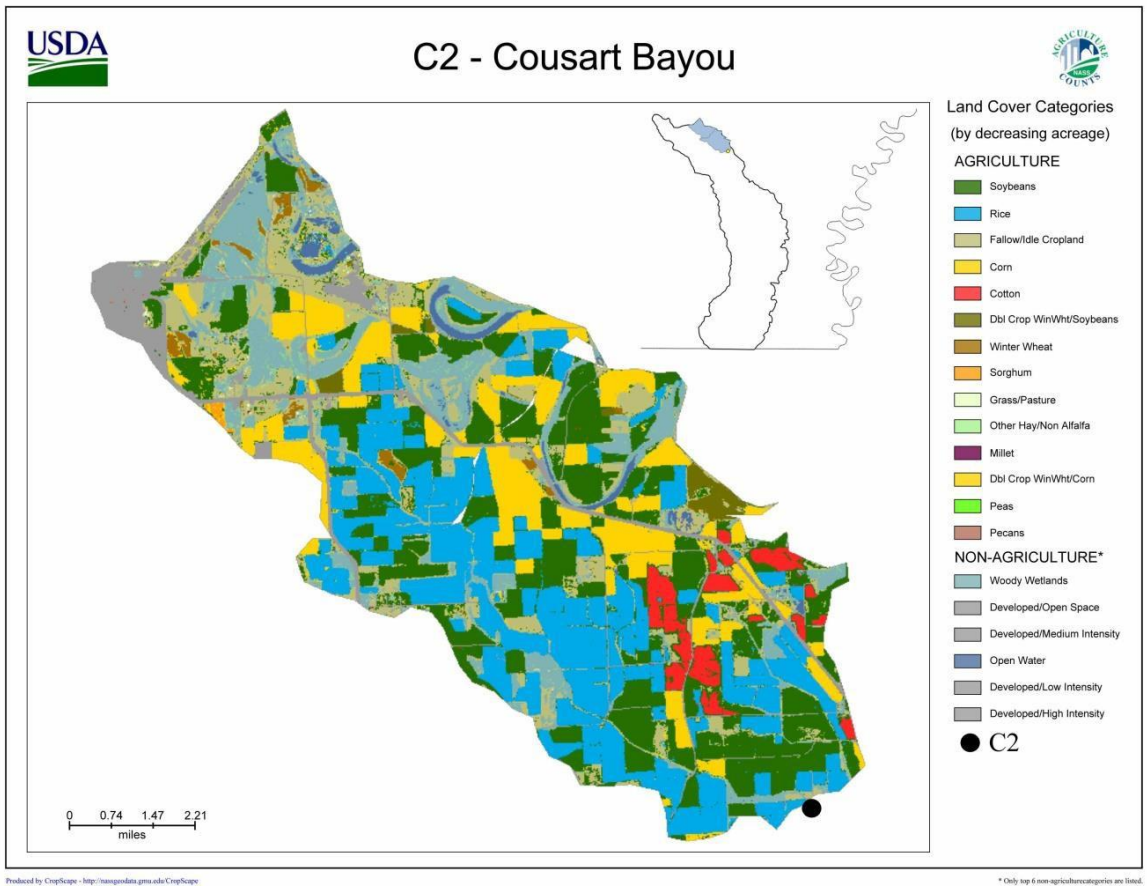

Figure 12 C2 Drainage Area Land Use

D1 – Deep Bayou Monitoring Station

The D1 monitoring station collected water from the Deep Bayou and was in the Upper Deep Bayou 12-digit HUC. The monitoring station received drainage from approximately 3,117 acres.

The monitoring station was located at M^{C}Entire Road near the intersection of M^{C}Entire and Arkansas Highway 425. It was found at latitude 34° 7'57.45"N and longitude 91°54'8.45"W. Data from USDA, National Agricultural Statistics Services suggested that during 2016 woody wetlands covered approximately 15.4% of this area; while soybeans, corn, and rice combined covered approximately 53.4% of this area. The D1 monitoring station is the farthest most upstream station in the Deep Bayou.

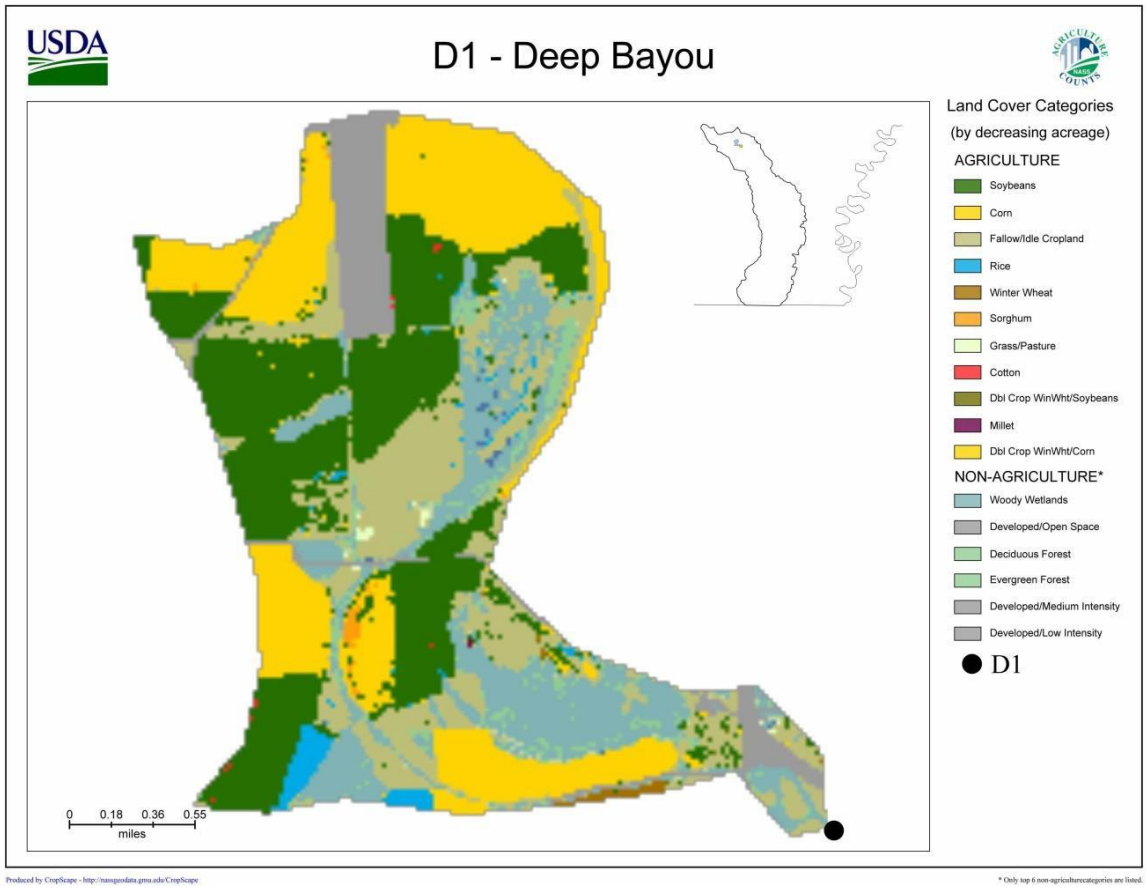

Figure 13 D1 Drainage Area Land Use

D2 – Deep Bayou Monitoring Station

The D2 monitoring station collected water from the Deep Bayou and was in the Upper Deep Bayou 12-digit HUC. The monitoring station received drainage from approximately 6,812 acres. The D2 station was downstream from D1. The monitoring station was located at the Arkansas Highway 199 bridge crossing. It was found at latitude 34°4'46.44"N and longitude 91°49'6.11"W. Data from USDA, National Agricultural Statistics Services suggested that during 2016;woody wetland covered approximately 27.4% of this area; while soybeans, corn, and rice combined covered approximately 35.0% of this area. The D2 monitoring station included drainage from the D1 station and is the farthest downstream station in the Deep Bayou before its confluence with Cousart Bayou.

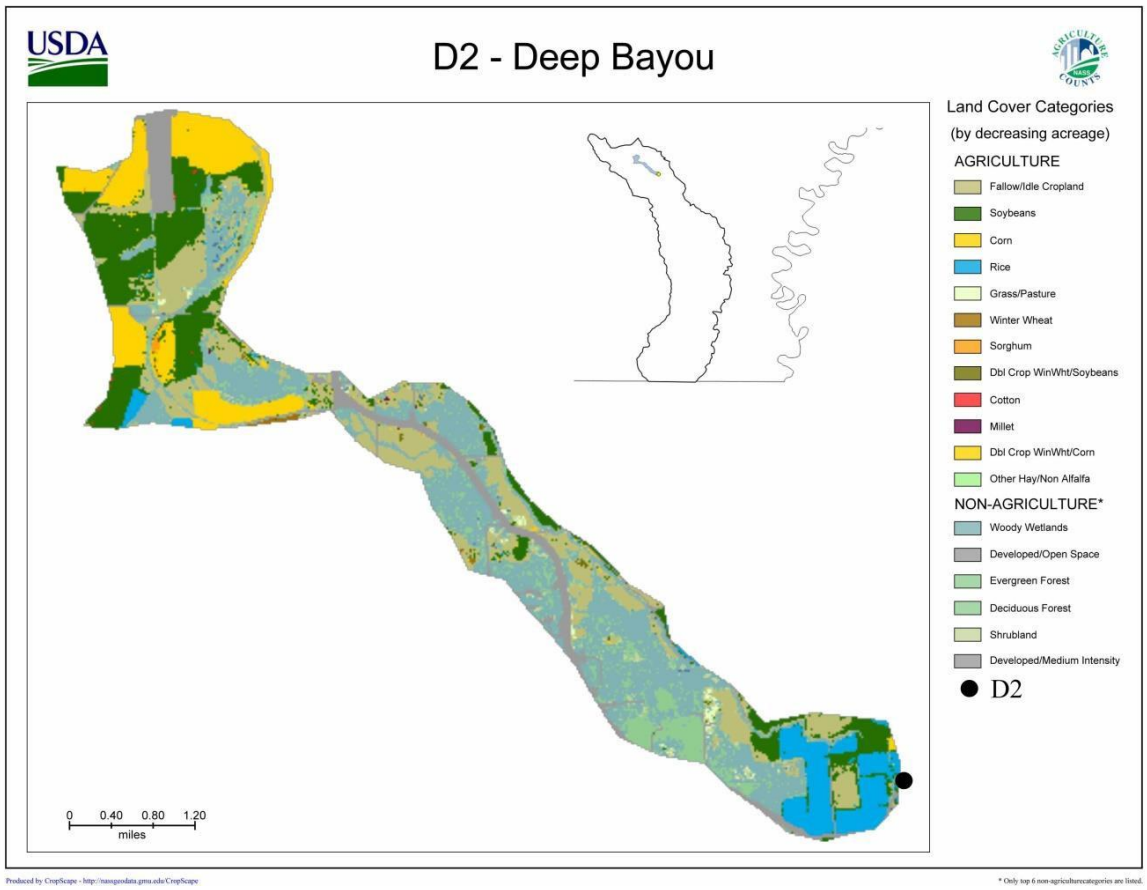

Figure 14 D2 Drainage Area Land Use

D3 – Deep Bayou Monitoring Station

The D3 monitoring station collected water from the Deep Bayou and was in the Upper Deep Bayou 12-digit HUC. The monitoring station received drainage from approximately 54,391 acres. Stations upstream from D3 included C1, C2, D1, and D2. The monitoring station was located at the Lincoln County Road 49 bridge crossing and found at latitude 34° 3'48.96"N and longitude 91°45'23.87"W. Data from USDA, National Agricultural Statistics Services suggested that during 2016 woody wetlands covered approximately 14.5% of this area; while soybeans, rice, corn, and cotton combined covered approximately 59.4% of this area. The D3 monitoring station was just downstream of the Cousart Bayou and Deep Bayou confluence; therefore, it includes drainage from C1, C2, D1, and D2.

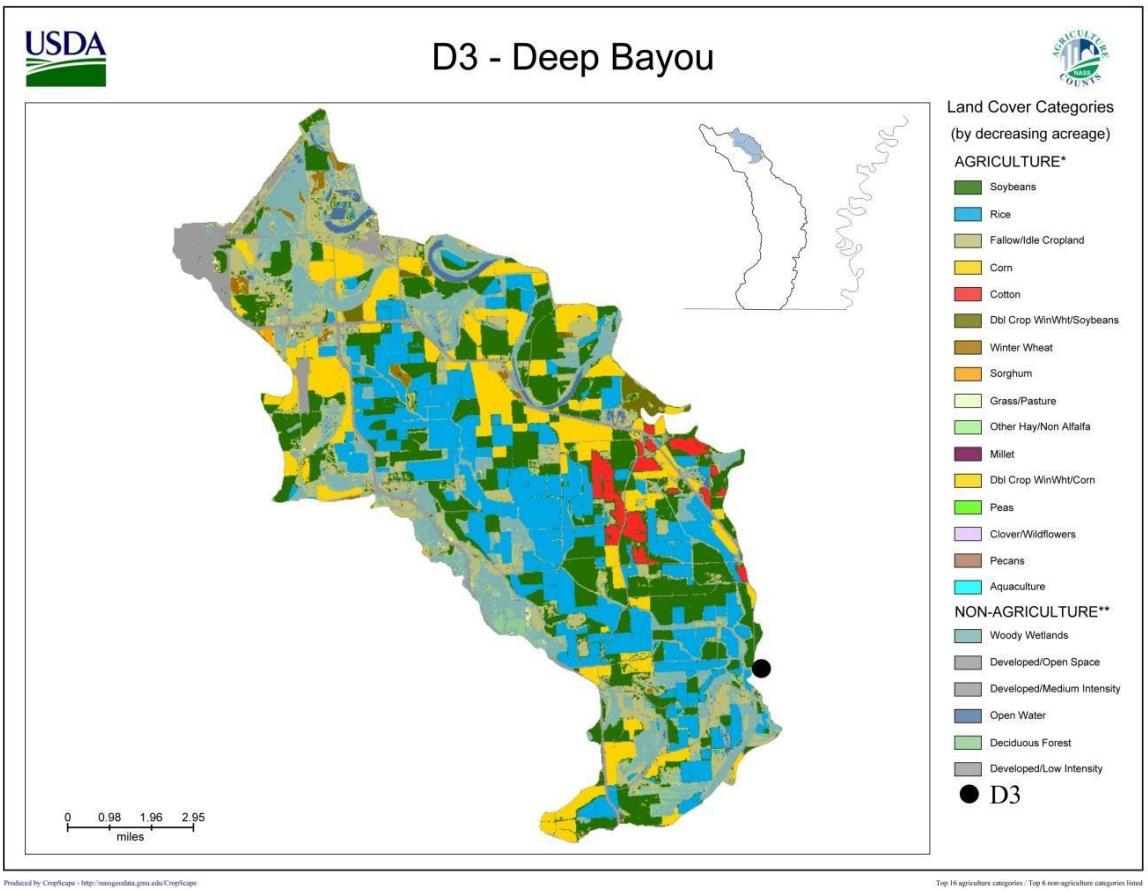

Figure 15 D3 Drainage Area Land Use

D4 – Deep Bayou Monitoring Station

The D4 monitoring station collected water from the Deep Bayou. The monitoring station received drainage from approximately 63,040 acres. Stations upstream from D4 included C1, C2, D1, D2, and D3. The monitoring station was located at the Arkansas Highway 11 bridge crossing and found at latitude 34° 2'3.65"N and longitude 91°42'35.19"W. Data from USDA, National Agricultural Statistics Services suggested that during 2016 woody wetlands covered approximately 14.0% of this area; while soybeans, rice, corn, and cotton combined covered approximately 60.9% of this area.

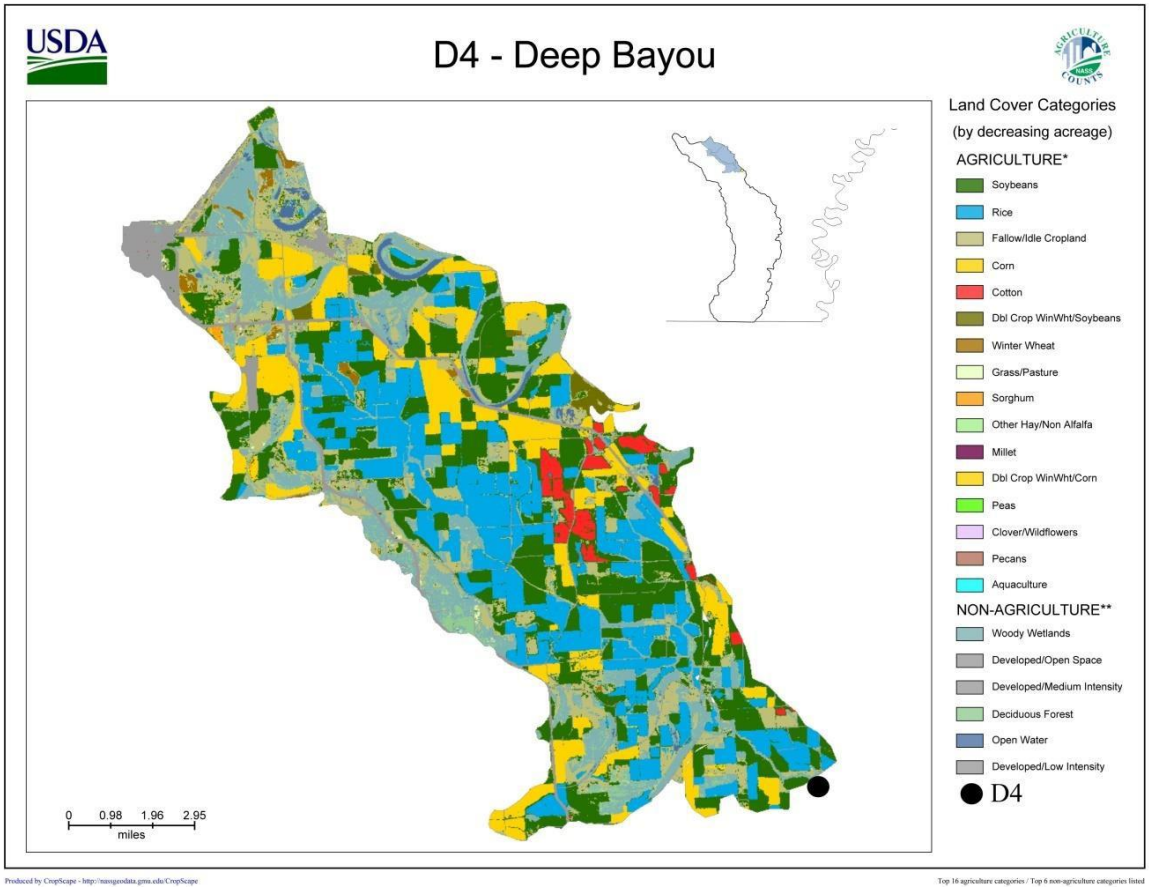

Figure 16 D4 Drainage Area Land Use

D5 – Deep Bayou Monitoring Station

The D5 monitoring station collected water from the Deep Bayou. The monitoring station received drainage from approximately 72,151 acres. Stations upstream from D5 included C1, C2, D1, D2, D3, and D4. The monitoring station was located at the Arkansas Highway 114 bridge crossing and found at latitude 33°57'47.20"N and longitude 91°41'32.76"W. Data from USDA, National Agricultural Statistics Services suggested that during 2016 woody wetlands covered approximately 14.0% of this area; while soybeans, rice, corn, and cotton combined covered approximately 60.9% of this area. D5 is the last monitoring station in the Deep Bayou before its confluence with the Bayou Bartholomew. USGS has established a stream gauging station at D5, therefore it was not necessary to establish a rating curve at the station.

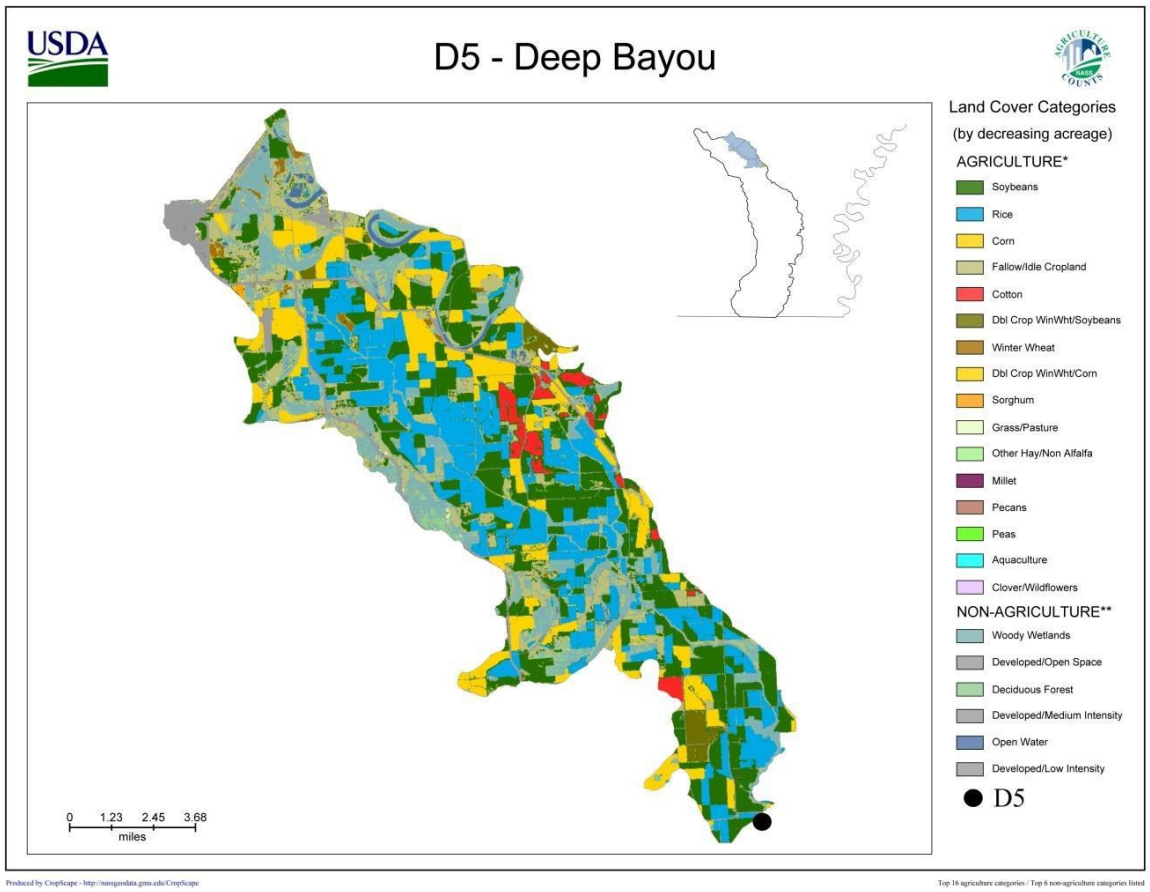

Figure 17 D5 Drainage Area Land Use

Monitoring Station Name	12-Digit HUC Name	Approximate Drainage Size (Acres)	Latitude	Longitude
B1	Spring Branch Creek	159,448	33°57'11.97"N	91°44'0.41"W
B2	Spring Branch Creek	234,349	33°55'33.38"N	91°42'57.14"W
B3	Village Creek – Flat Creek	252,292	33°51'59.26"N	91°39'22.92"W
C1	Cousart Bayou – Lake Alice	8, 946	34°12'2.00"N	91°55'17.97"W
C2	Cousart Bayou – Little Cypress Bayou	34,609	34° 5'15.06"N	91°46'15.60"W
D1	Upper Deep Bayou	3,117	34° 7'57.45"N	91°54'8.45"W
D2	Upper Deep Bayou	6,812	34°4'46.44"N	91°49'6.11"W
D3	Upper Deep Bayou	54,391	34° 3'48.96"N	91°45'23.87"W
D4	Lower Deep Bayou	63,040	34° 2'3.65"N	91°42'35.19"W
D5	Lower Deep Bayou	72,151	33°57'47.20"N	91°41'32.76"W

Acreage Approximation, Google Earth Pro 7.3.0.3832, 2017.

Table 2 Monitoring Stations Size and Locations

PROJECT METHODOLOGIES

Equilibrium collected stream flow and water quality data at ten monitoring stations within the Bayou Bartholomew watershed.

Water Quality Samples

Sampling frequency should be sufficient to acquire representative measurements during base flow conditions, during large peak flows as well as during seasonal variations. To collect enough water quality measurements that minimize bias in load calculations and dependencies on modeling a high sampling frequency was selected for this project.

During the sample extraction process, the field technician attempted to collect the sample at (or near) mid-depth and at the center of the stream. Samples were collected at locations with laminar flow and away from mixing zones. The field technician double rinsed each sample container with sample water prior to collecting the sample, then the sample was collected, preserved, labeled, and stored. At the time of sample collection, the technician also collected in-situ data with a handheld sonde to record the following parameters: temperature, dissolved oxygen, specific conductance, and pH.

Samples were analyzed for Total Phosphorus (TP), Total Nitrogen (TN), Ammonia-Nitrogen (NH_3-N), Turbidity, Total Suspended Solids (TSS), Sulfate (SO_4), Chloride (Cl^-), and Nitrate-Nitrogen (NO_3+NO_2-N). Total Kjeldahl Nitrogen was calculated by deducting appropriate nitrogen species (NO_3+NO_2-N from TN). All samples were analyzed by laboratories certified under the Arkansas Department of Environmental Quality's Certification Program.

Sample collection was documented in a field logbook. Entries included: type of sample, date, site location, name of sampler, Insitu recordings, and other pertinent field notes such as climatic characteristics during site visit, identified problems/concerns, and corrective actions taken.

Sample Handling and Quality Assurance

Sample integrity was maintained for each sampling event by ensuring the samples were maintained at or below 4° Celsius. Samples followed chain of custody requirements to qualify possession and acceptable holding times. In-situ meters were calibrated prior to use according to manufacturer's instructions. Chain-of-custody and calibration forms for field data were maintained by Equilibrium and the OBU Water Quality Laboratory. The analytical methods employed by the laboratory for this project are listed in table below.

Parameter	Source/Method	Units	MRL
Nitrate-Nitrite Nitrogen	4110B	mg/L	0.02
Ammonia Nitrogen	4500-NH3 E	mg/L	0.02
Total Nitrogen	4500-P J	mg/L	0.04
Total Phosphorous	4500-P J	mg/L	0.02
Turbidity	2130 B	NTU	0.1
Total Suspended Solids	2540 B	mg/L	1
Chloride	4110B	mg/L	0.5
Sulfate	4110B	mg/L	0.5

Standard Methods for the Examination of Water and Wastewater, 23RD Edition, 2017.
MRL = Minimum Reporting Limit

Table 3. Summary of laboratory methods employed to analyze all water samples.

A single field blank and a duplicate sample were collected during each sampling event and designated as field QA samples. Laboratories performed internal QA checks as well, including spike samples and spilt samples. Combined, more than 390 QA samples were analyzed for the project.

Stage and Discharge

During this project, we developed hydrographs based on stream depth (stage) at each station. Attempts were made to continuously measure stage with an Onset Hobo® pressure transducers at monitoring stations. Data was downloaded from the transducers annually. River stage was also manually recorded upon accessing the stations.

Acoustic Doppler technologies were used to collect stream velocities and area profiles at various flow regimes via a *Sontek* Flow Tracker® and RiverSurveyor M9® Doppler Profiler. Stream discharge was computed at a known stage as a result.

Stage-rating curves developed from previous projects were adjusted to estimate stream flow. A rating curve is a graph of discharge on the Y-axis versus stage on the X-axis for a specific site. At the monitoring stations, multiple measurements of discharge were made over a range of stream stages. The measured discharge values were plotted against stage values, regression analyses were performed and developed the “best-fit” equation that characterized flow as a function of stage at monitoring stations. Finally, these best-fit equations were applied to continuous stage data to estimate discharges throughout the project timeframe. USGS discharge was utilized at the B3 and D5 monitoring stations.

Discharge data for project timeframe were used with the water quality concentration data to estimate parameter loads. EPA states, loading estimation is a complex task that requires

accurate measurement of both pollutant concentration and water flow. (EPA, 2013). A period-weighted method was utilized in estimating loading values, meaning the parameter concentration for an individual water sample was assumed to be constant for the one-week timeframe, until the next water sample was collected and analyzed. Loading values for samples with concentrations less than the laboratories' reportable detection limits were computed at zero. Loadings were extrapolated for the monitoring stations and reported as monthly and annual loads. Furthermore, loadings were converted to unit area loads based on the drainage area upstream from the monitoring station.

Data Analysis

Data was processed using Onset HOBOware®, Riversurveyor ®, Microsoft Excel®, Statgraphic®, XLSTAT®, and QGIS® software packages. Trend analysis for parameter concentrations were conducted using the Mann-Kendall Statistical Test. The test evaluates whether "y" values tend to increase or decrease over time through what is essentially a nonparametric form of monontonic trend regression analysis (EPA, 2011). Hourly river stage data was transformed to daily average stage and hydrographs were reported at each station during the sampling period, as well as discharge curves and their analysis of variances, descriptive statistics, extrapolations of monthly and annual parameter loadings and unit area loadings. Furthermore, computations of linear regression analysis for monthly loads were calculated to indicate whether linear equations resulted in positively or negatively sloped lines, these were reported as trends.

RESULTS

Samples collections were attempted from November 2017 through September 2021 on a weekly basis, resulting in 1,862 grab samples and 386 field QA samples for a total of 2,248 samples.

B1 Results

Parameter Concentration Results at B1

Sampling Period	TP (mg/L)	TKN (mg/L)	NH_3-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	SO_4 (mg/L)	Cl^- (mg/L)	NO_3+NO_2-N (mg/L)	TN (mg/L)
11/2017 – 12/2017	0.19	0.84	0.03	48.92	19.00	6.02	13.16	0.94	1.41
2018	0.20	0.97	0.07	51.18	23.90	5.80	7.38	0.13	1.07
2019	0.18	0.84	0.05	52.07	25.65	5.27	5.29	0.15	1.00
2020	0.21	0.84	0.05	39.16	21.73	4.40	3.93	0.12	0.96
1/2021 – 9/2018	0.20	0.81	0.06	40.05	23.46	5.43	4.87	0.11	0.93

Table 4 Annual Mean Parameter Concentrations at B1.

Parameter	Minimum	Maximum	Mean	Std. deviation	Kendall's tau	S	p-value (Two-tailed)	alpha
TP	0.07	0.56	0.20	0.08	0.101	1827	0.04	0.05
TKN	0.13	1.92	0.87	0.22	-0.134	-2461	0.01	0.05
NH_3-N	<0.02	0.30	0.06	0.04	-0.028	-454	0.59	0.05
Turbidity	4.80	561.00	46.10	57.90	0.007	125	0.89	0.05
TSS	3.00	316.00	23.58	27.72	0.074	1355	0.13	0.05
SO_4	1.80	19.30	5.18	2.53	0.026	428	0.60	0.05
Cl^-	1.00	40.10	5.48	5.53	0.045	733	0.37	0.05
NO_3+NO_2-N	<0.02	2.10	0.14	0.19	-0.056	-660	0.31	0.05
TN	0.24	3.40	1.01	0.35	-0.112	-1333	0.04	0.05

Positive S-values indicate trends are increasing, negative S-values indicate trends are decreasing.
When the p-value is less than the alpha value, there is a significant trend in the data set.

Table 5 Mann-Kendall Statistical Test for Trend Analysis of Parameter Concentration at B1 during the project period.

Stage and Rating Curve at B1

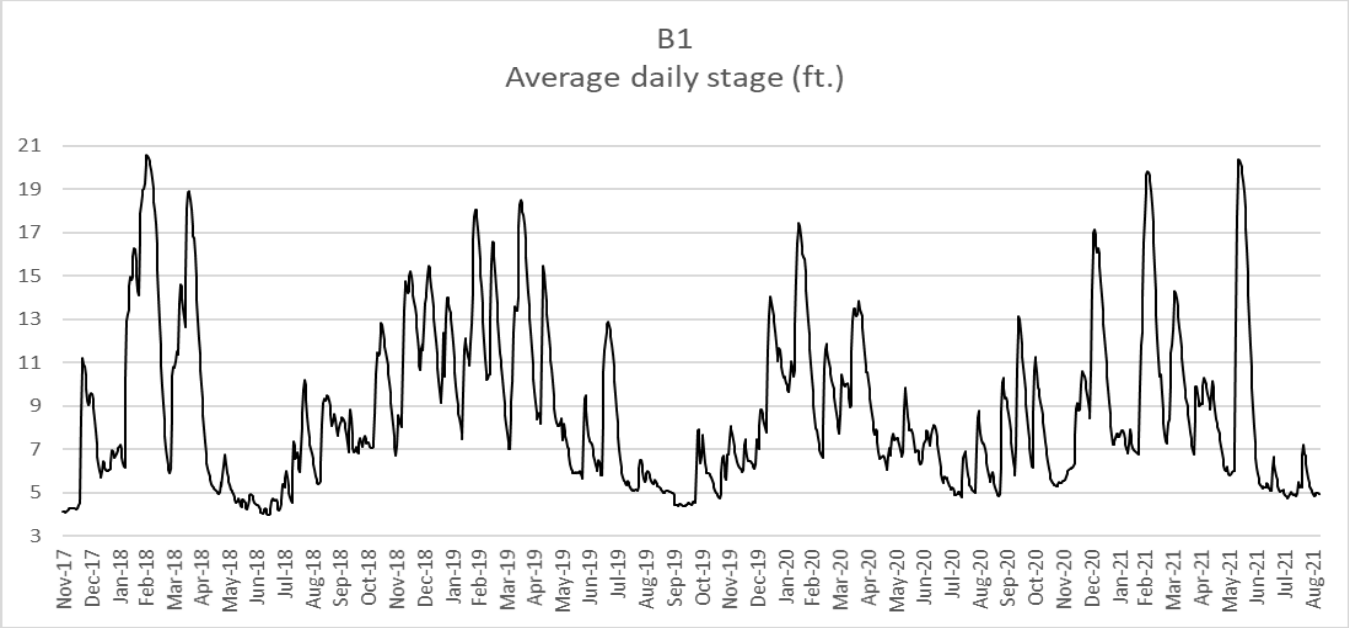

Figure 18 B1 Hydrograph

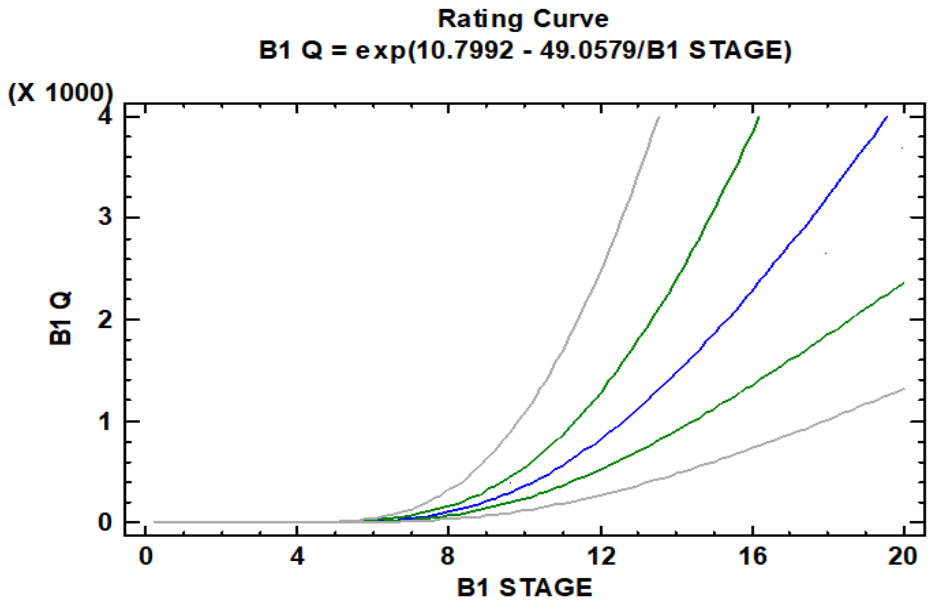

Figure 19 B1 Rating Curve

Source	Sum of Squares	Mean Squares	F-Ratio	P-Value	R-squared percent
Model	52.1647	52.1647	394.28	<0.05	98.9%
Residual	0.529216	0.132304			
Total (Corr.)	52.6939				

Table 6 Analysis of Variance for the Rating Curve at B1.

Linear Regression of Monthly Parameter Loads at B1

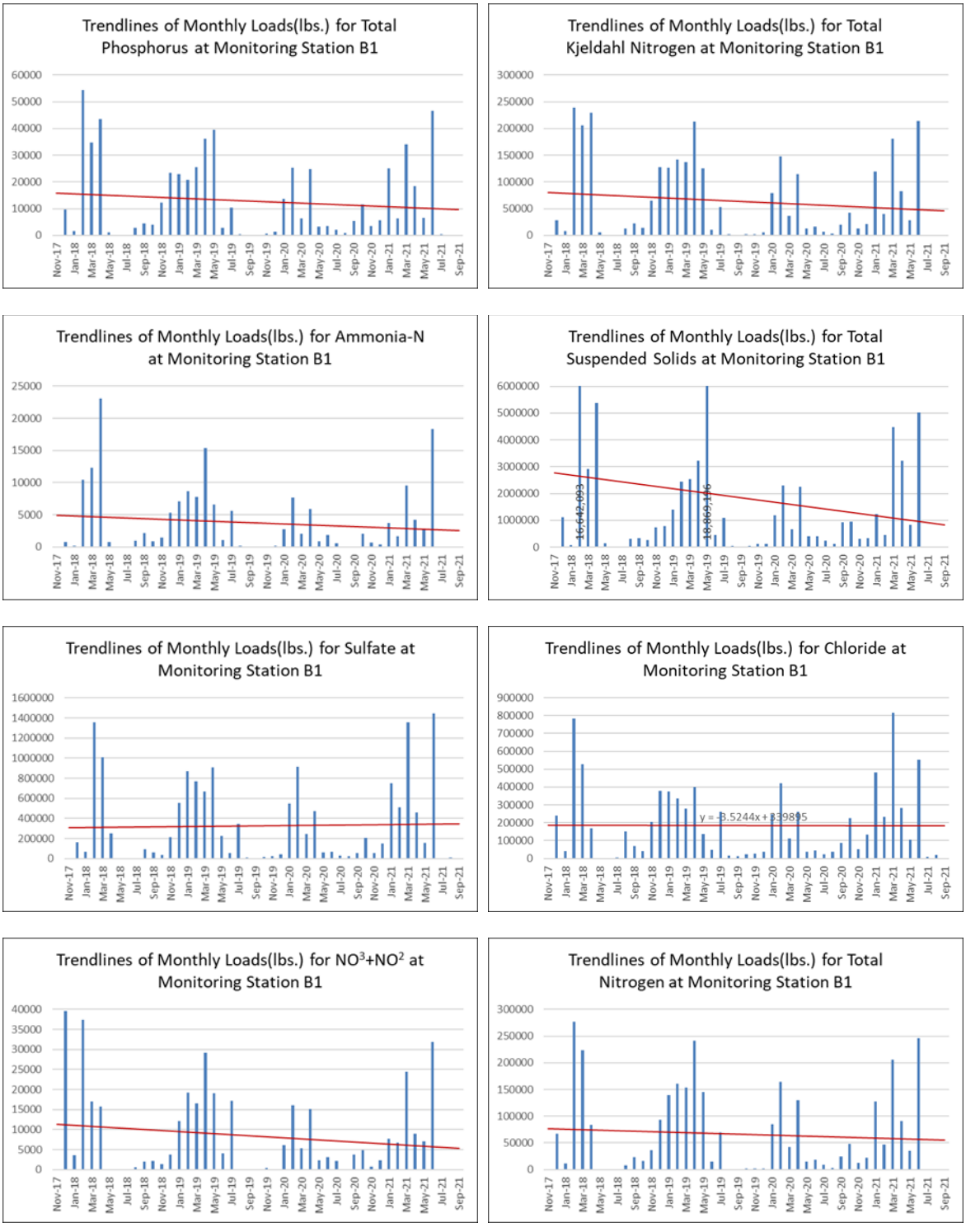

Figure 20 Linear Regression of Monthly Parameters Loads at B1.

Parameter Loadings at B1

Sampling Period	Annual Discharge (ft^3)	TP (lbs)	TKN (lbs)	NH_3-N (lbs)	TSS (lbs)	SO_4 (lbs)	Cl^- (lbs)	$NO_3 + NO_2$-N (lbs)	TN (lbs)
11/2017-12/2017	3.81E+08	9,750	28,100	714	1,110,000	162,000	239,000	39,500	67,000
2018	1.86E+10	182,000	931,000	57,500	27,600,000	3,650,000	2,370,000	83,600	772,000
2019	1.53E+10	161,000	820,000	52,500	30,400,000	3,940,000	1,940,000	118,000	933,000
2020	1.01E+10	106,000	515,000	24,800	10,100,000	2,810,000	1,680,000	62,200	576,000
1/2021-9/2021	1.44E+10	138,000	668,000	40,200	15,300,000	4,690,000	2,490,000	87,000	754,000
Project Total	5.88E+10	597,000	2,960,000	176,000	84,500,000	15,300,000	8,730,000	391,000	3,100,000

Table 7. Annual Discharge and Loading Extrapolations at B1.

Sampling Period	TP (lbs/acre)	TKN (lbs/acre)	NH_3-N (lbs/acre)	TSS (lbs/acre)	SO_4 (lbs/acre)	Cl^- (lbs/acre)	NO_3-NO_2-N (lbs/acre)	TN (lbs/acre)
11/2017-12/2017	0.06	0.18	0	6.96	1.02	1.5	0.25	0.42
2018	1.14	5.84	0.36	173	22.9	14.9	0.52	4.84
2019	1.01	5.14	0.33	191	24.7	12.2	0.74	5.85
2020	0.66	3.23	0.16	63.3	17.6	10.5	0.39	3.61
1/2021-9/2021	0.87	4.19	0.25	96	29.4	15.6	0.55	4.73
Project Average	0.75	3.72	0.22	106	19.1	10.9	0.49	3.89

Table 8. Unit Area Loading Extrapolations at B1

Summary B1

At B1, throughout the project period, trend analyses of parameter concentrations resulted in statistically significant negative trends (decreasing with time) for TKN and TN. Statistically significant positive trends (increasing with time) were identified for TP. No other significant trends were identified for the remaining parameter concentrations.

At B1, from the project's commencement, computations of linear regressions for monthly loads indicated negative trends for all parameters, except SO_4.

At B1, the 2018 calendar year resulted in greater discharge and greater annual loads for TP, TKN, and NH_3-N. Although, 2019 resulted in 21% less discharge, it resulted in greater annual loads for TSS, NO_3+NO_2-N, and TN. Sampling period during 2021 resulted in the third greatest amount of discharge and the greatest loads for SO_4 and Cl^-.

Ranking the average unit area loadings throughout the project period by station, resulted in B1 having less than other downstream stations for all parameters except SO_4.

B2 Results

Parameter Concentration Results at B2

Sampling Period	TP (mg/L)	TKN (mg/L)	NH_3-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	SO_4 (mg/L)	Cl^- (mg/L)	NO_3+NO_2-N (mg/L)	TN (mg/L)
11/2017 – 12/2017	0.25	0.92	0.03	73.64	28.80	6.40	11.02	1.72	2.19
2018	0.24	1.19	0.11	146.60	59.86	6.15	13.72	0.25	1.40
2019	0.22	1.05	0.09	110.21	46.87	6.90	12.34	0.32	1.39
2020	0.23	0.99	0.08	74.36	41.08	5.58	9.24	0.23	1.22
1/2021 – 9/2018	0.21	1.00	0.12	73.91	36.66	8.28	15.26	0.31	1.32

Table 9 Annual Mean Parameter Concentrations at B2.

Parameter	Minimum	Maximum	Mean	Std. deviation	Kendall's tau	S	p-value (Two-tailed)	alpha
TP	0.03	0.89	0.23	0.11	0.028	515	0.57	0.05
TKN	0.61	3.58	1.06	0.41	-0.060	-1101	0.22	0.05
NH_3-N	<0.02	0.71	0.10	0.09	0.070	1220	0.17	0.05
Turbidity	10.80	1508.00	102.26	194.09	-0.046	-851	0.34	0.05
TSS	6.00	703.00	46.28	80.02	0.052	954	0.29	0.05
SO_4	1.60	29.60	6.62	4.91	0.116	1900	0.02	0.05
Cl^-	1.10	65.00	12.27	14.95	0.051	829	0.31	0.05
NO_3+NO_2-N	<0.02	2.69	0.29	0.36	0.054	752	0.30	0.05
TN	0.68	4.47	1.34	0.65	-0.036	-507	0.49	0.05

Positive S-values indicate trends are increasing, negative S-values indicate trends are decreasing.
When the p-value is less than the alpha value, there is a significant trend in the data set.

Table 10 Mann-Kendall Statistical Test for Trend Analysis of Parameter Concentration at B2 during the project period.

Stage and Rating Curve at B2

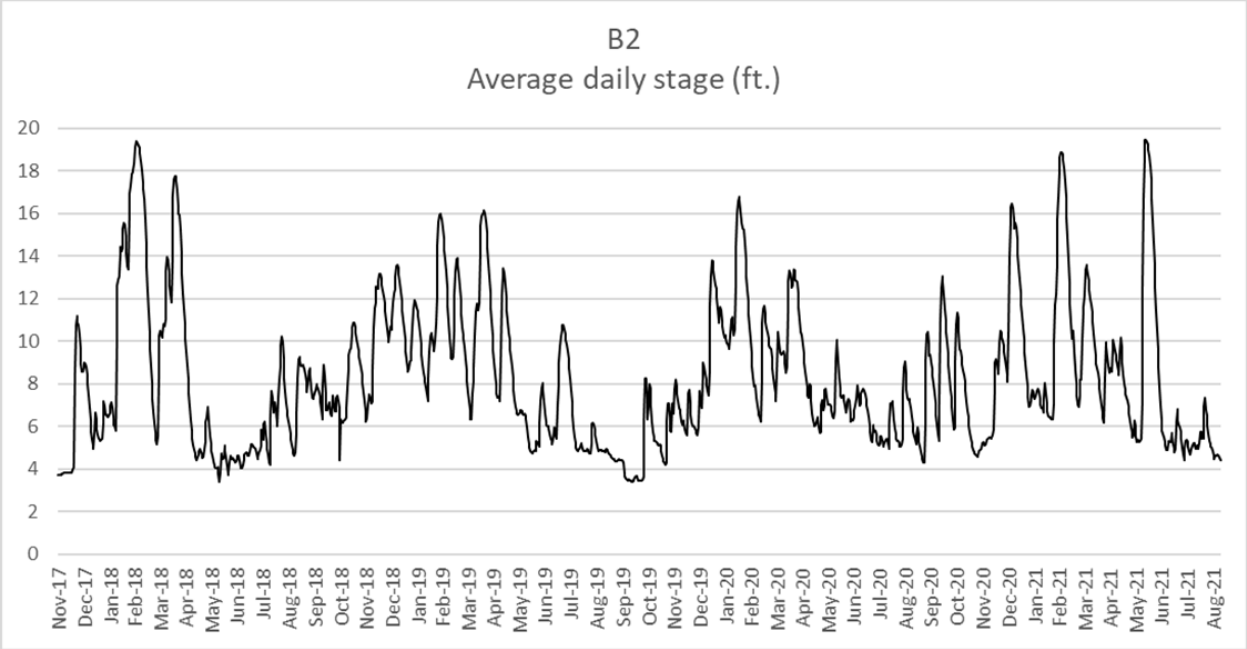

Figure 21 B2 Hydrograph

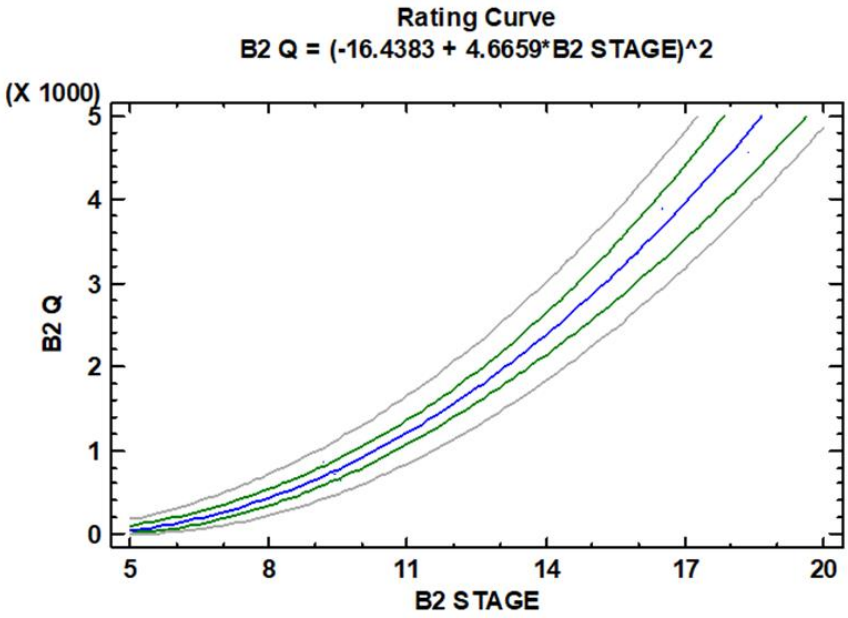

Figure 22 B2 Rating Curve

Source	Sum of Squares	Mean Squares	F-Ratio	P-Value	R-squared percent
Model	3271.59	3271.59	725.9	<0.05	99.3%
Residual	22.5348	4.50696			
Total (Corr.)	3294.13				

Table 11 Analysis of Variance for the Rating Curve at B2.

Linear Regression of Monthly Parameter Loads at B2

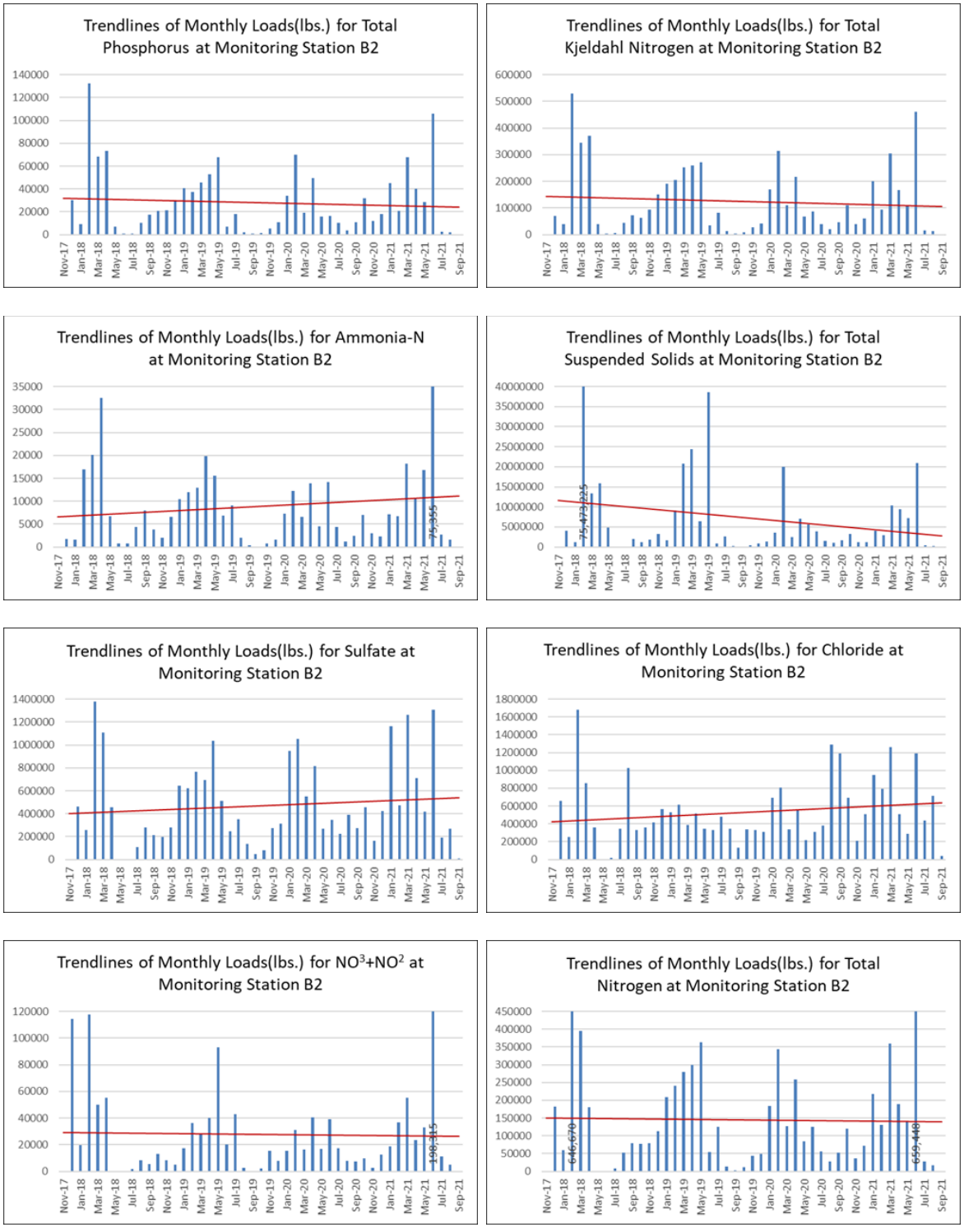

Figure 23 Linear Regression of Monthly Parameters Loads at B2.

Parameter Loadings at B2

Sampling Period	Annual Discharge (ft^3)	TP (lbs)	TKN (lbs)	NH_3-N (lbs)	TSS (lbs)	SO_4 (lbs)	Cl^- (lbs)	$NO_3 + NO_2$-N (lbs)	TN (lbs)
11/2017-12/2017	8.80E+08	30,200	70,800	1,780	4,080,000	461,000	656,000	114,000	183,000
2018	2.68E+10	391,000	1,760,000	104,000	121,000,000	4,930,000	6,210,000	284,000	1,690,000
2019	2.03E+10	289,000	1,390,000	91,100	106,000,000	5,070,000	4,660,000	307,000	1,690,000
2020	2.07E+10	290,000	1,280,000	78,900	52,400,000	5,910,000	7,190,000	217,000	1,490,000
1/2021-9/2021	2.21E+10	312,000	1,360,000	139,000	55,500,000	5,800,000	6,190,000	382,000	1,740,000
Project Total	9.07E+10	1,310,000	5,860,000	415,000	339,000,000	22,200,000	24,900,000	1,300,000	6,800,000

Table 12. Annual Discharge and Loading Extrapolations at B2.

Sampling Period	TP (lbs/acre)	TKN (lbs/acre)	NH_3-N (lbs/acre)	TSS (lbs/acre)	SO_4 (lbs/acre)	Cl^- (lbs/acre)	NO_3-NO_2-N (lbs/acre)	TN (lbs/acre)
11/2017-12/2017	0.13	0.3	0.01	17.4	1.97	2.8	0.49	0.78
2018	1.67	7.51	0.44	516	21	26.5	1.21	7.21
2019	1.23	5.93	0.39	452	21.6	19.9	1.31	7.21
2020	1.24	5.46	0.34	224	25.2	30.7	0.93	6.36
1/2021-9/2021	1.33	5.8	0.59	237	24.7	26.4	1.63	7.42
Project Average	1.12	5	0.35	289	18.9	21.3	1.11	5.8

Table 13. Unit Area Loading Extrapolations at B2

Summary B2

At B2, throughout the project period, trend analyses of parameter concentrations resulted in one statistically significant trend. A positive trend (increasing with time) was identified for SO_4 at the station. No other statistically significant trends were identified for the remaining parameter concentrations.

At B2, from the project's commencement, computations of linear regressions for monthly loads indicated negative trends for most parameters. Positive trends were found for three parameters (NH_3-N, SO_4, and Cl^-).

At B2, the 2018 calendar year resulted in greater discharge and greater annual loads for TP, TKN, and TSS. The 2021 sampling period resulted in 18% less discharge than the 2018 year, but had the greatest loads for NH_3-N, $NO_3 + NO_2$-N, and TN. The 2020 calendar year resulted in greatest loads for SO_4 and Cl^-.

Ranking the average unit area loadings throughout the project period by station, resulted in B2 having less than B3 (its downstream station) for half of the parameters (NH_3-N, SO_4, Cl^-, and $NO_3 + NO_2$-N). B2's TSS average unit area loading was the third greatest when compared to all stations.

B3 Results

Parameter Concentration Results at B3

Sampling Period	TP (mg/L)	TKN (mg/L)	NH_3-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	SO_4 (mg/L)	Cl^- (mg/L)	NO_3+NO_2-N (mg/L)	TN (mg/L)
11/2017 – 12/2017	0.25	0.98	0.04	47.16	26.20	4.96	9.48	0.37	1.34
2018	0.23	1.05	0.08	82.50	27.69	6.15	12.44	0.19	1.21
2019	0.21	1.01	0.08	88.10	30.10	7.21	11.93	0.41	1.45
2020	0.26	1.00	0.08	84.25	35.56	5.94	9.62	0.32	1.32
1/2021 – 9/2018	0.22	1.01	0.12	82.84	31.40	7.92	14.75	0.34	1.36

Table 14 Annual Mean Parameter Concentrations at B3.

Parameter	Minimum	Maximum	Mean	Std. deviation	Kendall's tau	S	p-value (Two-tailed)	alpha
TP	0.07	0.82	0.23	0.10	0.027	499	0.58	0.05
TKN	0.57	4.05	1.02	0.38	-0.068	-1259	0.16	0.05
NH_3-N	<0.02	0.95	0.08	0.09	-0.001	-15	0.99	0.05
Turbidity	7.70	802.00	83.63	99.49	-0.024	-439	0.63	0.05
TSS	4.00	248.00	31.09	32.24	0.047	858	0.34	0.05
SO_4	2.00	29.50	6.70	4.95	0.098	1607	0.051	0.05
Cl^-	1.20	76.30	11.85	14.35	0.058	958	0.24	0.05
NO_3+NO_2-N	<0.02	3.25	0.33	0.44	0.157	2364	0.00	0.05
TN	0.67	5.10	1.35	0.71	0.024	358	0.64	0.05

Positive S-values indicate trends are increasing, negative S-values indicate trends are decreasing.
When the p-value is less than the alpha value, there is a significant trend in the data set.

Table 15 Mann-Kendall Statistical Test for Trend Analysis of Parameter Concentration at B3 during the project period.

Stage at B3

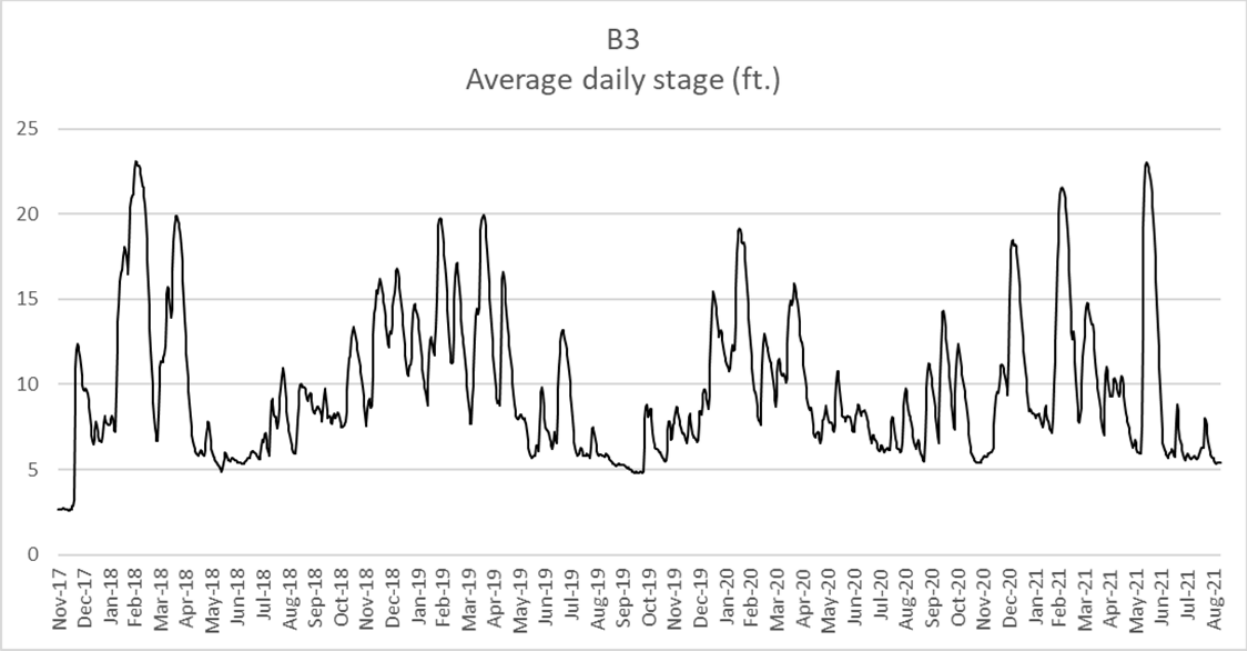

Figure 24 B3 Hydrograph (Source: USGS)

Linear Regression of Monthly Parameter Loads at B3

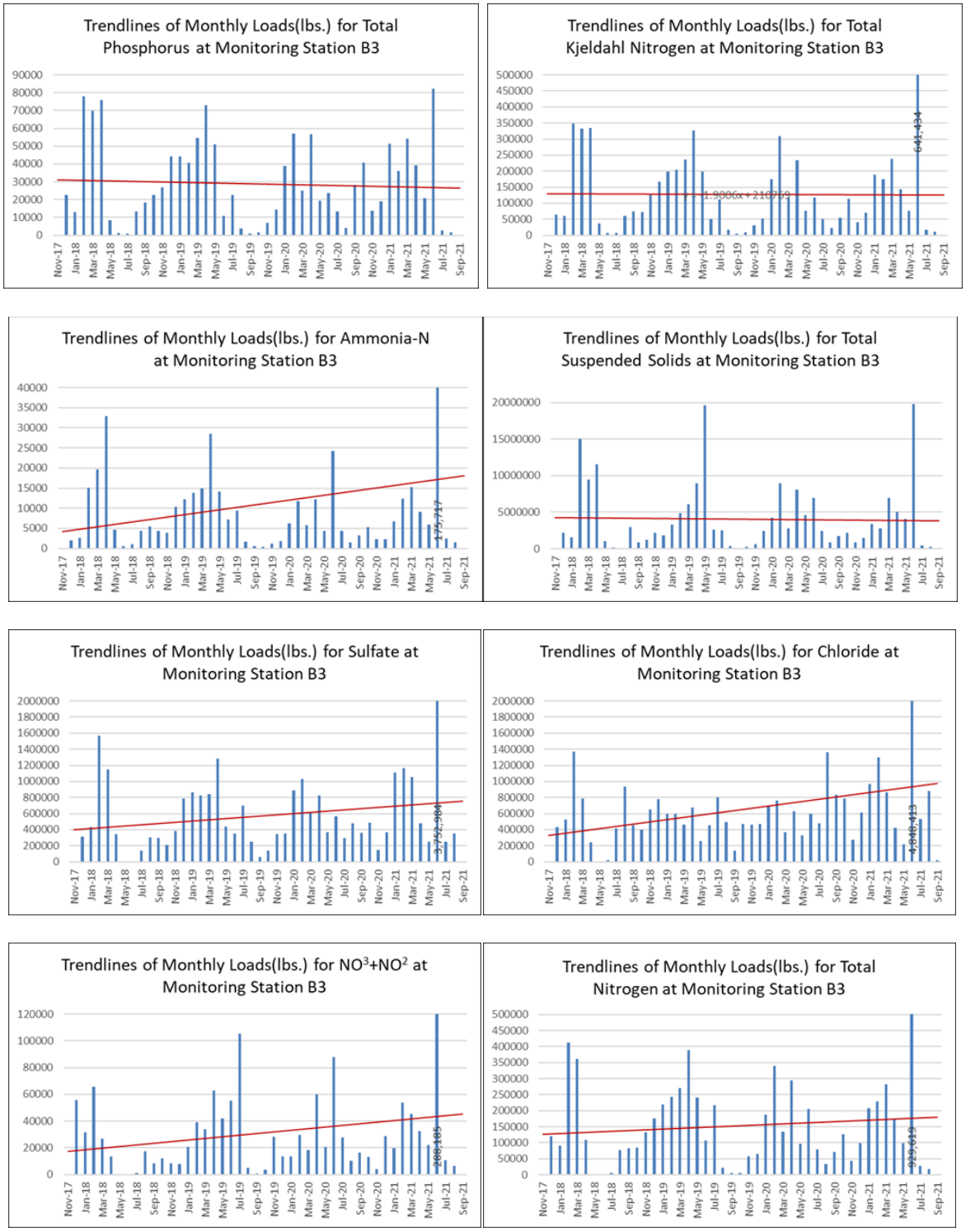

Figure 25 Linear Regression of Monthly Parameters Loads at B3.

Parameter Loadings at B3

Sampling Period	Annual Discharge (ft^3)	TP (lbs)	TKN (lbs)	NH_3-N (lbs)	TSS (lbs)	SO_4 (lbs)	Cl^- (lbs)	$NO_3 + NO_2$-N (lbs)	TN (lbs)
11/2017-12/2017	9.17E+08	22,500	64,800	1,920	2,140,000	315,000	431,000	55,600	120,000
2018	2.77E+10	372,000	1,620,000	105,000	48,000,000	5,620,000	6,580,000	193,000	1,530,000
2019	2.35E+10	324,000	1,440,000	106,000	51,600,000	6,440,000	5,890,000	411,000	1,840,000
2020	2.14E+10	340,000	1,380,000	83,600	45,200,000	6,420,000	7,730,000	330,000	1,710,000
1/2021-9/2021	2.08E+10	289,000	1,490,000	229,000	42,800,000	8,410,000	10,100,000	479,000	1,970,000
Project Total	9.44E+10	1,350,000	6,000,000	526,000	190,000,000	27,200,000	30,700,000	1,470,000	7,180,000

Table 16. Annual Discharge and Loading Extrapolations at B3.

Sampling Period	TP (lbs/acre)	TKN (lbs/acre)	NH_3-N (lbs/acre)	TSS (lbs/acre)	SO_4 (lbs/acre)	Cl^- (lbs/acre)	NO_3-NO_2-N (lbs/acre)	TN (lbs/acre)
11/2017-12/2017	0.09	0.26	0.01	8.48	1.25	1.71	0.22	0.48
2018	1.47	6.42	0.42	190	22.3	26.1	0.76	6.06
2019	1.28	5.71	0.42	205	25.5	23.3	1.63	7.29
2020	1.35	5.47	0.33	179	25.4	30.6	1.31	6.78
1/2021-9/2021	1.15	5.91	0.91	170	33.3	40	1.9	7.81
Project Average	1.07	4.75	0.42	150	21.6	24.4	1.16	5.68

Table 17. Unit Area Loading Extrapolations at B3

Summary B3

At B3, throughout the project period, trend analyses of parameter concentrations resulted in only one statistically significant trend. A positive trend (increasing with time) was identified for $NO_3 + NO_2$-N at the station. No other statistically significant trends were identified for the remaining parameter concentrations.

Discharge at the B3 station was provided by the USGS.

At B3, from the project's commencement, computations of linear regressions for monthly loads indicated negative trends for three parameters (TP, TKN, and TSS).

At B3, the 2018 calendar year resulted in greater discharge and greater annual loads for TP and TKN. The 2021 sampling period, which resulted in 25% less discharge than the 2018 period, but had the greatest loads for NH_3-N, SO_4, Cl^-, $NO_3 + NO_2$-N, and TN.

B3 was the largest watershed monitored and was downstream from all other stations. Ranking the average unit area loadings throughout the project period by station, signifies assimilation of the Deep Bayou contributions to the Bayou Bartholomew may be is occurring.

C1 Results

Parameter Concentration Results at C1

Sampling Period	TP (mg/L)	TKN (mg/L)	NH_3-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	SO_4 (mg/L)	Cl^- (mg/L)	NO_3+NO_2-N (mg/L)	TN (mg/L)
11/2017 – 12/2017	0.60	2.15	0.24	97.82	56.20	21.26	11.08	0.31	2.45
2018	0.34	1.30	0.21	52.28	22.59	4.27	3.90	0.13	1.44
2019	0.38	1.14	0.14	110.68	57.50	6.37	4.81	0.17	1.38
2020	0.36	1.12	0.15	58.43	31.54	5.08	4.51	0.24	1.36
1/2021 – 9/2018	0.38	1.21	0.23	59.36	28.86	5.13	6.45	0.14	1.36

Table 18 Annual Mean Parameter Concentrations at C1.

Parameter	Minimum	Maximum	Mean	Std. deviation	Kendall's tau	S	p-value (Two-tailed)	alpha
TP	0.05	1.33	0.37	0.20	0.004	67	0.94	0.05
TKN	0.36	4.30	1.21	0.57	-0.074	-1374	0.13	0.05
NH_3-N	<0.02	1.71	0.18	0.23	0.001	22	0.98	0.05
Turbidity	7.80	1952	72.13	150.54	-0.074	-1376	0.13	0.05
TSS	5.00	1020	36.41	83.81	-0.005	-97	0.91	0.05
SO_4	0.70	42.80	5.73	5.79	0.030	491	0.55	0.05
Cl^-	0.70	21.50	5.02	4.46	0.094	1541	0.06	0.05
NO_3+NO_2-N	<0.02	3.40	0.18	0.34	0.058	767	0.28	0.05
TN	0.42	4.96	1.40	0.64	-0.049	-663	0.35	0.05

Positive S-values indicate trends are increasing, negative S-values indicate trends are decreasing.
When the p-value is less than the alpha value, there is a significant trend in the data set.

Table 19 Mann-Kendall Statistical Test for Trend Analysis of Parameter Concentration at C1 during the project period.

Stage and Rating Curve at C1

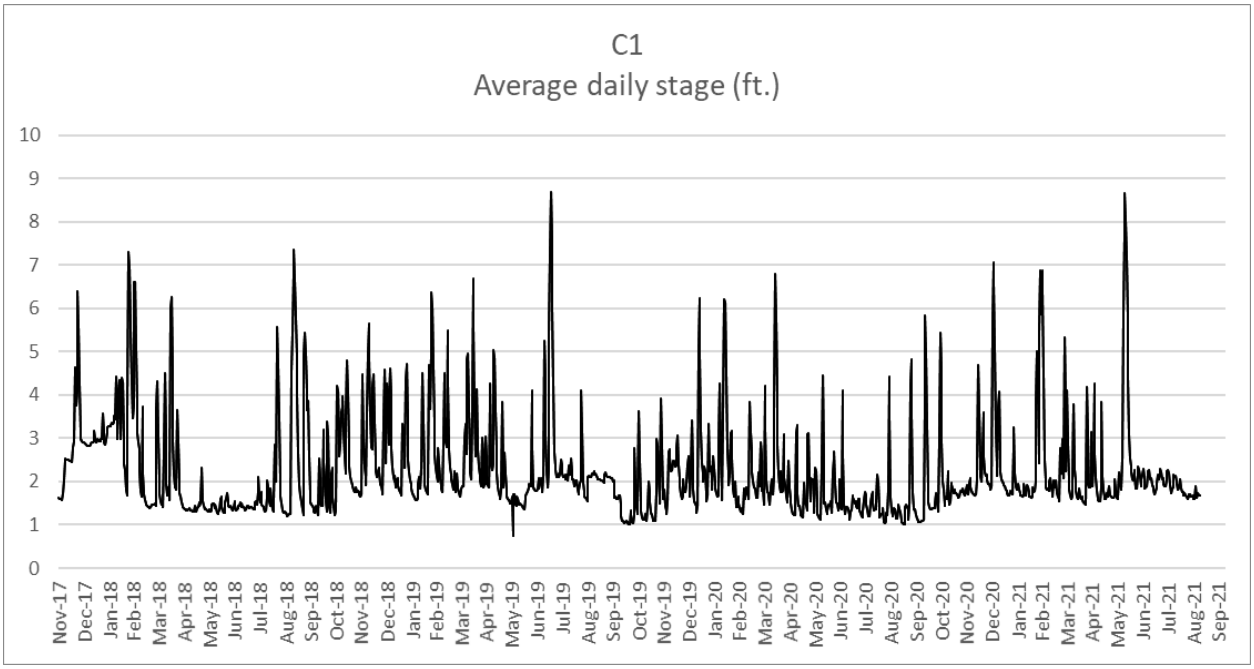

Figure 26 C1 Hydrograph

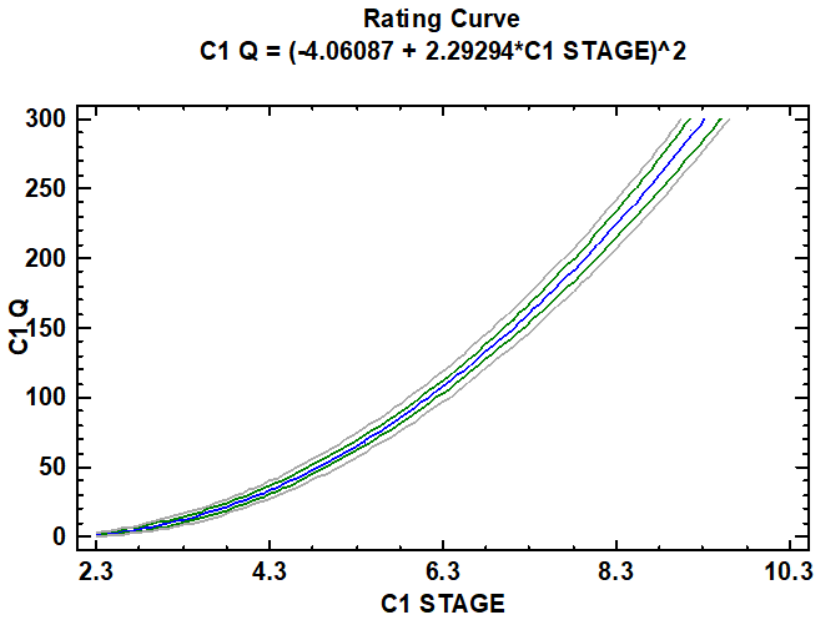

Figure 27 C1 Rating Curve

Source	Sum of Squares	Mean Squares	F-Ratio	P-Value	R-squared percent
Model	132.943	132.943	5731.99	<0.05	99.9%
Residual	0.06958	0.023193			
Total (Corr.)	133.013				

Table 20 Analysis of Variance for the Rating Curve at C1.

Linear Regression of Monthly Parameter Loads at C1

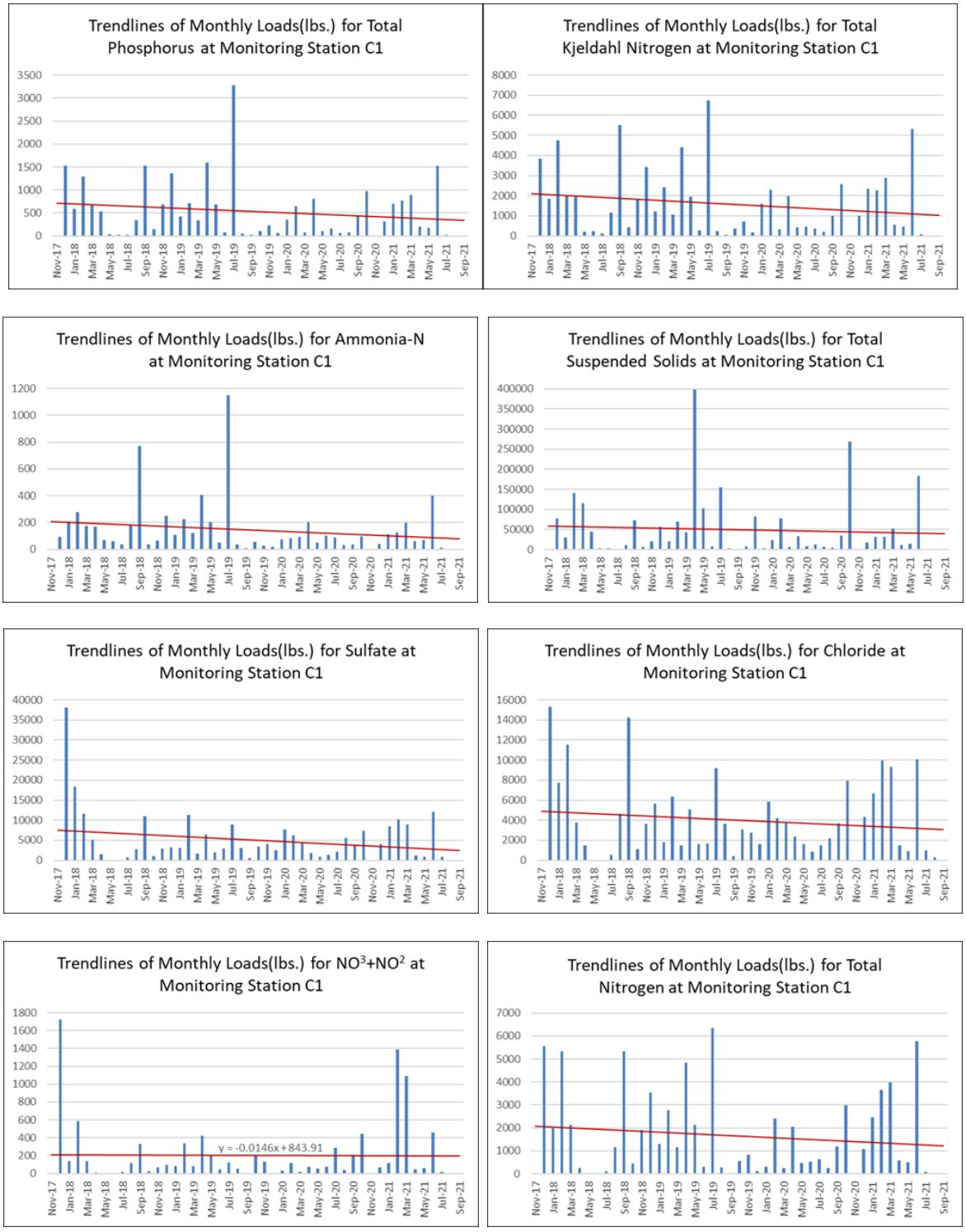

Figure 28 Linear Regression of Monthly Parameters Loads at C1.

Parameter Loadings at C1

Sampling Period	Annual Discharge (ft^3)	TP (lbs)	TKN (lbs)	NH_3-N (lbs)	TSS (lbs)	SO_4 (lbs)	Cl^- (lbs)	$NO_3 + NO_2$-N (lbs)	TN (lbs)
11/2017-12/2017	3.50E+07	1,530	3,840	95	77,500	38,100	15,300	1,730	5,560
2018	3.36E+08	7,220	23,500	2,290	506,000	58,400	54,400	1,530	22,200
2019	2.41E+08	7,590	19,600	2,400	895,000	49,900	38,800	1,680	20,700
2020	1.72E+08	4,010	12,200	902	495,000	45,400	38,300	1,430	12,200
1/2021-9/2021	2.10E+08	4,270	13,900	980	327,000	42,700	39,600	3,180	17,100
Project Total	9.93E+08	24,600	73,100	6,670	2,300,000	235,000	186,000	9,550	77,700

Table 21. Annual Discharge and Loading Extrapolations at C1.

Sampling Period	TP (lbs/acre)	TKN (lbs/acre)	NH_3-N (lbs/acre)	TSS (lbs/acre)	SO_4 (lbs/acre)	Cl^- (lbs/acre)	NO_3-NO_2-N (lbs/acre)	TN (lbs/acre)
11/2017-12/2017	0.17	0.43	0.01	8.66	4.26	1.71	0.19	0.62
2018	0.81	2.63	0.26	56.6	6.53	6.08	0.17	2.48
2019	0.85	2.19	0.27	100	5.58	4.34	0.19	2.31
2020	0.45	1.36	0.1	55.3	5.07	4.28	0.16	1.36
1/2021-9/2021	0.48	1.55	0.11	36.6	4.77	4.43	0.36	1.91
Project Average	0.55	1.63	0.15	51.4	5.24	4.17	0.21	1.74

Table 22. Unit Area Loading Extrapolations at C1

Summary C1

At C1, throughout the project period, trend analyses of parameter concentrations across time did not result in any statistically significant trends.

At C1, from the project's commencement, computations of linear regressions for monthly loads indicated negative trends for all parameters.

At C1, the 2018 calendar year resulted in greater discharge and greater annual loads for TKN, SO_4, Cl^-, and TN. The 2019 calendar year resulted in 28% less discharge than the 2018 year, but had the greatest loads for TP, NH_3-N, , and TSS.

Ranking the average unit area loadings throughout the project period by station, resulted in C1 having less load per acre than all other stations for three parameters (TP, TKN, and NH_3-N). The remaining five parameters (TSS, SO_4, Cl^-, $NO_3 + NO_2$-N and TN) load per acre were less than all stations except one; D1.

C2 Results

Parameter Concentration Results at C2

Sampling Period	TP (mg/L)	TKN (mg/L)	NH_3-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	SO_4 (mg/L)	Cl^- (mg/L)	NO_3+NO_2-N (mg/L)	TN (mg/L)
11/2017 – 12/2017	0.42	1.00	0.05	51.86	17.60	21.58	41.70	0.85	1.68
2018	0.31	1.31	0.18	103.71	32.96	11.00	25.49	0.29	1.43
2019	0.29	1.36	0.24	114.72	38.60	13.13	23.92	0.68	2.07
2020	0.33	1.40	0.23	111.13	44.20	13.09	24.10	0.46	1.83
1/2021 – 9/2018	0.29	1.34	0.21	104.36	47.18	14.77	31.93	0.59	1.87

Table 23 Annual Mean Parameter Concentrations at C2.

Parameter	Minimum	Maximum	Mean	Std. deviation	Kendall's tau	S	p-value (Two-tailed)	alpha
TP	0.04	0.87	0.31	0.14	-0.034	-594	0.49	0.05
TKN	0.51	5.82	1.35	0.69	0.005	92	0.92	0.05
NH_3-N	<0.02	4.40	0.21	0.42	0.040	684	0.43	0.05
Turbidity	3.60	1068.00	107.51	158.97	-0.050	-875	0.31	0.05
TSS	2.00	412.00	39.73	62.72	0.067	1158	0.18	0.05
SO_4	0.90	63.80	13.25	13.28	0.114	1771	0.02	0.05
Cl^-	1.30	143.10	26.32	28.43	0.089	1378	0.08	0.05
NO_3+NO_2-N	<0.02	9.14	0.53	0.86	0.123	1736	0.02	0.05
TN	0.72	13.40	1.86	1.37	0.077	1088	0.14	0.05

Positive S-values indicate trends are increasing, negative S-values indicate trends are decreasing.
When the p-value is less than the alpha value, there is a significant trend in the data set.

Table 24 Mann-Kendall Statistical Test for Trend Analysis of Parameter Concentration at C2 during the project period.

Stage and Rating Curve at C2

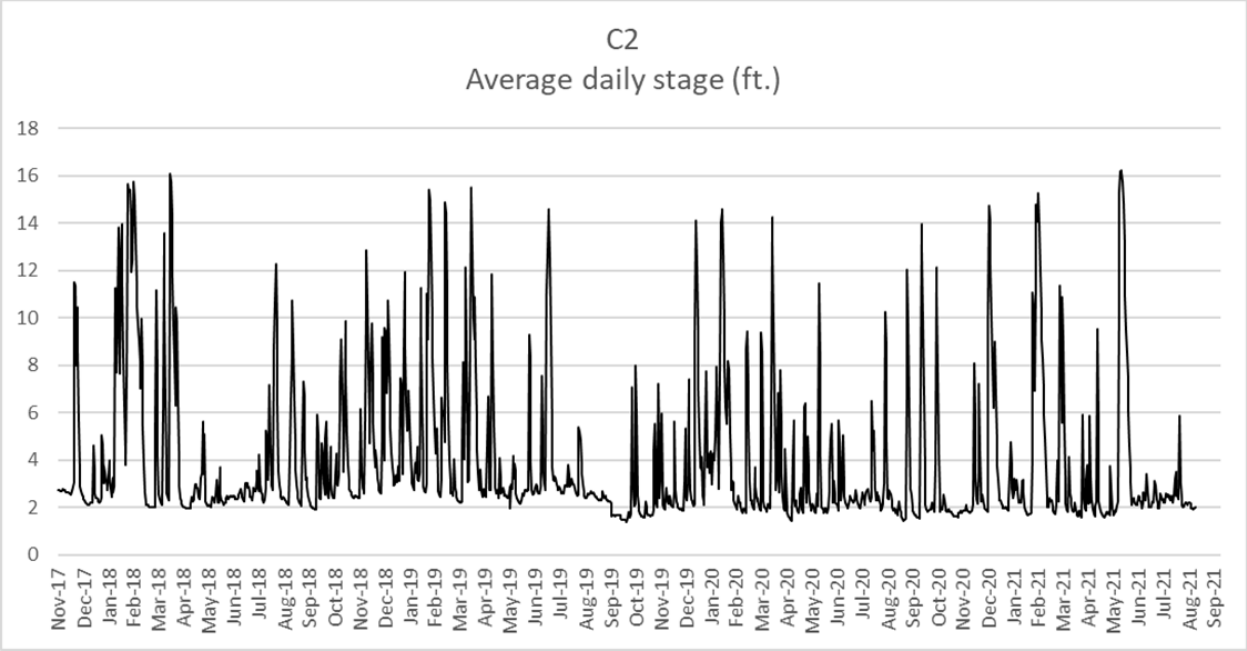

Figure 29 C2 Hydrograph

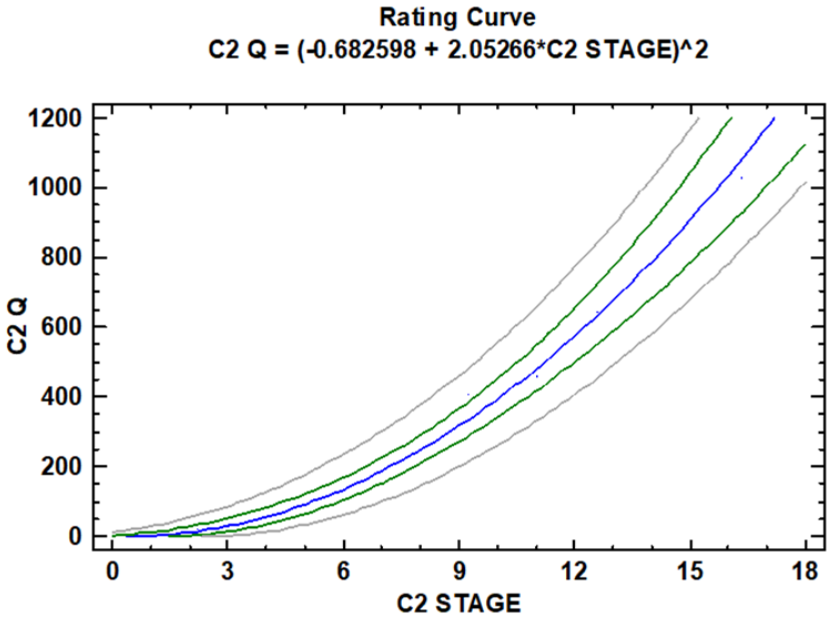

Figure 30 C2 Rating Curve

Source	Sum of Squares	Mean Squares	F-Ratio	P-Value	R-squared percent
Model	846.889	846.889	472.32	<0.05	98.7%
Residual	8.96519	1.79304			
Total (Corr.)	855.854				

Table 25 Analysis of Variance for the Rating Curve at C2.

Linear Regression of Monthly Parameter Loads at C2

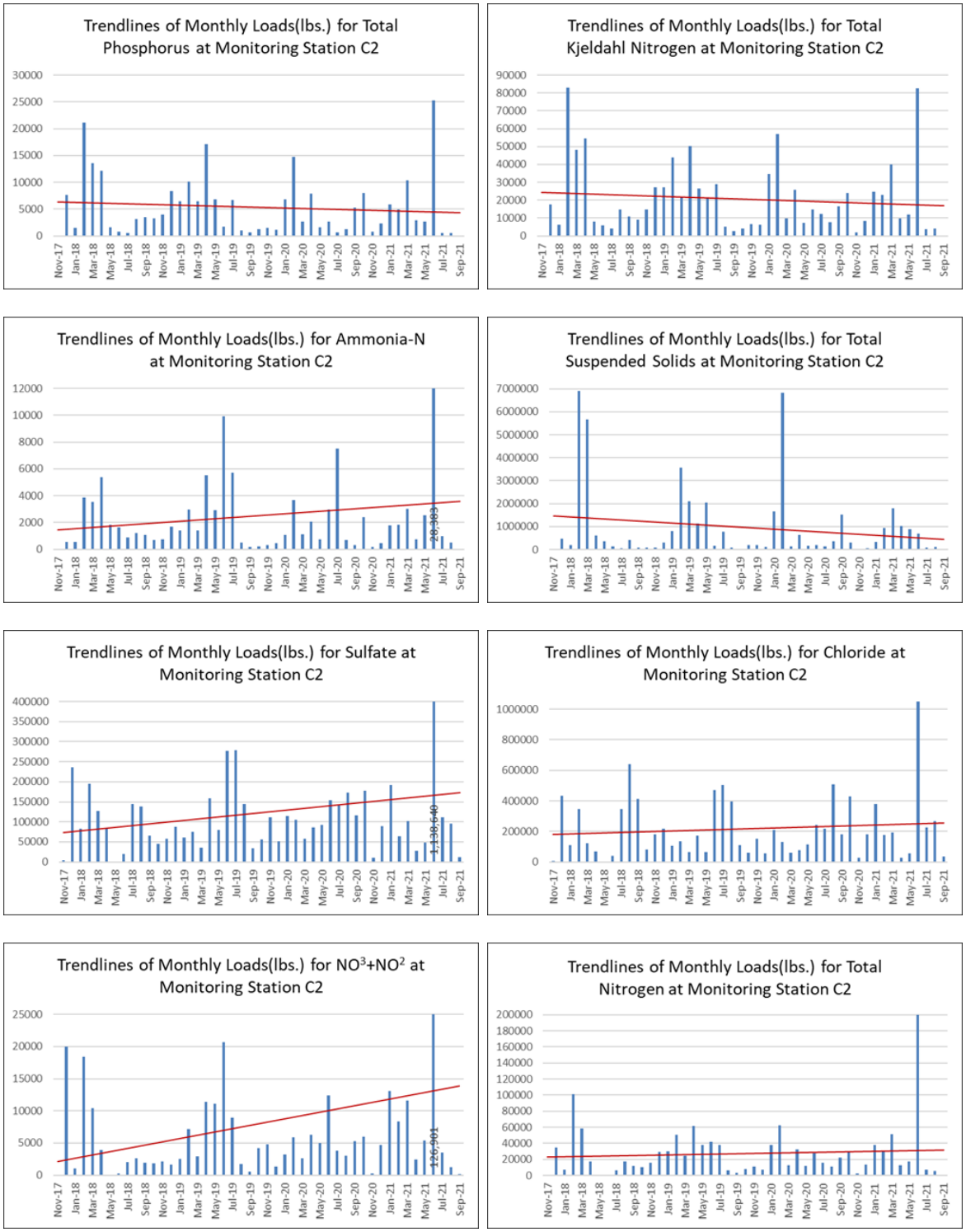

Figure 31 Linear Regression of Monthly Parameters Loads at C2.

Parameter Loadings at C2

Sampling Period	Annual Discharge (ft^3)	TP (lbs)	TKN (lbs)	NH_3-N (lbs)	TSS (lbs)	SO_4 (lbs)	Cl^- (lbs)	$NO_3 + NO_2$-N (lbs)	TN (lbs)
11/2017-12/2017	2.37E+08	7,730	17,700	569	473,000	241,000	441,000	20,000	34,600
2018	3.78E+09	73,500	287,000	23,000	14,900,000	1,050,000	2,570,000	45,900	276,000
2019	2.94E+09	60,800	244,000	31,400	11,200,000	1,370,000	2,290,000	77,200	321,000
2020	2.35E+09	54,800	221,000	23,200	12,000,000	1,320,000	2,370,000	58,400	279,000
1/2021-9/2021	2.32E+09	53,200	200,000	39,800	5,840,000	1,790,000	2,560,000	173,000	363,000
Project Total	1.16E+10	250,000	970,000	118,000	44,400,000	5,760,000	10,200,000	374,000	1,270,000

Table 26. Annual Discharge and Loading Extrapolations at C2.

Sampling Period	TP (lbs/acre)	TKN (lbs/acre)	NH_3-N (lbs/acre)	TSS (lbs/acre)	SO_4 (lbs/acre)	Cl^- (lbs/acre)	NO_3-NO_2-N (lbs/acre)	TN (lbs/acre)
11/2017-12/2017	0.22	0.51	0.02	13.7	6.96	12.7	0.58	1
2018	2.12	8.29	0.66	431	30.3	74.3	1.33	7.97
2019	1.76	7.05	0.91	324	39.6	66.2	2.23	9.28
2020	1.58	6.39	0.67	347	38.1	68.5	1.69	8.06
1/2021-9/2021	1.54	5.78	1.15	169	51.7	74	5	10.5
Project Average	1.44	5.6	0.68	257	33.3	59.1	2.16	7.36

Table 27. Unit Area Loading Extrapolations at C2

Summary C2

At C2, throughout the project period, trend analyses of parameter concentrations resulted in statistically significant positive trends (increasing with time) for SO_4 and $NO_3 + NO_2$-N. No other statistically significant trends were identified for the remaining parameter concentrations.

At C2, from the project's commencement, computations of linear regressions for monthly loads indicated negative trends for three parameters (TP, TKN, and TSS). Positive trends were found for all other parameters. However, these positive trends were greatly influenced by the June 7th, 2021 storm event.

At C2, the 2018 calendar year resulted in greater discharge and greater annual loads for TP, TKN, TSS, and Cl^-. The 2021 sampling period resulted in 39% less discharge than the 2018 year, but had the greatest loads for NH_3-N, SO_4, $NO_3 + NO_2$-N, and TN.

Ranking the average unit area loadings throughout the project period by station, resulted in C2 having the second greatest load per acre for three parameters (SO_4, Cl^-, and $NO_3 + NO_2$-N) and the third greatest load per acre for two parameters (NH_3-N and TN) when compared to all stations.

D1 Results

Parameter Concentration Results at D1

Sampling Period	TP (mg/L)	TKN (mg/L)	NH_3-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	SO_4 (mg/L)	Cl^- (mg/L)	NO_3+NO_2-N (mg/L)	TN (mg/L)
11/2017 – 12/2017	0.44	1.17	0.04	23.75	7.50	3.80	2.70	0.29	1.46
2018	0.44	1.31	0.13	25.55	10.34	1.65	4.22	0.05	1.27
2019	0.39	1.21	0.16	18.98	10.79	1.46	1.73	0.08	1.27
2020	0.35	1.04	0.07	18.78	9.18	0.98	2.59	0.07	1.17
1/2021 – 9/2018	0.36	1.16	0.16	19.12	10.34	0.90	3.34	0.06	1.21

Table 28 Annual Mean Parameter Concentrations at D1.

Parameter	Minimum	Maximum	Mean	Std. deviation	Kendall's tau	S	p-value (Two-tailed)	alpha
TP	0.11	2.81	0.38	0.26	-0.015	-155	0.80	0.05
TKN	0.63	2.93	1.16	0.36	-0.036	-386	0.52	0.05
NH_3-N	<0.02	0.72	0.13	0.14	0.120	1099	0.04	0.05
Turbidity	3.70	133.00	20.45	17.93	-0.201	-2157	0.00	0.05
TSS	2.00	46.00	10.05	6.25	0.071	739	0.21	0.05
SO_4	0.50	7.70	1.23	0.95	-0.268	-2044	0.00	0.05
Cl^-	0.80	22.80	2.88	2.93	0.183	1779	0.00	0.05
NO_3+NO_2-N	<0.02	0.40	0.08	0.09	-0.165	-215	0.10	0.05
TN	0.75	2.03	1.21	0.31	0.073	100	0.45	0.05

Positive S-values indicate trends are increasing, negative S-values indicate trends are decreasing.
When the p-value is less than the alpha value, there is a significant trend in the data set.

Table 29 Mann-Kendall Statistical Test for Trend Analysis of Parameter Concentration at D1 during the project period.

Stage and Rating Curve at D1

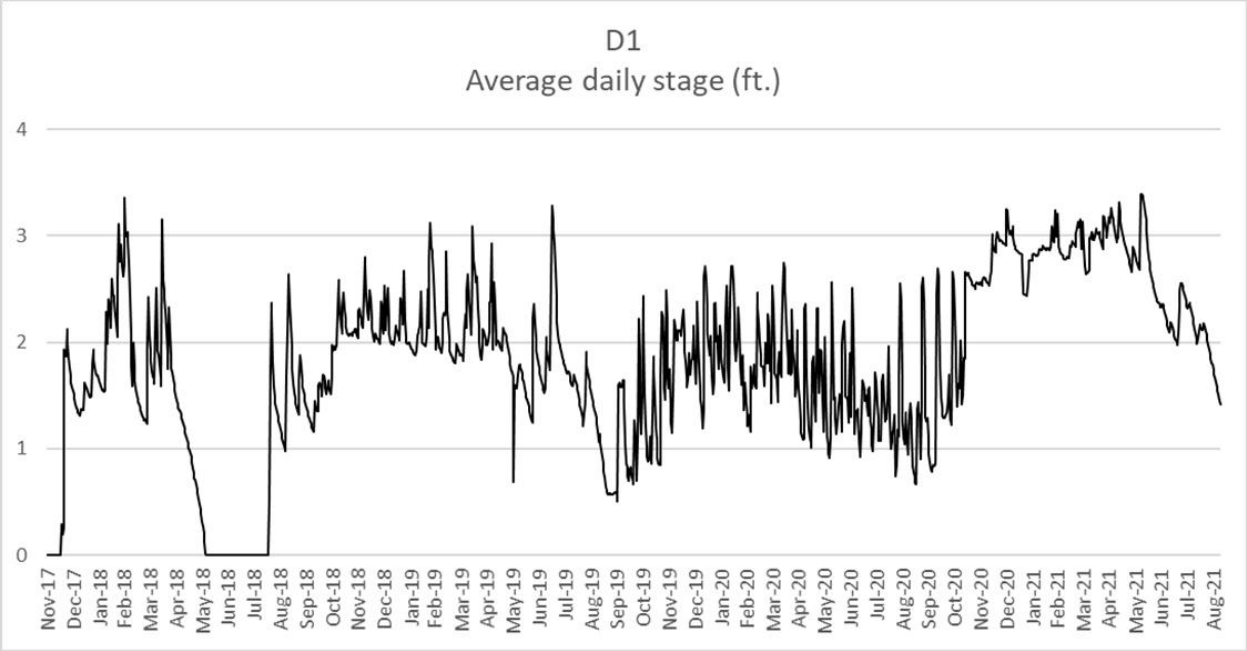

Figure 32 D1 Hydrograph

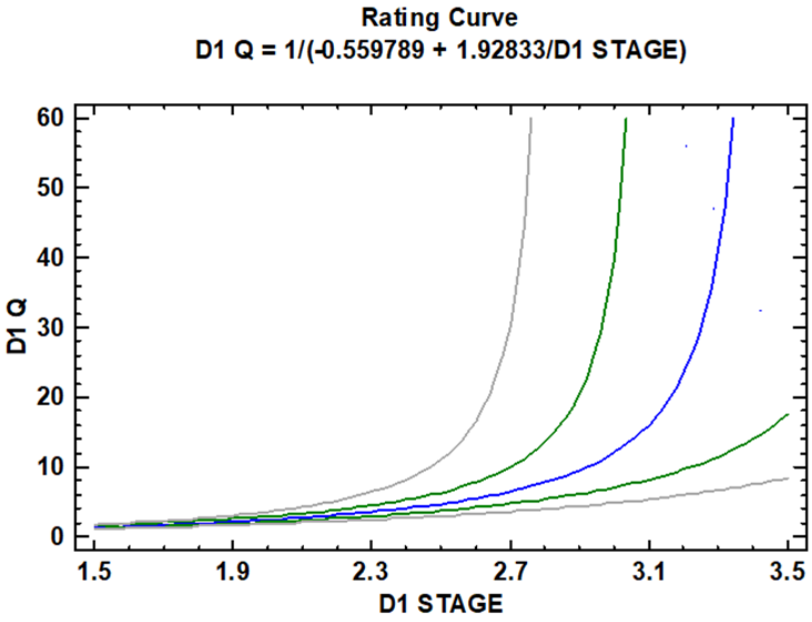

Figure 33 D1 Rating Curve

Source	Sum of Squares	Mean Squares	F-Ratio	P-Value	R-squared percent
Model	0.327909	0.327909	514.72	<0.05	99.6%
Residual	0.001274	0.000637			
Total (Corr.)	0.329183				

Table 30 Analysis of Variance for the Rating Curve at D1.

Linear Regression of Monthly Parameter Loads at D1

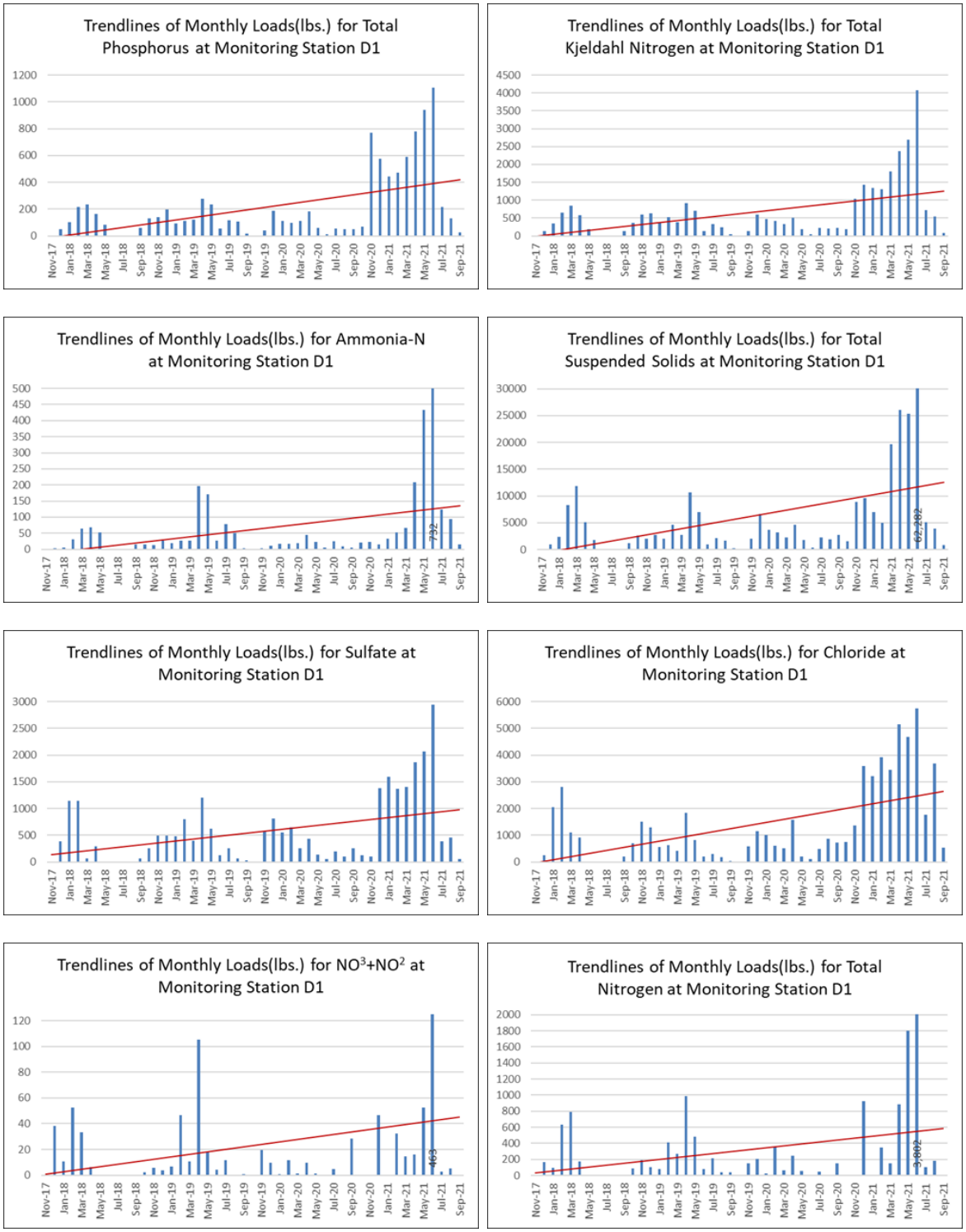

Figure 34 Linear Regression of Monthly Parameters Loads at D1.

Parameter Loadings at D1

Sampling Period	Annual Discharge (ft^3)	TP (lbs)	TKN (lbs)	NH_3-N (lbs)	TSS (lbs)	SO_4 (lbs)	Cl^- (lbs)	$NO_3 + NO_2$-N (lbs)	TN (lbs)
11/2017-12/2017	2.06E+06	50	127	3	982	384	243	38	165
2018	6.67E+07	1,330	4,330	288	38,100	3,940	10,600	114	2,070
2019	7.93E+07	1,370	4,390	613	40,800	5,360	6,710	233	2,980
2020	8.54E+07	2,140	5,300	221	42,700	4,220	11,700	104	1,870
1/2021-9/2021	2.14E+08	4,700	14,900	1,760	155,000	12,100	32,100	586	7,280
Project Total	4.48E+08	9,590	29,100	2,880	278,000	26,000	61,400	1,080	14,400

Table 31. Annual Discharge and Loading Extrapolations at D1.

Sampling Period	TP (lbs/acre)	TKN (lbs/acre)	NH_3-N (lbs/acre)	TSS (lbs/acre)	SO_4 (lbs/acre)	Cl^- (lbs/acre)	NO_3-NO_2-N (lbs/acre)	TN (lbs/acre)
11/2017-12/2017	0.02	0.04	0	0.32	0.12	0.08	0.01	0.05
2018	0.43	1.39	0.09	12.2	1.26	3.4	0.04	0.66
2019	0.44	1.41	0.2	13.1	1.72	2.15	0.07	0.96
2020	0.69	1.70	0.07	13.7	1.35	3.75	0.03	0.60
1/2021-9/2021	1.51	4.78	0.56	49.7	3.88	10.3	0.19	2.34
Project Average	0.62	1.86	0.19	17.8	1.67	3.94	0.07	0.92

Table 32. Unit Area Loading Extrapolations at D1

Summary D1

At D1, throughout the project period, trend analyses of parameter concentrations resulted in statistically significant negative trends (decreasing with time) for turbidity and SO_4. Statistically significant positive trends (increasing with time) were identified for NH_3 -N and Cl^-. No other significant trends were identified for the remaining parameter concentrations.

Although statistical computations at D1 resulted in a significant rating curve, discharge and loading estimations should be examined with caution. Discharge at D1 was problematic because of both anthropogenic and naturally occurring activities; people began dumping trash and animal carcasses at the site, followed by a family of beavers inhabiting the area. Furthermore, inadequate amounts of runoff for representative sample collections frequently occurred during the project period at D1.

At D1, from the project's commencement, computations of linear regressions for monthly loads indicated positive trends for all parameters.

At D1, the 2021 sampling period resulted in greater discharge and greater annual loads for all parameters.

Ranking the average unit area loadings throughout the project period by station, resulted in D1 having less load per acre than all other stations for five parameters (TSS, SO_4, Cl^-, NO_3 + NO_2-N and TN). The remaining three parameters (TP, TKN, and NH_3 -N) load per acre were less than all stations except one; C1.

D2 Results

Parameter Concentration Results at D2

Sampling Period	TP (mg/L)	TKN (mg/L)	NH_3-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	SO_4 (mg/L)	Cl^- (mg/L)	NO_3+NO_2-N (mg/L)	TN (mg/L)
11/2017 – 12/2017	0.35	1.28	0.06	121.35	22.50	6.15	8.40	0.86	2.14
2018	0.33	1.84	0.43	44.00	13.61	1.66	7.83	0.07	2.48
2019	0.29	1.18	0.19	20.73	10.83	2.00	7.44	0.07	1.25
2020	0.36	1.30	0.27	21.48	11.10	1.38	5.59	0.05	1.26
1/2021 – 9/2018	0.33	1.18	0.27	34.47	14.09	2.50	10.27	0.06	1.38

Table 33 Annual Mean Parameter Concentrations at D2.

Parameter	Minimum	Maximum	Mean	Std. deviation	Kendall's tau	S	p-value (Two-tailed)	alpha
TP	0.08	0.85	0.33	0.15	0.056	957	0.26	0.05
TKN	0.04	21.40	1.39	1.67	-0.077	-1312	0.12	0.05
NH_3-N	<0.02	8.00	0.29	0.76	0.068	1108	0.18	0.05
Turbidity	3.20	589.00	30.74	57.71	-0.069	-1178	0.17	0.05
TSS	2.00	68.00	12.38	8.71	0.049	821	0.33	0.05
SO_4	0.20	11.40	1.90	2.12	-0.008	-106	0.88	0.05
Cl^-	0.80	48.50	7.55	9.65	-0.043	-641	0.40	0.05
NO_3+NO_2-N	<0.02	1.45	0.08	0.15	-0.063	-393	0.34	0.05
TN	0.07	4.14	1.32	0.58	0.024	162	0.70	0.05

Positive S-values indicate trends are increasing, negative S-values indicate trends are decreasing.
When the p-value is less than the alpha value, there is a significant trend in the data set.

Table 34 Mann-Kendall Statistical Test for Trend Analysis of Parameter Concentration at D2 during the project period.

Stage and Rating Curve at D2

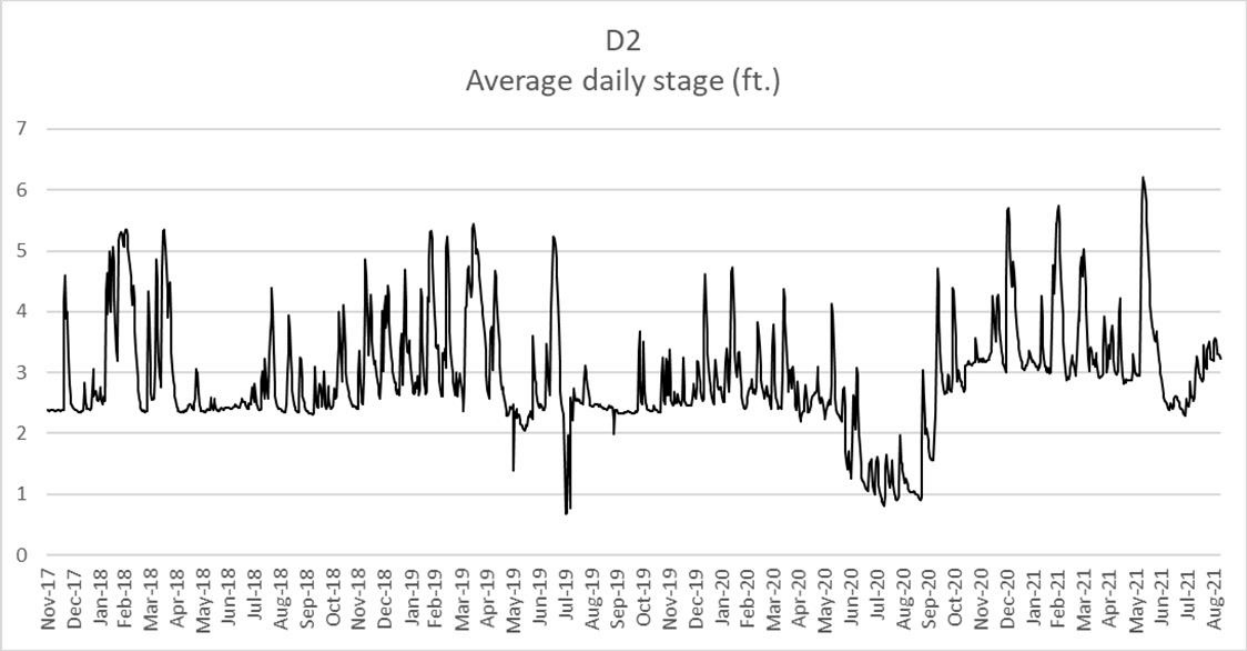

Figure 35 D2 Hydrograph

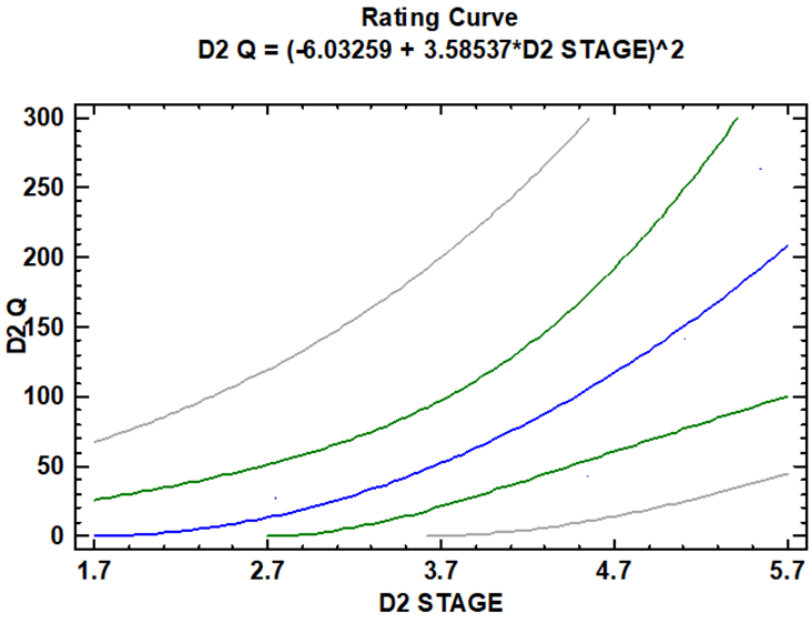

Figure 36 D2 Rating Curve

Source	Sum of Squares	Mean Squares	F-Ratio	P-Value	R-squared percent
Model	135.541	135.541	25.71	<0.05	86.5%
Residual	21.0883	5.27207			
Total (Corr.)	156.629				

Table 35 Analysis of Variance for the Rating Curve at D2.

Linear Regression of Monthly Parameter Loads at D2

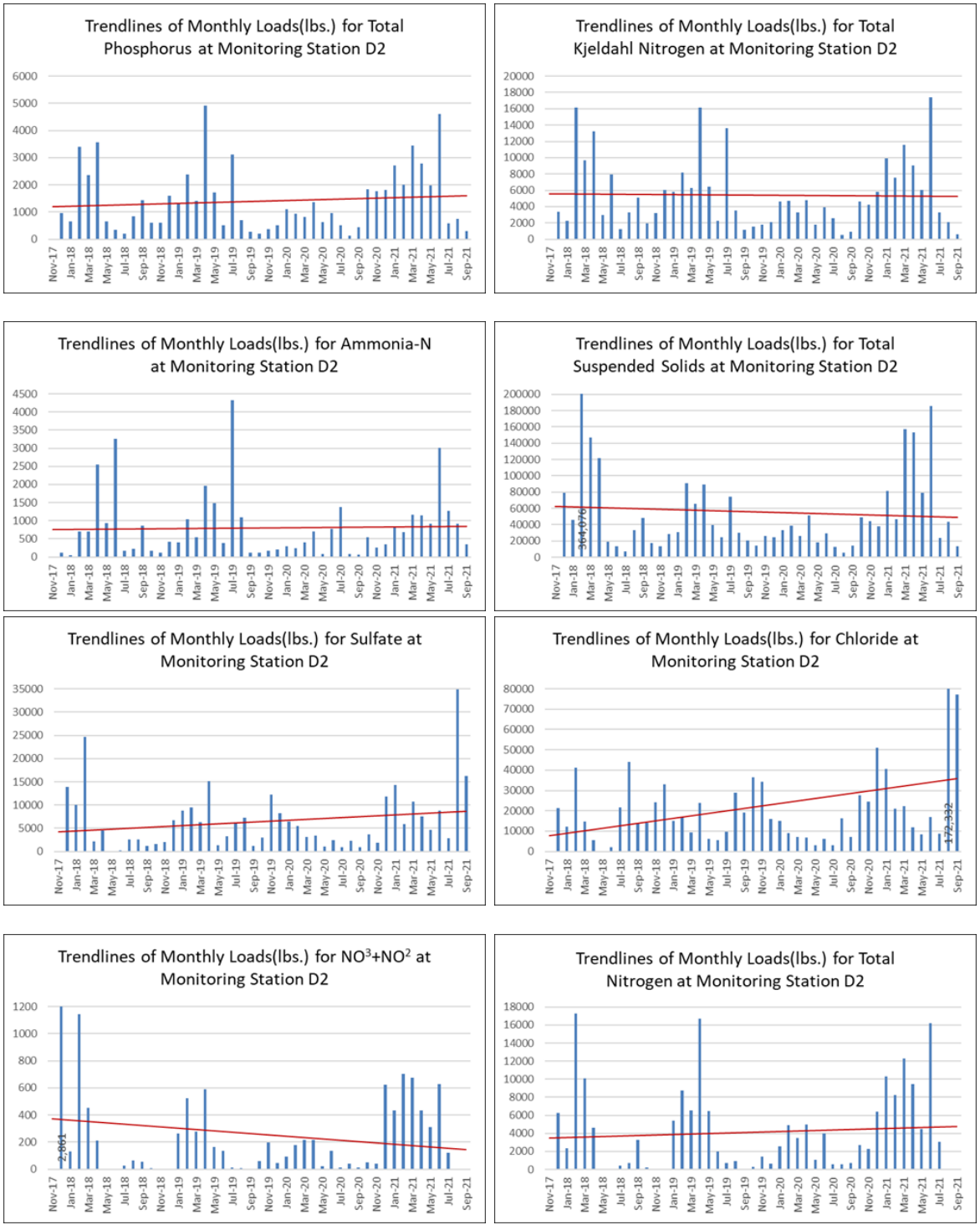

Figure 37 Linear Regression of Monthly Parameters Loads at D2.

Parameter Loadings at D2

Sampling Period	Annual Discharge (ft^3)	TP (lbs)	TKN (lbs)	NH_3-N (lbs)	TSS (lbs)	SO_4 (lbs)	Cl^- (lbs)	$NO_3 + NO_2$-N (lbs)	TN (lbs)
11/2017-12/2017	5.14E+07	951	3,370	109	78,600	13,900	21,300	2,860	6,230
2018	9.14E+08	16,300	73,000	10,200	860,000	58,000	227,000	2,090	39,100
2019	9.39E+08	17,500	68,800	11,800	530,000	82,400	220,000	2,270	49,800
2020	6.09E+08	12,300	41,700	5,200	362,000	43,500	176,000	1,640	34,300
1/2021-9/2021	1.03E+09	19,100	67,400	10,300	783,000	106,000	379,000	3,310	64,000
Project Total	3.55E+09	66,100	254,000	37,500	2,610,000	304,000	1,020,000	12,200	193,000

Table 36. Annual Discharge and Loading Extrapolations at D2.

Sampling Period	TP (lbs/acre)	TKN (lbs/acre)	NH_3-N (lbs/acre)	TSS (lbs/acre)	SO_4 (lbs/acre)	Cl^- (lbs/acre)	NO_3-NO_2-N (lbs/acre)	TN (lbs/acre)
11/2017-12/2017	0.14	0.49	0.02	11.5	2.04	3.13	0.42	0.91
2018	2.39	10.7	1.5	126	8.51	33.3	0.31	5.74
2019	2.57	10.1	1.73	77.8	12.1	32.3	0.33	7.31
2020	1.81	6.12	0.76	53.1	6.39	25.8	0.24	5.04
1/2021-9/2021	2.8	9.89	1.51	115	15.6	55.6	0.49	9.40
Project Average	1.94	7.47	1.1	76.7	8.92	30	0.36	5.68

Table 37. Unit Area Loading Extrapolations at D2

Summary D2

At D2, throughout the project period, trend analyses of parameter concentrations across time did not result in any statistically significant trends.

At D2, from the project's commencement, computations of linear regressions for monthly loads indicated negative trends for three parameters (TKN, TSS, and NO_3+NO_2-N). Positive trends were found for all other parameters.

At D2, the 2021 sampling period resulted in greater discharge and greater annual loads for TP, SO_4, Cl^-, NO_3+NO_2-N, and TN. The 2018 calendar year resulted in greater annual loads for TKN and TSS.

Ranking the average unit area loadings throughout the project period by station, resulted in D2 having the greatest NH_3-N load per acre and the second greatest TP and TKN loads per acre as compared to other stations.

D3 Results

Parameter Concentration Results at D3

Sampling Period	TP (mg/L)	TKN (mg/L)	NH_3-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	SO_4 (mg/L)	Cl^- (mg/L)	NO_3+NO_2-N (mg/L)	TN (mg/L)
11/2017 – 12/2017	0.36	1.08	0.06	64.26	29.80	24.36	56.72	1.27	2.07
2018	0.29	1.23	0.13	119.70	46.13	8.10	21.38	0.24	1.41
2019	0.27	1.19	0.14	102.94	42.90	11.77	22.82	0.50	1.73
2020	0.32	1.23	0.12	107.62	52.96	9.08	19.92	0.45	1.68
1/2021 – 9/2018	0.32	1.27	0.15	121.13	63.61	11.01	25.97	0.51	1.78

Table 38 Annual Mean Parameter Concentrations at D3.

Parameter	Minimum	Maximum	Mean	Std. deviation	Kendall's tau	S	p-value (Two-tailed)	alpha
TP	0.08	0.74	0.30	0.13	0.024	405	0.63	0.05
TKN	0.07	2.80	1.22	0.46	-0.041	-701	0.41	0.05
NH_3-N	<0.02	0.76	0.13	0.13	-0.020	-322	0.70	0.05
Turbidity	13.50	998.00	110.60	149.31	-0.124	-2110	0.01	0.05
TSS	4.00	488.00	49.82	64.55	-0.020	-338	0.69	0.05
SO_4	0.70	51.20	10.46	9.59	0.072	1073	0.16	0.05
Cl^-	2.00	93.80	23.25	22.51	0.049	741	0.34	0.05
NO_3+NO_2-N	<0.02	4.56	0.44	0.56	0.101	1354	0.06	0.05
TN	0.13	5.96	1.66	0.88	0.019	251	0.72	0.05

Positive S-values indicate trends are increasing, negative S-values indicate trends are decreasing.
When the p-value is less than the alpha value, there is a significant trend in the data set.

Table 39 Mann-Kendall Statistical Test for Trend Analysis of Parameter Concentration at D3 during the project period.

Stage and Rating Curve at D3

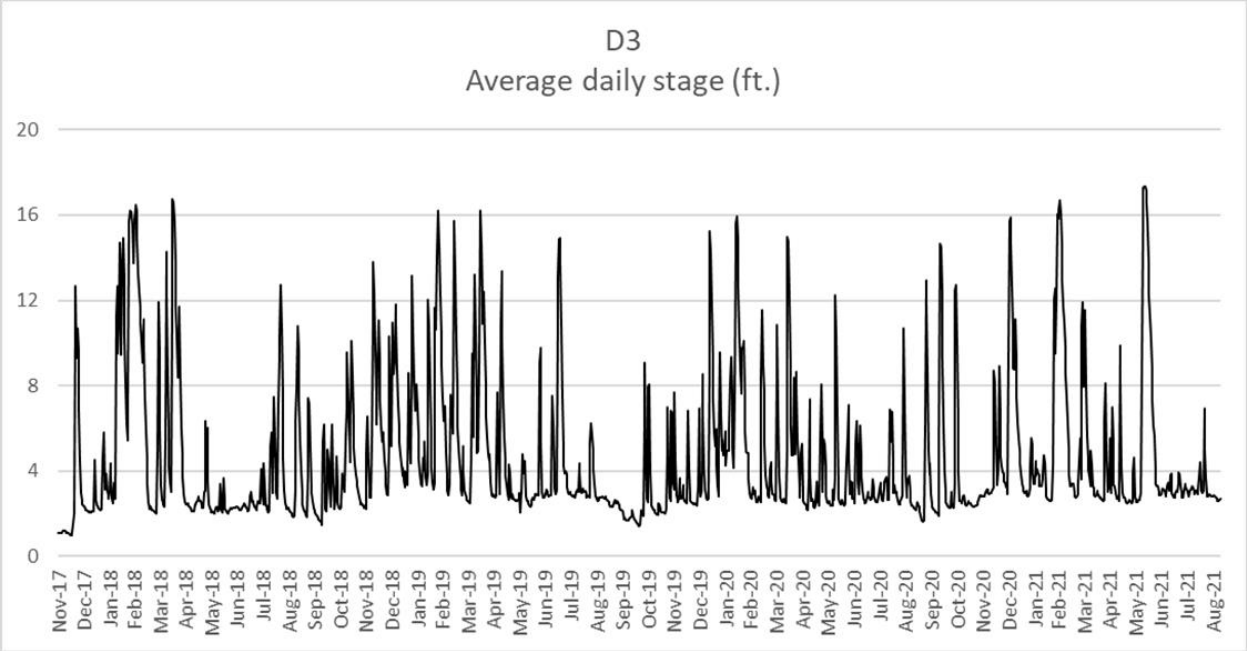

Figure 38 D3 Hydrograph

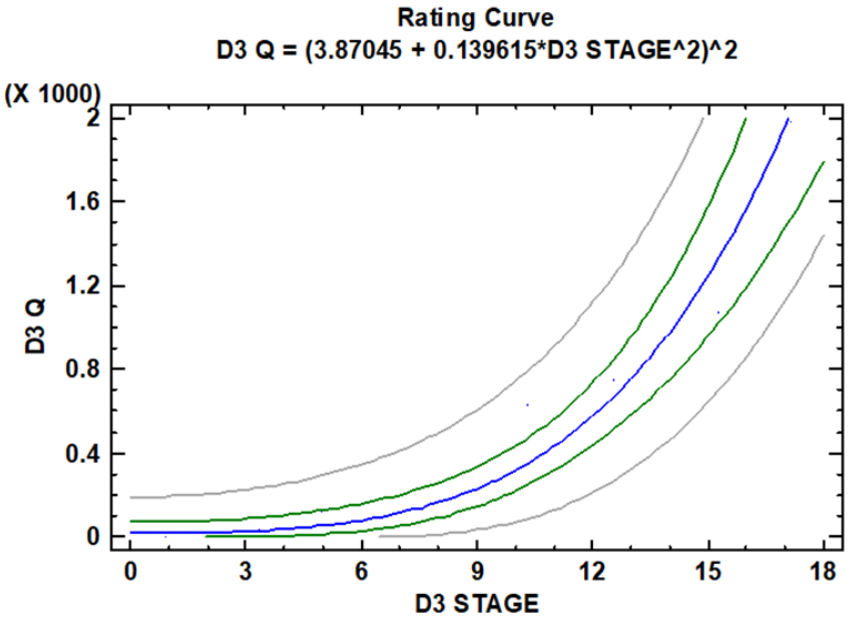

Figure 39 D3 Rating Curve

Source	Sum of Squares	Mean Squares	F-Ratio	P-Value	R-squared percent
Model	1877.46	1877.46	131.88	<0.05	97.4%
Residual	99.6498	14.2357			
Total (Corr.)	1977.11				

Table 40 Analysis of Variance for the Rating Curve at D3.

Linear Regression of Monthly Parameter Loads at D3

Figure 40 Linear Regression of Monthly Parameters Loads at D3.

Parameter Loadings at D3

Sampling Period	Annual Discharge (ft^3)	TP (lbs)	TKN (lbs)	NH_3-N (lbs)	TSS (lbs)	SO_4 (lbs)	Cl^- (lbs)	NO_3 + NO_2-N (lbs)	TN (lbs)
11/2017-12/2017	2.27E+08	7,420	20,600	644	458,000	214,000	445,000	20,700	38,100
2018	4.83E+09	95,500	362,000	21,500	28,800,000	930,000	2,230,000	57,300	350,000
2019	3.82E+09	73,800	291,000	30,400	15,100,000	1,430,000	2,470,000	74,800	362,000
2020	3.25E+09	72,900	271,000	19,100	18,100,000	1,310,000	2,700,000	84,000	355,000
1/2021-9/2021	3.93E+09	89,100	333,000	52,500	11,600,000	2,290,000	3,490,000	246,000	565,000
Project Total	1.61E+10	339,000	1,280,000	124,000	74,000,000	6,170,000	11,300,000	482,000	1,670,000

Table 41. Annual Discharge and Loading Extrapolations at D3.

Sampling Period	TP (lbs/acre)	TKN (lbs/acre)	NH_3-N (lbs/acre)	TSS (lbs/acre)	SO_4 (lbs/acre)	Cl^- (lbs/acre)	NO_3-NO_2-N (lbs/acre)	TN (lbs/acre)
11/2017-12/2017	0.14	0.38	0.01	8.42	3.93	8.18	0.38	0.7
2018	1.76	6.66	0.40	529	17.1	41	1.05	6.43
2019	1.36	5.35	0.56	278	26.3	45.4	1.38	6.66
2020	1.34	4.98	0.35	333	24.1	49.6	1.54	6.53
1/2021-9/2021	1.64	6.12	0.97	213	42.1	64.2	4.52	10.4
Project Average	1.25	4.7	0.46	272	22.7	41.7	1.78	6.14

Table 42. Unit Area Loading Extrapolations at D3

Summary D3

At D3, throughout the project period, trend analyses of parameter concentrations resulted in one statistically significant trend. A negative trend (decreasing with time) was identified for turbidity at the station. No other statistically significant trends were identified for the remaining parameter concentrations.

At D3, from the project's commencement, computations of linear regressions for monthly loads indicated negative trends for three parameters (TP, TKN, and TSS). Positive trends were found for all other parameters.

At D3, the 2018 calendar year resulted in greater discharge and greater annual loads for TP, TKN, and TSS. The 2021 sampling period resulted in 19% less discharge than the 2018 year, but had the greatest loads for SO_4, Cl^-, NO_3 + NO_2-N, and TN.

D4 Results

Parameter Concentration Results at D4

Sampling Period	TP (mg/L)	TKN (mg/L)	NH_3-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	SO_4 (mg/L)	Cl^- (mg/L)	NO_3+NO_2-N (mg/L)	TN (mg/L)
11/2017 – 12/2017	0.33	1.01	0.04	48.91	15.20	24.96	62.94	0.85	1.68
2018	0.29	1.35	0.13	146.26	50.73	7.36	19.44	0.21	1.52
2019	0.27	1.16	0.13	107.20	35.23	10.00	20.84	0.49	1.72
2020	0.31	1.22	0.14	103.38	41.48	7.88	18.28	0.44	1.66
1/2021 – 9/2018	0.29	1.33	0.15	115.21	48.14	10.20	24.35	0.51	1.84

Table 43 Annual Mean Parameter Concentrations at D4.

Parameter	Minimum	Maximum	Mean	Std. deviation	Kendall's tau	S	p-value (Two-tailed)	alpha
TP	0.10	0.92	0.29	0.13	-0.001	-16	0.99	0.05
TKN	0.58	6.48	1.25	0.71	-0.065	-1208	0.18	0.05
NH_3-N	<0.02	0.92	0.13	0.14	0.018	319	0.72	0.05
Turbidity	2.90	1126.00	116.03	178.19	-0.132	-2441	0.01	0.05
TSS	2.00	560.00	42.67	75.58	-0.058	-1065	0.24	0.05
SO_4	0.70	41.20	9.29	8.60	0.077	1269	0.12	0.05
Cl^-	1.50	98.90	21.65	22.26	0.049	798	0.33	0.05
NO_3+NO_2-N	<0.02	3.73	0.42	0.51	0.140	1990	0.01	0.05
TN	0.71	8.72	1.66	0.99	0.032	452	0.54	0.05

Positive S-values indicate trends are increasing, negative S-values indicate trends are decreasing.
When the p-value is less than the alpha value, there is a significant trend in the data set.

Table 44 Mann-Kendall Statistical Test for Trend Analysis of Parameter Concentration at D4 during the project period.

Stage and Rating Curve at D4

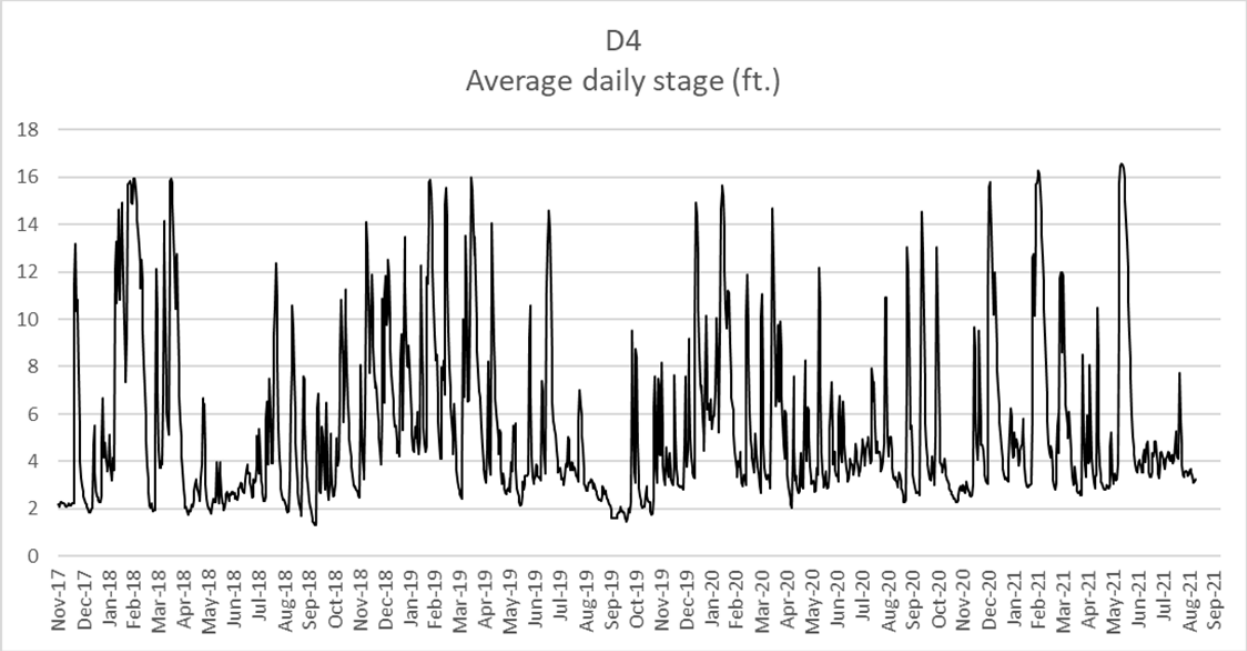

Figure 41 D4 Hydrograph

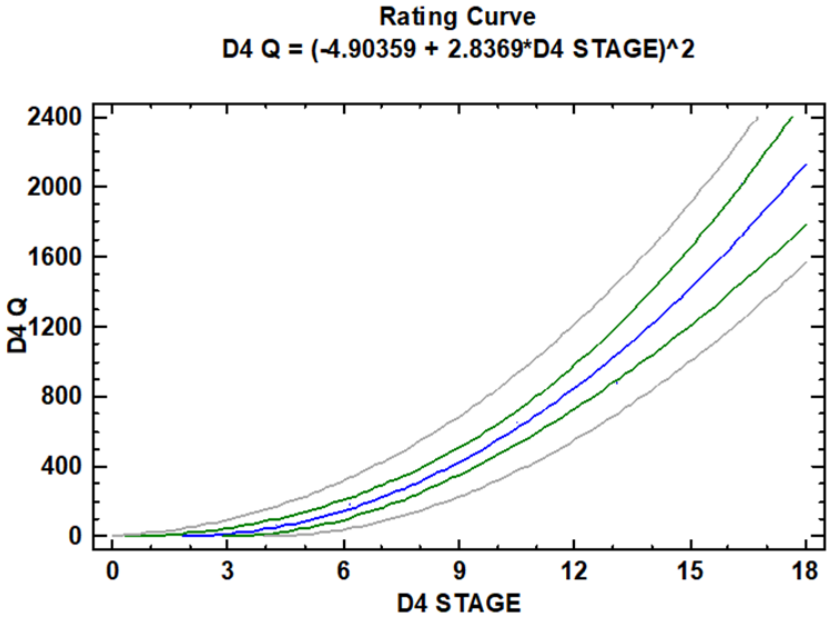

Figure 42 D4 Rating Curve

Source	Sum of Squares	Mean Squares	F-Ratio	P-Value	R-squared percent
Model	1330.59	1330.59	288.23	<0.05	98.0%
Residual	27.6985	4.61642			
Total (Corr.)	1358.29				

Table 45 Analysis of Variance for the Rating Curve at D4.

Linear Regression of Monthly Parameter Loads at D4

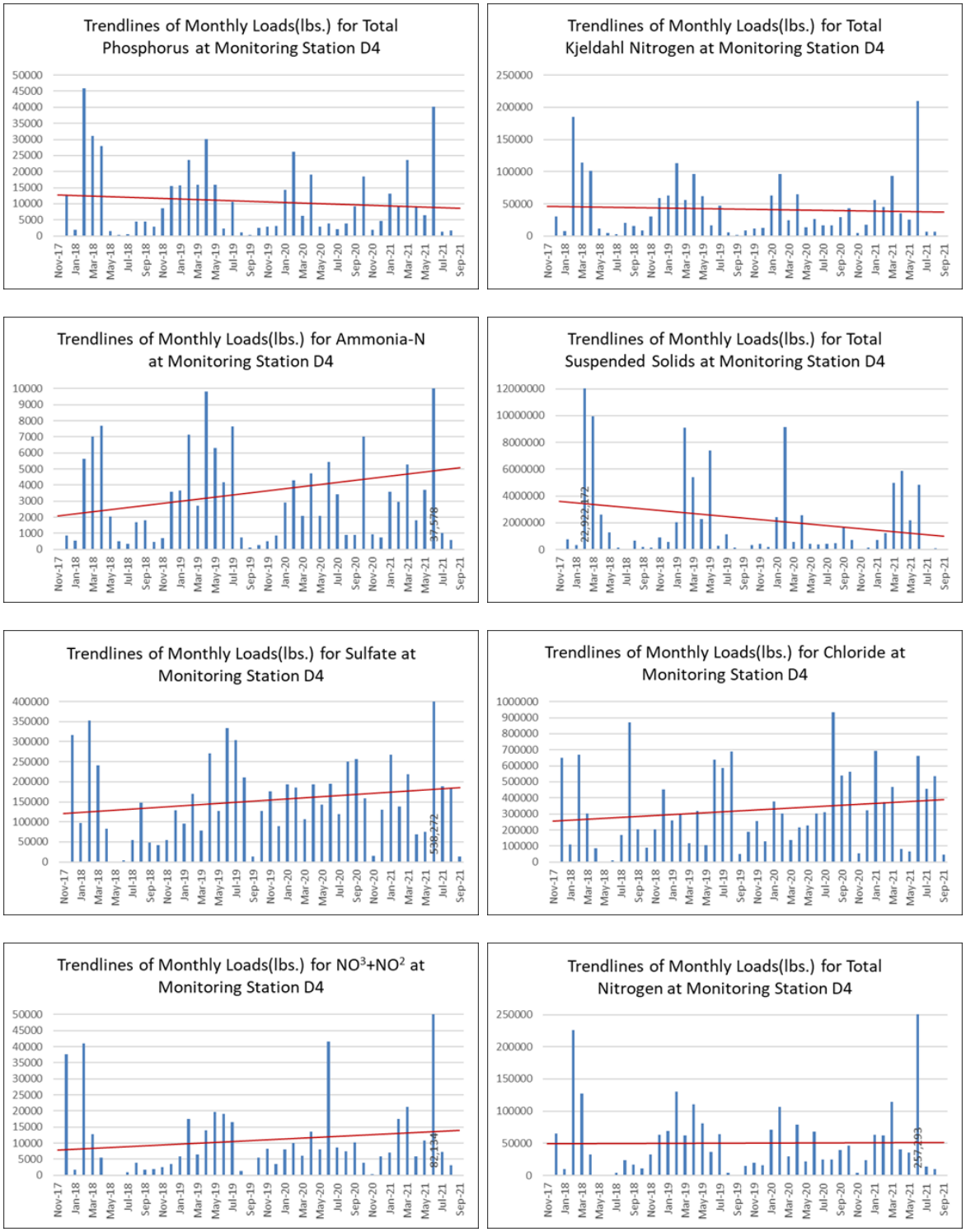

Figure 43 Linear Regression of Monthly Parameters Loads at D4.

Parameter Loadings at D4

Sampling Period	Annual Discharge (ft^3)	TP (lbs)	TKN (lbs)	NH_3-N (lbs)	TSS (lbs)	SO_4 (lbs)	Cl^- (lbs)	$NO_3 + NO_2$-N (lbs)	TN (lbs)
11/2017-12/2017	3.62E+08	12,800	30,400	870	777,000	318,000	651,000	37,700	65,500
2018	7.37E+09	145,000	560,000	32,000	39,800,000	1,250,000	3,160,000	75,700	546,000
2019	6.29E+09	124,000	493,000	43,900	28,700,000	2,000,000	3,630,000	118,000	606,000
2020	5.52E+09	113,000	415,000	35,500	19,000,000	1,950,000	4,290,000	123,000	538,000
1/2021-9/2021	5.52E+09	105,000	477,000	56,600	20,000,000	1,690,000	3,380,000	155,000	598,000
Project Total	2.51E+10	499,000	1,980,000	169,000	108,000,000	7,210,000	15,100,000	510,000	2,350,000

Table 46. Annual Discharge and Loading Extrapolations at D4.

Sampling Period	TP (lbs/acre)	TKN (lbs/acre)	NH_3-N (lbs/acre)	TSS (lbs/acre)	SO_4 (lbs/acre)	Cl^- (lbs/acre)	NO_3-NO_2-N (lbs/acre)	TN (lbs/acre)
11/2017-12/2017	0.2	0.48	0.01	12.3	5.04	10.3	0.6	1.04
2018	2.3	8.88	0.51	631	19.8	50.1	1.2	8.66
2019	1.97	7.82	0.7	455	31.7	57.6	1.87	9.61
2020	1.79	6.58	0.56	301	30.9	68.1	1.95	8.53
1/2021-9/2021	1.67	7.57	0.9	317	26.8	53.6	2.46	9.49
Project Average	1.59	6.27	0.54	344	22.9	47.9	1.62	7.47

Table 47. Unit Area Loading Extrapolations at D4

Summary D4

At D4, throughout the project period, trend analyses of parameter concentrations resulted in two statistically significant trends. A negative trend (decreasing with time) was identified for turbidity, and a positive trend (increasing with time) was identified for $NO_3 + NO_2$-N at the station. No other statistically significant trends were identified for the remaining parameter concentrations.

At D4, from the project's commencement, computations of linear regressions for monthly loads indicated negative trends for three parameters (TP, TKN, and TSS). Positive trends were found for all other parameters.

At D4, the 2018 calendar year resulted in greater discharge and greater annual loads for TP, TKN, and TSS. The 2021 sampling period resulted in 25% less discharge than the 2018 year, but had the greatest loads for NH_3-N and TN.

Ranking the average unit area loadings throughout the project period by station, resulted in D4 having the second greatest loads per acre for two parameters (TSS and TN) and the third greatest loads per acre for four parameters (TP, TKN, SO_4, and Cl^-) as compared to other stations.

D5 Results

Parameter Concentration Results at D5

Sampling Period	TP (mg/L)	TKN (mg/L)	NH_3-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	SO_4 (mg/L)	Cl^- (mg/L)	NO_3+NO_2-N (mg/L)	TN (mg/L)
11/2017 – 12/2017	0.27	0.88	0.05	61.76	20.40	13.44	36.06	1.02	1.71
2018	0.29	1.52	0.18	197.28	67.12	6.72	18.12	0.27	1.73
2019	0.26	1.27	0.19	132.13	46.69	9.35	19.84	0.69	2.07
2020	0.32	1.25	0.13	150.70	61.60	7.67	17.57	0.45	1.71
1/2021 – 9/2018	0.31	1.41	0.21	266.08	110.82	10.41	26.40	0.49	1.90

Table 48 Annual Mean Parameter Concentrations at D5.

Parameter	Minimum	Maximum	Mean	Std. deviation	Kendall's tau	S	p-value (Two-tailed)	alpha
TP	0.07	0.89	0.29	0.14	0.034	615	0.49	0.05
TKN	0.48	6.22	1.34	0.76	-0.073	-1328	0.13	0.05
NH_3-N	<0.02	1.98	0.17	0.25	0.051	900	0.30	0.05
Turbidity	3.70	3605.00	175.20	344.51	-0.083	-1497	0.09	0.05
TSS	2.00	1640.00	66.38	148.50	-0.030	-546	0.54	0.05
SO_4	1.20	37.70	8.62	7.61	0.099	1591	0.049	0.05
Cl^-	1.80	87.10	20.47	19.78	0.083	1330	0.10	0.05
NO_3+NO_2-N	<0.02	5.46	0.49	0.68	0.112	1561	0.03	0.05
TN	0.63	10.20	1.84	1.21	0.024	335	0.65	0.05

Positive S-values indicate trends are increasing, negative S-values indicate trends are decreasing.
When the p-value is less than the alpha value, there is a significant trend in the data set.

Table 49 Mann-Kendall Statistical Test for Trend Analysis of Parameter Concentration at D5 during the project period.

Stage at D5

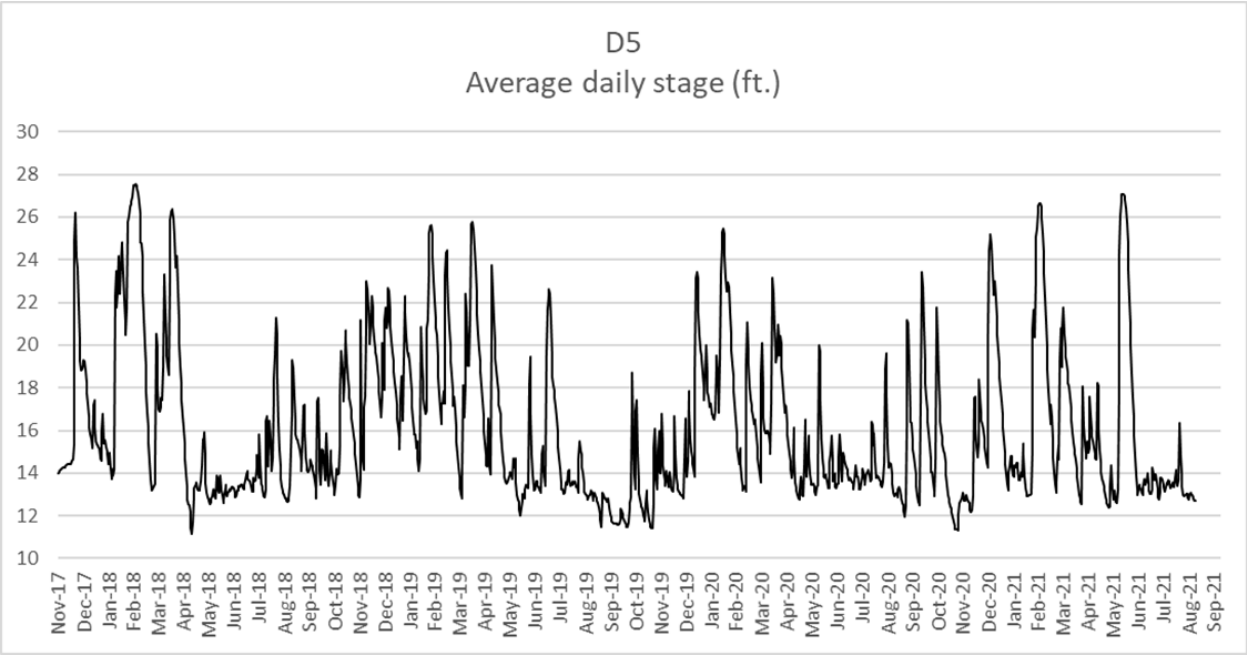

Figure 44 D5 Hydrograph (Source: USGS)

Linear Regression of Monthly Parameter Loads at D5

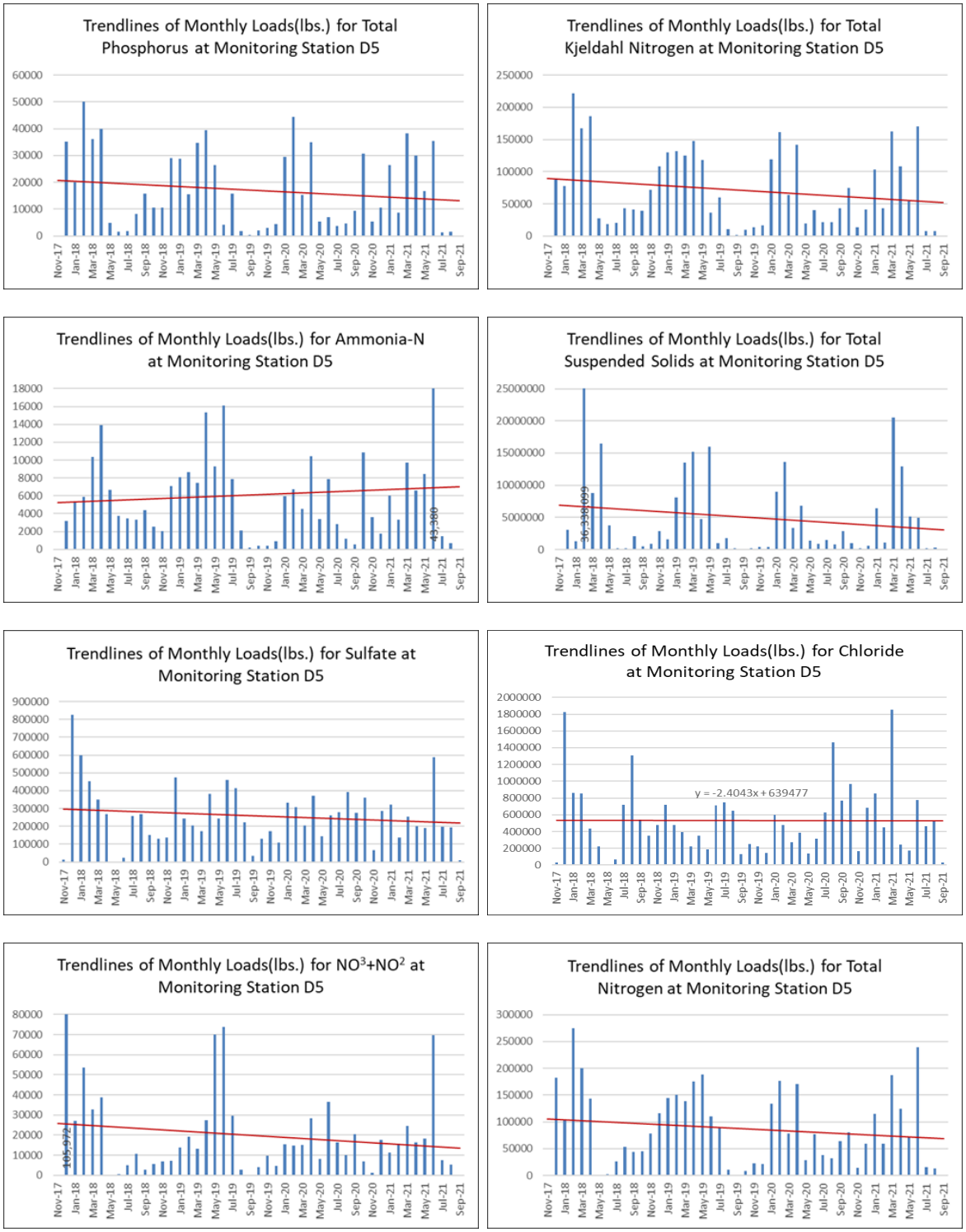

Figure 45 Linear Regression of Monthly Parameters Loads at D5.

Parameter Loadings at D5

Sampling Period	Annual Discharge (ft^3)	TP (lbs)	TKN (lbs)	NH_3-N (lbs)	TSS (lbs)	SO_4 (lbs)	Cl^- (lbs)	$NO_3 + NO_2$-N (lbs)	TN (lbs)
11/2017-12/2017	1.23E+09	35,200	87,700	3,210	3,090,000	837,000	1,850,000	106,000	183,000
2018	1.21E+10	228,000	1,020,000	68,900	75,000,000	3,110,000	6,550,000	191,000	1,090,000
2019	1.02E+10	176,000	800,000	76,800	61,400,000	2,780,000	4,500,000	268,000	1,060,000
2020	9.36E+09	201,000	760,000	59,600	41,800,000	3,290,000	6,860,000	191,000	951,000
1/2021-9/2021	7.44E+09	158,000	657,000	79,800	51,400,000	2,090,000	5,360,000	169,000	825,000
Project Total	4.03E+10	799,000	3,330,000	288,000	233,000,000	12,100,000	25,100,000	925,000	4,100,000

Table 50. Annual Discharge and Loading Extrapolations at D5.

Sampling Period	TP (lbs/acre)	TKN (lbs/acre)	NH_3-N (lbs/acre)	TSS (lbs/acre)	SO_4 (lbs/acre)	Cl^- (lbs/acre)	NO_3-NO_2-N (lbs/acre)	TN (lbs/acre)
11/2017-12/2017	0.49	1.22	0.04	42.8	11.6	25.6	1.47	2.54
2018	3.16	14.1	0.95	1040	43.1	90.8	2.65	15.1
2019	2.44	11.1	1.06	851	38.5	62.4	3.71	14.7
2020	2.79	10.5	0.83	579	45.6	95.1	2.65	13.2
1/2021-9/2021	2.19	9.11	1.11	712	29	74.3	2.34	11.4
Project Average	2.21	9.22	0.80	645	33.6	69.6	2.56	11.4

Table 51. Unit Area Loading Extrapolations at D5

Summary D5

At D5, throughout the project period, trend analyses of parameter concentrations resulted in two statistically significant positive trends (increasing with time) for SO_4 and $NO_3 + NO_2$-N. No other statistically significant trends were identified for the remaining parameter concentrations.

Discharge at the D5 station was provided by the USGS.

At D5, from the project's commencement, computations of linear regressions for monthly loads indicated negative trends for all parameters except NH_3-N.

At D5, the 2018 calendar year resulted in greater discharge and greater annual loads for TP, TKN, TSS, SO_4, and TN.

Ranking the average unit area loadings throughout the project period by station, resulted in D5 having the greatest loads per acre for all parameters except NH_3-N as compared to other stations, unit area loadings for NH_3-N at D5 resulted in the second greatest load per acre as compared to other stations.

Final Summary

Concentration Summary

- Trend analyses of parameter concentrations were conducted using the Mann-Kendall Statistical Test and resulted in few statistically significant trends. Ninety analyses were performed; in total, eleven significant trends were identified, seven were positive and four were negative. Significantly decreasing trends in turbidity values were identified at D1, D3, and D4; significantly decreasing trends in SO_4 concentrations were identified at D1.

Discharge Summary

- Stage rating discharge curves were produced for eight of the ten stations. The two exceptions were B3 and D5; which currently have USGS gauging stations.

- Eight of the ten monitoring stations (exceptions were D1 and D2) estimated discharge was greatest during the 2018 calendar year.

Loading Summary

- Computations of linear regression analysis at each station for monthly loads throughout the project period were calculated to indicate whether linear equations resulted in positively or negatively sloped lines, these were reported as trends. Eighty analyses were performed; 39 parameters resulted in positively sloped lines, while 41 were negative. Monthly loads of NH_3-N and Cl^- resulted in positive linear regressions at the same seven stations (B2, B3, C2, D1, D2, D3, and D4), and monthly loads SO_4 of resulted in positive linear regressions at nine stations, the only exception being at C1. Positive sloped linear regressions were identified for monthly loads of all parameters at D1; while the opposite occurred at C1, which negative sloped linear regressions were identified for monthly loads of all parameters.

- Annual parameter loads were estimated at each of the ten stations using a period-weighted method. Loading values for samples with concentrations less than the laboratories' reportable detection limits were computed at zero. The 2018 calendar produced the greatest annual loading for TKN at nine of the stations, TP at seven of the stations, and TSS at five of the stations.

- Each parameter loadings were summed at each monitoring station for the duration of the project, most all parameter loadings increased longitudinally as water moved downstream from station to station(one exception with TSS between B2 and B3). This is greatly apparent in both the Cousart Bayou and Deep Bayou watersheds.

- Annual loadings were converted to unit area loads based on the drainage area upstream from the monitoring station. Ranking the average unit area loadings throughout the project period by station, resulted in D5 having the greatest loads per acre for all parameters except NH_3-N as compared to other stations, unit area loadings for NH_3-N at D5 resulted in the second greatest load per acre as compared to other stations.

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Appendixes

Appendix I – Laboratory Data Set

Appendix II– In-situ Data Set

Appendix III– Statistical Comparison of Concentrations between Stations

Appendix IV– Monthly Load Estimations

Appendix I

Laboratory Data Set

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765
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Stream Name **Bayou Bartholomew**

Station Location **LINCOLN COUNTY, AT HWY 293 BRIDGE CROSSING, NEAR INTERSECTION OF AR HWY 11**

Latitude 33°57'11.97"N
Longitude 91°44'0.41"W

Laboratory's Minimum Reporting Limits								
Parameter	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3/NO2-N (mg/L)
MRL	0.02	0.05	0.02	0.1	1	0.5	0.5	0.02
*NR = not reportable due to either NO3+NO2-N or TKN resulting in less than MRL								

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/30/2017	B1	0.08	0.63	0.04	6.3	7	6.6	16.8	<0.02	0.64
12/7/2017	B1	0.10	0.72	0.03	10.7	12	4.7	15.9	0.17	0.89
12/14/2017	B1	0.09	0.65	0.03	4.8	7	4.4	17.0		
12/21/2017	B1	0.49	1.30	0.03	172.0	61	6.6	11.4	2.10	3.40
12/28/2017	B1	0.21	0.89	0.03	50.8	8	7.8	4.7	0.56	1.45
1/11/2018	B1	0.12	0.69	0.01	17.9	6	6.1	3.5	0.02	0.71
1/25/2018	B1	0.16	0.89	0.01	62.2	18	7.9	5.1	0.12	1.01
2/1/2018	B1	0.25	1.12	0.03	182.0	26	9.0	5.2	0.11	1.23
2/8/2018	B1	0.32	1.18	0.05	476.0	153	5.1	3.4	0.25	1.43
2/15/2018	B1	0.17	0.82	0.03	90.0	16	5.4	2.7	0.16	0.98
2/22/2018	B1	0.17	0.81	0.04	120.0	50	4.8	2.8	0.08	0.89
3/1/2018	B1	0.12	0.65	0.04	31.6	9	3.4	1.8	0.05	0.70
3/8/2018	B1	0.09	0.61	0.03	19.9	6	3.0	1.5	0.03	0.64
3/15/2018	B1	0.10	0.62	0.03	25.0	9	2.5	1.4	0.03	0.65
3/22/2018	B1	0.13	0.87	0.05	34.9	16	3.1	2.0	0.06	0.93
3/29/2018	B1	0.31	1.92	0.24	221.0	83	4.9	3.1	0.73	2.65
4/5/2018	B1	0.16	0.93	0.08	46.3	22	4.0	2.7	0.14	1.07
4/12/2018	B1	0.14	0.84	0.07	47.1	15				
4/19/2018	B1	0.14	0.59	0.07	42.6	13				
4/26/2018	B1	0.16	0.77	0.09	44.8	20				
5/3/2018	B1	0.11	0.80	0.11	47.0	22				
5/10/2018	B1	0.30	0.98	0.15	31.3	16				
5/17/2018	B1	0.25	0.92	0.07	28.2	21				
5/24/2018	B1	0.33	1.43	0.30	90.8	42				
5/31/2018	B1	0.36	1.06	0.13	40.2	17				
6/7/2018	B1	0.36	1.58	0.05	43.9	48				
6/14/2018	B1	0.21	1.12	0.16	30.2	30				
6/21/2018	B1	0.20	1.03	0.13	28.0	26				
6/28/2018	B1	0.14	0.97	0.02	21.8	25	11.1	21.2	<0.02	NR
7/5/2018	B1	0.19	1.45	0.06	30.0	34	12.2	23.6	<0.02	NR
7/12/2018	B1	0.13	0.97	0.03	26.8	21	15.1	23.2	<0.02	NR
7/19/2018	B1	0.11	1.00	0.12	18.9	15	19.3	23.3	0.05	1.05
7/26/2018	B1	0.14	1.03	0.04	32.1	35	15.3	28.6	<0.02	NR
8/2/2018	B1	0.07	1.02	0.06	25.3	21	13.0	40.1	0.20	1.22
8/9/2018	B1	0.23	1.06	0.03	85.3	66	9.8	11.5	0.21	1.27
8/16/2018	B1	0.16	1.00	0.05	27.7	28	8.5	12.2	<0.02	NR
8/23/2018	B1	0.28	0.96	0.10	12.0	9	5.1	9.5	0.04	1.00
8/30/2018	B1	0.22	1.01	0.14	31.8	27	3.3	4.3	0.13	1.14
9/6/2018	B1	0.27	1.10	0.12	24.3	17	3.2	4.8	0.07	1.17
9/13/2018	B1	0.19	1.13	0.11	18.5	15	3.5	3.9	0.09	1.22
9/20/2018	B1	0.20	0.90	0.08	21.9	18	2.8	1.9	0.11	1.01
9/27/2018	B1	0.26	0.99	0.10	16.7	13	1.8	2.1	0.11	1.10
10/4/2018	B1	0.19	0.84	0.04	20.5	15	2.6	2.4	0.11	0.95
10/11/2018	B1	0.53	1.31	0.06	48.8	32	2.7	4.2	0.33	1.64
10/18/2018	B1	0.25	1.07	0.08	22.9	16	2.2	3.0	0.13	1.20
10/25/2018	B1	0.21	0.85	0.04	28.8	17	3.4	3.8	0.12	0.97
10/30/2018	B1	0.21	0.97	0.04	33.2	17	3.5	3.9	0.11	1.08
11/8/2018	B1	0.20	1.16	0.03	37.6	17	3.3	3.6	0.04	1.20
11/15/2018	B1	0.17	0.80	0.01	25.5	7	2.8	2.5	<0.02	NR
11/20/2018	B1	0.14	0.78	0.03	19.8	4	3.1	2.3	<0.02	NR
11/29/2018	B1	0.13	0.63	0.01	14.4	4	3.5	2.4	<0.02	NR
12/6/2018	B1	0.21	0.91	0.04	23.4	4	3.2	2.9	<0.02	NR
12/13/2018	B1	0.13	0.79	0.03	20.3	5	3.6	2.3	0.04	0.83
12/20/2018	B1	0.11	0.67	0.03	18.8	5	3.2	1.9	0.02	0.69
1/3/2019	B1	0.15	0.68	0.03	34.0	8	3.9	1.9	0.06	0.74
1/10/2019	B1	0.10	0.61	0.04	22.7	4	3.6	1.9	0.04	0.65
1/17/2019	B1	0.09	0.60	0.04	19.9	3	7.0	2.3	0.07	0.67
1/24/2019	B1	0.12	0.77	0.05	62.3	12	6.2	2.2	0.10	0.87
1/31/2019	B1	0.11	0.67	0.03	30.5	4	3.3	1.7	0.07	0.74
2/7/2019	B1	0.12	0.62	0.04	25.4	9	4.9	2.3	0.08	0.70
2/14/2019	B1	0.16	0.72	0.06	37.9	12	4.7	2.2	0.14	0.86
2/20/2019	B1	0.13	0.99	0.06	55.6	19	5.2	2.2	0.13	1.12
2/28/2019	B1	0.10	0.73	0.03	31.5	8	3.4	1.4	0.09	0.82
3/7/2019	B1	0.10	0.58	0.03	24.7	6	3.7	1.3	0.07	0.65
3/14/2019	B1	0.18	0.80	0.05	72.5	22	3.9	1.7	0.10	0.90
3/21/2019	B1	0.12	0.65	0.05	27.7	7	3.0	1.2	0.07	0.72
3/28/2019	B1	0.15	0.72	0.03	35.5	17	3.5	1.6	0.08	0.80
4/4/2019	B1	0.20	0.82	0.03	37.4	25	4.4	2.3	0.11	0.93

Laboratory Data
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Equilibrium
Project #17-400
501.944.1765
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Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
4/11/2019	B1	0.18	1.06	0.09	40.8	15	4.7	2.4	0.17	1.23
4/18/2019	B1	0.11	0.79	0.05	21.3	9	3.2	1.0	0.08	0.87
4/25/2019	B1	0.16	0.75	0.06	28.7	14	2.5	1.0	0.12	0.87
5/2/2019	B1	0.21	0.72	0.07	31.8	17	3.2	1.5	0.18	0.90
5/9/2019	B1	0.56	1.64	0.07	561.0	316	2.0	1.4	0.21	1.85
5/16/2019	B1	0.18	0.83	0.06	34.4	21	2.8	1.4	0.18	1.01
5/23/2019	B1	0.23	0.95	0.09	40.4	21	3.0	1.6	0.23	1.18
5/30/2019	B1	0.28	1.09	0.09	43.1	25	3.6	2.4	0.20	1.29
6/6/2019	B1	0.34	1.40	0.19	34.9	26	3.0	2.4	0.28	1.68
6/13/2019	B1	0.32	0.87	0.13	33.2	19	4.3	4.3	0.14	1.01
6/20/2019	B1	0.30	1.16	0.10	85.1	72	8.2	8.0	0.58	1.74
6/27/2019	B1	0.24	1.01	0.10	221.0	40	6.1	3.7	0.49	1.50
7/2/2019	B1	0.27	1.02	0.09	76.1	30	6.2	3.9	0.26	1.28
7/11/2019	B1	0.27	0.85	0.06	38.6	31	6.9	6.3	0.06	0.91
7/18/2019	B1	0.15	0.87	0.11	46.3	12	6.7	5.0	0.36	1.23
7/25/2019	B1	0.15	0.80	0.06	27.9	22	2.4	1.5	0.19	0.99
8/1/2019	B1	0.22	0.99	0.09	36.9	22	2.5	2.0	0.15	1.14
8/8/2019	B1	0.22	0.90	0.06	30.7	19	5.2	6.0	0.03	0.93
8/15/2019	B1	0.26	0.85	0.05	34.9	24	7.0	11.3	<0.02	NR
8/22/2019	B1	0.19	0.73	0.02	25.0	25	9.5	16.5	<0.02	NR
8/29/2019	B1	0.13	0.85	0.05	21.1	22	9.7	22.2	<0.02	NR
9/5/2019	B1	0.19	1.00	0.04	32.4	26	5.6	5.7	<0.02	NR
9/12/2019	B1	0.18	0.94	0.06	22.2	23	4.9	8.5	0.03	0.97
9/19/2019	B1	0.14	0.77	0.02	21.1	18	5.9	12.1	<0.02	NR
9/26/2019	B1	0.14	0.81	0.03	27.8	30	5.6	12.4	<0.02	NR
10/1/2019	B1	0.12	0.85	0.02	26.4	24	6.0	10.3	<0.02	NR
10/9/2019	B1	0.10	0.82	0.03	27.1	24	6.2	11.2	0.10	0.92
10/17/2019	B1	0.11	0.68	0.01	20.2	19	6.6	11.8	<0.02	NR
10/24/2019	B1	0.11	1.03	0.03	46.0	30	7.8	12.9	0.06	1.09
10/31/2019	B1	0.23	0.99	0.04	93.9	58	9.0	9.7	0.20	1.19
11/7/2019	B1	0.14	0.97	0.04	43.3	22	5.8	7.1	0.44	1.41
11/14/2019	B1	0.12	0.67	0.02	27.8	6	8.0	8.3	0.29	0.96
11/21/2019	B1	0.16	0.13	0.03	26.7	9	7.8	8.0	0.11	0.24
11/25/2019	B1	0.25	1.03	0.03	56.6	38	7.3	7.8	<0.02	NR
12/5/2019	B1	0.24	0.82	0.02	61.5	18	6.0	5.7	0.02	0.84
12/12/2019	B1	0.19	0.78	0.04	37.2	6	7.4	4.6	<0.02	NR
12/19/2019	B1	0.17	0.58	0.04	37.7	6	5.8	4.1	0.03	0.61
12/31/2019	B1	0.17	0.91	0.04	68.8	19	4.7	3.1	0.04	0.95
1/9/2020	B1	0.14	0.80	0.02	44.6	7	7.7	3.5	0.04	0.84
1/16/2020	B1	0.14	0.82	0.03	40.6	14	4.0	1.9	0.08	0.90
1/23/2020	B1	0.13	0.74	0.03	40.5	14	5.6	2.1	0.05	0.79
1/30/2020	B1	0.10	0.72	0.03	27.6	7	5.6	2.7	0.10	0.82
2/6/2020	B1	0.13	0.82	0.03	47.1	13	6.0	2.8	0.08	0.90
2/13/2020	B1	0.14	0.75	0.05	53.1	13	4.5	2.1	0.09	0.84
2/20/2020	B1	0.09	0.60	0.02	25.3	8	3.3	1.4	0.05	0.65
2/27/2020	B1	0.11	0.61	0.03	30.9	7	3.6	1.7	0.08	0.69
3/5/2020	B1	0.18	0.89	0.05	73.8	38	4.7	2.4	0.15	1.04
3/11/2020	B1	0.15	0.87	0.05	36.9	17	6.2	2.9	0.13	1.00
3/19/2020	B1	0.13	0.79	0.05	29.1	10	4.5	1.9	0.11	0.90
3/25/2020	B1	0.14	0.79	0.03	30.1	14	5.9	3.1	0.12	0.91
4/2/2020	B1	0.16	0.78	0.04	23.0	11	6.7	3.0	0.10	0.88
4/9/2020	B1	0.16	0.98	0.04	25.2	15	4.5	2.7	0.11	1.09
4/16/2020	B1	0.27	1.07	0.06	112.0	24	3.3	2.0	0.16	1.23
4/23/2020	B1	0.16	0.83	0.04	50.1	16	3.0	1.6	0.09	0.92
4/30/2020	B1	0.19	0.89	0.06	41.3	24	3.8	1.9	0.16	1.05
5/7/2020	B1	0.23	0.90	0.06	42.9	28	4.1	2.6	0.17	1.07
5/14/2020	B1	0.25	0.92	0.05	42.1	38	4.3	3.3	0.15	1.07
5/21/2020	B1	0.25	0.95	0.05	44.0	37	4.7	3.7	0.15	1.10
5/28/2020	B1	0.27	0.94	0.09	53.4	25	5.2	3.5	0.14	1.08
6/4/2020	B1	0.25	1.16	0.08	63.7	31	4.0	3.1	0.20	1.36
6/11/2020	B1	0.23	1.19	0.18	41.5	25	5.7	2.9	0.15	1.34
6/18/2020	B1	0.25	1.02	0.11	54.8	36	3.5	2.9	0.46	1.48
6/25/2020	B1	0.27	0.88	0.06	34.1	18	4.4	4.0	0.20	1.08
7/2/2020	B1	0.26	0.96	0.07	55.5	31	4.2	4.0	0.40	1.36
7/8/2020	B1	0.27	0.86	0.07	58.0	32	3.5	2.6	0.24	1.10
7/15/2020	B1	0.25	0.84	0.05	51.5	29	3.0	2.6	0.22	1.06
7/22/2020	B1	0.36	0.90	0.07	37.2	17	2.7	3.8	0.10	1.00
7/29/2020	B1	0.30	0.73	0.06	32.3	16	4.2	4.5	0.08	0.81
8/5/2020	B1	0.25	0.82	0.03	38.7	26	6.1	12.2	0.04	0.86
8/12/2020	B1	0.21	0.86	0.05	45.4	44	5.8	11.9	0.06	0.92
8/19/2020	B1	0.23	0.89	0.05	29.6	26	4.7	6.3	0.07	0.96
8/26/2020	B1	0.20	0.68	<0.02	30.6	27	4.7	8.0	0.03	0.71
9/2/2020	B1	0.20	0.87	0.03	18.6	21	3.6	6.6	0.02	0.89
9/9/2020	B1	0.21	0.89	<0.02	33.4	68	3.5	5.1	0.10	0.99
9/16/2020	B1	0.20	0.80	0.05	26.9	29	3.6	5.9	0.04	0.84
9/23/2020	B1	0.46	1.68	<0.02	125.0	82	3.7	6.1	0.35	2.03
9/30/2020	B1	0.17	0.82	0.04	24.8	20	4.3	5.1	0.12	0.94
10/7/2020	B1	0.17	0.84	0.04	33.5	25	4.2	4.0	0.11	0.95

Laboratory Data
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Water Laboratory

Equilibrium
Project #17-400
501.944.1765
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Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
10/14/2020	B1	0.24	0.75	0.04	24.2	12	3.7	4.5	0.09	0.84
10/21/2020	B1	0.18	0.80	0.03	21.5	14	2.5	2.6	0.07	0.87
10/28/2020	B1	0.22	0.76	0.03	21.8	22	3.1	3.3	0.03	0.79
11/5/2020	B1	0.21	0.72	0.05	25.6	13	3.1	3.0	0.08	0.80
11/12/2020	B1	0.20	0.69	0.02	25.0	14	3.8	3.4	<0.02	NR
11/19/2020	B1	0.26	0.70	0.02	17.6	12	4.1	4.5	0.02	0.72
11/23/2020	B1	0.28	0.76	0.05	15.7	15	4.0	5.0	0.02	0.78
12/3/2020	B1	0.17	0.55	<0.02	10.2	8	5.2	6.8	<0.02	NR
12/10/2020	B1	0.22	0.67	0.04	12.2	6	3.4	4.0	0.04	0.71
12/17/2020	B1	0.18	0.63	0.02	30.0	11	4.0	4.6	0.06	0.69
12/22/2020	B1	0.20	0.73	<0.02	49.9	14	5.7	4.6	0.12	0.85
12/29/2020	B1	0.14	0.69	0.02	33.7	6	5.7	3.8	0.03	0.72
1/6/2021	B1	0.15	0.65	0.02	39.8	8	2.9	1.9	0.05	0.70
1/13/2021	B1	0.11	0.65	0.02	26.8	5	3.9	2.1	0.05	0.70
1/20/2021	B1	0.10	0.56	0.03	25.1	5	5.1	2.8	0.05	0.61
1/27/2021	B1	0.14	0.68	0.04	42.5	16	6.0	3.3	0.09	0.77
2/3/2021	B1	0.14	0.60	0.02	32.7	7	8.5	3.8	0.09	0.69
2/10/2021	B1	0.13	0.56	0.03	24.4	5	8.4	5.1	0.12	0.68
2/24/2021	B1	0.11	0.74	0.03	25.1	8	9.1	4.0	0.12	0.86
3/3/2021	B1	0.13	0.64	0.03	47.7	14	4.9	3.5	0.11	0.75
3/9/2021	B1	0.11	0.71	0.05	50.5	13	3.5	2.0	0.05	0.76
3/17/2021	B1	0.26	1.03	0.07	153.0	109	3.2	2.1	0.08	1.11
3/24/2021	B1	0.20	0.80	0.03	37.5	25	6.3	3.4	0.11	0.91
3/31/2021	B1	0.25	1.02	0.05	100.0	52	6.4	4.0	0.09	1.11
4/7/2021	B1	0.14	0.81	0.04	32.8	16	3.5	1.9	0.07	0.88
4/14/2021	B1	0.19	0.91	0.06	37.3	21	4.8	2.8	0.12	1.03
4/21/2021	B1	0.23	0.95	0.05	41.5	29	4.6	3.5	0.17	1.12
4/28/2021	B1	0.26	1.08	0.07	71.6	36	5.1	3.3	0.34	1.42
5/5/2021	B1	0.19	0.82	0.09	45.3	19	5.8	4.0	0.20	1.02
5/12/2021	B1	0.23	0.97	0.12	64.2	31	4.5	3.2	0.22	1.19
5/19/2021	B1	0.24	0.92	0.06	51.4	32	5.0	3.1	0.21	1.13
5/26/2021	B1	0.27	0.90	0.05	35.8	26	5.2	4.3	0.15	1.05
6/2/2021	B1	0.25	0.85	0.06	32.8	23	5.5	5.1	0.08	0.93
6/9/2021	B1	0.14	0.75	0.04	42.0	25	7.7	2.3	0.13	0.88
6/16/2021	B1	0.18	0.74	0.09	16.3	8	1.8	1.3	0.09	0.83
6/23/2021	B1	0.27	0.91	0.14	12.5	10	1.9	1.6	0.11	1.02
6/30/2021	B1	0.40	1.06	<0.02	20.5	14	1.9	2.7	0.12	1.18
7/8/2021	B1	0.28	0.87	0.07	34.2	29	3.8	6.7	0.03	0.90
7/14/2021	B1	0.30	0.87	0.08	27.3	24	4.0	8.4	0.08	0.95
7/21/2021	B1	0.25	0.93	0.14	40.4	29	6.9	6.3	0.14	1.07
7/28/2021	B1	0.25	0.74	0.06	30.2	25	9.3	10.9	0.06	0.80
8/4/2021	B1	0.25	0.81	0.05	34.1	32	5.0	9.5	0.03	0.84
8/11/2021	B1	0.12	0.58	<0.02	20.1	18	9.2	15.4	<0.02	NR
8/18/2021	B1	0.12	0.79	<0.02	20.7	20	8.1	14.8	<0.02	NR
8/25/2021	B1	0.16	0.77	0.06	32.3	32	6.3	5.9	0.05	0.82
9/1/2021	B1	0.18	0.87	0.02	32.0	32	5.3	5.9	<0.02	NR
9/8/2021	B1	0.10	0.84	0.03	21.4	23	6.5	9.6	<0.02	NR

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Stream Name Bayou Bartholomew

Station Location LINCOLN COUNTY, AT HWY 293 BRIDGE CROSSING, NEAR INTERSECTION OF SORRELS FERRY ROAD

Latitude 33°55'33.38"N
Longitude 91°42'57.14"W

Laboratory's Minimum Reporting Limits								
Parameter	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3/NO2-N (mg/L)
MRL	0.02	0.05	0.02	0.1	1	0.5	0.5	0.02
*NR = not reportable due to either NO3+NO2-N or TKN resulting in less than MRL								

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/30/2017	B2	0.10	0.70	0.03	12.0	12	5.0	11.2	<0.02	NR
12/7/2017	B2	0.13	0.76	0.04	15.3	13	5.5	11.5	<0.02	NR
12/14/2017	B2	0.09	0.72	0.03	11.7	8	5.4	12.4		
12/21/2017	B2	0.69	1.44	0.03	273.0	101	9.1	13.8	2.69	4.13
12/28/2017	B2	0.24	0.97	0.04	56.2	10	7.0	6.2	0.75	1.72
1/11/2018	B2	0.15	0.82	0.04	38.4	10	7.0	5.4	0.11	0.93
1/25/2018	B2	0.43	1.98	0.06	471.0	116	8.5	11.8	0.70	2.68
2/1/2018	B2	0.23	1.20	0.04	189.0	52	9.4	13.6	0.11	1.31
2/8/2018	B2	0.37	2.06	0.07	952.0	294	4.3	7.2	0.73	2.79
2/15/2018	B2	0.35	1.27	0.04	455.0	101	3.7	3.3	0.28	1.55
2/22/2018	B2	0.39	1.31	0.04	684.0	246	3.3	3.6	0.16	1.47
3/1/2018	B2	0.16	0.81	0.04	108.0	22	2.5	2.1	0.07	0.88
3/8/2018	B2	0.15	0.76	0.05	92.0	24	2.6	1.7	0.04	0.80
3/15/2018	B2	0.16	0.74	0.04	110.0	23	2.4	1.5	0.05	0.79
3/22/2018	B2	0.19	0.86	0.05	54.4	30	3.0	2.0	0.06	0.92
3/29/2018	B2	0.41	2.38	0.19	781.0	300	7.3	7.3	1.92	4.30
4/5/2018	B2	0.21	1.03	0.08	71.6	35	4.2	2.8	0.18	1.21
4/12/2018	B2	0.16	0.87	0.07	41.4	21				
4/19/2018	B2	0.17	0.80	0.08	113.0	26				
4/26/2018	B2	0.20	0.94	0.10	80.8	23				
5/3/2018	B2	0.23	0.89	0.11	58.3	27				
5/10/2018	B2	0.32	1.10	0.16	47.4	29				
5/17/2018	B2	0.19	1.45	0.33	26.5	28				
5/24/2018	B2	0.50	3.58	0.71	1508.0	703				
5/31/2018	B2	0.34	1.12	0.28	70.3	28				
6/7/2018	B2	0.41	1.96	0.10	59.0	54				
6/14/2018	B2	0.15	2.45	0.42	33.9	29				
6/21/2018	B2	0.14	1.21	0.27	22.7	19				
6/28/2018	B2	0.17	1.22	0.06	18.4	23	19.9	60.2	0.37	1.59
7/5/2018	B2	0.12	1.27	0.13	13.7	18	24.9	65.0	0.31	1.58
7/12/2018	B2	0.13	0.93	0.09	16.1	12	14.5	42.3	0.25	1.18
7/19/2018	B2	0.13	0.75	0.13	22.3	15	18.9	55.5	0.30	1.05
7/26/2018	B2	0.13	0.96	0.11	20.8	18	13.9	53.8	0.15	1.11
8/2/2018	B2	0.15	1.33	0.07	74.0	35	7.7	31.6	0.37	1.70
8/9/2018	B2	0.20	1.13	0.03	126.0	89	8.9	30.0	0.29	1.42
8/16/2018	B2	0.16	0.82	0.10	33.3	31	5.8	23.2	0.11	0.93
8/23/2018	B2	0.25	0.74	0.10	38.3	26	2.8	9.3	0.12	0.86
8/30/2018	B2	0.20	0.98	0.16	33.2	29	3.4	7.0	0.14	1.12
9/6/2018	B2	0.30	1.05	0.16	31.1	21	3.4	7.0	0.09	1.14
9/13/2018	B2	0.31	1.44	0.13	20.6	21	4.1	6.6	0.08	1.52
9/20/2018	B2	0.22	0.95	0.10	28.5	22	2.9	2.4	0.11	1.06
9/27/2018	B2	0.36	1.14	0.13	10.8	9	2.9	5.1	0.07	1.21
10/4/2018	B2	0.19	1.00	0.06	29.9	20	2.6	2.6	0.13	1.13
10/11/2018	B2	0.89	1.85	0.06	107.0	77	5.2	11.3	0.64	2.49
10/18/2018	B2	0.28	1.18	0.08	42.1	32	5.0	10.7	0.15	1.33
10/25/2018	B2	0.18	0.94	0.08	40.2	27	3.3	4.7	0.14	1.08
10/30/2018	B2	0.23	0.97	0.04	48.8	34	3.6	5.0	0.12	1.09
11/8/2018	B2	0.33	1.29	0.02	194.0	87	2.7	6.7	0.21	1.50
11/15/2018	B2	0.18	0.87	0.02	43.7	9	2.6	3.4	0.04	0.91
11/20/2018	B2	0.15	0.75	0.02	23.0	6	3.2	2.8	<0.02	NR
11/29/2018	B2	0.16	0.68	0.02	19.6	7	3.4	3.6	<0.02	NR
12/6/2018	B2	0.20	1.01	0.05	24.3	9	3.2	3.6	<0.02	NR
12/13/2018	B2	0.16	0.74	0.02	28.5	7	3.6	2.9	0.04	0.78
12/20/2018	B2	0.13	0.69	0.04	27.7	9	3.1	2.6	0.03	0.72
1/3/2019	B2	0.18	0.73	0.04	60.9	16	3.1	2.3	0.06	0.79
1/10/2019	B2	0.12	0.66	0.05	29.7	7	3.0	2.1	0.04	0.70
1/17/2019	B2	0.12	0.64	0.06	38.1	8	3.6	2.7	0.07	0.71
1/24/2019	B2	0.29	1.38	0.05	416.0	134	1.6	2.5	0.15	1.53
1/31/2019	B2	0.12	0.74	0.04	56.9	8	3.1	2.6	0.08	0.82
2/7/2019	B2	0.16	0.81	0.06	49.8	18	3.4	4.3	0.08	0.89
2/14/2019	B2	0.22	0.95	0.05	115.0	31	4.0	2.6	0.13	1.08
2/20/2019	B2	0.23	1.20	0.07	355.0	180	4.2	3.5	0.26	1.46
2/28/2019	B2	0.03	0.83	0.05	57.5	16	3.3	1.4	0.08	0.91
3/7/2019	B2	0.11	0.69	0.04	38.5	12	3.4	1.5	0.08	0.77
3/14/2019	B2	0.42	1.64	0.07	882.0	296	2.0	2.0	0.19	1.83
3/21/2019	B2	0.14	0.72	0.04	38.6	12	2.8	1.2	0.08	0.80
3/28/2019	B2	0.18	0.85	0.05	64.0	24	3.7	1.9	0.13	0.98
4/4/2019	B2	0.20	0.84	0.03	49.3	34	4.5	2.3	0.11	0.95

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
4/11/2019	B2	0.22	1.17	0.10	53.0	26	4.7	2.6	0.18	1.35
4/18/2019	B2	0.17	0.82	0.06	84.2	20	3.2	1.4	0.13	0.95
4/25/2019	B2	0.17	0.79	0.07	35.2	18	2.5	1.1	0.13	0.92
5/2/2019	B2	0.24	0.81	0.10	39.7	22	3.2	1.6	0.21	1.02
5/9/2019	B2	0.82	3.24	0.14	1222.0	576	4.7	3.7	1.23	4.47
5/16/2019	B2	0.20	0.85	0.07	36.5	24	3.0	1.5	0.19	1.04
5/23/2019	B2	0.25	1.37	0.19	41.2	21	3.6	1.9	0.28	1.65
5/30/2019	B2	0.31	0.71	0.11	43.4	26	3.5	2.7	0.23	0.94
6/6/2019	B2	0.32	1.66	0.46	32.8	30	12.2	16.9	0.85	2.51
6/13/2019	B2	0.38	1.17	0.21	44.2	36	4.8	5.1	0.36	1.53
6/20/2019	B2	0.23	1.64	0.33	52.0	43	14.9	24.3	1.02	2.66
6/27/2019	B2	0.22	1.40	0.23	142.0	32	9.7	10.8	1.14	2.54
7/2/2019	B2	0.27	1.22	0.18	70.6	30	8.2	9.9	0.52	1.74
7/11/2019	B2	0.22	1.18	0.14	87.0	46	10.2	18.9	1.17	2.35
7/18/2019	B2	0.24	0.91	0.11	94.9	35	3.7	4.6	0.60	1.51
7/25/2019	B2	0.19	1.11	0.09	35.4	23	2.3	2.3	0.18	1.29
8/1/2019	B2	0.22	1.49	0.28	39.0	21	5.0	7.8	0.34	1.83
8/8/2019	B2	0.15	0.86	0.09	25.6	20	18.2	41.7	0.32	1.18
8/15/2019	B2	0.17	0.79	0.11	24.6	19	15.1	42.1	0.29	1.08
8/22/2019	B2	0.12	0.75	0.09	22.6	23	12.7	36.1	<0.02	NR
8/29/2019	B2	0.18	0.91	0.08	28.1	25	9.2	33.5	0.17	1.08
9/5/2019	B2	0.20	0.86	0.08	41.4	31	7.6	18.3	0.06	0.92
9/12/2019	B2	0.17	0.91	0.09	17.8	18	11.6	28.1	0.11	1.02
9/19/2019	B2	0.15	0.87	0.07	32.2	26	11.2	29.3	<0.02	NR
9/26/2019	B2	0.12	0.80	0.08	24.8	25	12.8	51.2	<0.02	NR
10/1/2019	B2	0.15	1.17	0.05	27.2	26	11.3	35.7	<0.02	NR
10/9/2019	B2	0.14	0.87	0.08	42.4	39	6.3	20.0	<0.02	NR
10/17/2019	B2	0.11	0.88	0.05	49.6	44	4.6	27.2	<0.02	NR
10/24/2019	B2	0.10	0.83	<0.02	32.3	28	6.4	34.3	0.03	0.86
10/31/2019	B2	0.30	1.60	0.02	96.1	67	18.0	22.2	1.31	2.91
11/7/2019	B2	0.16	1.03	0.07	53.3	37	6.7	9.3	0.37	1.40
11/14/2019	B2	0.17	0.79	0.03	30.4	6	10.9	11.6	0.45	1.24
11/21/2019	B2	0.16	0.77	0.03	26.8	12	8.6	9.2	0.17	0.94
11/25/2019	B2	0.32	1.42	0.04	104.0	39	11.7	14.8	0.54	1.96
12/5/2019	B2	0.25	0.94	0.02	54.1	15	6.4	6.6	0.03	0.97
12/12/2019	B2	0.28	0.96	0.07	102.0	14	13.0	9.1	0.13	1.09
12/19/2019	B2	0.35	1.15	0.05	325.0	64	5.1	4.7	0.16	1.31
12/31/2019	B2	0.28	1.20	0.05	166.0	34	6.5	6.9	0.21	1.41
1/9/2020	B2	0.16	0.87	0.03	53.3	9	6.8	4.1	0.04	0.91
1/16/2020	B2	0.19	0.90	0.04	92.5	27	3.9	2.6	0.08	0.98
1/23/2020	B2	0.15	0.79	0.04	53.7	12	3.9	3.2	0.06	0.85
1/30/2020	B2	0.15	0.84	0.04	73.1	19	5.5	4.3	0.12	0.96
2/6/2020	B2	0.33	1.52	0.04	46.5	162	3.5	4.1	0.15	1.67
2/13/2020	B2	0.21	0.86	0.03	140.0	40	3.1	2.1	0.09	0.95
2/20/2020	B2	0.21	0.96	0.05	237.0	60	3.0	1.9	0.08	1.04
2/27/2020	B2	0.13	0.73	0.04	42.9	11	3.4	2.1	0.07	0.80
3/5/2020	B2	0.19	0.90	0.06	84.0	33	5.0	4.0	0.16	1.06
3/11/2020	B2	0.19	1.17	0.07	73.4	27	5.1	3.6	0.18	1.35
3/19/2020	B2	0.15	0.97	0.06	40.9	15	4.7	2.0	0.13	1.10
3/25/2020	B2	0.18	0.93	0.05	50.0	27	6.1	3.9	0.16	1.09
4/2/2020	B2	0.28	1.02	0.05	127.0	46	3.7	2.8	0.25	1.27
4/9/2020	B2	0.18	0.94	0.05	37.5	25	3.9	2.5	0.14	1.08
4/16/2020	B2	0.25	1.03	0.08	97.4	26	3.9	2.5	0.18	1.21
4/23/2020	B2	0.22	1.06	0.07	95.5	35	3.6	2.6	0.21	1.27
4/30/2020	B2	0.30	1.34	0.06	186.0	98	3.7	2.7	0.28	1.62
5/7/2020	B2	0.24	0.98	0.06	50.2	38	4.4	2.7	0.16	1.14
5/14/2020	B2	0.29	1.06	0.08	74.6	54	3.4	2.9	0.16	1.22
5/21/2020	B2	0.27	1.01	0.08	54.4	47	7.2	7.4	0.27	1.28
5/28/2020	B2	0.41	2.12	0.20	825.0	372	8.6	7.0	0.89	3.01
6/4/2020	B2	0.29	1.20	0.11	83.7	52	4.9	4.0	0.22	1.42
6/11/2020	B2	0.31	2.02	0.44	88.2	41	7.1	5.5	0.96	2.98
6/18/2020	B2	0.30	1.36	0.23	71.0	39	4.5	3.5	0.66	2.02
6/25/2020	B2	0.25	1.48	0.20	85.5	56	9.5	13.8	1.15	2.63
7/2/2020	B2	0.32	1.19	0.15	61.8	38	5.4	7.3	0.48	1.67
7/8/2020	B2	0.26	1.03	0.10	54.5	43	5.7	10.2	0.50	1.53
7/15/2020	B2	0.26	0.91	0.09	62.2	45	4.0	4.7	0.28	1.19
7/22/2020	B2	0.27	0.90	0.11	39.2	28	10.2	23.2	0.37	1.27
7/29/2020	B2	0.21	0.86	0.11	36.2	35	8.8	23.1	0.36	1.22
8/5/2020	B2	0.15	0.76	0.07	29.1	34	15.6	39.6	0.23	0.99
8/12/2020	B2	0.15	0.79	<0.02	49.5	55	19.0	49.9	0.50	1.29
8/19/2020	B2	0.18	0.76	0.06	27.1	32	7.2	25.3	0.20	0.96
8/26/2020	B2	0.11	0.61	0.06	21.9	29	12.7	53.9	0.16	0.77
9/2/2020	B2	0.21	0.79	0.05	23.2	25	5.1	12.2	0.08	0.87
9/9/2020	B2	0.23	0.92	0.04	36.1	37	3.8	8.5	0.09	1.01
9/16/2020	B2	0.29	0.99	0.07	16.1	17	4.5	13.9	0.06	1.05
9/23/2020	B2	0.24	1.00	0.05	36.7	41	5.7	31.4	0.20	1.20
9/30/2020	B2	0.23	1.05	0.06	36.8	34	4.8	7.3	0.12	1.17
10/7/2020	B2	0.20	0.89	0.07	33.5	32	4.4	5.2	0.12	1.01
10/14/2020	B2	0.32	0.93	0.05	19.5	20	3.6	6.5	0.07	1.00
10/21/2020	B2	0.22	0.82	0.03	30.9	27	2.5	3.2	0.05	0.87
10/28/2020	B2	0.27	0.87	0.08	38.6	29	3.5	5.3	0.05	0.92

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/5/2020	B2	0.23	0.76	0.05	29.3	21	3.5	3.6	0.08	0.84
11/12/2020	B2	0.24	0.87	0.02	33.6	25	3.8	4.0	<0.02	NR
11/19/2020	B2	0.31	0.80	0.08	30.9	22	3.8	4.9	0.04	0.84
11/23/2020	B2	0.33	0.88	0.09	31.5	25	3.4	4.0	<0.02	NR
12/3/2020	B2	0.27	0.87	0.08	38.0	14	5.1	10.1	0.19	1.06
12/10/2020	B2	0.22	0.68	0.05	19.3	14	4.6	7.2	0.09	0.77
12/17/2020	B2	0.27	0.83	0.03	58.0	19	4.8	7.2	0.24	1.07
12/22/2020	B2	0.23	0.81	0.02	66.2	18	6.3	6.5	0.20	1.01
12/29/2020	B2	0.16	0.70	0.02	43.9	6	5.7	4.5	0.02	0.72
1/6/2021	B2	0.19	0.79	0.03	107.0	21	2.8	2.6	0.08	0.87
1/13/2021	B2	0.13	0.71	0.02	46.7	17	5.0	3.2	0.11	0.82
1/20/2021	B2	0.13	0.63	0.04	48.9	12	4.5	3.2	0.05	0.68
1/27/2021	B2	0.24	1.08	0.07	121.0	30	5.7	8.0	0.23	1.31
2/3/2021	B2	0.16	0.76	0.04	68.2	15	8.5	7.8	0.09	0.85
2/10/2021	B2	0.17	0.89	0.06	70.4	16	5.3	8.5	0.14	1.03
2/24/2021	B2	0.21	0.91	0.07	47.6	33	3.5	7.2	0.47	1.38
3/3/2021	B2	0.17	0.75	0.03	86.6	23	3.4	2.8	0.11	0.86
3/9/2021	B2	0.15	0.79	0.05	107.0	19	3.1	2.4	0.05	0.84
3/17/2021	B2	0.25	1.04	0.10	113.0	53	2.9	3.2	0.13	1.17
3/24/2021	B2	0.25	1.01	0.07	62.9	39	5.0	4.0	0.16	1.17
3/31/2021	B2	0.33	1.26	0.09	175.0	103	5.3	4.2	0.18	1.44
4/7/2021	B2	0.16	0.87	0.04	43.3	23	3.4	2.0	0.07	0.94
4/14/2021	B2	0.22	1.11	0.07	48.0	32	4.9	2.8	0.15	1.26
4/21/2021	B2	0.26	0.92	0.06	54.4	36	4.3	3.5	0.20	1.12
4/28/2021	B2	0.27	1.00	0.06	80.5	41	5.1	3.4	0.25	1.25
5/5/2021	B2	0.23	1.01	0.13	78.2	35	5.2	3.9	0.25	1.26
5/12/2021	B2	0.62	2.26	0.47	540.0	210	5.6	3.7	0.80	3.06
5/19/2021	B2	0.25	0.96	0.08	57.0	40	5.5	3.4	0.25	1.21
5/26/2021	B2	0.28	0.96	0.07	43.3	30	4.7	4.1	0.16	1.12
6/2/2021	B2	0.28	1.42	0.39	61.3	42	11.5	11.7	0.59	2.01
6/9/2021	B2	0.32	1.51	0.25	188.0	95	3.8	3.2	0.89	2.40
6/16/2021	B2	0.22	0.84	0.11	22.2	11	2.4	2.3	0.11	0.95
6/23/2021	B2	0.28	0.96	0.19	14.8	13	2.4	2.8	0.09	1.05
6/30/2021	B2	0.35	1.17	0.21	22.8	21	2.8	5.7	0.21	1.38
7/8/2021	B2	0.13	1.12	0.22	32.6	38	19.8	43.9	0.76	1.88
7/14/2021	B2	0.16	1.15	0.16	27.4	30	18.7	38.5	1.35	2.50
7/21/2021	B2	0.15	1.21	0.25	44.0	40	11.7	34.5	0.95	2.16
7/28/2021	B2	0.15	0.97	0.14	36.4	34	17.9	40.5	0.46	1.43
8/4/2021	B2	0.09	1.07	0.16	20.4	21	29.6	58.6	0.59	1.66
8/11/2021	B2	0.17	0.63	0.08	15.7	15	23.0	57.6	0.24	0.87
8/18/2021	B2	0.11	0.89	0.11	20.9	22	17.1	51.2	0.37	1.26
8/25/2021	B2	0.16	0.85	0.10	32.0	28	7.9	25.1	0.14	0.99
9/1/2021	B2	0.14	0.75	0.13	24.6	17	8.6	33.9	0.17	0.92
9/8/2021	B2	0.08	0.83	0.07	24.6	28	19.0	40.7	0.12	0.95

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Stream Name **Bayou Bartholomew**

Station Location **COUNTY, NEAR HWY 54 BRIDGE CROSSING (Garrett Bridge) AND USGS GAUGE**

Latitude 33°51'59.26"N
Longitude 91°39'22.92"W

Laboratory's Minimum Reporting Limits								
Parameter	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3/NO2-N (mg/L)
MRL	0.02	0.05	0.02	0.1	1	0.5	0.5	0.02
*NR = not reportable due to either NO3+NO2-N or TKN resulting in less than MRL								

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/30/2017	B3	0.20	0.92	0.07	17.5	19	7.5	10.8	0.02	0.94
12/7/2017	B3	0.19	1.00	0.03	43.6	39	2.5	10.1	0.05	1.05
12/14/2017	B3	0.16	0.89	0.05	17.9	15	2.6	10.4	0.04	0.93
12/21/2017	B3	0.47	1.27	0.03	116.0	50	5.1	6.6	1.21	2.48
12/28/2017	B3	0.23	0.81	0.04	40.8	8	7.1	9.5	0.51	1.32
1/11/2018	B3	0.17	0.87	0.04	26.7	7	6.2	3.9	0.05	0.92
1/25/2018	B3	0.37	2.06	0.08	627.0	104	12.7	19.0	1.53	3.59
2/1/2018	B3	0.19	1.03	0.04	99.5	22	9.0	9.7	0.10	1.13
2/8/2018	B3	0.27	1.37	0.07	296.0	79	5.1	6.3	0.25	1.62
2/15/2018	B3	0.23	1.10	0.04	202.0	34	5.0	3.9	0.30	1.40
2/22/2018	B3	0.24	0.91	0.04	163.0	41	4.2	2.9	0.12	1.03
3/1/2018	B3	0.16	0.81	0.05	118.0	22	2.9	2.1	0.06	0.87
3/8/2018	B3	0.14	0.70	0.04	62.0	12	2.5	1.6	0.05	0.75
3/15/2018	B3	0.21	0.91	0.04	183.0	34	2.9	1.7	0.08	0.99
3/22/2018	B3	0.19	0.88	0.08	61.2	24	3.3	2.0	0.09	0.97
3/29/2018	B3	0.39	1.37	0.11	197.0	118	3.2	3.5	0.22	1.59
4/5/2018	B3	0.21	1.06	0.11	71.7	26	4.4	2.7	0.14	1.20
4/12/2018	B3	0.20	0.91	0.09	85.5	21				
4/19/2018	B3	0.22	0.91	0.09	132.0	33				
4/26/2018	B3	0.19	0.89	0.09	113.0	30				
5/3/2018	B3	0.22	0.92	0.10	75.1	30				
5/10/2018	B3	0.33	1.01	0.13	55.4	23				
5/17/2018	B3	0.28	1.01	0.16	36.4	14				
5/24/2018	B3	0.17	1.05	0.18	29.9	26				
5/31/2018	B3	0.25	1.33	0.15	174.0	32				
6/7/2018	B3	0.42	1.18	0.14	71.9	27				
6/14/2018	B3	0.25	0.97	0.08	31.7	24				
6/21/2018	B3	0.26	2.12	0.09	26.6	34				
6/28/2018	B3	0.15	1.15	0.09	15.5	16	19.3	52.6	0.26	1.41
7/5/2018	B3	0.15	1.20	0.15	15.9	17	16.0	35.7	0.09	1.29
7/12/2018	B3	0.18	1.00	0.12	21.1	19	11.8	35.3	<0.02	NR
7/19/2018	B3	0.07	0.77	0.15	17.3	14	15.0	47.6	0.16	0.93
7/26/2018	B3	0.09	0.70	0.10	15.3	12	17.8	58.8	0.20	0.90
8/2/2018	B3	0.12	1.21	0.09	45.8	31	14.2	46.8	0.46	1.67
8/9/2018	B3	0.27	1.29	0.05	222.0	124	5.2	15.9	0.42	1.71
8/16/2018	B3	0.21	0.86	0.07	69.9	34	3.6	15.1	0.23	1.09
8/23/2018	B3	0.21	0.81	0.08	47.7	18	3.1	8.2	0.21	1.02
8/30/2018	B3	0.20	0.94	0.06	29.8	25	10.2	7.1	0.14	1.08
9/6/2018	B3	0.29	1.03	0.11	27.4	14	3.3	5.8	0.21	1.24
9/13/2018	B3	0.28	1.30	0.08	12.3	13	6.1	10.5	0.10	1.40
9/20/2018	B3	0.26	1.07	0.07	33.1	15	2.6	2.7	0.15	1.22
9/27/2018	B3	0.40	1.30	0.11	9.9	10	4.7	9.2	0.07	1.37
10/4/2018	B3	0.24	1.08	0.06	25.9	11	2.4	3.4	0.19	1.27
10/11/2018	B3	0.59	1.29	0.05	48.4	35	3.3	4.6	0.33	1.62
10/18/2018	B3	0.27	1.18	0.10	28.8	14	4.3	11.0	0.09	1.27
10/25/2018	B3	0.26	1.10	0.06	36.2	15	3.2	6.2	0.18	1.28
10/30/2018	B3	0.25	1.03	0.05	39.6	18	3.5	7.2	0.15	1.18
11/8/2018	B3	0.34	1.27	0.04	68.5	26	3.1	7.6	0.07	1.34
11/15/2018	B3	0.12	1.01	0.02	104.0	21	2.8	5.0	0.10	1.11
11/20/2018	B3	0.18	0.75	0.03	28.2	6	3.2	2.9	0.02	0.77
11/29/2018	B3	0.17	0.68	0.05	23.0	8	3.3	3.2	<0.02	NR
12/6/2018	B3	0.29	0.92	0.07	52.3	8	3.4	5.1	0.04	0.96
12/13/2018	B3	0.20	0.72	0.04	35.2	9	3.2	3.3	0.04	0.76
12/20/2018	B3	0.14	0.64	0.04	30.7	7	3.7	2.7	0.03	0.67
1/3/2019	B3	0.20	0.74	0.04	93.3	19	3.2	2.2	0.09	0.83
1/10/2019	B3	0.12	0.71	0.05	31.8	6	3.2	2.1	0.05	0.76
1/17/2019	B3	0.13	0.68	0.06	33.3	6	4.4	2.5	0.07	0.75
1/24/2019	B3	0.21	0.92	0.05	91.2	16	3.1	2.4	0.11	1.03
1/31/2019	B3	0.14	0.88	0.06	51.1	8	3.0	2.6	0.10	0.98
2/7/2019	B3	0.16	0.70	0.06	41.4	10	3.8	3.8	0.09	0.79
2/14/2019	B3	0.26	1.17	0.08	243.0	36	3.1	3.9	0.37	1.54
2/20/2019	B3	0.18	0.92	0.06	75.6	25	4.2	2.3	0.17	1.09
2/28/2019	B3	0.14	0.74	0.04	61.8	14	3.0	1.3	0.07	0.81
3/7/2019	B3	0.13	0.67	0.04	47.8	13	3.4	1.6	0.09	0.76
3/14/2019	B3	0.31	1.08	0.07	196.0	37	2.8	2.2	0.19	1.27
3/21/2019	B3	0.16	0.78	0.06	47.5	16	3.1	1.4	0.10	0.88
3/28/2019	B3	0.25	1.06	0.07	154.0	36	3.5	2.2	0.23	1.29
4/4/2019	B3	0.22	0.92	0.06	67.9	33	4.9	2.2	0.15	1.07

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
4/11/2019	B3	0.27	1.40	0.14	88.8	33	5.7	3.3	0.31	1.71
4/18/2019	B3	0.25	0.99	0.08	122.0	31	3.4	1.8	0.17	1.16
4/25/2019	B3	0.18	0.81	0.07	45.2	17	3.0	1.2	0.14	0.95
5/2/2019	B3	0.25	0.85	0.07	61.6	29	2.9	1.7	0.24	1.09
5/9/2019	B3	0.43	1.62	0.09	408.0	236	2.3	1.5	0.30	1.92
5/16/2019	B3	0.20	0.87	0.08	46.8	28	3.0	1.5	0.18	1.05
5/23/2019	B3	0.26	1.30	0.13	62.0	32	3.6	2.4	0.38	1.68
5/30/2019	B3	0.36	0.81	0.09	72.5	44	3.1	2.1	0.29	1.10
6/6/2019	B3	0.21	1.27	0.20	37.9	39	15.5	26.1	1.03	2.30
6/13/2019	B3	0.27	4.05	0.15	62.2	29	10.8	12.8	1.05	5.10
6/20/2019	B3	0.36	1.64	0.26	221.0	126	5.4	5.0	1.09	2.73
6/27/2019	B3	0.21	1.10	0.22	153.0	72	13.0	16.3	3.25	4.35
7/2/2019	B3	0.30	0.96	0.07	89.7	26	6.6	6.0	0.44	1.40
7/11/2019	B3	0.20	0.86	0.08	49.9	37	12.4	20.9	0.64	1.50
7/18/2019	B3	0.21	1.16	0.11	73.8	20	7.6	7.8	1.69	2.85
7/25/2019	B3	0.22	1.07	0.07	48.2	23	3.1	2.4	0.26	1.33
8/1/2019	B3	0.23	1.01	0.07	46.6	23	9.4	6.2	0.22	1.23
8/8/2019	B3	0.22	0.95	0.09	28.7	12	5.9	11.0	0.35	1.30
8/15/2019	B3	0.14	0.58	0.09	14.4	13	22.0	48.8	0.33	0.91
8/22/2019	B3	0.13	0.64	0.09	12.3	12	17.1	45.9	0.25	0.89
8/29/2019	B3	0.17	0.80	0.06	30.3	20	8.9	24.5	0.25	1.05
9/5/2019	B3	0.13	0.74	0.09	15.9	9	10.4	21.4	0.15	0.89
9/12/2019	B3	0.17	0.79	0.11	13.0	11	7.7	18.2	0.14	0.93
9/19/2019	B3	0.13	0.71	0.05	10.9	8	11.2	34.7	0.14	0.85
9/26/2019	B3	0.11	0.60	0.06	11.1	10	10.1	28.9	<0.02	NR
10/1/2019	B3	0.12	0.71	0.07	9.8	11	9.0	21.4	<0.02	NR
10/9/2019	B3	0.13	1.02	0.10	19.0	14	8.1	24.7	<0.02	NR
10/17/2019	B3	0.08	0.74	0.04	18.3	15	9.1	40.0	<0.02	NR
10/24/2019	B3	0.10	0.73	0.02	13.4	19	11.1	44.8	<0.02	NR
10/31/2019	B3	0.32	1.07	0.05	70.1	29	16.4	22.2	2.03	3.10
11/7/2019	B3	0.18	0.94	0.06	51.6	22	10.5	10.7	0.26	1.20
11/14/2019	B3	0.16	0.78	0.03	33.0	7	7.0	8.4	0.35	1.13
11/21/2019	B3	0.15	0.81	0.03	25.5	8	7.2	7.7	0.13	0.94
11/25/2019	B3	0.32	1.65	0.05	124.0	35	14.9	22.9	0.88	2.53
12/5/2019	B3	0.30	0.95	0.04	122.0	22	5.6	6.9	0.02	0.97
12/12/2019	B3	0.28	1.00	0.06	96.0	12	8.7	7.6	0.07	1.07
12/19/2019	B3	0.47	1.44	0.04	802.0	131	7.5	10.7	0.41	1.85
12/31/2019	B3	0.26	1.18	0.04	135.0	25	7.0	7.2	0.13	1.31
1/9/2020	B3	0.19	0.93	0.03	65.8	12	7.4	4.7	0.05	0.98
1/16/2020	B3	0.27	1.10	0.04	215.0	39	3.4	3.2	0.08	1.18
1/23/2020	B3	0.16	0.74	0.03	45.7	13	4.3	2.9	0.06	0.80
1/30/2020	B3	0.17	0.95	0.03	64.7	17	4.3	3.1	0.11	1.06
2/6/2020	B3	0.20	1.43	0.06	94.2	25	4.8	5.1	0.11	1.54
2/13/2020	B3	0.26	1.18	0.04	257.0	54	3.1	2.1	0.11	1.29
2/20/2020	B3	0.12	0.74	0.03	42.9	10	2.9	1.7	0.08	0.82
2/27/2020	B3	0.13	0.71	0.04	43.6	12	3.6	2.1	0.08	0.79
3/5/2020	B3	0.19	0.84	0.05	70.0	22	4.6	3.1	0.16	1.00
3/11/2020	B3	0.20	1.02	0.05	72.5	25	4.9	2.8	0.12	1.14
3/19/2020	B3	0.21	0.91	0.04	65.8	20	5.1	2.6	0.16	1.07
3/25/2020	B3	0.20	0.85	0.04	69.0	25	4.7	3.5	0.17	1.02
4/2/2020	B3	0.30	1.26	0.04	254.0	62	3.7	3.7	0.53	1.79
4/9/2020	B3	0.24	0.98	0.04	58.3	46	4.4	2.9	0.18	1.16
4/16/2020	B3	0.31	1.20	0.08	172.0	32	3.9	2.6	0.29	1.49
4/23/2020	B3	0.20	0.92	0.05	74.8	25	3.3	2.9	0.20	1.12
4/30/2020	B3	0.25	1.05	0.04	82.2	38	3.0	1.9	0.18	1.23
5/7/2020	B3	0.26	0.96	0.05	62.9	37	4.2	2.7	0.21	1.17
5/14/2020	B3	0.30	1.14	0.08	102.0	51	5.3	3.4	0.32	1.46
5/21/2020	B3	0.24	1.01	0.08	51.3	44	9.9	13.0	0.39	1.40
5/28/2020	B3	0.47	1.76	0.13	382.0	248	8.9	8.7	0.70	2.46
6/4/2020	B3	0.33	1.16	0.08	123.0	46	5.7	5.0	0.35	1.51
6/11/2020	B3	0.43	2.68	0.73	396.0	160	10.5	8.0	2.28	4.96
6/18/2020	B3	0.35	1.02	0.07	100.0	58	4.1	3.8	0.45	1.47
6/25/2020	B3	0.18	1.52	0.45	60.7	50	14.4	25.4	2.02	3.54
7/2/2020	B3	0.32	1.11	0.08	80.5	52	5.7	7.5	0.67	1.78
7/8/2020	B3	0.26	1.07	0.09	83.5	55	5.2	7.4	0.52	1.59
7/15/2020	B3	0.30	1.03	0.05	87.1	52	3.5	4.4	0.39	1.42
7/22/2020	B3	0.22	0.86	0.09	51.2	39	8.8	18.3	0.44	1.30
7/29/2020	B3	0.15	0.83	0.08	32.3	35	11.6	30.5	0.62	1.45
8/5/2020	B3	0.10	0.75	0.08	23.5	32	19.9	52.6	0.40	1.15
8/12/2020	B3	0.08	0.57	0.03	16.8	21	19.2	50.2	0.37	0.94
8/19/2020	B3	0.14	0.79	0.05	28.1	28	9.5	31.7	0.29	1.08
8/26/2020	B3	0.13	0.62	0.03	20.0	22	8.4	28.0	0.12	0.74
9/2/2020	B3	0.23	0.83	0.06	16.6	18	7.4	18.4	0.15	0.98
9/9/2020	B3	0.23	0.70	0.05	28.8	23	4.0	10.1	0.14	0.84
9/16/2020	B3	0.23	0.69	0.06	15.4	18	4.7	13.3	0.19	0.88
9/23/2020	B3	0.82	1.16	0.06	40.3	44	6.2	13.1	0.45	1.61
9/30/2020	B3	0.24	0.89	0.05	26.3	20	5.4	8.1	0.13	1.02
10/7/2020	B3	0.21	0.90	0.05	37.7	21	4.4	5.7	0.17	1.07
10/14/2020	B3	0.44	0.95	0.04	39.7	14	4.0	7.3	0.07	1.02
10/21/2020	B3	0.26	0.84	0.03	30.3	19	2.3	2.9	0.11	0.95
10/28/2020	B3	0.28	0.80	0.04	32.2	19	2.7	5.3	0.08	0.88

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/5/2020	B3	0.27	0.83	0.06	31.8	15	3.3	6.0	0.10	0.93
11/12/2020	B3	0.27	0.81	<0.02	38.4	20	3.3	3.9	0.03	0.84
11/19/2020	B3	0.32	0.91	0.06	31.7	11	3.5	5.5	0.05	0.96
11/23/2020	B3	0.36	0.90	0.08	29.6	17	3.3	4.8	0.06	0.96
12/3/2020	B3	0.34	0.71	0.05	27.4	6	3.5	5.1	0.08	0.79
12/10/2020	B3	0.23	0.71	0.05	24.7	4	5.1	10.0	0.14	0.85
12/17/2020	B3	0.42	1.59	0.06	232.0	40	7.4	14.4	1.09	2.68
12/22/2020	B3	0.32	1.18	0.03	210.0	27	5.5	9.8	0.40	1.58
12/29/2020	B3	0.17	0.68	0.02	39.6	6	6.6	5.2	0.04	0.72
1/6/2021	B3	0.26	0.79	0.02	120.0	15	3.1	3.5	0.12	0.91
1/13/2021	B3	0.15	0.69	0.03	55.8	19	3.8	2.7	0.04	0.73
1/20/2021	B3	0.15	0.73	0.05	53.1	12	3.4	2.8	0.05	0.78
1/27/2021	B3	0.19	0.80	0.06	85.2	15	5.6	4.6	0.13	0.93
2/3/2021	B3	0.21	0.92	0.05	110.0	13	5.4	6.2	0.14	1.06
2/10/2021	B3	0.17	0.84	0.06	77.5	14	5.7	7.3	0.15	0.99
2/24/2021	B3	0.17	0.83	0.06	65.0	13	5.5	5.4	0.36	1.19
3/3/2021	B3	0.19	0.91	0.05	88.1	20	3.7	2.8	0.13	1.04
3/9/2021	B3	0.16	0.78	0.04	109.0	17	3.2	2.6	0.09	0.87
3/17/2021	B3	0.22	0.91	0.07	92.9	55	2.8	2.2	0.06	0.97
3/24/2021	B3	0.24	0.89	0.07	67.9	38	4.1	3.0	0.16	1.05
3/31/2021	B3	0.41	1.39	0.09	281.0	55	3.9	4.3	0.37	1.76
4/7/2021	B3	0.25	0.96	0.05	57.6	26	3.6	2.4	0.11	1.07
4/14/2021	B3	0.26	1.16	0.08	78.6	38	3.7	2.6	0.13	1.29
4/21/2021	B3	0.27	1.06	0.07	72.7	39	4.3	3.5	0.22	1.28
4/28/2021	B3	0.41	1.37	0.09	238.0	44	5.3	4.5	0.57	1.94
5/5/2021	B3	0.40	1.44	0.11	395	103	4.0	3.9	0.33	1.77
5/12/2021	B3	0.32	1.24	0.13	131.0	59	4.1	3.5	0.32	1.56
5/19/2021	B3	0.29	1.16	0.08	95.8	41	4.7	3.5	0.46	1.62
5/26/2021	B3	0.31	1.18	0.08	91.4	55	4.3	3.6	0.26	1.44
6/2/2021	B3	0.17	2.51	0.95	62.9	36	19.0	25.9	0.83	3.34
6/9/2021	B3	0.29	1.61	0.25	157.0	94	6.1	7.3	1.07	2.68
6/16/2021	B3	0.20	0.71	0.08	24.7	13	2.8	2.1	0.22	0.93
6/23/2021	B3	0.31	0.91	0.12	15.0	12	2.0	2.0	0.14	1.05
6/30/2021	B3	0.31	1.01	0.10	40.0	30	3.1	5.4	0.43	1.44
7/8/2021	B3	0.20	1.03	0.13	27.3	25	9.0	20.7	0.40	1.43
7/14/2021	B3	0.09	1.08	0.15	20.6	22	24.6	54.1	0.64	1.72
7/21/2021	B3	0.16	1.19	0.25	59.0	54	14.2	24.8	1.65	2.84
7/28/2021	B3	0.15	0.83	0.17	15.1	14	12.4	34.6	0.44	1.27
8/4/2021	B3	0.09	0.87	0.15	19.5	21	21.4	54.2	0.41	1.28
8/11/2021	B3	0.13	0.69	0.09	15.0	16	22.7	55.0	0.44	1.13
8/18/2021	B3	0.08	0.76	0.08	20.5	20	29.5	76.3	0.41	1.17
8/25/2021	B3	0.15	0.86	0.07	33.2	29	9.6	23.0	0.35	1.21
9/1/2021	B3	0.20	0.60	0.07	16.3	13	7.6	25.2	0.22	0.82
9/8/2021	B3	0.12	0.76	0.05	7.7	9	8.9	30.7	0.17	0.93

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Stream Name Cousart Bayou

Station Location JEFFERSON COUNTY, AT AR HWY 81 BRIDGE CROSSING

Latitude 34°12'2.00"N
Longitude 91°55'17.97"W

Laboratory's Minimum Reporting Limits								
Parameter	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3/NO2-N (mg/L)
MRL	0.02	0.05	0.02	0.1	1	0.5	0.5	0.02
*NR = not reportable due to either NO3+NO2-N or TKN resulting in less than MRL								

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/30/2017	C1	0.33	3.39	0.88	89.9	97	5.0	20.1	0.03	3.42
12/7/2017	C1	0.67	1.86	0.04	119.0	60	42.8	14.1	0.21	2.07
12/14/2017	C1	0.80	2.48	0.06	154.0	92	40.8	13.5	0.03	2.51
12/21/2017	C1	0.70	1.60	0.02	102.0	22	11.0	5.3	1.08	2.68
12/28/2017	C1	0.50	1.40	0.21	24.2	10	6.7	2.4	0.18	1.58
1/11/2018	C1	0.42	1.13	0.16	67.0	16	22.6	7.1	0.07	1.20
1/25/2018	C1	0.41	1.78	0.09	191.0	44	5.1	6.6	0.10	1.88
2/1/2018	C1	0.24	1.70	0.06	120.0	23	5.6	7.0	0.08	1.78
2/8/2018	C1	0.33	1.39	0.13	137.0	25	3.9	4.2	0.33	1.72
2/15/2018	C1	0.29	1.09	0.08	92.0	28	2.5	2.1	0.17	1.26
2/22/2018	C1	0.28	0.80	0.04	112.0	35	1.5	1.1	0.08	0.88
3/1/2018	C1	0.27	0.79	0.05	91.1	56	1.7	1.0	0.04	0.83
3/8/2018	C1	0.47	1.24	0.17	39.0	21	2.9	1.7	0.03	1.27
3/15/2018	C1	0.23	0.82	0.09	47.3	13	3.6	3.5	0.05	0.87
3/22/2018	C1	0.15	0.43	0.05	44.0	16	5.5	5.0	<0.02	NR
3/29/2018	C1	0.45	1.62	0.23	112.0	33	3.8	4.7	0.25	1.87
4/5/2018	C1	0.26	0.78	0.09	53.4	15	5.6	5.2	0.04	0.82
4/12/2018	C1	0.28	1.08	0.10	43.2	24				
4/19/2018	C1	0.62	1.89	0.06	59.7	59				
4/26/2018	C1	0.40	1.23	0.18	69.7	27				
5/3/2018	C1	0.22	0.59	0.12	51.6	21				
5/10/2018	C1	0.19	0.52	0.09	47.5	18				
5/17/2018	C1	0.22	3.93	1.48	44.7	42				
5/24/2018	C1	0.27	1.12	0.41	44.5	22				
5/31/2018	C1	0.36	3.26	1.09	32.0	21				
6/7/2018	C1	0.16	1.48	0.28	40.7	28				
6/14/2018	C1	0.26	2.75	0.71	53.3	42				
6/21/2018	C1	0.15	1.09	0.32	27.7	25				
6/28/2018	C1	0.09	0.85	0.16	19.0	11	5.8	4.3	0.23	1.08
7/5/2018	C1	0.16	0.53	0.07	16.4	10	12.2	5.7	0.07	0.60
7/12/2018	C1	0.14	0.67	0.08	9.5	8	4.1	1.8	<0.02	NR
7/19/2018	C1	0.18	2.24	1.11	12.2	12	5.6	4.1	0.34	2.58
7/26/2018	C1	0.20	0.72	0.09	8.2	8	13.6	18.5	0.19	0.91
8/2/2018	C1	0.25	1.13	0.12	20.0	9	7.7	7.0	0.17	1.30
8/9/2018	C1	0.35	1.56	0.05	77.7	56	7.6	6.1	0.85	2.41
8/16/2018	C1	0.29	0.97	0.16	10.8	8	2.1	4.1	0.10	1.07
8/23/2018	C1	0.40	1.10	0.11	19.3	14	2.9	2.4	<0.02	NR
8/30/2018	C1	0.36	1.48	0.52	12.0	15	3.9	3.1	0.05	1.53
9/6/2018	C1	0.22	1.01	0.14	19.6	14	2.5	3.3	0.07	1.08
9/13/2018	C1	0.53	1.21	0.11	12.7	17	1.7	1.7	<0.02	NR
9/20/2018	C1	0.43	1.15	0.19	23.3	12	1.2	1.5	0.08	1.23
9/27/2018	C1	0.28	1.39	0.07	51.5	25	2.7	4.0	0.02	1.41
10/4/2018	C1	0.56	1.20	0.17	59.0	31	1.3	2.1	0.11	1.31
10/11/2018	C1	0.54	1.40	0.10	22.7	24	3.1	3.9	0.03	1.43
10/18/2018	C1	0.36	1.31	0.11	45.3	15	3.6	4.0	0.07	1.38
10/25/2018	C1	0.44	1.49	0.11	134.0	19	3.3	3.0	0.33	1.82
10/30/2018	C1	0.49	1.33	0.03	39.3	9	2.7	3.3	0.07	1.40
11/8/2018	C1	0.52	1.39	0.06	56.7	21	1.8	2.2	0.03	1.42
11/15/2018	C1	0.40	0.97	0.05	30.5	15	1.5	1.8	0.03	1.00
11/20/2018	C1	0.52	1.27	0.14	48.9	11	1.2	1.7	0.02	1.29
11/29/2018	C1	0.53	1.24	0.04	52.6	24	1.8	3.3	<0.02	NR
12/6/2018	C1	0.55	1.46	0.06	57.6	27	1.1	2.5	0.03	1.49
12/13/2018	C1	0.47	1.07	0.08	33.4	19	1.4	1.7	0.04	1.11
12/20/2018	C1	0.45	1.11	0.14	49.0	19	1.4	2.0	0.06	1.17
1/3/2019	C1	0.28	0.78	0.04	52.2	15	1.1	1.1	0.04	0.82
1/10/2019	C1	0.28	0.94	0.13	39.8	16	1.1	1.4	0.04	0.98
1/17/2019	C1	0.33	1.01	0.14	61.8	11	2.4	1.6	0.08	1.09
1/24/2019	C1	0.28	0.87	0.05	108.0	17	4.4	1.1	0.07	0.94
1/31/2019	C1	0.35	1.21	0.14	84.7	88	5.4	2.6	0.08	1.29
2/7/2019	C1	0.43	1.22	0.26	77.7	26	19.9	11.6	0.09	1.31
2/14/2019	C1	0.35	1.16	0.09	79.7	24	2.4	1.8	0.07	1.23
2/20/2019	C1	0.28	0.99	0.07	136.0	30	2.6	1.4	0.15	1.14
2/28/2019	C1	0.53	1.26	0.41	43.1	25	2.1	1.1	0.07	1.33
3/7/2019	C1	0.30	0.99	0.16	60.1	23	2.2	2.0	0.11	1.10
3/14/2019	C1	0.32	1.00	0.06	121.0	53	1.1	1.0	0.05	1.05
3/21/2019	C1	0.36	1.05	0.12	56.2	23	2.9	2.4	0.14	1.19
3/28/2019	C1	0.38	1.03	0.09	46.9	8	7.5	6.3	0.06	1.09
4/4/2019	C1	0.59	2.07	0.11	333.0	320	4.1	3.0	0.27	2.34

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
4/11/2019	C1	0.70	1.52	0.20	43.8	40	1.5	1.4	0.09	1.61
4/18/2019	C1	0.58	2.02	0.14	474.0	280	2.2	1.9	0.20	2.22
4/25/2019	C1	0.48	1.74	0.16	303.0	92	4.6	2.6	0.31	2.05
5/2/2019	C1	0.70	1.38	0.20	47.5	28	2.1	1.7	0.06	1.44
5/9/2019	C1	0.48	1.78	0.12	248.0	130	1.7	1.2	0.21	1.99
5/16/2019	C1	0.71	1.45	0.32	36.8	18	0.9	1.3	0.23	1.68
5/23/2019	C1	0.69	1.80	0.33	57.7	24	3.3	1.7	0.08	1.88
5/30/2019	C1	0.78	1.76	0.31	57.9	29	1.2	1.6	0.35	2.11
6/6/2019	C1	0.46	1.52	0.23	331.0	216	3.0	1.9	0.53	2.05
6/13/2019	C1	0.36	1.30	0.22	27.0	11	3.8	3.4	0.22	1.52
6/20/2019	C1	0.21	0.90	0.17	22.4	17	15.5	8.6	0.12	1.02
6/27/2019	C1	0.17	0.89	0.12	18.8	10	18.7	21.0	0.22	1.11
7/2/2019	C1	0.22	0.93	0.06	14.5	11	2.4	6.2	<0.02	NR
7/11/2019	C1	0.95	1.71	0.33	37.0	45	1.7	1.6	0.02	1.73
7/18/2019	C1	0.38	1.01	0.14	35.7	17	1.6	0.8	0.04	1.05
7/25/2019	C1	0.34	1.16	0.26	36.8	37	11.7	4.2	0.11	1.27
8/1/2019	C1	0.19	0.68	0.10	20.8	16	7.7	4.4	0.05	0.73
8/8/2019	C1	0.19	0.74	0.09	14.6	14	8.8	5.4	0.07	0.81
8/15/2019	C1	0.16	0.46	0.07	14.4	10	6.2	5.3	0.03	0.49
8/22/2019	C1	0.20	0.82	0.14	13.5	14	11.8	15.8	0.24	1.06
8/29/2019	C1	0.25	0.83	0.10	24.1	11	6.1	2.6	0.05	0.88
9/5/2019	C1	0.22	0.70	0.08	7.8	5	5.8	3.7	<0.02	NR
9/12/2019	C1	0.21	0.60	0.09	8.4	9	6.0	6.1	<0.02	NR
9/19/2019	C1	0.17	0.53	0.06	10.3	8	6.3	5.6	<0.02	NR
9/26/2019	C1	0.20	0.56	0.06	11.0	11	5.4	6.0	0.04	0.60
10/1/2019	C1	0.19	0.67	0.09	12.2	9	7.0	5.9	0.03	0.70
10/9/2019	C1	0.20	0.48	0.09	13.1	7	7.6	6.3	0.04	0.52
10/17/2019	C1	0.20	1.07	0.31	38.1	35	6.9	6.3	0.14	1.21
10/24/2019	C1	0.21	1.18	0.22	30.0	13	20.4	16.6	0.91	2.09
10/31/2019	C1	0.48	1.50	0.05	146.0	40	6.8	7.8	1.19	2.69
11/7/2019	C1	0.38	1.08	0.11	49.7	24	20.9	7.5	0.09	1.17
11/14/2019	C1	0.34	0.92	0.03	53.4	7	9.0	6.0	0.10	1.02
11/21/2019	C1	1.29	4.30	0.06	1952.0	1020	7.3	8.3	0.66	4.96
11/25/2019	C1	0.39	1.13	0.06	69.2	16	9.0	5.9	0.06	1.19
12/5/2019	C1	0.54	1.02	0.06	94.9	18	4.7	4.0	0.04	1.06
12/12/2019	C1	0.05	0.37	0.06	11.7	5	10.4	6.7	<0.02	NR
12/19/2019	C1	0.07	0.36	0.06	23.1	7	11.9	7.2	<0.02	NR
12/31/2019	C1	0.17	0.67	0.04	44.7	7	9.9	7.1	0.06	0.73
1/9/2020	C1	0.22	1.10	0.05	41.0	6	5.1	4.0	<0.02	NR
1/16/2020	C1	0.33	1.09	0.09	85.5	20	3.3	2.0	0.05	1.14
1/23/2020	C1	0.35	1.07	0.04	188.0	90	2.8	1.8	0.15	1.22
1/30/2020	C1	0.25	1.01	0.06	82.7	18	4.0	2.5	0.11	1.12
2/6/2020	C1	0.32	1.14	0.03	129.0	39	3.5	2.4	0.06	1.20
2/13/2020	C1	0.20	0.70	0.04	66.4	22	1.3	0.8	0.03	0.73
2/20/2020	C1	0.34	1.17	0.07	180.0	55	1.9	0.9	0.08	1.25
2/27/2020	C1	0.35	1.25	0.15	103.0	23	2.6	2.3	0.10	1.35
3/5/2020	C1	0.33	1.01	0.17	37.8	6	4.1	3.7	0.14	1.15
3/11/2020	C1	0.07	0.53	0.21	8.2	5	11.5	10.0	<0.02	NR
3/19/2020	C1	0.16	0.90	0.23	32.6	14	9.5	7.5	0.07	0.97
3/25/2020	C1	0.20	0.85	0.20	34.1	18	8.1	6.8	0.06	0.91
4/2/2020	C1	0.42	1.31	0.11	45.8	22	1.1	1.2	0.04	1.35
4/9/2020	C1	0.54	1.27	0.13	35.7	19	0.9	1.3	0.04	1.31
4/16/2020	C1	0.34	1.05	0.07	106.0	31	1.2	0.7	0.05	1.10
4/23/2020	C1	0.37	1.44	0.10	114.0	58	2.1	1.8	0.22	1.66
4/30/2020	C1	0.39	1.31	0.13	61.1	29	2.0	3.7	0.09	1.40
5/7/2020	C1	0.35	1.19	0.18	65.8	28	4.6	4.2	0.26	1.45
5/14/2020	C1	0.36	1.15	0.15	71.7	25	1.8	3.5	0.17	1.32
5/21/2020	C1	0.22	1.21	0.11	18.7	17	0.9	6.1	0.07	1.28
5/28/2020	C1	0.38	1.52	0.24	53.4	47	1.1	4.9	0.06	1.58
6/4/2020	C1	0.46	1.21	0.25	39.9	25	1.5	1.3	0.19	1.40
6/11/2020	C1	0.36	1.28	0.20	41.9	15	2.4	1.7	0.14	1.42
6/18/2020	C1	0.21	0.81	0.25	72.5	72	14.1	6.6	0.30	1.11
6/25/2020	C1	0.23	1.78	0.74	45.1	15	3.6	2.0	0.23	2.01
7/2/2020	C1	0.27	1.35	0.31	26.3	23	5.1	3.9	0.33	1.68
7/8/2020	C1	0.22	0.96	0.20	18.2	18	11.0	3.8	2.00	2.96
7/15/2020	C1	0.18	2.15	0.56	32.4	39	8.9	12.2	0.41	2.56
7/22/2020	C1	0.14	0.71	0.29	12.4	15	12.5	9.7	3.40	4.11
7/29/2020	C1	0.15	0.76	0.18	21.1	29	10.1	19.1	0.29	1.05
8/5/2020	C1	0.15	0.54	0.06	11.1	8	13.2	3.8	0.22	0.76
8/12/2020	C1	0.22	0.78	0.08	18.1	23	8.8	8.1	0.19	0.97
8/19/2020	C1	0.14	0.38	0.06	12.4	7	12.9	3.7	0.04	0.42
8/26/2020	C1	0.16	0.42	0.06	10.7	9	13.5	3.7	0.05	0.47
9/2/2020	C1	0.47	1.16	0.21	28.4	24	3.9	6.1	0.12	1.28
9/9/2020	C1	0.21	0.63	0.08	10.7	11	7.8	5.9	0.05	0.68
9/16/2020	C1	0.28	1.12	0.38	13.2	22	6.7	4.2	0.02	1.14
9/23/2020	C1	0.71	1.54	<0.02	55.3	60	4.7	5.1	0.38	1.92
9/30/2020	C1	0.36	1.34	0.11	29.0	18	5.7	7.6	0.05	1.39

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
10/7/2020	C1	0.42	1.17	0.04	20.1	15	5.0	5.6	0.15	1.32
10/14/2020	C1	0.37	1.11	0.06	36.6	13	3.0	2.3	0.04	1.15
10/21/2020	C1	1.33	1.74	0.05	19.2	27	2.9	4.3	<0.02	NR
10/28/2020	C1	0.76	1.92	0.07	357.0	372	3.1	2.8	0.44	2.36
11/5/2020	C1	0.33	1.00	0.07	29.1	12	5.0	2.1	0.02	1.02
11/12/2020	C1	0.41	1.06	<0.02	16.1	11	0.7	1.7	<0.02	NR
11/19/2020	C1	0.71	0.95	0.02	31.3	17	0.9	5.9	0.02	0.97
11/23/2020	C1	1.01	1.25	<0.02	29.9	27	0.8	5.1	<0.02	NR
12/3/2020	C1	0.50	1.46	0.05	145.0	56	6.5	7.2	0.14	1.60
12/10/2020	C1	0.37	1.03	0.04	64.2	28	5.5	6.8	0.06	1.09
12/17/2020	C1	0.34	1.17	0.05	77.5	14	3.7	3.6	0.16	1.33
12/22/2020	C1	0.34	1.14	0.04	76.1	9	3.3	3.3	0.07	1.21
12/29/2020	C1	0.32	1.11	0.05	76.9	14	3.9	3.3	0.06	1.17
1/6/2021	C1	0.31	0.91	0.05	64.1	12	2.4	1.7	0.03	0.94
1/13/2021	C1	0.28	0.87	0.04	67.6	23	4.5	1.6	<0.02	NR
1/20/2021	C1	0.32	1.06	0.08	109.0	27	7.5	2.4	0.02	1.08
1/27/2021	C1	0.44	1.30	0.06	111.0	16	2.9	2.2	0.06	1.36
2/3/2021	C1	0.40	1.10	0.04	109.0	17	3.1	2.7	0.06	1.16
2/10/2021	C1	0.32	1.09	0.09	76.5	13	4.1	3.1	0.07	1.16
2/24/2021	C1	0.36	1.02	0.05	58.7	15	4.8	4.9	0.77	1.79
3/3/2021	C1	0.33	0.95	0.11	62.9	22	3.9	2.1	0.05	1.00
3/9/2021	C1	0.27	0.87	0.06	70.5	11	2.5	2.9	0.04	0.91
3/17/2021	C1	0.53	1.50	0.10	99.2	36	2.6	4.3	0.09	1.59
3/24/2021	C1	0.47	1.95	0.17	56.9	22	2.5	3.6	0.09	2.04
3/31/2021	C1	0.46	1.55	0.08	182.0	98	1.6	2.0	0.06	1.61
4/7/2021	C1	0.42	1.22	0.13	78.7	19	2.6	3.2	0.07	1.29
4/14/2021	C1	0.62	1.65	0.20	110.0	58	2.1	3.5	0.19	1.84
4/21/2021	C1	0.44	1.13	0.14	48.0	13	2.6	3.7	0.11	1.24
4/28/2021	C1	0.50	1.19	0.15	57.1	30	2.5	2.6	0.12	1.31
5/5/2021	C1	0.56	1.40	0.26	62.9	37	3.0	1.8	0.03	1.43
5/12/2021	C1	0.44	1.31	0.19	151.0	53	2.6	2.3	0.25	1.56
5/19/2021	C1	0.78	3.30	1.71	71.6	50	7.0	5.5	0.18	3.48
5/26/2021	C1	0.73	2.21	1.11	40.6	53	4.3	5.5	0.19	2.40
6/2/2021	C1	0.28	1.03	0.14	39.7	36	2.2	2.5	0.11	1.14
6/9/2021	C1	0.27	0.92	0.04	39.4	32	2.1	1.5	0.07	0.99
6/16/2021	C1	0.59	1.60	0.49	27.0	28	2.0	2.2	0.11	1.71
6/23/2021	C1	0.25	1.39	0.44	27.5	19	12.2	5.4	0.33	1.72
6/30/2021	C1	0.17	0.96	0.23	48.3	50	9.3	13.9	0.32	1.28
7/8/2021	C1	0.20	0.70	0.18	16.0	19	19.6	18.1	0.28	0.98
7/14/2021	C1	0.45	1.22	0.27	28.1	25	2.7	3.4	0.31	1.53
7/21/2021	C1	0.24	0.62	0.08	19.5	19	11.6	8.6	0.13	0.75
7/28/2021	C1	0.22	0.68	0.06	10.5	13	5.5	7.5	0.08	0.76
8/4/2021	C1	0.18	0.51	0.05	9.8	10	4.1	6.8	0.06	0.57
8/11/2021	C1	0.23	0.64	0.11	15.3	15	7.5	14.9	0.27	0.91
8/18/2021	C1	0.42	1.25	0.31	21.2	25	5.0	21.5	0.06	1.31
8/25/2021	C1	0.36	1.27	0.38	13.9	14	10.2	18.9	0.17	1.44
9/1/2021	C1	0.26	1.23	0.33	62.1	64	5.4	19.6	0.05	1.28
9/8/2021	C1	0.17	0.74	0.15	12.1	16	10.9	19.4	0.06	0.80

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Stream Name Cousart Bayou

Station Location LINCOLN COUNTY, AT BLACK BOTTOM LANE BRIDGE CROSSING

Latitude 34° 5'15.06"N
Longitude 91°46'15.60"W

Laboratory's Minimum Reporting Limits								
Parameter	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3/NO2-N (mg/L)
MRL	0.02	0.05	0.02	0.1	1	0.5	0.5	0.02
*NR = not reportable due to either NO3+NO2-N or TKN resulting in less than MRL								

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/30/2017	C2	0.33	0.84	0.05	5.8	8	32.8	63.1	<0.02	NR
12/7/2017	C2	0.37	0.75	0.02	4.9	8	25.6	59.0	0.02	0.77
12/14/2017	C2	0.30	0.64	0.03	3.6	3	27.9	61.9		
12/21/2017	C2	0.65	1.50	0.04	121.0	49	9.2	11.4	2.21	3.71
12/28/2017	C2	0.44	1.29	0.09	124.0	20	12.4	13.1	0.32	1.61
1/11/2018	C2	0.28	1.20	0.14	86.5	12	20.0	26.1	0.21	1.41
1/25/2018	C2	0.27	1.54	0.07	266.0	99	15.2	23.1	0.15	1.69
2/1/2018	C2	0.22	1.36	0.07	204.0	4	11.3	25.6	0.06	1.42
2/8/2018	C2	0.19	1.66	0.10	488.0	60	5.2	8.8	0.54	2.20
2/15/2018	C2	0.31	1.04	0.05	287.0	87	1.9	3.3	0.26	1.30
2/22/2018	C2	0.43	1.17	0.04	567.0	154	1.3	1.9	0.18	1.35
3/1/2018	C2	0.34	1.15	0.05	436.0	201	1.6	2.0	0.17	1.32
3/8/2018	C2	0.29	0.88	0.09	55.5	13	2.9	2.4	0.06	0.94
3/15/2018	C2	0.25	1.50	0.18	185.0	21	6.0	5.3	0.29	1.79
3/22/2018	C2	0.32	1.30	0.13	98.9	11	9.8	12.7	0.21	1.51
3/29/2018	C2	0.40	2.00	0.29	219.0	60	11.0	8.0	1.19	3.19
4/5/2018	C2	0.40	1.52	0.15	77.9	10	9.5	7.9	0.41	1.93
4/12/2018	C2	0.25	1.28	0.12	85.8	14				
4/19/2018	C2	0.29	1.20	0.13	122.0	20				
4/26/2018	C2	0.37	1.28	0.11	103.0	15				
5/3/2018	C2	0.41	1.15	0.09	62.8	13				
5/10/2018	C2	0.40	1.20	0.13	42.7	15				
5/17/2018	C2	0.21	1.81	0.43	12.2	15				
5/24/2018	C2	0.52	2.68	0.68	412.0	186				
5/31/2018	C2	0.41	1.10	1.00	75.2	11				
6/7/2018	C2	0.19	3.04	0.52	10.3	9				
6/14/2018	C2	0.40	2.71	0.72	206.0	143				
6/21/2018	C2	0.17	1.09	0.17	15.3	11				
6/28/2018	C2	0.13	1.31	0.49	14.8	16	63.8	128.3	0.90	2.21
7/5/2018	C2	0.16	1.48	0.34	13.8	9	37.0	96.1	0.71	2.19
7/12/2018	C2	0.05	0.83	0.09	12.3	11	62.8	143.1	0.44	1.27
7/19/2018	C2	0.18	1.19	0.29	21.1	17	12.2	31.3	0.45	1.64
7/26/2018	C2	0.16	0.93	0.09	7.6	7	25.5	71.6	0.33	1.26
8/2/2018	C2	0.17	1.21	0.08	15.9	16	9.3	29.3	0.22	1.43
8/9/2018	C2	0.23	1.28	0.04	113.0	76	6.1	22.9	0.28	1.56
8/16/2018	C2	0.16	0.74	0.07	12.1	12	9.1	46.7	0.11	0.85
8/23/2018	C2	0.29	0.92	0.13	28.4	15	3.2	8.6	0.13	1.05
8/30/2018	C2	0.23	0.73	0.07	16.0	10	1.8	16.9	0.24	0.97
9/6/2018	C2	0.15	0.67	0.05	5.4	3	6.3	47.4	0.09	0.76
9/13/2018	C2	0.44	1.22	0.18	22.0	25	3.8	6.9	0.04	1.26
9/20/2018	C2	0.45	1.01	0.09	14.3	5	3.0	7.1	0.33	1.34
9/27/2018	C2	0.62	1.53	0.24	16.2	18	3.1	6.6	<0.02	NR
10/4/2018	C2	0.50	1.20	0.11	17.8	5	3.3	8.9	0.33	1.53
10/11/2018	C2	0.87	1.95	0.12	25.5	26	9.7	12.4	0.54	2.49
10/18/2018	C2	0.30	1.31	0.10	22.2	9	7.7	16.3	0.13	1.44
10/30/2018	C2	0.33	1.21	0.06	25.7	7	5.0	15.4	0.19	1.40
11/15/2018	C2	0.27	0.89	0.04	74.9	13	1.9	5.6	<0.02	NR
11/20/2018	C2	0.23	0.88	0.07	33.9	4	3.3	12.5	0.10	0.98
11/29/2018	C2	0.25	0.82	0.05	24.7	3	4.4	14.4	0.11	0.93
12/6/2018	C2	0.41	1.17	0.07	41.5	6	4.2	10.9	0.06	1.23
12/13/2018	C2	0.26	0.98	0.06	73.6	19	2.7	5.7	0.06	1.04
1/3/2019	C2	0.28	1.12	0.04	234.0	29	1.6	3.1	0.13	1.25
1/10/2019	C2	0.21	0.97	0.12	116.0	16	2.0	5.7	0.14	1.11
1/17/2019	C2	0.21	1.16	0.10	134.0	29	2.3	8.3	0.07	1.23
1/24/2019	C2	0.27	1.05	0.03	255.0	44	3.3	2.1	0.10	1.15
1/31/2019	C2	0.15	0.90	0.05	82.0	19	1.3	5.4	0.04	0.94
2/7/2019	C2	0.23	0.98	0.09	47.7	23	1.1	10.2	0.09	1.07
2/14/2019	C2	0.47	2.72	0.32	1068.0	412	2.3	5.6	0.23	2.95
2/20/2019	C2	0.30	1.25	0.07	291.0	106	2.4	2.2	0.24	1.49
2/28/2019	C2	0.22	0.81	0.09	44.1	9	1.9	5.6	0.08	0.89
3/7/2019	C2	0.23	0.87	0.09	56.3	10	4.1	8.1	0.17	1.04
3/14/2019	C2	0.33	1.10	0.05	345.0	140	0.9	1.3	0.12	1.22
3/21/2019	C2	0.30	0.89	0.12	44.3	5	3.4	3.5	0.26	1.15
3/28/2019	C2	0.35	1.06	0.13	55.6	8	5.2	5.2	0.43	1.49
4/4/2019	C2	0.39	1.57	0.13	140.0	62	6.0	6.0	0.57	2.14
4/11/2019	C2	0.57	1.49	0.19	50.1	14	4.8	5.6	0.27	1.76
4/18/2019	C2	0.46	1.31	0.13	162.0	50	2.4	2.3	0.18	1.49
4/25/2019	C2	0.39	1.02	0.11	49.9	10	4.0	4.0	0.32	1.34

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
5/2/2019	C2	0.50	1.08	0.08	68.3	14	3.4	3.5	0.47	1.55
5/9/2019	C2	0.60	2.62	0.26	767.0	252	7.2	4.6	1.03	3.65
5/16/2019	C2	0.55	1.27	0.17	48.0	24	4.6	3.4	0.70	1.97
5/23/2019	C2	0.42	2.36	0.40	50.4	21	6.6	9.1	1.20	3.56
5/30/2019	C2	0.62	2.50	0.89	14.4	9	24.3	41.7	1.31	3.81
6/6/2019	C2	0.31	4.26	1.80	79.5	95	36.5	48.3	9.14	13.40
6/13/2019	C2	0.17	3.67	2.04	14.3	11	39.2	74.7	2.85	6.52
6/20/2019	C2	0.17	2.62	1.27	9.9	13	43.3	75.2	1.90	4.52
6/27/2019	C2	0.18	3.25	1.43	21.4	12	30.4	53.7	1.73	4.98
7/2/2019	C2	0.12	1.60	0.34	28.6	31	36.4	72.6	0.78	2.38
7/11/2019	C2	0.29	1.22	0.28	46.4	38	10.9	20.1	0.41	1.63
7/18/2019	C2	0.25	0.86	0.11	53.2	20	3.4	3.6	0.15	1.01
7/25/2019	C2	0.23	0.94	0.17	30.2	37	15.2	31.4	0.31	1.25
8/1/2019	C2	0.20	0.80	0.14	15.8	14	42.4	82.4	0.44	1.24
8/8/2019	C2	0.12	0.73	0.09	19.7	22	29.1	60.4	0.28	1.01
8/15/2019	C2	0.11	0.72	0.08	17.1	19	29.1	76.3	<0.02	NR
8/22/2019	C2	0.20	1.02	0.06	13.8	11	16.6	68.0	0.38	1.40
8/29/2019	C2	0.17	0.91	0.08	16.4	9	6.7	42.4	0.19	1.10
9/5/2019	C2	0.16	0.81	0.07	17.7	12	12.1	39.5	0.20	1.01
9/12/2019	C2	0.12	0.65	0.04	11.3	9	18.9	62.0	0.14	0.79
9/19/2019	C2	0.29	1.01	0.04	16.4	7	8.0	18.7	0.14	1.15
9/26/2019	C2	0.30	0.80	0.03	15.2	7	8.4	13.1	0.22	1.02
10/1/2019	C2	0.30	0.86	0.05	18.1	7	11.3	19.4	0.18	1.04
10/9/2019	C2	0.32	0.60	0.05	36.6	22	7.5	11.0	<0.02	NR
10/17/2019	C2	0.33	0.68	0.02	21.5	9	5.9	6.2	0.06	0.74
10/24/2019	C2	0.21	0.53	0.04	28.1	2	9.4	8.3	0.29	0.82
10/31/2019	C2	0.39	1.58	0.05	247.0	142	20.9	22.9	2.64	4.22
11/7/2019	C2	0.27	1.14	0.03	34.0	6	22.9	20.1	0.89	2.03
11/14/2019	C2	0.20	1.00	0.07	39.7	6	29.7	38.9	0.72	1.72
11/21/2019	C2	0.24	1.03	0.06	33.8	11	36.3	62.2	0.38	1.41
11/25/2019	C2	0.36	1.55	0.08	78.7	16	16.6	18.3	0.61	2.16
12/5/2019	C2	0.40	1.43	0.12	230.0	18	13.4	17.3	0.20	1.63
12/12/2019	C2	0.33	1.30	0.14	141.0	25	11.1	12.3	0.19	1.49
12/19/2019	C2	0.04	1.46	0.09	310.0	41	9.0	9.8	0.23	1.69
12/31/2019	C2	0.37	1.43	0.08	197.0	29	7.0	8.3	0.31	1.74
1/9/2020	C2	0.30	1.85	0.04	160.0	54	5.9	12.5	0.08	1.93
1/16/2020	C2	0.28	1.12	0.09	178.0	64	4.4	8.0	0.09	1.21
1/23/2020	C2	0.52	1.83	0.07	627.0	246	5.2	5.8	0.39	2.22
1/30/2020	C2	0.29	1.19	0.08	169.0	45	3.8	5.3	0.17	1.36
2/6/2020	C2	0.46	1.78	0.12	425.0	223	3.2	3.9	0.18	1.96
2/20/2020	C2	0.42	1.55	0.06	685.0	188	2.5	3.4	0.16	1.71
2/27/2020	C2	0.37	1.39	0.09	431.0	90	2.4	7.5	0.20	1.59
3/5/2020	C2	0.23	1.01	0.15	116.0	23	5.3	12.6	0.24	1.25
3/11/2020	C2	0.30	1.01	0.12	46.6	9	5.0	5.7	0.31	1.32
3/19/2020	C2	0.28	1.17	0.13	68.6	13	6.8	5.0	0.25	1.42
3/25/2020	C2	0.28	1.18	0.12	85.8	25	10.0	7.4	0.26	1.44
4/2/2020	C2	0.36	1.27	0.13	94.5	35	4.0	2.9	0.23	1.50
4/9/2020	C2	0.46	1.30	0.10	51.1	13	3.5	3.8	0.36	1.66
4/16/2020	C2	0.30	1.04	0.11	84.5	17	2.7	2.7	0.14	1.18
4/23/2020	C2	0.41	2.04	0.12	503.0	136	7.6	5.1	0.47	2.51
4/30/2020	C2	0.57	2.02	0.31	293.0	72	7.4	4.7	0.62	2.64
5/7/2020	C2	0.25	1.26	0.20	47.6	15	19.8	20.2	0.57	1.83
5/14/2020	C2	0.15	1.18	0.11	21.8	21	35.7	52.8	0.19	1.37
5/21/2020	C2	0.34	1.38	0.10	84.3	23	14.7	19.4	1.36	2.74
5/28/2020	C2	0.52	2.06	0.27	386.0	178	16.3	9.4	0.77	2.83
6/4/2020	C2	0.40	1.73	0.09	69.7	23	12.3	19.9	1.44	3.17
6/11/2020	C2	0.30	2.12	0.55	40.2	9	13.0	9.5	0.97	3.09
6/18/2020	C2	0.16	1.22	0.92	10.5	10	42.4	74.0	2.41	3.63
6/25/2020	C2	0.19	4.12	0.96	37.7	27	21.7	29.1	1.16	5.28
7/2/2020	C2	0.14	5.82	4.40	14.1	15	44.7	45.0	1.60	7.42
7/8/2020	C2	0.28	1.74	0.37	106.0	76	5.3	9.4	0.53	2.27
7/15/2020	C2	0.09	0.79	0.16	15.0	21	38.8	82.0	0.67	1.46
7/22/2020	C2	0.14	0.51	0.08	10.3	14	36.8	80.3	0.21	0.72
7/29/2020	C2	0.13	0.67	0.06	6.5	11	63.1	131.7	0.53	1.20
8/5/2020	C2	0.12	0.95	0.12	33.2	44	20.8	44.9	0.44	1.39
8/12/2020	C2	0.21	0.99	0.04	32.3	41	14.5	38.5	0.53	1.52
8/19/2020	C2	0.11	0.72	0.05	14.8	12	8.0	37.3	0.23	0.95
8/26/2020	C2	0.11	0.81	0.09	34.6	43	19.5	64.4	0.20	1.01
9/2/2020	C2	0.24	0.87	0.10	26.5	35	5.8	24.7	0.14	1.01
9/9/2020	C2	0.22	0.73	0.05	10.5	8	7.5	34.0	0.18	0.91
9/16/2020	C2	0.76	1.29	0.04	13.3	16	11.1	18.7	0.15	1.44
9/23/2020	C2	0.65	2.06	0.03	131.0	202	14.0	18.8	0.68	2.74
9/30/2020	C2	0.37	1.36	0.14	11.2	11	13.4	25.7	0.23	1.59
10/7/2020	C2	0.37	1.21	0.12	18.6	10	11.7	26.6	0.46	1.67
10/14/2020	C2	0.52	1.12	0.02	17.9	18	4.7	9.7	0.02	1.14
10/21/2020	C2	0.61	1.15	0.02	17.2	16	4.9	14.8	<0.02	NR
10/28/2020	C2	0.40	1.17	0.14	29.5	22	5.1	15.5	0.12	1.29

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/5/2020	C2	0.30	1.00	0.08	35.1	6	5.3	12.5	0.14	1.14
11/12/2020	C2	0.48	1.09	0.07	31.7	8	4.1	9.8	0.05	1.14
11/19/2020	C2	0.41	1.04	0.05	32.3	6	6.1	16.2	0.09	1.13
11/23/2020	C2	0.42	1.05	0.05	26.8	10	6.7	17.8	0.20	1.25
12/3/2020	C2	0.23	0.93	0.06	37.4	15	20.0	40.8	0.46	1.39
12/10/2020	C2	0.32	1.01	0.06	25.2	5	16.2	32.9	0.34	1.35
12/17/2020	C2	0.37	1.36	0.04	84.5	14	7.6	15.3	0.92	2.28
12/22/2020	C2	0.32	1.08	0.07	88.1	12	6.1	12.4	0.25	1.33
12/29/2020	C2	0.25	1.05	0.08	48.0	4	10.1	19.0	0.78	1.83
1/6/2021	C2	0.25	0.91	0.05	92.7	17	3.9	9.1	0.09	1.00
1/13/2021	C2	0.29	1.31	0.09	200.0	84	3.2	9.5	0.10	1.41
1/20/2021	C2	0.22	1.29	0.22	102.0	14	5.7	15.7	0.22	1.51
1/27/2021	C2	0.30	1.58	0.04	250.0	109	6.1	15.3	0.07	1.65
2/3/2021	C2	0.25	1.38	0.12	288.0	54	3.7	12.8	0.10	1.48
2/10/2021	C2	0.31	1.67	0.17	179.0	109	3.9	14.0	0.21	1.88
2/24/2021	C2	0.23	0.98	0.07	44.1	29	2.9	7.2	0.49	1.47
3/3/2021	C2	0.25	0.93	0.05	131.0	29	1.8	2.6	0.06	0.99
3/9/2021	C2	0.19	1.01	0.10	74.2	10	1.3	7.1	0.04	1.05
3/17/2021	C2	0.31	1.09	0.08	52.3	27	2.8	11.5	0.22	1.31
3/24/2021	C2	0.45	1.69	0.21	73.2	22	6.0	9.6	0.82	2.51
3/31/2021	C2	0.57	1.97	0.06	648.0	370	2.9	3.2	0.26	2.23
4/7/2021	C2	0.36	1.37	0.23	60.7	11	5.6	6.8	0.03	1.40
4/14/2021	C2	0.50	1.73	0.25	113.0	30	6.0	6.0	0.59	2.32
4/21/2021	C2	0.43	1.41	0.15	74.0	8	5.9	5.8	0.71	2.12
4/28/2021	C2	0.37	1.31	0.11	86.0	17	8.3	6.6	0.59	1.90
5/5/2021	C2	0.38	1.27	0.15	65.9	15	4.6	4.4	0.29	1.56
5/12/2021	C2	0.64	2.94	0.65	635.0	300	8.1	5.3	1.24	4.18
5/19/2021	C2	0.44	1.58	0.24	65.6	10	8.1	5.4	1.08	2.66
5/26/2021	C2	0.28	2.03	0.77	14.2	9	21.0	48.1	1.35	3.38
6/2/2021	C2	0.52	1.73	0.62	52.9	14	26.2	26.9	3.06	4.79
6/16/2021	C2	0.59	1.66	0.42	10.0	15	6.0	8.1	<0.02	NR
6/23/2021	C2	0.31	1.30	0.21	16.4	19	29.1	60.0	0.59	1.89
6/30/2021	C2	0.19	2.03	0.68	9.2	11	32.7	62.4	1.77	3.80
7/8/2021	C2	0.09	0.89	0.17	20.1	33	31.6	68.4	0.80	1.69
7/14/2021	C2	0.20	1.40	0.31	13.3	17	50.5	97.0	1.29	2.69
7/21/2021	C2	0.20	0.89	0.23	16.9	26	31.0	61.5	1.17	2.06
7/28/2021	C2	0.11	0.71	0.14	34.0	50	37.3	84.8	0.42	1.13
8/4/2021	C2	0.10	0.82	0.09	25.3	33	27.3	66.1	0.33	1.15
8/11/2021	C2	0.16	0.79	0.11	9.3	10	43.4	109.8	0.38	1.17
8/18/2021	C2	0.14	1.57	0.21	34.7	40	16.3	53.6	0.31	1.88
8/25/2021	C2	0.15	0.94	0.08	22.8	25	10.7	51.6	0.31	1.25
9/1/2021	C2	0.09	0.68	0.06	24.7	27	24.1	67.7	0.29	0.97
9/8/2021	C2	0.14	0.80	0.03	9.8	10	24.2	61.8	0.14	0.94

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Stream Name Deep Bayou

Station Location JEFFERSON COUNTY, AT McENTIRE RD BRIDGE CROSSING NEAR INTERSECTION OF McENTIRE AND AR HWY 425

Latitude 34° 7'57.45"N
Longitude 91°54'8.45"W

Laboratory's Minimum Reporting Limits								
Parameter	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3/NO2-N (mg/L)
MRL	0.02	0.05	0.02	0.1	1	0.5	0.5	0.02
*NR = not reportable due to either NO3+NO2-N or TKN resulting in less than MRL								

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
12/21/2017	D1	0.43	1.04	0.02	29.2	10	2.8	1.4	0.40	1.44
12/28/2017	D1	0.45	1.30	0.05	18.3	5	4.8	4.0	0.17	1.47
1/11/2018	D1	0.49	1.60	<0.02	11.3	6	4.1	3.8	<0.02	NR
1/25/2018	D1	0.25	1.30	0.02	36.5	21	5.5	21.1	<0.02	NR
2/1/2018	D1	0.19	1.11	0.06	35.6	7	2.4	22.8	<0.02	NR
2/8/2018	D1	0.27	0.93	0.03	35.7	6	2.4	4.4	0.15	1.08
2/15/2018	D1	0.30	0.94	0.04	43.3	8	1.6	1.9	0.09	1.03
2/22/2018	D1	0.38	0.98	0.05	74.3	18	1.3	1.3	0.06	1.04
3/1/2018	D1	0.22	0.83	0.05	65.3	14	<0.5	1.1	0.04	0.87
3/8/2018	D1	0.24	0.81	0.07	44.9	5	<0.5	1.0	0.03	0.84
3/15/2018	D1	0.32	1.33	0.16	31.2	16	1.4	2.0	0.03	1.36
3/22/2018	D1	0.69	1.73	0.28	27.4	12	<0.5	2.1	<0.02	NR
3/29/2018	D1	0.36	1.05	0.07	16.2	7	<0.5	1.3	0.03	1.08
4/5/2018	D1	0.44	1.31	0.26	14.1	7	3.0	8.9	0.05	1.36
4/12/2018	D1	0.25	1.16	0.04	19.3	15				
4/19/2018	D1	0.34	1.12	0.20	91.6	8				
4/26/2018	D1	0.45	1.17	0.29	40.1	5				
5/3/2018	D1	0.70	1.45	0.39	28.8	11				
5/10/2018	D1	0.87	2.17	0.61	15.9	24				
5/17/2018	D1	1.07	2.27	0.61	18.0	25				
9/13/2018	D1	0.56	1.26	0.21	5.1	10	0.7	2.3	<0.02	NR
9/27/2018	D1	0.86	2.01	0.10	8.7	22	0.8	2.7	<0.02	NR
10/4/2018	D1	0.78	1.87	0.09	5.6	13	0.8	3.3	<0.02	NR
10/11/2018	D1	0.82	1.85	0.02	8.4	17	0.7	3.7	<0.02	NR
10/18/2018	D1	0.38	1.22	0.09	13.1	7	1.5	2.7	<0.02	NR
10/25/2018	D1	0.29	1.13	0.06	26.2	7	1.5	2.5	0.03	1.16
10/30/2018	D1	0.49	1.65	0.02	14.0	8	1.0	3.7	0.05	1.70
11/8/2018	D1	0.22	1.32	0.03	11.7	4	1.4	4.1	<0.02	NR
11/15/2018	D1	0.22	0.80	0.02	17.0	2	1.2	2.4	<0.02	NR
11/20/2018	D1	0.24	1.03	0.03	8.0	3	0.6	2.1	<0.02	NR
11/29/2018	D1	0.39	1.33	0.03	6.5	9	<0.5	2.1	<0.02	NR
12/6/2018	D1	0.50	1.38	0.04	13.9	8	0.8	3.3	<0.02	NR
12/13/2018	D1	0.29	0.78	0.04	12.8	2	1.1	1.5	0.03	0.81
12/20/2018	D1	0.26	1.03	0.06	17.0	4	0.8	1.7	<0.02	NR
1/3/2019	D1	0.23	0.79	0.04	23.4	4	1.3	1.3	<0.02	NR
1/10/2019	D1	0.20	0.79	0.03	15.4	6	0.7	1.2	<0.02	NR
1/17/2019	D1	0.17	0.73	0.03	10.3	2	0.9	0.9	<0.02	NR
1/24/2019	D1	0.13	0.78	0.04	28.7	5	1.1	0.9	0.07	0.85
1/31/2019	D1	0.11	0.63	0.02	8.1	3	<0.5	1.0	<0.02	NR
2/7/2019	D1	0.24	0.94	0.03	10.3	7	<0.5	1.0	<0.02	NR
2/14/2019	D1	0.22	0.98	0.04	18.4	5	1.0	0.9	0.02	1.00
2/20/2019	D1	0.16	0.80	0.05	27.8	9	2.0	1.0	0.13	0.93
2/28/2019	D1	0.23	0.76	0.05	33.7	6	1.4	0.9	0.02	0.78
3/7/2019	D1	0.17	0.74	0.03	9.2	6	0.5	0.8	0.02	0.76
3/14/2019	D1	0.31	0.89	0.09	25.0	6	1.2	1.1	0.05	0.94
3/21/2019	D1	0.31	0.83	0.07	10.9	6	0.5	0.9	<0.02	NR
3/28/2019	D1	0.36	1.03	0.06	16.4	7	0.6	1.0	<0.02	NR
4/4/2019	D1	0.36	1.30	0.08	50.4	46	2.5	1.5	0.30	1.60
4/11/2019	D1	0.49	1.75	0.51	25.1	9	2.3	4.9	0.18	1.93
4/18/2019	D1	0.35	1.01	0.17	22.6	5	0.8	1.3	0.05	1.06
4/25/2019	D1	0.49	1.40	0.39	18.3	7	1.5	2.1	0.10	1.50
5/2/2019	D1	0.56	1.40	0.42	10.2	11	1.2	1.9	<0.02	NR
5/9/2019	D1	0.26	1.30	0.15	39.8	20	1.2	1.0	0.08	1.38
5/16/2019	D1	0.59	1.63	0.55	17.5	14	1.5	2.1	0.04	1.67
5/23/2019	D1	0.57	1.62	0.27	17.9	17	1.3	1.7	0.04	1.66
5/30/2019	D1	0.52	1.50	0.46	9.1	8	1.3	2.2	<0.02	NR
6/6/2019	D1	0.52	1.15	0.17	10.9	10	1.2	2.0	0.06	1.21
7/18/2019	D1	0.32	0.88	0.18	11.4	6	0.8	0.9	0.05	0.93
7/25/2019	D1	0.54	1.62	0.44	5.9	9	0.8	1.2	<0.02	NR
8/1/2019	D1	0.68	1.66	0.49	7.6	13	0.5	1.1	<0.02	NR
8/8/2019	D1	0.70	1.50	0.27	7.3	10	<0.5	1.1	<0.02	NR
8/29/2019	D1	0.70	1.46	0.09	8.4	10	1.1	1.3	0.02	1.48
11/25/2019	D1	0.57	1.77	0.03	9.3	27	7.7	7.9	0.26	2.03
12/5/2019	D1	0.69	1.89	0.02	28.4	15	1.6	3.1	<0.02	NR
12/12/2019	D1	0.59	1.79	0.03	27.7	22	1.5	2.9	<0.02	NR
12/19/2019	D1	0.27	1.13	0.04	37.2	14	2.0	2.1	0.02	1.15
12/31/2019	D1	0.27	1.32	0.02	23.7	11	1.8	1.9	<0.02	NR
1/9/2020	D1	0.24	1.13	0.04	27.4	6	1.3	3.2	<0.02	NR

Laboratory Data
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Equilibrium
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501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
1/16/2020	D1	0.29	0.84	0.04	35.1	11	0.9	1.8	<0.02	NR
1/23/2020	D1	0.24	0.89	0.05	21.6	7	0.9	1.8	<0.02	NR
1/30/2020	D1	0.21	0.93	0.04	30.1	8	1.6	1.5	0.03	0.96
2/6/2020	D1	0.30	1.27	0.04	35.2	9	1.4	1.7	0.03	1.30
2/13/2020	D1	0.16	0.71	0.03	25.6	6	1.7	1.2	0.04	0.75
2/20/2020	D1	0.16	0.69	0.03	27.5	5	1.0	0.9	<0.02	NR
2/27/2020	D1	0.18	0.74	0.04	22.6	4	1.0	1.1	<0.02	NR
3/5/2020	D1	0.34	0.92	0.07	16.6	4	0.7	1.2	<0.02	NR
3/11/2020	D1	0.22	0.77	0.02	14.5	5	0.6	1.3	<0.02	NR
3/19/2020	D1	0.37	1.04	0.07	28.2	6	0.9	1.8	0.02	1.06
3/25/2020	D1	0.42	1.22	0.07	21.1	10	0.8	1.8	<0.02	NR
4/2/2020	D1	0.31	0.96	0.04	15.0	7	1.2	5.4	<0.02	NR
4/9/2020	D1	0.51	1.20	0.07	10.0	12	0.8	4.9	<0.02	NR
4/16/2020	D1	0.44	1.29	0.15	133.0	12	1.2	2.7	0.08	1.37
4/23/2020	D1	0.39	1.37	0.19	40.5	11	1.2	2.1	0.03	1.40
4/30/2020	D1	0.47	1.70	0.21	33.4	25	1.0	1.4	0.03	1.73
5/7/2020	D1	0.37	1.26	0.09	14.1	7	0.6	1.4	<0.02	NR
5/14/2020	D1	0.31	0.94	0.17	11.3	8	1.1	1.2	<0.02	NR
6/25/2020	D1	0.25	1.04	0.11	7.5	9	1.1	2.3	<0.02	NR
7/2/2020	D1	0.25	1.04	0.12	3.8	8	0.9	2.1	<0.02	NR
7/8/2020	D1	0.30	1.08	0.08	29.2	23	1.1	1.8	0.13	1.21
7/15/2020	D1	0.23	0.95	0.12	4.0	7	0.8	2.1	<0.02	NR
7/22/2020	D1	0.22	0.95	0.10	4.4	9	0.6	2.0	<0.02	NR
7/29/2020	D1	0.21	0.92	0.08	3.7	6	0.7	2.7	<0.02	NR
8/5/2020	D1	0.22	0.88	0.05	5.5	7	0.6	3.6	<0.02	NR
8/12/2020	D1	0.20	0.94	<0.02	4.8	9	<0.5	2.2	<0.02	NR
8/19/2020	D1	0.25	0.96	<0.02	5.2	8	0.6	5.5	<0.02	NR
8/26/2020	D1	0.21	0.85	0.06	4.8	9	0.5	4.5	<0.02	NR
9/2/2020	D1	0.22	0.97	<0.02	3.7	8	1.0	5.5	<0.02	NR
9/9/2020	D1	0.30	0.85	0.05	7.4	9	0.6	5.2	<0.02	NR
9/16/2020	D1	0.32	0.97	0.05	5.0	9	0.8	5.4	<0.02	NR
9/23/2020	D1	0.18	1.15	0.02	36.1	17	1.6	1.5	0.27	1.42
10/14/2020	D1	0.40	1.08	<0.02	7.8	13	0.7	3.5	<0.02	NR
10/21/2020	D1	0.35	1.02	0.02	5.6	7	0.6	4.2	<0.02	NR
10/28/2020	D1	0.36	0.97	0.21	4.0	6	0.6	3.9	<0.02	NR
11/5/2020	D1	0.28	0.81	0.07	18.8	10	1.3	1.6	<0.02	NR
11/12/2020	D1	0.42	1.03	<0.02	14.3	15	<0.5	2.0	<0.02	NR
11/19/2020	D1	0.39	1.07	0.02	10.5	13	<0.5	2.5	<0.02	NR
11/23/2020	D1	2.81	2.93	0.04	9.4	16	<0.5	2.1	<0.02	NR
12/3/2020	D1	0.27	0.81	<0.02	5.0	10	<0.5	2.3	<0.02	NR
12/10/2020	D1	0.31	0.92	<0.02	6.8	7	<0.5	2.7	0.02	0.94
12/17/2020	D1	0.28	0.87	0.02	35.2	7	1.9	2.3	0.06	0.93
12/22/2020	D1	0.29	0.91	0.02	20.8	4	1.3	2.3	0.06	0.97
12/29/2020	D1	0.32	0.87	<0.02	19.0	4	1.2	2.4	<0.02	NR
1/6/2021	D1	0.28	0.78	0.03	46.4	4	0.9	2.5	<0.02	NR
1/13/2021	D1	0.22	0.82	0.03	44.2	7	1.1	1.3	<0.02	NR
1/20/2021	D1	0.28	1.08	0.03	35.2	5	0.9	1.8	<0.02	NR
1/27/2021	D1	0.34	1.00	0.03	26.4	3	1.0	2.0	<0.02	NR
2/3/2021	D1	0.31	0.87	0.02	22.6	4	0.7	1.9	<0.02	NR
2/10/2021	D1	0.30	0.84	0.03	19.3	2	0.6	2.1	<0.02	NR
2/24/2021	D1	0.30	0.78	0.05	20.3	5	1.5	3.9	0.08	0.86
3/3/2021	D1	0.23	0.82	0.04	60.2	9	1.0	1.2	<0.02	NR
3/9/2021	D1	0.24	0.83	0.03	35.0	7	0.7	1.4	<0.02	NR
3/17/2021	D1	0.37	1.04	0.04	19.5	13	0.6	1.7	<0.02	NR
3/24/2021	D1	0.40	1.16	0.02	14.0	12	0.5	2.1	<0.02	NR
3/31/2021	D1	0.29	1.19	0.09	45.3	23	1.2	1.3	<0.02	NR
4/7/2021	D1	0.48	1.40	0.17	28	20	0.9	2.7	<0.02	NR
4/14/2021	D1	0.43	1.37	0.08	14.5	14	0.9	3.0	<0.02	NR
4/21/2021	D1	0.37	1.07	0.09	9.3	6	1.0	3.1	0.02	1.09
4/28/2021	D1	0.43	1.10	0.12	9.5	11	1.0	2.4	0.02	1.12
5/5/2021	D1	0.43	1.29	0.24	13.5	13	0.9	1.7	<0.02	NR
5/12/2021	D1	0.45	1.11	0.26	13.2	12	0.9	2.0	0.04	1.15
5/19/2021	D1	0.34	1.20	0.11	6.8	7	0.9	1.9	0.04	1.24
5/26/2021	D1	0.25	1.11	0.08	4.1	8	0.6	2.1	<0.02	NR
6/2/2021	D1	0.27	1.19	0.13	6.3	11	0.6	2.1	0.04	1.23
6/9/2021	D1	0.35	1.34	0.24	72.9	32	1.4	1.3	0.32	1.66
6/16/2021	D1	0.70	1.62	0.56	10.4	16	1.0	2.6	<0.02	NR
6/23/2021	D1	0.74	2.01	0.72	12.0	15	0.5	3.2	<0.02	NR
6/30/2021	D1	0.41	1.25	0.32	4.7	6	0.5	2.4	<0.02	NR
7/8/2021	D1	0.45	1.56	0.29	6.5	10	0.5	2.5	<0.02	NR
7/14/2021	D1	0.39	1.20	0.14	6.2	11	0.5	2.3	<0.02	NR
7/21/2021	D1	0.32	1.06	0.12	7.6	9	0.7	2.5	<0.02	NR
7/28/2021	D1	0.26	1.10	0.21	5.4	8	1.2	6.2	0.03	1.13
8/4/2021	D1	0.27	1.14	0.22	7	8	1.2	7.9	<0.02	NR
8/11/2021	D1	0.27	1.13	0.25	6.2	7	0.9	6.8	<0.02	NR
8/18/2021	D1	0.26	1.03	0.12	6.4	9	1.3	10.1	0.03	1.06
8/25/2021	D1	0.31	1.27	0.20	7.2	9	<0.5	6.8	<0.02	NR
9/1/2021	D1	0.38	1.17	0.22	9.6	12	0.7	8.2	<0.02	NR
9/8/2021	D1	0.45	1.53	0.35	13.6	14	1.7	9.8	0.02	1.55

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Stream Name Deep Bayou

Station Location LINCOLN COUNTY, AT HWY 199 BRIDGE CROSSING

Latitude 34° 4'46.44"N
Longitude 91°49'6.11"W

Laboratory's Minimum Reporting Limits								
Parameter	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3/NO2-N (mg/L)
MRL	0.02	0.05	0.02	0.1	1	0.5	0.5	0.02
*NR = not reportable due to either NO3+NO2-N or TKN resulting in less than MRL								

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
12/21/2017	D2	0.47	1.66	0.05	196.0	40	6.7	10.4	1.45	3.11
12/28/2017	D2	0.23	0.90	0.07	46.7	5	5.6	6.4	0.26	1.16
1/11/2018	D2	0.56	1.86	0.03	45.6	43	8.1	9.9	0.02	1.88
1/25/2018	D2	0.37	1.21	0.02	94.3	26	4.7	6.0	0.07	1.28
2/1/2018	D2	0.40	1.98	0.10	589.0	68	6.3	13.9	0.05	2.03
2/8/2018	D2	0.33	1.46	0.04	219.0	41	3.8	4.1	0.16	1.62
2/15/2018	D2	0.20	0.98	0.06	73.5	20	1.8	1.8	0.07	1.05
2/22/2018	D2	0.21	1.03	0.05	41.7	16	<0.5	1.5	0.05	1.08
3/1/2018	D2	0.19	0.80	0.05	47.1	12	<0.5	1.2	0.03	0.83
3/8/2018	D2	0.20	0.89	0.07	124.0	13	<0.5	1.5	0.03	0.92
3/15/2018	D2	0.30	1.19	0.12	135.0	12	1.5	1.9	0.08	1.27
3/22/2018	D2	0.41	1.37	0.15	104.0	21	1.3	2.0	0.07	1.44
3/29/2018	D2	0.43	1.56	0.11	46.8	30	1.1	2.0	0.14	1.70
4/5/2018	D2	0.62	2.02	0.53	32.8	9	2.1	2.5	0.09	2.11
4/12/2018	D2	0.31	1.18	0.23	52.6	7				
4/19/2018	D2	0.24	1.06	0.12	148.0	21				
4/26/2018	D2	0.39	1.26	0.25	46.8	7				
5/3/2018	D2	0.61	1.46	0.45	28.1	7				
5/10/2018	D2	0.64	1.43	0.18	15.2	12				
5/17/2018	D2	0.46	2.03	0.83	8.3	9				
5/24/2018	D2	0.34	1.76	0.54	32.4	21				
5/31/2018	D2	0.33	21.4	8.00	11.3	11				
6/7/2018	D2	0.29	7.18	4.53	9.5	14				
6/14/2018	D2	0.41	4.69	1.30	13.4	14				
6/21/2018	D2	0.23	1.36	0.28	11.2	12				
6/28/2018	D2	0.19	1.03	0.07	7.1	6	1.8	19.4	<0.02	NR
7/5/2018	D2	0.08	0.65	0.10	5.3	7	3.0	14.6	<0.02	NR
7/12/2018	D2	0.08	0.51	0.07	5.3	4	2.2	14.9	<0.02	NR
7/19/2018	D2	0.21	1.40	0.27	8.2	6	1.5	21.8	0.09	1.49
7/26/2018	D2	0.20	0.90	0.07	7.7	4	0.9	11.2	<0.02	NR
8/2/2018	D2	0.12	0.83	0.09	4.8	2	1.4	23.3	<0.02	NR
8/9/2018	D2	0.11	0.83	0.08	3.7	4	1.1	21.1	0.09	0.92
8/16/2018	D2	0.29	1.00	0.05	7.9	12	0.5	10.1	<0.02	NR
8/23/2018	D2	0.32	1.03	0.06	8.5	14	0.8	5.9	<0.02	NR
8/30/2018	D2	0.63	1.47	0.17	15.3	17	0.4	6.1	0.03	1.50
9/6/2018	D2	0.55	2.48	0.55	17.6	23	0.4	6.5	0.04	2.52
9/13/2018	D2	0.55	1.82	0.23	13.0	16	1.7	5.2	<0.02	NR
9/20/2018	D2	0.59	1.59	0.12	12.0	15	0.7	3.2	<0.02	NR
9/27/2018	D2	0.57	1.49	0.14	12.1	17	0.7	7.2	<0.02	NR
10/4/2018	D2	0.61	1.41	0.18	15.1	23	0.4	3.3	<0.02	NR
10/11/2018	D2	0.45	1.36	0.07	9.8	12	1.7	11.7	<0.02	NR
10/18/2018	D2	0.21	1.04	0.10	4.1	4	1.1	8.1	<0.02	NR
10/25/2018	D2	0.16	0.93	0.06	6.0	4	0.6	9.5	0.03	0.96
10/30/2018	D2	0.16	0.89	0.06	3.2	4	0.7	11.8	<0.02	NR
11/8/2018	D2	0.18	1.01	0.02	4.4	5	0.6	7.1	<0.02	NR
11/15/2018	D2	0.19	0.94	0.04	9.3	2	0.9	5.5	<0.02	NR
11/20/2018	D2	0.16	0.77	0.05	6.5	3	0.2	2.2	<0.02	NR
11/29/2018	D2	0.18	0.83	0.05	5.1	4	0.9	4.9	<0.02	NR
12/6/2018	D2	0.27	0.98	0.06	5.2	4	1.0	6.9	<0.02	NR
12/13/2018	D2	0.21	0.78	0.04	16.2	3	1.3	3.6	<0.02	NR
12/20/2018	D2	0.24	0.91	0.09	13.1	6	0.9	4.1	<0.02	NR
1/3/2019	D2	0.19	0.78	0.06	17.8	4	1.5	1.7	0.04	0.82
1/10/2019	D2	0.20	0.71	0.06	13.3	2	0.8	2.5	0.03	0.74
1/17/2019	D2	0.21	0.73	0.07	11.5	3	1.2	3.3	0.06	0.79
1/24/2019	D2	0.17	1.00	0.04	24.0	6	1.4	1.3	0.04	1.04
1/31/2019	D2	0.16	0.71	0.04	17.0	4	0.9	2.9	0.04	0.75
2/7/2019	D2	0.33	1.02	0.19	9.7	9	0.5	3.5	0.03	1.05
2/14/2019	D2	0.25	0.04	0.05	36.0	11	1.2	1.7	0.03	0.07
2/20/2019	D2	0.30	1.14	0.13	81.0	12	1.3	1.6	0.08	1.22
2/28/2019	D2	0.21	0.90	0.07	42.9	13	1.4	1.6	0.03	0.93
3/7/2019	D2	0.31	1.38	0.13	66.1	28	0.9	2.2	0.09	1.47
3/14/2019	D2	0.18	0.90	0.07	26.8	6	1.0	1.0	0.03	0.93
3/21/2019	D2	0.23	0.80	0.10	25.5	4	0.4	1.5	0.03	0.83
3/28/2019	D2	0.36	1.06	0.10	15.5	8	1.2	2.7	0.10	1.16
4/4/2019	D2	0.43	1.03	0.09	11.3	10	0.7	1.1	0.03	1.06
4/11/2019	D2	0.36	1.39	0.19	16.2	7	1.2	2.2	0.04	1.43
4/18/2019	D2	0.24	0.90	0.12	17.1	3	1.3	1.5	0.05	0.95
4/25/2019	D2	0.35	0.93	0.09	11.6	4	0.5	1.1	0.03	0.96

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
5/2/2019	D2	0.41	1.05	0.10	7.1	8	0.6	1.3	0.02	1.07
5/9/2019	D2	0.31	1.34	0.33	8.8	8	0.4	1.1	0.04	1.38
5/16/2019	D2	0.30	1.31	0.44	4.3	4	0.7	1.4	0.03	1.34
5/23/2019	D2	0.50	1.96	0.61	8.0	16	1.0	1.7	0.03	1.99
5/30/2019	D2	0.55	1.56	0.21	10.7	11	0.5	1.7	<0.02	NR
6/6/2019	D2	0.47	1.66	0.23	13.2	23	3.2	4.8	0.67	2.33
6/13/2019	D2	0.33	1.45	0.23	8.9	14	0.4	1.5	<0.02	NR
6/20/2019	D2	0.48	2.24	0.43	17.8	26	2.0	4.8	0.07	2.31
6/27/2019	D2	0.19	1.12	0.13	7.3	9	6.3	6.8	0.03	1.15
7/2/2019	D2	0.46	1.36	0.10	18.4	16	1.0	2.6	<0.02	NR
7/11/2019	D2	0.52	1.63	0.34	13.5	17	<0.5	<0.5	<0.02	NR
7/18/2019	D2	0.34	1.84	0.72	5.5	5	1.0	1.4	<0.02	NR
7/25/2019	D2	0.32	1.92	0.61	4.8	9	1.7	3.1	0.03	1.95
8/1/2019	D2	0.48	2.94	0.79	16.1	26	1.6	4.3	0.03	2.97
8/8/2019	D2	0.38	1.83	0.61	10.7	14	4.8	18.5	<0.02	NR
8/29/2019	D2	0.25	1.03	0.07	18.9	22	1.2	15.4	<0.02	NR
9/19/2019	D2	0.29	1.06	0.19	11.0	12	0.7	19.1	<0.02	NR
9/26/2019	D2	0.18	1.10	0.07	9.5	14	0.8	22.6	<0.02	NR
10/1/2019	D2	0.16	1.25	0.06	8.4	11	0.9	21.2	<0.02	NR
10/9/2019	D2	0.13	1.07	0.07	11.9	9	1.0	23.0	<0.02	NR
10/17/2019	D2	0.11	0.85	0.06	8.5	7	1.3	22.2	<0.02	NR
10/24/2019	D2	0.11	0.83	0.06	7.6	8	1.9	22.4	<0.02	NR
10/31/2019	D2	0.12	0.87	0.14	14.1	10	4.0	19.4	0.26	1.13
11/7/2019	D2	0.11	0.74	0.11	9.0	8	7.5	17.7	0.09	0.83
11/14/2019	D2	0.16	0.67	0.06	6.3	6	6.0	17.7	<0.02	NR
11/21/2019	D2	0.26	0.87	0.06	10.8	13	6.3	19.4	<0.02	NR
11/25/2019	D2	0.29	1.27	0.07	52.3	24	8.8	17.9	0.11	1.38
12/5/2019	D2	0.25	0.72	0.06	17.5	2	1.2	3.5	<0.02	NR
12/12/2019	D2	0.24	1.18	0.15	56.1	8	3.5	7.7	<0.02	NR
12/19/2019	D2	0.29	1.14	0.12	57.5	16	4.1	6.2	<0.02	NR
12/31/2019	D2	0.34	1.37	0.08	97.1	10	2.4	5.8	0.03	1.40
1/9/2020	D2	0.26	1.12	0.06	24.2	5	1.3	3.5	<0.02	NR
1/16/2020	D2	0.25	0.99	0.07	67.0	11	1.4	2.4	0.03	1.02
1/23/2020	D2	0.24	1.04	0.09	93.7	12	1.6	3.2	0.07	1.11
1/30/2020	D2	0.20	0.91	0.05	31.7	8	1.2	2.3	0.03	0.94
2/6/2020	D2	0.24	1.12	0.06	38.4	8	0.8	2.2	0.03	1.15
2/13/2020	D2	0.13	0.84	0.04	31.2	7	1.2	1.3	0.04	0.88
2/20/2020	D2	0.17	0.72	0.04	40.8	8	1.3	1.6	0.04	0.76
2/27/2020	D2	0.20	0.81	0.07	41.5	10	1.2	1.7	0.04	0.85
3/5/2020	D2	0.25	1.01	0.13	25.0	6	1.1	1.9	0.06	1.07
3/11/2020	D2	0.26	1.04	0.11	25.5	10	0.8	2.8	0.05	1.09
3/19/2020	D2	0.29	1.26	0.20	47.6	6	1.2	2.0	0.11	1.37
3/25/2020	D2	0.32	1.22	0.17	29.3	9	1.4	2.2	0.12	1.34
4/2/2020	D2	0.31	1.18	0.11	45.3	14	0.9	1.7	0.08	1.26
4/9/2020	D2	0.49	1.42	0.32	20.2	12	0.7	1.3	0.03	1.45
4/16/2020	D2	0.20	0.98	0.06	29.7	7	0.8	2.1	0.05	1.03
4/23/2020	D2	0.28	1.19	0.10	144.0	29	1.2	2.0	0.08	1.27
4/30/2020	D2	0.29	1.03	0.07	27.9	11	0.9	1.7	0.04	1.07
5/7/2020	D2	0.44	1.16	0.09	11.1	10	0.9	1.8	<0.02	NR
5/14/2020	D2	0.33	0.95	0.04	10.3	10	1.4	2.5	<0.02	NR
5/21/2020	D2	0.47	1.10	0.03	5.2	13	<0.5	1.5	0.02	1.12
5/28/2020	D2	0.35	1.54	0.08	7.9	13	<0.5	1.5	0.02	1.56
6/4/2020	D2	0.44	1.79	0.06	10.4	14	1.2	3.8	0.10	1.89
6/11/2020	D2	0.56	2.62	1.12	12.2	20	1.6	2.1	0.04	2.66
6/18/2020	D2	0.65	1.84	0.51	9.1	13	1.2	2.8	0.03	1.87
6/25/2020	D2	0.26	3.38	1.05	13.1	10	3.5	6.7	0.11	3.49
7/2/2020	D2	0.51	1.64	0.31	7.2	14	1.3	3.1	0.03	1.67
7/8/2020	D2	0.77	4.30	2.51	14.4	22	0.9	2.2	<0.02	NR
7/15/2020	D2	0.85	4.85	3.00	10.5	17	0.9	2.9	<0.02	NR
7/22/2020	D2	0.63	2.25	1.05	8.2	7	2.0	5.2	0.04	2.29
7/29/2020	D2	0.36	1.27	0.24	9.2	11	2.3	15.6	0.04	1.31
8/5/2020	D2	0.18	0.79	0.12	7.5	9	2.5	26.8	0.08	0.87
8/12/2020	D2	0.49	1.13	0.08	8.5	16	1.8	7.4	0.03	1.16
8/19/2020	D2	0.11	0.51	0.08	4.6	5	6.4	32.0	0.07	0.58
8/26/2020	D2	0.17	0.85	0.19	6.0	7	1.7	21.2	0.05	0.90
9/2/2020	D2	0.59	1.23	0.06	11.2	20	1.1	8.9	0.02	1.25
9/9/2020	D2	0.52	1.21	0.08	8.4	16	0.6	9.0	0.02	1.23
9/16/2020	D2	0.35	1.23	0.09	7.3	15	0.6	8.6	0.02	1.25
9/23/2020	D2	0.66	0.93	0.03	11.8	20	2.1	6.9	<0.02	NR
9/30/2020	D2	0.27	0.88	0.04	5.4	9	1.2	5.9	0.02	0.90
10/7/2020	D2	0.30	1.06	0.04	5.7	9	0.9	6.1	0.02	1.08
10/14/2020	D2	0.41	1.09	0.16	6.0	10	1.1	4.0	0.02	1.11
10/21/2020	D2	0.57	1.00	<0.02	10.0	15	0.8	5.6	<0.02	NR
10/28/2020	D2	0.46	0.94	0.25	9.7	12	0.6	7.3	<0.02	NR
11/5/2020	D2	0.22	0.71	0.08	11.1	9	1.0	4.6	<0.02	NR
11/12/2020	D2	0.45	0.85	0.02	8.5	11	0.6	6.0	<0.02	NR
11/19/2020	D2	0.41	1.45	<0.02	9.4	12	0.5	6.3	0.03	1.48

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/23/2020	D2	0.46	1.14	0.02	7.5	9	<0.5	5.2	0.02	1.16
12/3/2020	D2	0.28	0.81	0.05	20.5	10	0.7	3.8	0.02	0.83
12/10/2020	D2	0.17	0.63	0.05	6.2	4	2.7	12.9	0.10	0.73
12/17/2020	D2	0.31	0.83	0.06	23.7	5	1.5	6.1	0.11	0.94
12/22/2020	D2	0.23	0.84	0.04	21.4	3	1.3	4.1	0.12	0.96
12/29/2020	D2	0.19	0.75	0.04	14.9	4	1.6	4.5	0.04	0.79
1/6/2021	D2	0.20	0.70	0.04	20.4	3	1.0	2.3	0.02	0.72
1/13/2021	D2	0.44	1.56	0.15	347.0	28	1.1	3.4	0.05	1.61
1/20/2021	D2	0.29	1.10	0.19	106.0	11	1.3	4.6	0.07	1.17
1/27/2021	D2	0.31	0.94	0.10	41.2	5	0.8	3.2	0.05	0.99
2/3/2021	D2	0.32	0.84	0.06	36.0	4	0.5	3.1	0.12	0.96
2/10/2021	D2	0.27	0.95	0.04	40.7	6	<0.5	2.3	0.03	0.98
2/24/2021	D2	0.20	0.94	0.13	24.0	6	1.4	2.7	0.13	1.07
3/3/2021	D2	0.18	0.99	0.07	52.7	16	1.0	1.4	0.03	1.02
3/9/2021	D2	0.29	1.07	0.17	95.9	15	0.7	2.5	0.05	1.12
3/17/2021	D2	0.52	1.22	0.28	25.1	19	0.7	2.4	0.03	1.25
3/24/2021	D2	0.43	0.94	0.03	14.5	11	0.6	1.8	0.05	0.99
3/31/2021	D2	0.38	1.54	0.15	79.3	33	1.5	1.7	0.08	1.62
4/7/2021	D2	0.39	1.32	0.28	31.2	14	1.2	2.6	0.07	1.39
4/14/2021	D2	0.49	1.32	0.21	19.1	27	0.6	1.7	0.02	1.34
4/21/2021	D2	0.50	1.10	0.12	15.6	11	0.7	1.4	0.06	1.16
4/28/2021	D2	0.34	1.16	0.12	17.1	14	1.2	1.6	0.07	1.23
5/5/2021	D2	0.47	1.17	0.23	18.4	18	0.8	1.5	<0.02	NR
5/12/2021	D2	0.36	1.03	0.15	19.5	16	0.9	1.2	0.13	1.16
5/19/2021	D2	0.43	1.05	0.12	13.6	15	0.7	1.3	<0.02	NR
5/26/2021	D2	0.43	1.85	0.34	8.6	16	1.1	3.3	0.05	1.90
6/2/2021	D2	0.38	1.14	0.06	7.6	15	<0.5	1.2	0.02	1.16
6/9/2021	D2	0.18	1.03	0.23	10.7	9	0.6	0.8	0.06	1.09
6/16/2021	D2	0.57	1.40	0.21	10.7	19	0.8	1.4	0.02	1.42
6/23/2021	D2	0.37	1.22	0.19	9.9	13	0.7	1.6	<0.02	NR
6/30/2021	D2	0.46	1.48	0.11	8.4	15	2.5	5.4	0.12	1.60
7/8/2021	D2	0.52	1.88	0.50	10.8	18	0.5	1.6	0.02	1.90
7/14/2021	D2	0.37	4.02	2.15	7.8	13	2.3	3.3	0.12	4.14
7/21/2021	D2	0.17	1.32	0.58	4.7	5	1.8	10.7	0.07	1.39
7/28/2021	D2	0.38	2.27	1.04	20.4	42	1.9	11.5	<0.02	NR
8/4/2021	D2	0.13	0.55	0.34	6.3	5	10.8	45.6	<0.02	NR
8/11/2021	D2	0.25	0.40	0.23	14.1	9	11.4	48.5	<0.02	NR
8/18/2021	D2	0.14	0.54	0.07	8.8	10	5.3	40.5	<0.02	NR
8/25/2021	D2	0.20	0.42	0.24	22.8	13	10.2	47.4	<0.02	NR
9/1/2021	D2	0.19	0.34	0.24	25.5	8	10.6	48.1	<0.02	NR
9/8/2021	D2	0.13	0.50	<0.02	12.1	11	5.3	45.7	<0.02	NR

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Stream Name Deep Bayou

Station Location LINCOLN COUNTY, AT CNTY RD 49 (BISHOP RD) BRIDGE CROSSING

Latitude 34° 3'48.96"N
Longitude 91°45'23.87"W

Laboratory's Minimum Reporting Limits								
Parameter	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3/NO2-N (mg/L)
MRL	0.02	0.05	0.02	0.1	1	0.5	0.5	0.02
*NR = not reportable due to either NO3+NO2-N or TKN resulting in less than MRL								

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/30/2017	D3	0.25	0.97	0.08	24.9	29	36.7	93.8	<0.02	NR
12/7/2017	D3	0.29	0.78	0.04	36.1	37	36.4	92.4	<0.02	NR
12/14/2017	D3	0.22	0.78	0.05	27.0	28	29.9	72.3		
12/21/2017	D3	0.65	1.74	0.04	135.0	34	8.3	12.6	2.12	3.86
12/28/2017	D3	0.38	1.15	0.09	98.3	21	10.5	12.5	0.42	1.57
1/11/2018	D3	0.31	1.25	0.13	96.2	14	20.0	25.2	0.26	1.51
1/25/2018	D3	0.35	1.62	0.08	327.0	105	18.5	22.3	0.21	1.83
2/1/2018	D3	0.20	1.43	0.07	199.0	60	10.1	24.5	0.06	1.49
2/8/2018	D3	0.35	1.76	0.08	543.0	159	7.3	10.2	0.56	2.32
2/15/2018	D3	0.30	1.12	0.04	302.0	86	2.0	3.2	0.23	1.35
2/22/2018	D3	0.39	1.19	0.03	573.0	200	1.1	2.0	0.20	1.39
3/8/2018	D3	0.27	0.83	0.07	91.7	19	1.7	2.0	0.09	0.92
3/15/2018	D3	0.29	1.28	0.11	189.0	32	3.7	3.8	0.21	1.49
3/22/2018	D3	0.40	1.34	0.12	163.0	44	5.9	7.4	0.22	1.56
3/29/2018	D3	0.35	2.04	0.24	221.0	64	9.7	7.2	1.16	3.20
4/5/2018	D3	0.46	1.50	0.11	133.0	33	5.8	6.1	0.34	1.84
4/12/2018	D3	0.26	1.16	0.09	142.0	27				
4/19/2018	D3	0.27	0.98	0.07	141.0	27				
4/26/2018	D3	0.20	1.20	0.10	182.0	41				
5/3/2018	D3	0.51	1.25	0.10	234.0	50				
5/10/2018	D3	0.19	0.98	0.18	46.7	38				
5/17/2018	D3	0.26	1.65	0.30	30.3	34				
5/24/2018	D3	0.49	2.72	0.61	585.0	194				
5/31/2018	D3	0.45	1.37	0.11	182.0	83				
6/7/2018	D3	0.17	1.76	0.33	35.0	38				
6/14/2018	D3	0.36	2.13	0.35	210.0	152				
6/21/2018	D3	0.17	1.58	0.16	38.0	38				
6/28/2018	D3	0.13	1.22	0.30	19.7	33	39.8	88.7	0.87	2.09
7/5/2018	D3	0.18	0.92	0.09	49.0	51	21.9	63.0	0.20	1.12
7/12/2018	D3	0.11	0.98	0.13	41.7	38	29.0	88.8	0.34	1.32
7/19/2018	D3	0.18	1.33	0.27	30.6	26	11.4	39.6	0.44	1.77
7/26/2018	D3	0.15	0.89	0.07	30.5	33	15.6	54.8	0.42	1.31
8/2/2018	D3	0.16	0.89	0.06	25.9	26	9.3	32.5	0.26	1.15
8/9/2018	D3	0.24	1.15	0.04	114.0	91	5.7	34.1	0.25	1.40
8/16/2018	D3	0.17	0.83	0.08	20.7	23	6.9	39.5	0.12	0.95
8/23/2018	D3	0.29	0.84	0.12	19.0	9	2.4	8.2	0.10	0.94
8/30/2018	D3	0.21	0.84	0.05	17.8	17	2.5	20.4	0.16	1.00
9/6/2018	D3	0.21	0.77	0.07	31.8	34	5.8	23.7	0.07	0.84
9/13/2018	D3	0.35	1.26	0.16	18.9	17	3.7	7.7	0.04	1.30
9/20/2018	D3	0.46	1.16	0.18	27.5	20	2.8	8.4	0.23	1.39
9/27/2018	D3	0.59	1.71	0.21	18.2	19	3.2	8.8	0.05	1.76
10/4/2018	D3	0.37	1.12	0.12	32.1	22	3.0	10.5	0.18	1.30
10/11/2018	D3	0.65	1.63	0.09	28.2	26	8.2	13.3	0.46	2.09
10/18/2018	D3	0.30	1.16	0.07	22.6	9	7.2	17.4	0.11	1.27
10/25/2018	D3	0.23	1.10	0.05	55.3	31	3.6	13.5	0.16	1.26
10/30/2018	D3	0.25	1.04	0.04	39.7	21	2.5	14.0	0.10	1.14
11/15/2018	D3	0.24	0.07	0.03	56.4	9	2.0	6.5	0.06	0.13
11/20/2018	D3	0.19	0.85	0.06	33.1	5	2.5	10.9	0.06	0.91
11/29/2018	D3	0.20	0.74	0.03	22.9	6	3.7	14.3	0.07	0.81
12/6/2018	D3	0.30	1.07	0.06	33.9	6	3.0	10.7	0.06	1.13
12/13/2018	D3	0.14	0.96	0.05	53.0	12	1.9	5.0	0.05	1.01
1/3/2019	D3	0.29	1.00	0.05	186.0	25	1.8	3.3	0.10	1.10
1/10/2019	D3	0.21	0.92	0.09	81.1	12	1.6	4.8	0.12	1.04
1/17/2019	D3	0.15	1.00	0.10	112.0	24	2.8	8.3	0.09	1.09
1/24/2019	D3	0.27	1.20	0.04	251.0	46	0.7	2.2	0.10	1.30
1/31/2019	D3	0.16	0.91	0.06	93.5	19	2.4	7.7	0.07	0.98
2/7/2019	D3	0.21	1.03	0.10	50.6	20	1.4	10.0	0.09	1.12
2/14/2019	D3	0.42	1.70	0.21	509.0	143	1.9	4.7	0.13	1.83
2/20/2019	D3	0.33	1.25	0.08	318.0	131	2.3	2.3	0.23	1.48
2/28/2019	D3	0.18	0.85	0.07	56.5	19	1.6	2.7	0.07	0.92
3/7/2019	D3	0.24	0.83	0.06	76.6	17	3.3	5.4	0.15	0.98
3/21/2019	D3	0.26	0.84	0.07	80.0	24	1.9	2.4	0.12	0.96
3/28/2019	D3	0.34	1.05	0.09	93.2	46	3.0	3.6	0.20	1.25
4/4/2019	D3	0.32	1.14	0.08	134.0	79	8.6	9.8	0.30	1.44
4/11/2019	D3	0.43	1.32	0.12	63.1	28	3.2	3.7	0.16	1.48
4/25/2019	D3	0.39	1.14	0.09	130.0	60	3.1	3.0	0.40	1.54
5/2/2019	D3	0.49	1.38	0.11	169.0	76	5.3	5.4	0.56	1.94
5/9/2019	D3	0.56	2.78	0.39	758.0	402	6.7	6.0	1.00	3.78

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
5/16/2019	D3	0.49	1.37	0.20	98.5	16	4.3	4.1	0.53	1.90
5/23/2019	D3	0.45	1.90	0.28	96.2	46	6.0	6.1	1.29	3.19
5/30/2019	D3	0.30	1.88	0.23	44.9	54	13.3	38.0	1.33	3.21
6/6/2019	D3	0.32	2.32	0.76	29.4	39	51.2	68.6	1.70	4.02
6/13/2019	D3	0.25	1.63	0.16	71.2	78	27.0	45.4	1.42	3.05
6/20/2019	D3	0.16	2.12	0.72	25.0	35	33.9	63.7	2.02	4.14
6/27/2019	D3	0.22	2.75	0.74	36.8	28	19.9	36.0	1.32	4.07
7/2/2019	D3	0.14	1.39	0.20	18.5	17	22.4	47.0	0.72	2.11
7/11/2019	D3	0.29	1.23	0.28	38.0	34	9.1	18.9	0.46	1.69
7/18/2019	D3	0.25	0.98	0.13	49.6	19	3.2	3.7	0.19	1.17
7/25/2019	D3	0.25	1.05	0.15	27.2	35	11.6	28.1	0.33	1.38
8/1/2019	D3	0.14	0.82	0.09	26.8	27	31.7	69.2	0.58	1.40
8/8/2019	D3	0.08	0.76	0.11	17.2	20	27.9	61.2	0.52	1.28
8/15/2019	D3	0.12	0.76	0.06	23.7	22	27.7	75.2	<0.02	NR
8/22/2019	D3	0.12	0.74	0.07	24.7	27	22.1	74.5	<0.02	NR
8/29/2019	D3	0.19	0.93	0.07	35.1	37	5.1	36.3	0.17	1.10
9/5/2019	D3	0.15	0.79	0.06	34.4	26	11.6	41.4	0.16	0.95
9/12/2019	D3	0.16	0.77	0.06	23.7	26	11.9	45.0	<0.02	NR
9/19/2019	D3	0.19	0.62	0.04	28.2	23	17.5	36.8	<0.02	NR
9/26/2019	D3	0.31	0.80	0.05	44.0	31	7.9	18.8	0.14	0.94
10/1/2019	D3	0.26	0.77	0.05	28.0	20	11.6	15.4	<0.02	NR
10/9/2019	D3	0.27	0.68	0.04	22.6	4	6.4	7.5	0.14	0.82
10/17/2019	D3	0.30	1.00	0.05	49.8	37	10.1	12.9	0.20	1.20
10/24/2019	D3	0.30	0.83	0.03	36.8	15	10.7	12.5	0.27	1.10
10/31/2019	D3	0.40	1.46	0.06	236.0	139	18.8	22.0	2.10	3.56
11/7/2019	D3	0.22	1.05	0.04	34.0	10	18.8	21.5	0.80	1.85
11/14/2019	D3	0.22	0.91	0.05	35.7	7	22.4	26.0	0.51	1.42
11/21/2019	D3	0.16	0.78	0.02	15.6	5	29.7	55.2	0.21	0.99
11/25/2019	D3	0.32	1.25	0.08	78.9	17	14.5	20.7	0.56	1.81
12/5/2019	D3	0.29	0.99	0.07	102.0	8	8.4	16.3	0.11	1.10
12/12/2019	D3	0.38	1.17	0.10	122.0	12	7.5	10.3	0.16	1.33
12/19/2019	D3	0.34	1.24	0.07	263.0	37	7.2	9.3	0.20	1.44
12/31/2019	D3	0.37	1.34	0.07	168.0	23	5.6	8.1	0.26	1.60
1/9/2020	D3	0.27	1.41	0.05	92.8	18	4.9	10.6	0.08	1.49
1/16/2020	D3	0.27	1.10	0.09	123.0	28	3.1	6.6	0.09	1.19
1/23/2020	D3	0.47	1.89	0.08	660.0	336	3.4	5.6	0.41	2.30
1/30/2020	D3	0.27	1.16	0.06	165.0	47	3.7	5.9	0.17	1.33
2/6/2020	D3	0.38	1.58	0.07	422.0	225	2.5	4.3	0.17	1.75
2/20/2020	D3	0.43	1.49	0.06	603.0	180	2.0	4.5	0.15	1.64
2/27/2020	D3	0.28	1.10	0.07	192.0	50	2.5	6.6	0.17	1.27
3/5/2020	D3	0.31	1.51	0.17	232.0	55	5.2	12.4	0.40	1.91
3/11/2020	D3	0.30	1.04	0.08	74.5	11	5.0	6.6	0.26	1.30
3/19/2020	D3	0.31	1.13	0.09	81.2	30	5.1	4.8	0.24	1.37
3/25/2020	D3	0.36	1.45	0.10	120.0	65	6.5	7.5	0.26	1.71
4/2/2020	D3	0.35	1.23	0.10	81.3	28	3.3	2.9	0.20	1.43
4/9/2020	D3	0.46	1.40	0.07	71.9	40	3.8	4.5	0.32	1.72
4/16/2020	D3	0.29	1.03	0.07	70.2	26	1.9	2.3	0.11	1.14
4/23/2020	D3	0.42	1.74	0.10	431.0	130	6.2	4.4	0.49	2.23
4/30/2020	D3	0.52	1.86	0.29	269.0	70	6.9	4.3	0.44	2.30
5/7/2020	D3	0.47	1.50	0.15	155.0	69	7.2	9.3	0.51	2.01
5/14/2020	D3	0.18	1.21	0.11	56.1	49	25.3	40.8	0.15	1.36
5/21/2020	D3	0.25	1.56	0.33	76.4	63	36.2	58.0	0.93	2.49
5/28/2020	D3	0.51	1.94	0.32	262.0	106	16.9	11.7	0.72	2.66
6/4/2020	D3	0.27	1.40	0.26	59.5	50	13.8	15.9	4.56	5.96
6/11/2020	D3	0.36	1.98	0.52	50.5	30	8.9	9.9	0.74	2.72
6/18/2020	D3	0.15	0.92	0.17	34.6	48	14.6	47.3	1.68	2.60
6/25/2020	D3	0.22	2.02	0.35	46.0	40	15.7	25.0	1.10	3.12
7/2/2020	D3	0.21	2.50	0.47	47.3	59	14.8	37.5	1.35	3.85
7/8/2020	D3	0.34	2.00	0.33	144.0	98	4.4	8.2	0.66	2.66
7/15/2020	D3	0.17	0.95	0.07	27.7	40	16.6	39.4	0.62	1.57
7/22/2020	D3	0.14	0.64	0.04	23.2	36	20.5	59.0	0.19	0.83
7/29/2020	D3	0.15	0.76	0.04	34.0	51	23.8	68.2	0.40	1.16
8/5/2020	D3	0.12	0.96	0.10	26.0	38	18.3	47.1	0.32	1.28
8/12/2020	D3	0.28	1.06	<0.02	59.6	34	9.9	28.3	0.50	1.56
8/19/2020	D3	0.14	0.69	0.05	23.7	32	6.7	37.2	0.17	0.86
8/26/2020	D3	0.18	0.70	0.04	17.7	21	14.9	56.6	0.17	0.87
9/2/2020	D3	0.23	0.87	0.09	17.6	23	5.1	25.6	0.14	1.01
9/9/2020	D3	0.24	0.85	0.05	21.9	26	5.3	29.0	0.27	1.12
9/16/2020	D3	0.47	0.97	0.04	20.7	30	11.9	22.2	0.12	1.09
9/23/2020	D3	0.64	2.32	0.03	154.0	218	16.2	23.9	0.93	3.25
9/30/2020	D3	0.35	1.08	0.07	14.8	17	7.5	19.9	0.09	1.17
10/7/2020	D3	0.37	0.83	0.04	20.7	19	3.7	13.9	0.14	0.97
10/14/2020	D3	0.48	1.06	0.02	13.6	17	2.7	7.3	0.02	1.08
10/21/2020	D3	0.46	0.86	0.03	21.0	24	2.3	9.8	0.09	0.95
10/28/2020	D3	0.44	0.91	0.28	56.1	21	3.5	12.1	0.21	1.12
11/5/2020	D3	0.34	0.86	0.07	29.8	15	3.0	9.1	0.10	0.96
11/12/2020	D3	0.41	0.94	0.04	19.5	11	3.4	11.6	0.06	1.00

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/19/2020	D3	0.34	0.83	0.03	17.9	6	4.6	18.8	0.08	0.91
11/23/2020	D3	0.33	0.85	0.05	22.2	17	6.1	20.8	0.03	0.88
12/3/2020	D3	0.24	0.93	0.04	28.7	15	12.7	28.0	0.28	1.21
12/10/2020	D3	0.25	0.87	0.05	22.8	4	13.7	31.0	0.47	1.34
12/17/2020	D3	0.31	1.11	0.04	65.0	16	5.9	14.4	0.62	1.73
12/22/2020	D3	0.27	0.97	0.04	68.7	13	14.5	10.1	0.27	1.24
12/29/2020	D3	0.20	0.91	0.06	41.5	6	6.5	15.1	0.16	1.07
1/6/2021	D3	0.22	0.79	0.05	60.2	9	2.1	5.8	0.06	0.85
1/13/2021	D3	0.29	1.11	0.07	170.0	56	2.6	7.7	0.13	1.24
1/20/2021	D3	0.25	1.16	0.12	106.0	25	3.9	12.6	0.17	1.33
1/27/2021	D3	0.31	1.52	0.04	247.0	96	5.9	14.4	0.13	1.65
2/3/2021	D3	0.21	1.24	0.07	179.0	53	3.6	14.0	0.08	1.32
2/10/2021	D3	0.26	1.31	0.10	151.0	78	2.8	14.5	0.14	1.45
2/24/2021	D3	0.22	1.03	0.06	48.1	26	2.6	6.5	0.48	1.51
3/9/2021	D3	0.25	1.03	0.09	84.4	16	1.6	5.5	0.11	1.14
3/17/2021	D3	0.36	1.27	0.11	78.7	56	2.9	9.5	0.23	1.50
3/24/2021	D3	0.40	1.57	0.15	79.6	62	5.2	10.4	0.49	2.06
3/31/2021	D3	0.74	2.45	0.08	998.0	488	2.9	3.5	0.29	2.74
4/7/2021	D3	0.38	1.25	0.15	103	68	5.4	5.7	0.45	1.70
4/14/2021	D3	0.54	1.57	0.13	142.0	91	5.1	5.7	0.30	1.87
4/21/2021	D3	0.45	1.43	0.13	118.0	44	5.9	6.9	0.51	1.94
4/28/2021	D3	0.45	1.54	0.18	122.0	74	6.0	5.9	0.43	1.97
5/5/2021	D3	0.45	1.29	0.12	100	53	4.1	4.2	0.24	1.53
5/12/2021	D3	0.65	2.80	0.49	683.0	326	6.2	4.5	1.23	4.03
5/19/2021	D3	0.47	1.60	0.16	101.0	40	7.1	7.0	0.79	2.39
5/26/2021	D3	0.25	0.97	0.10	44.3	46	12.0	22.3	0.79	1.76
6/2/2021	D3	0.52	1.77	0.47	88.1	34	18.8	19.4	2.39	4.16
6/16/2021	D3	0.59	1.27	0.22	13.5	19	2.6	4.1	<0.02	NR
6/23/2021	D3	0.53	1.79	0.34	39.0	42	13.8	27.0	0.71	2.50
6/30/2021	D3	0.22	1.71	0.50	17.2	22	31.1	66.0	2.16	3.87
7/8/2021	D3	0.18	0.92	0.14	16.2	25	24.2	60.5	0.60	1.52
7/14/2021	D3	0.14	1.40	0.24	26.4	33	36.5	74.4	1.19	2.59
7/21/2021	D3	0.17	0.97	0.24	14.6	17	25.6	61.5	0.81	1.78
7/28/2021	D3	0.21	0.61	0.11	19.3	22	19.3	55.4	0.25	0.86
8/4/2021	D3	0.14	0.71	0.08	29.1	36	20.9	44.4	0.26	0.97
8/11/2021	D3	0.10	0.66	0.04	21.6	28	26.6	70.6	0.29	0.95
8/18/2021	D3	0.12	0.75	0.04	26.7	31	13.4	57.0	0.02	0.77
8/25/2021	D3	0.18	0.90	0.05	30.0	34	9.3	47.4	0.34	1.24
9/1/2021	D3	0.13	0.65	0.06	21.9	27	15.1	49.9	0.19	0.84
9/8/2021	D3	0.17	0.79	0.03	18.4	22	18.1	52.9	0.13	0.92

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Stream Name Deep Bayou

Station Location LINCOLN COUNTY, AT AR HWY 11 BRIDGE CROSSING

Latitude 34° 2'3.65"N
Longitude 91°42'35.19"W

Laboratory's Minimum Reporting Limits								
Parameter	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3/NO2-N (mg/L)
MRL	0.02	0.05	0.02	0.1	1	0.5	0.5	0.02
*NR = not reportable due to either NO3+NO2-N or TKN resulting in less than MRL								

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/30/2017	D4	0.24	0.85	0.05	5.2	6	36.7	95.3	<0.02	NR
12/7/2017	D4	0.25	0.83	0.02	3.1	5	28.6	95.8	0.02	0.85
12/14/2017	D4	0.14	0.60	0.03	2.9	4	41.2	98.9		
12/21/2017	D4	0.67	1.53	0.04	145.0	42	7.6	12.1	2.09	3.62
12/28/2017	D4	0.37	1.23	0.08	88.3	19	10.7	12.6	0.43	1.66
1/11/2018	D4	0.28	1.09	0.11	82.6	9	22.6	23.8	0.28	1.37
1/25/2018	D4	0.49	2.16	0.10	587.0	154	13.0	17.6	0.40	2.56
2/1/2018	D4	0.16	1.47	0.05	229.0	82	9.8	22.4	0.06	1.53
2/8/2018	D4	0.42	1.82	0.07	624.0	195	4.2	8.2	0.60	2.42
2/15/2018	D4	0.32	1.09	0.04	348.0	92	1.9	3.3	0.26	1.35
2/22/2018	D4	0.37	1.42	0.03	743.0	226	1.6	2.6	0.21	1.63
3/1/2018	D4	0.37	1.25	0.05	537.0	162	1.8	2.9	0.16	1.41
3/8/2018	D4	0.23	0.82	0.05	93.1	14	1.8	2.3	0.06	0.88
3/15/2018	D4	0.26	1.18	0.11	162.0	20	3.0	3.2	0.15	1.33
3/22/2018	D4	0.38	1.29	0.14	149.0	25	4.3	5.6	0.23	1.52
3/29/2018	D4	0.41	2.14	0.28	290.0	76	9.2	7.6	0.20	2.34
4/5/2018	D4	0.39	1.36	0.12	89.5	11	4.1	4.3	0.29	1.65
4/12/2018	D4	0.29	1.04	0.08	114.0	14				
4/19/2018	D4	0.27	1.00	0.06	207.0	58				
4/26/2018	D4	0.33	1.15	0.10	146.0	24				
5/3/2018	D4	0.35	1.18	0.15	138.0	11				
5/10/2018	D4	0.31	1.20	0.19	91.6	10				
5/17/2018	D4	0.20	1.97	0.25	25.0	26				
5/24/2018	D4	0.42	3.22	0.62	875.0	428				
5/31/2018	D4	0.37	1.22	0.14	98.4	10				
6/7/2018	D4	0.16	5.82	0.43	10.1	10				
6/14/2018	D4	0.28	2.83	0.42	516.0	346				
6/21/2018	D4	0.16	1.38	0.28	37.3	23				
6/28/2018	D4	0.11	2.22	0.59	17.2	17	36.4	90.0	0.74	2.96
7/5/2018	D4	0.14	0.92	0.12	18.5	12	21.3	62.3	0.25	1.17
7/12/2018	D4	0.13	0.90	0.14	25.6	18	21.4	60.6	0.29	1.19
7/19/2018	D4	0.19	0.96	0.11	37.7	26	13.8	45.2	0.38	1.34
7/26/2018	D4	0.17	0.72	0.07	22.7	19	14.9	52.9	0.33	1.05
8/2/2018	D4	0.15	1.09	0.08	41.7	32	7.9	32.2	0.26	1.35
8/9/2018	D4	0.20	1.07	0.03	105.0	76	6.6	37.8	0.33	1.40
8/16/2018	D4	0.15	0.68	0.07	16.4	14	5.8	37.2	0.10	0.78
8/23/2018	D4	0.27	0.85	0.10	17.8	12	2.3	8.0	0.08	0.93
8/30/2018	D4	0.21	0.79	0.08	19.3	14	11.5	21.1	0.22	1.01
9/6/2018	D4	0.20	0.86	0.09	14.1	13	2.9	15.1	0.07	0.93
9/13/2018	D4	0.39	1.30	0.18	15.5	13	3.6	8.3	0.05	1.35
9/20/2018	D4	0.38	0.98	0.13	16.0	6	2.5	7.4	0.21	1.19
9/27/2018	D4	0.52	1.32	0.16	12.6	7	4.6	11.3	0.07	1.39
10/4/2018	D4	0.48	0.99	0.12	19.3	6	2.7	10.2	0.23	1.22
10/11/2018	D4	0.58	1.69	0.07	39.3	30	8.1	12.9	0.46	2.15
10/18/2018	D4	0.31	1.18	0.06	22.6	7	7.0	17.2	0.13	1.31
10/25/2018	D4	0.26	1.17	0.05	81.2	32	3.9	13.4	0.18	1.35
10/30/2018	D4	0.26	0.93	0.06	21.1	4	3.1	13.0	0.12	1.05
11/8/2018	D4	0.39	1.36	0.02	168.0	53	1.9	6.7	0.11	1.47
11/15/2018	D4	0.24	0.88	0.02	57.7	10	1.9	6.7	0.06	0.94
11/20/2018	D4	0.17	0.78	0.05	28.6	3	2.2	10.0	0.06	0.84
11/29/2018	D4	0.15	0.74	0.03	20.0	4	10.1	34.8	0.06	0.80
12/6/2018	D4	0.32	1.16	0.06	33.0	5	2.7	10.2	0.05	1.21
12/13/2018	D4	0.21	0.82	0.04	48.0	14	1.8	4.9	0.05	0.87
12/20/2018	D4	0.23	0.91	0.08	55.2	13	1.6	5.6	0.08	0.99
1/3/2019	D4	0.28	1.01	0.05	183.0	23	1.9	3.7	0.10	1.11
1/10/2019	D4	0.20	0.86	0.08	68.8	6	1.6	4.8	0.11	0.97
1/17/2019	D4	0.16	0.98	0.09	90.5	15	2.2	7.5	0.09	1.07
1/24/2019	D4	0.29	1.09	0.04	306.0	65	0.7	2.2	0.10	1.19
1/31/2019	D4	0.15	0.95	0.06	99.2	20	3.7	7.5	0.05	1.00
2/7/2019	D4	0.21	0.94	0.10	41.3	14	1.4	9.3	0.08	1.02
2/14/2019	D4	0.41	1.62	0.19	477.0	96	1.8	4.7	0.13	1.75
2/20/2019	D4	0.35	1.71	0.09	445.0	161	2.5	2.6	0.30	2.01
2/28/2019	D4	0.18	0.80	0.06	55.7	17	1.6	2.6	0.06	0.86
3/7/2019	D4	0.22	0.74	0.06	69.0	9	3.2	4.9	0.13	0.87
3/14/2019	D4	0.35	1.19	0.04	485.0	158	1.0	1.5	0.14	1.33
3/21/2019	D4	0.25	0.87	0.09	58.5	9	1.5	2.1	0.10	0.97
3/28/2019	D4	0.31	1.00	0.09	63.2	11	2.6	3.3	0.17	1.17
4/4/2019	D4	0.33	1.12	0.12	79.1	39	5.7	7.0	0.25	1.37

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
4/11/2019	D4	0.42	1.31	0.13	56.8	20	3.2	3.7	0.16	1.47
4/18/2019	D4	0.30	0.98	0.10	96.1	25	1.6	1.7	0.09	1.07
4/25/2019	D4	0.38	1.19	0.12	150.0	62	2.5	2.5	0.37	1.56
5/2/2019	D4	0.37	1.00	0.11	84.8	26	5.5	4.5	0.53	1.53
5/9/2019	D4	0.66	2.66	0.27	801.0	356	4.7	3.7	0.80	3.46
5/16/2019	D4	0.37	1.00	0.12	45.0	12	3.0	3.0	0.35	1.35
5/23/2019	D4	0.49	1.62	0.20	84.4	26	7.1	7.5	1.22	2.84
5/30/2019	D4	0.28	1.54	0.16	22.6	13	11.9	26.9	0.95	2.49
6/6/2019	D4	0.28	2.14	0.58	151.0	120	31.2	39.9	1.92	4.06
6/13/2019	D4	0.24	2.61	0.57	30.8	14	18.0	30.1	1.86	4.47
6/20/2019	D4	0.18	1.27	0.35	11.4	13	34.2	68.7	1.83	3.10
6/27/2019	D4	0.21	2.15	0.53	28.7	15	19.3	32.9	1.36	3.51
7/2/2019	D4	0.18	1.08	0.12	19.5	14	17.8	40.4	0.64	1.72
7/11/2019	D4	0.25	1.12	0.24	38.9	27	8.7	17.7	0.50	1.62
7/18/2019	D4	0.23	0.95	0.12	63.3	26	3.0	3.6	0.21	1.16
7/25/2019	D4	0.26	1.43	0.15	19.0	19	9.9	24.6	0.38	1.81
8/1/2019	D4	0.14	1.03	0.16	17.1	13	20.8	53.7	0.63	1.66
8/8/2019	D4	0.10	0.66	0.10	19.1	20	23.8	60.8	0.37	1.03
8/15/2019	D4	0.11	0.83	0.07	15.1	14	25.9	72.2	<0.02	NR
8/22/2019	D4	0.16	0.62	0.07	12.9	13	26.4	98.0	<0.02	NR
8/29/2019	D4	0.18	0.86	0.07	19.4	14	6.0	38.0	0.17	1.03
9/5/2019	D4	0.14	0.92	0.11	11.9	8	11.0	33.4	<0.02	NR
9/12/2019	D4	0.14	0.73	0.08	10.2	9	11.5	51.4	<0.02	NR
9/19/2019	D4	0.24	0.80	0.06	15.6	10	9.1	36.3	<0.02	NR
9/26/2019	D4	0.31	0.76	0.07	33.4	14	7.3	23.8	0.16	0.92
10/1/2019	D4	0.32	1.18	0.08	21.3	12	7.8	19.7	<0.02	NR
10/9/2019	D4	0.23	0.76	0.07	14.2	6	8.8	19.6	<0.02	NR
10/17/2019	D4	0.26	0.63	0.05	20.4	8	7.9	12.6	<0.02	NR
10/24/2019	D4	0.29	0.92	0.04	22.1	5	16.0	24.8	0.33	1.25
10/31/2019	D4	0.40	1.82	0.03	248.0	150	19.6	24.7	1.75	3.57
11/7/2019	D4	0.24	0.99	0.06	28.9	6	18.3	19.6	0.75	1.74
11/14/2019	D4	0.24	0.96	0.03	40.5	8	19.0	18.1	0.62	1.58
11/21/2019	D4	0.22	0.81	0.05	19.7	3	25.6	39.0	0.29	1.10
11/25/2019	D4	0.33	1.23	0.08	85.8	12	13.8	20.9	0.81	2.04
12/5/2019	D4	0.31	0.97	0.06	109.0	5	8.3	15.1	0.11	1.08
12/12/2019	D4	0.31	1.40	0.11	105.0	8	8.1	10.8	0.18	1.58
12/19/2019	D4	0.35	1.26	0.09	326.0	43	7.0	8.6	0.23	1.49
12/31/2019	D4	0.36	1.27	0.07	154.0	20	4.8	7.3	0.28	1.55
1/9/2020	D4	0.25	1.26	0.05	94.5	17	4.4	9.2	0.11	1.37
1/16/2020	D4	0.24	1.07	0.08	112.0	19	2.6	5.9	0.08	1.15
1/23/2020	D4	0.41	1.50	0.06	524.0	182	3.0	4.9	0.31	1.81
1/30/2020	D4	0.26	1.11	0.07	159.0	46	3.8	6.0	0.15	1.26
2/6/2020	D4	0.42	1.66	0.06	467.0	240	3.3	5.4	0.18	1.84
2/13/2020	D4	0.26	0.81	0.04	196.0	57	1.5	1.7	0.08	0.89
2/20/2020	D4	0.32	1.31	0.06	315.0	65	1.8	4.7	0.11	1.42
2/27/2020	D4	0.24	1.03	0.07	133.0	17	2.3	6.9	0.16	1.19
3/5/2020	D4	0.34	1.60	0.11	489.0	172	4.1	9.9	0.65	2.25
3/11/2020	D4	0.28	1.06	0.10	63.3	16	5.0	6.4	0.29	1.35
3/19/2020	D4	0.29	1.11	0.09	63.7	13	4.3	4.2	0.21	1.32
3/25/2020	D4	0.32	1.29	0.10	93.6	42	6.2	6.8	0.26	1.55
4/2/2020	D4	0.33	1.15	0.07	92.9	33	2.5	2.3	0.15	1.30
4/9/2020	D4	0.45	1.33	0.11	67.0	17	4.4	5.3	0.34	1.67
4/16/2020	D4	0.30	1.10	0.07	88.4	31	2.1	3.0	0.12	1.22
4/23/2020	D4	0.44	1.84	0.09	504.0	184	4.9	4.2	0.39	2.23
4/30/2020	D4	0.62	1.94	0.37	339.0	114	7.4	4.4	0.50	2.44
5/7/2020	D4	0.42	1.35	0.24	85.8	14	5.7	7.0	0.36	1.71
5/14/2020	D4	0.16	1.11	0.14	30.7	16	30.8	44.8	0.18	1.29
5/21/2020	D4	0.18	1.09	0.16	36.4	26	16.7	30.5	1.11	2.20
5/28/2020	D4	0.51	3.02	0.42	384.0	200	16.4	12.2	0.93	3.95
6/4/2020	D4	0.25	1.55	0.31	44.3	25	12.4	14.2	3.73	5.28
6/11/2020	D4	0.32	1.84	0.49	50.9	20	7.6	7.0	0.58	2.42
6/18/2020	D4	0.17	1.32	0.30	11.6	11	12.5	37.1	1.40	2.72
6/25/2020	D4	0.22	2.12	0.34	39.5	27	14.2	24.4	1.15	3.27
7/2/2020	D4	0.18	2.44	0.65	23.4	24	13.8	36.0	1.30	3.74
7/8/2020	D4	0.36	1.76	0.20	190.0	126	4.2	7.2	0.85	2.61
7/15/2020	D4	0.17	1.59	0.45	13.8	15	14.5	37.3	1.14	2.73
7/22/2020	D4	0.15	0.75	0.17	5.7	8	19.2	54.0	0.30	1.05
7/29/2020	D4	0.14	0.68	0.07	6.9	10	21.2	61.4	0.51	1.19
8/5/2020	D4	0.11	0.65	0.06	23.0	27	16.0	47.2	0.25	0.90
8/12/2020	D4	0.24	1.07	0.03	71.1	41	11.5	34.4	0.59	1.66
8/19/2020	D4	0.12	0.77	0.05	13.9	14	6.5	38.2	0.21	0.98
8/26/2020	D4	0.15	0.58	0.04	9.8	10	9.7	44.5	0.18	0.76
9/2/2020	D4	0.29	0.95	0.07	14.4	15	6.3	19.1	0.17	1.12
9/9/2020	D4	0.23	0.78	0.07	14.2	15	6.5	29.7	0.29	1.07
9/16/2020	D4	0.92	1.12	0.06	10.6	12	7.8	22.6	0.06	1.18
9/23/2020	D4	0.50	1.60	0.04	73.3	100	14.4	28.2	0.59	2.19
9/30/2020	D4	0.33	1.05	0.08	10.8	10	7.5	20.5	0.10	1.15

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
10/7/2020	D4	0.35	0.82	0.08	18.9	11	3.8	13.8	0.14	0.96
10/14/2020	D4	0.51	1.09	0.02	16.0	20	3.2	7.9	0.02	1.11
10/21/2020	D4	0.42	0.82	0.08	12.4	8	2.5	9.7	0.05	0.87
10/28/2020	D4	0.50	1.17	0.34	54.1	22	3.5	13.6	0.05	1.22
11/5/2020	D4	0.31	0.85	0.09	27.8	7	3.2	9.3	0.13	0.98
11/12/2020	D4	0.37	0.85	0.04	19.6	7	2.4	8.5	0.05	0.90
11/19/2020	D4	0.37	0.83	0.04	19.7	5	4.8	17.2	0.15	0.98
11/23/2020	D4	0.33	0.79	0.07	15.4	11	4.8	16.6	<0.02	NR
12/3/2020	D4	0.25	0.93	0.05	21.1	7	16.6	40.7	0.29	1.22
12/10/2020	D4	0.24	0.89	0.03	22.2	2	9.8	24.0	0.19	1.08
12/17/2020	D4	0.30	1.11	0.04	71.6	15	5.8	14.6	0.63	1.74
12/22/2020	D4	0.28	1.04	0.04	73.0	7	4.9	11.3	0.34	1.38
12/29/2020	D4	0.20	0.88	0.06	38.7	4	5.7	14.6	0.13	1.01
1/6/2021	D4	0.21	0.84	0.05	66.4	9	2.1	5.7	0.07	0.91
1/13/2021	D4	0.25	0.99	0.05	137.0	43	2.6	7.3	0.11	1.10
1/20/2021	D4	0.22	0.97	0.10	88.2	10	3.3	10.8	0.17	1.14
1/27/2021	D4	0.37	1.62	0.08	264.0	102	4.7	11.3	0.23	1.85
2/3/2021	D4	0.20	1.18	0.08	118.0	27	4.2	15.7	0.10	1.28
2/10/2021	D4	0.14	1.04	0.10	48.5	15	4.1	17.1	0.09	1.13
2/24/2021	D4	0.23	1.02	0.06	50.3	31	2.9	5.9	0.52	1.54
3/3/2021	D4	0.23	0.86	0.04	115.0	25	1.4	2.2	0.04	0.90
3/9/2021	D4	0.22	0.97	0.08	77.7	15	1.4	5.6	0.08	1.05
3/17/2021	D4	0.36	1.23	0.13	81.7	83	3.3	6.0	0.24	1.47
3/24/2021	D4	0.38	1.42	0.10	101.0	49	6.2	15.2	0.61	2.03
3/31/2021	D4	0.58	2.41	0.08	1126.0	560	2.6	3.0	0.26	2.67
4/7/2021	D4	0.33	1.13	0.15	65.2	12	4.0	4.3	0.39	1.52
4/14/2021	D4	0.48	1.38	0.13	96.1	49	5.1	6.0	0.37	1.75
4/21/2021	D4	0.36	1.10	0.09	50.2	12	4.9	6.4	0.37	1.47
4/28/2021	D4	0.34	1.19	0.10	68.8	15	5.3	5.0	0.32	1.51
5/5/2021	D4	0.42	1.29	0.14	98.8	27	4.1	4.2	0.25	1.54
5/12/2021	D4	0.69	2.94	0.49	828.0	332	6.6	4.8	1.44	4.38
5/19/2021	D4	0.37	1.18	0.12	69.4	12	5.8	6.0	0.43	1.61
5/26/2021	D4	0.38	1.17	0.13	47.6	25	9.3	12.1	0.46	1.63
6/2/2021	D4	0.32	6.48	0.92	151	29	16.8	22.2	2.24	8.72
6/9/2021	D4	0.35	1.38	0.30	127.0	59	3.7	3.5	0.80	2.18
6/16/2021	D4	0.50	1.30	0.22	18.8	25	2.6	4.1	<0.02	NR
6/23/2021	D4	0.31	3.07	0.55	40.9	21	9.5	19.9	1.42	4.49
6/30/2021	D4	0.18	0.81	0.12	5.5	6	24.6	54.6	1.37	2.18
7/8/2021	D4	0.15	0.78	0.13	6.0	8	30.6	69.9	0.70	1.48
7/14/2021	D4	0.18	1.03	0.16	5.2	7	25.5	56.9	1.12	2.15
7/21/2021	D4	0.17	1.13	0.17	7.6	8	21.3	53.5	1.04	2.17
7/28/2021	D4	0.17	0.68	0.09	9.9	12	21.7	65.6	0.47	1.15
8/4/2021	D4	0.19	0.67	0.07	9.7	9	22.9	53.3	0.28	0.95
8/11/2021	D4	0.15	0.59	0.05	10.6	12	33.3	84.1	0.31	0.90
8/18/2021	D4	0.19	0.81	0.06	18.7	14	12.4	44.5	0.36	1.17
8/25/2021	D4	0.22	0.77	0.06	9.1	8	9.0	51.5	0.29	1.06
9/1/2021	D4	0.17	0.64	0.04	9.8	10	12.1	44.4	0.21	0.85
9/8/2021	D4	0.13	0.65	0.02	4.8	4	27.1	69.8	0.06	0.71

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Stream Name Deep Bayou

Station Location LINCOLN COUNTY, AT AR HWY 114 BRIDGE CROSSING

Latitude 33°57'47.20"N
Longitude 91°41'32.76"W

Laboratory's Minimum Reporting Limits								
Parameter	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3/NO2-N (mg/L)
MRL	0.02	0.05	0.02	0.1	1	0.5	0.5	0.02
*NR = not reportable due to either NO3+NO2-N or TKN resulting in less than MRL								

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
11/30/2017	D5	0.10	0.60	0.05	5.8	6	18.7	52.0	0.03	0.63
12/7/2017	D5	0.11	0.62	0.04	7.8	6	12.5	46.7	<0.02	NR
12/14/2017	D5	0.08	0.64	0.04	4.3	4	18.3	57.5		
12/21/2017	D5	0.71	1.48	0.03	217.0	72	8.0	12.7	2.58	4.06
12/28/2017	D5	0.37	1.07	0.07	73.9	14	9.7	11.4	0.44	1.51
1/11/2018	D5	0.28	1.24	0.11	99.4	8	11.2	16.1	0.42	1.66
1/25/2018	D5	0.39	2.18	0.10	497.0	78	8.2	19.5	0.61	2.79
2/1/2018	D5	0.17	1.33	0.05	203.0	65	10.6	25.2	0.06	1.39
2/8/2018	D5	0.36	1.98	0.06	920.0	251	3.7	7.6	0.79	2.77
2/15/2018	D5	0.34	1.26	0.03	347.0	117	2.1	3.6	0.28	1.54
2/22/2018	D5	0.45	1.75	0.04	1160.0	456	2.6	3.6	0.23	1.98
3/1/2018	D5	0.30	1.03	0.05	347.0	59	1.7	3.4	0.08	1.11
3/8/2018	D5	0.26	1.15	0.05	336.0	61	2.4	2.4	0.08	1.23
3/15/2018	D5	0.27	1.37	0.11	418.0	62	2.5	3.2	0.15	1.52
3/22/2018	D5	0.39	3.65	0.21	286.0	52	4.6	4.7	0.30	3.95
3/29/2018	D5	0.33	2.44	0.24	560.0	162	8.1	7.1	1.71	4.15
4/5/2018	D5	0.47	2.36	0.18	1094.0	352	5.5	4.3	0.60	2.96
4/12/2018	D5	0.29	1.15	0.08	148.0	43				
4/19/2018	D5	0.28	1.08	0.06	303.0	44				
4/26/2018	D5	0.41	1.43	0.15	280.0	96				
5/3/2018	D5	0.36	1.12	0.17	116.0	18				
5/10/2018	D5	0.41	1.55	0.23	131.0	62				
5/17/2018	D5	0.70	2.41	1.33	21.5	25				
5/24/2018	D5	0.33	2.76	0.39	972.0	540				
5/31/2018	D5	0.40	1.41	0.28	91.6	19				
6/7/2018	D5	0.22	4.34	0.73	40.3	43				
6/14/2018	D5	0.16	1.73	0.49	24.8	22				
6/21/2018	D5	0.13	1.56	0.37	20.0	18				
6/28/2018	D5	0.12	1.48	0.23	17.4	22	24.7	67.0	0.53	2.01
7/5/2018	D5	0.15	4.61	0.87	25.0	24	25.3	66.2	0.43	5.04
7/12/2018	D5	0.12	0.97	0.12	18.7	16	19.6	47.4	0.27	1.24
7/19/2018	D5	0.15	0.90	0.13	23.5	21	18.8	58.1	0.40	1.30
7/26/2018	D5	0.15	0.93	0.15	15.1	16	17.8	54.5	0.45	1.38
8/2/2018	D5	0.15	1.13	0.08	44.6	27	7.4	31.1	0.29	1.42
8/9/2018	D5	0.13	1.36	0.04	236.0	116	6.4	30.4	0.49	1.85
8/16/2018	D5	0.16	0.68	0.07	17.3	15	5.3	30.7	0.11	0.79
8/23/2018	D5	0.27	0.80	0.09	29.6	26	2.5	8.5	0.08	0.88
8/30/2018	D5	0.22	0.73	0.08	8.7	9	2.6	21.0	0.17	0.90
9/6/2018	D5	0.26	0.74	0.05	6.0	8	2.5	19.9	0.07	0.81
9/13/2018	D5	0.36	1.16	0.11	23.2	23	4.3	8.5	0.07	1.23
9/20/2018	D5	0.53	1.05	0.17	7.6	3	4.0	7.0	0.05	1.10
9/27/2018	D5	0.48	1.40	0.10	27.1	20	5.1	13.2	0.06	1.46
10/4/2018	D5	0.36	1.65	0.16	38.8	33	3.0	15.3	0.05	1.70
10/11/2018	D5	0.56	1.77	0.08	80.1	61	5.9	11.9	0.46	2.23
10/18/2018	D5	0.30	1.35	0.08	31.2	12	6.9	17.2	0.13	1.48
10/25/2018	D5	0.29	1.23	0.10	33.2	14	4.1	11.8	0.19	1.42
10/30/2018	D5	0.25	1.15	0.09	33.5	15	3.6	13.1	0.14	1.29
11/8/2018	D5	0.20	1.46	0.02	235.0	94	2.3	7.8	0.16	1.62
11/15/2018	D5	0.08	0.90	0.03	66.3	9	1.8	5.9	0.07	0.97
11/20/2018	D5	0.21	0.93	0.05	33.2	6	2.2	8.9	0.05	0.98
11/29/2018	D5	0.27	0.88	0.07	29.5	7	4.4	12.8	0.11	0.99
12/6/2018	D5	0.34	1.19	0.07	42.1	4	2.6	9.2	0.06	1.25
12/13/2018	D5	0.22	0.85	0.04	53.8	11	1.6	4.6	0.04	0.89
12/20/2018	D5	0.25	0.95	0.08	74.6	24	7.6	5.9	0.09	1.04
1/3/2019	D5	0.23	1.04	0.05	141.0	15	1.2	3.3	0.08	1.12
1/10/2019	D5	0.21	0.88	0.09	89.8	16	1.5	4.4	0.09	0.97
1/17/2019	D5	0.16	1.01	0.10	142.0	21	2.7	6.6	0.15	1.16
1/24/2019	D5	0.32	1.38	0.05	552.0	201	1.3	2.4	0.17	1.55
1/31/2019	D5	0.17	0.90	0.07	112.0	21	1.6	5.8	0.06	0.96
2/7/2019	D5	0.22	1.03	0.11	95.5	35	1.5	8.7	0.08	1.11
2/14/2019	D5	0.19	1.13	0.07	132.0	33	1.7	3.2	0.11	1.24
2/20/2019	D5	0.13	1.73	0.10	608.0	254	2.7	3.0	0.32	2.05
2/28/2019	D5	0.20	0.90	0.06	131.0	43	1.6	1.8	0.06	0.96
3/7/2019	D5	0.29	0.98	0.06	116.0	22	2.3	3.2	0.15	1.13
3/14/2019	D5	0.46	1.54	0.06	807.0	340	1.3	1.8	0.16	1.70
3/21/2019	D5	0.25	0.94	0.10	90.0	22	1.3	1.8	0.10	1.04
3/28/2019	D5	0.34	1.12	0.10	127.0	42	3.4	3.6	0.23	1.35
4/4/2019	D5	0.34	1.19	0.15	81.6	51	3.2	4.2	0.22	1.41

Laboratory Data
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Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
4/11/2019	D5	0.36	1.39	0.15	80.7	37	3.6	3.3	0.18	1.57
4/18/2019	D5	0.27	1.17	0.09	221.0	40	2.9	2.0	0.25	1.42
4/25/2019	D5	0.37	1.08	0.13	99.1	27	2.8	2.3	0.29	1.37
5/2/2019	D5	0.41	1.12	0.16	105.0	29	5.0	4.6	0.54	1.66
5/9/2019	D5	0.46	2.34	0.09	1020.0	456	3.7	2.4	1.69	4.03
5/16/2019	D5	0.37	1.24	0.13	57.2	20	3.3	2.7	0.37	1.61
5/23/2019	D5	0.35	2.76	0.76	61.2	13	5.9	6.0	0.83	3.59
5/30/2019	D5	0.38	1.90	0.79	25.3	15	8.7	8.4	0.66	2.56
6/6/2019	D5	0.39	6.22	1.98	94.2	95	36.9	39.6	3.98	10.20
6/13/2019	D5	0.19	1.34	0.29	22.5	16	23.6	34.6	2.63	3.97
6/20/2019	D5	0.17	1.42	0.86	72.9	65	29.4	49.7	5.46	6.88
6/27/2019	D5	0.21	1.46	0.25	40.1	24	16.5	26.6	1.54	3.00
7/2/2019	D5	0.15	1.07	0.12	20.8	11	23.7	46.0	1.31	2.38
7/11/2019	D5	0.23	1.10	0.13	63.0	39	9.8	19.1	0.61	1.71
7/18/2019	D5	0.23	0.82	0.12	79.7	30	3.0	3.6	0.32	1.14
7/25/2019	D5	0.35	1.05	0.13	24.0	16	5.6	12.2	0.38	1.43
8/1/2019	D5	0.14	2.40	1.04	20.1	16	15.6	38.6	0.87	3.27
8/8/2019	D5	0.18	0.82	0.09	11.9	16	25.0	55.2	0.37	1.19
8/15/2019	D5	0.14	0.80	0.07	18.6	13	23.7	64.5	0.31	1.11
8/22/2019	D5	0.17	0.60	0.06	11.0	12	17.1	60.5	<0.02	NR
8/29/2019	D5	0.19	0.87	0.08	19.9	13	7.2	41.6	0.17	1.04
9/5/2019	D5	0.07	0.67	0.08	8.9	8	12.5	46.6	<0.02	NR
9/12/2019	D5	0.09	0.95	0.10	3.7	4	13.2	46.8	<0.02	NR
9/19/2019	D5	0.18	0.70	0.10	5.5	4	15.8	66.1	<0.02	NR
9/26/2019	D5	0.24	0.73	0.07	14.6	15	10.2	34.0	<0.02	NR
10/1/2019	D5	0.21	1.12	0.05	10.7	7	5.1	45.5	<0.02	NR
10/9/2019	D5	0.18	0.77	0.08	7.1	6	6.0	32.6	<0.02	NR
10/17/2019	D5	0.21	0.72	0.05	5.7	3	5.6	23.5	<0.02	NR
10/24/2019	D5	0.15	0.58	0.03	4.7	2	8.4	19.7	<0.02	NR
10/31/2019	D5	0.24	1.49	0.04	156.0	76	19.9	26.2	1.56	3.05
11/7/2019	D5	0.27	1.15	0.04	42.9	6	13.9	15.5	0.65	1.80
11/14/2019	D5	0.26	0.91	0.03	35.2	7	17.5	19.7	0.55	1.46
11/21/2019	D5	0.26	1.05	0.04	26.6	6	15.6	18.9	0.28	1.33
11/25/2019	D5	0.38	1.29	0.05	114.0	18	14.1	19.4	0.77	2.06
12/5/2019	D5	0.35	1.04	0.05	118.0	8	7.8	12.9	0.10	1.14
12/12/2019	D5	0.38	1.61	0.12	221.0	26	8.3	11.7	0.24	1.85
12/19/2019	D5	0.43	1.55	0.08	481.0	77	6.2	7.6	0.31	1.86
12/31/2019	D5	0.35	1.21	0.07	222.0	36	5.6	7.8	0.35	1.56
1/9/2020	D5	0.23	1.03	0.05	80.0	8	4.8	9.6	0.10	1.13
1/16/2020	D5	0.28	1.16	0.06	165.0	36	2.4	5.4	0.08	1.24
1/23/2020	D5	0.50	1.89	0.09	807.0	314	3.0	4.2	0.30	2.19
1/30/2020	D5	0.25	1.11	0.06	165.0	52	4.4	7.0	0.12	1.23
2/6/2020	D5	0.39	1.43	0.05	431.0	138	3.1	5.1	0.16	1.59
2/13/2020	D5	0.28	0.95	0.04	221.0	54	1.8	2.0	0.08	1.03
2/20/2020	D5	0.50	1.79	0.07	865.0	194	2.1	2.9	0.14	1.93
2/27/2020	D5	0.25	0.99	0.08	112.0	33	3.0	8.7	0.11	1.10
3/5/2020	D5	0.56	2.58	0.13	1092.0	488	3.3	7.1	1.08	3.66
3/11/2020	D5	0.34	1.47	0.11	157.0	74	4.3	6.3	0.38	1.85
3/19/2020	D5	0.31	1.21	0.08	100.0	28	3.9	3.7	0.20	1.41
3/25/2020	D5	0.32	1.23	0.09	132.0	70	6.9	6.5	0.29	1.52
4/2/2020	D5	0.34	1.28	0.09	169.0	40	3.1	2.8	0.23	1.51
4/9/2020	D5	0.38	1.45	0.12	82.5	27	4.2	4.7	0.28	1.73
4/16/2020	D5	0.31	1.28	0.09	149.0	38	2.7	3.0	0.19	1.47
4/23/2020	D5	0.42	1.86	0.10	506.0	148	4.4	4.9	0.46	2.32
4/30/2020	D5	0.70	2.36	0.50	564.0	286	10.6	4.1	0.56	2.92
5/7/2020	D5	0.47	1.35	0.26	87.7	18	4.4	4.4	0.23	1.58
5/14/2020	D5	0.40	1.30	0.13	129.0	49	6.9	6.1	0.71	2.01
5/21/2020	D5	0.27	1.29	0.18	82.2	53	15.5	18.0	0.83	2.12
5/28/2020	D5	0.51	2.06	0.25	360.0	172	15.8	13.4	1.02	3.08
6/4/2020	D5	0.28	1.12	0.15	71.2	26	9.8	9.4	1.82	2.94
6/11/2020	D5	0.33	2.14	0.52	75.7	38	8.4	6.8	0.91	3.05
6/18/2020	D5	0.19	1.36	0.30	33.6	30	11.8	21.1	1.50	2.86
6/25/2020	D5	0.24	2.02	0.37	69.6	48	13.2	21.8	1.33	3.35
7/2/2020	D5	0.17	1.35	0.15	33.0	35	14.6	32.7	1.12	2.47
7/8/2020	D5	0.31	1.40	0.05	256.0	210	10.9	23.3	0.80	2.20
7/15/2020	D5	0.17	1.25	0.31	20.9	24	15.6	33.1	1.39	2.64
7/22/2020	D5	0.16	0.92	0.25	12.4	18	28.2	65.4	0.58	1.50
7/29/2020	D5	0.11	0.87	0.14	15.1	20	17.5	44.5	0.59	1.46
8/5/2020	D5	0.10	0.65	0.05	16.7	25	17.7	59.5	0.21	0.86
8/12/2020	D5	0.22	1.05	0.02	96.7	55	13.9	42.9	0.64	1.69
8/19/2020	D5	0.12	0.68	0.06	12.7	15	8.4	45.4	0.18	0.86
8/26/2020	D5	0.13	0.48	0.03	8.6	10	11.4	49.6	0.15	0.63
9/2/2020	D5	0.26	0.87	0.09	25.9	27	6.0	22.1	0.12	0.99
9/9/2020	D5	0.24	0.82	0.07	6.0	6	4.8	24.6	0.18	1.00
9/16/2020	D5	0.22	0.78	0.08	3.8	6	7.5	37.2	0.18	0.96
9/23/2020	D5	0.33	1.60	<0.02	102.0	118	9.8	25.0	0.84	2.44
9/30/2020	D5	0.33	1.21	0.07	14.4	16	8.0	20.2	0.13	1.34

Laboratory Data
Analyzed by Ouachita Baptist University
Water Laboratory

Equilibrium
Project #17-400
501.944.1765

Sample Date	Station	TP (mg/L)	TKN (mg/L)	Ammonia-N (mg/L)	Turbidity (NTU)	TSS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	NO3+NO2-N (mg/L)	TN (mg/L)
10/7/2020	D5	0.37	0.89	0.11	11.6	8	5.3	16.6	0.16	1.05
10/14/2020	D5	0.49	1.10	0.02	16.5	17	4.0	9.6	0.02	1.12
10/21/2020	D5	0.40	0.87	0.10	7.8	7	2.2	9.1	0.03	0.90
10/28/2020	D5	0.62	1.54	0.48	48.5	21	8.1	19.8	0.16	1.70
11/5/2020	D5	0.31	0.89	0.09	29.4	12	3.4	10.0	0.12	1.01
11/12/2020	D5	0.41	0.87	0.05	14.9	10	1.9	6.9	<0.02	NR
11/19/2020	D5	0.42	0.91	0.10	12.7	7	2.7	11.7	0.07	0.98
11/23/2020	D5	0.38	0.95	0.13	11.0	10	3.4	13.4	0.02	0.97
12/3/2020	D5	0.27	1.04	0.07	44.9	9	9.1	28.2	0.37	1.41
12/10/2020	D5	0.21	1.04	0.06	29.6	4	14.0	33.2	0.56	1.60
12/17/2020	D5	0.33	1.15	0.04	89.6	24	6.2	15.0	0.62	1.77
12/22/2020	D5	0.31	1.13	0.04	114.0	21	5.3	11.6	0.42	1.55
12/29/2020	D5	0.23	0.96	0.04	75.3	6	5.0	13.8	0.16	1.12
1/6/2021	D5	0.32	1.17	0.07	366.0	123	2.3	5.7	0.10	1.27
1/13/2021	D5	0.27	1.08	0.07	237.0	77	2.5	6.8	0.05	1.13
1/20/2021	D5	0.31	1.24	0.12	297.0	37	3.2	9.2	0.16	1.40
1/27/2021	D5	0.33	1.33	0.11	161.0	38	5.9	13.8	0.33	1.66
2/3/2021	D5	0.19	1.16	0.06	124.0	30	4.1	20.3	0.09	1.25
2/10/2021	D5	0.17	1.12	0.09	108.0	19	3.2	18.4	0.11	1.23
2/24/2021	D5	0.23	1.02	0.08	46.6	28	3.2	6.3	0.55	1.57
3/3/2021	D5	0.26	0.93	0.04	155.0	35	1.3	2.4	0.06	0.99
3/9/2021	D5	0.32	1.30	0.09	369.0	76	1.9	47.0	0.14	1.44
3/17/2021	D5	0.69	4.77	0.26	3605.0	1640	3.7	4.8	0.62	5.39
3/24/2021	D5	0.39	1.33	0.10	117.0	65	3.5	6.2	0.27	1.60
3/31/2021	D5	0.62	2.21	0.10	982.0	432	2.7	3.2	0.25	2.46
4/7/2021	D5	0.33	1.48	0.05	76.4	42	2.5	3.0	0.16	1.64
4/14/2021	D5	0.51	1.51	0.20	110.0	31	4.4	5.6	0.37	1.88
4/21/2021	D5	0.44	1.37	0.18	114.0	46	5.4	6.4	0.42	1.79
5/5/2021	D5	0.38	1.36	0.14	138	41	4.5	4.7	0.33	1.69
5/12/2021	D5	0.89	2.84	0.51	893.0	396	9.8	7.1	1.12	3.96
5/26/2021	D5	0.43	1.26	0.30	54.7	32	6.5	10.3	0.23	1.49
6/2/2021	D5	0.57	3.97	1.16	424	171	18.8	20.5	2.76	6.73
6/9/2021	D5	0.31	1.47	0.28	159.0	59	3.9	3.5	0.80	2.27
6/16/2021	D5	0.30	0.92	0.14	26.6	8	3.2	4.2	0.05	0.97
6/23/2021	D5	0.28	2.15	1.13	11.8	15	7.9	20.3	0.29	2.44
6/30/2021	D5	0.18	1.38	0.44	12.6	15	19.5	46.5	1.28	2.66
7/8/2021	D5	0.17	1.03	0.17	13.6	20	34.8	73.6	0.84	1.87
7/14/2021	D5	0.18	1.00	0.15	19.0	25	20.8	46.9	1.15	2.15
7/21/2021	D5	0.11	0.96	0.15	21.8	28	24.0	62.6	0.84	1.80
7/28/2021	D5	0.19	0.73	0.11	17.1	17	28.3	69.5	0.75	1.48
8/4/2021	D5	0.17	0.77	0.11	18.9	22	16.4	45.5	0.32	1.09
8/11/2021	D5	0.15	0.59	0.05	10.5	11	37.7	87.1	0.29	0.88
8/18/2021	D5	0.16	0.97	0.07	54.1	44	15.2	42.0	0.81	1.78
8/25/2021	D5	0.18	0.83	0.09	13.8	11	9.1	62.9	0.26	1.09
9/1/2021	D5	0.19	0.77	0.09	13.6	12	10.1	32.6	0.22	0.99
9/8/2021	D5	0.12	0.60	0.07	10.5	11	23.1	72.3	0.18	0.78

Appendix II

In-situ Data Set

Equilibrium
Project #17-400
501.944.1765
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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
11/30/2017	B1	215.6	51.7	6.42	7.20
12/7/2017	B1	211.7	50.4	6.30	7.20
12/14/2017	B1	234.1	43.4	7.94	7.23
12/21/2017	B1	136.5	54.0	7.65	6.77
12/28/2017	B1	98.6	42.8	7.54	6.45
1/11/2018	B1	86.5	46.3	9.08	6.55
1/20/2018	B1	171.8	35.6	11.30	6.95
2/1/2018	B1	113.3	41.9	9.07	6.74
2/8/2018	B1	99.7	36.7	12.48	6.68
2/15/2018	B1	94.1	41.8	10.31	6.25
3/1/2018	B1	83.4	49.9	8.18	6.00
3/29/2018	B1	105.4	56.2	6.54	6.55
4/26/2018	B1	77.6	55.3	6.97	6.22
5/3/2018	B1	84.5	61.5	5.69	6.42
5/10/2018	B1	102.3	66.8	3.34	6.62
5/17/2018	B1	127.6	70.2	4.23	7.39
5/24/2018	B1	137.2	70.4	3.23	7.26
5/31/2018	B1	118.4	70.1	8.90	7.00
6/14/2018	B1	209.9	71.7	8.64	7.97
6/28/2018	B1	255.0	76.5	7.87	8.29
7/12/2018	B1	302.8	75.8	7.97	
7/19/2018	B1	301.7	74.2	4.03	5.58
7/26/2018	B1	334.2	72.9	4.49	5.76
8/2/2018	B1	372.1	68.6	5.07	5.59
8/9/2018	B1	184.0	67.5	6.19	5.69
8/16/2018	B1	185.6	72.1	4.17	
8/23/2018	B1	159.5	69.1	1.86	6.66
8/30/2018	B1	114.9	71.7	3.03	6.55
9/6/2018	B1	128.1	69.9	2.98	6.88
9/13/2018	B1	107.8	66.1	4.17	6.79
9/20/2018	B1	87.2	69.5	4.48	6.54
10/11/2018	B1	116.6	63.2	1.55	6.82
10/18/2018	B1	111.0	53.5	5.45	7.20
10/25/2018	B1	110.6	51.1	8.01	7.14
10/30/2018	B1	121.5	52.8	7.40	7.58
11/8/2018	B1	110.3	51.4	6.66	7.32
11/15/2018	B1	99.8	41.5	9.10	7.30
11/29/2018	B1	85.0	41.9	7.67	6.72
12/6/2018	B1	105.1	43.0	7.04	6.53
12/13/2018	B1	99.6	39.4	10.51	6.68
12/20/2018	B1	92.5	43.7	9.18	6.34

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
1/3/2019	B1	115.6	42.4	9.61	6.73
1/10/2019	B1	139.6	40.3	10.12	6.52
1/24/2019	B1	129.5	39.7	11.07	7.01
1/31/2019	B1	111.0	39.9	10.61	7.02
2/7/2019	B1	124.2	49.1	8.75	7.12
2/14/2019	B1	133.1	46.0	8.81	7.12
2/28/2019	B1	140.3	43.5	10.17	5.63
3/7/2019	B1	137.7	40.8	10.53	6.50
3/14/2019	B1	135.0	50.2	9.41	6.96
3/21/2019	B1	139.8	48.7	8.74	6.87
3/28/2019	B1	135.1	52.2	8.08	6.09
4/4/2019	B1	157.6	51.8	7.37	7.03
4/18/2019	B1	144.9	52.2	7.28	9.08
4/25/2019	B1	141.5	54.5	7.53	
5/2/2019	B1	134.8	59.3	5.66	
5/9/2019	B1	116.7	57.5	7.96	6.51
5/16/2019	B1	152.1	54.7	7.32	6.36
5/30/2019	B1	125.8	67.0	4.47	6.55
6/6/2019	B1	125.6	67.9	2.67	6.61
6/13/2019	B1	153.7	65.4	3.14	6.71
6/20/2019	B1	189.8	67.2	4.12	7.03
6/27/2019	B1	126.3	69.0	3.48	6.47
7/2/2019	B1	119.7	70.3	4.12	6.70
7/11/2019	B1	163.8	73.4	2.95	7.03
7/18/2019	B1	134.7	70.3	4.07	6.38
7/25/2019	B1	100.4	68.4	5.41	6.36
8/1/2019	B1	114.5	70.9	3.70	6.54
8/8/2019	B1	204.5	73.6	4.52	7.09
8/15/2019	B1	211.0	74.8	3.34	7.03
8/22/2019	B1	267.9	74.4	3.24	7.34
9/5/2019	B1	160.6	72.6	4.16	7.15
9/19/2019	B1	227.7	72.9	4.13	7.38
10/1/2019	B1	232.4	72.2	5.20	7.46
10/17/2019	B1	238.1	55.8	7.64	7.75
10/24/2019	B1	240.1	55.0	6.45	7.68
10/31/2019	B1	173.1	52.6	7.42	7.29
11/7/2019	B1	141.9	52.3	7.26	7.14
11/14/2019	B1	159.3	41.2	8.17	7.17
11/21/2019	B1	168.0	46.2	7.58	7.32
12/19/2019	B1	132.8	41.3	8.44	6.77
12/31/2019	B1	118.6	46.8	8.29	6.28

Equilibrium
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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
1/9/2020	B1	125.6	45.3	8.75	
1/16/2020	B1	98.5	49.6	7.76	
1/23/2020	B1	102.1	42.7	9.63	
1/30/2020	B1	106.6	44.0	9.58	
2/6/2020	B1	50.6	50.8	8.80	6.68
2/13/2020	B1	41.0	49.7	9.65	6.53
2/20/2020	B1	95.7	46.0	9.52	
2/27/2020	B1	97.0	46.0	9.57	
3/11/2020	B1	55.9	59.6	7.46	6.58
3/19/2020	B1	100.3	53.8	5.93	7.97
3/25/2020	B1	55.3	59.9	6.83	7.09
4/2/2020	B1	42.2	60.5	7.33	7.38
4/16/2020	B1	98.1	55.6	5.97	6.25
4/23/2020	B1	95.0	57.0	7.04	5.73
4/30/2020	B1	101.2	60.0	6.23	5.95
5/7/2020	B1	110.5	62.8	5.68	6.12
5/21/2020	B1	121.5	64.4	4.66	6.21
5/28/2020	B1	120.3	67.9	3.81	6.13
6/11/2020	B1	114.0	70.0	3.96	6.17
6/18/2020	B1	107.3	69.7	4.76	6.44
6/25/2020	B1	77.5	80.2	2.83	6.80
7/2/2020	B1	120.1	73.6	4.35	6.64
7/8/2020	B1	111.9	73.4	3.66	6.75
7/15/2020	B1	102.2	75.2	4.02	7.20
7/22/2020	B1	93.1	85.3	2.88	7.46
7/29/2020	B1	105.2	84.2	2.98	7.28
8/5/2020	B1	182.9	71.3	4.15	7.55
8/12/2020	B1	191.3	73.2	3.42	7.82
8/19/2020	B1	155.6	71.6	3.48	7.42
8/26/2020	B1	162.9	72.8	4.46	7.96
9/2/2020	B1	145.5	72.6	3.12	7.07
9/9/2020	B1	129.0	71.6	4.18	7.39
9/16/2020	B1	101.9	78.3	3.22	7.22
9/23/2020	B1	137.4	61.5	6.58	7.63
9/30/2020	B1	111.8	61.8	5.70	6.60
10/7/2020	B1	105.1	58.2	6.12	7.23
10/14/2020	B1	100.8	61.6	4.90	6.47
10/21/2020	B1	96.6	61.5		7.01
10/28/2020	B1	105.0	54.9	5.96	7.07
11/5/2020	B1	99.6	52.1	7.66	5.73
11/12/2020	B1	105.4	56.5	4.84	

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
11/19/2020	B1	131.1	51.1	3.98	5.85
12/3/2020	B1	156.6	46.0	7.47	6.03
12/10/2020	B1	347.8	46.3	8.51	5.54
12/17/2020	B1	71.4	43.5	9.13	6.13
12/22/2020	B1	65.6	45.0	9.84	7.24
12/29/2020	B1	129.7	40.7	9.99	7.58
1/6/2021	B1	111.0	40.0	10.36	8.38
1/13/2021	B1	112.5	36.9	11.10	7.81
1/20/2021	B1	86.1	43.1	9.96	
1/27/2021	B1	93.6	49.4	8.12	
2/3/2021	B1	65.7	45.0	9.89	8.17
2/10/2021	B1	78.3	45.3	9.57	7.12
2/24/2021	B1	65.7	41.2	12.04	6.73
3/3/2021	B1	46.0	50.2	9.29	6.32
3/17/2021	B1	43.0	64.6	6.73	6.51
3/24/2021	B1	63.0	63.4	6.60	6.38
3/31/2021	B1	61.3	62.7	6.38	6.44
4/7/2021	B1	40.5	63.7	6.87	6.31
4/14/2021	B1	54.2	66.6	5.66	6.36
4/21/2021	B1	63.4	60.4	5.91	6.48
4/28/2021	B1	57.6	66.5	5.97	6.23
5/5/2021	B1	60.1	69.7	5.39	6.25
5/12/2021	B1	55.1	65.0	6.17	6.37
5/19/2021	B1	58.8	71.5	5.03	6.22
5/26/2021	B1	76.3	76.9	3.76	6.22
6/2/2021	B1	93.1	73.3	3.93	6.44
6/9/2021	B1	50.8	75.3	6.81	6.36
6/16/2021	B1	37.7	77.5	3.34	6.06
6/30/2021	B1	74.9	82.4	1.94	6.45
7/8/2021	B1	124.1	80.7	2.90	6.97
7/14/2021	B1	136.2	82.9	2.98	6.78
7/21/2021	B1	122.1	80.7	3.59	
7/28/2021	B1	183.0	85.8	3.47	6.87
8/4/2021	B1	147.9	81.6	3.29	7.33
8/11/2021	B1	183.5	87.3	5.01	7.13
8/18/2021	B1	209.0	81.7	4.05	7.44
8/25/2021	B1	93.1	84.1	3.36	6.65
9/1/2021	B1	75.4	80.6	3.98	7.44
9/8/2021	B1	110.4	78.1	4.70	7.70

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11/30/2017	B2	164.70	51.94	8.9	7.4
12/7/2017	B2	163.78	49.49	6.4	7.1
12/14/2017	B2	173.04	44.38	7.0	7.1
12/21/2017	B2	156.90	55.13	7.4	6.9
12/28/2017	B2	103.62	41.76	7.7	6.8
1/11/2018	B2	98.67	44.06	9.7	6.8
1/20/2018	B2	82.60	41.72	9.6	7.0
2/1/2018	B2	206.35	41.71	10.4	7.2
2/8/2018	B2	137.12	35.37	12.7	6.7
2/15/2018	B2	104.85	41.85	10.7	6.7
3/1/2018	B2	90.45	50.60	7.9	6.3
3/29/2018	B2	151.08	55.98	8.2	6.8
4/26/2018	B2	80.33	55.30	7.1	6.3
5/3/2018	B2	85.88	61.54	5.9	6.9
5/10/2018	B2	97.83	67.60	3.6	6.8
5/17/2018	B2	387.25	71.37	4.5	7.4
5/24/2018	B2	222.64	69.81	4.8	7.6
5/31/2018	B2	156.12	70.08	8.9	6.9
6/14/2018	B2	323.64	70.99	8.7	7.5
6/21/2018	B2	203.90	70.90	8.8	9.5
6/28/2018	B2	456.89	74.92	8.1	7.8
7/12/2018	B2	552.18	74.15	8.2	9.2
7/19/2018	B2	513.45	72.48	4.1	6.3
7/26/2018	B2	495.30	71.75	4.9	6.5
8/2/2018	B2	331.81	66.08	5.5	6.1
8/9/2018	B2	304.87	68.30	5.7	6.0
8/16/2018	B2	274.21	71.20	4.1	5.7
8/23/2018	B2	167.89	68.50	3.9	6.9
8/30/2018	B2	144.76	71.50	3.1	6.8
9/6/2018	B2	158.64	70.28	1.9	6.9
9/13/2018	B2	143.10	65.73	3.4	7.1
9/20/2018	B2	90.92	69.70	4.3	7.0
10/11/2018	B2	186.61	63.74	1.0	6.9
10/18/2018	B2	180.92	52.70	5.8	7.2
10/25/2018	B2	121.85	51.30	7.6	7.3
10/30/2018	B2	130.48	52.15	7.6	7.9
11/8/2018	B2	153.52	50.70	7.8	7.0
11/15/2018	B2	112.40	41.18	9.4	7.1
11/29/2018	B2	123.60	41.90	7.8	7.0
12/6/2018	B2	115.10	43.34	7.8	6.7
12/13/2018	B2	106.20	39.38	10.2	6.8

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12/20/2018	B2	99.70	44.06	9.1	6.4
1/3/2019	B2	124.50	42.26	9.6	6.8
1/10/2019	B2	113.10	42.08	9.9	6.6
1/24/2019	B2	136.90	40.28	11.0	7.0
1/31/2019	B2	127.00	40.28	10.2	7.0
2/7/2019	B2	154.60	51.08	8.3	8.4
2/14/2019	B2	145.00	46.76	9.1	8.0
2/28/2019	B2	147.20	43.88	10.0	6.2
3/7/2019	B2	142.00	41.54	10.3	6.8
3/14/2019	B2	147.80	50.36	9.6	6.4
3/21/2019	B2	141.00	48.92	8.6	7.5
3/28/2019	B2	141.50	52.34	8.2	6.6
4/4/2019	B2	160.70	51.62	7.6	6.6
4/18/2019	B2	146.42	53.10	7.3	
4/25/2019	B2	143.87	54.36	7.2	
5/2/2019	B2	137.46	59.60	5.4	
5/9/2019	B2	150.85	58.55	7.5	6.7
5/16/2019	B2	154.55	54.88	7.2	6.4
5/30/2019	B2	143.24	64.82	4.6	6.7
6/6/2019	B2	247.43	68.49	2.6	7.0
6/13/2019	B2	155.31	66.70	3.1	6.9
6/20/2019	B2	295.01	69.30	3.5	7.2
6/27/2019	B2	184.32	68.60	3.1	6.8
7/2/2019	B2	178.25	70.47	3.7	7.1
7/11/2019	B2	267.65	72.68	3.9	7.4
7/18/2019	B2	145.95	69.44	5.4	6.9
7/25/2019	B2	113.39	68.80	4.9	6.5
8/1/2019	B2	174.85	71.42	3.5	6.9
8/8/2019	B2	487.28	73.92	4.3	7.2
8/15/2019	B2	475.10	74.93	3.4	7.4
8/22/2019	B2	582.14	74.65	3.9	7.6
9/5/2019	B2	278.69	72.60	3.8	7.5
9/19/2019	B2	397.38	72.08	3.0	7.5
10/1/2019	B2	446.52	70.77	4.1	7.5
10/17/2019	B2	330.14	56.61	5.3	7.8
10/24/2019	B2	386.13	55.06	6.5	7.6
10/31/2019	B2	266.51	52.81	7.0	7.2
11/7/2019	B2	154.87	51.50	7.6	7.4
11/14/2019	B2	198.85	42.00	8.3	7.4
11/21/2019	B2	172.51	44.81	8.2	7.5
12/19/2019	B2	147.68	41.05	9.7	7.4

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12/31/2019	B2	196.83	47.53	8.3	6.1
1/9/2020	B2	138.43	45.27	8.6	
1/16/2020	B2	112.12	49.90	7.9	
1/23/2020	B2	123.53	42.89	9.5	
1/30/2020	B2	131.41	44.98	9.9	
2/6/2020	B2	84.41	50.89	9.4	7.0
2/13/2020	B2	49.70	48.50	10.2	6.7
2/20/2020	B2	108.09	46.68	9.6	
2/27/2020	B2	105.11	46.33	9.6	
3/11/2020	B2	71.99	62.30	7.4	6.8
3/19/2020	B2	104.75	53.72	8.0	6.0
3/25/2020	B2	80.93	59.72	7.2	7.1
4/2/2020	B2	67.30	60.50	6.7	6.9
4/16/2020	B2	110.28	55.12	7.0	6.2
4/23/2020	B2	110.62	57.49	6.9	6.0
4/30/2020	B2	115.29	60.20	6.2	6.2
5/7/2020	B2	112.77	63.23	5.2	6.1
5/21/2020	B2	171.06	65.50	4.4	6.5
5/28/2020	B2	158.90	67.30	4.3	6.4
6/11/2020	B2	150.58	69.68	3.5	6.5
6/17/2020	B2	104.92	64.57	5.5	6.6
6/18/2020	B2	123.36	70.42	4.1	6.7
6/25/2020	B2	180.08	78.67	3.2	7.1
7/2/2020	B2	158.62	74.39	3.5	6.9
7/8/2020	B2	200.83	74.21	3.6	7.1
7/15/2020	B2	126.43	75.45	3.8	7.6
7/22/2020	B2	275.88	85.35	2.9	7.5
7/29/2020	B2	296.55	84.32	2.8	7.4
8/5/2020	B2	488.19	70.88	4.9	7.6
8/12/2020	B2	546.31	72.08	5.4	7.9
8/19/2020	B2	332.28	72.21	4.6	7.6
8/26/2020	B2	526.08	72.62	5.5	7.9
9/2/2020	B2	200.23	71.92	3.3	7.2
9/9/2020	B2	166.93	71.80	3.9	7.6
9/16/2020	B2	187.90	78.50	1.3	7.1
9/23/2020	B2	348.46	64.04	5.9	7.4
9/30/2020	B2	141.74	61.70	4.6	6.7
10/7/2020	B2	116.67	58.50	5.9	7.5
10/14/2020	B2	137.45	61.88	3.3	6.6
10/21/2020	B2	96.92	61.32		7.6
10/28/2020	B2	122.30	55.70	4.5	6.7

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
11/5/2020	B2	108.24	51.95	7.5	6.2
11/12/2020	B2	115.28	56.64	5.1	5.7
11/19/2020	B2	132.17	52.01	3.9	6.8
12/3/2020	B2	188.99	45.70	6.4	6.1
12/17/2020	B2	98.01	42.99	9.3	6.1
12/22/2020	B2	86.98	46.50	9.5	7.4
12/29/2020	B2	139.08	40.78	10.1	8.0
1/6/2021	B2	120.69	40.20	9.9	9.1
1/13/2021	B2	120.27	36.75	11.1	9.0
1/20/2021	B2	91.36	43.09	9.8	
1/27/2021	B2	147.47	50.66	8.0	
2/3/2021	B2	124.53	45.40	9.6	8.0
2/10/2021	B2	141.69	45.99	9.5	7.2
2/24/2021	B2	90.71	40.99	11.6	7.0
3/3/2021	B2	50.52	50.00	9.0	6.6
3/9/2021	B2	92.15	54.44	7.9	6.9
3/17/2021	B2	72.41	64.80	6.2	6.9
3/24/2021	B2	84.62	62.68	6.2	6.7
3/31/2021	B2	73.79	62.70	6.4	6.8
4/7/2021	B2	43.80	63.44	7.0	6.6
4/14/2021	B2	56.43	67.03	5.7	6.8
4/21/2021	B2	65.45	60.84	5.9	6.6
4/28/2021	B2	61.92	66.48	6.0	6.6
5/5/2021	B2	64.43	70.09	5.0	6.5
5/12/2021	B2	73.01	62.30	7.1	6.6
5/19/2021	B2	62.88	71.70	4.9	6.4
5/26/2021	B2	75.11	77.48	4.0	6.3
6/2/2021	B2	135.28	73.40	3.6	6.6
6/9/2021	B2	57.40	72.90	5.5	6.5
6/16/2021	B2	57.45	79.40	2.8	6.4
6/30/2021	B2	115.75	82.27	2.1	6.7
7/8/2021	B2	503.62	80.54	3.0	7.4
7/14/2021	B2	401.70	81.11	3.8	7.2
7/21/2021	B2	378.28	80.30	3.6	
7/28/2021	B2	457.58	85.78	3.0	7.2
8/4/2021	B2	632.69	80.82	3.4	7.5
8/11/2021	B2	613.96	84.23	4.2	7.8
8/18/2021	B2	562.23	81.10	4.4	7.6
8/25/2021	B2	248.75	83.40	2.6	7.1
9/1/2021	B2	269.17	80.37	2.8	7.6
9/8/2021	B2	330.77	77.70	3.8	7.8

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11/30/2017	B3	162.09	50.7	5.6	7.30
12/7/2017	B3	158.08	49.1	5.1	7.07
12/14/2017	B3	163.80	43.4	7.0	7.16
12/21/2017	B3	101.53	54.6	7.8	6.71
12/28/2017	B3	129.45	43.5	8.5	7.02
1/11/2018	B3	84.62	43.6	10.4	7.22
1/20/2018	B3	82.70	41.9	9.9	6.99
2/1/2018	B3	156.36	42.2	10.2	7.70
2/8/2018	B3	124.00	36.9	12.0	6.49
2/15/2018	B3	110.43	40.6	10.7	7.13
3/1/2018	B3	91.83	49.9	8.3	6.41
3/29/2018	B3	103.48	56.4	6.9	6.76
4/26/2018	B3	82.59	55.1	7.9	6.79
5/3/2018	B3	88.75	61.2	6.9	7.58
5/10/2018	B3	94.25	65.9	5.0	7.51
5/17/2018	B3	107.27	69.6	3.1	7.55
5/24/2018	B3	327.54	69.5	3.5	7.41
5/31/2018	B3	185.32	68.9	9.1	7.45
6/14/2018	B3	212.83	68.9	9.1	6.91
6/28/2018	B3	380.65	72.9	8.4	7.18
7/12/2018	B3	406.64	72.5	8.5	8.07
7/19/2018	B3	503.96	70.9	2.9	5.92
7/26/2018	B3	510.61	70.6	3.4	6.18
8/2/2018	B3	413.96	66.8	5.2	5.99
8/9/2018	B3	208.04	66.8	5.7	5.71
8/16/2018	B3	204.41	70.0	5.2	5.81
8/23/2018	B3	149.33	67.6	5.6	6.96
8/30/2018	B3	147.92	70.3	4.2	7.16
9/6/2018	B3	144.26	70.0	3.4	7.06
9/13/2018	B3	177.77	65.2	4.5	7.21
9/20/2018	B3	97.64	68.7	5.5	7.81
10/11/2018	B3	117.53	63.5	4.1	7.01
10/18/2018	B3	191.64	54.6	5.5	7.28
10/25/2018	B3	143.22	51.4	8.1	7.41
10/30/2018	B3	146.48	52.4	7.6	7.94
11/8/2018	B3	155.26	50.7	7.8	7.19
11/15/2018	B3	130.70	40.8	10.1	7.10
11/29/2018	B3	351.60	41.9	16.5	7.09
12/6/2018	B3	135.40	44.2	7.8	6.69
12/13/2018	B3	116.60	39.4	10.5	7.22
12/20/2018	B3	101.90	43.5	9.4	7.10

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1/3/2019	B3	130.40	42.4	9.9	6.94
1/10/2019	B3	135.60	38.8	10.8	6.64
1/24/2019	B3	132.80	39.6	11.1	7.54
1/31/2019	B3	124.20	40.6	10.8	7.93
2/7/2019	B3	142.00	49.3	9.1	8.72
2/14/2019	B3	160.60	46.8	9.4	7.73
2/28/2019	B3	154.40	43.0	10.5	8.85
3/7/2019	B3	146.60	41.5	10.8	7.81
3/14/2019	B3	149.70	50.4	9.4	
3/21/2019	B3	150.30	48.4	9.3	9.15
3/28/2019	B3	147.90	51.6	8.7	
4/4/2019	B3	159.70	50.9	8.5	6.73
4/18/2019	B3	151.97	53.2	7.8	
4/25/2019	B3	145.98	54.3	7.9	
5/2/2019	B3	137.72	59.4	6.6	
5/9/2019	B3	120.96	57.6	8.1	6.63
5/16/2019	B3	153.74	54.2	7.9	6.58
5/30/2019	B3	151.67	63.3	4.8	6.76
6/6/2019	B3	303.81	68.1	4.1	7.20
6/13/2019	B3	218.81	65.3	2.8	7.05
6/20/2019	B3	149.85	66.2	4.1	7.22
6/27/2019	B3	245.00	67.2	5.6	7.33
7/2/2019	B3	153.51	69.5	5.0	7.67
7/11/2019	B3	279.65	72.9	4.4	7.58
7/18/2019	B3	185.05	68.6	6.1	7.37
7/25/2019	B3	115.27	67.9	5.9	6.63
8/1/2019	B3	164.13	70.1	5.5	7.47
8/8/2019	B3	221.49	72.0	3.4	7.30
8/15/2019	B3	577.18	73.2	3.8	7.45
8/22/2019	B3	501.10	73.4	3.6	7.72
9/5/2019	B3	379.80	71.6	4.0	7.67
9/19/2019	B3	403.46	71.2	3.4	7.87
10/1/2019	B3	372.97	70.2	3.3	7.77
10/17/2019	B3	410.83	54.7	6.1	7.67
10/24/2019	B3	436.45	54.8	6.2	7.50
10/31/2019	B3	254.37	53.3	7.5	7.09
11/7/2019	B3	180.28	50.7	8.2	7.71
11/14/2019	B3	158.00	42.3	8.8	7.30
11/21/2019	B3	159.96	45.1	8.0	7.95
12/19/2019	B3	203.55	40.6	10.6	7.95
12/31/2019	B3	177.88	47.3	8.6	6.76

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1/9/2020	B3	146.31	45.1	9.5	
1/16/2020	B3	123.04	49.1	8.8	
1/23/2020	B3	114.54	42.9	9.8	5.54
1/30/2020	B3	117.62	44.6	10.1	
2/6/2020	B3	89.81	49.8	9.4	6.78
2/13/2020	B3	55.34	50.1	9.9	6.60
2/20/2020	B3	104.01	46.2	9.8	
2/27/2020	B3	107.45	45.9	9.8	
3/11/2020	B3	63.80	59.0	8.1	6.93
3/19/2020	B3	116.66	54.1	8.4	6.49
3/25/2020	B3	72.77	59.9	7.7	7.70
4/16/2020	B3	109.46	54.8	8.0	6.38
4/23/2020	B3	104.98	57.2	7.7	6.18
4/30/2020	B3	103.52	59.5	7.1	6.24
5/7/2020	B3	113.70	61.6	6.5	6.43
5/21/2020	B3	198.83	64.4	5.3	6.63
5/28/2020	B3	164.80	66.7	5.3	6.57
6/11/2020	B3	176.08	67.6	5.5	6.94
6/17/2020	B3	106.63	65.0	4.1	6.96
6/18/2020	B3	119.83	69.4	5.4	7.45
6/25/2020	B3	280.13	77.8	3.9	7.22
7/2/2020	B3	172.85	73.6	4.3	7.50
7/8/2020	B3	167.78	72.6	4.6	7.31
7/15/2020	B3	131.34	75.0	5.0	8.09
7/22/2020	B3	224.82	84.1	3.3	7.88
7/29/2020	B3	360.25	82.2	3.9	7.51
8/5/2020	B3	537.89	70.0	5.1	7.71
8/12/2020	B3	571.83	71.8	4.5	8.10
8/19/2020	B3	374.00	71.0	5.1	7.65
8/26/2020	B3	374.52	71.8	4.3	8.25
9/2/2020	B3	250.15	71.4	4.2	7.16
9/9/2020	B3	182.40	70.4	4.9	7.97
9/16/2020	B3	179.36	78.0	3.8	7.26
9/23/2020	B3	217.69	62.9	5.8	7.98
9/30/2020	B3	153.80	61.1	6.2	7.25
10/7/2020	B3	121.67	58.1	7.1	7.96
10/14/2020	B3	148.70	61.1	4.6	7.03
10/21/2020	B3	103.40	61.5	6.0	8.31
10/28/2020	B3	122.93	55.9	6.5	6.76
11/5/2020	B3	122.52	51.8	8.1	7.10
11/12/2020	B3	116.98	56.6	6.5	6.91

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11/17/2020	B3	289.80	48.4	8.4	6.81
11/19/2020	B3	131.70	52.0	5.1	7.86
12/3/2020	B3	142.09	46.6	6.1	7.02
12/17/2020	B3	159.69	42.1	10.6	5.85
12/22/2020	B3	118.19	45.9	10.1	7.77
12/29/2020	B3	145.38	40.9	10.5	8.58
1/6/2021	B3	132.82	40.1	10.4	
1/13/2021	B3	91.62	40.3	10.3	9.50
1/20/2021	B3	88.89	43.1	10.2	
1/27/2021	B3	106.19	48.7	8.7	
2/3/2021	B3	102.37	45.1	10.3	8.75
2/10/2021	B3	124.29	45.8	10.1	7.43
2/24/2021	B3	83.53	40.6	12.2	7.02
3/3/2021	B3	51.41	50.5	9.1	6.64
3/17/2021	B3	47.05	63.7	7.1	7.37
3/24/2021	B3	62.71	62.6	6.8	6.62
3/31/2021	B3	75.85	62.2	7.0	7.38
4/7/2021	B3	47.60	63.3	7.5	7.41
4/14/2021	B3	55.37	66.3	6.4	7.47
4/21/2021	B3	64.04	59.6	6.9	7.05
4/28/2021	B3	71.55	65.3	6.6	7.07
5/5/2021	B3	68.58	68.9	6.2	7.06
5/12/2021	B3	60.50	65.1	6.8	7.18
5/19/2021	B3	65.87	70.7	5.6	7.02
5/26/2021	B3	67.78	74.6	4.2	6.76
6/2/2021	B3	259.39	72.1	3.5	7.00
6/9/2021	B3	83.74	72.1	6.1	7.23
6/16/2021	B3	52.92	78.5	3.8	6.93
6/30/2021	B3	99.55	80.0	3.4	7.35
7/8/2021	B3	228.26	80.3	2.3	7.67
7/14/2021	B3	499.97	80.3	3.2	7.19
7/21/2021	B3	258.76	78.1	4.0	
7/28/2021	B3	407.07	84.1	2.8	7.49
8/4/2021	B3	521.85	79.7	3.1	7.80
8/11/2021	B3	522.71	83.0	3.5	7.49
8/18/2021	B3	663.00	80.9	4.5	7.83
8/25/2021	B3	263.51	81.6	4.2	7.61
9/1/2021	B3	186.28	78.8	3.5	8.02
9/8/2021	B3	253.50	76.6	4.6	8.23

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11/30/2017	C1	385.91	52.9	3.1	7.25
12/7/2017	C1	303.38	46.4	3.2	7.24
12/14/2017	C1	329.73	42.3	3.3	7.48
12/21/2017	C1	150.49	54.4	3.8	6.60
12/28/2017	C1	113.09	35.9	10.8	6.68
1/11/2018	C1	216.03	49.4	3.3	6.68
1/20/2018	C1	98.20	40.8	10.1	7.18
2/1/2018	C1	164.39	44.6	9.5	6.63
2/8/2018	C1	143.59	34.4	11.5	6.58
2/15/2018	C1	110.31	49.1	8.8	6.58
3/1/2018	C1	96.91	52.7	8.5	6.71
3/29/2018	C1	146.59	55.8	6.2	6.67
4/26/2018	C1	149.90	54.8	8.1	6.77
5/3/2018	C1	194.66	65.5	7.4	7.35
5/10/2018	C1	191.98	64.8	8.1	7.42
5/17/2018	C1	332.70	65.7	6.6	7.74
5/24/2018	C1	226.86	68.7	7.4	7.99
5/31/2018	C1	214.42	68.7	9.1	8.10
6/14/2018	C1	199.46	68.7	9.1	8.88
6/28/2018	C1	221.14	74.0	8.2	9.05
7/12/2018	C1	331.66	74.9	8.1	
7/19/2018	C1	348.33	72.2	7.8	6.49
7/26/2018	C1	474.99	68.2	6.8	6.44
8/2/2018	C1	275.86	68.7	7.6	6.27
8/9/2018	C1	196.22	66.4	6.1	5.75
8/16/2018	C1	298.75	71.8	5.3	6.23
8/21/2018	C1	106.50	67.5	4.8	7.05
8/23/2018	C1	137.71	67.1	4.1	6.74
8/30/2018	C1	204.83	72.9	3.9	7.10
9/6/2018	C1	204.09	68.7	6.1	7.40
9/13/2018	C1	107.49	65.1	3.5	6.63
9/20/2018	C1	120.31	68.9	5.7	7.08
10/11/2018	C1	135.89	59.3	5.7	7.03
10/18/2018	C1	160.91	52.2	8.2	6.94
10/25/2018	C1	145.59	49.4	9.0	6.89
10/30/2018	C1	182.15	58.3	6.1	7.05
11/8/2018	C1	132.87	49.0	6.0	6.89
11/15/2018	C1	133.50	35.4	10.5	7.10
11/29/2018	C1	125.70	46.4	121.6	7.10
12/6/2018	C1	135.10	39.9	10.0	6.63
12/13/2018	C1	117.90	42.4	9.8	6.58

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
12/20/2018	C1	135.80	45.3	8.9	6.44
1/3/2019	C1	131.00	40.1	10.9	6.68
1/10/2019	C1	139.10	40.8	10.6	6.86
1/24/2019	C1	134.40	37.8	10.8	6.71
1/31/2019	C1	172.40	36.0	12.5	7.01
2/7/2019	C1	354.60	55.0	7.0	6.93
2/14/2019	C1	161.90	45.7	10.0	7.00
2/28/2019	C1	162.00	46.6	9.1	5.91
3/7/2019	C1	177.60	39.7	11.5	6.47
3/14/2019	C1	147.70	52.3	8.5	5.98
3/21/2019	C1	188.20	46.8	10.3	6.88
3/28/2019	C1	243.70	52.7	9.8	6.19
4/4/2019	C1	218.10	49.5	9.9	6.52
4/18/2019	C1	181.91	52.7	9.0	6.96
4/25/2019	C1	207.23	56.2	7.8	
5/2/2019	C1	193.70	58.5	6.9	7.86
5/9/2019	C1	178.76	52.4	7.8	6.68
5/16/2019	C1	197.11	58.2	6.3	6.95
5/30/2019	C1	195.84	63.4	4.8	7.08
6/6/2019	C1	145.90	63.7	7.3	7.24
6/13/2019	C1	252.60	62.9	6.2	7.43
6/20/2019	C1	325.72	63.6	8.0	7.65
6/27/2019	C1	286.39	68.2	6.6	7.36
7/2/2019	C1	184.17	68.9	6.0	7.27
7/11/2019	C1	123.78	72.7	4.7	6.86
7/18/2019	C1	121.68	69.8	3.1	6.32
7/25/2019	C1	327.07	63.8	6.8	7.08
8/1/2019	C1	221.63	67.3	7.0	7.16
8/8/2019	C1	279.68	67.9	7.3	7.25
8/15/2019	C1	220.00	71.7	7.5	7.79
8/22/2019	C1	482.72	70.5	6.5	7.73
8/26/2019	C1	858.70	70.2	1.6	7.61
9/5/2019	C1	251.31	72.1	5.1	7.35
9/19/2019	C1	246.65	70.3	5.9	7.53
10/1/2019	C1	252.28	71.9	6.3	7.53
10/17/2019	C1	281.15	51.6	6.6	7.71
10/24/2019	C1	299.12	52.2	5.5	7.52
10/31/2019	C1	182.29	48.1	8.2	7.36
11/7/2019	C1	268.04	53.1	7.4	7.36
11/14/2019	C1	190.52	41.6	9.7	7.39
11/21/2019	C1	178.24	50.5	7.9	7.57

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12/19/2019	C1	467.37	41.0	11.5	
12/31/2019	C1	436.89	44.4	10.6	
1/9/2020	C1	282.95	45.6	10.6	8.79
1/16/2020	C1	167.95	50.8	8.9	
1/23/2020	C1	169.42	40.0	11.6	5.66
1/30/2020	C1	183.45	43.3	10.4	5.55
2/6/2020	C1	109.65	46.3	10.1	6.85
2/13/2020	C1	45.66	46.9	10.0	6.63
2/20/2020	C1	125.45	42.8	11.0	
2/27/2020	C1	167.23	43.4	10.9	
3/11/2020	C1	500.34	62.4	10.1	7.60
3/19/2020	C1	451.94	58.9	8.4	7.13
3/25/2020	C1	346.52	62.7	8.8	7.27
4/16/2020	C1	122.75	52.1	8.1	6.34
4/23/2020	C1	143.04	57.1	7.8	6.46
4/30/2020	C1	182.16	59.1	7.5	6.70
5/7/2020	C1	259.44	59.3	7.6	6.96
5/21/2020	C1	216.73	61.0	7.2	6.94
5/28/2020	C1	210.54	65.8	5.9	6.72
6/11/2020	C1	159.78	65.5	6.9	6.74
6/18/2020	C1	354.39	64.6	8.0	7.57
6/25/2020	C1	129.99	78.2	5.5	7.14
7/2/2020	C1	253.13	73.1	5.6	6.93
7/8/2020	C1	271.33	72.4	7.8	6.79
7/15/2020	C1	400.12	72.7	7.1	7.16
7/22/2020	C1	419.95	79.9	7.3	7.41
7/29/2020	C1	514.43	77.4	6.7	7.45
8/5/2020	C1	276.27	69.0	9.5	7.69
8/12/2020	C1	331.06	68.8	6.9	7.21
8/19/2020	C1	290.09	67.2	8.3	7.25
8/26/2020	C1	291.90	71.0	8.1	7.44
9/2/2020	C1	211.94	71.2	5.1	6.98
9/16/2020	C1	287.07	76.7	3.4	7.09
9/23/2020	C1	142.01	60.8	6.5	6.81
9/30/2020	C1	240.49	59.2	6.9	6.80
10/7/2020	C1	281.85	53.3	6.8	6.80
10/14/2020	C1	143.42	56.9	7.0	6.38
10/21/2020	C1	282.69	64.6		6.50
10/28/2020	C1	106.10	50.7	9.6	6.69
11/1/2020	C1	113.50	59.0	10.4	6.59
11/5/2020	C1	172.40	52.6	9.2	5.61

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11/12/2020	C1	133.02	54.5	7.8	5.80
11/19/2020	C1	208.00	49.8	6.2	5.60
12/3/2020	C1	190.31	45.4	9.8	5.91
12/17/2020	C1	101.42	40.9	11.1	6.13
12/22/2020	C1	101.41	46.4	10.1	6.50
12/29/2020	C1	192.80	41.4	10.6	6.84
1/6/2021	C1	151.81	39.1	11.1	7.39
1/13/2021	C1	127.98	38.5	11.4	7.38
1/20/2021	C1	166.50	45.7	9.5	7.81
1/27/2021	C1	137.35	48.2	8.6	
2/3/2021	C1	135.98	45.4	10.9	7.29
2/10/2021	C1	163.53	41.5	10.8	6.97
2/24/2021	C1	107.44	47.8	9.3	6.80
3/3/2021	C1	80.82	49.7	8.6	6.69
3/17/2021	C1	164.79	66.1	6.5	7.00
3/24/2021	C1	114.84	69.3	8.3	7.06
3/31/2021	C1	66.65	57.7	7.5	6.52
4/7/2021	C1	152.22	70.3	6.8	7.02
4/14/2021	C1	149.80	61.6	6.7	7.02
4/21/2021	C1	192.93	56.5	8.1	7.29
4/28/2021	C1	93.48	69.8	5.9	6.95
5/5/2021	C1	101.13	65.5	6.8	6.55
5/12/2021	C1	74.37	60.2	6.9	6.42
5/19/2021	C1	240.78	70.1	4.7	6.90
5/26/2021	C1	256.19	77.1	4.3	7.13
6/2/2021	C1	91.41	71.9	5.9	6.64
6/7/2021	C1	104.90	70.2	7.9	8.19
6/9/2021	C1	59.15	72.5	4.2	6.22
6/16/2021	C1	94.03	78.1	5.8	6.63
6/30/2021	C1	502.54	79.5	6.4	7.54
7/8/2021	C1	452.64	77.5	6.1	7.38
7/14/2021	C1	204.46	81.1	6.0	6.91
7/21/2021	C1	354.11	76.5	7.1	
7/28/2021	C1	311.33	83.7	9.9	7.68
8/4/2021	C1	313.30	75.5	8.6	7.41
8/11/2021	C1	455.87	82.1	6.4	7.87
8/18/2021	C1	190.86	76.2	3.2	7.09
8/25/2021	C1	404.78	85.1	7.1	7.23
9/1/2021	C1	282.04	77.4	2.6	7.23
9/8/2021	C1	352.76	79.2	8.0	7.81

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11/30/2017	C2	755.35	50.1	5.7	7.73
12/7/2017	C2	731.86	48.3	4.4	7.73
12/14/2017	C2	723.41	41.3	6.0	7.78
12/21/2017	C2	161.62	55.2	6.8	6.95
12/28/2017	C2	192.83	36.7	12.2	7.31
1/11/2018	C2	286.82	49.1	9.8	7.55
1/20/2018	C2	126.80	42.4	10.9	7.56
2/1/2018	C2	329.19	43.3	11.3	7.52
2/8/2018	C2	153.66	34.5	12.7	6.93
2/15/2018	C2	113.07	48.3	9.8	6.88
3/1/2018	C2	107.52	52.8	9.3	7.00
3/29/2018	C2	151.76	55.3	7.8	6.96
4/26/2018	C2	155.08	56.2	7.3	6.95
5/3/2018	C2	216.88	64.5	4.6	7.41
5/10/2018	C2	289.32	64.2	4.2	7.72
5/17/2018	C2	617.52	69.4	6.1	8.08
5/24/2018	C2	245.36	67.2	5.9	7.59
5/31/2018	C2	221.89	69.0	9.1	8.03
6/14/2018	C2	338.12	69.6	9.0	8.87
6/28/2018	C2	855.08	72.1	8.5	8.90
7/12/2018	C2	887.84	71.8	8.6	
7/19/2018	C2	432.08	71.9	5.6	6.29
7/26/2018	C2	623.04	70.1	7.1	6.61
8/2/2018	C2	409.78	67.2	6.8	6.43
8/9/2018	C2	247.82	65.8	6.3	5.98
8/16/2018	C2	412.40	71.4	6.3	6.39
8/23/2018	C2	187.41	68.2	5.8	7.16
8/30/2018	C2	246.82	72.1	6.0	7.55
9/6/2018	C2	454.62	68.6	5.7	7.54
9/13/2018	C2	155.32	65.0	5.7	7.12
9/20/2018	C2	219.22	69.5	4.1	7.43
9/27/2018	C2	139.40	61.9	3.0	7.75
10/11/2018	C2	222.25	62.2	3.2	7.15
10/18/2018	C2	242.96	51.3	9.0	7.48
10/30/2018	C2	244.00	55.1	6.8	7.49
11/15/2018	C2	149.50	35.4	12.2	7.05
11/29/2018	C2	245.00	43.5	8.4	7.45
12/6/2018	C2	196.10	41.7	10.2	6.80
12/13/2018	C2	152.90	41.2	11.4	6.74
1/3/2019	C2	153.20	39.9	11.5	7.05
1/10/2019	C2	185.40	43.0	10.3	7.21

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
1/24/2019	C2	178.80	33.8	12.9	6.88
1/31/2019	C2	209.90	38.5	12.4	7.06
2/7/2019	C2	283.90	56.1	7.8	7.51
2/14/2019	C2	194.60	44.6	10.3	7.33
2/28/2019	C2	210.00	49.1	9.1	6.10
3/7/2019	C2	166.60	39.7	11.3	7.70
3/14/2019	C2	142.50	51.8	9.4	6.91
3/21/2019	C2	218.70	47.5	8.5	7.91
3/28/2019	C2	232.70	51.6	7.5	6.49
4/4/2019	C2	261.90	51.4	7.5	8.68
4/25/2019	C2	218.22	57.6	5.4	
5/2/2019	C2	215.12	59.7	5.3	
5/9/2019	C2	204.62	53.1	8.8	7.05
5/16/2019	C2	226.68	58.6	5.7	7.06
5/30/2019	C2	475.50	65.7	3.5	7.46
6/6/2019	C2	525.42	66.1	5.8	7.47
6/13/2019	C2	657.51	64.4	5.1	7.68
6/20/2019	C2	760.69	67.3	4.3	7.77
6/27/2019	C2	483.95	71.2	3.8	7.33
7/2/2019	C2	774.41	67.9	6.0	7.83
7/11/2019	C2	272.98	73.7	5.2	7.41
7/18/2019	C2	150.12	72.9	4.2	6.63
7/25/2019	C2	522.48	66.1	6.3	7.48
8/1/2019	C2	764.61	71.1	6.1	7.68
8/8/2019	C2	737.82	71.1	6.7	7.86
8/15/2019	C2	713.48	72.9	5.6	7.61
8/22/2019	C2	724.53	72.5	5.1	7.87
9/5/2019	C2	494.13	71.9	5.3	7.75
9/19/2019	C2	418.11	71.1	4.4	7.85
10/1/2019	C2	372.98	69.8	4.7	7.76
10/17/2019	C2	413.49	53.0	5.4	7.44
10/24/2019	C2	259.11	53.3	5.8	7.68
10/31/2019	C2	271.68	49.2	9.1	7.39
11/7/2019	C2	296.79	53.2	6.9	7.36
11/14/2019	C2	380.26	40.3	10.5	7.32
11/21/2019	C2	512.57	48.8	8.0	7.58
12/19/2019	C2	257.53	39.3	12.0	5.87
12/31/2019	C2	215.87	45.0	10.6	5.70
1/9/2020	C2	270.10	45.3	10.1	9.09
1/16/2020	C2	197.67	54.2	8.5	5.89
1/23/2020	C2	172.19	39.3	12.1	5.98

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
1/30/2020	C2	179.65	44.8	10.8	6.05
2/6/2020	C2	90.96	45.4	11.4	7.33
2/20/2020	C2	143.67	42.7		5.90
2/27/2020	C2	194.77	42.8	11.1	5.89
3/11/2020	C2	180.18	61.8	7.8	7.53
3/19/2020	C2	195.28	55.2	8.8	6.90
3/25/2020	C2	167.32	63.0	7.5	7.40
4/16/2020	C2	137.38	53.0	8.6	6.70
4/23/2020	C2	169.82	56.7	8.4	6.82
4/30/2020	C2	165.58	59.9	7.0	6.77
5/7/2020	C2	406.35	60.0	5.5	7.24
5/21/2020	C2	288.77	63.7	5.3	7.21
5/28/2020	C2	207.52	67.9	5.8	6.77
6/11/2020	C2	224.76	69.5	4.7	6.75
6/18/2020	C2	818.69	68.9	4.4	7.52
6/25/2020	C2	362.51	81.3	4.0	7.36
7/2/2020	C2	582.92	74.2	3.0	7.41
7/8/2020	C2	237.69	73.4	5.1	7.15
7/15/2020	C2	750.77	74.7	5.6	7.64
7/22/2020	C2	785.08	80.8	6.4	7.86
7/29/2020	C2	943.00	79.8	5.7	7.77
8/5/2020	C2	603.81	69.8	6.9	7.85
8/12/2020	C2	438.28	69.7	5.3	7.59
8/19/2020	C2	443.80	70.0	6.4	7.74
8/26/2020	C2	566.31	72.0	6.4	7.88
9/2/2020	C2	332.31	72.9	5.4	7.44
9/9/2020	C2	472.04	70.5	5.6	7.64
9/16/2020	C2	260.55	76.5	3.4	7.46
9/23/2020	C2	252.79	60.7	5.3	7.09
9/30/2020	C2	319.42	60.0	4.6	6.84
10/7/2020	C2	347.03	54.7	4.8	6.92
10/14/2020	C2	209.95	60.6	3.3	6.46
10/21/2020	C2	272.32	63.5		6.90
10/28/2020	C2	258.91	52.6	6.4	6.51
11/5/2020	C2	235.03	51.9	8.6	5.89
11/12/2020	C2	242.18	54.4	5.4	6.16
11/19/2020	C2	313.53	49.5	6.3	6.14
12/3/2020	C2	420.02	45.3	9.6	6.21
12/10/2020	C2	225.50	47.2	6.3	6.82
12/17/2020	C2	181.59	39.4	12.0	6.26
12/22/2020	C2	168.58	46.7	10.5	6.79

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
12/29/2020	C2	292.09	40.7	10.3	7.13
1/6/2021	C2	203.48	40.3	10.9	7.67
1/13/2021	C2	203.12	35.1	12.4	7.49
1/20/2021	C2	228.19	44.0	9.4	8.33
1/27/2021	C2	227.38	50.8	8.9	
2/3/2021	C2	232.02	43.0	11.4	7.70
2/10/2021	C2	255.18	44.0	11.0	7.64
2/24/2021	C2	104.86	47.9	9.6	7.12
3/3/2021	C2	81.03	48.8	9.3	7.00
3/17/2021	C2	234.41	67.4	5.2	7.22
3/24/2021	C2	186.20	65.5	6.9	7.21
3/31/2021	C2	83.40	59.4	8.1	7.06
4/7/2021	C2	156.98	67.4	4.1	7.00
4/14/2021	C2	152.50	62.8	6.3	7.21
4/21/2021	C2	161.72	54.5	7.2	7.38
4/28/2021	C2	138.73	68.8	5.1	6.99
5/5/2021	C2	114.80	68.6	5.6	6.87
5/12/2021	C2	94.22	59.5	8.1	6.76
5/19/2021	C2	155.24	72.8	3.3	6.93
5/26/2021	C2	554.14	74.0	4.8	7.51
6/2/2021	C2	303.67	72.3	3.8	6.92
6/16/2021	C2	154.86	84.2	1.2	6.65
6/23/2021	C2	74.70	77.1	1.6	7.47
6/30/2021	C2	673.00	81.9	4.1	7.53
7/8/2021	C2	761.23	78.8	5.7	7.83
7/14/2021	C2	768.92	81.5	3.9	7.28
7/21/2021	C2	753.67	79.1	5.9	
7/28/2021	C2	840.21	82.2	5.9	7.60
8/4/2021	C2	688.00	78.3	6.0	7.58
8/11/2021	C2	814.00	82.3	5.9	7.84
8/18/2021	C2	603.00	79.6	5.3	7.58
8/25/2021	C2	586.00	83.9	4.5	7.55
9/1/2021	C2	502.08	76.8	5.9	7.76
9/8/2021	C2	508.08	74.4	7.0	8.14

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
12/21/2017	D1	73.36	55.0	5.1	6.21
12/28/2017	D1	103.14	38.7	3.3	6.22
1/11/2018	D1	103.94	53.8	3.4	6.17
1/20/2018	D1	111.00	42.4	4.8	7.05
2/1/2018	D1	159.36	42.5	5.4	6.19
2/8/2018	D1	125.44	34.8	10.2	6.26
2/15/2018	D1	96.65	44.4	9.0	6.35
3/1/2018	D1	83.96	52.1	7.6	6.37
3/29/2018	D1	89.10	56.4	5.0	6.45
4/26/2018	D1	90.28	53.7	4.0	6.42
5/3/2018	D1	100.38	62.0	2.7	6.83
5/10/2018	D1	110.57	61.0	1.0	6.90
5/17/2018	D1	117.71	65.4	2.2	7.60
9/13/2018	D1	100.74	65.1	2.1	6.59
10/11/2018	D1	126.54	59.6	2.3	6.95
10/18/2018	D1	98.33	52.1	2.9	7.18
10/25/2018	D1	99.36	49.1	5.1	6.97
10/30/2018	D1	122.44	54.4	1.3	6.77
11/8/2018	D1	125.95	49.6	3.8	6.69
11/15/2018	D1	105.80	35.2	7.2	6.98
11/29/2018	D1	118.70	45.0	4.2	6.86
12/6/2018	D1	722.20	39.0	5.1	6.97
12/13/2018	D1	100.90	41.2	7.0	6.74
12/20/2018	D1	97.90	45.0	5.9	6.54
1/3/2019	D1	113.00	40.3	6.0	6.83
1/10/2019	D1	156.00	37.6	5.7	6.58
1/24/2019	D1	125.70	37.6	9.3	7.00
1/31/2019	D1	112.80	36.9	10.0	7.48
2/7/2019	D1	120.00	54.5	5.7	8.04
2/14/2019	D1	132.20	44.8	7.5	7.25
2/28/2019	D1	134.10	46.6	6.9	6.67
3/7/2019	D1	135.50	39.4	9.3	6.43
3/14/2019	D1	133.20	51.4	7.3	5.91
3/21/2019	D1	149.80	47.3	6.6	6.64
3/28/2019	D1	156.30	53.2	8.1	6.22
4/4/2019	D1	167.30	48.9	8.0	8.74
4/18/2019	D1	151.59	53.3	5.5	7.25
4/25/2019	D1	157.61	56.1	3.3	
5/2/2019	D1	152.07	58.0	2.0	9.36
5/9/2019	D1	164.80	51.3	6.8	6.20
5/16/2019	D1	174.29	57.0	2.9	6.39

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
5/30/2019	D1	138.85	58.5	9.8	6.88
6/6/2019	D1	122.71	64.3	4.3	6.68
7/18/2019	D1	101.21	70.1	3.2	6.10
7/25/2019	D1	78.01	64.8	8.5	6.45
8/1/2019	D1	128.29	67.3	2.1	7.17
8/8/2019	D1	128.68	68.2	1.6	7.21
12/19/2019	D1	113.59	38.2	2.9	
12/31/2019	D1	106.01	44.8	3.2	
1/9/2020	D1	127.12	44.0	3.4	9.28
1/16/2020	D1	104.58	50.3	5.0	
1/23/2020	D1	107.62	40.1	6.9	
1/30/2020	D1	102.68	43.4	6.4	
2/6/2020	D1	48.76	47.8	4.6	6.28
2/13/2020	D1	32.11	47.0	9.0	6.42
2/20/2020	D1	96.81	45.3	8.2	
2/27/2020	D1	98.85	44.8	7.0	
3/5/2020	D1	136.08	61.2	9.1	7.52
3/11/2020	D1	44.61	59.0	6.9	7.02
3/19/2020	D1	112.25	54.9	5.2	5.99
3/25/2020	D1	60.39	60.3	5.1	6.62
4/16/2020	D1	101.38	51.4	4.8	5.94
4/23/2020	D1	109.42	55.9	3.7	5.82
4/30/2020	D1	112.48	57.1	2.4	5.87
5/7/2020	D1	112.49	57.1	1.9	5.90
6/25/2020	D1	64.11	73.7	1.8	6.75
7/2/2020	D1	111.65	70.1	1.6	6.67
7/8/2020	D1	91.09	69.9	3.1	6.32
7/15/2020	D1	108.89	70.9	1.2	6.90
7/22/2020	D1	69.21	78.3	0.6	6.95
7/29/2020	D1	76.31	77.3	0.7	7.27
8/5/2020	D1	122.45	65.9	1.3	7.57
8/12/2020	D1	111.26	67.9	3.3	7.47
8/19/2020	D1	144.39	66.9	1.4	7.36
8/26/2020	D1	145.69	68.3	1.3	7.62
9/2/2020	D1	155.57	69.7	1.5	7.16
9/16/2020	D1	116.16	73.9	0.9	7.19
9/23/2020	D1	78.35	62.0	6.7	7.28
10/14/2020	D1	126.68	57.5	1.5	6.38
10/21/2020	D1	138.71	60.5		6.75
10/28/2020	D1	127.64	52.5	3.3	6.71
11/5/2020	D1	96.34	49.6	2.1	5.91

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
11/12/2020	D1	107.55	52.9	1.3	5.55
11/19/2020	D1	109.55	48.2	2.0	6.21
12/3/2020	D1	105.27	44.0	3.1	6.43
12/17/2020	D1	53.70	41.2	4.7	6.52
12/22/2020	D1	53.93	44.1	5.4	6.88
12/29/2020	D1	130.23	39.2	4.8	7.26
1/6/2021	D1	121.05	39.1	7.2	7.56
1/13/2021	D1	111.56	36.1	5.9	7.65
1/20/2021	D1	82.34	43.3	5.6	8.62
1/27/2021	D1	85.08	47.4	5.1	
2/3/2021	D1	50.65	43.1	4.3	7.91
2/10/2021	D1	50.10	42.4	4.4	6.62
2/24/2021	D1	51.49	40.5	8.0	6.35
3/3/2021	D1	36.90	50.9	7.0	6.33
3/17/2021	D1	49.78	65.4	4.6	6.53
3/24/2021	D1	52.88	65.3	5.5	6.35
3/31/2021	D1	42.20	59.6	5.1	6.25
4/7/2021	D1	66.86	66.2	3.1	6.38
4/14/2021	D1	61.50	61.4	3.7	6.45
4/21/2021	D1	65.53	54.1	2.4	6.17
4/28/2021	D1	56.85	63.4	1.9	6.19
5/5/2021	D1	55.04	65.1	1.5	5.95
5/12/2021	D1	51.87	60.1	2.6	5.94
5/19/2021	D1	49.40	67.4	1.4	5.90
5/26/2021	D1	54.23	70.0	0.8	5.98
6/2/2021	D1	57.58	66.7	1.0	6.10
6/9/2021	D1	36.60	71.8	3.5	5.88
6/16/2021	D1	74.83	78.2	1.0	6.13
6/30/2021	D1	70.88	77.6	1.0	6.44
7/8/2021	D1	77.00	74.9	1.1	6.79
7/14/2021	D1	71.87	75.5	1.2	6.50
7/21/2021	D1	70.69	74.7	1.0	
7/28/2021	D1	107.35	79.1	1.0	6.87
8/4/2021	D1	116.78	73.8	1.0	6.76
8/11/2021	D1	106.74	77.0	1.0	6.43
8/18/2021	D1	141.02	74.6	1.1	7.00
8/25/2021	D1	130.10	77.8	0.8	6.66
9/1/2021	D1	93.15	74.5	1.0	6.93
9/8/2021	D1	92.18	69.9	0.7	6.81

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
12/21/2017	D2	130.34	54.3	5.4	6.68
12/28/2017	D2	119.44	37.9	7.3	6.90
1/11/2018	D2	153.42	52.3	1.3	6.69
1/20/2018	D2	92.50	43.0	3.9	7.20
2/1/2018	D2	178.41	43.4	7.5	7.08
2/8/2018	D2	131.86	34.0	10.4	6.75
2/15/2018	D2	89.37	45.0	8.5	6.32
3/1/2018	D2	82.79	52.1	7.0	6.46
3/29/2018	D2	100.90	56.0	4.1	6.55
4/26/2018	D2	87.11	56.3	4.2	6.76
5/3/2018	D2	103.69	64.3	3.5	7.23
5/10/2018	D2	104.53	64.6	4.0	7.50
5/17/2018	D2	270.01	67.9	4.6	7.72
5/24/2018	D2	274.83	70.3	3.3	7.50
5/31/2018	D2	356.37	68.9	9.1	7.93
6/14/2018	D2	286.41	70.6	8.8	8.71
6/21/2018	D2	227.10	67.6	9.3	
6/28/2018	D2	373.52	73.0	8.4	8.87
7/12/2018	D2	384.11	72.0	8.6	
7/19/2018	D2	334.45	72.4	3.0	5.67
7/26/2018	D2	270.79	68.7	1.9	5.57
8/2/2018	D2	338.03	66.8	3.9	5.82
8/9/2018	D2	276.67	66.6	2.4	5.54
8/16/2018	D2	189.32	70.6	1.3	
8/23/2018	D2	164.50	68.9	1.0	6.66
8/30/2018	D2	153.09	70.8	0.8	6.74
9/6/2018	D2	176.44	68.2	1.1	7.07
9/13/2018	D2	121.25	66.0	1.7	6.83
9/20/2018	D2	116.53	69.3	0.8	6.80
10/11/2018	D2	163.72	60.9	1.8	7.07
10/18/2018	D2	143.03	51.9	3.5	7.48
10/25/2018	D2	154.49	50.2	4.1	7.03
10/30/2018	D2	180.32	55.7	3.1	7.23
11/8/2018	D2	133.34	49.7	3.4	6.74
11/15/2018	D2	124.60	36.3	7.5	6.84
11/29/2018	D2	135.30	43.7	4.3	7.42
12/6/2018	D2	137.50	41.4	5.6	7.06
12/13/2018	D2	112.20	40.5	7.2	6.88
12/20/2018	D2	117.10	45.7	3.4	6.61
1/3/2019	D2	114.00	41.0	6.0	7.12
1/10/2019	D2	376.90	34.5	12.4	6.98

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
1/24/2019	D2	124.40	39.2	9.2	7.07
1/31/2019	D2	129.00	37.8	8.4	7.40
2/7/2019	D2	148.10	54.5	3.8	8.11
2/14/2019	D2	138.10	44.6	6.1	7.46
2/28/2019	D2	145.00	48.2	5.6	6.26
3/7/2019	D2	162.00	41.0	7.0	6.80
3/14/2019	D2	126.60	52.0	7.0	6.25
3/21/2019	D2	180.90	48.9	4.7	7.56
3/28/2019	D2	160.80	53.4	3.8	6.21
4/4/2019	D2	168.70	50.5	7.6	
4/18/2019	D2	171.57	55.2	6.1	8.07
4/25/2019	D2	180.17	59.3	2.7	
5/2/2019	D2	172.42	59.6	1.6	8.57
5/9/2019	D2	178.53	55.2	2.8	6.53
5/16/2019	D2	192.52	59.5	1.7	6.67
5/30/2019	D2	164.65	64.8	1.7	6.94
6/6/2019	D2	159.01	64.9	1.5	6.74
6/13/2019	D2	155.38	61.6	0.9	6.76
6/20/2019	D2	180.48	64.5	1.0	6.97
6/27/2019	D2	164.85	70.4	1.3	6.93
7/2/2019	D2	151.27	68.2	0.8	6.87
7/11/2019	D2	129.13	72.8	0.9	6.70
7/18/2019	D2	111.19	69.7	1.0	6.08
7/25/2019	D2	156.26	68.9	1.5	6.97
8/1/2019	D2	203.71	69.6	2.9	7.56
8/8/2019	D2	258.36	70.0	3.5	7.39
9/19/2019	D2	419.69	69.4	0.8	7.16
10/1/2019	D2	463.52	68.7	2.0	7.38
10/17/2019	D2	266.85	53.5	5.6	7.66
10/24/2019	D2	405.43	52.2	3.0	7.38
10/31/2019	D2	227.87	50.7	4.6	7.31
11/7/2019	D2	222.32	51.9	3.7	7.33
11/14/2019	D2	226.63	39.9	3.7	7.37
11/21/2019	D2	229.82	46.4	3.4	7.71
12/19/2019	D2	151.58	40.2	5.8	5.75
12/31/2019	D2	153.77	44.9	6.1	5.66
1/9/2020	D2	125.63	45.1	5.3	9.39
1/16/2020	D2	113.93	52.2	5.7	
1/23/2020	D2	126.78	39.9	9.6	
1/30/2020	D2	109.15	44.7	7.8	
2/6/2020	D2	53.88	48.8	6.6	6.65

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
2/13/2020	D2	35.55	46.9	9.3	6.71
2/20/2020	D2	105.83	45.1		
2/27/2020	D2	107.87	44.0	7.9	
3/11/2020	D2	103.10	63.1	6.0	7.11
3/19/2020	D2	118.84	57.1	4.1	6.16
3/25/2020	D2	67.53	63.3	4.0	7.09
4/16/2020	D2	116.92	54.0	5.9	6.39
4/23/2020	D2	123.39	58.0	5.5	6.33
4/30/2020	D2	106.33	60.5	3.8	6.12
5/7/2020	D2	127.68	62.0	3.2	6.48
5/21/2020	D2	116.34	63.3	2.7	6.49
5/28/2020	D2	112.72	67.3	3.0	6.18
6/11/2020	D2	118.72	68.7	1.7	6.33
6/18/2020	D2	136.86	68.8	1.6	7.32
6/25/2020	D2	135.35	82.5	3.1	7.04
7/2/2020	D2	151.20	73.7	1.2	6.99
7/8/2020	D2	136.22	73.1	1.2	6.76
7/15/2020	D2	162.02	74.7	1.5	7.23
7/22/2020	D2	110.39	82.5	2.2	7.85
7/29/2020	D2	215.75	80.7	2.2	7.58
8/5/2020	D2	374.62	68.4	3.5	7.68
8/12/2020	D2	192.25	69.3	2.6	7.61
8/19/2020	D2	457.17	67.8	2.7	7.31
8/26/2020	D2	309.71	71.7	3.2	7.78
9/2/2020	D2	176.74	71.9	1.8	7.42
9/16/2020	D2	151.49	76.8	3.2	7.54
9/23/2020	D2	134.34	61.7	4.4	7.10
9/30/2020	D2	127.80	60.2	2.9	7.20
10/7/2020	D2	128.45	56.6	2.6	7.07
10/14/2020	D2	118.54	60.6	1.9	6.66
10/21/2020	D2	141.23	63.4		6.97
10/28/2020	D2	139.05	53.0	3.2	7.22
11/5/2020	D2	123.75	52.3	5.4	6.06
11/12/2020	D2	148.49	56.7	2.0	6.12
11/19/2020	D2	144.89	50.1	3.4	6.57
12/3/2020	D2	114.72	44.8	5.2	6.83
12/17/2020	D2	88.19	40.6	6.7	6.47
12/22/2020	D2	64.53	46.7	6.4	7.09
12/29/2020	D2	137.79	41.4	6.5	7.43
1/6/2021	D2	119.68	40.6	7.0	7.63
1/13/2021	D2	127.18	36.3	7.0	7.31

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
1/20/2021	D2	99.58	45.1	5.0	8.45
1/27/2021	D2	103.56	49.4	5.1	
2/3/2021	D2	68.45	44.1	6.8	8.19
2/10/2021	D2	51.96	44.0	6.7	7.61
2/24/2021	D2	47.25	43.2	9.2	6.63
3/3/2021	D2	39.60	49.1	7.0	6.45
3/17/2021	D2	89.50	67.2	2.4	6.84
3/24/2021	D2	57.91	67.3	7.6	6.82
3/31/2021	D2	43.90	60.2	4.9	6.34
4/7/2021	D2	97.82	67.9	2.1	6.72
4/14/2021	D2	87.21	64.9	2.7	6.79
4/21/2021	D2	73.03	56.7	3.1	6.72
4/28/2021	D2	55.81	70.3	1.8	6.43
5/5/2021	D2	58.04	69.4	1.5	6.35
5/12/2021	D2	47.44	62.5	3.2	6.23
5/19/2021	D2	58.34	72.4	1.7	6.38
5/26/2021	D2	75.16	74.4	3.1	6.71
6/2/2021	D2	61.89	71.5	1.6	6.40
6/9/2021	D2	27.72	72.5	3.1	5.98
6/16/2021	D2	63.17	84.4	0.9	6.25
6/23/2021	D2	81.20	71.8	1.3	6.86
6/30/2021	D2	97.15	81.7	1.0	6.92
7/8/2021	D2	103.62	77.8	1.0	7.45
7/14/2021	D2	124.67	78.4	1.5	7.06
7/21/2021	D2	265.47	78.5	2.6	
7/28/2021	D2	259.02	82.9	1.6	7.25
8/4/2021	D2	584.69	67.5	2.0	6.88
8/11/2021	D2	529.00	70.8	3.3	6.70
8/18/2021	D2	546.00	76.4	2.4	7.18
8/25/2021	D2	611.54	66.6	2.4	6.78
9/1/2021	D2	432.81	66.8	2.7	7.05
9/8/2021	D2	423.56	71.4	1.4	7.23

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
11/30/2017	D3	748.15	51.8	7.1	7.66
12/7/2017	D3	698.28	47.8	8.4	7.89
12/14/2017	D3	700.01	41.6	9.8	7.96
12/21/2017	D3	160.96	55.3	6.4	6.90
12/28/2017	D3	182.51	36.2	12.3	7.24
1/11/2018	D3	274.59	49.4	9.5	7.40
1/20/2018	D3	58.70	42.6	11.4	7.42
2/1/2018	D3	311.63	43.6	11.1	7.39
2/8/2018	D3	153.07	35.1	12.5	6.87
2/15/2018	D3	110.81	47.0	9.9	6.86
3/29/2018	D3	147.06	55.5	7.7	6.92
4/26/2018	D3	115.45	56.9	7.5	6.85
5/3/2018	D3	160.55	65.3	5.5	7.29
5/10/2018	D3	555.44	67.0	3.9	7.39
5/17/2018	D3	512.32	70.3	5.5	8.07
5/24/2018	D3	195.45	67.0	5.7	7.67
5/31/2018	D3	160.88	70.8	8.8	7.73
6/14/2018	D3	323.10	70.0	8.9	8.90
6/28/2018	D3	708.89	74.6	8.1	8.99
7/12/2018	D3	714.84	74.4	8.2	
7/19/2018	D3	441.96	72.2	5.1	6.32
7/26/2018	D3	568.31	70.5	5.9	6.68
8/2/2018	D3	387.77	67.4	6.5	6.40
8/9/2018	D3	300.30	66.3	6.0	6.04
8/16/2018	D3	376.13	71.2	5.9	6.27
8/23/2018	D3	181.98	68.4	5.0	7.00
8/30/2018	D3	294.45	72.1	5.7	7.52
9/6/2018	D3	308.90	69.8	6.1	7.75
9/13/2018	D3	160.64	65.4	5.7	7.11
9/20/2018	D3	222.54	71.1	3.8	7.29
10/4/2018	D3	222.50	65.8	4.4	7.43
10/11/2018	D3	210.49	62.7	3.2	7.09
10/18/2018	D3	240.83	51.6	8.6	7.40
10/25/2018	D3	198.58	50.6	8.9	7.39
10/30/2018	D3	224.69	55.0	7.1	7.42
11/15/2018	D3	150.00	36.0	11.9	7.15
11/29/2018	D3	154.60	42.3	9.5	7.36
12/6/2018	D3	182.60	40.5	10.3	6.76
12/13/2018	D3	134.70	41.9	10.8	6.71
1/3/2019	D3	152.90	40.1	11.2	6.93
1/10/2019	D3	108.30	42.6	10.1	7.09

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
1/24/2019	D3	178.00	33.6	12.8	6.83
1/31/2019	D3	202.70	37.9	12.3	6.91
2/7/2019	D3	276.60	55.9	7.6	7.47
2/14/2019	D3	184.50	45.1	9.7	7.25
2/28/2019	D3	169.30	48.4	9.1	5.97
3/7/2019	D3	199.50	40.1	11.6	6.79
3/21/2019	D3	174.50	48.2	9.1	7.58
3/28/2019	D3	191.90	52.2	8.2	6.48
4/4/2019	D3	256.70	51.8	8.5	7.50
4/25/2019	D3	191.36	58.0	6.9	
5/2/2019	D3	227.04	59.9	6.1	
5/9/2019	D3	213.02	53.2	9.0	7.05
5/16/2019	D3	216.48	59.3	6.2	7.05
5/30/2019	D3	443.50	67.4	4.9	7.54
6/6/2019	D3	625.82	67.7	4.5	7.45
6/13/2019	D3	431.98	65.3	4.9	7.39
6/20/2019	D3	714.41	68.5	4.0	7.79
6/27/2019	D3	380.47	70.9	4.3	7.34
7/2/2019	D3	635.66	69.9	5.6	7.84
7/11/2019	D3	271.84	73.7	4.9	7.42
7/18/2019	D3	148.52	73.5	4.2	6.65
7/25/2019	D3	470.16	67.1	6.3	7.45
8/1/2019	D3	704.93	71.3	6.0	7.65
8/8/2019	D3	738.20	72.1	6.5	7.85
8/15/2019	D3	715.37	73.2	6.0	7.69
8/22/2019	D3	758.05	72.4	6.2	7.97
9/5/2019	D3	594.75	72.9	5.9	7.80
9/19/2019	D3	583.11	71.4	5.5	7.82
10/1/2019	D3	378.20	74.4	6.4	8.05
10/17/2019	D3	266.41	53.8	7.8	7.75
10/24/2019	D3	285.73	53.6	6.8	7.68
10/31/2019	D3	268.90	49.7	9.1	7.39
11/7/2019	D3	282.87	53.4	7.5	7.30
11/14/2019	D3	307.77	40.3	10.6	7.26
11/21/2019	D3	512.51	47.8	8.7	7.40
12/19/2019	D3	233.03	39.9	12.0	6.05
12/31/2019	D3	210.15	44.3	10.2	5.66
1/9/2020	D3	236.83	43.9	10.3	9.51
1/16/2020	D3	181.15	53.9	8.1	5.62
1/23/2020	D3	173.61	38.9	12.1	6.01
1/30/2020	D3	181.29	45.0	10.4	5.95

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
2/6/2020	D3	92.99	46.2	10.7	7.30
2/20/2020	D3	159.69	43.3		5.93
2/27/2020	D3	181.35	44.0	10.6	5.79
3/11/2020	D3	154.65	61.4	7.7	7.38
3/19/2020	D3	168.09	56.0	8.3	6.75
3/25/2020	D3	159.60	62.1	7.3	7.36
4/16/2020	D3	120.28	54.4	7.2	6.46
4/23/2020	D3	156.65	56.6	8.3	6.72
4/30/2020	D3	162.96	60.1	6.9	6.71
5/7/2020	D3	209.18	61.5	4.8	6.86
5/21/2020	D3	541.50	64.2	5.6	7.22
5/28/2020	D3	220.62	67.5	6.0	6.78
6/11/2020	D3	202.62	69.0	5.0	6.65
6/18/2020	D3	607.18	70.1	5.1	7.44
6/25/2020	D3	303.77	80.8	4.3	7.30
7/2/2020	D3	489.34	74.9	3.8	7.40
7/8/2020	D3	213.92	73.0	4.9	7.05
7/15/2020	D3	509.71	76.2	5.3	7.63
7/22/2020	D3	659.00	83.1	5.8	7.84
7/29/2020	D3	686.92	82.6	5.5	7.82
8/5/2020	D3	611.46	69.9	6.8	7.81
8/12/2020	D3	359.00	69.7	4.4	7.59
8/19/2020	D3	466.38	70.6	6.7	7.72
8/26/2020	D3	552.29	72.4	6.1	7.92
9/2/2020	D3	332.59	72.9	5.4	7.36
9/9/2020	D3	389.43	71.4	5.3	7.58
9/16/2020	D3	278.68	77.4	4.3	7.48
9/23/2020	D3	284.96	61.1	5.5	7.17
9/30/2020	D3	260.56	59.9	6.1	6.74
10/7/2020	D3	218.30	56.4	7.5	7.01
10/14/2020	D3	168.36	60.8	2.0	6.45
10/21/2020	D3	189.41	64.1		6.96
10/28/2020	D3	207.84	53.0	8.2	6.77
11/5/2020	D3	190.21	53.1	9.0	5.95
11/12/2020	D3	234.86	56.2	6.4	5.86
11/19/2020	D3	309.77	49.4	7.8	5.97
12/3/2020	D3	321.52	44.9	10.4	6.16
12/17/2020	D3	166.79	40.1	11.7	6.17
12/22/2020	D3	144.95	46.2	10.2	6.80
12/29/2020	D3	249.04	41.1	10.5	7.10
1/6/2021	D3	166.32	40.6	10.1	8.21

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
1/13/2021	D3	179.41	35.5	12.2	7.49
1/20/2021	D3	193.95	45.0	9.7	8.31
1/27/2021	D3	219.53	52.2	8.6	
2/3/2021	D3	239.43	43.5	11.4	7.61
2/10/2021	D3	236.48	44.0	11.1	7.69
2/24/2021	D3	98.60	46.5	9.8	7.06
3/17/2021	D3	184.10	68.2	6.1	7.20
3/24/2021	D3	175.51	64.4	7.2	7.21
3/31/2021	D3	82.50	60.2	8.0	7.05
4/7/2021	D3	115.24	68.1	6.2	6.97
4/14/2021	D3	124.20	65.1	6.5	7.04
4/21/2021	D3	158.49	56.8	6.6	7.29
4/28/2021	D3	121.82	70.0	5.6	6.92
5/5/2021	D3	102.50	69.5	5.7	6.83
5/12/2021	D3	87.91	60.0	8.0	6.75
5/19/2021	D3	136.82	72.3	5.5	6.94
5/26/2021	D3	350.92	77.9	5.4	7.40
6/2/2021	D3	227.35	72.4	4.1	6.81
6/16/2021	D3	103.10	82.2	0.8	6.41
6/23/2021	D3	461.99	75.7	4.3	7.25
6/30/2021	D3	654.08	83.3	4.1	7.49
7/8/2021	D3	728.77	80.5	5.6	7.86
7/14/2021	D3	651.54	82.7	3.5	7.30
7/21/2021	D3	733.15	78.5	6.4	
7/28/2021	D3	703.00	84.7	5.3	7.63
8/4/2021	D3	615.00	79.8	5.7	7.65
8/11/2021	D3	673.00	84.2	5.4	7.88
8/18/2021	D3	591.00	79.7	5.0	7.53
8/25/2021	D3	543.46	84.5	4.2	7.52
9/1/2021	D3	445.27	79.7	5.1	7.73
9/8/2021	D3	457.96	75.1	6.8	8.12

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
11/30/2017	D4	761.87	52.2	4.9	7.40
12/7/2017	D4	762.26	48.9	4.0	7.42
12/14/2017	D4	751.87	42.0	7.7	7.57
12/21/2017	D4	155.62	55.6	6.8	6.92
12/28/2017	D4	179.59	37.2	11.8	7.18
1/11/2018	D4	267.96	49.4	9.3	7.23
1/20/2018	D4	174.30	43.2	9.4	7.15
2/1/2018	D4	304.14	41.4	11.2	7.28
2/8/2018	D4	144.93	35.2	12.5	6.75
2/15/2018	D4	110.08	45.8	10.4	6.76
3/1/2018	D4	116.42	53.4	8.9	6.87
3/29/2018	D4	139.78	55.6	8.0	6.90
4/26/2018	D4	108.49	57.5	7.0	6.68
5/3/2018	D4	148.45	64.7	4.9	7.09
5/10/2018	D4	229.54	65.7	4.1	7.14
5/17/2018	D4	579.58	69.9	5.7	8.03
5/24/2018	D4	198.35	67.6	5.3	7.75
5/31/2018	D4	176.86	71.3	8.7	7.44
6/7/2018	D4	583.00	69.1	9.1	
6/14/2018	D4	362.05	69.2	9.1	8.63
6/28/2018	D4	656.08	74.5	8.2	8.68
7/12/2018	D4	673.56	74.4	8.2	
7/19/2018	D4	470.86	72.1	5.0	6.39
7/26/2018	D4	534.36	71.0	6.6	6.76
8/2/2018	D4	375.58	66.7	5.9	6.28
8/9/2018	D4	312.05	66.9	5.4	6.02
8/16/2018	D4	356.20	71.3	5.6	6.24
8/23/2018	D4	174.78	68.4	4.3	6.95
8/30/2018	D4	285.71	72.2	5.5	7.44
9/6/2018	D4	238.89	69.6	3.9	7.47
9/13/2018	D4	164.41	65.4	5.1	7.06
9/20/2018	D4	210.97	71.6	3.2	7.14
9/27/2018	D4	108.20	63.5	5.4	7.79
10/11/2018	D4	201.90	63.6	2.3	7.00
10/18/2018	D4	238.97	51.1	8.6	7.25
10/25/2018	D4	206.72	50.5	9.1	7.27
10/30/2018	D4	204.38	54.1	7.3	7.40
11/8/2018	D4	155.06	50.0	8.4	6.86
11/15/2018	D4	148.80	35.8	11.7	7.24
11/29/2018	D4	310.40	42.1	9.1	7.02
12/6/2018	D4	178.50	40.8	10.3	6.63

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
12/13/2018	D4	134.00	40.5	10.7	6.58
12/20/2018	D4	143.30	45.9	9.2	6.56
1/3/2019	D4	155.40	40.5	11.0	6.77
1/10/2019	D4	158.10	43.5	9.8	6.95
1/24/2019	D4	137.50	38.5	11.7	6.90
1/31/2019	D4	202.00	36.7	12.5	6.74
2/7/2019	D4	266.50	55.4	7.8	7.35
2/14/2019	D4	241.40	41.0	10.5	7.10
2/28/2019	D4	167.40	47.8	9.1	5.74
3/7/2019	D4	191.20	39.9	11.6	6.60
3/14/2019	D4	143.30	51.6	9.5	6.27
3/21/2019	D4	175.70	49.5	9.0	7.25
3/28/2019	D4	183.00	52.7	8.4	6.32
4/4/2019	D4	233.00	51.8	7.8	7.33
4/18/2019	D4	164.65	54.8	6.4	9.19
4/25/2019	D4	180.55	57.9	6.4	
5/2/2019	D4	242.90	60.1	5.8	9.51
5/9/2019	D4	186.29	53.1	8.9	6.90
5/16/2019	D4	196.20	58.5	5.5	6.85
5/30/2019	D4	382.05	68.4	4.0	7.34
6/6/2019	D4	439.95	66.9	4.8	7.37
6/13/2019	D4	347.14	66.6	3.4	7.26
6/20/2019	D4	751.05	68.9	4.4	7.77
6/27/2019	D4	360.91	71.0	3.9	7.24
7/2/2019	D4	522.75	70.6	5.5	7.72
7/11/2019	D4	261.41	74.3	4.6	7.40
7/18/2019	D4	147.19	72.3	4.6	6.68
7/25/2019	D4	405.47	68.3	5.7	7.18
8/1/2019	D4	607.43	72.3	5.4	7.55
8/8/2019	D4	750.79	72.3	6.7	7.76
8/15/2019	D4	701.31	73.6	5.6	7.58
8/22/2019	D4	878.63	72.7	5.8	7.76
9/5/2019	D4	532.15	71.9	5.1	7.59
9/19/2019	D4	516.64	72.9	3.7	7.71
10/1/2019	D4	366.39	70.5	3.4	7.64
10/17/2019	D4	294.14	53.9	6.1	7.70
10/24/2019	D4	328.86	54.9	5.9	7.61
10/31/2019	D4	279.45	50.7	8.6	7.30
11/7/2019	D4	269.54	53.3	7.5	7.17
11/14/2019	D4	271.82	39.9	10.3	7.14
11/21/2019	D4	390.19	47.4	7.5	7.23

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
12/19/2019	D4	217.15	39.1	11.9	5.96
12/31/2019	D4	200.23	45.2	9.9	5.60
1/9/2020	D4	215.91	44.5	10.1	
1/16/2020	D4	166.74	53.7	8.0	5.42
1/23/2020	D4	155.52	39.0	12.0	5.88
1/30/2020	D4	185.30	45.3	10.4	5.90
2/6/2020	D4	115.38	48.0	10.4	7.26
2/13/2020	D4	49.59	46.9	11.0	6.94
2/20/2020	D4	156.25	45.1	10.9	5.64
2/27/2020	D4	183.94	45.8	10.2	5.76
3/11/2020	D4	148.30	61.8	7.6	7.31
3/19/2020	D4	155.31	55.8	8.5	6.65
3/25/2020	D4	151.41	62.7	7.4	7.28
4/16/2020	D4	123.11	53.5	6.9	6.43
4/23/2020	D4	145.21	57.0	8.2	6.62
4/30/2020	D4	156.02	60.5	6.8	6.65
5/7/2020	D4	197.56	62.6	3.6	6.73
5/21/2020	D4	451.71	64.9	5.3	7.11
5/28/2020	D4	216.33	67.2	5.5	6.73
6/11/2020	D4	179.95	69.0	4.3	6.56
6/18/2020	D4	486.29	70.2	4.4	7.09
6/25/2020	D4	282.72	80.1	3.8	7.18
7/2/2020	D4	452.90	75.4	3.3	7.28
7/8/2020	D4	188.09	72.8	5.2	7.25
7/15/2020	D4	475.81	76.3	4.9	7.43
7/22/2020	D4	643.21	83.7	5.8	7.74
7/29/2020	D4	649.00	83.1	4.9	7.64
8/5/2020	D4	594.50	69.8	6.8	7.71
8/12/2020	D4	392.33	70.3	4.8	7.57
8/19/2020	D4	452.58	70.8	6.4	7.63
8/26/2020	D4	539.85	72.9	6.5	7.80
9/2/2020	D4	296.52	72.6	4.6	7.24
9/9/2020	D4	372.03	70.5	5.2	7.39
9/16/2020	D4	293.95	78.0	3.2	7.34
9/23/2020	D4	302.32	61.8	6.2	7.09
9/30/2020	D4	261.66	60.1	5.3	6.59
10/7/2020	D4	216.86	57.3	6.4	6.90
10/14/2020	D4	174.29	61.0	1.6	6.33
10/21/2020	D4	188.32	63.7		6.85
10/28/2020	D4	215.26	53.4	7.0	6.82
11/5/2020	D4	112.73	53.3	8.4	5.61

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
11/12/2020	D4	195.42	56.8	5.4	5.59
11/19/2020	D4	293.52	50.0	7.0	5.61
12/3/2020	D4	397.98	44.5	9.9	5.67
12/10/2020	D4	349.80	45.8	9.6	6.30
12/17/2020	D4	167.28	40.0	11.7	6.04
12/22/2020	D4	150.30	46.2	10.1	6.72
12/29/2020	D4	242.86	41.4	10.4	6.98
1/6/2021	D4	162.75	40.5	9.8	7.72
1/13/2021	D4	175.62	35.4	12.3	6.91
1/20/2021	D4	173.50	44.4	9.9	8.35
1/27/2021	D4	191.88	53.0	8.3	
2/3/2021	D4	254.28	42.4	11.6	7.52
2/10/2021	D4	308.85	44.4	10.8	7.58
2/24/2021	D4	94.83	45.2	10.3	7.05
3/3/2021	D4	66.21	49.9	8.7	6.90
3/17/2021	D4	135.30	67.2	5.8	7.03
3/24/2021	D4	190.72	64.5	7.0	7.20
3/31/2021	D4	84.22	61.4	7.9	6.95
4/7/2021	D4	103.15	66.9	5.5	6.80
4/14/2021	D4	129.66	66.1	5.3	6.91
4/21/2021	D4	142.91	59.7	6.1	7.19
4/28/2021	D4	105.15	69.7	5.2	6.73
5/5/2021	D4	101.91	70.9	5.1	6.76
5/12/2021	D4	86.87	60.0	8.3	6.78
5/19/2021	D4	122.60	73.1	4.2	6.62
5/26/2021	D4	198.83	76.9	2.8	6.88
6/2/2021	D4	235.27	72.1	4.8	6.78
6/9/2021	D4	63.50	72.6	5.4	6.36
6/16/2021	D4	97.84	81.9	0.8	6.41
6/30/2021	D4	577.00	83.8	4.2	7.43
7/8/2021	D4	759.08	79.7	5.5	7.72
7/14/2021	D4	584.31	82.3	3.9	7.29
7/21/2021	D4	671.46	80.3	5.5	
7/28/2021	D4	744.62	83.9	5.7	7.57
8/4/2021	D4	672.54	78.7	5.8	7.55
8/11/2021	D4	692.92	82.3	5.7	7.89
8/18/2021	D4	527.00	80.4	4.5	7.47
8/25/2021	D4	537.54	84.9	3.6	7.39
9/1/2021	D4	393.36	78.7	5.1	7.59
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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
11/30/2017	D5	432.31	52.9	7.4	7.41
12/7/2017	D5	411.78	49.5	7.1	7.39
12/14/2017	D5	469.21	44.7	9.5	7.52
12/21/2017	D5	154.70	55.3	7.3	6.90
12/28/2017	D5	168.42	39.1	10.8	6.90
1/11/2018	D5	205.40	43.5	10.4	6.89
1/20/2018	D5	107.00	39.6	12.2	6.87
2/1/2018	D5	305.56	41.1	11.4	6.97
2/8/2018	D5	138.75	35.1	12.9	6.61
2/15/2018	D5	111.33	43.5	11.0	6.54
3/1/2018	D5	116.06	52.7	8.3	6.52
3/29/2018	D5	147.61	55.7	8.0	6.74
4/26/2018	D5	101.72	55.9	6.4	6.44
5/3/2018	D5	130.78	63.8	4.7	6.59
5/17/2018	D5	610.25	71.2	5.0	7.64
5/24/2018	D5	282.43	70.2	4.9	7.48
5/31/2018	D5	192.93	70.1	8.9	7.26
6/14/2018	D5	386.68	70.8	8.8	8.42
6/28/2018	D5	556.34	74.9	8.1	8.90
7/12/2018	D5	525.24	74.4	8.2	
7/19/2018	D5	517.39	71.5	5.3	6.35
7/26/2018	D5	535.88	71.0	6.0	6.57
8/2/2018	D5	344.37	66.3	5.6	6.15
8/9/2018	D5	287.78	66.9	6.0	5.94
8/16/2018	D5	334.81	70.9	5.9	6.26
8/23/2018	D5	169.00	68.4	4.3	6.94
8/30/2018	D5	277.90	72.6	3.8	7.13
9/6/2018	D5	284.31	70.4	2.5	7.35
9/13/2018	D5	167.71	65.4	4.8	6.83
9/20/2018	D5	180.11	71.3	1.7	6.84
10/11/2018	D5	193.93	63.3	1.5	6.86
10/18/2018	D5	241.04	51.3	8.2	7.03
10/25/2018	D5	206.63	50.8	8.3	7.04
10/30/2018	D5	212.35	53.9	7.3	7.26
11/8/2018	D5	164.79	50.2	7.7	7.14
11/15/2018	D5	145.40	37.0	11.1	7.31
11/29/2018	D5	5.40	42.8	7.7	6.75
12/6/2018	D5	179.30	41.9	9.4	6.28
12/13/2018	D5	132.10	39.2	10.9	6.41
12/20/2018	D5	142.00	45.5	8.7	6.23
1/3/2019	D5	148.00	41.0	10.5	6.61

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
1/10/2019	D5	113.20	44.1	8.9	6.65
1/24/2019	D5	141.20	40.3	11.5	6.80
1/31/2019	D5	203.80	37.2	12.3	6.60
2/7/2019	D5	255.90	55.4	7.5	7.03
2/14/2019	D5	162.50	46.4	9.4	6.91
2/28/2019	D5	162.00	46.6	9.4	
3/7/2019	D5	140.80	39.0	11.5	6.42
3/14/2019	D5	149.00	51.1	9.8	6.20
3/21/2019	D5	105.40	49.6	7.8	6.48
3/28/2019	D5	187.90	52.9	7.1	5.98
4/4/2019	D5	209.50	51.4	6.6	7.15
4/18/2019	D5	169.55	54.4	7.0	8.63
4/25/2019	D5	175.75	57.1	5.2	
5/2/2019	D5	214.31	60.7	4.0	
5/9/2019	D5	138.32	56.4	8.8	6.75
5/16/2019	D5	192.61	56.3	4.4	6.72
5/30/2019	D5	258.04	68.0	2.7	7.06
6/6/2019	D5	481.39	68.4	4.2	7.31
6/13/2019	D5	384.35	65.6	3.0	7.13
6/20/2019	D5	553.20	68.3	4.8	7.51
6/27/2019	D5	306.16	70.8	4.0	7.04
7/2/2019	D5	481.01	71.5	4.5	7.34
7/11/2019	D5	263.91	73.7	4.7	7.31
7/18/2019	D5	142.04	70.1	5.1	6.68
7/25/2019	D5	251.20	69.6	3.5	6.76
8/1/2019	D5	508.92	73.0	4.4	7.08
8/8/2019	D5	679.14	73.3	5.8	7.47
8/15/2019	D5	611.17	74.8	5.1	7.41
8/22/2019	D5	686.12	73.9	5.7	7.58
9/5/2019	D5	603.74	72.7	5.3	7.36
9/19/2019	D5	620.57	72.5	4.4	7.40
10/1/2019	D5	531.09	71.9	6.2	7.53
10/17/2019	D5	356.72	56.4	6.1	7.61
10/24/2019	D5	360.52	55.1	7.1	7.54
10/31/2019	D5	291.77	50.9	8.6	7.17
11/7/2019	D5	244.79	52.4	7.6	7.02
11/14/2019	D5	280.73	40.9	8.7	6.95
11/21/2019	D5	270.68	47.8	8.1	7.15
12/19/2019	D5	192.89	39.0	11.7	6.15
12/31/2019	D5	218.00	46.1	9.9	5.56
1/9/2020	D5	219.26	44.9	9.9	8.98

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1/16/2020	D5	158.07	51.6	8.0	
1/23/2020	D5	148.20	38.8	11.8	5.51
1/30/2020	D5	192.79	45.9	10.3	5.82
2/6/2020	D5	109.08	50.0	9.8	7.17
2/13/2020	D5	58.11	46.5	10.9	6.75
2/20/2020	D5	139.80	45.8	10.2	
2/27/2020	D5	194.26	48.5	9.1	5.51
3/11/2020	D5	130.85	61.1	7.6	7.15
3/19/2020	D5	148.70	53.4	8.3	6.59
3/25/2020	D5	154.52	60.3	7.6	6.98
4/16/2020	D5	120.43	53.2	7.4	6.38
4/23/2020	D5	146.85	58.7	7.1	6.34
4/30/2020	D5	163.35	59.8	6.8	6.55
5/7/2020	D5	168.27	63.7	3.2	6.51
5/21/2020	D5	302.27	65.3	4.5	6.69
5/28/2020	D5	229.65	68.2	5.4	6.66
6/11/2020	D5	177.31	69.7	4.3	6.41
6/18/2020	D5	297.74	71.9	3.7	6.60
6/25/2020	D5	265.29	78.8	4.2	7.00
7/2/2020	D5	416.36	75.6	3.5	7.01
7/8/2020	D5	344.72	73.9	5.4	6.96
7/15/2020	D5	430.51	77.0	4.0	7.10
7/22/2020	D5	649.08	85.4	5.1	7.28
7/29/2020	D5	533.71	84.5	4.6	7.20
8/5/2020	D5	640.60	70.2	6.6	7.33
8/12/2020	D5	445.84	71.3	5.0	7.47
8/19/2020	D5	497.23	70.8	6.3	7.27
8/26/2020	D5	558.42	72.4	6.3	7.60
9/2/2020	D5	306.91	72.6	4.3	6.92
9/9/2020	D5	337.11	71.6	4.3	7.15
9/16/2020	D5	425.63	78.0	4.0	6.96
9/23/2020	D5	267.52	61.3	6.1	7.20
9/30/2020	D5	266.71	60.7	3.8	6.31
10/7/2020	D5	237.98	58.0	4.9	6.75
10/14/2020	D5	183.71	61.9	2.0	6.19
10/21/2020	D5	178.32	62.1		6.60
10/28/2020	D5	247.92	54.5	5.5	6.74
11/5/2020	D5	186.48	51.9	7.9	
11/12/2020	D5	178.35	57.9	3.9	
11/19/2020	D5	222.63	51.7	3.8	
12/3/2020	D5	309.95	45.0	8.2	5.57

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Date	Site	Specific Conductance (µS/cm)	Temperature (°F)	Dissolved Oxygen (mg/L)	pH (SU)
12/10/2020	D5	298.40	46.1		6.22
12/17/2020	D5	167.06	40.3	11.4	5.88
12/22/2020	D5	150.09	46.8	10.0	6.72
12/29/2020	D5	232.79	40.6	10.4	7.03
1/6/2021	D5	161.56	40.3	9.3	7.40
1/13/2021	D5	174.36	35.2	11.7	7.07
1/20/2021	D5	165.74	43.5	9.9	8.57
1/27/2021	D5	217.75	50.5	8.7	
2/3/2021	D5	295.75	43.1	11.5	7.42
2/10/2021	D5	310.39	45.8	10.4	7.21
2/24/2021	D5	93.77	42.5	11.2	6.89
3/3/2021	D5	67.05	49.5	8.5	6.83
3/17/2021	D5	86.02	63.1	7.2	6.81
3/24/2021	D5	143.72	64.3	6.3	7.00
3/31/2021	D5	75.81	60.4	7.6	6.76
4/7/2021	D5	83.32	65.4	7.9	6.68
4/14/2021	D5	130.09	68.0	3.5	6.69
4/21/2021	D5	145.30	59.6	4.2	6.98
5/5/2021	D5	105.10	71.5	4.5	6.65
5/12/2021	D5	116.50	61.1	7.8	6.57
5/26/2021	D5	170.20	76.3	3.9	6.67
6/2/2021	D5	226.96	72.5	4.5	6.58
6/9/2021	D5	62.80	72.7	5.8	6.47
6/16/2021	D5	97.03	83.2	1.9	6.44
6/30/2021	D5	520.00	83.7	3.0	7.05
7/8/2021	D5	686.79	81.0	5.3	7.44
7/14/2021	D5	535.00	82.0	4.7	7.21
7/21/2021	D5	682.00	80.6	5.0	
7/28/2021	D5	689.31	85.7	4.6	7.29
8/4/2021	D5	491.46	78.2	5.3	7.33
8/11/2021	D5	705.58	83.8	5.2	7.81
8/18/2021	D5	514.00	80.1	4.8	7.36
8/25/2021	D5	544.00	85.0	3.5	6.98
9/1/2021	D5	318.65	79.6	4.3	7.39
9/8/2021	D5	497.63	76.5	4.9	7.70

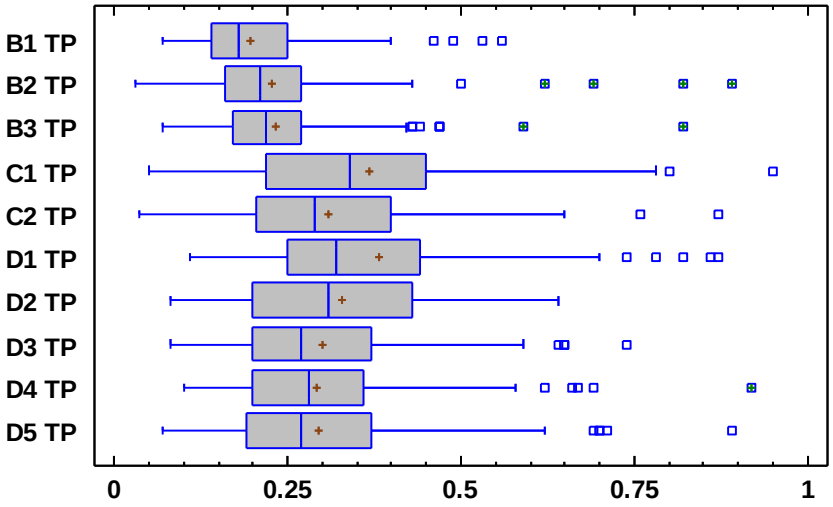
Appendix III

Statistical Comparison of Concentrations between Stations

Appendix III

Comparison of Parameter Concentrations between Stations

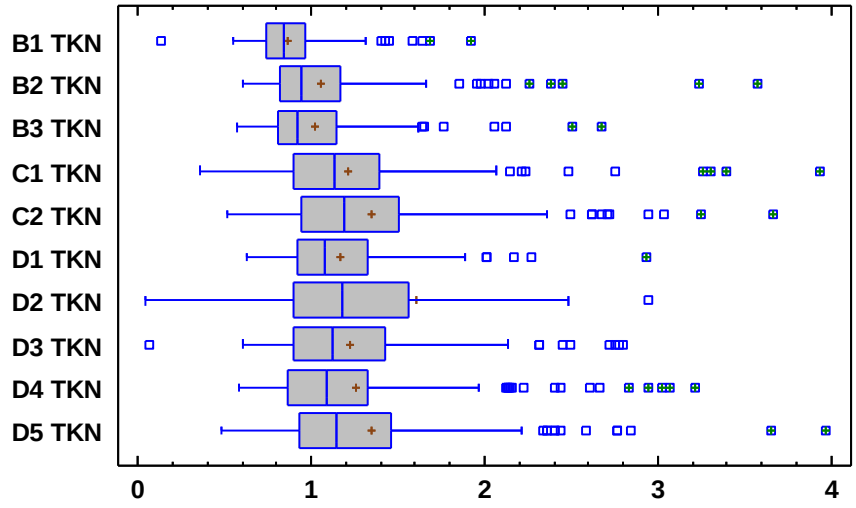
Comparison of TP between Stations



Multiple Range Tests, Method: 95.0 percent LSD

	Mean	*Homogeneous Groups*
B1 TP	0.196114	X
B2 TP	0.22829	X
B3 TP	0.233212	X
D4 TP	0.291865	X
D5 TP	0.293874	X
D3 TP	0.3	X
C2 TP	0.309388	X
D2 TP	0.327711	X
C1 TP	0.368394	X
D1 TP	0.382517	X

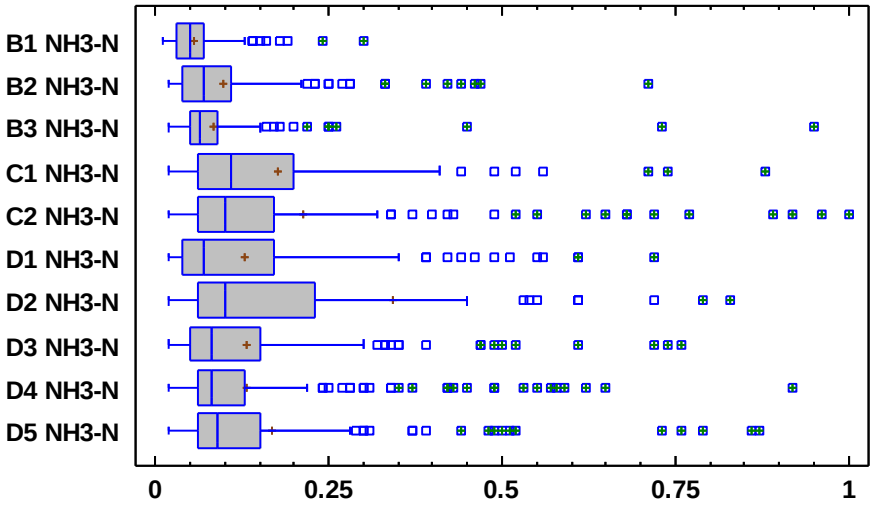
Comparison of TKN between Stations



Multiple Range Tests, Method: 95.0 percent LSD

	Mean	*Homogeneous Groups*
B1 TKN	0.868601	X
B3 TKN	1.01746	X
B2 TKN	1.05622	X
D1 TKN	1.16463	XX
C1 TKN	1.21373	XX
D3 TKN	1.22308	XX
D4 TKN	1.25338	XX
D5 TKN	1.34461	X
C2 TKN	1.34548	X
D2 TKN	1.60518	X

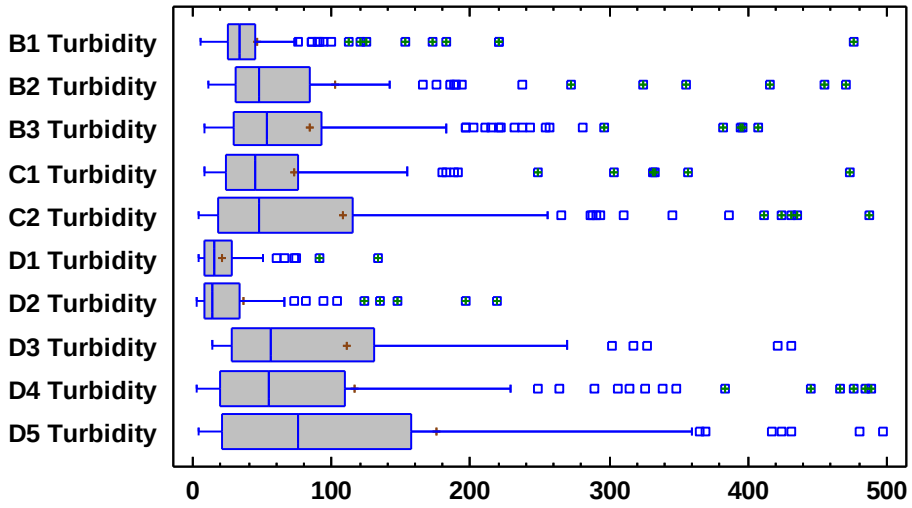
Comparison of NH3-N between Stations



Multiple Range Tests, Method: 95.0 percent LSD

	Mean	*Homogeneous Groups*
B1 NH3-N	0.0567568	X
B3 NH3-N	0.084026	XX
B2 NH3-N	0.0970681	XX
D1 NH3-N	0.129565	XX
D3 NH3-N	0.131196	XX
D4 NH3-N	0.132762	XX
D5 NH3-N	0.169053	XX
C1 NH3-N	0.177753	XX
C2 NH3-N	0.212947	X
D2 NH3-N	0.343735	X

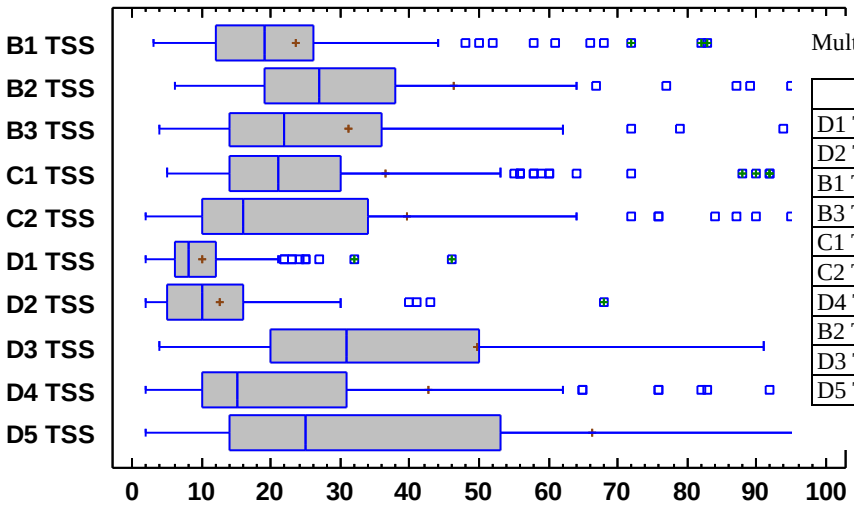
Comparison of Turbidity between Stations



Multiple Range Tests, Method: 95.0 percent LSD

	Mean	*Homogeneous Groups*
D1 Turbidity	20.4469	X
D2 Turbidity	36.111	XX
B1 Turbidity	46.1036	XX
C1 Turbidity	72.1332	XX
B3 Turbidity	83.6254	XX
B2 Turbidity	102.26	XX
C2 Turbidity	107.507	X
D3 Turbidity	110.599	X
D4 Turbidity	116.031	X
D5 Turbidity	175.2	X

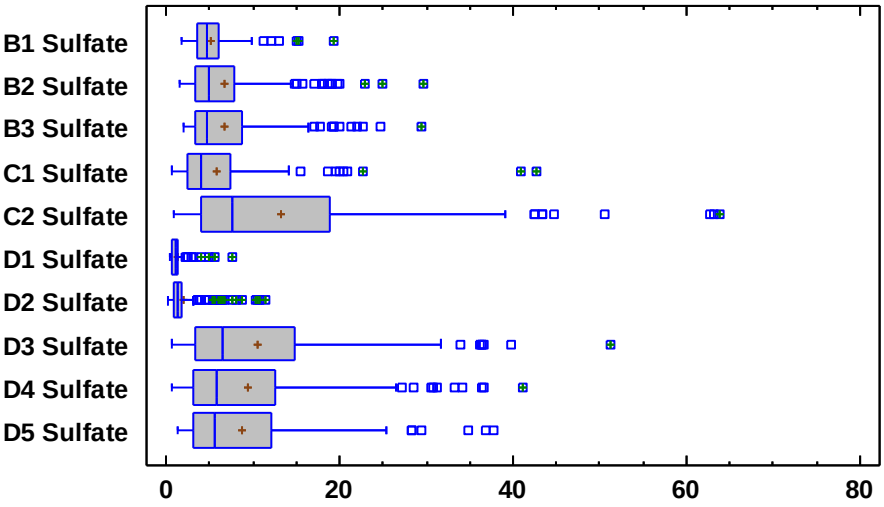
Comparison of TSS between Stations



Multiple Range Tests, Method: 95.0 percent LSD

	Mean	*Homogeneous Groups*
D1 TSS	10.0476	X
D2 TSS	12.6747	XX
B1 TSS	23.5803	XXX
B3 TSS	31.0933	XXX
C1 TSS	36.4145	XXX
C2 TSS	39.7287	XX
D4 TSS	42.6736	XX
B2 TSS	46.285	X
D3 TSS	49.8162	X
D5 TSS	66.3822	X

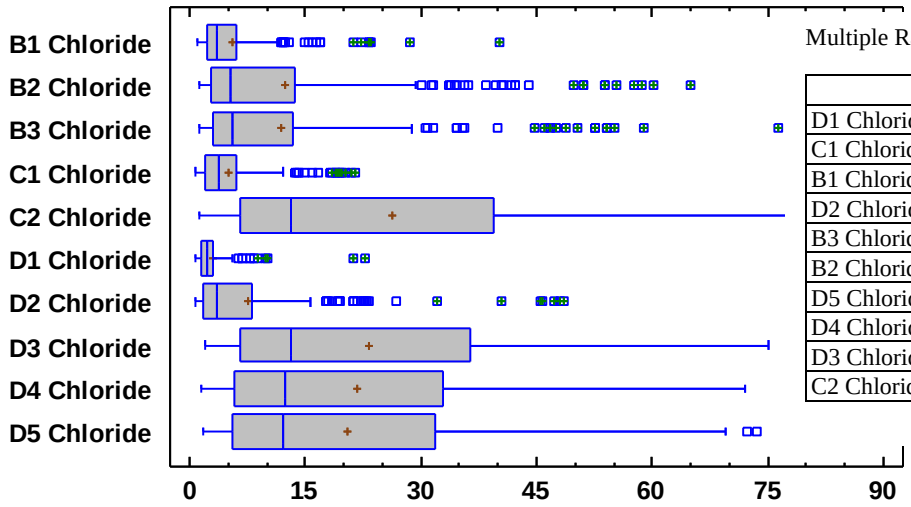
Comparison of Sulfate between Stations



Multiple Range Tests, Method: 95.0 percent LSD

	Mean	*Homogeneous Groups*
D1 Sulfate	1.22937	X
D2 Sulfate	1.89518	X
B1 Sulfate	5.18132	X
C1 Sulfate	5.73022	XX
B2 Sulfate	6.61813	XX
B3 Sulfate	6.69945	X
D5 Sulfate	8.61556	X
D4 Sulfate	9.29341	XX
D3 Sulfate	10.4603	X
C2 Sulfate	13.2497	X

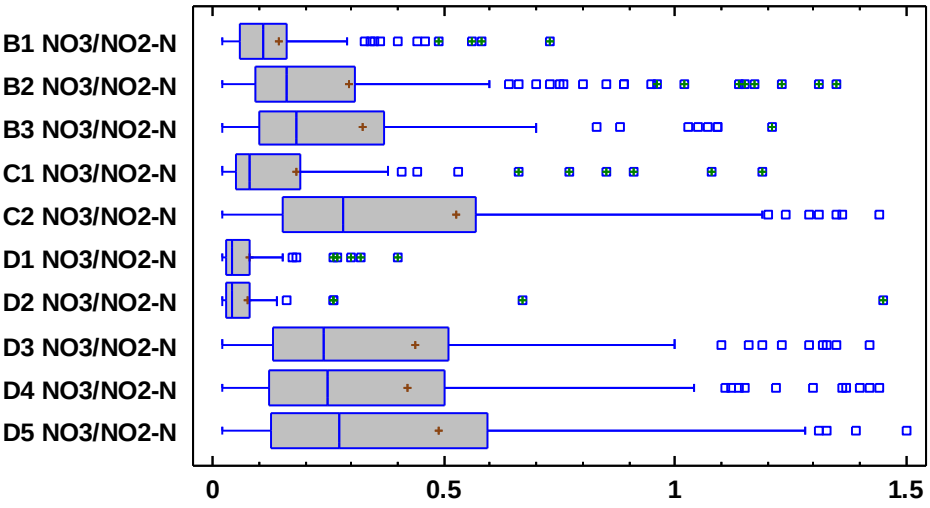
Comparison of Chloride between Stations



Multiple Range Tests, Method: 95.0 percent LSD

	Mean	*Homogeneous Groups*
D1 Chloride	2.8773	X
C1 Chloride	5.02253	XX
B1 Chloride	5.47637	XX
D2 Chloride	7.55172	X
B3 Chloride	11.8522	X
B2 Chloride	12.2681	X
D5 Chloride	20.4739	X
D4 Chloride	21.6478	X
D3 Chloride	23.2511	XX
C2 Chloride	26.3243	X

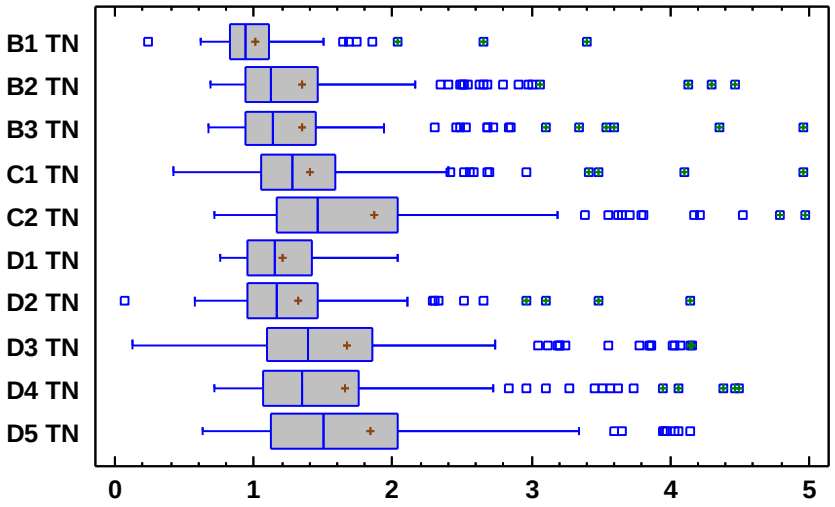
Comparison of NO3+NO2-N between Stations



Multiple Range Tests, Method: 95.0 percent LSD

	Mean	*Homogeneous Groups*
D2 NO3/NO2-N	0.0752586	X
D1 NO3/NO2-N	0.0775472	X
B1 NO3/NO2-N	0.143419	X
C1 NO3/NO2-N	0.181697	X
B2 NO3/NO2-N	0.29381	X
B3 NO3/NO2-N	0.325257	XX
D4 NO3/NO2-N	0.420765	XX
D3 NO3/NO2-N	0.438982	X
D5 NO3/NO2-N	0.488452	X
C2 NO3/NO2-N	0.525284	X

Comparison of TN between Stations



Multiple Range Tests, Method: 95.0 percent LSD

	Count	*Mean*	*Homogeneous Groups*
B1 TN	155	1.00813	X
D1 TN	53	1.21189	XX
D2 TN	116	1.32259	X
B2 TN	168	1.34006	X
B3 TN	175	1.34577	X
C1 TN	165	1.39758	X
D4 TN	170	1.65535	X
D3 TN	165	1.66341	X
D5 TN	168	1.84149	XX
C2 TN	169	1.86481	X

Appendix IV

Monthly Load Estimations

Equilibrium
Project #17-400
501.944.1765
www.equilibrium-ar.org

Station	Year	Month	TP (lbs)	TKN (lbs)	Ammonia-N (lbs)	TSS (lbs)	Sulfate (lbs)	Chloride (lbs)	NO3+NO2-N (lbs)	TN (lbs)
B1	2017	Nov-17	0	1	0	12	12	30	0	0
		Dec-17	9,750	28,100	714	1,110,000	162,000	239,000	39,500	67,000
	2018	Jan-18	1,660	7,640	178	83,000	67,200	40,700	3,530	11,200
		Feb-18	54,300	239,000	10,500	16,600,000	1,360,000	782,000	37,400	277,000
		Mar-18	34,800	206,000	12,300	2,920,000	1,010,000	527,000	16,900	223,000
		Apr-18	43,500	230,000	23,000	5,380,000	253,000	168,000	15,800	84,300
		May-18	1,120	5,720	808	152,000				
		Jun-18	75	300	30	7,020	162	309	0	0
		Jul-18	26	197	10	5,350	2,930	4,890	2	40
		Aug-18	2,900	13,200	950	319,000	95,800	150,000	592	7,910
		Sep-18	4,450	21,800	2,150	334,000	64,300	69,900	1,960	23,800
		Oct-18	3,960	13,700	822	258,000	34,500	41,900	2,230	15,900
		Nov-18	12,200	65,100	1,400	736,000	213,000	203,000	1,390	35,800
		Dec-18	23,400	128,000	5,330	781,000	553,000	379,000	3,740	93,500
	2019	Jan-19	23,000	127,000	7,040	1,410,000	867,000	373,000	12,100	139,000
		Feb-19	20,800	142,000	8,620	2,440,000	770,000	336,000	19,300	161,000
		Mar-19	25,600	137,000	7,740	2,540,000	669,000	278,000	16,600	153,000
		Apr-19	36,200	213,000	15,400	3,220,000	910,000	398,000	29,100	242,000
		May-19	39,500	126,000	6,560	18,900,000	226,000	136,000	19,100	145,000
		Jun-19	2,810	11,000	1,070	449,000	57,600	47,700	4,090	15,100
		Jul-19	10,400	52,800	5,600	1,080,000	347,000	261,000	17,200	70,100
		Aug-19	434	1,850	129	47,200	11,400	17,400	159	1,360
		Sep-19	139	784	38	20,600	5,910	11,100	5	157
		Oct-19	224	1,870	56	59,300	14,500	23,100	131	1,940
		Nov-19	618	2,550	104	117,000	23,500	25,400	504	2,310
		Dec-19	1,410	5,430	219	126,000	43,200	37,000	97	2,600
	2020	Jan-20	13,700	79,200	2,750	1,190,000	548,000	249,000	6,040	85,300
		Feb-20	25,300	148,000	7,670	2,300,000	915,000	419,000	16,100	164,000
		Mar-20	6,370	36,900	2,070	660,000	242,000	113,000	5,400	42,300
		Apr-20	24,800	115,000	5,860	2,250,000	473,000	262,000	15,200	130,000
		May-20	3,170	13,300	902	397,000	60,500	36,300	2,310	15,600
		Jun-20	3,490	15,900	1,800	397,000	67,900	43,900	3,050	18,900
		Jul-20	2,140	7,100	531	240,000	29,100	25,100	2,210	9,310
		Aug-20	848	3,020	63	126,000	20,400	36,400	163	3,180
		Sep-20	5,400	20,300	112	929,000	53,200	86,300	3,760	24,000
		Oct-20	11,500	42,900	2,090	960,000	204,000	226,000	4,840	47,800
		Nov-20	3,580	12,300	615	299,000	52,100	53,300	776	12,500
		Dec-20	5,600	20,500	373	331,000	149,000	133,000	2,400	22,700
	2021	Jan-21	25,000	119,000	3,680	1,230,000	751,000	480,000	7,770	127,000
		Feb-21	6,470	40,600	1,690	442,000	508,000	232,000	6,700	47,300
		Mar-21	34,000	181,000	9,500	4,470,000	1,360,000	815,000	24,500	206,000
		Apr-21	18,500	82,100	4,210	3,230,000	457,000	282,000	8,920	91,100
		May-21	6,700	28,000	2,750	829,000	155,000	106,000	7,110	35,100
		Jun-21	46,600	214,000	18,300	5,020,000	1,450,000	552,000	31,900	246,000
		Jul-21	378	1,130	85	28,300	5,280	7,900	115	1,240
		Aug-21	205	1,160	20	33,700	11,700	19,800	16	283
		Sep-21	18	90	2	3,220	567	660	0	0

Estimated Monthly Loads

Equilibrium
Project #17-400
501.944.1765
www.equilibrium-ar.org

Station	Year	Month	TP (lbs)	TKN (lbs)	Ammonia-N (lbs)	TSS (lbs)	Sulfate (lbs)	Chloride (lbs)	NO3+NO2-N (lbs)	TN (lbs)
B2	2017	Nov-17	1	4	0	64	27	59	0	0
		Dec-17	30,200	70,800	1,780	4,080,000	461,000	656,000	114,000	183,000
	2018	Jan-18	8,950	40,200	1,550	1,170,000	255,000	252,000	19,400	59,600
		Feb-18	132,000	529,000	16,900	75,500,000	1,380,000	1,680,000	118,000	647,000
		Mar-18	68,100	346,000	20,100	13,400,000	1,110,000	853,000	49,800	395,000
		Apr-18	73,000	370,000	32,500	15,900,000	456,000	358,000	55,300	180,000
		May-18	7,140	39,800	6,730	4,800,000				
		Jun-18	595	4,550	702	80,000	5,660	17,100	105	452
		Jul-18	856	6,240	707	105,000	109,000	346,000	1,560	7,810
		Aug-18	10,000	44,800	4,400	2,060,000	281,000	1,030,000	8,200	53,000
		Sep-18	17,600	72,600	7,930	1,250,000	214,000	328,000	5,640	78,300
		Oct-18	20,900	63,800	3,800	1,880,000	197,000	362,000	13,200	77,100
		Nov-18	21,100	92,900	2,050	3,260,000	277,000	416,000	8,210	78,400
		Dec-18	30,300	151,000	6,610	1,590,000	645,000	568,000	5,210	112,000
	2019	Jan-19	40,600	192,000	10,400	9,030,000	621,000	532,000	17,100	209,000
		Feb-19	37,500	204,000	11,900	20,800,000	765,000	618,000	36,400	240,000
		Mar-19	45,600	252,000	12,900	24,300,000	694,000	386,000	28,200	281,000
		Apr-19	52,800	260,000	19,800	6,460,000	1,040,000	513,000	40,200	300,000
		May-19	67,400	270,000	15,500	38,700,000	511,000	346,000	93,100	363,000
		Jun-19	6,860	33,700	6,800	835,000	245,000	328,000	20,200	53,900
		Jul-19	17,800	82,400	9,020	2,570,000	349,000	476,000	42,700	125,000
		Aug-19	2,170	13,300	2,020	274,000	136,000	346,000	2,760	13,300
		Sep-19	806	4,070	376	118,000	46,100	132,000	362	3,470
		Oct-19	1,300	9,610	32	341,000	82,000	336,000	2,050	11,600
		Nov-19	5,490	27,500	717	905,000	273,000	334,000	15,500	43,000
		Dec-19	11,000	41,300	1,630	1,310,000	312,000	310,000	8,040	49,300
	2020	Jan-20	33,900	169,000	7,240	3,580,000	949,000	696,000	15,200	184,000
		Feb-20	69,800	313,000	12,200	20,000,000	1,050,000	806,000	31,100	344,000
		Mar-20	18,800	111,000	6,590	2,480,000	547,000	340,000	16,400	127,000
		Apr-20	49,200	217,000	13,900	6,980,000	815,000	554,000	40,700	258,000
		May-20	15,700	67,900	4,440	5,660,000	268,000	216,000	16,900	84,800
		Jun-20	16,300	87,000	14,200	3,840,000	344,000	312,000	38,900	126,000
		Jul-20	10,300	39,300	4,380	1,520,000	223,000	379,000	17,100	56,400
		Aug-20	3,800	19,400	1,250	1,040,000	388,000	1,290,000	7,840	27,300
		Sep-20	11,000	45,400	2,470	1,740,000	273,000	1,190,000	7,590	53,000
		Oct-20	31,700	110,000	7,020	3,190,000	457,000	692,000	9,940	120,000
		Nov-20	11,900	38,700	2,910	1,180,000	165,000	208,000	2,590	35,700
		Dec-20	17,800	60,300	2,290	1,220,000	424,000	509,000	12,800	72,500
	2021	Jan-21	44,800	200,000	7,170	4,050,000	1,160,000	951,000	18,500	218,000
		Feb-21	20,600	93,800	6,760	2,860,000	474,000	793,000	36,600	130,000
		Mar-21	67,600	304,000	18,200	10,400,000	1,260,000	1,260,000	55,400	359,000
		Apr-21	39,800	166,000	10,500	9,340,000	709,000	508,000	23,600	190,000
		May-21	28,600	109,000	16,700	7,150,000	418,000	290,000	32,700	142,000
		Jun-21	106,000	461,000	75,400	20,900,000	1,300,000	1,190,000	198,000	659,000
		Jul-21	2,570	15,500	2,700	439,000	192,000	439,000	11,300	26,900
		Aug-21	1,850	12,500	1,610	318,000	270,000	713,000	5,010	17,500
		Sep-21	146	821	135	19,500	10,400	37,400	179	1,000

Equilibrium
Project #17-400
501.944.1765
www.equilibrium-ar.org

Station	Year	Month	TP (lbs)	TKN (lbs)	Ammonia-N (lbs)	TSS (lbs)	Sulfate (lbs)	Chloride (lbs)	NO3+NO2-N (lbs)	TN (lbs)
B3	2017	Nov-17	0	1	0	30	12	17	0	1
		Dec-17	22,500	64,800	1,920	2,140,000	315,000	431,000	55,600	120,000
	2018	Jan-18	13,000	59,300	2,620	1,540,000	432,000	524,000	31,300	90,700
		Feb-18	78,000	347,000	15,100	15,100,000	1,560,000	1,370,000	65,600	413,000
		Mar-18	69,700	333,000	19,600	9,510,000	1,150,000	783,000	26,900	360,000
		Apr-18	75,900	334,000	32,900	11,500,000	345,000	244,000	13,500	109,000
		May-18	8,420	37,500	4,740	1,080,000				
		Jun-18	1,310	7,030	544	143,000	8,390	22,900	113	613
		Jul-18	987	7,460	1,070	129,000	135,000	416,000	1,180	6,650
		Aug-18	13,200	59,500	4,310	2,970,000	308,000	937,000	17,200	76,600
		Sep-18	18,400	75,000	5,380	894,000	298,000	454,000	8,250	83,200
		Oct-18	22,500	73,100	4,310	1,180,000	212,000	396,000	12,000	85,100
		Nov-18	26,900	124,000	3,940	2,150,000	381,000	655,000	8,530	133,000
		Dec-18	44,100	167,000	10,400	1,790,000	789,000	777,000	8,000	175,000
	2019	Jan-19	44,100	198,000	12,300	3,280,000	867,000	598,000	20,600	219,000
		Feb-19	40,500	204,000	13,800	4,850,000	824,000	600,000	39,200	244,000
		Mar-19	54,700	236,000	15,000	6,120,000	841,000	463,000	33,900	270,000
		Apr-19	72,900	327,000	28,600	8,970,000	1,280,000	673,000	62,700	390,000
		May-19	50,900	199,000	14,100	19,600,000	436,000	259,000	42,000	241,000
		Jun-19	10,700	51,100	7,220	2,620,000	348,000	454,000	55,300	106,000
		Jul-19	22,700	111,000	9,480	2,520,000	703,000	804,000	105,000	217,000
		Aug-19	3,650	16,400	1,590	333,000	248,000	496,000	5,230	21,600
		Sep-19	870	4,460	489	70,000	56,100	137,000	934	5,150
		Oct-19	1,590	9,310	344	236,000	138,000	470,000	3,610	5,510
		Nov-19	6,900	30,000	1,220	658,000	343,000	463,000	28,100	58,100
		Dec-19	14,500	51,900	1,860	2,410,000	355,000	468,000	13,600	65,500
	2020	Jan-20	39,000	174,000	6,220	4,240,000	889,000	701,000	13,600	188,000
		Feb-20	57,200	310,000	11,800	8,940,000	1,030,000	762,000	29,600	339,000
		Mar-20	25,100	117,000	5,760	2,820,000	614,000	368,000	18,200	135,000
		Apr-20	56,600	234,000	12,200	8,080,000	822,000	631,000	59,800	294,000
		May-20	19,300	76,100	4,400	4,590,000	364,000	328,000	20,600	96,600
		Jun-20	23,600	117,000	24,300	6,940,000	567,000	600,000	87,700	204,000
		Jul-20	13,400	51,400	4,320	2,480,000	294,000	478,000	27,800	79,200
		Aug-20	4,070	23,500	1,530	883,000	478,000	1,360,000	10,400	34,000
		Sep-20	28,400	54,400	3,230	1,760,000	356,000	831,000	16,300	70,800
		Oct-20	40,700	113,000	5,260	2,200,000	488,000	784,000	13,200	126,000
		Nov-20	13,600	40,300	2,230	855,000	150,000	270,000	4,120	44,400
		Dec-20	18,900	69,200	2,330	1,450,000	369,000	613,000	28,900	98,100
	2021	Jan-21	51,300	188,000	6,650	3,370,000	1,110,000	967,000	19,400	207,000
		Feb-21	36,100	175,000	12,400	2,810,000	1,160,000	1,300,000	53,900	229,000
		Mar-21	54,100	238,000	15,300	6,940,000	1,050,000	864,000	45,200	283,000
		Apr-21	39,300	143,000	9,120	5,080,000	477,000	422,000	32,700	176,000
		May-21	20,900	75,700	5,920	4,060,000	248,000	220,000	22,200	97,900
		Jun-21	82,100	641,000	176,000	19,800,000	3,750,000	4,850,000	288,000	930,000
		Jul-21	2,840	17,700	2,500	462,000	246,000	536,000	10,800	28,500
		Aug-21	1,770	11,600	1,550	285,000	351,000	877,000	6,530	18,200
		Sep-21	165	536	59	10,900	6,720	22,400	186	722

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Station	Year	Month	TP (lbs)	TKN (lbs)	Ammonia-N (lbs)	TSS (lbs)	Sulfate (lbs)	Chloride (lbs)	NO3+NO2-N (lbs)	TN (lbs)
C1	2017	Nov-17	0	2	1	63	3	13	0	2
		Dec-17	1,530	3,840	94	77,500	38,100	15,300	1,730	5,560
	2018	Jan-18	585	1,850	204	30,100	18,300	7,760	142	1,990
		Feb-18	1,290	4,760	277	141,000	11,600	11,500	584	5,340
		Mar-18	682	2,050	174	116,000	5,080	3,790	136	2,140
		Apr-18	535	1,930	169	44,500	1,580	1,480	13	240
		May-18	36	210	68	3,650				
		Jun-18	24	225	61	3,120	60	45	2	11
		Jul-18	16	112	37	1,040	754	523	16	109
		Aug-18	345	1,150	181	10,500	2,730	4,640	117	1,160
		Sep-18	1,530	5,510	771	72,400	11,000	14,200	333	5,330
		Oct-18	141	422	36	6,460	959	1,130	27	450
		Nov-18	683	1,830	63	20,900	2,980	3,640	65	1,900
		Dec-18	1,370	3,440	251	57,000	3,310	5,680	98	3,540
	2019	Jan-19	422	1,220	107	20,300	3,080	1,800	81	1,300
		Feb-19	712	2,420	226	70,200	11,300	6,360	337	2,760
		Mar-19	343	1,070	121	42,500	1,690	1,490	80	1,150
		Apr-19	1,600	4,410	406	397,000	6,400	5,070	426	4,830
		May-19	680	1,930	202	103,000	2,050	1,610	203	2,140
		Jun-19	78	266	48	7,240	2,960	1,700	45	310
		Jul-19	3,280	6,760	1,150	155,000	9,000	9,170	124	6,370
		Aug-19	56	224	36	3,990	3,060	3,660	55	278
		Sep-19	19	60	7	740	551	435	1	19
		Oct-19	99	370	56	8,630	3,400	3,060	193	564
		Nov-19	227	701	24	82,900	4,010	2,770	134	835
		Dec-19	68	179	17	2,910	2,420	1,640	5	122
	2020	Jan-20	349	1,600	73	23,800	7,640	5,840	33	312
		Feb-20	648	2,300	83	77,500	6,250	4,170	119	2,420
		Mar-20	71	343	95	5,740	4,350	3,730	18	252
		Apr-20	809	1,970	203	33,000	1,900	2,340	77	2,050
		May-20	106	416	52	8,560	888	1,620	54	470
		Jun-20	153	454	101	12,200	1,360	885	76	530
		Jul-20	70	361	89	6,330	2,080	1,480	290	651
		Aug-20	71	207	30	4,820	5,640	2,180	37	243
		Sep-20	431	984	36	34,900	3,720	3,730	212	1,200
		Oct-20	980	2,580	97	268,000	7,420	7,950	444	2,980
		Nov-20	11	27	1	2,100	86	57	3	27
		Dec-20	315	999	42	17,900	4,110	4,320	70	1,070
	2021	Jan-21	695	2,360	112	31,200	8,400	6,630	118	2,470
		Feb-21	769	2,260	126	31,900	10,200	9,940	1,390	3,640
		Mar-21	887	2,890	196	52,600	8,860	9,320	1,090	3,970
		Apr-21	202	544	61	11,000	1,130	1,470	44	588
		May-21	170	445	67	13,700	914	889	59	503
		Jun-21	1,520	5,310	401	183,000	12,100	10,000	460	5,770
		Jul-21	20	69	13	2,310	909	953	19	87
		Aug-21	7	20	3	383	166	314	3	24
		Sep-21	1	4	1	191	18	61	0	4

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Station	Year	Month	TP (lbs)	TKN (lbs)	Ammonia-N (lbs)	TSS (lbs)	Sulfate (lbs)	Chloride (lbs)	NO3+NO2-N (lbs)	TN (lbs)
C2	2017	Nov-17	43	110	7	1,050	4,290	8,250	0	0
		Dec-17	7,680	17,600	562	472,000	237,000	433,000	20,000	34,600
	2018	Jan-18	1,450	6,330	532	190,000	83,200	111,000	1,010	7,330
		Feb-18	21,200	82,900	3,850	6,900,000	195,000	346,000	18,400	101,000
		Mar-18	13,500	48,200	3,540	5,660,000	127,000	123,000	10,400	58,700
		Apr-18	12,100	54,500	5,370	622,000	83,700	69,200	3,870	17,400
		May-18	1,660	8,070	1,820	355,000				
		Jun-18	789	5,880	1,660	133,000	19,700	39,600	278	683
		Jul-18	519	4,260	861	43,800	144,000	346,000	1,980	6,240
		Aug-18	3,130	14,800	1,190	405,000	138,000	638,000	2,590	17,400
		Sep-18	3,550	11,000	1,050	82,600	65,600	411,000	1,900	12,100
		Oct-18	3,230	9,190	687	85,400	44,900	82,400	1,790	10,700
		Nov-18	4,030	14,700	754	93,600	58,100	181,000	2,090	15,700
		Dec-18	8,330	27,300	1,680	319,000	87,600	218,000	1,630	28,900
	2019	Jan-19	6,480	27,300	1,380	810,000	61,500	107,000	2,540	29,800
		Feb-19	10,100	43,800	2,980	3,560,000	74,400	135,000	7,130	50,900
		Mar-19	6,450	21,800	1,390	2,090,000	35,800	62,900	2,880	24,700
		Apr-19	17,100	50,200	5,510	1,150,000	158,000	172,000	11,400	61,600
		May-19	6,830	26,600	2,930	2,040,000	79,900	64,900	11,100	37,700
		Jun-19	1,750	21,300	9,920	167,000	277,000	472,000	20,700	42,000
		Jul-19	6,650	29,100	5,690	778,000	279,000	503,000	8,970	38,100
		Aug-19	961	5,020	484	87,600	144,000	397,000	1,700	6,040
		Sep-19	622	2,560	160	27,800	34,700	111,000	534	3,090
		Oct-19	1,270	3,940	194	204,000	56,700	60,700	4,240	8,010
		Nov-19	1,510	6,450	305	192,000	112,000	150,000	4,810	11,300
		Dec-19	1,090	6,120	452	115,000	51,100	57,900	1,300	7,420
	2020	Jan-20	6,850	34,500	1,090	1,670,000	115,000	208,000	3,190	37,700
		Feb-20	14,700	56,900	3,660	6,820,000	105,000	132,000	5,900	62,800
		Mar-20	2,680	9,870	1,110	152,000	57,900	58,700	2,620	12,500
		Apr-20	7,840	25,900	2,080	632,000	86,600	77,900	6,320	32,200
		May-20	1,640	7,220	757	169,000	92,900	113,000	4,970	12,200
		Jun-20	2,630	14,900	2,970	186,000	154,000	242,000	12,400	27,300
		Jul-20	704	12,200	7,510	130,000	141,000	218,000	3,830	16,100
		Aug-20	1,260	7,760	671	354,000	173,000	507,000	2,980	10,700
		Sep-20	5,260	16,500	330	1,530,000	115,000	180,000	5,260	21,800
		Oct-20	8,040	24,100	2,390	304,000	177,000	430,000	5,980	29,600
		Nov-20	752	2,050	167	22,500	10,100	26,700	236	2,290
		Dec-20	2,370	8,530	476	61,300	89,600	179,000	4,670	13,200
	2021	Jan-21	5,910	24,700	1,760	326,000	192,000	380,000	13,100	37,700
		Feb-21	4,970	22,800	1,820	934,000	63,800	178,000	8,360	31,200
		Mar-21	10,400	40,100	3,030	1,790,000	101,000	192,000	11,600	51,700
		Apr-21	2,890	9,960	732	1,030,000	28,200	28,900	2,410	12,400
		May-21	2,660	11,900	2,550	878,000	48,600	54,300	5,370	17,300
		Jun-21	25,300	82,600	28,400	682,000	1,140,000	1,200,000	127,000	199,000
		Jul-21	494	3,700	964	79,800	111,000	225,000	3,490	7,190
		Aug-21	509	4,050	519	112,000	95,900	267,000	1,260	5,310
		Sep-21	49	357	29	12,800	12,400	34,400	140	497

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D1	2017	Nov-17	0	0	0	0	0	0	0	0
		Dec-17	50	127	3	982	384	243	38	165
	2018	Jan-18	103	356	4	2,380	1,140	2,060	11	94
		Feb-18	216	655	30	8,280	1,140	2,810	53	633
		Mar-18	237	836	64	11,900	66	1,100	33	790
		Apr-18	161	572	68	5,140	293	920	6	175
		May-18	85	192	52	1,810				
		Jun-18	0	0	0	0	0	0	0	0
		Jul-18	0	0	0	0	0	0	0	0
		Aug-18	0	0	0	0	0	0	0	0
		Sep-18	58	133	15	1,230	65	214	0	0
		Oct-18	133	357	15	2,640	251	706	2	85
		Nov-18	140	592	13	2,070	492	1,500	6	188
		Dec-18	198	638	27	2,720	491	1,300	4	102
		Jan-19	93	391	18	2,010	481	555	7	83
		Feb-19	112	519	26	4,610	795	617	47	415
		Mar-19	120	377	28	2,760	395	427	10	271
		Apr-19	276	920	197	10,700	1,210	1,840	105	990
		May-19	237	705	171	7,030	621	821	18	483
	2019	Jun-19	54	131	28	964	128	214	4	83
		Jul-19	118	336	77	2,120	251	307	12	217
		Aug-19	105	237	51	1,710	60	171	0	36
		Sep-19	19	40	2	272	30	35	1	40
		Oct-19	0	0	0	0	0	0	0	0
		Nov-19	43	132	2	2,010	575	589	19	151
		Dec-19	189	599	12	6,630	816	1,140	10	206
		Jan-20	112	463	17	3,640	552	998	1	24
		Feb-20	98	420	16	3,170	645	611	12	358
		Mar-20	110	334	18	2,210	260	519	1	65
		Apr-20	181	512	45	4,680	430	1,570	9	248
		May-20	58	196	22	1,760	132	208	1	60
	2020	Jun-20	12	49	5	419	51	107	0	0
		Jul-20	55	226	24	2,320	190	478	5	45
		Aug-20	49	204	9	1,860	100	854	0	0
		Sep-20	48	218	6	2,690	251	717	28	149
		Oct-20	71	194	22	1,530	120	743	0	0
		Nov-20	770	1,050	23	8,840	107	1,370	0	0
		Dec-20	577	1,430	16	9,580	1,380	3,580	47	925
		Jan-21	441	1,350	33	7,050	1,600	3,200	0	0
		Feb-21	473	1,300	52	5,040	1,360	3,920	32	348
		Mar-21	591	1,810	65	19,600	1,400	3,450	14	154
		Apr-21	781	2,360	208	26,100	1,870	5,160	16	881
	2021	May-21	940	2,700	433	25,300	2,060	4,680	53	1,800
		Jun-21	1,110	4,080	732	62,300	2,950	5,750	463	3,800
		Jul-21	214	712	124	5,070	388	1,760	3	100
		Aug-21	130	536	95	3,880	454	3,680	5	183
		Sep-21	25	78	15	785	52	538	0	11

Estimated Monthly Loads

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Station	Year	Month	TP (lbs)	TKN (lbs)	Ammonia-N (lbs)	TSS (lbs)	Sulfate (lbs)	Chloride (lbs)	NO3+NO2-N (lbs)	TN (lbs)
D2	2017	Nov-17	0	0	0	0	0	0	0	0
		Dec-17	951	3,370	109	78,600	13,900	21,300	2,860	6,230
	2018	Jan-18	664	2,240	54	45,800	10,100	12,300	130	2,370
		Feb-18	3,410	16,100	705	364,000	24,600	41,100	1,150	17,300
		Mar-18	2,350	9,650	697	147,000	2,140	14,700	452	10,100
		Apr-18	3,570	13,300	2,550	122,000	4,450	5,460	212	4,610
		May-18	649	2,970	941	18,900				
		Jun-18	338	7,920	3,260	13,600	206	2,220	0	0
		Jul-18	203	1,210	164	7,190	2,540	21,800	27	445
		Aug-18	853	3,310	220	33,400	2,550	44,000	65	747
		Sep-18	1,420	5,110	869	48,300	1,180	13,900	53	3,260
		Oct-18	595	1,970	162	17,200	1,580	14,200	8	250
		Nov-18	597	3,210	119	13,800	1,990	24,100	0	0
		Dec-18	1,610	6,040	423	28,700	6,640	33,000	0	0
	2019	Jan-19	1,330	5,830	403	30,900	8,830	15,100	261	5,410
		Feb-19	2,390	8,210	1,040	91,200	9,470	16,500	524	8,710
		Mar-19	1,420	6,240	536	65,500	6,290	9,200	276	6,520
		Apr-19	4,920	16,100	1,960	89,000	15,200	23,700	588	16,700
		May-19	1,720	6,460	1,480	39,400	1,370	6,060	165	6,500
		Jun-19	511	2,240	381	24,300	3,280	5,660	137	2,020
		Jul-19	3,120	13,600	4,320	74,300	6,100	9,550	12	725
		Aug-19	702	3,550	1,090	30,100	7,250	28,800	9	898
		Sep-19	281	1,170	110	20,900	1,150	19,100	0	0
		Oct-19	202	1,550	121	14,500	3,050	36,400	60	260
		Nov-19	375	1,740	164	25,700	12,200	34,300	195	1,430
		Dec-19	520	2,110	201	24,300	8,190	16,100	44	615
	2020	Jan-20	1,100	4,610	286	33,000	6,420	15,100	94	2,570
		Feb-20	927	4,720	247	38,800	5,400	8,910	180	4,900
		Mar-20	814	3,270	402	26,300	3,150	7,170	215	3,490
		Apr-20	1,360	4,760	707	51,700	3,420	6,660	216	4,970
		May-20	635	1,780	88	18,300	1,000	2,920	21	1,050
		Jun-20	956	3,870	780	29,500	2,430	6,030	136	4,010
		Jul-20	519	2,600	1,380	12,800	931	2,890	11	548
		Aug-20	133	510	78	5,500	2,340	16,400	43	552
		Sep-20	428	949	56	14,400	925	7,040	12	748
		Oct-20	1,830	4,620	550	49,300	3,740	27,500	50	2,730
		Nov-20	1,770	4,260	266	43,900	1,930	24,500	41	2,280
		Dec-20	1,820	5,790	354	38,000	11,900	51,100	624	6,410
	2021	Jan-21	2,720	9,890	800	81,300	14,300	40,700	434	10,300
		Feb-21	1,990	7,550	693	46,400	5,880	21,200	705	8,260
		Mar-21	3,440	11,600	1,160	157,000	10,700	22,200	677	12,300
		Apr-21	2,780	9,000	1,150	153,000	7,570	11,900	433	9,440
		May-21	1,970	6,010	921	78,600	4,660	8,310	310	4,460
		Jun-21	4,620	17,400	3,000	186,000	8,770	16,800	628	16,200
		Jul-21	575	3,290	1,270	23,800	2,870	8,710	121	3,060
		Aug-21	752	2,070	912	43,800	34,900	172,000	0	0
		Sep-21	297	575	347	13,400	16,200	77,200	0	0

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D3	2017	Nov-17	22	85	7	2,540	3,220	8,230	0	0
		Dec-17	7,390	20,600	637	455,000	211,000	437,000	20,700	38,100
		Jan-18	1,540	6,030	492	178,000	79,200	97,900	1,300	7,340
		Feb-18	33,300	124,000	4,230	15,500,000	289,000	469,000	26,800	150,000
		Mar-18	22,200	73,000	3,450	9,270,000	123,000	154,000	15,800	88,800
		Apr-18	18,300	73,100	5,580	1,750,000	68,700	70,600	4,340	21,800
		May-18	1,700	8,220	1,540	442,000				
	2018	Jun-18	922	5,840	873	256,000	13,700	30,500	299	719
		Jul-18	574	3,990	602	138,000	83,100	246,000	1,560	5,550
		Aug-18	2,970	13,600	1,180	493,000	99,400	540,000	2,320	15,900
		Sep-18	3,080	9,920	1,130	287,000	48,300	185,000	1,090	11,000
		Oct-18	2,160	6,700	456	107,000	29,200	69,600	1,180	7,880
		Nov-18	2,560	9,460	439	185,000	25,900	134,000	953	10,400
		Dec-18	6,260	28,800	1,580	252,000	70,200	229,000	1,580	30,400
		Jan-19	6,740	29,900	1,580	844,000	44,500	113,000	2,630	32,600
		Feb-19	15,400	60,700	4,330	5,560,000	107,000	175,000	9,950	70,700
		Mar-19	7,180	25,300	1,870	545,000	93,200	151,000	4,310	29,600
		Apr-19	20,200	63,600	5,530	1,950,000	213,000	245,000	9,650	73,300
		May-19	7,550	34,100	4,630	4,230,000	90,500	90,200	13,100	47,200
	2019	Jun-19	1,540	15,000	4,240	304,000	228,000	404,000	12,500	27,400
		Jul-19	8,370	36,300	6,530	835,000	238,000	455,000	11,300	47,600
		Aug-19	653	4,220	436	138,000	135,000	370,000	1,220	3,240
		Sep-19	707	2,830	204	102,000	42,700	137,000	313	1,970
		Oct-19	1,740	5,220	235	203,000	64,700	77,900	2,750	7,350
		Nov-19	1,710	6,880	324	265,000	123,000	175,000	5,490	12,400
		Dec-19	1,980	6,970	466	124,000	53,000	77,500	1,510	8,470
		Jan-20	8,330	39,100	1,620	1,660,000	125,000	253,000	3,880	43,000
		Feb-20	18,700	76,300	3,380	10,400,000	123,000	218,000	8,270	84,500
		Mar-20	3,400	12,700	987	304,000	56,400	76,500	2,870	15,500
		Apr-20	11,700	38,700	2,230	1,390,000	112,000	121,000	8,370	47,100
		May-20	2,200	9,840	1,560	423,000	140,000	206,000	4,010	13,900
	2020	Jun-20	2,730	15,100	2,970	495,000	140,000	217,000	32,100	47,300
		Jul-20	1,180	8,650	1,340	325,000	75,100	192,000	4,020	12,700
		Aug-20	1,990	8,430	381	295,000	141,000	488,000	2,890	11,300
		Sep-20	6,690	23,700	450	2,070,000	169,000	294,000	8,990	32,700
		Oct-20	11,800	25,900	3,330	574,000	106,000	376,000	4,380	30,300
		Nov-20	1,580	3,700	434	63,700	17,200	58,800	408	4,110
		Dec-20	2,510	9,240	456	96,600	99,800	199,000	3,760	13,000
		Jan-21	8,320	36,100	2,340	452,000	214,000	510,000	5,470	41,600
		Feb-21	7,230	34,700	2,120	1,160,000	86,400	261,000	12,800	47,500
		Mar-21	15,500	67,000	4,290	2,910,000	166,000	394,000	25,800	92,800
		Apr-21	5,690	18,500	1,080	2,570,000	41,900	47,700	3,590	22,100
	2021	May-21	3,810	14,800	2,200	1,310,000	49,700	53,800	6,300	21,100
		Jun-21	46,800	152,000	38,900	2,870,000	1,500,000	1,580,000	185,000	324,000
		Jul-21	856	5,480	1,220	112,000	132,000	302,000	5,010	10,500
		Aug-21	713	3,820	287	161,000	90,800	288,000	1,060	4,880
		Sep-21	140	691	58	27,300	16,000	52,100	189	881

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Station	Year	Month	TP (lbs)	TKN (lbs)	Ammonia-N (lbs)	TSS (lbs)	Sulfate (lbs)	Chloride (lbs)	NO3+NO2-N (lbs)	TN (lbs)
D4	2017	Nov-17	2	7	0	52	320	830	0	0
		Dec-17	12,800	30,400	869	777,000	317,000	650,000	37,700	65,500
	2018	Jan-18	1,870	7,760	545	336,000	96,600	110,000	1,690	9,450
		Feb-18	45,800	185,000	5,620	22,900,000	353,000	668,000	41,000	226,000
		Mar-18	31,200	114,000	7,010	9,960,000	241,000	302,000	12,700	127,000
		Apr-18	28,000	101,000	7,700	2,580,000	83,300	85,500	5,490	32,300
		May-18	1,470	11,000	2,040	1,290,000				
		Jun-18	242	4,200	486	152,000	4,350	10,700	88	353
		Jul-18	475	2,690	366	57,500	53,900	168,000	1,010	3,700
		Aug-18	4,410	20,000	1,670	671,000	148,000	870,000	3,860	23,800
		Sep-18	4,400	15,400	1,790	182,000	47,600	204,000	1,690	17,000
		Oct-18	2,900	8,990	470	132,000	42,000	90,800	1,910	10,900
		Nov-18	8,600	30,400	716	921,000	54,200	202,000	2,610	33,000
		Dec-18	15,500	59,100	3,590	583,000	129,000	452,000	3,570	62,700
	2019	Jan-19	15,700	62,800	3,640	2,040,000	96,000	259,000	5,970	68,700
		Feb-19	23,600	113,000	7,150	9,090,000	170,000	295,000	17,400	130,000
		Mar-19	15,800	55,600	2,720	5,380,000	77,800	119,000	6,510	62,100
		Apr-19	30,000	96,400	9,810	2,260,000	271,000	317,000	14,000	110,000
		May-19	16,000	61,300	6,320	7,410,000	127,000	106,000	19,700	81,100
		Jun-19	2,360	16,900	4,160	295,000	333,000	638,000	19,200	36,100
		Jul-19	10,600	47,500	7,640	1,130,000	304,000	586,000	16,600	64,100
		Aug-19	1,190	6,010	728	126,000	210,000	689,000	1,250	3,580
		Sep-19	243	1,170	119	13,600	13,200	50,800	51	306
		Oct-19	2,420	8,850	281	348,000	128,000	186,000	5,510	14,300
		Nov-19	2,870	11,500	515	433,000	177,000	254,000	8,290	19,800
		Dec-19	3,150	12,000	841	180,000	88,800	129,000	3,480	15,500
	2020	Jan-20	14,400	63,100	2,930	2,440,000	193,000	378,000	8,040	71,200
		Feb-20	26,100	96,500	4,280	9,140,000	186,000	304,000	9,940	106,000
		Mar-20	6,140	23,900	2,090	570,000	107,000	136,000	6,090	30,000
		Apr-20	19,100	65,200	4,710	2,560,000	193,000	216,000	13,500	78,700
		May-20	2,830	13,400	2,080	410,000	144,000	227,000	8,030	21,400
		Jun-20	3,960	26,300	5,440	395,000	195,000	304,000	41,600	67,900
		Jul-20	2,070	16,000	3,430	443,000	120,000	311,000	8,610	24,600
		Aug-20	3,770	16,800	919	480,000	250,000	933,000	7,380	24,200
		Sep-20	9,190	29,000	882	1,670,000	257,000	538,000	10,200	39,200
		Oct-20	18,500	42,800	7,000	695,000	158,000	564,000	3,960	46,700
		Nov-20	1,810	4,380	944	66,600	14,800	52,800	293	4,380
		Dec-20	4,570	17,500	755	126,000	130,000	323,000	5,800	23,200
	2021	Jan-21	13,100	55,800	3,580	717,000	267,000	694,000	7,100	62,900
		Feb-21	9,150	44,700	2,960	1,250,000	139,000	372,000	17,500	62,200
		Mar-21	23,500	93,300	5,300	4,990,000	218,000	469,000	21,200	114,000
		Apr-21	9,130	34,900	1,810	5,860,000	68,800	81,000	5,980	40,800
		May-21	6,360	25,100	3,700	2,170,000	74,900	66,500	10,900	36,000
		Jun-21	40,200	210,000	37,600	4,830,000	538,000	661,000	82,100	257,000
		Jul-21	1,280	6,790	1,040	60,800	189,000	455,000	7,170	14,000
		Aug-21	1,670	6,560	566	108,000	183,000	534,000	3,050	9,610
		Sep-21	156	603	36	8,830	12,900	44,300	183	786

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Station	Year	Month	TP (lbs)	TKN (lbs)	Ammonia-N (lbs)	TSS (lbs)	Sulfate (lbs)	Chloride (lbs)	NO3+NO2-N (lbs)	TN (lbs)
D5	2017	Nov-17	60	361	30	3,610	11,300	31,300	18	379
		Dec-17	35,100	87,400	3,180	3,090,000	825,000	1,820,000	106,000	182,000
	2018	Jan-18	20,000	77,100	5,370	1,230,000	600,000	859,000	27,100	104,000
		Feb-18	50,000	222,000	5,890	36,300,000	453,000	855,000	53,500	275,000
		Mar-18	36,100	167,000	10,300	8,830,000	348,000	432,000	32,700	200,000
		Apr-18	40,000	186,000	13,900	16,500,000	270,000	219,000	38,800	143,000
		May-18	4,810	27,600	6,690	3,770,000				
		Jun-18	1,540	18,500	3,750	210,000	23,800	64,500	510	1,930
		Jul-18	1,800	20,900	3,500	241,000	259,000	721,000	5,090	25,900
		Aug-18	8,270	43,100	3,350	2,020,000	268,000	1,310,000	10,500	53,700
		Sep-18	15,900	41,400	4,360	481,000	151,000	541,000	2,760	44,200
		Oct-18	10,600	39,100	2,570	883,000	129,000	349,000	5,680	44,800
		Nov-18	10,500	71,700	2,080	2,910,000	137,000	481,000	6,920	78,600
		Dec-18	29,100	109,000	7,090	1,570,000	473,000	717,000	7,250	116,000
	2019	Jan-19	28,800	130,000	8,060	8,050,000	245,000	481,000	13,900	144,000
		Feb-19	15,600	131,000	8,620	13,500,000	206,000	395,000	19,200	151,000
		Mar-19	34,600	125,000	7,420	15,200,000	173,000	225,000	13,300	138,000
		Apr-19	39,400	148,000	15,300	4,710,000	380,000	350,000	27,300	175,000
		May-19	26,400	118,000	9,280	16,000,000	242,000	184,000	70,100	188,000
		Jun-19	4,150	36,400	16,100	991,000	462,000	713,000	73,700	110,000
		Jul-19	15,700	60,300	7,900	1,800,000	413,000	750,000	29,700	89,900
		Aug-19	1,900	10,500	2,150	156,000	221,000	651,000	2,780	10,100
		Sep-19	362	2,010	230	21,500	32,700	131,000	73	445
		Oct-19	2,000	9,190	382	213,000	128,000	250,000	3,990	7,810
		Nov-19	2,910	13,200	435	392,000	171,000	223,000	9,750	23,000
		Dec-19	4,460	16,300	906	411,000	107,000	148,000	4,710	21,000
	2020	Jan-20	29,600	119,000	5,940	9,000,000	331,000	600,000	15,400	134,000
		Feb-20	44,500	161,000	6,750	13,600,000	309,000	475,000	14,900	176,000
		Mar-20	15,300	63,400	4,530	3,380,000	205,000	269,000	15,200	78,600
		Apr-20	35,000	142,000	10,400	6,800,000	373,000	385,000	28,400	170,000
		May-20	5,360	19,900	3,360	1,350,000	145,000	137,000	8,080	28,000
		Jun-20	7,080	40,000	7,880	890,000	261,000	312,000	36,700	76,700
		Jul-20	3,620	21,800	2,830	1,450,000	281,000	628,000	16,200	38,000
		Aug-20	4,590	21,400	1,170	783,000	394,000	1,460,000	9,950	31,400
		Sep-20	9,470	43,300	559	2,850,000	276,000	767,000	20,400	63,700
		Oct-20	30,700	74,200	10,900	952,000	360,000	966,000	6,760	80,900
		Nov-20	5,290	13,300	3,590	178,000	65,300	167,000	1,340	14,200
		Dec-20	10,700	41,300	1,730	584,000	286,000	686,000	17,600	58,900
	2021	Jan-21	26,400	103,000	6,020	6,450,000	320,000	851,000	11,300	114,000
		Feb-21	8,680	43,400	3,310	1,060,000	137,000	447,000	15,600	59,000
		Mar-21	38,300	162,000	9,700	20,500,000	253,000	1,850,000	24,600	187,000
		Apr-21	29,900	108,000	6,620	13,000,000	202,000	242,000	16,300	125,000
		May-21	16,600	53,800	8,440	5,080,000	192,000	176,000	18,400	72,200
		Jun-21	35,500	170,000	43,400	4,920,000	587,000	776,000	69,700	240,000
		Jul-21	1,270	7,850	1,510	167,000	198,000	462,000	7,500	15,400
		Aug-21	1,520	7,640	717	263,000	194,000	522,000	5,160	12,800
		Sep-21	143	586	68	9,230	8,630	27,700	168	753