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April 10, 2020

VIA ELECTRONIC FILING

Project No. 2628-065
R.L. Harris Hydroelectric Project
Transmittal of the Draft Water Quality Study Report

Ms. Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street N.
Washington, DC 20426

Dear Secretary Bose,

Alabama Power Company (Alabama Power) is the Federal Energy Regulatory Commission (FERC or Commission) licensee for the R.L. Harris Hydroelectric Project (Harris Project) (FERC No. 2628-065). On April 12, 2019, FERC issued its Study Plan Determination[1] (SPD) for the Harris Project, approving Alabama Power's ten relicensing studies with FERC modifications. On May 13, 2019, Alabama Power filed Final Study Plans to incorporate FERC's modifications and posted the Final Study Plans on the Harris relicensing website at www.harrisrelicensing.com. In the Final Study Plans, Alabama Power proposed a schedule for each study that included filing a voluntary Progress Update in October 2019 and October 2020. Alabama Power filed the first of two Progress Updates on October 31, 2019.[2]

Pursuant to the Commission's Integrated Licensing Process (ILP) and 18 CFR § 5.15(c), Alabama Power filed its Harris Project Initial Study Report (ISR) on April 10,2020. Concurrently, and consistent with FERC's April 12, 2019 SPD, Alabama Power is filing the Draft Water Quality Study Report (Draft Report) (Attachment 1). This filing also includes the stakeholder consultation for this study beginning May 2019 through March 2020 (Attachment 2). Stakeholders have until June 11, 2020 to submit their comments to Alabama Power on the Draft Report. Comments should be sent directly to harrisrelicensing@southernco.com.

Stakeholders may access the ISR, this Draft Report, and other study reports on FERC's website (http://www.ferc.gov) by going to the "eLibrary" link and entering the docket number (P-2628). The ISR and study reports are also available on the Project relicensing website at https://harrisrelicensing.com.

[1] Accession Number 20190412-3000

[2] Accession Number 20191030-5053

If there are any questions concerning this filing, please contact me at arsegars@southernco.com or 205-257-2251.

Sincerely,

Angie Anderegg
Harris Relicensing Project Manager

Attachment 1 – Draft Water Quality Study Report
Attachment 2 – Water Quality Consultation Record (May 2019-March 2020)

cc: Harris Stakeholder List

Attachment 1
Draft Water Quality Study Report

HARRIS DAM
RELICENSING

DRAFT
WATER QUALITY STUDY REPORT

R. L. HARRIS PROJECT
FERC NO. 2628

Prepared by:

ALABAMA POWER COMPANY
BIRMINGHAM, ALABAMA

Alabama Power

MARCH 2020

DRAFT
WATER QUALITY STUDY REPORT

R.L. HARRIS PROJECT
FERC NO. 2628

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DRAFT
WATER QUALITY STUDY REPORT

R.L. HARRIS PROJECT
FERC NO. 2628

1.0 INTRODUCTION

Alabama Power Company (Alabama Power) owns and operates the R.L. Harris Project (FERC Project No. 2628) (Harris Project), licensed by the Federal Energy Regulatory Commission (FERC or Commission). Alabama Power Company (Alabama Power) is relicensing the 135-megawatt (MW) Harris Project, and the existing license expires in 2023. The Harris Project consists of a dam, spillway, powerhouse, and those lands and waters necessary for the operation of the hydroelectric project and enhancement and protection of environmental resources. These structures, lands, and water are enclosed within the FERC Project Boundary. Under the existing Harris Project license, the FERC Project Boundary encloses two distinct geographic areas, described below.

Harris Reservoir is the 9,870-acre reservoir (Harris Reservoir) created by the R.L. Harris Dam (Harris Dam). Harris Reservoir is located on the Tallapoosa River, near Lineville, Alabama. The lands adjoining the reservoir total approximately 7,392 acres and are included in the FERC Project Boundary (Figure 1-1). This includes land to 795 feet mean sea level (msl)[1], as well as natural undeveloped areas, hunting lands, prohibited access areas, recreational areas, and all islands.

The Harris Project also contains 15,063 acres of land within the James D. Martin-Skyline Wildlife Management Area (Skyline WMA) located in Jackson County, Alabama (Figure 1-2Figure 1-2). These lands are located approximately 110 miles north of Harris Reservoir and were acquired and incorporated into the FERC Project Boundary as part of the FERC-approved Harris Project Wildlife Mitigative Plan and Wildlife Management Plan.

[1] Also includes a scenic easement (to 800 feet msl or 50 horizontal feet from 793 feet msl, whichever is less, but never less than 795 feet msl).

These lands are leased to, and managed by, the State of Alabama for wildlife management and public hunting and are part of the Skyline WMA (ADCNR 2016b).

For the purposes of this study, "Lake Harris" refers to the 9,870-acre reservoir, adjacent 7,392 acres of Project land, and the dam, spillway, and powerhouse. "Skyline" refers to the 15,063 acres of Project land within the Skyline WMA in Jackson County. "Harris Project" refers to all the lands, waters, and structures enclosed within the FERC Project Boundary, which includes both Lake Harris and Skyline. Harris Reservoir refers to the 9,870-acre reservoir only; Harris Dam refers to the dam, spillway, and powerhouse. The Project Area refers to the land and water in the Project Boundary and immediate geographic area adjacent to the Project Boundary (Alabama Power Company 2018).

Lake Harris and Skyline are located within two river basins: the Tallapoosa and Tennessee River Basins, respectively. The only waterbody managed by Alabama Power as part of their FERC license for the Harris Project is the Harris Reservoir.

Commonly used acronyms that may appear in this draft report are included in Appendix A.

1.1 STUDY BACKGROUND

During the October 19, 2017 issue identification workshop, several stakeholders noted water quality as a potential issue at the Harris Project. On November 13, 2018, Alabama Power filed ten proposed study plans for the Harris Project, including a study plan for water quality. FERC issued a Study Plan Determination on April 12, 2019, which included FERC staff recommendations. Alabama Power incorporated FERC's recommendations and filed the Final Study Plans with FERC on May 13, 2019.

Alabama Power formed the Harris Action Team (HAT) 2 to specifically address water quality issues at Lake Harris and in the Tallapoosa River downstream of Harris Dam. Alabama Power distributed an email to HAT 2 participants on May 1, 2019, requesting identification of locations of areas of water quality concern. Alabama Power did not receive any areas of water quality concern. Alabama Power held a HAT 2 meeting on September 11, 2019, where it presented

information on the water quality monitoring and addressed a stakeholder question about a previously identified area of concern near Foster's Bridge[2].

Alabama Power prepared this draft report to support the relicensing process and supplement information included in the 2016 Baseline Water Quality Report (Appendix L of the Pre-Application Document [PAD]) and to fulfill the requirements of the FERC-approved Water Quality Study Plan. Therefore, this report summarizes data collected from 2017 through 2019 with the exception of Alabama Water Watch (AWW) data which includes years prior to 2017. AWW data was not available to Alabama Power to include in the 2016 Baseline Water Quality Report. Data sources include Alabama Power, Alabama Department of Environmental Management, and AWW. No additional data was available for streams at Skyline. Since the 303(d) listed section of Little Coon Creek at Skyline is impaired due to siltation, it is addressed in the Draft Erosion and Sedimentation Report.

A summary of data sources for this report is provided in

[2] At the 2017 Issue Identification Workshop, stakeholders raised the area near Foster's Bridge as a potential area of water quality concern.

Table 1-1. See Section 5.2.1.7 of the PAD for more information on federally approved water quality standards.

TABLE 1-1 SUMMARY OF WATER QUALITY DATA SOURCES

Location	Source	Description	Period
Lake Harris	ADEM	Vertical profiles and discrete chemistry samples at six locations	April - October 2018
	Alabama Power	Vertical profiles in the forebay	March - October 2017 - 2019
	Alabama Water Watch	Surface samples at six locations	monthly to semi-monthly, 2011 - 2019
Tallapoosa River, Harris Dam to Horseshoe Bend	ADEM	Monthly measurements and discrete samples at Malone, Wadley, and Horseshoe Bend	2018 - 2019
	ADEM	Continuous (15-minute interval) monitoring at Malone	May 2018 - November 2019
	Alabama Power	Continuous (15-minute interval) monitoring during generation (approximately 800 ft downstream of dam)	June - October 2017 - 2019
	Alabama Power	Continuous (15-minute interval) monitoring during generation (approximately 0.5 miles downstream of dam)	March - October 2019
	Alabama Water Watch	Surface samples at Horseshoe Bend	1993, 2007, & 2014 - 2017

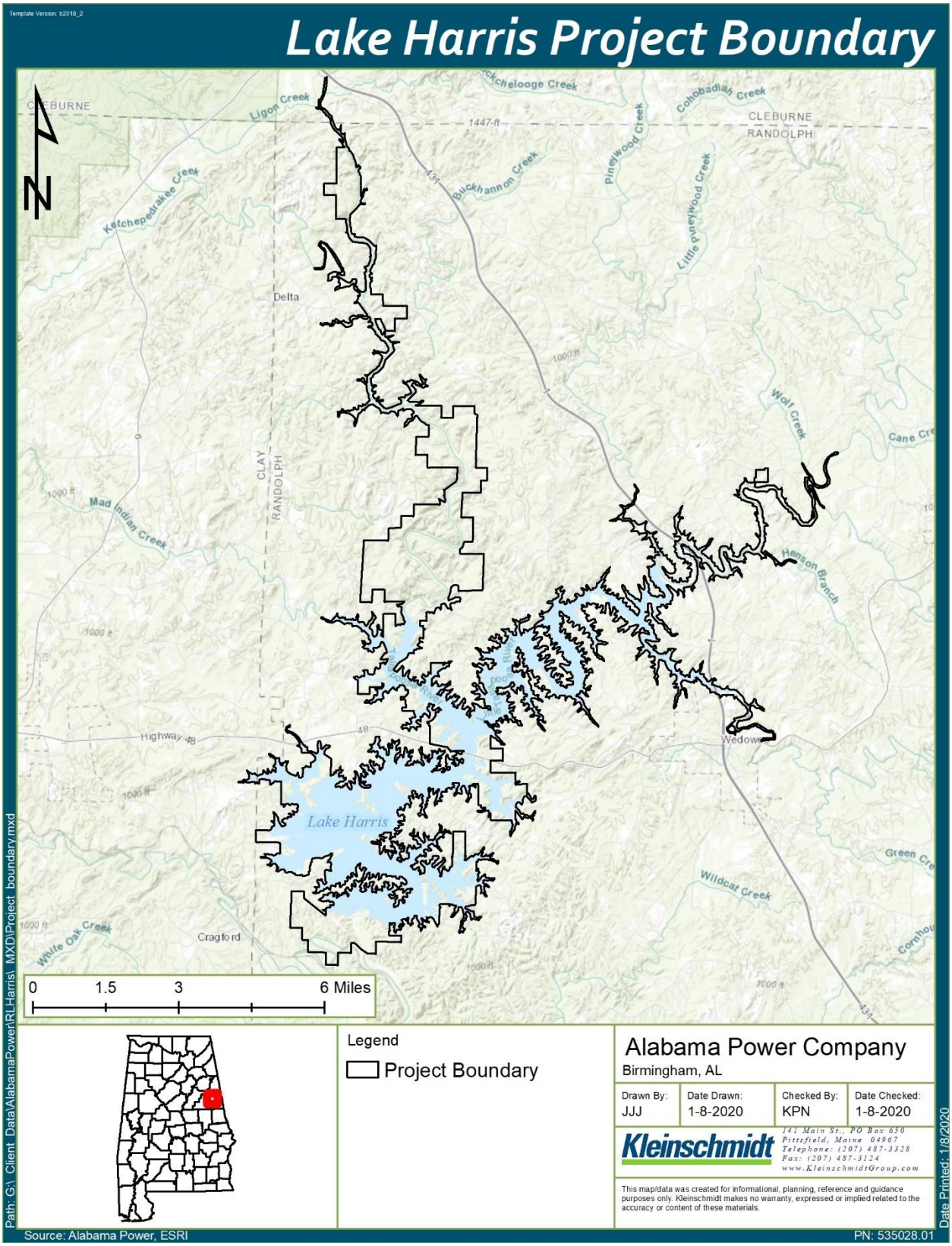


FIGURE 1-1 LAKE HARRIS PROJECT BOUNDARY

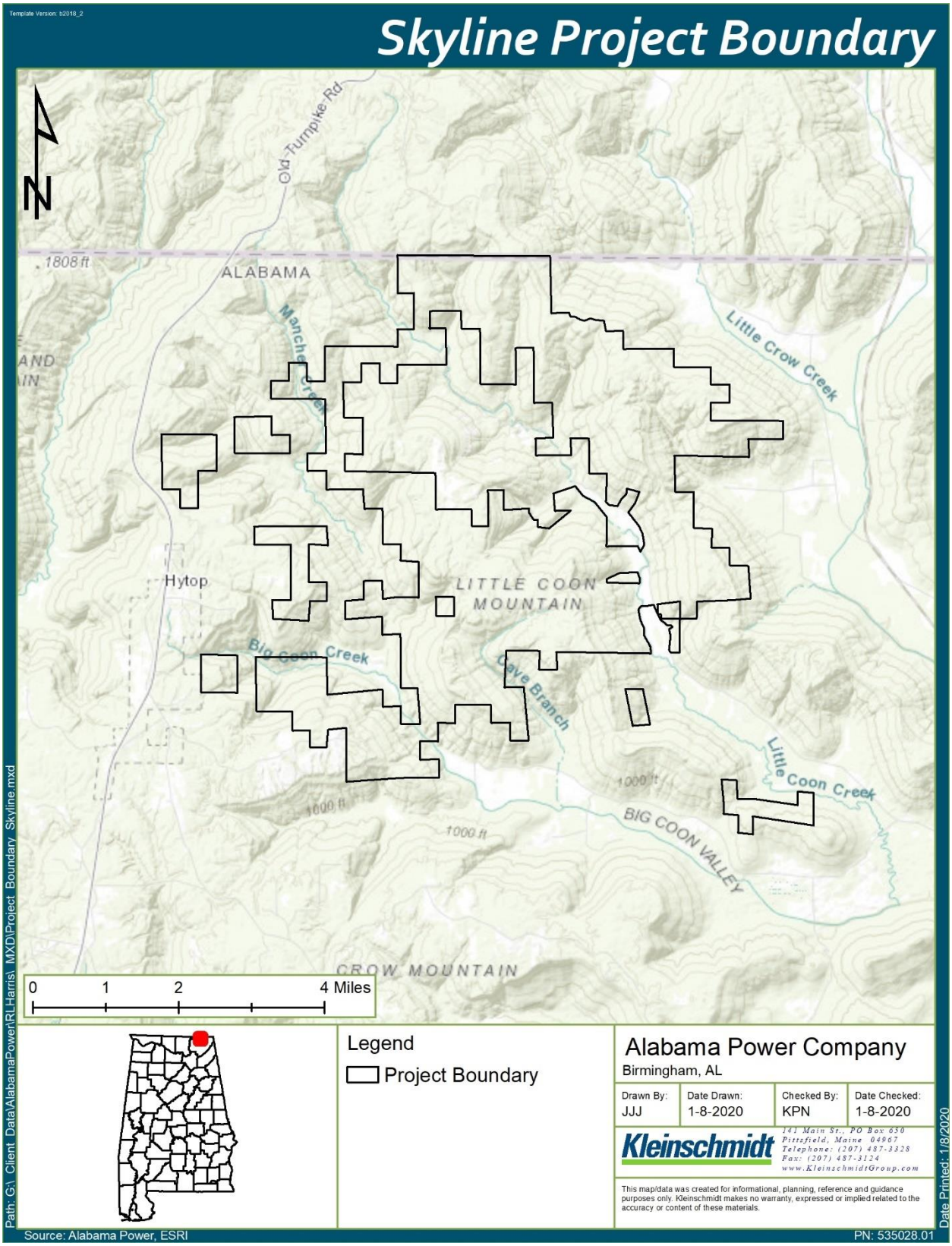


FIGURE 1-2 SKYLINE PROJECT BOUNDARY

2.0 LAKE LEVELS AND HYDROLOGY

Lake levels at Harris Reservoir are maintained at or below target elevations according to the operating curve (Figure 2-1). In 2017, Alabama Power performed an early spring fill, reaching the summer pool elevation of 793 ft msl one month earlier than normal. Harris Reservoir was two feet above the winter pool elevation of 785 ft msl during the months of February and March in 2017, and February to April in 2018. Harris Reservoir was maintained at or near target summer pool levels in 2017 and 2018, but dropped below those levels in 2019 as a result of low inflows from July to October.

Compared to long-term averages, flows in the Tallapoosa River downstream of Harris Dam, as measured at the USGS Wadley gage (Station No. 02414500) were lower in February and March, and higher in June to October of 2107. In 2018 and 2019, flows were below the long-term average for most of the summer months (Figure 2-2).

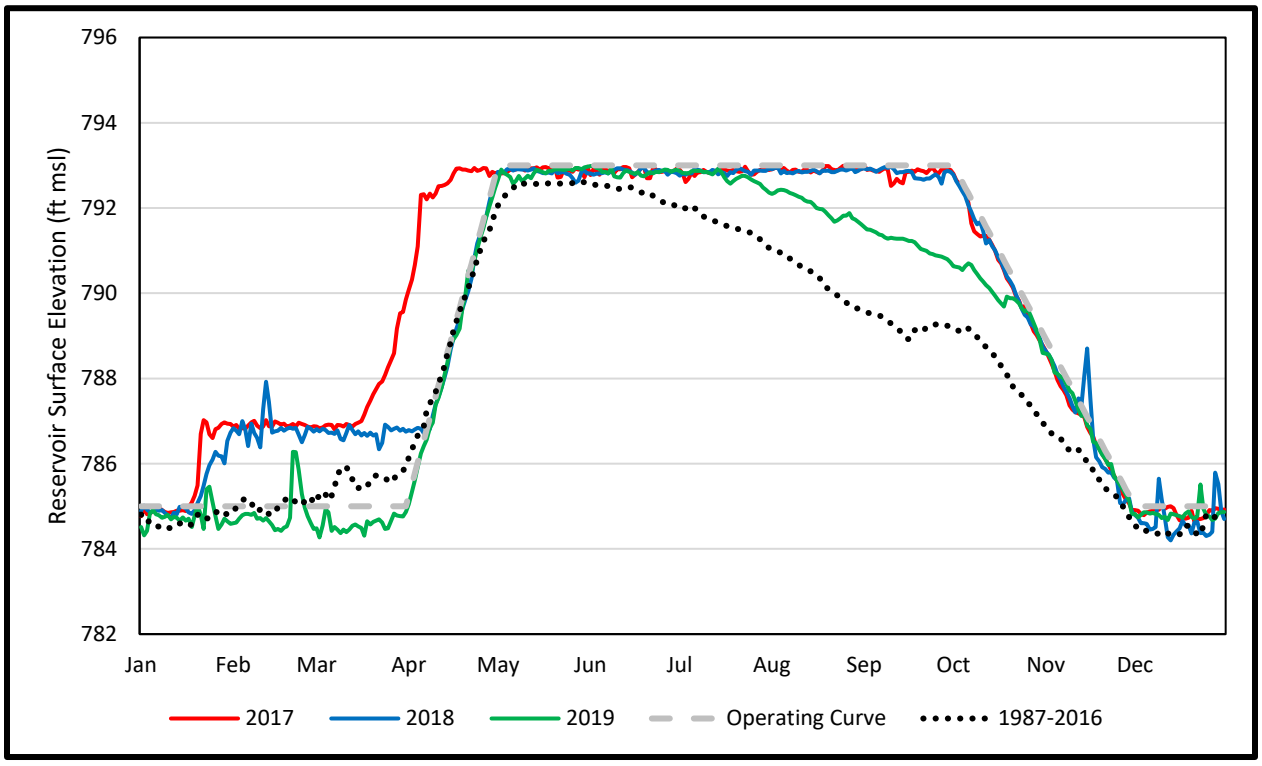


FIGURE 2-1 HARRIS RESERVOIR SURFACE ELEVATIONS FOR 2017 - 2019

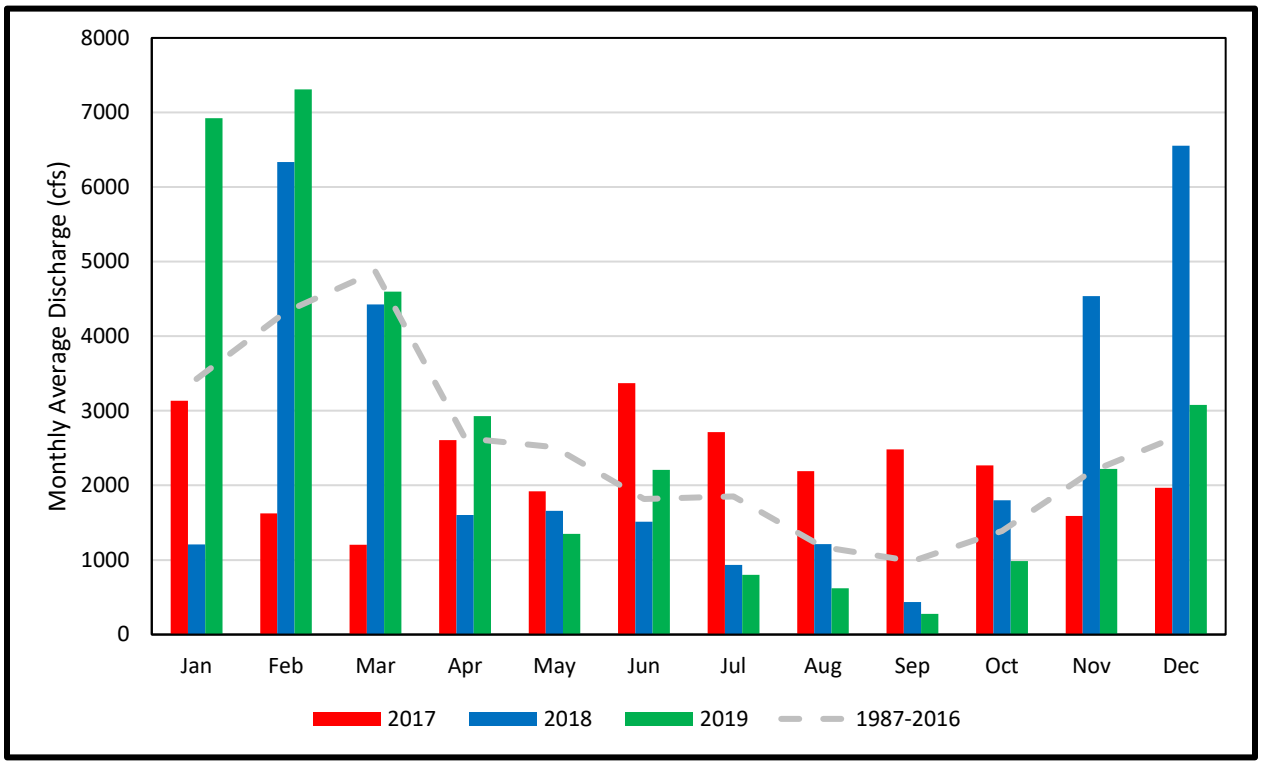


FIGURE 2-2 TALLAPOOSA RIVER MONTHLY AVERAGE DISCHARGE AT WADLEY

3.0 RESERVOIR WATER QUALITY

3.1 VERTICAL PROFILES

The Alabama Department of Environmental Management (ADEM) performed water quality sampling at six Harris Reservoir sites in April through October 2018 (Figure 3-1). As part of its monitoring program, ADEM collects basic water quality data throughout a vertical profile from the reservoir surface to the bottom at regular depth intervals (approximately 3 feet). Water temperature, dissolved oxygen, pH, and conductivity data from these profiles are presented in Figure 3-2 to Figure 3-5. Generally, during the spring and summer, the Harris Reservoir stratifies into three layers:

- an epilimnion, which is fairly uniform in temperature and is well oxygenated,
- a hypolimnion, a cold, less oxygenated bottom layer, and
- a metalimnion or thermocline, which is a transition layer between the epilimnion and hypolimnion.

In accordance with the Water Quality Study Plan, Alabama Power collected monthly vertical profile data in the forebay (Figure 3-6) from March through October each year from 2017 to 2019. Due to high flows at the end of the month when the profile was scheduled, Alabama Power was unable to collect vertical profile data in September 2017. Water temperature and dissolved oxygen data from these forebay profiles are presented in Figure 3-7 and Figure 3-8.

3.2 DISCRETE CHEMISTRY

ADEM collected and analyzed monthly surface water samples for numerous parameters at six stations on Harris Reservoir in April through October 2018. These data are summarized in Table 3-1. Water clarity, as measured by mean Secchi Disk depth (a measure of water clarity), was highest at RLHR-6 (2.71 m) and lowest at RLHR-3 (1.35 m). Similarly, concentrations of nutrients such as nitrogen and phosphorus, as well as chlorophyll *a* (a measure of algal abundance), were higher at the upper reservoir stations (RLHR-3, RLHR-4 and RLHR-5).

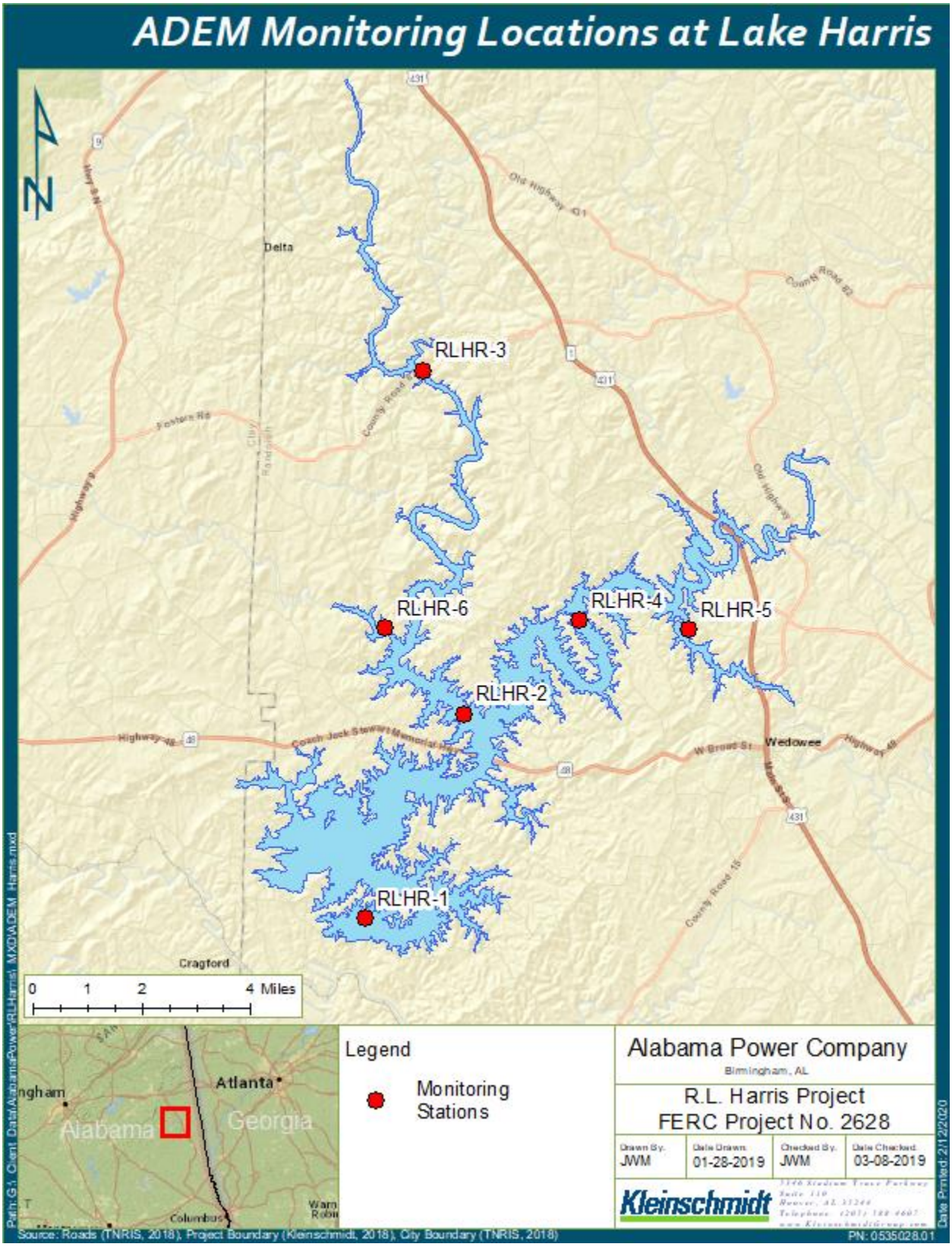
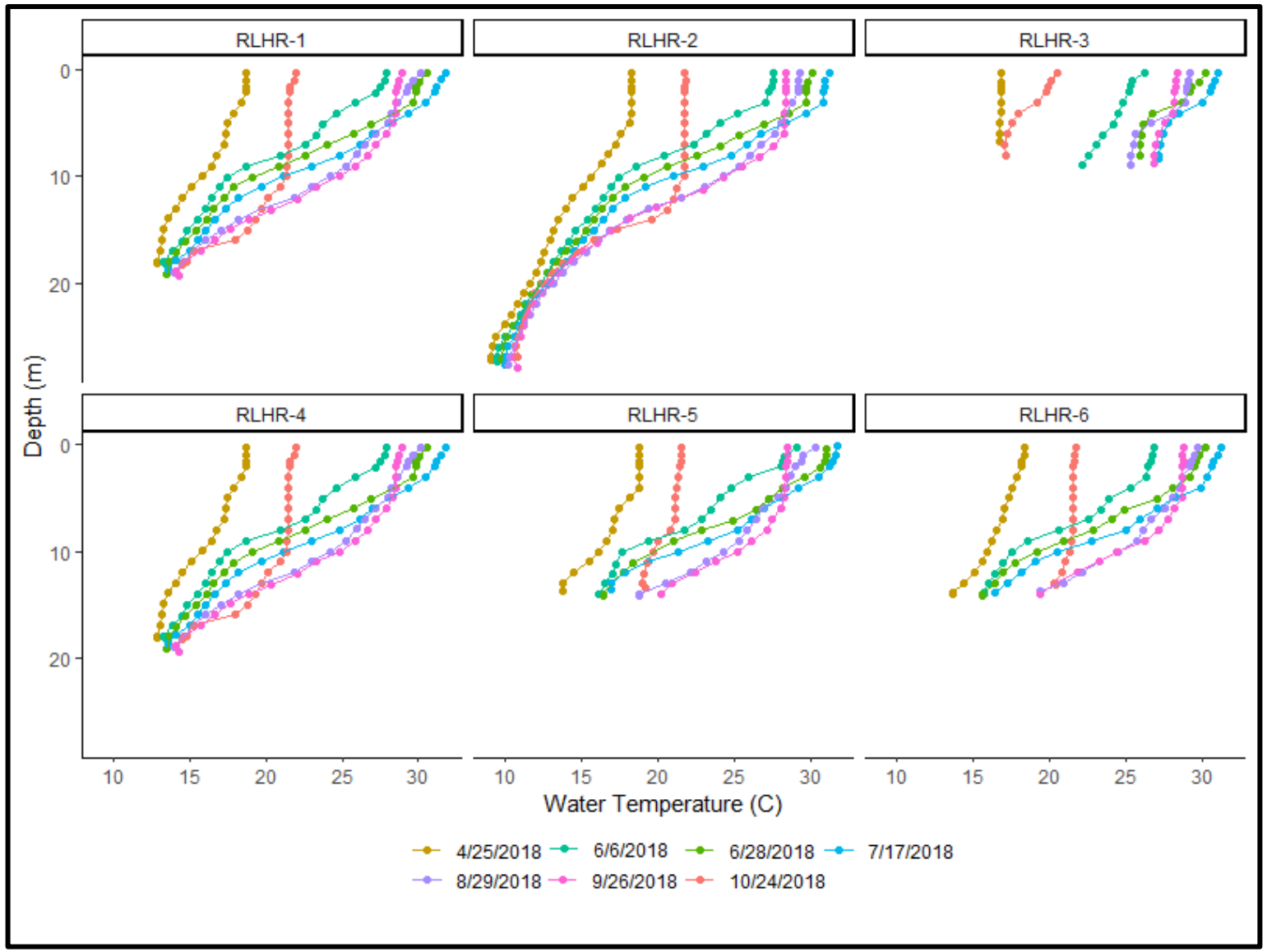
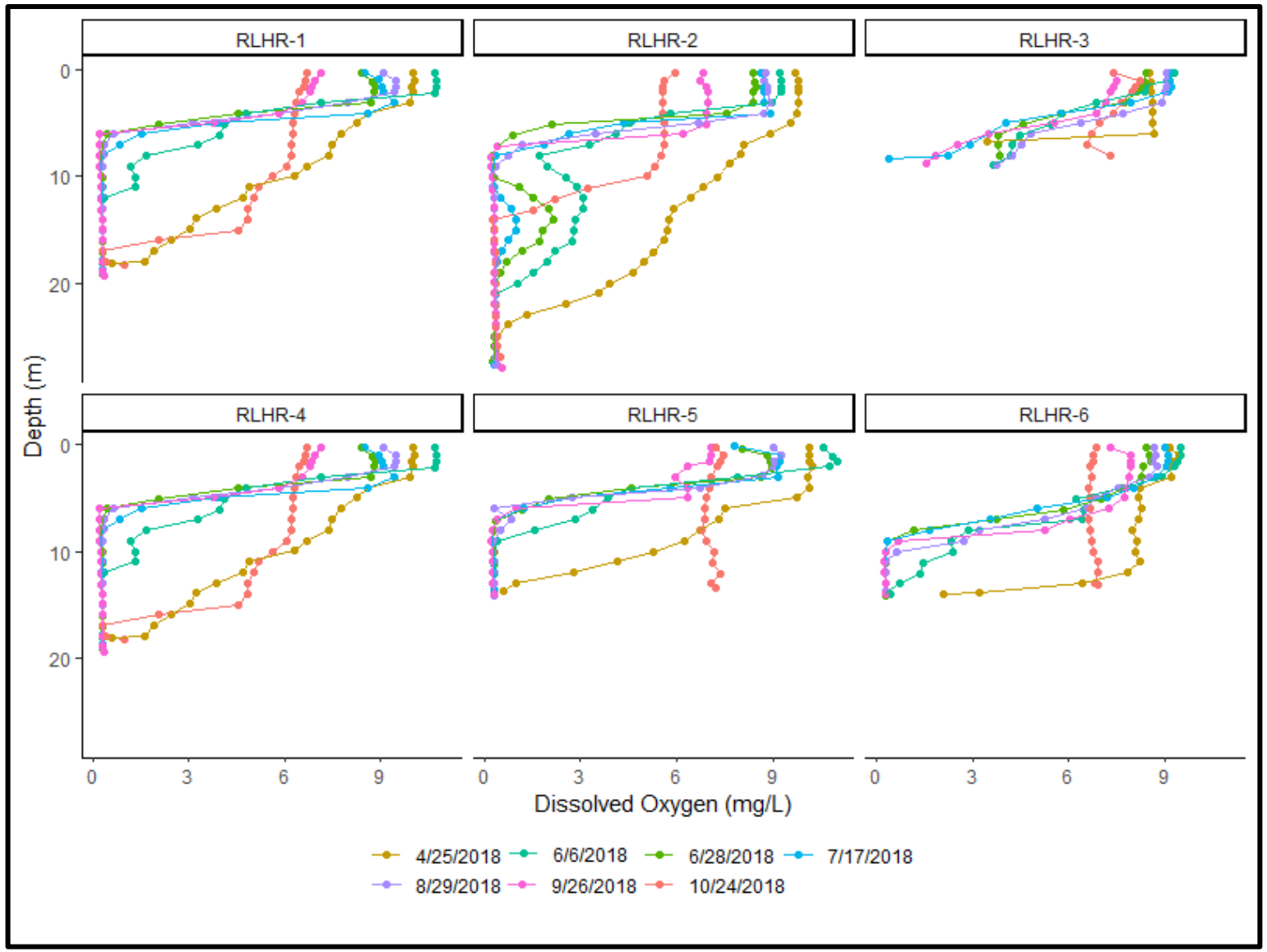


FIGURE 3-1 ADEM MONITORING SITES ON HARRIS RESERVOIR



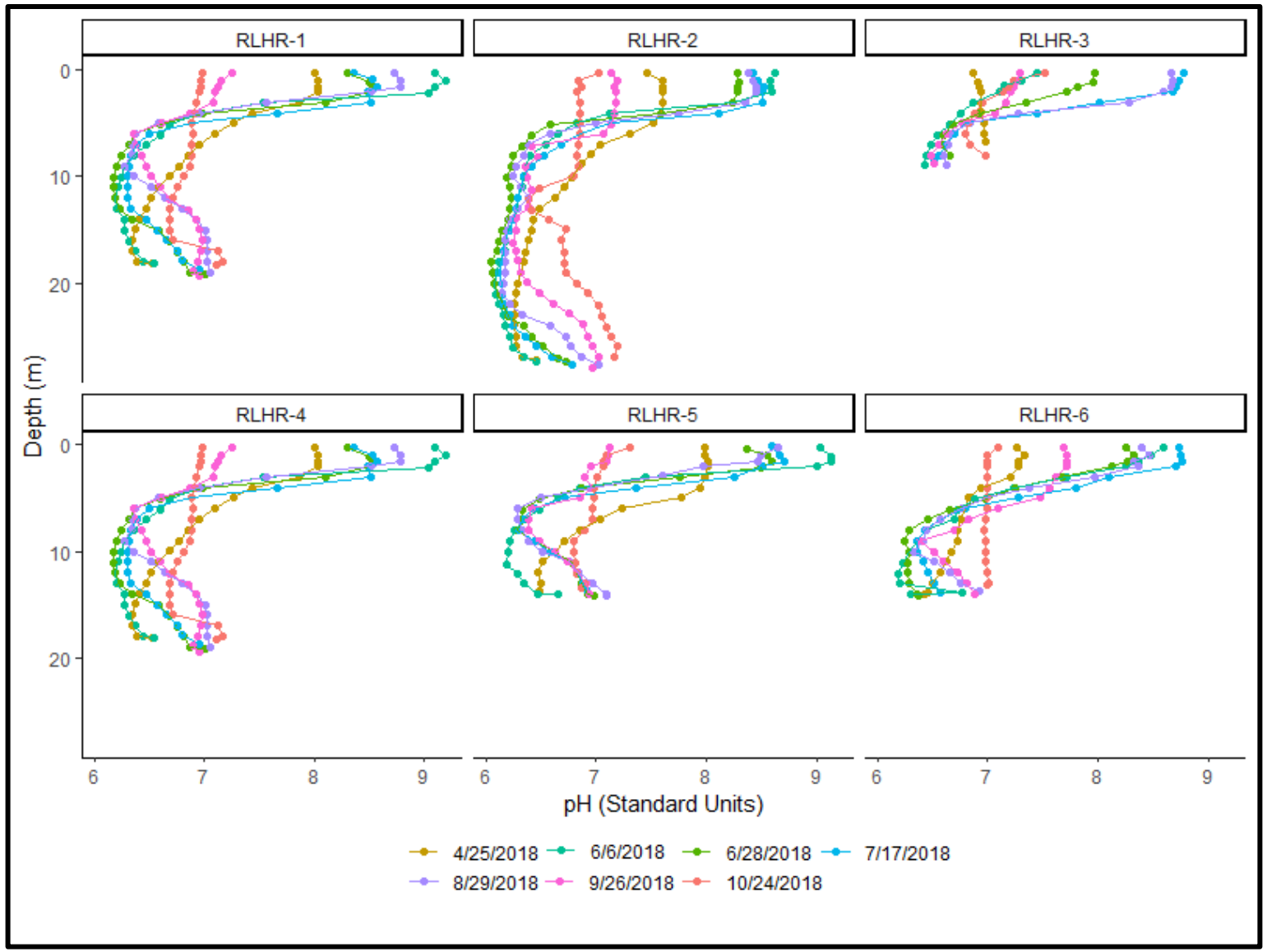
Source: ADEM 2019

FIGURE 3-2 2018 ADEM HARRIS RESERVOIR WATER TEMPERATURE PROFILES



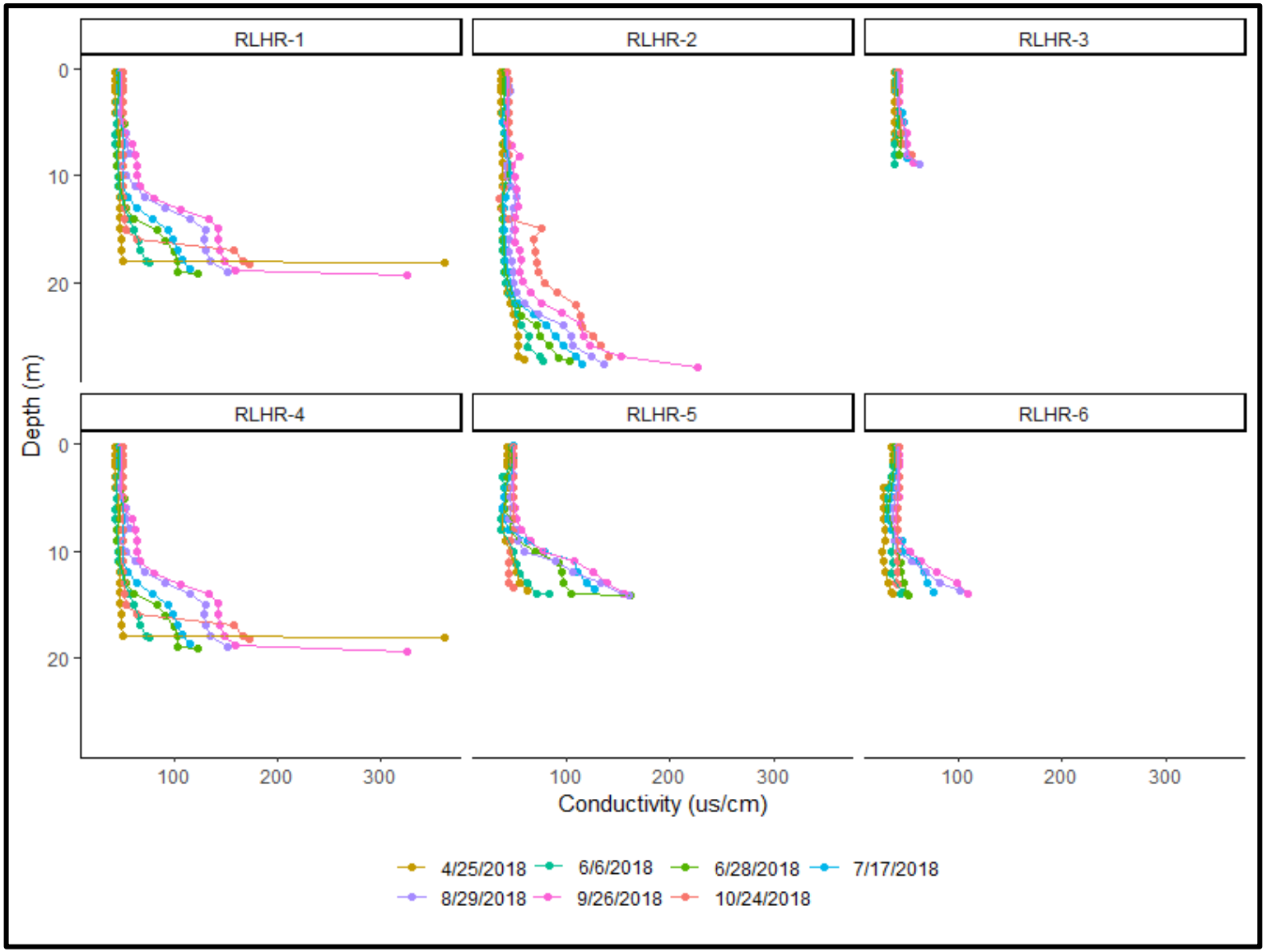
Source: ADEM 2019

FIGURE 3-3 2018 ADEM HARRIS RESERVOIR DISSOLVED OXYGEN PROFILES



Source: ADEM 2019

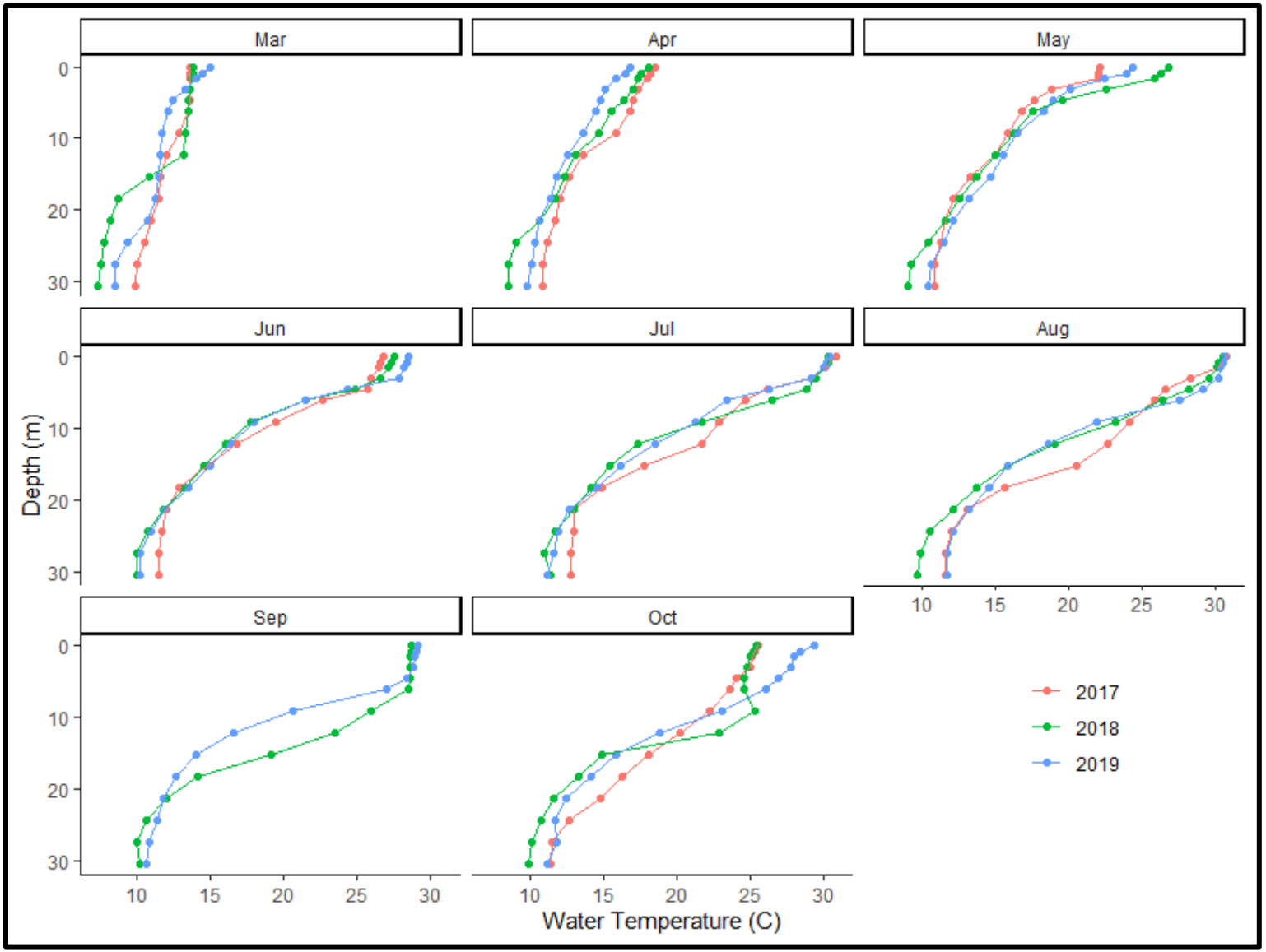
FIGURE 3-4 2018 ADEM HARRIS RESERVOIR PH PROFILES



Source: ADEM 2019

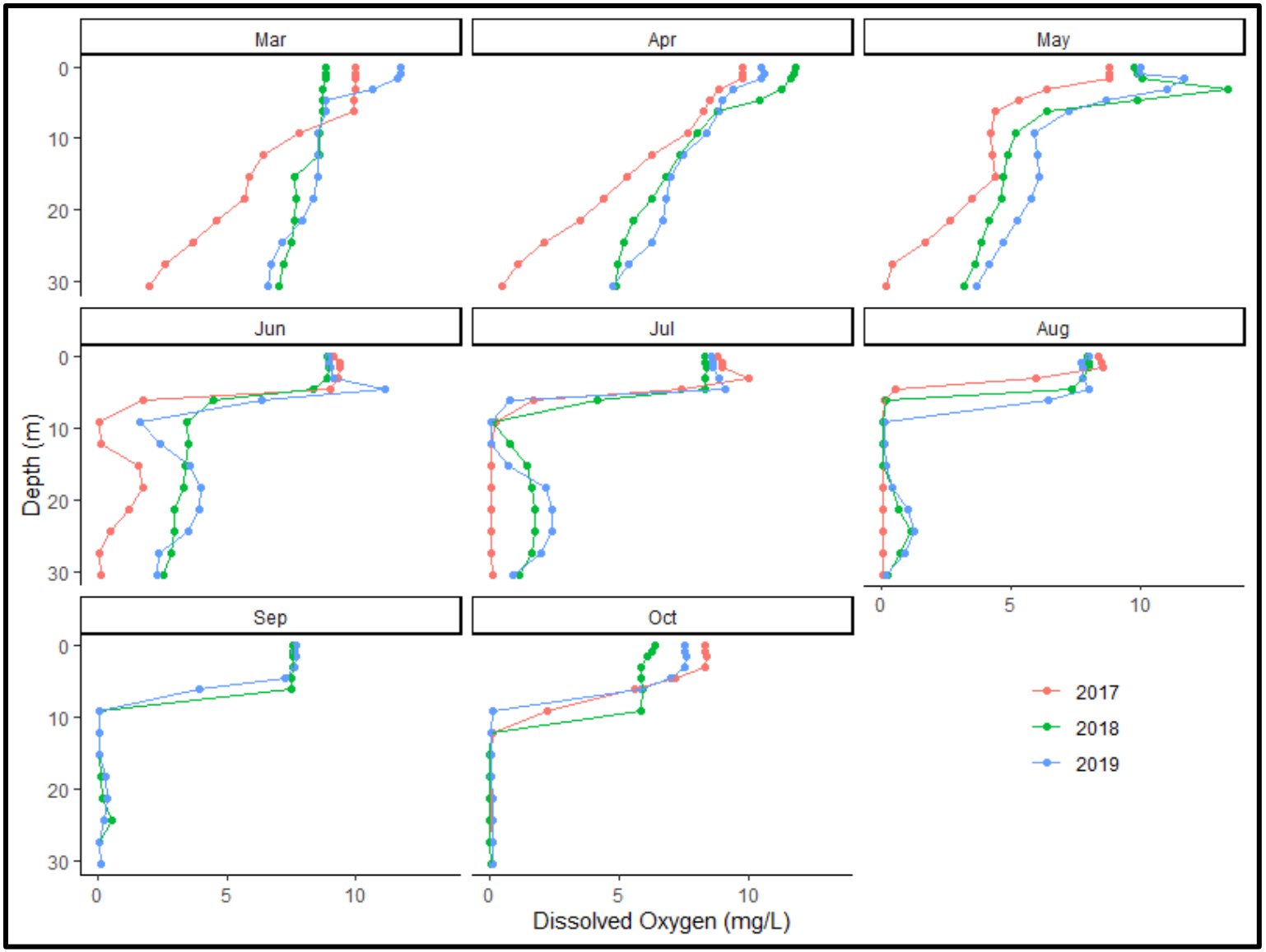
FIGURE 3-5 2018 ADEM HARRIS RESERVOIR CONDUCTIVITY PROFILES

FIGURE 3-6 ALABAMA POWER MONITORING LOCATIONS



Source: Alabama Power 2019

FIGURE 3-7 2017 - 2019 ALABAMA POWER FOREBAY TEMPERATURE PROFILES



Source: Alabama Power 2019

FIGURE 3-8 2017-2019 ALABAMA POWER FOREBAY DISSOLVED OXYGEN PROFILES

TABLE 3-1 SUMMARY OF 2018 PARAMETER AVERAGES FROM ADEM SITES ON HARRIS RESERVOIR

Parameter	n	RLHR-1	RLHR-2	RLHR-3	RLHR-4	RLHR-5	RLHR-6	Units
Alkalinity, total	7	12.6	13.4	13.9	13.3	13.6	12.4	mg/L
Ammonia-nitrogen	7	0.000	0.008	0.009	0.000	0.000	0.017	mg/L
5-day BOD	7	0.00	0.00	0.00	0.73	0.00	0.00	mg/L
Calcium	4	2.65	2.80	3.02	2.70	2.79	2.03	mg/L
Chloride	7	2.36	2.63	2.14	3.77	3.87	2.57	mg/L
Chlorophyll *a*	7	4.39	5.48	11.91	8.24	9.59	8.26	mg/m3
Depth, Secchi disk depth	7	1.97	2.33	1.35	1.89	1.98	2.71	m
Escherichia coli	4	2.3	1.3	8.9	1.5	1.5	1.5	MPN/100 mL
Hardness	4	12.0	12.7	13.5	12.6	13.0	9.4	mg/L
Nitrate + Nitrite	7	0.027	0.037	0.049	0.074	0.092	0.035	mg/L
Kjeldahl nitrogen	7	0.299	0.267	0.319	0.384	0.336	0.319	mg/L
Light attenuation, depth at 99%	7	5.0	5.8	3.5	4.8	5.1	6.4	m
Magnesium	4	1.31	1.38	1.46	1.43	1.47	1.04	mg/L
Orthophosphate	7	0.001	0.000	0.002	0.001	0.001	0.001	mg/L
Phosphorus	7	0.015	0.015	0.027	0.023	0.018	0.011	mg/L
Total dissolved solids	7	26.0	32.1	33.7	33.9	32.3	27.1	mg/L
Total suspended solids	7	2.9	1.6	4.7	3.1	2.4	2.0	mg/L
Turbidity	7	4.3	3.3	8.7	3.7	3.6	2.4	NTU

Source: ADEM 2019

Key:

BOD	Biochemical Oxygen Demand
m	Meter
m3	Cubic Meter
mg/L	Milligram per liter
MPN	Most Probable Number
n	Number of Samples
NTU	Nephelometric Turbidity Units

3.3 ALABAMA WATER WATCH

Alabama Water Watch (AWW) is a citizen volunteer water quality monitoring program that was established in 1992. As part of this program, citizens, including members of the Lake Wedowee Property Owners Association, have performed monitoring at over 40 sites on Harris Reservoir according to EPA-approved plans. Many of the sites are currently inactive and did not have recent data available. Data from six active monitoring sites (Figure 3-9) with recent available data were obtained and summarized in Table 3-2. AWW conducted bacteria monitoring at three sites on Harris Reservoir, the results of which are summarized in Table 3-3. These data and data from the inactive monitoring site can also be view on AWW's website at www.alabamawaterwatch.org.

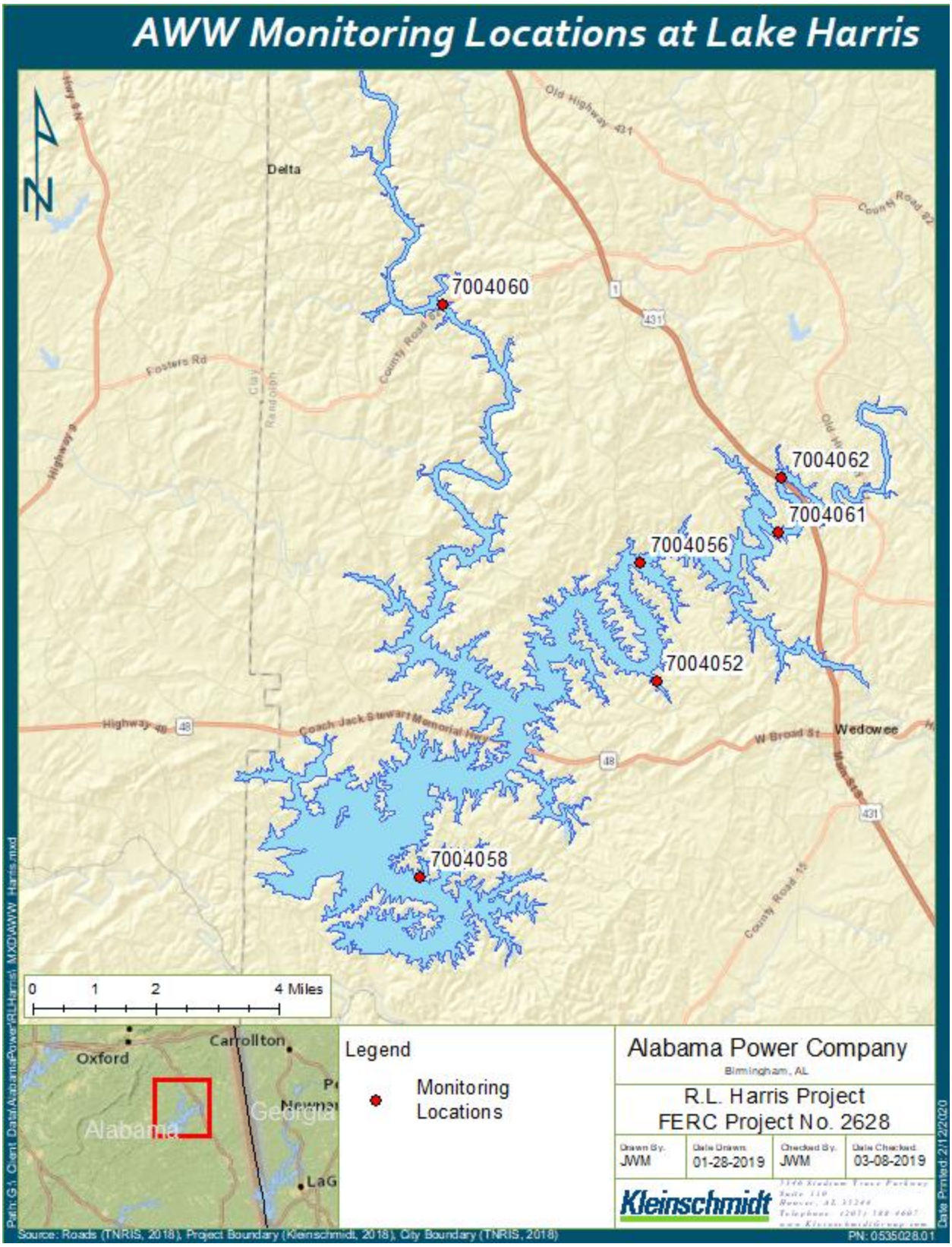


FIGURE 3-9 ALABAMA WATER WATCH MONITORING SITES AT HARRIS RESERVOIR

TABLE 3-2 SUMMARY OF PARAMETER AVERAGES FROM ALABAMA WATER WATCH SITES ON HARRIS RESERVOIR

Parameter	Location						Units
	0700 4052	0700 4056	0700 4058	0700 4060	0700 4061	0700 4062	
Water Temperature	20.5	22.1	23.3	21.0	25.1	22.4	°C
Dissolved Oxygen	7.92	5.96	7.94	8.15	6.50	6.97	mg/L
pH	7.19	7.01	7.25	7.07	7.29	7.09	SU
Alkalinity	17.8	20.8	21.4	20.7	17.9	18.4	mg/L
Hardness	17.7	32.7	12.8	20.0	15.7	35.0	mg/L
Turbidity	2.2	2.4	2.0	2.0	2.0	2.0	JTU
Secchi Depth	1.4	1.4	2.2	0.9	1.3	1.3	m
# Samples	60	59	32	41	7	16	
Date Range	11/11 to 06/19	06/12 to 09/19	04/13 to 08/19	10/15 to 09/19	06/17 to 01/19	11/17 to 09/19	

Source: AWW 2019; Data from 2011 - 2019

Key:
- C Centigrade
- mg/L milligrams per liter
- SU standard units
- JTU Jackson Turbidity Units
- m meters

TABLE 3-3 SUMMARY OF E. COLI TEST RESULTS FROM ALABAMA WATER WATCH SITES ON HARRIS RESERVOIR

Location	Minimum (MPN/100 mL)	Average (MPN/100 mL)	Maximum (MPN/100 mL)	# of Samples
07004052	0	19	233	27
07004056	0	74	789	49
07004058	0	9	233	29
All Sites	0	42	789	105

Source: AWW 2019; Data from 2011 - 2019

Key: MPN Most Probable Number

4.0 DOWNSTREAM WATER QUALITY

4.1 ADEM MONITORING

ADEM performed monitoring in the Tallapoosa River at four sites downstream of Harris Dam in 2018 and 2019 (Figure 4-1). The site immediately downstream of Harris Dam (MARE-12) was sampled monthly in 2018 from April to October (Table 4-1). Dissolved oxygen levels at this station were all above 5.0 milligrams per liter (mg/L). Conductivity ranged from 39 to 45 us/cm, and pH ranged from 6.44 to 6.92. Table 4-2 presents a summary of discrete chemistry samples collected by ADEM at this site in 2018.

In May 2019, ADEM installed a monitoring station in the Tallapoosa River at the Malone bridge crossing, approximately seven river miles downstream of Harris Dam. The station recorded measurements of water temperature, dissolved oxygen, conductivity, pH, Turbidity, and chlorophyll *a* at 15-minute intervals. The station was initially installed on a bridge pier near the left bank but was relocated to a pier near the middle of the river channel in April 2019.

Table 4-3 provides a summary of the monthly average values for each parameter. Table 4-4 provides a summary of dissolved oxygen data recorded at Malone. Overall, dissolved oxygen levels were above 5 mg/L for a majority of monitoring period, with less than one percent of all measurements falling below 5 mg/L. Line plots of the 15-minute data for water temperature and dissolved oxygen are provided in Figure 4-2 and Figure 4-3.

Results of the monthly in-stream measurements collected by ADEM from March 2018 through February 2019 at the Wadley site (TA-1), located approximately 14 miles downstream of Harris Dam, indicated the highest water temperatures occurred during July through September (Table 4-5). Lowest dissolved oxygen levels occurred in the July through October samples, though no measurements less than 6.0 mg/L were recorded. Measurements of pH were typically circumneutral[3], and conductivity ranged between 34 and 45 microsiemens per centimeter (us/cm). Table 4-6 presents a summary of discrete chemistry samples collected by ADEM from March 2018 through February 2019 at the Wadley site.

[3] Meaning “nearly neutral”.

Results of the monthly in-stream measurements collected by ADEM from January 2018 through July 2019 at the Horseshoe Bend site (TART-1) located approximately 44 miles downstream of Harris Dam indicated the highest water temperatures occurred during July (Table 4-7). Lowest dissolved oxygen levels typically occurred in June through October, though no measurements less than 7.1 mg/L were recorded. Measurements of pH were typically circumneutral, and conductivity ranged from 33 to 45 us/cm. Table 4-8 presents a summary of results for discrete chemistry samples collected by ADEM at Horseshoe Bend.

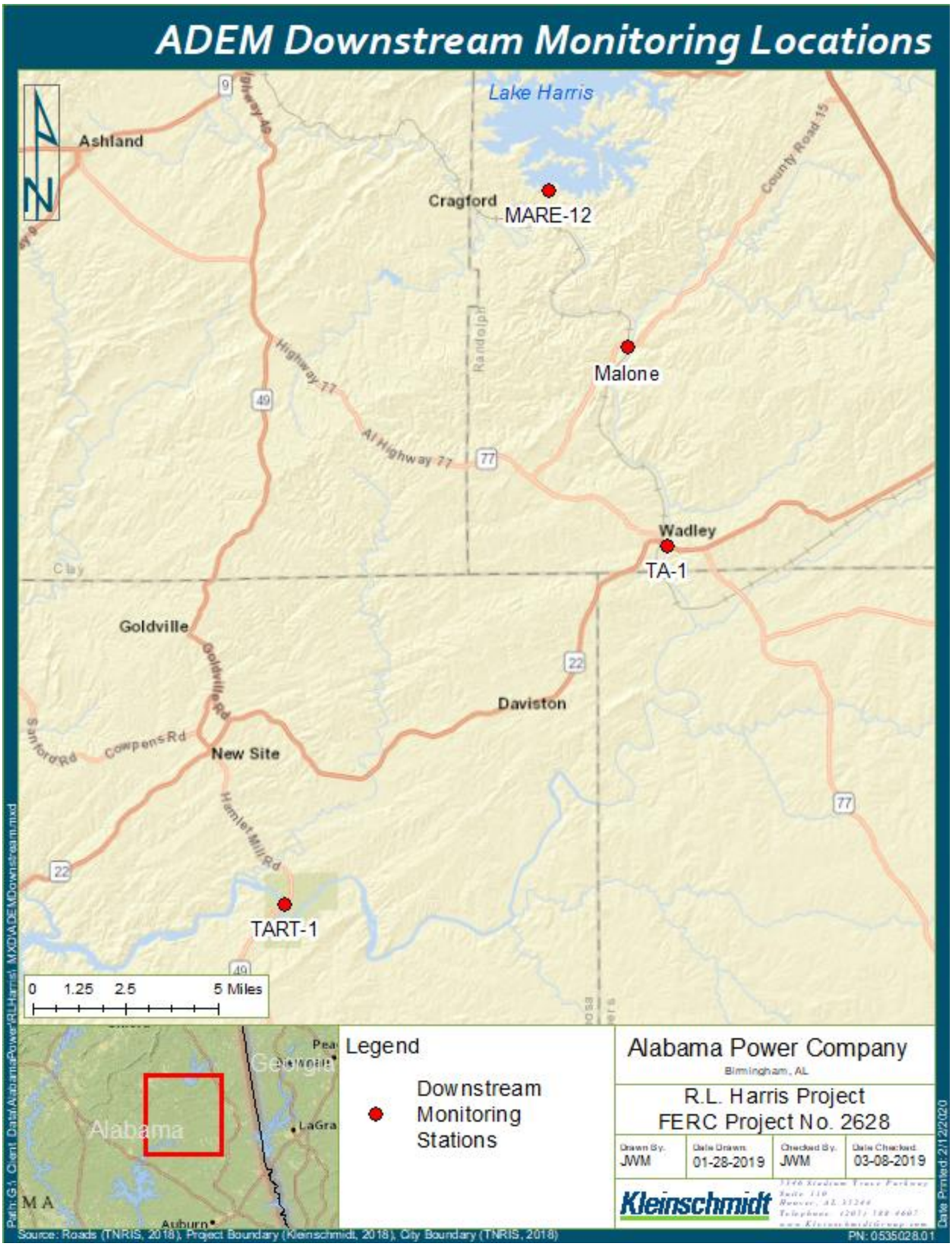


FIGURE 4-1 ADEM MONITORING SITES ON TALLAPOOSA RIVER

TABLE 4-1 ADEM WATER QUALITY DATA FROM HARRIS DAM TAILRACE (MARE-12)

Date	Water Temperature (°C)	DO (mg/L)	pH	Specific conductance (µs/cm)
4/25/2018	18.15	9.62	6.92	39
6/6/2018	20.19	8.64	6.66	39
6/28/2018	22.08	8.44	6.47	40
7/17/2018	23.79	6.66	6.62	41
8/29/2018	24.55	5.82	6.49	43
9/26/2018	24.52	6.09	6.44	44
10/24/2018	20.87	7.53	6.75	45

Source: ADEM 2019

Key:

DO dissolved oxygen
mg/L milligrams per liter
C Centigrade
µs/cm microsiemens per centimeter

TABLE 4-2 2018 SUMMARY OF PARAMETER AVERAGES FROM ADEM SAMPLES AT HARRIS DAM TAILRACE (MARE--12)

Parameter	n	Mean	Min	Max	Units
Alkalinity, total	7	13.0	10.8	20.6	mg/L
Ammonia-nitrogen	7	0.002	0.000	0.012	mg/L
BOD, 5-day	7	0	0	0	mg/L
Chloride	7	2.61	2.48	2.84	mg/L
Chlorophyll *a*	7	3.9	2.1	6.9	ug/L
Escherichia coli	4	3.1	1.0	6.3	MPN/100 mL
Nitrate + Nitrite	7	0.135	0.013	0.273	mg/L
Kjeldahl nitrogen	7	0.202	0.082	0.378	mg/L
Orthophosphate	7	0.001	0.000	0.005	mg/L
Phosphorus	7	0.012	0.010	0.017	mg/L
Total dissolved solids	7	27.9	13.0	35.0	mg/L
Total suspended solids	7	2.3	1.0	3.0	mg/L
Turbidity	7	2.9	1.8	4.5	NTU

Source: ADEM 2019

Key:

BOD Biochemical Oxygen Demand
cfu Colony Forming Unit
µg/L Microgram per liter
n Number of Samples
mg/L Milligram per liter
NTU Nephelometric Turbidity Unit

TABLE 4-3 MONTHLY AVERAGE VALUES FOR PARAMETERS MONITORED BY ADEM IN THE TALLAPOOSA RIVER AT MALONE

Year/Month	Water Temperature (°C)	Dissolved Oxygen (mg/L)	Conductivity (us/cm)	pH	Turbitiy (FNU)	Chlorophyll *a* (ug/L)
2018						
May	20.05	7.41	38.7	6.63	9.65	3.52
Jun	22.60	7.11	39.3	6.60	8.61	3.61
Jul	24.93	6.43	41.0	6.66	6.50	2.91
Aug	25.11	6.26	43.0	6.69	9.34	3.19
Sep	26.06	6.27	44.6	6.75	6.74	1.78
Oct	22.01	6.42	44.0	6.59	4.32	1.27
Nov	14.71	6.89	44.6	6.55	10.02	1.37
Dec	10.30	9.16	40.3	6.54	16.03	2.47
2019						
Jan	9.96	9.93	35.5	6.58	10.91	1.97
Feb	10.40	10.09	35.0	6.66	10.00	1.95
Mar	12.69	9.50	32.2	6.68	7.47	2.04
Apr	16.04	9.26	33.5	7.00	12.98	3.60
May	20.05	7.97	36.4	6.78	5.73	3.37
Jun	22.66	7.12	37.5	6.58	15.37	2.84
Jul	25.21	6.85	38.0	6.55	2.15	1.39
Sep	25.58	7.62	42.3	7.14	1.83	0.14
Oct	21.89	7.29	41.4	6.66	6.77	0.33
Nov	15.26	7.51	41.6	6.52	5.68	0.35
Dec	12.86	7.20	44.7	6.48	6.08	0.33

Source: ADEM 2020

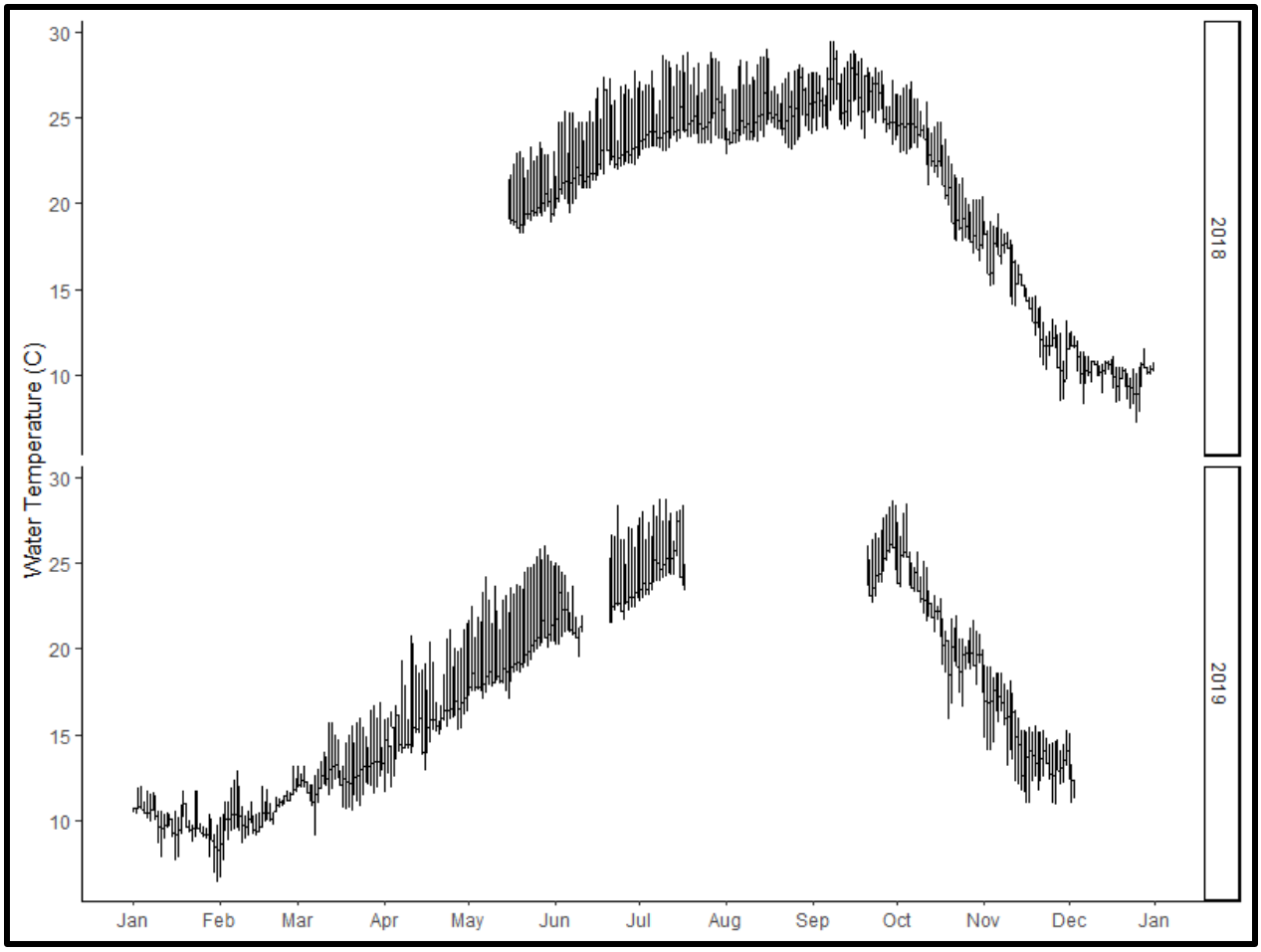
Key:

C Centigrade
mg/L milligrams per liter
µs/cm microsiemens per centimeter
FNU = Formazin Nephelometric Unit
µg/L Microgram per liter

TABLE 4-4 SUMMARY OF 15-MINUTE DISSOLVED OXYGEN DATA FROM THE TALLAPOOSA RIVER AT MALONE

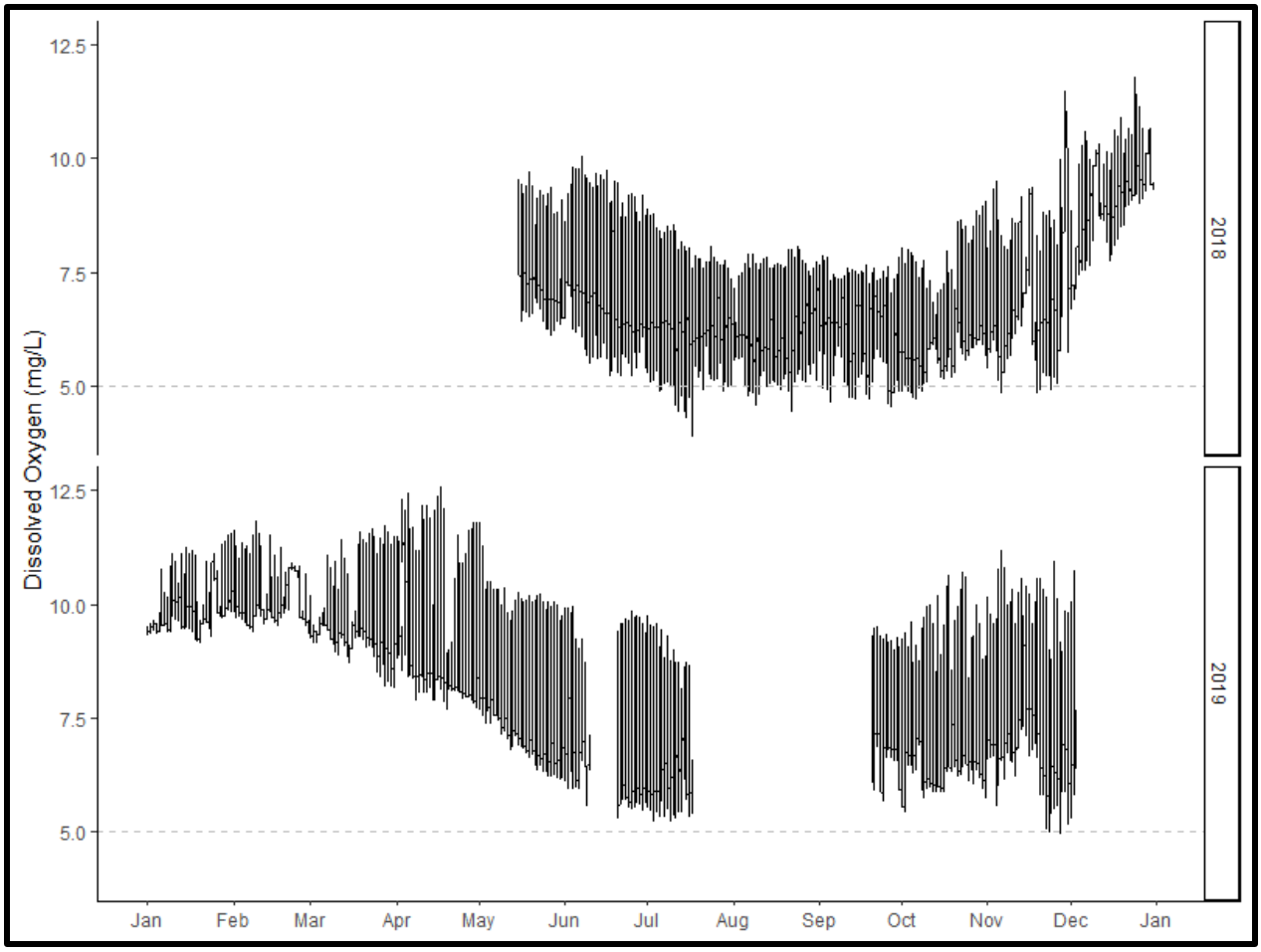
Year/Month	Min	Avg	Max
2018			
May	6.14	7.41	9.72
Jun	5.23	7.11	10.06
Jul	3.92	6.43	8.90
Aug	4.46	6.26	8.09
Sep	4.55	6.27	7.88
Oct	4.73	6.42	9.05
Nov	4.86	6.89	11.47
Dec	6.70	9.16	11.79
2019			
Jan	9.18	9.93	11.55
Feb	9.37	10.09	11.82
Mar	8.18	9.50	11.74
Apr	7.71	9.26	12.59
May	6.15	7.97	11.78
Jun	5.33	7.12	9.95
Jul	5.23	6.85	9.75
Sep	5.69	7.62	9.52
Oct	5.46	7.29	10.71
Nov	4.96	7.51	11.18
Dec	5.33	7.20	10.72

Source: ADEM 2020



Source: ADEM 2020

FIGURE 4-2 LINE PLOTS OF 15-MINUTE WATER TEMPERATURE DATA COLLECTED BY ADEM ON THE TALLAPOOSA RIVER AT MALONE



Source: ADEM 2020

FIGURE 4-3 LINE PLOT OF 15-MINUTE DISSOLVED OXYGEN DATA COLLECTED BY ADEM ON THE TALLAPOOSA RIVER AT MALONE

TABLE 4-5 2018-2019 ADEM WATER QUALITY DATA FROM TALLAPOOSA RIVER AT WADLEY (TA-1)

Date	Water Temperature (°C)	DO (mg/L)	pH	Specific conductance (µs/cm)
3/12/2018	11.53	9.76	6.32	34
4/11/2018	14.94	10.05	6.77	38
5/9/2018	19.38	9.03	6.62	38
6/11/2018	22.35	8.25	6.37	38
7/9/2018	25.29	8.19	6.27	39
7/30/2018	26.65	7.58	6.43	40
9/26/2018	26.58	7.67	6.63	45
10/15/2018	23.02	7.97	6.55	42
12/6/2018	9.38	9.85	6.54	40
1/16/2019	8.52	10.58	6.19	36
2/6/2019	10.29	10.61	6.39	36

Source: ADEM 2019

Key:
DO dissolved oxygen
mg/L milligrams per liter
C Centigrade
µs/cm microsiemens per centimeter

TABLE 4-6 SUMMARY OF 2018 – 2019 PARAMETER AVERAGES FOR ADEM SAMPLES FROM THE TALLAPOOSA RIVER AT WADLEY (TA-1)

Parameter	n	Mean	Min	Max	Units
Alkalinity, total	11	10.9	8.9	14.4	mg/L
Ammonia-nitrogen	11	0.016	0.000	0.120	mg/L
BOD, 5-day	11	0	0	0	mg/L
Chloride	11	2.56	2.24	3.17	mg/L
Chlorophyll *a*	11	1.4	0.0	3.2	ug/L
Escherichia coli	11	35.4	8.4	201.4	MPN/100 mL
Nitrate + Nitrite	11	0.219	0.038	0.363	mg/L
Kjeldahl nitrogen	11	0.079	0.000	0.274	mg/L
Orthophosphate	11	0.002	0.000	0.006	mg/L
Phosphorus	11	0.017	0.013	0.023	mg/L
Total dissolved solids	11	29.6	16.0	51.0	mg/L
Total suspended solids	11	3.55	0.00	13.00	mg/L
Turbidity	11	6.0	1.8	16.6	NTU

Source: ADEM 2019

Key: BOD Biochemical Oxygen Demand
cfu Colony Forming Unit
µg/L Microgram per liter
n Number of Samples
mg/L Milligram per liter
NTU Nephelometric Turbidity Unit

TABLE 4-7 2018-2019 ADEM WATER QUALITY DATA FROM TALLAPOOSA RIVER AT HORSESHOE BEND (TART-1)

Date	Water Temperature (°C)	DO (mg/L)	pH	Specific conductance (µs/cm)
1/9/2018	6.26	12.07	6.76	45
2/28/2018	13.41	9.77	6.72	38
3/14/2018	11.96	9.96	6.60	38
4/11/2018	15.80	9.20	6.72	39
5/9/2018	21.18	8.07	6.38	39
6/11/2018	25.60	7.12	6.40	41
7/9/2018	26.01	7.20	6.43	39
7/30/2018	29.39	7.26	6.62	39
9/26/2018	28.15	7.30	6.60	43
10/15/2018	22.88	7.51	6.46	43
11/13/2018	14.65	8.20	6.55	39
12/5/2018	10.09	10.10	6.78	40
1/8/2019	10.96	10.41	6.74	37
2/5/2019	10.42	10.74	6.71	37
4/2/2019	13.75	10.01	7.20	33
5/8/2019	21.70	8.49	7.25	37
6/5/2019	26.73	6.78	7.06	39
7/16/2019	28.68	6.58	7.22	43

Source: ADEM 2019

Key:
- DO dissolved oxygen
- C Centigrade
- mg/L milligrams per liter
- µs/cm microsiemens per centimeter

TABLE 4-8 SUMMARY OF 2018-2019 PARAMETER AVERAGES FOR ADEM SAMPLES FROM THE TALLAPOOSA RIVER AT HORSESHOE BEND (TART-1)

Parameter	n	Mean	Min	Max	Units
Alkalinity, total	24	11.3	7.6	14.8	mg/L
Ammonia-nitrogen	26	0.019	0.000	0.096	mg/L
BOD, 5-day	26	0	0	0	mg/L
Calcium	3	1.96	1.95	1.98	mg/L
Chloride	26	2.49	1.99	2.99	mg/L
Chlorophyll *a*	26	1.11	0.00	4.00	µg/L
Escherichia coli	26	156.7	6.2	2419.6	MPN/100 mL
Hardness	3	10.1	9.9	10.2	mg/L
Nitrate + Nitrite	26	0.203	0.056	0.332	mg/L
Kjeldahl nitrogen	26	0.178	0.000	0.594	mg/L
Magnesium	3	1.26	1.23	1.28	mg/L
Orthophosphate	26	0.004	0.000	0.009	mg/L
Phosphorus	26	0.019	0.012	0.070	mg/L
Sulfate	26	1.81	1.31	2.25	mg/L
Total dissolved solids	26	35.1	1.0	71.0	mg/L
Total suspended solids	26	10.3	0.0	122.0	mg/L
Turbidity	27	12.7	3.8	90.8	NTU

Source: ADEM 2019

Key:

BOD	Biochemical Oxygen Demand
µg/L	Microgram per liter
mg/L	Milligram per liter
n	Number of Samples
NTU	Nephelometric Turbidity Unit
MPN	Most Probable Number

4.2 ALABAMA POWER MONITORING

4.2.1 GENERATION MONITOR

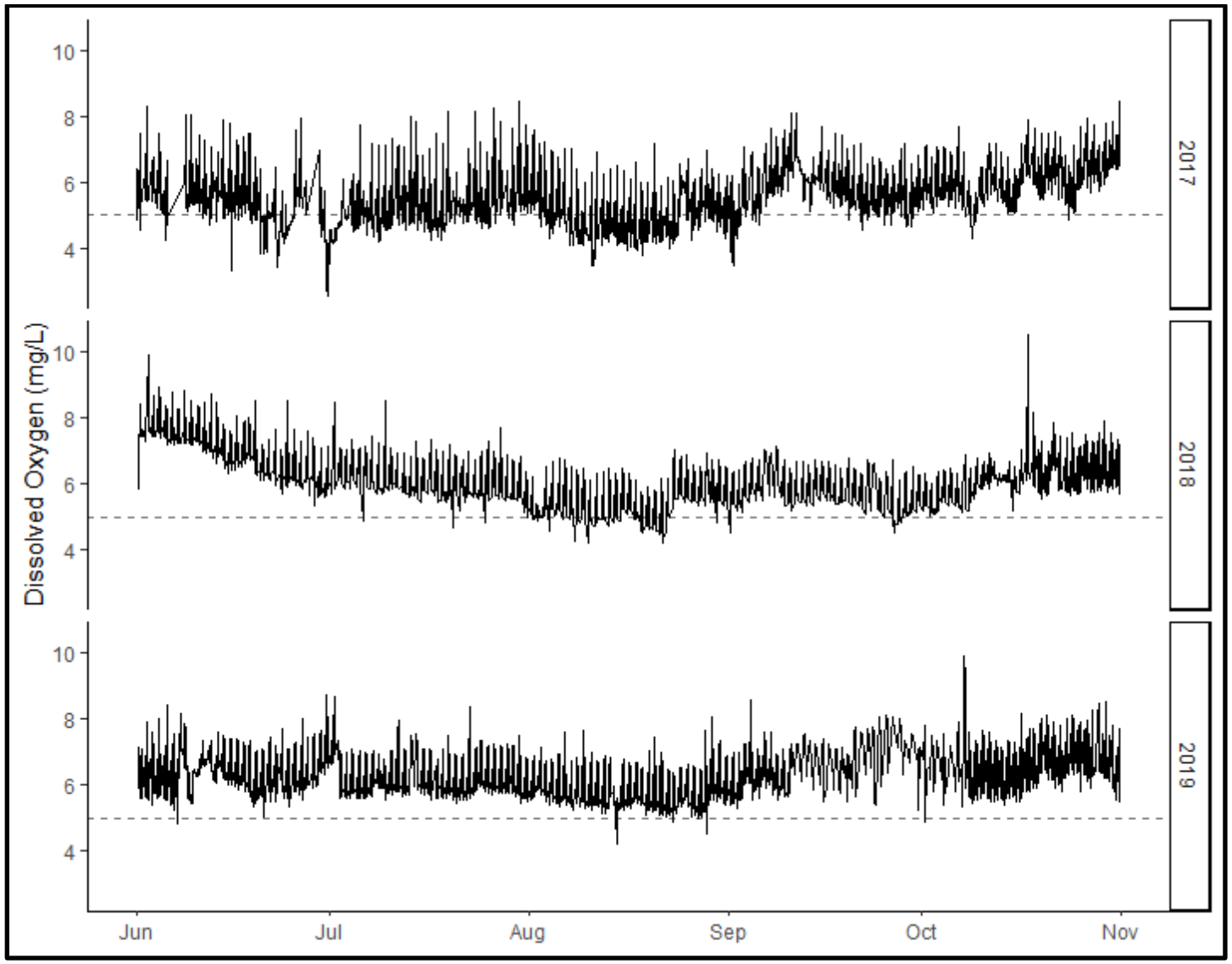
For purposes of developing an application for a Section 401 Water Quality Certification, per agreement with ADEM, Alabama Power conducted dissolved oxygen and temperature monitoring in the tailrace at the monitor placed approximately 800 feet downstream of the Harris Dam on the west bank of the river (see Figure 3-6 for monitor location). Measurements were recorded at 15-minute intervals during generation from June to October of 2017 – 2019 (see Appendix B). Tabular summaries of these measurements are presented in Table 4-9. Figure 4-4 and Figure 4-5 provide graphical depictions of the data.

Dissolved oxygen levels were consistently greater than 5 mg/L during the 2018 and 2019 monitoring periods. Dissolved oxygen levels were typically lowest in August of each year of the monitoring period. Dissolved oxygen levels in 2017 were lower than those measured during the 2018 and 2019 monitoring periods. Section 6.2 provides a discussion of the suspected primary cause of the low dissolved oxygen levels in the 2017 data. Water temperatures were typically lowest in June and October and highest in August and September during the monitoring period.

TABLE 4-9 SUMMARY OF DISSOLVED OXYGEN DATA AND WATER TEMPERATURE DATA COLLECTED DURING GENERATION

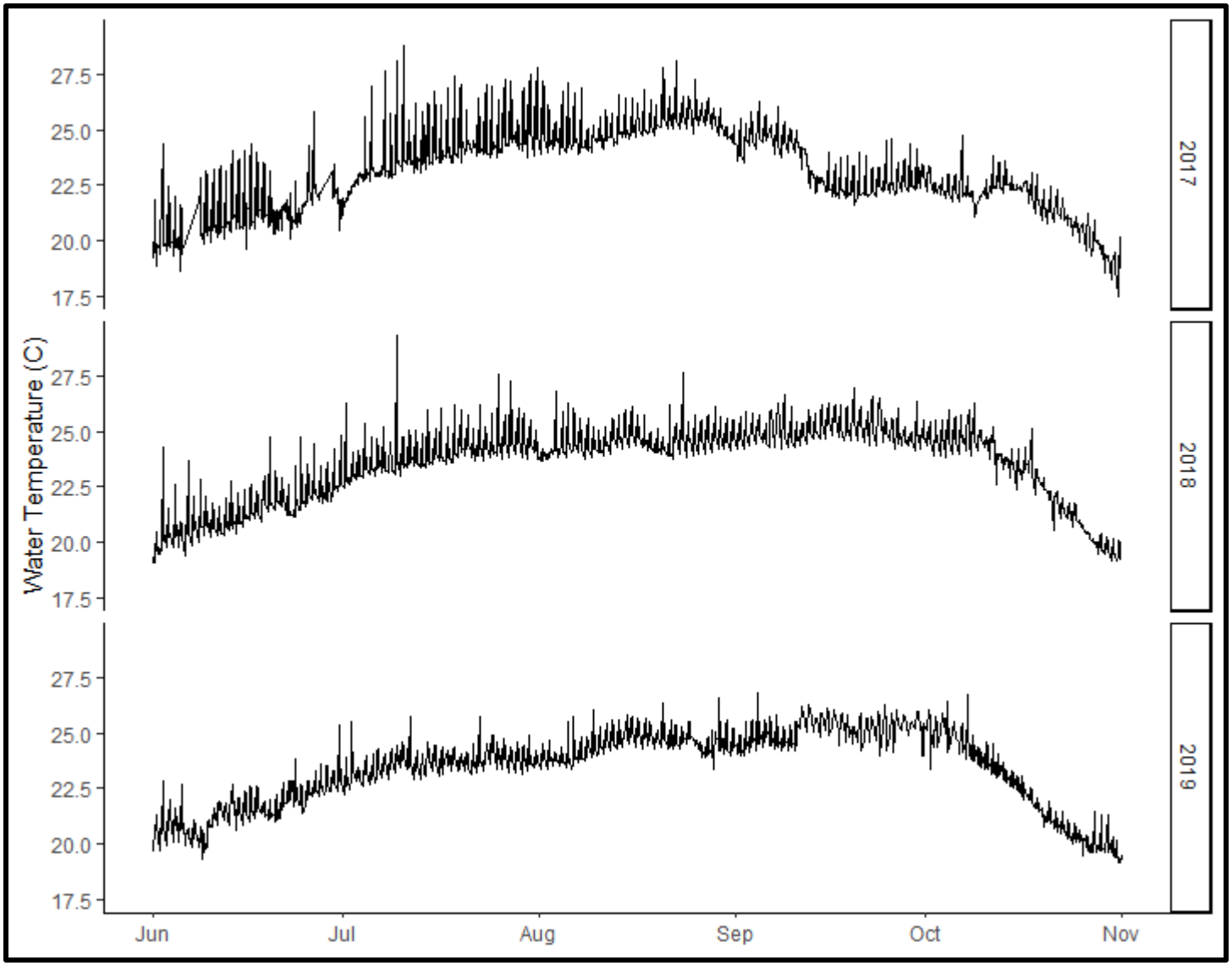
	Dissolved Oxygen (mg/L)			Water Temperature (degrees C)		
Year/Month	**Min**	**Avg**	**Max**	**Min**	**Avg**	**Max**
2017						
Jun	2.58	4.94	8.32	18.65	21.04	25.77
Jul	3.64	4.98	8.44	21.14	23.52	28.80
Aug	3.47	4.61	7.59	23.88	24.84	28.13
Sep	3.48	5.74	8.11	21.60	23.17	26.30
Oct	4.33	5.74	8.46	17.50	21.38	24.73
2018						
Jun	5.34	6.82	9.90	19.09	21.19	24.85
Jul	4.69	5.92	8.53	22.44	23.92	29.35
Aug	4.22	5.21	7.01	23.67	24.34	27.65
Sep	4.51	5.52	7.12	24.14	24.94	26.95
Oct	5.04	6.02	10.52	19.16	22.94	26.23
2019						
Jun	4.82	6.22	8.72	19.31	21.33	25.33
Jul	5.42	6.11	8.64	22.25	23.66	25.75
Aug	4.22	5.71	8.06	23.35	24.42	26.58
Sep	5.23	6.47	8.54	23.95	24.95	26.81
Oct	4.85	6.35	9.90	19.14	21.20	26.71

Source: Alabama Power 2019



Source: Alabama Power 2019

FIGURE 4-4 LINE PLOT OF DISSOLVED OXYGEN DATA COLLECTED DURING GENERATION



Source: Alabama Power 2019

FIGURE 4-5 LINE PLOT OF WATER TEMPERATURE DATA COLLECTED DURING GENERATION

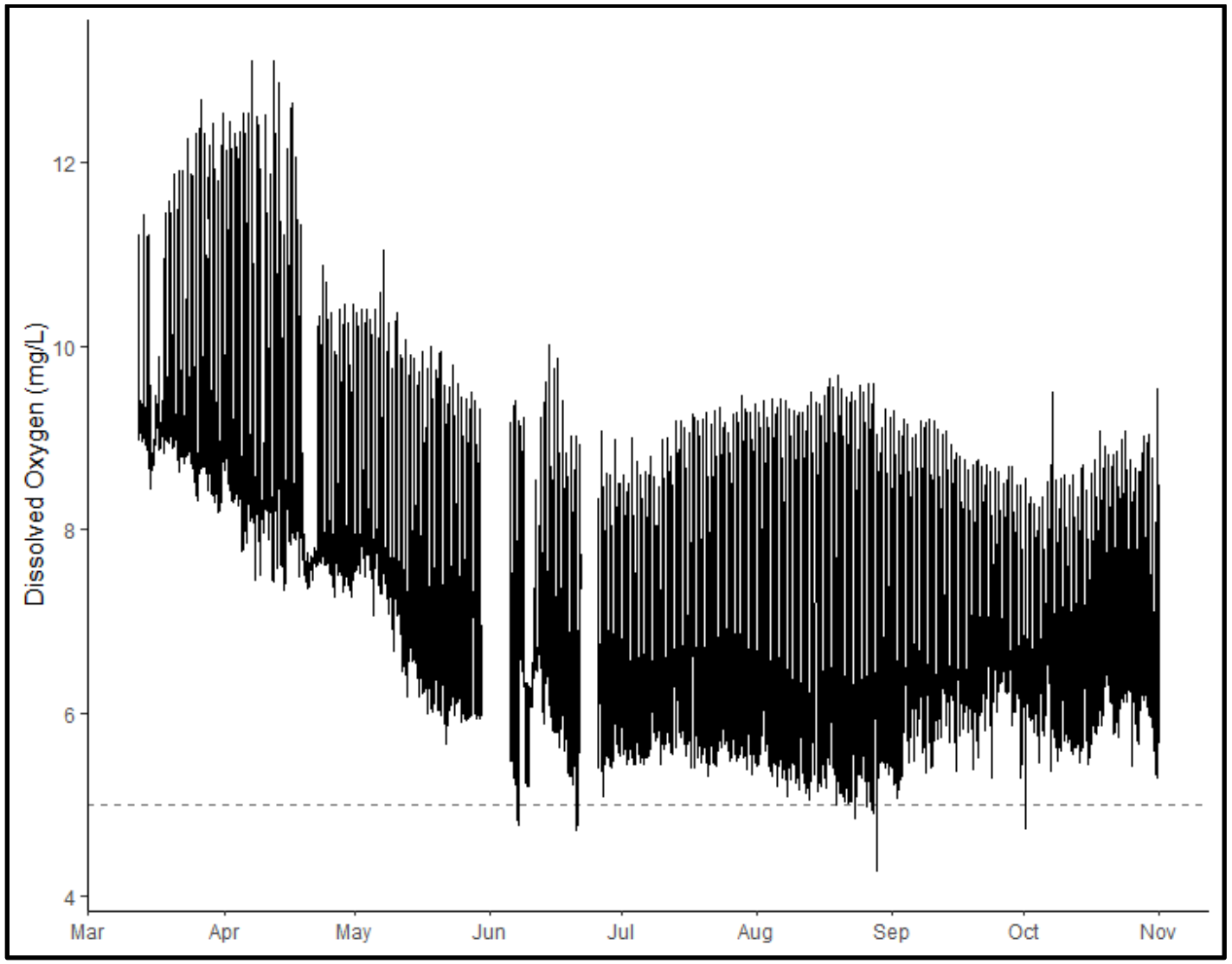
4.2.2 CONTINUOUS DOWNSTREAM MONITOR

Alabama Power monitored dissolved oxygen and water temperature approximately 0.5 miles downstream of Harris Dam from March to October of 2019 (see Figure 3-6 for monitor location). Measurements of dissolved oxygen and water temperature were recorded at 15-minute intervals. Dissolved oxygen levels were generally lowest from June through October. A summary of dissolved oxygen and water temperature data from the continuous monitor is presented in Table 4-10**Error! Reference source not found.**. These data indicate the highest average water temperature occurred during August. Line plots of dissolved oxygen and temperature data from the continuous monitor presented in Figure 4-6 and Figure 4-7.

TABLE 4-10 MONTHLY SUMMARY OF DISSOLVED OXYGEN AND WATER TEMPERATURE DATA COLLECTED AT THE CONTINUOUS DOWNSTREAM MONITOR IN 2019

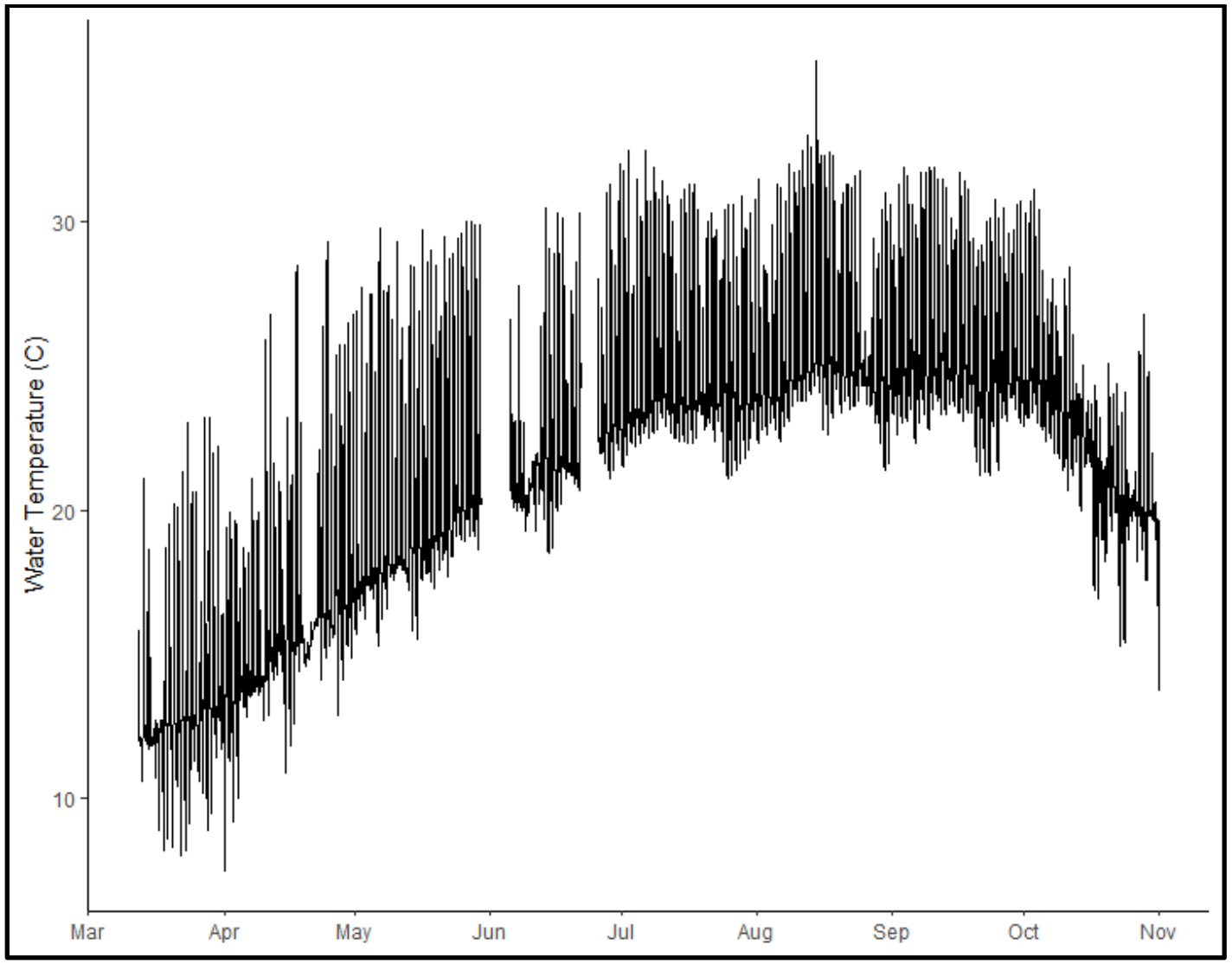
	Dissolved Oxygen (mg/L)			Water Temperature (degrees C)		
Month	**Min**	**Avg**	**Max**	**Min**	**Avg**	**Max**
Mar	8.18	9.50	12.69	8.00	13.13	23.20
Apr	7.26	8.84	13.11	7.50	16.10	29.30
May	5.66	7.86	11.05	15.30	20.10	30.00
Jun	4.72	6.96	10.01	18.50	22.32	32.00
Jul	5.32	7.07	9.46	21.10	24.66	32.50
Aug	4.29	7.04	9.68	21.40	25.51	35.60
Sep	5.07	7.12	9.30	21.20	25.36	31.90
Oct	4.75	7.20	9.53	13.70	22.01	31.10

Source: Alabama Power 2019



Source: Alabama Power 2019

FIGURE 4-6 LINE PLOT OF 2019 DISSOLVED OXYGEN DATA FROM THE CONTINUOUS DOWNSTREAM MONITOR



Source: Alabama Power 2019

FIGURE 4-7 LINE PLOT OF 2019 WATER TEMPERATURE DATA FROM THE CONTINUOUS DOWNSTREAM MONITOR

4.3 AWW MONITORING AT HORSESHOE BEND

Alabama Water Watch citizen volunteers have performed periodic monitoring on the Tallapoosa River at Horseshoe Bend since 1993, including from 1993 to 2007, and 2014 through 2017. A summary of the results for all parameters monitored at this site is presented in Table 4-11. Results were similar to those obtained by ADEM during its monitoring events at the same location.

TABLE 4-11 SUMMARY OF AWW WATER QUALITY MONITORING DATA FROM THE TALLAPOOSA RIVER AT HORSESHOE BEND

Parameter	Minimum	Mean	Maximum	Count	Units
Water Temperature	4.0	18.9	31	145	°C
pH	6.0	6.74	7.5	146	SU
Dissolved Oxygen	3.40	8.05	11.30	144	mg/L
Dissolved Oxygen Saturation	40.0	84.9	127.2	143	%
Total Alkalinity	10	18	40	146	mg/L
Total Hardness	10	24	90	146	mg/L
Turbidity	2	9	25	139	JTU
Secchi Depth	0.91	1.78	4.00	9	m

Source: AWW 2019

Key:

C	Centigrade
mg/L	milligrams per liter
SU	standard units
JTU	Jackson Turbidity Units
m	meters

5.0 STAKEHOLDER-IDENTIFIED AREAS OF POTENTIAL WATER QUALITY CONCERN

In accordance with the FERC-approved study plan, Alabama Power asked Harris Action Team (HAT) 2 participants to submit areas of water quality concern (areas believed to have degraded water quality conditions) to be evaluated. Only one area, Lake Harris at Foster's Bridge (RLHR-3 in Figure 3-1), was identified as a concern with regard to potential nutrient enrichment and associated impacts[4]. Alabama Power used existing and historical data to assess the Foster's Bridge area, as described in the sections below.

The drainage area for the Tallapoosa River above Foster's Bridge includes 739.5 square miles within Alabama and Georgia. Based on the most recent land cover data (2016), a majority of this drainage area is forested (> 70 percent), with agricultural use making up 11.2 percent of the total (Table 5-1). A comparison to land cover data from 2001 indicates little change over the 15-year period.

TABLE 5-1 SUMMARY OF LAND COVER IN THE AREA DRAINING TO FOSTER'S BRIDGE

Land Cover Class	Area (mi^2)		Percent (%) of Total	
	2001	2016	2001	2016
Open Water	4.3	4.5	0.6	0.6
Developed	43.2	46.1	5.8	6.2
Barren	1.0	0.9	0.1	0.1
Forested	524.5	525.9	70.9	71.1
Scrub/shrub	17.4	32.8	2.4	4.4
Grassland/Herbaceous	47.5	36.7	6.4	5.0
Agriculture	91.3	82.5	12.4	11.2
Wetlands	10.0	10.1	1.4	1.4

Source: MRLC 2019

In 1996, ADEM placed a 4.3-mile portion of the Tallapoosa River near Heflin, AL on the Section 303(d) list of impaired waters due to organic enrichment and low dissolved oxygen levels. The source of impairment was attributed to industrial and municipal point sources, agricultural non-point sources, and flow regulation/modification due to the Howle and Turner

[4] This area was identified by stakeholders during the 2017 Issue Identification Workshop

Dam[5]. As required by the Clean Water Act, ADEM developed a total maximum daily load (TMDL) to determine what levels of pollutants the river could receive and still be able to meet acceptable dissolved oxygen criteria. The recommended effluent limits from the TMDL were included in subsequent National Pollution Discharge Elimination System (NPDES) permits for the industrial and municipal sources.

ADEM conducted periodic water quality monitoring at Foster's Bridge, including analysis of nutrient concentrations. A summary of data collected at this location by ADEM from 2005 to 2015 was included in the 2018 Pre-Application Document – Appendix L – Baseline Water Quality Report (Alabama Power 2018). A more detailed analysis of nutrient concentrations from this station dating back to 1997 was conducted. The data were compared to nutrient criteria for lakes and reservoirs developed by the U.S. Environmental Protection Administration (EPA) for total nitrogen, total phosphorus, mean Secchi depth, and chlorophyll *a* (EPA 2000). As depicted in Figure 5-1, concentrations of total nitrogen and phosphorus have historically exceeded the recommended criteria, though there appears to be a decreasing trend over time.

[5] Howle and Turner Dam was removed in 2019.

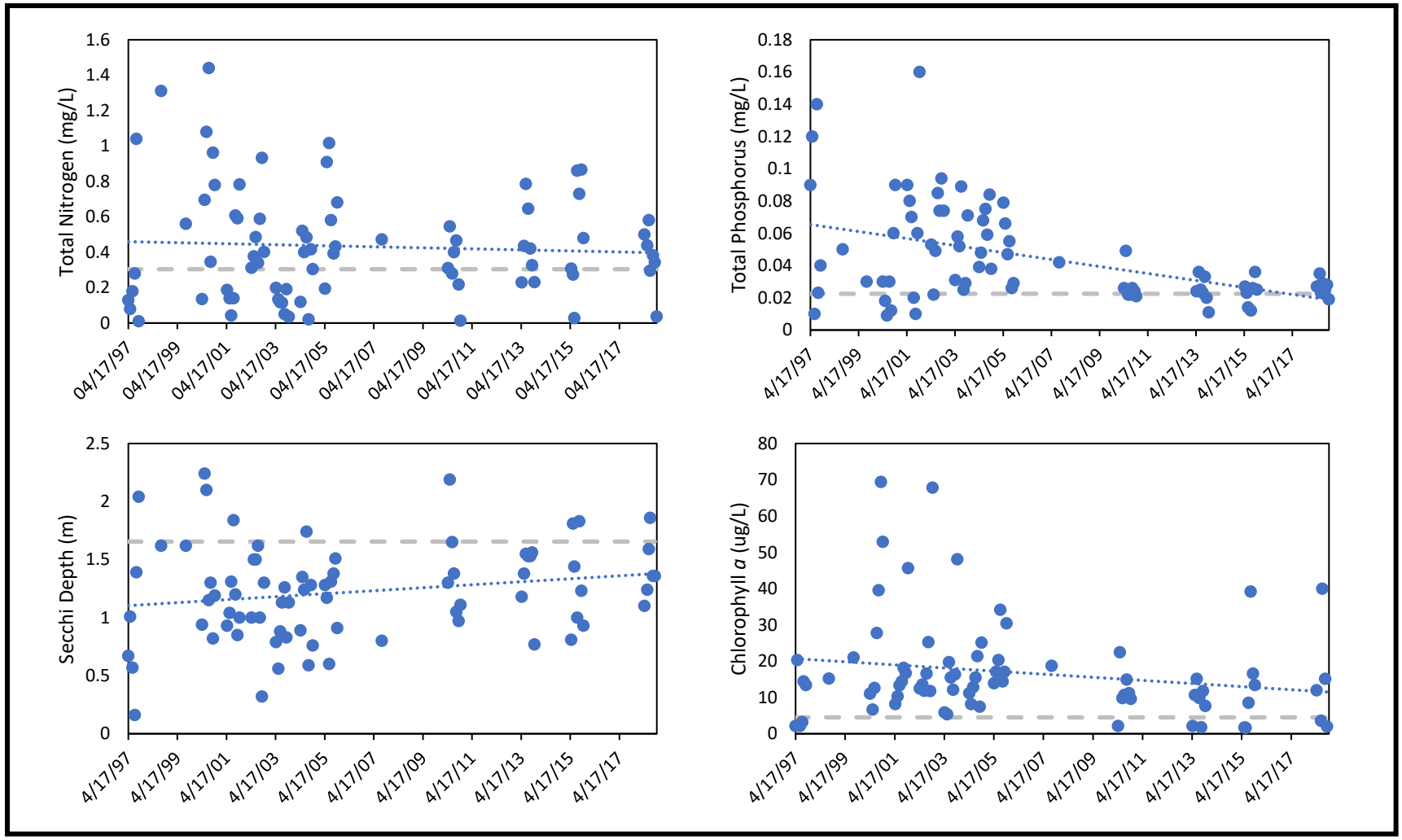


FIGURE 5-1 TOTAL NITROGEN, TOTAL PHOSPHORUS, SECCHI DEPTH, AND CHLOROPHYLL *a* RESULTS FOR ADEM'S FOSTER'S BRIDGE MONITORING LOCATION

(Dotted blue line indicates linear trend over time. Dashed gray line indicates EPA-recommended criteria)
NOTE: Increasing Secchi depth values indicate greater water clarity

6.0 DISCUSSION AND CONCLUSION

6.1 RESERVOIR WATER QUALITY

Harris Reservoir is typically stratified from June through October, with hypoxic/anoxic conditions at depths greater than 30 feet. A portion of the Harris Reservoir was placed on ADEM's 2018 303(d) list of impaired waters due to mercury in fish tissue samples (ADEM 2018). The 2018 303(d) list included portions of 43 other lakes/reservoirs in Alabama due to mercury in fish tissue attributed to atmospheric deposition, including portions of Lakes Martin, Yates, and Thurlow downstream of Harris on the Tallapoosa River. The Foster's Bridge area of concern identified by stakeholders appears to have been affected by historic point sources of nutrients upstream of the Project. Reductions in nutrient levels due to implementation of a TMDL has resulted in improved conditions.

6.2 DOWNSTREAM WATER QUALITY

Data collected during generation immediately downstream of Harris Dam in 2018 and 2019 indicated dissolved oxygen was greater than 5 mg/L for 94 percent of all measurements (91% in 2018 and 99.6% in 2019). Data from the continuous monitoring station that recorded data during both generation and non-generation in 2019 indicated dissolved oxygen levels were greater than 5 mg/L for 99.9% of all measurements. Monitoring data collected by Alabama Power in 2017 showed numerous events where dissolved oxygen was less than 5 mg/L. The low dissolved oxygen events in 2017 may be attributed to conditions in Harris Reservoir that were impacted by severe drought in the summer and fall of 2016, where inflows to the lake were at historic lows (Figure 6-1). In addition, a variance that

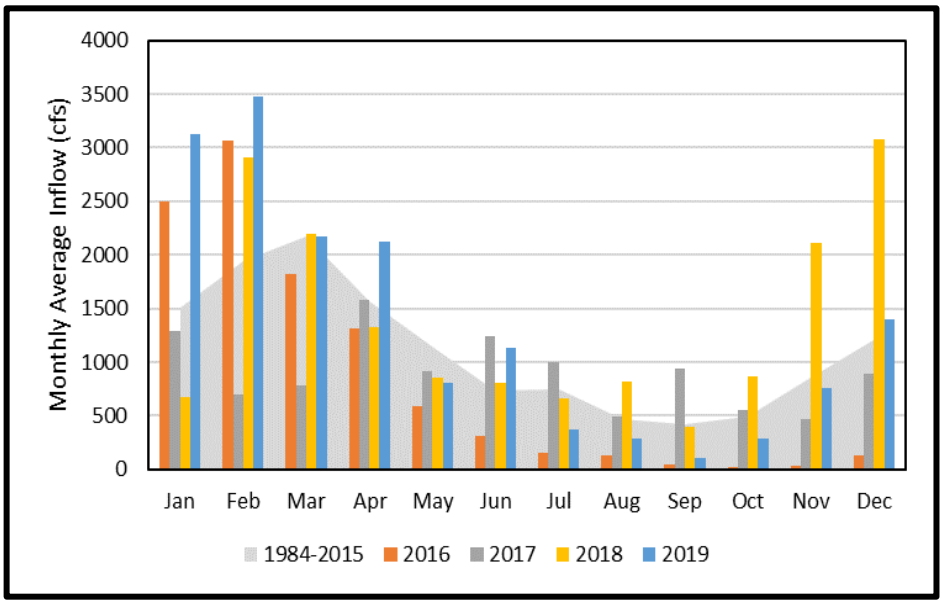


FIGURE 6-1 HISTORICAL AND RECENT INFLOWS

allowed for the lake to be filled two feet above the normal rule curve earlier in the year was likely another contributing factor. As shown in the 2017 vertical profile data collected by Alabama Power (Figure 3-8), Harris Reservoir became more strongly stratified earlier in the year compared to other years. Dissolved oxygen levels at depths below 20 ft in the lake were hypoxic/anoxic from June through October 2017.

Data collected by ADEM on the Tallapoosa River at Harris Dam, Wadley, and Horseshoe Bend showed dissolved oxygen levels were well above 5 mg/L during each of their sampling events. Data from the recently installed continuous monitor at Malone indicated that dissolved oxygen levels were greater than 5 mg/L for 99 percent of the monitoring period.

7.0 REFERENCES

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APPENDIX A

ACRONYMS AND ABBREVIATIONS

ACRONYMS AND ABBREVIATIONS

A

A&I	Agricultural and Industrial
ACFWRU	Alabama Cooperative Fish and Wildlife Research Unit
ACF	Apalachicola-Chattahoochee-Flint (River Basin)
ACT	Alabama-Coosa-Tallapoosa (River Basin)
ADCNR	Alabama Department of Conservation and Natural Resources
ADECA	Alabama Department of Economic and Community Affairs
ADEM	Alabama Department of Environmental Management
ADROP	Alabama-ACT Drought Response Operations Plan
AHC	Alabama Historical Commission
Alabama Power	Alabama Power Company
AMP	Adaptive Management Plan
ALNHP	Alabama Natural Heritage Program
APE	Area of Potential Effects
ARA	Alabama Rivers Alliance
ASSF	Alabama State Site File
ATV	All-Terrain Vehicle
AWIC	Alabama Water Improvement Commission
AWW	Alabama Water Watch

B

BA	Biological Assessment
B.A.S.S.	Bass Anglers Sportsmen Society
BCC	Birds of Conservation Concern
BLM	U.S. Bureau of Land Management
BOD	Biological Oxygen Demand

C

°C	Degrees Celsius or Centrigrade
CEII	Critical Energy Infrastructure Information
CFR	Code of Federal Regulation
cfs	Cubic Feet per Second
cfu	Colony Forming Unit
CLEAR	Community Livability for the East Alabama Region
CPUE	Catch-per-unit-effort
CWA	Clean Water Act

D

DEM	Digital Elevation Model
DIL	Drought Intensity Level
DO	Dissolved Oxygen
dsf	day-second-feet

E

EAP	Emergency Action Plan
ECOS	Environmental Conservation Online System
EFDC	Environmental Fluid Dynamics Code
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act

F

°F	Degrees Fahrenheit
ft	Feet
F&W	Fish and Wildlife
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FNU	Formazin Nephelometric Unit
FOIA	Freedom of Information Act
FPA	Federal Power Act

G

GCN	Greatest Conservation Need
GIS	Geographic Information System
GNSS	Global Navigation Satellite System
GPS	Global Positioning Systems
GSA	Geological Survey of Alabama

H

Harris Project	R.L. Harris Hydroelectric Project
HAT	Harris Action Team
HEC	Hydrologic Engineering Center
HEC-DSSVue	HEC-Data Storage System and Viewer
HEC-FFA	HEC-Flood Frequency Analysis
HEC-RAS	HEC-River Analysis System
HEC-ResSim	HEC-Reservoir System Simulation Model
HEC-SSP	HEC-Statistical Software Package

HDSS	High Definition Stream Survey
hp	Horsepower
HPMP	Historic Properties Management Plan
HPUE	Harvest-per-unit-effort
HSB	Horseshoe Bend National Military Park

I

IBI	Index of Biological Integrity
IDP	Inadvertent Discovery Plan
IIC	Intercompany Interchange Contract
IVM	Integrated Vegetation Management
ILP	Integrated Licensing Process
IPaC	Information Planning and Conservation
ISR	Initial Study Report

J

JTU	Jackson Turbidity Units

K

kV	Kilovolt
kva	Kilovolt-amp
kHz	Kilohertz

L

LIDAR	Light Detection and Ranging
LWF	Limited Warm-water Fishery
LWPOA	Lake Wedowee Property Owners' Association

M

m	Meter
m^3	Cubic Meter
M&I	Municipal and Industrial
mg/L	Milligrams per liter
ml	Milliliter
mgd	Million Gallons per Day
µg/L	Microgram per liter
µs/cm	Microsiemens per centimeter
mi^2	Square Miles
MOU	Memorandum of Understanding

MPN	Most Probable Number
MRLC	Multi-Resolution Land Characteristics
msl	Mean Sea Level
MW	Megawatt
MWh	Megawatt Hour

N

n	Number of Samples
NEPA	National Environmental Policy Act
NGO	Non-governmental Organization
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTU	Nephelometric Turbidity Unit
NWI	National Wetlands Inventory

O

OAR	Office of Archaeological Resources
OAW	Outstanding Alabama Water
ORV	Off-road Vehicle
OWR	Office of Water Resources

P

PA	Programmatic Agreement
PAD	Pre-Application Document
PDF	Portable Document Format
pH	Potential of Hydrogen
PID	Preliminary Information Document
PLP	Preliminary Licensing Proposal
Project	R.L. Harris Hydroelectric Project
PUB	Palustrine Unconsolidated Bottom
PURPA	Public Utility Regulatory Policies Act
PWC	Personal Watercraft
PWS	Public Water Supply

Q

QA/QC	Quality Assurance/Quality Control

R

RM	River Mile
RTE	Rare, Threatened and Endangered
RV	Recreational Vehicle

S

S	Swimming
SCORP	State Comprehensive Outdoor Recreation Plan
SCP	Shoreline Compliance Program
SD1	Scoping Document 1
SH	Shellfish Harvesting
SHPO	State Historic Preservation Office
Skyline WMA	James D. Martin-Skyline Wildlife Management Area
SMP	Shoreline Management Plan
SU	Standard Units

T

T&E	Threatened and Endangered
TCP	Traditional Cultural Properties
TMDL	Total Maximum Daily Load
TNC	The Nature Conservancy
TRB	Tallapoosa River Basin
TSI	Trophic State Index
TSS	Total Suspended Soils
TVA	Tennessee Valley Authority

U

USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

W

WCM	Water Control Manual
WMA	Wildlife Management Area
WMP	Wildlife Management Plan
WQC	Water Quality Certification

APPENDIX B

2017 – 2019 ALABAMA POWER WATER QUALITY MONITORING DATA (ATTACHED IN MICROSOFT EXCEL SPREADSHEET FORMAT)

Attachment 2
Water Quality Consultation Record
(May 2019-March 2020)

HAT 2 - Erosion and Sedimentation Study and Water Quality Study - INPUT REQUEST

Anderegg, Angela Segars

Wed 5/1/2019 4:04 PM

To:'harrisrelicensing@southernco.com' <harrisrelicensing@southernco.com>;

Bcc:damon.abernethy@dcnr.alabama.gov <damon.abernethy@dcnr.alabama.gov>; Steve Bryant - Alabama Department of Conservation and Natural Resources <Steve Bryant - Alabama Department of Conservation and Natural Resources>; stan.cook@dcnr.alabama.gov <stan.cook@dcnr.alabama.gov>; taconya.goar@dcnr.alabama.gov <taconya.goar@dcnr.alabama.gov>; chris.greene@dcnr.alabama.gov <chris.greene@dcnr.alabama.gov>; keith.henderson@dcnr.alabama.gov <keith.henderson@dcnr.alabama.gov>; mike.holley@dcnr.alabama.gov <mike.holley@dcnr.alabama.gov>; nick.nichols@dcnr.alabama.gov <nick.nichols@dcnr.alabama.gov>; amy.silvano@dcnr.alabama.gov <amy.silvano@dcnr.alabama.gov>; jhaslbauer@adem.alabama.gov <jhaslbauer@adem.alabama.gov>; cljohnson@adem.alabama.gov <cljohnson@adem.alabama.gov>; mlen@adem.alabama.gov <mlen@adem.alabama.gov>; fal@adem.alabama.gov <fal@adem.alabama.gov>; djmoore@adem.alabama.gov <djmoore@adem.alabama.gov>; arsegars@southernco.com <arsegars@southernco.com>; dkanders@southernco.com <dkanders@southernco.com>; jcarlee@southernco.com <jcarlee@southernco.com>; kechandl@southernco.com <kechandl@southernco.com>; gfhorn@southernco.com <gfhorn@southernco.com>; pjmcdani@southernco.com <pjmcdani@southernco.com>; ammcvica@southernco.com <ammcvica@southernco.com>; tlmills@southernco.com <tlmills@southernco.com>; jsrasber@southernco.com <jsrasber@southernco.com>; cchaffin@alabamarivers.org <cchaffin@alabamarivers.org>; clowry@alabamarivers.org <clowry@alabamarivers.org>; gjobsis@americanrivers.org <gjobsis@americanrivers.org>; kmo0025@auburn.edu <kmo0025@auburn.edu>; irwiner@auburn.edu <irwiner@auburn.edu>; Eric Reutebuch (reuteem@auburn.edu) <reuteem@auburn.edu>; lgallen@balch.com <lgallen@balch.com>; jhancock@balch.com <jhancock@balch.com>; kate.cosnahan@kleinschmidtgroup.com <kate.cosnahan@kleinschmidtgroup.com>; colin.dinken@kleinschmidtgroup.com <colin.dinken@kleinschmidtgroup.com>; amanda.fleming@kleinschmidtgroup.com <amanda.fleming@kleinschmidtgroup.com>; henry.mealing@kleinschmidtgroup.com <henry.mealing@kleinschmidtgroup.com>; jason.moak@kleinschmidtgroup.com <jason.moak@kleinschmidtgroup.com>; kelly.schaeffer@kleinschmidtgroup.com <kelly.schaeffer@kleinschmidtgroup.com>; sforehand@russelllands.com <sforehand@russelllands.com>; 1942jthompson420@gmail.com <1942jthompson420@gmail.com>; Jesse Cunningham (jessecunningham@msn.com) <jessecunningham@msn.com>; nancyburnes@centurylink.net <nancyburnes@centurylink.net>; lgarland68@aol.com <lgarland68@aol.com>; rbmorris333@gmail.com <rbmorris333@gmail.com>; mitchell.reid@tnc.org <mitchell.reid@tnc.org>; richardburnes3@gmail.com <richardburnes3@gmail.com>; Albert Eiland (eilandfarm@aol.com) <eilandfarm@aol.com>; eveham75@gmail.com <eveham75@gmail.com>; jec22641@aol.com <jec22641@aol.com>; donnamat@aol.com <donnamat@aol.com>; harry.merrill47@gmail.com <harry.merrill47@gmail.com>; mhpwedowee@gmail.com <mhpwedowee@gmail.com>; midwaytreasures@bellsouth.net <midwaytreasures@bellsouth.net>; inspector_003@yahoo.com <inspector_003@yahoo.com>; Matt and Ann Campbell (wmcampbell218@gmail.com) <wmcampbell218@gmail.com>; decker.chris@epa.gov <decker.chris@epa.gov>; gordon.lisa-perras@epa.gov <gordon.lisa-perras@epa.gov>; holliman.daniel@epa.gov <holliman.daniel@epa.gov>; jeff_duncan@nps.gov <jeff_duncan@nps.gov>; Chuck Denman <chuckdenman@hotmail.com>;

3 attachments (8 MB)

2019-05-01 Draft E&S Sites_Aerial Maps.pdf; 2019-05-01 Draft E&S Sites_Street Maps.pdf; 2019-05-01 Erosion-Sedimentation Draft Site List.pdf;

Dear Harris Action Team (HAT) 2,

We would like your assistance on the HAT 2 relicensing studies: 1) **Erosion and Sedimentation Study** and 2) **Water Quality Study**.

For the **Erosion and Sedimentation Study**, we have created the attached draft maps of erosion and sedimentation sites that will be evaluated as part of this study. These sites were identified based on comments received at the Issue Identification Workshop in 2017, subsequent meetings in 2018, and comments submitted by stakeholders to the Federal Energy Regulatory Commission (FERC). Some sites were also identified based on input from Alabama Power's shoreline surveillance contractors.

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For both studies, one of the more convenient tools to reference locations online is https://www.google.com/maps/. Clicking a location on the map will result in a small window indicating the latitude and longitude of that point.
Additionally, if you have current and/or historical photos of the areas we have identified or of additional areas that you note, including the degraded water quality areas, please include those in your response.

Please make every effort to submit your information to me by **May 24, 2019** so that we can finalize the **Erosion and Sedimentation Study** and the **Water Quality Study** lists and begin to evaluate each site according to the FERC-approved study plan.

If you have any questions or require assistance, please don't hesitate to email or call me at ARSEGARS@southernco.com or (205) 257-2251.

Thank you,

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

APC Harris Relicensing

From: Anderegg, Angela Segars
Sent: Wednesday, May 1, 2019 1:32 PM
To: 'Jimmy Traylor'
Subject: FW: HAT 2 - Erosion and Sedimentation Study and Water Quality Study - INPUT REQUEST
Attachments: 2019-05-01 Draft E&S Sites_Aerial Maps.pdf; 2019-05-01 Draft E&S Sites_Street Maps.pdf; 2019-05-01 Erosion-Sedimentation Draft Site List.pdf

Hi Jimmy,

I sent the email below to Harris Action Team 2 soliciting input on erosion and sedimentation sites around Lake Harris and downstream. I noticed that you aren't on HAT 2. Would you like to be added so you can stay plugged into the erosion and sedimentation evaluation?

Also, I was looking at the photos you filed along with your comments (link below). Would you mind providing a description (location, date, etc.) of these pics? That would be extremely helpful.

Docket(s): P-2628-065
Lead Applicant: Alabama Power Company
Filing Type: Project Safety Compliance Report
Description: Application (Specify...) of james T Traylor under P-2628.

To view the document for this Filing, click here https://urldefense.proofpoint.com/v2/url?u=http-3A__elibrary.FERC.gov_idmws_file-5Flist.asp-3Faccession-5Fnum-3D20190328-2D5164&d=DwICAw&c=AgWC6Nl7SIwpc9jE7UoQH1_Cvyci3SsTNfdLP4V1RCg&r=3qWv32MayddUzrbqJnBFwNmttMUUbdCuXZrVDKTC5gg&m=4amW4W58x8GzI0Io1AISi6_0iwHli6tFIGIW3g9R1LE&s=-UByZc5Gfu5z7L8_qUv6WAz0kd8CPIY5g1CK3gOsV80&e=

Thanks!

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: Anderegg, Angela Segars
Sent: Wednesday, May 1, 2019 11:06 AM
To: 'harrisrelicensing@southernco.com' <harrisrelicensing@southernco.com>
Subject: HAT 2 - Erosion and Sedimentation Study and Water Quality Study - INPUT REQUEST

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Thank you,

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

APC Harris Relicensing

From: Anderegg, Angela Segars
Sent: Thursday, May 2, 2019 3:07 PM
To: Carol Knight
Subject: FW: HAT 2 - Erosion and Sedimentation Study and Water Quality Study - INPUT REQUEST
Attachments: 2019-05-01 Draft E&S Sites_Aerial Maps.pdf; 2019-05-01 Draft E&S Sites_Street Maps.pdf; 2019-05-01 Erosion-Sedimentation Draft Site List.pdf

FYI

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: Anderegg, Angela Segars
Sent: Wednesday, May 1, 2019 11:06 AM
To: 'harrisrelicensing@southernco.com' <harrisrelicensing@southernco.com>
Subject: HAT 2 - Erosion and Sedimentation Study and Water Quality Study - INPUT REQUEST

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Thank you,

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

APC Harris Relicensing

From: Anderegg, Angela Segars
Sent: Tuesday, May 21, 2019 12:48 PM
To: 'Maria R. Clark '
Subject: Harris water quality monitor locations

Hi Maria,

I got your voicemail concerning the monitor locations for the Harris water quality study. Below are the lat/longs for the Generation monitor and the Continuous monitor. The Forebay location is for profiles, so there isn't a specific lat/long for those. Let me know if you have any questions.

Generation monitor: 33.255448, -85.615760

Continuous monitor: 33.248466, -85.612034

Thanks,

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

APC Harris Relicensing

From: Anderegg, Angela Segars
Sent: Wednesday, May 22, 2019 9:58 AM
To: 'Maria R. Clark '
Subject: FW: Harris water quality monitor locations
Attachments: E&S Sites.mpk; HAT 2 - Erosion and Sedimentation Study and Water Quality Study - INPUT REQUEST

Hi Maria,

Attached is a Map Package (.mpk) that contains the .mxd and associated shapefiles used to create the Erosion and Sedimentation site maps I sent out on May 1 soliciting input from HAT 2 (email attached). Note that no specific locations of areas of water quality concern had been identified by stakeholders when I sent the email out; therefore, none are shown on these maps as of yet.

Let me know if you have any questions.

Thanks,

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: Clark, Maria <Clark.Maria@epa.gov>
Sent: Tuesday, May 21, 2019 1:14 PM
To: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Subject: RE: Harris water quality monitor locations

Hi Angie,

My apologies if I wasn't clear regarding what we need. We would like to have the GIS files (.mxd preferable) from the Monitoring Location Maps, so we can open them and digitize our suggested sites in there. The .mxd files would allow us to submit to you more detailed information of the proposed sites. If we can digitize our own proposed sites we can extract the coordinates and other information that would help you to capture our recommendations.

Please let me know if you have any questions.
Thank you!!

Maria R. Clark
NEPA Section - Region 4
Strategic Programs Office
U.S. Environmental Protection Agency

61 Forsyth, Street South West
Atlanta, GA 30303
404-562-9513

From: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Sent: Tuesday, May 21, 2019 1:48 PM
To: Clark, Maria <Clark.Maria@epa.gov>
Subject: Harris water quality monitor locations

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From: APC Harris Relicensing
Sent: Wednesday, May 22, 2019 9:48 AM
To: Anderegg, Angela Segars
Subject: HAT 2 - Erosion and Sedimentation Study and Water Quality Study - INPUT REQUEST
Attachments: 2019-05-01 Draft E&S Sites_Aerial Maps.pdf; 2019-05-01 Draft E&S Sites_Street Maps.pdf; 2019-05-01 Erosion-Sedimentation Draft Site List.pdf

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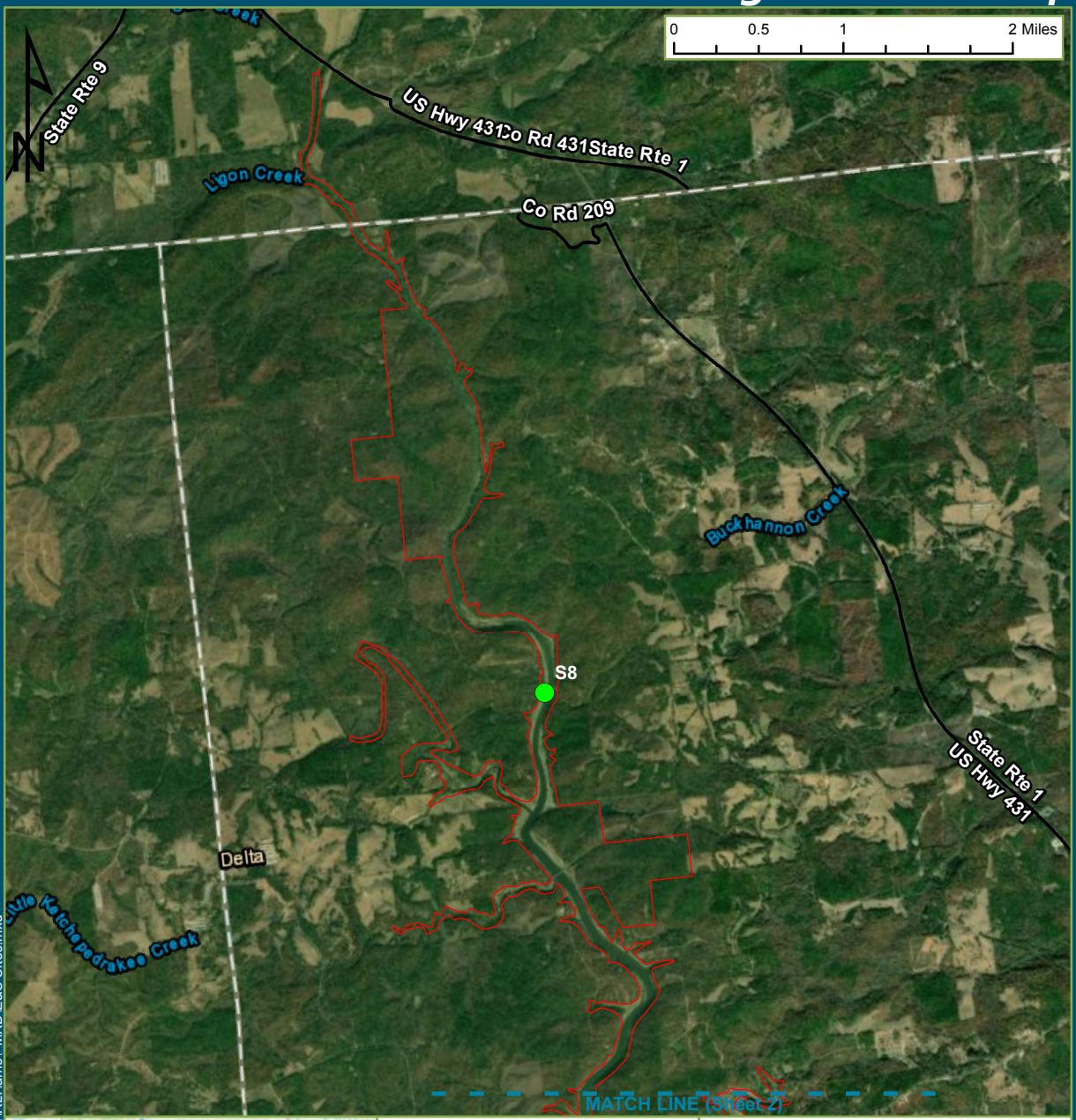
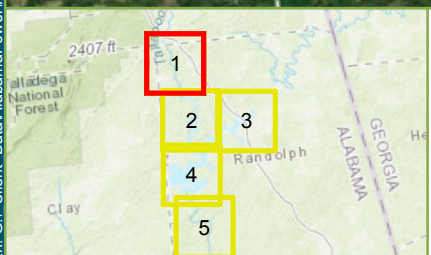
Thank you,

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

Monitoring Location Map





Legend

- Sedimentation
- Erosion
- Match Line
- Road
- Project Boundary

Alabama Power Company
Birmingham, AL

R.L. Harris Project
FERC Project No. 2628

Drawn By:	Date Drawn:	Checked By:	Date Checked:
JJJ	4/24/19	XXX	4/24/2019

Kleinschmidt
141 Main St., PO Box 650
Pittsfield, Maine 04967
Telephone: (207) 487-3328
Fax: (207) 487-3124
www.KleinschmidtGroup.com

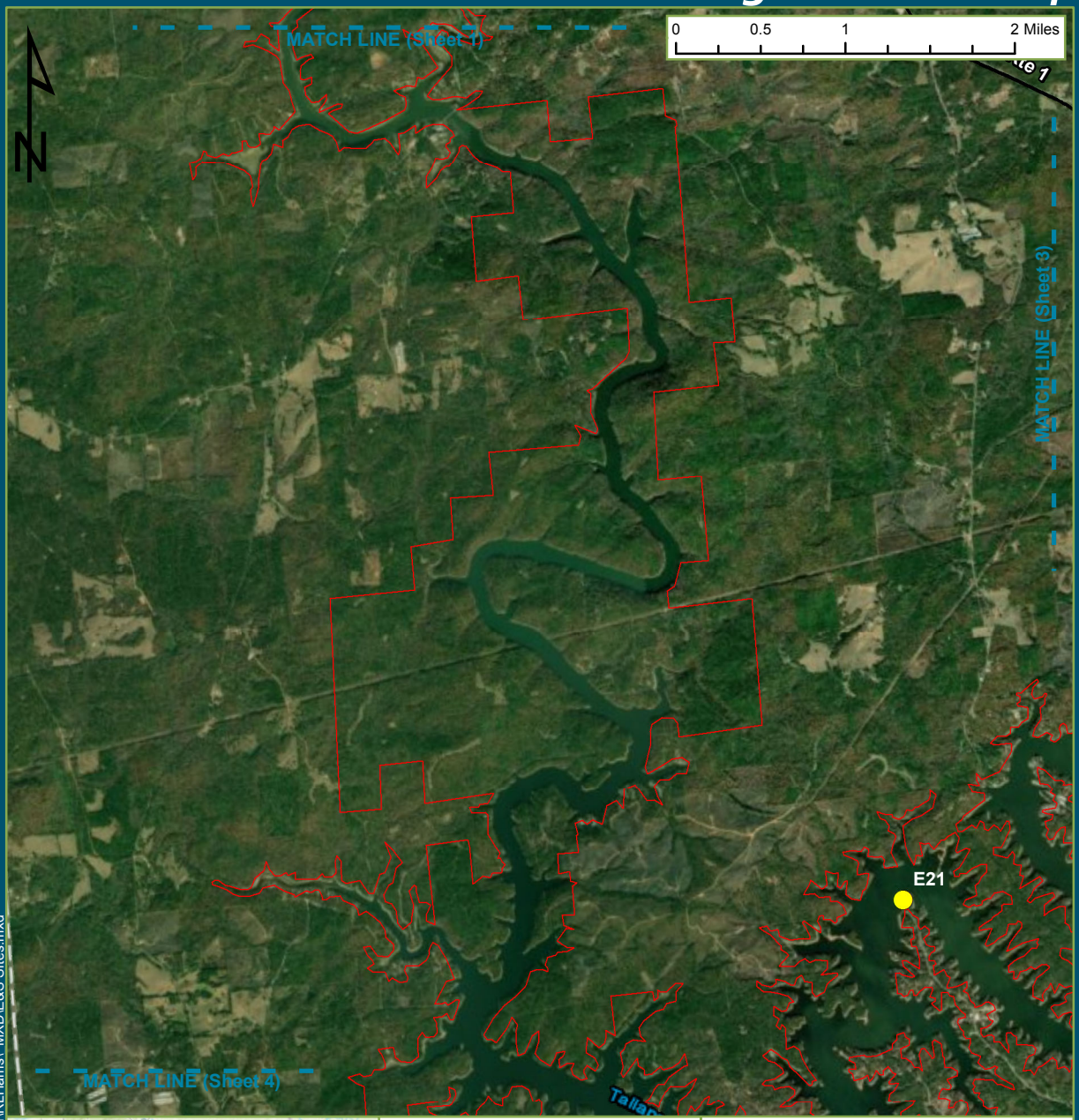
Path: G:\Client Data\AlabamaPower\RLHarris\MXD\E&S Sites.mxd

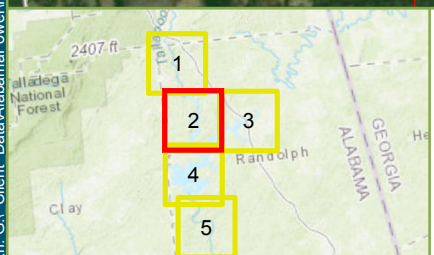
Date Printed: 4/25/2019

Source: Erosion/Sedimentation Locations (Alabama Power, 2019), Project Boundary (Kleinschmidt, 2018), Steet Map (ESRI, 2019)

PN: 0535028.01

Monitoring Location Map





Legend

- Sedimentation
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Alabama Power Company

Birmingham, AL

R.L. Harris Project
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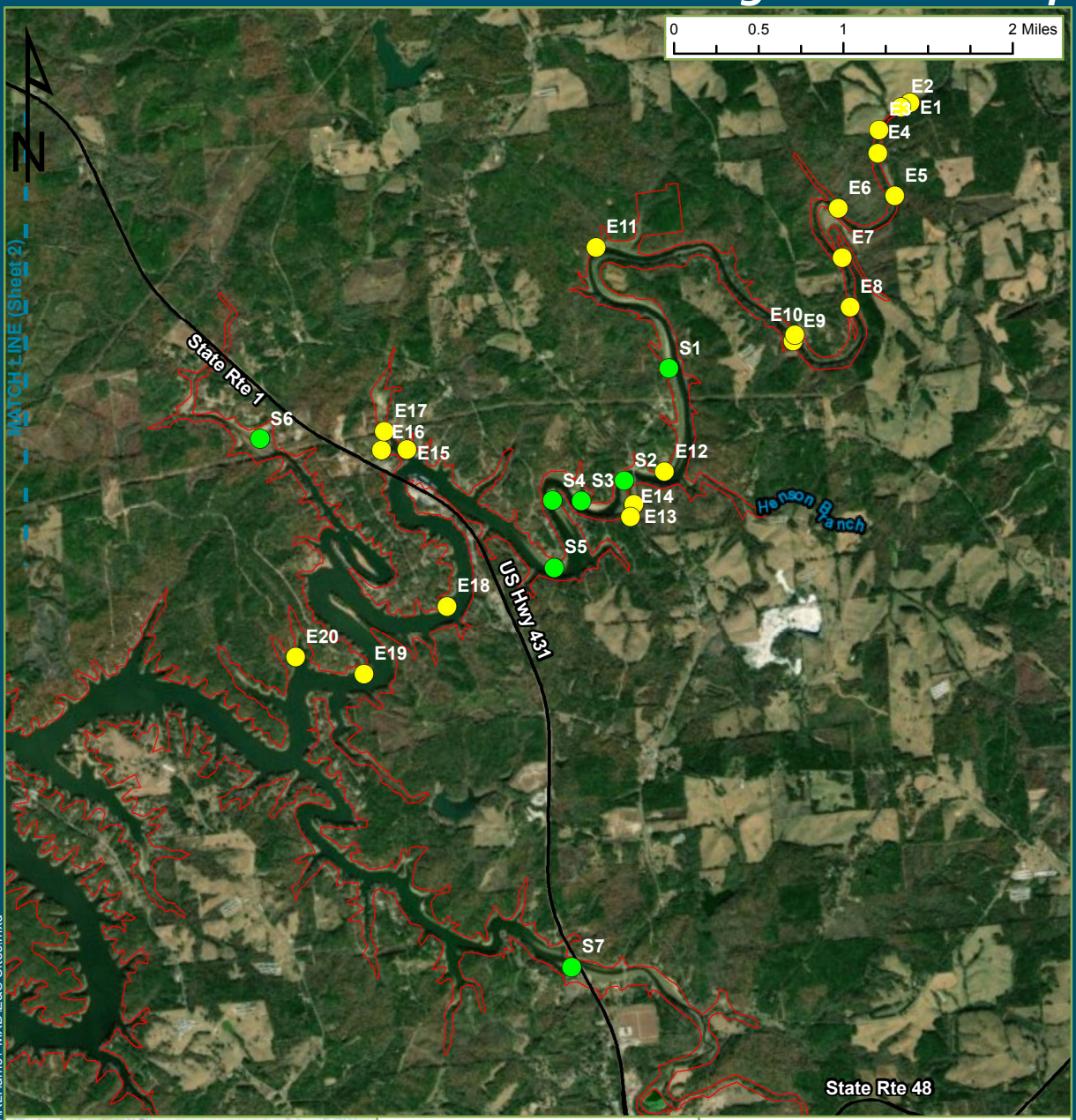

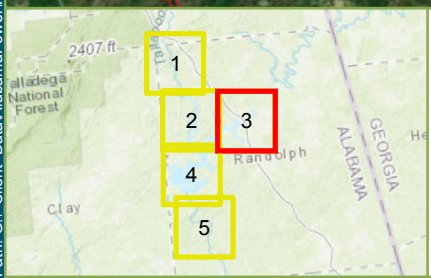

Legend

- Sedimentation
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- Project Boundary

Alabama Power Company
Birmingham, AL

R.L. Harris Project
FERC Project No. 2628

Drawn By:	Date Drawn:	Checked By:	Date Checked:
JJJ	4/24/19	XXX	4/24/2019

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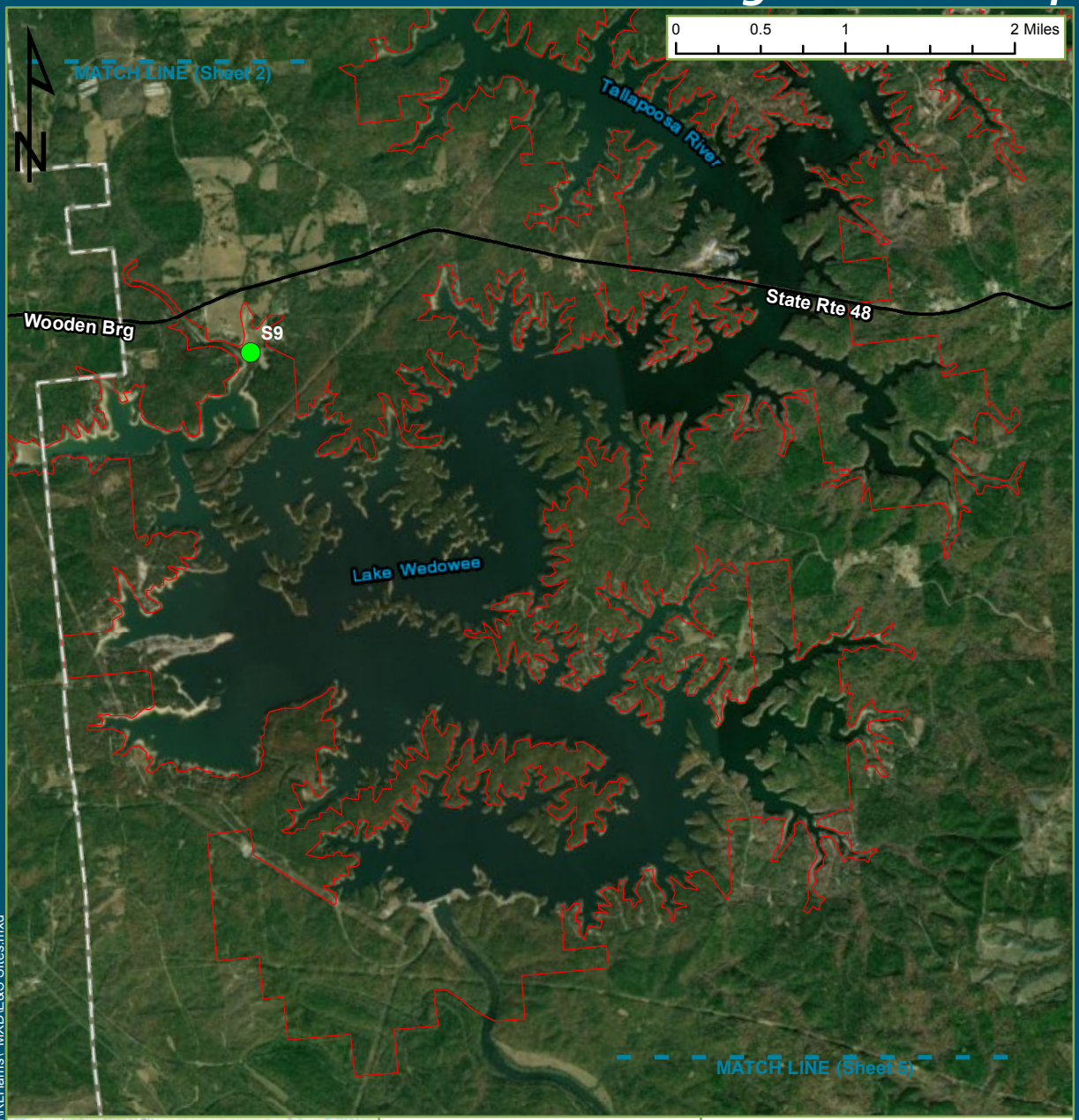
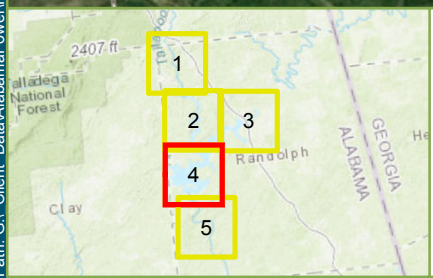
Monitoring Location Map





Legend

- Sedimentation
- Erosion
- Match Line
- Road
- Project Boundary

Alabama Power Company

Birmingham, AL

R.L. Harris Project
FERC Project No. 2628

Drawn By:	Date Drawn:	Checked By:	Date Checked:
JJJ	4/24/19	XXX	4/24/2019

Kleinschmidt
141 Main St., PO Box 650
Pittsfield, Maine 04967
Telephone: (207) 487-3328
Fax: (207) 487-3124
www.KleinschmidtGroup.com

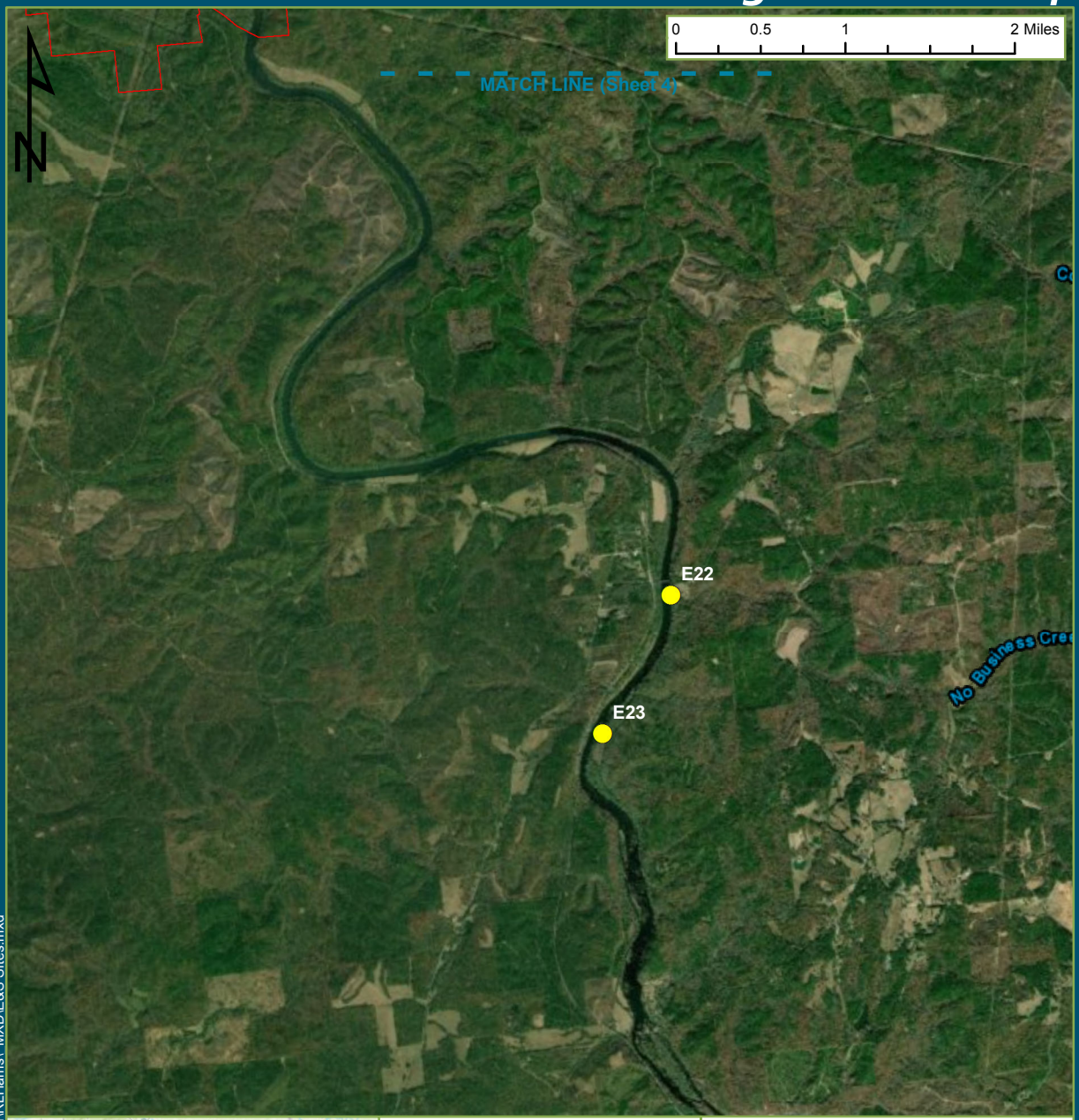
Path: G:\ Client Data\AlabamaPower\RLHarris\ MXD\E&S Sites.mxd

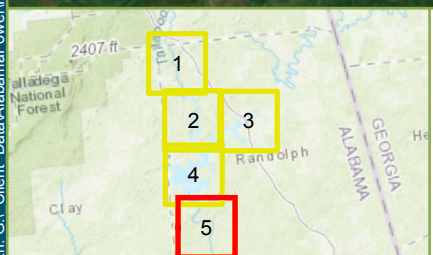
Date Printed: 4/25/2019

Source: Erosion/Sedimentation Locations (Alabama Power, 2019), Project Boundary (Kleinschmidt, 2018), Steet Map (ESRI, 2019)

PN: 0535028.01

Monitoring Location Map





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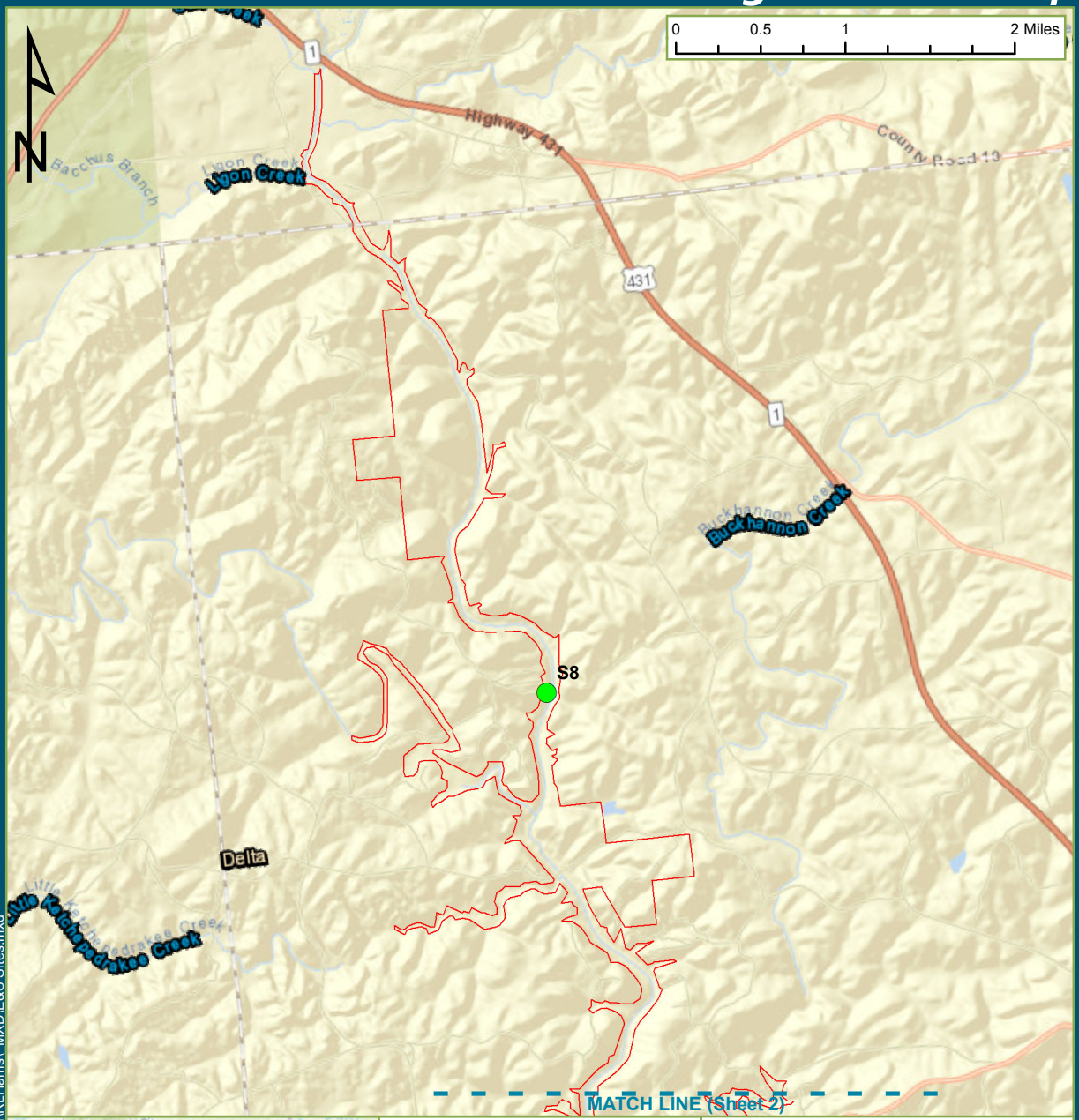

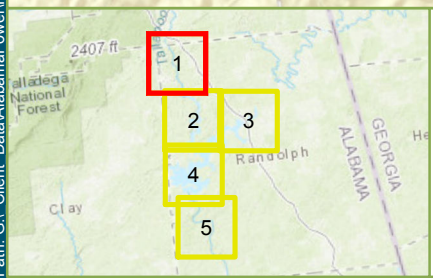

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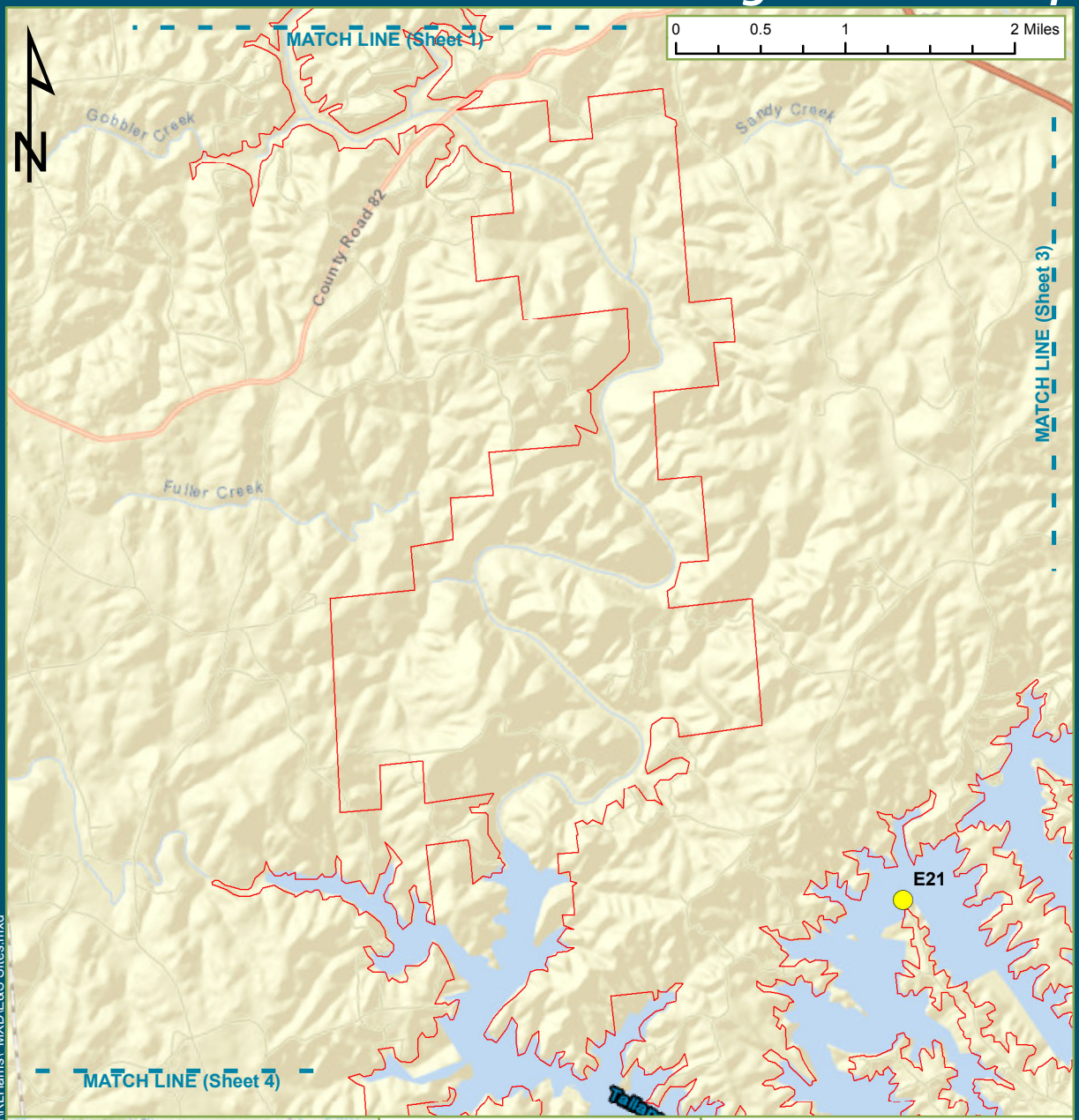

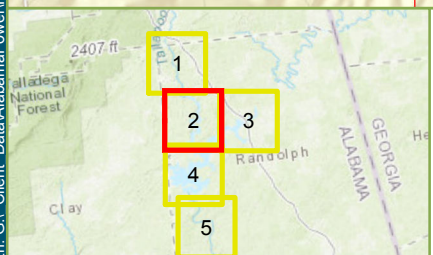

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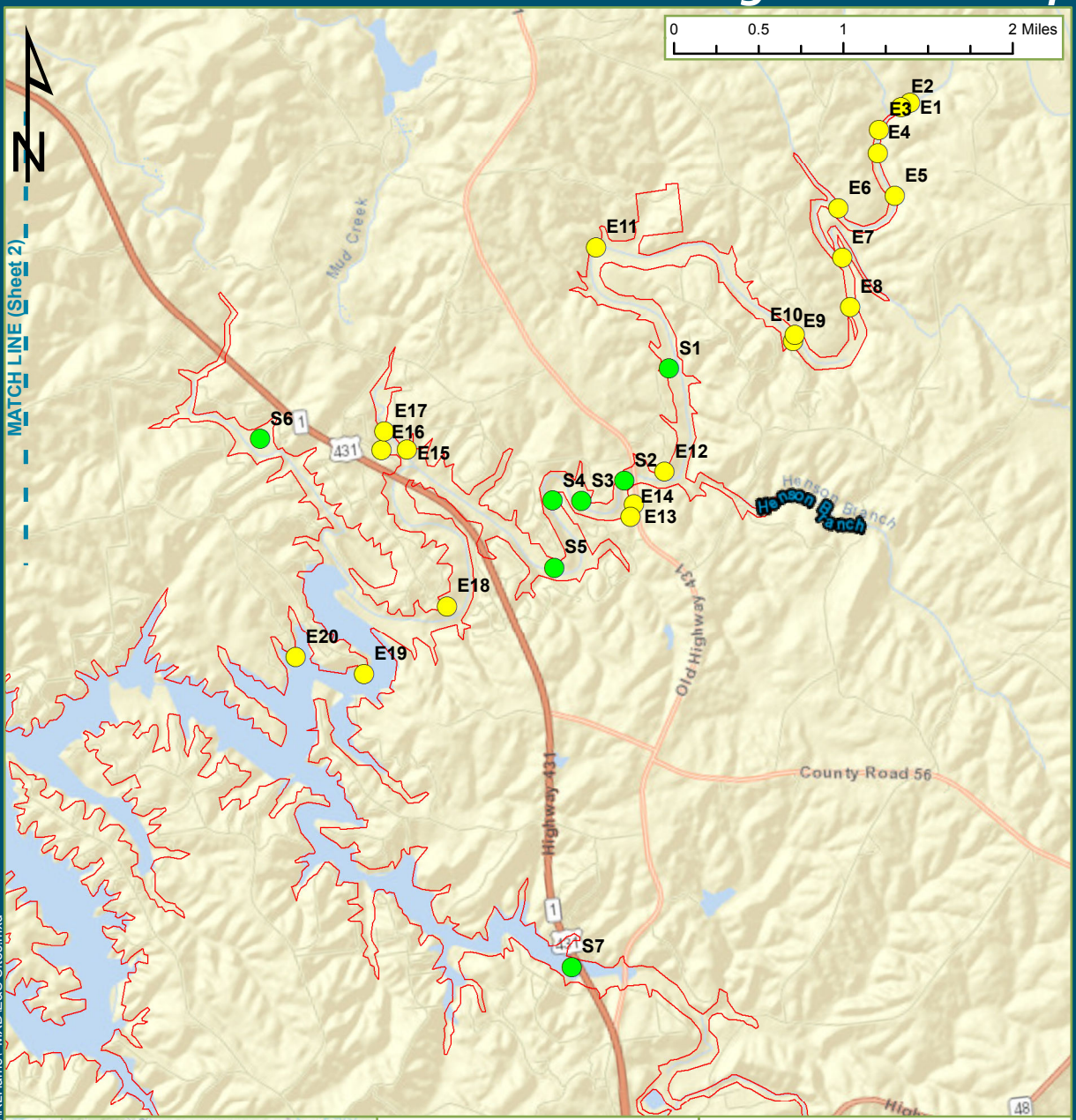

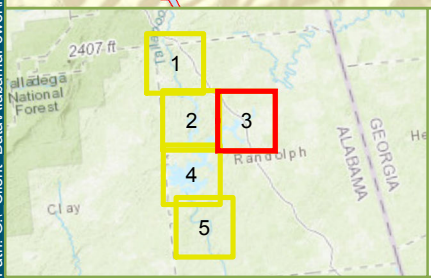

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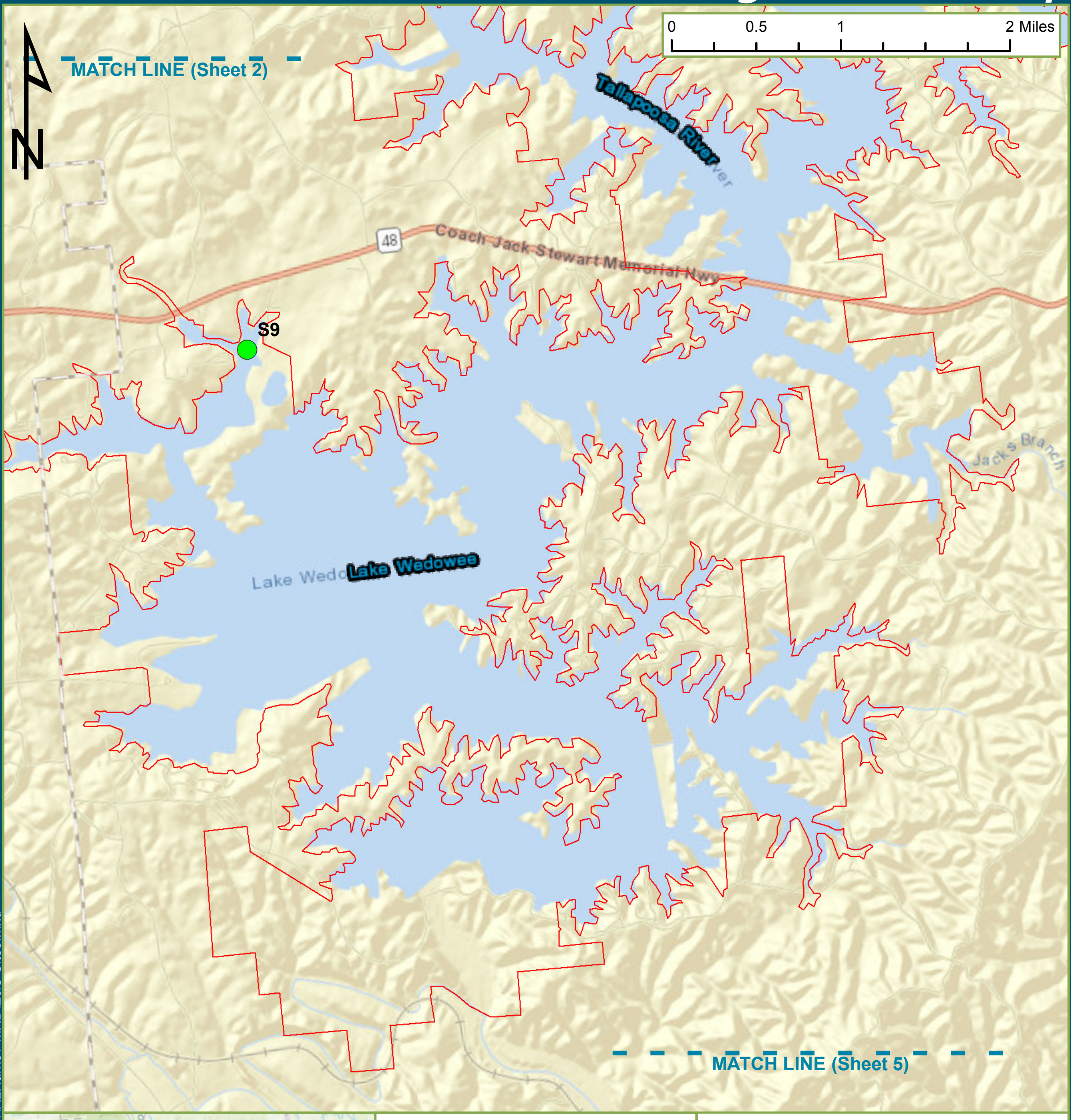

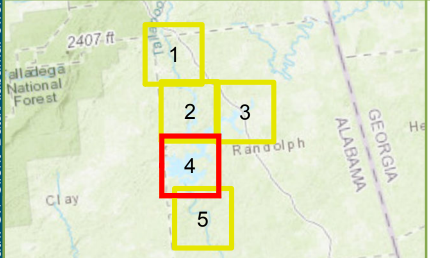

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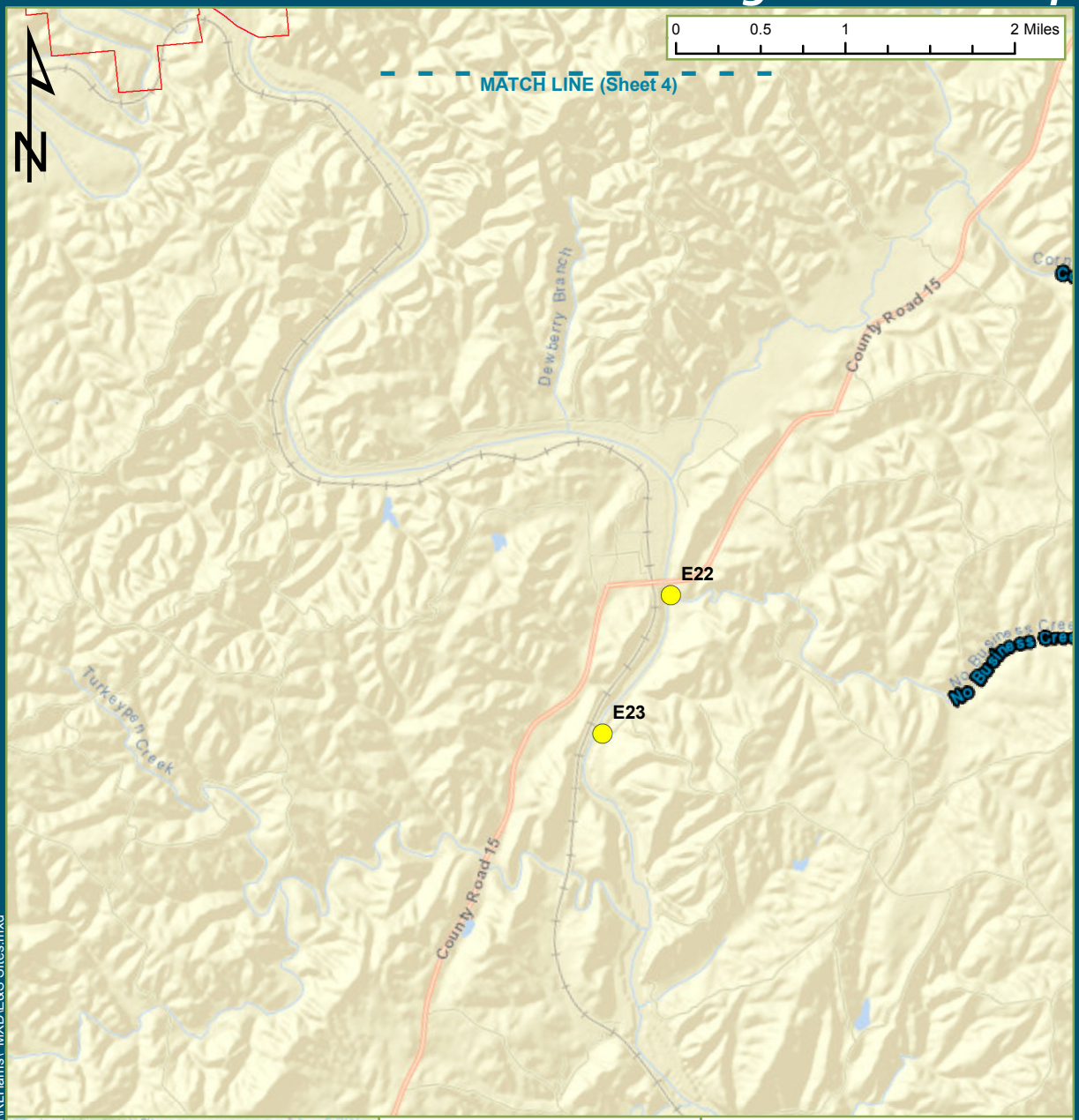

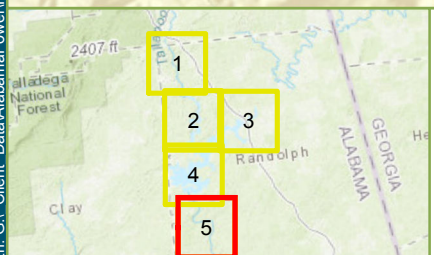

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R.L. Harris Project
Erosion Sedimentation Study
Draft Site List
May 1, 2019

Name	Type	Latitude	Longitude
S1	Sedimentation	33.37624948	-85.47166235
S2	Sedimentation	33.36719999	-85.47747307
S3	Sedimentation	33.36590337	-85.48206374
S4	Sedimentation	33.36621704	-85.48497203
S5	Sedimentation	33.36051157	-85.48560019
S6	Sedimentation	33.37431997	-85.5138457
S7	Sedimentation	33.3264078	-85.4885445
S8	Sedimentation	33.45383479	-85.60980855
S9	Sedimentation	33.30647091	-85.62855097
E1	Erosion	33.39648716	-85.44412236
E2	Erosion	33.39618116	-85.44512448
E3	Erosion	33.39447905	-85.44762594
E4	Erosion	33.39252729	-85.44796667
E5	Erosion	33.38869558	-85.44676742
E6	Erosion	33.38816557	-85.4526412
E7	Erosion	33.38399233	-85.45284646
E8	Erosion	33.3797199	-85.45259528
E9	Erosion	33.37732425	-85.45878731
E10	Erosion	33.37784798	-85.45851087
E11	Erosion	33.38726919	-85.47760635
E12	Erosion	33.36758594	-85.47330665
E13	Erosion	33.36508776	-85.47680031
E14	Erosion	33.36406619	-85.47728423
E15	Erosion	33.37197386	-85.49913637
E16	Erosion	33.37216342	-85.50173268
E17	Erosion	33.37371456	-85.50122349
E18	Erosion	33.35832713	-85.4969299
E19	Erosion	33.3533428	-85.50610579
E20	Erosion	33.35544286	-85.51280286
E21	Erosion	33.33941479	-85.5581353
E22	Erosion	33.1960328	-85.57649228
E23	Erosion	33.18490256	-85.58503087

APC Harris Relicensing

From: Anderegg, Angela Segars
Sent: Tuesday, August 13, 2019 1:51 PM
To: 'harrisrelicensing@southernco.com'
Subject: HAT 2 meeting - September 11, 2019

HAT 2,

Alabama Power will be hosting a series of HAT meetings on **Wednesday, September 11, 2019 at the Oxford Civic Center,** 401 McCullars Ln, Oxford, AL 36203. The HAT 2 meeting will be from 11:00 to 11:45. The purpose of the HAT 2 meeting is to review the sedimentation and erosion areas that were previously identified by stakeholders and to prepare for the field investigation in the fall. During this HAT 2 meeting, Alabama Power will also provide an update on water quality study efforts.

Please RSVP by Friday, September 6, 2019. Lunch will be provided so please indicate any food allergies or vegetarian preferences on or before September 6, 2019. I encourage everyone to attend in person. If this is not feasible, we are also offering a Skype option (info below). It would be ideal to join on your computer as we will be viewing presentations and maps.

If you have any questions about the agenda or meetings, please email or call me at ARSEGARS@southernco.com or (205) 257-2251.

Join Skype Meeting [meet.lync.com]

Trouble Joining? Try Skype Web App [meet.lync.com]

Join by phone

Toll number: +1 (207) 248-8024

Find a local number [dialin.lync.com]

Conference ID: 892052380

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

APC Harris Relicensing

From: Clark, Maria <Clark.Maria@epa.gov>
Sent: Wednesday, September 4, 2019 6:51 AM
To: APC Harris Relicensing
Subject: RE: HAT 2 meeting - September 11, 2019

Thank you so much Angie.

From: APC Harris Relicensing <g2apchr@southernco.com>
Sent: Tuesday, September 03, 2019 3:58 PM
To: Clark, Maria <Clark.Maria@epa.gov>
Subject: FW: HAT 2 meeting - September 11, 2019

FYI – I've added you to this list now so you'll get these emails in the future.

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Sent: Tuesday, August 13, 2019 1:51 PM
To: APC Harris Relicensing <g2apchr@southernco.com>
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Hydro Services
(205)257-2251
arsegars@southernco.com

HAT 2 (Water Quality & Erosion/Sedimentation)
Stakeholder Meeting Summary
September 11, 2019
11:00 am to 11:45 am
Oxford Civic Center, Oxford, AL

Participants:
See Attachment A

Participants by Phone:
Maria Clark – Environmental Protection Agency (EPA), Atlanta
Chuck Denman – Downstream Property Owner
Sarah Salazar – Federal Energy Regulatory Commission (FERC)

Action Items:

- Alabama Power will post the HAT 2 meeting summary and all meeting materials to the Harris Relicensing website (www.harrisrelicensing.com)
- Alabama Power will make a link to the Google Earth files of identified erosion and sedimentation sites, as well as identified water quality hotspots, available on Harris Relicensing website

Summary
The Harris Action Team (HAT) 2 (Water Quality & Erosion/Sedimentation) met on September 11, 2019. The meeting presentation is included in Attachment B; therefore, this meeting summary focuses on the overall meeting purpose, highlights of the presentation, and stakeholders' questions/comments and Alabama Power's responses.

Introduction – Angie Anderegg (Alabama Power)
Angie reviewed the HAT 2 meeting purpose, safety procedures, and introduced the participants in the meeting room and on the phone via Skype. The purpose of the HAT 2 meeting was to finalize the erosion and sedimentation sites and to provide an update on the water quality data collection.

Erosion and Sedimentation Study – Jason Moak (Kleinschmidt)
Jason reviewed the study plan goal and scope and reminded HAT 2 stakeholders that Alabama Power, on May 1, 2019, distributed a map (see Attachment C) and request for input to the erosion and sedimentation sites. Jason noted that Alabama Power didn't receive any additional erosion and sedimentation sites other than those sites previously identified by stakeholders, Alabama Power surveillance contractors, and agencies. Jason stated that Alabama Power's next step is to assess each site with certified erosion specialists and record the assessment results on the survey form (attached to the May 2019 Final Study Plan). Alabama Power will complete the Lake Harris erosion and sedimentation assessment once Lake Harris reaches winter pool in fall/winter 2019.

Jason explained that Trutta Environmental Solutions completed the downstream soils and erosion survey from Harris Dam to Jaybird Landing and that Trutta's report will be available in first quarter (Q1) 2020. Barry Morris (Lake Wedowee Property Owners Association -LWPOA) noted there were no sites on the Big Tallapoosa and asked if stakeholders could provide

additional erosion/sedimentation sites for Alabama Power to consider. Jason responded yes but that stakeholders should do so in today's meeting or very soon after, because Alabama Power is gearing up for the field work on Lake Harris in October. During the discussion, Barry realized the site he was going to request be added was already in the sedimentation and erosion site list. Harry Merrill (LWPOA) indicated that there is a lot of sedimentation at Fosters Bridge. Jason noted that Fosters Bridge is part of the erosion and sedimentation evaluation. Jason provided a Google Earth "tour" of all the erosion and sedimentation sites that are part of this study. Angie Anderegg told the group that the Google Earth "tour" would be available on the Harris Relicensing website (Note: Rather than place the Google Earth file on the website, the data can be viewed in a web browser here: https://drive.google.com/open?id=1mv1mUDi6CSUbFV5K38fCZmWuOxJDwLcW&usp=sharing. The data can also be downloaded from this link for use in Google Earth).

Albert Eiland (Downstream property owner) explained that the pulsing – river going up and down "like a washboard" - is causing a lot of erosion downstream. Jason noted there are many causes of erosion and that the erosion/sedimentation assessment form has an area for the assessor to indicate possible causes of the erosion. Angie noted that this study serves to collect baseline information that will inform the other operations studies, for example, to determine if a change in the winter pool would affect the frequency or magnitude of downstream flooding, which may cause additional erosion. Albert prefers continuous flows where what is coming into the reservoir is going out. Jason explained that the Harris Project was not designed to be "run-of-river" but that he recognizes the desire for a steady flow.

Barry Morris asked Jason what Alabama Power will do with the assessment when completed. In other words, what types of mitigation/enhancement measures will Alabama Power implement? Jason noted that Alabama Power will determine if the erosion/sedimentation site has reached equilibrium, is worsening, is vegetated, or needs additional monitoring before determining next steps. Sarah Salazar (FERC) stated that the current assessment form doesn't have anywhere to note the width of the vegetative/riparian zone. She asked if Alabama Power could include this on the assessment form. Alabama Power agreed to add the riparian/vegetative zone width to the assessment form to ensure that all assessors consistently report this feature. Angie and Jason also noted that Alabama Power will upload the map (and associated Google Earth files) to the Harris Relicensing website. Barry also asked Jason to explain #7 on the assessment form ("Description of Exposed Soils including Types and Depths"). Jason responded that sometimes you can see a layer of sand, silt, and/or rock, and the assessors would include this description on the form. Jason also noted that aerial and water observations will inform Alabama Power of the adjacent land activities.

Water Quality Study – Jason Moak (Kleinschmidt)

Jason reviewed the study goal, geographic scope, and the components of this study. He noted that ADEM agreed to a generation monitoring site about 800 feet downstream of Harris Dam. Alabama Power has also installed a continuous monitor about ½ mile downstream of Harris Dam. Jason reviewed some of the existing data and other monitoring locations (i.e., Malone gage). Jason Carlee (Alabama Power) noted that Alabama Power maintains the monitors about every 10 days. On May 1, 2019, Alabama Power asked HAT 2 stakeholders to send in any areas of water quality concern; Alabama Power did not receive additional areas of water quality concern. Jason noted that Fosters Bridge is the one area that had been previously identified as having potential water quality concerns. Barry Morris asked that if the chicken processing plant was reopened in the future, would that activity be under the Alabama Department of

Environmental Management's (ADEM) regulatory authority. Jason responded yes, and there would likely be a public comment period. Harry Merrill noted that a big cattle operation was creating a lot of pollution on the Big Tallapoosa where it crosses the 431 Bridge (below Hollis Crossroads). Sheila Smith (Alabama Power) noted this area is near the existing canoe put in site. Harry believes that fish are not in this area. He also noted that the chicken litter on the pastures combined with the cows entering the water at this location has resulted in a very polluted site. Jason noted that this site is one that was identified for further water quality evaluation.

Barry Morris asked if temperature is going to be addressed in a different HAT. Jason responded that Alabama Power is collecting temperature data at all 20 level logger sites on the Tallapoosa River below Harris Dam. Auburn University and ADEM are also collecting temperature data. Sarah Salazar noted that there are a couple of freshwater mussels on the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) list and advised Alabama Power to check area water quality if any of these species were found within the Harris Project Boundary. Jason commented that there is at least one threatened and endangered (T&E) that occurs upstream of the Harris Project Boundary. The HAT 3 (T&E) is aware of the presence of this mussel upstream of the Harris Project and is planning accordingly.

Maria Clark (EPA) noted that the EPA recommends year-round monitoring for at least one full year and also noted that one year of monitoring water quality may not be enough data. She indicated that EPA will send an official request on the monitoring. Maria added that EPA had previously made this comment, and it had not been incorporated into the Harris Water Quality Study Plan. Jason responded that the comment period for the Harris study plans was extensive and that FERC approved the study plans in April 2019. Alabama Power is not planning to monitor year-round. Jason indicated that based on years of experience, studies from other projects, and water quality experts, it is atypical for dissolved oxygen to be adversely affected during the winter months in the southeast, USA. Maria indicated that EPA would send their comments to Angie on the need for long-term, year-round water quality monitoring during the Harris relicensing process.

Donna Matthews asked how far north Alabama Power would look to see if the endangered mussel exists around the Highway 431 Bridge and the Harris Project Boundary. Jason noted that Alabama Power does not control the water quality or quantity coming into Lake Harris. If there are non-point source water quality issues above the Harris Project, the regulating entities would be responsible for addressing effects on mussel populations outside of the Harris Project Boundary.

Albert Eiland noted that his cousin, Chuck Denman, has commented that, if you have an open wound (i.e., cut), you should not get into the Tallapoosa River. He stated it is likely to get infected.

The meeting concluded at 11:50 am.

ATTACHMENT A
HARRIS ACTION TEAM 2 MEETING ATTENDEES

HARRIS PROJECT RELICENSING

HAT 2 SIGN-IN SHEET

September 11, 2019 9:00 AM

	Name/ Affiliation or Organization	Email
1	*John Smith/ Stakeholder*	*jsmith@email.com*
2	Thomas St. John /APC	twstjohn@southernco.com
3	Fred Leslie	fal@adem.alabama.gov
4	Jennifer Rusberry	
5	Jason Carlee	
6	Jennifer Hasibauer	jhasibauer@adem.alabama.gov
7	David Moore	
8	Nathan Aycock	
9	Mike Holley	
10	David Smith	
11	Glenell Smith	
12	Kristie Coffman	

HARRIS DAM
RELICENSING

HARRIS PROJECT RELICENSING

HAT 2 SIGN-IN SHEET

September 11, 2019 9:00 AM

	Name/ Affiliation or Organization	Email
13	Josh Yerby APC	
14	Taconya Goar ADCNR	
15	Mitch Redd TNC	
16	Kelly Yates, Env. Affairs	klyates@southernco.com
17	Tom Garland	
18	Donna Matthews	
19	ALBERT EILAND	
20	Stan Nelson, Nelson & Co	s nelson
21	Joel Stevens	
22	Trey Stevens	
23	Tina Freeman	
24	Sheila Smith	

HARRIS DAM
RELICENSING

HARRIS PROJECT RELICENSING

HAT 2 SIGN-IN SHEET

September 11, 2019 9:00 AM

	Name/ Affiliation or Organization	Email
25	~~Stacy~~ Thompson APC	
26	Barry Morris	
27	Stacey Graham	
28		
29		
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31		
32		
33		
34		
35		
36		

ATTACHMENT B
SEPTEMBER 11, 2019 HAT 2 PRESENTATION

R.L. Harris Project Relicensing

HAT 2 Meeting

September 11, 2019

Erosion and Sedimentation Study

Goal

Identify any problematic erosion sites and sedimentation areas and determine the likely causes

Geographic Scope

Little Coon Creek and Crow Creek Watersheds at Skyline, Lake Harris, and the Tallapoosa River from Harris Dam downstream through Horseshoe Bend.

Study Components

- Identify erosion and sedimentation sites
- Assess sites using a qualified Erosion and Sediment Control Professional
- Assess bank erosion susceptibility in Tallapoosa River from Harris Dam through Horseshoe Bend
- Assess sedimentation sites by examining available lake photography and data (LIDAR) and analyzing with Geographic Information System (GIS)

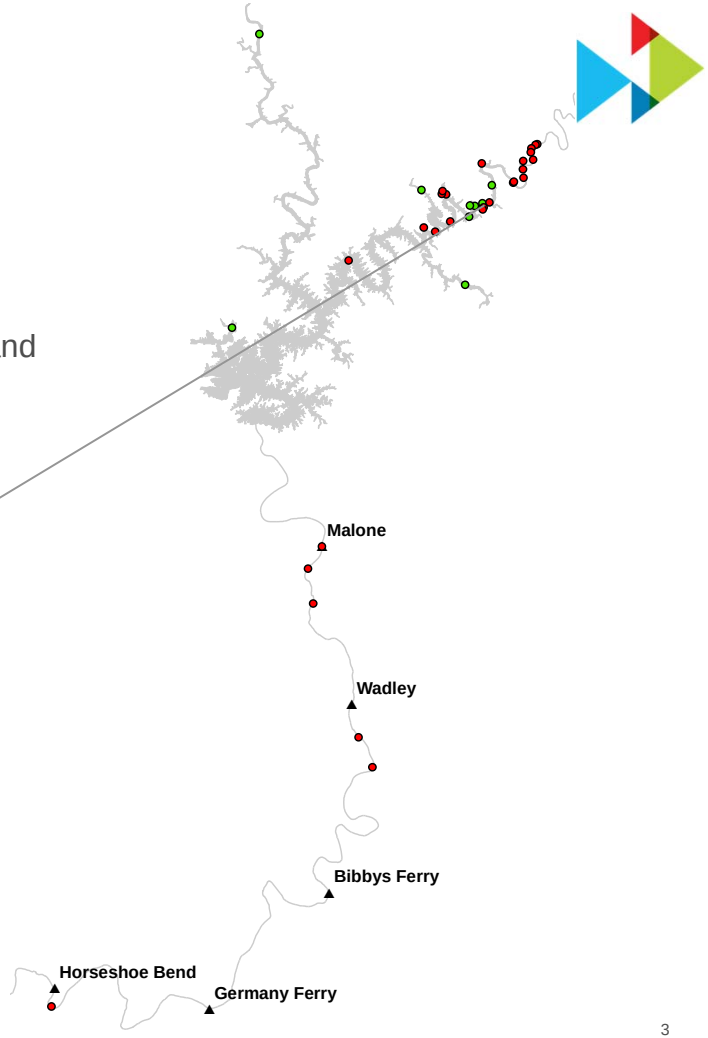
Study Sites

Erosion (red dots)

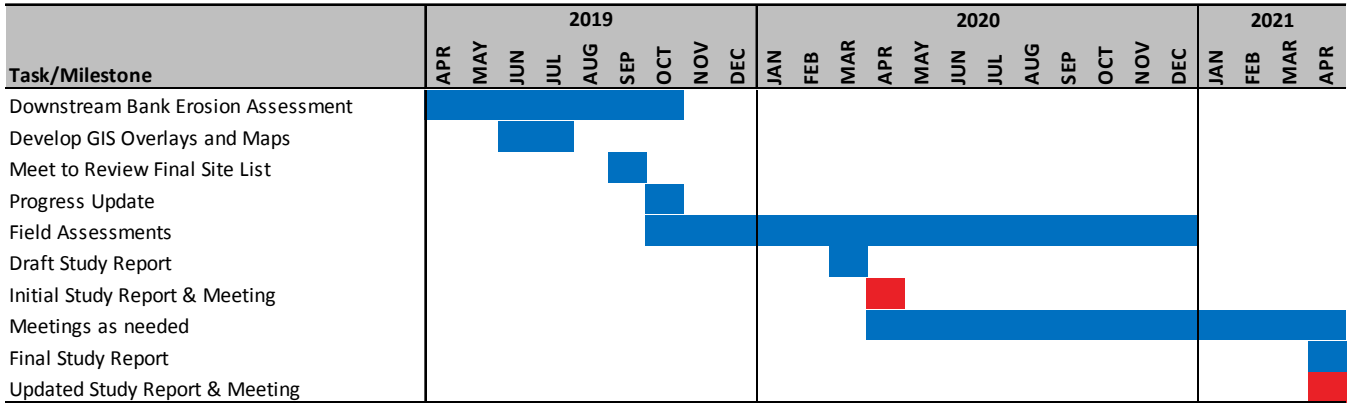
- 21 sites on Lake Harris
  - All on Little Tallapoosa arm of lake
  - 17 sites upstream of 431
- 6 sites on Tallapoosa between Harris Dam and Horseshoe Bend

Sedimentation (green dots)

- 9 sites on Lake Harris



E & S Study Schedule



Water Quality Study

Goal

Supplement the 2018 Baseline Water Quality Report; identify and assess potential areas of water quality concern.

Geographic Scope

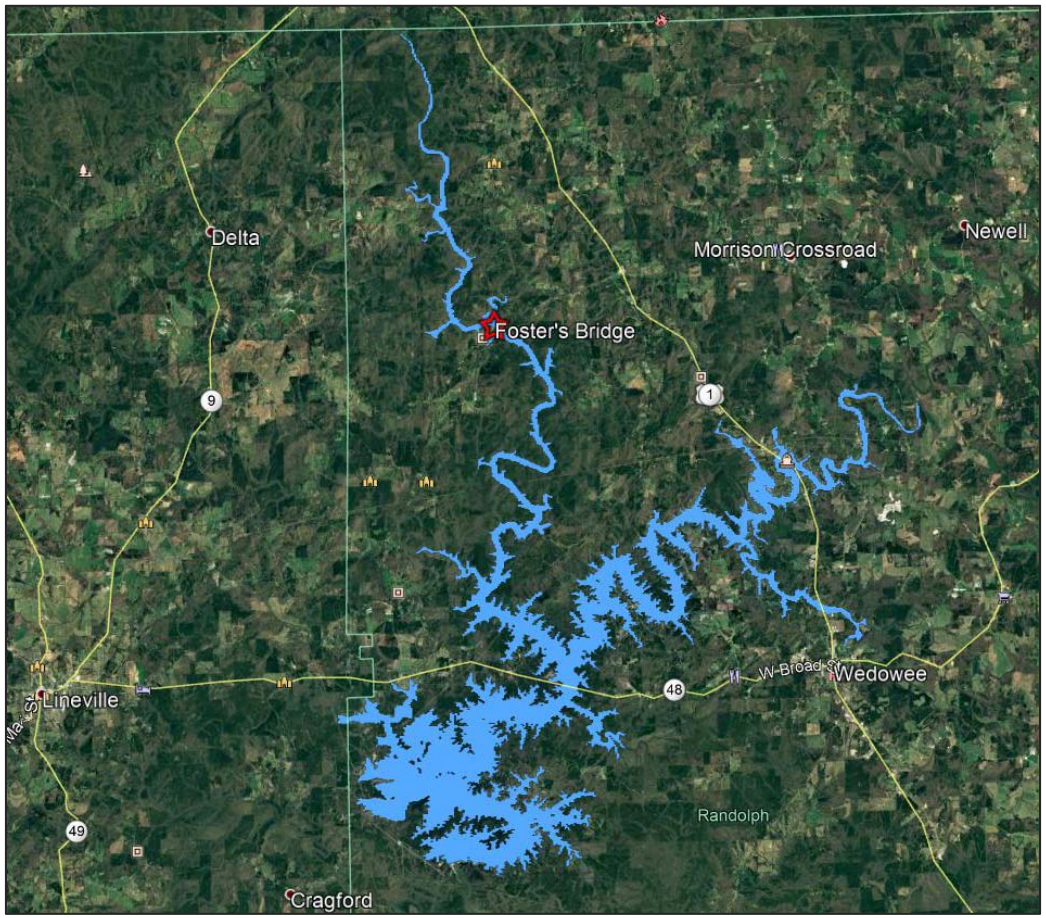
Lake Harris and its tributaries; Tallapoosa River from Harris Dam through Horseshoe Bend; Little Coon Creek and Crow Creek watersheds at Skyline.

Study Components

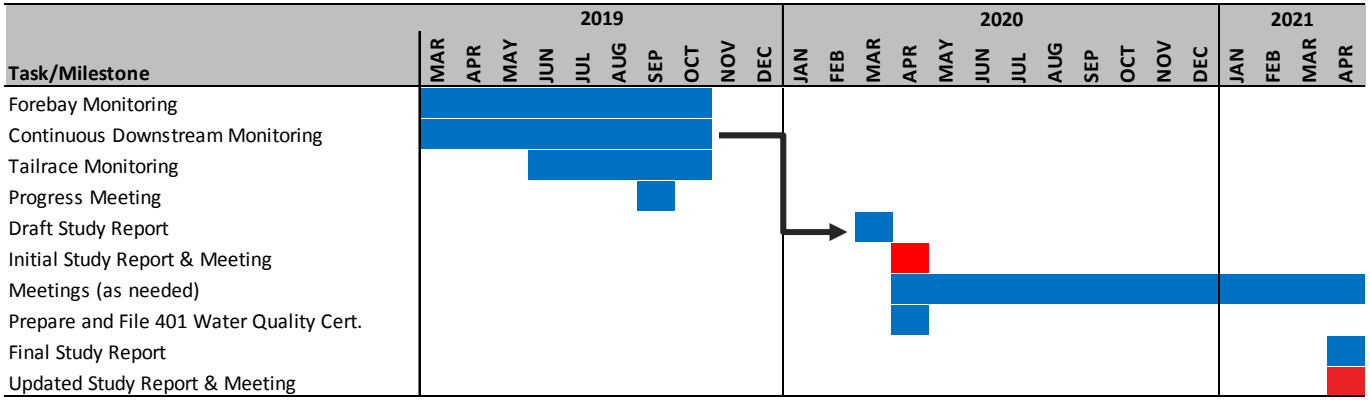
- Monitor dissolved oxygen and temperature during generation at the existing site 800 ft downstream of Harris Dam (June 1 – October 31)
- Monitor dissolved oxygen and temperature continuously at new location 0.5 miles downstream of Dam (March 1 – October 31)
- Collect monthly vertical profiles of dissolved oxygen and temperature in reservoir forebay (March – October)
- Identify and assess areas in reservoir where water quality may be degraded
- Compile new data from other credible sources (e.g., USGS, ADEM, AWW)

Monitoring Locations

Areas of Concern

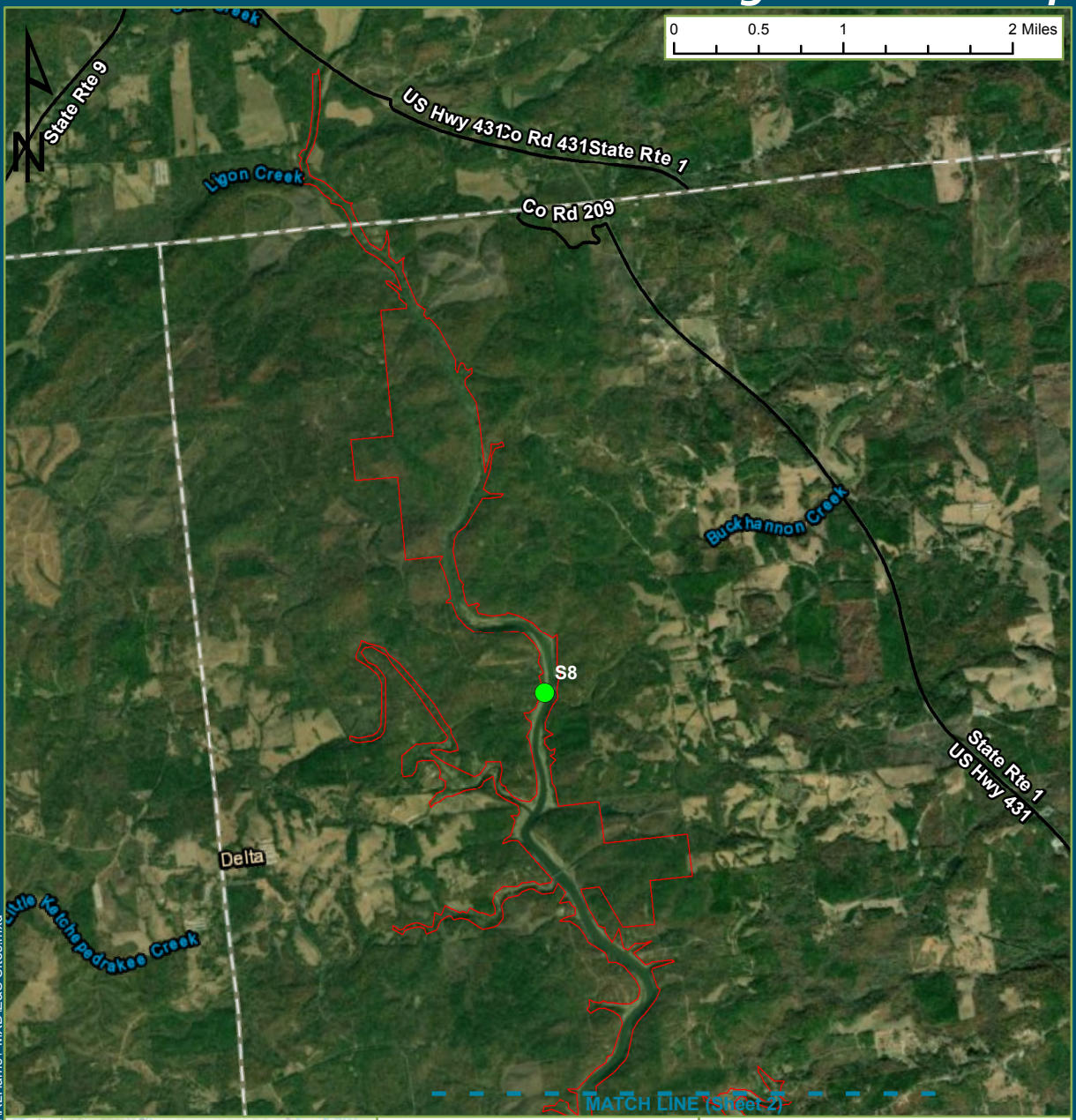


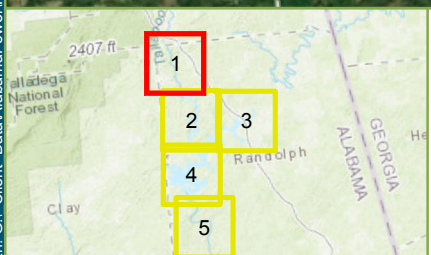
Study Schedule



ATTACHMENT C
HAT 2 MAP OF EROSION/SEDIMENTATION STUDY SITES

Monitoring Location Map





Legend

- Sedimentation
- Erosion
- Match Line
- Road
- Project Boundary

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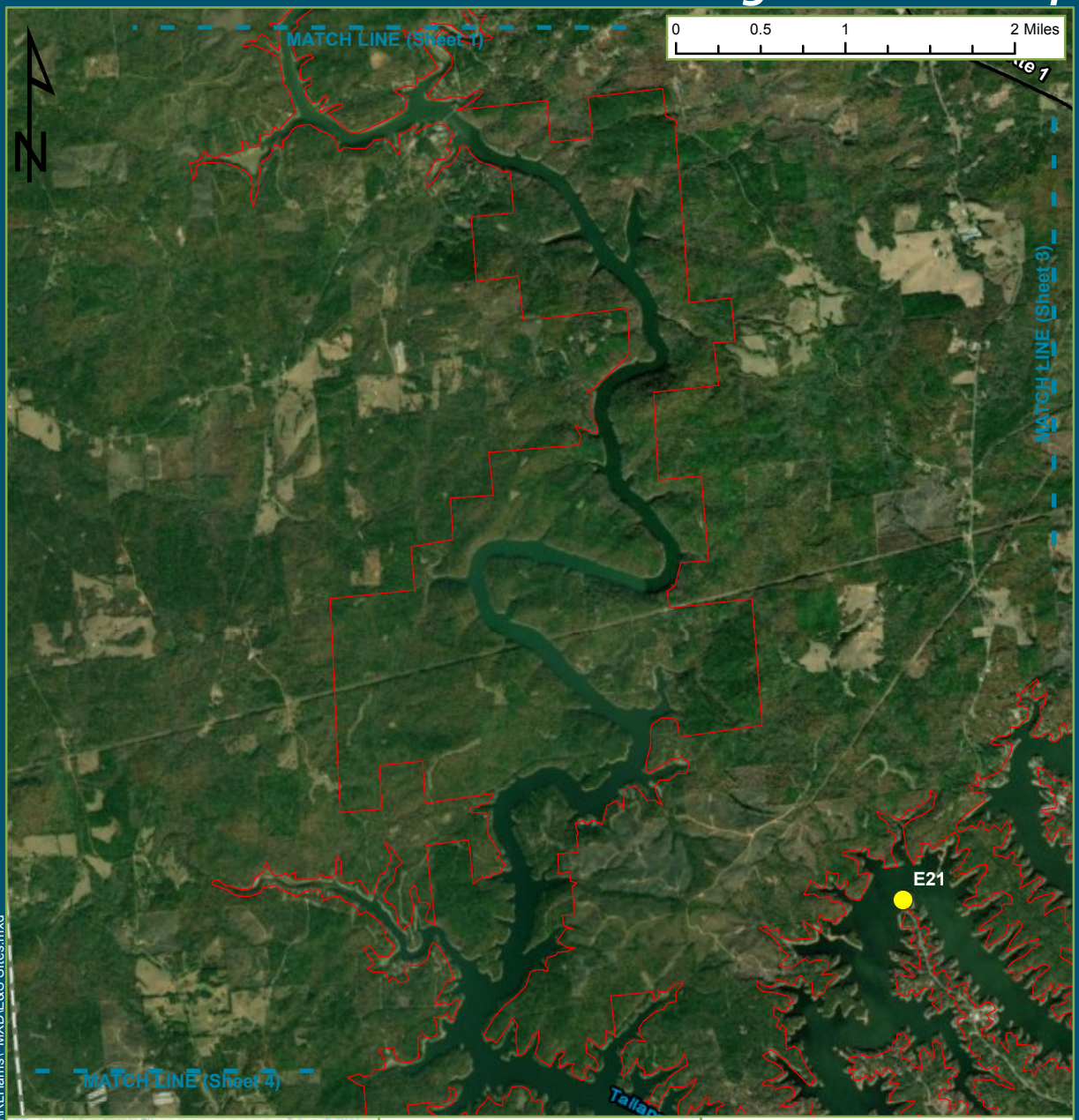
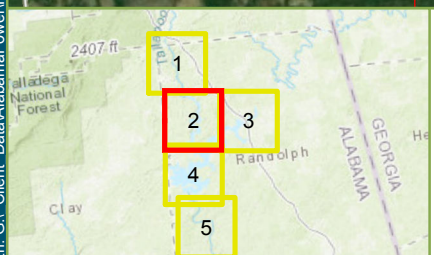
Source: Erosion/Sedimentation Locations (Alabama Power, 2019), Project Boundary (Kleinschmidt, 2018), Steet Map (ESRI, 2019)

PN: 0535028.01

Monitoring Location Map





Legend

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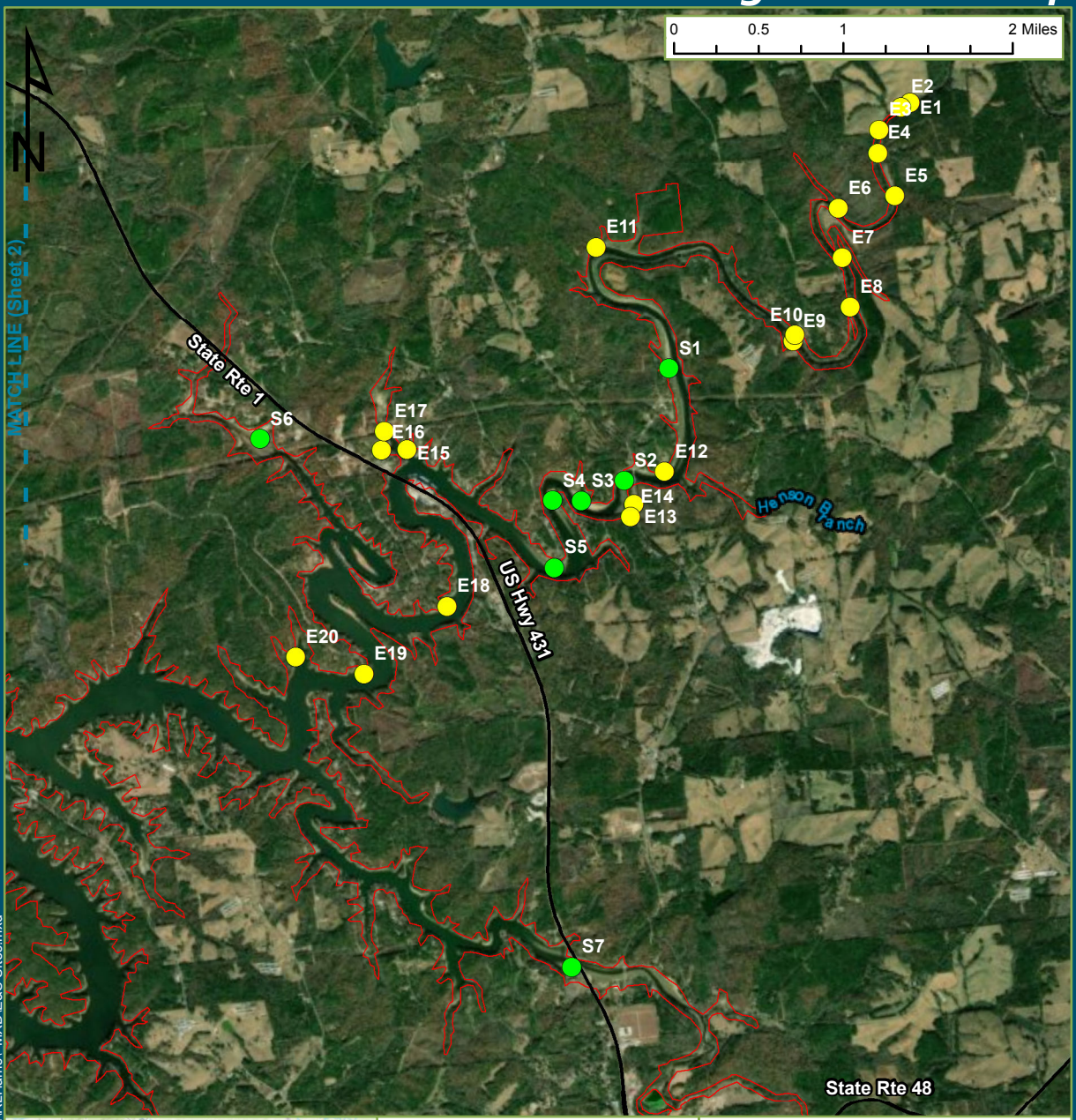

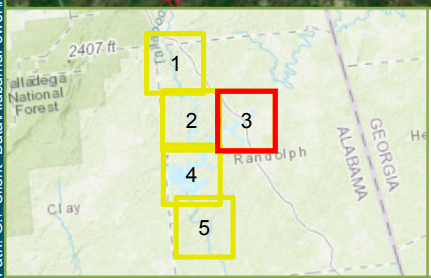

Legend

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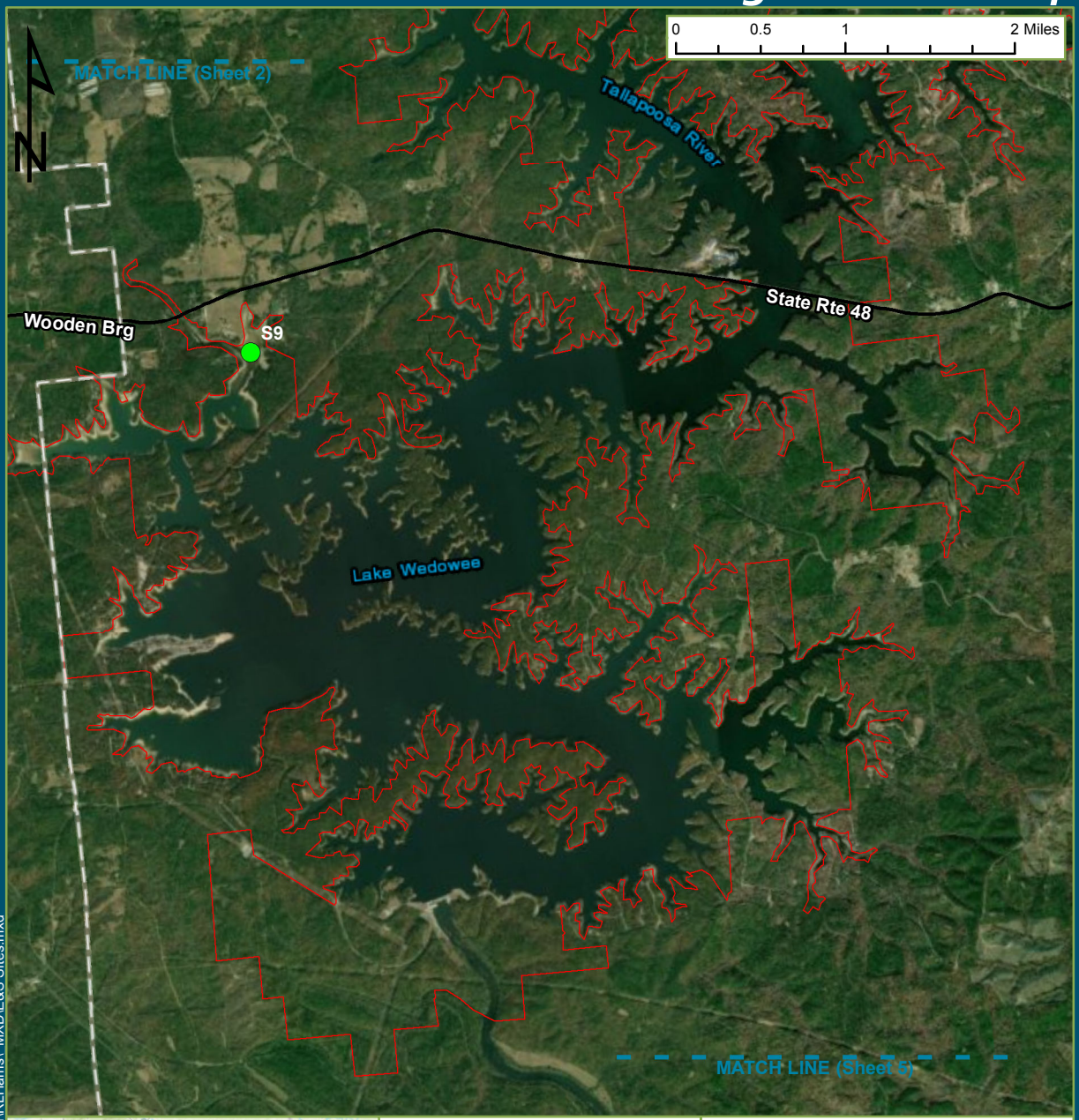

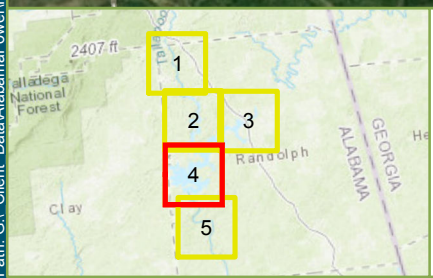

Legend

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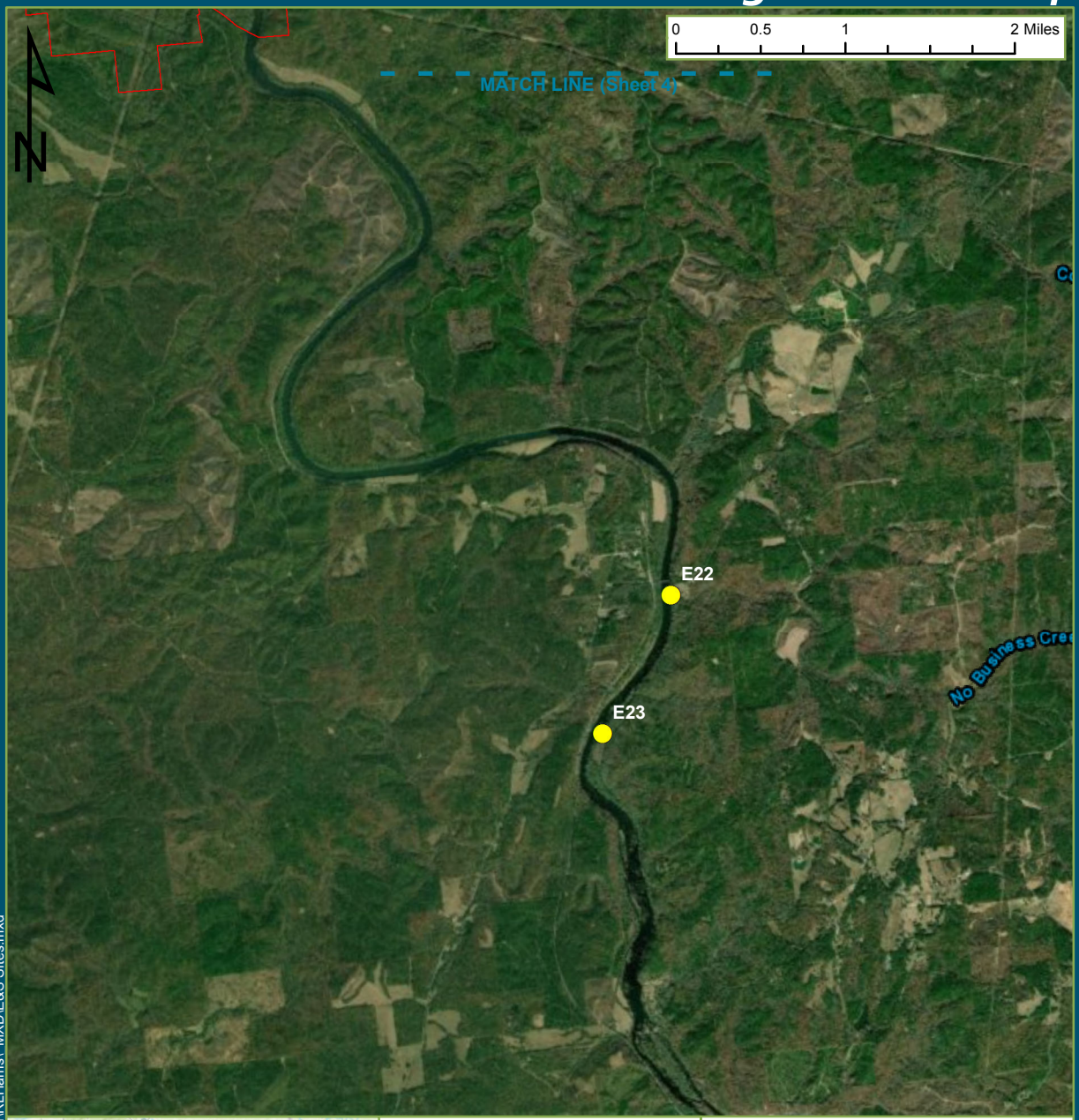

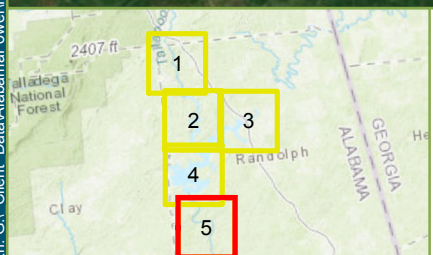

Legend

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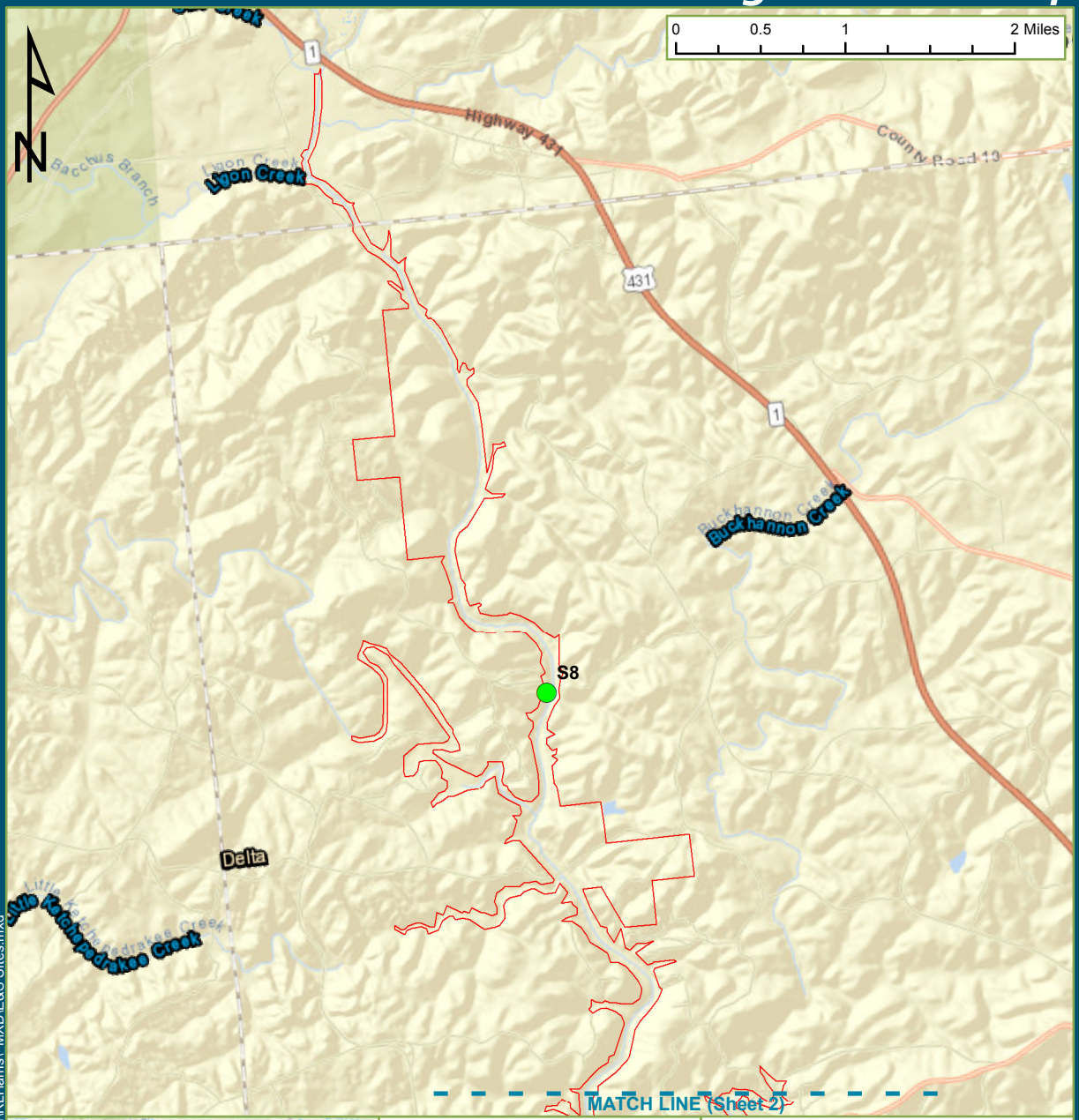

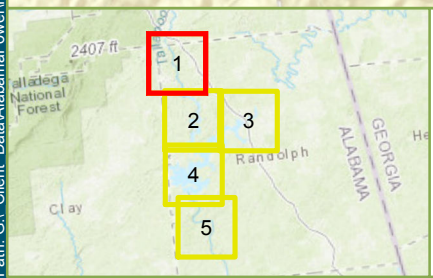

Legend

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- Match Line
- Project Boundary

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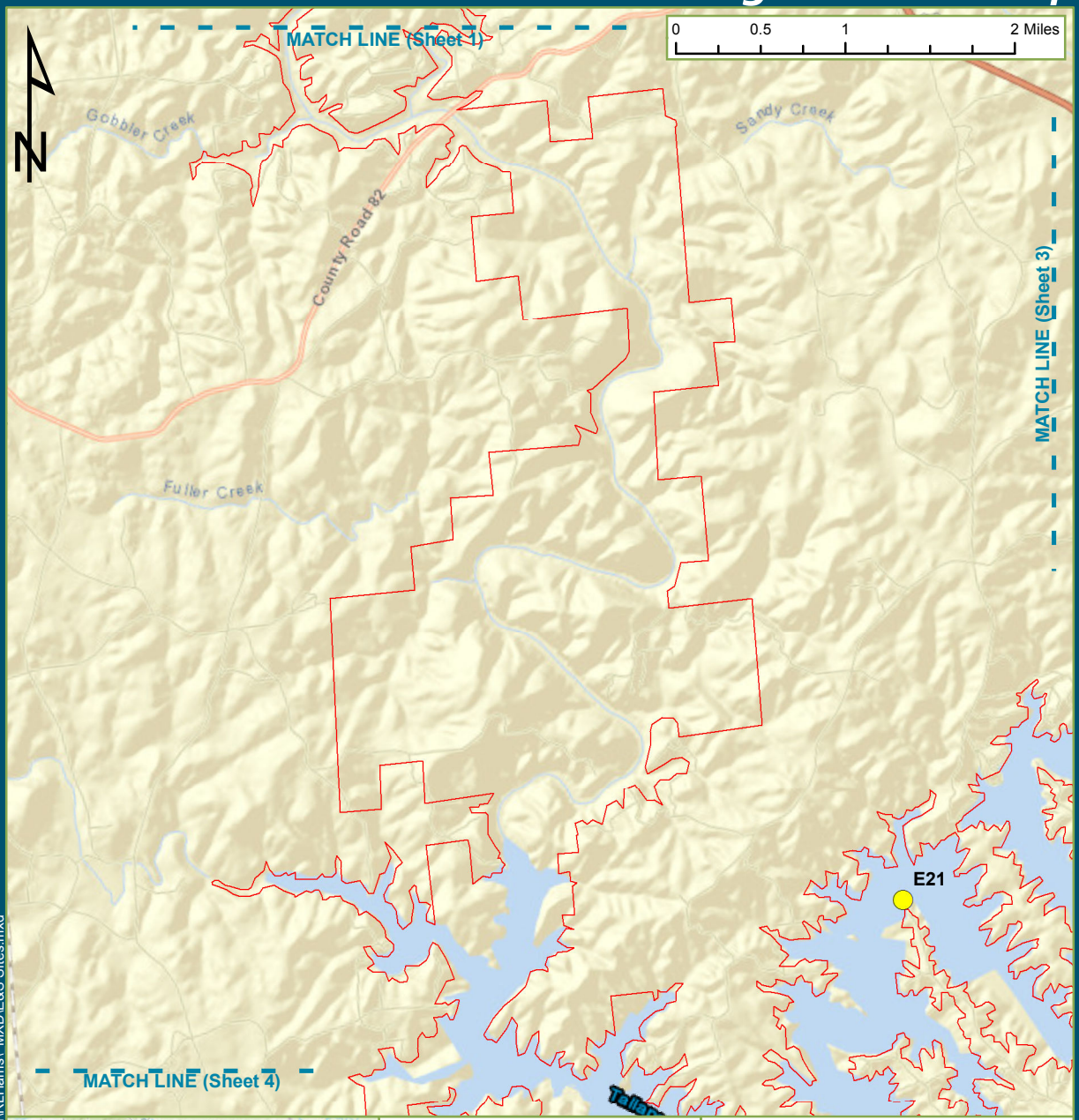

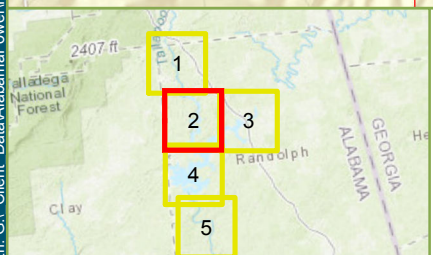

Legend

- Sedimentation
- Erosion
- Match Line
- Project Boundary

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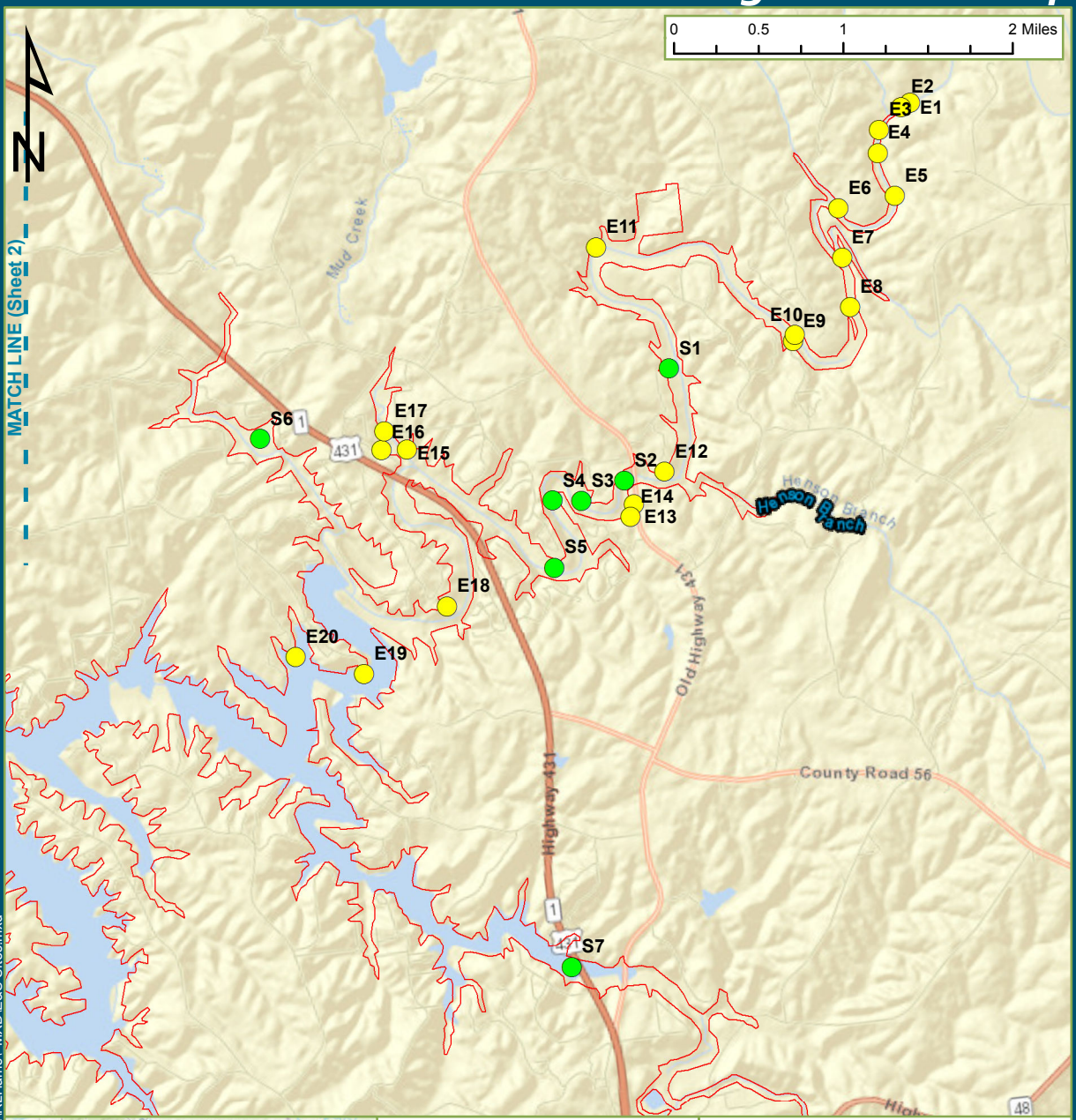

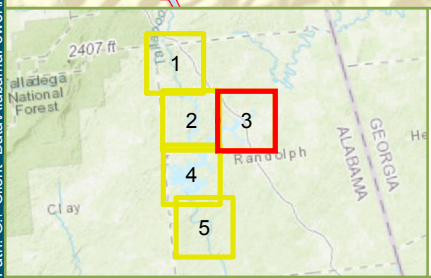

Legend

- Sedimentation
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- Match Line
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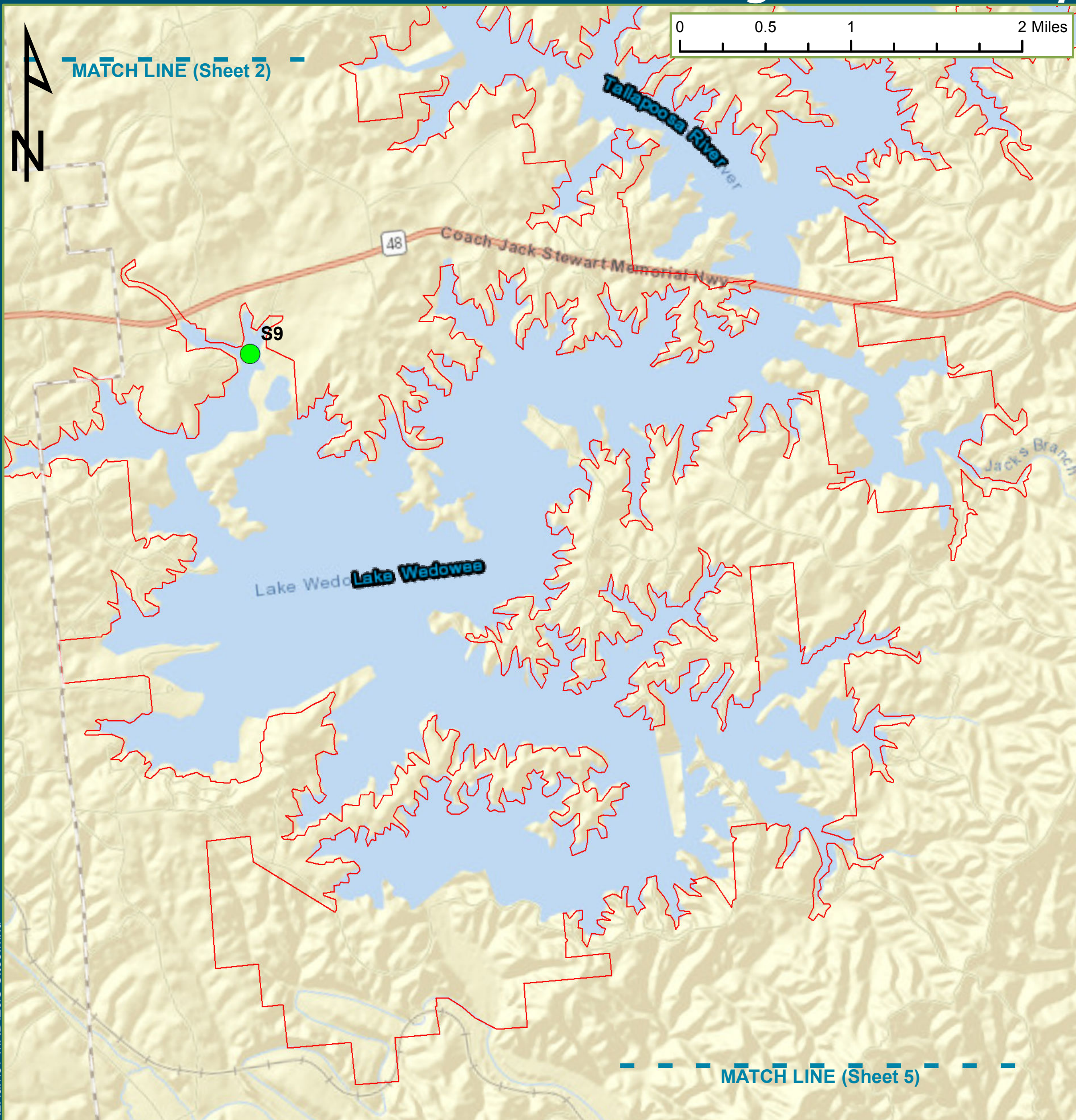

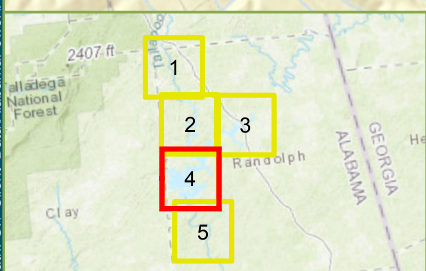

Legend

- Sedimentation (green dot)
- Erosion (yellow dot)
- Match Line
- Project Boundary

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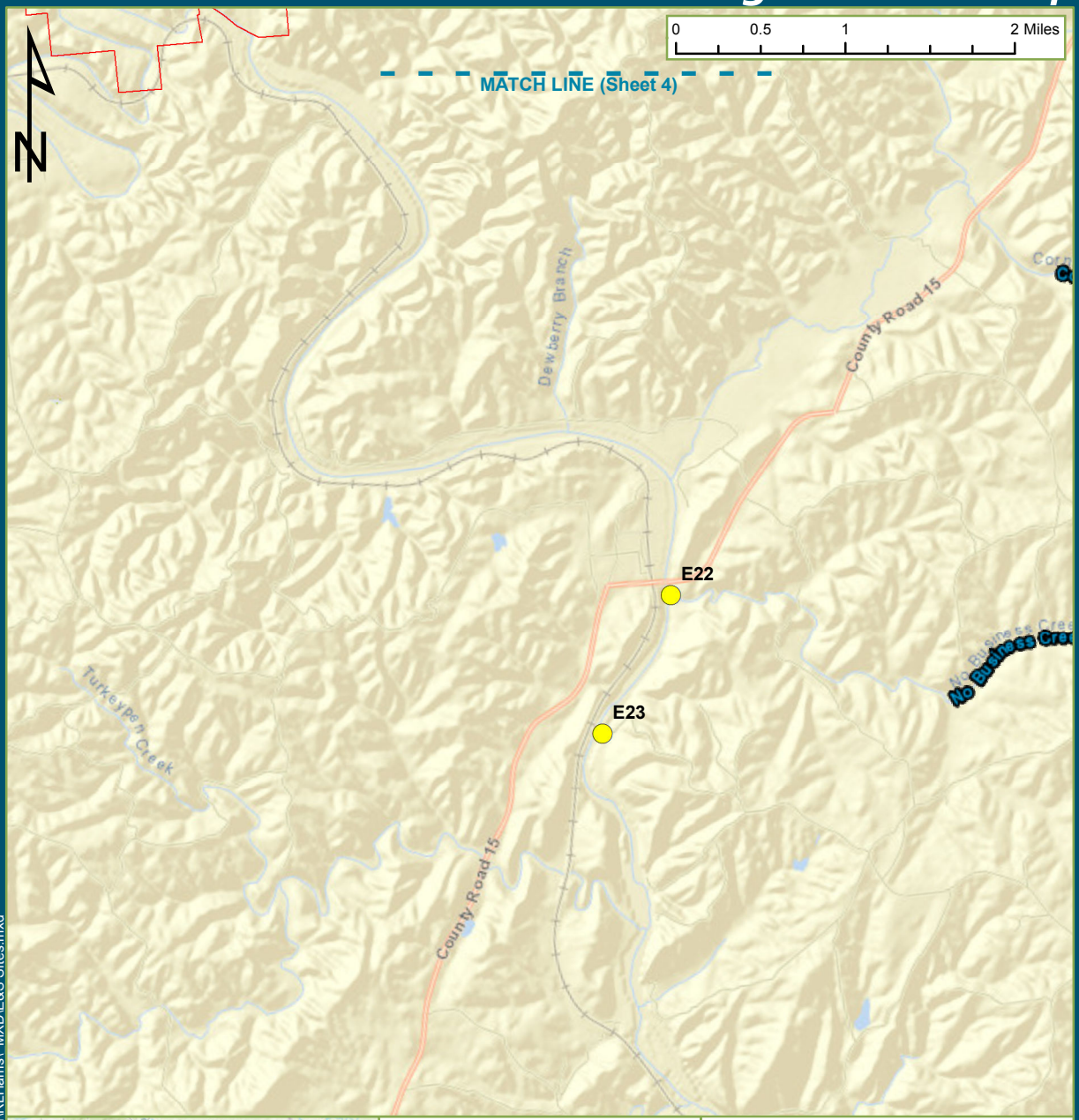

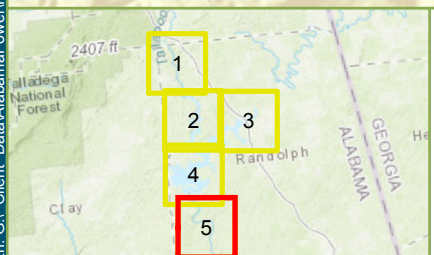

Legend

- Sedimentation
- Erosion
- Match Line
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PN: 0535028.01

R.L. Harris Project
Erosion Sedimentation Study
Draft Site List
May 1, 2019

Name	Type	Latitude	Longitude
S1	Sedimentation	33.37624948	-85.47166235
S2	Sedimentation	33.36719999	-85.47747307
S3	Sedimentation	33.36590337	-85.48206374
S4	Sedimentation	33.36621704	-85.48497203
S5	Sedimentation	33.36051157	-85.48560019
S6	Sedimentation	33.37431997	-85.5138457
S7	Sedimentation	33.3264078	-85.4885445
S8	Sedimentation	33.45383479	-85.60980855
S9	Sedimentation	33.30647091	-85.62855097
E1	Erosion	33.39648716	-85.44412236
E2	Erosion	33.39618116	-85.44512448
E3	Erosion	33.39447905	-85.44762594
E4	Erosion	33.39252729	-85.44796667
E5	Erosion	33.38869558	-85.44676742
E6	Erosion	33.38816557	-85.4526412
E7	Erosion	33.38399233	-85.45284646
E8	Erosion	33.3797199	-85.45259528
E9	Erosion	33.37732425	-85.45878731
E10	Erosion	33.37784798	-85.45851087
E11	Erosion	33.38726919	-85.47760635
E12	Erosion	33.36758594	-85.47330665
E13	Erosion	33.36508776	-85.47680031
E14	Erosion	33.36406619	-85.47728423
E15	Erosion	33.37197386	-85.49913637
E16	Erosion	33.37216342	-85.50173268
E17	Erosion	33.37371456	-85.50122349
E18	Erosion	33.35832713	-85.4969299
E19	Erosion	33.3533428	-85.50610579
E20	Erosion	33.35544286	-85.51280286
E21	Erosion	33.33941479	-85.5581353
E22	Erosion	33.1960328	-85.57649228
E23	Erosion	33.18490256	-85.58503087

HAT 2 - September 11 meeting notes

APC Harris Relicensing

Tue 10/1/2019 6:17 PM

To: 'harrisrelicensing@southernco.com' <harrisrelicensing@southernco.com>
Bcc damon.abernethy@dcnr.alabama.gov <damon.abernethy@dcnr.alabama.gov>; Steve Bryant - Alabama Department of Conservation and Natural Resources <Steve Bryant - Alabama Department of Conservation and Natural Resources>; stan.cook@dcnr.alabama.gov <stan.cook@dcnr.alabama.gov>; taconya.goar@dcnr.alabama.gov <taconya.goar@dcnr.alabama.gov>; chris.greene@dcnr.alabama.gov <chris.greene@dcnr.alabama.gov>; keith.henderson@dcnr.alabama.gov <keith.henderson@dcnr.alabama.gov>; mike.holley@dcnr.alabama.gov <mike.holley@dcnr.alabama.gov>; amy.silvano@dcnr.alabama.gov <amy.silvano@dcnr.alabama.gov>; jhaslbauer@adem.alabama.gov <jhaslbauer@adem.alabama.gov>; cljohnson@adem.alabama.gov <cljohnson@adem.alabama.gov>; mlen@adem.alabama.gov <mlen@adem.alabama.gov>; fal@adem.alabama.gov <fal@adem.alabama.gov>; djmoore@adem.alabama.gov <djmoore@adem.alabama.gov>; arsegars@southernco.com <arsegars@southernco.com>; dkanders@southernco.com <dkanders@southernco.com>; jcarlee@southernco.com <jcarlee@southernco.com>; kechandl@southernco.com <kechandl@southernco.com>; mcoker@southernco.com <mcoker@southernco.com>; cggoodma@southernco.com <cggoodma@southernco.com>; gfhorn@southernco.com <gfhorn@southernco.com>; ammcvica@southernco.com <ammcvica@southernco.com>; tlmills@southernco.com <tlmills@southernco.com>; jsrasber@southernco.com <jsrasber@southernco.com>; wtanders@southernco.com <wtanders@southernco.com>; cchaffin@alabamarivers.org <cchaffin@alabamarivers.org>; clowry@alabamarivers.org <clowry@alabamarivers.org>; gjobsis@americanrivers.org <gjobsis@americanrivers.org>; kmo0025@auburn.edu <kmo0025@auburn.edu>; irwiner@auburn.edu <irwiner@auburn.edu>; reuteem@auburn.edu <reuteem@auburn.edu>; lgallen@balch.com <lgallen@balch.com>; jhancock@balch.com <jhancock@balch.com>; allan.creamer@ferc.gov <allan.creamer@ferc.gov>; rachel.mcnamara@ferc.gov <rachel.mcnamara@ferc.gov>; sarah.salazar@ferc.gov <sarah.salazar@ferc.gov>; monte.terhaar@ferc.gov <monte.terhaar@ferc.gov>; kate.cosnahan@kleinschmidtgroup.com <kate.cosnahan@kleinschmidtgroup.com>; colin.dinken@kleinschmidtgroup.com <colin.dinken@kleinschmidtgroup.com>; amanda.fleming@kleinschmidtgroup.com <amanda.fleming@kleinschmidtgroup.com>; henry.mealing@kleinschmidtgroup.com <henry.mealing@kleinschmidtgroup.com>; jason.moak@kleinschmidtgroup.com <jason.moak@kleinschmidtgroup.com>; kelly.schaeffer@kleinschmidtgroup.com <kelly.schaeffer@kleinschmidtgroup.com>; jessecunningham@msn.com <jessecunningham@msn.com>; sforehand@russelllands.com <sforehand@russelllands.com>; 1942jthompson420@gmail.com <1942jthompson420@gmail.com>; nancyburnes@centurylink.net <nancyburnes@centurylink.net>; lgarland68@aol.com <lgarland68@aol.com>; rbmorris333@gmail.com <rbmorris333@gmail.com>; mitchell.reid@tnc.org <mitchell.reid@tnc.org>; richardburnes3@gmail.com <richardburnes3@gmail.com>; eilandfarm@aol.com <eilandfarm@aol.com>; eveham75@gmail.com <eveham75@gmail.com>; wmcampbell218@gmail.com <wmcampbell218@gmail.com>; jec22641@aol.com <jec22641@aol.com>; chuckdenman@hotmail.com <chuckdenman@hotmail.com>; carolbuggknight@hotmail.com <carolbuggknight@hotmail.com>; donnamat@aol.com <donnamat@aol.com>; harry.merrill47@gmail.com <harry.merrill47@gmail.com>; mhpwedowee@gmail.com <mhpwedowee@gmail.com>; midwaytreasures@bellsouth.net <midwaytreasures@bellsouth.net>; inspector_003@yahoo.com <inspector_003@yahoo.com>; clark.maria@epa.gov <clark.maria@epa.gov>; decker.chris@epa.gov <decker.chris@epa.gov>; gordon.lisa-perras@epa.gov <gordon.lisa-perras@epa.gov>; holliman.daniel@epa.gov <holliman.daniel@epa.gov>; jeff_duncan@nps.gov <jeff_duncan@nps.gov>

HAT 2,

The meeting notes and materials from the September 11 HAT meeting can be found on the Harris relicensing website (www.harrisrelicensing.com) under HAT 2 – Water Quality and Use.

Thanks,

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

APC Harris Relicensing

From: Bryant, Steve <Steve.Bryant@dcnr.alabama.gov>
Sent: Wednesday, October 2, 2019 10:00 AM
To: APC Harris Relicensing
Subject: RE: HAT 2 - September 11 meeting notes

OK Thanks

From: APC Harris Relicensing <g2apchr@southernco.com>
Sent: Wednesday, October 2, 2019 9:16 AM
To: Bryant, Steve <Steve.Bryant@dcnr.alabama.gov>
Subject: FW: HAT 2 - September 11 meeting notes

Hi Steve,

I received an notice that this email didn't get to you. I wanted to make sure you saw it.

Thanks,

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: APC Harris Relicensing <g2apchr@southernco.com>
Sent: Tuesday, October 1, 2019 1:18 PM
To: APC Harris Relicensing <g2apchr@southernco.com>
Subject: HAT 2 - September 11 meeting notes

HAT 2,

The meeting notes and materials from the September 11 HAT meeting can be found on the Harris relicensing website (www.harrisrelicensing.com) under HAT 2 – Water Quality and Use.

Thanks,

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

APC Harris Relicensing

From: Anderegg, Angela Segars
Sent: Monday, November 4, 2019 12:04 PM
To: Clark, Maria
Cc: Kajumba, Ntale; Buskey, Traci P.; Sarah Salazar
Subject: RE: EPA Follow-up: R.L. Harris Dam Relicensing Stakeholder Meeting

Hi Maria,

The study plans were finalized and approved by FERC in April of this year and we are currently wrapping up the first study season. The relicensing process afforded several opportunities to comment on the draft studies. All comments on the study plans were either incorporated or addressed in the cover letter that was filed with the final study plans.

In response to stakeholder comments on the Water Quality Study Plan, Alabama Power agreed to an additional monitor approximately 0.5 miles downstream of Harris Dam. The additional monitor's location was chosen in consultation with ADEM and continuously recorded dissolved oxygen and temperature data at 15-minute intervals from March 1 through October 31 of 2019. The monitoring season, location, and frequency of readings during generation that is included in the Water Quality Study Plan for the future 401 Water Quality Certification station was determined in consultation with ADEM.

Thank you for your comments.

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: Clark, Maria <Clark.Maria@epa.gov>
Sent: Tuesday, October 22, 2019 2:45 PM
To: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Cc: Kajumba, Ntale <Kajumba.Ntale@epa.gov>; Buskey, Traci P. <Buskey.Traci@epa.gov>; Sarah Salazar <Sarah.Salazar@ferc.gov>; Clark, Maria <Clark.Maria@epa.gov>
Subject: EPA Follow-up: R.L. Harris Dam Relicensing Stakeholder Meeting
Importance: High

VIA E-MAIL

DATE: October 22, 2019

SUBJECT: R.L. Harris Dam Relicensing; NEPA Comments and Recommendations from the September 11, 2019, Stakeholder Meeting

FROM: Maria R. Clark
Project Officer, NEPA Section
USEPA, Region 4

TO: Angie Anderegg
Project Manager, Harris Relicensing
Alabama Power Company

Dear Angie:

The EPA is following up on our comments made at the September 11, 2019, meeting. Further, please find additional information/recommendations that are not necessarily new since we have offered them previously, but we would like to reiterate them at this time as well.

- Water Quality - Collecting water samples only during generation is insufficient to determine if WQS (water quality standards) are being met. The EPA noted in our original comments on the WQ Study Plan and verbally that dissolved oxygen must be met both during **generation** and during **non-generation** year-round. The Alabama Department of Environmental Management (ADEM) Water Division indicates that:

  …"For a diversified warm water biota, including game fish, daily dissolved oxygen concentrations shall not be less than 5.5 mg/l at all times; except under extreme conditions due to natural causes, it may range between 5.5 mg/l and 4 mg/l, provided that the water quality is favorable in all other parameters...[i]*"*

- In Methods, Section 4.0 - Alabama Power identifies two sites downstream of Harris Dam for dissolved oxygen and temperature monitoring: 800 feet downstream of the dam and 0.5 miles downstream of the dam (please update me, if this information has changed after any additional comments might have been received).

  As mentioned before, the EPA applauds the decision to expand the downstream monitoring activities in order to understand what operational changes may be needed for the future operation of the dam. Among your additional considerations, we hope that you included sites that have been previously monitored by ADEM such as: the Wadley site located 14 miles downstream of Harris dam, and, a site 44 miles downstream of the dam at Horseshoe Bend. The inclusion of additional sites in the temperature monitoring network would provide a more complete picture of water quality throughout the defined geographic scope of the project. In addition, the EPA recommends that data from all downstream monitoring sites be recorded continuously at 15-minute intervals, during periods of generation and non-generation year-round.

  The EPA wants to strive for an adequate Water Quality Sampling Plan for DO in order to determine if the Harris Dam project is meeting the applicable WQS year-round.

[i] ADEM Admin. Code r. 335-6-x-.xx, REVISED EFFECTIVE: October 4, 2019.
http://www.adem.state.al.us/alEnviroRegLaws/files/Division6Vol1.pdf [adem.state.al.us]

As always, thank you in advance for the opportunity to work with you during the FERC relicensing process. Please feel free to contact me at any time, if you have any questions.

Maria R. Clark

NEPA Section - Region 4
Strategic Programs Office
U.S. Environmental Protection Agency
61 Forsyth, Street South West
Atlanta, GA 30303
404-562-9513

APC Harris Relicensing

From: Clark, Maria <Clark.Maria@epa.gov>
Sent: Wednesday, November 13, 2019 11:23 AM
To: Anderegg, Angela Segars
Cc: Kajumba, Ntale; Sarah Salazar; Clark, Maria
Subject: RE: EPA Follow-up: R.L. Harris Dam Relicensing Stakeholder Meeting

Hello Angie,

Thank you for taking the time to reply and thank you for many months of a very wonderful communication.
As I mentioned in my latest e-mail, essentially, our comments are the same since 2018. We have commented many times and attended several meetings and calls as you know. Our recommendations are always intended to help the project to meet the applicable WQS year-round. We have confidence that Alabama Power have shared our recommendations with ADEM throughout the process. I wish you and your family a wonderful Thanksgiving.

Sincerely,

Maria R. Clark

NEPA Section - Region 4
Strategic Programs Office
U.S. Environmental Protection Agency
61 Forsyth, Street South West
Atlanta, GA 30303
404-562-9513

From: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Sent: Monday, November 04, 2019 1:04 PM
To: Clark, Maria <Clark.Maria@epa.gov>
Cc: Kajumba, Ntale <Kajumba.Ntale@epa.gov>; Buskey, Traci P. <Buskey.Traci@epa.gov>; Sarah Salazar <Sarah.Salazar@ferc.gov>
Subject: RE: EPA Follow-up: R.L. Harris Dam Relicensing Stakeholder Meeting

Hi Maria,

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Thank you for your comments.

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: Clark, Maria <Clark.Maria@epa.gov>
Sent: Tuesday, October 22, 2019 2:45 PM
To: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Cc: Kajumba, Ntale <Kajumba.Ntale@epa.gov>; Buskey, Traci P. <Buskey.Traci@epa.gov>; Sarah Salazar <Sarah.Salazar@ferc.gov>; Clark, Maria <Clark.Maria@epa.gov>
Subject: EPA Follow-up: R.L. Harris Dam Relicensing Stakeholder Meeting
Importance: High

VIA E-MAIL

DATE: October 22, 2019

SUBJECT: R.L. Harris Dam Relicensing; NEPA Comments and Recommendations from the September 11, 2019, Stakeholder Meeting

FROM: Maria R. Clark
Project Officer, NEPA Section
USEPA, Region 4

TO: Angie Anderegg
Project Manager, Harris Relicensing
Alabama Power Company

Dear Angie:

The EPA is following up on our comments made at the September 11, 2019, meeting. Further, please find additional information/recommendations that are not necessarily new since we have offered them previously, but we would like to reiterate them at this time as well.

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  As mentioned before, the EPA applauds the decision to expand the downstream monitoring activities in order to understand what operational changes may be needed for the future operation of the dam. Among your additional considerations, we hope that you included sites that have been previously monitored by ADEM such as: the Wadley site located 14 miles downstream of Harris dam, and, a site 44 miles downstream of the dam at Horseshoe Bend. The inclusion of additional sites in the temperature monitoring network would provide a more complete picture of water quality throughout the defined geographic scope of the project. In addition, the EPA recommends that data from all downstream monitoring sites be recorded continuously at 15-minute intervals, during periods of generation and non-generation year-round.

  The EPA wants to strive for an adequate Water Quality Sampling Plan for DO in order to determine if the Harris Dam project is meeting the applicable WQS year-round.

[i] ADEM Admin. Code r. 335-6-x-.xx, REVISED EFFECTIVE: October 4, 2019. http://www.adem.state.al.us/alEnviroRegLaws/files/Division6Vol1.pdf [adem.state.al.us]

As always, thank you in advance for the opportunity to work with you during the FERC relicensing process. Please feel free to contact me at any time, if you have any questions.

Maria R. Clark

NEPA Section - Region 4
Strategic Programs Office
U.S. Environmental Protection Agency
61 Forsyth, Street South West
Atlanta, GA 30303
404-562-9513

APC Harris Relicensing

From: Anderegg, Angela Segars
Sent: Friday, December 13, 2019 10:41 AM
To: Moore, David
Cc: Haslbauer, Jennifer; Thompson, David; Chandler, Keith Edward
Subject: RE: Malone water quality data request

Thanks!

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: Moore, David <djmoore@adem.alabama.gov>
Sent: Friday, December 13, 2019 7:47 AM
To: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Cc: Haslbauer, Jennifer <jhaslbauer@adem.alabama.gov>; Thompson, David <DWT@adem.alabama.gov>; Chandler, Keith Edward <KECHANDL@SOUTHERNCO.COM>
Subject: RE: Malone water quality data request

Angie,

We are currently compiling the Malone dataset and will send to you when completed.

We also plan on collecting another season of data in 2020 which will probably run from March 1st through November 30th.

David

From: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Sent: Thursday, December 12, 2019 12:41 PM
To: Johnson, Chris L <CLJohnson@adem.alabama.gov>
Cc: Moore, David <djmoore@adem.alabama.gov>; Haslbauer, Jennifer <jhaslbauer@adem.alabama.gov>; Chandler, Keith Edward <KECHANDL@SOUTHERNCO.COM>
Subject: Malone water quality data request

Hi Chris,

Keith mentioned that the 2019 Malone data may be available. Would you mind sending it to us so we can incorporate it into the Harris draft water quality report?

Thanks!

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

APC Harris Relicensing

From: Moore, David <djmoore@adem.alabama.gov>
Sent: Tuesday, January 28, 2020 8:16 AM
To: Anderegg, Angela Segars
Cc: Haslbauer, Jennifer; Thompson, David; Chandler, Keith Edward
Subject: RE: Malone water quality data request
Attachments: ADEM Malone Data 051518-120319.xlsx

Angie,

Please find attached the data collected at Malone from 05/15/2018 – 12/03/19. As I previously mentioned, we plan on collecting data this year as well.

Let us know if you have any questions regarding the dataset.

David

From: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Sent: Friday, January 10, 2020 12:45 PM
To: Moore, David <djmoore@adem.alabama.gov>
Cc: Haslbauer, Jennifer <jhaslbauer@adem.alabama.gov>; Thompson, David <DWT@adem.alabama.gov>; Chandler, Keith Edward <KECHANDL@SOUTHERNCO.COM>
Subject: Re: Malone water quality data request

Hi David,

Just checking in to see when the Malone dataset will be available. We're working on the draft water quality report now and I want to make sure it gets included.

Thanks,

Angie

From: Moore, David <djmoore@adem.alabama.gov>
Sent: Friday, December 13, 2019 7:46 AM
To: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Cc: Haslbauer, Jennifer <jhaslbauer@adem.alabama.gov>; Thompson, David <DWT@adem.alabama.gov>; Chandler, Keith Edward <KECHANDL@SOUTHERNCO.COM>
Subject: RE: Malone water quality data request

Angie,

We are currently compiling the Malone dataset and will send to you when completed.

We also plan on collecting another season of data in 2020 which will probably run from March 1st through November 30th.

David

From: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Sent: Thursday, December 12, 2019 12:41 PM
To: Johnson, Chris L <CLJohnson@adem.alabama.gov>
Cc: Moore, David <djmoore@adem.alabama.gov>; Haslbauer, Jennifer <jhaslbauer@adem.alabama.gov>; Chandler, Keith Edward <KECHANDL@SOUTHERNCO.COM>
Subject: Malone water quality data request

Hi Chris,

Keith mentioned that the 2019 Malone data may be available. Would you mind sending it to us so we can incorporate it into the Harris draft water quality report?

Thanks!

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From:	APC Harris Relicensing
To:	"harrisrelicensing@southernco.com"
Bcc:	damon.abernethy@dcnr.alabama.gov; Steve Bryant - Alabama Department of Conservation and Natural Resources; todd.fobian@dcnr.alabama.gov; chris.greene@dcnr.alabama.gov; keith.henderson@dcnr.alabama.gov; mike.holley@dcnr.alabama.gov; matthew.marshall@dcnr.alabama.gov; amy.silvano@dcnr.alabama.gov; jhaslbauer@adem.alabama.gov; cljohnson@adem.alabama.gov; mlen@adem.alabama.gov; fal@adem.alabama.gov; djmoore@adem.alabama.gov; arsegars@southernco.com; dkanders@southernco.com; wtanders@southernco.com; jcarlee@southernco.com; kechandl@southernco.com; mcoker@southernco.com; cggoodma@southernco.com; gfhorn@southernco.com; ammcvica@southernco.com; tlmills@southernco.com; mhunter@alabamarivers.org; clowry@alabamarivers.org; gjobsis@americanrivers.org; kmo0025@auburn.edu; irwiner@auburn.edu; reuteem@auburn.edu; lgallen@balch.com; jhancock@balch.com; allan.creamer@ferc.gov; rachel.mcnamara@ferc.gov; sarah.salazar@ferc.gov; monte.terhaar@ferc.gov; kate.cosnahan@kleinschmidtgroup.com; colin.dinken@kleinschmidtgroup.com; amanda.fleming@kleinschmidtgroup.com; henry.mealing@kleinschmidtgroup.com; jason.moak@kleinschmidtgroup.com; kelly.schaeffer@kleinschmidtgroup.com; jessecunningham@msn.com; sforehand@russelllands.com; 1942jthompson420@gmail.com; nancyburnes@centurylink.net; lgarland68@aol.com; rbmorris333@gmail.com; mitchell.reid@tnc.org; richardburnes3@gmail.com; eilandfarm@aol.com; eveham75@gmail.com; wmcampbell218@gmail.com; jec22641@aol.com; chuckdenman@hotmail.com; carolbuggknight@hotmail.com; donnamat@aol.com; harry.merrill47@gmail.com; mhpwedowee@gmail.com; midwaytreasures@bellsouth.net; inspector_003@yahoo.com; clark.maria@epa.gov; decker.chris@epa.gov; gordon.lisa-perras@epa.gov; holliman.daniel@epa.gov; jeff_duncan@nps.gov; Jack West
Subject:	HAT 2 - Draft Water Quality Study Report
Date:	Wednesday, March 11, 2020 11:07:31 AM
Attachments:	2020-03-09 DRAFT Harris Water Quality Study Report.pdf Appendix B - 2017-2019 Alabama Power WQ Data.xlsx

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HAT 2,

Attached is the Draft Harris Water Quality Study Report. This report can also be found at www.harrisrelicensing.com. In the study plan, Alabama Power committed to distributing this draft report to HAT 2 participants in March. As you may recall, Alabama Power will file the Initial Study Report (ISR) in April 2020, which will include reports such as this one as well as other draft study reports. At that time, Alabama Power will request official comments on the ISR and draft study reports.

If you have any questions, please contact me at 205-257-2251 or ARSEGARS@southernco.com.

Thank you,

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: Anderegg, Angela Segars
To: "Lydia Mayo"
Subject: FW: HAT 2 - Draft Water Quality Study Report
Date: Monday, March 16, 2020 1:22:58 PM
Attachments: 2020-03-09 DRAFT Harris Water Quality Study Report.pdf
Appendix B - 2017-2019 Alabama Power WQ Data.xlsx

Hi Lydia,

This is the email with attachments that went out last week.

Thanks!

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: APC Harris Relicensing
Sent: Wednesday, March 11, 2020 11:08 AM
To: 'harrisrelicensing@southernco.com' <harrisrelicensing@southernco.com>
Subject: HAT 2 - Draft Water Quality Study Report

HAT 2,

Attached is the Draft Harris Water Quality Study Report. This report can also be found at www.harrisrelicensing.com. In the study plan, Alabama Power committed to distributing this draft report to HAT 2 participants in March. As you may recall, Alabama Power will file the Initial Study Report (ISR) in April 2020, which will include reports such as this one as well as other draft study reports. At that time, Alabama Power will request official comments on the ISR and draft study reports.

If you have any questions, please contact me at 205-257-2251 or ARSEGARS@southernco.com.

Thank you,

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: Anderegg, Angela Segars
To: Mayo, Lydia
Subject: RE: APC Harris Relicensing <g2apchr@southernco.com>
Date: Monday, March 23, 2020 9:49:30 AM

Hi Lydia,

Yes, you were on the email distribution for last Friday's email. I will send it to you again and have you added to all of the HAT lists.

Thanks,

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: Mayo, Lydia <Mayo.Lydia@epa.gov>
Sent: Monday, March 23, 2020 9:27 AM
To: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Subject: Re: APC Harris Relicensing <g2apchr@southernco.com>

Hi Angie.
Can you check to see if I was on the list for the 3/20 email re: Harris Relicensing - Initial Study Report meetings? Perhaps just add me to everything - that might make it easier.
Thanks.
Lydia

From: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Sent: Tuesday, March 17, 2020 4:08 PM
To: Mayo, Lydia <Mayo.Lydia@epa.gov>
Subject: RE: APC Harris Relicensing <g2apchr@southernco.com>

Will do!

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: Mayo, Lydia <Mayo.Lydia@epa.gov>
Sent: Monday, March 16, 2020 3:44 PM

To: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Subject: Re: APC Harris Relicensing <g2apchr@southernco.com>

EXTERNAL MAIL: Caution Opening Links or Files

Thanks Angie. It looks like most of the HAT meetings are finished meeting but the files/initial study report meetings are coming up. I might like to get information on those when available.

From: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Sent: Monday, March 16, 2020 2:22 PM
To: Mayo, Lydia <Mayo.Lydia@epa.gov>
Subject: RE: APC Harris Relicensing <g2apchr@southernco.com>

Hi Lydia,

You are on our overall stakeholder list, but you are not on any of our Harris Action Team (HAT) lists. The email you are referencing from last Wednesday was sent to HAT 2 – Water Quality and Use. I will add you to this HAT and forward last week's email. If you would like to be included on any of the other HAT's, just let me know. Info on the HATs is on our website: www.harrisrelicensing.com [gcc01.safelinks.protection.outlook.com].

Thanks!

Angie Anderegg
Hydro Services
(205)257-2251
arsegars@southernco.com

From: Mayo, Lydia <Mayo.Lydia@epa.gov>
Sent: Monday, March 16, 2020 1:16 PM
To: Anderegg, Angela Segars <ARSEGARS@southernco.com>
Subject: APC Harris Relicensing <g2apchr@southernco.com>

EXTERNAL MAIL: Caution Opening Links or Files

Hi Angie.
Could you double check your email list to see if I'm included? I don't think I received the last email you sent out to the group on Wednesday, March 11, 2020 12:08 PM.
Thank you!
Lydia

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