

# **R.L. Harris Dam Relicensing FERC No. 2628**

**Initial Study Report Meeting  
April 28, 2020**



# Welcome and Roll Call

## Roll Call by Organization





# Phone Etiquette

- Be patient with any technology issues
- Follow the facilitator's instructions
- Phones will be muted during presentations
- Follow along with PDF of presentations
- Write down any questions you have for the designated question section
- Clearly state name and organization when asking questions
- Facilitator will ask for participant questions following each section of the presentation



# Agenda



- ❑ 9 AM Introduction/Roll Call/Safety Moment
- ❑ Initial Study Report Overview
  - Cultural Resources (HAT 6)
  - Recreation Evaluation (HAT 5)
  - Project Lands Evaluation (HAT 4)
  - Operating Curve Feasibility Analysis and Downstream Release Alternatives (HAT 1)
  - Water Quality and Erosion and Sedimentation (HAT 2)
  - Threatened and Endangered Species; Downstream Aquatic Habitat; Aquatic Resources (HAT 3)
- ❑ Next Steps in the FERC Process



# HAT 6 Cultural Resources



# CULTURAL RESOURCES PROGRAMMATIC AGREEMENT AND HISTORIC PROPERTIES MANAGEMENT PLAN



## Study Purpose and Methods Summary

- Develop Historic Properties Management Plan and Programmatic Agreement.

## Study Progress

- Identify Sites for Further Evaluation and Initial Evaluation Methods
- Propose Historic Properties Management Plan Outline
- Five HAT Meetings, including one Site Visit
- Inadvertent Discovery Plan, Traditional Cultural Properties Identification Plan Filed in April 2020

# CULTURAL RESOURCES PROGRAMMATIC AGREEMENT AND HISTORIC PROPERTIES MANAGEMENT PLAN



## Variance from Study Plan and Schedule

- Alabama Power continues to work with the Alabama SHPO for concurrence regarding the Harris APE
- File the final APE (with maps) by June 30, 2020

## Remaining Activities /Modifications/Other Proposed Studies

- Survey of Sites Identified for Further Evaluation (96 sites)
- Finalize Area of Potential Effects (June 2020)
- Continue developing Historic Properties Management Plan
- Complete survey work and TCP identification (February 2021)
- Complete eligibility assessments for known cultural resources (July 2021)
- Issue determination of effect on historic properties (July 2021)
- Draft HPMP (July 2021)
- No additional studies have been proposed beyond that in FERC's SPD

**QUESTIONS?**



# HAT 5 Recreation Evaluation





# RECREATION EVALUATION



## Study Purpose and Summary of Methods

- Evaluate baseline recreation at the Harris Project and downstream
  - Gather baseline information on existing Project recreation facilities, existing Project recreational use and capacity, and estimated future demand and needs at the Harris Project
  - Determine how flows in the Tallapoosa River downstream of Harris Dam affect recreational users and their activity

## Study Progress

- Lake Harris Public Access User Counts – March to December 2019
- Lake Harris Public Access Questionnaires – May to December 2019
- Tallapoosa River User and Surveys – May to October 2019
- Skyline Use Data from ADCNR – August 2019
- Recreation Facilities Inventory – October 2019
- HAT 5 Meeting to discuss Tallapoosa River Landowner Survey Research Plan (Research Plan) - December 11, 2019
- Downstream Landowner and Anonymous User Surveys – February – April 2020



# RECREATION EVALUATION –DETAILS OF LAKE HARRIS PUBLIC ACCESS, USER COUNTS



- 1,368 Shifts
- Paper Forms Vehicle and Activity Counts
- “Instantaneous Count”
- Reduced Flat Rock Park Schedule
- Daylight Savings Time
- Data Cleaning
- Data Analysis



# RECREATION EVALUATION –DETAILS OF LAKE HARRIS PUBLIC ACCESS, QUESTIONNAIRES



- 1,357 Completed
- Majority Collected at Highway 48, Flat Rock Park, and Big Fox Creek
- Four Questions
- Intercept Technique
- Paper Forms



# RECREATION EVALUATION – TALLAPOOSA RIVER

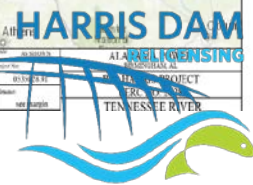
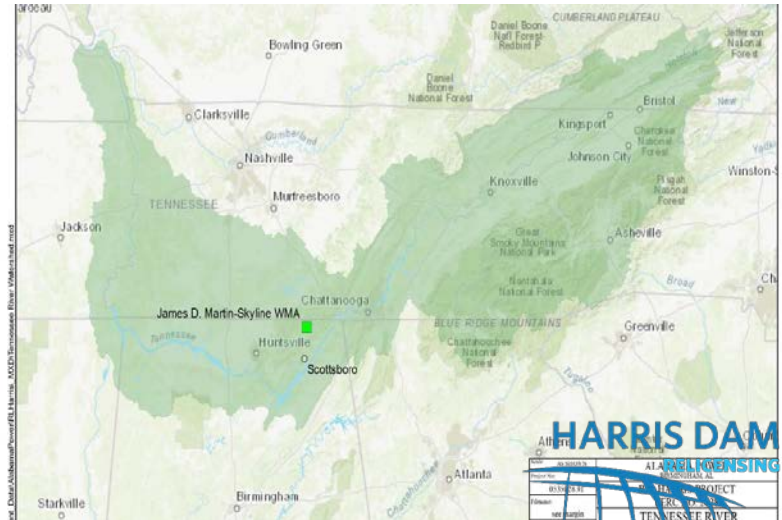
## USER, METHODS



- ❑ Calculated Total Visitation (Effort) and Daily Use
- ❑ Measured User Attitudes/Perceptions About Instream Flow and Trip Satisfaction
- ❑ Obtained Catch Information from Anglers
- ❑ Determined How Instream Flow Affected Effort, Perception of Instream Flow and Trip Satisfaction, and Species of Fish Targeted, Caught, and Retained



# Recreation Evaluation- Skyline Use Data (ADCNR)



# RECREATION EVALUATION –DETAILS OF LAKE HARRIS PUBLIC ACCESS, INVENTORY



- ❑ Inventoried and Mapped
- ❑ Summarized Who Owns, Operates, and Manages
- ❑ Evaluated the Condition of the Recreation Sites and Facilities
  - Opportunities for Persons with Disabilities to Participate in Recreation, Where Feasible
  - Public Safety Features



HARRIS DAM  
RELICENSING



# RECREATION EVALUATION – TALLAPOOSA RIVER LANDOWNERS SURVEY RESEARCH PLAN



- Downstream Landowners
- Recreational Users
- December 11, 2019 HAT 5 Meeting
- December 19, 2019 Tallapoosa River Landowner Survey Research Plan



# PREVIEW- DRAFT RECREATION EVALUATION REPORT



- ⌘ Introduction
- ⌘ Background
- ⌘ Methods
  - ⚡ Data Collection
  - ⚡ Analysis
- ⌘ Results
  - ⚡ Existing Use
  - ⚡ Future Use
  - ⚡ Needs
- ⌘ Conclusions
- ⌘ References
- ⌘ Appendices





# RECREATION EVALUATION



## Variance from the Study Plan and Schedule

- Added the Tallapoosa River Downstream Landowner Survey and Tallapoosa River Recreation User Survey
- File the Draft Harris Project Recreation Evaluation report in August 2020 (rather than June 2020)
- March 2020 HAT 1 meeting cancelled due to COVID-19

## Remaining Activities/Modifications/Other Proposed Studies

- Recreation Data Reports from Subcontractors
- Draft Recreation Evaluation Study Report
- No additional studies have been proposed beyond that in FERC's SPD

# QUESTIONS?



# HAT 4 Project Lands Evaluation





# PROJECT LANDS EVALUATION

## Study Purpose and Methods Summary

- ❑ **Phase I:** Identified lands to be added to, removed from, or reclassified within the current Harris Project Boundary.
  - HAT 4 meeting, desktop analysis, draft map of changes
- ❑ **Phase II:** develop a Wildlife Management Program (WMP) and a Shoreline Management Plan (SMP) to be filed with License Application.
  - Utilizes results from Phase I evaluation, incorporation of study data

## Study Progress

- ❑ Presented proposed land changes, including tract by tract description and maps
- ❑ HAT 4 meeting to discuss proposed changes (09/11/2019)
- ❑ Requested feedback from HAT 4 regarding the Project Lands proposal
- ❑ Evaluated acreage at Skyline to determine suitability for bobwhite quail habitat
- ❑ Prepared Draft Phase 1 Project Lands Evaluation Study Report
- ❑ Conducted a botanical inventory of a 20-acre parcel at Flat Rock (field work & final report complete)



# PROJECT LANDS EVALUATION



## Variance from the Study Plan and Schedule

- No variance from the study plan or schedule.

## Remaining Activities/Modification/Other Proposed Studies

- Review comments on Draft Phase 1 Project Lands Study Report and modify Final Report, as applicable
- Conduct the botanical inventory survey on additional 21 acres adjacent to previously surveyed area at Flat Rock Park (Spring and Fall 2020; report in January 2021)
- Complete Phase 2 methods and develop draft Wildlife Management Plan and Shoreline Management Plan
- No additional studies have been proposed beyond that in FERC's SPD

**QUESTIONS?**



# HAT 1 Project Operations

- ❑ Operating Curve Change Feasibility Analysis
- ❑ Downstream Release Alternatives



# OPERATING CURVE CHANGE FEASIBILITY ANALYSIS



## Study Purpose and Methods Summary

- To evaluate, in increments of 1 foot, from 786 feet msl to 789 feet msl, Alabama Power's ability to increase the winter pool elevation and continue to meet Project purposes

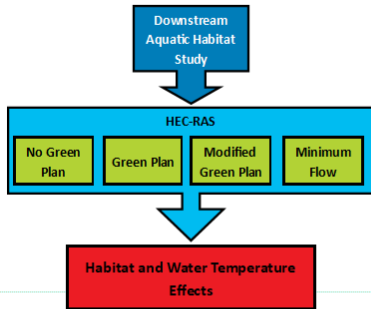
## Study Progress

- RES-Sim outflow hydrographs developed
- HEC-RAS model complete; all four winter curve changes have been modeled with design flood
- Navigation, ADROP and Hydrobudget analyses
- Flood frequency analysis
- Draft report distributed to stakeholders

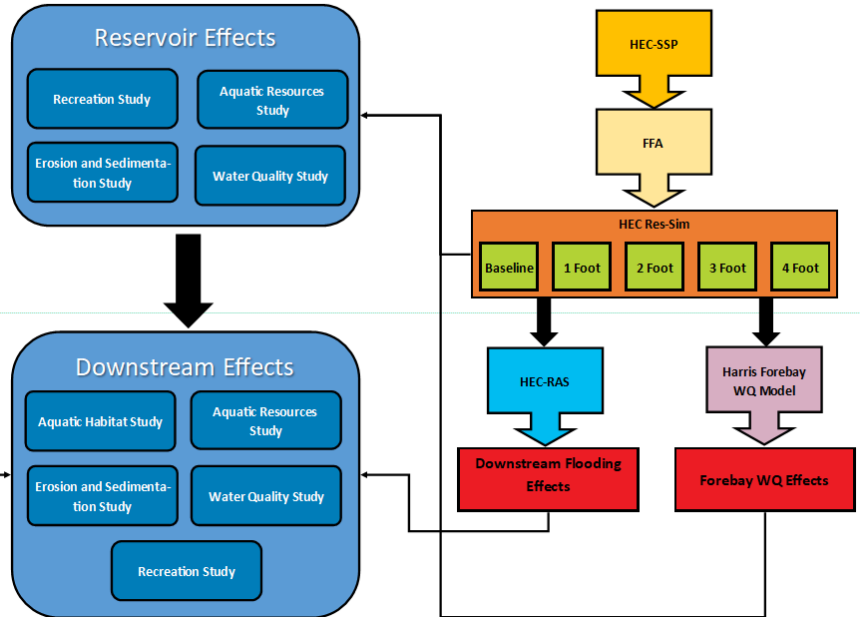




### Downstream Release Alternatives Study

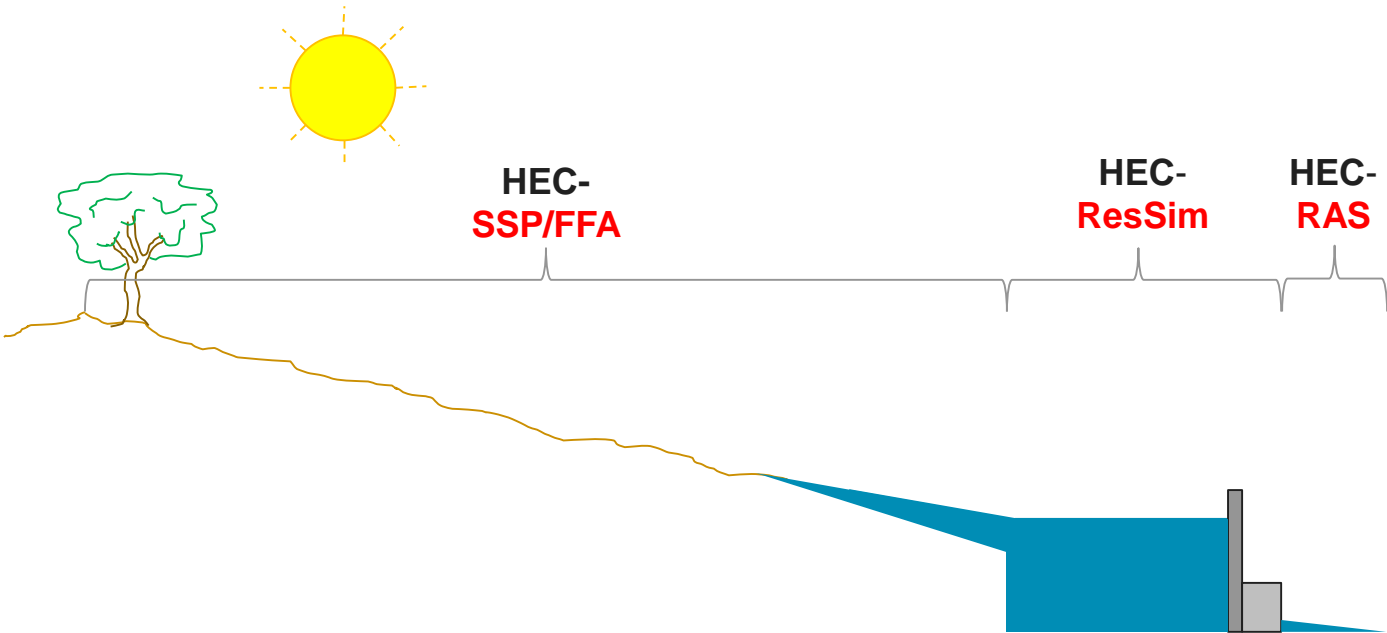


### Operating Curve Change Feasibility Analysis Study





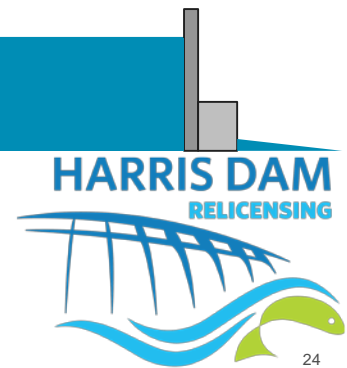
Where the models are used...



**HEC-  
SSP/FFA**

**HEC-  
ResSim**

**HEC-  
RAS**

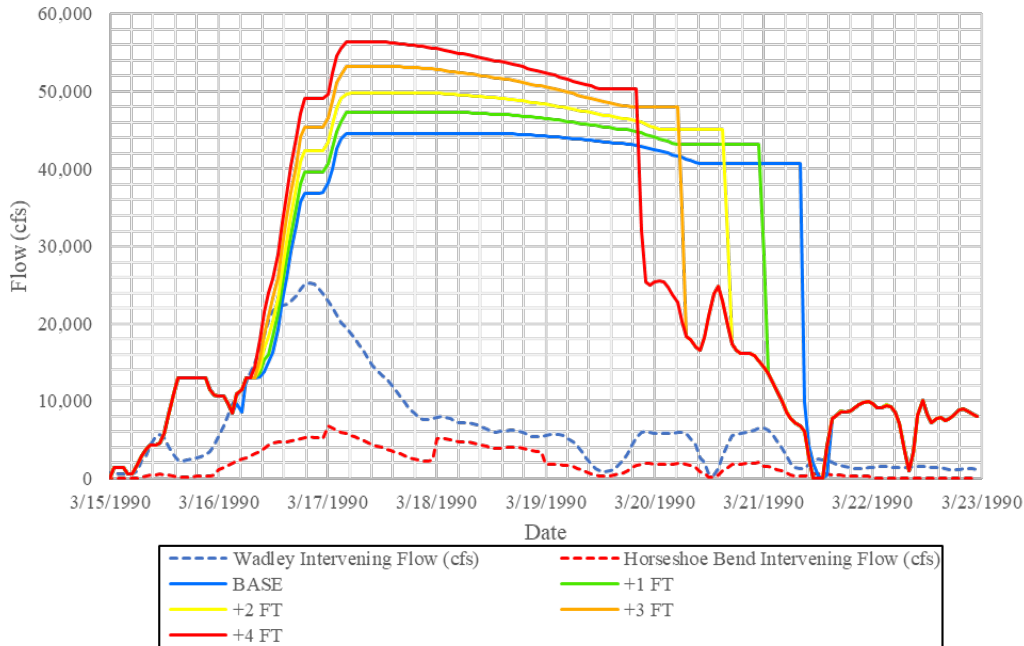




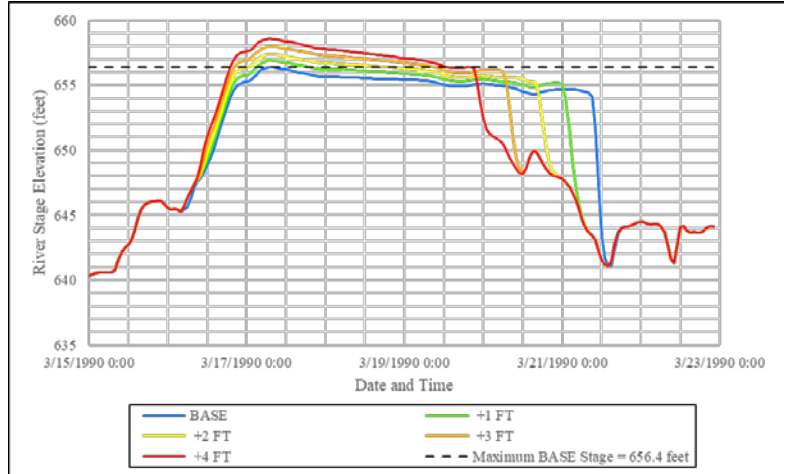
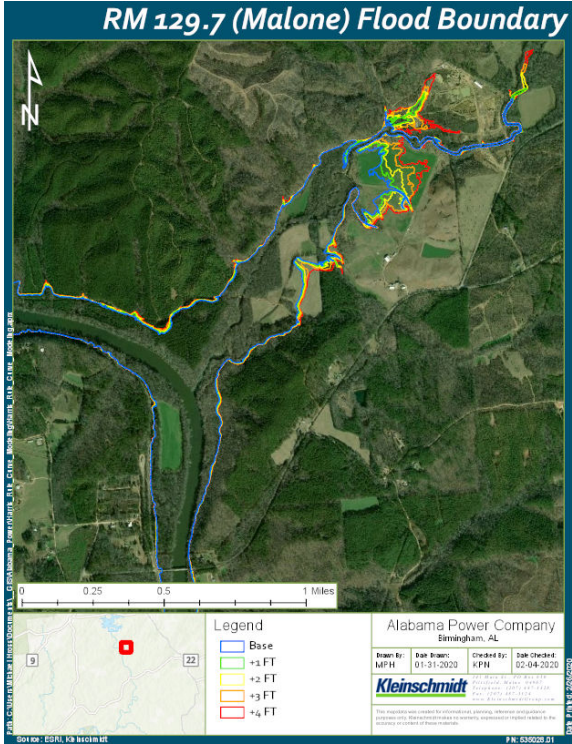
# HEC-RAS – MODELED FLOWS



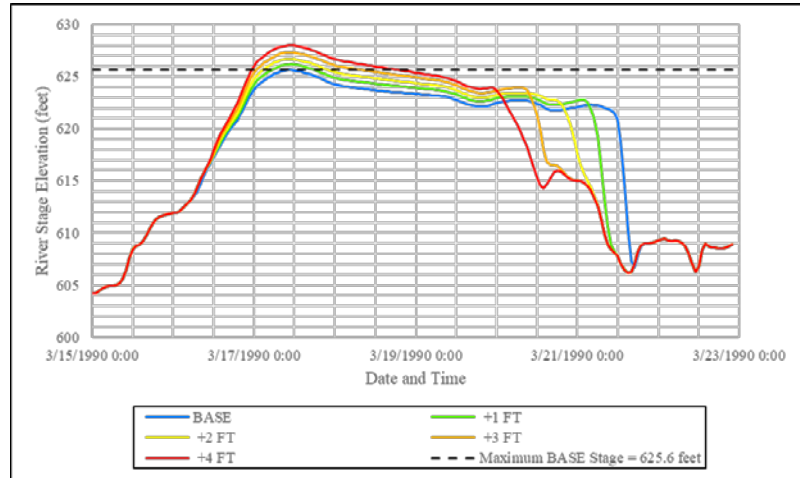
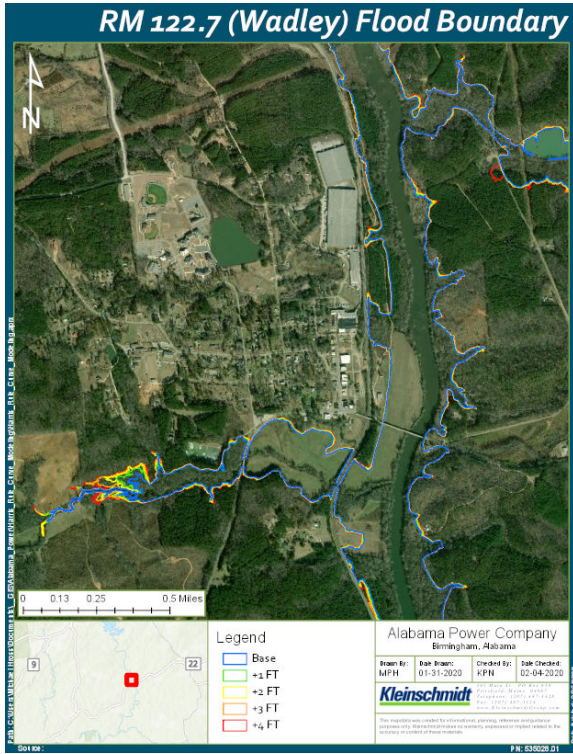
- Base scenario (i.e., existing) and 4 rule curve simulations
  - +1 ft, +2 ft, +3 ft, +4ft
- Intervening flows included in model
  - Flows contributed to river by watershed downstream of the dam
  - Between Harris Dam and Wadley, AL
  - Between Wadley, AL and Horseshoe Bend



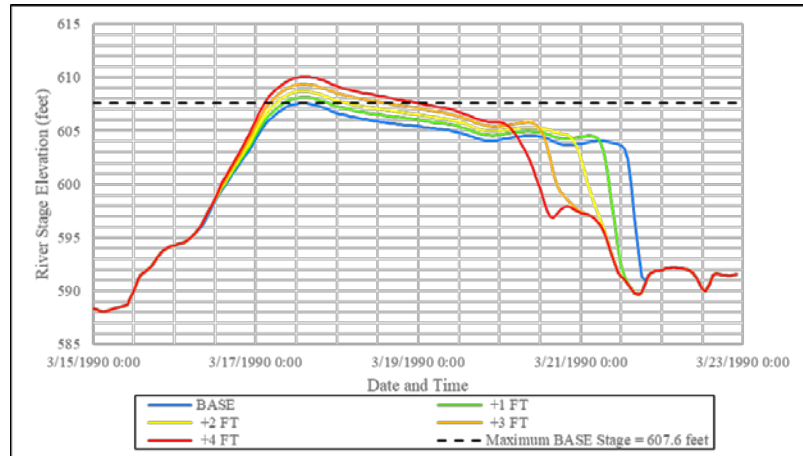
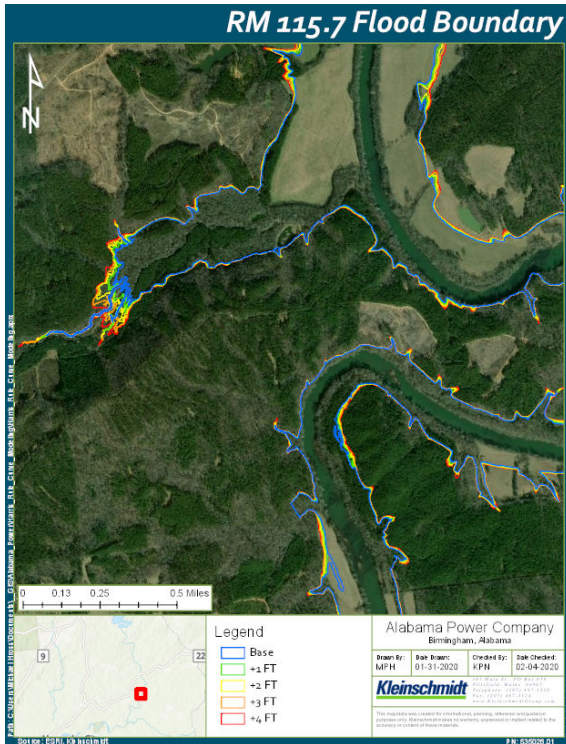
# HEC-RAS – MODELING RESULTS



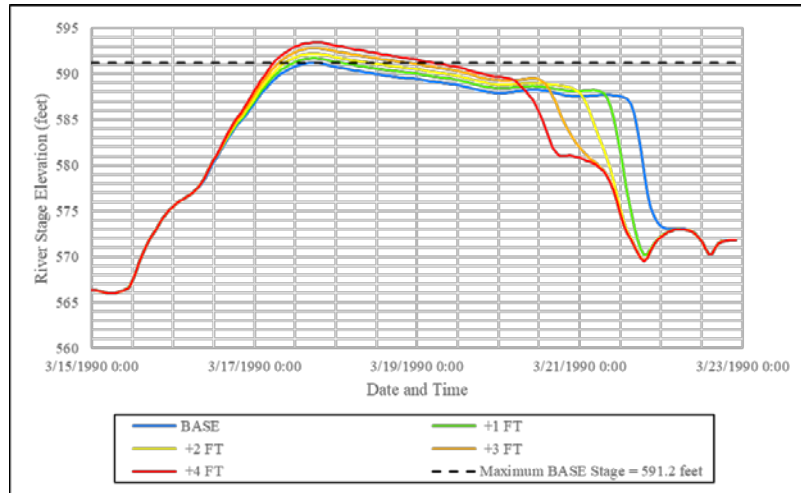
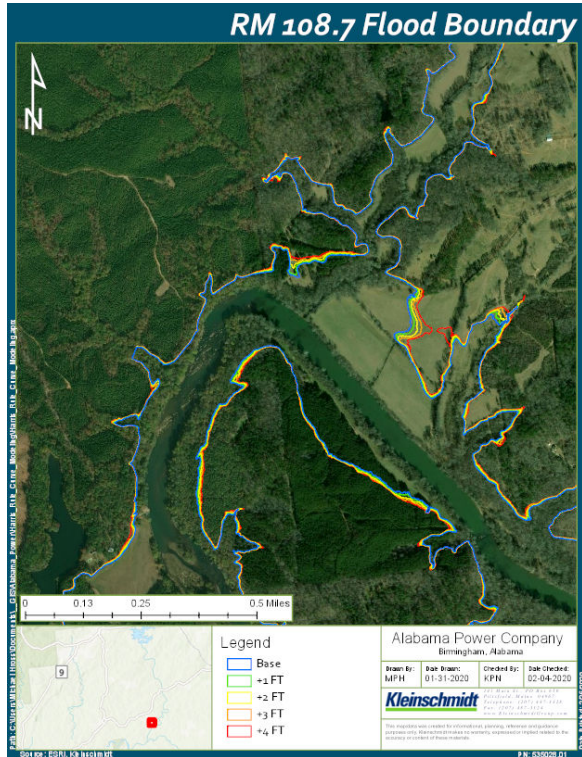
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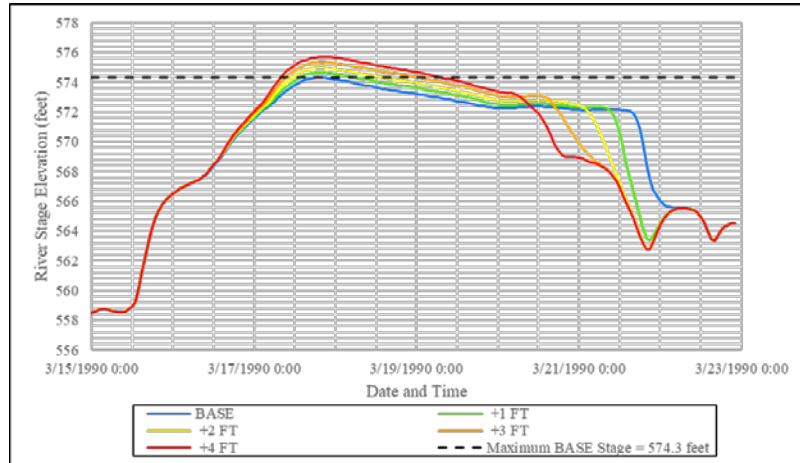
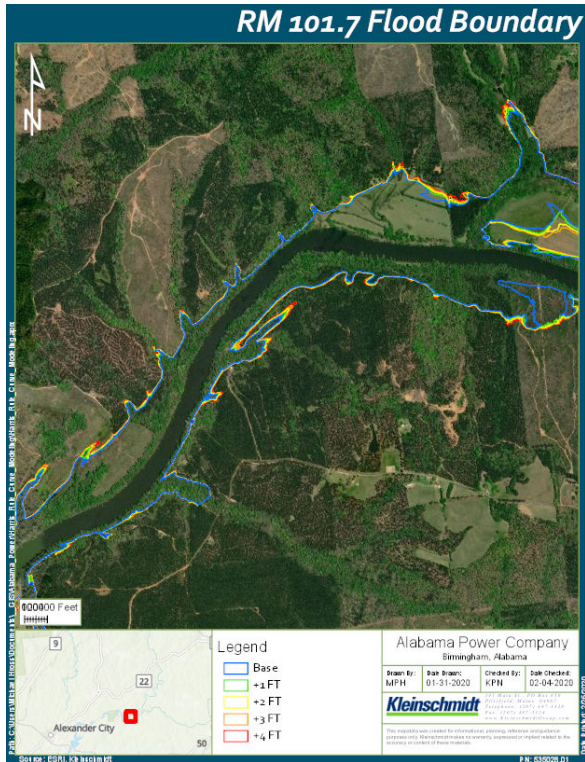
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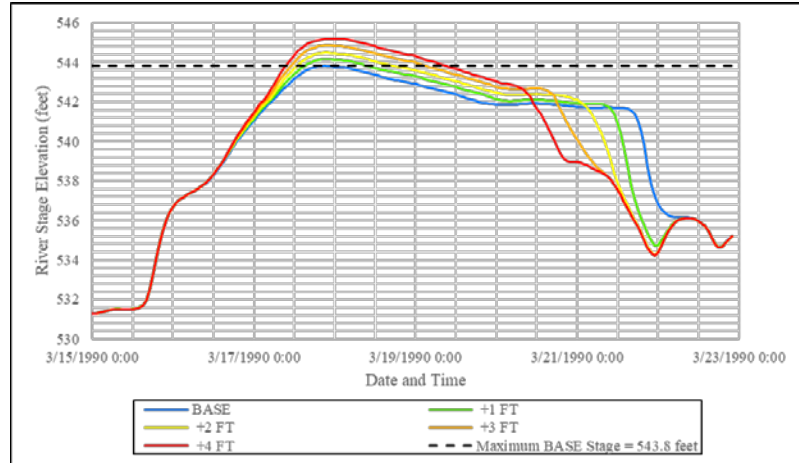
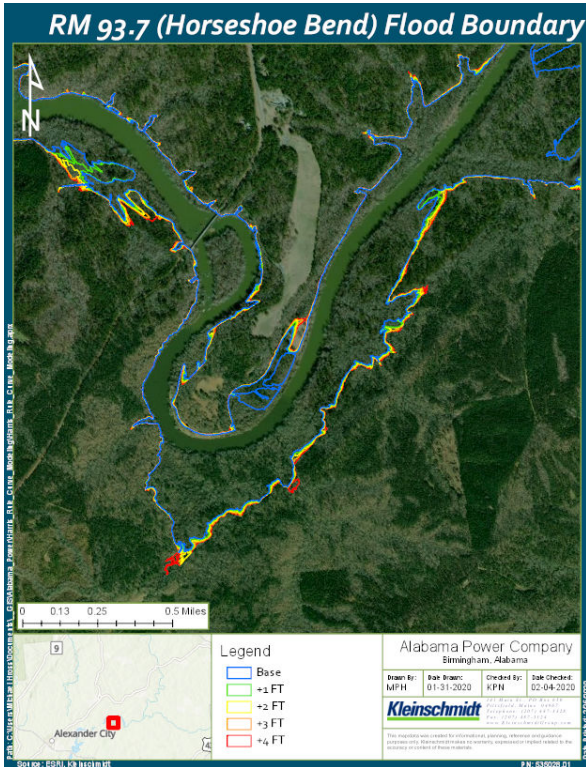
# HEC-RAS – MODELING RESULTS



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# HEC-RAS – MODELING RESULTS



# HEC-RAS – MODEL RESULTS



Location	Distance from Dam (miles)	Max Water Surface Rise (feet)			
		+ 1 foot	+ 2 feet	+ 3 feet	+ 4 feet
RM 129.7 (Malone, AL)	7	0.5	1.0	1.6	2.2
RM 122.7 (Wadley, AL)	14	0.5	1.1	1.7	2.4
RM 115.7	21	0.6	1.1	1.8	2.5
RM 108.7	28	0.5	1.0	1.6	2.2
RM 101.7	35	0.4	0.7	1.1	1.4
RM 93.7 (Horseshoe Bend)	43	0.3	0.7	1.0	1.4

Location	Distance from Dam (miles)	Duration above Baseline Condition Max Elevation (hours)			
		+ 1 foot	+ 2 feet	+ 3 feet	+ 4 feet
RM 129.7 (Malone, AL)	7	15	43	61	67
RM 122.7 (Wadley, AL)	14	12	19	32	43
RM 115.7	21	13	21	34	46
RM 108.7	28	14	26	38	48
RM 101.7	35	17	27	40	48
RM 93.7 (Horseshoe Bend)	43	18	29	39	47

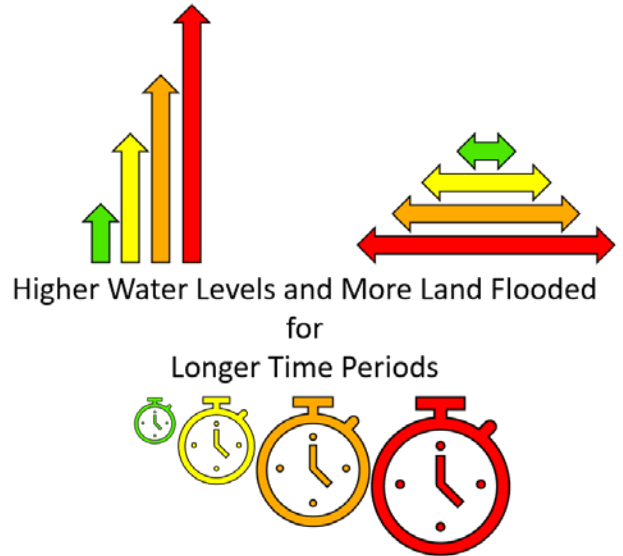




# HEC-RAS - SUMMARY



- ❑ Any change in the operating curve causes:
  - ❑ increased maximum stage
  - ❑ increase in inundation,
  - ❑ increase in duration
- ❑ Most flooding occurs where tributaries enter Tallapoosa River
- ❑ Will need to evaluate effects on downstream structures



# OPERATING CURVE CHANGE FEASIBILITY ANALYSIS



## Variance from Study Plan and Schedule

- March 2020 HAT 1 meeting cancelled due to COVID-19

## Remaining Activities/Modification/Other Proposed Studies

- Draft Phase 1 study report comments due June 11, 2020
- Begin Phase 2 analysis on effects of winter operating curve on other resources
- Present methods for the Lake Recreation Structure Usability at Winter Pool Alternatives phase 2 analysis to HAT 1 and HAT 5
- Present methods for evaluating effects on inundated structures downstream of Harris Dam
- No additional studies have been proposed beyond that in FERC's SPD

**QUESTIONS?**



# DOWNSTREAM RELEASE ALTERNATIVES



## Study Purpose and Methods Summary

- To evaluate the effects of pre- and post- implementation of Green Plan operations, a continuous minimum flow of 150 cfs, and an alternative/modified Green Plan operation on Project resources.

## Study Progress

- RES-Sim outflow hydrographs developed
- HEC-RAS model complete;
- Navigation, ADROP and Hydrobudget analyses
- Draft report distributed to stakeholders



# HEC-RAS – MODELED SCENARIOS



- ❑ 3 Downstream Release Alternative Plans
  - Pre-Green
  - Green Plan
  - 150 cfs Continuous Minimum Flow
- ❑ 2001 Selected as an average year
  - Intervening flows included in model
    - Flows contributed to river by watershed downstream of the dam
    - Between Harris Dam and Wadley, AL
    - Between Wadley, AL and Horseshoe Bend
  - Intervening flow data from USGS gages at Wadley, 02414500 and near Horseshoe Bend, 02414715



# PHASE 1 MODELING RESULTS



- Lake Level Impacts: none
- Generation Impacts
  - Pre-Green Plan: + \$357,000 per year
  - Green Plan: none (current operation mode)
  - 150 cfs Continuous Minimum Flow: undetermined
- Flood Control Impacts: none
- Navigation Impacts: none
- Drought Operation Impacts: none



# DOWNSTREAM RELEASE ALTERNATIVES



## Variance from Study Plan and Schedule

- March 2020 HAT 1 meeting cancelled due to COVID-19

## Remaining Activities/Modification/Other Proposed Studies

- Draft Phase 1 study report comments due June 11, 2020
- Begin Phase 2 analysis on effects of downstream release alternatives on other resources
- No additional studies have been proposed beyond that in FERC's SPD

# QUESTIONS?



# HAT 2 Water Quality and Use

- ❑ Water Quality Study
- ❑ Erosion and Sedimentation Study



# WATER QUALITY



## Study Purpose and Methods Summary

- ❑ Summarizes data collected from 2017 through 2019 from Alabama Power, Alabama Department of Environmental Management (ADEM), and Alabama Water Watch (AWW)
- ❑ Supports the required 401 Water Quality Certification by conducting dissolved oxygen and water temperature monitoring in the tailrace and Harris Reservoir forebay
- ❑ Identifies any possible areas of water quality concern by HAT 2 participants

## Study Progress

- ❑ Held HAT 2 meeting on September 11, 2019
- ❑ HAT 2 stakeholders identified one location of water quality concern: the Foster's Bridge area at Lake Harris
- ❑ Distributed Draft Water Quality Report March 9, 2020
- ❑ Collected dissolved oxygen (DO) and temperature data at two locations downstream of the dam and monthly vertical profiles in the Harris Reservoir forebay





# WATER QUALITY



## Data Collection Results

- ❑ Generation data immediately downstream of Harris Dam in 2018 and 2019 had dissolved oxygen (DO) readings greater than 5 milligrams per liter (mg/L) for 94 percent of all measurements
- ❑ Continuous monitoring for generation and non-generation in 2019 had DO levels greater than 5 mg/L for 99.9 percent of all measurements
- ❑ Several low DO level readings in 2017 can be attributed to severe drought that impacted the Harris Reservoir in the summer and fall of 2016, where inflows to the lake were at historic lows, causing stronger stratification of Lake Harris
- ❑ Data collected by ADEM at Harris Dam, Wadley, and Horseshoe Bend had DO levels above 5 mg/L at each sampling event
- ❑ Continuous monitoring at Malone indicated that the DO levels were greater than 5 mg/L for 99 percent of the monitoring period

# WATER QUALITY



## Variance from the Study Plan and Schedule

- Alabama Power intends to submit an application to ADEM for the 401 Water Quality Certification in April 2021, not in April 2020 as noted in the FERC SPD.

## Remaining Activities/Modification/Other Proposed Studies

- Comments on Draft Water Quality Study Report due June 11, 2020
- Review comments on the Draft Water Quality Study Report and modify the Final Report, as applicable
- Prepare the 401 WQC application and submit to ADEM in April 2021
- No additional studies have been proposed beyond that in FERC's SPD

# QUESTIONS?



# EROSION AND SEDIMENTATION



## Study Purpose and Methods Summary

- Identify any problematic erosion sites and sedimentation areas and determine the likely causes
  - Identify erosion and sedimentation sites
  - Assess lake erosion 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 Progress

- May 1, 2019 email to HAT 2 members distributed maps of sites identified for assessment and requested additional sites
- September 11, 2019 HAT 2 meeting – Reviewed study plan and last call for erosion and sedimentation sites
- Lake erosion site assessments performed in December 2019
- Bank erosion susceptibility assessment performed in May 2019
- Draft Erosion and Sedimentation Study Report distributed to HAT 2 on March 17, 2020



# EROSION AND SEDIMENTATION



## Lake Harris Erosion Assessment

☐ 24 sites assessed

- 8 sites – no erosion
- 16 sites with erosion due to land use (12), anthropogenic (6), and/or natural factors independent of Project operations (8).

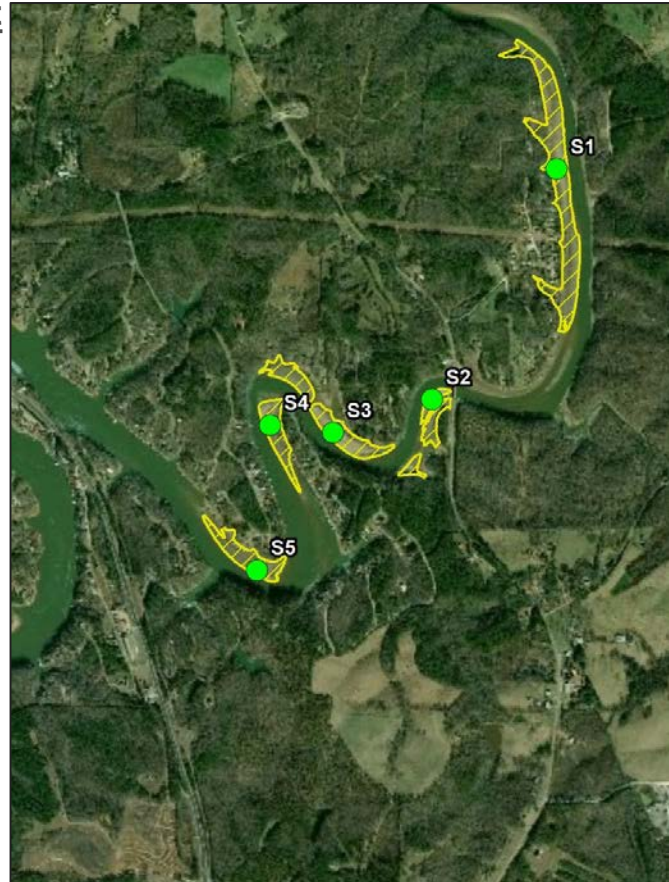


# EROSION AND SEDIMENTATION



## Lake Harris Sedimentation Assessment

- ❑ 9 sites assessed – most in Little Tallapoosa arm
- ❑ GIS analysis estimated 120 acres
- ❑ 25% of Little Tallapoosa River basin is hay/pasture fields



# EROSION AND SEDIMENTATION



## Tallapoosa River Assessment

- High Definition Stream Survey (HDSS)
- Left and right banks scored independently
- Only one area was impaired to non-functional

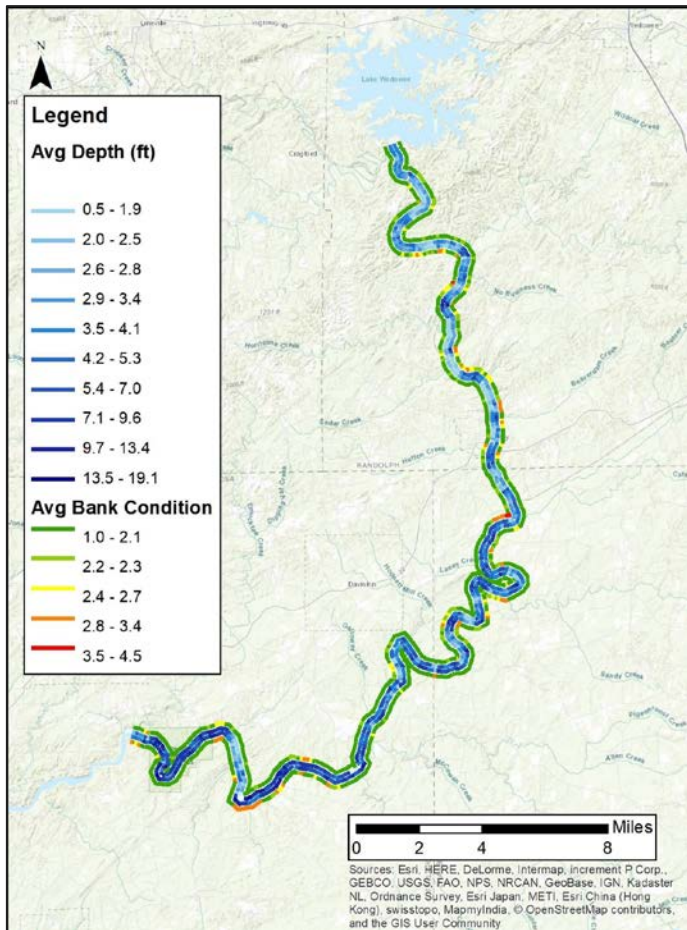
Bank Condition Score	Bank Condition Class	Description	Erosion Potential	Human Impact
1	Fully Functional	Banks with low erosion potential, such as, bedrock outcroppings, heavily wooded areas with low slopes and good access to flood plain.	Low  to  High	Low  to  High
2	Functional	Banks in good condition with minor impacts present, such as, forested with moderate bank angles and adequate access to flood plains.		
3	Slightly Impaired	Banks showing moderate erosion impact or some impact from human development.		
4	Impaired	Surrounding area consists of more than 50% exposed soil with low riparian diversity or surface protection. Obvious impacts from cattle, agriculture, industry, and poorly protected streambanks		
5	Non-functional	Surrounding area consists of short grass or bare soil and steep bank angles. Evidence of active bank failure with very little stabilization from vegetation. Contribution of sediment likely to be very high in these areas.		



# EROSION AND SEDIMENTATION



# EROSION AND SEDIMENTATION





# EROSION AND SEDIMENTATION



## Variance from the Study Plan and Schedule

- No variance from the study plan or schedule.

## Remaining Activities/Modification/Other Proposed Studies

- Draft Erosion and Sedimentation Study Report comments due June 11, 2020
- Additional reconnaissance at Lake Harris sedimentation site during full (summer) pool conditions to determine if any nuisance aquatic vegetation is present
- No additional studies have been proposed beyond that in FERC's SPD

**QUESTIONS?**



# HAT 3 Fish and Wildlife

- ❑ Threatened and Endangered Species Study
- ❑ Downstream Aquatic Habitat Study
- ❑ Aquatic Resources Study



# THREATENED & ENDANGERED SPECIES



## Study Purpose and Methods Summary

- ❑ Determine if listed species occur in the Project Area and identify potential project impacts
  - Compile a list of T&E species and critical habitats
  - Review literature of agreed upon species to gather habitat requirement data and describe historical range.
  - Identify factors affecting the status of each species.
  - Use GIS to map habitat information to determine possible areas in the geographic scope that T&E species may utilize.
  - Summarize collected data of areas within the geographic scope that provide habitat requirements for T&E species.
  - Determine if these areas are potentially impacted by Harris Project operations.
  - Perform field surveys, as appropriate

## Study Progress

- ❑ August 27, 2019 – Reviewed Study Plan and discussed need for field surveys
- ❑ Surveyed for fine-lined pocketbook (mussel) in Tallapoosa River (November 2019)
- ❑ Draft Threatened and Endangered Species Desktop Assessment complete



# THREATENED & ENDANGERED DESKTOP STUDY



## Federally Threatened and Endangered Species Potentially Occurring in AL Counties within Project Vicinity

- 20 species: 7 threatened, 13 endangered
  - Harris – 7 species
    - Red-cockaded woodpecker
    - Southern pigtoe and fine-lined pocketbook
    - Indiana bat and northern long-eared bat
    - Little amphianthus and white fringeless orchid
  - Skyline – 16 species
    - Palezone shiner and spotfin chub
    - 8 mussel species
    - Indiana bat, northern long-eared bat, and gray bat
    - White fringeless orchid, Price's potato bean, Morefield's leather flower



# THREATENED & ENDANGERED DESKTOP STUDY



## HABITAT OCCURRENCE

SPECIES	SKYLINE	LAKE HARRIS
Fine-lined pocketbook		✓
Southern pigtoe		✓
Gray bat	✓	
Indiana bat	✓	✓
Northern long-eared bat	✓	✓
Little amphianthus		✓
Price's potato bean	✓	
White fringeless orchid	✓	✓
Red-cockaded woodpecker		✓



# THREATENED & ENDANGERED DESKTOP STUDY



## USFWS Designated Critical Habitat

- Fine-lined pocketbook
- Indiana bat
- Rabbitsfoot
- Slabside pearlymussel
- Southern pigtoe
- Spotfin chub



# THREATENED & ENDANGERED SPECIES



## Variance from the Study Plan and Schedule

- March 2020 HAT 3 meeting was cancelled due to COVID-19

## Remaining Activities/Modifications/Other Proposed Studies

- Comments on Draft Threatened and Endangered Species Desktop Assessment due June 11, 2020
- Additional consultation with USFWS as needed
- Additional surveys in spring/summer 2020: palezone shiner and fine-lined pocketbook
- No additional studies have been proposed beyond that in FERC's SPD

**QUESTIONS?**



# DOWNSTREAM AQUATIC HABITAT



## Study Purpose and Methods Summary

- To develop a model that describes the relationship between Green Plan operations and aquatic habitat.

## Study Progress

- Use HEC-RAS to evaluate the effect of current operations on the amount and persistence of wetted aquatic habitat, especially shoal/shallow-water habitat.
  - Model runs of Green Plan vs Pre-Green Plan operations
- Mesohabitat analysis (classified as riffle, run, or pool) complete
- 20 Level/temperature loggers deployed in 2019
- HAT 3 March 20, 2019 Meeting – Reviewed Study Plan and draft mesohabitat analysis
- HAT 3 December 11, 2019 – Reviewed study progress and proposed methodology for analyzing results from HEC-RAS
- February 20, 2020 – HAT 3 Meeting to review proposed analysis methodology and initial results of wetted perimeter analysis





# DOWNSTREAM AQUATIC HABITAT



## Variance from the Study Plan and Schedule

- March 2020 HAT 3 meeting was cancelled due to COVID-19

## Remaining Activities/Modifications/Other Proposed Studies

- Level loggers continue to collect data through June 2020
- Analysis of HEC-RAS results
- Develop temperature component of HEC-RAS model (spring 2020)
- Draft Report in June 2020
- No additional studies have been proposed beyond that in FERC's SPD

# QUESTIONS?



# AQUATIC RESOURCES



## Study Purpose and Methods Summary

Evaluate the effects of the Harris Project on aquatic resources.

## Study Progress

Desktop Assessment of Aquatic Resources (Kleinschmidt)

Downstream Fish Population Research (Auburn)

- Fish Temperature Requirements
- Assessment of Temperature Data from Regulated and Unregulated Reaches
- Fish Community Surveys
  - Wadeable standardized (30+2) sampling
  - Boat Electrofishing
- Bioenergetics Modeling



# DOWNSTREAM FISH POPULATION RESEARCH



- ❑ Literature review of temperature requirements of target species: Redbreast Sunfish, Channel Catfish, Tallapoosa Bass, and Alabama Bass
  - Spotted Bass temperature review will be used in place of Alabama Bass
- ❑ Fish sampling at Horseshoe Bend, Wadley, Lee's Bridge (control site), and Harris Dam tailrace
  - Sampling in April, May, July, September, November 2019 and January and March 2020
  - Individual fish weighed, measured, sexed, had gonads removed and weighed, had diets removed from stomachs and preserved, and had otoliths removed and stored to be evaluated
  - To date, all diets quantified, all prey items identified, and all diet data entered into databank
- ❑ Target species specimens being used in respirometry tests
  - Intermittent flow static respirometry tests: data will be used in bioenergetics models
  - Swimming respirometry to quantify performance capabilities of fish



# AQUATIC RESOURCES

## Variance from Study Plan and Schedule

- March 2020 HAT 3 meeting was cancelled due to COVID-19
- Auburn University exploring alternatives to electromyogram radio tags

## Remaining Activities/Modifications/Other Proposed Studies

- Desktop Assessment of Aquatic Resources
- Downstream Fish Population Research
  - Fish Temperature Requirements
  - Assessment of Temperature Data from Regulated and Unregulated Reaches
  - Fish Community Surveys
    - Wadeable standardized (30+2) sampling
    - Boat Electrofishing
  - Bioenergetics Modeling
  - Consider Alternative “Control” Site Upstream of Reservoir
  - Tag and Track Fish During Summer 2020
  - Continue Static Respirometry Tests at 10 and 21°C
  - Continue Measuring Active Metabolic Rates (Combination of Increasing Water Velocity and Decreasing Water Temperature)
- Draft Aquatic Resources Study Report in July 2020
- No additional studies have been proposed beyond that in FERC’s SPD

**QUESTIONS?**



# Next Steps



# Next Steps



- Alabama Power will file a summary of the ISR meeting on **May 12, 2020**
- Comments on the ISR and ISR meeting summary should be submitted to FERC by **June 11, 2020**
- Any requests for modifying the FERC approved study plan must follow 18 CFR Section 5.15 (d) and (e)
- Comments on the draft study reports should be submitted to Alabama Power at [harrisrelicensing@southernco.com](mailto:harrisrelicensing@southernco.com) by **June 11, 2020**



# Next Steps in Relicensing Process



- Additional HAT meetings (2020-2021)
- Second Study Season/Phase II (2020/2021)
- Progress Update (10/2020)
- File Updated Study Report (4/12/2021)
- File Updated Study Report Meeting Summary (4/27/2021)
- File Preliminary Licensing Proposal (PLP) (by 7/3/2021)
- Comments on Preliminary Licensing Proposal, Additional Information Request (if necessary) (90 days from issuance of PLP or by 10/1/2021)
- File Final License Application (11/30/2021)

## Questions?





# HARRIS DAM

## RELICENSING



Alabama Power