

May 12, 2020

VIA ELECTRONIC FILING

Project No. 2628-065
R.L. Harris Hydroelectric Project
Initial Study Report Meeting Summary

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 utilizing the Federal Energy Regulatory Commission's (FERC) Integrated Licensing Process (ILP) to complete the relicensing process for the Harris Hydroelectric Project (FERC No. 2628-065). On April 28, 2020, Alabama Power held an Initial Study Report Meeting pursuant to 18 C.F.R. Section 5.15 (c) of the ILP. Due to concerns with COVID-19, Alabama Power held the Initial Study Report meeting via conference call.

The meeting summary, including a list of attendees and the meeting presentation, is attached.

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 - Initial Study Report Meeting Summary

cc: Harris Stakeholder List



R. L. Harris Hydroelectric Project

Meeting Summary

Initial Study Report Meeting via Conference Call

April 28, 2020 ~ 9:00 AM to 4 PM

TABLE OF CONTENTS

1	Overview	3
1.1	FERC's Questions submitted in advance of the meeting	3
2	Cultural Resources Programmatic Agreement and Historic Properties Management Plan Study.....	5
2.1	FERC's Questions submitted in advance of the meeting	5
2.2	Carol Knight's Questions submitted in advance of the meeting	5
2.3	Participant Questions.....	6
3	Recreation Evaluation Study	7
3.1	Donna Matthews' Questions submitted in advance of the meeting	7
3.2	Participant Questions.....	7
4	Project Lands Evaluation Study	9
4.1	FERC's Questions submitted in advance of the meeting	9
4.2	Participant Questions.....	12
5	Operating Curve Change Feasibility Analysis Study	13
5.1	FERC's Questions submitted in advance of the meeting	13
5.2	Participant Questions.....	14
6	Downstream Release Alternatives Study	19
6.1	FERC's Questions submitted in advance of the meeting	19
6.2	Alabama Rivers Alliance's Questions submitted in advance of the meeting	19
6.3	Participant Questions.....	20
7	Water Quality Study	24
7.1	FERC's Questions submitted in advance of the meeting	24
7.2	Alabama Rivers Alliance's Questions submitted in advance of the meeting	25
7.3	Participant Questions.....	26

8	Erosion and Sedimentation Study.....	28
8.1	FERC’s Questions submitted in advance of the meeting	28
8.2	Alabama Rivers Alliance’s Questions submitted in advance of the meeting	30
8.3	Donna Matthews’ Questions submitted in advance of the meeting	31
8.4	Participant Questions.....	31
9	Threatened and Endangered Species Study	34
9.1	FERC’s questions submitted in advance of the meeting.....	34
9.2	Alabama Rivers Alliance’s Questions submitted in advance of the meeting	38
9.3	Participant Questions.....	38
10	Downstream Aquatic Habitat Study	40
10.1	Participant Questions	40
11	Aquatic Resources Study	41
11.1	Participant Questions.....	41
12	Next Steps In the ILP.....	42

APPENDICES

Appendix A ISR Meeting Participants

Appendix B ISR Meeting Presentation

1 OVERVIEW

Angie Anderegg (Alabama Power) opened the Harris Project (FERC No. 2628) (Project) Initial Study Report (ISR) meeting and reviewed the ISR meeting purpose. Angie conducted a roll call, reviewed phone etiquette, and presented a safety moment. A list of participants is included in Appendix A¹. Alabama Power presented information on the progress of each study, which included applicable study results, requested variances, and any additional studies or requested study modifications. The ISR presentation was made available to all participants on the Harris Relicensing website (www.harrisrelicensing.com) prior to the meeting and is included in this report as Appendix B.

In this ISR Meeting Summary, Alabama Power presents the questions and comments that were provided prior to and during the ISR meeting². Each question or comment is followed by Alabama Power's responses and discussion in **bold** text. FERC staff as well as three stakeholders submitted written questions/comments in advance of the ISR meeting via email. Where appropriate, Alabama Power provides a full response. However, many responses to the questions will be addressed in the applicable Final Study Reports and in additional analyses (Phase 2) to be conducted in 2020/2021.

FERC staff raised three general questions in its April 27, 2020 email to Alabama Power. Alabama Power's responses to FERC's general questions are provided below.

1.1 FERC's Questions submitted in advance of the meeting

- Q1 - Comments on all the studies should be filed with the Commission by 6/11/20, as stated in the cover letter of the ISR, and not (solely) sent directly to Alabama Power via email, as stated in the cover letters of the Draft Downstream Release Alternatives Phase 1 Report, Draft Operating Curve Change Feasibility Analysis Phase 1 Report, Draft Erosion and Sedimentation Study Report, Draft Water Quality Study Report, Draft T&E Species Assessment, Draft Phase 1 Project Lands Evaluation Study Report, and the Traditional Cultural Properties Identification Plan and Inadvertent Discovery Plan.

Alabama Power emphasized that all stakeholders should file comments with FERC on the Harris Project (P-2628-065) on or before June 11, 2020. Alabama Power also noted that if any stakeholder has a question about filing comments with FERC, they could email those questions to harrisrelicensing@southernco.com.

- Q2 - Several of the studies reference the use of Geographic Information System (GIS) data. To facilitate stakeholder review and analysis of the study results it would be helpful if all GIS data collected or developed as part of the studies is filed with the study reports.

¹ Because this meeting was conducted over Skype, there may be participants who joined after the roll call and are not listed in Appendix A.

² These notes summarize the major items discussed during the meeting and are not intended to be a transcript or analysis of the meeting.

Alabama Power will file GIS data, as applicable, with the Final Study reports.

- Q3 - Please describe whether you have experienced or anticipate any delays to studies as a result of COVID-19 related closures or social distancing measures.

Alabama Power has experienced delays conducting field work and meeting with the Harris Action Teams (HATs) due to COVID-19 closures and restrictions. Alabama Power anticipates that it may be months before HATs can meet in person. However, meetings can still occur using teleconferencing.

2 CULTURAL RESOURCES PROGRAMMATIC AGREEMENT AND HISTORIC PROPERTIES MANAGEMENT PLAN STUDY

Amanda Fleming (Kleinschmidt) presented the Cultural Resources documents that were filed with the ISR: the Inadvertent Discovery Plan (IDP) and the Traditional Cultural Properties (TCP) Identification Plan. Amanda reviewed the study purpose, data collection to date, initial results, and a variance request to file the Area of Potential Effects (APE) in June 2020.

2.1 FERC's Questions submitted in advance of the meeting

- Q1 - Staff recommend changing the term “historic properties” to “cultural resources” because at the time a previously-undocumented resource is discovered, it has not been assessed for eligibility for the National Register of Historic Places, and cannot, by definition, be considered a “historic property” until its eligibility is determined.

Alabama Power will make adjustments to the term “historic properties” and will include both the Inadvertent Discovery Plan (IDP) and Traditional Cultural Properties (TCP) Identification Plan as appendices to the Historic Properties Management Plan (HPMP).

- Q2 - Item 2.3.1(b) seems to indicate that at some point after discovery, an evaluation of eligibility for a newly discovered cultural resource will occur. The process for determining National Register-eligibility should be outlined in the plan.

Alabama Power will add this process to the IDP. The National Register-eligibility process will also be addressed in the Historic Properties Management Plan (HPMP) being developed by Alabama Power.

- Q3 - Rachel McNamara asked about defining the area of potential effects (APE) and the possibility of extending the APE downstream. Rachel stated there is a need for more discussion.

Alabama Power noted that it intends to schedule a Harris Action Team (HAT) 6 meeting in May to further discuss the APE.

2.2 Carol Knight's Questions submitted in advance of the meeting

- Q4 - How far down river from the dam does Alabama Power have responsibility for the river?

Alabama Power's responsibility downstream of Harris dam is the Harris Project Boundary below the dam.

- Q5 - How far up each side of the bank does Alabama Power have below the dam?

The State of Alabama owns the river channel, and the riverbanks are private property.

- Q6 - How do they (Alabama Power) enforce their responsibilities?

Alabama Power follows all guidelines and regulations for lands and waters within the Harris Project Boundary.

- Q7 - Are they [Alabama Power] aware of archaeological sites that are endangered below the dam? That each time they open the flood gates, erosion occurs washing away cultural remains?

Alabama Power is reviewing potential effects of Harris Project operations on cultural resources downstream of the dam in the Tallapoosa River. However, Alabama Power cannot enforce preservation policies on private lands. If a landowner encounters a burial site, they should report it immediately to the State Historic Preservation Officer (SHPO)/Alabama Historical Commission (AHC). The SHPO or AHC can provide additional details on regulations and authority regarding archaeological properties or cultural remains.

- Q8 - Are they [Alabama Power] aware of the destruction of the fish weirs down river?

Alabama Power is reviewing potential effects of Harris Project operations on cultural resources downstream of the dam in the Tallapoosa River. In addition, Alabama Power may work with stakeholders to develop best management practices related to cultural resources.

2.3 Participant Questions

- Q9 - Elizabeth Toombs (Cherokee Nation) – Do the HPMP, TCP Identification Plan, and IDP documents apply to the Skyline portion of the Project or is this limited to the reservoir?

Yes, all of the cultural resources documents and procedures apply to all lands within the Harris Project Boundary.

3 RECREATION EVALUATION STUDY

Amanda Fleming (Kleinschmidt) presented the Recreation Evaluation Study progress. Amanda reviewed the study purpose, data collection to date, initial results, and a variance request to file the draft Recreation Evaluation Study Report in August 2020 instead of June 2020.

3.1 Donna Matthews' Questions submitted in advance of the meeting

- Q1 - Increased downstream, Alabama Power managed, public access. An impediment to public use of the river to swim, fish or float is lack of access. What plans are underway to correct this omission?

Alabama Power is evaluating downstream use as part of the recreation study, and any additional access needs will be discussed with HAT 5 and addressed in the licensing proposal.

- Q2 - Safety from Rapid Water Level Rises. Over the last 40 years, even locals have been dissuaded from using their river because of erratic and dramatic variations in water levels. Completely aside from the issue of how unnaturally the river is distended from pre-dam normals on an hour by hour basis remains the unaddressed danger to humans recreating in/on the river during episodes of rapid water level rise. The potential threat is created by water release at the dam. APC must alert downstream subscribers of planned and imminent water release. Current cell phone technology is well suited to send safety alerts.

Alabama Power is evaluating downstream flows and recreation use as part of the recreation evaluation study as well as gathering information/input from public access sites, downstream landowners, and Tallapoosa River users.

Alabama Power uses the Smart Lakes App and the Alabama Power website to inform stakeholders of water releases. There are times, however, that system demands require a change in the generation schedule. Prior to any generation releases, Alabama Power sounds a notification siren. The generating units will not load unless the siren activates.

3.2 Participant Questions

- Q3 - Ken Wills (Alabama Glade Conservation Coalition) - Why was the operating schedule reduced for Flat Rock and will the operating schedule be modified in 2020 due to COVID-19?

The operating schedule in August 2019 was condensed based on low attendance. Last year's schedule is not indicative of the 2020 summer schedule. Currently, no changes from the normal operating schedule are proposed, and the goal is to open

by Memorial Day. Alabama Power will follow all state and federal guidelines related to COVID-19.

- Q4 - Several questions and comments were raised by participants about flood control operations and water releases downstream.

Alabama Power addresses operational questions in Section 6 of this meeting summary.

- Q5 - Keith Henderson, Alabama Department of Conservation and Natural Resources (ADCNR) - Why did the Lake Harris questionnaires start in May 2019 (rather than March 2019) and what were the four survey questions?

In its April 2019 Study Plan Determination, FERC requested that Alabama Power add the Lake Harris questionnaire. Therefore, Alabama Power started those surveys in May 2019. The study questions are listed in Appendix C to the Recreation Evaluation Study Plan, which can be found at www.harrisrelicensing.com.

4 PROJECT LANDS EVALUATION STUDY

Kelly Schaeffer (Kleinschmidt) presented the Project Lands Phase 1 Evaluation Study Report progress. Kelly reviewed the study purpose and data collection to date, which included the development of maps showing Alabama Power's proposal to add, remove, or modify lands in the Project Boundary. Kelly also reviewed the remaining activities in this study, which include the use of other relicensing studies to develop the Phase 2 Wildlife Management Program (WMP) and the Shoreline Management Plan (SMP). Kelly noted that no variances to this study plan are requested. Alabama Power distributed the Draft Phase 1 Project Lands Evaluation Report to stakeholders in April 2020, concurrently with filing the ISR.

4.1 FERC's Questions submitted in advance of the meeting

- Q1 - On page 9, the proposed definition for the "Recreation" classification includes a reference to permitting processes for various types of recreations activities. Will the permitting processes be updated as part of the revised Shoreline Management Plan (SMP)?

Alabama Power will review the existing permitting processes during development of the SMP and determine if any updates are needed.

- Q2 - On page 9, the proposed definition of the "Hunting" classification includes a reference to the existing Harris Project Wildlife Mitigation Plan. How do you envision the existing Project Wildlife Mitigation Plan relating to the proposed Wildlife Management Plan that is to be developed as part of Phase 2 of the Lands Evaluation?

Any existing information (i.e., the existing Wildlife Mitigation Plan) will be reviewed to determine if any portion of the plan might apply to the new WMP, which would be implemented in the next license term.

- Q3 - On page 9, the proposed definition of the "Natural/Undeveloped" classification mentions that one of the allowable uses would be "normal forestry management practices." Please clarify what these practices would include.

All forestry practices that would be allowable in the Natural/Undeveloped land use classification will be included in the WMP, which will be filed with the final license proposal.

- Q4 - Rachel McNamara (FERC) - Some lands classified as "Recreation" are proposed to be changed to "Natural/Undeveloped". She noted that it may be helpful in the final report for Alabama Power to be very clear about the project purpose in retaining those lands rather than removing from the project boundary.

Alabama Power intends to clearly state the project purpose of all lands proposed to be reclassified in the Final Licensing Proposal.

- Q5 - On page 10, there are descriptions of two new proposed land use classifications, including "Flood Storage" which would include lands between the 793 ft and 795 ft msl

contours, and “Scenic Buffer Zone” which would include lands between the 795 ft and 800 ft msl contours. Would these classifications overlap with other land use classifications? Also, are there any buildings/structures currently within these elevation bands around Lake Harris?

The land use classifications will not overlap. In areas where the lands above the 800 ft msl contour (i.e. “back acreage”) are project lands, the project lands below the 800 ft msl contour would be classified to match the back acreage. In areas where the lands above the 800 ft msl contour are non-project lands, the lands below the 800 ft msl contour would consist of these two classifications. However, the classifications would not overlap but would be adjacent (one band in front of the other). Alabama Power could not confirm at the meeting whether any buildings or structures currently exist within those contours, but current permitting practices allow property owners to build piers, etc. in these bands.

- Q6 - Page 11 discusses the results of the desktop evaluation and site visit to identify any suitable bobwhite quail habitat within the project boundary at Skyline WMA. Could you elaborate on the methods for evaluating the availability of bobwhite quail habitat and how it was determined that no suitable habitat occurred within the project boundary at Skyline WMA? Also, could the report include a figure showing a map of the 7 locations in the Skyline WMA where Alabama DCNR conducts spring/fall quail call surveys, and has documented quail, relative to the project boundary at Skyline WMA?

The Final Phase 1 Project Lands Evaluation Report will contain detailed methods for the evaluation of suitable bobwhite quail habitat at Skyline. Alabama Power will also include a figure showing the ADCNR’s quail call survey locations.

- Q7 - Appendix B provides maps and general descriptions of proposed changes in land use classifications at Lake Harris that were also discussed during the 9/11/19 HAT 4 meeting. It would be helpful if the maps of the proposed changes in land use classifications included legends to identify the various classifications, as well as north arrows and scale bars to facilitate orientation and review.

Alabama Power will add a legend, north arrows, and a scale bar to the final maps in the Final Phase 1 Project Lands Evaluation Report.

- Q8 - In addition, during the 9/11/19 HAT 4 meeting, we (FERC staff) asked if terrestrial and cultural resource surveys were being conducted on lands proposed for removal from the project boundary and Alabama Power staff responded that they were. Could you provide descriptions of the terrestrial and riparian habitat types for areas that you are proposing to remove from the project boundary. Could you also describe the terrestrial and riparian habitat types for area “RC4” that you propose to reclassify from “Recreation” to “Commercial Recreation”? Do these areas contain suitable habitat for any of the T&E species that may occur at the Harris Lake portion of the project? What were the results of the cultural resource surveys for areas proposed to be removed from the project boundary?

Many other resource studies are being conducted concurrently with the development of the Project lands proposal. Alabama Power intends to use information from other relicensing studies to inform the final decision on the Project lands proposal, which will be included in the final licensing proposal. Additionally, Alabama Power will include within its final licensing proposal descriptions of the terrestrial and riparian habitat types for all areas proposed to be removed from the Project as well as the area “RC4” proposed to be reclassified to “Commercial Recreation”.

- Q9 - Sarah Salazar (FERC) - Alabama Power needs to be sure to get information on the record so that FERC can use that information to inform their decision on the project related effects. The Final Phase 1 Project Lands Evaluation should explain the rationale for adding, removing or reclassifying lands in the Project Boundary. Also, it would be helpful if the map of area A6 included the existing birding trail and the proposed extension of the trail.

The project purpose for the lands to be removed, added, or reclassified will be included in the final licensing proposal. Alabama Power will also add the birding trail and trail extension on the respective map as included in the Final Phase 1 Project Lands Evaluation Report.

- Q10 - Appendix C provides the Anniston Museum of Natural History’s Flat Rock Botanical Inventory (inventory) report and the consultation record includes the Anniston Museum of Natural History’s letter transmitting the report, Ken Wills’ (Coordinator of the Alabama Glade Conservation Coalition) emails, along with several additional observations and recommendations from them.

Approximately 365 plant species, including some rare species were documented at the site during the botanical inventory. The surveyors, Ken Wills, and FERC staff observed damages caused by vehicles traversing the site (SUV observed by surveyors; ATVs tire marks on granite outcrops observed by Ken Wills and FERC staff during scoping/environmental site review). The consultation record for this study includes recommendations from Anniston Museum of Natural History and Ken Wills’ to manage/preserve/restore the site. The proposed definition of the “Natural/Undeveloped” classification, proposed for the rare plant site, does not indicate what types of recreation activities/vehicle access would be prohibited or how Alabama Power would manage such a site. Considering all of this, do you think that Alabama Power’s proposed definition of “Natural/Undeveloped” would be effective in protecting this site? Could the definition of this classification be expanded/more detailed, or would you consider another, more protective land use classification type/designation for this site?

Also, what has Alabama Power done to protect the rare plants that were identified during the inventory and were subsequently damaged by ongoing ATV use observed by Ken Wills? Can vehicles be excluded from these sensitive areas to protect rare plants while the relicensing process proceeds?

Alabama Power noted that that it has SMPs for its other projects that contain different classifications because of unique areas and circumstances. Therefore, the Natural/Undeveloped land use classification may need to be modified to address the rare plants at Flat Rock Park. Alabama Power will work with the HAT on reviewing the classifications and their definitions.

Sheila Smith (Alabama Power) noted that Alabama Power has been working with a contractor to barricade the area to prevent vehicle traffic. The barricade work has been completed. Alabama Power plans to continue monitoring the site to discourage vehicle and all-terrain vehicle (ATV) access.

- Q11 - Sarah Salazar (FERC) asked if the area also gets a lot of mountain bike use?

Ken Wills (AGCA) noted that vehicles are the primary issue in that area and that mountain biking would not likely cause the effects they are seeing. He also noted that in the rural areas, ATVs were much more common.

- Q12 - Has the request from Randolph County regarding the proposed water treatment intake/plant been resolved/processed?

Alabama Power is working with Randolph County to find an acceptable site that is similar to their original request. Alabama Power intends to file a land use variance request with FERC's Division of Hydropower Administration and Compliance, and, therefore, this request would not be a part of the relicensing process.

4.2 Participant Questions

- Q13 - Maria Clarke (EPA): It was my understanding there was a court case that involved Skyline Property. What happened? Why was the Skyline property reduced? Is this case closed?

Alabama Power filed an application with FERC to amend its current Harris Project Boundary at Skyline (Accession No. 20200302-5424), which would add 13.1 acres of land and remove 62.2 acres of land, all within the approximately 15,063 acres of the Harris Project Boundary at Skyline.

5 OPERATING CURVE CHANGE FEASIBILITY ANALYSIS STUDY

Kelly Schaeffer (Kleinschmidt) presented the Operating Curve Change Feasibility Analysis Phase 1 Report progress. Kelly reviewed the study purpose and data collected to date, which included the development of models and the initial modeling results. Kelly also reviewed the remaining activities for this study, including the use of other relicensing studies to conduct the Phase 2 analyses. Kelly noted that no variances to this study plan are requested. Alabama Power distributed the Draft Operating Curve Change Feasibility Analysis Phase 1 Report to stakeholders in April 2020, concurrently with filing the ISR.

5.1 FERC's Questions submitted in advance of the meeting

- Q1 - As we understand it, downstream effects with regard to flooding were assessed for a 100-year design flood. However, the relationship between the downstream flow alternative analysis and the Harris Reservoir winter flood pool analysis is not clear under alternative flood scenarios. What would happen in a scenario other than a 100-year flood? Would operations at Harris Dam under the alternative flood scenario, including different flow release scenarios, have any impact on the Harris Reservoir winter pool analysis, or vice versa?

The “100-year flood” scenario used for modeling is based on an actual local storm event in the Tallapoosa River basin that is scaled up to equal a 100-year flood event. Other flood flow scenarios would likely have downstream flooding effects but at a smaller amount and duration. Alabama Power evaluated the effects of the 100-year flood, because FEMA uses the 100-year flood for its analysis and is the “gold standard”. This is also consistent with modeling efforts that Alabama Power has conducted in previous relicensing processes. Kenneth Odom (Alabama Power) explained that if a 50-year flood scenario is used, there will still be downstream flooding. It will just result in less of an impact than the 100-year scenario. If Alabama Power used a 25-year flood, there would be fewer impacts than the 50-year flood scenario. Ultimately, reducing the flood frequency interval reduces the total amount of flow. However, there is no way to determine the differences in the total amount of flow downstream without modeling.

- Q2 - Table 5-2, page 51 of the report...What is it about RM 115.7 that appears to create a hydraulic control, such that the maximum increase in depth under any winter pool elevation scenario occur about mid-way down the Tallapoosa River?

The surveyed bathymetric transects of the river indicate that the channel bottom rises at RM 113.63 and RM 114.5, constricting the channel area and creating a hydraulic control. Examination of aerial imagery shows what appears to be a shoal across the river at RM 114.5 and a shoal and island complex at RM 113.63.

- Q3 - Figures 5-20 and 5-21 appear incomplete, as they only show the results for one alternative...baseline (? based on color). Please address this apparent omission.

These figures are complete. However, Alabama Power will review them to determine if the information can be presented with more clarity. The Y axis shows the different winter curve change alternative elevations (+1 is 786 ft, +2 is 787 ft, etc.). For example, at the 786 ft msl winter pool elevation, there are 12 additional days of spill over baseline. Figure 5-21 is similar but includes the additional days of capacity operations for each alternative.

5.2 Participant Questions

- Q4 - Jimmy Traylor, Donna Matthews, and Albert Eiland (Downstream Landowners) expressed concern regarding how Alabama Power is operating the Harris Project, particularly during high flow events. All expressed that flood control has been worse since the dam has been in place. There were specific comments regarding various dates where flow conditions were a concern including February 6, 11, and 13, 2020. There were also questions regarding operations and use of flood gates on April 9, 2020. This discussion on operations during high flow events transitioned to comments and questions on the efficiency of the turbines at Harris and whether Alabama Power ever evaluated the efficiency of the turbines. Does raising the winter pool help with the generation efficiency, or are there any studies ongoing to improve the efficiency of generation for the dam? What about the dam turbines or equipment upgrades?

Alabama Power operates Harris in accordance with U.S. Army Corps of Engineers flood control procedures provided in the Harris Reservoir Regulation Manual. Alabama Power follows these procedures and cannot evacuate water in anticipation of a high flow event. Kenneth Odom (Alabama Power) explained that raising the winter pool to the levels being evaluated in this study does not appreciably affect the efficiency of generation. Turbine or powerhouse equipment upgrades have a much greater impact on efficiency. However, the order of magnitude for total generation capacity for Harris would remain the same regardless of any equipment upgrades. Kenneth noted that the efficiency of the turbines is addressed during a turbine upgrade, which typically occurs at the end of the useful life of the turbine. There are no planned turbine upgrades during this relicensing.

Additionally, Kenneth Odom reviewed the reservoir levels that were raised by a stakeholder earlier in the meeting. He noted that on February 6, 2020, the reservoir level was 785 ft msl. A large rain event had occurred, and both units were generating at best gate. The reservoir's elevation rose to 790 ft msl (5 feet above winter curve) on February 11, 2020 and both units began operating at full gate. The reservoir continued to rise. On February 13, 2020, the Harris reservoir was 6.5 feet above the winter curve elevation of 785 ft msl. In accordance with Harris flood control procedures, Alabama Power opened flood gates. Kenneth further confirmed that Alabama Power was not using any flood gates to pass water downstream of Harris Dam on April 9, 2020.

- Q5 - Donna Matthews (Downstream Landowner): Is the public ever involved in discussions regarding turbine or equipment upgrades; why not consider using the HEC-RAS modeling to redesign the turbines? Could you find the optimal solution to turbine

design and flow scenarios to solve those issues? How do we know what to ask for if all the possible solutions aren't offered for us to consider?

Angie Anderegg (Alabama Power) stated that the public is not usually involved with discussions on equipment upgrades. She noted that there seemed to be confusion between the turbine design/efficiency versus the downstream flow scenarios. The two existing turbines have a specific capacity and generate a finite number of megawatts with the amount of water that passes through them, which is inherent in the design of the turbines. When it is time to upgrade, Alabama Power desires to achieve more power with less water, creating an increase in efficiency. It is not possible to completely redesign the turbines, because the Harris Project was originally designed to generate a certain number of megawatts using a certain amount of water at specific times (i.e., peak) to support system operations. Angie gave an example of the system peak that happens during a hot summer afternoon and how hydropower is used to meet the system demand. As part of the downstream release alternatives study, the benefit or impact of providing a continuous minimum flow are being analyzed (a continuous minimum flow would also ideally produce power). Angie reiterated that the results from this study, as well as the other studies, will be analyzed together to develop the best proposal.

Kenneth Odom (Alabama Power) added that a redesign of the turbines or new “runners” would focus on improving the efficiency but deliver the same general number of megawatts.

FERC staff stated that, if a licensee determines that upgrades are necessary, it must file a license amendment application with FERC. She explained that license amendment applications are subject to the NEPA process, and depending on the potential for environmental effects, FERC would issue a public notice and solicit public input.

- Q6 - Donna Matthews: Who controls the amount of number of megawatts generated? What if the number of megawatts is too much for the river? Why can't you change it?

The number of megawatts that a project is authorized to generate is set by FERC, as described in the original license order. Changing the generating capacity would affect the energy grid beyond Harris, because Alabama Power is required to supply a certain amount of power across the entire system. There is a reliability factor from the Harris Project that supports the entire power grid.

- Q7 - Question from Instant Messenger, Martha Hunter (Alabama Rivers Alliance): Wasn't there a turbine upgrade a few years ago?

No, a turbine upgrade has not been completed at the Harris Project.

- Q8 - James Hathorn (USACE): How were the intervening flows considered in the Harris model?

The intervening flow hydrograph for the contributions to the Tallapoosa River from the drainage area between Harris and Wadley was calculated by Alabama Power, as described in Section 4.4 of the study report. The hydrograph was included in the model as a uniform lateral hydrograph entering the river between RM 136.6 and 122.97. Kleinschmidt developed an intervening flow hydrograph for the contributions to the river from the drainage area between Wadley and Horseshoe Bend by comparing the daily flood hydrographs from the Wadley and Horseshoe Bend gages for the March 1990 event. A comparison of the daily average flow hydrographs gages showed a similar shape for both gages. The hourly hydrograph for the Wadley intervening flow, calculated by Alabama Power, was adjusted by multiplying each hourly ordinate of the hydrograph by a ratio of the Horseshoe Bend to Wadley gages. The data was then adjusted to subtract out the flow from the Wadley gage so that the lateral inflow was only equal to the flow intervening between the two gages. The hydrograph was included as a uniform lateral inflow between RM 122.97 and RM 93.66. The development of the hydrograph is described in Section 4.5.3 of the report.

- Q9 - James Hathorn: What types of structures will be analyzed in the phase 2 structure study? Will there be any crop/farmland analysis?

Alabama Power has not conducted a full economic analysis of each structure, land type, or property type. Crop or farmland analysis is not currently in the FERC-approved methodology.

- Q10- James Hathorn: For the HEC-RAS modeling, it only uses a 100-year design flood, or different types of storms?

Alabama Power has not proposed to model other storm events. However, if FERC needs this information for its analysis, Alabama Power can model other storm events.

Angie Anderegg (Alabama Power) explained that the 100-year flood has been used as the standard by FEMA. To move forward with other flood scenarios, Alabama Power will need to know exactly which additional floods need to be modeled.

Sarah Salazar (FERC) reiterated that the process is in the information gathering stage, and no decisions are being made right now. However, we do want to know all of the alternatives that are possible moving forward in order to make the best decision later. She encouraged all stakeholders to file comments on or before June 11, 2020.

- Q11 - Alan Creamer (FERC) - Regarding the flood design, what would the downstream flows look like using a 50-year or 25-year flood scenario? I know the worst-case scenario is the 100-year flood. I'm wondering if it would present as a straight line, or a curve in terms of how it presents downstream? Maybe the 100-year flood isn't the end-all.

Kelly Schaeffer (Kleinschmidt) asked if FERC was requesting that Alabama Power add specific flood events other than the 100-year flood to the study plan (the 25 and 50-year flood scenarios).

Alan Creamer (FERC) answered that he thought it would be helpful to see how the flows would work under different scenarios.

Kelly Schaeffer responded that if there are additional modeling requests, Alabama Power would need to know those scenarios as soon as possible to avoid getting to December 2020 (after completing the majority of the Phase 2 analysis) and have to re-run the model for additional flood events and revisit the Phase 2 analyses.

Kenneth Odom (Alabama Power) explained that the “100-year flood” scenario that Alabama Power uses for modeling is based on a local storm event in the Tallapoosa River basin, but it is scaled up to equal a 100-year flood event. If it is a 50-year flood scenario, downstream flooding will still occur. It is just less impact than the 100-year scenario. If Alabama Power used a 25-year flood, there would be fewer impacts than the 50-year flood scenario. FEMA bases its flood maps on the 100-year flood. Other storms can be examined, but ultimately, reducing the flood frequency interval reduces the total amount of flow. However, there is no way to determine what the differences would be in the total amount of flow downstream without modeling.

Angie Anderegg (Alabama Power) commented that Alabama Power’s intent is to use the 100-year flood to determine whether it will propose a lake level change.

- Q12 - Regarding the 100-year flood, are they taking climate change into account when they’re looking at these scenarios? Martha Hunter also added that along with additional rains we are seeing we need to anticipate the different droughts that are coming and wants that to be part of the decision for how the river is operated in the next 50 years.

Alan Creamer (FERC) stated that he did not recall that climate change was part of the study design or approved study plan.

- Q13 - Maria Clark (EPA) noted that the EPA, U.S. Geological Survey, and FEMA have been working together to address data shortfalls on climate information. She noted that the 100-year event may not be appropriate at this point or if Alabama Power does use the 100-year, they should also supplement with local events. Maria plans to pass along this information from EPA.

Kelly Schaeffer (Kleinschmidt) asked if Maria could include that information or provide a reference in its comments on the ISR. Kenneth Odom (Alabama Power) also noted that the 100-year design flood used in the Harris modeling was based on an actual storm event that was scaled up to equal a 100-year event.

- Q14 – Charles Denman via email following the meeting: I believe a comparison of historical (pre-dam) and recent flooding downstream of the dam would help stakeholders understand the effectiveness of the Dam for flood control. Also include a model with

same parameters (land use, storm intensity and duration, etc.) but without the dam attenuation. This would help downstream stakeholders understand what effects the Dam has on flooding downstream. Are the original studies and permitting materials available for stakeholders to review?

The Harris Project, as it exists today, is considered baseline with regard to FERC analyses and is used in FERC's decision whether to issue a new operating license and under what conditions. Alabama Power structured this study to review and analyze flood conditions with the Harris Dam in place, consistent with FERC's guidance on existing projects and the evaluation of pre-project conditions. FERC approved this study plan in April 2019. All Harris Relicensing study plans, meeting documentation, and other permitting materials are available to stakeholders at www.harrisrelicensing.com. These documents may also be provided upon request if needed.

6 DOWNSTREAM RELEASE ALTERNATIVES STUDY

Kelly Schaeffer (Kleinschmidt) presented the Draft Downstream Release Alternatives Phase 1 Study Report progress. Kelly reviewed the study purpose and the data collected to date, which included the development of models and initial modeling results. Kelly also reviewed the remaining activities for this study, including the use of other relicensing studies to conduct the Phase 2 analyses. Kelly noted that no variances to this study plan are requested. Alabama Power distributed the Draft Downstream Release Alternatives Phase 1 Report to stakeholders in April 2020, concurrently with filing the ISR.

6.1 FERC's Questions submitted in advance of the meeting

- Q1 - Modeling scenarios...as it stands now, the report presents the results for three downstream release alternatives: Pre-Green Plan operation, Green Plan operation, and Pre-Green Plan operation with a 150 cfs continuous minimum flow. Why was modelling of minimum flow limited to 150 cfs? Also, have you considered modeling Green Plan releases with continuous minimum flow scenarios? On what basis did you choose not to do so?

Alabama Power proposed these three modeling scenarios for downstream releases in the study plan. These scenarios have been discussed for at least 18 months with stakeholders and were developed in the study plan process and approved by FERC in its April 12, 2019 Study Plan Determination.

6.2 Alabama Rivers Alliance's Questions submitted in advance of the meeting

- Q2 - Why is the only continuous minimum flow regime being studied a 150 cfs flow? Why was this particular value chosen? Previous commenters have encouraged the study of a wide variety of flow conditions and operational scenarios. Does Alabama Power plan to study a broader range of continuous minimum flows?

As noted above, the various flow scenarios were determined in the development of the study plan. The 150 cfs minimum flow is equal to the same daily volume as three 10-minute Green Plan pulses. If stakeholders desire additional flow conditions and operational scenarios, they need to request additional modeling per the FERC study plan modification process. Kelly Schaeffer (Kleinschmidt) explained that the modeling is resource intensive and while the HEC-RAS model is built and functioning, the process to review other flow scenarios is resource intensive.

- Q3 - The study report states that with full power storage available, Harris is programmed to generate 3.84 hours per day. Is all of that peaking generation, or is some percentage of the programmed operation for non-peaking generation?

Yes, that number is in the daily Res-SIM model. It is really an average of all the plants in Alabama Power's system at full pool. That number is not connected to peaking operations.

- Q4 - In the Green Plan Release Criteria attached as Exhibit B, item 4 concerns Spawning Windows and states that “Spring and Fall spawning windows will be scheduled as conditions permit. The operational criteria during spawning windows will supersede the above criteria.” Can you elaborate on when “conditions permit” for scheduling spawning windows?

It is dependent on where the reservoir elevation is in relation to its rule curve and what flows are coming into the reservoir to provide stable operations. Keith Chandler (Alabama Power) gave an example: Alabama Power tried to hold a spawning window and only ran 10-minute pulses to see what it would do downstream. By going by the criteria (three 10-minute pulses) Alabama Power wanted to see if it would create a spawning window for the downstream fishery.

- Q5 - Jack West (Alabama Rivers Alliance) asked if Alabama Power had data that permitted for the spawning windows.

There is some data. Alabama Power’s Reservoir Management group has summaries of each year, and the effort in the most recent year is summarized in the baseline report included with the Pre-Application Document (PAD). A portion of this analysis is being done as part of the aquatic resources study and will be detailed in the Draft Aquatic Resources Report.

6.3 Participant Questions

- Q6 - Lisa Gordon (EPA) asked if she could be directed to the 3 downstream release alternative scenarios to find the document where the analysis occurred to model 150 cfs continuous minimum flow. So continuous minimum flow means there is no pulsing?

Correct; there will not be pulsing with a continuous minimum flow. The flow scenarios are documented in the meeting summaries from December 2018, as well as meetings and filings in 2019 prior to the FERC Study Plan Determination (April 12, 2019). Angie Anderegg (Alabama Power) noted that all the meeting summaries and presentations (from PAD to present) are available on the Harris relicensing website.

- Q7 - Lisa Gordon asked if flows would be adaptively managed. Would these be set, locked in flows, or would there be modified flows when needed?

Alabama Power is evaluating a continuous minimum flow with no variations or modifications; however, Alabama Power is currently in the data gathering and analysis phase. With this information, a decision about flows can be made. What Alabama Power has been doing in the years leading up to relicensing is an adaptive management process. Alabama Power also has another project that flows are being adaptively managed in a bypassed reach.

- Q8 - Sarah Salazar recalls during the study plan meeting that we discussed alternatives and the stakeholders generally didn’t feel comfortable proposing alternatives at that point but said they would once they saw results from the three modeled scenarios included in

Alabama Power's study plan. The information gathering stage does not last forever so now is the time to propose other flow scenarios for modeling. Alabama Power needs those flow scenarios now.

- Q9 - Alan Creamer (FERC) said he agreed with Sarah's summary. Alan would like to see an operating scenario that includes the Green Plan with minimum flows. Alan acknowledged that the fisheries studies have not been completed, so stakeholders do not currently have that information. Once all the studies are complete and reports are available, Alan noted that there should be another opportunity for stakeholders to revisit phase 1 in terms of modeling and not simply go to phase 2 once all the information is presented to stakeholders. Also, what does the 150 cfs represent in terms of percentage of average annual flow? Where does it fall on flow duration curve?

Alabama Power is in the process of getting that additional information by conducting the FERC approved studies. However, Alabama Power needs to hear from stakeholders now—based on the extensive amount of data currently available on the project—regarding alternative flow scenarios. Any additional scenarios are needed now. Once the phase 2 portions of the operations studies begin, any need to come back to modeling various flow scenarios may result in delays and an incomplete application, which is not acceptable to Alabama Power. There is a lot of data on the Harris Project that has been compiled and presented, and Alabama Power wants stakeholders to meet halfway with regard to putting forward additional flow alternatives to analyze.

- Q10 - Alan Creamer agreed but also reiterated that he doesn't believe we have complete information and that stakeholders should have the opportunity to modify the study plan after receiving and reviewing the study results. Alan noted that there are three studies that are not complete, and FERC and Alabama Power will have to work through this issue so that there is an additional opportunity. Normally at an ISR, Alan stated that all the first-year studies are done. In this case, there are still outstanding studies. He indicated that he doesn't think there is adequate information for stakeholders to make suggestions on alternative flow scenarios.

The due dates in the studies were approved by FERC. Alabama Power and FERC discussed the draft study reports that were not scheduled to be included in the ISR and discussed the two studies for which Alabama Power is requesting a variance. Angie Anderegg (Alabama Power) noted that the Recreation Evaluation Draft Report is delayed, because Alabama Power incorporated a stakeholder request for an additional survey, which was just completed in April. However, the original due date approved by FERC for the Draft Recreation Evaluation Report was June 2020. Alabama Power stated that there are some reports that were not scheduled to be filed as part of the ISR. The ILP may anticipate that studies will be completed in one year and reports filed as part of the ISR, but that is not a requirement of the ILP or the ISR.

- Q11 - Sarah said that in Alabama Power's proposed and revised study plan that the schedule listed the ISR as a milestone and FERC interpreted that to mean that all the first

phases of the study would be complete by then. Any other milestone that went beyond that phase would be a follow up of that report. FERC sets up the study seasons for one year. There are usually two study seasons in each ILP, and she noted that perhaps this accounts for the disparity between FERC and Alabama Power's understanding of where we should be at this moment. Maybe we need to have another discussion.

Six study reports are available for review and comment. If there is disagreement after stakeholder review and comment of the remaining three reports and cultural documents, Alabama Power would enlist FERC for a dispute resolution. Alabama Power desires that everyone has the opportunity to comment on these study reports. Angie Anderegg (Alabama Power) referred to the study schedule and noted that Alabama Power has met the ILP obligations and, where necessary, Alabama Power has asked for a variance on two studies (Recreation and Cultural APE document).

- Q12 - Rachel McNamara agreed with Alabama Power's characterization of the Recreation Evaluation and understood the rationale for modifying the schedule. For the Recreation Evaluation Draft Report, Rachel emphasized that there's need for adequate time for stakeholders to comment on the draft report and that all comments be filed with FERC. There are ways we [FERC] can handle the comment period and I think FERC staff needs to discuss that and figure out the best strategy to address comments and study plan modifications.

Angie Anderegg (Alabama Power) assured the participants that they would have ample time to comment on the remaining draft study reports (Recreation, Aquatic Resources, Downstream Aquatic Habitat, and the Cultural APE document).

- Q13 - Jimmy Traylor raised the issue of the downstream temperature and the relationship with the minimum flow. He noted that the Tallapoosa River below Harris Dam is not supposed to be a cold-water fishery. If Alabama Power is going to release a 150 cfs continuous minimum flow, it has to be at a temperature that more like that of a warm water fishery.

Angie Anderegg (Alabama Power) indicated that temperature would be addressed in the aquatic resources' studies (HAT 3) and requested that this question be addressed later in the meeting.

- Q14 - Barry Morris (LWPOA) asked if he was right in assuming these alternative releases would have no impacts on the lake level. Barry asked if 150 cfs was equivalent to the Green Plan flow, would it be twice as much water?

Based on the model, a 150 cfs minimum flow would not affect the lake level. However, a larger continuous minimum flow could impact lake levels. Regarding the amount of water, Kenneth Odom (Alabama Power) stated that in response to Barry's second question, no, it is not twice as much water. Kenneth stated that the part of generation that is now used solely for Green Plan flows would be replaced by 150 cfs continuous flow. Alabama Power would not pass a continuous minimum flow and continue to pulse.

- Q15 - Rachel asked if you are generating with minimum flow.

Yes, ideally the minimum flow would be generating, not spill. Chris Goodman (Alabama Power) said that a 150 cfs minimum flow would not affect lake levels but would constrain Alabama Power's ability to peak with the same flexibility as they currently have.

- Q16 - Maria Clark (EPA) encouraged Alabama Power to review their March 2019 comments on this issue. She asked why 2001 was selected as an average year.

2001 was an average or normal water year determined by the Flood Frequency Analysis study for the Tallapoosa. Additionally, 2001 was pre-Green Plan, which provided pre-Green Plan operations and hourly data to run through HEC-RAS model.

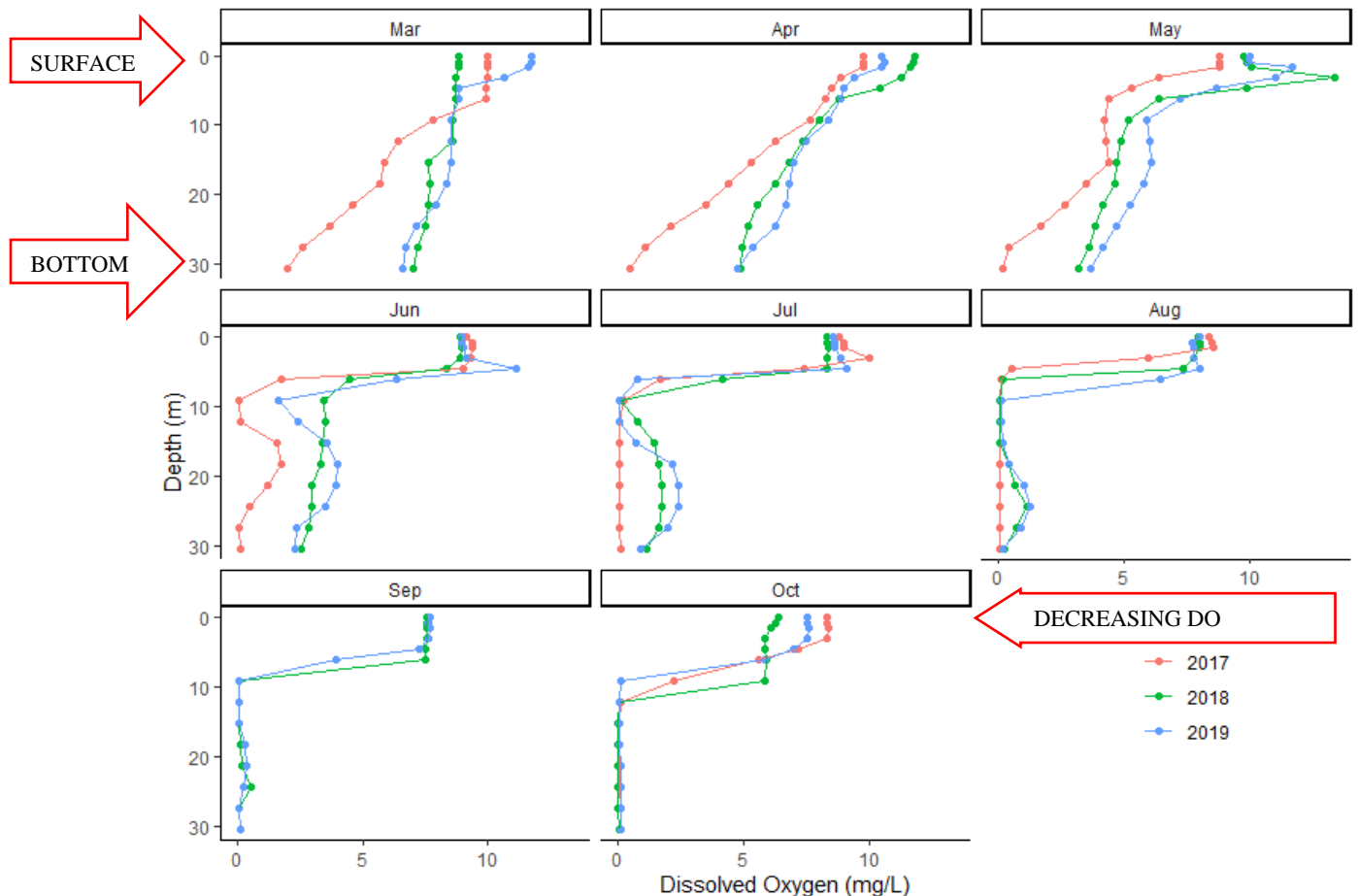
7 WATER QUALITY STUDY

Jason Moak (Kleinschmidt) presented the progress on the Draft Water Quality Study, which included the study purpose, data and activities collected to date, and remaining activities. Jason noted that no variances to this study plan are requested. However, the schedule has been updated to reflect Alabama Power's plan to file the 401 Water Quality Certification application in April 2021. Alabama Power distributed the Draft Water Quality Study report to stakeholders on March 9, 2020, and also in April 2020, concurrently with filing the ISR.

7.1 FERC's Questions submitted in advance of the meeting

- Q1 - Page 18...figure 3-8...please explain what is happening with the vertical DO profiles where DO increases in May, June, July, and August, where otherwise the DO should be declining.

Jason Moak (Kleinschmidt) said it could be how the graphs are interpreted. The data shows the reservoir stratifying as expected in a reservoir during the warmer months of the year. Jason recommended an offline discussion but stated that Alabama Power will also try to clarify in the Final Water Quality Study Report.



- Q2 - Page 23 discusses Alabama DEM monitoring data for the Harris Dam tailrace (i.e., immediately downstream from Harris Dam). Was this data collected during generation, or does it also reflect non-generation periods?

These were events when ADEM went out monthly and took a grab sample. All samples were completed during non-generation. Alabama Power will clarify this in the Final Water Quality Study Report.

- Q3 - Pages 39-41 present DO and temperature data for downstream continuous water quality monitoring station. On page 16 of the ISR, Alabama Power is not proposing any additional monitoring beyond what was approved in the Commission's SPD. Why is there not a second year of monitoring for the downstream continuous monitoring station? How confident are Alabama Power and the HAT 2 members that 1 year of monitoring at the downstream station includes a worst-case scenario?

A second year of monitoring was not included in the FERC-approved study plan. Alabama Power is confident in the data collected thus far. Regarding a worst-case scenario, Alabama Power could monitor for 5 years and may not see a worst-case scenario. Although 2017 may have been a bad year, Alabama Power missed that opportunity to collect a continuous data set at the approved location in the study plan.

7.2 Alabama Rivers Alliance's Questions submitted in advance of the meeting

- Q4 - Previous data from 2017-2019 mentioned in Table 1-1 is not continuous, year-round data. Is Alabama Power now collecting continuous, year-round data at multiple locations?

No. The study plan approved collecting continuous data at the downstream monitor during 2019.

- Q5 - The Alabama Power data listed on Table 1-1 shows monitoring during generation only. Is data during non-generation periods available prior to 2019?

No.

- Q6 - The report states that a continuous monitor was "recently installed" at Malone. Was it installed on March 12, 2019 corresponding to the "Downstream Monitor 2019" tab of the WQ data excel spreadsheet?

The monitor at Malone is owned and operated by ADEM. Data from the Malone monitor was not included in the spreadsheet. However, Alabama Power can add it to the Final Water Quality Report.

- Q7 - Is there only the one continuous monitoring station downstream from Harris Dam at Malone?

Yes.

- Q8 - The Draft Water Quality Study Report contains significant water temperature data, but the discussion and conclusions focus almost exclusively on dissolved oxygen levels, and do not discuss temperature. Will the effects of temperature be discussed in the final report or reported on in the Aquatic Habitat or Aquatic Resources study reports?

The effects of temperature on aquatic resources will be addressed in the Aquatic Resources Report.

- Q9 - Is Alabama Power studying, or planning to study, methods to account for low water temperatures, including using an alternative intake structure that would allow for mixing of warmer and cooler water to raise average temperatures or withdrawing water from a higher depth in the reservoir to allow for warmer releases?

Alabama Power intends to study technologies that can address temperature, as needed, once a temperature issue has been determined and defined through on-going study and data analyses.

7.3 Participant Questions

- Q10 - Alan Creamer (FERC) noted that there was only one year of continuous monitoring data. How confident is Alabama Power that the data represents what could be a worst-case drought or is truly reflective of the worst water quality could be? Also, Alan asked why Alabama Power couldn't get more than one year of continuous data? If stakeholders want to look at this and want to know how confident Alabama Power is in this data and that it truly represents a drought period.

Jason Moak (Kleinschmidt) said he does not think 2019 was a worst-case scenario and that it is not known if 2020 would be either. Angie Anderegg (Alabama Power) said that Alabama Power proposed one year of monitoring in the study plan, which was approved. Angie also noted that it is time consuming and expensive to service the continuous monitor but that will not prevent further monitoring should it be required.

Alan stated that when FERC approved the Water Quality Study Plan, it was with the intent that collectively, we would use year one data to determine if additional data were needed. Angie Anderegg (Alabama Power) asked if FERC sees a need for an additional year. Alan said there are instances where we drop below what we are trying to achieve, so if this is not the worst-case scenario, you could have more years where the DO drops below that criteria. Alan further stated that it is hard to make decisions on just one year. Alan also pointed out that the one year included in the report was not one that could be considered a drought, so in a drought Alabama Power may only meet water quality criteria 90% of the time. Angie noted that because Alabama Power is filing the 401 application in 2021, Alabama Power is collecting data at the tailrace monitor in 2020, resulting in an additional year of data. Alan Creamer noted that the tailrace monitor is only capturing generation. He indicated that FERC wants to know what happens to water quality during both generation and non-generation.

Keith Chandler (Alabama Power) noted that 2019 was not a drought year, but it was a hot year and that ADEM is continuing to collect data downstream. Keith further said Alabama Power ran only green plan flows a lot of the time during the monitoring season.

Alan Creamer said the most important part of this is what is happening right below Harris Dam or less than half a mile downstream. The other gages further downstream are also accounting for other influence. In reading this report Alabama Power met the criteria near 100% of the time but that may not be reflective of what's happening closer to the dam.

- Q11 - Jimmy Traylor (Downstream Landowner) asked if anyone has identified the sulfur smell in released water? Jimmy said he noticed it in the summer especially during the first 45 minutes or so of generation. Near Malone you get a foul smell. Seems to go hand-in-hand with drought conditions. As you get further into the summer months, it worsens.

Alabama Power is not aware of a sulfur smell in the water. Jason Moak (Kleinschmidt) asked if there was a time of year that the smell is worse. Jason said he has noticed that smell at other hydro projects and said it probably had something to do with natural lake stratification and biological processes that occur on the lake bottom.

- Q12 - Sarah Salazar (FERC) asked if the Draft Water Quality Report covered where in the water column that Alabama Power is drawing water from in Lake Harris? This would be helpful to include in the report.

The intake at Harris has a movable sill. Alabama Power will add this information to the Final Water Quality Report.

- Q13 - Albert Eiland (Downstream Landowner) asked to please summarize the conversation between him and Jason Moak about mercury. Has the content changed in the reservoir? How bad is it in the lake?

Jason Moak (Kleinschmidt) said he was not sure. It could be coming from atmospheric deposition in the lake. Jason noted it is a widespread issue among reservoirs all over the country and an issue with large bodies of water and fish.

- Q14 - Maria Clark mentioned a Georgia Project where they do maintenance in the intake because a lot of debris accumulates, and they let the water run which causes the debris to mix into the water that is being released. Clearing that helped alleviate the smell. This was a smaller dam.

Jason Moak (Kleinschmidt) said there is not much of a debris issue due to the size of the Harris Dam.

8 EROSION AND SEDIMENTATION STUDY

Jason Moak (Kleinschmidt) presented the progress on the Draft Erosion and Sedimentation Study, which included the study purpose, data and activities collected to date, and remaining activities. Jason noted that no variances to this study plan are requested. Alabama Power distributed the Draft Study report to stakeholders on March 17, 2020, and also in April 2020, concurrently with filing the ISR.

8.1 FERC's Questions submitted in advance of the meeting

- Q1 - Section 5.0, Discussion and Conclusions states that at some sites, "land clearing and landscaping, and other construction activities affecting runoff towards the reservoir" cause erosion. Is it possible to provide areal images showing the areas of active erosion in relation to the project boundary as part of the final study report?

Yes. Alabama Power will add aerial photos showing the project boundary, winter pool, and summer pool contours.

- Q2 - Appendix D – photos...it would be helpful if the captions for the photos included better location descriptors (e.g., Harris Reservoir, Harris Reservoir-?? Embayment, Harris Reservoir-?? River Arm, Tallapoosa River, etc.). For the Harris Reservoir sites, it would be helpful if the contours within which peaking operations occur (lake fluctuation zone) could be identified.

Alabama Power will add captions with location descriptors to the photos in Appendix D. Because Harris is a storage reservoir, there are no daily fluctuations in reservoir level, only seasonal fluctuations in accordance with the operating curve.

- Q3 - Could you make the video footage that was collected as part of this study available for stakeholders to view?

Yes, Alabama Power is investigating how to make the video footage available.

- Q4 - Will the nuisance aquatic vegetation surveys still be possible to conduct in Lake Harris this summer?

Yes, the nuisance aquatic vegetation surveys are scheduled for summer 2020.

- Q5 - On page 24, in section 3.2, the report includes the following statement: "A total of 20 sites, rather than 15 sites, were provided for the left bank segments as many segments were tied with a score of (slightly impaired)." Please explain what is meant by many of the streambank segments being "tied with a score of slightly impaired" and clarify the relationship between the number of streambank segments/sites and the bank condition score.

Alabama Power will edit the text to make this section clearer. All assessed streambank segments (each 0.1 mi of the study reach) were sorted based on their condition score, from lowest to highest. Sites with the 15 worst scores (i.e., ranked 1 through 15) were presented in Table 3-2. Since 14 of the left bank segments in the list had the same score for condition (3.0), they were included in the list.

- Q6 - On page 25, in Table 3-2, shouldn't the heading/label of the first column of the table be "Site Number" instead of "Rank" given that the rank options are only 1 through 5 (according to Table 3-1) and there appear to be 20 sites?

Please see the response to Q5 above. Alabama Power understands that this table is confusing and will rework it to make the results clearer in the Final Erosion and Sedimentation Study Report.

- Q7 - On page 11, of the Tallapoosa River High Definition Stream Survey Final Report (Appendix E of the Erosion and Sedimentation Study Report), it states that prior to the survey, flows were monitored to ensure relatively normal flow conditions during the survey. For clarity, what were the "relatively normal flow conditions" during the survey? Were they slightly higher or lower than average?

As seen in the graphs of discharge on page 12 of Appendix E, flows during the study were very close to the long-term median value.

- Q8 - In Figures 13 and 16 of the Tallapoosa River High Definition Stream Survey Final Report, the scale is small and so it appears that most of the riverbanks are unmodified and the modified banks identified on the individual site surveys are not visible. It would be helpful if the figures in the report showed labeled points for the erosion/sedimentation sites that are identified in the report.

Alabama Power will provide figures with a larger scale and with labeled erosion sites in the Final Report.

- Q9 - Page 20 of Tallapoosa River High Definition Stream Survey Final Report states that a confidence rating was used to indicate the clarity of the streambanks in the video and figures 14 and 17 of that report show areas where the video clarity was impaired and therefore the confidence in the accuracy of the streambank conditions/classifications is lower. As stated above, it would be helpful if the figures in the report showed labeled points for the erosion/sedimentation sites that are identified in the report. Do any of the areas with impaired video clarity coincide with areas that stakeholders identified as erosion/sedimentation sites or other sites that Alabama Power identified as part of this study? Do you intend to take any steps to deal with the impaired clarity data? Is so, how?

Alabama Power will reexamine these areas to determine if sites with lower confidence coincided with identified erosion sites. If so, we will perform targeted surveys of these areas and update the Final Report accordingly.

- Q10 - In Figure 18 of the Tallapoosa River High Definition Stream Survey Final Report, there appears to be a missing ranking at river mile 37 for the right streambank. Could you explain this gap in the ranking?

Alabama Power is reexamining this area and will include rankings in the Final Report.

- Q11 - For Figures 20 through 23 of the Tallapoosa River High Definition Stream Survey Final Report, please label the river mile ranges on the maps to help reviewers understand the starting and ending points of the study area and which segments of river are included.

In Figure 26 of the Tallapoosa River High Definition Stream Survey Final Report, please move the scale bar and sources so that they are not covering the river segment and bank conditions at the bottom of the map.

Alabama Power will revise this figure accordingly.

- Q12 - Can you identify where peaking pulses are attenuated downstream from Harris Dam under the current operating regime and volume of typical downstream releases? If so, are there any patterns in the downstream streambank conditions and observed levels of erosion along the segments of streambanks within the attenuation zone? Where are the identified erosion sites in relation to the length of the attenuation zone?

Alabama Power will incorporate a discussion of water level fluctuations and any potential correlations with streambank erosion into the discussion section of the Final Report.

8.2 Alabama Rivers Alliance's Questions submitted in advance of the meeting

- Q13 - Will we have access to the High Definition Stream Survey video created by Trutta Environmental Solution as part of the Downstream Bank Stability Report?

Yes, Alabama Power is investigating how to make the video footage available.

- Q14 - Table 3-2 shows streambank scored for the 15 most impaired areas downstream of Harris Dam. How was the Average Combination Bank Condition score (final column) computed? It does not appear to be an average of the "Average Left Bank Condition" and "Average Right Bank Condition" scores, which would yield a lower average scored. The averages showing for the left and right banks are mostly 3.0 or higher while the average combined bank condition scores are mostly below 3.0.

Jason Moak (Kleinschmidt) noted that one column looks only at left bank and the other the only right bank. Every tenth mile those scores were averaged and ranked. Jack West (Alabama Rivers Alliance) said it still doesn't make sense why you have larger averages on both sides, and they are reduced in combination. Sarah Salazar (FERC) said that part of the table was confusing as well, and she is not certain that last column is informative. Jason said he agrees and was thinking that it may only make sense when there are impacts on both sides, like a transmission line crossing.

- Q15 - The report concludes in Section 5.0 that “None of the erosion sites surveyed were the result of fluctuations due to project operations.” This conclusion seems in conflict with the assessment in the HDSS that impairment areas “were due to the fluctuating flows eroding the streambank within a few feet of the water surface and streambank interface.” (Pg. 43 of Trutta Report).

This statement refers to the reservoir. Because Harris is a storage reservoir, most of the erosion occurring in the reservoir is due to wave action from boats or winds.

- Q16 - Is Alabama Power completing a total suspended sediment analysis during the pre-pulse, pulse, and post-pulse time periods to see what sediment is getting moved from and to various locations?

No, Alabama Power is not completing a total suspended sediment analysis.

- Q17 - Is Alabama Power conducting a historical, cumulative effects study of erosion since the dam’s construction?

Alabama Power is not performing a cumulative effects study.

- Q18 - Is Alabama Power assessing whether having a continuous minimum flow downstream may help with erosion and sedimentation problems?

Yes. Alabama Power will use the model outputs to assess the difference in water level fluctuations.

- Q19 - Jack West asked why it seems that none of the erosion sites are due to operations.

Most of the erosion issues downstream are not due exclusively to operations. For example, areas where trees and vegetation are being cleared are not due exclusively to operations, but water fluctuations could exacerbate erosion.

8.3 Donna Matthews’ Questions submitted in advance of the meeting

- Q20 - Better Visualization of Erosion over the Past 50 Years: Do the erosion studies conducted during this permitting period compare pre-dam (baseline) river shape/contour with the current status of the river? Pre-dam analog photographs exist for comparison to current satellite imagery.

Alabama Power has not compared pre-dam conditions to current conditions. Historical photographs may provide useful information for the cumulative impacts section of the license application and for FERC’s use.

8.4 Participant Questions

- Q21 - Jimmy Traylor (Downstream Landowner) said he has no trees on the bank at his property and has little bank remaining. He asked Jason what he would consider that? Mr. Traylor noted that his trees have been falling in and steps that his grandfather built are disappearing since the dam was built and operation.

Jason Moak said he would locate Mr. Traylor's property on the data file to see how that area was scored. Jimmy Traylor responded that the Draft Erosion and Sedimentation Report says, "not much erosion" at his property. Mr. Traylor also noted that there is significant sedimentation in areas like Cornhouse Creek and No Business Creek where the water backs up during generation. He characterized it as "a mud pit" and this has significantly affected these tributaries. He believes Alabama Power is missing the mark on erosion. Mr. Traylor also noted that since the inception of the Green Plan, erosion has decreased. He noted that a continuous minimum flow would also help reduce erosion. Jack West (ARA) asked about data Alabama Power may have regarding bank conditions and erosion from the 1980s (pre-project and just after project was constructed), 1990s, and in the 2000s to do a cumulative effects study. If there is data, he asked that Alabama Power make it available so we can assess the impacts on a larger scale.

Carol Knight concurs with Jimmy Traylor and Albert Eiland can give anecdotal evidence of how the banks have eroded. Carol indicated that she has old maps from 40s and 50s of conditions during that time to compare what it is now. Those trees weren't necessarily clear cut. People downstream know what it used to be, and they know what it is now. She noted that they are having a hard time reconciling these things. There is significant erosion. It is not just because somebody is cutting trees or that they are letting cows access the river.

Jason Moak (Kleinschmidt) explained that he was not suggesting that where erosion occurs it is the landowners' fault. Jason emphasized that it is very important for downstream property owners to comment on any areas that downstream property owners believe the Draft Erosion and Sedimentation Report has mischaracterized the erosion and source of the erosion.

Maria Clark wanted to know why not do a GIS study. We have a lot of data, including the areas that are impaired. We have pictures. What I can see by following the data you have looks like the erosion is mostly in the river bends. With other projects, we have seen landowners have a lot to do with it by cutting trees for their river view. If we analyze with GIS what happened when the dam was built and 50 years later, we will be able to see the development. It is important to bring this information out for Alabama Power to show more clearly these project impacts using GIS.

Donna Matthews said she's been playing with maps and someone took old aerial photos and coordinates from landowners when they came to a meeting and shared erosion hot spots. One set is from 1964 and one set is from the 1940s. Donna indicated that if anyone is interested, they can overlay the google earth pictures. There are certain markers that local people have put together.

Jimmy Traylor said that his land is undeveloped except for maybe 200 yards and said they have never cut the timber, one of the last virgin hardwood bottoms around. Losing trees and losing bank. That is erosion.

Albert Eiland noted he lives about 2 miles below Jimmy Traylor and is on the outside of a natural curve, which will experience more damage than an inside curve. Mr. Eiland noted that historically there were 7-8 islands in the Tallapoosa River. Those old maps will show that. There is only one island left. Jimmy asked if it's Hodge's island. Albert said the island is on an inside curve, that's why it's still there. In spring of 2017 we experienced a lot of flooding. I lost 2 big trees. Has been losing trees and the bank. We have hauled a lot of rocks in there to keep it from washing away. Would be eroded away without the rocks.

Relevant to this discussion, Carol Knight submitted a comment via IM from a participant that had to drop off the meeting conference call. Her issue is that there are serious erosion issue and has gotten worse this year with all the rain and the river fluctuating up and down. Several places have large holes in the banks and many of the trees have washed away. She indicated that the water is extremely high even if there isn't a scheduled release.

- Q29 - Lake Watch: Has there been assessment/consideration of sedimentation in the Tallapoosa where it enters Lake Martin, where the bulk of the sediment settles out as the river current declines, as seen by large sediment bars that have formed below where Hillabee Creek enters the river?

An assessment has not been done in that area. The Study Area extends through Horseshoe Bend. It is likely that bedload sediment naturally transported down Hillabee Creek settles out as it enters the upper reaches of Lake Martin, similar to what happens in the Little Tallapoosa River at the headwaters of Lake Harris.

- Q30 - Rachel asked about erosion areas on the lake that are anthropogenically attributed: She recommended that Alabama Power include in the Final Study Report the shoreline management classifications in the area where it appears erosion is occurring. Rachel noted that FERC identified erosion and sedimentation as something they would analyze for cumulative effects. There is a sense that the license application will need information on cumulative effects. Some of this will be anecdotal and this information may go into the analysis. FERC does look at cumulative effects, but it may not be something addressed directly by study report.

Summer and winter pool contours would also be helpful for cumulative effects analysis, and Alabama Power will add the suggested information to the Final Report.

- Q31 – Charles Denman via email following the meeting: I agree with other participants that a comparison of historical photos with current conditions of the river would help to understand the flushing effects operations of the dam have on downstream erosion.

9 THREATENED AND ENDANGERED SPECIES STUDY

Jason Moak (Kleinschmidt) presented the progress on the Draft Threatened and Endangered Species study, which included the study purpose, data and activities collected to date, and remaining activities. Additional fieldwork is planned for summer 2020 for this study. Jason noted that no variances to this study plan are requested. Alabama Power distributed the Draft Desktop Assessment Report to stakeholders in April 2020, concurrently with filing the ISR.

9.1 FERC's questions submitted in advance of the meeting

- Q1 - Have the GIS overlays of T&E species habitat information and maps been completed (i.e., the map figures in Appendix B of the draft T&E species study report)? Or are there still steps to complete this component of the study? We suggest including project features, recreation areas, and other managed areas (e.g., timber harvest areas, wildlife management areas, etc.) on the T&E species maps in order to help determine the proximity of species ranges/habitats to project-related activities and identify the need for species-specific field surveys.

Those maps are completed. Alabama Power will consider making the suggested additions.

- Q2 - While the draft T&E species study report indicates that additional field surveys for the fine-lined pocketbook freshwater mussel are planned for May 2020, the report does not include a description of the criteria used to determine which of the species on USFWS's official (IPaC) list of T&E species would be surveyed in the field. Please describe which species will be surveyed in the field and explain how and why they were selected. In addition, please describe any correspondence Alabama Power has had with FWS and state agencies regarding the T&E species selected for additional field surveys.

Alabama Power is consulting with USFWS to determine which species have known historical occurrences or critical habitat intersecting the Project boundary or could reasonably be found within the Project boundary. Surveys will be performed for the palezone shiner due to information from USFWS regarding the possibility of existence in some tributaries within Skyline. Surveys of fine-lined pocketbook are being performed due to existing critical habitat in the upper Tallapoosa River above Lake Harris. Correspondence between Alabama Power and USFWS and state agencies as of the ISR filing is included as Attachment 2 of the Draft Threatened and Endangered Species Desktop Assessment.

- Q3 - Page 7 lists the sources for the ESA species information. The sources included USFWS's Environmental Conservation Online System (ECOS) but did not include IPaC. The official list is obtained through the IPaC report. Has an IPaC report been downloaded or are you using the IPaC report filed to the record by FERC staff?

The ECOS website was used as a source for life history, habitat, and range information in preparation of the desktop assessment. The IPaC list was used to identify species to include in the desktop assessment and potential field surveys.

- Q4 - Page 8 states that the existing land use data is not specific enough to determine if the 3,068 acres of coniferous forest within the Project Boundary at Lake Harris would be suitable for red-cockaded woodpecker. How do you propose to assess the suitability for red-cockaded woodpecker?

Field observation at these coniferous forests could determine whether these areas contain suitable habitat. Specifically, Alabama Power would look for areas with little or no hardwood mid-story and over-story trees. Alabama Power would also look for larger, older longleaf pines, which make ideal cavity trees for this species in areas that were lacking hardwood mid-story and over-story. Alabama Power will perform this field observation if USFWS deems it necessary.

- Q5 - On pages 3, 10, and 26 there is mention of additional fieldwork planned for two mussel species (i.e., fine-lined pocketbook and Southern pigtoe) for May 2020. Please elaborate on the details of the additional survey work (e.g., survey location(s), sampling protocols and methodologies employed, and clarify which species will be included in the May 2020 assessment, etc.).

In November 2019, surveys were conducted for fine-lined pocketbook on a 3.75 mile stretch of the Tallapoosa River where critical habitat is known to occur from the County 36 bridge to a shoal below the Highway 431 bridge. This endpoint was chosen, because only pool habitat was available another half mile downstream of this bridge. Six surveyors including USFWS, Alabama Power, and Kleinschmidt searched for the target species in 20-minute to one-hour segments at areas containing critical habitat and searched for additional areas with suitable habitat. Silty areas and piles of shells left by muskrats and raccoons were also searched. The introduced *Corbicula fluminea* (Asian clam) was the only bi-valve species observed in these piles. Because high water impeded the search in some areas and the cold weather may have caused mussels to burrow out of site, USFWS suggested another effort be made in the spring. Surveyors will search for fine-lined pocketbook and suitable habitat again in late spring/summer 2020, pending any COVID-19 restrictions. Southern pigtoe is not a species that we would reasonably expect to find in the Project boundary. It is known to occur in Cleburne County, which overlaps the Project boundary. However, documented historical range in that county exists exclusively in the Coosa River drainage basin. The Lake Harris Project Area does not contain any critical habitat areas for Southern pigtoe identified by the USFWS.

- Q6 - The descriptions of Alabama lampmussel and rabbitsfoot mussel on pages 11, 13, and 14 do not provide these species' host fish species. Are the host fish species currently unknown, or was this an inadvertent omission?

The host fish species are currently unknown. Suitable hosts for rabbitsfoot populations west of the Mississippi River are shiner species such as blacktail shiner, cardinal shiner, red shiner, spotfin shiner, and bluntface shiner. There is not much

available information about rabbitsfoot host fishes east of the Mississippi River. Research has shown that lampmussels can successfully utilize rock bass, green sunfish, bluegill, smallmouth bass, spotted bass, largemouth bass, and redeye bass as host fish. It has also been reported that banded sculpin are potential host fish for lampmussels.

- Q7 - There appears to be a typo on page 16, in the description of Southern pigtoe mussel. The middle of the first paragraph refers to the glochidia of the finelined pocketbook mussel. Is this sentence misplaced, or does the information pertain to the southern pigtoe mussel (the subject of section 3.12)? Please clarify.

This is a typo, and the information refers to the Southern pigtoe. The host fishes are accurate.

- Q8 - On page 19, in the first paragraph about the northern long-eared bat (NLEB), it is unclear why the discussion includes the statement about a low occurrence of this species in the "...southwestern region of Alabama" given that the project areas are located in the northeastern and mid-eastern portions of Alabama. Please clarify or correct this statement.

This information is correct. The sentence is intended to describe the general distribution of the species in Alabama.

- Q9 - The draft T&E species study report states that there are no known NLEB hibernacula or maternity roost trees *within the Project Boundary*. However, it does not include information on known NLEB hibernacula *within 0.25 mile of the Project Boundary* and known NLEB maternity roosts *within 150 feet of the Project Boundary* (i.e., at Harris Lake and Skyline). In addition, the report mentions a couple of best management practices (BMPs), protective of some bat species, that Alabama Power implements during timber harvest activities and states that the BMPs have been expanded but not incorporated in the existing license. However, the report does not include the locations of Alabama Power's timber harvesting and other tree removal activities, or detailed descriptions of timber harvesting protocols and BMPs currently implemented within the Project Boundary. This information is important to understanding the affected environment for Indiana bat, NLEB, and/or other T&E species. This information could also be used for the streamlined consultation option for analyzing the potential project effects on NLEB (including within the buffer areas for hibernacula and maternity roost trees).

Please complete the USFWS's NLEB streamlined consultation form and include it in the final T&E species study report. This form can be found at:

<https://www.fws.gov/southeast/pdf/guidelines/northern-long-eared-bat-streamlined-checklist.pdf>. We recommend using FWS's definition of "tree removal" to guide your responses on the form (i.e., "cutting down, harvesting, destroying, trimming, or

manipulating in any other way the trees, saplings, snags, or any other form of woody vegetation likely to be used by northern long-eared bats”).³

Also, please update figures 3.14-1, 3.14-2, 3.14-3, 3.15-1, 3.15-2, and 3.15-3 which currently show “forested area” or “karst landscape” in relation to NLEB and Indiana bat habitats, to show Alabama Power’s timber management areas within the Project Boundary, and other proposed managed areas (e.g., new/improved recreation areas, new quail management areas). This type of information is needed to meet another component of this study (i.e., “determine if [T&E species habitat at the project] are potentially impacted by Harris Project operations”, as described on slide 5 of the Aug. 27, 2019, HAT 3 meeting).

Alabama Power will complete the NLEB streamlined consultation form to be included in the Final T&E Species Report and update the requested figures.

- Q10 - On page 21 and 22, in section 3.17, the discussion mentions an occurrence of little amphianthus within the Project Boundary at Lake Harris (Flat Rock Park) that was documented in 1995 and may be extirpated. Did the botanical surveys in that area of the project target that species? The top of page 22, states that “Vernal pools were not identified due to a lack of available data.” Did the botanical surveys identify vernal pools in this area?

The botanical inventory targeted all plant species existing within the Inventory Area, which is defined as the Blake’s Ferry Pluton and is located adjacent to Flat Rock Park. Of the 365 plant species documented in the Inventory Area. Vernal pools were observed during surveys performed in 2019, however little amphianthus was not found in any of the pools.

- Q11 - On page 22, in section 3.18, the report states that the National Wetland Inventory data is not detailed enough to identify wetlands within the project area that contain white fringeless orchid’s unique wetland habitat characteristics. Do you propose collecting more data on this subject?

Alabama Power is consulting with USFWS and Alabama Natural Heritage Program experts to determine if these habitats are present within the Project Boundary.

- Q12 - On page 23, in section 3.19, the report states that the 16 extant populations of Prices’ potato bean in Jackson County, occur on Sauta Cave National Wildlife Refuge, and near Little Coon Creek in the Skyline WMA. Please clarify whether or not any of the 16 populations occur within the Project Boundary at Skyline WMA.

One extant population intersects the Project Boundary at Skyline and comprises 11 percent of the extant population occurring at Little Coon Creek. However, 89 percent of this single population occurs outside of the Project Boundary.

³ 81 Fed. Reg. 1902 (January 14, 2016).

- Q13 - In Appendix B, figure 3.19, showing Price's potato bean habitat range, there is a 100-foot Stream Buffer within the Limestone Landscape layer shown on the map and legend. Please explain the significance of this buffer, including any regulatory requirements associated with this buffer. Please include this information in the Final T&E Species Study Report.

Price's potato bean is known to exist in Little Coon Creek. This species seems to prefer low areas along near or along the banks of streams and rivers. The buffer indicated on the figure is not regulatory. It is meant to depict areas where this species could potentially occur based on known habitat preferences. We will include this information in the final report.

- Q14 - In the August 27, 2019, HAT 3 meeting summary, please clarify the following: How does Alabama Power define terms such as "sensitive time periods" in the context of timber harvesting? Evan Collins, of FWS, stated that the palezone shiner may be present in some of the lower reaches of the Tennessee River tributaries. Please clarify where these tributaries are located in relation to the Project Boundary.

Alabama Power will include its timber harvesting BMPs as an appendix to the Final T&E species study report. Alabama Power is consulting with USFWS to perform an assessment to determine if palezone shiner are present in Little Coon Creek, which flows through portions of the Project Boundary at Skyline.

9.2 Alabama Rivers Alliance's Questions submitted in advance of the meeting

- Q15 - Is the additional fieldwork to identify mussels scheduled for May being pushed back or proceeding on schedule?

The mussel identification fieldwork is proceeding on schedule; however, fieldwork dates are subject to change due to COVID-19 restrictions. Alabama Power will proceed with fieldwork at the earliest possible date during the spring/summer 2020.

9.3 Participant Questions

- Q16 - Ken Wills (Alabama Glade Conservation Association) - Are the 138.4 acres of granite geology west of the Project Boundary on Alabama Power land, other private land, or public land? How much is public and private land and how much is Flat Rock?

There are private property outcroppings in that area. The Flat Rock Park itself is approximately 25 acres.

- Q17 - Jimmy Traylor asked why there are no [Threatened and Endangered Species] studies below the dam and how Skyline effects water below the dam.

Based on consultation with USFWS, no threatened or endangered species have been identified below the dam. Skyline does not affect the water below the dam.

- Q18 - Sarah Salazar (Federal Energy Regulatory Commission (FERC) asked if Alabama Power could elaborate on how they decided which species to perform field surveys for. How was the list of species being surveyed narrowed down with USFWS?

Determining which species to search for in the field is an ongoing process. The consultation details will be in the final report. This desktop assessment is being used as an initial step toward determining which species to focus on in the field.

- Q19 - Sarah asked if IPaC was being used to determine which threatened or endangered species were in the Project Boundary. If USFWS makes any changes to the inventory of listed species in the Project Boundary, that needs to be considered.

The ECOS website was used as a source for life history, habitat, and range information in preparation of the desktop assessment. The IPaC list was used to identify species to include in the desktop assessment and potential field surveys.

- Q20 - Sarah said that additional information is needed for a streamlined consultation on the Northern long-eared bat. The buffer zones, which are within 0.25 miles of a hibernaculum at any time or within 150 feet of a known occupied maternity roost tree from June through July, were not included in the report. The report seems to be focused on what has been reported in the Project Boundary, but the effects of tree removal need to be analyzed.

Consultation on the Northern long-eared bat is ongoing.

- Q21 - Evan Collins (USFWS) said he does not have a copy of the best management practices for consultation on bats and that information would be beneficial to mapping the buffer zone.

Alabama Power has this information and will provide it to Evan Collins.

- Q22 - Jimmy Traylor asked why no federally listed species below the dam are being studied.

No listed species have been documented in the Tallapoosa River below the Harris Dam.

10 DOWNSTREAM AQUATIC HABITAT STUDY

Jason Moak (Kleinschmidt) presented the progress on the Downstream Aquatic Habitat Study, which included the study purpose, data and activities collected to date, and remaining activities. Jason noted that no variances to this study plan are requested, and the Draft Study Report will be distributed to stakeholders in June 2020.

10.1 Participant Questions

- Q1 - Jimmy Traylor (Downstream Landowner) asked if the temperature component would be included in the draft report? Jimmy commented that 3 months of data will not provide enough information.

Depending upon the timeframe for data processing, Alabama Power may be able to include the temperature component in the draft report. Jason Moak (Kleinschmidt) clarified that the level loggers have been operational since June 2019 and will continue to gather data through June 2020.

- Q2 - Alan Creamer (FERC) stated that only a limited number of alternatives are being tested and that there may be additional scenarios that stakeholders would like to see modeled based on the outcomes of these studies. Alan suggested that FERC may need to meet with Alabama Power to decide how best to approach this study and decide whether a modified study plan is needed.

Jason Moak (Kleinschmidt) indicated that once the model is complete, it would be possible to run different operational scenarios.

- Q3 - Donna Matthews asked if the completed model could analyze optimal conditions, or what would be needed to achieve optimal conditions. Could the model be adjusted to see the effects of change on the outputs?

Alan Creamer (FERC) suggested that FERC may need to meet with Alabama Power to decide how best to approach this study and decide whether a modified study plan is needed.

- Q4 - Jimmy Traylor (Downstream Landowner) asked if Elise Irwin's studies are being considered.

The previous studies conducted by Elise Irwin are being used in the Aquatic Resources study and in the desktop assessment.

11 AQUATIC RESOURCES STUDY

Jason Moak (Kleinschmidt) presented the progress on the Aquatic Resources Study, which included the study purpose, data and activities collected to date, and remaining activities. Auburn University has a primary role in conducting this study, which includes fieldwork and laboratory testing (i.e., bioenergetics). Jason noted that no variances to this study plan are requested, and the Draft Study Report will be distributed to stakeholders in July 2020.

11.1 Participant Questions

- Q1 - Ken Wills asked if there were any dates set for our next electronic meeting.

Angie Anderegg said meetings have not been scheduled to-date, but Alabama Power will let the HAT participants know as soon as dates are selected.

12 NEXT STEPS IN THE ILP

Kelly Schaeffer reviewed the next steps in the ILP. She noted that participants should file their comments on the ISR meeting summary and the draft study reports with FERC no later than June 11, 2020.

- Q1 - Maria Clark asked if the questions or comments would be posted on the website?

Alabama Power will file the ISR meeting summary with FERC on May 12, 2020, and the document will also be posted on the Harris relicensing website (www.harrisrelicensing.com).

APPENDIX A

ISR Meeting Participants

Harris Relicensing Initial Study Report Meeting

April 28, 2020

Attendees:

Alabama Department of Conservation and Natural Resources

Damon Abernethy
Todd Fobian
Keith Gauldin
Keith Henderson
Matt Marshall
Amy Silvano
Chris Smith

Alabama Department of Economic and Community Affairs, Office of Water Resources

Brian Atkins
Dow Johnston

Alabama Department of Environmental Management

Jennifer Haslbauer
Fred Leslie
David Moore

Alabama Glade Conservation Coalition

Ken Wills

Alabama Historical Commission

Amanda McBride
Eric Sipes

Alabama Power

Angie Anderegg
Dave Anderson
Wes Anderson
Jeff Baker
Jason Carlee
Keith Chandler
Jim Crew
William Gardner
Mike Godfrey
Chris Goodman
Stacey Graham
Rodger Jennings
Ashley McVicar
Tina Mills

Alabama Power (continued)

Kenneth Odom
Courtenay O'Mara (Georgia Power)
Alan Peeples
Jennifer Rasberry
Shelia Smith
Thomas St. John

Alabama Rivers Alliance

Martha Hunter
Jack West

Auburn University

Dennis Devries
Ehlana Stell
Rusty Wright

Cherokee Nation

Elizabeth Toombs

Downstream Property Owners

David Chandler, Historian
Albert Eiland, Wadley
Carol Knight, Wadley
Donna Matthews, Wedowee
Jimmy Traylor, Malone
Melissa Willis, Clay County Extension

Environmental Protection Agency

Maria Clark
Lisa Perras Gordon
Lydia Mayo

Federal Energy Regulatory Commission

Allan Creamer
Danielle Elefritz
Rachel McNamara
Sarah Salazar
Monte Terhaar

General Stakeholders

Charles Denman
Matthew Stryker

Kleinschmidt

Kate Cosnahan

Colin Dinken

Amanda Fleming

Mike Hross

Jason Moak

Kevin Nebiolo

Kelly Schaeffer

Dr. Kevin Hunt - Recreation Subconsultant

Lake Martin Resource Association

Steve Forehand

John Thompson

Lake Wedowee Property Owners Association

Barry Morris

Muscogee (Creek) Nation

RaeLynn Butler

Turner Hunt

LeeAnn Wendt

National Park Service

Jeff Duncan

U.S. Army Corps of Engineers

Cindy Donald

James Hathorn

U.S. Fish and Wildlife Service

Evan Collins

U.S. Geological Survey

Elise Irwin

APPENDIX B

ISR Meeting Presentation

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

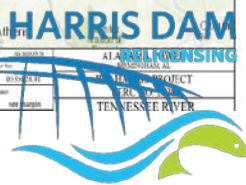
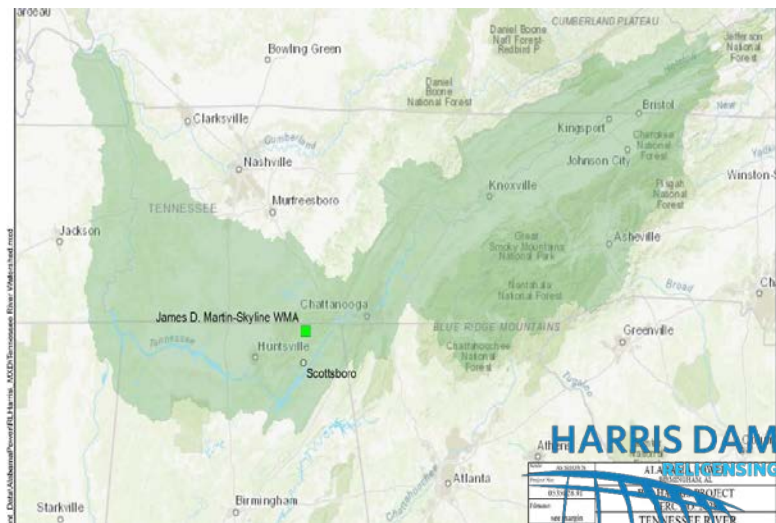
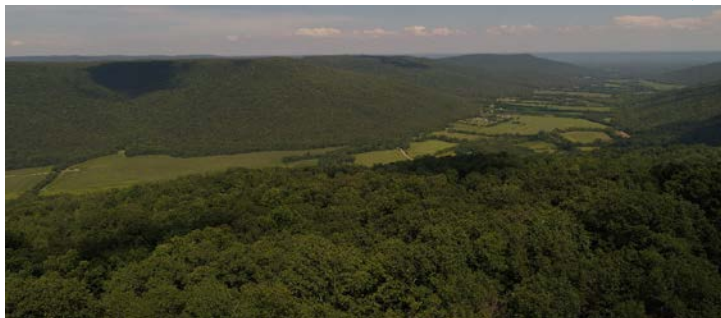
USER, METHODS



- ☐ 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



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

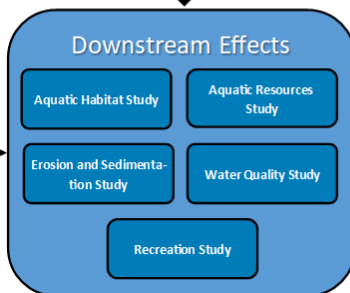
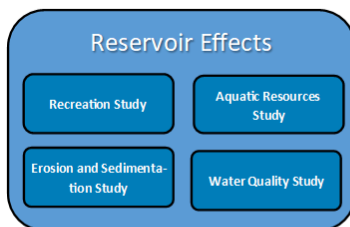
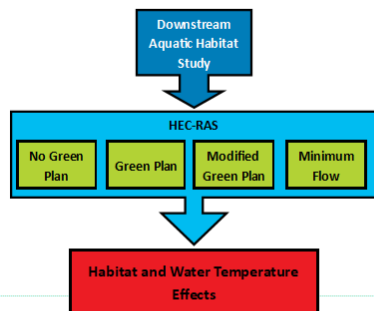
Study Progress

- ☐ 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

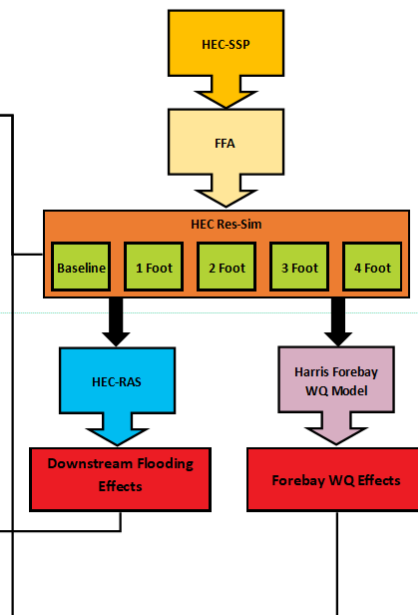




Downstream Release Alternatives Study

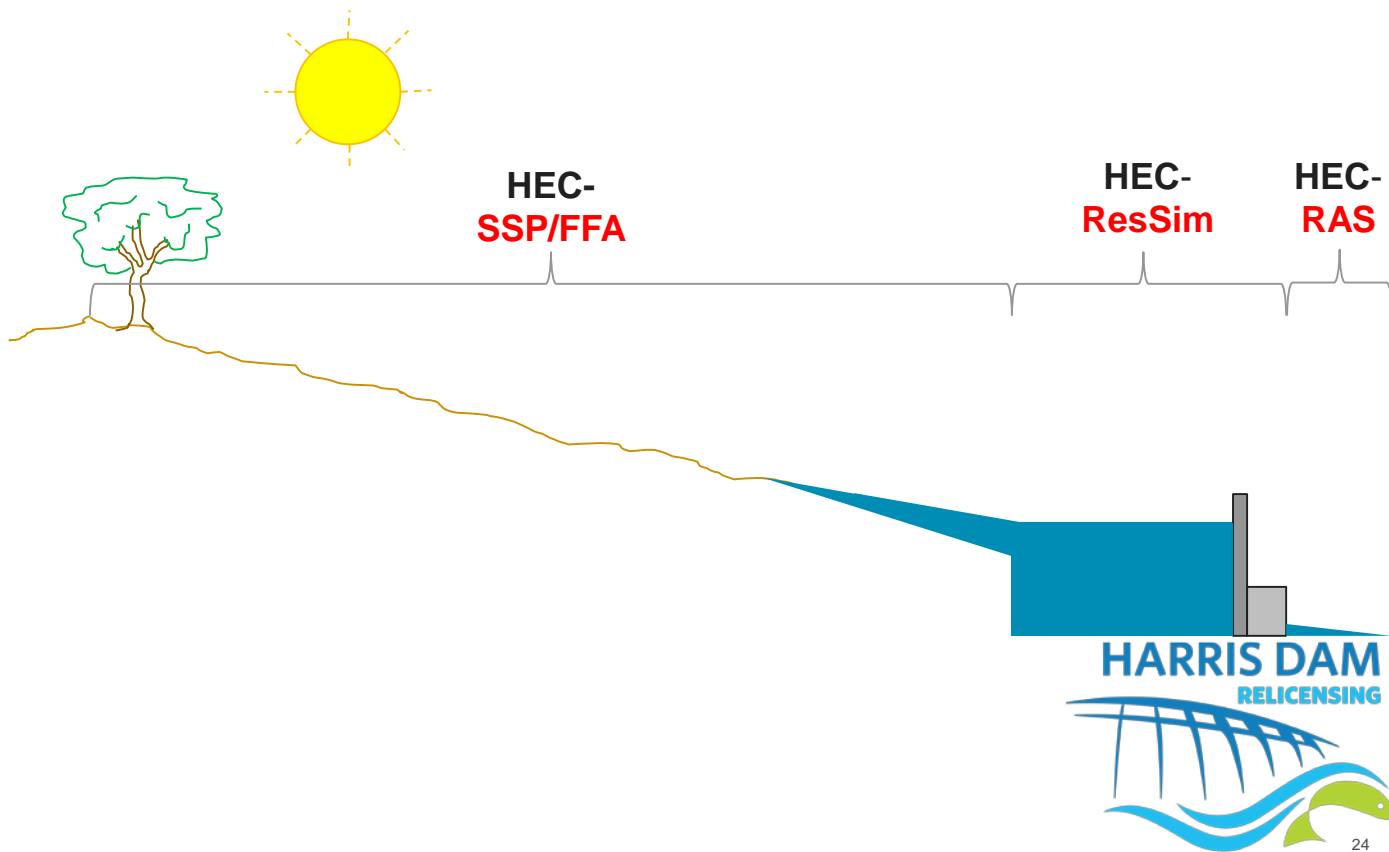


Operating Curve Change Feasibility Analysis Study





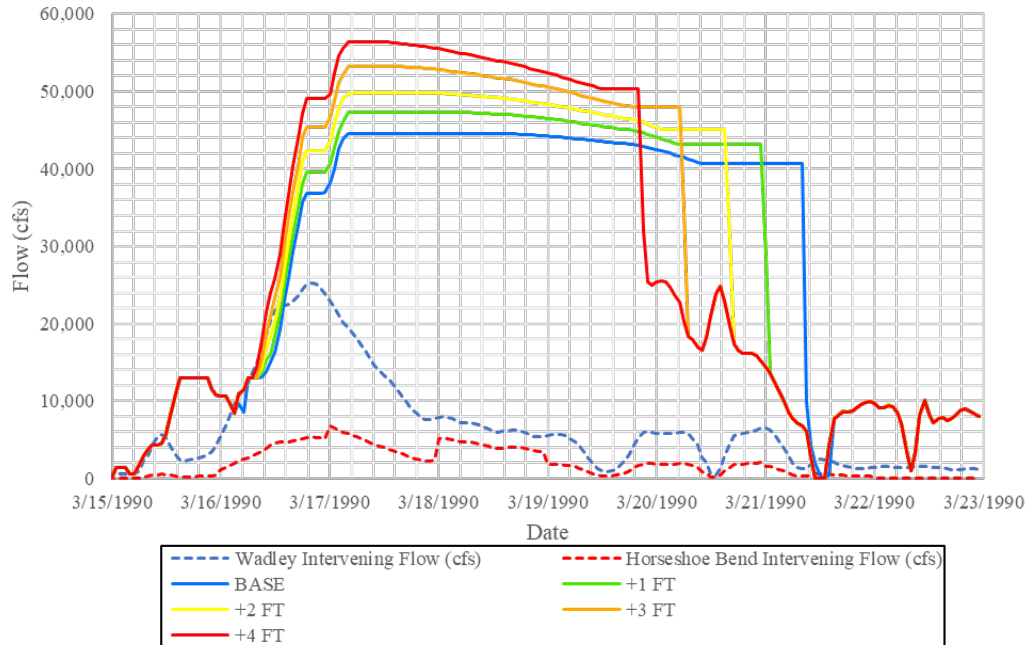
Where the models are used...



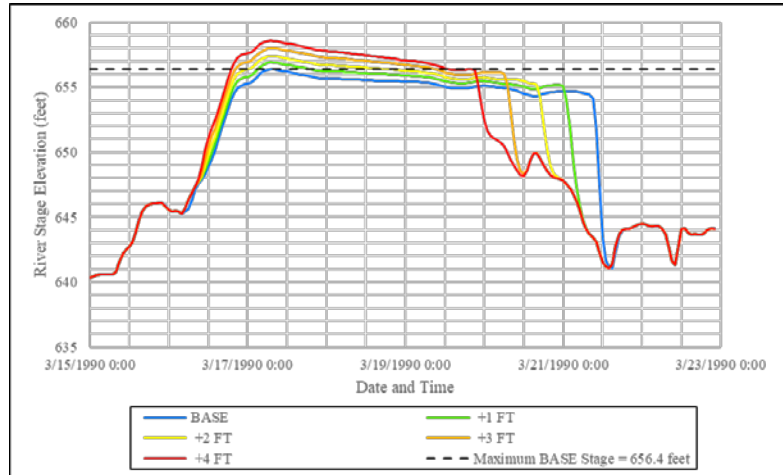
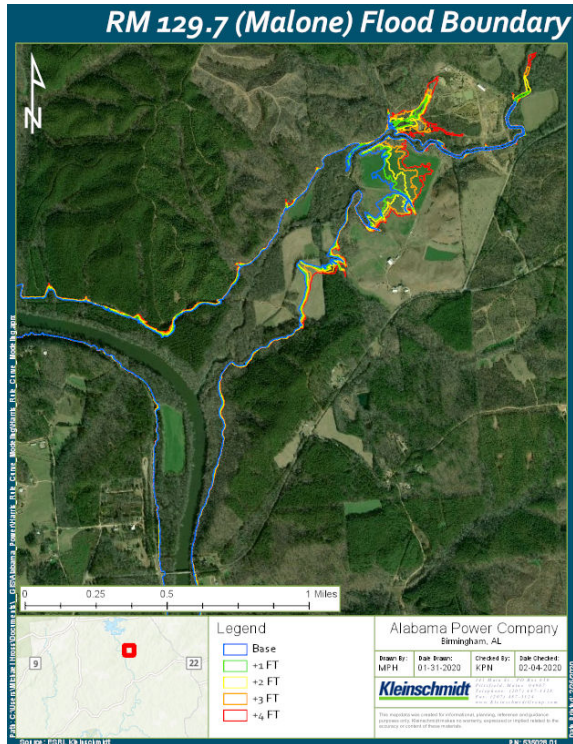
HEC-RAS – MODELED FLOWS



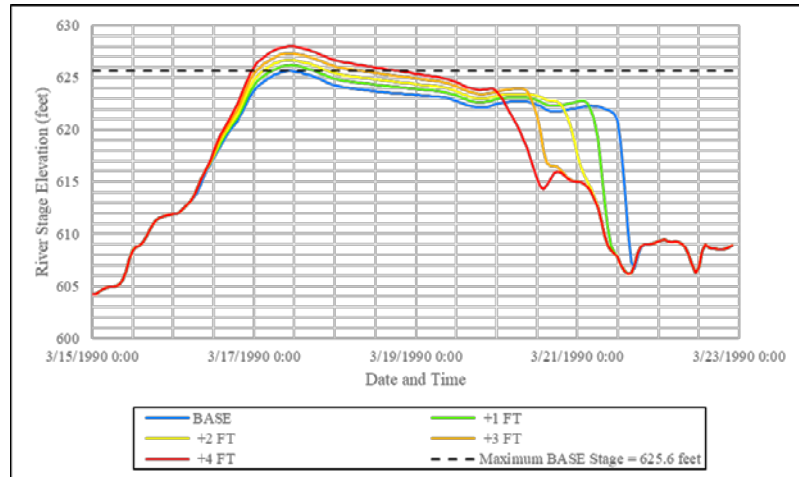
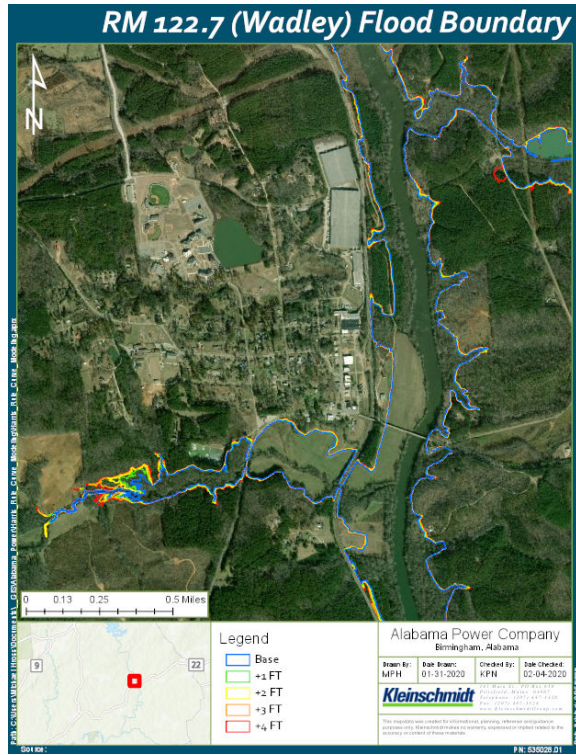
- ❑ Base scenario (i.e., existing) and 4 rule curve simulations
 - +1 ft, +2 ft, +3 ft, +4ft
- ❑ Intervening flows included in model
 - Flows contributed to river by watershed downstream of the dam
 - Between Harris Dam and Wadley, AL
 - Between Wadley, AL and Horseshoe Bend



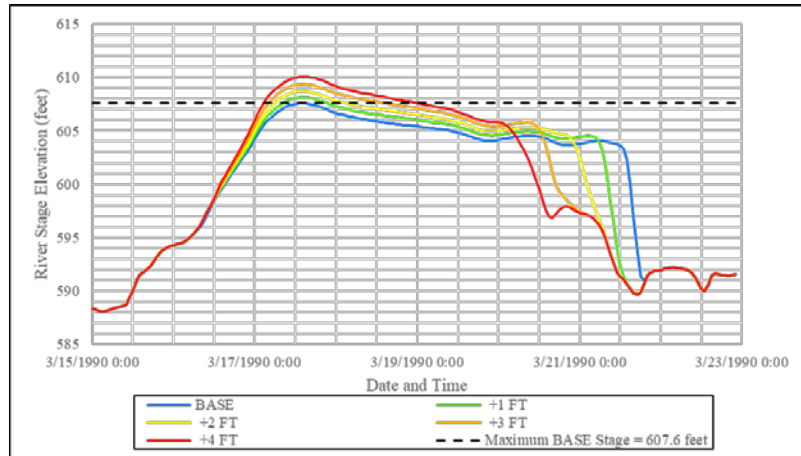
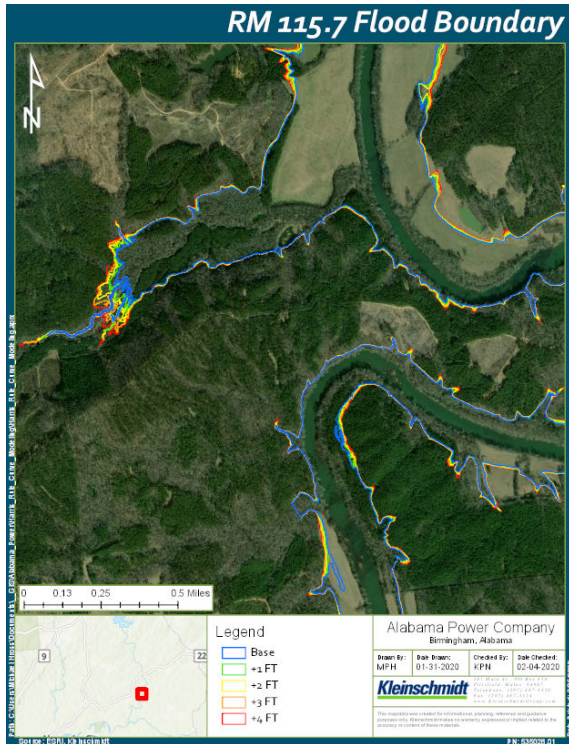
HEC-RAS – MODELING RESULTS



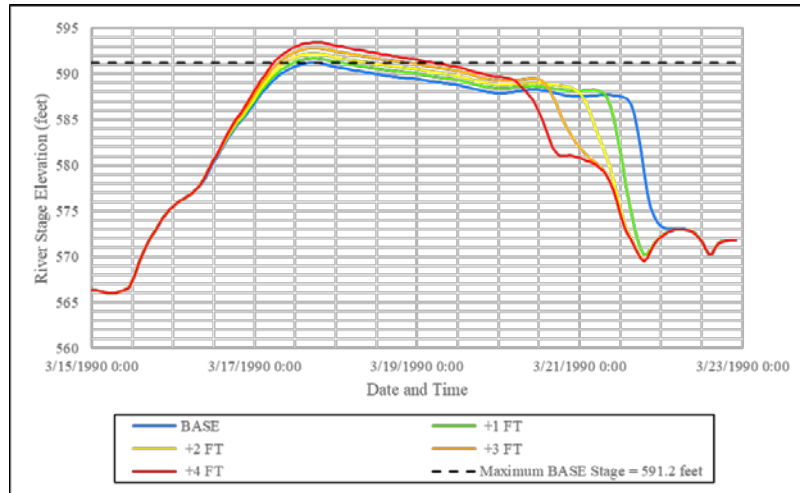
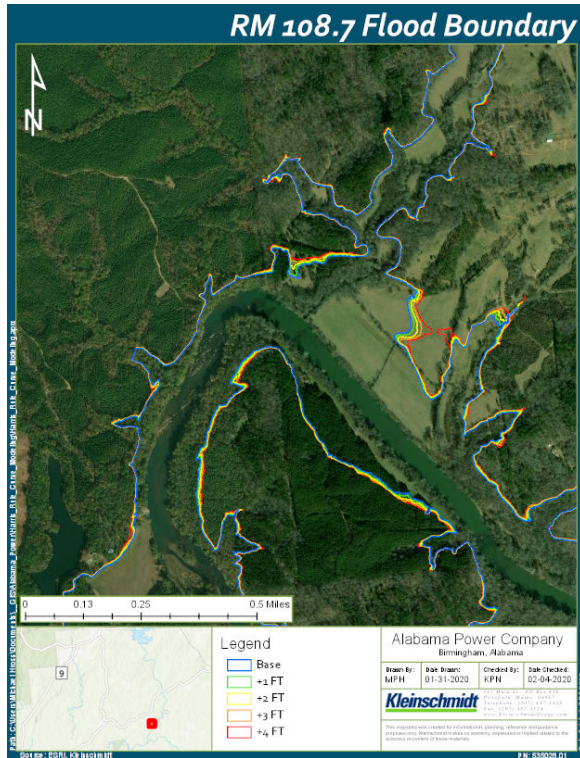
HEC-RAS – MODELING RESULTS



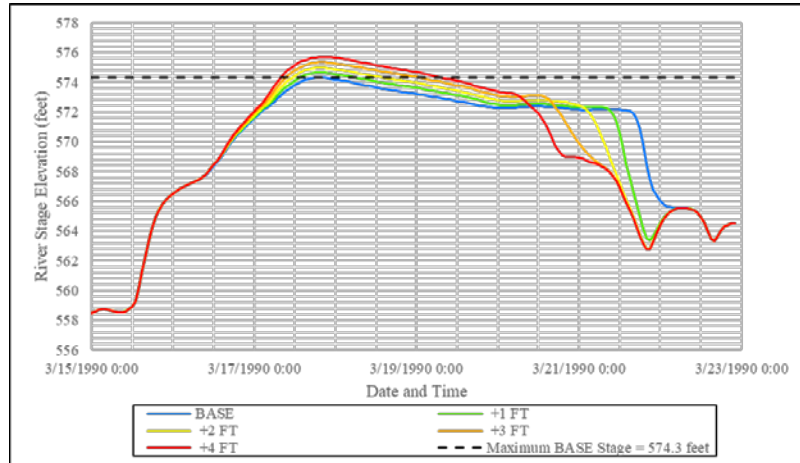
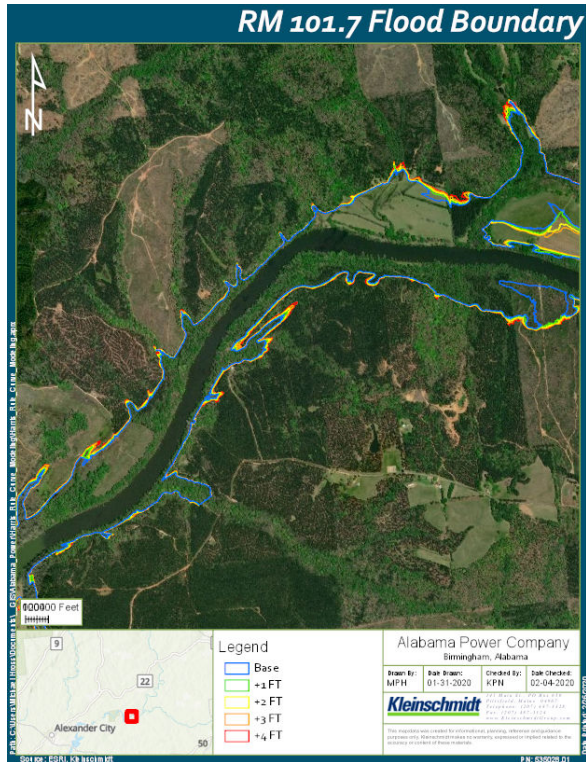
HEC-RAS – MODELING RESULTS



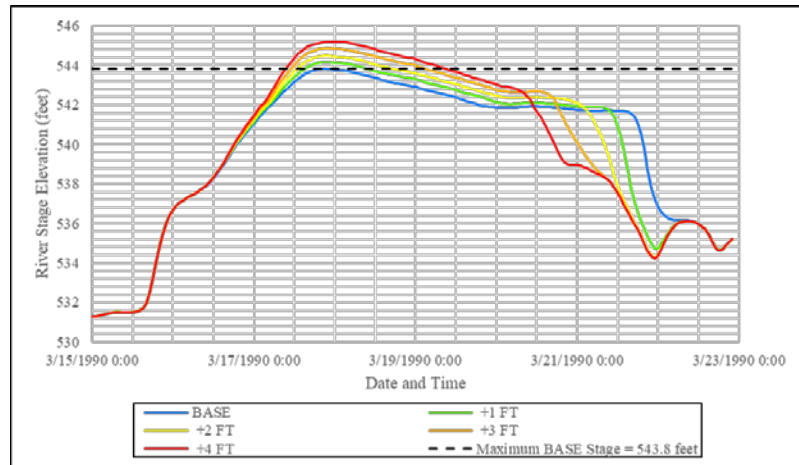
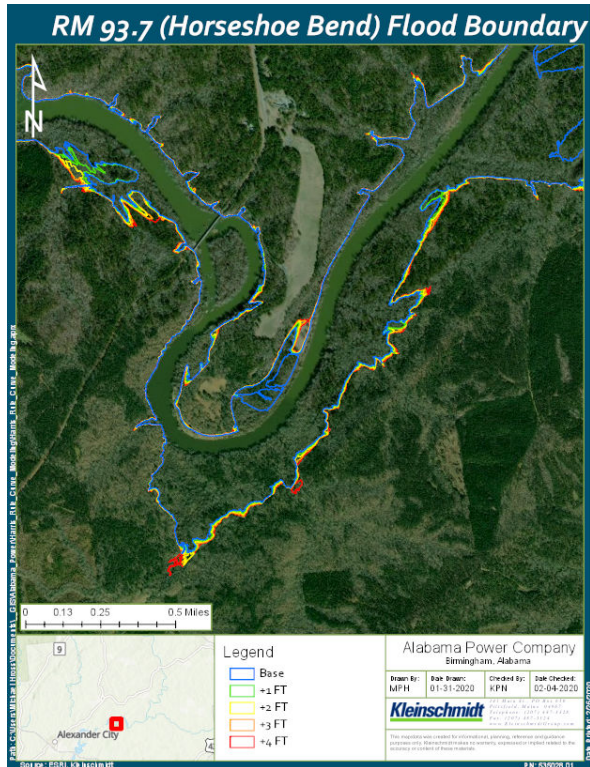
HEC-RAS – MODELING RESULTS



HEC-RAS – MODELING RESULTS



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

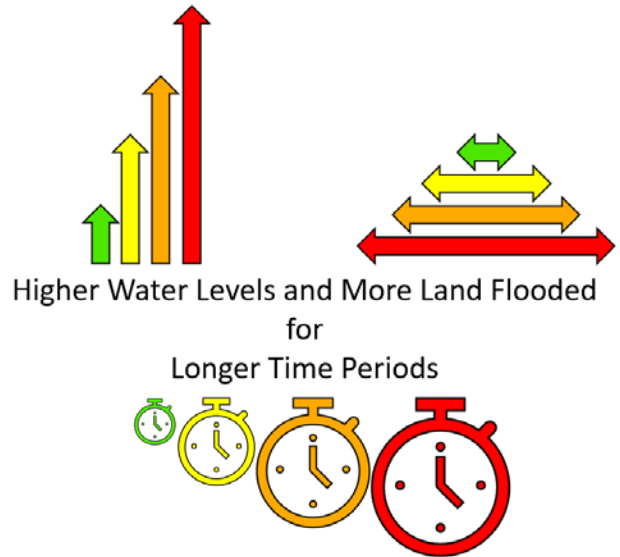
Location	Distance from Dam (miles)	Duration above Baseline Condition Max Elevation (hours)			
		+ 1 foot	+ 2 feet	+ 3 feet	+ 4 feet
RM 129.7 (Malone, AL)	7	15	43	61	67
RM 122.7 (Wadley, AL)	14	12	19	32	43
RM 115.7	21	13	21	34	46
RM 108.7	28	14	26	38	48
RM 101.7	35	17	27	40	48
RM 93.7 (Horseshoe Bend)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

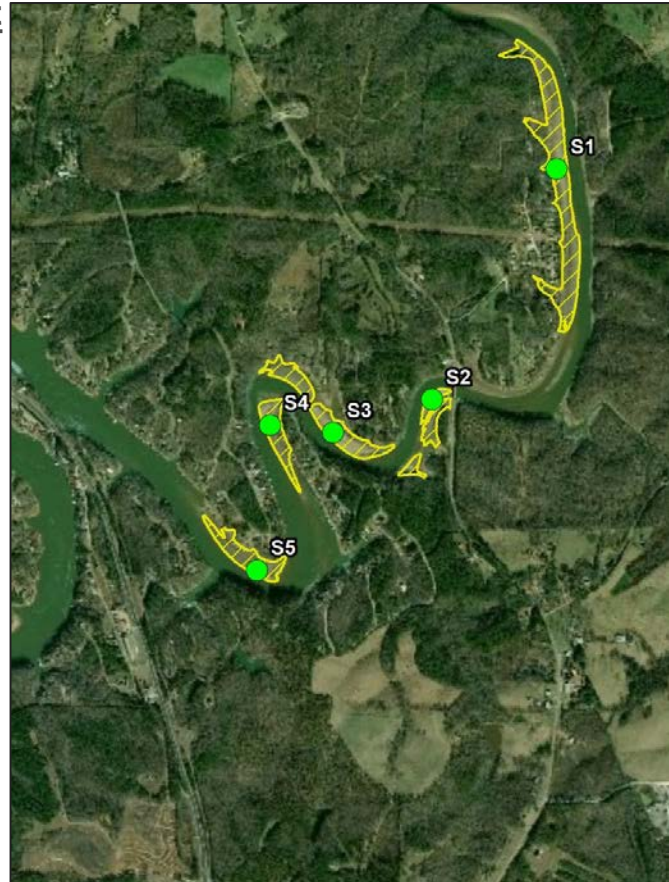


EROSION AND SEDIMENTATION



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

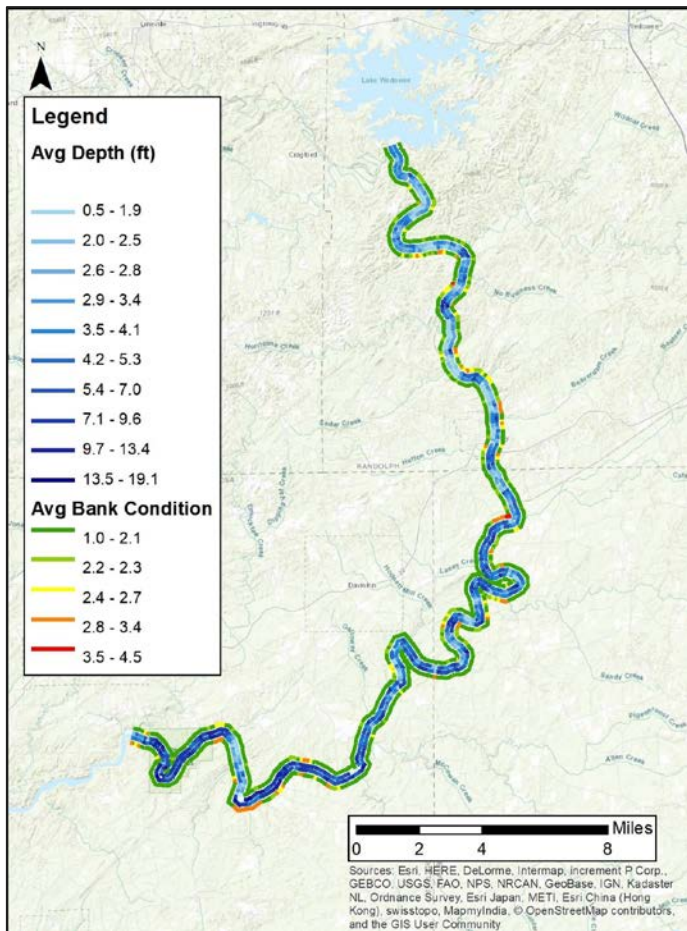
Bank Condition Score	Bank Condition Class	Description	Erosion Potential	Human Impact
1	Fully Functional	Banks with low erosion potential, such as, bedrock outcroppings, heavily wooded areas with low slopes and good access to flood plain.	Low to High	Low to High
2	Functional	Banks in good condition with 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 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