

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426
February 15, 2022

OFFICE OF ENERGY PROJECTS

Project No. 2628-066 – Alabama
R.L. Harris Hydroelectric Project
Alabama Power Company

VIA FERC Service

Angie Anderegg
Harris Relicensing Project Manager
Alabama Power Company
600 North 18th Street, P.O. Box 2641
Birmingham, AL 35203-8180

Reference: Additional Information Request

Dear Ms. Anderegg:

We need additional information before we can conduct our evaluation of your relicense application for this project. Pursuant to section 4.32(g) of the Commission's regulations, please provide the additional information requested in the enclosed Schedule A within 60 days from the date of this letter. If the requested information causes any part of the application to be inaccurate, that part must be revised and refiled by the due date. Also, please be aware that further requests for additional information may be sent to you at any time before final action on your license application.

Within 5 days of receipt, provide a copy of this letter to all agencies you will consult in response to this additional information request. Then, when you file the requested information with the Commission, you must provide a complete copy of the information to each agency consulted under 18 C.F.R. section 16.8 of the Commission's regulations.

The Commission strongly encourages electronic filing. Please file the requested information using the Commission's eFiling system at <http://www.ferc.gov/docs-filing/efiling.aspx>. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov, (866) 208-3676 (toll free), or (202) 502-8659 (TTY). In lieu of electronic filing, you may submit a paper copy. Submissions sent via the U.S. Postal Service must be addressed to: Kimberly D. Bose, Secretary, Federal Energy

Regulatory Commission, 888 First Street NE, Room 1A, Washington, D.C. 20426. Submissions sent via any other carrier must be addressed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852. The first page of any filing should include docket number P-2628-066.

Please contact Sarah Salazar at (202) 502-6863, or via email at sarah.salazar@ferc.gov, if you have any questions.

Sincerely,

Allan F. Creamer

for
Stephen Bowler, Chief
South Branch
Division of Hydropower Licensing

Attachment: Schedule A – Request for Additional Information

REQUEST FOR ADDITIONAL INFORMATION

Exhibit A

Project Facilities

1. Section 2.2, *Powerhouse*, of Exhibit A indicates that the normal tailwater elevation with one unit operating is 664.9 feet mean sea level (msl), and with two units operating is 667.7 feet msl. However, Exhibit F, Sheet F-8 shows that the normal tailwater elevation for one-unit operation is 666.0 feet and for two-unit operation is 669.0 feet, with the datum for the elevations in Exhibit F being unclear. Please correct the discrepancy in tailwater elevations between Exhibits A and F. Also, please provide (a) the datum used in the Exhibit F drawings, and (b) the tailwater elevation with no units operating.

Exhibit E

Proposed Action

2. As part of the study plan, Commission staff requested that Alabama Power model, and evaluate the effects of 150-cubic feet per second (cfs), 300-cfs, 600-cfs, and 800-cfs continuous minimum flows (with and without Green Plan pulsing) on downstream resources in the Tallapoosa River. Based on the outcome of that work, on October 1, 2021,¹ Commission staff requested that Alabama Power determine what continuous minimum flow between 300 cfs and 600 cfs (with or without Green Plan pulsing) would result in a more than negligible effect on Harris Lakes levels. Table 5-1 in section 5.2, *Alternatives Considered but Eliminated from Further Analysis*, of Exhibit E (page E-44) provides Alabama Power's preliminary analysis of the effects of continuous minimum flows of 350 cfs, 400 cfs, and 450 cfs on the average and minimum reservoir levels in Harris Lake. During the January 20, 2022, Harris Modeling Technical Meeting, Alabama Power representatives confirmed that the evaluation was done using the HEC-ResSim model, and that they had not had time to model the potential effects of the three minimum flows on downstream resources (e.g., erosion and sedimentation, water use, water quality, aquatic habitat, terrestrial and botanical resources, recreation, and cultural) using the HEC-RAS model.

In addition to the potential effects on the lake levels, considering the potential effects of these flows on downstream resources is important. Having the results of the additional analysis for the 350 cfs, 400 cfs, and 450 cfs continuous minimum flows will facilitate staff's review of the proposed project and inform the Commission's

¹ See Accession No. 20211001-3009.

licensing decision. Therefore, please complete the evaluation of the 350 cfs, 400 cfs, and 450 cfs continuous minimum flows using the HEC-RAS model, as well as Alabama Power's Hydrobudget model (for generation and cost information), and apply the results of those model runs in evaluating the effects on downstream resources in the same manner as was performed under the study plan for the 150-cfs, 300-cfs, 600-cfs, and 800-cfs continuous minimum flows. In addition, please describe any options, including mechanisms and costs, to release flows greater than 300 cfs from Harris Dam.

Geology and Soils

3. Section 7.1.1.1, *Existing Erosion and Sedimentation*, indicates that Little Coon Creek, which runs through the project area within the Skyline Wildlife Management Area (WMA), is currently included in Alabama's 303(d) Impaired Waters List due to siltation. Non-irrigated crop production and pasture grazing are identified as sources of soil erosion contributing to sedimentation/siltation in the creek. However, the discussion indicates that only 8.8 percent of the land within the watershed is currently used for agriculture, which is an increase of just 0.8 percent from 2001 to 2016. The discussion does not provide any information about other land uses, including timber harvesting, in the watershed and in the project boundary that could contribute to erosion and sedimentation in Little Coon Creek. The final Erosion and Sedimentation Study Report provides land cover changes in the Little Coon Creek watershed from 2001 to 2016, and it states the majority (i.e., about 87.4 percent) of this creek's watershed is forested, but it does not provide information about changes in timber harvesting within these forests, including within the project boundary. To facilitate Commission staff's review of project operation and maintenance on geology and soils within the Skyline WMA, please provide the percentage of land where silviculture occurs (a) in the watershed, if known, and (b) within the project boundary; as well as describe any changes to the amount of timber harvesting on the land within the project boundary at Skyline WMA during the current license term. In addition, please describe how long Alabama Power has been implementing the Alabama Forestry Commission's Best Management Practices for Forestry to minimize soil disturbance and erosion during timber management activities within the project boundary at Skyline WMA.

Water Resources

4. During the January 20, 2022, Harris Modeling Technical Meeting, Alabama Power indicated that the corrected temperature data filed on August 16, 2021² were provided to Auburn University prior to the November 23, 2021 filing of the final Aquatic

² See Accession No. 20210816-5246.

Resources Study Report,³ and that the bioenergetics model that used the data was rerun. These data were also used in other studies (e.g., water quality); however, it is not clear if, and how, the corrected data were incorporated in the other studies. To confirm what was stated at the Technical Meeting, please file any correspondence between Alabama Power and Auburn University that documents the corrected temperature data were provided to Auburn University and incorporated into results of the bioenergetics report. In addition, please identify all the other studies in which the uncorrected data were used and provide an explanation of how the data corrections were incorporated into the studies.

5. Table 5-2 in section 5.3.2, *Proposed Environmental Measures*, of Exhibit E (pages E-49 and E-51) indicates that Alabama Power proposes to (a) install a new minimum flow unit that incorporates an aeration system, and (b) continue using the existing passive-tube aeration system and skimmer weir with the existing generating units. The existing skimmer weir is set to draft water from the highest possible elevation in the water column (764 feet msl), which according to Exhibit A (page A-3), would be 29 feet below the summer pool elevation of 793 feet msl. However, even though the intake skimmer weir draws water from the upper water column where dissolved oxygen (DO) concentrations tend to be the highest, as shown in figure 3-10 (page 19) of the final Water Quality Study Report, hypolimnetic water with DO as low as 0 milligrams per liter (mg/L) would also be drawn through the project's intakes.

The existing passive-tube aeration system was designed to increase DO by 2.0 mg/L; however, it currently only increases DO by about 1.0 mg/L. The available data indicates that, while the existing aeration system improves DO, there are periods when water drawn through the project's intakes has a DO concentration that is below 5.0 mg/L. The proposed minimum flow unit's aeration system would potentially further improve downstream DO in the Tallapoosa River. However, the license application does not include any information on the type of aeration system for the proposed minimum flow unit or its expected efficiency. In order for Commission staff to evaluate the minimum flow unit's design and its capability to improve DO in the Tallapoosa River, please provide:

- (a) the type of aeration system to be incorporated in the design of minimum flow unit (e.g., passive turbine aeration design, or active aeration system such as an oxygen injection system), and its capabilities and efficiency to improve DO in Tallapoosa River to 5.0 mg/L or above (i.e., how much DO the system would add to the turbine's discharge); and

³ See Accession No. 20211123-5079.

- (b) the basis for the conclusion on page E-161 of Exhibit E that the new aeration system, along with continuing to operate and maintain the existing units' aeration system(s) would ensure that DO in the Tallapoosa River is at, or above, 5.0 mg/L; including any documentation to support the conclusion.
6. Section 3, *Anticipated Water Quality Parameters to be Monitored and Monitoring Methods*, of the proposed Water Quality Monitoring Plan indicates that Alabama Power anticipates that the Alabama Department of Environmental Management will require water quality monitoring in the tailrace during periods of discharge from June through October for a period of 2-3 years. Section 7, *Estimated Capital and Annual Costs Associated with the Water Quality Monitoring Plan*, of that same plan indicates that monitoring would occur "from June through October each year for the life of the license." Please clarify how long Alabama Power proposes to monitor water quality in the tailrace at the Harris Project (i.e., 2 to 3 years, or for the entire license term). Should changes to the plan be necessary, please make those requisite changes and refile the plan as part of the response to this additional information request (AIR).
 7. Section 3.3.2, *Results – Tallapoosa River Downstream of Harris Dam*, of the final Operating Curve Change Feasibility Analysis Phase 2 Report indicates that the results of the EFDC (or Environmental Fluid Dynamics Code) model show only "small differences" in simulated water temperature and DO in the withdrawal zone of the forebay between the baseline condition and the four winter pool alternatives. In order for Commission staff to understand how the four winter pool curve alternatives affect water temperature and DO in the withdrawal zone, please describe (i.e., quantify) what is characterized as "small differences."
 8. Table 4-1 in section 4, *Summary*, of the final Operating Curve Change Feasibility Analysis Phase 2 Report provides a summary of effects associated with the winter pool alternatives. The table shows that for the Harris Project, the loss in hydro generation and revenue diminishes with each incremental increase in the winter pool elevation from +1 foot to +3 feet. However, instead of having the smallest loss consistent with the aforementioned trend, the +4 feet alternative shown in table 4-1 results in the greatest loss of hydro generation and revenue. Therefore, please review the figures in table 4-1 for all of the alternatives for accuracy and correct if necessary. If the figures are accurate, please explain why the +4 feet alternative does not fit the observed trend.
 9. Section 3.2.2, *Results – Harris Reservoir*, of the final Downstream Release Alternatives Phase 2 Report indicates that "Reductions in retention time [*associated with higher minimum flows than currently occur*] could theoretically result in lower surface water temperatures and less pronounced thermal stratification." However, the report provides no support for this conclusion. To facilitate Commission staff's review of the effects of Tallapoosa River continuous minimum flows on retention times, water levels, and water quality in Harris Lake, please describe the information

relied upon to support the report's conclusion regarding reduced retention time of water in the lake, changes in water levels, and cooler water temperatures drawn through the intakes. As part of the response to this AIR, please include any relevant peer-reviewed articles and other literature cited.

Also, section 3.2.2, *Results – Tallapoosa River Downstream of Harris Dam*, of the downstream release report states that “As the depth from the lake surface to the intake becomes shallower, water withdrawn by Harris Dam for generation would likely be warmer and have higher dissolved oxygen concentrations.” This statement about lower Harris Lake levels and warmer water in the intakes' withdrawal zone seems inconsistent with the conclusion, above, regarding reduced retention times, lower lake levels, and cooler water temperatures in the withdrawal zone associated with higher continuous minimum flow releases. Please reconcile these two conclusions.

Fishery Resources

10. Table 9-3 in section 9.1.2.2., *Entrainment*, of Exhibit E presents an estimated number of fish entrained by season and family/genus group. Total entrainment is estimated to be 294,427 fish, with shad representing about 95 percent of the total fish entrained. Table 9-4 provides an estimated number of entrained fish lost due to turbine mortality, by season and family/genus group. Mortality was estimated at 18,808 fish, with shad representing about 80 percent of the total fish lost. With these entrainment and mortality numbers, the estimated mortality associated with turbine passage is about 6 percent. However, neither the report, nor the license application include any discussion of the project-specific factors that affect fish entrainment and turbine mortality at the Harris Project. In order for Commission staff to evaluate the effects of Harris Project operation on fish entrainment and mortality, please describe the biological and project configuration factors that (a) affect fish entrainment and turbine mortality at the project, and (b) support the estimates in Kleinschmidt (2018) and the license application.
11. Section 9.2.2.3, *Fish Entrainment and Mortality*, of Exhibit E indicates that the proposed minimum flow of 300 cfs would not affect fish entrainment and mortality at the Harris Project, when compared to the baseline. However, no analysis for this conclusion was provided in this section because “the design of the turbine has not been finalized.” Section 4.2, *Proposed Minimum Flow Unit*, of Exhibit A, though, provides conceptual design information for the proposed minimum flow unit (e.g., Francis-type turbine, 2.5-megawatt capacity at a net head of 115 feet, runner speed of 360 revolutions per minute, runner diameter of about 46 inches, 15 blades, and a vent opening of 9 inches). The unit also would include an aeration system and its penstock would tie into the Unit 1 intake. This information is sufficient to complete a desktop analysis of fish entrainment and turbine mortality associated with the proposed minimum flow unit. Therefore, in order for Commission staff to adequately assess the effects of the proposed project on fish entrainment and mortality, please complete

a desktop fish entrainment and turbine mortality analysis for the proposed minimum flow unit using similar methodology used in Kleinschmidt (2018), and that takes into account project-specific factors affecting fish entrainment and turbine mortality at the Harris Project.

Terrestrial Resources and Threatened and Endangered Species

12. Table 4-1 in section 4.1.5 of Exhibit E, which summarizes the existing environmental protection, mitigation, and enhancement (PM&E) measures being implemented at the Harris Project, includes a measure that states “Manage 180 acres of right-of-way on project lands¹¹...” Footnote number 11 states that “Alabama Power does not currently manage any rights-of-way on project lands for the benefit of wildlife; rather, rights-of-way are managed for safety and reliability of the electric system.” However, section 10.1.5.1, *Rights of Way Maintenance*, indicates that Alabama Power uses mechanical, chemical, and biological treatments in order to maintain low-growing vegetation that also enhances wildlife habitat in the transmission line corridor. Please clarify whether Alabama Power does or does not currently manage any rights-of-way on project lands for the benefit of wildlife. In order for Commission staff to evaluate the effects of project maintenance on terrestrial resources, if the statement referenced above from section 10.1.5.1 is accurate, please provide examples of the target wildlife species and the low-growing species of vegetation that occur in, and are maintained by, Alabama Power in the transmission line corridor for the benefit of wildlife.
13. The license application does not include information about the design/configuration and maintenance of the project transmission lines as it relates to avian protection. Please indicate whether the project transmission line poles and conductors are consistent with the Avian Power Line Interaction Committee (APLIC) and the U.S. Fish and Wildlife Service (FWS) guidelines to minimize adverse interactions (i.e., potential avian electrocutions and collisions) (APLIC, 2006 and 2012; and APLIC and FWS, 2005). Please provide detailed descriptions, figures, and/or diagrams of the design of the project transmission lines and any existing avian protection devices installed on them. Also, please provide the specifications and locations of any proposed avian protection measures that would be consistent with APLIC guidelines, if applicable. If Alabama Power has an Avian Protection Plan for the Harris Project, or for all of its hydropower projects that include transmission lines, please file a copy of the plan.

In addition, the license application does not include information about any avian interactions that may have been observed with the project transmission line (e.g., nest building, perching, electrocutions, collisions, and any outages related to such interactions). Please provide any available data regarding observed/documented avian interactions with the project transmission line(s).

14. Section 10.1.4, *Lake Harris Wildlife Resources*, states that “Alabama Power maintains Pollinator Plots at Little Fox Creek that strengthens natural habitat for the Monarch Butterfly and other pollinators such as bees, moths, and beetles. Little Fox Creek was developed with plants chosen for that specific habitat in order to benefit pollinator species.” Please provide a list of representative plant species occurring in the pollinator plots, including specific milkweed species and any nectar-rich species known to benefit monarchs.⁴ Also, please provide a map showing the location of the pollinator plots at Little Fox Creek in relation to the project boundary, primary project features, and locations where Alabama Power manages herbaceous vegetation. In addition, please provide a detailed description of any vegetation management (i.e., manual, mechanical, chemical, and/or biological) that occurs within, and adjacent to the pollinator plots. If herbicides are used to control vegetation near the pollinator plots, please include the method of application (e.g., foliar, stump, stem, and/or vine). Finally, please describe whether monarch butterflies have been observed at the pollinator plots or other locations in the project boundary.
15. Section 10.2.3.3, *Nuisance Aquatic Vegetation and Vector Control Program*, indicates that this program is intended to control non-native aquatic vegetation to benefit native vegetation and wildlife, as well as to control nuisance organisms, primarily mosquitoes, to minimize the potential transmission of mosquito-borne pathogens at the project. Please describe whether the aquatic herbicide treatments proposed for this program would affect any known stands of milkweeds, referenced in footnote #4 of AIR #14. In addition, please provide a list of other types of insects the proposed mosquito insecticides could affect. Please also provide a list of the areas within the project boundary where the insecticides have been and typically are applied, as well as a description of any existing and/or proposed site-specific pesticide application protocols to prevent spraying non-target plants and insects.
16. Section 10.1.5.2, *Botanical Inventories*, states that based on stakeholder comments in 2020, Alabama Power installed signage and a barrier to prevent unauthorized all-terrain-vehicle (ATV) traffic through two parcels adjacent to Flat Rock Park that provide habitat for a diverse assemblage of native plants, including some rare species. It is not clear whether Alabama Power intends to periodically inspect the signage and barrier to determine if they are intact/in place and are effective at preventing ATV traffic in this sensitive plant community. Please describe any monitoring, maintenance, and/or operation activities (if applicable) for the signage and barrier and any associated costs.

⁴ Examples of plants that benefit monarchs can be found on the Xerces Society’s Monarch Nectar Plants Southeast list, available at <https://xerces.org/publications/plant-lists/monarch-nectar-plants-southeast>.

17. Sections 10 and 12, *Terrestrial Resources* and *Recreation Resources* respectively, and the proposed Recreation Plan do not describe the existing terrestrial resources at the proposed project recreation sites on Lake Harris and downstream from Harris Dam, the effects of constructing, operating, and maintaining the sites, or the effects of proposed project-related recreation activities at these sites on terrestrial resources. In addition, some statements in the license application bring into question whether a specific location for the new recreation site at Lake Harris has been proposed. For example, in section 10, page E-187, it states that “*Depending on siting*,⁵ the addition of a new recreation site would cause a disruption of the Lake Harris shoreline and associated terrestrial resources.” Also, in section 12, page E-291, it states “Alabama Power is proposing to build an additional day use park *in the vicinity of Wedowee Marine South*⁶ that would be a Project recreation site and include amenities for swimming, picnicking, and a boat ramp.”

Additionally, figure 12-13 in the license application shows aerial imagery of a segment of shoreline at Harris Lake superimposed with the concept design of the proposed Harris Lake recreation site. However, the precise location of this site within the project boundary and in relation to other project features is unclear because it is not included in the figure title and a smaller scale reference map was not included. Also, the opaque polygons used in figure 12-13 to delineate the proposed recreation amenities (e.g., picnic area, parking lots) block the view of the underlying terrestrial habitat in the aerial image. Figure 5-3 in the Recreation Plan appears to be the same as figure 12-13, but has a different title (i.e., “Highway 48 Day Use Park Concept Design”), and the location of the site is unclear because it does not include a smaller scale reference map. In order to facilitate Commission staff’s analysis of project-related effects on terrestrial resources, please file the following information about the proposed recreation sites at Harris Lake and downstream from Harris Dam:

- (a) a revised map or set of maps clearly showing the name and location of the proposed recreation site at Harris Lake in relation to the project boundary and other project features, including other existing project recreation sites (i.e., please identify *existing* versus *proposed* recreation sites with map labels);
- (b) a geographic information system (GIS) shapefile (e.g., polygons and lines), if available, of the proposed amenities at the Lake Harris and Tailrace Fishing Pier Kayak/Canoe Access recreation sites, as shown in figures 12-13 and 12-14;

⁵ Emphasis added.

⁶ *Id.*

- (c) the estimated dimensions (length and width) and composition of the proposed amenities at each site (i.e., the picnic area, beach, parking lots, bank fishing pier, boat ramp, launching pier, the new access roads, tailrace fishing pier and kayak/canoe access);
 - (d) a detailed description of the existing terrestrial resources, including existing vegetation (native and non-native), and the acreage of each terrestrial habitat type that occurs at each site;
 - (e) the composition and acreage of terrestrial habitat that would be permanently removed (i.e., replaced with the proposed project amenities) during construction at each site;
 - (f) the composition and acreage of terrestrial habitat that would be temporarily disturbed by construction activities at each site;
 - (g) the estimated acreage, diameters, and number of trees that would be removed, including the number of suitable⁷ summer roost trees for federally listed bats;
 - (h) a description of any activities that would be needed to maintain the amenities at these recreation sites after construction; and
 - (j) a description of any specific best management practices that would be implemented to minimize the effects of construction, operation, and maintenance, and project-related recreation activities on terrestrial resources at the proposed recreation sites.
18. To facilitate Commission staff's review and assessment of the effects of the proposed project on federally listed species, please file the GIS shapefiles, if available, of the following species survey locations and/or habitat features from section 11, *Threatened and Endangered Species*, of Exhibit E:
- (a) palezone shiner survey sites (figure 11-2);
 - (b) forested lands/area (i.e., shapefile(s) associated with Indiana bat and northern long-eared bat in figures 11-12, 11-14, 11-30, and 11-31);
 - (c) karst landscape (i.e., a shapefile associated with federally listed bat habitat in figures 11-13, 11-14, and 11-16);

⁷ "Suitable" for purposes of responding to this item means live or dead trees with a diameter at breast height (dbh) of 3 inches or greater and exfoliating bark, crevices, and/or cracks.

- (d) white fringeless orchid and Price's potato-bean survey sites at Skyline Wildlife Management Area (figure 11-18);
- (e) the 100-foot stream buffer within limestone landscape (i.e., a shapefile associated with Price's potato-bean habitat in figure 11-19);
- (f) south-southwest slopes in limestone wooded areas (i.e., a shapefile associated with Morefield's leather flower habitat in figure 11-20);
- (g) coniferous lands (i.e., a shapefile associated with red-cockaded woodpecker habitat in figure 11-22);
- (h) red-cockaded woodpecker survey sites (figure 11-23);
- (i) fine-lined pocketbook survey sites (figures 11-25, 11-26, 11-27, and 11-28);
- (j) granite area (i.e., a shapefile associated with little amphianthus habitat in figure 11-32); and
- (k) white fringeless orchid survey sites at Harris Lake (figure 11-34).

Cultural Resources

19. Section 15.1 of Exhibit E indicates that certain archeological sites were not selected for preliminary assessment because they were either mis-plotted, disturbed beyond the potential to retain intact cultural deposits, located below the winter drawdown level of Harris Lake and are inaccessible, or have been subjected to alteration that has "negated their potential to contain intact deposits." However, the site table filed in response to staff's preliminary licensing proposal (PLP) Comment No. 46, and presented in the November 23, 2021 Historic Properties Management Plan (HPMP, Attachment 2 – Comments and Responses on the Draft HPMP) filed with the license application lacks detail. The missing details include indications of why sites were removed from consideration and complete records of consultation and concurrence with the State Historic Preservation Officer (SHPO) for the removal.

To adequately analyze the cultural resource issues at the Harris Project, it is important that staff understands the current status of all sites within the area of potential effects (APE) and the decisions that were made regarding each site. Also, because the site table will be used by Alabama Power throughout any new license term, it is important that it contain accurate information. Therefore, please provide, as an appendix to the HPMP, information in an updated, comprehensive site table as follows:

- (a) 74 of the sites at Lake Harris were not subject to assessment and are recommended as ineligible for listing on the National Register of Historic Places (National Register) based on the statement that there is "no additional info in site file." However, a table included with the earlier draft HPMP

(Attachment 2, Consultation Record 2), filed on June 29, 2021 as part of the PLP, provides additional descriptive information on the 74 sites. Most of the sites are described in this attachment as having aboriginal artifact scatters. Please confirm that all descriptive information for each site within the project APE is correct and is accurately carried over from the earlier table to the updated, comprehensive site table.

- (b) Overall, the site table in the application identifies numerous sites at Harris Lake and Skyline as recommended as ineligible for listing or removed from consideration. Many of these previously recorded sites were investigated in the 1970s and 1980s, and may have been recommended ineligible at that time, but it is not clear that the Alabama SHPO has concurred.

Absent formal evaluations of each site within the project APE and documentation of SHPO concurrence, all sites remain potentially eligible for listing on the National Register. Please provide documentation of written concurrence, from the Alabama SHPO for each site recommendation. If no formal concurrence has been received for a particular site, please indicate in the updated comprehensive table that the eligibility of the site remains undetermined. Please provide a copy of any request for concurrence to the SHPO with the updated, comprehensive table. If formal evaluation of effects for a particular site has been completed by the SHPO, and a copy of Alabama Power's concurrence request for the site is provided, please list the site in the updated comprehensive table as "concurrence pending."

- (c) Although it is not always possible to identify or predict the potential impacts to historic properties prior to license issuance, several potential impacts were previously identified in Attachment 2 of the June 29, 2021 draft HPMP, including, but not limited to recreational use and other public access, looting, shoreline erosion, past construction, and the ongoing use of project facilities and roads. Neither the table provided with responses to Commission staff's PLP Comments, nor the tables provided with the revised HPMP filed on November 23, 2021, specify inundation as a potential, project-related, adverse effect. Inundation can result in chemical and mechanical changes to archaeological sites that can alter the characteristics for which they may qualify for listing on the National Register (*see* Lenihan et al., 1982; and Ware, 1989). Though inundated sites at the project are not currently accessible and National Register evaluations of the effects of inundation are not possible at this time, until formal evaluations of National Register eligibility have been completed for each site within the APE, the submerged sites cannot be removed from consideration. Unless the SHPO has concurred with removing these sites from consideration, please indicate in the updated comprehensive table that the eligibility of these sites remains undetermined.

- (d) Attachment 3, Appendix A, of the April 2021 “Cultural Assessment for Alabama Power Company lands in Randolph County,” includes figures 2-13, which show the locations of some previously recorded cultural resource sites at Lake Harris; and figures 14-25, which identify the locations of the assessed sites at Lake Harris. However, not all previously assessed and unassessed sites within the APE in these areas are included in the figures. Complete maps are necessary for Commission staff to understand the location and status of all cultural resource sites, relative to the project boundary and facilities. Please file as privileged, a set of comprehensive maps in a separate appendix to the HPMP that includes all previously assessed and unassessed sites within the APE at Lake Harris, Skyline, and the Tallapoosa River downstream from Harris Dam. Locations of all project facilities, including, but not necessarily limited to, existing and proposed hydroelectric and energy system features, transmission lines, project access roads, project recreation areas, mitigation areas, and other principal project features or locations should be identified. Use colors and/or symbols to distinguish map features, particularly assessed versus non-assessed sites.
- (e) Section 4.7.3 of the November 23, 2021 HPMP indicates that a cultural resources assessment of lands proposed to be removed from the Harris Project boundary and lands proposed to be developed for recreational use was completed in August 2021, and that consultation with the Alabama SHPO and participating tribes regarding these areas would be completed. Please file the results of the investigations and documentation of this consultation. If any cultural resource sites were identified in these areas, please ensure that they are included in the updated site table.
- (f) Section 1.1 of the November 23, 2021 HPMP states that “*Historic properties on private property are not within Alabama Power’s administrative area of control and the evaluation of any historic property affected by Project operations is distinct from those on project lands or lands under the jurisdiction of FERC or Alabama Power.*” The Commission cannot require a licensee to conduct cultural resource surveys on private property if the property owner denies access. However, if an owner will allow the work to be conducted to identify any potential historic properties that could be affected by the project, then these studies should be conducted. Please file any documentation of outreach to private property owners regarding the completion of cultural resource surveys on their lands.

Literature Cited

- APLIC (Avian Power Line Interaction Committee). 2012. Reducing Avian Collisions with Power Lines: The State of the Art in 2012. Edison Electric Institute and APLIC. Washington, D.C.
- _____. 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute and APLIC. Washington, D.C.
- APLIC and FWS (U.S. Fish and Wildlife Service). 2005. Avian Protection Plan Guidelines. Available at:
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- Kleinschmidt Associates (Kleinschmidt) 2018. Desktop Fish Entrainment and Turbine Mortality Report (FERC No. 2628). Kleinschmidt Associates, Hoover, Alabama.
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<https://irma.nps.gov/DataStore/DownloadFile/486795>.
- Ware, J.A. 1989. Archeological inundation studies: Manual for reservoir managers. Contract Report EL-89-4. Environmental Impact Research Program, Department of the Army, U.S. Army Corps of Engineers, Washington, DC. U.S. Department of the Interior, National Park Service. Available at:
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