

**UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

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Alabama Power Company,) FERC Project No.
349)
Martin Dam Project)
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**ALABAMA RIVERS ALLIANCE’S AND AMERICAN RIVERS’ COMMENTS
ON ALABAMA POWER COMPANY’S PRELIMINARY LICENSING
PROPOSAL FOR THE MARTIN DAM PROJECT**

Pursuant to 18 C.F.R. § 5.16(e) Alabama Rivers Alliance and American Rivers provide these comments in response to Alabama Power Company’s Preliminary Licensing Proposal for its Martin Dam Project (P-349) (*see* eLibrary nos. 20110112-0038; 20110107-4005; 20110107-4006) (Jan. 7, 2011).

The preliminary licensing proposal must:

- (1) Clearly describe, as applicable, the existing and proposed project facilities, including project lands and waters;
- (2) Clearly describe, as applicable, the existing and proposed project operation and maintenance plan, to include measures for protection, mitigation, and enhancement measures with respect to each resource affected by the project proposal; and
- (3) Include the potential applicant's draft environmental analysis by resource area of the continuing and incremental impacts, if any, of its preliminary licensing proposal, including the results of its studies conducted under the approved study plan.

18 C.F.R. § 15.16(b)

We have briefly reviewed Commission Staff’s comments on the PLP. According to Staff, “[i]n some instances ... however, the description and analysis of the proposed measures lack sufficient detail for Commission staff to conduct its environmental analysis. Our specific comments are discussed in Appendix A, and we request that you address our comments in your license application due to be filed on or before June 8, 2011.” FERC PLP Comments, p. 1. We agree with Staff’s assessment that the PLP contains inadequate description and analysis of proposed measures for purposes of NEPA analysis. Based on our initial review, we also support the additional information requested in Appendix A, particularly the requests regarding estimated costs for PME measures (*see id.*, Appendix A, paragraph 8), and those for Water Resources (*see id.*,

*Alabama River Alliance’s and American Rivers’ Comments re PLP
Alabama Power Company’s Martin Dam Project (P-349)*

Appendix A, paragraphs 9-11) and Fish and Aquatic Resources (*see id.*, Appendix A, paragraphs 12-16).

The following comments reflect our specific concerns with several specific deficiencies of this preliminary license as well as several concerns that we have with the conduct of this ILP process in general.

1.3 Review Schedule

We appreciate the opportunity to comment on this license application. The Tallapoosa River is one of Alabama's crown jewels and it is important that this license be carefully designed in order to balance power generation with restoration and protection of the Tallapoosa watershed.

2.2 Proposed Action

The PLP describes Alabama Power's proposed project operation: "Alabama Power proposes to change the Flood Control Guide Curve elevation between 1 foot (482 msl) and 5 ft (486 msl) during the winter months...." PLP, p. 2-17.

The five alternatives presented in the PLP represent a very small change from present operations. Several stakeholders have requested through written comments and during stakeholder meetings the desire to investigate the feasibility of changing the Flood Control Guide Curve for the Martin Reservoir. Specifically, many stakeholders are interested in evaluating alternatives that raise Lake Martin to full pool earlier in the spring and maintain full pool into early mid/fall. American Rivers and Alabama Rivers Alliance are especially interested analyzing an alternative that would raise the full pool earlier in the spring.

We have intervened in several hydropower relicensing proceedings with high value lake and river resources, similar to Lake Martin and the Tallapoosa River, and have found that operational changes/alternatives that include an early spring fill can result in project operations that more closely mimic the natural hydrograph to the benefit of both lake and river interests. An early spring fill can benefit lake based recreation and increase spawning habitat for popular lake sport fish such as large mouth bass. Typically, in order to maintain lake levels and lake integrity, an early spring fill also allows for more water to be released downstream during critical spawning periods that could benefit paddlefish spawning as well as several other species. The excess water available in the spring can also benefit downstream river recreation such as whitewater boating.

2.1.3 Existing Project Operation

The entire Tallapoosa River segment from the Martin project to Thurlow Dam is impounded. Releases from the Project flow directly through the Yates and Thurlow developments (FERC License 2407). The Project is a peaking project that usually

*Alabama River Alliance's and American Rivers' Comments re PLP
Alabama Power Company's Martin Dam Project (P-349)*

operates Monday through Friday to meet peak power demands. During generation, the Project's four turbines release up to 17,900 cfs (APC PLP). Hours of generation and discharge levels are notoriously sporadic. The Project provides only limited discharges on weekends and does not typically discharge on Sunday. Flows downstream vary wildly from 1,200 cfs to 17,900 cfs.

The reach of the Tallapoosa immediately below Thurlow is known throughout the state for its shoals which are an important area for recreation, particularly whitewater boating. The current operational regime for the Martin Project greatly diminishes the ability for recreation by creating unsafe and unpredictable conditions. In addition, the current program of instantaneous peaking operation scours the streambed and significantly contributes to unnatural erosion. The ongoing negative impacts of existing Project operations have not been adequately studied nor has the applicant provided any recommended PM&E measures which would prevent or mitigate these negative impacts.

2.2.1 Multiple-Criteria Decision Analysis

The PLP states:

Alabama Power used the MCDA process as a screening tool to narrow the alternatives to the top five, based on the data, stakeholder rankings of the major criteria, and a stochastic analysis. Alabama Power hosted two meetings on the MCDA—October 13, 2010 and October 26, 2010. These meetings were designed to familiarize stakeholders with the MCDA process, allow them input to ranking the major criteria and allow them time to use the process and study the results.

PLP, p. 2-19. It states that the MCDA process resulted in five operating alternatives for analysis, all involving an incremental change in the winter pool elevation. *See id.*, p. 2-20.

We are concerned that APC's application of the MCDA has not resulted in a fair or accurate statement of stakeholder interests. The top five alternatives identified by APC using the MCDA do not address all stakeholder interests, and do not represent a range of reasonable alternatives. Because of the lack of stakeholder input and significant concerns with the amount and quality of certain data, the Alabama Rivers Alliance and American Rivers do not concur with the MCDA results nor support the applicant's limited selection of alternatives.

While the Multiple Decision Criteria Analysis (MCDA) is a fairly common tool to aid in the evaluation and selection of a preferred course of action among numerous alternatives based on multiple criteria, the way in which it was implemented in the Martin Project Relicensing proceeding to evaluate the 24 potential Flood Control Guide Curve Alternatives has serious flaws.

*Alabama River Alliance's and American Rivers' Comments re PLP
Alabama Power Company's Martin Dam Project (P-349)*

First, prior to APC's presentation of the model at the October 13, 2010 meeting, APC did not seek stakeholder input into the list of Major Criteria, Sub-Criteria, or the weighted values of the those categories. This was a critical error that resulted in a model that essentially removed stakeholder preference from the MCDA alternative selection process. This concern was expressed by several stakeholders at both the October 13, 2010 and October 26, 2010 meetings as well through 3 letters from separate stakeholder interest groups and a joint letter sent on behalf of 8 different stakeholders representing different interests in the Lake Martin Project (*see* Attachment 1).

There are four Major Criteria used in the MCDA; Energy, Lake Resources, Downstream Resources, and Reservoir Management. With the exception of Energy, each of these groupings is made up of 4-5 Sub-Criteria. For example, the Downstream Criteria set is made up of four Sub-Criterion: erosion, water quality, paddlefish spawning, and recreation. Each Major Criteria set is weighted equally at 0.250 but each Sub-Criterion weight varies from 0.250 (Generation and Energy) to 0.050 for most other Sub-Criteria. Because the Major Criteria, Energy has only one Sub-Criterion, Energy and Generation, APC's model weighs energy production 4-5 times greater than other Sub-Criterion. Because stakeholders were prohibited from the process of assigning weights to each Sub-Criterion during the development of the Martin MCDA, energy production drives the model. This is not consistent with the intention of MCDA methodology and results in an outcome that is seemingly pre-determined. Indeed, regardless of weights assigned by stakeholders to the Major-Criteria or Sub-Criteria sets the results are always the same. To American Rivers and the Alabama Rivers Alliance, this realization represented a major breakdown in the process.

Second, while APC defends the MCDA as being data driven, American Rivers and Alabama Rivers Alliance have concerns about how Sub-Criterion data is organized within each Major Criteria Category. It appears that the model was designed for Sub-Criterion to cancel out other Sub-Criterion in each Major Criterion Category through the range of operational alternatives. For example in the Downstream Resources Criteria, sub-criterion downstream recreation days and paddlefish spawning flows increase with higher winter pool levels, fall extension, and early spring fill while the other two sub-criterion, erosion and water quality decrease. This same pattern holds true with every other Major Criteria category except Energy. Thus, regardless of how stakeholders rank Major Criteria, the assessment of alternatives favors energy production over all other interests.

Third, American Rivers and the Alabama Rivers Alliance are concerned that due to the organization of the Sub-Criterion within each Major Criteria category, the varied interests of each stakeholder group cannot be accurately reflected. Additionally, each Sub-Criterion within the Major Criteria categories may not accurately reflect stakeholder interests. For example, American Rivers and Alabama Rivers Alliance are more interested in alternatives that enhance paddlefish spawning and downstream recreation because we believe that the flows that support these uses will also provide critical

components of overall river health. The applicant unfortunately relied on less reliable water quality and erosion data for downstream resources in its analysis to negate the sound data supporting enhancing spawning flows and downstream recreation. We disagree with this approach because the data used for water quality and downstream erosion does not accurately reflect a given alternative's impact on river health.

The MCDA as implemented by APC without stakeholder input as to how to weight criteria is not an objective or accurate method to prioritize stakeholder interests for purposes of developing alternatives. APC has mis-applied the MCDA to artificially constrain the alternatives analysis.

2.2.2 Proposed Environmental Measures

According to the PLP, “[i]n addition to proposing a change in the Flood Control Guide Curve at the Project, Alabama power is also proposing various measures that provide additional protection, mitigation, and/or enhancement to the Project resources.” PLP, p. 2-20. It summarizes the proposed environmental measures:

- Prepare and implement a Shoreline Management Plan (SMP)...
- Prepare and implement a Public Education Program...
- Implement a Wildlife Management Plan for Project lands
- Provide 500 acres for a Public Hunting Area
- Monitor potential increases in invasive aquatic vegetation in the Lake as part of a change in the Flood Control Guide Curve
- Monitor specific environmental water quality parameters based on consultation with ADEM, as necessary to evaluate the impacts from a Flood Control Guide Curve change
- Provide periodic winter draw-downs to 481 msl (original Flood Control Guide Curve) that would be dependent on hydrologic conditions
- Prepare a final Recreation Plan to Include various enhancements as described in the recreation plan
- Prepare and implement a Historic Properties Management Plan (HPMP) and Programmatic Agreement (PA) for cultural resources

PLP, p. 2-21.

We generally support the PME measures proposed by APC, subject to review of the details of each measure. However, these measure do not go far enough to prevent or mitigate the negative impacts from current project operations or the proposed alternatives. The record developed by APC to date is inadequate to show that APC's PME measures will mitigate the projects impacts on the environment. We discuss potential impacts on specific resources below.

Water Quality

*Alabama River Alliance's and American Rivers' Comments re PLP
Alabama Power Company's Martin Dam Project (P-349)*

The PLP does not provide an adequate discussion of the project's impacts on water quality under current or proposed alternative operating scenarios. Likewise, the applicant's proposed PME measures do not address such impacts.

On July 27, 2010, APC convened a Water Quality Expert Panel to allow stakeholders an opportunity to learn more about water quality at the project. (Attachment 2) Questions developed by APC with limited stakeholder input provided the basis for the discussion. The water quality report was sent to stakeholders on Friday July 23rd for the panel discussion on the 27th. This timeframe gave stakeholders less than two working days to prepare additional questions, responses, and to conduct analysis. The truncated timeframe also affected the experts' understanding and analysis of water quality at the project. Indeed, several of the experts admitted that they had to quickly analyze the data to meet timelines. *See* World Wildlife Fund's "Follow-up to Water Quality Panel Discussion of July 27, 2010" (Attachment 3). This resulted in a clear misunderstanding of some data and inconsistencies between their analysis and the data provided. For example, the panelist suggested that the alternate summer pool extension would have little impact on water quality when the data suggests that an increased deoxygenation of the hypolimnion may lead to an increased incidence of sub-4.0 mg/l dissolved oxygen in the tailwater. *Id.*

The PLP does not provided specific discussion, supported by quantitative data, of how the project under alternative operating scenarios will affect downstream water quality. The PLP does not provide specific discussion of how the project under alternative operating scenarios will comply with water quality criteria and protect and restore designated uses of waters downstream. The applicant should provide a detailed analysis of how current and proposed alternative project operating regimes will impact water quality and provide specific PME measures to reduce the impacts associated with hydropower operations.

Finally, PME measures should address the concerns expressed by the Alabama Department of Conservation and Natural Resources (ADCNR) and the U.S. EPA Region 4 (EPA Region 4) regarding dissolved oxygen levels below 5.0 mg/l below the Project as well as below Yates and Thurlow which are directly affected by discharges from Martin. In response to APC's application to ADEM for certification under Section 401 of the Clean Water Act, ADCNR said:

Due to the inherent link between water quality and water quantity, the state standard dissolved oxygen (D.O.) level should be met or exceeded not only during generation from Martin Dam, but also during non-generation. ADEM requires a D.O. level of not less than 5 mg/l at all times for diversified warm water biota, including game fish, in waters under the "Fish and Wildlife" classification. This includes all hydropower facility tailraces. The only exception under this classification is during turbine discharge from hydroelectric dams, in which case the statewide

D.O. level must be maintained above 4 mg/l. ADCNR believes it is vital that "Fish and Wildlife" waters be monitored and adequately protected from adverse conditions at all times.

Letter from ADCNR re Alabama Power Company's (APC) Application for the Martin Project Water Quality Certification under Section 401 of the Clean Water Act (Attachment 4).

In review of the Alabama Department of Environmental Management's 2009 Triennial Review EPA Region 4 stated:

The State should consider eliminating or modifying the 4 mg/l standard variance for dissolved oxygen for existing hydroelectric generation impoundment discharges. A default provision in the standard allowing dissolved oxygen to be degraded to 4 mg/l during periods of hydroelectric impoundment discharge should not be allowed if a dissolved oxygen standard of 5 mg/l can be met or if a higher standard than 4 mg/l can be met.

Letter from Joan Benante, US EPA Region 4, to James McIndoe, ADEM, August 20, 2010 (Attachment 5)

PME measures should address the concerns of these agencies and ensure that dissolved oxygen below Martin, Yates and Thurlow are maintained at or above 5.0 mg/l at all times.

Downstream Flows

The PLP does not provide any adequate discussion of the project's impacts on downstream flows and flow dependent uses under proposed and alternative operating scenarios, or how to address such impacts. PME measures should include measures that would replicate the natural unimpaired flows of the river through a continuous instantaneous flow regime

Flow is a central issue in the vast majority of hydropower relicensing processes. American Rivers and Alabama Rivers Alliance are interested in exploring opportunities for the Martin Project to operate in a manner that more closely mimics pre-dam hydrographs. We believe this will benefit paddlefish spawning and other aquatic species as well as improving recreational opportunities for boaters and anglers.

During the MIG 1 meeting on March 30, 2010, American Rivers and other stakeholders requested that Alabama Power clarify the dates in March and April that flows below Thurlow exceed 6,000 cfs and describe the extent to which these same flows are continuous throughout the paddlefish spawning period. According to the draft study

report, paddlefish typically spawn over clean swept gravel bar substrate. Spawning is triggered by a rise in flow of 1 to 3 m during the 10 to 17°C preferred temperature range.

The draft report does provide data that shows the specific days during March and April that 6,000 cfs occur in the period between January 2, 1993 and November 16, 2009. It also provides some hourly data samples.¹ This data is useful for understanding how the Martin Project typically operates but provides little insight into determining paddlefish spawning success. It appears from review of the hourly data provided in the flow matrix that few if any periods during the period of record experienced 10 to 11 days of continuous flow over 6000 cfs. According to data presented in the draft report it takes 10 to 11 days for paddlefish eggs to hatch at 14.5° C. Flows in the Tallapoosa River downstream of Thurlow Dam regularly fluctuate upwards of 5 feet at the Milstead Gage, dropping below the 6000 cfs threshold leaving paddlefish eggs following their release,² susceptible to stranding and desiccation.

Specific PME measures should be adopted to enhance paddlefish spawning in the Tallapoosa River downstream of Thurlow Dam above current levels. The draft report determined that flows from Thurlow Dam are currently providing for the spawning needs of paddlefish and that proposed operational alternatives, early spring fill and higher winter pool, could provide more days during the March and April timeframe when 6000 cfs would be available. It remains unclear whether more days of 6000 cfs measured as a daily average would in fact enhance paddlefish spawning. Daily average flows with extreme fluctuations leave paddlefish eggs at risk of stranding, desiccation, and ultimately death. While there appears to be several times in the period of record when flows exceeded 6000cfs and were continuous for two or three days, there does not appear in the data provided, a time where flows exceeded 6000 cfs for 10 or 11 day period it takes paddlefish eggs to hatch.

American Rivers and Alabama Rivers Alliance requests that APC expand their analysis regarding paddlefish spawning flows. The adhesive characteristic of paddlefish eggs leaves them vulnerable to stranding when flows decline. The number of times and the degree to which flows decline due to project operations could have an effect on egg survival. APC should provide the number of days when the average daily flow exceeded 6000cfs but the minimum daily flow was below the 6000 cfs threshold. APC should also provide the number of times in the period of record where flows exceeded 6000 cfs and did not drop below 6000 cfs for a 10 to 11 day period. In order to more accurately evaluate operational alternatives to enhance spawning conditions for paddlefish in the Tallapoosa River, APC should evaluate possibilities of releasing an instantaneous minimum flow for a period of no less than 11 days.

¹ The purpose of the hourly data is to illustrate which flows were continuous through whole days and which were sustained for only a number of hours during the likely paddlefish spawning period. APC also provided a flow matrix in the draft report that shows all flow rates above 6000 cfs for the months of March and April from 1992 to 2009, bar charts of the flows for March and April of each year, and some additional hourly data samples that correspond to days chosen randomly from the flow matrix.

² Their eggs are adhesive after fertilization and become firmly attached to the substrate.
*Alabama River Alliance's and American Rivers' Comments re PLP
Alabama Power Company's Martin Dam Project (P-349)*

Additionally, we are concerned that because APC's analysis of downstream flows was limited to only one species, paddlefish, and only one life stage, spawning. Thus, based on the record developed by APC to date, it is unclear how operational alternatives under the new license will affect other aquatic species. The Commission needs such information in order to conduct its environmental analysis under the National Environmental Policy Act (NEPA).

Recreation

The Alabama State Comprehensive Outdoor Recreation Plan provides that “[m]ultiple uses of the State’s land and water resources are required to meet the diverse recreational and economic needs and expectations of state residents and visitors.” See Attachment 4, 2002-2007 State Comprehensive Outdoor Recreation Plan. The PLP does not adequately address the project’s impacts on recreation, especially flow-based recreation downstream of Thurlow Dam as a result of project operation, under proposed and alternative operating scenarios, or how to address such impacts.

The Tallapoosa River below Thurlow Dam is a popular destination for whitewater boating. Currently, boating opportunities are limited due to project operations. APC’s draft Recreation Plan does not consider flow related enhancements to benefit whitewater boating. The draft Recreation Plan also does not propose adequate methods for notifying the public of boating conditions. In order to protect public safety and enhance whitewater boating opportunities for the public, APC should develop a website that provides information about forecasted flows, water levels, information about specific whitewater features and how they will react to projected flows, and safety. APC should also adopt and install an early warning system which provides adequate notice to downstream users including published release schedules and audio and visual signals at least one half hour prior to all controlled discharges. Additionally, PME measures should be developed to provide for proscribed flow releases to enhance and promote whitewater boating below Thurlow. These measures should reflect the natural variation of the River’s traditional hydrograph and include a release schedule which provides recreational opportunities, to specifically include weekends and holidays, in the fall, spring, early summer and fall. Limited flows subject to water availability should be provided whenever possible during the traditionally drier summer months.

3.0 Pre-Filing Consultation Summary

We appreciate the applicant’s efforts and hospitality in holding stakeholder meetings throughout this portion of the ILP process. Unfortunately upon reviewing the PLP at the end of this two year process, we are concerned that the entire process was predetermined. APC has not meaningfully considered reasonable stakeholder recommendations or concerns throughout the relicensing process. Rather than undertaking to conduct the necessary studies or provide meaningful PME measures targeted at resolving these issues, our concerns appear to have been dismissed through the design and presentation of the

MCDA, where stakeholders were not given a meaningful role in the development of the model which resulted in a divergence from the purpose and intent of stakeholder decision making tools like MCDA.

4.0 Environmental Analysis

Under the ILP rules, the PLP must “[i]nclude the potential applicant's draft environmental analysis by resource area of the continuing and incremental impacts, if any, of its preliminary licensing proposal, including the results of its studies conducted under the approved study plan.” 18 C.F.R. § 5.16(b)(3). As described below, we are concerned that the PLP does not provide adequate information for Commission Staff and parties to accurately identify and mitigate the environmental impacts of the proposal.

4.1.1 Geographic Scope of FERC Approved Studies

FERC defined the geographic scope of the Project for certain studies as extending from the upstream end of the project boundary to Project-affected waters below the Thurlow Development to River Mile 12.9. The PLP has not adequately address the impacts of current or proposed alternative project operations below Thurlow Dam. The PLP does not address current peaking operations on streambed scouring. Likewise the PLP does not address the impacts on the environment due to variations from a natural hydrograph below Thurlow Dam. Finally, the PLP does not contain adequate PME measures to prevent or mitigate the harmful impacts to the natural environment and recreation below Thurlow Dam from project operations.

4.2 Cumulative Effects

The PLP provides no information regarding the cumulative impacts from the three hydropower projects affected by Martin Dam. It is incorrect to say that the project provides an overall cumulative impact on water quality. By its very nature the project impairs water quality when compared to the natural system. The applicant should undertake to study the true cumulative impacts that these impoundments are having in the Tallapoosa Basin and develop PME measures to address these impacts. These measures should include an instantaneous flow regime which replicates the natural hydrograph of the river as well as specific measure to ensure adequate water quality, to include a minimum dissolved oxygen level of 5.0 mg/l at all times.

4.3 Applicable Laws

4.3.1 Section 401 of the Clean Water Act

The PLP states: “Alabama Power filed an Application for a 401 Water quality Certification to the Alabama Department of Environmental Management (ADEM) on May 10, 2010. Alabama Power intends to filed with FERC, the 401 Water Quality Certification with the Final License Application, on or before June 8, 2011.”

*Alabama River Alliance’s and American Rivers’ Comments re PLP
Alabama Power Company’s Martin Dam Project (P-349)*

PLP, p. 4-10.

Alabama Rivers Alliance and American Rivers have questioned the application for a water quality certification before the issues with the PLP have been addressed. A 401 certification at this time would be premature. *See* Letter from Mitch Reid, Alabama Rivers to Lynn Sisk, April 1, 2011 (Attachment #)

CONCLUSION

We appreciate the opportunity to submit comments on the PLP for the Martin Project. At this time there is still much information that must be provided before FERC can move forward with its obligations under NEPA and Federal Environmental Law. We ask that FERC carefully review this project in light of these comments and require such additional studies and PME measures as are necessary for a complete analysis and determination.

Respectfully Submitted,

Sincerely,



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For Alabama Rivers Alliance and American
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