



STATE OF ALABAMA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
WILDLIFE AND FRESHWATER FISHERIES DIVISION

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The mission of the Wildlife and Freshwater Fisheries Division is to manage, protect, conserve, and enhance the wildlife and aquatic resources of Alabama for the sustainable benefit of the people of Alabama.

M. N. 'CORKY' PUGH
DIRECTOR

FRED R. HARDERS
ASST. DIRECTOR

August 30, 2010

Jim Crew
Alabama Power Company
600 North 18th Street
Birmingham, AL 35291

Re: Comments from the ADCNR – Fisheries Section regarding Martin Project Relicensing (FERC Project No. 349) Water Quality Expert Panel Discussion Summary Report (Study Plan 12C).

Jim,

After reviewing the Martin Water Quality Expert Panel Discussion Summary Report in detail, we provide the following comments:

- If modifications to the rule curve at Martin are implemented, we concur with members of the expert panel by recognizing the potential for water quality changes at the Martin project. A longer full pool season (fall extension) may increase internal nutrient loading and thus accelerate hypolimnetic degradation. This full pool extension would allow more time for deoxygenation of this zone that could negatively affect striped bass that rely on cool oxygenated water for survival; however, we also recognize that a fall extension may provide potential benefits to striped bass habitat. Current rule curve guidelines begin winter drawdown on September 1 and historic striped bass kills have occurred during the late August or early September period. Holding full pool levels longer into the fall would prevent unnecessary discharge of hypolimnetic waters through the dam during this critical period. Since any impacts are speculative and may be difficult to quantify, if a rule curve change occurs, we recommend a routine monitoring plan be implemented to detect changes. An appropriate response can then be initiated through an adaptive management process.
- One of our principal concerns of a rule curve modification at the Martin project is increased sedimentation to the inflow areas of the reservoir. As stated by the expert panel, this will likely happen during the winter high flow periods; therefore, if the overall winter pool elevation is increased or if the pool level is raised too early in the spring, an increase in the elevation of deposited sediments is imminent. This could result in eutrophication and/or nuisance aquatic vegetation issues as stated in the summary report. We agree with the expert

panel in recommending close monitoring following any rule curve change in order to detect and thus mitigate for sedimentation issues through an adaptive management approach. Mitigation could involve, but not be limited to, a periodic winter lake drawdown below the new rule curve level that would allow for the flushing of sediments.

- We feel that one area of the Water Quality Expert Panel Discussion Summary Report requires clarification. One panel member misinterpreted the results of Dr. Steve Sammons' Martin relicensing study related to striped bass. Under response #5 on page 10, a panel member states that Dr. Sammons' study concluded that striped bass "mortality was natural and unrelated to project operation". To clarify, Dr. Sammons' determined that striped bass mortality could be linked to above average rainfall during the hot summer period, but further explains, "this study has demonstrated that striped bass habitat availability is subject to drastic seasonal changes even in reservoirs that appear to provide good opportunities for quality striped bass fisheries such as Lake Martin. The rapid change observed in striped bass habitat may be attributed to unusually high amounts of precipitation that fell in the drainage basin of the reservoir in 2009, which caused the dam to generate large volumes of water to maintain reservoir levels near full-pool levels. During these events, cool hypolimnetic waters are discharged through the dam and replaced with warm epilimnetic waters, resulting in large changes in habitat availability". Dr. Sammons' statements obviously link striped bass habitat loss and potential mortality, under specific conditions, to project operations.

Thanks for providing us the opportunity to comment on this summary report. We look forward to continuing our cooperative efforts with Alabama Power Company and other stakeholders in the Martin relicensing process.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Greene", with a long horizontal flourish extending to the right.

J. Chris Greene
Environmental Affairs Supervisor