



ALABAMA POWER COMPANY

BIRMINGHAM, ALABAMA

MARTIN HYDROELECTRIC PROJECT

FERC NO. 349

STUDY PLAN 12 (F) – EFFECTS OF A RULE CURVE CHANGE ON DOWNSTREAM RECREATION

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Prepared by:



**ALABAMA POWER COMPANY
BIRMINGHAM, ALABAMA**

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**STUDY PLAN 12 (F) – EFFECTS OF A RULE CURVE CHANGE
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1.0 GOALS AND OBJECTIVES OF STUDY

Many stakeholder groups have requested that Alabama Power Company (APC) investigate the feasibility of raising the winter rule curve at Martin. In Study Plan 12 (a), APC is conducting a study that will model an increase in the winter pool elevation in increments of 1 foot from el. 481 ft msl¹ to el. 486 ft msl. (i.e., el. 482, 483, 484, 485, and 486 ft msl) as well as to examine extending the summer pool level in the shoulder seasons (raise the Lake to full pool earlier in the Spring and maintain full pool into the early/mid Fall). As a result of this modeling study, APC must address potential changes to downstream recreational access and facilities associated with a Lake Martin winter rule curve that is higher than existing levels of el 481 ft. msl. which may cause an increase in frequency, duration, and/or magnitude of flooding downstream of Martin Dam.

2.0 RELEVANT RESOURCE MANAGEMENT GOALS

The Federal Energy Regulatory Commission (FERC) requires that the licensee for non-Federal hydroelectric projects consider the effects of continued or proposed operations of the hydroelectric facility. In this case, FERC will require APC to determine the effects of the proposed rule curve changes on the environmental, recreation, and cultural resources associated with the Project, including changes downstream as a result of the proposed rule curve changes.

3.0 BACKGROUND AND EXISTING INFORMATION

There is little existing information regarding the effects of operational changes at the Martin Project. However, necessary information will be collected and analyzed during the Rule Curve Change Modeling Analysis (see Study Plan 12a) regarding any possible changes in downstream flows and elevations as a result of proposed rule curve changes. This information will be used as necessary when it becomes available.

Information on existing recreation facilities and opportunities from the Martin Dam tailrace to downstream of the Thurlow Project in the Tallapoosa River will be collected as necessary. Existing LIDAR (elevation) data may be used as necessary to determine the effects of water level changes at existing facilities.

4.0 PROJECT NEXUS

The Project is licensed by FERC and all proposed operational changes must be disclosed and affects addressed in the license application to FERC.

¹ Elevation 481 ft msl is equivalent to el. 480 Martin Datum (MD).

5.0 STUDY AREA AND STUDY SITES

The study area includes all of the waters located within the Martin Project boundary and the tailrace of the Project. It also includes looking at effects on inflows to APC's downstream Yates and Thurlow Project, and resulting flows downstream of the Thurlow Project in the Tallapoosa River. The upstream Harris Project will not be affected by changes in the Lake Martin rule curve. Recreational opportunities, access, and facilities will be studied from the tailrace of Martin Dam to the study area identified in the Rule Curve Change Modeling Analysis (see Study Plan 12 a).

6.0 PROPOSED METHODOLOGY

APC's proposed steps include:

- 1) Review recreation resources in the river reaches below Martin Dam;
- 2) Identify those recreational resources that may be affected by the changes in flows and/or water levels in the river reaches below Martin Dam;
- 3) Review elevation data and/or depth profiles near identified recreational resources to determine if the resources will be affected;
- 4) Conduct site visits as necessary to identified recreational resources;
- 5) Prepare draft report, including maps (both hard copy and electronic), in consultation with MIG 3 members that summarizes possible effects to identified recreational resources; and
- 6) Prepare final report and determine potential mitigation measures to be included, if appropriate, in the Preliminary Licensing Proposal.

7.0 CONSISTENCY WITH GENERALLY ACCEPTED SCIENTIFIC PRACTICE

This study employs generally accepted practices for evaluating recreational access and the effects of hydroelectric projects on recreational access.

8.0 PRODUCTS

Data and documentation (including maps) of the analyses from this study will be included in the PAD and Preliminary Licensing Proposal. Any draft reports generated as part of this study will be distributed to the MIG 3 for review and comment.

9.0 SCHEDULE

This schedule is draft and APC intends to develop a formal schedule with MIG 3 members upon Final FERC approval of the study.

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| APC submits Final Study Plan for FERC Approval..... | November 2008 |
| FERC Study Plan Approval..... | May 2009 |
| MIG 3 Consultation | December 2009 - May 2010 |
| Review Results of Rule Curve Change Analysis..... | December 2009 |
| Determine Access Sites..... | January 2010 |
| Determine Effects Based on Rule Curve Change Analysis | February 2010 |
| Draft Report | March 2010 |
| Final Report | May 2010 |

10.0 LEVEL OF EFFORT AND COST

APC estimates that consultation with the MIG 3 and determining the effects of the proposed rule curve changes on downstream recreation will cost approximately \$75,000.

11.0 REFERENCES