ALABAMA POWER COMPANY

BIRMINGHAM, ALABAMA

MARTIN HYDROELECTRIC PROJECT

FERC NO. 349

STUDY PLAN 11 – WATER QUANTITY, WATER USE, AND WATER WITHDRAWALS

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1.0 GOALS AND OBJECTIVES OF STUDY

In preliminary consultation with various agencies and stakeholders, the following issues were identified: the amount of water being withdrawn from Lake Martin and the correlation with population; limiting future water withdrawals, especially for municipalities; and accommodating/increasing permitted withdrawals for riparian use.

The goal of this study is to produce a white paper detailing the Alabama Power Company's (Alabama Power) water withdrawal policy, current known water withdrawals from the Martin Project, ecological and navigational flow requirements in the Tallapoosa River basin, and water withdrawal intake locations during droughts, and drought contingency operations at the Martin Project.

2.0 RELEVANT RESOURCE MANAGEMENT GOALS

During the summer of 2007, Alabama experienced the worst drought in recorded history. During August 2007, nearly three-fourths of the state was classified as "exceptional," the highest drought level issued by the U.S. Drought Monitor. As a result of this drought, Alabama Power reservoirs experienced the lowest inflows in recorded history, which significantly curtailed hydroelectric generation at the Martin Project, except for the flows passed necessary to meet downstream requirements. Understanding how and why Alabama Power manages this water resource is imperative because of the impact that water scarcity may have on other resources at the Project.

3.0 BACKGROUND AND EXISTING INFORMATION

Over the last decade, there have been a growing number of new demands placed on Alabama Power's water resources. These additional demands have been for such uses as residential water supply, industrial growth, agriculture, recreational use, and environmental stewardship. Since large storage reservoirs provide a constant and reliable water supply, many water withdrawers have sought approval from Alabama Power to use its hydroelectric reservoirs as a source of water.

Alabama Power's existing policy was first developed in 1989 to manage water withdrawals and give consideration to the economic impacts of water withdrawals from its reservoirs. Consistent with Federal Energy Regulatory Commission (FERC) precedent on compensation for water withdrawals from federally-licensed hydroelectric projects, Alabama Power developed a water withdrawal policy designed to prevent Alabama Power's ratepayers from subsidizing the withdrawals from the reservoirs.

In 1993, the Alabama Legislature enacted the Alabama Water Resources Act, which created the Office of Water Resources (OWR). The OWR's primary purpose was to create a system for tracking the various uses of Alabama's waters. This system was intended to help the state develop plans and strategies for the management of its waters. The Alabama Water Resources Act also required that a declaration of beneficial use be submitted to the OWR by each public water system and by each person who diverts, withdraws, or consumes more than 100,000 gallons of water a day from the waters of the state. Thus, this law requires that a prospective withdrawer of water from an Alabama Power reservoir must file a declaration with the OWR.

In 2001, the OWR requested that Alabama Power implement measures to provide incentives to promote conservation of water resources. In response to this request, Alabama Power has implemented a process requiring applicants to demonstrate that they have initiated and obtained the necessary approvals from the OWR prior to granting permission to withdraw from Alabama Power's reservoirs.

Water use and drought management have been studied in the Alabama-Coosa-Tallapoosa Comprehensive Study done in the 1990s. Data and models from that study are currently being updated to include the 2000 and 2007 droughts as part of the development of new U.S. Army Corps of Engineering basin manuals.

4.0 PROJECT NEXUS

Availability of water is of utmost concern to the future operation of the Martin Project. Understanding how much water is available and the various competing interests will provide valuable information for deciding how this scarce resource is managed.

5.0 STUDY AREA AND STUDY SITES

The study area will encompass Lake Martin, Alabama Power-owned lands within the Project Boundary, and specific tributaries as they pertain to water withdrawals.

6.0 PROPOSED METHODOLOGY

The identification of water withdrawers on Alabama Power reservoirs will be accomplished through the use of secondary data sources.

6.1 Data Collection Techniques

Existing information will be used to facilitate data collection for this study. First, a request for data from the OWR will be made. Alabama Power records on those withdrawals approved by the FERC will also be collected. Alabama Power will also provide additional information on the location of water withdrawal intakes during droughts and any associated Alabama Drought Response Operating Proposal (ADROP) measures.

Other reports will be consulted during the collection of known withdrawal locations. There were a number of studies related to the Alabama-Coosa-Tallapoosa (ACT) Draft Environmental Impact Statement that will be found and reviewed (See Section 11.0). Other literature will be gathered and reviewed on an as needed basis.

Once a list of known withdrawal locations is complete and other existing literature has been reviewed, a draft report will be issued to Martin Issue Group (MIG) 2 for their input. Comments received from MIG-2 will be incorporated into a final report.

6.2 Data Analysis

In addition to the literature review, Alabama Power will include an analysis of future water withdrawals based on existing information and consultation with OWR for current and proposed operations.

7.0 CONSISTENCY WITH GENERALLY ACCEPTED SCIENTIFIC PRACTICE

The planned study methods discussed above have been accepted by the federal and state agencies and other interested stakeholders in other Alabama FERC relicensing projects.

8.0 PRODUCTS

Once this study is completed, a draft white paper detailing Alabama Power water withdrawal policy, current known water withdrawals from the Martin Project, ecological and navigational flow requirements in the Tallapoosa River basin, and drought contingency operations at the Martin Project will be available to the MIG 2 for review and comment. Upon review and discussion, a Final white paper will be filed with the Martin License Application.

9.0 SCHEDULE

This schedule corresponds to Alabama Power's Process Plan and Schedule filed with FERC on February 16, 2009. Actual consultation meeting dates will be determined with MIG 1 members upon FERC approval of the study plan.

Alabama Power files Final Study Plan	March 2009
FERC Approval	April 2009
MIG 2 Consultation	May 2009 – December 2010
Initial Study Report	November 2009
Initial Study Report Meeting	December 2009
Consult with and Obtain OWR and other withdrawal data	June 2009
Draft Report	February 2010
Final Report	December 2010
FERC Updated Study Report	September 2010
Updated Study Report Meeting	September 2010

10.0 LEVEL OF EFFORT AND COST

Alabama Power estimates the cost of consulting on the study plan, collecting and reviewing existing information, and reporting is approximately $25,000.

11.0 REFERENCES

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