
From: Crew, James F.
Sent: Friday, November 16, 2007 12:54 PM
To: Brian Barr; carl.scardina@dcnr.alabama.gov; Charles Borden (jcborden39@cs.com); Chris.Greene@dcnr.alabama.gov; David Winsor (shugorbear@charter.net); davegard@charter.net; dbronson@charter.net; Don Hawkins (dphoton@gmail.com); Frances Allred (fallred@comlinkinc.net); Gary Woodsmall; careymullican@charter.net; Jesse Cunningham (jessecunningham@msn.com); Janckersen@bellsouth.net; j bain@russellands.com; campchaos@yahoo.com; judy.takats@wwfus.org; Milam, Keith; Kenneth S. Boone (kenneth@kennethboone.com); Larry Brantley (larrybrantley@bellsouth.net); Griffin, Marshall D.; 'nick.nichols@dcnr.alabama.gov'; Hanks, Rhett; rondalisa@hotmail.com; wdenton@comlinkinc.net; Jeff Powell (jeff_powell@fws.gov); michael.j.eubanks@sam.usace.army.mil; robert.a.allen@sam.usace.army.mil; LS@ADEM.STATE.AL.US; prescott.brownell@noaa.gov; dowj@adeca.state.AL.us; Tom Littlepage (Tom.Littlepage@adeca.alabama.gov); Waites, David G.; Grogan, John D.; Stover, Charles M.; Peeples, Alan L.; McVicar, Ashley M; Sheppard, Andrew R.; Ramey, Walter R.; Henry Mealing
Cc: Akridge, R. M.; Allison, Eugene B., Jr.; Jackson, Viki R.; 'Kelly Schaeffer'
Subject: Martin Relicensing - Distribution of Draft MIG 3 (Project Operations) Study Plan
Attachments: Rule Curve Change Analysis Study Plan (DRAFT 11-16-07).doc; ILP study_criteria.pdf

MIG 3 Members,

At the September 2007 Martin Issue Group (MIG) meetings in Alexander City, we discussed the MIG sheets and provided a summary of the study plans that Alabama Power has developed in consultation with the state and federal resource agencies to address the effects of the Martin Project on the environmental resources. The notes from those meetings and the PowerPoint presentations are available on the Martin Relicensing website at <http://www.alabamapower.com/hydro/martin.asp>. We indicated that the draft study plans were undergoing further revisions and would soon be available for review and discussion by the applicable MIGs.

Accordingly, attached herewith for your review and comment is the Lake Martin Rule Curve Change Analysis draft study plan associated with MIG 3, Project Operations. This is the plan Alabama Power is proposing to implement upon FERC approval. As discussed during the September meetings, the study plans will be submitted to FERC in June 2008, and should be approved by FERC and ready for implementation in early 2009. Please review this draft plan and provide any comments/edits you may have to me on or before **December 14, 2007**. (The document is in Microsoft Word and can be edited easily using track changes.) To facilitate your review, also attached is a copy of FERC's Study Criteria that must be followed in the Integrated Licensing Process.

You may also be aware that on October 23, 2007, Alabama Power filed a request with FERC for approval of a drought-based temporary variance of the Martin rule curve. FERC is currently reviewing our request, and we sincerely appreciate the letters and emails of support that were filed by homeowners and the state and federal resource agencies. We anticipate receiving a favorable ruling from FERC by the end of next week.

Our next meeting of the MIGs will occur in early February 2008 at the Betty Carol Graham Center in Alexander City. We will focus primarily on the comments received on the draft study plans for each MIG. Once an exact date in February is selected, we will notify you by email and also post the date on our website. As always, if you cannot attend meetings, notes and meeting materials will be posted to the Martin Relicensing website within two weeks following the meeting.

If you have any questions, please send me an email or give me a call at 205-257-4265. We look forward

to your continued participation in the Martin relicensing effort. Have a safe and joyous holiday season!



Rule Curve Change
Analysis Stu...



ILP
ly_criteria.pdf (83 K)

Jim

James F. Crew
Hydro Services
Relicensing Project Manager
Southern Company Generation
Phone: (205) 257-4265
Fax: (205) 257-1596
Cell: (205) 902-3213
Email: jfcrew@southernco.com

Study Plan - Lake Martin Rule Curve Change Analysis

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. APC's goal of this study would be to determine the feasibility of revising the Martin rule curve by modeling changes involving an increase in winter pool elevation up to 6 feet. APC would need to determine potential flood impacts associated with higher winter rule curve levels and also address the duration of the summer pool (e.g., extending the summer pool into October or November).

2.0 RELEVANT RESOURCE MANAGEMENT GOALS

APC's analysis will assist APC in making a proposal for the Pre-Application Document (PAD) and Preliminary Licensing Proposal for FERC's analysis in determining new license conditions for the Martin Project. The goal of the analysis will be to determine an appropriate winter pool level that optimizes the many interests in the operation of the Martin project. APC will work with agencies and other stakeholders to ensure that resource management goals for individual resource areas are taken into account and any environmental, cultural, or recreational studies take into account any proposed rule curve change.

3.0 BACKGROUND AND EXISTING INFORMATION

APC has existing tools it is using to develop the appropriate flood control, routing and budget models for Martin to determine the feasibility of raising the winter rule curve. These tools include the Corps of Engineers HEC-RAS and Flood Frequency Analysis (FFA) models, the ACT unimpaired flow data set developed by the Corps and others, APC's Project Routing model, APC's spreadsheet model to determine flow duration and APC's HydroBudget model.

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.

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. The upstream Harris Project will not be affected by changes in the Lake Martin rule curve.

6.0 PROPOSED METHODOLOGY

- 1) Develop the Flood Frequency Analysis (FFA) to determine the statistical frequency of historical flood event.
- 2) Develop a 100yr design flood based off the FFA considering peak timing and volume of the event.
- 3) Develop the HEC-RAS model for Martin and for downstream.

- 4) Develop the Project Routing model to route the flood thru the dam determining the appropriate outflow and elevation.
- 5) Route the 100 yr design flood for the current flood control and rule curve as well as for any proposed flood control and rule curve to be limited to a reasonable number of runs.
- 6) Evaluate the results and identify any impacts to downstream.
- 7) Flow duration analysis for low flow scenarios.
- 8) HydroBudget analysis to determine the cost associated with increased winter pool elevations.

7.0 CONSISTENCY WITH GENERALLY ACCEPTED SCIENTIFIC PRACTICE

- 1) Same analysis performed on 1999 Henry study to raise the winter pool levels accepted by the Corps of Engineers and FERC
- 2) Same analysis performed on Coosa Relicensing evaluation of raising the winter pool levels at Weiss and Logan Martin with the methodology being accepted by the Corps of Engineers and FERC

8.0 PRODUCTS

Data and documentation 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

Conduct Analysis	September – December 2007
Present Results	February 2008
Incorporate APC Proposal into PAD	June 2008

10.0 LEVEL OF EFFORT AND COST

APC estimates that consultation with the MIG 3 and development of models and analysis on the potential rule curve change at Lake Martin will cost approximately \$250,000.

11.0 REFERENCES



Understanding the Study Criteria

Integrated Licensing Process

*Federal Energy Regulatory Commission
Office of Energy Projects*

April 6, 2005

Understanding the Study Criteria

Reaching agreement on study needs can be difficult and contentious. Historically, deferring resolution of fundamental issues about what information gathering and studies are necessary until after the license has been filed with the Commission has in some cases resulted in lengthy licensing proceedings. The Integrated Licensing Process (ILP) is designed to eliminate that problem. Working collaboratively with the hydro industry, state and federal resource agencies, tribes, and non-governmental organizations, the Commission developed seven criteria that must be addressed by parties requesting studies in the ILP. Following these criteria will help formulate a well structured and thought out request that can help focus discussions about the merits and applicability of a study to evaluate the effects of a project on environmental resources.

This document is intended to explain the study criteria and help stakeholders craft study requests (18 CFR § 5.9(b)) that will clearly identify their information needs and expectations and explain why they need the information. A clear understanding of the study criteria and adherence to these criteria in formulating study requests should facilitate the development of study plans (18 CFR § 5.11 (b)-(e)).

While the reader may wish to use the suggested structure as a template for a request, there are a number of variables that will determine whether a study or a totally different approach would be best suited to a particular project and approved by the Commission.

Study Request Criteria

As specified by CFR 18, § 5.9(b) of FERC's regulations on the ILP, any study request must:

- (1) Describe the goals and objectives of each study proposal and the information to be obtained;
- (2) If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied;
- (3) If the requester is a not resource agency, explain any relevant public interest considerations in regard to the proposed study;
- (4) Describe existing information concerning the subject of the study proposal, and the need for additional information;
- (5) Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements;
- (6) Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate filed season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge; and
- (7) Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.

Study Plan Criteria

CFR 18 § 5.11 (b)-(e) specifies the following requirements for the applicant's proposed study plan. Note that these requirements closely parallel those described in § 5.9(b).

(b) The potential applicant's proposed study plan must include with respect to each proposed study:

- (1) A detailed description of the study and the methodology to be used;
- (2) A schedule for conducting the study;
- (3) Provisions for periodic progress reports, including the manner and extent to which information will be shared; and sufficient time for technical review of the analysis and results; and

- (4) If the potential applicant does not adopt a requested study, an explanation of why the request was not adopted, with reference to the criteria set forth in [5.9\(b\)](#).

(c) The potential applicant's proposed study plan must also include provisions for the initial and updated study reports and meetings provided for in [5.15](#).

(d) The applicant's proposed study plan must:

- (1) Describe the goals and objectives of each study proposal and the information to be obtained;

- (2) Address any known resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied;

- (3) Describe existing information concerning the subject of the study proposal, and the need for additional information;

- (4) Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied;

- (5) Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers any known tribal interests;

- (6) Describe considerations of level of effort and cost, as applicable.

(e) The potential applicant's proposed study plan must be accompanied by a proposal for conducting a study plan meeting or meetings during the 90-day period provided for in [5.12](#) for the purpose of clarifying the potential applicant's proposed study plan and any initial information gathering or study requests, and to resolve any outstanding issues with respect to the proposed study plan. The initial study plan meeting must be held no later than 30 days after the deadline date for filing of the potential applicant's proposed study plan.

Goals and Objectives

§5.9(b)(1) Describe the goals and objectives of each study proposal and the information to be obtained;

This paragraph describes what the study is intended to accomplish, the goals and objectives of the study, and specific information to be obtained. The goals of the study should clearly relate to the need to evaluate the effects of the project on a particular resource. The objectives are the specific information needs to be gathered to allow achievement of the study goal. This section provides the context for why the study is being requested.

Relevant Resource Management Goals

§5.9(b)(2) If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied;

§5.9(b)(3) If the requester is a not resource agency, explain any relevant public interest considerations in regard to the proposed study;

This discussion should clearly establish the connection between the study request and the management goals of the requesting agency or tribe, or in the case of non-governmental agencies or others without a jurisdictional mandate or obligation, between the study and resource of interest. A statement by an agency connecting its study request to a legal, regulatory, or policy mandate is entitled to appropriate consideration. However, it is much easier to understand the relationship of an information need to a specific management goal than to broadly stated mandates established in law or regulation. Where such mandates are integral to the need for the information, the requester needs to thoroughly explain how the mandate relates to the study request and, in turn, project impacts.

Background and Existing Information

§5.9(b)(4) Describe existing information concerning the subject of the study proposal, and the need for additional information;

The purpose of this discussion is to highlight the gap in existing data, giving full consideration to what has been provided in the PAD or is known from other information sources relevant to the project. This discussion should clearly explain why the existing information is inadequate and the need for additional information.

Project Nexus

§5.9(b)(5) Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements;

This discussion should clearly draw the connection between project operations and the effects (direct, indirect, and/or cumulative) on the applicable resource. Just as important, this discussion should explain how the requester will use the information to develop protection, mitigation, and enhancement measures, including those related to an agency's mandatory conditioning authority under 401 of the Clean Water Act or sections 4(e) and 18 of the Federal Power Act.

Proposed Methodology

§5.9(b)(6) Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge;

Study requests should be as detailed as possible. It is important to relay to the applicant your expectations on the scope and methods so that an adequate study plan can be developed. The requester may describe the proposed methodology by outlining specific methods to be implemented (e.g. study area, study sites, data collection methods, etc.) or simply by referencing an approved and established study protocol or methodology (e.g. Henderson 1999, or Missouri State Water Quality Sampling Protocols for Lead, 1999). If providing a detailed methodology, the requester should demonstrate how the requested methodology is consistent with generally accepted practice within the scientific community or, as appropriate, considers relevant tribal values and knowledge. The requested study must be generally accepted in the context of how it is being used. For example, just because an IFIM is a generally accepted methodology for determining the relationship of flow to available habitat, it doesn't mean you would use IFIM for answering questions about fish populations.

LEVEL OF EFFORT AND COST

§5.9(b)(7) Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.

This section should describe your expectations of the level of effort and costs associated with the development and implementation of the requested study. This would be used to provide the applicant with a better understanding of your expectations for the completion of the study. Within this section, you should also provide a justification as to why any proposed alternative studies would not be sufficient to meet the stated information needs. Proposed alternative studies could be studies being proposed by the applicant in the PAD or those being requested by other parties.