

PROJECT OPERATIONS ISSUE SHEET
MARTIN ISSUE GROUP THREE (MIG3)

Determine the feasibility of changing the Martin rule curve and, if feasible, analyze the effects (both negative and positive) as a result of a potential rule curve change on all resource areas.

DESCRIPTION OF ISSUE

Stakeholders expressed strong desire to change the Martin rule curve and to determine the effects of changing the rule curve on various project resources such as fish and wildlife, general operations of the project, and navigation.

Specific issues or areas of potential effect include:

Lake Level Fluctuation

- Keep 10ft winter drawdown to accommodate flood and to help home owners to work on docks
- 5 ft draw down would reduce rate of siltation
- Impact of project operations and lake level changes on head cutting in the tributaries and sediment accumulation
- Remain at 489 ft msl elevation in winter; periodically drop to 481 ft msl
- Is there an option to retain 10ft drawdown on a periodic basis (every other year for 1 month)?
- Effects of raising the winter pool elevation even 5 ft would eliminate shoreline work - if seawalls aren't erected, increase in erosion due to boat wake
- Can APC do a trial of raising winter pool and evaluate all impacts to resources?
- Can APC raise lake to full pool by March 1 and maintain to December 1?
- Keep summer pool at 491 ft msl through October
- Examine the rule curve minimum
- Concern that APC is operating in the summer to make profit instead of keeping the lake up

Operations

- Impacts of flows at Martin on Lake Wedowee
- Use adaptive management in the new license and leave FERC out
- Investigate changing all Tallapoosa River license terms so they all expire at once
- All evaluations of changes in operation must consider Harris operations; all studies should document the interaction of Harris with Martin
- Evaluate Harris Reservoir to see if it can share storage (flood) with Lake Martin
- Harris, Martin and Yates and Thurlow need to be evaluated together; provide a basin review
- Look at the drought management plan
- How does the need for flood control affect winter pool levels?
- Assure flood control requirements are met during any change in the rule curve

Navigation

- Will APC ask the U. S. Army Corps of Engineers (USACE) to re-evaluate their navigation requirements? Review times when flooding is more probable

Fish & Wildlife

- Proceed cautiously with lake level change and examine effects for water quality, fish and plants
- Evaluate effects of project operation (timing of releases, magnitude, duration) on the different life-stages of aquatic resources
- Opportunity for adaptive management (in terms of operations)

ADDITIONAL ISSUES IDENTIFIED FROM PAD QUESTIONNAIRE

- Modification of the Martin project operational guide curve to achieve a 6 month full-pool season and 5 ft or 6 ft winter drawdown
- Water levels-winter drawdown level to 486 ft msl and full pool season extended from March 15 through October 31

GEOGRAPHIC SCOPE

- Project lands and lands potentially affected by rule curve changes

EXISTING INFORMATION

- Current Martin Project license guidelines (Exhibit H (revised))

CURRENT ANALYSIS/STUDY

- Using APC's flood flow and hydro budget models, evaluate and select rule curve alternatives from 481 ft msl to 491 ft msl

ADDITIONAL INFO/STUDY

- Need good baseline data for use in developing an adaptive management process/program for the Martin winter rule curve change. The following types of baseline information are needed:
 - Existing sediment levels and aquatic plant info
 - Look especially at Blue Creek, Sandy Creek, Irwin Shoals, Lower Hillabee Creek
 - Literature search on other lakes in the SE that could be used to help predict levels of eutrophication as result of rule curve change
 - Water quality measurements
 - ADEM is interested in current and long-term reservoir and downstream water quality data including chlorophyll a and nutrient levels