



November 5, 2010

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

Subject: American Rivers comments on Study 3, Evaluation of Minimum Flows Downstream of Martin Dam for the Martin Hydroelectric Project (P-349)

Jim:

Thank you for the opportunity to provide comments on Alabama Power Company's draft report for Study 3, the evaluation of minimum flows downstream of Martin Dam. While we sincerely appreciate the work and stakeholder outreach that went into the preparation of Study Plan 3, we remain concerned that APC's Study Plan lacks a number of critical details that are likely to determine the accuracy and availability of information that will be necessary for a full and complete environmental analysis of APC's license application.

Study Plan 3 (Evaluation of Minimum Flows Downstream of Martin Dam)

Flow is a central issue in the hydropower relicensing process. American Rivers is interested in exploring opportunities for the Martin Project to operate in a manner that more closely mimics pre-dam hydro-graphs. We believe this will benefit paddlefish spawning and other aquatic species as well as improving recreational opportunities for boaters and anglers.

During the MIG 1 meeting on March 30, 2010, American Rivers and other stakeholders requested that Alabama Power clarify the dates in March and April that flows below Thurlow exceed 6,000 cfs and describe the extent to which these same flows are continuous throughout the paddlefish spawning period. The draft study report has determined that paddlefish typically spawn over clean swept gravel bar substrate. Spawning is triggered by a rise in flow of 1 to 3 m during the 10 to 17°C preferred temperature range. Their eggs are adhesive after fertilization and become firmly attached to the substrate. Researchers have observed that it takes approximately 10 to 11 days for paddlefish eggs to hatch at 14.5° C.

The draft report does provide data that shows the specific days during March and April that 6,000 cfs occur in the period between January 2, 1993 and November 16, 2009. It also provides some hourly data samples. The purpose of the hourly data is to illustrate which flows were continuous through whole days and which were sustained for only a number of hours during the likely paddlefish spawning period. APC also provided a flow

matrix in the draft report that shows all flow rates above 6000 cfs for the months of March and April from 1992 to 2009, bar charts of the flows for March and April of each year, and some additional hourly data samples that correspond to days chosen randomly from the flow matrix. This data is useful for understanding how the Martin Project typically operates but provides little insight into determining paddlefish spawning success. It appears from review of the hourly data provided in the flow matrix that few if any periods during the period of record experienced 10 to 11 days of continuous flow over 6000 cfs. According to data presented in the draft report it takes 10 to 11 days for paddlefish eggs to hatch. Flows in the Tallapoosa River downstream of Thurlow Dam regularly fluctuate upwards of 5 feet at the Milstead Gage, dropping below the 6000 cfs threshold leaving paddlefish eggs following their release, susceptible to stranding and desiccation.

MIG members are interested in understanding if there is any flexibility in project operations to enhance paddlefish spawning in the Tallapoosa River downstream of Thurlow Dam above current levels. The draft report determined that flows from Thurlow Dam are currently providing for the spawning needs of paddlefish and that proposed operational alternatives, early spring fill and higher winter pool, could provide more days during the March and April timeframe when 6000 cfs would be available. It remains unclear whether more days of 6000 cfs measured as a daily average would in fact enhance paddlefish spawning. Daily average flows with extreme fluctuations leave paddlefish eggs at risk of stranding, desiccation, and ultimately death. While there appears to be several times in the period of record when flows exceeded 6000cfs and were continuous for two or three days, there does not appear in the data provided, a time where flows exceeded 6000 cfs for 10 or 11 day period it takes paddlefish eggs to hatch.

American Rivers requests that APC expand their analysis regarding paddlefish spawning flows. The adhesive characteristic of paddlefish eggs leaves them vulnerable to stranding when flows decline. The number of times and the degree to which flows decline due to project operations could have an effect on egg survival. APC should provide the number of days when the average daily flow exceeded 6000cfs but the minimum daily flow was below the 6000 cfs threshold. APC should also provide the number of times in the period of record where flows exceeded 6000 cfs and did not drop below 6000 cfs for a 10 to 11 day period. In order to more accurately evaluate operational alternatives to enhance spawning conditions for paddlefish in the Tallapoosa River, APC should evaluate possibilities of releasing an instantaneous minimum flow for a period of no less than 11 days.

American Rivers recommends:

APC evaluate proposed alternatives on river flows below Thurlow Dam to assess operations that improve paddlefish migration, spawning and egg incubation. In order to do so APC should explore opportunities to provide flows that appear to be more consistent with paddlefish spawning success; increases in flows above 6000cfs (or as WWF suggests, rises in river stage to 7 to 11 feet) that last several days followed by a slow decline over a 10-14 day period.

Although American Rivers believes that improved paddlefish spawning flows will benefit other aquatic species and improve recreational opportunities for boaters and anglers, we concur with WWF that Study 3 would be far more robust if the analysis included more

species than paddlefish alone. We believe that additional information about operations, operational alternatives and aquatic late spring or early summer spawning species is necessary for the Federal Energy Regulatory Commission to prepare a defensible and comprehensive environmental document under the National Environmental Policy Act.

We appreciate the opportunity to comment on the progress of Study 3 and look forward to continued dialogue with APC staff, other stakeholders, and the Federal Energy Regulatory Commission.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt", followed by a long horizontal flourish line.

Matt Rice
American Rivers
Associate Director of Southeast Conservation

CC: Federal Energy Regulatory Commission

Document Content(s)

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