



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

October 13, 2005

IN REPLY REFER TO

Project Planning Branch

To All Interested Parties:

The U.S. Army Corps of Engineers, Nashville District (Corps) is preparing an Environmental Assessment (EA) concerning a proposed experimental pool level change at Lake Barkley. Because a pool level change would affect the pool level of Kentucky Reservoir, the Tennessee Valley Authority (TVA) is cooperating in the preparation of this EA. The Corps was requested to consider a change in order to improve recreational boating conditions on Lake Barkley by extending the summer pool (elevation 359 feet) from the current drawdown date of July 1 until July 15.

The enclosure shows the current guide curve for Lake Barkley and actual pool levels for 2005. Under the current guide curve, implemented in 1980, summer pool is maintained from May 1 to July 1. At that time, the lake is gradually drawn down to winter pool (elevation 354 feet) by December 1. Winter pool is maintained until April 1. The guide curve is an operational goal under normal conditions and actual pool levels are allowed to fluctuate within a foot above or below the guide. During extreme events such as floods, pools may be off the guide curve until the event ends and pools are returned to the guide as soon as practical. During the July 5-10 period this year, pool levels were held above the guide curve in order to allow repair work to be conducted at Lock and Dam #52 (Ohio River) and upon completion of the repairs, the guide curve has been maintained. Based on observed data during the summer pool drawdown period, pool levels are almost always on the high side of the guide curve.

Lake Barkley is a Corps of Engineers lake on the Cumberland River in western Kentucky and middle Tennessee. The lake is formed by a dam at Cumberland River Mile 30.6. Kentucky Reservoir is a TVA impoundment located in western Kentucky and Tennessee and is formed by a dam on the Tennessee River mile 22.4. Because both water bodies are connected by the unregulated Barkley Canal, they are operated in tandem and any changes to operation must be approved by both agencies. Operation of both lakes is controlled by the Corps of Engineers

when flooding or low water navigation concerns are occurring on the lower Ohio and Mississippi Rivers.

In 2004, TVA completed a comprehensive review of operations on the TVA reservoir system, *Final Programmatic Environmental Impact Statement, Tennessee Valley Authority Reservoir Operations Study* (February 2004) ("ROS EIS"). The Corps was a cooperating agency in the ROS EIS. This current EA would tier from the ROS EIS in order to utilize previous analyses and information. It is noted that summer pool extensions considered in the ROS EIS were longer in duration than the current proposal. As an outcome of the ROS EIS, TVA decided to not change summer pool levels in Kentucky Reservoir. TVA also committed to developing better benchmark data about shorebird and waterfowl populations, wetlands vegetation, and the sport fishery on Kentucky Reservoir. These benchmark data are important in evaluating affects of any pool level changes which have been periodically suggested over the years. These studies began in 2005 and, depending on the particular study, will be performed over a 5 to 13 year period. The Corps is performing similar benchmark data collection on Lake Barkley.

As part of the scoping process for this EA, the Corps of Engineers hosted a meeting on May 3, 2005, with several resource agencies with jurisdiction over the area. The concerns voiced at the meeting and in follow-up letters from each agency will be considered in the EA. At the conclusion of the EA, the Corps and TVA will make a determination that either a Finding of No Significant Impact (FONSI) is appropriate for the proposed pool extension or that a comprehensive Environmental Impact Statement (EIS) would be necessary. If we determine an EIS is needed, we would reevaluate the benefits, impacts and costs associated with further studies before proceeding with the experiment.

Anticipated areas of concern over any pool extensions include the following:

- Impacts to shoreline vegetation (button bush) and long-term loss of fish and wildlife habitat as vegetation declines;

- Impacts to habitat used by migrating shorebirds and waterfowl that utilize mudflats under the existing operation;
- Increased shoreline erosion; Capital investments to maintain current operations at the Tennessee and Cross Creeks National Wildlife Refuges;
- Increased likelihood of fish kills below Kentucky and Barkley Dams due to increased spilling operations during the period pools are raised;
- Loss of operational flexibility during periods when the lakes are operated to reduce flooding or improve river navigation in the lower Ohio and Mississippi Rivers and the Tennessee and Cumberland River systems;
- Decreased tourism revenue associated with fishing and wildlife observation;
- Interference with benchmark data collection identified by the ROS EIS;
- Endangered Species Act compliance issues.

Anticipated benefits of the proposed pool extension include:


- Improved conditions for recreational boating;
- Reduced damage to boats;
- Possible increased revenue for marinas during increased pools and associated economic benefits from additional boaters.

In accordance with the National Environmental Policy Act (NEPA) and applicable implementing regulations, an EA will be prepared. By way of this letter, we are soliciting public and agency comments concerning environmental and social issues that should be addressed during the NEPA process. We encourage comments not only about the immediate project area, but also of plans or proposals for any other development that may impact or influence project resources. Recommendations concerning pool extension alternatives to be considered should be provided. Anticipated alternatives to be considered would include No Action (current operation), summer pool extension until July 15th (with various return periods to the current guide curve), and restoration of the original guide curve used prior to 1980 (summer pool drawdown date of June 15). The latter has been recommended by some resource agencies due to environmental impacts of the original guide curve change.

This letter also serves to initiate the public involvement requirements of Section 106 of the National Historic Preservation Act of 1966, as amended. Section 106, implemented by regulations at 36CFR800, requires the Corps of Engineers to consider the effects of its undertakings on historic properties. Appropriate archeological investigations will be conducted within those areas affected by the proposed activities. Investigations will be conducted in consultation with the Kentucky and Tennessee State Historic Preservation Officer, the Advisory Council on Historic Preservation, and relevant Native American tribes as appropriate.

Please contact Tim Higgs, Environmental Engineer, at the above address or call (615)736-7863 with any questions or comments concerning environmental, social, and cultural resource issues. Please respond no later than November 18, 2005, to ensure evaluation and inclusion in the EA. Your participation is greatly appreciated.

Sincerely,


Steven J. Roemhildt, P.E.
Lieutenant Colonel
Corps of Engineers
District Engineer

Enclosure

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BARKLEY LAKE LEVELS AND OUTFLOWS

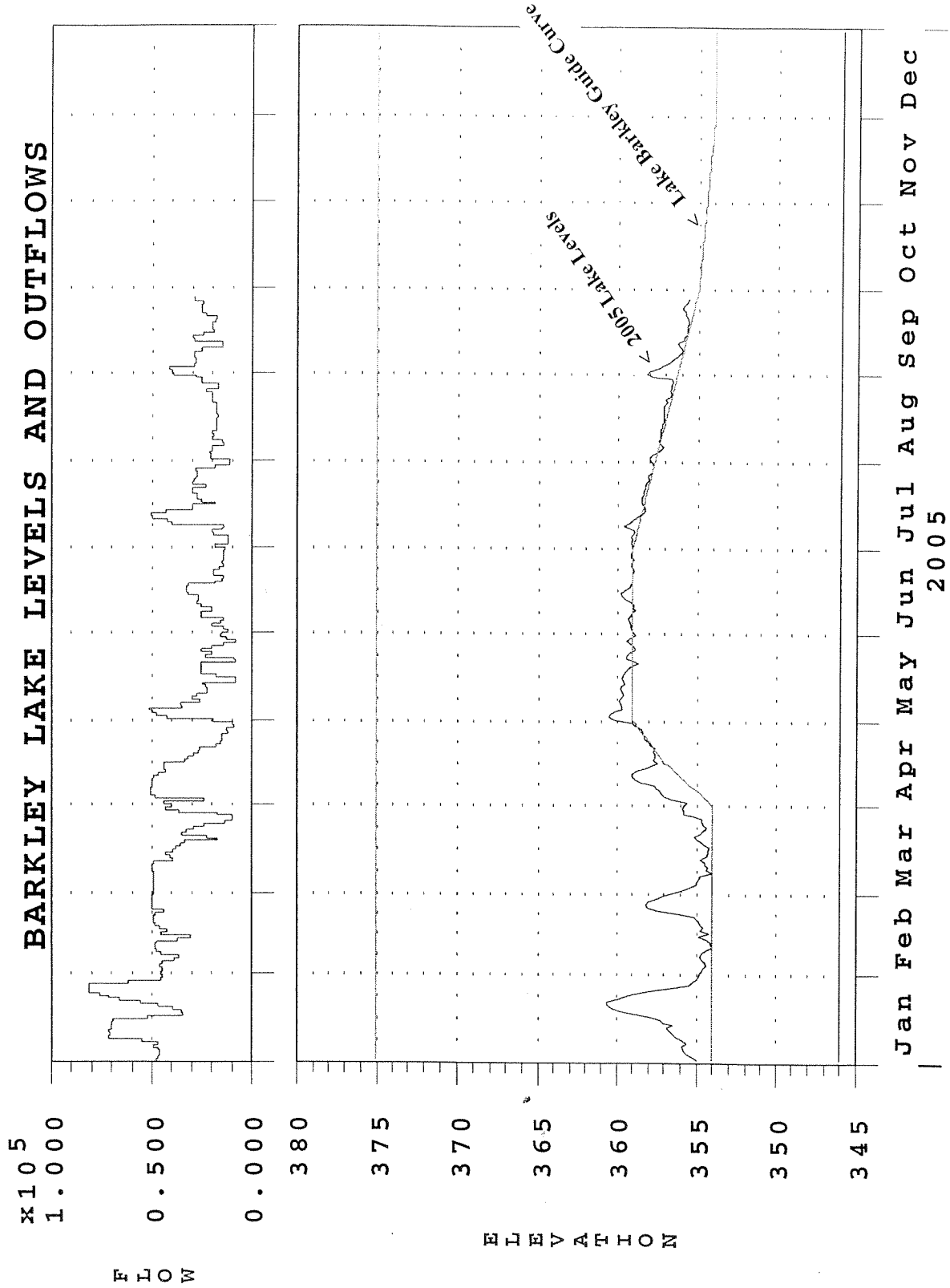


FIGURE 1

Enclosure