



DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

28 JUN 1994

CECW-PE (1110-2-1150a)

SUBJECT: Wolf Creek Hydropower, Cumberland River, Kentucky

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on uprating the hydroelectric power capacity at the existing Wolf Creek Dam and Lake Cumberland, Kentucky project. It is accompanied by the report of the district and division engineers. These reports are in partial response to a resolution passed by the Committee on Environment and Public Works of the United States Senate, adopted 9 September 1982. In the resolution, the Senate committee requested review of the reports of the Chief of Engineers on the Tennessee River and Tributaries, North Carolina, Tennessee, Alabama, and Kentucky, published as Senate Document Number 328, 71st Congress, 2nd Session, and the Cumberland River, Kentucky and Tennessee, published as House Document number 761, 79th Congress, 2nd Session, and other pertinent reports in order to determine whether any modifications of the recommendation therein are necessary at this time.

2. The recommended plan includes uprating of the Wolf Creek Dam hydroelectric power plant from its existing capacity of 270 megawatts (MW) to approximately 390 MW. The uprating would include selective replacement of key electrical and mechanical components within the existing hydroelectric units in order to facilitate peaking operation and improve generating efficiency. The Administrator of the Southeastern Power Administration has concluded that the additional power is marketable. The recommended plan would also mitigate fish and wildlife losses resulting from uprating the power plant. Proposed mitigation features consist of adding two multicone aerators at the National Fish Hatchery just downstream of the dam, and improving two user access areas within the tailwater reach.

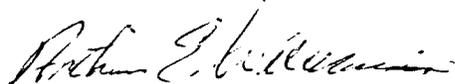
3. Based on October 1993 prices, the estimated first cost of the selected plan is \$49,200,000. Average annual benefits and costs for the recommended plan, based on the current Federal interest rate of 8 percent and a 50-year period of analysis, are \$3,721,000 and \$3,007,000 respectively, with a benefit-cost ratio of 1.2. The recommended plan is the National Economic Development Plan.

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4. Washington level review indicates that the proposed plan is technically sound, economically justified, and environmentally acceptable. The proposed project complies with applicable U.S. Army Corps of Engineers planning procedures and regulations. Also, the views of interested parties, including Federal, State, and local agencies have been considered. No one has expressed any reservations or objections with regard to the proposed plan.

5. Accordingly, I recommend that the capacity of the existing Wolf Creek hydropower plant on the Cumberland River, Kentucky, be uprated generally in accordance with the reporting officers' recommended plan. In accordance with the provision of section 103(c) of the Water Resources Development Act of 1986, 100 percent of the costs associated with constructing, operating, maintaining, and rehabilitating the recommended improvements shall be borne by the non-Federal sponsors. Sponsorship and 100 percent funding of preconstruction engineering and design will be provided by the Tennessee Valley Authority; and construction, operation, maintenance, and rehabilitation funding will be provided by a sponsor to be identified by the Southeastern Power Administration's sponsor selection process. The provisions of the project cooperation agreement with the construction sponsor will be developed during preconstruction engineering and design.

6. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program nor the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization. However, prior to transmittal to the Congress, the Commonwealth of Kentucky, interested Federal agencies; and other parties will be advised of any modifications and will be afforded an opportunity to comment further.


ARTHUR E. WILLIAMS
Lieutenant General, USA
Chief of Engineers