

January 15, 2003

Bridgette K. Ellis, NRB 2A-N

SHIELDS CREEK CRAPPIE IMPOUNDMENT – PROPOSED LICENSE AGREEMENT AND SECTION 26a APPROVAL TO TENNESSEE WILDLIFE RESOURCES AGENCY (TWRA) FOR A PORTION OF SHIELDS CREEK EMBAYMENT, TVA TRACT XCK-337R, OPPOSITE HOLSTON RIVER MILE 70.1, RIGHT BANK, CHEROKEE RESERVOIR, GRAINGER COUNTY, TENNESSEE – FINDING OF NO SIGNIFICANT IMPACT (FONSI)

In accordance with the National Environmental Policy Act (NEPA) and TVA's implementing procedures, Environmental Policy and Planning has prepared the attached Environmental Assessment (EA) and is issuing the attached FONSI. This serves as documentation of TVA's environmental review. As stated in the FONSI, we conclude that the proposed action will not have a significant impact on the quality of the environment.

Please ensure that commitments are included in the license agreement or Section 26a permit, as appropriate.



*for* Jon M. Loney, Manager  
NEPA Administration  
Environmental Policy and Planning

SED:HMD:MSW

Attachments (2)--[FONSI, EA of January 15, 2003]

cc: J. Collins, WT 8A-K (electronic copy of EA and FONSI for web posting)

M. H. Dunn, ET 11A-K (entire package)

S. B. Fuhr, WPB 1A-MOT (entire package)

K. J. Jackson, WT 11A-K (FONSI only)

J. W. Shipp, Jr., MR 2T-C

EDMS, SP 1D-C (entire package)

Prepared by Stanford E. Davis and Harold M. Draper (EP&P); reviewed by Laurie S. Pearl and Buff Crosby (RS); with concurrence of Khurshid K. Mehta and Rebecca C. Tolene (OGC).

**FINDING OF NO SIGNIFICANT IMPACT  
TENNESSEE VALLEY AUTHORITY**

**SHIELDS CREEK CRAPPIE IMPOUNDMENT**

**Proposed license agreement and Section 26a approval to  
Tennessee Wildlife Resources Agency (TWRA)  
for a portion of Shields Creek Embayment  
TVA Tract XCK-337R  
Opposite Holston River Mile 70.1, Right Bank  
Cherokee Reservoir  
Grainger County, Tennessee**

**Proposed Action and Need**

Tennessee Wildlife Resources Agency (TWRA) has requested a license and Section 26a approval from TVA to construct a small dam to hold water in Shields Creek at a constant level for about 6 to 8 months during the spring and summer. TWRA submitted revised project plans in August 2002. The earth-filled structure would be located just north of U.S. Highway 11W in Bean Station, Grainger County, Tennessee. The dam, approximately 750 feet long, 100 feet wide, and 21 feet high, would capture drainage from a 2280-acre watershed. At normal pool, elevation 1067 mean sea level (msl), the dam would impound 45 surface-acres of water (emergency spillway at elevation 1069 msl). The project, including the proposed TVA licensed-area, would involve use of approximately 62 acres of public land and 8574 feet of TVA shoreline. The project would also involve construction of an access road and gravel boat ramp above the dam on the west side of the embayment. Except for the road right-of-way license, access would require crossing adjoining private farmland.

The purpose of the project is to provide optimum spawning conditions in the Shields Creek embayment even when the reservoir has low water levels during the spring. High and relatively constant water levels during the spring spawning season typically result in good crappie reproduction in Cherokee Reservoir. Alternatively, during periods of drought, crappie spawning success rates drop markedly. This project would allow TWRA to more consistently and successfully raise fingerling crappie in the nursery impoundment for release into the reservoir and ultimately improve the population of this species.

The Shields Creek impoundment would provide a stable pool beginning about the end of March; and, unless the main reservoir overtops the dam, provide a summer-long growing season for the young crappie. The gate valve is proposed to remain closed until September 15. TWRA would be responsible for long-term operation and maintenance of the facility, including any liability associated with dam failure, vegetation control, and structural refurbishment needs. TWRA would also be responsible for dam removal and site restoration in the future in the event it was ever needed.

**Alternatives**

The two alternatives assessed in this EA are the No Action Alternative and the Proposed Impoundment Construction Alternative. Under the No Action Alternative, the TWRA proposal would not receive the necessary approval from TVA. No access road, boat ramp, or Shields Creek impoundment would be constructed. Under the Proposed Impoundment Construction Alternative, TWRA would be issued a Section 26a permit and a land use license from TVA over

62 acres of Tract XCK-337R, Cherokee Reservoir. In issuing these authorizations, TVA would approve TWRA's proposed construction, operation, and maintenance of an access road, gravel boat ramp, and Shields Creek impoundment.

### **Impact Assessment**

Under the No Action Alternative, no development would be allowed on TVA Tract XCK-337R and within the 100-year floodplain. The resultant recreational or socioeconomic benefits to the Cherokee Reservoir area and region would be foregone. The anticipated insignificant environmental impacts resulting from construction, operation, and maintenance of the project, as proposed, would not occur. Therefore, there would neither be benefits from the project nor the insignificant affects.

Under the Proposed Impoundment Construction Alternative, the impoundment would also likely result in long-term benefits to the crappie fishery and resultant recreational and socioeconomic value of Cherokee Reservoir to the area and region. No impacts on endangered species are expected. There would also be positive affects on wetlands and the reservoir's aquatic environment. Provided commitments are implemented, including construction best management practices (BMPs), insignificant impacts on aquatic ecology and water quality are anticipated. Commitments (see Mitigation) included in this environmental assessment as well as permits and other authorizations would avoid archaeological resources known to occur on the site and minimize secondary affects such as those that could occur on recreational boating, floodplain values, and the possible need to control of fish-eating bird predation.

### **Mitigation**

The following is a list of mitigation measures that are necessary to avoid significant impacts if the preferred alternative is implemented.

1. If the need arises, TWRA will manage and control fish-eating birds by use of non-lethal methods.
2. Any future facilities or equipment subject to flood damage will be located above or flood-proofed to the 500-year flood elevation 1075.0.
3. Any future development proposed within the limits of the 100-year floodplain, elevation 1075.0, must receive additional approval from TVA.
4. All future development will be consistent with the requirements of TVA's Flood Control Storage Loss Guideline.
5. TVA reserves the right to flood this tract as needed during flood control operations.
6. TWRA will be required to post warning signs that will be visible to boaters. TVA will work with TWRA on appropriate signage. Once the crappie impoundment is established, TWRA will close the area upstream of the dam to the public for fishing. Violators will be prosecuted as specified by TWRA.

7. No ground disturbance will occur at either of the archaeological sites. A map will be prepared showing these sites and boundaries will be verified and marked (i.e., flagged or staked) on the ground. A pre-construction site meeting will then be scheduled among TWRA, Cherokee Lake Users Association, and TVA staff to examine areas to be avoided. No construction, equipment, vehicles, or material storage, construction lay-down or other such ground disturbing activities will occur on these sites. TWRA will erect temporary fences around these sites for the duration of construction.

TVA will regularly monitor work activities throughout the construction project to ensure these commitments are being implemented.

### **Public and Intergovernmental Review**

TVA published a public notice on this proposed land license on May 9, 2001 and a TVA/US Army Corps of Engineers (USACE) joint Public Notice No. 01-43 was published on June 6, 2001 notifying the public of TWRA's request for the original project, i.e., 200-foot long and 18-foot high dam and a slightly different location on Shields Creek. Comment periods on the TVA and joint public notices ended on June 30 and July 5, 2001, respectively. The TVA public notice of proposed land action appeared in the *Morristown Citizens Tribune* and was available on a TVA external web site. TVA also placed a sign on the property along Highway 11W to inform passersby of the proposed land action.

In response to the joint public notice on the original proposal, USACE received one letter each from a federal and state agency and two e-mails from Tennessee Department of Transportation (TDOT), another state agency. TVA received one written comment from Bean Station Utility District (BSUD) on the proposal and received one telephone call from a private citizen who was complimentary of the proposal. BSUD informed TVA of its waterline which could likely be affected by the project at the originally proposed location. As a result of BSUD's comment, the applicant decided to shift the Shields Creek dam location slightly north (about 175 feet upstream of U.S. Highway 11W) to avoid the water main.

In addition, TVA circulated a Shields Creek Crappie Impoundment draft EA to 17 federal and state agencies, including USACE and TWRA, and local entities on December 4, 2002. Responses to the circulated draft EA (second notice) were received from TWRA (cooperator), USACE (cooperator), Tennessee Department of Environment and Conservation (TDEC), East Tennessee Development District (ETDD), and Tennessee Historical Commission (THC). The final EA was revised in response to these comments.

In letters dated August 4, 2000 and July 5, 2001, U.S. Fish and Wildlife Service (FWS) indicated that based on endangered species collection records available to it, no federally listed or proposed endangered or threatened species occur within the impact area of the project. Therefore, FWS has no objection to the issuance of the permit to conduct the work described in the subject notice.

In a letter dated December 11, 2002, TWRA indicated that this crappie impoundment should go a long way in improving sport fishing on Cherokee Reservoir. It further indicated that TWRA supports the findings of the draft EA and feels confident it will be able to abide by the directives stipulated by the various permitting agencies.

By letter dated December 9, 2002, THC concurred with TVA's finding that, with commitments included in the EA, no historic properties would be affected by the project. THC further concurred that TVA should regularly monitor the construction so as to be assured that the archaeological sites do not incur any damage (see Mitigation).

By e-mails dated July 20 and August 14, 2001, TDOT asked that TWRA submit plans for the project to ensure conflicts in future road, bridge, and right-of-way issues could be avoided. TDOT was forwarded the project plans on December 4, 2002.

Because TDEC, Division of Water Pollution Control, inadvertently reviewed and referenced the original project in its initial October 21, 2002 approval of the project, it agreed to review to revised plans in the draft EA. By letter to TWRA, dated January 3, 2003, TDEC conditionally approved and reissued its water quality certification for the project. TWRA will adhere to special conditions included in this certification in implementing the project.

ETDD found no conflicts with regional plans or programs of the District or other agencies in the region.

### **Conclusion and Findings**

After review of the EA, TVA finds that the impacts of implementing the Proposed Impoundment Construction Alternative and issuance of a Section 26a permit and a land use license to TWRA over 62 acres of Tract XCK-337R, Cherokee Reservoir, would be insignificant. In issuing these authorizations, TVA would approve TWRA's proposed construction, operation, and maintenance of a Shields Creek impoundment, an access road, and gravel boat ramp. The impoundment would likely result in long-term benefits to the crappie fishery and resultant recreational and socioeconomic value of Cherokee Reservoir to the area and region. There would also be positive affects on wetlands and the reservoir's aquatic environment.

In total, approval of these actions for the Shields Creek Crappie Impoundment would not have a significant impact on the quality of the environment provided the above commitments are implemented. Accordingly, an environmental impact statement is not required.

*Jon M. Loney*

Jon M. Loney, Manager  
NEPA Administration  
Environmental Policy and Planning  
Tennessee Valley Authority

*January 15, 2003*

Date Signed