

## CHAPTER 2

### 2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

#### 2.1 The Proposed Impoundment Construction Alternative

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. Additionally, TWRA would be issued a Section 10 and Section 404 permit from USACE authorizing the construction of the dam and gravel boat ramp. The earth-filled dam would hold water in Shields Creek at a constant level for about 6 to 8 months during the spring and summer and would impound 45 surface-acres of water at elevation 1067-foot mean sea level (msl). The project would involve use of 8574 feet (at elevation 1075 msl) of TVA shoreline. Because the purpose of this project is to provide optimum crappie spawning conditions and ultimately improve the population of this species in the main reservoir, it is expected to have a beneficial impact on recreational fishing.

This alternative consists of the applicant's final proposal with the inclusion of typical TVA and USACE permit conditions (see Section 5.0) to minimize environmental impacts to the maximum extent practicable.

#### 2.2 The No Action Alternative

Under the No Action Alternative, the TWRA proposal would not receive the necessary approval from TVA or USACE. No access road, boat ramp, or Shields Creek impoundment would be constructed. 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.

#### 2.3 Mitigation for the Proposed Action

Measures, including construction best management practices (BMP), would be designed and implemented to protect water quality and reduce short-term aquatic effects. Commitments (see Section 5) included in this EA, as well as permits and other authorizations that would be issued, are designed to avoid archaeological resources known to occur on the site and to 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.

#### 2.4 Comparison of Alternatives

Under the No Action Alternative, no development would be allowed on TVA Tract XCK-337R and within the 100-year floodplain. Therefore, there would neither be benefits from the project nor the insignificant affects.

Under the Proposed Impoundment Construction Alternative, 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. No impacts on

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endangered species are expected. There would also be positive affects on wetlands and the reservoir's aquatic environment. Provided commitments are implemented, including BMPs, insignificant impacts on aquatic ecology, water quality and floodplains are anticipated. Two archaeological sites in the vicinity of the project would be avoided and, therefore, unaffected by the project construction, operation, and maintenance. Commitments associated with this alternative would insure that potential impacts are avoided or reduced to levels of insignificance.