



US Army Corps
of Engineers
Kansas City District

Wilson Lake Reallocation Feasibility Study U.S. Army Corps of Engineers Kansas City District, Wilson Lake, Kansas

Background

The Kansas Water Office (KWO) identifies the state's water quality and quantity needs and develops the Kansas Water Plan. The Kansas Water Plan takes a watershed oriented approach. Within the Plan are 12 individual basin (watershed) plans. The Smoky Hill/Saline Basin Plan pertains to this study. Regional public water supply has been identified in the Smoky Hill/Saline Basin Plan as a very important component of the plan. Preliminary estimates indicate the increase a water supply need of 5.1 million gallons per day (MGD). The increase in demand is due to anticipated population and industrial growth. Wilson Lake has been identified as a possible regional water supply source since 2004. Three public water suppliers have expressed interest to KWO in Wilson Lake as a source of water supply, if it is made available. These are Hays, Russell and Post Rock Rural Water District. Studies to assess the viability and costs of reallocation of storage to water supply at Wilson Lake are necessary to determine if water storage for municipal and industrial (M&I) purposes is available for purchase by the State. The water management complexities in the basin are recreation, economics, industrial use, and environmental/ecological issues.

USACE Policy

Authority for the Corps to reallocate existing storage space to M&I water supply is contained in Public Law 85-500, Title III, Water Supply Act of 1958, as amended. The Secretary of the Army is authorized to cooperate with local interests in providing storage space for M&I water supply in U.S. Army Corps of Engineers projects (reservoirs) as long as the local interests agree to pay the costs associated with the storage space. The Corps has the discretionary authority to reallocate storage capacity in Wilson Lake provided the reallocation has no severe effect on other authorized purposes and will not involve major structural or operational changes.

What has the USACE done up to this point?

Under a USACE planning assistance program, a study was conducted to evaluate the preliminary feasibility, and identify environmental effects of the potential use of Wilson as a source of public water supply. As part of this study, the USACE has developed a Reservoir Operations Model using the historical period of record in conjunction with projecting the effects of changing land use (i.e. upstream extractions) and depleted inflows. The model (simulation) showed that reallocation of water (using 5.1 MGD) from the multi-purpose pool and/or a pool raise was hydrologically feasible. A Wilson Lake Water Supply Open House was held last February (2009) to obtain public comment and feedback on potentially studying reallocation at Wilson. Over 130 people attended and more than 50 comments were received. The Wilson Lake environmental study has been completed and is currently under review.

What is the USACE doing now?

Currently, the Corps is conducting a feasibility level study to determine whether Wilson Lake storage reallocation is the least cost, environmentally sustainable, technically feasible, solution to future water supply needs.

Key Study Components

The key components of the **Wilson Lake Reallocation Feasibility Study** include:

- public input;
- an updated water supply needs analysis;
- lake elevation modeling using different pool raise scenarios;
- developing a comprehensive list of alternatives;
- detailed evaluation of alternative sources of water supply;
- detailed evaluation of potential impacts (technical, environmental, economic); and
- evaluating lake management options.

Objectives

The main objectives of the feasibility study are to screen identified alternatives using a rigorous set of assessments. Technical, economic, and environmental analysis will identify potentially feasible alternatives. Potentially feasible alternatives will be evaluated and compared. Eventually, a recommended alternative may be identified. The study will culminate with a final report that documents the recommendation and associated justification. The final report containing a recommendation will be sent to US Army Corps of Engineers Headquarters in Washington D.C. for review and approval. The final report and recommendation must contain public and agency comment resolutions, technical review, non-federal partner approval, and non-federal partner financial commitment.

Why are YOUR comments important?

The study process is designed to promote the early involvement of agencies and the public in the identification of potential alternatives. The public input will help identify potential issues, and identify other potential requirements associated in analyzing the effects of a proposed action. Public input will be utilized in helping to develop alternatives and study objectives.

Comments may be sent to: christina.ostrander@usace.army.mil