



US Army Corps  
of Engineers  
Tulsa District

# WICHITA BASIN REEVALUATION WICHITA RIVER, TEXAS

## Project Overview

### History of the Chloride Control Project

Studies to control natural chloride emissions in the Arkansas and Red River basins began in 1957 when Congress directed the U.S. Public Health Service to locate the major sources of natural chloride emissions in those basins. Ten major sources were located in the Red River Basin on the upper Red River and the Wichita River. Areas V, VI, IX, XI, XIII, XIV, and XV are on the Red River. Areas VII, VIII, and X are on the Wichita River.

In 1959, Congress directed the Corps of Engineers (COE) to determine if the naturally occurring salt sources could be controlled and, if so, to determine the costs and benefits of alternative control plans. Experimental work at Estelline Springs (Area V in the upper Red River Basin) was authorized in 1962. An effective control plan at Area V was completed in 1964.

The COE completed a survey report in 1966 that recommended chloride control plans at the salt sources on the Wichita River – Areas VII, VIII, and X (Part I). Part I was authorized by Congress in 1966 and preconstruction planning started in 1968. Detailed studies of the three areas were completed in 1972. In 1974, the Water Resources Development Act (Public Law 93-251) provided special authorization to construct control measures at Area VIII on the Wichita River. Construction began in 1977 and Area VIII became operational in 1987.

The remaining areas in the Red River Basin (Part II) were the subject of a second survey report completed in 1966 that recommended chloride control plans for five of the six salt sources. Area XI was not recommended for further studies. Part II, including the experimental work at Area XIII on Jonah Creek, was authorized for construction in 1970.

In 1976, General Design Memorandum No. 25 was submitted by the COE recommending control measures for salt areas on the Pease and Red Rivers. Area XV and the North Pease River portion of Area IX were not considered economically feasible at that time and were recommended for possible development in the future.

The Water Resources Development Act of 1986 (Public Law 99-662) amended earlier authorizations to separate the overall project into the Arkansas River Basin and the Red River Basin. The Red River Basin features were authorized for construction, subject to a favorable review panel on the performance of Area VIII in the Wichita River Basin. Area VIII had been under construction since 1977 and became operational in 1987.



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In accordance with the National Environmental Policy Act, a Final Environmental Statement for the project was completed in July 1976, distributed for agency and public review, and filed with the Environmental Protection Agency on May 18, 1977.

In 1978, the COE requested an economic reanalysis of the entire Red River Chloride Control plan to include a significantly more detailed benefit analysis. On September 12, 1991, the Office of the Assistant Secretary of the Army (Civil Works) directed the COE to prepare a current economic analysis of the authorized plan of the Red River Chloride Project (RRCCP) prior to construction of any other areas outside Area X. Accordingly, the COE completed the Limited Reevaluation Report in June 1993. The report focused on an economic evaluation that defined a sequence of construction of the various project elements.

By memorandum dated September 20, 1996, the Assistant Secretary of the Army (Civil Works) directed the COE to prepare a Supplemental Assessment Report to identify and explore in a preliminary fashion other options, such as the feasibility of desalinization or mixing and blending of water supplies. Partnership options for support of the project were also considered. The report would discuss implementation issues; preliminary costs; and whether the options, alone or in combination, might provide a workable, more environmentally sensitive solution to long-term water needs identified in the region. The Supplemental Assessment Report was completed in February 1997.

On September 9, 1997, the Office of the Assistant Secretary of the Army (Civil Works) directed the COE to delay construction on the RRCCP and prepare an informal economic analysis of completing the Wichita River Basin features of the authorized RRCCP. It was proposed that proceeding with completion of the Wichita River Basin construction in lieu of the total authorized project would address recent geographic shifts in water demand, avoid environmentally sensitive areas along the Red and Pease rivers, and avoid impacts to fish and wildlife species and habitat. Further, the evaluation would identify if opportunities to build upon previous RRCCP investments are justified economically. The analysis was based on current, existing information and was completed in October 1997. The findings indicated that there was a good possibility that completion of the Wichita River Basin features was economically feasible. A thorough reevaluation of the Wichita River Basin features was warranted.

On December 2, 1997, the Director of Civil Works, Major General Russell L. Fuhrman, approved by letter, with concurrence from the Assistant Secretary of the Army (Civil Works), that the Tulsa District COE could undertake the proposed reevaluation. The study was to be titled "Wichita River Basin Project Reevaluation".

Whereas the study completed in October 1997 was a brief analysis of the economic feasibility of completing specific, authorized Wichita River Basin features of the RRCCP, the Wichita River Basin Project Reevaluation study would be more involved. The new



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study would include detailed formulation, economic, environmental and cost analyses of the alternatives identified for both with- and without-project conditions. The alternatives would include modifications to the authorized project for existing and unconstructed features.

### **Project Purpose and Scope**

The Wichita River Basin Project Reevaluation consists of features in and associated with chloride control in the Wichita River Basin, a tributary of the Red River located southeast of the Texas panhandle in Texas. The study area includes north central and northeastern Texas, including the Dallas-Fort Worth region and the region along the Red River as far downstream as Shreveport, Louisiana. The goal of the project is to reduce naturally occurring chloride and total dissolved solid concentrations in the Red River, including the Wichita River, to allow economical use of those waters for municipal, industrial, and agricultural purposes.

The purpose of the reevaluation is twofold: (1) to provide a basis to determine the most appropriate course of action for the unconstructed features of the authorized project, and (2) to reexamine the economic feasibility of chloride control alternatives and the environmental impacts of those alternatives.

### **Information, Comments and Questions:**

The Corps is actively seeking public involvement in the planning of the Wichita Basin Project. Inquiries and comments can be directed to:

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Information about the project can also be obtained from the Tulsa District World Wide Web Site-- **[www.swt.usace.army.mil](http://www.swt.usace.army.mil)**.