

CHAPTER 1 - INTRODUCTION

1.1 Study Scope and Area

The Scope of the program is flood damage reduction and ecosystem restoration projects in the lower Colorado River basin, Texas. Projects could be implemented by U. S. Army Corps of Engineers (USACE) through congressional authorization or the Continuing Authorities Program. Projects that are large in scope require specific Congressional authorization; however, in instances where problems are generally small in scope, USACE may act directly under its Continuing Authorities Program.

The study area addressed herein includes the lower Colorado River watershed from O.H. Ivie Reservoir downstream through the Highland Lakes to the mouth of the river at Matagorda Bay. The lower Colorado River basin encompasses about 18,300 square miles of contributing drainage area (Figure 1-1). The total length of the lower Colorado River studied for this project is 482 miles. The lower portion of the basin contains several major tributaries to the Colorado River, most notably the Llano River, Pedernales River, San Saba River, Pecan Bayou, Sandy Creek, and Onion Creek. The dam at O.H. Ivie Reservoir was chosen as the beginning of the study area since it represents the upstream limit of any project related impacts. The Programmatic Environmental Impact Statement (PEIS) is not intended to cover any projects upstream of O.H. Ivie Reservoir.

1.2 Study Authority

Feasibility studies for the lower Colorado River basin have been and are being conducted by USACE in response to direction by the Congress of the United States from which USACE derives Federal funding for the studies. The authority for the studies of the Colorado River, Texas and tributaries include but are not limited to:

Flood Control Act, approved June 22, 1936:

“Section 6. The Secretary of War is hereby authorized and directed to cause preliminary examinations and, surveys for flood control at the following named localities...Colorado River, Texas, above the county line between Coke and Runnels counties...lower Colorado River, Texas.”

Resolution by the Committee on Commerce, United States Senate, adopted August 4, 1936:

“Resolved by the Committee on Commerce of the United States Senate, that the Board of Engineers for Rivers and Harbors created under Section 3 of the River and Harbor Act, approved June 13, 1902, be and is hereby, requested to review the reports on Colorado River, Texas, submitted in House Document Number 361, Seventy-first Congress, second session, and previous reports, with a view to determining if improvement in the interest of commerce and flood control is advisable at the present time.”

Rivers and Harbors Act, approved August 26, 1937:

“Section 4. The Secretary of War is hereby authorized and directed to cause preliminary examinations and surveys to be made at the following named localities...Colorado River, and its tributaries, Texas, with a view to its improvement in the interest of navigation and flood control.”

Rivers and Harbors Act, approved March 2, 1945:

“Section 6. The Secretary of War is hereby authorized and directed to cause preliminary examinations and surveys to be made at the following named localities...Colorado River, Texas.”

Onion Creek Authorization

Specific authority for the study of Onion Creek is contained in a resolution by the Committee on Transportation and Infrastructure, United States House of Representatives, adopted May 6, 1998, and is quoted below:

“Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, that the Secretary of the Army is requested to review the report of the Chief of Engineers on the Colorado River, Texas, published as House Document 361, 71st Congress, 2nd Session, and other pertinent reports, with a view to determine if improvements to the Onion Creek watershed in the interest of flood damage reduction, environmental restoration and protection, and other related purposes are advisable at the present time.”

Continuing Authorities Program

In addition to specific Congressional authorization, projects can be implemented through the Continuing Authorities Program, which allows USACE to respond more quickly than is pos-

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Figure 1-1 Lower Colorado River Basin Study Area

sible through the specific Congressional authorization process. Congress has delegated to USACE the general authority to study, approve and construct certain water resources development projects. The program is comprised of different types of projects, each with its own project authority and strict limit on the Federal contribution. As favorable studies progress toward more detailed design and construction, certain project costs must be shared with the local sponsor including any and all costs in excess of Federal project limits. For this reason, the local sponsor must be a non-Federal entity with the power to raise revenue sufficient to satisfy requirements of local cooperation.

Section 14 of the Flood Control Act of 1946 provides for the development and construction of emergency streambank and shoreline protection projects to protect endangered highways, highway bridge approaches, public works facilities, churches, schools, hospitals, and other non-profit public facilities.

Section 205 of the Flood Control Act of 1948 provides for local protection from flooding by the construction or improvement of structures such as levees, channels, and dams. Non-structural alternatives may include measures such as installation of flood warning systems, raising and/or flood proofing of structures, and relocation of flood-prone facilities.

Section 206 of the Water Resources Development Act of 1996 provides for the restoration and protection of aquatic ecosystems if the project will improve the environment and is in the public interest.

Section 208 of the Flood Control Act of 1954 provides for local protection from flooding by channel clearing and excavation, with limited embankment construction.

Section 1135 of the Water Resources Development Act of 1986 provides for ecosystem restoration through modification to structures or operation of USACE structures or implementation of restoration features when the construction of a USACE project has contributed to degradation of the quality of the environment.

1.3 Purpose and Need

Previous studies conducted along the lower Colorado River by USACE and others (USACE 1961, 1971, 1975, 1979, 1981a, 1981b, 1985a, 1985b, 1986a, 1986b, 1987a, 1987b, 1987c, 1987d, 1988, 1989a, 1989b, 1989c, 1990, 1991a, 1991b, 1992, 1995, 2003a; Loomis & Moore 1997) have concluded that significant flood risks exist along the main stem of the river as well as some of its tributaries in the Austin area. In response to requests for assistance from the City of Austin (COA), the State of Texas and the Lower Colorado River Authority (LCRA), the Congress of the United

States authorized funding to USACE to conduct the Lower Colorado River Basin Study (LCRBS). The LCRA acts as the non-Federal cost sharing sponsor with USACE, on behalf of other local entities that to date include the cities of Austin, Sunset Valley and Wharton, Travis County and the Texas Water Development Board (TWDB). These latter entities serve to sponsor interim feasibility studies that are focusing on their respective problem areas to reduce flood damages, restore and protect environmentally sensitive areas, improve water conservation, and provide recreational opportunities.

From USACE's perspective, key Federal concerns for the nation's water and related land resources lie in controlling and minimizing urban flood damages, enhancing navigation, and protecting and restoring the environment. Prevention of agricultural flood damages, intensification of agricultural crop yields, development of hydropower, water supply, and recreation are additional purposes, which could be incorporated into a multipurpose project that has flood damage reduction, navigation, and/or ecosystem restoration as the primary purpose. Therefore, initial efforts focused on identifying potential flood prone areas within the lower Colorado River basin to determine if key Federal interest existed that warranted further studies.

During the initiation of the LCRBS, a group of local communities and interests came together to form the Texas Colorado River Floodplain Coalition (TCRFC). This group of over 50 communities and counties within the lower Colorado River basin was formed to encourage comprehensive consistent management of the floodplain along the Colorado River and its tributaries; provide a forum for data exchange and facilitate a structured approach to managing the complex issues related to floodplain management. The TCRFC has provided invaluable input to the study and support for budgetary and TWDB grant application requests by the study champion communities.

Phase I investigations of the LCRBS (USACE 2003b) focused on identifying existing conditions within the basin regarding flood damages to residential, commercial, industrial and public structures, environmental conditions, opportunities for restoration of natural ecosystems, and recreational needs. Based on the results of previous studies, the high cost of conducting additional studies and the identification of cost sharing sponsors, the Phase I study area was limited to the main stem of the river. Tributary areas will be addressed during their respective interim feasibility studies or as other potential sponsors emerge.

The Onion Creek Interim Feasibility Study is currently underway for Onion Creek in the cities of Austin and Sunset Valley and Travis County. The Wharton Interim Feasibility Study is currently underway in Wharton, Texas, and the Highland Lakes Interim Feasibility Study is also

currently underway. These interim studies are focusing on known problem areas that were identified during past studies and confirmed during a reconnaissance study. Two additional interim feasibility studies are known to be forthcoming: one each for the Walnut Creek and Shoal Creek watersheds in the COA. These interim feasibility studies constitute Phase II of the LCRBS.

Concurrent with the Phase II interim feasibility studies, and prior to the completion of any one of them, Phase III studies are being conducted to establish existing baseline conditions and adequately assess cumulative impacts that would result from implementing the interim feasibility studies. The PEIS will be the final product of the Phase III studies. The PEIS will serve as a springboard for tiering the future environmental analysis of any recommended implementation plan that is a product of an interim feasibility study or future USACE recommended multipurpose flood damage reduction or ecosystem restoration study within the lower Colorado River basin.

1.4 National Environmental Policy Act Requirements

This document has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, and guidance contained in pertinent implementing regulations. NEPA is the primary legislation that sets forth regulations for the consideration of environmental consequences in the decision-making process of proposed major Federal Actions. Title II of this act created the Council on Environmental Quality (CEQ) and in 1978 the CEQ issued regulations (40 CFR Parts 1500-1508) which established statutes for implementing the provisions of NEPA. This PEIS serves to fulfill the requirements of NEPA and pertinent USACE regulatory guidance for implementing the procedural provisions of NEPA found in Engineer Regulation (ER) 200-2-2 dated 3 February 1988.

NEPA regulations direct agencies to use PEISs and tear from statements of broad scope to those of narrower scope to eliminate repetitive discussions of the same issues. In addition, the scope for an EIS directs agencies to group together actions of several types:

- Connected actions, i.e. actions that are closely related and automatically trigger other actions that may require an Environmental Assessment (EA) or Environmental Impact Statement (EIS).
- Cumulative actions, i.e. actions that may have cumulatively significant impacts when evaluated in conjunction with other proposed actions.

- Similar actions, i.e. actions that, in conjunction with other proposed or reasonably foreseeable agency actions, have common elements that provide a basis for evaluating their consequences together. Similar actions may be grouped based on relevant characteristics such as timing, geographical location, impacts, alternatives, methods of implementation, media or subject matter.

As the lead agency responsible for implementing flood damage reduction measures and protecting and restoring the natural environment for the nation's water and related land resources, and because the proposed action consists of a large-scale program of multiple individual projects within the basin, USACE has determined that a PEIS is the appropriate document for assessing the anticipated impacts associated with these activities. On July 31, 2001, USACE published a Notice of Intent (NOI) to prepare a Draft PEIS (DPEIS) for potential multi-objective projects in the lower Colorado River basin and associated tributaries for flood damage reduction, ecosystem restoration, and recreation in and around Austin, Texas. A copy of the NOI can be found in Appendix 1.

The actions to be evaluated in this PEIS are the direct, indirect, and cumulative environmental impacts of USACE activities within the lower Colorado River basin, combined with the reasonably foreseeable activities of others that would affect the lower Colorado River basin. This programmatic evaluation also helps to assure that a holistic approach is taken to addressing the water related problems and opportunities within the watershed.

Generally, a PEIS contains significantly less detail than an EA or EIS for a specific project, and usually does not involve complex quantitative analyses. Because a PEIS is broad in scope, additional environmental impact analyses are often required for certain individual activities in cases where sufficient detail was not available to adequately assess the environmental impacts as part of the programmatic process. Subsequent EAs or EISs can be tiered to the PEIS and need only reference the PEIS and summarize relevant issues, allowing the EA or EIS to concentrate on the impacts of the specific action that it addresses.

Consistent with CEQ regulations, the scope of the analysis presented in the PEIS defines the potential range of environmental impacts that may result from implementation of the proposed actions. This PEIS addresses alternatives evaluated to address flood damage reduction and ecosystem restoration in the study area, and discloses the direct, indirect, and cumulative impacts of these potential projects, along with those past, present, and reasonably foreseeable future projects, to the

extent that they could be determined.

Reasonably foreseeable future projects were identified through agency scoping and the public involvement process. Three agency scoping meetings were conducted with various state and Federal resource agencies. Over 800 letters were mailed to potentially affected individuals and local and county officials in an effort to identify proposed future projects and concerns. Three public scoping meetings were held in September 2003 to solicit public input and identify upcoming projects proposed within the study area.

1.5 Public Concerns

In order to facilitate public involvement, elicit public comment, identify reasonably foreseeable future projects, and coordinate as required by the NEPA process, public scoping meetings were held on September 16, 2003 near Buchanan Dam, Texas; September 17, 2003 in Bastrop, Texas; and September 18, 2003 in Bay City, Texas. During the public scoping process, a number of comments were received. These issues generally related to preservation of environmental quality, along with protection of life and property from flood damages and cleanup of damaged property from previous flooding episodes. Additionally, concerns were expressed over the effects of the high rate of development and increasing impervious cover in the watershed. Finally, concerns were expressed over the proposed projects increasing water surface elevations in Matagorda County. A more detailed discussion of the public involvement process is presented in Chapter 8.

1.6 Study Objectives

The purpose of this PEIS is to develop a document from which other project-specific environmental documents within the basin can be tiered. The objectives of the programmatic document are to 1) address the programmatic effects of potential projects proposed by USACE, 2) provide an overview of the existing environmental conditions within the basin, 3) identify reasonably foreseeable projects of others, and 4) address cumulative impacts of the proposed action in combination with the past, present, and reasonably foreseeable projects of others. Additionally, a GIS-based data management system is being developed that will allow USACE and LCRA to access all relevant data and reference documentation in an organized, digitized manner after completion of the PEIS.

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