

CHAPTER 7 - CONCLUSIONS AND RECOMMENDATIONS

This PEIS was prepared to address the cumulative effects of potential USACE projects being formulated under the LCRBS in relation to reasonably foreseeable projects of other entities within the study area. Because this document has been prepared primarily to address the impact of the USACE program, it focuses on water and related land resources and potential projects of others that would affect those resources. The primary study area for this document is the lower Colorado River basin.

Existing environmental and socioeconomic resources of the study area are described in the PEIS. Likewise, past actions of USACE and other entities within the study area are identified. Past actions have included the construction of 18 reservoirs in the study area, 12 USACE projects, operations of the Highland Lakes as well as irrigation districts within the basin by LCRA, numerous projects by TxDOT and numerous flood control and transportation projects by the COA. Regulatory documents indicate that in excess of 1,200 regulatory actions have occurred in the study area just during the period from 1999 to 2004. Additionally, numerous undocumented projects have been implemented within the study area in the last 20 to 30 years. Collectively, these projects have had a direct impact on altering the region's natural and cultural resources and have contributed to secondary impacts on these resources as population growth and land use has intensified within the study area.

This document describes all USACE recommended future flood damage reduction and ecosystem restoration measures within the lower Colorado River basin including the interim feasibility studies described in the LCRBS and two Section 206 projects. The interim feasibility studies are the Highland Lakes, Shoal Creek, Walnut Creek, Onion Creek, and Wharton Interim Feasibility Studies. Section 206 studies are the Mad Island and Austin Area Lakes Section 206. In addition any of the structural, non-structural, and ecosystem restoration measures may be combined in different scales to serve as a future project or multiple projects. Currently, five projects have local sponsor support. These are the Highland Lakes, Shoal Creek, Walnut Creek, Onion Creek, and Wharton Interim Feasibility Studies. General USACE flood damage reduction projects could include combinations of structural and non-structural measures as well as ecosystem restoration or recreational features. Structural measures may include one or a combination of levees, floodwalls, relief channels, diversion channels, tunnels, dry detention basins, multipurpose reservoirs, detention basins and channel improvements. Non-structural measures could consist of evacuation of the 25-year

floodplain (buyouts), flood warning systems, changes in gate operations at existing reservoirs, floodproofing, and/or zoning.

Impacts of each proposed action and the cumulative impacts of the proposed action in combination with other projects proposed by USACE, and projects of others, are analyzed to the extent that details of the various alternatives are available. Pertinent resources for which each project is evaluated include land use, hydraulics and hydrology, floodplains, socioeconomics, vegetational areas and soils, wildlife resources, aquatic resources, wetlands, marine resources including essential fish habitat, air quality, water and sediment quality, threatened and endangered species, cultural resources, recreation, and open space, HTRW, and environmental justice. Impacts vary by measure and affected resource. In addition to addressing the relative impacts of various structural and non-structural flood damage reduction measures and ecosystem restoration alternatives, the PEIS attempts to also address the cumulative effects that implementation of the program in any combination with reasonably foreseeable projects by others, might have on resources of the overall study area. At the level of detail available for these evaluations, some of the impacts of structural flood damage reduction measures were found to potentially cause significant impacts to study area resources. However, future projects will require additional NEPA evaluation and those project-specific documents will be tiered from this PEIS. Each individual project evaluation will address both the project-specific impacts and the cumulative impacts, using the cumulative impact analysis guidance provided in this PEIS.