

## FEATURES OF THE SELECTED PLAN

- ◆ An 8-mile extension of the authorized navigation channel from mile marker 3 near the lower end of Cedar Bayou to the upper end of the navigation channel at State Highway 146 will be constructed.
- ◆ The channel will be 10 feet deep with a bottom width of 100 feet and side slopes of 3 on 1.
- ◆ A 100-ft wide cutoff channel to eliminate a curve referred to as "Devils Elbow" will be constructed.
- ◆ A 200-ft wide passing area has been included for the one-way channel design.

## ECONOMICS

### Cost / Benefit Analysis

Average Annual Costs	\$1,212,815
Average Annual Benefits	\$2,725,473
Net Benefits	\$1,512,658

**BCR** **2.25**

## ENVIRONMENTAL BENEFITS AND CONSERVATION FEATURES

- ◆ The 10'x100' channel design was selected to minimize the environmental impact on the shore line and dredge placement sites.
- ◆ 157.5 Acres will be set aside as conservation easements for preservation in perpetuity for project mitigation.
- ◆ Ijams Lake, formed by subsidence, will be restored to its original marsh-like conditions, providing additional and improved wildlife habitat for project mitigation.
- ◆ Devil's Elbow will become a wildlife habitat conservation island.

# CEDAR BAYOU, TX

## NAVIGATION CHANNEL

### FEASIBILITY REPORT &

### ENVIRONMENTAL IMPACT STATEMENT



## **Issues and Additional Information**

Cedar Bayou is a natural stream that becomes navigable to commercial barge traffic at State Highway (SH) 146 in the City of Baytown. From SH 146 (Mile 11), the navigation channel follows Cedar Bayou along the east edge of the urbanized portion of Baytown to its confluence with Galveston Bay, then turns westward and traverses Upper Galveston Bay and Tabbs Bay to the Houston Ship Channel (HSC). The CBNC is used to transport commodities to and from several industries located along Cedar Bayou. Currently, the portion of the CBNC from the HSC to Mile 3 of Cedar Bayou is maintained by the U.S. Army Corps of Engineers (USACE) to a depth of 10 feet and a bottom width of 100 feet. The portion of the navigation channel above Mile 3 has not been improved and is not maintained. Navigation in the upper portion of the channel is constrained by relatively narrow and shallow channel conditions as well as extreme curvature of bends, which restrict maneuverability along the channel. The CBNC above Mile 3 currently ranges from 8 to 10 feet deep and 40 to 170 feet wide. Whether or not this project is undertaken, the traffic along the channel is expected to increase over time as development along the channel increases. If the channel is not improved, these problems are expected to be amplified by an unreliable channel, and the increased barge traffic is projected to create congestion and costly delays.

Several alternatives for both the improvement of the CBNC and the management of dredged material were evaluated from the Houston Ship Channel to SH 146. Based on the environmental impacts, engineering feasibility, and economic considerations, the recommended plan would dredge the CBNC to 10 feet deep and 100 feet wide (bottom width) from Mile 3 to SH 146; provide a 200-foot wide and 1,300-foot long passing zone located downstream of SH 99 at Mile 6; dredge a cutoff channel to bypass the existing Devil's Elbow section of the CBNC; ease two bends that would require dredging outside the existing banks of Cedar Bayou; and provide for the management of dredged material over the 50-year life of the project.

With any project of this size, there are certain impacts which can not be eliminated from the scope of the project. The Draft Environmental Impact Statement (DEIS) addresses the direct, indirect, and cumulative impacts of the recommended plan on human and environmental issues, including the following: water and sediment quality; habitat types; finfish and shellfish resources; wildlife resources; cultural resources; air quality; noise; hazardous, toxic, and radioactive wastes; socioeconomic issues; flooding; bank erosion; and prime farmlands.

In order to compensate for environmental impacts, the proposed project would provide for mitigation of impacts to estuarine marsh and upland habitats, as well as provide for the beneficial use of dredged material. The mitigation and beneficial use plans would result in the creation of 80.1 acres of estuarine marsh within the Ijams Lake Placement Area from the beneficial use of dredged material. Impacts to upland habitats would be compensated for by the preservation of 157.5 acres of habitats within four mitigation areas. Habitats in these areas include native hardwoods, tallow-dominated hardwoods, scrub/shrub, improved pasture, and high salt marsh. The mitigation plans have been coordinated with and generally accepted by the appropriate resource agencies.