

Galveston Bay Plan

Executive Summary

Galveston Bay ranks high among the nation's great bay systems, providing huge economic benefits to the region and state. Remarkably, the bay's natural resources are self-renewing as long as the bay remains healthy and productive. However, Galveston Bay, like many other U.S. bays, now faces significant problems related to habitat loss and species declines, conflicting human uses, and pollution. Some management actions (for example, regulation of point sources of pollution) are already working to improve the bay. Other serious problems still need to be addressed if disasters noted in other U.S. bays are to be prevented. The bay's most serious problems, such as habitat losses and non-point source pollution, occur at the ecosystem level, and will require interdisciplinary solutions involving both natural resource agencies and bay stakeholders.

The Galveston Bay Plan is a Comprehensive Conservation and Management Plan produced by the Galveston Bay National Estuary Program under Section 320 of the Water Quality Act. *The Plan* was drafted by a partnership of state and federal agencies, local governments, stakeholders, interest groups, and the public. Over a five-year period, bay problems were agreed upon, numerous scientific studies conducted, and 82 management initiatives were established to address 17 specific problems.

WHAT PROBLEMS DOES *THE PLAN* ADDRESS?

Habitat Destruction and its Effect on Fish and Wildlife Populations

Destruction of coastal wetlands and underwater seagrass meadows has been substantial, with more than 30,000 wetland acres lost during four decades. These are productive nursery areas for the bay's seafood species, which also serve valuable functions to stabilize shorelines, moderate flooding, and remove contaminants. *The Galveston Bay Plan* proposes nineteen specific actions for habitat and fish and wildlife protection. Initiatives include direct acquisition of wetlands, economic incentives (such as tax breaks) for conservation by private land-owners, and habitat creation (such as utilizing dredged sediment from navigation channels to create wetlands). Efforts aimed at fish and wildlife protection include reduction of commercial fishing by-catch (incidental catch of non-target species in shrimp trawls), catch and release programs for recreational fisheries, and controlling harmful exotic species that displace Galveston Bay's native fish and wildlife.

Competing Human Uses of the Bay: A Balance Between Needs and Available Resources

A variety of bay problems result from the way various users of the bay compete for its scarce resources. For example, diversions of freshwater for use by the expanding population alter

circulation and salinity patterns in the bay, in turn affecting the abundance and distribution of fisheries species and the condition of coastal habitats. *The Galveston Bay Plan* will help determine freshwater needs for Galveston Bay in order to sustain ecological productivity in balance with human uses. Promoting water conservation and more efficient water usage are some of the tools that can be used to achieve these goals.

Shoreline development also can produce unintended problems such as habitat alteration and destruction, pollution, and loss of fish and wildlife abundance and diversity. Nearly 650,000 people live within two miles of the bay's shoreline, with steady population growth intensifying the need for better planning. *The Galveston Bay Plan* proposes five shoreline management actions to ensure compatibility of shoreline uses. These actions include the establishment of guidelines for shoreline development for residential, commercial, and industrial uses. Local governments along the bay's shoreline will have the opportunity to voluntarily coordinate with other shoreline communities in maintaining the shoreline values that draw people to the area and contribute to local economies. Other actions include minimizing negative effects of structures and dredging on publicly-owned lands and ensuring improved access to publicly-owned shorelines.

Water and Sediment Quality Problems

Regulation of point sources of pollution has resulted in substantial improvement of water quality in the upper Houston Ship Channel—a success in the making. But despite ongoing improvements, there are still concerns over source areas—limited areas with pollution or contamination problems. Non-point sources of pollution are of particular concern, with over 50 percent of Galveston Bay permanently or conditionally closed to oyster harvest due to fecal coliform bacteria contamination. *The Galveston Bay Plan* proposes sixteen specific actions to reduce water quality problems caused by non-point runoff. These actions include the implementation of storm water management programs which focus on residential neighborhoods, septic tanks, new development and road construction, and industrial and agricultural activities. Other actions would require treatment of wastes from boating and marina activities.

Other actions address aging sewage collection systems which create bypasses to the bay's tributary waters, improved monitoring, regionalization of smaller, less effective wastewater treatment systems, and elimination of harm associated with brine discharges from petroleum extraction. Several actions are designed to refine methods used by the state to determine allowable pollutant loadings for Galveston Bay and to ensure that pollutant discharges are regulated more effectively. Together, these actions are designed to ensure balanced but protective public policy for the benefit of future generations of Texans.

WHO WILL IMPLEMENT THE GALVESTON BAY PLAN?

The Galveston Bay Plan recommends implementation under a Galveston Bay Program of the Texas Natural Resource Conservation Commission (TNRCC), with a Galveston Bay Office of the commission to be located in the bay area. Several factors weighed in this decision:

- Most state initiatives in *The Plan* fall under the jurisdiction of the TNRCC. Initiatives estimated to cost about \$7.5 million over the first five years fall to the TNRCC, compared to some \$4.5 million for TPWD, and \$1.5 million for GLO (other state agencies were even smaller amounts).
- The National Estuary Program is a Water Quality Act program, and all other programs under the Water Quality Act are under TNRCC jurisdiction at the state level.
- The recent consolidation of natural resource management under the TNRCC by the Texas Legislature has given this agency a broad role for management of aquatic and marine ecosystems—a good fit with the comprehensive approach of *The Plan*.

A Program Director and staff of up to 15 TNRCC employees will oversee the work of implementation. The composition of the staff will reflect *The Plan's* initiatives, with expertise in wetlands and estuarine habitats, coastal resource conservation, non-point source issues, water quality, public health, and public education. Work of the staff will also include support actions provided by a regional monitoring initiative, research, and continuing public participation in bay policy.

The Galveston Bay Council

Unlike past management initiatives, *The Galveston Bay Plan* is a comprehensive plan. Diverse concerns for habitats and wildlife, competing resource uses, water quality, and human health cannot be adequately addressed without the involvement of multiple resource agencies and bay stakeholders. To achieve success, problems of a regional nature, those affecting the entire ecosystem, will require regionally coordinated actions. Therefore, *The Plan* proposes creation of a *Galveston Bay Council* to advise the TNRCC on all aspects of implementation. The Galveston Bay Council will consist of representatives of federal, state, and local natural resource agencies, the research community, local governments, citizens, and other Galveston Bay stakeholders. The Galveston Bay Council will:

- Provide a forum for technical and stakeholder review and input during *Plan* implementation
- Maintain agency commitments to implement *The Galveston Bay Plan*
- Advise TNRCC staff during preparation of progress reports, evaluations and *Plan* updates
- Authorize and make appointments to advisory committees as necessary
- Assess the success of the action plans and initiate revisions
- Address legislative issues and make recommendations to the legislature
- Set annual priorities for the implementation of the action plans

The Galveston Bay Council is a continuation of the partnership successfully utilized by the Galveston Bay National Estuary Program for the creation of *The Galveston Bay Plan*.

Consistency Review: Broader Options Under the Texas Coastal Management Program

Consistency review is an important tool for the implementation of *The Plan*. Federal consistency review under Section 320 of the Water Quality Act allows the Galveston Bay

Program to review federal assistance programs and federal development projects for consistency with *The Plan*. Consistency ensures that federal agency actions which affect Galveston Bay do not work at cross-purposes to the goals of *The Plan*.

While federal consistency review under Section 320 of the Water Quality Act gives the Galveston Bay Program the ability to review certain federal actions for consistency and seek "accommodation" by a federal agency proposing an action that is inconsistent with *The Plan*, it does not give the Galveston Bay Program the authority to stop such action nor to seek mediation.

There are two other types of consistency review *The Plan* may be able to use in the future. Under the CMP, the Coastal Coordination Council has the authority to review state actions that may adversely affect coastal natural resource areas for their consistency with the CMP. Additionally, once the CMP is approved by the National Oceanic and Atmospheric Administration for participation in the federal Coastal Zone Management Program, the Coastal Coordination Council will have the authority to review federal actions (licenses and permits, development projects, direct activities, and federal assistance) to determine their consistency with the CMP.

If enforceable policies of *The Galveston Bay Plan* are adopted by the CCC for a Special Area Management Plan (SAMP), then the state and federal consistency reviews under the CMP may be used to ensure that state and federal actions are consistent with *The Plan*. The enforceable policies associated with *The Plan* will be developed in an open consensus process and will be based on existing federal and state regulations and laws. A focus group that includes industry and other stakeholder representatives will work with the Galveston Bay Council in identifying enforceable goals and policies for inclusion of *The Galveston Bay Plan* as a SAMP under the CMP.

HOW MUCH WILL THE GALVESTON BAY PLAN COST?

Costs

Total Galveston Bay Program costs are estimated at \$2.0 million per year. Approximately \$1.0 million per year will be needed for Galveston Bay Program operating expenses. These funds will be used by the TNRCC to undertake actions identified in *The Plan* as Galveston Bay Program functions. These costs include establishing and staffing the Galveston Bay Program Office and supporting the Galveston Bay Council. An additional \$1.0 million per year will be needed as match money for grants. This "seed money" can be used to leverage outside funding, such as federal grants, to fund specific initiatives. Costs to implement actions in *The Plan* are estimated at \$36.5 million over five years, with variable annual costs averaging \$7.3 million per year. These costs include those to be incurred by federal, state, and local entities as well as the Galveston Bay Program for implementing new actions recommended by *The Plan*.

Sources of Funds

Of the \$2.0 million required annually for the Galveston Bay Program (\$1.0 million for the Program itself and \$1.0 million seed money to leverage grants and other sources), funding is to consist of \$1.5 million state funds and \$0.5 million federal funds. State funds are to be sought from the Texas Legislature as an appropriation to the TNRCC for establishment of the Galveston Bay Program to implement *The Plan*. The available funding options for implementation of new actions recommended by *The Plan* include federal, state, and private grants and assistance programs. Although funding from many of the regulatory agencies involved in the Galveston Bay Program cannot be formally committed over long time periods, there has been an informal commitment from these agencies to support the Program on a long-term basis.

Within *The Plan* individual actions have been assigned a priority rank of "High," "Medium," or "Low" based on deliberation by the Management Conference. In assigning these ranks, the Management Conference considered both the costs and probable outcomes of the actions, and made judgments about which were most significant in relation to the bay's documents problems. The assigned rankings will help provide a guideline for expenditure of funds during implementation of *The Plan*.