

**Galveston Bay Freshwater Inflows Group
Work Plan
Revised 26 June 2000**

Task I: Establish the Galveston Bay Freshwater Inflows Group (GBFIG)

- A. Develop and approve mission statement
- B. Establish membership
- C. Develop and approve ground rules for participation
- D. Develop and approve 1997 Work Plan
- E. Obtain letter of recognition/support from executives of state natural resource agencies
- F. Coordinate with estuary management under Galveston Bay Estuary Program.
- G. Coordinate with Senate Bill 1 water planning for Regions H and C.
- H. Develop and approve Updated 2000 Work Plan

Task II: Obtain Necessary Background Information

- A. Establish common understanding of State Bay and Estuary Program methodologies and procedures for determining freshwater inflow requirements
 - 1. Provide written background information on State B&E program for review by GBFIG participants (e.g., statutory basis and objectives, data requirements, modeling methods, etc.)
 - 2. Brief GBFIG on B&E program methodologies and procedures, Nueces Estuary process, state planning criteria re: multi-stage operating rules for environmental flows
 - 3. Present results of state agency analysis of Galveston Bay inflow requirements re: quantity, quality, timing and location
- B. Brief GBFIG on TNRCC program to improve models of water availability
- C. Brief GBFIG on actions of Legislature relating to B&E freshwater inflows
- D. Brief GBFIG on current water rights in the San Jacinto River and the upper and lower Trinity River basins.
- E. Brief GBFIG on reservoir operations for Lake Conroe, Lake Houston, and Lake Livingston/
Wallisville Saltwater Barrier System.

Task III: Conduct Analyses Required to Determine under what Hydrologic Conditions would Freshwater Inflows to Galveston Bay be Inadequate

- A. Analyze Conditions and Determine Frequency of Inadequate Inflows (GBFIS-1)
 - * Naturalized monthly hydrologic conditions (i.e., flows without influence of human activity)
 - * Monthly hydrologic conditions with current diversions, return flows, interbasin transfers, etc.
 - * Monthly hydrologic conditions with full exercise of water rights, future return flows and interbasin transfers, etc.
 - * Determine statistical frequency of not meeting inflow targets under each of the above scenarios
- B. Use TNRCC water availability models that extend the Period of Record (POR) for the San Jacinto, Trinity and related Coastal Basins to re-analyze conditions in III-A above. (GBFIS-2).
- C. Use the TNRCC water availability models incorporating full development of authorized water rights to determine the impact of changes to Galveston Bay freshwater inflows resulting from (1) water management strategies for major water providers included in the Regional Water Plans for Regions H and C and (2) management scenarios defined by GBFIG under Task IV-A.
- D. Distribute GBFIS-2 inflow projections spatially and temporally to determine the source and location of inflow for at least the San Jacinto, Trinity, Neches-Trinity, Trinity-San Jacinto Basins and San

Jacinto-Brazos basins.

- E. Use TWDB/TPWD models to develop salinity estimates and fisheries production estimates using distributed GBFIS-2 freshwater inflow projections.

Task IV: Assess Feasibility of Various Options for Addressing Freshwater Inflow Deficits

- A. Define management goals and management scenarios for analysis in III-C above.
- B. Identify management strategies
 - * No action
 - * Modify reservoir operations and/or diversion practices
 - * Voluntary dedication of water rights
 - * Reallocation of rights by purchase, trade or other mechanisms
 - * Dedication of return flows
 - * Spatial re-distribution of return flows
 - * Special conditions on new or amended permits
 - * Interbasin transfers for water supply or environmental flows
 - * Reservoir construction for water supply or environmental flows
 - * Promote conservation practices such as:
 - Water-wise landscaping
 - Variable pricing schedules
 - Other conservation practices
 - * Other
- C. Evaluate options according to the following criteria
 - * Degree to which strategy addresses any freshwater inflow deficiency
 - * Direct costs and who pays
 - * Socioeconomic impacts, including impact on water supplies
 - * Other environmental impacts
 - * Legal impediments
 - * Public acceptance
 - * Time to implement; feasibility

Task V: Develop Freshwater Inflow Management Recommendations for Galveston Bay

- A. Define specific management objectives
- B. Recommend management strategies for achieving management objectives
- C. Recommend implementation plan
- D. Prepare report for consideration by state agencies, the Galveston Bay Council-GBEP and Region H Water Planning Group.