



POLLUTION REDUCTION



As many as 32 bacteria-related, impaired water bodies exist in the Houston-Galveston area, making it one of the highest priority problems facing the Galveston Bay ecosystem. Non-point source pollution within the watershed has impacted hundreds of miles of bayous and streams that flow to Galveston Bay.

Four million people currently live in the Galveston Bay area, and another 3.5 million are expected by 2035. Construction of new wastewater treatment plants (WWTPs) and runoff from converted land as a result of population increases, combined with current defective and leaking WWTPs and an estimated 80,000 failing septic systems, present challenges for Estuary Program partners. With the help of many private, public and community partners, the Galveston Bay Estuary Program (GBEP) is combining watershed-based management and targeted-source reduction to address the pollution and other estuary threats.

THE NATIONAL ESTUARY PROGRAM IN ACTION

Galveston Bay Estuary Program

Over 384 municipal WWTPs have been built in the Houston-Galveston area, and more are expected as population grows. Dozens of WWTPs—many of them small and aging—are struggling to optimally manage costs and meet performance standards. Additionally, an estimated 20 percent of septic systems in the region are failing and occasionally discharging sewage into local waterways.

The GBEP recently galvanized an effort to bring watershed managers together to determine the best way to regionalize some of

Galveston's WWTPs and address some 1,000 permitted discharges. Many small WWTPs were identified and included in GBEP's 10-year strategic action plan, "Charting the Course to 2015." The GBEP also identified 17,800 failing systems in an underserved area by conducting a series of septic system surveys and sponsoring a community risk assessment study on the potential health impacts of failing septic systems. The work moved county officials and the community toward finding replacement options. In helping local governments implement

large-scale water quality improvement projects in targeted watershed areas, the GBEP and Texas Commission on Environmental Quality have pooled Federal Clean Water Act Section 320, 319 and 106 program funding, which enabled municipalities to receive \$4 million in partnership grants.

Another notable success is a six-year, 3.5-acre stormwater demonstration project consisting of a series of three ponds, spearheaded by the GBEP and partners in 2001. With plans to widen the Brays Bayou at Mason Park



EFFECTIVE



EFFICIENT



ADAPTIVE



COLLABORATIVE



already under way by the Harris County Flood Control District, the GBEP, in partnership with the Texas Coastal Watershed Program, saw an opportunity. Aware that the project would require the excavation of large portions of earth in order for streamside shelves to be installed, the GBEP approached the county with the idea of creating wetland areas that could provide a wet bottom detention to catch floatable litter, fertilizers, pesticides, and other

pollutants. The goal: address a low-income community's long-term wastewater treatment needs.

It took little persuading for the county to agree to the add-on and soon numerous local, state, and federal agencies and organizations, including Texas Sea Grant, US EPA, Harris County Flood Control District, Texas Parks and Wildlife Department, the City of Houston Parks and

Recreation Department, Texas Master Naturalists, NRG Energy Inc., and students from local high schools, came together to provide project funding, expertise and volunteer labor.

Having laid the path for future collaborative work, the award-winning project is already reaping environmental benefits, including an average 99% reduction in bacteria levels in the water. The constructed ponds help filter out sediments, oil, and other pollutants after a rainfall event from Brays Bayou neighborhoods' run-off—aiding in the decreased bacteria levels. The ponds also provide new habitat for fish and wildlife. A recreational trail with a kiosk and interpretive signs is educating the public about the function and benefits of the 3.2-acre project. And the best part of all? The flood control district is now tak-

ing what it has learned and is applying it to other Harris County watersheds.

Visit **www.gbep.state.tx.us** to learn more about this and other GBEP efforts.

EPA's National Estuary Program (NEP) is a unique and successful coastal watershed-based program established in 1987 under the Clean Water Act Amendments. The NEP involves the public and collaborates with partners to protect, restore, and maintain the water quality and ecological integrity of 28 estuaries of national significance located in 18 coastal states and Puerto Rico.

For more information about the NEP go to www.epa.gov/owow/estuaries.