Galveston Bay Foundation's Water Quality Outreach Programs:

TMDL Implementation Plan and the Boater Waste Education Campaign

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Many thanks to our partners:

TMDL Implementation Plan

Healthy Oysters = Healthy Bay

- **Commercially Critical** - Galveston Bay produces more oysters than any single water body in the United States; more than Louisiana and Washington combined
- **Filter Feeders** - Important ecological role as filter feeders influencing water clarity and phytoplankton abundance
- **Important Indicators** - Serve as an important indicator of the overall health of a bay ecosystem
- **Habitat Builders** - Oysters create reef habitats utilized by many other species

Total Maximum Daily Load

- Upper Gulf Coast is not suitable for harvesting shellfish because of elevated bacteria concentrations
- The Texas Commission on Environmental Quality (TCEQ) has developed a total maximum daily load (TMDL) for fecal coliform
- A **TMDL** estimates the amount of a pollutant that a water body can receive and still support its designated uses
- Affected segments are:
  - Upper Galveston Bay (Segment 2421)
  - Trinity Bay (Segment 2422)
  - East Bay (Segment 2423)
  - West Bay (Segment 2424),
  - Chocolate Bay (Segment 2432)
  - Lower Galveston Bay (Segment 2439)

Implementation Plan

- The Galveston Bay Foundation and TCEQ are developing an Implementation Plan for the TMDL
- **Implementation Plan** - describes the actions that local, regional, and state organizations must take to reduce pollutants to levels established in TMDLs.
- Five workgroups were formed to develop management measures to reduce the bacteria in the oyster waters of the Upper Gulf Coast: Science and Monitoring, Policy and Outreach, Waste Water Treatment Facilities (WWTF), On-Site Sewage Facilities (OSSF), and Boater Waste.

Policy and Outreach

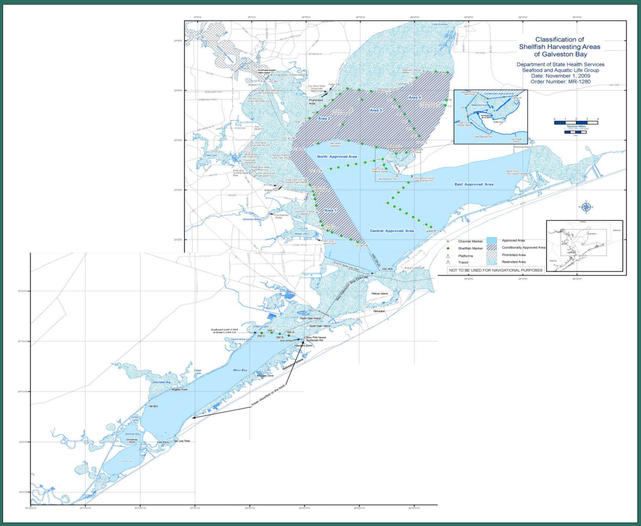
- Work with and support the other workgroups to achieve their policy and outreach goals.

Science and Monitoring

- Support other workgroups and ensure that monitoring will be adequate to measure progress on the Implementation Plan.
- Analyzing past and current data to realize local trends.

On-Site Sewage Facilities

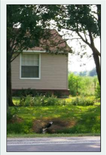
1. Create a regional plan to identify, prioritize, and address failing systems.
2. Pursue funding for actively locating failing systems.
3. Pursue funding for low income repairs.
4. Require that a licensed maintenance provider or a registered maintenance technician must do the maintenance on all types of systems, not homeowners.
5. Standardize and promote point of sale inspections.



Waste Water Treatment Facilities

1. Training
   - Better training, guidance and support for permittees with new bacterial monitoring requirements.
   - Offer assistance to small facilities that have discharge violations.
   - Offer classes covering bacteria issues closer to the entities and make sure the class is relevant.
2. Permitting
   - Offer funding for pre-testing early enough that the facilities can get into compliance before the new permit limits take effect.
   - Encourage dischargers to sample and test for bacteria before actual permit renewal to ensure the facility is in compliance and testing for the correct species.
3. Post-Permitting
   - TCEQ would provide a detailed guidance document to help the facilities comply with the new bacterial sampling.
   - Funding for more frequent unannounced sampling and inspections.

Malfunctioning aeration basin



This homeowner's on-site sewage facility is improperly discharging into a drainage ditch.

Maritime Sanitation, a mobile pumpout company in the Clear Lake/Galveston Bay area, services a boat. Customers can schedule ahead and do not need to be present while their boat is pumped out.

Boater Waste

1. Make Galveston Bay a No Discharge Zone.
2. Increase the number of pumpouts in the Clear Lake and Galveston Bay areas.
3. Continue with education and outreach of boater waste issues.
4. Increase enforcement. The workgroup would like TPWD to work with the Coast Guard Auxiliary to train marine officers about preventing sewage discharge and incorporating y-valve inspections into the USCG Auxiliary voluntary vessel checks.

Boater Waste Education Campaign & Workgroup

- **Purpose** - decrease the incidence of illegal discharge of boater sewage to the Galveston Bay estuarine system, particularly Clear Lake, which has the third highest concentration of privately-owned marinas in the United States.
- **Workgroup** - Galveston Bay Foundation, Galveston Bay Estuary Program, Texas Commission on Environmental Quality, Clean Texas Marina Program, Texas Parks and Wildlife, Clear Lake Marina Association, and local citizens
- **Audience** - primary, boaters; secondary, greater community
- **Focus** - educating the public about the proper disposal of boater sewage with an overall emphasis on the health of the ecosystem.

Education and Outreach

Campaign Strategy

The workgroup decided early-on that the campaign should focus on positive messages and not be a scare-tactic campaign. The main message of the campaign was to educate Clear Lake and Galveston Bay boaters. The education of the boating community, as well as the community as a whole, has been the primary focus of the campaign marketing materials.

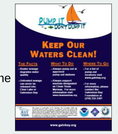
Mass Media

Billboards and advertisements were created to educate local boaters. However, with mass media advertising, the community as a whole also could receive the message and understand the issues.

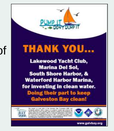
- **Billboards**
  1) *Keep Boater Sewage Out of Galveston Bay*
  Locations –near local marinas: one on FM 518 West and the other at the intersection Highway 146 and FM 2094

  2) *Pump Don't Dump*
  Location– I-45 South, north of Dixie Farm Rd.

- **Advertisements**
  1) *Keep Our Waters Clean*
  Information to the boating community presented in a clear and simple way: the problem, what to do, and where to go.



  2) *Thank You Marinas*
  Publically thank the marinas who have pumpout stations and giving them the benefit of free advertizing.



Campaign Promotional Materials

Promotional items to grab people's attention and to create a take-home reminder for the public.

- **T-shirts**
  Pump It Don't Dump It shirts were created with the intention of having a simple, attractive shirt that would relay the message to boaters from fellow boaters (wearing the shirt) within the boating community.

- **Koozies**
  Pump Don't Dump koozies were given out at educational booths and lead to great success at drawing people's attention, bringing them over to an educational display, and keeping their attention long enough to explain our campaign and purpose. Through feedback we learned that the koozies were one of the most popular items.

- **Events**
  The BWEC has been exhibited at many fairs and events throughout the year, e.g. Houston Boat Shows, Houston Fishing Show, concerts, Earth Day festivals, and local outdoors shows.

Houston Boat Show, June 2009

Creative Outreach

Since the subject-matter of the campaign can be repelling, the workgroup came up with creative ideas to reach boaters.

- **Online campaign**
  The campaign website was overhauled to have a clean look with easy-to-find information. The page has a map of Clear Lake pumpouts, videos of pumpout facilities, and other related information. *www.galvbay.org/education_boater waste.html*.

- ***How to Pump out* DVDs**
  This 3 1/2 minute video gives basic information about how a boat owner can use a self-serve pumpout facility. The DVD is distributed to boaters at marinas and at education exhibits and is available on the campaign website.
- **Mailing Inserts**
  An informational insert and a boater survey were distributed to Clear Lake marina managers and distributed in monthly billings to marina tenants. Responses received from surveys will help determine the direction and focus of the campaign in the future.

How to Pump Out Your Boat DVD's, two mailing inserts: one, general informational insert and two, a boater survey, head sticker/cling, and disposable coasters

- **Head stickers and clings**
  Realizing that new boaters may not know what to do with their boater sewage, the working group approached the yacht brokers with a simple proposal: placing a small sticker on the head with information. In addition to the stickers, static clings were created to attach to a boat's bathroom mirror.
- **Disposable coasters**
  To creatively reach a new audience, coasters were distributed to waterfront restaurants. Coasters were designed with the campaign logo on one side and a map highlighting Clear Lake pumpout facilities on the other.