

# **Efforts to Secure Funding for the Work Plan Elements of the Senate Bill 3 Environmental Flows Process as related to the Guadalupe and Mission-Aransas Estuaries**

**October 2012**



# General History of Events

April 2010 - BP Macondo Well Blowout (Deepwater Horizon)

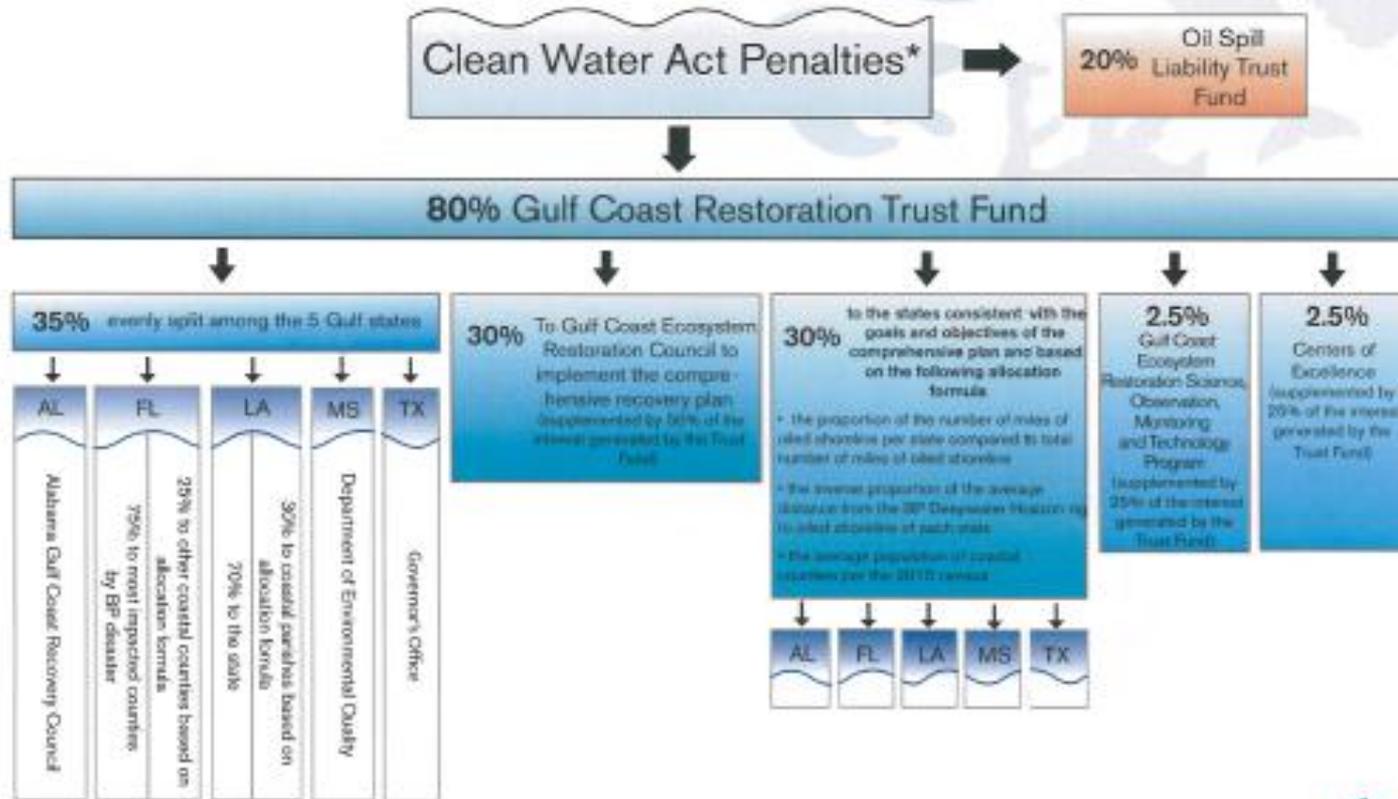
Oct. 2010 - Gulf Coast Ecosystem Restoration Task Force  
Texas rep. on Task Force – General Land Office (Jerry Patterson)

Early 2012 - GLO “Coastal Priority Projects” Process initiated

Sept. 2012 - Gulf Coast Ecosystem Restoration Council  
Texas rep. on Council – TCEQ Commissioner Toby Baker

Sept. 2012 - GLO “Coastal Priority Projects” Technical Advisory  
Committee(s) meet to score projects

# Distribution of Clean Water Act penalties to Gulf recovery per the RESTORE Act



\* Clean Water Act penalties are a per barrel penalty of \$1100 for release of pollution into the environment. If 'gross negligence' is determined in release of the pollution, the penalty per barrel increases to \$4300. In the case of the BP Deepwater Horizon incident the following are estimates:

\$1100 X (4.9 million barrels of oil released into the environment) = approx \$5.39 billion  
 \$4300 X (4.9 million barrels of oil released into the environment) = approx \$21.07 billion (gross negligence)

All amounts are subject to negotiation via a settlement between the government and responsible parties.



# The General Land Office's (GLO) process to establish "Coastal Priority Projects"



GLO created Technical Advisory Committee:

- Coast-wide "Core members (NWF, TPWD, TNC, ...)
- Regional experts (Reg 2: SARA, GBRA, TPWD, TNC, SABP)

Guadalupe Estuary in Reg 2  
Mission-Aransas in Reg 3

# Technical Advisory Committee (Invited members)

## Core members

**John Anderson**, RICE University

**Carl Anderson**, U.S. Army Corps of Engineers

**Jorge Brenner**, The Nature Conservancy

**Tom Calnan**, Coastal Expert

**Samantha Danchuk**, Shaw Engineering

**Gregg Easley**, Texas Commission on Environmental Quality

**Richard Egg**, Texas State Soil & Water Conservation Board

**Mark Fisher**, Texas Dept. of Transportation

**Manuel Freytes**, Texas General Land Office

**Ryan Fykes**, Gulf of Mexico Foundation

**Jim Gibeaut**, Harte Research Institute

**Ed Hegen**, Texas Parks & Wildlife Dept.

**Rebecca Hensley**, Texas Parks & Wildlife Dept.

**Myron Hess**, National Wildlife Federation

**Laura Huffman**, The Nature Conservancy

**Susan Kadarka**, National Wildlife Federation

**Jim Lester**, Houston Advanced Research Center

**Tom Minello**, U.S. National Marine Fisheries Service

**Jerry Mohn**, Coastal Coordination Advisory Committee member

**Johns Norman**, National Wildlife Federation

**Jeff Paine**, UT Bureau of Economic Geology

**Walt Peacock**, Texas A&M

**Pamela Plotkin**, Texas Sea Grant College Program

**Chris Robbins**, Ocean Conservancy

**Lance Robinson**, Texas Parks & Wildlife Dept.

**Leslie Savage**, Railroad Commission of Texas

**Ruben Solis**, Texas Water Development Board

**Michael Turco**, U.S. Geological Survey

**Becky Walker**, Railroad Commission of Texas

**Aaron Wendt**, Texas State Soil & Water Conservation Board

**Tony Williams**, Texas General Land Office

**Woody Woodrow**, U.S. Fish & Wildlife Service

## Region 2 members

**Norman Boyd**, Texas Parks & Wildlife Dept.

**Rhonda Cummins**, Texas Sea Grant College Program

**Sally Davenport**, Coastal Tech. Engineering

**Mark Dumesnil**, The Nature Conservancy

**Mike Griffith**, Port of Bay City

**Leslie Hartman**, Texas Parks & Wildlife Dept.

## Region 3 members

**Sally Morehead**, Mission-Aransas NERR

**Ray Allen**, Coastal Bend & Bays Estuaries Program

**Paul Carrangelo**, Port of Corpus Christi

**Frank Fuller**, Consultant

**Faye Grubbs**, Texas Parks & Wildlife Dept.

**Dan Heilman**, HDR Engineering

**Karen Meador**, Texas Sea Grant College Program

**Russ Miget**, Texas Sea Grant College Program

**David Newstead**, Audubon Society

**Robert Payne**, City of Corpus Christi

# The General Land Office's (GLO) process to establish "Coastal Priority Projects"



- initial "projects" list from multiple sources, but not SB3.

- held four regional meetings, Sept. 2012

- very regimented evaluation process

## Guadalupe Estuary “Projects” in the GLO process for Region 2 meeting.

initial list



R2 - 31	<b>Espiritu Santo Bay</b>	111
R2 - 32	Espiritu Santo Bay - Blackberry Island and Dewberry Island	113
R2 - 33	Espiritu Santo Bay - Army Hole Entrance	117
R2 - 34	Espiritu Santo Bay / GIWW - Northern Seadrift / Port O'Connor Ridge Wetlands	121
R2 - 35	Espiritu Santo Bay / GIWW - Seadrift / Port O'Connor Ridge Wetlands - Arapaho Holdings	125
R2 - 36	Espiritu Santo Bay / GIWW - Seadrift / Port O'Connor Ridge Wetlands - Shoreline	129
R2 - 37	<b>Guadalupe / San Antonio River Delta</b>	133
R2 - 38	Guadalupe / San Antonio River Delta - Guadalupe Field	135
R2 - 39	Guadalupe / San Antonio River Delta - Traylor's Cut	139
R2 - 40	Guadalupe Bay	143
R2 - 41	<b>San Antonio Bay</b>	147
R2 - 42	San Antonio Bay - Big Bird Island	149
R2 - 43	San Antonio Bay - Chicken Foot Oyster Reef	153
R2 - 44	San Antonio Bay - Matagorda Island	157
R2 - 45	San Antonio Bay - Rookery Islands	161
R2 - 46	San Antonio Bay / GIWW - Welder Flats Wildlife Management Area	165

# Guadalupe Estuary “Projects” in the GLO process for Region 2 meeting.

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R2 - 54

Region Wide - Work Plan for Adaptive Management

189



**added, refined  
by NWF & SARA**

## Region 2 – Region Wide

**Area of Interest:** Work Plan for Adaptive Management

**Project #:** R2-54

**Potential Project:** Habitat Protection; Watershed Protection

### General Information:

The Guadalupe, San Antonio, Mission and Aransas Rivers and Mission, Copano, Aransas and San Antonio Bays Basin and Bay Area Stakeholders Committee (GSABBASC) was created by the 80th Texas Legislature in recognition of the importance of adaptive management and the ecological soundness of our riverine, bay, and estuary systems and riparian lands have on the economy, health, and well-being of Texas. The purpose of GSABBASC is to balance the environmental flow regime presented with water supply needs across stakeholder groups to reach consensus on recommendations to TCEQ for future flow requirements that will protect the ecology of the rivers and bays/estuaries. These recommendations, within the confines of SB3, will also offer standards and strategies to TCEQ. This includes development of a work plan and strategies to meet environmental flow standards and guidelines to mandate these standards. There are six priority areas identified in the Work Plan for Adaptive Management submitted by the GSABBASC including instream and freshwater flow studies, salinity models, surface water accounting and lifecycle habitat studies, in general.

### Issues of Concern for this Area:

*Please fill in the issue boxes below with the corresponding level of concern associated with **this area**:*

	0 – not at all concerned	1 – slightly concerned	2- moderately concerned	3- very concerned	4- extremely concerned
a. Wetlands & Habitat Loss	<input type="checkbox"/>				
b. Gulf Beach Erosion & Dune Degradation	<input type="checkbox"/>				
c. Bay Shoreline Erosion	<input type="checkbox"/>				
d. Flooding & Storm Surge	<input type="checkbox"/>				
e. Water Quality & Quantity	<input type="checkbox"/>				
f. Public Access: Gulf & Bay	<input type="checkbox"/>				
g. Impacts to Fish & Wildlife	<input type="checkbox"/>				
h. Impacts to Marine Resources	<input type="checkbox"/>				
i. Navigation: Commercial & Recreation	<input type="checkbox"/>				
j. Marine Debris	<input type="checkbox"/>				
k. Public Health & Safety	<input type="checkbox"/>				
l. Land Subsidence	<input type="checkbox"/>				
m. Invasive Species	<input type="checkbox"/>				
n. Lack of Info & Data	<input type="checkbox"/>				
o. Community Resilience	<input type="checkbox"/>				
p. Tourism and Local Economy	<input type="checkbox"/>				
q. Other _____	<input type="checkbox"/>				

**Comments:**

### Benefits:

Please fill in the boxes below with the corresponding level of benefits for this area that will be achieved by this project:

	0 - no benefit	1 - slight benefit	2- medium benefit	3- high benefit	4- extremely high benefit
r. Wetland/Habitat Conservation & Restoration	<input type="checkbox"/>				
s. Erosion Control/ Reduction	<input type="checkbox"/>				
t. Dune Restoration	<input type="checkbox"/>				
u. Flood Control	<input type="checkbox"/>				
v. Water Quality Improvements	<input type="checkbox"/>				
w. Enhanced Public Access	<input type="checkbox"/>				
x. Reduced Impacts to Fish & Wildlife	<input type="checkbox"/>				
y. Marine Resources Enhancement	<input type="checkbox"/>				
z. Navigation Enhancement	<input type="checkbox"/>				
aa. Reduction of Marine Debris	<input type="checkbox"/>				
bb. Health & Safety Improvements	<input type="checkbox"/>				
cc. Reduced Land Subsidence	<input type="checkbox"/>				
dd. Management of Invasive Species	<input type="checkbox"/>				
ee. Collection of Essential Data/Info	<input type="checkbox"/>				
ff. Enhanced Coastal Community Resilience	<input type="checkbox"/>				
gg. Tourism & Economic Growth	<input type="checkbox"/>				
hh. Other: _____	<input type="checkbox"/>				

Comments:

### Evaluation:

- What is the feasibility of actually executing the appropriate project(s) for this area?  
 1- not at all likely    2- slightly likely    3- moderately likely    4- very likely    5- extremely likely
- What is the likelihood of the completed project significantly reducing the identified issues of concern?  
 1- not at all likely    2- slightly likely    3- moderately likely    4- very likely    5- extremely likely
- How do the project benefits align with the issues of concern for the area?  
 1- Do not align    2- slightly align    3- moderately align    4- mostly align    5- completely align
- If the project does not occur, what is the expected level of economic loss?  
 1- extremely low    2- somewhat low    3- moderate    4- somewhat high    5- extremely high
- If the project does not occur, what is the expected level of social-value loss?  
 1- extremely low    2- somewhat low    3- moderate    4- somewhat high    5- extremely high
- If the project does not occur, what is the expected level of ecologic loss?  
 1- extremely low    2- somewhat low    3- moderate    4- somewhat high    5- extremely high

Comments:

# SB3-related “Projects” added to the GLO process for Region 2 & 3 final rankings.

added by  
**NWF & SARA**

## **R2 Project 56 Guadalupe Estuary**

[freshwater inflow strategy, 70-80,000 ac-ft combination of voluntary wastewater dedication and water rights purchase]

added by  
**GLO**

## **R3 Project 45 Region 3 GSABBAC**

Workplan for Guadalupe and Mission-Aransas Estuaries  
[for ranking by Region 3 members since has Mission-Aransas elements]

## Region 2- Project Evaluation

### Area of Interest: Guadalupe Estuary (Project #: R2-56)

1 / 1

Freshwater inflows are critical for the environmental health and productivity of estuaries; delivering nutrients, sediments, and maintaining areas of moderate salinity for critical life stages of many species. The Guadalupe Estuary supports commercial fisheries for shrimp, blue crabs, and oysters; recreational fishing for species such as trout and redfish; and its shores are also the wintering grounds of the highly-endangered Whooping Crane. Sufficient freshwater inflows are key to the sustained productivity of the estuary. As recently found by the Senate Bill 3 Stakeholder Committee, with the water withdrawal permits already granted by the State, future freshwater inflows to the Guadalupe Estuary are forecast to decline significantly especially during drought periods. Although new permits can be conditioned to minimize harm, addressing the impacts of the existing permits requires a more proactive approach. Existing water rights can be leased or purchased and converted to environmental flow protection purposes. Another option is to secure “dedications” of treated wastewater discharged from municipal and industrial dischargers.

Through a combination of acquisition and conversion of existing water rights and the dedication of wastewater return flows, this project would be designed to provide an additional 70,000 to 80,000 acre-feet/year of drought-secure inflows to the Guadalupe Estuary as compared to future conditions without the project.

## Region 3 -Project Evaluation

### Workplan for adaptive Management Project #: R3-45

Potential Project:

Refinement of Freshwater Inflow Standards

Background:

Adequate freshwater inflows are essential to the health of the Guadalupe Estuary. Pursuant to Senate Bill 3 of the 80th Texas Legislature, the Basin and Bay Area Stakeholder Committee for the Guadalupe, San Antonio, Mission and Aransas Rivers and Mission, Copano, Aransas and San Antonio Bays (GSA-BBASC) developed a set of recommended environmental flow standards including a regime of freshwater inflows for the Guadalupe Estuary. The GSA-BBASC, and their appointed Expert Science Team, identified additional data and studies needed in order to validate and refine certain aspects of the freshwater inflow standards, which were recently adopted by TCEQ, including:

- studies of inflows and the life cycle needs of Blue Crabs, White Shrimp, and oysters
- studies of the distribution and inflow-related life cycle needs of rangia clams, an important upper estuary species;
- studies of the distribution of key marshland plant communities in the Guadalupe River delta
- studies of the salinity and soil requirements of key marshland plant communities in the Guadalupe River delta
- refinement of the habitat models used to develop inflow recommendations
- updates and improvements to the TWDB hydrodynamic and salinity circulation model
- a study to precisely describe the portion of gauged river flow that makes it to the estuary

## Region 2

### Survey Area of Interest

<a href="http://www.surveymonkey.com/s/R2_Project55">http://www.surveymonkey.com/s/R2_Project55</a>	Guadalupe River
<a href="http://www.surveymonkey.com/s/R2_Project56">http://www.surveymonkey.com/s/R2_Project56</a>	Guadalupe Estuary
<a href="http://www.surveymonkey.com/s/R2_Project58">http://www.surveymonkey.com/s/R2_Project58</a>	Tres Palacios River Watershed
<a href="http://www.surveymonkey.com/s/R2_Project59">http://www.surveymonkey.com/s/R2_Project59</a>	San Antonio Bay
<a href="http://www.surveymonkey.com/s/R2_Project60">http://www.surveymonkey.com/s/R2_Project60</a>	Colorado-Lavaca Estuary (Matagorda and Lavaca Bays)
<a href="http://www.surveymonkey.com/s/R2_Project61">http://www.surveymonkey.com/s/R2_Project61</a>	East Matagorda, Matagorda, and Lavaca Bays
<a href="http://www.surveymonkey.com/s/R2_Project62">http://www.surveymonkey.com/s/R2_Project62</a>	Region Wide - CMSP
<a href="https://www.surveymonkey.com/s/R2_Project63">https://www.surveymonkey.com/s/R2_Project63</a>	Region Wide - Artificial Reefs
<a href="http://www.surveymonkey.com/s/R2_Project64">http://www.surveymonkey.com/s/R2_Project64</a>	Region Wide - Seagrass Monitoring
<a href="http://www.surveymonkey.com/s/R2_Project65">http://www.surveymonkey.com/s/R2_Project65</a>	Region Wide - Habitat Mapping
<a href="http://www.surveymonkey.com/s/R2_Project66">http://www.surveymonkey.com/s/R2_Project66</a>	Mid-Coast Project
<a href="http://www.surveymonkey.com/s/R2_Project67">http://www.surveymonkey.com/s/R2_Project67</a>	Guadalupe River Delta

## Region 3

### Survey Area of Interest

<a href="http://www.surveymonkey.com/s/R3_Project39">http://www.surveymonkey.com/s/R3_Project39</a>	Colonial Waterbird Rookery Island
<a href="http://www.surveymonkey.com/s/R3_Project40">http://www.surveymonkey.com/s/R3_Project40</a>	Coastal Bend Project
<a href="http://www.surveymonkey.com/s/R3_Project41">http://www.surveymonkey.com/s/R3_Project41</a>	Mid-Coast Project
<a href="http://www.surveymonkey.com/s/R3_Project42">http://www.surveymonkey.com/s/R3_Project42</a>	Guadalupe River Delta
<a href="http://www.surveymonkey.com/s/R3_Project43">http://www.surveymonkey.com/s/R3_Project43</a>	Baffin Bay Complex
<a href="http://www.surveymonkey.com/s/R3_Project44">http://www.surveymonkey.com/s/R3_Project44</a>	Egery Flats
<a href="http://www.surveymonkey.com/s/R3_Project45">http://www.surveymonkey.com/s/R3_Project45</a>	Region 3 GSABBAC
<a href="http://www.surveymonkey.com/s/R3_Project46">http://www.surveymonkey.com/s/R3_Project46</a>	Nueces Estuary (Nueces and Corpus Christi Bays)
<a href="https://www.surveymonkey.com/s/R3_Project47">https://www.surveymonkey.com/s/R3_Project47</a>	Region Wide - CMSP
<a href="https://www.surveymonkey.com/s/R3_Project48">https://www.surveymonkey.com/s/R3_Project48</a>	Padre Island National Seashore
<a href="https://www.surveymonkey.com/s/R3_Project49">https://www.surveymonkey.com/s/R3_Project49</a>	Region Wide - Artificial Reefs
<a href="http://www.surveymonkey.com/s/R3_Project50">http://www.surveymonkey.com/s/R3_Project50</a>	Region Wide - Habitat Mapping
<a href="http://www.surveymonkey.com/s/R3_Project51">http://www.surveymonkey.com/s/R3_Project51</a>	Region Wide - Seagrass Monitoring

# Senate Bill 3 Environmental Flows Process

## Work Plan as related to San Antonio Bay

### Principal Work Plan Elements:

#### A. Studies to reinforce / refine existing standards

- studies of inflows and the life cycle needs of Blue Crabs, White Shrimp, and oysters
- studies of the distribution and inflow-related life cycle needs of rangia clams, an important upper estuary species;
- studies of the distribution of key marshland plant communities in the Guadalupe River delta
- studies of the salinity and soil requirements of key marshland plant communities in the Guadalupe River delta
- refinement of the habitat models used to develop inflow recommendations
- updates and improvements to the TWDB hydrodynamic and salinity circulation model
- a study to precisely describe the portion of gauged river flow that makes it to the estuary

# Senate Bill 3 Environmental Flows Process

## Work Plan as related to San Antonio Bay

Principal Work Plan Elements:

### B. Strategies to meet inflows of existing standards

1) Identifying potential strategies for evaluation to determine their ability to help meet the environmental flow standards,

**BBASC evaluated- a) wastewater dedication, b) irrigation dry-year option, c) voluntary conversion of existing unused rights.**

2) Developing detailed plans for evaluating these strategies,

3) Performing evaluations to quantify the effects of identified strategies,

4) Preparing recommendations of strategies that should be pursued,

5) Working to implement recommended strategies, and

6) Performing measurements of strategies implementation

## **Any new Study or Strategy of SB3 Work Plans are currently unfunded**

**Recent efforts to secure funding –**

**pursued by participants in the SB3 Guadalupe –San Antonio Environmental flows process**

- **NGOs (such as National Wildlife Federation) attempting to influence allocation of potential RESTORE Act funds**
- **Many SB3 Participants (NWF, SARA, GBRA, TPWD, SABP) participating in General Land Office (GLO) process to establish “Coastal Priority Projects” for a report to the Texas Legislature.**

Questions?