

Galveston Bay Habitat Restoration

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Photo by: Irene Quiroga



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What is Habitat Restoration?

Webster's definition of Restoration:

- a bringing back to a former condition
- restoring to an unimpaired or improved condition
- a representation or reconstruction of the original form

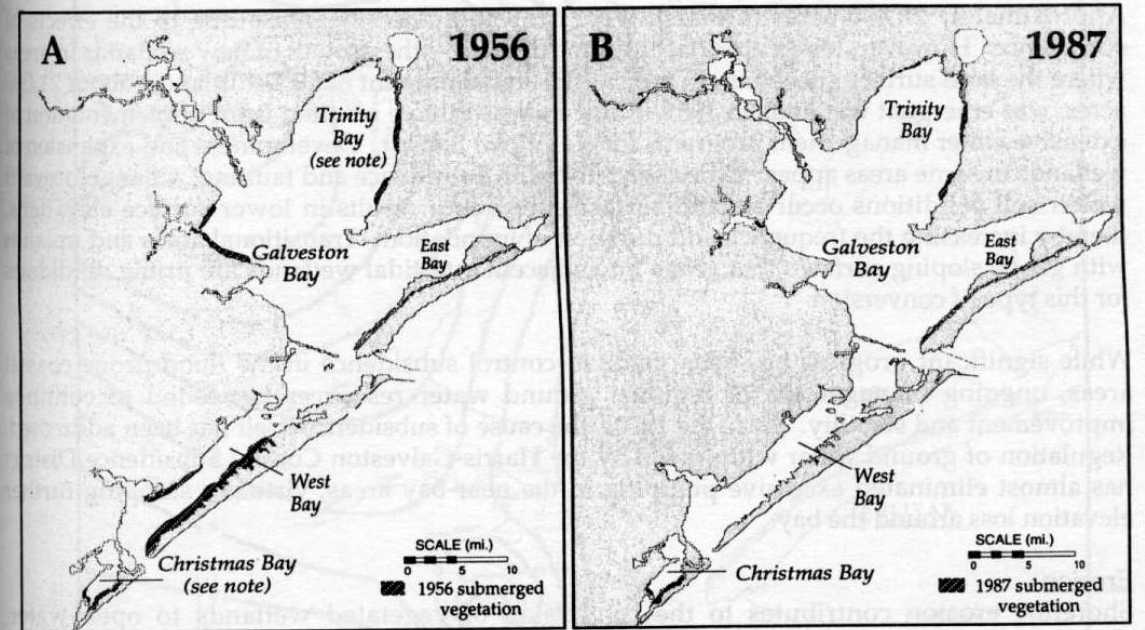
Habitat Restoration is simply the restoration of some form of habitat to an improved condition, or similar to what it was at a point in the past.

....estuarine marsh, freshwater wetlands, oyster reef, coastal prairie, forested wetlands, rookeries.....

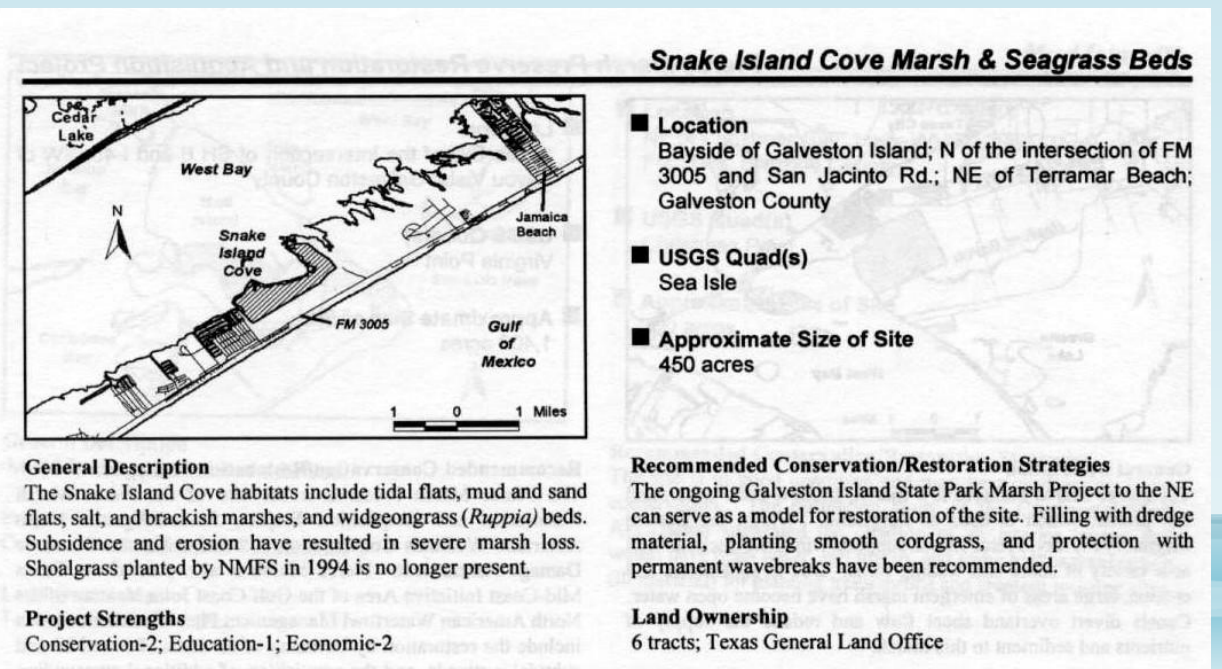


Identifying potential projects

- Galveston Bay Plan
- Habitat Conservation Blueprint
- Word of mouth
 - Members of the community
 - Fishermen
 - Hunters
 - Partners
- Review of historical aerials
 - Google earth



Note: Although present, submerged aquatic vegetation was not mapped in Christmas Bay and Trinity Bay locations in 1956. The 1987 distribution of SAV in these locations is shown for comparison.

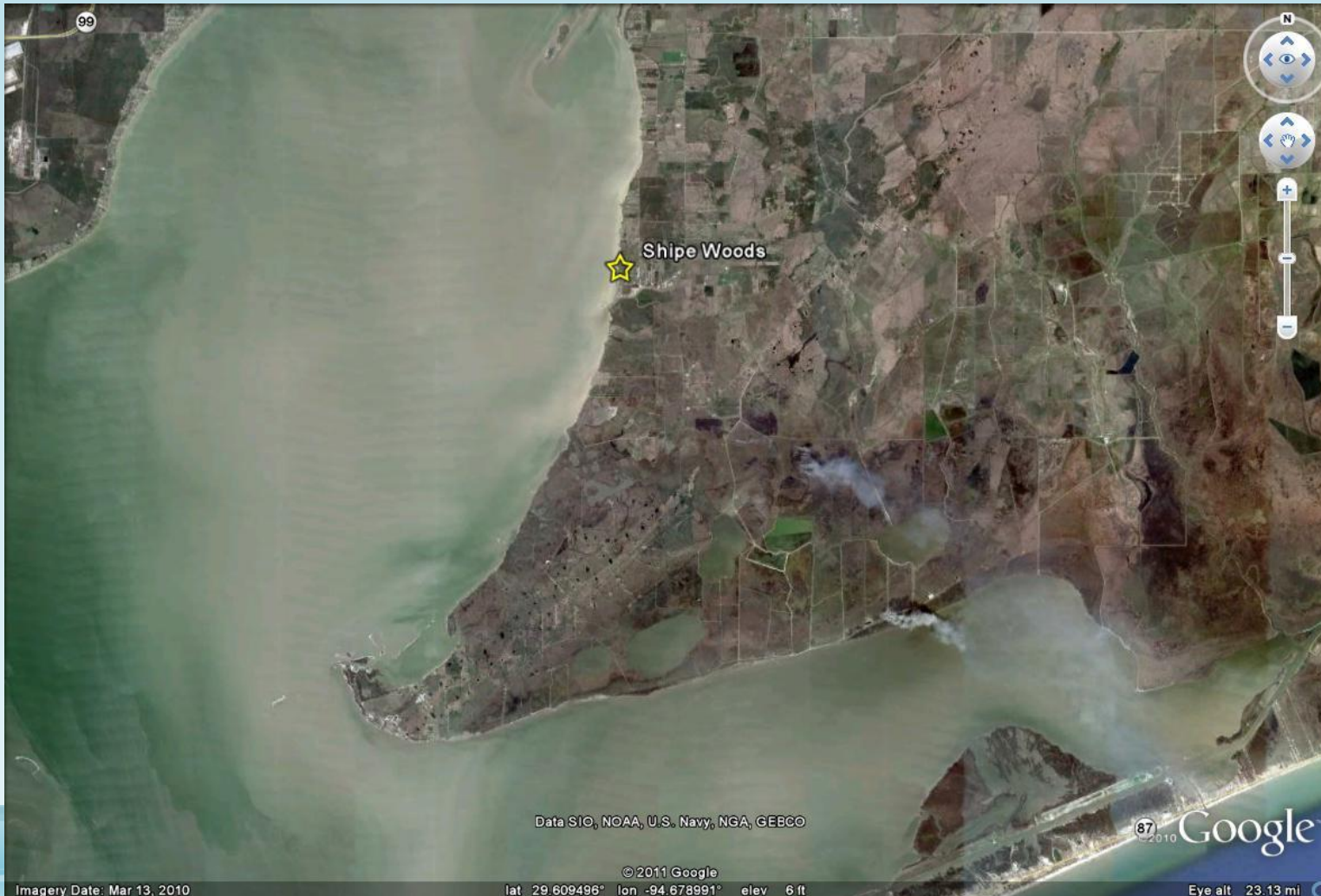


Marsh Restoration - How?

- Provide protection to areas that already have elevations that can support marsh vegetation
- Create an environment that will allow sediment to be deposited in an area, thereby raising existing elevations to levels that will support marsh vegetation
- Utilize fill material to directly raise an areas elevation to support marsh vegetation



Shipe Woods Habitat Protection and Marsh Restoration



Shipe Woods: 14 acre GBF conservation property

Shoreline faced major erosion issues, losing ~2 acres of property between the 1960's and 2013

In 2013 completed a shoreline protection project to stop/reduce erosion.

Sediment was allowed to accrete behind the breakwater structure and wetland grasses planted as elevations allowed.

Shipe Woods

1970
Shipe Woods



2013



Shipe Woods - 2011



Shipe Woods – 2013 Breakwater Construction





Shipe Woods

2015



Marsh Mania September 2013 & 2014



Shipe Woods



3.10.2017

Shipe Woods – 3.10.2017

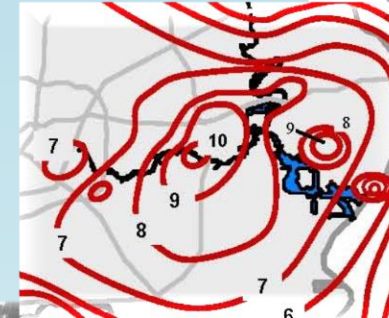
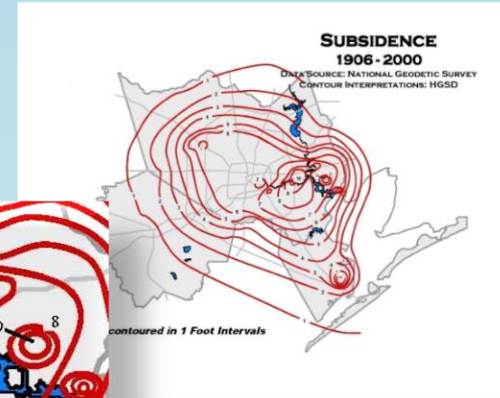
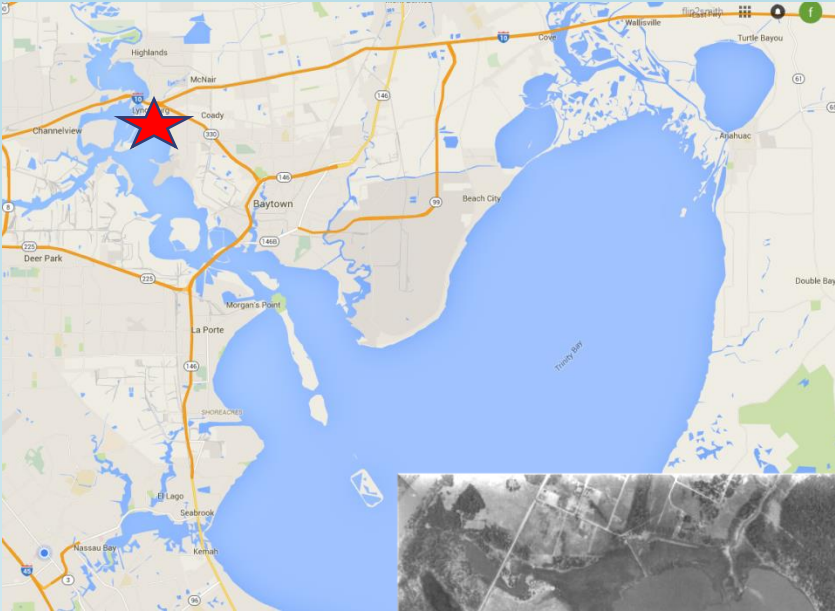


Shipe Woods – 3.10.2017



Burnet Bay Wetlands Restoration

Goal: Restore intertidal wetlands within the heavily subsided (8'-10') area of Burnet Bay



Burnet Bay
3/31/1944
Scale: 1"=1200'
Source: ASCS



Burnet Bay
2/21/1969
Scale: 1"=1000'
Source: Wallace



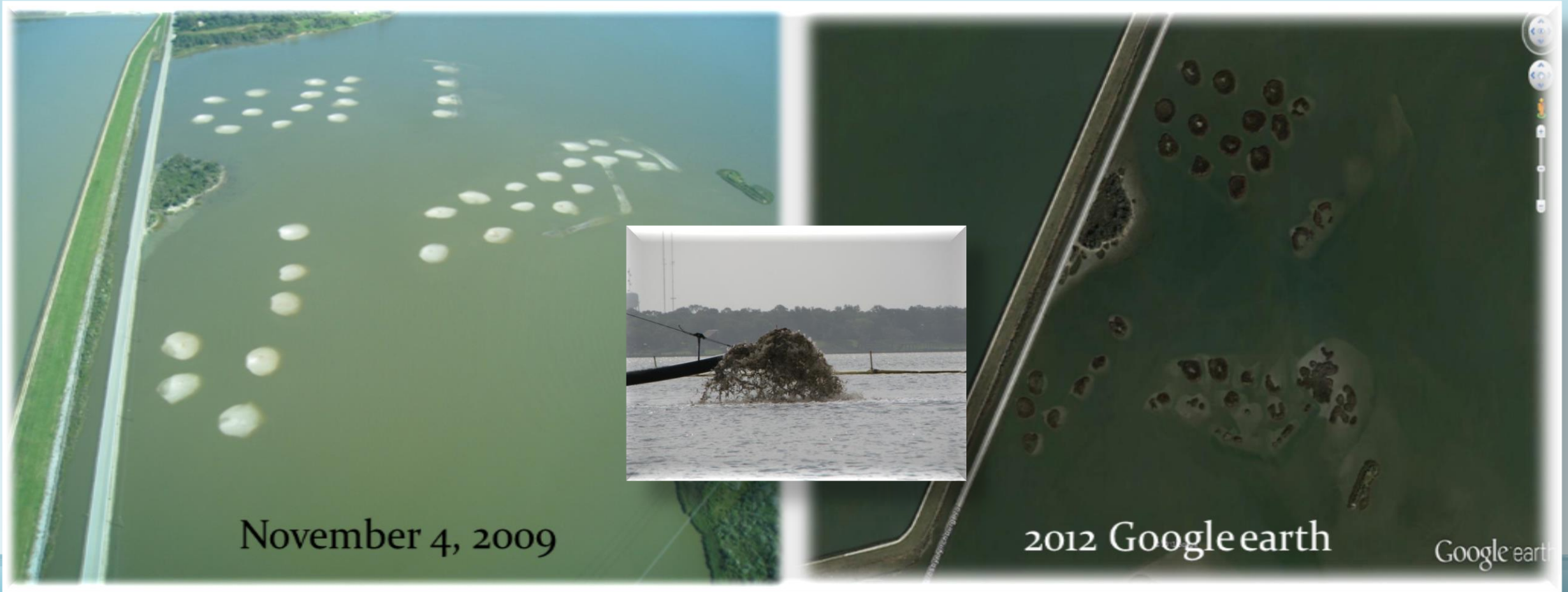
Burnet Bay
12/12/1978
Scale: 1"=1200'
Source: IADOT



Burnet Bay
3/16/2005
Scale: 1"=1200'
Source: USDA

Before and After

Burnet Bay Wetlands Restoration Phase 1



39 mounds

Before and After

Burnet Bay Wetlands Restoration Phase 1

2009



2011



Burnet Bay Wetlands Restoration Phase 2



- Completed Fall 2016 (33 mounds)
- Planted in December 2016



Burnet Bay Wetlands Restoration Phase 2



Snake Island Cove

Completed in 2007

Design concept inspired by a TPWD project in the late 1990's at Galveston Island State Park



Marine Debris Removal





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Questions and Comments

Photo by Andrew Hancock