

Sediment Management Partnerships and Source Investigations on the Texas Coast

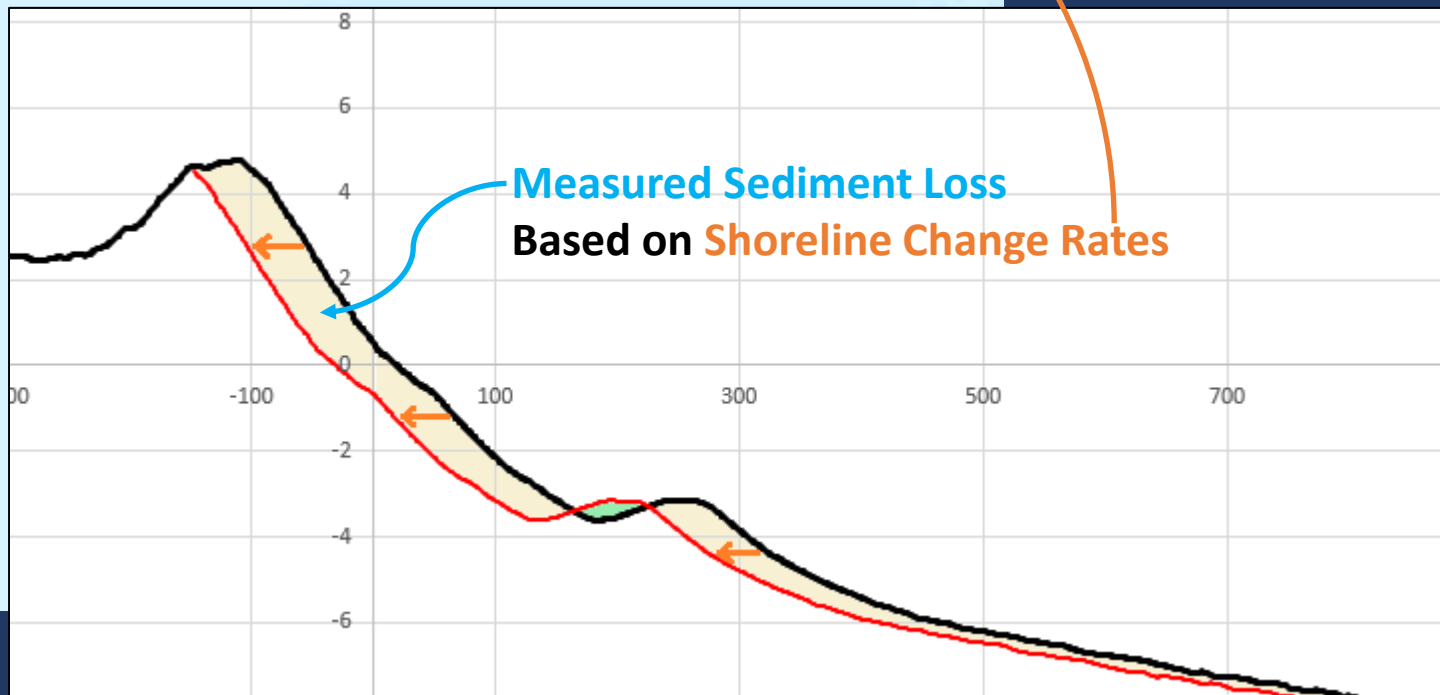
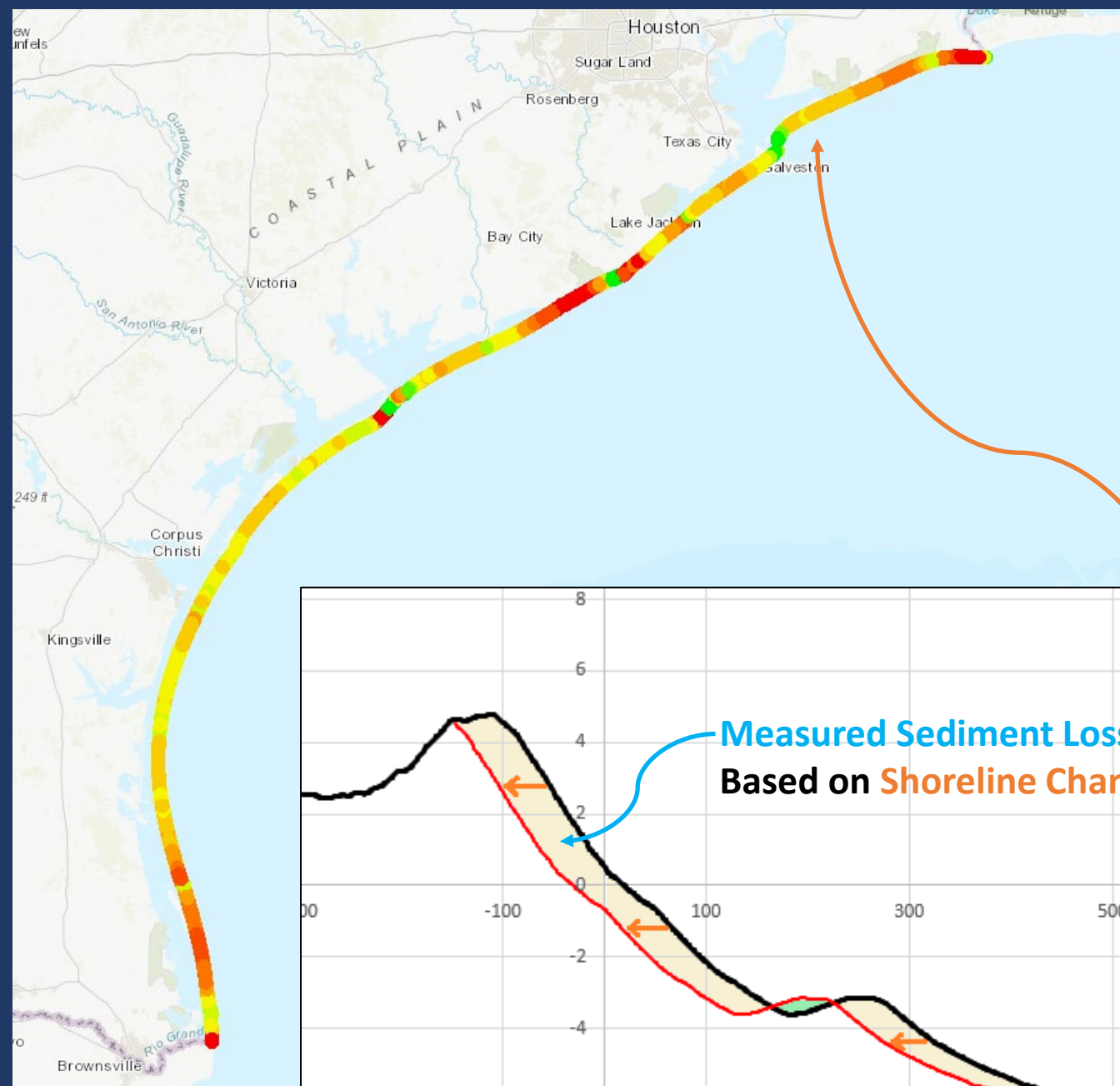


USACE Summer 2021 Stakeholder Partnering Forum
August 11, 2021

Tony Williams
Texas General Land Office

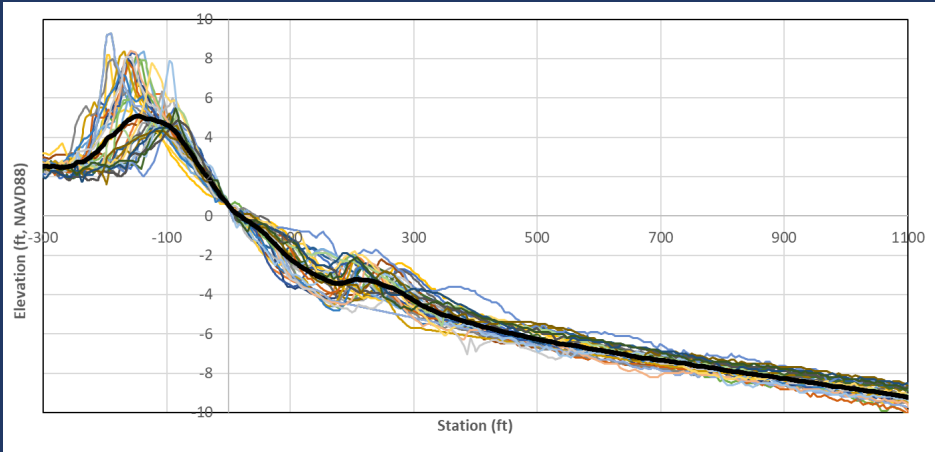
Sediment Management

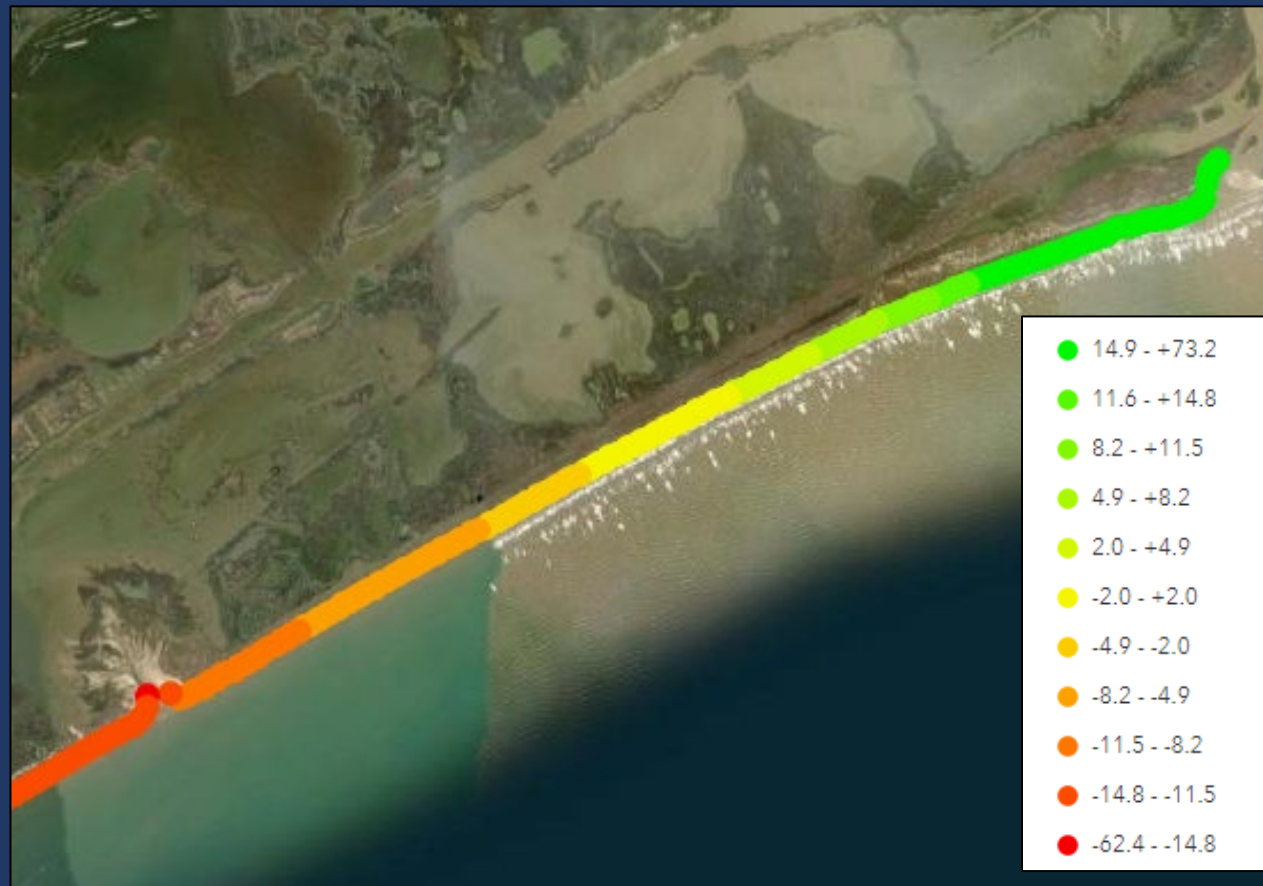
- Understanding the sediment needs along the Texas coast
- Establishing a volume of sediment loss based on 3 inputs:
 - Shoreline change rates
 - Regional equilibrium profiles
 - Shoreline length





Region	Volume Change Rate Without Nourishment (cy/yr)	Nourishment Volume Rate (cy/yr)	Volume Change Rate Adjusted for Nourishment (cy/yr)	BEG Shoreline Change Rate Adjusted for Nourishment (ft/yr)
McFaddin	-1,334,515	54,095	-1,388,610	-12.71
Bolivar	-93,371	190,136	-283,508	-6.18
Galveston	5,921	76,595	-70,674	-2.34
Jamaica Beach	-255,840	2,300	-258,140	-4.07
Surfside Beach	-192,131	14,317	-206,448	-3.23
Quintana	-311,725	92	-311,816	-12.65
Sargent Beach	-335,557	3,627	-339,183	-4.59
East Matagorda	-718,642	13,910	-732,552	-7.93
Matagorda Peninsula	276,033	0	276,033	2.31
Matagorda Island	-450,411	0	-450,411	-2.91
San Jose Island	-307,101	0	-307,101	-3.59
Mustang Island	-192,454	160	-192,614	-2.34
Padre Island	-916,450	47,498	-963,949	-2.69
South Padre Island	-1,706,007	65,843	-1,771,850	-8.20





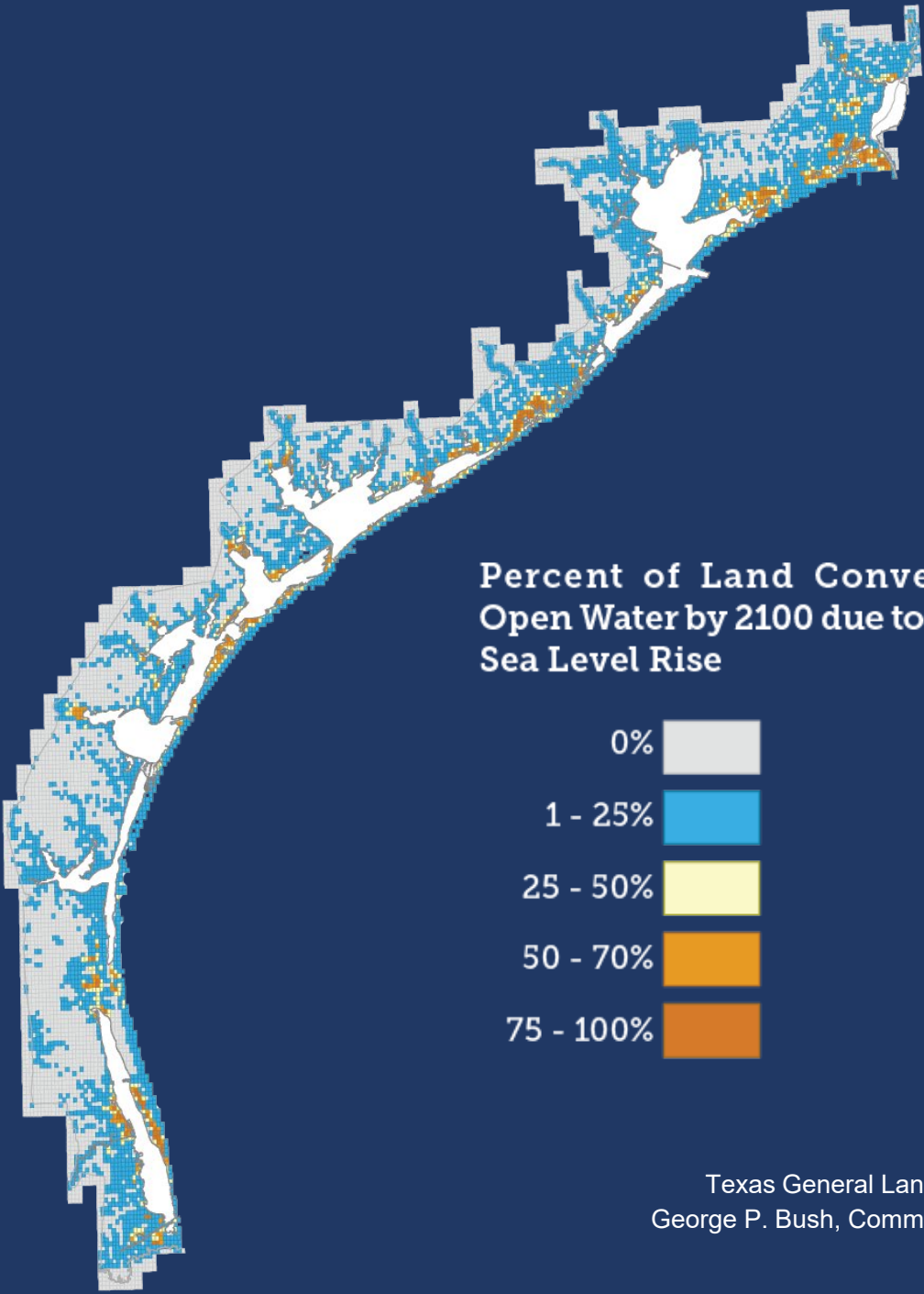
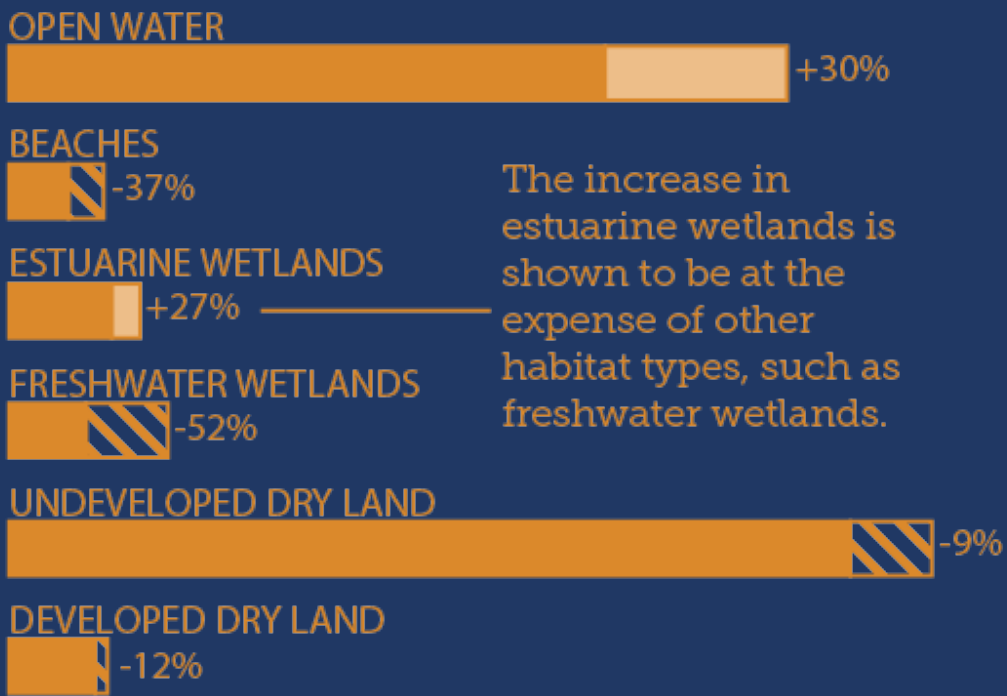
	Accretion				Erosion			
Region	Shoreline Length (ft)	Percent of Regional Shoreline (%)	Weighted BEG Shoreline Change Rate (ft/yr)	Volume Change Rate (cy/yr)	Shoreline Length (ft)	Percent of Regional Shoreline (%)	Weighted BEG Shoreline Change Rate (ft/yr)	Volume Change Rate (cy/yr)
Sargent Beach	28,729	28.3	27.75	580,810	72,690	71.7	-17.31	-916,367



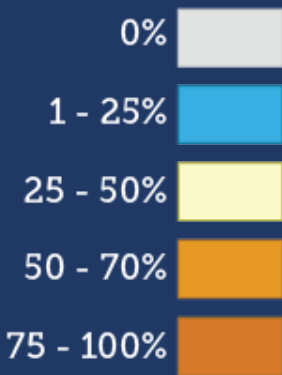
Land Cover Change

Without Projects

Coastwide Habitat Change from 2007 to 2100 due to Relative Sea Level Rise



Percent of Land Converted to Open Water by 2100 due to Relative Sea Level Rise



Funding Opportunities at the GLO

Coastal Erosion Planning and Response Act (CEPRA)

- Program funds projects to address coastal erosion
- \$14 Million funding last biennium used to cost share 75/25 for beach nourishment and 60/40 for all other projects

Coastal Management Program (CMP)

- Program funds projects to address resource protection/enhancement, planning, data collection, and public access
- \$2 Million annually Federal §306/§306A coastal management grant funds from NOAA, \$100,000 in funding for a §306 (non-construction) project and up to \$200,000 for a §306A (construction) project

Hotel Occupancy Tax (HOT) Bill

- Passed in the 2019 Texas Legislative Session to dedicate 2% of HOT in coastal communities to CEPRA
- Municipalities can also use HOT to set money aside for specific tourism-based community investments

Gulf Of Mexico Energy Security Act (GOMESA)

- \$46 Million FY 2019 to State of Texas (\$58 Million total), remainder to select Counties
- \$76 Million FY 2020
- \$54 Million FY 2021
- GOMESA at GLO used to supplement CEPRA and CMP projects that are Tier 1 in the TCRMP

Community Development Block Grant – Mitigation Fund (CDBG-MIT)

- \$4.3 Billion to hazard mitigation projects in Texas
- \$100 Million Coastal Resilience Program to Tier 1 projects



Thank you!

Tony Williams

Deputy Director
Coastal Planning and Field Operations
tony.williams@glo.texas.gov

Joshua Oyer

Coastal Planner
joshua.oyer@glo.texas.gov