

Black Point Bayside Living Shoreline Project

Project Description: The project proposes the installation of a living shoreline to protect shoreline erosion and enhance wetland habitats. The area of shoreline near Black Point has eroded due to hurricanes, storm surge, wave energy and increasing water levels. The site is further at-risk of inundation due to future increase in sea level rise. This project can include multiple components which are considered as separate phases. The first phase will construct living shoreline features and connect the in-tact old roadway piles to provide shoreline protection. This phase will also include installations of community amenities such as trails, boardwalk, etc. preferred by the community members (identified through a supplementary project survey). The future phase of the project will focus on habitat creation, expansion of recreational opportunities (trails, boardwalk, etc.), and minimizing the sediment build-up on the Black Point edge of the site (close to the existing boat ramp) by dredging and beneficially using the sediment to the nearby marsh habitat. The efforts of this project will be complementary to the “Bayside Water Quality, Access, and Habitat Creation” project identified as a priority project in the 2023 Texas Coastal Resiliency Master Plan.

Hazard Risk Reduction Benefits: This project is proposed along the stretch of Bayside at risk of intermediate-low sea level rise (3 feet) and coastal storms.

Ecological Benefits: The project will help reduce wetland erosion and protect the productive wetlands. that are already accreting.

Community Benefits: The site is publicly accessible to fishermen, bird watchers, tourists, and will provide community-preferred recreational opportunities. The location of the project is in a highly visible location for the public and will help drive future funding opportunities.

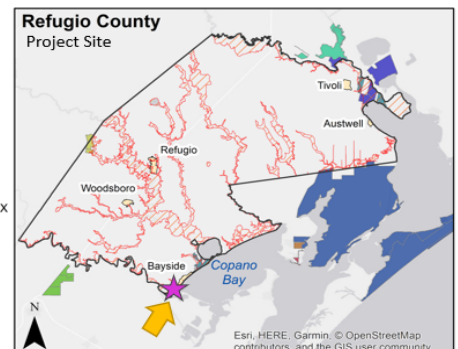
Land Ownership/Jurisdiction:
Refugio County

Black Point Bayside Living Shoreline Project



Legend

- Cities and townships
 - Flood Zones
 - Protected and Managed Areas**
 - Unit Name**
 - Aransas Complex Easement
 - Aransas National Wildlife Refuge
 - Goose Island State Park
 - Grassland Reserve Program (GRP), San Patricio, TX
 - Grasslands Reserve Program (GRP)
 - Guadalupe Delta Wildlife Management Area
 - Us-Tx-142-12
 - Wetlands Reserve Program (WRP), Refugio, TX
 - Wetlands Reserve Program (WRP), Victoria, TX
- Imagery and Data sources: ESRI, Google, USGS, USCENSUS



Mission River Living Shoreline Restoration

Project Description: The project will help restore riparian function and shoreline stabilization along the Mission River by installing living shoreline features. The river is experiencing stream bank erosion and habitat degradation impacting the overall water quality of the river as well as the Copano Bay. During the heavy rainfall events of July 2021, the Mission River at Refugio rose above major flood and crested at 31.24 feet putting the residents living around the river at risk. The project will include evaluation of the riparian areas along Mission River from Refugio to Mission Bay to identify riparian restoration opportunities and conducting outreach to landowners, as needed, to design living shoreline features along the river. This would involve contacting landowners to discuss the natural and cultural significance of the river, develop educational materials to be used in that discussion and seek landowners' participation and provide funding where appropriate and of interest to the landowner to identify opportunities for living shoreline and habitat restoration. The permitting and construction of the living shoreline features will take place in the next phase of the project.

Hazard Risk Reduction Benefits: This project is proposed along the Mission River experiencing flood risks and water quality challenges due to extreme rainfall and coastal storms.

Ecological Benefits: The project will help protect the riverine habitat and wetlands and create positive ecological cascades for Mission Bay and Copano Bay.

Community Benefits: The project will provide water quality improvement benefits and is a critical first step towards improving public access to the river and recreational opportunities for community members.

Land Ownership/Jurisdiction: Refugio County, Private landowners

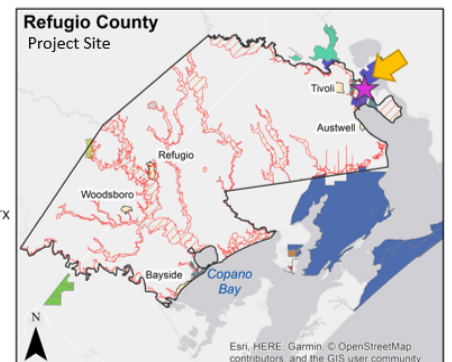
Mission River Living Shoreline Restoration



Legend

	Cities and townships
	Flood Zones
Protected and Managed Areas	
Unit Name	
	Aransas Complex Easement
	Aransas National Wildlife Refuge
	Goose Island State Park
	Grassland Reserve Program (GRP), San Patricio, TX
	Grasslands Reserve Program (GRP)
	Guadalupe Delta Wildlife Management Area
	Us-Tx-142-12
	Wetlands Reserve Program (WRP), Refugio, TX
	Wetlands Reserve Program (WRP), Victoria, TX

Imagery and Data sources: ESRI, Google, USGS, USCENSUS



East Refugio Nature-based Stormwater Management

Project Description: The project will include development and implementation of nature-based stormwater management measures to alleviate stormwater runoff, flooding and nonpoint source pollution at the eastern side of the town of Refugio. The first phase of the project would focus on delivering education programs within the town that increase awareness regarding the impacts of stormwater on riparian areas and water quality. This can include installation of demonstration sites (constructed wetlands, green infrastructure practices, etc.) at Lions/Shelley Park, training for city/county district officials and community members through developing flyers, and other outreach materials. The second phase will involve working with local jurisdiction and community members and potentially develop an incentive program for landowners to install green infrastructure on their properties. Potential measures include, but are not limited to, rain gardens, rain barrels/cisterns, green roofs, permeable pavement, bioretention, constructed wetlands, and bioswales.

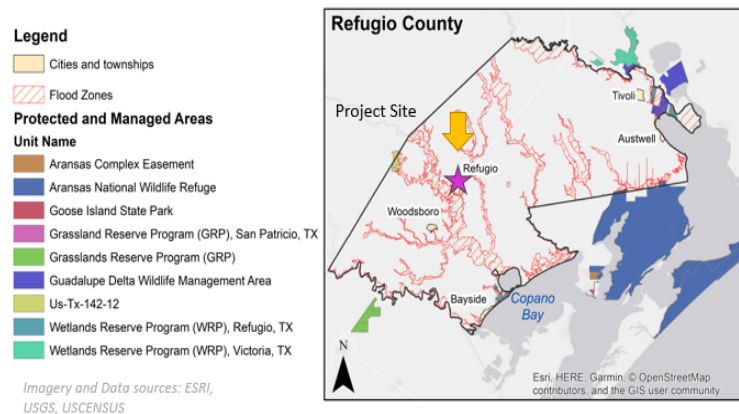
Hazard Risk Reduction Benefits: This project is proposed in the eastern side of Refugio, experiencing flooding due to stormwater runoff and rainfall events.

Ecological Benefits: The project will help protect the water quality of the Mission River that feeds into Mission Bay and Copano Bay by reducing stormwater runoff.

Community Benefits: The project will provide education and learning opportunities for community members. The incentive program developed through the project would also serve as a convincing example for community members to work together on shared flood mitigation goals.

Land Ownership/Jurisdiction: Refugio County, Town of Refugio, Private landowners

East Refugio Nature-based Stormwater Management



Projects identified by the Advisory Team in Workshop #1

Project	Number of Votes	Group
Hynes Bay Restoration	2	1
Mission River Living Shoreline	5	1
Black Point Bayside Living Shoreline	10	1
N. Woodsboro Drainage Green Infrastructure	7	2
E. Refugio Stormwater Management	5	2
Fennessey Ranch Education Component for Ranch Owners	4	3
Black Point Boat Ramp	-	3
Bayside Green Infrastructure	4	4
E. Bayside Flood Mitigation	-	4
Levee Removal (confluence of San Antonio and Guadalupe Rivers)	1	4
Policies for Development on Coastal Land	-	4