City of Corpus Christi

Wetland Construction, Habitat Enhancements, and Land Acquisition at the Oso Conservation Interpretive Park

Project Description:

The City of Corpus Christi (the "City") is developing a 162-acre nature park on the shores of Oso Bay (the "Property"). The Oso Conservation Interpretive Park will include a nature center building, interpretive trails, and significant habitat for wildlife (enhanced through wetland construction, wetland restoration, and invasive species control). The Property already contains wetlands, although some of the wetland complexes have been degraded due to poor rangeland management.

The Property has three components:

1) Wetland Construction and Drainage Improvements – The City shall use SEP Funds to construct wetlands as a best management practice for stormwater control. A drainage ditch transects the Property and discharges directly into Oso Bay. The City shall construct wetlands so that water in the drainage ditch discharges into the wetlands prior to it entering Oso Bay. Construction of the wetlands must include appropriate contouring, elevations, plantings and water inflow to ensure that the wetlands achieve and maintain functionality. The City may also modify other portions of the drainage ditch to enhance stormwater control. By entering into this Agreement, the City certifies that it is not required to perform these actions under its stormwater control permit.

2) Habitat Restoration and Management – The City shall use SEP Funds to enhance habitats by restoring degraded wetlands and controlling and removing invasive species. The Property is largely former pasture land that borders on Oso Bay. The former rangeland harbors both non-indigenous species, such as Bermuda grass, and indigenous species, such as Mesquite and Huisache, that can become invasive and affect habitat functionality. The City shall control/remove the invasive species in an environmentally protective manner. Wetland restoration is needed because of past modifications to the landscape (construction of the drainage ditch and grazing) that have negatively affected existing wetlands. The City shall re-contour, replant, and perform other activities on these existing wetlands as necessary to restore or enhance the functionality of the wetlands.

3) Acquisition of Additional Land – The City shall use SEP Funds to acquire tracts of land adjacent to the Property. The City shall ensure that any land acquired with SEP Funds has high conservation values, becomes a part of the Oso Conservation Interpretive Park soon after acquisition; and is preserved in perpetuity through a conservation easement approved by the TCEQ.

Environmental Benefit:

<u>Wetland Construction</u>

Constructed wetlands, used as a best management practice for stormwater control, will reduce pollutant loading such as oil and grease, nitrogen and bacteria, and floatable trash that can enter into Oso Bay. According to the Center for Watershed Protection, a nationally-recognized expert in stormwater control and wetland construction, constructed wetlands can remove pollutants to the levels specified in the table below, expressed as a percentage*:

Pollutant	Low Performance	Median Performance	High Performance
Total Suspended Solids	45	70	85
Total Phosphorus	15	50	75
Soluble Phosphorus	5	25	55
Total Nitrogen	0	25	55
Organic Carbon	0	20	45
Total Zinc	30	40	70
Total Copper	20	50	65
Bacteria	40	60	85
Hydrocarbons (including oil and grease)	50	75	90
Trash and Debris (Floatables)	75	90	95

* *Urban Subwatershed Restoration Manual 3, Appendix D-3*, Center for Watershed Protection, August 2007.

The values expressed above vary and are the result of evaluations of wetland stormwater treatment systems throughout the country. Since no stormwater wetland system has been evaluated and monitored in Corpus Christi for functionality, local results could vary.

Habitat Restoration and Management

Restoration of degraded wetlands and the removal of invasive species will return the property to ecological functionality. Wetlands are known for providing habitat for wildlife, filtering pollutants, and retaining stormwater, as well as providing other ecological services.

The presence of invasive or nonnative species has been shown to significantly reduce ecosystem function. Removal of invasive and nonnative species will help to enhance the coastal prairie ecosystem.

Acquisition of Additional Land

Eligible Counties:

This project may receive contributions from the following:

Nueces County

Minimum Contribution:

$5,000