

PROJECT PROPOSAL FORM

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GENERAL INFORMATION

Title of Project: Bayou Chico Upper “T” Estuarine Restoration

Date Submitted: 2/21/12

Lead Implementation Trustee: Northwest Florida Water Management District

CONTACT INFORMATION

Project Manager: Nick Wooten, Chief, Bureau of Surface Water Management

Name of Organization: Northwest Florida Water Management District

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BACKGROUND INFORMATION

Project Location: *(Include GIS coordinates and submit shape files if available)*

Bayou Chico, Escambia County, Florida. Latitude 30.405085 North; Longitude 87.255817 West

Project Partners: *(Including co-Trustee, other governmental agency, NGO, University partners, etc.)*

Northwest Florida Water Management District, City of Pensacola, Escambia County, and the Bayou Chico Association

PROJECT FOCUS CATEGORY (CIRCLE ONE)

- **Restore water quality**
- Restore and conserve habitat
- Replenish and protect living and coastal marine resources
- Enhance community Resilience

BRIEF PROJECT DESCRIPTION

The NFWFMD proposes to build upon past efforts to restore Bayou Chico, a major sub-embayment of Pensacola Bay. Bayou Chico has experienced severe environmental degradation due to historic impacts, including industrial and domestic wastewater discharges, shipyard-related pollution, and long-term stormwater runoff. The wastewater discharges have been substantially addressed, and progress has been made over the last two decades in improving the treatment and management of stormwater runoff. Significant restoration needs remain to be accomplished, however, to allow the bayou to heal and to regain its natural richness and productivity.

This project will include the dredging and removal of sediments enriched with nutrients from an area in the Bayou that have been deposited over several decades by stormwater runoff. The area to be dredged is the northern arm of Bayou Chico, starting at the railroad trestle and extending north past the US-98 bridge and including the Jackson Branch and Maggie's Ditch portions of Bayou Chico (referred to as the Bayou Chico Upper T area). Expected outcomes include restored and greatly improved benthic habitat quality, increased biological diversity and productivity, improved water quality and restored navigational access by small boats.

FINANCIAL INFORMATION

Project Design, Permitting and post monitoring Cost Estimate: \$225,000

Project Implementation/Construction Cost Estimate: \$2,257,500

Project Pre-Dredge Sediment Analysis Cost Estimate: \$80,000

Preliminary Project Cost Estimate: \$2,625,500

Available Matching or Leverage Funds from other funding sources: Escambia County will provide the land for the disposal site for the dredged material.

RESTORATION BENEFITS

Describe direct benefits to Project Focus Category:

The Bayou Chico Upper T Estuarine area has progressively been filling with sediment over many decades with sediment from Jackson Branch and Maggie's Ditch from stormwater runoff. Fine grained sediment with a high silt and clay content has accumulated throughout Bayou Chico smothering the bottom habitat and negatively impacting the water quality and biological communities in the bayou. The sediment is enriched with nutrients, heavy metals and other pollutants typical of stormwater runoff. Stormwater retrofit projects completed in the watershed by Escambia County and the City of Pensacola have greatly reduced amount of sediment discharging into this part of the bayou from stormwater runoff. Removal of this sediment from the bayou will contribute to improved water quality and bottom habitat and enhance the ecological restoration of this water body.

Identify mechanisms for providing benefits: *(including, but not limited to restoration, creation, improvement/enhancement, preservation, protection, etc.)*

The proposed project will improve water quality by removing sediment containing enriched nutrients and other pollutants from the water body and eliminate the re-suspension of pollutants contained in the sediment. The removal of the sediment will also improve bottom habitat by removing fine sediment and clay that smothers bottom habitat and directly impacts healthy biological activity in the bayou. The dredging will also result in improved circulation and increased natural tidal flushing in the bayou which will further improve water quality and habitat.

PROJECT IMPLEMENTATION

Timeline for commencement and completion:

A dredge and fill permit similar to that was used for maintenance dredging of the navigation channel will be obtained for the dredging activity proposed for this project. Dredging activities will be made easier with the close location of the existing pond used for dredge material fill. The permitting of the project is anticipated to take about 6 months to complete including pre-dredge sediment testing. Dredging activity is expected to be completed in approximately 18 months after funding for the project is received.

Permits or Environmental Compliance needed: (e.g., ESA Section 7, CWA 404 permit, state permits, NEPA – CatEx, EA, EIS) ACOE/DEP Joint Dredge and Fill Permit in the Waters of Florida.

Public notice, process, and/or participation associated with the project:

There is a strong support local support for this project from the City of Pensacola and Escambia County as well as recreational and commercial stakeholders in the community. Escambia County will provide notification to the local community and stakeholders in the basin.

MONITORING AND MAINTENANCE

List anticipated pre and post project monitoring activities:

Monitoring and documentation of the hydrologic restoration will take place with photographs and monitoring that will be completed by the state and local governments to assess the water quality and habitat improvements in the bayou.

List anticipated long term maintenance activities:

The County's dredge material fill site, located immediately west of the proposed dredge area, will be monitored to comply with permit requirements. Groundwater quality may be monitored as a requirement of permits.

List anticipated short term maintenance activities:

Water quality monitoring will take place during dredging operations in accordance with the permit requirements to minimize any impacts during the removal of the sediment.

LIKELIHOOD OF SUCCESS

Potential general risks to project success:

Maintenance dredging of the navigation channel was completed by the U.S. Army Corps of Engineers in 2008 to improve navigation and circulation in the bayou. The removal of the sediment also resulted in improved water quality in the bayou. This project will be a continuation of the previous dredging activity. Project permitting for the navigation dredging in 2008 took several years to complete due to concerns related to the disposal site at an old borrow pit site that was acquired by Escambia County. Extensive monitoring for a 3 year period after completion of the dredging confirmed that no impacts to the groundwater occurred from disposal of the dredge material. The dredging operations for the restoration in the Upper T area of Bayou Chico should take a much shorter time period since the system is already in place to initiate a dredging program and a sediment holding pond that can take all the dredge material is close and available with a monitoring network.

PHOTOS/MAPS/DEPICTIONS

