# Crayfish Habitat Restoration

Partnerships & Regional Incentives

Bay

| | |
|---|---|
| *Year Added to Priority List* | *2020* |
| *Project Acres* | *2,348* |
| *Acquired Acres* | *0* |
| *Cost of Acquired Acres* | *$0* |
| *Remaining Project Acres* | *2,348* |
| *2020 Assessed Value of Remaining Acres* | *$3,531,325* |

## Purpose for State Acquisition

The Crayfish Habitat Restoration project will provide habitat protection for the Panama City crayfish, which is narrowly endemic to a small region of Bay County and enhance conservation of coastal resources. The project will restore important ecosystems, landscapes, and forests, to enhance and protect significant surface water, coastal, recreational, timber, and fish and wildlife resources. The project will restore coastal habitat in northwest Florida, provide surface and groundwater protection, protect natural floodplain functions, and provide opportunities for fish and wildlife resource-based public outdoor recreation.

## General Description

The Crayfish Habitat Restoration proposal comprises multiple parcels located in eastern Bay County in urban/suburban Panama City. The project is comprised of three properties in the St. Andrews Bay watershed and consists of a 40-acre parcel (Highpoint tract), a 130-acre parcel (Lynn Haven tract), and a 2,178- acre property (Star Avenue tract). The county proposes acquisition of the project site to achieve multiple goals: to protect habitat for the Panama City crayfish (Procambarus econfinae), offer recreational greenspace, and provide watershed protection for St. Andrews Bay. Long-term management will be facilitated by funds pledged by the FWS and two private partners.

Predominant current land use is silviculture. Historically the sites supported wet and mesic flatwoods, in association with baygalls, basin swamps, dome swamps, and other wetlands. Silvicultural activities replaced former open savannas with short-rotation slash pine in bedded plantations, with consequent loss of native groundcover and altered hydrological regimes. These activities have been detrimental to the Panama City crayfish (Procambarus econfinae), which is narrowly endemic to a small region of Bay County.

**FNAI Element Occurrence Summary**

| FNAI Elements | Score |
|---|---|
| Panama City crayfish | G1G2/S1S2 |
| Florida black bear | G5T4/S4 |

## Public Use

The project will provide passive public recreation such as hiking trails within a mile of the urban Panama City area. The habitats are very attractive to birders and plant enthusiasts due to the number of threatened and endangered species thought to exist in the habitats of the Mill's Bayou Watershed area. This project can help to educate the public and raise awareness of the importance of the Mill's Bayou Watershed and its relation to St. Andrew's Bay. Essential roads will be maintained to provide all-weather public access and management operations. Infrastructure development will be limited to only that which is necessary to allow public access and to provide for the necessary facilities, security, and management of the property. Archaeological and historical sites will be managed in coordination with DHR.

## Acquisition Planning

In October 2020, the ARC added the Crayfish Habitat Restoration project to the Partnerships and Regional Incentives category of the 2021 Florida Forever Priority List. This fee-simple project was proposed by Bay County and consists of three disjunct sites. All parcels intersected by the proposed 2,348-acre restoration sites total 4,085 acres and were valued at $6,473,145 (2019) according to Bay County's property appraiser. The proposed restoration site currently includes partial parcels which Bay County will re-record at the time of survey/acquisition. The property is owned by the St. Joe Land and Development Company.

## Coordination

FWS has pledged 3.73 million dollars towards the development and management of the project.

## Management Policy Statement

FWC could manage the Crayfish Habitat Restoration project for the purposes of operating a WMA, providing ecological diversity, providing managed habitat for both imperiled and common wildlife, and providing the public with fish and wildlife-based outdoor recreational opportunities. All the natural and historical resources would be managed for the purposes of acquisition included within the Florida Forever Act and Chapters 253 and 259, F.S., under a management plan approved by the Acquisition and Restoration Council.

## Manager(s)

FWC

## Management Prospectus

**Qualifications for state designation**

The Crayfish Habitat Restoration project if acquired will help to achieve multiple goals: to protect habitat for the Panama City crayfish (*Procambarus econfinae*), offer recreational greenspace, and provide watershed protection for St. Andrews Bay. Long-term management will be facilitated by funds pledged by the U.S. Fish and Wildlife Service and two private partners.

**Conditions affecting intensity of management**

Resources described in this management prospectus indicate conditions affecting intensity of management. These include natural community types, topography and soils, surface and ground water conditions, extent of historic disturbance, and already existing improvements. Environmentally sensitive areas, such as erosion-prone sites, important habitats, outstanding natural areas, wetlands, or cultural sites shall be identified, appropriately managed, and protected.

FWC conducts analysis of historic vegetation of natural community types when necessary to determine appropriate desired future conditions. Upland wildlife management concentrates on appropriate vegetative manipulations guided by FWC's OBVM program, which includes the application of prescribed fire to achieve conditions acceptable to a broad range of wildlife species within the area's fire-adapted natural communities. Some areas may require ecological restoration of ground cover, control of invasive and exotic species, and either thinning or reforestation. Such resource management projects including hydrologic restoration may be necessary to accomplish restoration objectives and to attain the desired future conditions for communities. This is especially important for conservation of habitats and populations of imperiled or rare species. Landscape ecology is also important, as land use changes in the vicinity of the area, such as intensive residential, commercial, and industrial developments, and the roads that often accompany them, may also affect the attainment of resource conservation goals for the area and the effectiveness of necessary resource management projects.

**Management implementation, Public access, Site security and Protection of infrastructure**

If acquired and leased to FWC for management, FWC will develop a management plan describing the management goals and objectives necessary to implement future resource management programs on Crayfish Habitat Restoration. The management plan will also establish the current and future roles of cooperating entities including governmental agencies, non-governmental organizations, and other stakeholders.

Long-range plans would stress ecosystem management and the protection and management of locally important, rare, and imperiled species. If acquired, historic analysis of natural communities and vegetation types may be conducted, if deemed necessary, and quantified vegetation management objectives will be developed. FWC would also assess the condition of wildlife resources and provide planning support to enhance management of locally important species and recovery of imperiled species on the area. Use of prescribed fire and other essential resource management activities will be

implemented to maintain and restore natural communities and vegetation types to benefit native wildlife resources.

FWC set a long-term conservation goal of increasing the total area of occupied Panama City crayfish habitat to 2,000 acres. FWS has estimated that approximately 2,200 acres of actively managed and permanently protected habitat is needed for the persistence of the Panama City crayfish. Under the proposed ESA listing, the establishment of the approximately 2,200 acres would meet the projected goal for the species.

**Revenue-generating potential**

Revenue from conservation lands can include sales of various permits and recreational user fees and ecotourism activities if such projects could be economically developed. Area regulations would be developed to identify the necessary and required permits, fees, and regulations. Timber sales from thinning operations or restoration of off-site plantations may also yield additional revenue. Apiary leases will be considered as a revenue source depending on whether the area meets the criteria of FWC's Apiary Policy.

The Florida Legislature appropriates funds for land management. In addition, the project sponsor, Bay County, has received commitments from partners to restore and manage the property. Approximately $3.7 million has been pledged for an endowment as mitigation for the restoration and site management of Panama City crayfish habitat.

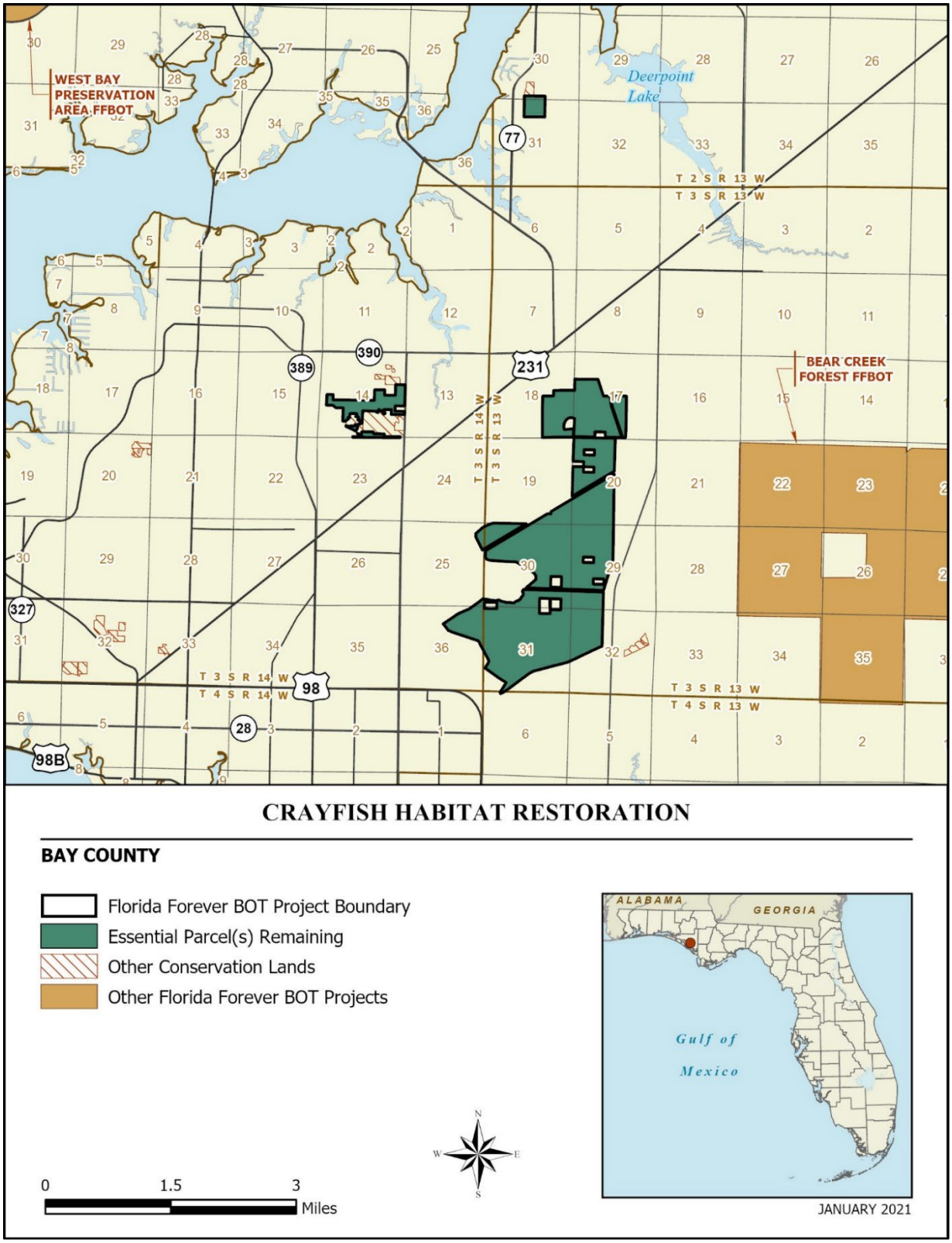
The long-term values of ecosystem services to local and regional land and water resources, and to human health, are expected to be significant.

**Cooperators in management activities**

FWC will continue to cooperate with other state and local governmental agencies including DEP, DACS, FFS, NWFWMD, FWS, and Bay County in management of the property.

**Management costs and sources of revenue**

The initial non-recurring (first year only) start-up cost for the Crayfish Habitat Restoration project is estimated to be $375,680, which includes public access and infrastructure and fixed capital outlays necessary for management of the area. Below is an estimate of the recurring, annual operating costs to operate and manage the Crayfish Habitat Restoration project. Optimal management of the area would require one (1) full-time equivalent (FTE) position. Salary requirements for these FTE positions, as well as those of other needed FWC staff, and costs to operate and manage Crayfish Habitat Restoration are reflected in the cost estimate below. All land management funding is dependent upon annual legislative appropriations.




*Map 1: FNAI, January 2021*