

FLORIDA GULF OF MEXICO RESTORATION

PROJECT SUBMITTAL FORM

Form Purpose and Instructions:

- To assist the project proposal and review process, please complete this Submittal Form. Completion of the Form will contribute to the appropriate information being completely and accurately submitted for each project.
- Take as much space as needed for each question, but please keep responses as focused as possible. It may assist you to review all the questions before addressing any one question.
- Please submit one Form per project, if you have multiple projects - please submit one Form for each project.
- Please submit completed Forms to Restoration.Projects@dep.state.fl.us. Once your Form is successfully submitted, you will receive a confirmation email from the Florida Department of Environmental Protection.

Project Name:

Contact Information *(Include at least one name, phone number, email address, and organization name if applicable):*

Project Location *(Include a map, if possible, and the city, county, longitude/latitude, and watershed):*

Project Description *(Describe all aspects of the project):*

Estimated Project Costs *(Describe the estimated costs of the project, including any assumptions for contingency and ongoing operations/maintenance. Identify other secured funding sources such as matching funds, in-kind contributions or state/federal dollars. In addition, if possible, complete and submit the Cost Appendix Sheet associated with this Form):*

Other Funding *(Indicate if the project is submitted for any potential funding or if it may be used to leverage additional funding, if so please describe the funding source [e.g. State/Federal Grants]):*

Technical Feasibility *(Describe the technologies involved and any relevant past experience or proven success with similar projects):*

Environmental Benefits *(Describe the nature, magnitude, and timing of any environmental benefits attributable to the project. If possible, describe potential environmental performance measures [e.g. pollutant reduction]. Please address any potential environmental impacts associated with implementing or maintaining the project [e.g. loss of a habitat or conversion of habitat from one type to another during implementation]):*

Economic and Social Benefits *(Describe the economic and social benefits including those related to the project's improved ecosystem services and any estimates on jobs created or preserved):*

Community Resilience *(Describe if the project assists Florida's ability to anticipate, withstand, or recover from hazards or threats [e.g. hurricane preparedness, establishing living shorelines]):*

Conflicts or Complements to Existing Efforts *(Describe any ongoing activities in the project implementation area, if the project is part of another plan, and why the project does or does not interfere with that work. Please consider how the project may complement existing local, regional, and state efforts/plans/objectives):*

Complies with Federal, State, Local, and Tribal Laws/Regulations *(Describe any concerns or potential conflicts):*

Readiness for Implementation *(Describe if the project has had any design or permitting work started or completed [attach permits or design work]. Please address any issues that may delay start or finish of the project):*

Public Acceptance *(Describe any known or potential public approval or opposition to the project):*

Additional Information you wish to provide *(Please include any maps, designs, drawings, photos, or background resources that may assist in completely and accurately understanding the project):*

Cost Appendix Sheet	
Cost Item	Cost Estimate
Planning	
Planning Subtotal:	
Construction	
Construction Subtotal:	
Monitoring	
Monitoring Subtotal:	
Project Cost	
Subtotal:	
TOTAL:	

Estimated Costs by Year	
Year 1	
Year 2	
Year 3	
Year 4	
Year 5	
Year 6	

Lake Pippin & North Lakeshore Residential Septic System Elimination Areas

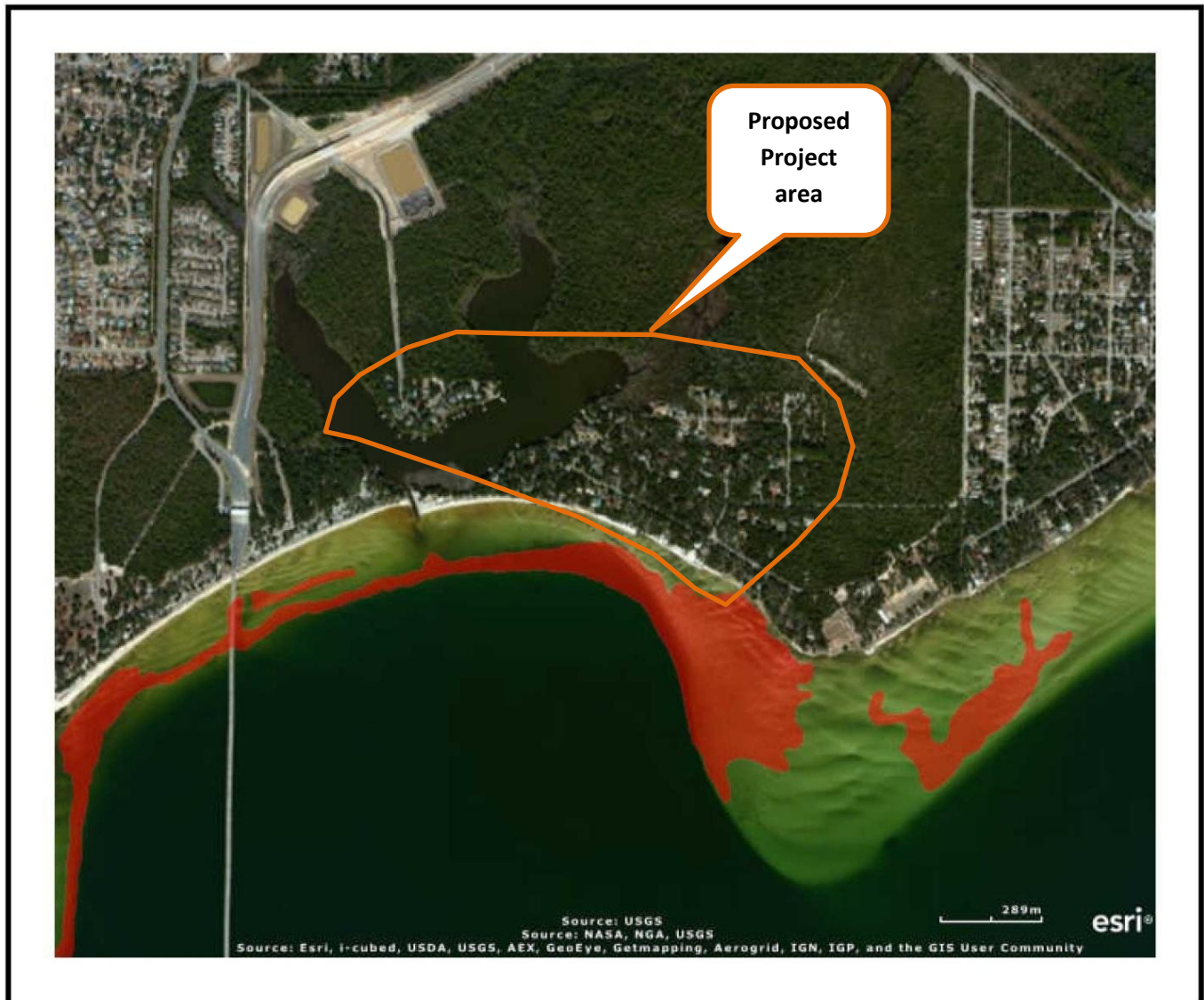


Fig. 1 Location of proposed project. Red shading denotes areas that have seagrass communities (Source: Florida Fish and Wildlife 2011 GIS survey)



LAKE PIPPIN AREA SEWER SYSTEM: Coastal eutrophication has long been documented to have negative effects on nearshore ecosystems. Seagrass meadows are particularly vulnerable to increased nutrient inputs, which spur the growth of phytoplankton and epiphytic algae that shade the seagrass and lead to declines in seagrass health. Seagrass ecosystems are important in that they are highly biologically productive environments and serve as important nursery and/or adult habitats for numerous fish and invertebrate species, some of which are commercially or recreationally important. Previous research has shown that septic tanks leach nutrients into shallow groundwater systems that discharge into coastal waters, resulting in elevated nutrient concentrations in nearshore waters and the epiphytic overgrowth of nearshore seagrass beds. The conversion of approximately 125 homes in the Lake Pippin and North Lakeshore developments from septic tanks to sewer collection systems has the potential to positively impact adjacent seagrass beds by reducing nutrient inputs, which will likely have beneficial effects on seagrass health. In addition to the nutrients leached out by properly functioning septic systems, improperly designed or malfunctioning septic systems can also leach human fecal material into the shallow groundwater systems, thus posing a health risk to individuals utilizing adjacent coastal waters. To assess the impact of the proposed project on water quality and seagrass health in adjacent coastal waters, we propose the following environmental sampling:

Water quality: Water samples will be taken quarterly before project implementation and after project completion. Water samples will be collected in Choctawhatchee Bay along a 2000m transect running parallel to and approximately 50m offshore from the Lake Pippin development. Water samples will also be collected along two transects located within Pippin Lake. The first Pippin Lake transect will extend approximately 400m around the point of the North Lakeshore development and will be located parallel to and approximately 50m off of the shoreline. The second Lake Pippin transect will be located approximately 50 m offshore of the north shoreline of the Lake Pippin development and will run for approximately 800m parallel to the shoreline. All water samples will be collected at set points along the three transects and will be analyzed for ammonia, nitrate, nitrite, phosphorous, chlorophyll *a*, *Enterococcus*, and fecal coliform. Additional water samples for DNA analysis will be collected along the same transects during at least two low flow and two high flow periods both before project implementation and after project completion.



Lake Pippin Area Sanitary Sewer Improvements Project
Okaloosa County Water & Sewer
Okaloosa County, Florida

Seagrass health: Seagrass samples will be taken in Choctawhatchee Bay in the spring and fall in the year before project implementation and the year after project completion at set points along three transects that will extend up to 300m perpendicular from the shore. If seagrass is determined to be present in Lake Pippin, additional transects will be added to assess project impacts on those seagrass beds. At each sampling point, seagrass core samples will be collected and analyzed for aboveground seagrass biomass, belowground seagrass biomass, leaf area index, and epiphyte biomass.

Results will be summarized in quarterly reports.