

Florida Gulf of Mexico Natural Resource Restoration Plan

FWC Potential Projects

Proposed Project or Program: **Unpaved Roads Initiative, Northwest Region of Florida**

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1) Project description, including location

Sedimentation is a leading nonpoint source pollutant and may be the primary contributor of stream turbidity. The U.S. Environmental Protection Agency (USEPA) identified suspended sediment as the most important source of water quality impairment and aquatic habitat degradation (USEPA, 1994). In 2002, a report from the National Water Quality Inventory suggested that 84,503 miles of U.S. rivers are impaired by sedimentation (USEPA, 2002). Road systems typically occupy a relatively small portion of the landscape. However, their combined effect on water quality and aquatic ecosystems pales in comparison. Of the multiple sources that generate stream-bound sediment, one of the most pervasive is the road-stream crossing. Generally, the most direct interaction of roads and aquatic systems occurs at their intersections (road-stream crossing) or near proximity (road-stream proximity) (USFWS, 2005). Direct connection between roads and streams can result in the delivery of sediment, alteration of natural surface and subsurface hydrology, and the risk of exposure to toxic chemical materials (USFWS, 2005). When hydrologic phenomena or anthropogenic activities result in substantial increases in suspended particle concentrations, many aquatic organisms exposed to such conditions may be adversely affected (Neumann et al., 1982). Hardening of road-stream crossings will minimize the amount of sediment entering the stream, thus improving in-stream habitats for both fish and wildlife.

The basins of the Northwest Region can be split into 7 major basins (Perdido River and Bay, Pensacola Bay System, Choctawhatchee River and Bay, St. Andrew Bay, Apalachicola River and Bay, Ochlockonee River and Bay, St. Marks River and Apalachee Bay). The number and location of unpaved roads within these basins can be acquired easily with GIS layers. A simple prioritization method could easily be adopted based on surrounding land and size of impact. However, if a more biologically based prioritization method is desired, a separate planning project would need to precede this project.

2) Provide a range of costs and if necessary, break down into capital costs, operational, or monitoring.

Costs include materials for road hardening and restoration of road prisms as well as any culverts that may need to be removed or replaced.

Total Project: **\$9,000,000-23,000,000**

Perdido River and Bay: \$ 1,000,000-2,000,000

Pensacola Bay System: \$ 2,000,000-5,000,000

Choctawhatchee River and Bay: \$ 1,000,000-3,000,000

St. Andrew Bay: \$1,000,000-2,000,000

Apalachicola River and Bay: \$2,000,000-5,000,000

Ochlockonee River and Bay: \$ 1,000,000-3,000,000

St. Marks River and Apalachee Bay: 1,000,000-3,000,000

This project can be broken into multiple phases, and taken basin by basin. The number and location of unpaved roads can be acquired easily using GIS layers. However, if further analyses are required to prioritize then a separate planning and prioritization project (enter Kevin's project name here) could be funded prior to this project.

3) Duration of project or program

The duration of the project is **20 years for all basins**. This project can be broken into multiple phases where basins are focused on in a sequential manner. Based on size and the number of unpaved roads within the basin, each basin could be completed in 3-5 years.

4) Direct benefits to one of the following (pick the one that is the primary beneficiary)

- a. Restore and Conserve Habitat**
- b. Restore Water Quality
- c. Replenish and Protect Living Coastal and Marine Resources
- d. Enhance Community Resilience
- e. Restore and Revitalize the Gulf Economy

Note: This project accomplishes all of the benefits listed.