

Tamiami Trail Modifications: Modified Water Deliveries & Next Steps Projects

National Park Service
U.S. Department of the Interior

South Florida Natural Resources Center
Everglades National Park



The need to eliminate barriers to overland flow of water in the Everglades is considered one of the indisputable tenets of restoration. Much scientific information amassed in recent decades reinforces the importance of removing these barriers to flow in order to restore natural marsh connectivity.

Tamiami Trail Modifications: Modified Water Deliveries Project

The Tamiami Trail (U.S. Highway 41) has long been recognized as one of the primary barriers to flow of water through the ecosystem. While the 1992 General Design Memorandum for the Modified Water Deliveries to Everglades National Park Project (16 U.S.C. § 410r-S) recommended a plan to address this problem, it only included minor modifications to Tamiami Trail. Subsequent analyses conducted by the U.S. Army Corps of Engineers indicated that additional modifications to the Trail were needed; however, the plans identified were considered to either be too expensive or provide insufficient restoration benefits.

In 2009, Congress authorized implementation of the plan selected in the 2008 Modified Water Deliveries to Everglades National Park, Tamiami Trail Modifications, Limited Reevaluation Report (LRR). The 2008 LRR plan consists of a 1-mile bridge and road improvements to allow the increase in water levels in the adjacent canal to be raised from the current 7.5 ft-ngvd to 8.5 ft-ngvd. The LRR plan would improve potential marsh connectivity, reduce sharp changes in water velocity, and improve rainy season depths and durations. More specifically, raising the water level constraint in the L-29 canal upstream of ENP to 8.5 feet due to the Tamiami Trail modifications will allow for 1,848 cfs peak flows into the park, a 47% increase over current conditions. Ecological responses to these changes in the hydrological conditions within the park include improving conditions to sustain the ridge and slough landscape and improvements to fish productivity that could result in increased wading bird foraging success. Concurrent with the construction of the LRR plan for Tamiami Trail will be the development of a new water control plan. Referred to as the Combined Operational Plan (COP), the water control plan will identify changes in operations of the Central and South Florida Project needed to attain these benefits.

The LRR Plan is acknowledged as only a first step in the modifications to Tamiami Trail needed for full restoration of natural water conditions in Everglades National Park. In recognition of this, the 2009 Omnibus Appropriations Act (Act) (H.R. 1105; P.L. 111-008, March 11, 2009), directed the Department of the Interior and the National Park Service to evaluate the feasibility of additional bridging for the Tamiami Trail necessary to improve the ecological connectivity within the remaining natural Everglades, including Everglades National Park and the State of Florida Water Conservation Areas. The Act further directed that the evaluation

recommend a plan to achieve more natural water flow and habitat restoration within the Everglades. In response to this direction, the National Park Service initiated a study that culminated in a Final Environmental Impact Statement (FEIS) for the Tamiami Trail Modifications: Next Steps Project, noticed in the Federal Register on December 14, 2010.

Tamiami Trail Modifications: Next Steps Project – Key Findings and Summary of Final Environmental Impact Statement

The 2009 Omnibus Appropriations Act direction and recent science on restoration requirements, including science conducted by the State of Florida, provided the foundation for the National Park Service's analysis of the question of how much additional bridging is needed and the benefits and impacts associated with the six alternatives that were the subject of the evaluation. Eight separate factors were assessed by a project delivery team that included representatives of the National Park Service, the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, the South Florida Water Management District, the Florida Department of Environmental Protection, the Florida Department of Transportation, and the Miami-Dade County Department of Environmental Resources Management. These factors included marsh connectivity, marsh water velocity, reconnection of the ridge and slough landscape, vehicular wildlife mortality, preservation of cultural resources, and wetland loss. Analysis of the alternatives found a strong positive correlation between the amount of bridge span and the benefits provided and culminated in the selection of Alternative 6E as the preferred alternative as set forth in the Final Environmental Impact Statement and Record of Decision.

The 2012 Consolidated Appropriations Act authorized construction of four bridges with a combined length of 5.5 miles. In combination with the 1-mile bridge, presently under construction, these bridges will result in a total of 6.5 miles of bridges within the 10.7-mile Tamiami Trail corridor. This level of bridging will eliminate historical hydrologic constraints and allow for more natural sheet flow patterns, improving ecological conditions throughout much of the southern Everglades, including the Water Conservation Areas and Everglades National Park. The increased water volumes and flow distributions will reestablish the seasonal water depths and flooding durations that are critical to the survival of fish and wildlife species, including many endangered species.

If the Tamiami Trail Modifications: Next Steps project is funded and implemented in conjunction with other planned restoration projects, ecological connectivity between the marshes located in the Water Conservation Areas and Everglades National Park will be substantially improved. Further, it will also be possible to move larger volumes of water through the Water Conservation Areas

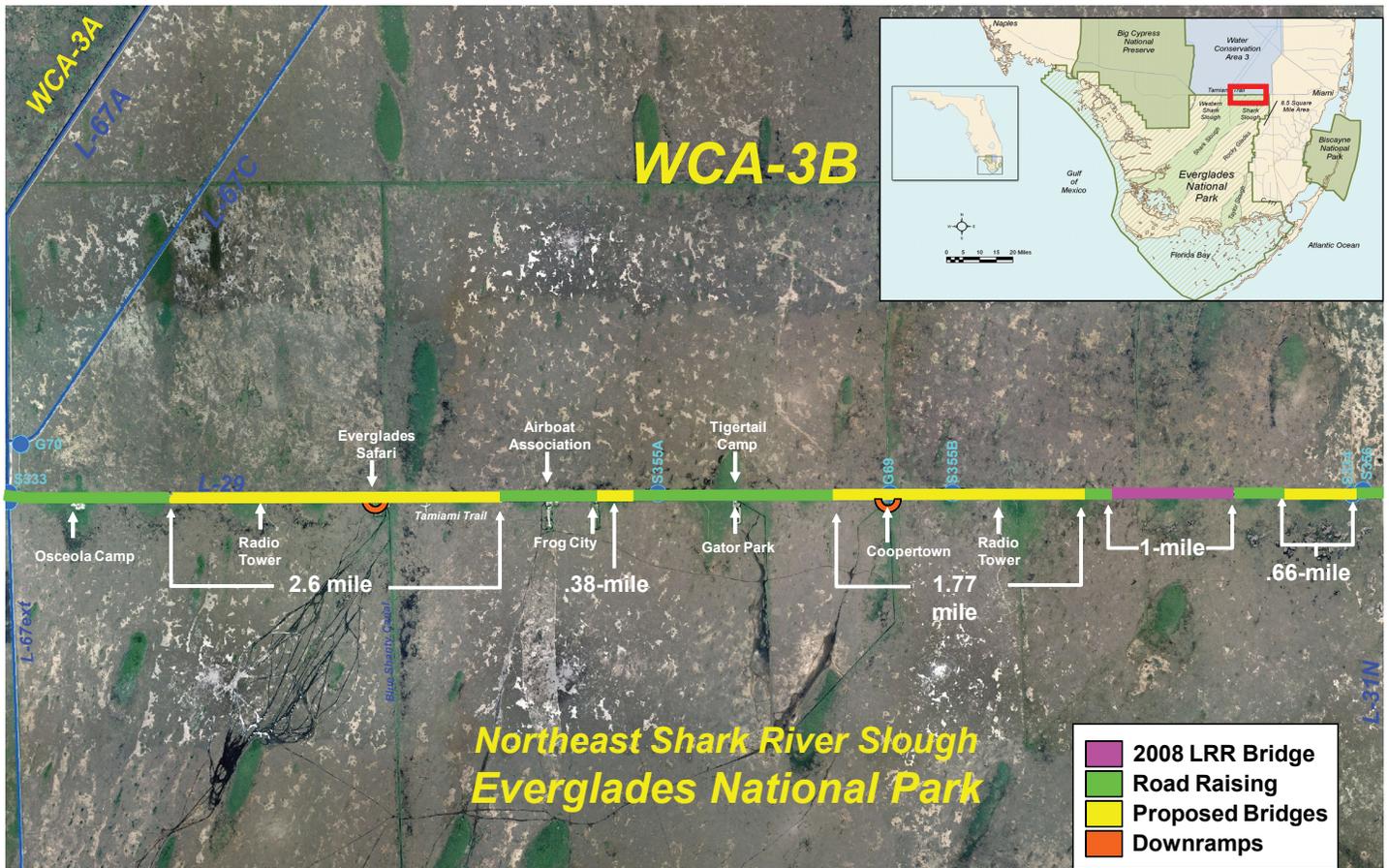
to Everglades National Park in a more natural sheetflow pattern, improving ecological conditions throughout the park and within the Water Conservation Areas. The increased water volumes and improved flow distributions will reestablish seasonal water depths and flooding durations that are critical to the survival of many fish and wildlife species, including the federally endangered Wood Stork, Everglade Snail Kite, and Cape Sable Seaside Sparrow, and state listed Roseate Spoonbill. Alternative 6E will also enable the reconnection of Water Conservation Area 3 to Everglades National Park, reducing the severity and duration of dry-down events in Water Conservation Area 3B and the prolonged deep-water conditions associated with loss of tree islands in the southern portion of Water Conservation Area 3A. Alternative 6E will not adversely affect existing Native American Indian camps located on the Tamiami Trail since no bridging will occur within a half mile of these camps. The proposed location of the bridge spans also maintains access to existing commercial airboat tour operations.

The total estimated cost for implementation of Alternative 6E is \$285 million. The current cost breakdown, reported in Fiscal Year 2010 dollars, of Alternative 6E is as follows:

Construction:	\$260 million
Compensable Business Costs:	\$9 million
Demolition/Telemetry Site Relocation:	\$16 million

The 2012 Consolidated Appropriations Act included \$25 million for the acquisition of commercial properties along Tamiami Trail authorized for acquisition by the 1989 Everglades National Park Protection and Expansion Act. If the additional bridging and raising of the Tamiami Trail is funded by the Congress, construction would be located predominantly within Everglades National Park, south of the alignment of the existing Tamiami Trail corridor, and would require 48.1 acres of lands currently within the park. The National Park Service would utilize current law to provide a highway easement deed to allow the use of these lands to construct the necessary bridging, and would ultimately seek authorization to exchange these lands with the State of Florida for an equal amount of state lands adjacent to the current park boundary. This approach is the same as was utilized for the implementation of the 1-mile bridge for the Tamiami Trail as part of the Modified Water Deliveries Project.

National Park Service Preferred Alternative Alternative 6E: 5.5 miles of bridges and remaining roadway elevated



Alternative 6E had the highest importance score, consists of a 5.5 miles of bridging, and would also maintain access to the commercial airboat facilities and the Native American Indian camps.