

**Project Name:** U.S. DOI Modified Water Deliveries to Everglades National Park  
*Mod Waters (MWD)*  
**Project ID:** 1307  
**Lead Agency:** National Park Service  
**Authority:** Everglades National Park Protection and Expansion Act of 1989 (Public Law 101-229)  
**Funding Source:** DOI

**Strategic Plan Goal(s) Addressed:** **Primary:** 1-A.3 **Secondary:** 2-A.3, supports 3-B.1

**Measurable Output(s):**

- 16 miles of impediments removed  
{Tamiami Trail (11 miles), L-67 Extension (4 miles); L-29 (1 mile)}
- 190,000 acres of habitat improved

**Project Synopsis:** In 1989, Congress approved the Everglades National Park Protection and Expansion Act for the purpose of modifying the Central and Southern Florida (C&SF) Project to improve water deliveries to Everglades National Park (ENP), and to take steps to restore the Park's natural hydrologic condition.

Hydrological improvements are crucial to restoring ecosystem productivity in the southern Everglades and maintaining adequate freshwater inflow to downstream estuaries along the Gulf of Mexico and Florida Bay. Addressing the effects of the Tamiami Trail (U.S. 41) is a major component. The roadway was built in the 1920s so vehicles could travel between two of the earliest centers of population growth in southern Florida, Tampa and Miami. Decades later, restoration agencies identified the Tamiami Trail as one of the most serious threats to the health of the Everglades, as it acts like a dam stopping water flows from moving south. Modified Water Deliveries (MWD) authorized the U.S. Army Corps of Engineers (USACE), in consultation with the DOI, to construct modifications of the C&SF Project water management system and related operational changes and “to the extent practicable, take steps to restore the natural hydrological conditions within the park” improving water deliveries to ENP.

The project design in the USACE 1992 General Design Memorandum (GDM) and Environmental Impact Statement, *Modified Water Deliveries to Everglades National Park, Central and Southern Florida Project for Flood Control and Other Purposes*, and subsequent supplements, specify the construction of structural features with the intended purpose of restoring conveyance between Water Conservation Areas (WCAs) north of ENP and the Shark River Slough, the lifeline of ENP. The combined features would improve conditions for more than 900,000 acres of habitat, aid in the recovery of threatened and endangered species, and lay a foundation for future restoration efforts under the CERP.

In the 1992 GDM, the MWD project consists of four major components. All are necessary and work together to restore flows from WCA-3A to WCA-3B and under Tamiami Trail to the historic headwaters of the Northeast Shark River Slough in the Everglades Expansion Area:

- (1) **Flood Mitigation for 8.5 Square Mile Area (8.5 SMA):** a residential and agricultural area directly adjacent to expansion boundary in East Everglades, and tribal residential areas along U.S. 41;
- (2) **Conveyance and Seepage Control Features (CSCF):** facilitate flow through the system from WCA 3A to WCA-3B and limit seepage eastward from WCA-3B and ENP, including the re-establishment of the historic Shark River Slough flow ways;
- (3) **Tamiami Trail Modifications (TTM):** facilitate water flow beyond the road south into ENP; and

- (4) **Project Implementation Support (PIS):** includes monitoring and operational changes, an experimental program; development of a final water control plan, and raising Osceola and Tigertail Camps.

Most of the 109,504 acres of land were acquired in the East Everglades as part of the Everglades National Park expansion by the end of 2012. Acquisition of land within the East Everglades addition is necessary to limit further losses suffered by ENP due to habitat destruction outside former boundaries and to restore natural water flow patterns critical to the ecological integrity and long-term viability of park resources. Only six properties remain to be acquired consisting of three commercial airboat operators, two radio tower facilities, and a strip of land owned by Florida Power and Light (FPL). An additional property, the Airboat Association of Florida, will be acquired by the USACE.

Since completion of the 1992 GDM, scientific investigations identified revised ecosystem restoration requirements and potential design problems associated with some 1992 features. These requirements, in turn, resulted in the completion of supplemental NEPA documents for the 8.5 SMA component (July 2000) and the Tamiami Trail Modifications (TTM) component (January 2006, August 2008).

Historically, the project has been funded through the National Park Service (NPS) in the Department of the Interior (DOI) as part of the NPS annual construction appropriations. Total appropriations through FY2013 to the NPS for the MWD project amount to \$337,371,000. Due to the increase in the estimated cost of the project and the focus of much of the remaining work on construction, additional funding was requested through USACE appropriations in FY06, FY07, and FY08. Specifically, in FY06 \$32.6 M was received through USACE, primarily to support the construction of the 8.5 SMA features and during the latter two years, USACE appropriations supported the Tamiami Trail project. USACE funding provided for the MWD project totaled \$77.5 M.

**Current Status:**

Since the 1992 GDM, the 8.5 SMA 2000 GRR ROD and the 2008 TTM LRR, there have been design changes to the 8.5 SMA and TTM components, operational development efforts identified that would include the C-111 South Dade Project under a Combined Operations Plan, development of a Pilot Swales feature and additional monitoring requirements resulting in additional costs to the project. Due to limitations on the funds available from the NPS line-item construction program, a maximum of \$336.5 million is available to complete this project. Combined with the \$77.5 million from prior Corps of Engineers funding and the approximate \$3+million to be received from the Florida Department of Transportation for the TTM, the not-to-exceed amount to complete the project is now \$417+ million. The final allocations from the NPS for the project will be in FY 2013. Priorities suggested in March 2012 by the NPS for completion within the new budget amount were provided to the USACE and include in order of priority:

- (1) Tamiami Trail Modifications
- (2) Continue required endangered species monitoring
- (3) 8.5 SMA seepage collector system
- (4) G-3273 Relaxation and S-356 Test
- (5) Development of a final operating plan for MWD constructed components

The NPS and the USACE continues to develop the Scope for the G-3273 Relaxation and S-356 Test and development of the final operating plan for the MWD constructed components that were initiated in 2013. The effort must remain within the not to exceed amount of \$417+ million. No additional funding is planned or will be provided for the remaining features of CSCF or Combined Operational Plan. To proceed with the G-3273 Relaxation and S-356 Test effort and the implementation of a final water control plan, sufficient real estate must be acquired and water quality concerns expressed by the SFWMD and FDEP must be resolved. Current status by component is provided below.

**(1) Flood Mitigation for the 8.5 Square Mile Area (SMA)**

The following features have been completed or are in the final phase of completion:

- Land acquisition
- S-357 pump station
- S-357 Stormwater Treatment Area (STA)
- Internal flood mitigation canal
- Perimeter levee
- Internal canal levees
- Land transfers to NPS
- Land transfers to SFWMD
- Internal road and bridge improvements

Lands were acquired and construction was completed in 2008. The Las Palmas residential area, referred to as 8.5 SMA, now has perimeter levees and a seepage collector canal to mitigate for the increased flood risk with planned increased water flows and levels in ENP with future MWD and C-111 component implementation. The new pump station (S-357) will remove water from the seepage collector canal to prevent increased water levels in residential areas, while allowing for increases in the adjacent ENP lands, separated by the protection levee. Land preparations necessary for operation, including access control, debris and invasive vegetation removal have been completed. The USACE developed a Draft Environmental Assessment (EA) of the Interim Water Control Plan, held a public meeting November 19, 2008 and released the revised Draft EA for additional public comments in May, 2009. Operational testing and monitoring of the 8.5 SMA project features began June 1, 2009 and ended earlier than anticipated due to unanticipated changes in water levels. To address the unanticipated changes in the water levels, new water control criteria were developed and approved. An EA was published and the FONSI was signed June 2011. The features were evaluated to ensure full functional capability and additional design refinements are being constructed. Land transfer was completed as scheduled in early 2014. All features have been transferred to the SFWMD for OMRR&R. Due to the complexity of the structures associated with the seepage collector system, there have been delays in the implementation of these features. The USACE recently revised the contracting for the final features and these features are now expected to be implemented by the end of 2014.

**(2) Conveyance and Seepage Control Features (CSCF)**

The following features have been constructed:

- Spillway structures S-355A and B in the L-29 Levee
- S-333 modifications
- Tigertail Camp elevation (raised to 12.0 feet with 1<sup>st</sup> floor elevations of at least 12.5 feet)
- Pump Station S-356 between L-31N Canal and L-29 Canal
- Osceola Camp elevation evaluation
- Degradation of the L-67 Extension Canal and Levee (4 of 9 miles degraded)
- S-331 Command and Control (added telemetry & remote control of conveyance features)

At this time no additional funding is planned or will be provided for the remaining CSCF features.

- Structures S-345 A, B and C through the L-67A and C Levees
- Structures S-349 A, B and C in the L-67A Borrow Canal
- Degradation of the L-67 Extension Canal and Levee (remaining 5 of 9 miles)

**(3) Tamiami Trail Modifications (TTM)**

In the 2008 Integrated Limited Reevaluation Report (LRR) and Environmental Assessment (EA), USACE re-analyzed the plan approved in the 2005 Revised GRR/SEIS to determine other less costly alternatives and direction for the TTM project. The LRR plan recommended a one-mile bridge to the east (2 miles west of Krome Avenue), and reinforcing the road to mitigate the impacts from increasing water levels in the adjacent L-29 canal from current operational levels to higher water levels consistent with the design high water of 8.5 feet-NGVD. The TTM project as described in the Integrated LRR/EA, with amendment, was approved by the Assistant Secretary of the Army for Civil Works on August 1, 2008.

On September 29, 2009, USACE awarded the \$81 million Tamiami Trail construction contract for the one-mile bridge and to raise and reinforce an additional 9.7 miles of Tamiami Trail roadway. A groundbreaking for the Tamiami Trail Bridge portion took place December 4, 2009. Roadwork construction began in March 2010. An existing utility was not located according to the original roadway plans and specifications that resulted in a contract modification awarded in August 2011. This modification increased the cost of the contract by \$11.4 million, added 214 days. As a result the original project completion date of May 2013 was changed to December 2013. The bridge was completed in May 2013 and substantial completion of the roadway was achieved December 2013. The contractor is finalizing the required documentation for construction transfer. Final costs will be determined upon contract close-out. For this reason, NPS funds appropriated for the MWD project through FY13 that have not been transferred to the USACE will be retained by the NPS until final financial requirements can be determined.

**(4) Project Implementation Support**

This component is ongoing for project and program management support by the DOI and USACE, hydrological stream gage monitoring, wildlife monitoring, the G-3273 Relaxation and S-356 test and a final operating plan. Implementation of the final operating plan is dependent on the acquisition of the remaining real estate within the ENP park expansion area. While negotiations are proceeding to acquire the needed real estate, it is unknown when these acquisitions will be completed. Additionally, water control plan updates will require water quality certification from the State of Florida.

**Est. Cost:** \$ 414,864,000.

**Project Schedule:**

1990	Start
2016	Finish

**Detailed Project Budget Information** (agency appropriations to date and rounded\*):

DOI	\$337,371,000
USACE	\$77,493,000
<b>Total</b>	<b>\$414,864,000</b>

\*As of 9/30/13, approximately \$12.5 million remain as unobligated funds by the Corps of Engineers and approximately \$9.4 million of NPS for MWD project that have not been transferred to the Corps pending the remaining cost for completion of construction of the Tamiami Trail and 8.5 Square Mile Area project components.

**Hyperlinks:** [http://www.evergladesplan.org/pm/projects/non\\_cerp\\_sf\\_projects.aspx](http://www.evergladesplan.org/pm/projects/non_cerp_sf_projects.aspx)

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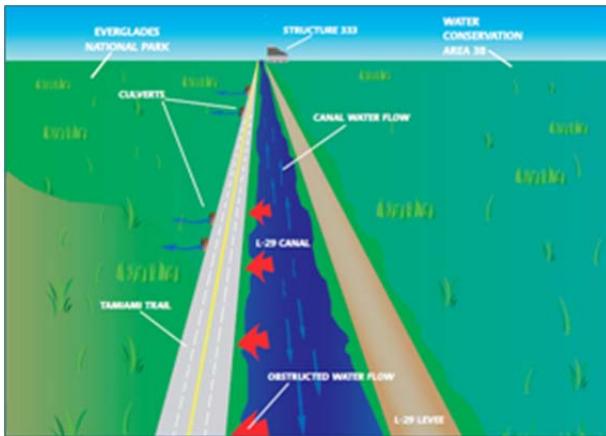
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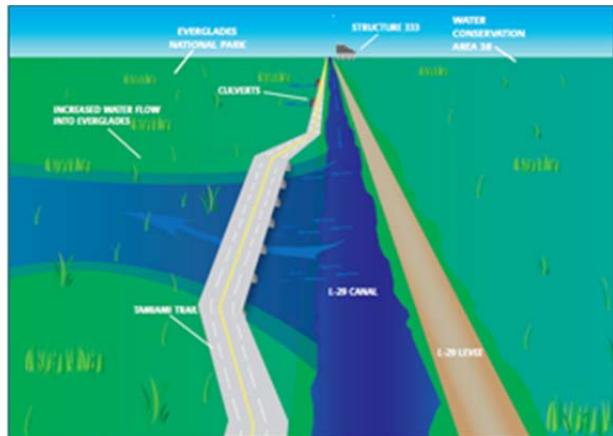
**Source:** Current status information and expenditure calculation were provided by the project managers. Cost estimate information is updated to reflect current budget approved and agreed to between USACE and DOI.

**Additional  
 Information:**

**TAMIAMI TRAIL MODIFICATIONS**



**Current Condition of Tamiami Trail**



**Water Flow When Bridge is Completed**



