Crane Creek M-1Canal Flow Restoration

The Challenge

The M-1 Canal, a man-made flood control canal in Brevard County, has for decades diverted stormwater east into Crane Creek, sending untreated runoff into the IRL. Excess nutrients in this runoff fuel harmful algal blooms and degrade habitat in what is considered one of North America's most biologically diverse estuaries. Recognizing the urgency of protecting the lagoon, a critical part of Florida's $40 billion tourism economy, the **St. Johns River Water Management District (SJRWMD),** in partnership with **Brevard County** and the **Florida Department of Environmental Protection,** launched the **Crane Creek/M-1 Canal Flow Restoration Project.**

Why it Matters:

The Crane Creek/M-1 Canal Flow Restoration Project is more than an engineering success — it's a model for **ecosystem recovery and community resilience.**

Clean water protects dolphins, manatees, and fish species, sustaining the outdoor economy that defines Florida's Space Coast, from fishing charters to waterfront dining.

This project demonstrates how **science-based engineering, strong partnerships, and state investment** can protect Florida's iconic waterways while supporting local communities.

PROJECT FUNDING

- Brevard County: $2.03 million
- Florida Department of Environment Protection $2.45 million
- Federal Funds via FDEP $4.5 million
- St. Johns River Water Management District: $14–15 million

JonesEdmunds

This innovative design redirects stormwater westward into a newly constructed stormwater treatment area (STA) rather than allowing untreated runoff to enter the IRL.

Operable Weir

Allows stormwater capture for eastward pumping, engineered to maintain existing flood control capability.

Two Pump Stations and Force Mains

Divert flow under I-95 to the new treatment facility.

Pipeline System

Delivers treated water to marshlands near the St. Johns River, restoring historic flow.

Stormwater Treatment Area

Naturally filter pollutants, removing nutrients before water reaches the St. Johns River, while also providing floodplain compensation.

ENVIRONMENTAL AND OPERATIONAL BENEFITS

Significant Nutrient Reduction to the Indian River Lagoon

Total Nitrogen:
24,000 lbs/year

Total Phosphorus:
3,100 lbs/year

No negative impact on flood control or local traffic during construction or operation.

Resilient Water Management

Captures and treats up to **7 million gallons of stormwater per day,** improving water quality and restoring freshwater flow to the St. Johns River system.

Advanced operational controls:

Redundant sensors and emergency weir adjustments protect nearby neighborhoods during storm events.