

Monroe County, Islamorada and Marathon Canal Restoration Project Updates FKNMS WQPP Steering Committee Meeting – November 13, 2019



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wood.

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Wood



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Presentation Topics

1. **EPA Grant - Canal Management Master Plan - Guidance Document** for municipalities and unincorporated Monroe County
2. **USDA NRCS Marine Debris and Sediment Removal**
3. **RESTORE funding**
4. **Canal Restoration Projects** – Canal #266 Air Curtain; Canal #259 Culvert; Canals # 82 / 83 / 84; Canal #132 Injection Well; Canal #257 – Culvert / Berm Break

1. EPA Grant - Canal Management Master Plan - Guidance Document

EPA provided a \$100,456 Grant to the County to complete Scope of Work:

Task 1: Update CMMP database

- update water quality summaries (Good, Fair and Poor)
- lessons learned from the implementation of the canal restoration demonstration projects
- FIU water quality and benthic monitoring results

Task 2: Update to the CMMP to develop a Guidance Plan

Evaluate strategies to reduce costs as part of a countywide implementation of canal restoration technologies:

- economies of scale
- effect of grouping similar technologies into a single project
- grouping restorations on a geographical basis
- pre-qualifying vendors
- policy and assessment criteria

Canal Restoration Guidance Document: It's Purpose

- **The current process:**
 - Each project has been submitted to the Water Quality Protection Program Canal Subcommittee (also referred to as: **Canal Restoration Advisory Subcommittee**) for their endorsement.
- **What is being asked today:**
 - Upon acceptance of this guidance document by the WQPP, it will be the responsibility of the municipalities to select the canals and methods of restoration.



Monroe County
Canal Management Master Plan (CMMP)



Prepared By:
AMEC Environment & Infrastructure, Inc.
Prepared For:
Monroe County, EPA, the
WQPP Steering Committee and WQPP Canal Restoration Advisory Subcommittee
September 20, 2013

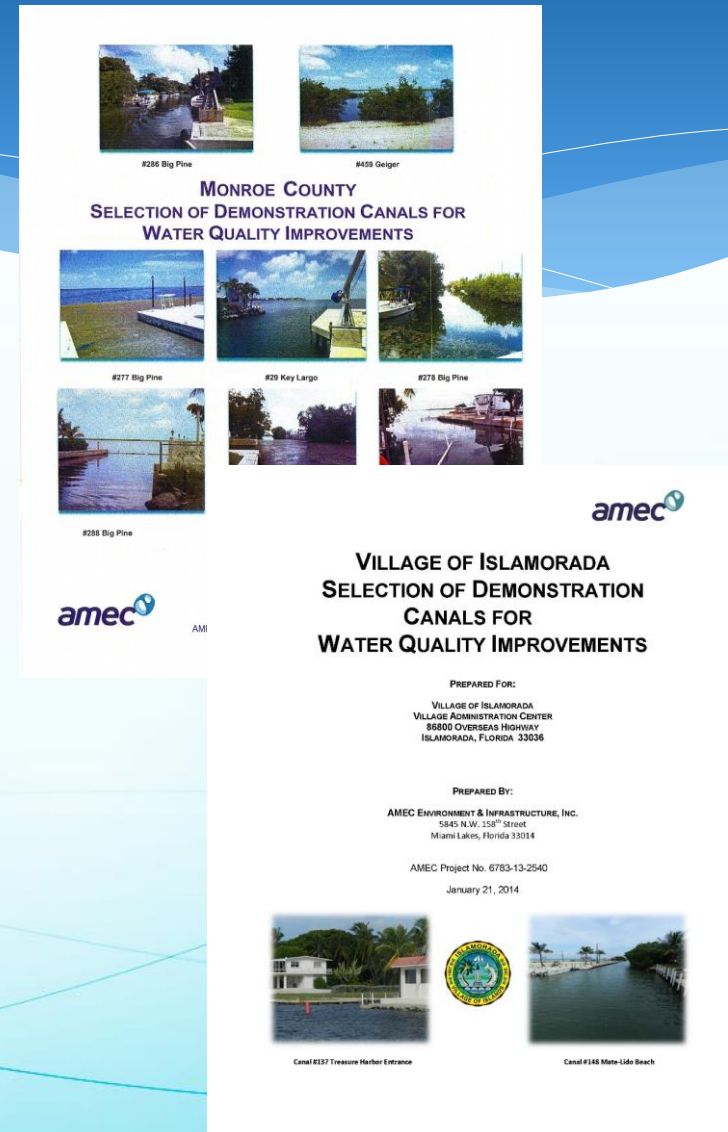
Canal Restoration Guidance Document: Need

- Number of canals that need to be restored
- Ability to take advantage of the available funding mechanisms.



What's in the document?

- A strategic framework that sets forth:
 - Guiding principles,
 - Structure for establishing a program,
 - Do's and don'ts (aka lessons learned),
 - A streamlined process for implementation
- Templates for planning and execution



Topics Discussed: Assessing your capabilities

- Importance of determining your ability to feasibility manage a canal restoration project:
 - Do we have the technical knowledge?
 - Can we manage contractors?
 - How will we fund the construction and operations and maintenance?



Explanations for Determining costs

- The current water quality condition of the proposed canal;
- The suitability of restoration technologies to address the documented water quality issues
 - Will it take more than one technology,
- Ease of permitting,
- Operational costs



Examples of how canal restoration can be done cheaper?

- **Specialization and division of labor:** In large scale operations workers can do more specialized tasks.
- **Spreading overheads:** If a firm merged, it could rationalize its operational centers.
- **Coordination of Projects:** If more than one participating entity pursues a restoration project, coordinating schedules and contracting



What's next?

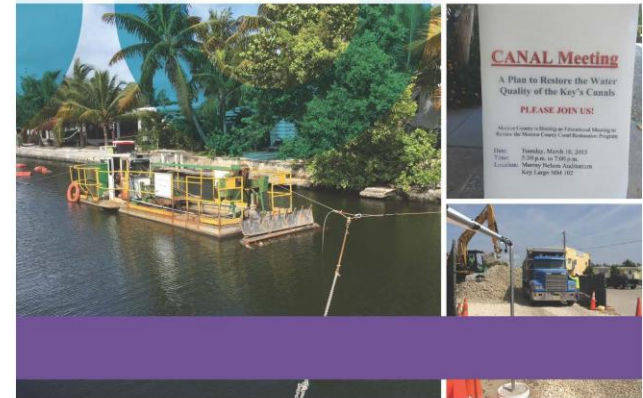
- WQPP acceptance of the Canal Water Quality Restoration Document
- Coordination with the Department of Economic Opportunity
- Outreach to would be participants
- Improving canal water quality throughout the Florida Keys



wood.

Canal Restoration Program Guidance

Prepared for Monroe County, Florida
With Funding from the United States EPA (Grant No. 00D83418)



2. USDA NRCS Marine Debris and Sediment Removal

- **247** canals approved for **marine debris removal** have been completed. Approximately **16,700 cubic yards** of debris removed.
- **9** canals approved for **sediment removal** have been completed. Approximately **8,074 cubic yards** of sediment removed.
- Monroe County held an event on **October 24, 2019** to celebrate the end of the debris removal activities for the NRCS grant.
- **2 additional canals** for **sediment removal** have been approved in Islamorada. Anticipated start date of **December 2019**.



Project Metrics to date

1. **100% Canals Cleared of Debris**
 - 247 out of 247 canals complete
2. **100% Canals Cleared of Sediment**
 - 9 out of 9 canals complete
3. **65% of the Budget Spent**
 - \$30.0 Million of \$45.8 Million Construction Budget
4. **84% of the revised Schedule complete**
 - 423 days out of 505 days of revised schedule
 - Based on additional sediment removal, the County has submitted a **90 day no cost time extension**. If approved by NRCS it would extend the schedule from **December 31, 2019** to **March 31, 2020**.



3. RESTORE FUNDING

A. RESTORE Local Pot 1 - \$1.2 Million

- i. TNC - \$578K; Monroe County - \$478K; Islamorada - \$128K
- ii. TNC and Islamorada grant awarded; subrecipient agreement approved by BOCC
- iii. County grant awarded, on the November BOCC for approval

B. RESTORE Gulf Consortium Pot 3 - \$19 Million

- i. The County is working on project selection
- ii. Paid out through the State Expenditure Plan
- iii. Must follow federal grant guidelines, rules and restrictions

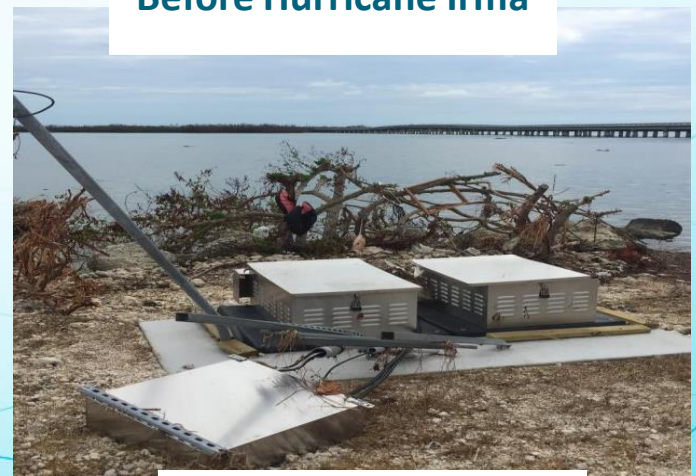
4. Canal Restoration Projects

Canal #266 Air Curtain – Big Pine Key

1. Funded by FEMA
2. Air curtain destroyed in Hurricane Irma
3. Minor redesign required by FEMA for increased resilience
4. Design, permitting and procurement assistance for Canal #266 air curtain on Witters Lane on Big Pine Key is complete.
5. Contractor and CEI firm selected, EarthTech and Tetra Tech, anticipate to start work in November 2019.
6. County set up \$104/month/parcel assessment to pay for operations and maintenance: 1st ASSESSMENT!



Before Hurricane Irma

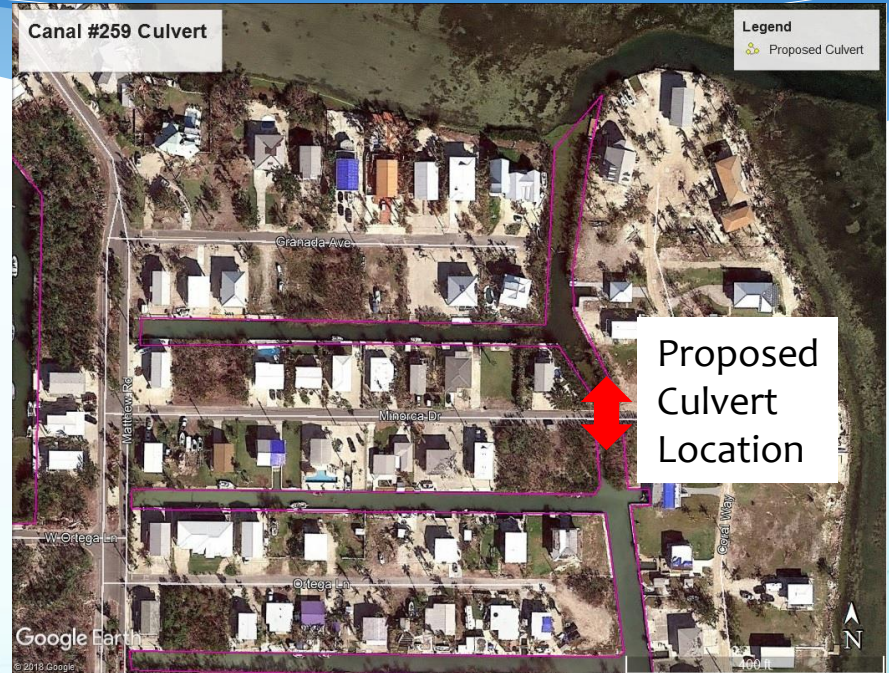


After Hurricane Irma

Canal Restoration Project

Canal #259 Culvert – Big Pine Key

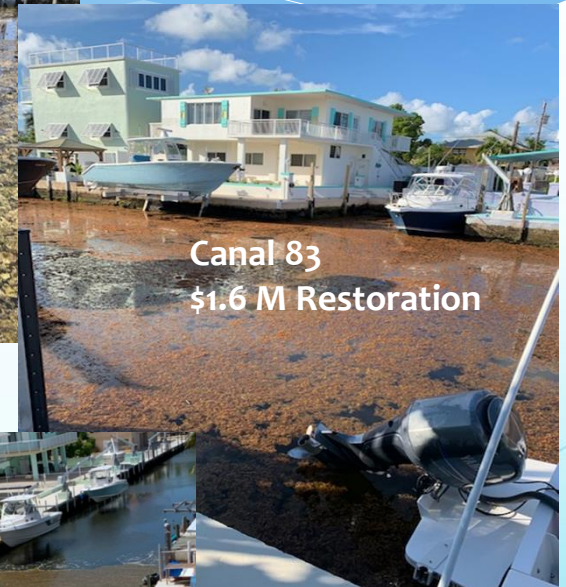
1. Funded by the RESTORE grant and potentially the FDEP WQ protection funds.
2. Canal selected based on water quality summary, funding, and technology.
3. Replace undersized existing culvert under Minorca Drive in Big Pine Key.
4. Design, permitting and procurement task order on the December 2019 BOCC for approval.



Canal Restoration Project

Canal #82 / #83 / #84 Air Curtain / Organic Removal / Backfilling / Breakwater – Key Largo

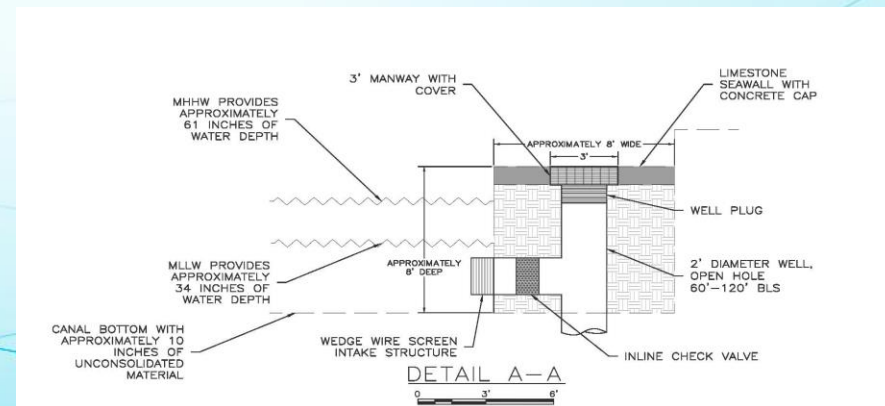
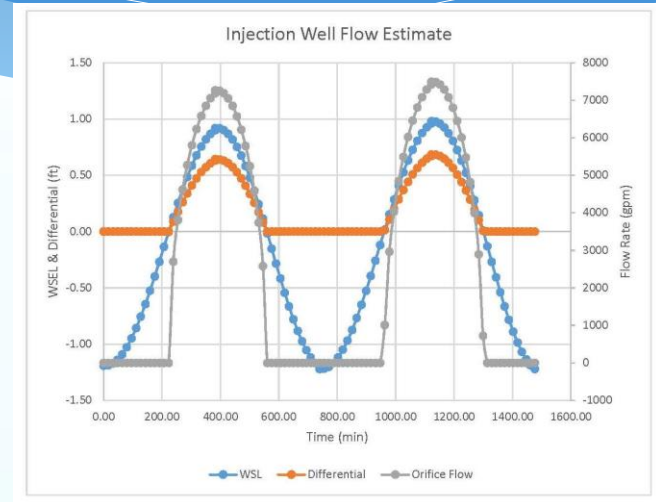
1. County has \$200K approved for FEMA reimbursement for an air curtain in Canals 83 and 84
2. Residents asked for assistant from BOCC to repair / replace jetty / breakwater
3. BOCC directed staff to survey the residents on their opinion on paying for the repairs and O&M
4. County is planning a public meeting with the residents in December 2019 to gauge interest and obtain results for moving forward



Canal Restoration Project

Canal #132 Injection Well - Islamorada

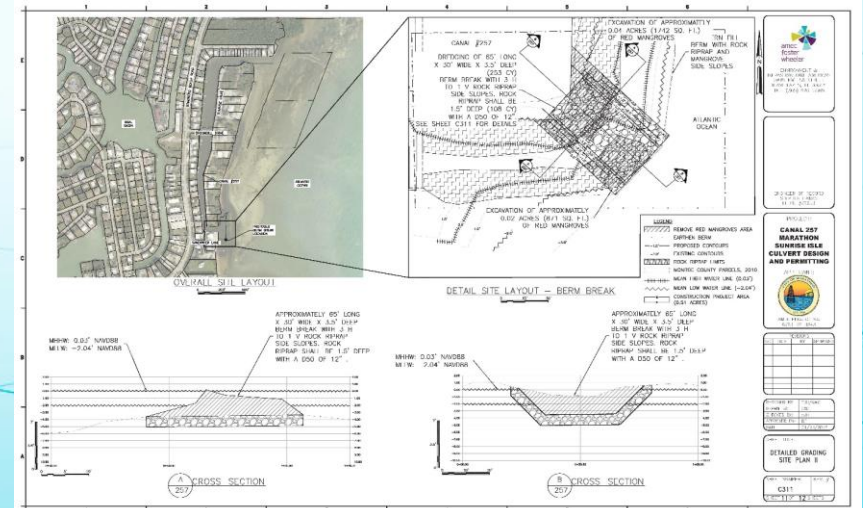
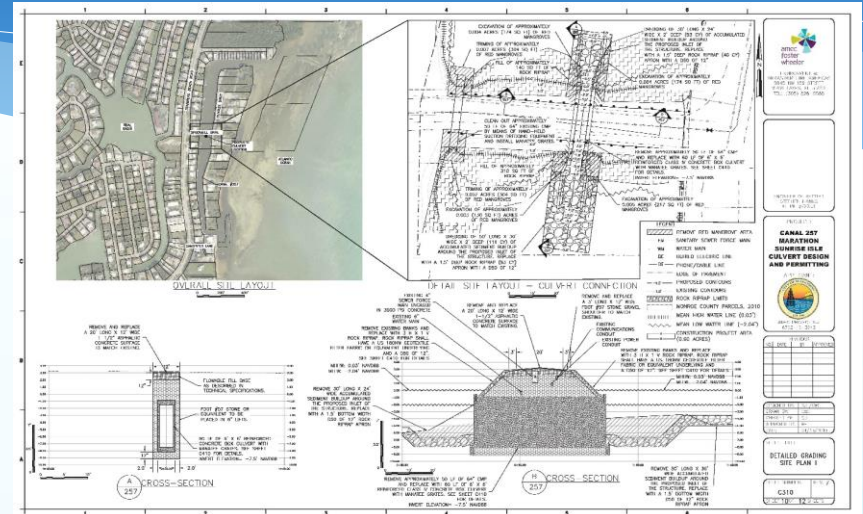
1. Funded by the RESTORE grant.
2. Evaluate the feasibility of using a gravity flow injection well to increase circulation in poor flushing residential canal system
3. Estimated that a maximum injection rate of approximately 700 gallons per minute
4. Obtained surface water samples for analysis of TPH by the FL-PRO method
5. **FDEP Permit application has been submitted**



Canal Restoration Project

Canal #257 Culvert / Berm Break - Marathon

1. City issued RFP for the culvert and berm break that was designed using FDEP WQ protection funds
2. City is reviewing responses from Contractors, anticipated to selected November 2019.



Presentation Summary

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The End