

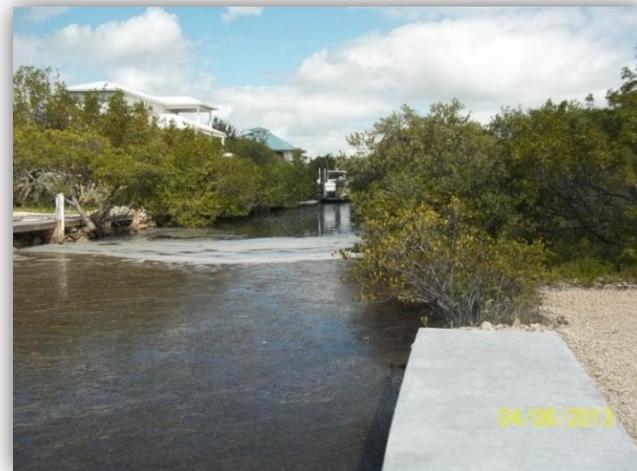
Monroe County Canal Demonstration Projects Update 10-16-13

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Demonstration Canal Selection Process for Top 15

- A.** Narrowed the list from 107 *Poor Water Quality Canals* located in Unincorporated Monroe County to 15
- B.** Canal Management Master Plan Ranking utilized to prioritize canals for water quality improvements
- C.** Ranking Criteria was Approved by Canal Restoration Advisory Subcommittee
- D.** Grouped Canals by Applicable Technology (minimum of 3 canals per each technology)
- **Removal of accumulated organics**
 - **Weed barriers** to minimize additional organic accumulation
 - **Culvert connections** to facilitate flushing
 - **Pumping systems** to facilitate flushing
 - **Backfilling** to remove deep stagnant zones



Process to Select the Top 5 Demonstration Canals

A. Further narrow the list from 15 to 5

- 1) Already evaluated water quality
- 2) Objective evaluation
- 3) Field engineering site evaluations

B. Selection Criteria Approved by Canal Restoration Advisory Subcommittee and BOCC on 09/17/13

- 1) Ease of Permitting
- 2) Ease in Implementation



Scoring Criteria for *Ease of Permitting*

A. Presence of sensitive resources

- Maximum score 15 – 20 for none depending upon technology.

B. Need for mitigation Max score 15-20 for *none required*.

C. Footprint of restoration within dredged canal

- Weed barriers only. Max score 10 for completely within.

D. Additional data needed for permitting

All but weed barriers - max score 10-15.

- Number of bathymetric cross sections
- Sediment characterization
- Private property surveys

E. Central Wastewater Treatment or Septic

- Pumping & culverts – max score 5.

Total score 50



Scoring Criteria for *Ease of Implementation*

A. Width of mouth and/or canal, length of canal, depth of canal

B. Construction Staging Area

Max score 10-20.

C. Site Access for Equipment and Electric Hookups

Weed barriers and pumping only - max score 10.

D. Existing Infrastructure Concerns

Culverts only. *Max score 20* for no impacts.

- private property removal and replacement
- utility impacts

E. Other: Traffic Impacts (culverts);

Hauling Distance (for backfilling);

Quantity of Organics to Remove;

Demolition of Existing Equipment (weed barriers)

F. Total score 50



Final Selection

- Canal Restoration Advisory Subcommittee reviewed ranking on 09/27/13
- Top 5 final canals selected (one for each technology)
- Homeowners will be contacted to determine interest and access approval
- BOCC final approval after written agreement has been received.



Top 15 Canals Evaluated for Canal Restoration Demonstration Projects

	Weed Barriers	Organic Removal	Culvert Installation	Pumping	Backfilling
1	#266 Big Pine Doctor's Arm between Witters & Bailey Lanes <i>Same Canal – 2 categories</i>	#266 Big Pine Doctor's Arm between Witters & Bailey Lanes	#459 Geiger Key. Boca Chica Ocean Shores btw Boca Chica Rd & Jay Lane	#286 Big Pine Whispering Pines between Sands Road & Hibiscus Drive	#29 Key Largo Sexton Cov. Between Bunting & Pigeon Drives
2	#288 Big Pine Hollerich btw Hollerich & Hibiscus Drs	#290 Big Pine between Ave I and J	#277 Big Pine Tropical Bay between Watson and Sunset Rd	#278 Big Pine Eden Pines Colony Pine Ave	#27 Key Largo Sexton Cove Estates Sexton Cove Rd
3	#297 Big Pine Ross Haven between Aves F & G	#297 Big Pine Ross Haven between Aves F & G	#472 Geiger Geiger Mobile Homes btw Caribbean Dr & Venus Ln	#47 Key Largo Bermuda Shores btw Shaw Dr & Bowie Lane	#37 Key Largo Key Largo Mobile Homes Taylor Dr
4	#287 Big Pine Atlantic Estates btw Hollerich and Atlantis Drs	#287 Big Pine Atlantic Estates btw Hollerich and Atlantis Drs			#92 Tavernier Hammer Point Park btw Fairwich & Guilford Cts
5		#288 Big Pine Hollerich btw Hollerich & Hibiscus Drs			

Top 5 Canals Estimated Cost

**TOTAL \$3.2 Million
Construction Costs
for Top 5**

	Weed Barriers	Organic Removal	Culvert Installation	Pumping	Backfilling
1	#266 Big Pine Doctor's Arm Between Witters & Bailey Lanes \$45,000	#266 Big Pine Doctor's Arm Between Witters & Bailey Lanes \$750,000	#459 Geiger Key Boca Chica Ocean Shores between Boca Chica Road & Jay Lane \$150,000	#286 Big Pine Whispering Pines Between Sands Road & Hibiscus Drive \$300,000	#29 Key Largo Sexton Cove Between Bunting & Pigeon Drives \$1.5 Million
		#290 Big Pine Between Aves I & J \$550,000		#278 Big Pine Eden Pines Colony Pine Ave \$230,000	

Related Grants & Timelines

EPA: Water Quality and Seagrass Monitoring Grant

1. \$300,000
2. Awarded to FIU in September 2013
3. For *all* demonstration canals
4. Pre-construction monitoring to determine baseline
5. Post construction monitoring to determine results of project...
“Was water quality restored?”
6. Limited time availability of funds – 2 years est.
7. Delays to homeowner approval process will delay design, construction and implementation period

BOCC APPROVAL

Approval Requested:



1. **Approval of top 15 canals**
2. **Approval of top 5 canals.**
 - Include the **second ranked canal** under the *Organic Removal* Category due to a duplicate canal in #1 rank order for both Organic Removal and Weed Barrier categories.
3. **Approval to authorize staff to negotiate with homeowners**, in rank order for each of the five categories, until written agreement is received from the homeowners for 5 projects.
4. **Approval to limit the period of negotiations with homeowners to 90 days** from date letter is received to receiving written approval. If approval is not received, move to the next canal in ranking.

