

Florida Keys Water Watch

FOR THE

#GATORGOOD

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Florida Sea Grant

Florida Keys Water Watch

Volunteer Water Quality Monitoring Program

Rationale

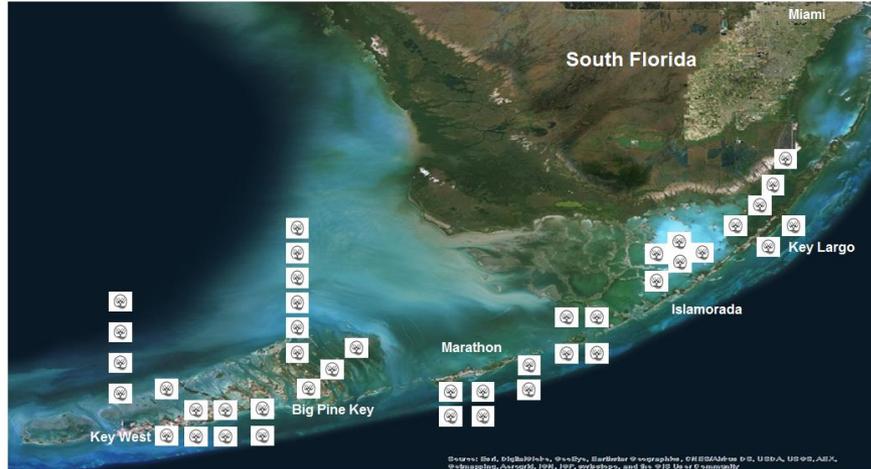
The waters surrounding the Florida Keys are designated Areas of Critical State Concern and are the primary economic driver for Monroe County, generating >33,000 jobs and \$2.3 billion in annual added revenue. In the past century, there have been extensive topographic changes to Monroe County when fill materials dredged from inshore waters were used to create upland and >500 residential canals, thus altering the natural hydrology. 26% of these manmade canals, which discharge directly into the waters of the Florida Keys National Marine Sanctuary, and the third largest coral reef system in the world, have been designated as "Poor," with water quality regularly below state standards.



Residential canals dredged in the 1950s



Wrack floating on a canal in Big Pine Key



Florida Keys Water Watch sites (n=41). Volunteers perform monthly monitoring for dissolved oxygen, pH, salinity and temperature

Response

UF/IFAS Monroe County Extension developed Florida Keys Water Watch (FKWW), a community-based volunteer water quality monitoring program to promote awareness of the importance of water quality and the connections between land-use and aquatic health. Teachers, students, and citizens from diverse groups are trained during 4-hour workshops to become citizen scientists and collect chemical water quality data to assess coastal habitat health. Florida Keys Water Watch is a partnership with, and modeled upon, Georgia Adopt-A-Stream, a 22 year-old program operated through the Georgia Department of Natural Resources Environmental Protection Division (georgiaadoptastream.org). Volunteers are asked to monitor at least one site, at least monthly, anywhere they have legal access. Most volunteers choose to monitor their backyard canals.

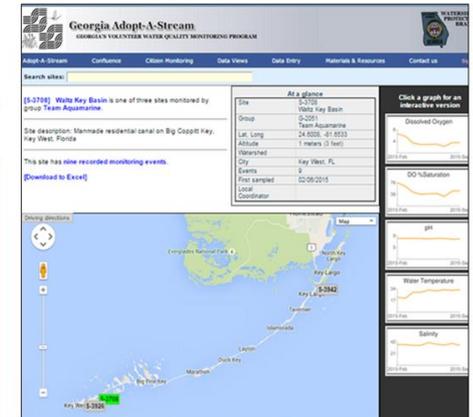
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Florida Keys Water Watch Program Goals

- A:** Raise **awareness** of the importance of water quality in the Florida Keys
- D:** Collect baseline **data** to track coastal health over time
- A:** **Adopt** best management practices to prevent nonpoint source pollution
- P:** Create community **partnerships** between citizens and local agencies
- T:** Provide **tools and training** for students and citizens to evaluate local waterways

Results

Volunteer-based water quality monitoring programs are valuable to assess environmental trends when data is collected consistently over time; FKWW has formed a partnership with Georgia Adopt-A-Stream (GA-AAS), whose EPA-approved program was established in 1993. Since March 2015, 84 people have been trained at 20 4-hour FKWW workshops to perform monthly water quality testing at a site of their choice for dissolved oxygen, pH, salinity and temperature and enter these data into the Georgia Adopt-A-Stream Water Quality Database. To date, 41 sites are being monitored monthly on residential canals, tidal creeks, beaches, marinas, and 1 offshore location from Key West to Barnes Sound, with >240 GA-AAS Water Quality Database entries.



Volunteer site on Georgia Adopt-A-Stream Water Quality Database (georgiaadoptastream.org)



Florida Keys Water Watch workshop attendees learn water quality testing

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FKWW Qualtrics Likert Survey Results (n=21 out of 69)

Knowledge Gain	Topic
31%	Causes of poor water quality in the Florida Keys
46%	The inverse (opposite) relationship of dissolved oxygen and temperature
54%	What is point source pollution?
51%	What is nonpoint source pollution?
35%	What is eutrophication -- how excess nutrients stimulate algae, whose decomposition lowers dissolved oxygen levels?
44%	BMPs to reduce nonpoint source pollution (keeping pesticides, animal waste, leaves, fertilizers out of canals, etc.)
91%	How to find Monroe County Canal Restoration Demonstration website with canal rankings

FKWW Qualtrics Likert Survey Results – Behavior Change

Question	I already have	Very likely	Not likely	Not sure
Create a Florida Keys Water Watch site and perform monthly water quality monitoring?	84%	16%	0%	0%
Share water quality information with friends, family, and neighbors?	58%	42%	0%	0%
Share water quality information with decision makers/elected officials or HOA?	37%	42%	11%	11%
Adopt at least one BMP to reduce nonpoint source pollution (clean boater, properly discard fish carcasses, etc.)	47%	37%	5%	5%
How likely are you to recommend Monroe County Extension Services to a friend?	58%	37%	0%	5%



Thank you!



FLORIDA KEYS
WATER WATCH



NATIONAL MARINE
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FLORIDA KEYS



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Questions?

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