Monroe County, FL
Hurricane Irma Debris Removal Updates
FKNMS SAC Meeting, April 17, 2018

Rhonda Haag
Monroe County

Hurricane Irma makes Landfall in Florida September 10, 2017

Big Pine Key

Big Pine Key

Little Torch Key

Marathon

Islamorada

Tavernier

Key Largo

Manatee in Canal
Big Pine Key

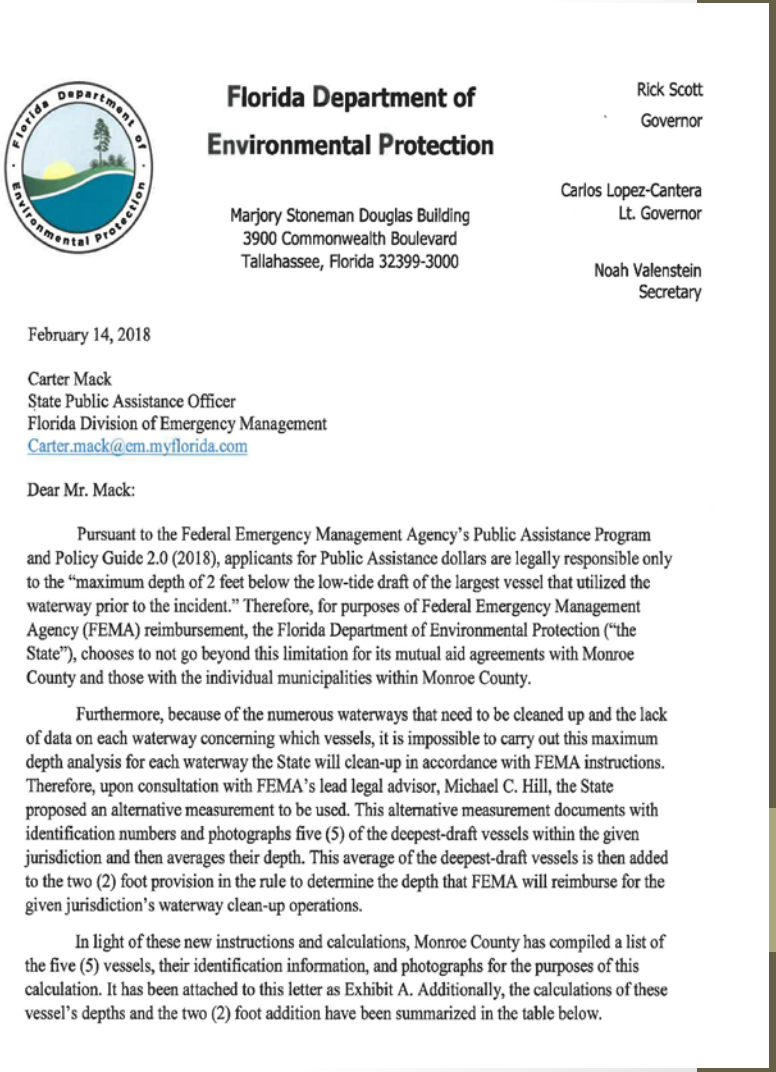
MARINE AND VESSEL DEBRIS REMOVAL MOU

- FL Dept of Environmental Protection (DEP) and Monroe County executed an MOU on 02-06-28 for removal of marine debris in private and public waterways
  - $5 M Debris Removal
  - $1 M Monitoring
  - Focus on Canals
- Separate $2 M MOU's for Marathon and Islamorada
- All 3 will reimburse DEP, and then seek reimbursement from FEMA
- FDEP contracted with DRC and Tetra Tech to start the removal

DEP Dep Secretary David Clark, Mayor Rice, Rep. Holly Raschein, County Administrator Roman Gastesi, County Attorney Bob Shillinger sign the County MOU on 2/26/18

MARINE AND VESSEL DEBRIS
Depth of Debris Removal

- **FEMA only reimburses for removal and disposal of debris related to *navigation hazards***
  - **Normally 2 feet below the low-tide draft of largest vessel**
  - **4 foot average draft of fishing vessel**
  - **Average draft of 5 largest vessels throughout Monroe County is 14.72 feet**



Florida Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Noah Valenstein
Secretary

February 14, 2018

Carter Mack
State Public Assistance Officer
Florida Division of Emergency Management
Carter.mack@em.myflorida.com

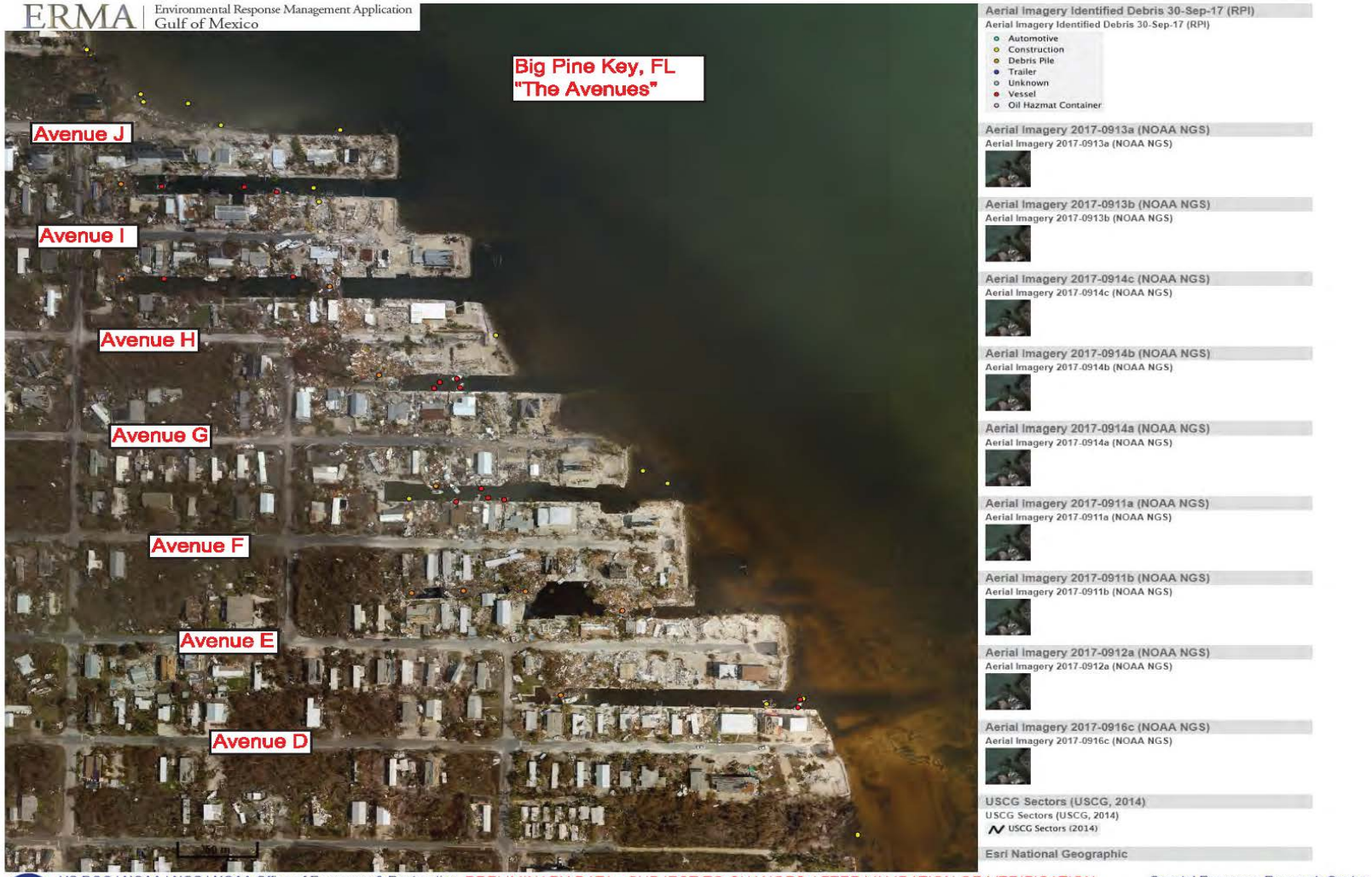
Dear Mr. Mack:

Pursuant to the Federal Emergency Management Agency's Public Assistance Program and Policy Guide 2.0 (2018), applicants for Public Assistance dollars are legally responsible only to the "maximum depth of 2 feet below the low-tide draft of the largest vessel that utilized the waterway prior to the incident." Therefore, for purposes of Federal Emergency Management Agency (FEMA) reimbursement, the Florida Department of Environmental Protection ("the State"), chooses to not go beyond this limitation for its mutual aid agreements with Monroe County and those with the individual municipalities within Monroe County.

Furthermore, because of the numerous waterways that need to be cleaned up and the lack of data on each waterway concerning which vessels, it is impossible to carry out this maximum depth analysis for each waterway the State will clean-up in accordance with FEMA instructions. Therefore, upon consultation with FEMA's lead legal advisor, Michael C. Hill, the State proposed an alternative measurement to be used. This alternative measurement documents with identification numbers and photographs five (5) of the deepest-draft vessels within the given jurisdiction and then averages their depth. This average of the deepest-draft vessels is then added to the two (2) foot provision in the rule to determine the depth that FEMA will reimburse for the given jurisdiction's waterway clean-up operations.

In light of these new instructions and calculations, Monroe County has compiled a list of the five (5) vessels, their identification information, and photographs for the purposes of this calculation. It has been attached to this letter as Exhibit A. Additionally, the calculations of these vessel's depths and the two (2) foot addition have been summarized in the table below.

NOAA Aerials
Debris Volume Estimates



Estimated Volumes of Marine Debris

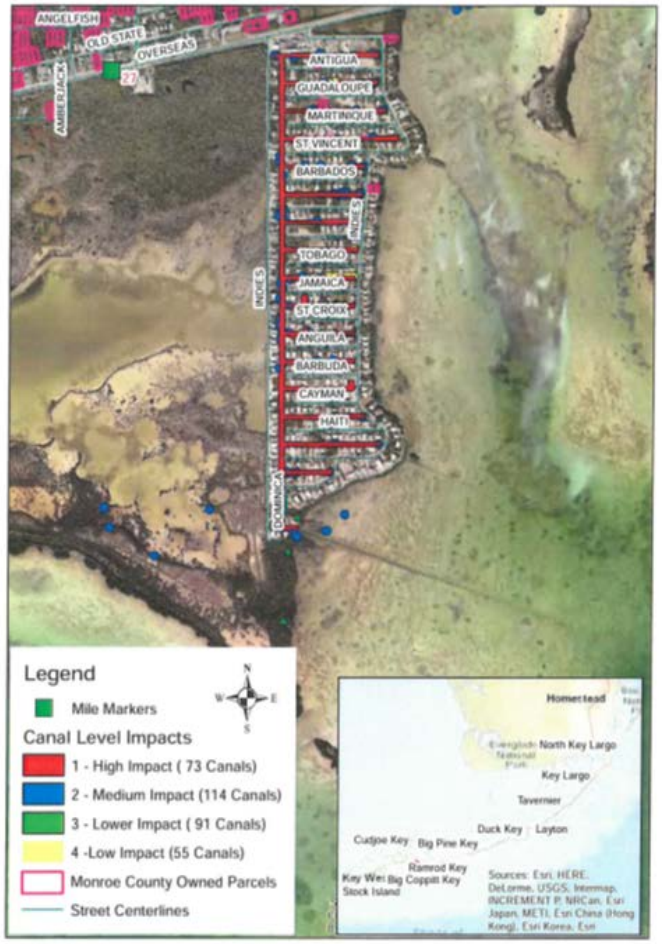
- Estimated 100,000 cubic yards:
  - 50,000 construction & demolition;
  - 50,000 vegetative
- Estimates based on NOAA aerial photos. Need underwater sonar to verify accuracy.
- Total estimated cost to remove marine debris is $52.6 Million throughout Keys

Marathon Canal

Big Pine Key Avenue E Canal

Number of Canals Impacted in Keys

- Total number of canals in the Keys, including municipalities: 513
  - Due to Hurricane Irma impacting the entire Keys, assumption is that all 513 canals are impacted to some degree.
  - 333 in Unincorporated Monroe
- Impacts Vary- Keys Wide:
  1. High Impact: 97 canals
  2. Medium Impact: 150
  3. Lower Impact: 139 canals
  4. Low Impact: 127 canals



Definition of Marine Debris

This debris includes, but is not limited to:

- Vegetation
- Hazardous waste
- Construction and demolition debris
- Propane tanks
- White goods
- Docks
- Non-marine vehicles
- Seawalls
- Houses or portions of houses
- Motorhomes
- Boats not included

MARINE AND VESSEL DEBRIS REMOVAL MOU
Unincorporated Monroe County

- Debris removal ceremony on February 16, 2018
- Started removal in the *Avenues* of Big Pine Key – most heavily impacted area
- Former Big Pine Key Prison site being used as a temporary debris management area
  - Coordination with DEP on environmental monitoring

Erin Muir w/Rep Raschein, Gus Rios w/DEP, Cynthia Hall, Commissioner Neugent, Rhonda Haag, Mayor Rice, County Administrator Roman Gastesi, Islamorada Councilmember Mike Forster

STORM DEBRIS REMOVAL ON BIG PINE KEY

Little Torch Key Debris Removal

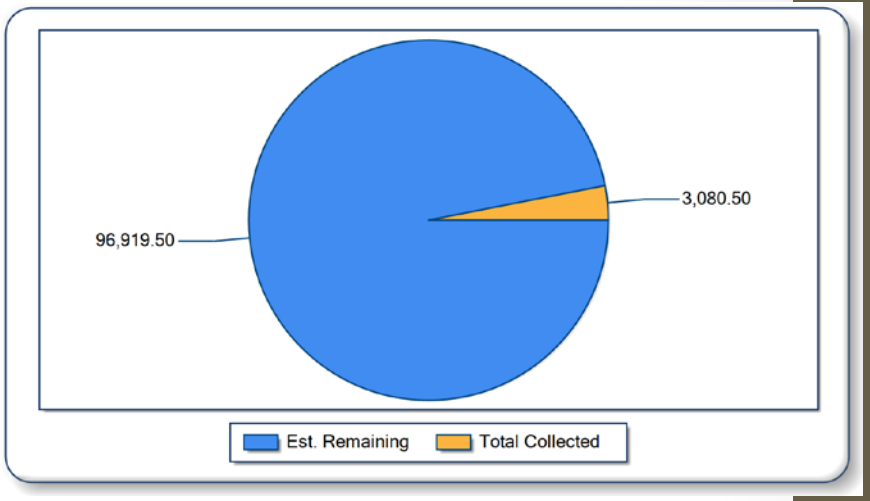
791 CAROLYN AVENUE, Little Torch

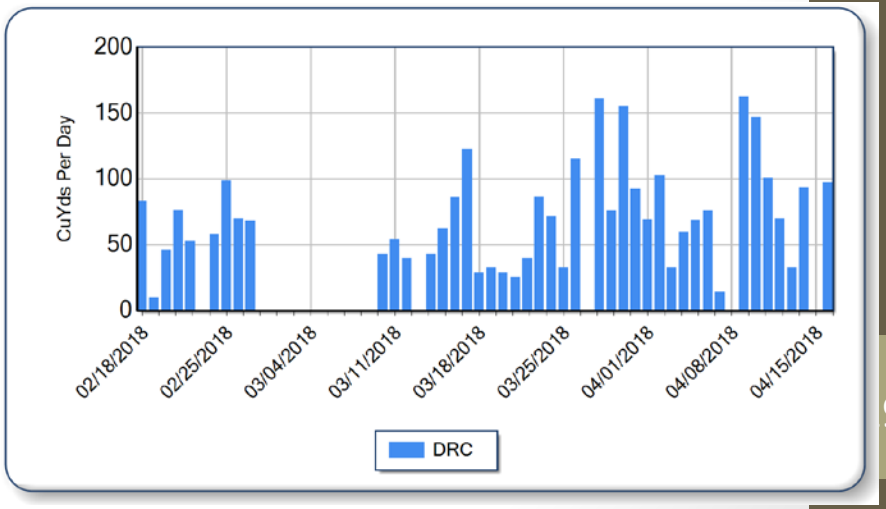
Debris Collected to Date

Below is the 04/16/2018 summary of FDEP Monroe County Waterways Program debris removal operations:

- **Vegetative and C&D Debris Removal Operations:**
  - **Cumulative Total:** 3,081 CY
    Daily Total: 2 load(s) / 97 Cubic Yards / 1 Truck(s) Operating / 1 Barge(s) Operating
  - **Vegetative/Wood:** 0 CY
    Construction & Demolition: 97 CY

- **Site Tickets Issued:**
  - **Cumulative Total:** 48
  - **Big Pine Prison DMS:** 48





Debris Staging Areas

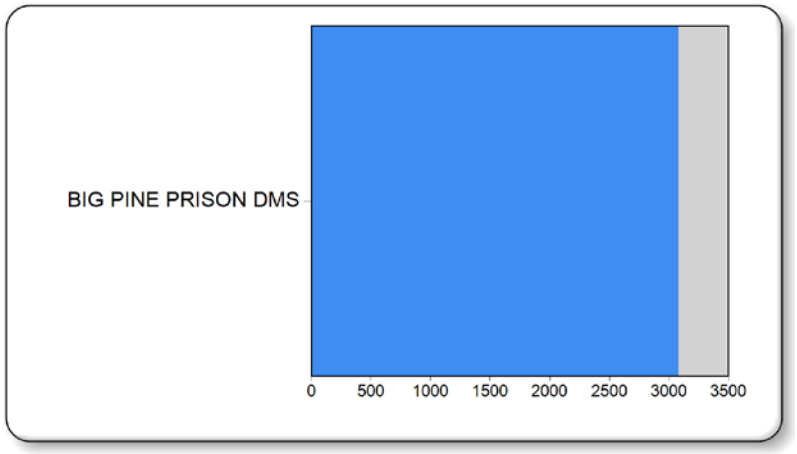
BIG PINE PRISON DMS 147

2,687

- CONSTRUCTION&DEMOLITION 147

  2,640
- VEGETATIVE/WOODY 0

  47



Canals Cleared to Date

Name	Status	Canal Level Impact
258 BIG PINE KEY	In Progress	2
277 BIG PINE KEY	In Progress	2
292 LITTLE TORCH KEY	In Progress	2
288 BIG PINE KEY	Completed	1
317 LITTLE TORCH KEY	Completed	2
339 LITTLE TORCH KEY	Completed	2
259 BIG PINE	Completed	2
263 BIG PINE KEY	Completed	2
266 BIG PINE KEY	Completed	2
282 BIG PINE KEY	Completed	1
286 BIG PINE KEY	Completed	1
287 BIG PINE KEY	Completed	1
290 BIG PINE KEY	Completed	1
293 BIG PINE KEY	Completed	1
295 BIG PINE KEY	Completed	1
297 BIG PINE KEY	Completed	1
299 BIG PINE KEY	Completed	1
300 BIG PINE KEY	Completed	1
350 RAMROD KEY	Completed	1

Couch pulled from the canal along Blackbeard on Little Torch Key

LESSONS LEARNED MOVING FORWARD

- **FEMA RESTRICTIONS**
  - Can't go to bottom of all canals to remove debris
  - Must prove debris is from Irma storm only
  - Not yet clear what $ will be reimbursed to County
- **Not Enough Debris Storage Sites**
- **Low Bid Pricing**
- **Federal Funding Slow To Arrive – work delays**
  - FEMA, NRCS, NOAA, EPA
  - Elected Officials Helping!

Senator Marco Rubio and County Administrator Roman Gastesi meet on April 4, 2018

POTENTIAL FEMA RESTRICTIONS

<u>Potential FEMA FUNDING</u>: $10 Million loan from FDEP on marine debris removal in the Keys, including Marathon and Islamorada. DEP to be paid back starting within 18 months. *Navigation* is the guiding principle.

- **County and municipalities to submit for reimbursement from FEMA.**
- **$6 Million Monroe County, $2 Million Islamorada, $2 Million Marathon**
- **Amount reimbursable from FEMA still under negotiation, not clear what work will be reimbursable**
- **Reimbursable work related only to canals navigability. Sediment removal or plugged canals not covered.**
- **Debris may be left on the bottom of deeper canals if not related to navigation issues**

OTHER POTENTIAL SOURCES OF FUNDING

- **<u>Potential NOAA FUNDING</u>: NOAA has $18 Million available nationwide for storm marine debris removal. Focus on trap and fishing line removal, not construction debris. *Environmental protection* is the guiding principle.**
- **Amount of funding is minimal and not enough to address construction debris or sediment removal.**
- **FKNMS is in need of funds for trap removal.**

CANAL RESTORATION

CANAL SKIMMING PROGRAM

A. Potential alternative to installation of weed gate air curtain systems to remove floating seaweed & seagrass and debris.

B. Proposals opened on October 11, 2017 Adventure Environmental, Inc. was top ranked vendor

C. Initial 6 month demonstration program covers 86 canals in Key Largo. May expand beyond Key Largo canals at BOCC option.

D. Funded by $147,168 from the $1.5 Million FY16/17 Stewardship allocation

E. Start date of 03-1-18, end date of 11-30-18. 9 months total.

F. Contractor established a hotline for residents to report hot spots.

Canal and Nearshore Water Quality Monitoring

1. FDEP will provide 50% funding and require 50% match from Stakeholders - rare for DEP to provide this type of funding
2. FDEP developed a scope of work and asked the County to issue an RFP and manage the contract
3. County included canal / nearshore monitoring in unincorporated Monroe at its own cost
4. RFP issued on February 2, 2018 and proposals received March 27, 2018
5. Monitoring work to begin soon – continue for 2 years.

Backfilling Project
Canal #75 Rock Harbor, Key Largo

A. Adventure Environmental, $1,216,000, was ranked #1 through the selection committee.
B. Funded from the $1.5 Million FY16/17 Stewardship allocations
C. Contract issued on October 17, 2017, start date delayed due to Hurricane Irma.
D. NTP issued on February 7, 2018.
E. Adventure Environmental removed storm debris from Hurricane Irma prior to backfill operations
F. Final completion of work anticipated no later than June 7, 2018
G. As of 4-17-18 Already backfilled over 1,000 truckloads = 20,000 tons of

Canal 75 Backfilling Video

https://vimeo.com/263270156

Unincorporated Monroe County Canal Program Funding

1. RESTORE Gulf Consortium Pot 3 - $19 Million
2. FY17/18 State Stewardship Act –$3.9 Millio to County – varies annually
3. RESTORE Local Pot 1 - $478K
4. DEP Annual funding - $100,000
5. Monroe County funding –amount to be determined
6. Homeowners – amount to be determined

Not a tidal wave of funding

Thank You!

Haag-Rhonda
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