



Florida Department of Environmental Protection

Submerged Lands & Environmental Resources Coordination

Seagrasses & Mangroves

**29th Annual Environmental Permitting Summer
School – Orlando 2015**

Tim Rach





ERP Process

- “Protection of wetlands and other surface waters is preferred to destruction and mitigation”
- “Mitigation ...is only required to offset the adverse impacts to the functions ...caused by the regulated activities”
- “In general, mitigation is **best accomplished** through creation, restoration, enhancement or preservation of ecological communities **similar to those being impacted.**”



ERP Process*

Avoidance, Minimization ... then Mitigation

Mitigation Bank

On-site Mitigation

Off-site Mitigation

** Includes Joint Coastal Permits*





DEP Mitigation Preference

Mitigation can be conducted on-site, off-site, or through the purchase of credits from a mitigation bank, or through a combination of approaches, as long as it offsets anticipated adverse impacts to wetlands and other surface waters and meets all other criteria for permit issuance. Off-site mitigation is preferred when:

(a) On-site mitigation opportunities are not expected to have comparable long-term viability due to such factors as unsuitable hydrologic conditions or ecologically incompatible existing adjacent land uses or future land uses identified in a local comprehensive plan adopted according to Chapter 163, F.S.;

or

(b) Off-site mitigation will provide greater improvement in ecological value than on-site mitigation.



ACOE Mitigation Preference

- Preference Hierarchy:
 - Mitigation Banks
 - In Lieu fee
 - Permittee Responsible
 - On site
 - Off site
 - Additional documentation for the administrative record must include justification for this option



Where to Mitigate

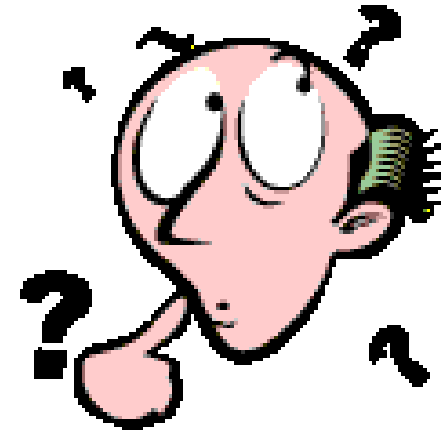
- Mangrove Mitigation Banks?
 - A few are available **with others being permitted now**
- Seagrass Mitigation Banks?
 - **A Draft proposal is under discussion**





What are your options?

- In Lieu Fee / ROMAs
- On-site or Off-site Mitigation
 - Mangrove Planting
 - scrape down
 - seed source
 - nursery stock or don't plant
 - Seagrass Restoration
 - scrape down
 - soil amendments?
 - donor material (or don't plant)





DEPs emphasis

- *Pre-application meetings*
- *UMAM rule development*
- *Specific worksheet for benthic habitats*





Rulemaking

Current Rulemaking:

SWERP Phase II
UMAM





UMAM

We continue to be in active rule development and have incorporated feedback and comments from the seven workgroups to help develop revised field worksheets.

Specific workgroups are focusing on seagrasses and hardbottom.



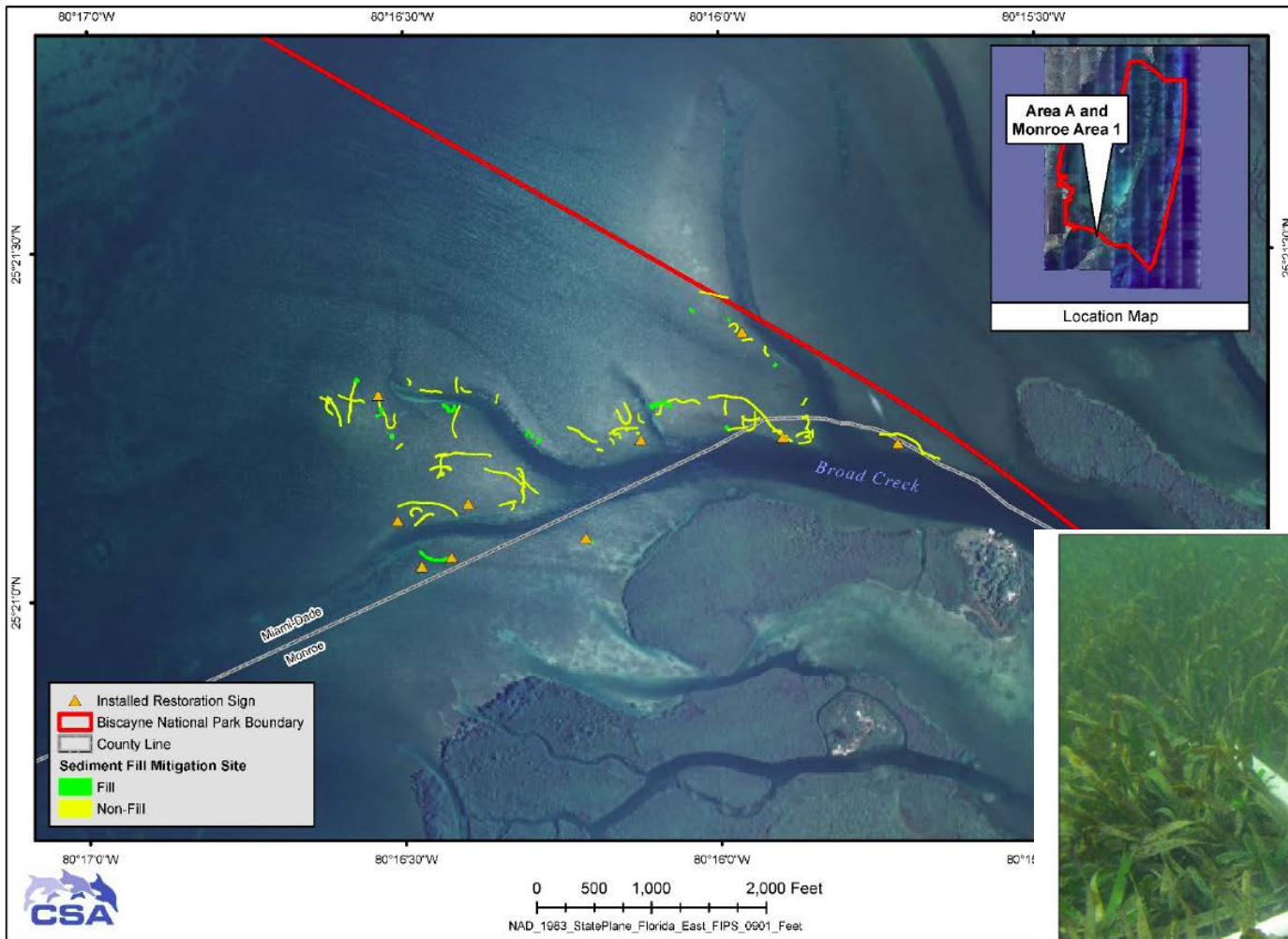


Recent or on-going Projects

- Village of Key Biscayne seagrass restoration/mitigation
 - Seagrass transplants, bird stakes, sediment fill
 - Mitigation for a beach nourishment project
- Residential community dredge channel project
 - Dredging of access channels to an existing residential canal community
 - Scrape down and nearshore planting along with exclusion devices
- Seagrass Mitigation Bank
 - Preservation and enhancement
 - Signage
 - Motorized vessel exclusion



Village of Key Biscayne



Key Biscayne project

5 yrs. Monitoring

1.33 acres

Informational signage





FWRI – Statewide Database

Data Collection – Permit Types

- State Environmental Resource Permits (ERP) issued by FDEP and the Water Management Districts
- State Joint Coastal Permits (JCP) issued by FDEP
- Federal Dredge and Fill Permits issued by the Army Corps
- Federal Permits issued by the Florida Keys National Marine Sanctuary (FKNMS)
- County Permits



Data Collection



- **Time Frame: 1990 to Present.**
- **Continue to Pursue Data on Seagrass Mitigation and Restoration projects from the 1970's, 1980's and early 1990's.**



The Database

	PERMIT FOLDER & GOOGLE EARTH IMAGE	PERMITTEE	PROJECT NAME	PROJECT DESCRIPTION	LOCATION COUNTY	LOCATION WATERBODY	PERMITTING AGENCY	PERMIT DATE
1	03-0209811-001 SAJ-2003-01552	Bay Environmental Study Team, Inc. (BEST)	West Bay Seagrass Restoration Pilot Project	Seagrass Habitat Restoration	Bay	West Bay	FDEP/NWD USACE	4/22/06 6/10/06
2	50-04766-P SAJ-2000-02515	City of Lake Worth/Palm Beach County	City of Lake Worth Restoration Project (Snook Islands)	Seagrass Habitat Restoration	Palm Beach	Lake Worth Lagoon	SFWM USACE	2/15/06 5/31/06
3	44-0299688-001 SAJ-2010-00682 FKNMS-2010-099	CSA International, Inc.	DANI	Vessel Grounding	Monroe	FKNMS-Annie's Beach	FDEP/SD USACE FKNMS	4/12/10 8/19/10 8/16/10
4	13-1805086	Dade County	Fill of Dredged Depressions for Environmental Enhancement - Demonstration Project	Seagrass Habitat Restoration	Miami-Dade	Biscayne Bay Aq Preserve/OFW	FDER	10/9/05
5	52&411343473	FDNR Division of Marine Resources	Seagrass Planting Experimentation Project in Tampa Bay	Seagrass Restoration	Pinellas/Manatee	Tampa Bay; Pinellas County & Terra Ceia Aq Preserves/OFW	FDER	6/26/08
6	52&411343474	FDNR Division of Marine Resources	Seagrass Planting Experimentation Project in Tampa Bay	Seagrass Restoration	Pinellas/Manatee	Tampa Bay; Pinellas County & Terra Ceia Aq Preserves/OFW	FDER	6/27/08
7	52&411343475	FDNR Division of Marine Resources	Seagrass Planting Experimentation Project in Tampa Bay	Seagrass Restoration	Pinellas/Manatee	Tampa Bay; Pinellas County & Terra Ceia Aq Preserves/OFW	FDER	6/28/08
8	52&411343476	FDNR Division of Marine Resources	Seagrass Planting Experimentation Project in Tampa Bay	Seagrass Restoration	Pinellas/Manatee	Tampa Bay; Pinellas County & Terra Ceia Aq Preserves/OFW	FDER	6/29/08
9	52&411343477	FDNR Division of Marine Resources	Seagrass Planting Experimentation Project in Tampa Bay	Seagrass Restoration	Pinellas/Manatee	Tampa Bay; Pinellas County & Terra Ceia Aq Preserves/OFW	FDER	6/30/08
10	44-00343-P	Florida Dept of Environmental	Restoration of Prop Scars &	Seagrass Habitat	Monroe	Florida Bav/LKSLMA	SFWM	8/24/06



Database Information

- *Permit Information*

- Permit Number
- Permitting Agency
- Date Issued

- *Permittee*

- *Project Type/Description*

- *Location*

- County
- Waterbody
- GIS Coordinates
- Impact Site
- Mitigation Site

- *Seagrass*

- Amount Impacted
- Species

- *Mitigation*

- Brief description
- Amount Required
- In/Out of Kind

- On/Off Site

- *Monitoring*

- Length Required
- Dates

- *Success Criteria*

- *Contractor/Consultant*

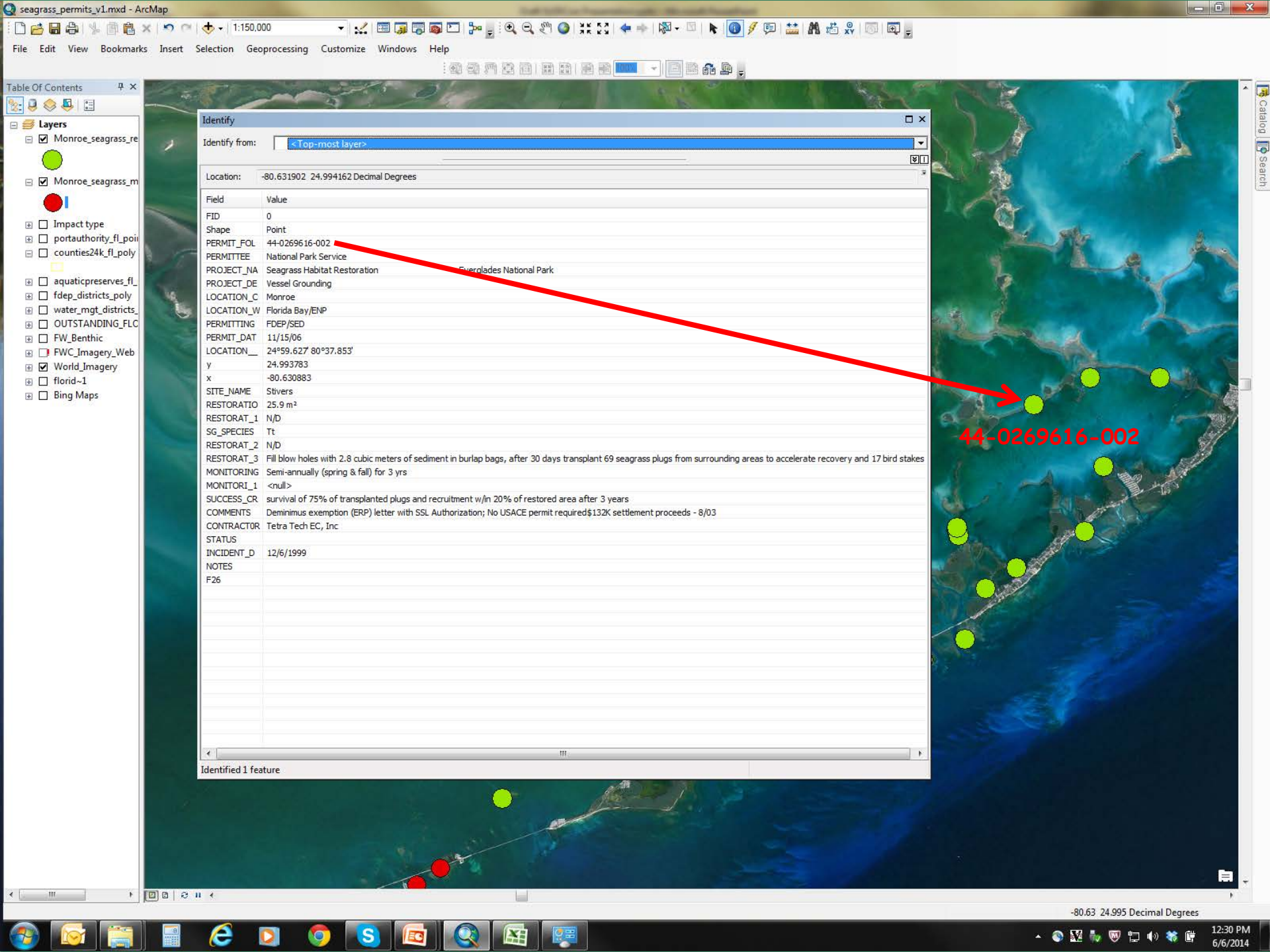
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50-04756-P SAJ-2000-02515	City of Lake Worth/Palm Beach County	City of Lake Worth Restoration Project (Snook Islands)	Seagrass Habitat Restoration	Palm Beach	Lake Worth Lagoon	SFWMD USACE	2/15/03 5/31/03
44-0293688-001 SAJ-2010-00682	CSA International, Inc.	DANI	Vessel Grounding	Monroe	FKNMS Annie's Beach	FDEP/SO USACE FKNMS	4/12/10 8/19/10 8/16/10
13-1805086	Dade County	Fill of Dredged Depressions for Environmental Enhancement - Demonstration Project	Seagrass Habitat Restoration	Miami-Dade	Biscayne Bay Aq Preserve/DFW	FDER	10/9/05
528411343473	FDNR Division of Marine Resources	Seagrass Planting Experimentation Project in Tampa Bay	Seagrass Restoration	Pinellas/Manatee	Tampa Bay; Pinellas County & Terra Ceia Aq Preserves/DFW	FDER	6/26/05
528411343474	FDNR Division of Marine Resources	Seagrass Planting Experimentation Project in Tampa Bay	Seagrass Restoration	Pinellas/Manatee	Tampa Bay; Pinellas County & Terra Ceia Aq Preserves/DFW	FDER	6/27/05
528411343475	FDNR Division of Marine Resources	Seagrass Planting Experimentation Project in Tampa Bay	Seagrass Restoration	Pinellas/Manatee	Tampa Bay; Pinellas County & Terra Ceia Aq Preserves/DFW	FDER	6/28/05
528411343476	FDNR Division of Marine Resources	Seagrass Planting Experimentation Project in Tampa Bay	Seagrass Restoration	Pinellas/Manatee	Tampa Bay; Pinellas County & Terra Ceia Aq Preserves/DFW	FDER	6/29/05
528411343477	FDNR Division of Marine Resources	Seagrass Planting Experimentation Project in Tampa Bay	Seagrass Restoration	Pinellas/Manatee	Tampa Bay; Pinellas County & Terra Ceia Aq Preserves/DFW	FDER	6/30/05
44-00343-P	Florida Dept of Environmental	Restoration of Proco Scars &	Seagrass Habitat	Monroe	Florida Bay/LUSUMA	SFWMD	8/24/03



GIS Mapping



GIS MAP OF RESTORATION (GREEN CIRCLES) AND MITIGATION (RED CIRCLES) PROJECTS LOCATED IN FLORIDA



Identify

Identify from: <Top-most layer>

Location: -80.631902 24.994162 Decimal Degrees

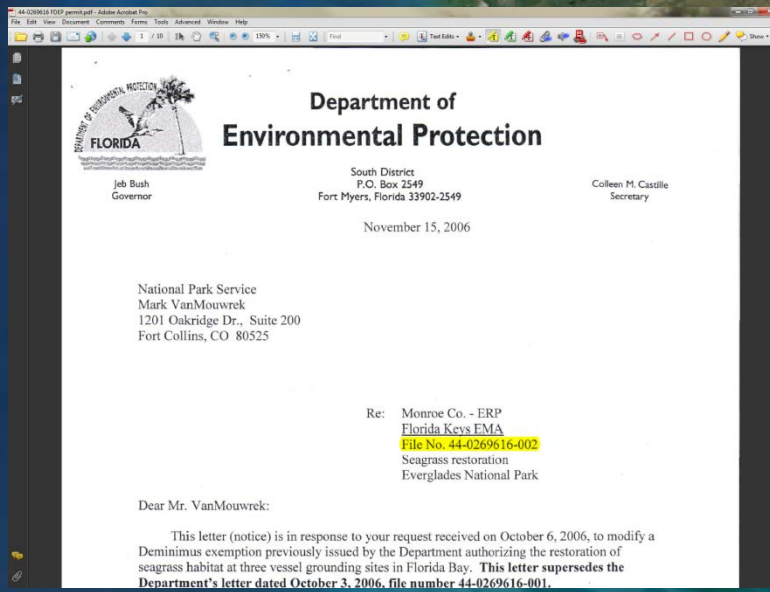
Field	Value
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Shape	Point
PERMIT_FOL	44-0269616-002
PERMITTEE	National Park Service
PROJECT_NAME	Seagrass Habitat Restoration Everglades National Park
PROJECT_DESCRIPTION	Vessel Grounding
LOCATION_CODE	Monroe
LOCATION_W	Florida Bay/ENP
PERMITTING	FDEP/SED
PERMIT_DATE	11/15/06
LOCATION_COORDINATES	24°59.627' 80°37.853'
Y	24.993783
X	-80.630883
SITE_NAME	Stivers
RESTORATION	25.9 m²
RESTORATION_1	N/D
SG_SPECIES	Tt
RESTORATION_2	N/D
RESTORATION_3	Fill blow holes with 2.8 cubic meters of sediment in burlap bags, after 30 days transplant 69 seagrass plugs from surrounding areas to accelerate recovery and 17 bird stakes
MONITORING	Semi-annually (spring & fall) for 3 yrs
MONITORING_1	<null>
SUCCESS_CRITERIA	survival of 75% of transplanted plugs and recruitment w/in 20% of restored area after 3 years
COMMENTS	Deminimus exemption (ERP) letter with SSL Authorization; No USACE permit required \$132K settlement proceeds - 8/03
CONTRACTOR	Tetra Tech EC, Inc
STATUS	
INCIDENT_DATE	12/6/1999
NOTES	
F26	

Identified 1 feature

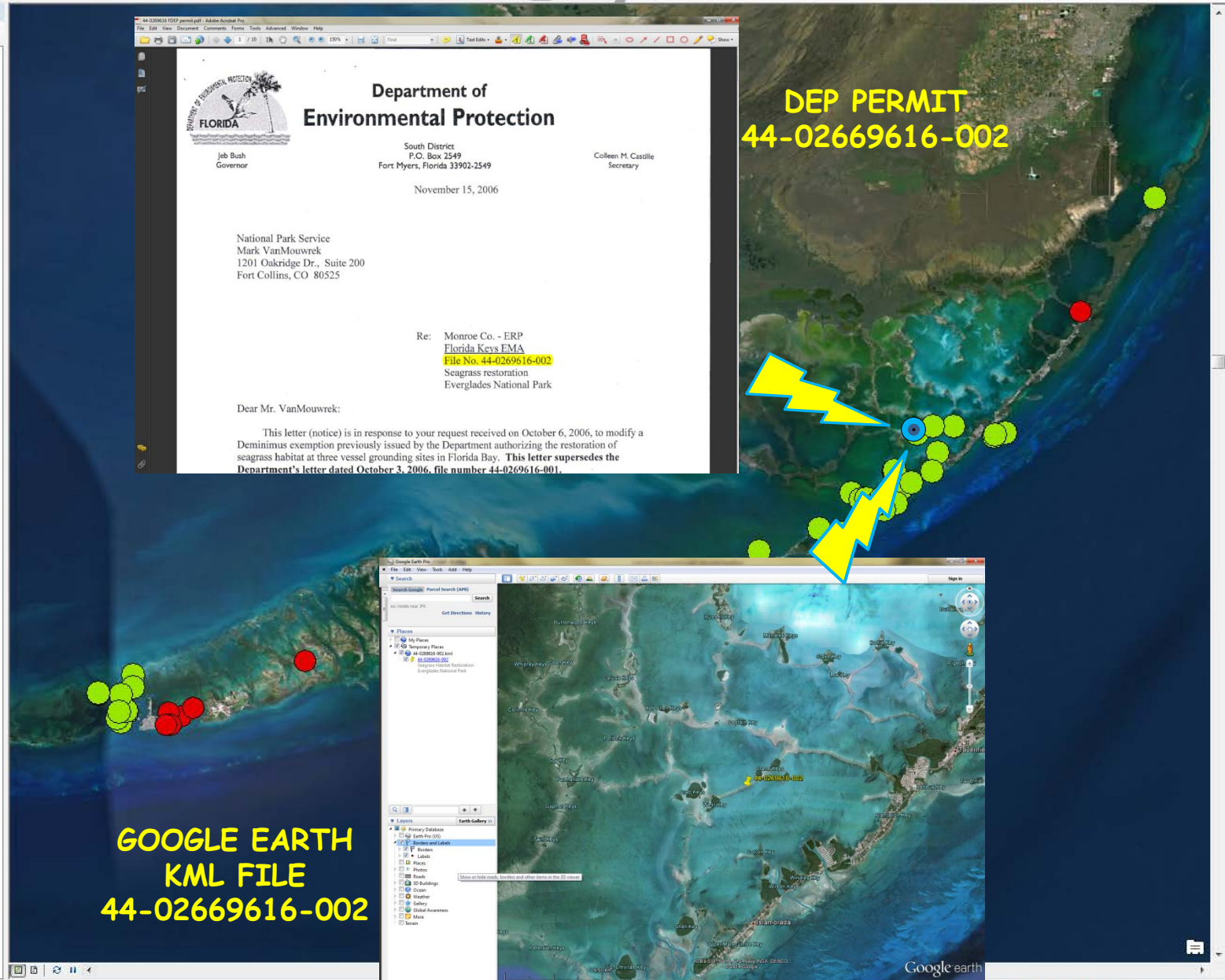
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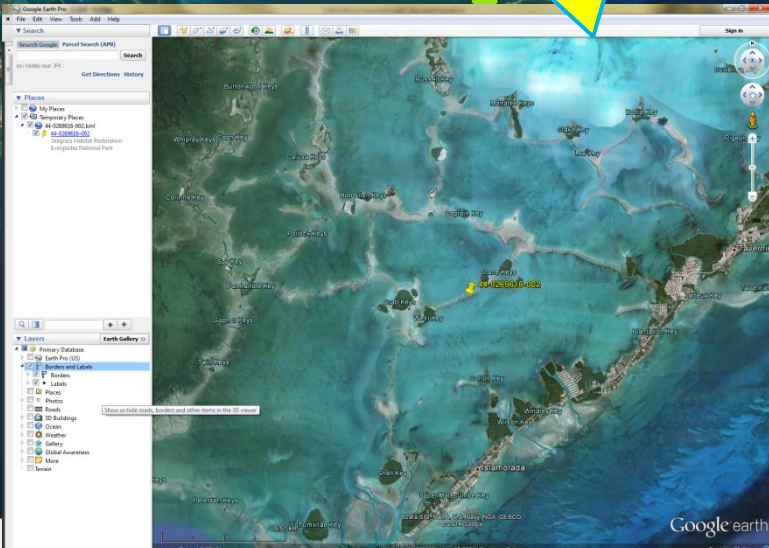
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 - Mitigation_impact_type_11
 - Mitigation_impact_type_12
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 - counties24k_fl_poly
 - aquaticpreserves_fl_poly
 - fdep_districts_poly
 - water_mgt_districts_fl_poly
 - OUTSTANDING_FLORIDA_WATERS
 - FW_Benthic
 - FWC_Imagery_Web
 - FWC Imagery
 - World_Imagery
 - florid-1
 - Bing Maps



DEP PERMIT
44-02669616-002



GOOGLE EARTH
KML FILE
44-02669616-002



-81.628 25.373 Decimal Degrees



Permit Tracking By County

COUNTY	COUNTY	COUNT
BAY	LEE	3
BREVARD	MANATEE	5
BROWARD	MARTIN	0
CHARLOTTE	MIAMI-DADE	5
CITRUS	MONROE	27
COLLIER	OKALOOSA	1
ESCAMBIA	PALM BEACH	8
FRANKLIN	PASCO	0
HERNANDO	PINELLAS	5
HILLSBOROU	SARASOTA	0
INDIAN RIV	ST. LUCIE	0
JEFFERSON	WAKULLA	1
		0

Database will track # of mitigation permits and restoration permits issued within each county

In-kind vs. out-of-kind mitigation

Types of mitigation strategies



Various Mitigation Strategies

- Water Quality Improvements
- Seagrass Transplantation
- Derelict Vessel Removal
- Out-of-Kind Planting (mangroves, saltmarsh)
- Spoil Island scrape down/habitat creation
- Filling in dredge holes
- Prop scar repairs
- Exotic removal
- Seagrass protection zones
- Artificial Reefs
- In-Lieu Fees/Mitigation Banks
- Mosquito Impoundment reconnections
- Transfer of private submerged lands
- Wave attenuation



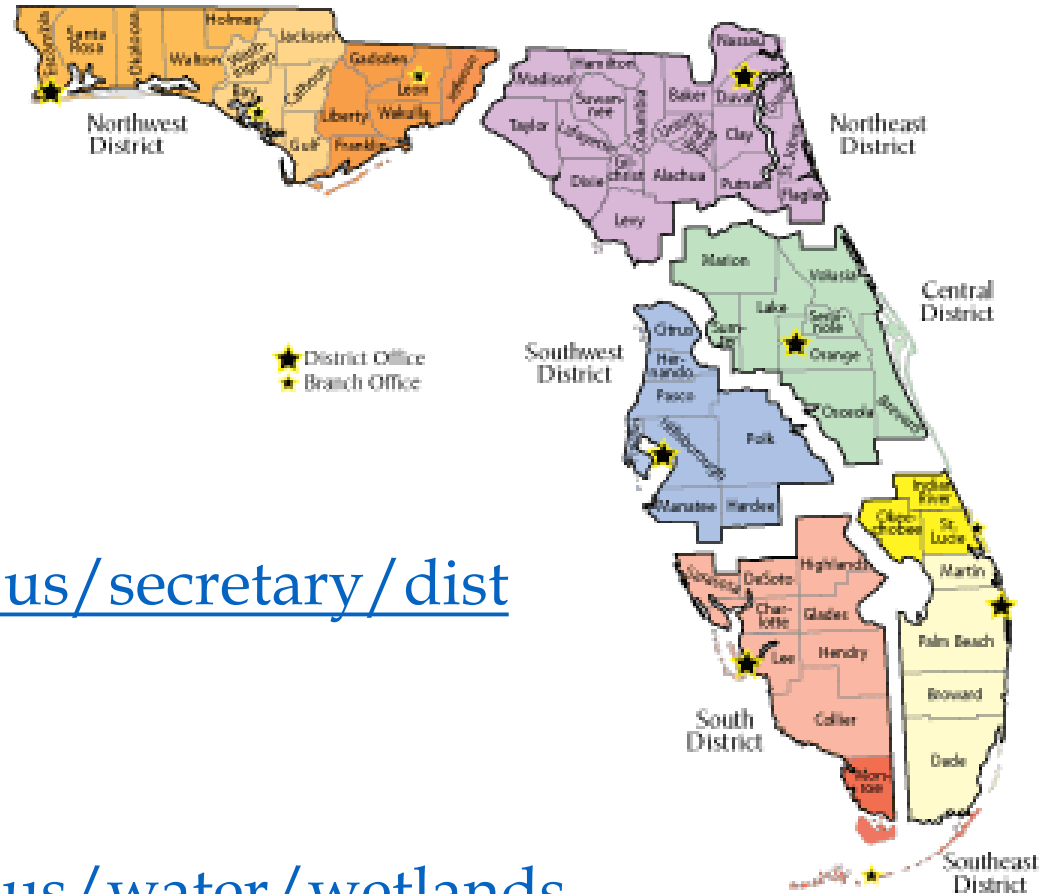
What's Next

- Work in progress, gathering copies of all permits
- Starting to look at mitigation and restoration success
- Can be a useful tool to regulators and restoration/mitigation consultants

Robin Jung (FWCC-FWRI) is the project lead



Web Information



DEP District Offices

<http://www.dep.state.fl.us/secretary/dist>

Helpful Websites

<http://www.dep.state.fl.us/water/wetlands>

<http://www.dep.state.fl.us/water/wetlands/erphelp>



Contact Information

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