



**METRA**

**Metropolitan Environmental  
TRaining Alliance**

# Stormwater Compliance



*Jennifer Roberts, CFM*



# Before & After



# Stormwater in Florida

Stormwater runoff collects & transports pollutants

# Clean Water Act

Passed in 1972, after public awareness due to the Cuyahoga river which is famous for having been so polluted that it "caught fire" in 1969





# NPDES

## National Pollutant Discharge Elimination System – Construction Generic Permit

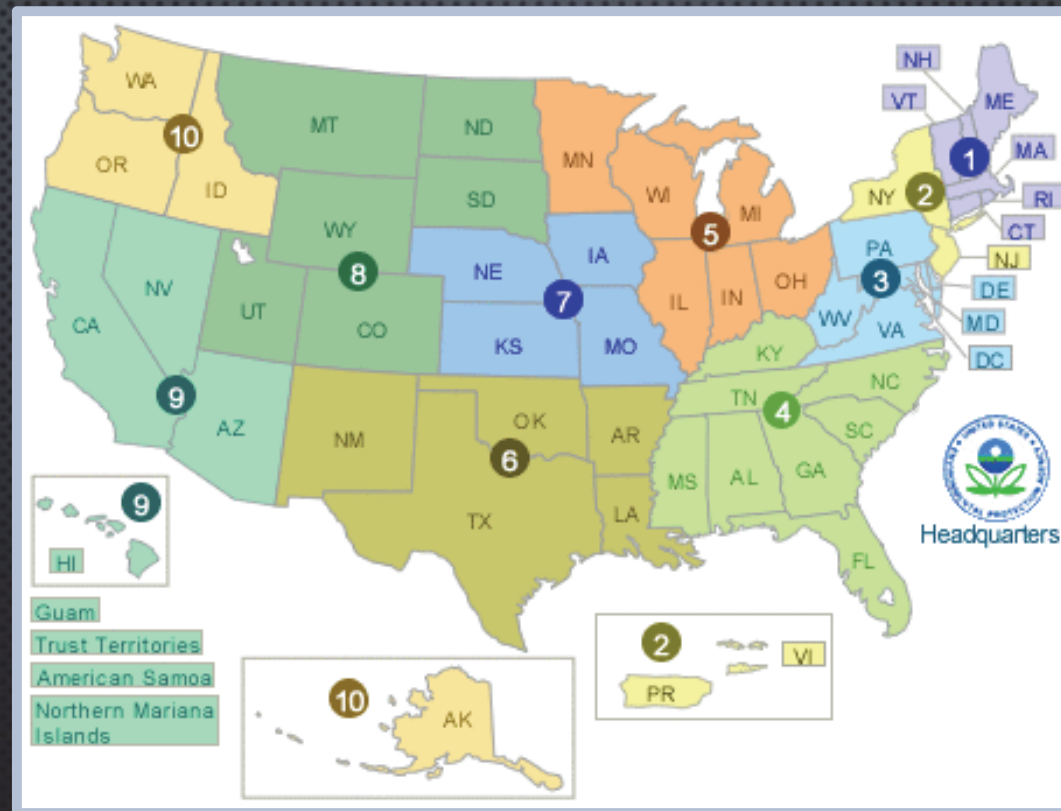


# REGULATION



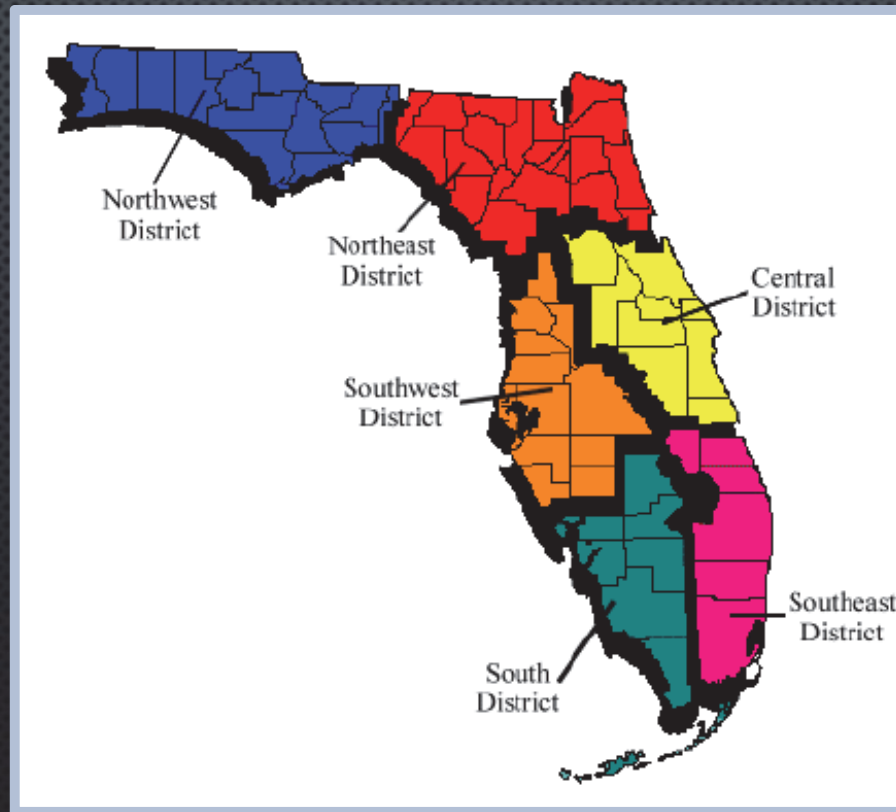
# EPA

## FL is in Region 4



# FDEP

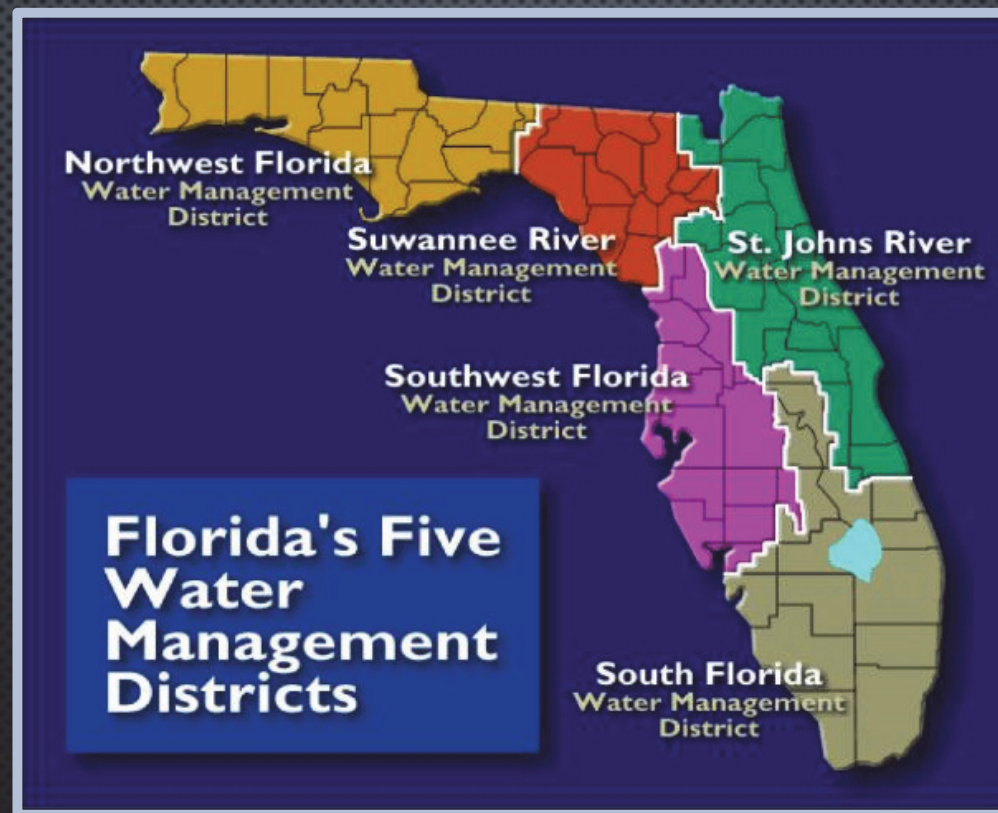
## EPA Delegated NPDES Program





# Water Management Districts

## Flood Control & Quality



# MS4

## Municipal Separate Storm Sewer System





# Army Corps of Engineers

## Federal Agency- Jacksonville District



# NPDES Compliance

- **Create a Stormwater Pollution Prevention Plan**
- **Send NOI to FDEP**
- **Receive - Acknowledgment Letter**
- **Install BMPs**
- **Inspections and corrective actions**
- **Construction complete - Terminate permit**

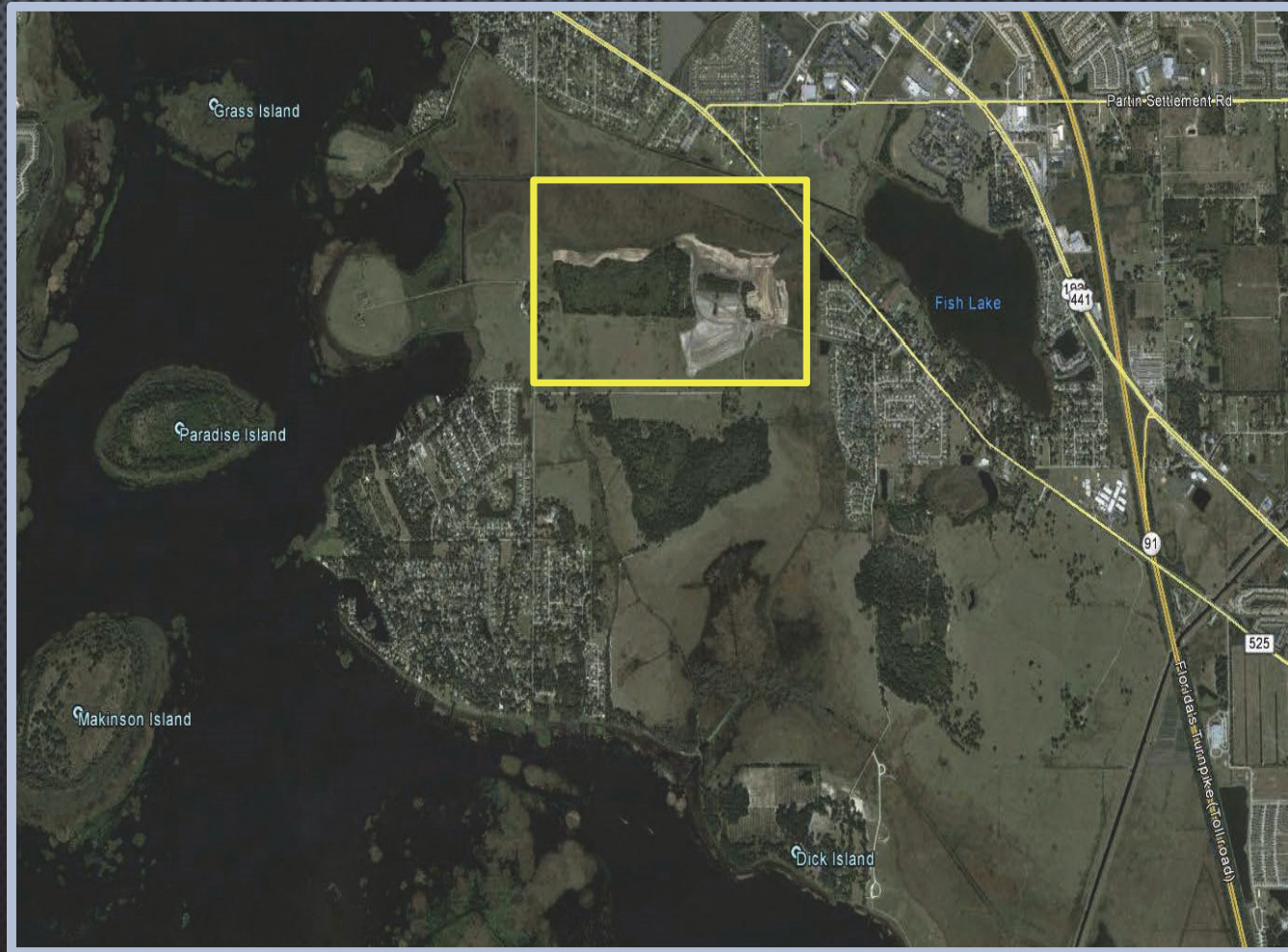


# Muddy Water Blues



# Case Scenario

## 84 Acre Land Development



# Site information

- Large Construction Land Development
  - Surrounded by wetlands → discharge to a Ranch Land → pump to Lake.
- Newly constructed ponds not complete



# Team Recommendations

## – late May

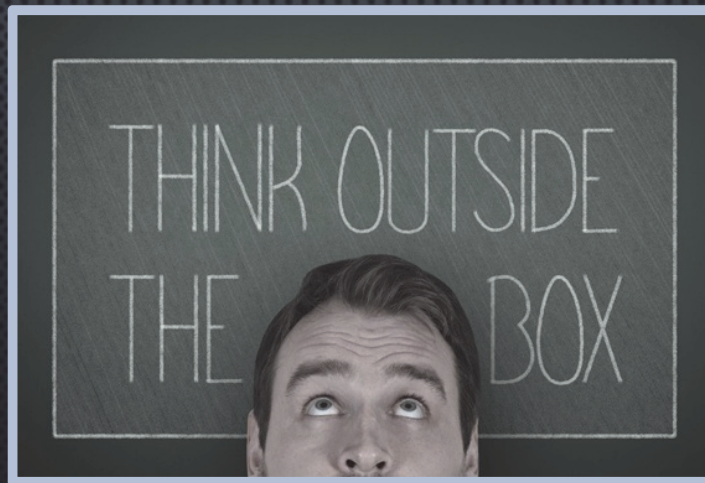
- Stabilize slope (30 acres)
- Wire back fence (3,000 LF)





# Challenges

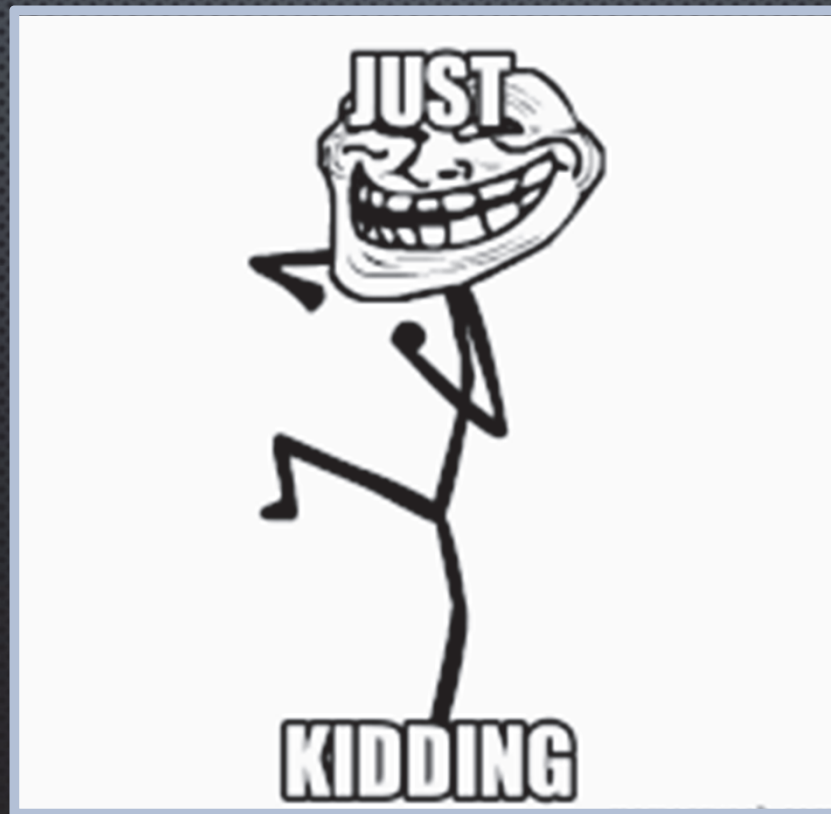
- In a drought – no sod available
- Labor and materials



# We get it done!

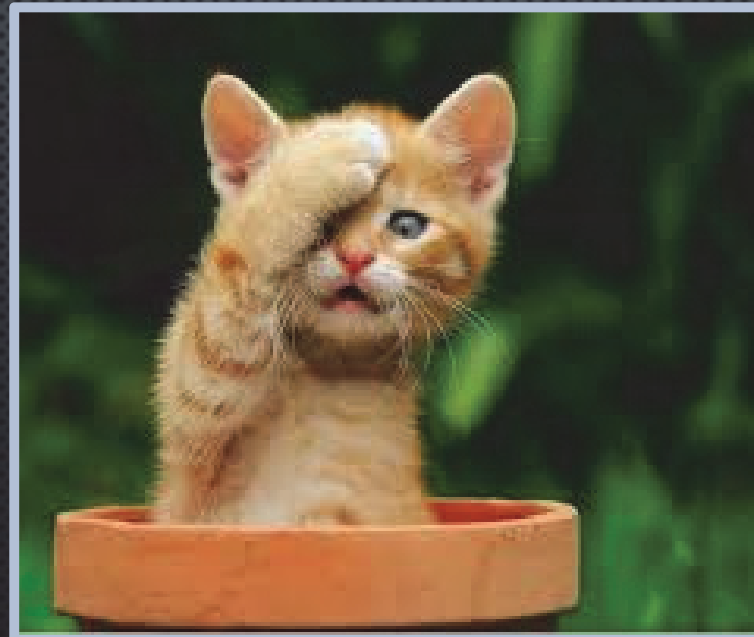


**...AND Everything goes as  
planned**

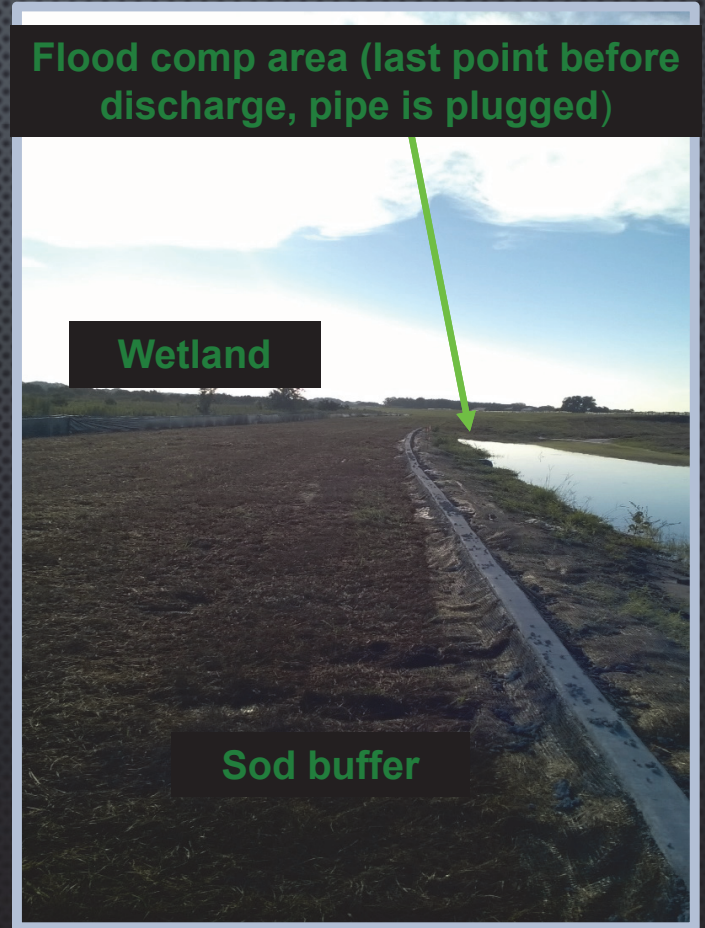


# July 17<sup>th</sup>

– Flash flooding event



# Before the storm...

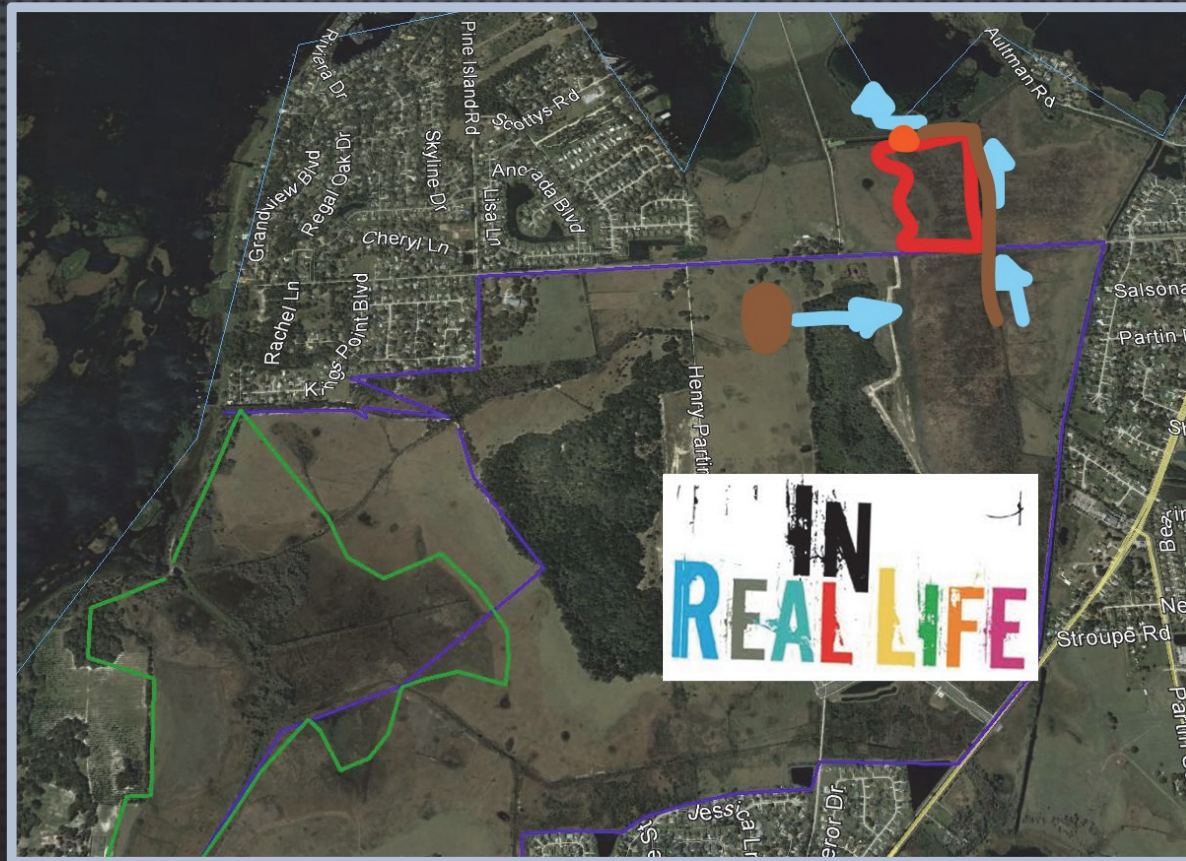


# After the storm...Overnight July 17<sup>th</sup>

- Six inches of rain
- Flash flooding



# Aerial view



# Responding to the event...



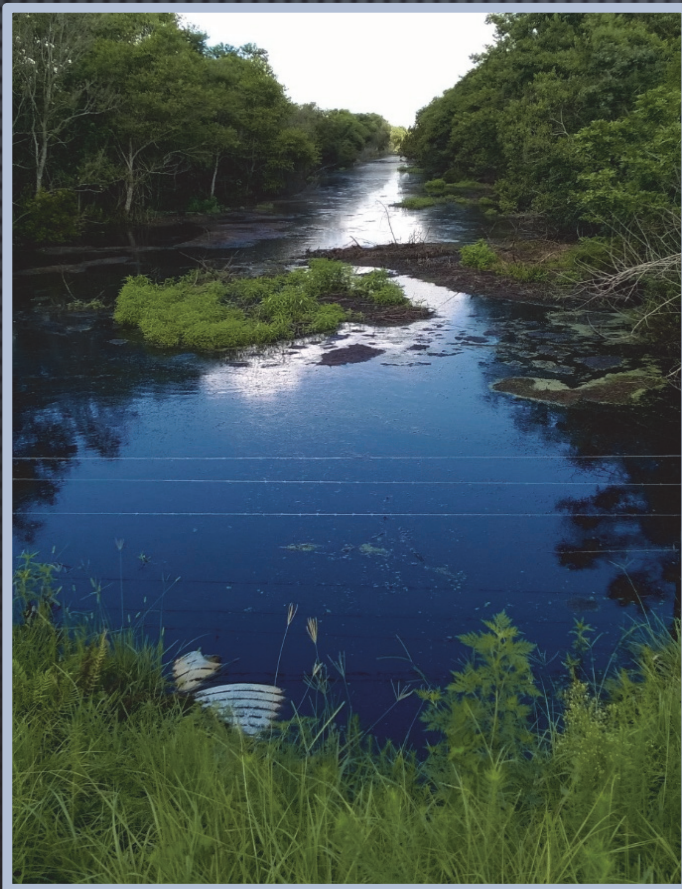
Wetlands drain to the canal which flows on to the Ranch property for pump discharge to Lake.





# CANAL

BEFORE



AFTER



# Discharge point - Ranch land flooded



Pump House



Pump



Lake

Polymer Treatment



# The pump discharges to Lake Toho



# Responding to the event...

**Silt fence:  
Replaced  
7/19/17**



**Wetland:  
Bio Tech digs out  
sediment, replants**



**Sod:  
Replaced 7/27/17**



**Comp area plugged**



SFWMD meeting on site 7/20/17, NTU's in wetland 506, ponds over 1K and canal 300-500 NTU. Background – 2-3 NTU



# Action...

**7-18-2017**  
Self Reported

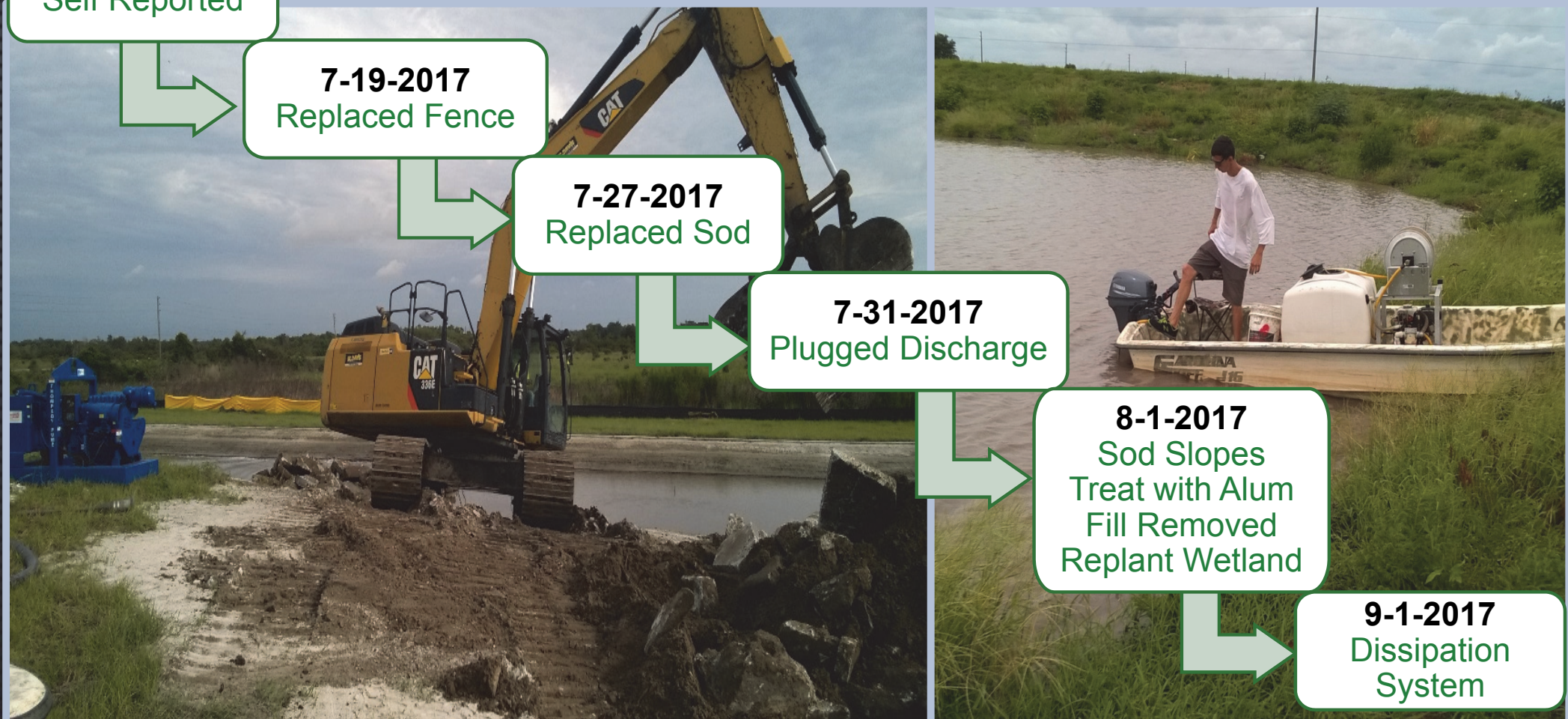
**7-19-2017**  
Replaced Fence

**7-27-2017**  
Replaced Sod

**7-31-2017**  
Plugged Discharge

**8-1-2017**  
Sod Slopes  
Treat with Alum  
Fill Removed  
Replant Wetland

**9-1-2017**  
Dissipation  
System

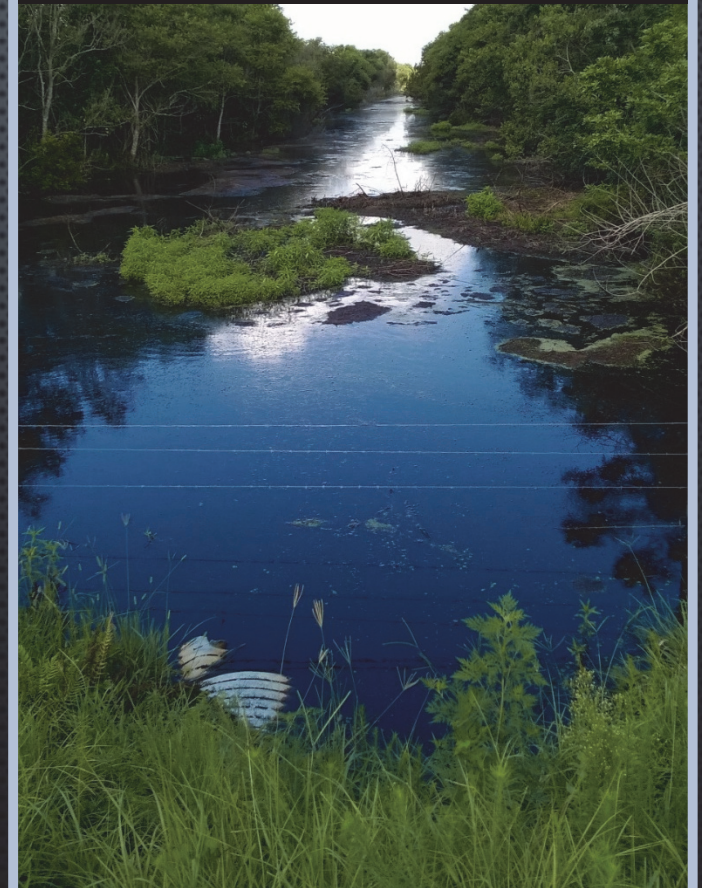


# As of 8-1-2017

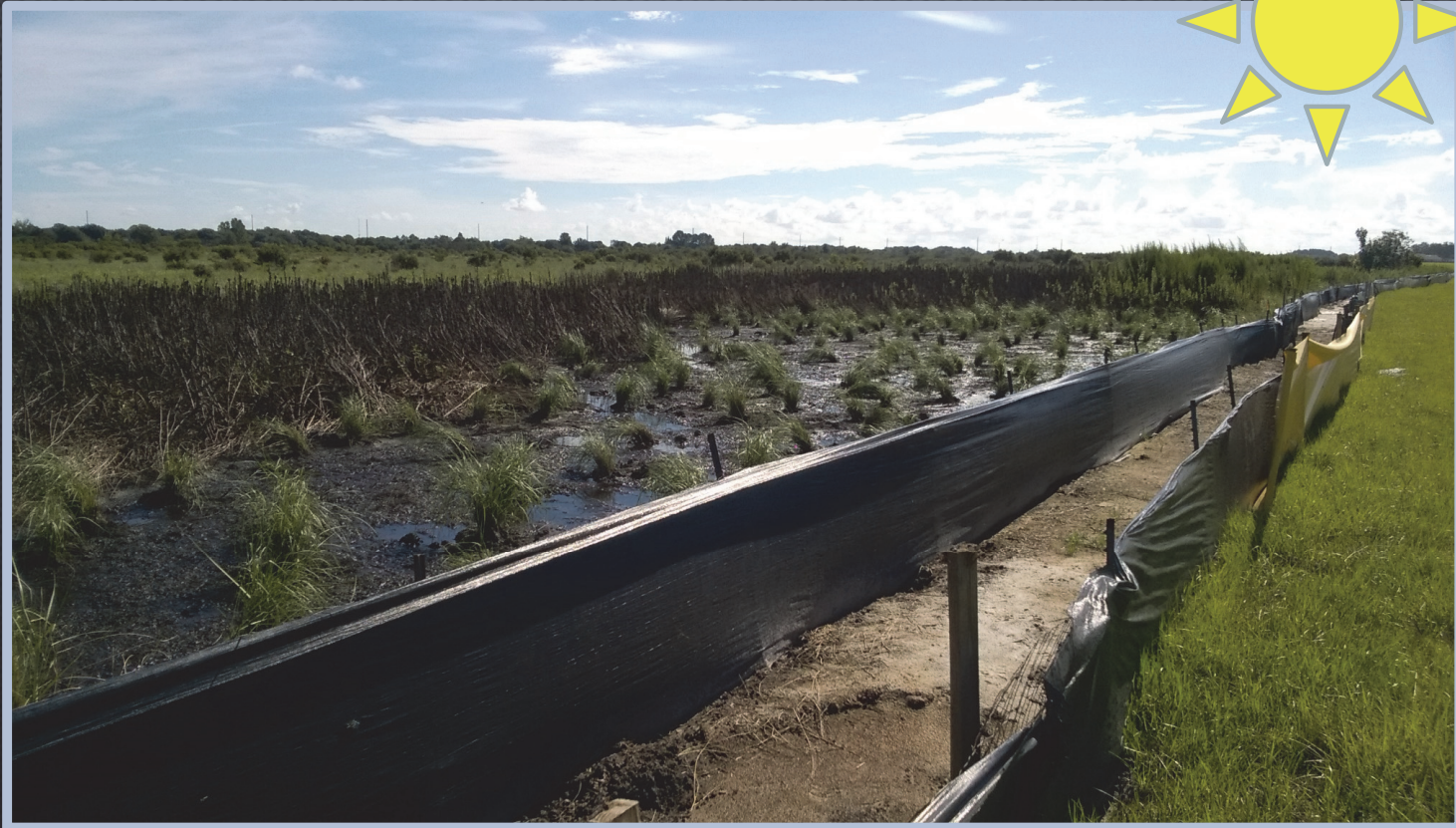
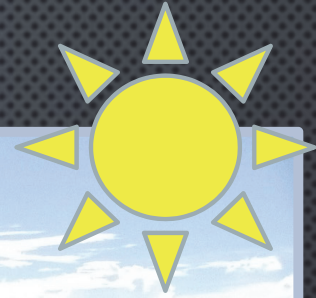
Ranch Land



The Canal



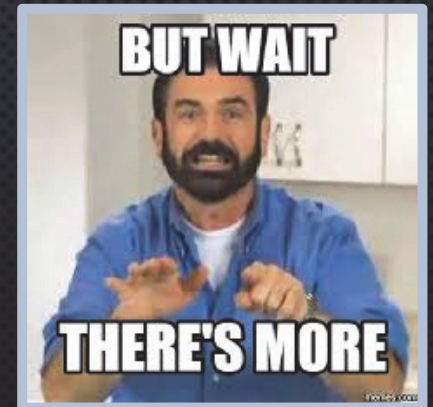
# Sunny day again!





# Take away...

- Be proactive
- Have a plan A,B & C
- Have vendors approved and ready to go
- Respond quick
- Communicate with Regulatory Districts
- Don't give up



We thought it was over...



# We over prepare ...

- **EC blanket over concrete footer at swale**
- **Add sod**
- **Treat ponds**
- **Pump down ponds**
- **Add floc logs and jute to discharge point**



# IT WORKS!!!! 13 inches of rain





**DRH NPDES Administrator:  
Jennifer Roberts , CFM  
407-489-6227**





**Metropolitan Environmental  
Training Alliance**

