Seagrass Monitoring at Two Different Sites for the Miami Harbor Phase III Federal Channel Expansion Project Julia Tuttle Mitigation Site and Fisherman's Channel

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Julia Tuttle Mitigation Site
Fisherman's Channel
Bird Key
Julia Tuttle Causeway
Sunset Islands
Pace Picnic Islands
Venetian Islands
Di Lido Island
San Marino Island
Belle Isle
Biscayne Island
N SR A1A
Watson Island
Hibiscus Island
Palm Island
Star Island
Dodge Island
Fisher Island
Burlingame Island
Airport Expy (Toll road)
NW 40th St
NW 36th St
NW 29th St
NW 28th St
NW 20th St
NW 11th St
NW 7th St
NW 8th St
NW 6th St
E Flagler St
SW 1st St
SW 22nd St
SW 16th St
Federal Hwy
NW 10th Ave
NW 14th Ave
NW 12th Ave
NW 7th Ave
NW 17th Ave
NW 2nd Ave
NE 2nd Ave
NE 1st Ave
N Miami Ave
SW 22nd Ave
SW 17th Ave
SW 12th Ave
SW 3rd Ave
Brickell Ave
Meridian Ave
Washington Ave
Collins Ave
Alton Rd
5th St
17th St
W 47th St
71st St
La Gorce Dr
Pine Tree Dr
Indian Creek Dr
27
195
907
395
95
41
933
968
970
9
7
90
972
913
1995
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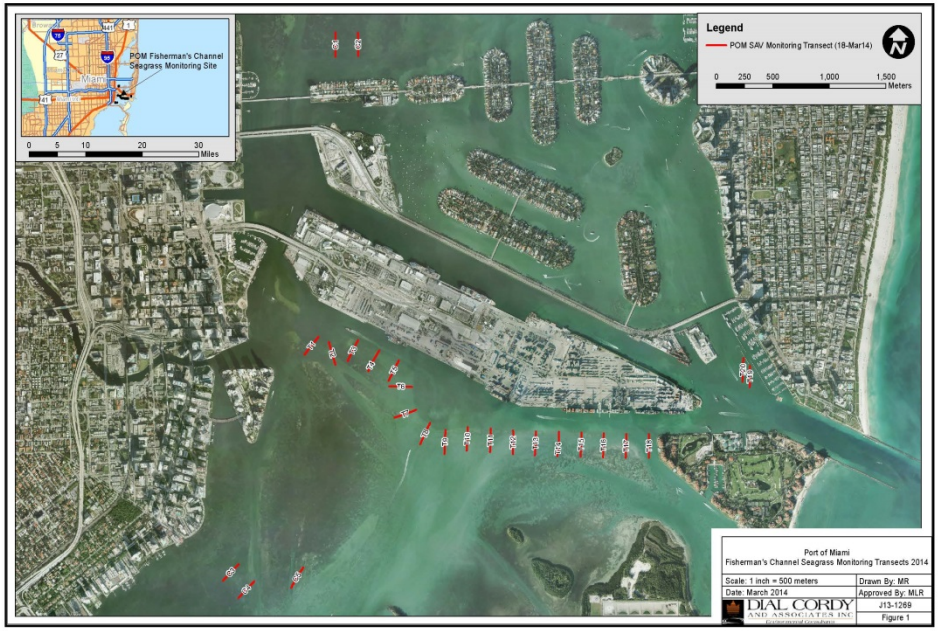
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Google earth
Imagery Date: 1/23/2016 25°47'36.41" N 80°09'19.31" W elev -1 ft eye alt 48894 ft

Methods

Julia Tuttle

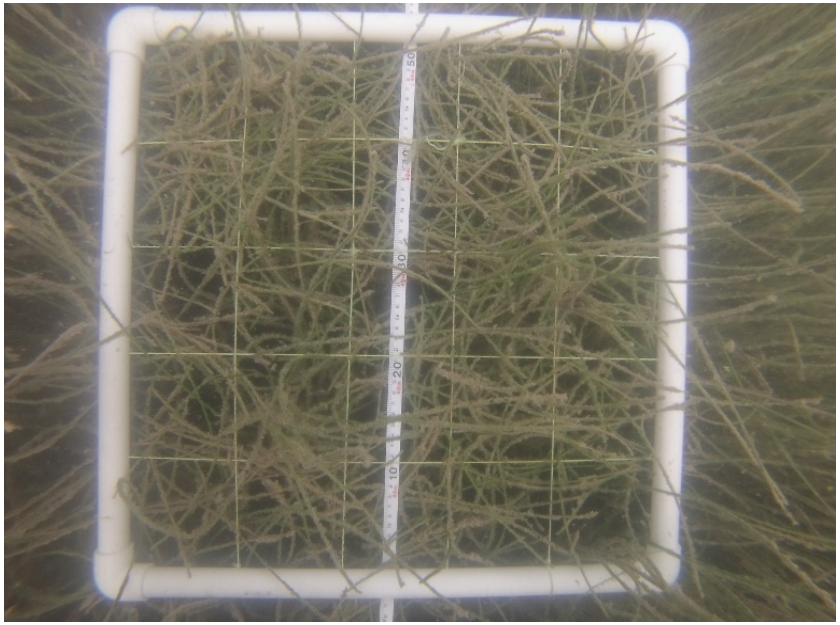
Fisherman's Channel



- Permit and specification driven monitoring requirements and BMPs.
- Scientific divers collected seagrass species data within 0.25m^2 quadrats along 100 m (JTSMS) or 200 m (FC) transects.
  - 5 transects at JTSMS (4 compliance, 1 control)
  - 25 transects at Fisherman's Channel (20 compliance, 5 control)
- Weekly reporting comparison to controls, normalized decrease 20% or less

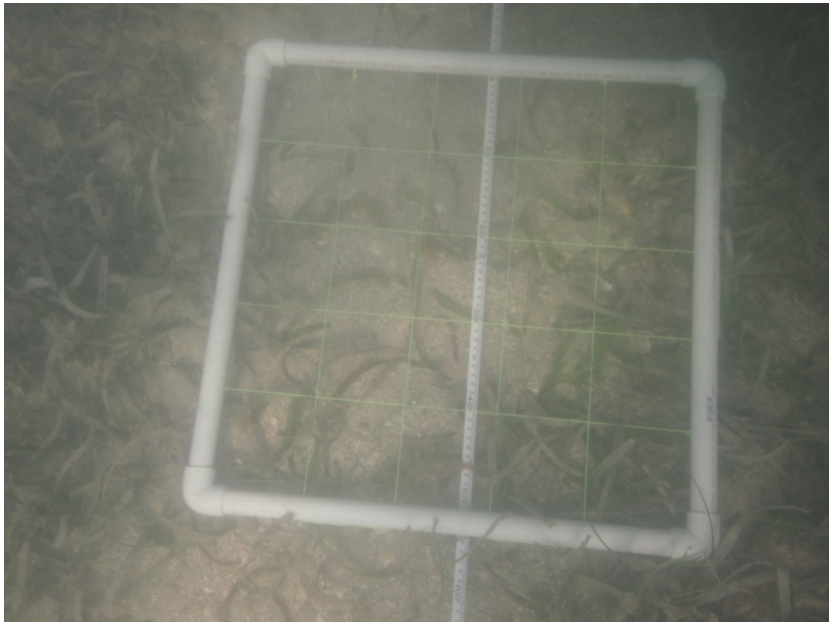
Results

Julia Tuttle



- *Syringodium* dominated, high biomass
- Seasonal cyanobacterial accumulation
- Drift algae present, but no effect
- Impact from non-project related vessel documented

Fisherman's Channel



- *Thallasia* or *Syringodium* dominated, patchy and variable distribution throughout
- In some *Syringodium* areas there was a transition to *Halodule wrightii and Halophila decipiens*
- Drift algae affected control seagrass

Lessons Learned

- Best management practices, monitoring data and adaptive management protected seagrass habitat at Julia Tuttle and Fisherman’s Channel.