

Biscayne Bay Regional Restoration Coordination Team

NOAA SE Fisheries Science Center (SEFSC) NOAA Atlantic Oceanographic & Meteorological Laboratory
4301 Rickenbacker Causeway (entrance across from 75 Virginia Beach Drive)
Key Biscayne, FL 33149

April 12, 2016

Attendees

Phil Everingham
Sarah Bellmund
Joan Lawrence
Bahram Charkhian
Laura Eldridge
Caroline McLaughlin (by phone)
Celeste De Palma
Susan Shapiro
Irela Bague
Matt McPherson
Brent Stolifle
Suzana Mic

1. Welcome and Introductions

Phil Everingham, Chairman of the BBRCT, called the meeting to order. Introductions were made by attendees.

2. Discussion of Priority List of Action Items: The BBRCT continued its discussion of priority items, including freshwater to Biscayne Bay & Biscayne National Park and completion of Phase 1 and initiation of planning for Phase 2 of the BBCW Project.

3. Biscayne Bay Coastal Wetlands Restoration Benefits:

Bahram Charkhian, Lead Environmental Scientist, Coastal Ecosystems Section, South Florida Water Management District (SFWMD) gave a presentation on the Biscayne Bay Coastal Wetlands (BBCW) Comprehensive Everglades Restoration Plan (CERP) Project Restoration Benefits.

Project Objectives:

- Re-establish productive nursery habitat
- Improve quantity, quality, timing, and distribution of freshwater to Biscayne Bay
- Redistribute freshwater flow and minimize point source discharges
- Preserve and restore natural coastal glades habitat

- Re-establish connectivity between the coastal and adjacent wetlands
- Improve near shore and saltwater wetland salinity regimes

SFWMD Phase I Expedited Projects: Provide for early ecosystem restoration benefits by distributing flows along coast and near shore including Biscayne National Park (BISC).

- L-31E Tidal Restoration Components (construction completed June 2010)
 - Restoration benefits of L-31E culverts
 - Expansion of sawgrass observed
 - Mapping showed an increase of 7 acres of sawgrass between 2013 and 2016
 - Various species of birds, amphibians, invertebrates, fish, and reptiles were observed
- Deering Estate (construction completed April 2012)
 - Restoration benefits of Deering Estate Flow-way:
 - Approximately 45,233 acre-feet of freshwater redirected to historic remnant wetlands;
 - Timing of flows to the wetlands at Deering Estate has been improved:
 - Reduced salinity in groundwater;
 - Reduced salinity in surface water;
 - Groundwater stage rose noticeably at groundwater monitoring stations depending on operations; and
 - Improved salinity regimes for the Deering Estate Flow-way Creeks
- Cutler Wetlands - USACE is responsible for design & construction of the remaining Phase 1 features
 - Cutler Flow Way
 - Design completed November 2009
 - Design update scheduled for 2019
 - Construction scheduled 2020 to 2021
- L-31E Interim Pump (interim operation to continue up to 5 years or until the permanent pump station S-709 is constructed by the USACE; ameliorates the effects of the Ag drawdown)
 - Temporary diesel pump operation October 2014 to April 2015
 - Temporary electric pump installed March 2016
 - L-31E Pilot Pump Test Project was used to verify that the pump station identified in the BBCW Phase 1 PIR:
 - Is properly located and sized for redirecting water available water through 4 flap-gated culverts in the L-31E Levee that open to adjacent wetlands
 - Diverts water from point source discharge and redistributes it through culverts to remnant tidal creeks

- Pump Test:
 - Pumping maintained L-31E Canal stage at optimal level
 - Restoration benefits:
 - Enhanced sheetflow to historic tidal creeks;
 - + 3,300 acre-feet of freshwater diverted from point source to overland flow; and
 - Rehydration improved coastal wetlands along east & west sides of L-31E Canal and improved near shore Biscayne Bay salinity conditions within the vicinity of the L-31E Flow-way

Conclusions – All metrics indicate a successful project:

- **Environmental benefits from the L-31E Culverts are already being realized:**
 - Point source discharges from the C-103 Canal were reduced or eliminated;
 - Monitoring results demonstrated an improvement of hydrologic conditions in response to the pump test;
 - The L-31E Pilot Pump Test resulted in improved saltwater wetlands salinity regimes, enhanced sheet flow, rehydration of freshwater and saltwater wetlands; and
 - Pumping maintained the stage within the L-31E Canal at the optimal level of approximately 2.20 feet NGVD.
- **Environmental benefits from the Deering Estate Flow-way are already being realized:**
 - Reduced point source discharge from canals;
 - Improved water quality and timing of flows to the wetlands;
 - Rehydration of historic coastal wetlands; and
 - Wetland plant species are proliferating including expansion of sawgrass, die-off of upland plants, and new wetland vegetation emerging.

Bahram’s presentation, including maps, can be found in the BBRCT section on The Task Force website under the October presentations at:

http://www.evergladesrestoration.gov/content/bbrct_handouts.html).

4. Presentation/Discussion: Habitat Focus Area (Social Sciences)

There was a presentation by Matt McPherson and Brent Stolifle regarding their SEFSC social science group projects in cooperation with RSMAS. The presentation included

- Results of the Biscayne Bay Social Sciences Literature Search
- Proposed Organization Network Study for Biscayne Bay

Matt McPherson discussed the Vietnamese mesoscale social modeling of the Mekong River community. Brent Stolifle discussed the HFA measurable including the results of the Biscayne Bay Social Sciences Literature Search, as well as the proposed organization network study for Biscayne Bay.

5. Update: Miami-Dade Water and Sewer Department Activities

This presentation was postponed to a later date.

6. Updates:

Irela Bague discussed with the BBRRCT recent events and efforts by stakeholders to further the completion of Phase 1 and initiate planning for Phase 2 of the BBCW Project expeditiously.

The meeting was adjourned by the Chair.