

Minutes - South Florida Ecosystem connectivity working group

March 15, 2022

Action items:

- Chris Bergh can follow up with Jennifer Carpenter about Arcadia and Clewiston sewage outfalls into the rivers and ocean outfalls in general. Please contact Chris if you also want to help.
- Cara, Kelly, and Jerry will work on Resolution - letter thanking administration for historic Everglades Restoration funding. Timeline: Will be completed by April 5th to be included on the agenda of the next SAC meeting on April 19th.
- Steve offered to bring some of the EPA-funded projects he has been involved with to give presentations at future meetings.

Attendees: Karen Bohnsack, Cara Capp, Shelly Krueger, Jolly Benson, Brian Cumbie, Emma Haydocy, Michael Collis (guest speaker), Jerry Lorenz, Kelly Cox, Jennifer Carpenter (guest speaker), Chris Bergh, Adam Gelber, Amelia Moura, Caitlin Newcamp, Erinn Muller, Gina Ralph, Luke McEachron, Steve Blackburn, Suzy Roebing, Matt Semcheski, Nick Parr, and Becky Allenbach

Brian Cumbie replaced Gus Rios, following Gus' retirement from FDEP last month. Chris Kavanagh has moved to a new position with the National Park Service; Tylen Dean is in place temporarily for Chris.

South Florida Ecosystem Restoration (SFER) Program, ACOE Presentation by Michael Collis (ACOE) on project implementation reports, design, and construction

Infrastructure Investment and Jobs Act (aka IJA funding): \$1.1 Billion was allocated for FY22 in infrastructure funds from the federal government for Army Corps to work with South Florida Water Management District (SFWMD) on Everglades projects. The FY22 budget will go towards Project Implementation Reports (including the Lake O Watershed Restoration Project, WERP

and BBSEER), design (including the C111 South Dade, Loxahatchee River Watershed Restoration Project, Lake O Watershed Restoration Project, CEPP, IRL South, and Broward County Water Preserve Areas), and construction (CEPP, IRL South, Picayune Strand, Caloosahatchee River West Basin Storage, BBCW). The C-11 impoundment within the Broward County Water Preserve Areas was fully funded by the IJA, as was pump station 356 within CEPP South. Indian River Lagoon South goals are to complete the design and have awarded in FY 2023; the C-23/24 STA and north reservoir were fully funded by the IJA. The EAA was not a recipient of the infrastructure bill, but it did get a large FY22 budget that will facilitate getting the 2nd contract awarded.

The \$1.1 billion IJA funding helps keep the latest draft of the IDS (integrated delivery schedule) 2021 on track. As these projects come online, it's a good opportunity to move water south through ENP and into Florida Bay.

The president's FY23 budget is pending; USACE will work with SFWMD and stakeholders to identify what that budget will be applied towards within the SFER program. We will have more flexibility because the IJA funds helped projects in the FY21 IDS progress more quickly.

Question: Why wasn't IJA money put toward the EAA, which will help with problems related to Lake O? – EAA Reservoirs have benefits, yet other reservoirs need to come online, too.

Answer: \$1.1 billion in infrastructure was an administrative decision w/ goal to 1) fully fund construction contracts so no longer awaiting future year appropriations. This decreases risk for construction contractors, and allows more efficient implementation. 2) Does not concentrate the money on a single project in a single area; wanted projects spread across the region to go towards more efforts in more communities for a broader blanket of benefits instead of a single area. People are familiar with the EAA and know its benefits, however there are also other pre-reservoir projects that need to be finished for the system to come online (e.g., Broward County project). The IJA investment may reduce competition for future funding.

Question: Has the IDS been updated with the new injection of \$1.1 billion dollars? Sounds like not yet.

Answer: Not yet, but it will be updated soon to be finalized at the start of the federal fiscal year in October 2022.

Question: Usually there is \$10M for operations and maintenance (O&M) per year. Do we anticipate a shift and need for more O&M money in the future as more projects come on line?

Answer: It's a slow process because of how long it takes to construct these projects (e.g., 4-5 years), but O&M requirements will increase. SFWMD is required to oversee O&M, then submit invoices as the feds are required by CERP to pay 50% of these costs. The feds get \$8-10M per year for their share. C-44 Reservoir will be completed in the next couple of years and O&M budget will need to be increased.

South Florida Ecosystem Connectivity working group can make recommendations to ask for continued high levels of funding and to make sure these completed projects are funded with O&M budgets. \$1.1 billion is going to construction and O&M. The construction dollars go towards project implementation reports (PIR), design and construction. O&M funds things like pump stations operational expenses, mowing levees, engine lubricants, etc. A small amount of IJA funds went to the Western Everglades and Biscayne Bay PIRs, but most went to the CEPP South, IRL and the Broward County Water Preserve Area.

Presentation 2: Sewer Outfalls: impacts of water pollution on the health of the FKNMS –

Jennifer Carpenter

Jennifer Carpenter, Assistant Director of South District for FDEP. Previously worked on Everglades and Water Quality for FDEP. 1/3 of Florida's population uses septic (onsite sewage treatment and disposal systems or OSTDS). Over 2,000 individually permitted domestic wastewater facilities in Florida. The majority of these do not discharge to surface waters but are discharged to groundwater (percolation ponds), via land application (spray fields), reuse (reclaimed water for irrigation), and deep well injection.

Current regulatory levels for effluent treatment = a) Primary (screening raw wastewater); b) Secondary (adding biological processes to break down waste), c) Advanced Wastewater Treatment (AWT) which adds in nutrient removal and has a specific standard of 5:5:3:1 (5 total biological oxygen demand; 5 TSS; 3 N; 1 P) in the Keys. In the Keys, Best Available Technology (BAT) is used for smaller WWT plants with less than <100,000 gallons per day with regulatory levels of 10:10:10:1 (10 BOD; 10 TSS; 10 N ; 1 P).

Senate Bill 64 calls for the elimination of non-beneficial discharges to surface water to be eliminated by 2032 for approved plans and by the year 2028 if there is no approved plan. There are some exceptions to this rule for fiscally constrained municipalities, indirect potable reuse, wet weather emergency discharge, and use for direct ecological or public water supply benefits (e.g., minimum flow levels [MFL]).

There are multiple sewer outfalls in SW Florida and ocean outfalls in SE Florida but none in Florida Keys. There is 2-way connection between coastal waters of S. Florida and the FL Keys. Currents carry waters to the Keys from the GOM and SW Florida, as well as from SE Florida via a southward moving bottom layer of the Florida Current..

In Southwest Florida, there are 9 permitted surface water discharges, 7 of 9 are meeting AWT levels of treatment for nutrients. 73 MGD permitted discharge. There are more systems in the Tampa Bay region with similar magnitude; legislation will also require AWT for those discharges.

Virtually all are discharged into estuaries and rivers; non have offshore pipes.

In Southeast Florida sewer outfalls discharge 1-2 miles offshore, including:

1. Miami Dade Central – secondary treatment, no nutrient removal. Three miles east of Virginia Key, 143 MGD capacity.
2. Miami Dade North 120 MGD capacity.

403.086(9) Florida Statutes (2008; reviewed in 2013). Prohibits new ocean outfalls or expansion; requires reduced nutrients discharged by implementing AWT by 2018 or equivalent; eliminates the normal use of ocean outfalls by the end of 2025; request reuse to be 60% of the baseline wastewater flow by 2025.

- Miami Dade Central WWTP – oldest and first in S. Florida. 143MGD. Not on track to reduce nutrients on time; working with FPL?
- Miami Dade North WWTP – behind schedule for nutrient reductions. Proposing to construct deep wells to add to 4 existing wells. These are not being considered as part of the reuse plan.

FDEP coral program is looking to solidify a unified water quality monitoring network, recognizing the ecologic connectivity of these systems; this is important to understand the impacts associated with these various regulatory actions to make better management decisions. Joanna Walczak is on those teams for FKNMS WQPP Steering Committee and SAC representative. The goal is to provide data connectivity among offshore WQM stations, nearshore regulatory monitoring data, estuary data and ultimately Everglades Restoration data. FDEP and FWC are proposing a new Coral Reef Coordination Team under the umbrella of the South Florida Ecosystem Restoration Task Force to help make the connection between Everglades Restoration and coral reefs and coastal water quality .

DEP undergoing rulemaking (62-550 and 62-555, FAC) to adopt recommendations of the Potable Reuse Commission 2020 report “advancing potable reuse in Florida” (aka Toilet to Tap). Current laws do not allow this so the legislature is pushing to promote this new technology as an option.

Question: Are there incentives to encourage private wastewater treatment plants to go from BAT to AWT?

Answer: For smaller communities it's more difficult to get to the higher standard of the 5:5:3:1 due to inconsistent inflows. Another incentive is potential enforcement action by DEP if laws and standards are not met. There is also a lot of funding available for WWT upgrades.

Question: What are the 2 facilities not meeting AWT in southwest Florida? Any attempts to get them further along?

Answer: Arcadia, which discharges to the Peace River and Clewiston, which discharges to the Caloosahatchee River. DEP uses enforcement authority as much as possible. With Arcadia, have been violating laws, including effluent limitations. Use this to require them to go to AWT. Will hopefully sign a consent order soon to convert to AWT over the next several years. This is also a facility that is exempt from SB 64 so they don't have to eliminate discharge, but trying to convince them that that is what they SHOULD do. WWT plant upgrades is not an exciting option for spending money, so it helps communicate why infrastructure is important. Clewiston is not as far along in the search for a solution.

- A connectivity team member noted this can be something else we encourage our SAC to take action on (encourage those communities to do this).

Question: What is the standard disinfection at the SE Florida outfall sites? What pathogens might still be escaping?

Answer: Basic disinfection vs high level disinfection is based on dosage and the amount of time the disinfecting agent is in contact with the water. Water with lower TSS is easier to disinfect because bacteria and viruses can hide on particles. Water treated to AWT has lower TSS, and can be disinfected better. A combination of AWT and high level disinfection will do better at eliminating pathogens. Deep wells are part of the elimination plan in Miami Dade and some still being permitted, designed, and funded. 2025 DEADLINE FOR THIS.

Question: Are there any current considerations for potable reuse (this is currently not allowed under FL law)? Is anywhere in the US using potable reuse? Why is reuse in MDC so much more difficult?

Answer: Potable reuse technology exists, we just have to make it feasible and safe.

Communities have differing opinions on it. Potable reuse is not allowed in Florida because it's by law until DEPs rulemaking is finished, but there have been pilot projects. Nationwide, there is potable reuse in California and Arizona (EPA can provide more information about the areas where this is happening) FPL using wastewater reuse for the nuclear plant cooling canals. MDC reuse is difficult due to the size of the urban area, old infrastructure, the volume of water, and competing priorities.

Links from chat:

<http://serc.fiu.edu/wqmnetwork/boyerj/pubs/Gibson%20et%20al.%202008.pdf>

https://www.youtube.com/watch?v=YfhPsJwnl_Y&t=2s

<https://www.evergladesrestoration.gov/task-force-1/may-3-2020-task-force-meeting>

Need to consider emergent pollutants of concern, personal care products, and persistent organic pollutants. Epilepsy medications in the Baltic Sea. Benzodiazepines impact on fish, and predator avoidance. The Bonefish and Tarpon Trust released a study on medications in bonefish in the Florida Keys.

Team Member Updates

Cara Capp:

Proposed a letter to thank the Biden administration for Infrastructure Investment and Jobs Act, \$1.1 Billion for FY22, investments in CERP and would like to see more, and here is why it's important. Cara can help draft. Anyone else want to help draft a letter to the FKNMS SAC for consideration? Jerry willing to help draft, and Kelly Cox, and also look at what other groups have done as a starting point. Timeline: Will be completed by April 5th to be included on the agenda of the next SAC meeting on April 19th. Cara will lead.

Chris Bergh: Do Arcadia and Clewiston need help with their sewage outfalls? Chris can follow up with Jennifer Carpenter. What would a resolution look like? (tabled, when more information available)

Other information shared included:

- Ocean outfalls above Florida Keys is a proximal concern for the Florida Keys. There has been discussion within the WQPP SC and in the Keys about – potable reuse. If Monroe County goes this direction, it may also alleviate issues related to shallow vs. deep injection wells and costs. Potable reuse could be another place for Monroe County to set an example.
- EPA South Florida updates: 3 projects related to south florida connectivity have been funded from FY21. More details can be shared at a later date. In FY22 – S. Florida funding increased to \$10 million, which includes \$3.2 million infrastructure funds.
- City of Key West Port – city taking action on cruise ships. Study of water quality in the harbor and secondary items to fund permanently. Outstanding question of how harmful is it to corals and seagrasses.

Adjourned at 11:58

Minutes: Shelly Krueger