

Florida Keys and South Florida Ecosystem Connectivity Team Meeting
Tuesday, July 18, 2023 at 10:00am via Google Meet

10:00am Meeting convenes & roll call

- Members and agency advisors present at roll call: Karen Bohnsack, Jerry Lorenz, Cara Capp, Chris Bergh, Chris Madden, Emma Haydocy, Erinn Muller, Gina Ralph, Kelly Cox, Tylan Dean, Marisa Carrozzo (SAC Alternate)

10:10am Jerry Lorenz introduces our expert speaker Tylan Dean, U.S. National Park Service, to speak about boat education program at Everglades National Park

- Tylan notes the presentation will overview several aspects of ENP General Management Plan (boater education, pole and troll zones, seagrass scarring analysis, opening of Joe Bay, entrance fees)
- ENP boater education program was initiated in 2016 with a focus on improving active management of Florida Bay as part of the General Management Plan (GMP) and went live in April 2019.
- Online training is online via a partnership with University of Indiana (EPPLY) Institute
- Course was developed over several years - planning process lasted almost three years. The foundation of the boater education course is to combine instructional information for visitor safety while using the park and minimizing environmental damage.
- Now reflecting on four years of the course being live:
 - Participants from almost every state in the U.S. and nearly a dozen other countries have taken the online course
 - 6,500 people completed the program in 2019, with fewer each year since then. Overall thousands of people have successfully completed the program and more people continue to take the class each year.
 - ENP rangers evaluated program compliance during vessel stops in Florida Bay and found that 43% of vessel stops in Flamingo District and 16% of vessel stops in Key Largo District have completed the boater education training. Data is not available from the Gulf Coast District. Overall 30% average in completion among stopped boaters in the park. This data is from June 2023.
- Pole and troll zones
 - This is a topic covered in the boater education program. A pilot zone was first established in Snake Bight in 2011, and these were more fully implemented with the GMP.
 - Were created in areas of persistent seagrass damage
 - There is evidence that the pole and troll zones are working, as ongoing monitoring of seagrass health shows improvement since zone creation as previously mapped seagrass scarring and damage hotspots.
 - 105,000 acres are in a pole and troll zone in ENP

- Obstacle: visitors have a hard time knowing where the pole and troll zones begin and end - challenge in delivering information to boaters in a way that is usable . The zones are marked on maps, but not widely available in GPS.
- Overall the pole and troll zones are considered a success in ENP resource management
- Seagrass scarring analysis
 - Analysis was conducted in 2021 based on aerial photos. A new method for analyzing seagrass scarring overtime was developed in partnership with FWC. This uses a 1km² raster. The number of seagrass scars per cell are documented and categorized into a scoring system of none, low, high, and very high. This improved methodology (vs. counting and tracking individual seagrass scars) allows for more consistent comparisons over time to detect change.
 - Hotspot analysis helps to identify areas and regions where there have been both improvements and additional damage to seagrass. This tool is being used to reassess how to improve education and outreach to the public, and refine management actions to get better results and reduce seagrass damage in ENP.
- Entrance fees
 - Announced late 2018 and fully implemented now
 - First time visitors arriving by boat have been charged - can be paid on the water via special [recreation.gov](https://www.recreation.gov) (\$30 per vehicle for 1 week or \$55 annual pass)
- When a boater is stopped and found to be in violation either with no entrance fee paid or no boater education program completed, the first action is a warning. Goal is to improve people's awareness of the resources.
- Overall, the program has been effective and has also been a learning process. There is evidence of more consistent awareness and education among boaters, but there is also still room to improve especially among first-time users who may not even know they are entering national park waters.
 - Covid was a challenge - more visitors via boat while having fewer staff, so having the online boater education program was a great resource.

Group discussion and questions with the team on boater education & ENP management:

Gina Ralph - on the seagrass scarring, please explain the legend and data presented. Tylan explains there was a methodological shift over the course of data collection (from 2015 to 2021) that led to generalized categories that represented all data sets available in the graph displayed. Low-low in the displayed graph indicates low scarring in 2015 and low scarring again during the subsequent survey.

Kelly Cox - question about program enrollment and number of folks taking education program over time, can you speak to the decline in number of people who take the program each year? Tylan explains a lot of longtime users took the course to gain compliance for the first time in 2019, since most regular users took it up front the subsequent years had fewer people taking the course as many of the "regulars" had already completed it. Additionally, during COVID efforts to make the public aware of the course declined. The park may do another push to

remind people that the tool exists, is helpful to safely boat in Florida Bay, and is required for compliance. They may also make some content updates to the course, to make it more useful and interesting to users.

Marisa Carrozzo - additional follow-up on decline in boater engagement with the course - were there specific actions implemented during the launch in 2019 to ensure people were aware of the new mandatory course? Tylan: yes, in 2019 there was a campaign to get the word out about the new course. ENP received a lot of pushback from the public about the various changes to the GMP so there was a plan to start with an education-based approach (educating not issuing violations/tickets right away) to maintain strong relationships and encourage people to comply. Priorities remain resource protection and safety - and having a more gentle, education-based approach was the best way to get there.

Emma Haydocy - question about GPS and insight on outreach to GPS companies. Pole and troll zones should be showing up on all GPS systems but that isn't happening (Snake Bite pole and troll zone not on all GPS systems). Tylan shares that GPS companies were mostly not interested in developing custom maps for Florida Bay - ENP received a lot of pushback from Garmin and other GPS companies on this topic. ENP will be recruiting for a Park Planner position; once this position is filled, a task for that person will be to see if there has been any change in industry data standards and to once again try to get this information included within GPS systems.

Emma Haydocy - would be very interested in learning about compliance rates during the season when we have more visitors. All agree this would be good info to have.

Marisa Carrozzo - thinking about potential next steps, as voter education has been a topic of conversation for FKNMS SAC and the public for some time. Sanctuary currently has a voluntary boater education course that has been live since 2017. Since both ENP and the Sanctuary are interested in updating their boater education programs, is there an opportunity to partner and update together for consistency? Tylan says - yes the park has talked about the goal of making the education classes as seamless as possible across the boundaries.

Chris Bergh - follow from from previous question - has NPS considered including Biscayne National Park in this boater education program? Tylan says yes, it has been considered, there are challenges but if we had a solid framework for consistent education programs across different entities/waters/managing agencies, that would be very positive.

Chris Madden - asks if entrance fees are per person or per vessel? Tylan confirms the fees are per person, and Cara Capp shares that this is consistent with park entrance fees across the country. However for the boater education class just the captain must have certification.

Cara Capp - notes that entry through water is a unique situation, which is why the entrance fee was such a hard topic. These are, however, consistent with the National Parks visitation experience overall; people have no issue paying an entrance fee to go to the Grand Canyon.

Jerry Lorenz - acknowledges that after the GMP, the park also made an effort to improve channel marking. This likely helped reduce prop scarring as well. Tylan agrees. Not all channels are marked; people familiar with the Bay continue to transit the unmarked channels, but are able to do so without damage. Final marking was completed in 2019 following Hurricane Irma, then more went missing or were damaged during Hurricane Ian. The Park is currently lining up a project to repair markers - 90 are missing and 50 are damaged. This is a piece of the GMP that requires consistent maintenance to be effective. Jerry follows-up with a note that FKNMS could look at ENP as an example of how to mark shallow waters; a single system for marking channels across the jurisdictions could be beneficial, as would working cooperatively to get the work done with limited resources.

Jerry Lorenz - asks about the concept of an ENP Advisory Council. Tylan confirms that this was included in the GMP but has not been implemented yet. There could be a future opportunity for the FKNMS SAC and ENP Advisory Council to collaborate on channel marking and other management issues of shared interest between the jurisdictions.

11:00am - Opportunity for public comment (none)

11:00am - Group updates and discussion

Gina Ralph notes that a 2-day RECOVER Monitoring Workshop is being hosted by the South Florida Ecosystem Restoration (SFER) Science Coordination Team on July 19-20, 2023. The purpose of the workshop is to identify current science and monitoring efforts and future science and monitoring needs across South Florida to address outstanding uncertainties and assess Comprehensive Everglades Restoration Plan (CERP) success. The information gained at this workshop will inform the future REStoration, COordination and VERification (RECOVER) Monitoring and Assessment Plan (MAP) Update. This information will also be shared with the new Florida Coral Reef Coordination Team (FCRCT).

Gina Ralph shares info about BBSEER (Biscayne Bay and Southeastern Everglades Ecosystem Restoration) upcoming PDT meeting on Friday 7/21. Jerry gauges group interest in a BBSEER update for a future meeting - people agree it would be timely and topical for our team.

Karen Bohnsack reminds the group that SFER Task Force Working Group has created a coral reef advisory team - mentioned by Gina. This group is working on putting together a monitoring framework to detect changes associated with Everglades restoration and resultant impacts on coastal/coral resources. At this point a presentation is premature but something to track for the future as there is tremendous synergy with the Sanctuary and our team's work.

Karen Bohnsack reminds the group about the upcoming SAC meeting on August 15th.

Cara Capp shares that both Cara and Jerry are featured in a new Washington Post podcast as part of the “Field Trip” series on national parks, the Everglades National Park episode touches heavily on the health of Florida Bay. Captains for Clean Water and USACE are also featured. Listen here: <https://www.washingtonpost.com/podcasts/field-trip/everglades-national-park/>

11:10am - Meeting adjourns