

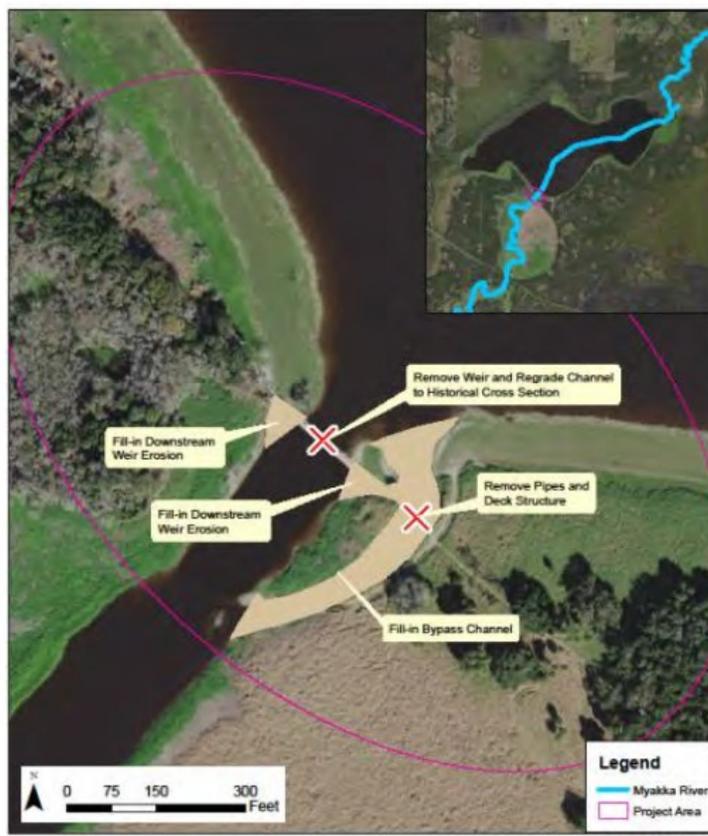
## **Myakka Wild and Scenic River Program 2020 Annual Report**



**A. Permitting & Regulatory issues**

1. The FPS District IV continues the effort to restore the Upper Myakka Lake (UML) Bypass/Weir Area as directed in the adopted Myakka Wild and Scenic River (MWSR) Management Plan, under Action 2.4. In October 2017 an application was submitted to request funding through the SWFWMD Cooperative Funding Initiative (CFI) to conduct modeling to identifying the best solution to this long-standing issue. In October 2018 SWFWMD approved matching funding. Wood Environment & Infrastructure Solutions, Inc. (Wood) was contracted to produce a feasibility study. In summer 2020 Wood provided a final study and their recommendation for restoration the area to the pre-alteration condition. The FPS, SWFWMD, FWC's Aquatic Habitat Restoration/Enhancement (AHRE) Program, and U.S. Fish and Wildlife Service (FWS) agreed to partner in this effort. Wood provided additional work from the conceptual design toward formal construction plans and applied for the necessary restoration permitting with SWFWMD and ACOE in late 2020. If permits are received and a contractor is secured to assist FWS with demolition of the structures, this area may be restored during the dry season in 2021.

Exhibit 5.1a - Alternative 1 Conceptual Plan



Conceptual design for restoration from Wood UML Feasibility Study 2020, from page 42.

2. The FPS District IV continues the effort for the restoration of the Downs' Dam area as directed in the adopted MWSR Management Plan, under Action 2.4. In October 2018 an application was submitted to request funding through the SWFWMD CFI to conduct modeling to identifying the best solution to this long-standing issue. In October 2019 SWFWMD approved matching funding for the project and in early 2020 a contract with Wood was secured for a study. The O Bar O Ranch hosted the consultants and agency staff for a February 2020 kick-off meeting for this project. The FPS, SWFWMD, FWC's AHRE Program, and FWS have agreed to partner in this effort. The consultant has completed survey, modeling, and a cost and benefit analysis for three options at the site. A feasibility study base on these products will be completed in Spring 2021.



Kayakers bypass the structure of Downs' Dam paddling through the large eastern wash-out February 2020.

3. In 2020 several bank areas within the river area were under consideration for addressing serious erosion issues. This included both private and public properties, but most were located from the Laurel Road area down to Snook Haven Park (SHP). These issues are complex for many reasons. Several issues set up potential conflicts with concepts in the MWSR Management Plan frame for protecting the river resource values and the interests

of property owners. The first complexity relates the actual determination of where the “river area” is, and therefore what can be regulated under 62D-15. In the non-tidal river, there has been some confusion. Formal determination is necessary.

A second issue more broadly relates to loss in natural resource values along the river from shoreline protection measures. Erosion is often a natural process associated with riverine systems and thus to some degree should be expected and accepted. Additionally, many locations recently identified to have erosion issues are known also other drivers that are likely accelerating bank loss. The most common of these drivers are wakes from increased occurrences from speeding boats, the removal of vegetation, or unintentional trampling of vegetation. Shoreline protection measures often need engineering and thus may be costly. The simplest traditional solutions include building walls or using materials like riprap which have a negative impact on natural resource values including the viewshed.

- In 2019 permitting issues arose related to shoreline wall adjacent to a structure constructed in the river area off North Jackson Road. The project was initially submitted as exempt and fully in uplands (i.e. not in the river area, and thus not regulated under 62D-15). Conversations and site visits occurred to address regulatory issues with some disagreement about location of river area. Initially, a Safe Upland Line (SUL) was established well below the ‘top of bank’ making the project exempt. This SUL was established without site visit. Later, the limit of surface waters determined by the present Ordinary High Water Mark (OHWM). The South District Regulatory Office (SDO) found that the entire project was below the OHWM and therefore, in the river area. On October 31<sup>st</sup>, 2019 SDO issued a permit stating, “the permittee is authorized to stabilize an eroding shoreline through the installation of a 117-linear foot retaining wall and vegetative plantings within the landward extent of the Myakka River, a Wild and Scenic River, Class III Outstanding Florida Waters. Those activities include the restoration of an eroding shoreline through the installation of vegetative plantings on state-owned sovereignty submerged lands.” The physical wall was installed in early 2020. The permit required plantings including in front of the wall to mitigate impact to the view but were viewed as very unlikely to establish. Plantings were installed at the top of the structure in late 2020. See photos.



2019 pre-installation of wall.



2020 post-installation of wall.

**B. Incidents**

1. Blatant non-compliance with posted MWSR and manatee speed limits remains a serious issue. Residents, paddlers, fisherman, and tour operators frequently reporting observations to this office. A significant portion of boaters fail to comply with regulatory signs. All these activities have an impact to the wild and scenic values in the river area and are a potential hazard to other recreational users. Wakes from speeding in some locations appears to be accelerating bank failure and loss of point bar vegetation.
  - Discussion continue regarding improvement of signage at most public access points including; SHP, VMRP, and MRSP.
  - Some regulatory signage on the Myakka River is old and failing. In the Spring of 2020 signs associated with four pilings from U.S.41 were replaced. Additional signage will need to be replaced soon. The temporary buoy at the new SHP ramp was replaced with standard piling and signage.



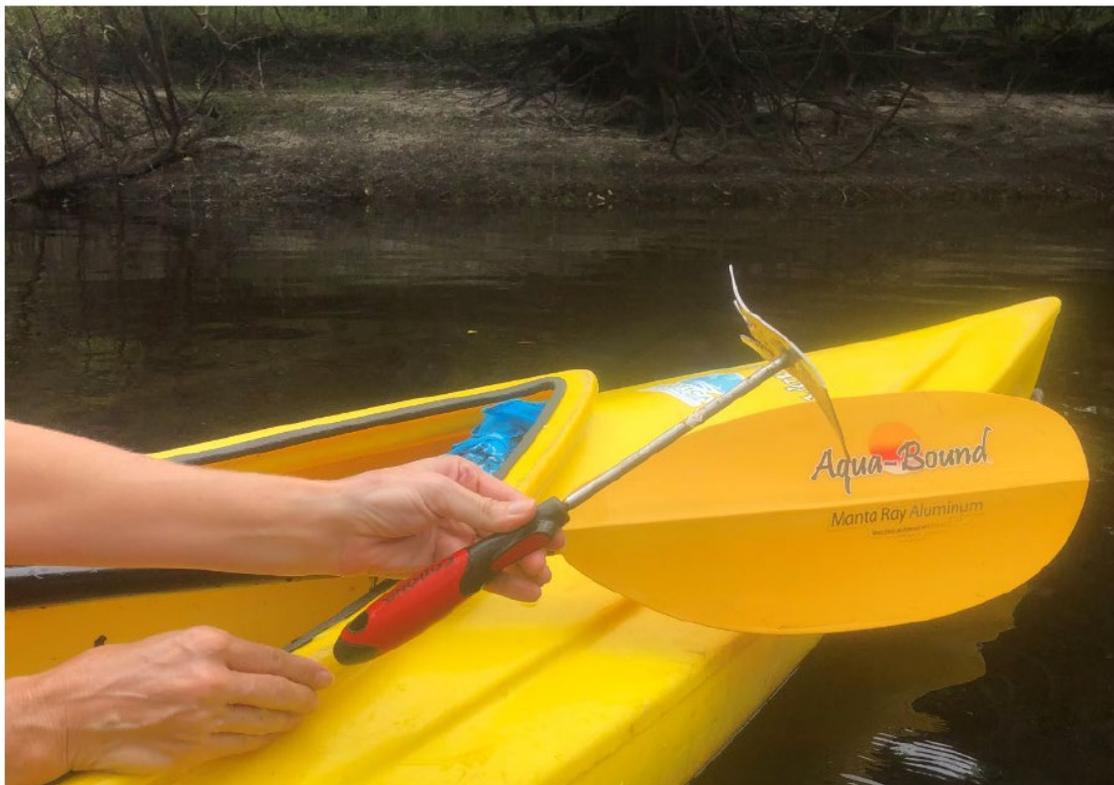
Boaters seen speeding in MRSP stopped for lunch on private O Bar O Ranch tied off on table under “no trespass” signs.

2. Continued unpermitted camping and fires, and the illegal removal of vegetation including listed species remains an issue impacting wild and scenic values on private and public conservation properties.



Two campsites seen in February 2020, some are developed with tree and branch removal, other sites are more primitive.

3. Impacts from fossil collection in the river area is very apparent during the low water season. The number of indirect and direct observations of this activity as steeply increased. It appears some areas are dug extensively and systematically by several serious collectors using hand tools including large shovels.
  - *“The volume of fossil hunters of Florida streams seems to be exploding in response to highly-active social media sites and YouTube channels dedicated to promoting the activity and sharing their findings. This creates a ‘gold rush’ effect to hot spots – concentrating much activity in some streams”. “These activities destabilize the banks, causing massive erosion in some streams. The simple act of heavy foot traffic by fossil hunters on streambanks denudes streambank vegetation leading to further erosion. In essence, the collection methods popular today are changing the morphology and likely the ecology of many of our stream channels and banks.” (Dr. John Kiefer, fluvial geomorphologist, personal communication)*
  - Additionally, this issue is complicated by confusion in the fossil collecting community. Many hunters view that this activity is allowed including using tools. One returning fossil hunter obtained a written confirmation from FWC’s online (ASK FWC) specifically asking *“is it legal to kayak and dig for sharks’ teeth in the Myakka River”* noting he planned to use a 4’ shovel and that he had a book that states that it is legal. FWC responded February 14, 2020, *“Thank you for your question. It is legal as long as you stay out of the State Park.”* In late April after I encountered this individual digging in the river with the 4’ shovel. I spoke with the FWC’s Regional Captain about this written statement.



In addition to shovels, hand tools like this one found during the July 2020 survey are used to dig in the river bottom and banks.

4. Monitoring of Deep Hole wildlife for concerns related to recreation impacts continues.
  - In early 2020 Zane Walsh, a student from New College, conducted an alligator study at Deep Hole and wrote a paper on his findings, “The Flushing Behaviors of the *Alligator mississippiensis* Deep Hole Population in Relation to Human Interference and Disturbances at Myakka River State Park”. The effort based on thirty-three hours over six days noted “a total of 70 identifiable instances of flushing behavior were recorded from *A. mississippiensis* at the deep hole site.’ Further describing the results, “67.14% instances of flushing behaviors in *A. mississippiensis* individuals are a result of a direct human presence. In comparison, only 5.71% of flushing behaviors observed were determined to be naturally occurring. 5.71% of flushing behaviors were indirectly caused by human activities. The sources of 21.43% of flushing behaviors were unable to be identified.” In the discussion Walsh as notes, “It was also found that 28.57% of all flushing behaviors were transitional water flushes, in which an *A. mississippiensis* individual flushes from a basking area into the water. Having shown the statistical significance of the effect that a visitor presence has on the percent of *A. mississippiensis* individuals basking as well, the natural behaviors of the population in the deep hole area seemed to be affected by a visitor presence. If an individual flushes from a basking area due to visitor activity in the deep hole area, this can be disruptive to the thermoregulatory process in *A. mississippiensis*

(Heatwole, 1976). If, as observed during this study, park visitors are walking or sitting in basking areas for prolonged periods of time, this may alter body temperatures in *A. mississippiensis*, potentially causing a decrease in energy levels and disrupting essential daily activities (Heatwole, 1976).”

- During the regular river survey attempts were made to capture more information as to location of alligators on the bank, any observed flushing or human interactions. At Deep Hole less alligators appear to be present and there is an increased in recreation activity and observed flushing events. (See January survey example on page 10 of this report.)

### C. Nuisance and Exotic Plants and Animals

1. Island apple snail (IAS), *Pomacea maculata*, egg masses began showing up on the UML in September 2011. In August 2013 one egg mass from the IAS was observed south of the S.R. 72 Bridge which appears to be the first report in this section. Increasing numbers of IAS masses began appearing in the river section below the Lower Myakka Lake (LML) in 2015. In late 2015 the first observation of egg masses occurred below Downs’ Dam. In 2016, the IAS range extended down river to Border Road.
  - It appears during 2020 there was a steep decline in the observance of IAS egg masses in all the freshwater portions surveyed.
  - IAS egg masses are now seen near I-75 and along the tidal area of Big Slough, but in relatively low numbers. Limpkins are increasingly observed along the lower tidal river.
  - For the sixth consecutive year no native apple snail eggs were seen during surveys or other visits to the river area.
2. Invasive fish species remain a major issue in the entire watershed. Invasive fish dominate the overall fish population in many sections of the river which has large negative effects on other fishes and aquatic vegetation and may increase factors such as erosion and turbidity.
  - An FWC threat assessment for Myakka River is underway and will consider these elements.
  - The FPS is in discussion with FWC about monitoring of invasive fish and possible control efforts.
  - Hydrological restoration efforts, including the removal of the UML Weir and Downs’ Dam are anticipated to assist in the effort to control these non-native species.
3. Expanded efforts to reduce large monoculture areas of paragrass (*Urochloa mutica*) and West Indian Marsh Grass (WIMG, *Hymenachne amplexicaulis*) were undertaken in 2020. Several areas of the floodplain saw an expansion of WIMG in 2019. Water levels and contractor issues did hamper efforts to quickly address the issue. In 2020, one aerial herbicide treatment

of about 100 acres was conducted in Big Flats Marsh (BFM). When water levels allowed additional treatments were conducted by both staff and contractors in MRSP. This included areas of the floodplain down to S.R.72 and up to the northern park boundary for the first time. The Conservation Foundation of the Gulf Coast (CFGC) contractor treated areas of paragrass above MRSP in 2019 for the first time and in 2020 additional work has been conducted.

For background, major efforts reduce large monoculture areas of paragrass in BFM began in 2015. Through FWC's AHRE Program large areas were treated with herbicides in late 2015 and 2016 for paragrass that formed a dense monoculture over the majority of the marsh. On February 21<sup>st</sup>, 2017, MRSP staff conducted a burn on the eastern portion of the treated area. Bareroot maidencane and other native species were planted in April 2019. Overall, since 2015 much of BFM has seen a significant drop in large dense areas of non-native grasses. The restored marsh is much more diverse and more spatially open. There has been an increase in observations of birds and other wildlife using areas these more open marsh areas.



BFM dense tickseed band in the distance with a re-treated small patch of paragrass and small area of native maidencane in the foreground. (May 2020)

**D. Wildlife and Plant Monitoring**

1. River Inspection data from 1990 through 2019 has been entered into the MWSR Wildlife Database.
2. Throughout the year, several interesting wildlife sightings took place during regular monthly surveys. A sampling of these sightings includes:
  - During the January survey, 231 alligators were observed during the survey. Ninety-five were located at Deep Hole, of which twenty-three were fully out of the water, basking. Seventeen of these were the largest alligators of the group concentrated in the typical area on the north bank. Another seven alligators were partially out of the water. The remaining sixty-five alligators were already in the water. During the ten-minute observation, several alligators flushed when the photographer on the north rim stood up and approached. (See photos below.)



North rim of Deep Hole, with some low level of basking compare with previous low water periods. See next photo.



Flushing, more than half alligators left the bank zone within a few minutes. Several splashes from entry into the water can be seen in this frame.

- During the March 13<sup>th</sup> Survey, 273 alligators were observed. Sixty-two of the total alligators were located at Deep Hole. Of these only eight were fully out of the water, basking. Another six alligators were partially out of the water. The remaining forty-eight alligators were already in the water as we arrived.

Notes on vegetation also occurred during the Marsh survey including a description of the large low areas of the floodplain marsh that had lush growth of Teal's lovegrass, dwarf crabgrass, coast cockspur, and lowland loosestrife. The (state) endangered lowland loosestrife was beginning to bloom. Also, seen flowering was disk waterhyssop, *Bacopa rotundifolia*, in a small single population in the recently exposed floodplain marsh. This native plant is not vouchered in Florida and maybe a range expansion. It was first noticed spring 2019 but was not vouchered after the very small population was impacted by boat activity and seasonal flooding. This new 2020 population was located about 100 yards from the 2019 population (which is no longer present). A few were collected this march for Herbaria, see photos. Further downriver above Laurel Road, roundfruit hedgehyssop, *Gratiola virginiana* was observed flowering on a sandbar. This bacopa relative has not yet been recorded in Sarasota County (and was collected for Herbaria, see photos).



disk waterhyssop, *Bacopa rotundifolia*



roundfruit hedgehyssop,  
*Gratiola virginiana*

- On June 12<sup>th</sup>, eight manatees were seen between C.R.780 and the UML. Heavy herbivory on riverine vegetation was very common along the river and three manatees were encountered not far from the Hidden River Recreation area. Four more were seen after entering MRSP, and a single manatee was encountered as we were entering the UML.
  - During the December 11<sup>th</sup> Survey, 147 alligators were observed of which sixty-nine were located at Deep Hole. Notes indicate that no hikers present when we arrived at Deep Hole. Of the sixty-nine alligators counted, thirteen were fully out of the water, basking. As usual these were the largest alligators of the group and were mostly concentrated on the north bank. Another eleven alligators were partially out of the water, most were just off the bank in the shallow rim areas before the drop off to the deep water. The remainder, 45 alligators, were in the deeper center with only the heads exposed.
3. For the ninth consecutive season, numerous documented Florida manatee sightings above the tidal Myakka River indicate that manatees are using areas within MRSP and upriver into Manatee County for many months when water levels and temperatures are favorable.
- With help from staff, visitors, and volunteers, the MWSR Program documented at least 13 recorded observations from early June until early December. Manatees appear to be present a minimum of 176 days in MRSP aquatic habitats. Based on previous data and water level data manatees had the potential to utilize MRSP for about 210 days.
  - For the sixth consecutive year manatees were observed above MRSP near the C.R.780 Bridge.



Manatees surfacing for air in the dark water (Photo by Kris Fehlberg, July 28, 2020)

4. Snail kite observations are more common in MRSP especially in the large floodplain marsh areas. Several drivers including an abundance of invasive island snails and AHRES effort to eliminate large monocultured areas of paragrass have led to the recent appearance of snail kites at MRSP. The reduction in dry season hydroperiod and continued invasive grass control efforts are complimentary efforts to keep a more open mosaic marsh community that is more usable to the snail kite. (The FPS wildlife database only has two documented snail kite observations in MRSP, once in 1969 and again in 1984. After October 2015 some were documented, and observations have increased yearly. Most of these observations are in the marsh area near the project area. <https://ebird.org/species/snakit/L299291> .)
5. The Myakka Rookery was designated as a Critical Wildlife Area (CWA) in 1987. The FWC Commissioners met in November 2016 and approved a buffer zone around the CWA. The new protection area is 75 feet on the north, west and south sides and 50 feet on the east side. The commission took this action to reduce the potential impacts to nesting birds from any disturbance from recreational activities. The protected season is January 1 through August 31, during which most of the nesting season occurs. Signage was installed in late January 2018.



*Wood stork and great egret nesting on CWA as seasonal activities increase.*

As in previous years, the CWA (Myakka Rookery) was monitored during monthly wildlife surveys. (See graph of estimated nesting by MWSR Program on the following page.)

