Myakka River Management Coordinating Council
Virtual Meeting on Microsoft Teams
September 18, 2020
9:30 A. M. – 12:30 P.M.

MINUTES

The meeting began at 9:30 A. M. with Jono Miller presiding. This meeting was advertised in the Herald Tribune on Friday, September 18, 2020.

MEMBERS IN ATTENDANCE

Jono Miller – Sierra Club
Juliette Jones-Friends of WMS
Chuck Johnston – 2J Farms LLC
Bob Clark-Venice Audubon
Barbara Lockhart-NP FOWL
Megan Cousar-FFS
Mackenzie Moorehouse-SWFRPC
Verne Hall-City of Sarasota
Nicole Ladevaia-CHNEP
Howard Berna - SCNR
Steve Giguere-MRSP
Steven Schaefer-Friends of Myakka
Lauren Peters-FDOT
Alana Todd-TBRPC
Dennis Ragosta-SWFWMD
Ryan Pieper-Charlotte County
Elizabeth Wong-City of North Port
Kathleen Weeden-City of Venice

INTERESTED PARTIES

Chris Oliver – FDEP/FPS
Chris Becker – FDEP/FPS
Stefan Kalev-Charlotte County
Nadine Hallenbeck – FDEP/FPS
Ashley Ellis-SCNR
Michelle Keirsey-MRSP

- **Call to Order and Roll Call was made**.
- **Public Comments**: None
- **Approval of the Meeting Minutes from December 13, 2019 Council Meeting**. Bob Clark motioned to approve the minutes. Steven Schaefer seconded. Howard Berna abstained. Need to change "flats assessment" on page 3 to "threats assessment" instead. Minutes approved.

Officer Elections
Chris Oliver started with a short review on the process of electing officers from the bylaws.

Howard nominated Jono Miller for chair. Barbara Lockhart seconded. No additional nominations were made. Jono accepted the position.

Chuck Johnston nominated Elizabeth Wong for Vice Chair. Barbara Lockhart seconded. No additional nominations were made. Elizabeth accepted the position.

Jono advised the Council that Jim Beever from the Southwest Florida Regional Planning Council retired. Jim brought about 50 years of experience working in Southwest Florida for different agencies. Jono also recommended that the Council recognize Jim's service in some way.

Recommendations for Potential Membership
Chuck Johnston asked about having more agricultural interests on the Council and Triangle Ranch was suggested. Elizabeth Moore is the owner and Jason McKendry is the property manager. It was decided that Triangle Ranch will be asked if they have any interest in joining the Council.

UPDATES:

Ashley Ellis-Sarasota County

The County sent out their annual letter to the Fort Myers DEP regulatory office. It is a statutory requirement that outlines all of the projects that Sarasota County has reviewed from docks to new homes to boat lifts to code enforcement cases that are associated with the Myakka River Protection Zone in Sarasota County. If anyone is interested in seeing that list, Ashley can provide it, just let her know in which format you would like them to send it in.

Jono asked for an update of the Venice Myakka River Park (VMRP) erosion issue and how that is being approached.

Ashley replied that the park is located within the City of Venice jurisdiction. Chris Oliver, a couple of folks from county parks and a gentleman from the City of Venice Public Works were at the park to check out one area. There is a short-paved path that ends in a cul-de-sac, a little picnic area, and on the outside bend of that, they are having some undercutting and they have lost some cabbage palms along the river. Short term, temporary options have been discussed to help protect the public so that they are not going to have any kind of slip, trip or fall in that area. One of the suggestions was to stop mowing this area. This should prevent people from gathering there and minimize any risk.

Another item that was discussed is the option to put in a temporary post and rope barrier to help keep people out of that area as well, it would be low profile and temporary, and they are also going to be doing some native vegetative planting and putting up some signage to let people know that this is a restoration area and to stay out of it. No long-term solutions were discussed.

Chris noted that there was a similar meeting with the County just down the river at Our Lady of Perpetual Retreat Center. They have some erosion just opposite of the Snook Haven Park area, and so similar issues are happening at various properties along the river.

Other locations were discussed including the water line crossing to the Carlton Reserve.

Elizabeth Wong-City of North Port

There is a new environmental technician for the city helping Elizabeth. Her name is Savannah White, and she will be getting more involved with this committee. She is not here this morning because she is out on the Myakkahatchee Creek.

Elizabeth shared that FEMA has released preliminary coastal risk flood maps that greatly affect the Myakka River. The preliminary results show that the flood elevations near El Jobean has gone up four feet, and this translates all the way up the river and into North Port. The increase in base flood elevation is between one and two feet in North Port. FEMA have not started the public comment period yet, which is usually 90 days. It was supposed to have started up in June but been delayed due to the virus. Elizabeth sent in comments on behalf of the city, and one of the major comments she had was they forgot to include the three bridges in the Myakka River. Those bridges really have a dampening effect on the storm surge going up the river.

Jono added that Florida is one of the states that does not have a law requiring risk disclosure, so you do not have to reveal the flood risk if you are selling property. Maybe that will change.

Kathleen Weeden -City of Venice
City of Venice had nothing new to report.

Nicole Ladevaia-CHNEP
The CHNEP brought somebody on to do an economic valuation study of the CHNEP area, mostly focusing on the value of natural resource protection in the area. The final report will be approved next week by their Policy Committee. It is broken down by county as well as by basin, so there is a Myakka Basin economic valuation report, and they have fact sheets available on their website, CHNEP.org, if anyone is interested.

There is a value to natural resource protection and restoration efforts, but sometimes it is hard to get funding, so they hope that this will be useful when looking out for grants and looking to justify some of the work done in the area.

The CHNEP have a couple of ongoing restoration projects in partner with the Conservation Foundation of the Gulf Coast, as well as with the Water Management District. They also have some fact sheets about those projects on their website.

The CHNEP are working with FWC and a contractor on a design plan for Warm Mineral Springs. It is a restoration project, which is an ongoing FWC project to try and restore hydrology to Warm Mineral Springs Creek for access for manatees. They now have 60% of the design plans done. The final product will be final design plans from the contractor and permit documents that they will make available to FWC and hopefully they can continue to look for funding to do the construction for that project in the future.

They are currently in their last week of collecting updates for national reports on habitat restoration and land acquisitions in the Myakka River area and CHNEP area in the last year. This report goes to Congress, it helps justify federal spending in the area as leverage against state and local spending. Nicole encouraged people that if they have any recent acquisitions or restorations that they know of, they could send this information on in this next week that would be wonderful.

They also have a conservation grants program, which are grants up to $3,000 for smaller projects. The application process is simple. The FY 21 conservation grants program is now open, and there is more information on their website for anyone that knows of any restoration project that might need a little boost or an education project as well. All the grant requirements are on the website.

Dennis Ragosta-SWFWMD (WMD)
At the beginning of Covid, the WMD reached out to all their cooperators in the 16 county area, and they have had constant communication with them throughout the entire pandemic just to stay on point and to make sure that there is been no financial impact to any ongoing or future projects. None of the 16 counties, their Cities or municipalities have had to scale back on any projects related with the WMD regarding any water quality and flood protection. They are heading into their Cooperative Funding Initiative (CFI) fiscal year 2022 application process within the next couple of weeks.

Megan Cousar-Florida Forest Service (FFS)
The FFS did a thinning recently of about 86 acres, and they have seen a lot more wildlife in the area. They are continuing their invasive species eradication processes with their techs, and recently did a chopping project out near the river. Some of the neighbors were complaining about the overgrowth with exotics, so they did a big chopping project there. That is pretty much finished, and they will be treating this area as necessary from here on out.

Chris Oliver- on behalf of the CFGC

The area north of Myakka River State Park (MRSP), up to CR-780, Triangle Ranch and parts of the Crowley Museum property that are in the floodplain, have received two treatments for exotic grass by a contractor. That is helping to control West Indian marsh grass & paragrass and seeds that flow down into MRSP, so it is part of a cooperative effort to increase the control of these invasive grasses. Lee Amos is also working with the ranch manager at Triangle Ranch, towards changing the ranching practices in a way to help with water quality and to eliminate areas of West Indian marsh grass, that are in the floodplain, so there is some efforts going on there.

The CFGC has purchased a couple of additional conservation easements and properties that increase the buffer to the river area and increase protection of water resource.

Chuck Johnston-O Bar O Ranch

The ranch has completed all the work they were doing in cooperation with the USDA Natural Resource Conservation Service. They had done some projects to be able to help with mitigating any run-off or erosion and those have been completed and inspected by USDA. They were happy to get that done before the rainy season.

The ranch has had great cooperation from the sheriff's department recently. There is still a lot of boat traffic up and down the river of larger flat bottom boats with 75 to 90 horsepower engines. Chuck believes this is due to the water being up over the dam and the boats can cross over. They have got some pretty good video footage of them proceeding all the way up into the park towards Lower Myakka Lake. The boaters seem to be the same ones over and over again, probably a dozen or so. It is hard to track them for law enforcement because their timing is not consistent, but they do seem to capitalize on when there is high water. Chuck said that he has also been in contact with FWC, so the problem is noted.

Steve Giguere-Myakka River State Park (MRSP)

The Park has done two rounds of exotic grass treatments with a contractor this summer. Park staff have also been working on the exotic grasses as well. Steve said he expect good restoration conditions, once it goes to lower water levels when we when be able to assess native regrowth.

Chris Oliver-Myakka Wild and Scenic River (MWSR) Program

The Florida Park Service (FPS) has continued to look at options and is working with various agencies like, the Water Management District, Fish and Wildlife Service and FWC to explore paths to restore some of the hydrologic alterations that were made in the state park and beyond. FPS is continuing to seek funding and implementing the recommendations from a feasibility study to restore the Upper Myakka Lake, bypass and weir area. This is being done because it is directed specifically to do this in the adopted Wild and Scenic River Management Plan under action item 2.4. This was in the 1990 management plan, in the 2011 management plan, and the 2004 and 2019 MRSP Unit Management Plans. These were priority projects. Wood completed the study this summer. It is a cooperative funding initiative for the study with the WMD which started in 2017, and very similarly, one year later in October 2018, another joint CFI study for the Downs Dam restoration area was requested, which abuts the O Bar O Ranch. That study is now in the modeling phase, and they will probably see some preliminary results this winter.

Chris Oliver and Chris Becker have had many discussions with various stakeholders about permitting issues, including exemption requests, ERPs, other types of permitting issues, determinations of what is river area and what is protection zones.

The Wild and Scenic River's Florida Uniform Water Ways permit, which is from FWC, was updated since the last meeting. There were several old pylons that were probably put in in the 1990s, and they had become dilapidated. Two may have fallen in and two were about to fall in. These were down near US 41

on the Lower Myakka, up to Ramblers Rest, and so those were all replaced in the spring. At the same time, Sarasota County had the same contractor replace a buoy that was north of the new Snook Haven boat ramp, so now there is an actual marker on a post there with better visibility. The program hopes that they can replace some of the next most problematic markers around the Snook Haven area and potentially some bridge signs.

There have had a few natural resource issues and incidents, similar to ones in the past. There is been a real increase in un-permitted boaters coming into the wilderness preserve from both the north and south coming up over Downs Dam area. These boaters not only did not pay for access to the park, they do not have a permit for the wilderness area, and they are almost always going very fast. There are manatees, other boaters and paddlers in the area so this can create a real hazard.

In the spring when water levels were still low, there was a real increase that Carlton staff and other people reported fossiling above the Rocky Ford area. There was a lot of people using tools and even damming the river with cabbage palms and rocks to try to make areas more accessible for fossiling. That is an ongoing problem that seems to be at an increase.

There is also been a seasonal increase in alligator safety issues, usually when the water is low. Alligators are congregating into the best spots and people are going there to get photographs or going there to do cast- netting and fishing. They had an increase at the standard areas, one of the problematic areas being the Upper Myakka Lake Weir, and another area being VMRP.

Staff is looking at better signage and some potential options at the Upper Myakka Lake area and the weir. The park did temporally ban fishing and cast netting from those locations, but it is an ongoing problem. Law enforcement is probably the only thing that is going to handle any of those three issues.

There have been coordinating with the FWC IPM program and their Aquatic Habitat Restoration and Enhancement Section (AHRES)program to continue to restore areas of the floodplain, mainly focusing around suppressing West Indian marsh grass, paragrass and other invasive grasses. They have had some contractor issues with bad water levels and unresponsiveness. There was an aerial application in mid-August when water levels were great for that. The FPS are planning to apply for AHRES support for additional work next cycle, so that would be after July next year, but they will apply for that probably in November or December.

Jono mentioned that he joined Ashley and Chris in looking at the situation at the Diocese of Venice, their retreat on the river. They have a high bank with erosion threatening the access road for the property. Jono has been looking at their options for protecting that and corresponding with County Staff too about VMRP at the end of Laurel Road.

Jono advised the Council on the Recreational Carrying Capacity Subcommittee (RCCS) meeting last week. The RCCS went over which areas on the river are “functional river segments”. The idea is that you have to take in all the different characteristics of the river since it can vary so much before deciding what are appropriate recreational uses of the river in each area. For instance, the Wild and Scenic River area at the Charlotte County line is completely different than at the Manatee County line. Then the RCCS went through and reviewed the latest thoughts and observations people had about recreational use and also recreational abuse. Jono has a photo of someone who is camping out on the Venice Golf and River Club property, the campers have a tarp set up right on the bank of the river. Jono and his wife commuted down the river this week around the park, then to Border Road, and three boats passed going upstream, and as Chuck Johnston suggested, there is no real reason to believe they stopped at the park boundary.

Jono disclosed a communication on Tuesday, September 15th. He called Chuck Johnston to get permission to stop on the O Bar O Ranch property when they canoed through there, and they talked for a while. Chuck asked Jono about the Sarasota County landfill. They are proposing to raise the maximum height of one section of the land fill to 200 feet. Chuck and the adjoining property owners are concerned, how it might affect their property. Historically, the reason the landfill was limited to 100 feet had been a concern that if the landfill were higher, it might be visible from the Lower Myakka Lake wilderness area. Jono talked to a consultant who is doing work related to that issue, and They have been trying to ascertain whether the height of the trees between the Lower Lake and the landfill would be sufficient to obscure the top of the landfill. They currently have new technology, lidar technology that instead of measuring the ground surface can measure the canopy height, and he requested information from them about the canopy height along the line of sight from the Lower Lake.

Jono wasn't sure if it would be addressed in today's meeting but it was a discussion between two Council members that could conceivably come up. The County Planning Commission recommended the approval of it and it is going to the county commission on October 7th.

Break 10:37-10:50

NEW BUSINESS:

Chuck mentioned that back in the late 1990s, the adjacent landowners to the landfill were promised that the landfill would never go above 100 feet. Chuck and Mrs. Davis, also from O Bar O Ranch, are also concerned that not now, but in the future, school kids that would go to the top of the canopy walk will see the most prominent feature off on the horizon and it is going to be a 221 foot above sea level, 500 acre garbage valley.

Presentation from Wood Environment and Infrastructure Solutions (See pdf copy of presentation online)
Kristen Nowak is an environmental scientist with Wood Environment and Infrastructure Solutions (Wood). She is the project manager on this project. It is the Upper Myakka Lake (UML)Weir Restoration Feasibility Study. Wood has been working on this project for the last year and a half.

This project was sponsored by FDEP and it was co-funded by SWFWMD with CFI matching funds.

The end product was a nearly 300-page long feasibility study report, which was completed in July. Kristen went over project objectives, background information, data collection and analysis, modeling, alternatives analysis, and summary and conclusions.

The goal of the feasibility study was to explore three alternatives with the objectives of restoring natural systems and improving water quality in the Myakka River. Alternative one is removing the low water control structure. Alternative two is amending the low water control structure, and alternative three is rebuilding it.

The weir is located at the outlet of the UML and that is part of the Myakka River. A 66-mile-long Blackwater River, that empties into Charlotte Harbor and has a total drainage area of 580 square miles. The river is punctuated by two large in-line lakes, Upper Myakka and Lower Myakka, which are both located in the MRSP which is 37,000 acres. The area of interest is at the outlet of the UML. The weir and the bypass are located at the lake outlet, there is a parking lot and concession to the right (as seen on the slide). The weir is a low water control structure where the river transitions from a lake into a river again. It was constructed to hold water back during the dry season for recreational purposes, it held water back so that the lake would not draw down all the way and there would be more water in it for people to boat and fish. The Myakka River is a very dynamic river with high water periods where large areas of the park

are under water, low water periods where sections of the river and marsh go dry. Because the water gets so high, the water flows over the structure during the wet season, and it is acting like a weir, not a dam. Plans from 1937 show the proposed hydrologic modifications, so this dates back very far, it was constructed in 1938-1939. Unfortunately, there were unintended consequences from the construction of the dam. Blocking the river and lake from flowing freely. Things like dissolved oxygen, fish kills, changes to the communities, and that was just due to the lack of the natural draw down on the lake and changing the timing of the hydrology.

So in 1974, a bypass comprised of 6, 60 inch culverts was constructed to help improve the negative effects of the weir to allow more water to flow out and have a better draw down, but unfortunately, the culverts did not have the capacity to draw down the lake as much as the natural condition would. There was even additional pumping in attempt to achieve a full draw down because this did not function as well as hoped.

The structure consist of a coquina wall and then concrete slabs were put on top of it at some point, it has been degraded over time and you can see numerous gaps in the structure, there is even trees and vegetation growing in it. The culverts themselves and the bypass have rusted out and these rusty ribs are definitely a hazard. Even further, in 2016, there was a blow-out around the bypass itself. The area used to be connected and you could walk across the viewing platform all the way to the weir. The river is trying to go wild again, it is trying to widen and achieve the natural outlet it used to have.

The no-action alternative would be to allow the river to do what it wants to do, and what would happen is this will continue to erode on the eastern bank, leading to loss of park property and increased sedimentation downstream. The soil has to go somewhere, and that can have its own unintended consequences downstream. The structure would continue to degrade and the intended function of holding back water would be reduced, and then rusted culverts and a dilapidating weir do present unsafe conditions to humans and wildlife. The viewing deck is unusable, and addressing these issues is part of the park's unit management plan, so the no action alternative is not a viable alternative.

Data collection was a big part of the study that involved reviewing existing data and collecting new data, including survey, water levels, sediment, water quality, vegetation and wildlife.

Wood reviewed existing survey data and then determined what additional data was needed for modeling purposes. They needed new bathymetry data, so they surveyed the lake bottom along a grid, and with that, they were able to create a bathymetric map. Elevations range from 7.4 NAVD in the deepest spots to 9.5 NAVD around the edge. NAVD is North American Vertical Datum of 1988. These are elevations, not water levels or depths.

On the day of the survey, the water level was a little over 10 feet (elevation at gage), so at the deepest point, the lake was not even three feet. This survey was done in the dry season, so that is as to be expected. When they were getting all these points in the lake, they also probed down at each of point to get an idea of how thick the sediment was, and the sediment ranged from zero to 1.4 feet deep. They also did a very detailed area of the outlet, a cross-section and a profile. To get an idea of how water levels fluctuate within the lake, they reviewed available hydro data from USGS, SWFWMD and the state park. There was already a gage on the lake and park staff has been taking manual readings since 2002, so they got all the park's hard copies and digitized them, but to get more continuous data, they installed a logger. The logger records data every day, then it was downloaded, and they collected a year's worth of data, which was really helpful information for modeling purposes.

They also collected sediment samples. They sampled twelve locations, ten in the lake and two in the river, and this was to get an idea of the characteristics of the sediment. They spaced them out based on

the different sediment thicknesses that they had gotten in the survey, so it was planned out to get a good representative sample among the lake. Wood found that the sediment was mostly sand, so even where it seemed mucky, it was predominantly sand. The lake sentiments had higher levels of nutrients, metals and Total Organic Carbon, than the river sediments did, but these were all lower than you would see in typical urban lakes. They also took a subset of samples called phosphorous fractionation, an extra lab analysis, and found there is low bioavailable phosphorus or BIP, meaning that there is not a high risk for nutrient release or re-suspension with respect to removing the weir. Based on a combination of physical and chemical properties of the sediment, they are confident that there is not a mass of sediment right behind the weir that is waiting to be released, which is something you hear about being concerned with some dam removal projects. They do not expect some big wedge of sediment coming out, if the weir is removed.

For water quality, they did not collect any new water quality data for this study, but they did look at the existing data. The UML has been identified as impaired for nutrients, but looking at the data, it does look like nutrient concentrations have been decreasing in recent years. They also did not collect new vegetation or wildlife data, but they reviewed the existing data. The lake is 950 acres of open water and surrounded by floodplain marsh, and hydric hammock. The hydric hammock area is seasonally inundated, so pretty much every year, you are going to see water way out there, the river gets very wide. The park has documented invasive plants and fish within the lake and floodplain, and manatees have come all the way up to the Upper Myakka Lake.

The current condition of the weir does pose a hazard to manatees. In 2014, a manatee was stranded behind a water control structure further down at Downs' Dam and it had to be rescued, so having an unobstructed river allows for better fish and wildlife passage.

The study explored three options to address the situation. Option one, the removal option would entail taking the weir out all together and taking the pipes out and everything, so you would have a natural size bank, full channel that allows much more capacity. Option two, amending the structure would lower the weir by two feet to an elevation of 10.4 feet. Option three, the rebuild option, would replace the structures to function as they were in 1974. Replacing the 6, 60-inch culverts and rebuilding the weir to an elevation of 12.4 feet.

The next step was the event modeling, and that is done to assess flooding impacts with respect to each alternative. Wood used an existing Myakka River Watershed Initiative model, which is an ICPR 4 model. They modeled three storm events, the 2.33 year or mean annual, the 25 year and the 100-year, 24-hour storms.

The modeling showed no adverse impacts for any of the three alternatives with respect to flooding. They were examining the differences in peak flood elevations from the no-weir condition or from the rebuild of the weir condition, which is the baseline. It is what is out there today. Comparing it to the removal and modification, there is no differences again, the same reason being that these are large flood events where the water is over topping the weir anyway. The structure is a low water control structure intended to hold water back during the dry season, so they are not seeing any adverse off-site impacts for flooding. Rather than looking at specific flood events, a continuous model allows you to look at a full range of flows, so looking at the wet season and the dry season and using an integrated surface and groundwater model to simulate 16 years. They also used an exceedance frequency curve, it has the elevation on the y axis and the exceedance frequency on the X axis, and each of these lines represents a different alternative.

When looking at the full range of flows, you start to see some differences between the different alternatives. Some of the alternatives do bring the water level down, which means that there is more of a

draw down. The graph shows a 0.3-foot drop in the seasonal low water level from the weir in condition to the weir out condition.

That means during the dry season, the UML would be reduced by 0.3 feet, which is four inches, and although four inches might not sound like very much, that actually relates to 70 acres of additional land that would be exposed during the seasonal low water conditions. Those 70 acres would be restored from open water habitat to wetland habitat, floodplain marsh, and that additional wetland habitat would improve water quality, and it also aids in management activities such as prescribed burns and invasive species control. Since the actual breach, DEP has had some success with doing more fire management and more invasive control because there has been a more natural drawdown since that breach occurred in 2016. The breach has created a real-life preview of the benefits that removing the weir can have, and that is what the modeling shows.

If the weir is removed the lake will not just drain out uncontrollably, the lake will not go dry. There is a downstream controlling shoal crest with an elevation of 9.4 NAVD. It is typical for an in-line lake transition in Florida where you have lakes that are part of river systems. It is a natural control and this controlling crest is seldom in the lake boundaries, but typically is formed and sustained some distance downstream. In this case, it is 940 feet downstream, and you could see (in a projected aerial map) the lake is still wet and holding water, as is the section of the river.

The last section of the report is the alternatives analysis, and once the modeling was completed, Wood looked even closer at the alternatives with regards to various considerations, and then compared them and scored them. The parameters they assessed were water quantity, natural systems, sediment, water quality, environmental considerations, fish and wildlife passage, recreation, permitting and costs.

Kristen showed a chart ranking the alternatives. A zero is a neutral impact. A plus one is a positive impact and a negative one is a negative impact. All the offsite flooding received a zero because they found in the modeling that there was no flooding. The removal option got a point because of the 70 acres of floodplain marsh that will be restored by the lake drawing down more in the dry season.

Sediment balance provides more natural flow regimes. The removal option gets a point because those additional wetlands will create water quality benefits like, improving fire and nuisance species activities. Again, the removal option gets a point because it allows for more drawdown. On the modification, even though the weir was lowered the modeling did not show that it improved the drawdown. The reason for that is because the elevation just was not low enough to allow the drawdown because it was still higher than that crest elevation of that controlling crest, it just does not allow the drawdown.

The modification option does lower the elevation of the weir. This creates a longer period of time through which wildlife and fish can pass through. It also got a point because paddlers can go over the dam for a longer period. Removal scored as neutral because, while it has not proven it is for recreation in terms of no obstruction to the paddler, the weir created a nice little viewing area. There is lots of alligators and wading birds that hang out there. It is not known if that would change if the weir is removed.

The removal option is a self-sustaining option. It is the natural outlet, so that reduces maintenance costs. As far as ease of permitting, they have state, local and federal departments. The state permitting agency is SWFWMD and the federal agency is Army Corps. They have had preapplication meetings with both agencies. As far as the state goes, the removal option would require an individual permit versus a general permit. The rebuild option would be able to go through a general permit. That is a quicker permitting process, so that gets a point there, but the other options did not get a point there.

The federal permit considers the removal option to be restoration. That falls under a nationwide permit, which is a general permit. The modification would probably require a standard permit and the rebuild option would also fall under a nationwide permit because it is maintenance.

When ranking everything together, the removal option is the recommended alternative. It far outweighs the other options. To summarize, the benefits of the removal option are it will restore the river's natural flow regime and timing. It also restores natural systems like wetlands, improves water quality, aides in management activities, improves fishing, manatee passage and all of that while reducing maintenance costs.

Final design and permitting is about to start right now. Wood is hoping to have the permit in hand, early 2021, and then hopefully it could be constructed in 2021 and 2022. As far as costs, because the removal would be a restoration project, the FWC and USFWS would be partners on this project.

Jono asked what the controlling elevation is at the bottom of the pipes that were installed.

Kristin replied probably pretty low. Those culverts were built down all the way to about 7.4 feet, but over time these culverts were impacted by sediments. They were as low as the lake bottom, but since there was that controlling crest downstream, it just filled in because it was lower than the controlling crest.

Jono asked what the controlling crest is made up of.

Chris replied that it is a combination. It is a lot of mollusk shell, not just sand or muck.

John Keifer added that it is a persistent river shoal. It is the head shoal of the river coming out of the lake depression and every inline water body they have studied in Florida, whether it is in small tributaries or larger rivers, naturally has that kind of feature. These persistent river shoals do not tend to shift location very much among years. These shoals tend to be quite persistent in position and in elevation with some fluctuation in a limited way. There might be some inter-annual variation, or it might move a little bit upstream or downstream year to year or decade to decade, but generally they hold their position closely. Those shoals can be completely made of sand. There does not have to be a rock feature for that to function as a sustainable feature over a multidecadal period.

Jono mentioned that those shoals form because once the lake water leaves the lake and enters the marsh, they are at a higher water stage, the water then gets distributed across the marsh surface, which drops the velocity, which means this sediment load falls out. And then it persists as water levels go back to lower flow.

John replied that it is a very good way to look at it, especially in this case, because you are entering an expansive marsh and the channel is bifurcating. There is an energy dissipation that occurs since this funnel flows through a deeper exit channel to the lake. And then that is shallowing up as you enter Big Flats Marsh. Then right where the main river channel splits open that is right where the shoal is occurring. As soon as it is hitting this sort of gradual longitudinal profile on the valley that is caused by Big Flats quasi-depression, it is a big energy drop so any of the sand that is being transported during a larger flow event through the upstream channel drops right there.

Bob Clark asked who makes the final decision on the alternative and where are we in the official process between doing the research and getting permits.

Chris replied that it was already written in the MWSR Management Plan that the study would be done, and the 2019 Myakka River State Park Unit Management plan said, if the study finds that it is feasible,

the weir will be removed and the area will be restored. However, because it requires a fair amount of money and resources, FPS District staff also wrote a memo to Tallahassee requesting final approval to process with permitting and removal. FPS leadership looked at the study's recommendation and they agreed to move forward.

Jono added that the state adopted Unit Management Plan for Myakka River State Park said that the weir should be removed if it could be shown to be feasible. The study that Wood just completed was a feasibility study. The feasibility study generated a price tag for the cost of removal. Chris Oliver is optimistic that that funds can be found to do that. If that is true, then it would be feasible.

Chris noted that it is much cheaper with the removal option, but there are additional benefits. Because of these ecological benefits, he did find two partners for the construction phase. FWC awarded $185,000 toward the construction phase through their AHRES program. US Fish and Wildlife Service, out of their Panama City branch, and their fish passage group, looked at the benefits of this project and they are sending down their specialist staff that have removed many dams. Approximately 25 dams in the Southeast. They will be driving the excavators and will be giving us their staff, knowledge, equipment, and expertise for the project.

Elizabeth asked if the weir is removed, would the increased velocity where the deeper channel is move the sandbar and maybe lower that control elevation of 9.4. She also asked how the banks will be stabilized.

John responded that Wood has looked at whether or not the tractive forces are increased by weir removal. And, they really are not. There really is not any kind of significant change in channel forming discharge, frequency or duration and associated velocities or tractive forces with that. This is a very natural position for such a shoal. It is an intrinsically persistent feature to have a shoal like that. They are not anticipating any hydraulics that would alter the position or the elevation of that shoal with respect to shoreline stabilization. It has side slopes and native vegetation associated with the natural side slopes and soil materials that you would find in a natural shoreline along this part of the Myakka River Valley. It is a very stable morphology and vegetation combination that they would use on that shoreline. There is no need to do anything exotic or have any kind of rock reinforcement or inert materials involved in the stabilization of that particular shoreline.

Elizabeth asked if it is 9.4 going all the way to the marshy area? She also wanted to know if they looked at even more positive effects of lowering that sandbar so there is more lowering of the lake levels.

John replied that they did look at what happens if the next downstream control is gone and it did not make a big change. From a conceptual standpoint, they really do see that shoal as being a persistent feature. If you were to dredge it out, and you would have to dredge not only the shoal itself, but the bifurcated channel, both branches of it, as well down to the next shoal and the next shoal is not that much lower than this head shoal. You would have to dig it out too. So, to drain the lake even more, you would have to work really hard, it would be a major investment and that investment would not persist. These shoals would reform, and they might reform fairly quickly, certainly within less than a few years, maybe even the very first major flood would re reform them. It is not sustainable, so this would not be a viable option.

Chris added that there is the 1916/1917 Army Corps report to Congress about the feasibility of dredging the Myakka River to make it suitable to transport by barge cattle from Myakka City. The survey found overhanging trees were a big problem and costly, but one of the big issues is all of the shoals and areas that they would have to constantly dredge and maintain. There are dozens of these controlling shoals in the river. It is one of the things that makes the Myakka River so dynamic in the low period. It is a great thing for wildlife because you get these pocketed sections between the shoals during dry periods.

Jono mentioned that one of the distinguishing characteristics of the Myakka River is that it, when it stops raining for long enough, the river does stop flowing. It is not like many of the rivers further north in the state that are spring fed and have a constant base flow.

John noted the geomorphic and biodiversity of the Myakka is incredible, and it is one of our team's favorite rivers to work on in the state.

Jono asked Kristen or John how to gauge whether the additional exposed lake bottom during drier periods will be primarily bare sand or just germinating seeds that never get above six inches high, or whether we're going to see a taller, emergent wetland vegetation in that additional 70 acres, how do you predict what that is going to look like?

John replied we have a natural drawdown experiment with the (2016) breach of the bypass has caused. And noted that park staff have seen vegetative response from that.

Chris added that in a few of areas within Big Flats Marsh, staff are seeing a colonization of certain native species, especially if the invasive grasses are removed. Big Flats Marsh and the Upper Lake have had a historic problem with the introduction of cattle grasses. In areas where they had removed those invasive monocultures, natives emerged from seed in the dry season. Many native species have come in, the most abundant may be the native coast cockspur (*Echinochloa walteri*). It is fantastic for ducks and other wildlife. This species and other floodplain natives that quickly colonize are annuals. They grow and produce seed. And then when the floodwaters come, they are covered up. Then they come back in the next generation from seed the following season. Coast cockspur is probably the most predominant colonizer, but in other areas, including some of the higher areas, there is other things like cutleaf ground cherry, which is also great for wildlife. *Ludwigia repens*, creeping primrosewillow and other native species quickly come in if we can reduce the invasive grasses.

Jono added that when a lake levels drop during drought; you get a sort of bathtub ring of exposed organic soils or sandier soils. It takes a while for plants to germinate, figure out what is going on and get going. It seemed like part of the reason for the justification for lowering the lake levels historically, was to oxidize organic soils, and to try to get back towards the sandy condition.

Robin Jackson noted that the weir is considered historic and part of the CCC era construction of the park, the Office of Compliance and Review would like to be part of the process. This may happen as part of the permitting process.

Teri Carron with the Bureau of Design and Construction added that They have been in charge of this project to this point, and Terry is also in charge of the design and permitting task assignment that is starting now. The initial consultation was sent into historic preservation. The FPS does understand it is considered a historic structure and they do intend on pursuing consultation in this next future phase with Robin Jackson.

Bob Clark noted that the platform was a great place for visitors. He wondered if there might be some new site to the southeast and consideration for enhancing the area for people, because it is a natural place for people to go now. He thinks it will continue to be whether there is a weir there or not.

Jono remarked that it might be worthwhile seeing how wildlife adapts to the future state before making a final decision about wildlife viewing.

Chris replied that at FPS staff have talked to representatives about the idea of incorporating at least a narrative, if not, physical components of the weir structure in the new visitor center, so that there is

interpretive mitigation for the historical aspects. Steve and Chris have discussed the idea of how to optimize a future viewing area post restoration, but the idea is, let us see what we get. It may be possible to have an elevated boardwalk and platform in an area where the structure is somewhat obscured, but still looking over the same general area. There might be an opportunity to partner with the Friends of Myakka River or other agencies to do a partnership, but that is definitely under consideration.

Bob Clark motioned for a letter to be sent commending Wood for their feasibility study. Barbara Lockhart seconded. Stephen Schaefer & Steve Giguere abstained. Motion passed.

New members of the Council introduced themselves.

Lauren Peters is with FDOT. She is an Environmental Project Manager. Her background is working specifically with threatened and endangered species.

Alana Todd is with the Tampa Bay Regional Planning Council.

Megan Cousar is a Forester at the Myakka State Forest.

Mackenzie Moorhouse is at the SW Florida Regional Planning Council. She is an AmeriCorps Vista, there until January of 2021.

Ryan Pieper is with Charlotte County. He is an Environmental Specialist.

Stefan Kalev is also with Charlotte County as an Environmental Specialist.

The agenda called for the continued discussion of the Myakka Wild and Scenic River Management Plan but Jono felt that, with the meeting being virtual and not in-person, trying to update language on the management plan would be too difficult. It was discussed that a task force be created instead. This group could no more than one Council member on it. Howard Berna motioned for the creation of a task force to develop draft language to update the Wild and Scenic River Management Plan. Elizabeth Wong seconded. Stephen Schaefer voted no.

Elizabeth suggested that whatever recommendations are reached, they be sent out to all the members, at least two weeks before the next meeting so they have a chance to review and maybe give some feedback by email.

Jono opened the meeting up for other topics.

Chuck asked when the information on Downs' Dam will be coming out.

Kristin replied that Wood will be done with the modeling at the end of next month. Then at the end of year, Wood will have the alternatives analysis and cost benefit done, and then the draft report is due in March 2021.

Howard suggested more discussion on law enforcement issues.

It was suggested that law enforcement have a greater presence on the river to catch illegal activity.

Jono added that immediately upstream of MRSP on the west side of the river, there is a dike that was originally created to facilitate cattle grazing operations to the west of the river. It incorporated a large section of the floodplain. When the cattle operation ended, they created a subdivision called the Hidden

River. They use pumps to discharge water from behind the dike, into the river during high water periods. The dike is experiencing deterioration and may not currently have a homeowner's association that has the power to levy assessments on residents. There are a few residents that would be significantly affected by dike failure during a high-water period, but there are a number of other residents that would not be. Jono believes that the people that would be affected are searching for solutions on how to repair and maintain the dike. There was a comparable dike at the Triangle Ranch property. That had also been constructed to keep water out and had a pump situation. That was a common practice at the time to reduce the floodplain of the river. The Council could look further into the issues with Hidden River Dike in the future.

Chris mentioned that in advance of this meeting he received comments from a resident of Hidden River. She stated that the park and the Council did not take the seriousness of the Hidden River Dike as much as it should. She specifically mentioned that the dike is not addressed much in the management plans. There is probably a reason why it is not discussed like the Upper Lake Weir and Downs' Dam are talked about because the likelihood of a restoration event is much more complex because of the private property interest. Chris suggested there could be a greater discussion of the issue and potential inclusion in the next round of the management plan.

Jono replied then let us add that discussion.

Jono continued that he thinks there is some muddiness or discrepancy regarding the southernmost east-west run of the dike and whether that dike is within the park or on the park boundary or is it totally within Hidden River. When you look at the property appraiser's website it looks like it is in the park.

Steve said that it appears that the portions of it are in the park and it is been brought up over a number of years to Park Planning for a comment.

Chris added that the east-west component at the park's north boundary is of lower stature. Generally, it does not have the brute force and velocities that the north-south component has. It is very small portion of the stormwater system of the dike and berm system. There might be some need to look at that structure and determine the boundary, should it be a part of the park or part of Hidden River as it was built in 1958.

Jono advised that at the next meeting to anticipate a report on the management plan and a report or action from law enforcement, particularly FWC and others as appropriate. There will be an initial investigation regarding Hidden River Dike and how that affects the park and the Wild and Scenic River since it does go all the way up to the bridge. There the western boundary is a manmade dike, so it hasn't gotten a lot of airplay and it also generally has not been able to be paddled. Jono and his wife went through that area last Saturday and noticed that areas had been sprayed for hyacinth. Had it not been for that, they might not have been able to get through because of vegetation.

Bob Clark motioned to adjourn the meeting. Chuck Johnston seconded.

The Meeting was adjourned at 12:30 p.m.