

**INTEGRATED PEST MANAGEMENT
SUB-COMMITTEE
MEETING AGENDA
MONDAY, MARCH 8th, 2021 – 2:00 P.M.
COUNCIL CHAMBERS
1225 MAIN STREET, SEBASTIAN, FL**

- I. CALL TO ORDER
- II. PLEDGE OF ALLEGIANCE
- III. ROLL CALL
- IV. APPROVAL OF MINUTES **-ACTION ITEM**
February 22nd, 2021 Meeting
- V. ANNOUNCEMENTS
- VI. PUBLIC INPUT
- VII. NEW BUSINESS
Item A. Non-Chemical Methods Suggested at Last Meeting
 - i. Discuss the Pros and Cons of Each
- VIII. OLD BUSINESS
Item A. Section II. Structures
 - i. Review and Discussion**Item B. Section IV. Ponds**
 - i. Review and Discussion
- IX. SUB-COMMITTEE MEMBER MATTERS
- X. STAFF MATTERS
- XI. ITEMS FOR NEXT AGENDA
Item A. V. Ditches/ Rights-of-Way/ Dry Retention Areas
Item B. VI. Further Non-Chemical Recommendations
- XII. ADJOURNMENT

ANY PERSON WHO DECIDES TO APPEAL ANY DECISION MADE ON THE ABOVE MATTERS, WILL NEED A RECORD OF THE PROCEEDINGS AND MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH APPEAL IS TO BE HEARD. SAID APPEAL MUST BE FILED WITH THE CITY CLERK'S OFFICE WITHIN TEN DAYS OF THE DATE OF ACTION. (286.0105 F.S).

IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA), ANYONE WHO NEEDS SPECIAL ACCOMMODATIONS FOR THIS MEETING SHOULD CONTACT THE CITY'S ADA COORDINATOR AT (407)-589-5330 AT LEAST 48 HOURS PRIOR TO THIS MEETING. TWO OR MORE ELECTED OFFICIALS MAY BE IN ATTENDANCE.



IPM SUB-COMMITTEE AGENDA TRANSMITTAL FORM

Board Meeting Date: March 8th, 2021

Agenda Item Title: IV. APPROVAL OF MINUTES –**ACTION ITEM**
February 22nd, 2021 Meeting

Recommendation: Submitted for Committee Member Approval

Background:

If Agenda Item Requires Expenditure of Funds:

Total Cost: n/a

Attachments: February 22nd, 2021 Meeting Minutes

**INTEGRATED PEST MANAGEMENT SUB-COMMITTEE
MINUTES OF REGULAR MEETING
COUNCIL CHAMBERS
1225 MAIN STREET, SEBASTIAN, FL
FEBRUARY 22, 2021**

I. Call to Order -- The meeting was called to order by Mr. Benton at 2:00 p.m.

II. Pledge of Allegiance was recited by all.

III. Roll call

Present

Mr. Griffin

Mr. Carrano

Dr. Cox

Mr. Stadelman

Also Present:

Brian Benton, Leisure Services Director

Kim Haigler, Environmental Planner

Barbara Brooke-Reese, MIS Manager

Janet Graham, Technical Writer (Zoom)

IV. Approval of Minutes -- January 11, 2021

Chairman Benton asked if everyone had a chance to review the Minutes as presented. All indicated they had. Dr. Cox thanked the recording secretary for her detailed transcription of the Minutes of these meetings. Hearing no changes/corrections, Mr. Benton called for a motion. A motion approving the January 11, 2021 Minutes as presented was made by Mr. Carrano, seconded by Mr. Griffin, and approved unanimously via voice vote.

V. Announcements -- None

VI. Public Input

Bob Stephen, Concha Drive, Sebastian. Thanked the Sub-Committee for their work. He asked if any of the Sub-Committee members had read Lisa Souto's IRL report card and/or viewed the movie from Sir David Attenborough, "Life on Our Planet." He thinks those two items are very important. He also referred to what the United Nations put out. The title of that report was, "Making Peace with Nature." He said the bottom line is to stop what we are doing. He read a short clip from a report from the U.N. regarding climate change, etc. He stated we have to stop what we are doing--we are not doing the right

thing. He said there is money to change things and stated the waterways and parks of the City are being killed.

There being no one else in chambers and no one on Zoom who wished to speak, Mr. Benton closed public input at this time and moved to the next item on the agenda.

VII. New Business -- None

VIII. Old Business

A. Recent Projects Presentation

- i. PowerPoint presentation from November 2nd meeting, updated with final numbers

Ms. Haigler made a PowerPoint presentation (SEE ATTACHED) and stated it covers a lot of the same photographs and projects that were described previously. Now that they are complete, there are some numbers to show. This covers the past six months. She stated the City's stormwater team has been working every day, five days a week, every week all year. She described what is contained in the PowerPoint.

As far as City infrastructure is concerned, the overgrowth of aquatic vegetation impairs the water flow, reduces the storage capacity, and damages the stormwater structures. This can take a lot of effort and a lot of money to repair. She reviewed the structures addressed by the Stormwater Department. The City contracted a company to mechanically remove the vegetation with a Weedo, a specialized boat that piles vegetation on the shoreline that is later removed by dumpster and taken to the landfill. After six days, most of the vegetation at the canal terminus was removed; however, a lot of duckweed remained, and a lot of vegetation was still along the shorelines. What had been loosened up but not collected gathered downstream at the Hardee dam. It began to block the flow from the dam, as was shown on the PowerPoint. The contractor returned, and City staff assisted them in removing more of the vegetation over the next three days. The final data on that project was \$27,000.00 for the contract, 339 manhours, 1,800 linear feet of canal that was affected, and 685,000 pounds of wet vegetation was removed. That equals 170 cubic yards of vegetative debris that was removed from that area. In addressing the Collier Creek canal, she stated there were sections where the canal could barely be seen due to overgrowth of the vegetation. She described the work that was done at the Collier Creek canal, which was a three-month project. She gave the final data, which was 8,735 linear feet excavated, 3,400 cubic yards of invasive aquatic

vegetation and muck were removed. 144 cubic yards of invasive brush and vegetation were removed from the shorelines. Next, she reviewed the Tulip drainage where there was mechanical vegetation removal and ditch excavation. The final result was a cleared waterway with water flow and storage restored. The Melrose drainage was addressed with mechanical vegetation removal and a ditch excavation project. It was unrecognizable as a ditch except for the indentation. Now it has water flowing through the pipes through the command system. The Potomac drainage was a bank erosion restoration project. The three projects together were called the South Ditches project, which yielded 17,057 linear feet excavated, 10,799 cubic yards of aquatic vegetation and muck removed. At the 512 drainage project very little water was flowing through the main ditch. Organic material and sediment deposits had made this ditch more of a swamp, ideal for breeding mosquitos and algae. It also had a lot of garbage in it. During its driest phase of the year, the stormwater staff excavated the mucky bottom to restore the flow. The result is the open, flowing channel free of debris. The residents who live along that area have called the City to comment that it smells a lot better. The final data on that project were 5,000 linear feet excavated, 100 cubic yards of aquatic vegetation and muck removed, and one \$16,000.00 equipment repair.

She reviewed the final data for all the projects are 32,592 linear feet, or 6.17 miles, of the stormwater conveyance system that was mechanically managed; 14,613 cubic yards of debris were removed; 10,059 manhours were involved with City staff alone; \$27,500.00 was paid to the contractor; \$30,767.00 was spent on rental equipment; \$1,305.00 was paid to the Indian River County landfill for disposal of 29 truckloads of debris. That does not include the Hardee Park. It is also important to remember that part of the non-chemical approach is the mowing contract to do the ditches and the easements. In six months it was \$150,000.00 for them to go through the entire system. She pointed out that these are the kinds of projects that the stormwater field staff is dedicated to.

Mr. Benton referred the \$1,305.00 for 29 truckloads of debris and inquired whether that was all of the debris or is that just what has been transported to the landfill as of today. Mr. Griffin stated that his crews took this material to the county landfill, he signed all the disposal tickets so the county can get paid, and he would have to see what Ms. Haigler looked at to see if that was all of it. Since Sebastian does not have a disposal site, this is the only option.

Mr. Benton commented regarding the 10,059 manhours from City staff, he noted for a while when there was rental equipment being used to help, he stated the City staff were working six days a week, so quite a few of those hours were spent on Saturdays. Thus, a portion of that 10,059 manhour figure would have covered overtime costs for the staff

as well. Mr. Griffin explained that the reason the rental equipment was needed was because the City's tractor that would have normally been used for this had come to the end of its useful life. There was an entry placed in the budget for a replacement track hoe. That was in approximately April of 2019. It was approved by City Council, and an order was placed at approximately October 1, 2019. Unfortunately, the City did not receive the equipment until just a couple months ago because of shutdowns at the factory. That was the reason the rental equipment had to be used. Mr. Benton then called for questions/comments from the Sub-Committee members.

Mr. Carrano:

- Inquired if during this time, this was all mechanical removal and there were no herbicides sprayed. Ms. Haigler stated there has been spraying done since November, but not in these areas.

Dr. Cox:

- Commended Ms. Haigler for her work in summarizing all this data. It is very helpful to know that there is a lot going on besides a contract to do spraying.
- In the course of the last month or so, Dr. Cox has given Mr. Griffin a list of questions, and he has answered some of them. He emphasized in this whole project he thinks it is important to say that the last thing we will go to is spraying herbicides and/or any toxic materials. It is good to know that there is management going on that confronts the problems that arise with the drainage system without having to resort to toxics. Mr. Griffin stated this will be an ongoing effort. The City now has its own equipment, so the work can be done without the rental.

Mr. Benton thanked Ms. Haigler and the Stormwater Department staff for getting these data together and being able to share them, because the numbers clearly show that they spend 10,000+ manhours over the past six months on this project. When you take into account the staffing levels within the Stormwater Department, he stated that the majority of the hours that the staff has worked over the last six months has been in mechanical removal.

There being no further comments/questions from the Sub-Committee members, Mr. Benton called for public comment regarding this section of the agenda. Seeing no one in chambers and hearing no one on Zoom, Mr. Benton moved to the next item on the agenda.

B. Non-Chemical Methods Table

- i. Review of previously approved table
- ii. Discussion of any new items to be added

Ms. Haigler reviewed that this table was discussed at a previous meeting. It was tentatively approved, and some of the items that were on it did not apply to us, such as the carp. They cannot be used because there can be no guarantee that they will not escape, as the system is interconnected with an outfall. She wanted to present the table for the Sub-Committee members' review, and if anyone has any other methods they would like added at this time, that can be discussed. She called for any questions/comments/additions that anyone wished to discuss.

Mr. Stadelman:

- Referred to an item called a "lake bottom blanket" system. It is more like a shading system that would shade large areas, and even though the system works well, it is labor intensive. He also suggested a system of lake and pond skimmers that would work with the duckweed. It could be used behind a boat. It works like a pool skimmer and skims all the top debris. Regarding addressing the weeds, a dry ice blasting of the weeds could be done instead of chemicals on sidewalks and medium-sized areas. This system gets to the roots better than using a shovel to scrape it off, etc. He also suggested that a solar farm area could be installed to shade the areas underneath and turn an area into some type of a park area where it will be managed more as a park. Ms. Haigler stated the lake bottom blanket was discussed, and that system is really for still water. She stated the system has some drawbacks, such as intensive maintenance. Mr. Stadelman asked if the City would be able to use the actual depth of the water to its advantage. He has noticed in other places the plants do not grow in deep water. He did not know if it would be possible to raise the water levels in certain areas until those plants either died off or they were able to be extracted in other ways.

Mr. Carrano:

- Reviewed that there is a system called "diver-assisted suction harvesting" which basically puts something in the water which is excellent at removing vegetation at the bottom. It is pumped into a filter bag and then lets the water run back in. He explained that there are pluses and minuses to it. Ms. Haigler stated that system is commonly used around docks.

Dr. Cox:

- Stated he would like the Sub-Committee to consider keeping triploid carp and/or tilapia on the list. He stated that Port St. Lucie and Martin County are using the triploid carp under guidelines from the FCC. They cannot be introduced where there is an outlet to some other body of water. Other than the canals, there are a lot of other bodies of water in the City that could be considered. Ms. Haigler stated they were not kept on the list because the stormwater system in Sebastian is completely connected. There is no way to isolate them to one water body. Even though they may be sterile, they can live up to 20 years. If they escape into the San Sebastian River, they can really have an effect on the Ecosystem. Every part of the City's water system is interconnected, and every part of the system eventually finds its way to the San Sebastian River. Dr. Cox suggested asking the FWC for an opinion as to whether it is a good or a bad idea for this system. Ms. Haigler stated she did speak to them about it and was told that carp should absolutely not be used unless it can guarantee that they are isolated. Mr. Carrano suggested that a screening system can be installed, but that does not solve the problem when you consider the maintenance of it and keeping the weeds under control.
- Regarding the idea of probiotic bacterial enzymes, Martin County plans to spend \$100,000.00 on an incubator to produce their own probiotic enzymes to put in the ponds. Studies showed that it is an economical approach compared to what they were doing in the past with herbicides and mechanical means. Dr. Cox stated that, specifically for ponds, it is something this group should consider. Mr. Carrano stated he has used muck pellets which have basically an enzymatic action. It works to some degree, and for every positive there are always one or two negatives. Ms. Haigler stated that bacteria enzyme has not been removed; it is under Pathogens. She stated she has spoken directly to a few places that have tried it, and they say that the results are inconclusive. She suggested that it is something to be revisited through the annual review process. Mr. Benton asked Dr. Cox if he had spoken to the people at Port St. Lucie about why there was no recent data on that. Dr. Cox stated they are still having that discussion. Mr. Benton wants to be sure of the data, and he is under the impression that the places that are doing it are doing it as more of a testing area, and the City is not set up to do testing.

Mr. Benton opened the meeting for public input.

Diana Bolton, Sebastian. She stated she appreciates the work this group is doing. She addressed the lily pads. Using blackouts is being looked at in order to keep the sunlight out to prevent algae growth. She opined that algae are healthy, lily pads are healthy, seaweed is healthy, cattails are healthy. She stated that some areas are using water

lettuce to filter the water. Is success measured by a sterile pond that is full of chemicals, or is it measured by the health of it? She suggested that the ultimate goal is to maintain the health of our water bodies. She is in favor of using the sterile fish if that is the only option. She thinks a better option is to use the native fish. Duckweed does not clog up any structures, and it is very nutritious. She suggested that the group back up and identify what the problem is and how they are trying to solve it. She appreciates what the City is doing with mechanical maintenance. Regarding the 29 truckloads of debris that the City paid \$1,305.00 for the dumping fee, it would be interesting to see there is a way to recycle those nutrients.

Ms. Haigler emphasized that staff has made it clear through every step of this program that the Sub-Committee is not encouraging an eradication program; it is a plant management program that uses chemicals as the last resort.

C. Section II, Structures -- This item was deleted from the agenda and will be discussed at the next meeting.

D. Section III, Canals

i. Review and Discussion

Ms. Haigler stated that Mr. Benton had reviewed the overview and the do-nothing options at the last meeting. The non-chemical methods for addressing the problem are dredging and the sediment and erosion control at development sites, which is very important. Mr. Benton commented that this is one of the items that was discussed at the last meeting, and it was requested that staff bring all of these sections back individually so that there can be a Sub-Committee discussion on exactly how to move forward. He called for input from the Sub-Committee members on how they want this section to look and where we go from here in regard to canals.

Mr. Carrano:

- Regarding the canals, he stated that they are frequently used for kayaking and fishing. He has never seen anyone kayaking or any kayak launch areas that are readily accessible. Ms. Haigler stated there are kayak launches at the Concha dam, and there is a launch at Hardee Park and the Stormwater Park. Mr. Griffin stated there is one at the Stonecrop Park facility, where there is foot traffic access to the water. Ms. Haigler reviewed that several residents who have docks use the kayaks there.

Dr. Cox:

- His property backs up to the canal off George Street. He would like to think of the whole canal system as a real City asset, with lots of people using it for kayaking and fishing. The biggest problem he observes along the canal are the vacant lots that have overgrown Brazilian pepper trees. There are issues with getting permission to go onto those vacant lots to deal with these trees and other overgrown vegetation. Mr. Griffin stated that Brazilian pepper trees are extremely rapidly growing. He stated there is the same problem at the Stormwater Park. The problem is, if there is not something done besides cutting back by way of some type of chemical treatment, it comes back extremely fast. Mr. Griffin stated keeping the pepper trees under control takes a lot of effort, and it is very expensive. Dr. Cox stated there is one chemical that can be painted around the base of the tree to address the problem.

Mr. Benton asked what the Sub-Committee members would like to see changed regarding the canals. He wants to be sure that the issues with canals are fully discussed, because when it comes back before this Sub-Committee the next time, it will be for approval.

Dr. Cox:

- Under the do-nothing option, where it says the tolerance threshold for vegetation growth before action is taken is considered moderate, he prefers to list it as high. Ms. Haigler stated she read Dr. Cox's notes on that, and she still feels that it is moderate because controlling it in canals is controlling it for the structures also. After re-reading that sentence, Dr. Cox agreed that the tolerance threshold should be moderate or low.

Mr. Stadelman:

- Asked if any consideration should be made by this Sub-Committee for ongoing payment for dredging and mechanical removal. Mr. Griffin stated his department is in good shape in terms of staffing and equipment that is needed. Those budget items have been approved. As far as the canal itself, dredging and mechanical removal is an extremely ineffective, very costly method. Regarding the other water bodies such as ditches, his department is budgeted sufficiently to do that with the equipment the City now has. Mr. Carrano stated it is the job of the elected

officials to consider the costs. The job of this group is to look at the best management practices to complete the job.

- Does not think there is a do-nothing option. He feels that something needs to be done. Ms. Haigler explained that in a lot of environmental assessments of actions to take it always begins with the do-nothing option just so it is clear that, if we do not do anything, what can be the consequences.

Mr. Carrano:

- One of the things he has a problem with is the wording to the effect that all the plants involved have a negative impact on the canals. That is far from the truth. He stated that removing some of these plants will have as negative an impact as allowing them to stay. Some of these plants do have a positive impact. Ms. Haigler stated that was addressed, and it was discussed in the first sections of the plan. Mr. Griffin reminded everyone that the overall efforts are not necessarily eradication, but often replacement, especially in the canals and ponds where we are looking to replace the invasive, rapidly growing species with desirable native species that truly do enhance the habitat and provide many ecological benefits. Mr. Carrano also stated that providing a good shoreline buffer area is necessary to absorb flood waters and absorb nutrients and maintain a healthy system.
- Asked if any consideration was given to wicking or painting what is left of the Brazilian pepper tree, for example, which is done with a paintbrush. Ms. Haigler stated that will be discussed in the chemical methodology.

Mr. Griffin stated he would like to see on Page 11 (SEE ATTACHED) where it addresses mechanical removal, a sentence that would add to the notation that for some species mechanical removal by itself is highly ineffective, such as Brazilian pepper, and there will need to be other means employed in addition to the mechanical removal. Ms. Haigler stated she can provide that wording.

Mr. Benton reviewed that some of the wording should be changed under the do-nothing option, such as "navigation" changed to "access," and instead of "lost," maybe "hindered" or something of that nature. He also referred to the last meeting when there was discussion and public input about the aquaculture method that was presented to City Council. At that time, a group came and presented what they are going to do at Lake Okeechobee. They will pump the muck out, it will turn into a slurry-type material, and they will be able to pump it out into fields where they can grow hay and use the nutrients in those areas. He believes they were approved with some grant funds to start that project in the near future. Unfortunately, we had wanted them to come here and try to do a test program here in our canals. However, they are set on starting on Lake Okeechobee.

Hopefully, that will be an option here to dredge. They could set up in one spot and just work their way down the canal. They will pump that material all the way out to a piece of property that can grow hay, etc. Ms. Haigler stated she is aware of that program, and it's a sort of agricultural BMP. The City does not have any agricultural-zoned areas. So it would have to be taken pretty far out to get it somewhere that it could be used. Mr. Carrano stated you can pump the material through a geotextile fabric pillow and allow it to get rid of the water weight. Mr. Griffin stated he has been involved with a lot of dredging projects, and most of the citizens agree that it is a good idea. Virtually none of the citizens agree that it's a good idea to dispose of it anywhere near them. That proves to be an amazingly difficult issue. Dredging in reality can be a challenging situation, but it often is the right solution.

Mr. Benton thanked the members for their input, and a few adjustments will be made, and then it will come back to the Sub-Committee. He stated that since Item C under Old Business was skipped over this evening, staff will bring it back at the next meeting.

IX. Sub-Committee Member Matters

Mr. Carrano stated that when the Sub-Committee did the terrestrial IPM Plan, the group looked very carefully at each use and what the target pest management plan was going to be. On some of the properties it was said that there was zero tolerance for pests because of public safety, health, and welfare. On other areas, the group was able to look beyond that because those areas were more of a passive use, and only those areas where the public were going to be had to be looked at. At that point, it was decided whether treatment was necessary or not. He suggested that with the City's waterways, the group has to come up with a plan similar to that. He suggested that the group can come up with a reason for when to apply, what are the conditions where nothing else has worked, and this is what has to be done. At what point do we say the non-chemical methods have not worked, and we have to come in and apply the chemicals.

Mr. Benton stated that there are four separate asset classifications. On three out of the four, chemicals are not sprayed, with the exception of structures possibly at times. Mr. Griffin added that the City does a lot of mechanical removal from the structures, and it works well. It cannot be done 100% of the time at 100% of our locations, but we can do a good job of that. Mr. Benton stated that, with the exception of canals, everywhere else is only being sprayed where there is more of an emergency need. He thinks that is something that the Sub-Committee needs to discuss. It has been discussed regarding how we determine when spraying is needed and what's acceptable. He gave an example of a recent spray contract that he reviewed from another community close to Sebastian, their answer to it is "The contractor shall provide all labor, equipment, and associated

"materials necessary to treat 100% of the project area and achieve a 95% kill rate within one month of treatment." His opinion is that it is absurd to have even that in effect, because if you are killing 95% of what is there, what are you doing to all the fish and everything else that is there. He stated that a 95% kill rate cannot be achieved in one month. He suggested that at some point this group needs to have the discussion of where we want to go with that idea. He opined that what we are doing in Sebastian is nowhere near as severe as what other communities are requiring of their spraying contractors. Mr. Griffin emphasized that the goal is to maintain the ability of the stormwater system to function properly, and multiple methods are used to do that.

Dr. Cox stated that the Cheltenham pond site is a perfect example of a pond where the probiotics could be used as an experiment. He also stated there are two big unknowns: what does this plan tell us and what similarities exist between this and the Parks and Recreation Plan, and what do we do next? It is difficult to say which technique or method is best for controlling the stormwater system because not enough is known about what the stormwater management plan is going to tell us. Secondly, whatever happens next, he is guessing there is going to be a contract with someone like AVC or a similar contractor. He is guessing that they will come back to the City with a very detailed description of sections such as how much we need to do, etc. He stated it is difficult for him to get his head around an integrated pest management plan without knowing just what those two items will tell us. He opined it is more of a preamble to what is going to be done, but a very useful preamble. He stated this Sub-Committee needs detail regarding what vegetation is there and detail as to what is going to be done with it. Referring to Martin County, they have a 50-page contract with AVC spelling out all of the segments and all of the treatments and all the dates on which they are going to do it. He opined that that is where the end result of this process is going to be--that kind of document. He feels there is still a lot of detail that this Sub-Committee does not know that would make this more of a useful document.

Ms. Haigler stated she feels that getting into the details is getting in the weeds on this. This Sub-Committee is not proposing to micromanage how the Stormwater Department is going to manage the Stormwater Department. That is for them to decide. The Sub-Committee is attempting to provide a guidance document for managing the vegetation.

Mr. Carrano suggested that one of the questions that has not even been asked is when action is required. When do we have to make a decision that it needs to go to the Stormwater Department, and they have to come up with a plan? This Sub-Committee has not set that criteria yet. Ms. Haigler stated that is not something you can really quantify. In the Parks and Properties Plan an action threshold was set such as low, moderate, and high, and at some point we have to trust the staff and the contractor's

integrity to make those choices. We cannot really quantify when it gets to a certain percent, because it really depends on the vegetation and the use of a certain waterway in that area. There are so many factors regarding the management of stormwater. Mr. Carrano stated that at some point there needs to be quantification. He asked when do we react. At what point do we go from the do-nothing alternative to a do-something alternative?

Mr. Griffin stated that it should be kept in mind that, whether you are talking about parks or whether you are talking about the canals, action needs to be taken early on because, if you wait until it becomes a crisis, you end up spending a lot more time and money addressing it. On a regular basis his department believes in action sooner rather than later so that you minimize the use of chemicals.

Mr. Benton states this all goes back to non-chemical versus the chemical methods. The stormwater staff is trying to get to the large ditches once a year and the smaller ditches every couple years. That is a proactive approach. He stated that structures need to be checked often, especially during heavy rains, to see what conditions they are in. Mr. Carrano stated that those structures have zero tolerance. Mr. Benton stated that ditches and structures have been eliminated from this discussion based on that knowledge. When it comes to canals and ponds, whether we can come to some sort of delineation of when it needs to be treated and when it does not is at a level completely different than what was faced after the moratorium.

Ms. Haigler referred to research that states, "The maintenance of water hyacinths to less than 5% coverage reduced herbicide usage by a factor as great as 2.6 and reduced the deposition of detritus by a factor of 4.0." She stated it is sometimes assumed that the frequent repeated herbicide treatments are adding large quantities of chemicals to the water bodies, but actually less than 1% of the spray applied is the active ingredient, and the rest is water. Unfortunately, during the moratorium we had to let it go beyond what we could keep under control under normal means, and now we are having to extend all of our resources to try to control the situation. Once we get it back under control, then we will be back to what this plan is written for, which is a plant management program.

Dr. Cox stated he has not yet bought into the idea that we can spray some invasive species within the canal one month, spray it again in another month, etc., and natural native plants will take over. In his view, that is not going to work. Things will have to be done far more proactively regarding residents and their plantings. It is going to be like almost a daily gardening project. Mr. Griffin agreed. It is an art to do that, and it takes a lot of experience and knowledge to do selected spraying of selected plantings. It is not easy, but he thinks it can be done, and it should be done. Dr. Cox stated that an important

component of this is public education of the residents along the canals. He is looking for a way to get people to understand why we do what we do, even though it might not be the most popular approach, and yes, we have looked at all the alternatives and, no, we cannot find a better one than this at this particular stage.

Mr. Stadelman thanked City Council for putting this Sub-Committee together. It shows that they are very involved with the residents of the City on a daily basis. He thanked the City staff for all the work they have done on this project. He also proposed that, since the City is attempting to do everything possible to obtain the goal of this plan, he would like to see individual residents of the City do what they can do also. There is nothing the City can do about practices of the residents on their properties.

X. Staff Matters

Mr. Griffin stated he would like to add what Mr. Stadelman said by proposing that the residents remove the invasive aquatic species from their canal sections. That would help tremendously. It is one thing to allow high-quality natives to survive and thrive in front of a seawall; it is something else to allow invasive species to thrive and propagate exponentially, like Brazilian pepper.

Ms. Haigler reviewed that the FWC manages the standards for aquatic spraying programs. They actually have set a standard that, if there is a patch of a certain size, they do not allow eradication spraying. That is not good for a system, to generate that much dead plant material at once. The point is that the edge should be sprayed some, and the next time they come back, they know that site and they spray the edge a little more, the idea being that you are keeping it from multiplying, and it is being pushed back a little bit. It was never meant that a contractor would go out and eradicate a huge patch.

Mr. Griffin agreed with what Ms. Haigler stated, and there have been discussions between the staff of the Stormwater Department and the contractor who did the spraying. The contractor has stated he does not want to cause significant environmental damage while performing his actions to help control the invasive species. It will take patience on everyone's part to get the system back to what it needs to be.

Mr. Benton suggested Sub-Committee members take a ride around and look at the amount of cleaning up that has been done in the last six months. He reminded all the Sub-Committee members to continue to bring their ideas and what they are hearing about in other communities, but understand that everywhere these ideas are coming from, for the most part they already have a spraying program in place. He typically finds and reviews the contracts from those other municipalities.

XI. Items for Next Agenda

- A. **II Structures, III ponds, IV and ditches**
- B. **VI Further Non-Chemical Recommendations**

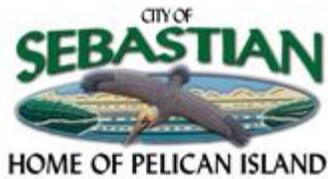
XII. Adjournment

There being no further business, Mr. Benton called for a motion. Motion to adjourn was made by Mr. Stadelman, seconded by Dr. Cox, and the motion passed unanimously via voice vote. The meeting was adjourned at 3:46 p.m.

By: _____

Date: _____

jg



IPM SUB-COMMITTEE AGENDA TRANSMITTAL FORM

Board Meeting Date: March 8th, 2021

Agenda Item Title: VIII. OLD BUSINESS
Item A. Section II. Structures
i. Review and Discussion
Item B. Section IV. Ponds
i. Review and Discussion

Recommendation: Submitted for Committee Member Review and Discussion

Background: Originally submitted to sub-committee at February 8th, 2021 Meeting, in which it was decided by consensus that deeper review was needed

If Agenda Item Requires Expenditure of Funds:

Total Cost: n/a

Attachments: Draft Sections II & IV of the IPM Plan

II. STRUCTURES

Overview

Stormwater assets classified as “structures” includes all dams, weirs, spillways, catch basins, baffle boxes, culvert pipes, inlets, outlets, and outfalls. There are over 100 such structures across the stormwater system. These assets have a virtually zero tolerance for pests; they must stay clear of vegetation and debris at all times in order to function.

Do Nothing Option

There are numerous ways that aquatic plants can interfere with the operating of water management structures, as each structure is unique in its design and/or purpose. Overgrowth of aquatic vegetation around and within these structures can greatly impede the flow of water, block gates opened or closed, often when the operation of these structures is the most critical. These structures are often critical to flood control during major rain events. The damage caused to the structures and by the resulting flooding problems can become very costly to repair. Therefore, the tolerance threshold for pest activity, before action is taken is considered the very low for these assets.

Non-Chemical Methods

In order to eradicate vegetation, the following cultural and mechanical methods will be conducted routinely as part of standard proactive maintenance procedures within the City's stormwater system:

- **Vacuum Removal.** A vacuum truck is utilized to remove all accumulated sediments and vegetative debris from catch basins and baffle boxes regularly.
- **Manual Removal.** When safe and practicable, vegetation will be removed by hand from structures as part of routine inspections.

IV. PONDS

Overview

There are 17 stormwater ponds throughout the City. These include all of the ponds located within City parks, as well as the interconnected ponds of the Stormwater Park, and the multiple ponds of the Day Drive Retention Area. Pond vegetation provides an ecological as well as an aesthetic benefit. If left to grow uncontrolled, however, the flood control and safety of these properties can be impaired.

Do Nothing Option

Overgrowth of aquatic vegetation in the ponds can very quickly reduce their stormwater storage capacity, especially in the smaller ponds. This accelerated **succession** can cause localized flooding problems in a very short time.

All of the stormwater ponds are connected to the entire stormwater conveyance system. Aquatic vegetation can block the water flow in and out of the pond. Many species of tall grasses growing around the pond edges can create dense thickets which readily hide dangerous wildlife and can prohibit police and park visitors from seeing beyond; this creates a serious safety concern. Four of the City's ponds also contain a fountain for aeration and algae control. Dense vegetation can damage the fountains by clogging the pump system or blocking the spray. The tolerance threshold for pest activity, before action is taken is considered high for these assets.

Non-Chemical Methods

In order to control vegetation, the following cultural and mechanical methods will be conducted routinely as part of standard proactive maintenance procedures within the City's stormwater system:

- **Dredging.** When all or parts of the ponds are at their lowest storage, the City can access the pond bottoms and edges with equipment to mechanically remove the vegetation and accumulated sediments.
- **Mechanical Removal by Contractor.** During periods where invasive vegetation has spread too extensively at a location to be brought back under control by routine methods, a contractor may be hired with the equipment to cut and remove the vegetation by boat.
- **Fountain Aeration.** A fountain installed in the center of the pond provides water circulation and increases the dissolved oxygen of the water. This inhibits vegetation growth and increases the habitat quality for aquatic animals as well.
- **Planting Native Emergent Vegetation.** Maintaining a healthy, natural shoreline of native vegetation will help prevent the pest vegetation from re-establishing and enhance the habitat and aesthetic quality of the pond.