

**City of Fort Lauderdale
Infrastructure Task Force Committee
January 4, 2018
2:00 p.m. to 5:00 p.m.
8th Floor City Commission Room – City Hall
Fort Lauderdale, FL 33301**

1. **Call to Order:**
 - **Roll Call**

MEMBERS		PRESENT	ABSENT
Marilyn Mammano	P	9	0
Ed Kwoka	P	8	1
Ralph Zeltman	P	9	0
Keith Cobb	P	6	3
Leo Hansen	P	8	1
Roosevelt Walters	P	9	0
Fred Stresau	P	8	1
Norm Ostrau	P	6	1
David Orshefsky	P	6	0

Staff Present

Lee Feldman, City Manager
 Paul Berg, Public Works Director
 Dr. Nancy Gassman, Asst. Public Works Director- Sustainability
 Raj Verma, Interim Asst. Public Works Director - Engineering
 Meredith Shuster, Administrative Assistant

2. **Approval of Agenda**

Motion made by Mr. Walters, seconded by Mr. Kwoka, to approve the agenda. In a voice vote, the motion carried unanimously.

3. **Approval of Previous Meeting Minutes**

A. December 4, 2017

Mr. Hansen referenced the bottom of Page 15. It should read, “**Mr. Hansen noted that the *City’s position is* that the stormwater problem is not being caused by development.**”

Mr. Zeltman made the following corrections, additions, and deletions:

- Bottom of Page 1, fourth bullet, should read, “Mr. Zeltman indicated the Reece report **has** 837 pages and the executive summary outlines and characterizes improvements for both water and sewer.”

- Bottom of Page 5 and top of Page 6, should read, “Mr. Zeltman indicated that rates are going down and once the sewer collection mains are repaired **reducing ground water drainage and will save wastewater treatment plant costs.** Once the realization of **these** repairs are made, there should be a big **savings in wastewater treatment plant costs. The treatment plant capacity will also be increased.**”
- Page 7, sixth paragraph, should read, “**Mr. Zeltman mentioned that the Floridan Aquifer is approximately 1,000 feet down. Once the ground water infiltration problem is solved, the likelihood of replenishment to the Biscayne Aquifer will increase. As long as all are raw water where sewers can be preserved, the longer the sewers will last and will slow down the salt water intrusion.**”
- Page 7, seventh paragraph, should read, “Mr. Zeltman commented that the service life **of the gravity mains is generally** 50 years. **After the pipes have been lined, life might be extended 15 to 20 years. What will happen then? At some point and time, the pipes will never be able to be lined due to the severity of the damaged pipe.**”
- Page 14, second to last paragraph, should read “Mr. Zeltman indicated there are **basically two different types of storm drainage systems, positive and exfiltration.**”
- Page 17, should read, “Mr. Zeltman indicated there **might be** a problem **with a new Commission regime effective in March and** what is said now may have to be repeated.”

Mr. Orshefsky made the following corrections, additions, and deletions:

- Page 3, bottom line, should read, “Mr. Orshefsky indicated that some of the answers to previous questions involved contributions **in aid of construction with initial tasks (CIAC).**”
- Page 5, first paragraph, line 3, should read, “**inch**”.
- Page 14, fourth paragraph, line 2, should read: “**used for infrastructure.**”

Motion made by Mr. Walters, seconded by Mr. Zeltman, to approve the December 4, 2017 meeting as modified. In a voice vote, the motion carried unanimously.

Motion made by Mr. Kwoka, seconded by Mr. Walters, to take the agenda out of order to accommodate Hazen & Sawyer. In a voice vote, the motion carried unanimously.

Mr. Orshefsky understood this is a 20+ minute presentation and recommended that questions be held until the end.

4. General Discussion (Board Members) – 15 minutes

Mr. Orshefsky requested that an item dealing with how the CIP gets pulled together and/or funded be placed on the February agenda. Mr. Orshefsky questioned if there

would be time to discuss the meeting with Chaz Adams. Two informational items are needed on the February agenda and they do not need a lot of discussion or staff presentations. One is the timing of bond issues the City is intending or knows about. The other is in the 12-22-17 critical projects report to the City Commission; the 40-year inspection city facilities. Mr. Orshefsky requested a status update.

Mr. Walters questioned Mr. Feldman as to the disbursement of funds for the property on State Road 7. A breakdown was given with \$8.8 million on the seawall and that was not part of the original budget. \$1.2 million was put into the general fund and \$3 million was given to EMS. As these types of things are done Mr. Walters wants to be sure that the Committee is notified where the money came from. This is \$14.2 million and most of it is going to the seawall.

Mr. Feldman stated in the fiscal year 18 budget that just went into effect on October 1, 2017 there were three expenditures the Commission wanted to make that they did not have specific revenue for. \$3 million was for a new type of fire station; ambulance only, \$8.9 million was for the Cordova seawall, and the \$1.2 million was to represent the general funds contribution to the Aquatics Center, which is currently on the street. An award came in last night at \$13 million, which was more than anticipated; therefore, \$1,250,001 went back into the City's general fund. It was noted that those three items were included in the budget as expenditures.

Chair Mammano commented that money is being taken from the general budget to do the seawalls.

5. Old Business

A. Status of the Public Outreach Survey

There was a consensus to terminate the Outreach Survey.

B. Rescheduling the Outreach Meeting set for January 30th

There was a consensus to terminate the Outreach Meeting set for January 30th.

6. Board Member Comments – None.

7. New Business

A. Stormwater Master Plan Presentation – Hazen & Sawyer

Rob Taylor, who is leading the Hazen & Sawyer team, was introduced. For the past two years, since April 2016, the City has undertaken the Stormwater Master Plan research. A presentation was made to the Commission on December 19, 2017 at which time Hazen & Sawyer was asked to make the same presentation to this Committee.

Mr. Taylor has been leading the team of firms working on the City's Stormwater Master Plan for a little more than a year and a half. That work was given to them in the way of task orders, which have dealt primarily with four different project elements; data collection, modeling, design, and public outreach.

Mr. Taylor provided a brief presentation regarding the Stormwater Master Plan as follows:

Data Collection:

- A significant amount of data has been collected for this project to support both modeling and design.
- Design is heavily focused on seven specific neighborhoods that were initially identified as priorities within the City.
- One thing at the core of the data collection effort was new high density Light Detection and Ranging (LiDAR) data, basically flown from an airplane and collected by a radar type technique. It will be useful to the City in a variety of applications. It measured the elevations of the City within an accuracy of about 2 inches.
- A digital elevation model was constructed (a surface elevation of the City), which is helpful both in the modeling and design aspect of the program. It will show the high points and the low points indicating where water will pond and which way the water wants to flow.
- There are significant issues relative to tidal flooding and that is where the idea of perimeter barriers, particularly seawalls, come into play. This (LiDAR) will allow the City from a desktop to click on the top of a seawall and determine its height within a couple of inches.
- LiDAR captures what is at ground surface; however, it is important to know what is going on with the storm water sewers and those below ground elements of the system, which can be determined using traditional survey methods.
- Several survey crews collected attributes relative to over 5,000 stormwater assets the City owns. That information feeds into the modeling aspect of the project.
- A comprehensive citywide stormwater management model has been created that will be helpful in a variety of regards, whether it is designing new systems and talking about the way systems are operated and maintained.
- The first thing needed in the modeling effort was to delineate the water sheds in the City.
- Three primary tools were used:
 - the digital elevation model that came from the LiDAR data.
 - Information gathered from neighbors, Broward County, Florida Department of Transportation, Oakland Park and other surrounding cities
 - Lastly, a good aerial photograph is often extremely helpful when sorting out things at a desktop level.

- The data determined 10 watershed basins in the City and shows how they interact with one another and how water flows between them.
- Stormwater runoff knows no political boundaries so some of these water sheds extend beyond the City's boundaries and come and go between other municipal jurisdictions.
- The model also gives the ability to look at the response of the City Stormwater Management system to a variety of different factors and conditions. It includes a number of different storm events, so different rainfalls can be looked at across a wide range of values. The model allows different time horizons to be looked at; how they affect land use, particularly for Fort Lauderdale; how they project the effect of sea level rise; and how that is going to impact the systems.
- Three sea levels are currently being modeled. This model will allow scenarios to be updated and projected as they continue to see the phenomenon in the future. The models indicate the risk/tolerance levels depending on how it's determined. The stormwater model is used to evaluate an informed design effort.
- Seven priority neighborhoods were identified. The map is looking at flooding depths within a given neighborhood as predicted by the model. This was helpful because they were able to collect a lot of information from past City records, FEMA records, neighbors within specific neighborhoods being talked about. The ability to have a model to confirm and cross check with those records was very helpful. Various improvement scenarios were also evaluated so the level of flooding improvement could be seen.

Design Effort:

- Seven neighborhoods are being modeled.
- There are a multitude of firms on their team so the neighborhoods were split between four design teams. This was done to expedite this effort.

Mr. Kwoka questioned how the efforts in the design are being coordinated so there are not three different sets of designs.

Mr. Taylor indicated that design standards have been put together and standard details and specifications were developed that will be used across the seven neighborhoods. They will also be used on other projects that will come forward so there is standardization. Standard surveying and drawing templates have been established. Even though four different firms are working on these efforts, the product seen by the City and by contractors bidding on the job will be a very uniform product. Different neighborhoods have different characteristics and vulnerabilities. For example there are some areas where even on a sunny day, if the tide conditions are high, perhaps the New River is higher than usual, there could be water on the streets. As systems feed into each other, indirect impacts would not allow the system to work as effectively; so even when there isn't a direct impact, indirect impacts were taken into consideration. Some neighborhoods have undersized infrastructure or aging-in-need-of-replacement infrastructure or no existing stormwater infrastructure.

Mr. Kwoka questioned how the airport plays into that. His understanding was that the airport is currently or has designed drainage from their property, which is substantial, into the drainage basin that abuts River Oaks and Edgewood.

Mr. Taylor stated there is a portion of the airport that flows through the Edgewood Passive Park owned by Broward County and discharges into the upstream end of what is called Osceola Creek and up into the south fork of the New River. There is a piece of the airport that does drain through the southwest portion of Edgewood and that was captured in the model.

Also being worked into the plans are other technologies, pervious materials, exfiltration trenches, swales and creating wetlands.

Mr. Zeltman mentioned the design and questioned what provisions have been considered to handle the lessening ability to discharge through the hydraulic gradient capability.

Mr. Taylor advised that the rising ground water that is going to “inherently happen” has, in fact, been happening. Along with rising sea levels, it is a big issue. It does change the hydraulic gradient. All of that has been captured in the model. The other big impact the rising ground water has, is that storage is lost in the unsaturated zone of the soil strata. That has to be taken into consideration in the modeling because the displaced water now has to be dealt with. It either has to be stored someplace else or conveyed away to a better place. A lot of what will be seen in the designs is the improvement and increase in conveyance capabilities of the stormwater systems as well as seven new stormwater pumping stations, which will be necessary to overcome some of these ground water impacts.

A Committee member mentioned a section on canal dredging that had some effect on the ability for the discharge of the water into the canals and questioned if that is true.

Mr. Taylor indicated that he has not seen any areas where canal dredging is affecting the ability to discharge.

Chair Mammano commented that the ground water infiltration coming up limits the ability to use some of these technologies such as permeable surfaces and swales. Because ground water is coming up, they are not as effective as in other places.

Mr. Taylor advised there will be areas where the solutions are simple and others that will have more challenges. Those areas of higher elevation where there is still an unsaturated zone to exfiltrate water into are typically being targeted. When getting into the lower areas, things like swales and exfiltration trenches are not going to be useful for future improvements and the ones that already exist will have diminishing performance. What must happen, not only for Fort Lauderdale, but for others, is to look at this on a water shed basis and on a citywide basis instead of project by project. Mr.

Taylor mentioned collected support, design effort, and geotechnical data. Design survey has been completed for over 40 miles of City right-of-way as well as properties where they are intending to place some of the stormwater pump stations. There are standards so there will be uniformity across the projects. Standard details and specifications were developed in many different areas to designs done by different firms but all will be similar in nature. The best example is the Southeast Isles area where tidal flooding is an issue. The City has already endeavored to install tidal valves on a number of its outfalls and approximately 100 additional tidal flow valves are proposed to be installed. In some locations, there will be a time when the tidal valve, which stops the unwanted backflow of water, will not work because the tide will be so high it will over top the seawalls or other barrier features in place to protect the properties. There will be some necessity to raise seawalls and some of the other barrier features. This phase of the program involves raising 14 of the City owned seawalls to protect in that fashion. Having the City raise seawalls will not get the job done completely, there has to be some work done on the sites of private property owners as well. There will be a need, especially with the finger islands in the isles area because all of those seawalls are a potential point in the barrier that can be a weak link that would let water into the system. The entire barrier needs to be made resilient to the inflow of tidal waters, if the final goal is going to be achieved. The City has a seawall ordinance in place that will help and the City is taking a step forward to say they are doing their part.

Mr. Kwoka commented that the problem is private residents do not have the ability to pay for the seawalls.

Chair Mammano stated there is also an issue of timing. That ordinance will take years.

Mr. Cobb questioned how five feet is determined to be sufficient.

Mr. Taylor indicated that five feet is the elevation currently established in the City's ordinance; therefore, that is what was determined as a sufficient barrier to sea level rise.

Mr. Kwoka questioned if the current sea level is 3.5 feet.

Dr. Gassman stated that the current ordinance requires a minimum elevation for all new seawalls of 3.9 feet but depending on the base foot elevation of the location there is also a maximum attached. The minimum is 3.9 feet but the maximum is based on the base flood elevation of the property.

Mr. Kwoka mentioned that the ordinance currently requires residents to comply only if more than 50% of the seawall needs to be repaired or replaced.

Dr. Gassman added, "Or if it is a new seawall". There are two provisions in the ordinance: first, if the seawall is in disrepair, it must be repaired and if more than 50% is in disrepair, it must be brought up to the new code. The second is, if a resident is allowing tidal flows to come across his/her property and impact either his/her neighbors'

properties or the right-of-way itself, then a remedy must be created that will prevent the tidal flows from leaving the property. It is not enough to just maintain the seawall. If the seawall is no longer effective to protect the public rights-of-way from tidal flows a change must be made to address the situation.

Mr. Kwoka commented that the typical linear distance of a seawall is about 75 feet and an average cost is between \$1,000 to \$2,000 per linear foot to raise the seawall. The average citizen does not have \$150,000 to \$200,000 on repairs.

Chair Mammano indicated there was discussion about this during discussion of the ordinance and it was not resolved. As it stands, the burden is on the individual property owner to bear the cost of raising the seawall.

Mr. Taylor stated that the table is a breakdown by neighborhood of the proposed improvements and designs. New storm sewers are being proposed in some areas, replacing undersized or aged storm sewers in other areas, exfiltration trenches, new swales, drainage wells, water quality structures, and seven new pump stations. The tidal flow valves were mentioned, which are backflow preventers, creating wetlands, seawall replacement, and maintenance work, particularly on the Osceola Creek that runs through Edgewood and the River Oaks neighborhoods. About 69,000 linear feet of new storm sewer, about 13 miles, is being proposed. Compared to the current length of storm sewer in the City, that is an addition of about 5% to the current infrastructure. Another ten miles of repair or replacement of stormwater pipes is being proposed. Cost estimates indicate that the total aggregate construction cost is between \$150 million and \$200 million for the seven neighborhoods. Hazen & Sawyer has 90% design plans and about 1,000 drawings across the seven neighborhoods. These were based on real takeoffs of actual proposed infrastructure.

Mr. Orshefsky commented this is the design specific cost estimate for seven neighborhoods and questioned when the balance of the stormwater system for the City gets generated and/or presented to the City.

Mr. Taylor indicated that is not yet a task in any of their task orders at this point. Not everything needs to be done now, it can be done on an incremental basis.

Public Outreach:

- This was a part of the planning and design process. The biggest component was neighborhood meetings within each of the seven neighborhood Associations.
- The first round of meetings was a “get to know you” with the neighbors to make sure they understood the City’s plan and concept moving forward, gather their input on what their plans and expectations were, as well as to gather a lot of helpful information. Residents filled out flooding reports based upon their historical knowledge and a lot of good photographs and videos were also received.

- During a second round of meetings, the preliminary design concepts were presented.
- A third round of meetings will occur in January and February 2018 to go over the final design with each of the neighborhoods.
- The next step is working with Broward County to complete the conceptual permitting of this citywide model. Permitting of improvements will be completed. They are working on a direct project agreement with FDOT and a couple of neighborhoods with the hopes of defraying some of the costs to the City, and between now and when projects go to bid, other grant funding opportunities will be sought that would further defray those costs.
- Based upon regulatory comments, the plan will be finalized 90% into biddable documents and once the funding strategy for the City has been established they will be prepared to move forward with bidding these construction projects.
- The last of the steps is to continue to use the model to evaluate the next step of investment from the City's perspective.

Mr. Taylor indicated that the timeframe to do the analysis could be completed within the upcoming calendar year if tasked.

Mr. Kwoka commented that the City has stated that normally seawalls would not be part of a stormwater management plan but this is a unique situation. As proposed, water knows no political boundaries so that means all of the seawalls in the City need to be addressed; this is an infrastructure problem. Seawalls cannot be treated the way the City has treated sidewalks, by fixing the seawalls and liening a house. The City cannot unilaterally raise their seawalls to five feet and then try to dictate to the rest of the community that they have to do it.

Mr. Orshefsky questioned if Mr. Kwoka was suggesting as a policy matter that this Committee decide that infrastructure citywide should include private seawalls.

Mr. Kwoka emphasized that it is part of the infrastructure and if seawalls that the City owns is part of the problem that is unique to the stormwater situation they are not going to logistically going to be able to force everyone to raise their seawalls.

Dr. Gassman stated there is 165 miles of waterways, the majority of which have seawalls, times two, and the City owns about 7.5 miles. The issues brought up were very clear when discussing the ordinance. The original proposal was that every seawall within the City had to be raised by a certain date and that was not politically or community acceptable. Council ended up approving an ordinance that would allow them to move from neighborhood to neighborhood, as sea level rise caused flooding problems in new locations to be able to target the locations being impacted.

Mr. Kwoka reiterated that it is not logistically possible and questioned the cost of the seawalls just at the City level, noting it was something like \$20 million or \$25 million and that was for five miles. That leaves 295 miles of other seawalls.

Dr. Gassman advised there are many seawalls within the City that are privately owned and already meet the current requirement. Every new seawall is being built to the new requirement.

Chair Mammano mentioned time and questioned if there is time.

Mr. Kwoka stated if there were 50 years to require the entire community to raise seawalls that is one thing; however, 10 and 15-year timetables are being considered.

Mr. Taylor indicated that even looking at the tidal valves, areas have been targeted that have elevations below a certain elevation, which will be vulnerable. There is time and this is an incremental approach; it is not going to be upon us next year or in ten years; it is going to happen incrementally; therefore, it needs to be dealt with in an incremental fashion.

Mr. Orshefsky advised that policy has been argued before the City Commission and was rejected. If the Committee wants, this can be put on their policy agenda as an item for further discussion.

Mr. Cobb mentioned that there are existing seawalls that are lower and need to be raised, which would not cost as much; it would be at least one-third; perhaps between \$20,000 and \$50,000. The City should provide standard details and make sure there are more contractors capable of doing just those repairs.

Chair Mammano commented that during the ordinance discussion there were many suggestions. At the last meeting with the City Commission, they rejected the idea of assessing stormwater.

Mr. Orshefsky stated this could be brought up as a Committee and discussed as a policy matter. This policy has been years in the making and a meaningful shift as a policy matter was not foreseen, particularly if dollars are involved.

Mr. Cobb questioned if anything was ever raised about the stormwater rate structures or any costs of walls to the homeowners during neighborhood discussions

Mr. Taylor advised that there were discussions at various meetings relative to what this might mean regarding the City's stormwater rate structure and how this \$150 million to \$200 million would be dealt with from that perspective.

Dr. Gassman commented that the main conversation was about whether there would be an additional assessment or whether the existing rates would cover the cost. Part of the conversation was that residents have seen rates increase for the last ten years and have not seen any new infrastructure. The response is that there will be other

infrastructure improvements that, in turn, will be paid by others for their infrastructure. It is a community based good that those investments happen.

Chair Mammano stated that the reason those seven neighborhoods were picked was because there is science behind it.

Mr. Taylor mentioned that this came out by the modeling conducted but the City got it right when they came up with the seven neighborhoods.

Mr. Walters mentioned communication during the outreach to people who are not as educated as others. The concern is that when the presentation is made that time be taken to get as many people as possible to understand what is being said.

Mr. Taylor indicated that every presentation has to be catered to the audience. During neighborhood meetings, each of the design firms were present as well as Boards and members of the team available to spend time with individual neighbors who wanted to talk about issues or have things explained.

Mr. Zeltman questioned if the design included the efforts of the City that are currently being made towards repairing the sanitary sewer gravity mains that are taking in a lot of ground water. Currently the George T. Lohmeyer Plant is getting over 70 million gallons a day during rain events when there is a permit for 55.7 million gallons a day. When the groundwater infiltration is reduced, the wastewater treatment capacity will be increased for future development. Mr. Zeltman questioned if that was considered in the design over the course of those years.

Mr. Taylor advised that the study did not look at the differences in what those flows to the water plant would be because Broward County has new requirements relative as to how ground water levels will be considered in future design; therefore, in the stormwater model that was taken into consideration, irrespective of how much flow goes to the wastewater plant, it looked at Broward County's projection as to the future ground water levels. Probably the most significant impact is the loss of the unsaturated zoned, the soil storage where water can be absorbed, which will not be as readily available in the future.

Chair Mammano understood and appreciated the issue about the unsaturated zone but asked if more stormwater is going to be collected and directed into new sewers to the sewage treatment plant.

Mr. Taylor stated that stormwater does not go to the sewage treatment plant; there are separate systems. Sanitary wastewater flows go to the plant. Stormwater flows to a receiving water body.

Mr. Zeltman commented that currently the ground water is going into the sanitary sewer gravity mains.

Mr. Orshefsky mentioned LiDAR and questioned if it was the entire City or just the seven areas.

Mr. Taylor responded that it was the entire City. The City owns that information and that information can be requested.

Mr. Orshefsky mentioned the model and questioned if that is City specific or generic.

Mr. Taylor indicated that it is generic software. The City owns the software and there are staff who have been trained.

Mr. Orshefsky referenced slides 15 and 28; and noted that the areas noted are directly tidally influenced or indirectly tidally influenced. Mr. Orshefsky questioned if based on this information, some kind methodology could be constructed to determine a premium on those that have more tidal influence than someone in the west.

Mr. Taylor advised that a lot can be done with the stormwater utility. The City has a rate consultant looking at those issues.

Mr. Orshefsky mentioned that a graphic presentation of those areas has been given that suffer tidal influence more than others. It was questioned if that was the rational basis for charging an extra amount a month.

Mr. Kwoka questioned if a sliding scale is provided and where it will stop.

Mr. Orshefsky questioned if tidally influenced is reflected throughout the map or just in those seven areas.

Mr. Taylor replied just in the seven areas. It was noted that the graphic was somewhat gross in its approximation but those are the general areas. There may be other areas that are directly tidally influenced.

Dr. Gassman indicated that all stormwater in the City ultimately ends up in a tidally influenced water body. The argument can be made that the entire City's stormwater discharge is dependent on tidally influenced water.

Mr. Orshefsky understood and was trying to do a piece of the other, saying others are more tidally influenced.

Dr. Gassman advised that Burton & Associates looked down that path when they first started looking at stormwater rates and the conclusion was that there was not a defensible way to be able to do it. They looked at a bifurcated rate and tried to define delineations of what was tidally influenced.

Mr. Feldman commented that there were several different options when the stormwater issue began. One was looking at stormwater coming from two sources; rain and tides. If a lot of time was spent on this model it could probably be created but from the information received, the Commission basically said, from a policy standpoint, they did not want to make that distinction. So, it was left alone.

Chair Mammano questioned if another model should be created. She agreed that at some point there becomes a distinction between these issues. It is an equity issue.

Mr. Hansen questioned how fluid the data is and what if it affects other projections.

Mr. Taylor advised that it is simple to adjust the model whenever the sea level rise projections are being changed. Those parameters are quickly and easily adjusted in the model. If new projects are adopted the model is easily updated.

Mr. Kwoka asked why task orders were being used and if there are any other alternatives.

Mr. Feldman stated that task orders are basically incremental and sometimes the next step is unknown until the previous step is taken. A blank check isn't given. The consultant needs to do what needs to be done next. Staff runs checks and reviews to make sure they agree with the next steps. This was an undertaking of \$9 Million.

Mr. Kwoka mentioned that once the design and analysis are done this will become a budgeted item on a larger project scale.

Mr. Feldman indicated that the design is at 90%. Stormwater has always been talked about as being in three phases; Phase 1 is current work being done, such as tidal valves and repair. The Stormwater Master Plan was Phase 2 estimated to be between \$140 million and \$240 million worth of work, which is now lower to \$195 million to \$200 million. Phase 3 was for everything else, which will be about another \$800 million but does not need to be done right now. That \$800 million of stormwater work may be 30 to 60 years worth of work. With sea level rise the City knows it will have to do some things in the future but doesn't know what that is at this time. The City has been looking at these areas for decades. The goal is currently \$200 million and that is being asked of the Task Force to concentrate on. After spending \$9 Million, we don't want to put the study on a shelf.

Chair Mammano questioned if this study was funded out of the stormwater fees.

Mr. Feldman replied affirmative.

Chair Mammano questioned if there is any stormwater money on an annual basis that is being collected to do these projects and if so, how much money is there.

Mr. Feldman advised there is roughly about \$3 million a year that is built into today's rates that can be built into debt service on a bond for the current rate structure. There is \$3.4 million currently in the rate structure that is available for debt service, which means \$2.1 million must be raised on an annual basis for the debt service using the current rate structure.

Mr. Orshefsky questioned if non-residential was captured as one of the things under the trips methodology.

Mr. Feldman stated this was based on the current rate structure as it is now.

Chair Mammano requested clarification and noted that the current methodology of assessing stormwater fees.

Mr. Orshefsky stated it was all based on impervious area.

Mr. Feldman advised if the rate was kept the same for single-family, there would be a lot more money. If the current \$14.4 million raised per year were reallocated and based upon trips the same amount of money would be raised.

Chair Mammano stated that was not what the proposal was. We never got to the details.

Mr. Stresau mentioned that just because the current commission dismissed a discussion previously, it doesn't mean this issue goes away. He thinks the Committee needs to focus on the seawall and financing and aggressively go after it.

Chair Mammano indicated that speaks to what is on the agenda, which is the debriefing of the meeting with the Commission.

B. Community meetings in the 4 Commission Districts

Mr. Kwoka stated that he had a productive meeting with Paul Berg, Chaz Adams, and Matt Little subsequent to the workshop. The consensus was that the survey was going to be duplicative and too complicated so it was thought the survey concept should be cancelled. In continuing with the Mayor's suggestion that there be outreach meetings, it was decided to consider four outreach meetings that would align after the election, one in each District. The suggested venues are the Beach Community Center, Holiday Park, Carter Park, and Rio Vista Church. The meetings will be structured and will be two hours with two concise topics. The idea behind these meetings is not to debate but a way for the public to provide information in a timed fashion. The meetings would not duplicate from District to District so someone from District 1 could attend a meeting in District 3 if they have comments about the topic. Each District would have different topics to stand eight separate topics. The deliverable would be a combination of the meeting minutes. These could be considered Sunshine meetings if more than three

Committee members attend. The meetings will have to be noticed and there will be a records keeper, it will be recorded; however, it does not require that a quorum is met. The meetings are not meant to be a debate, it is meant to be an effort to collect information and to aggregate that information and provide a report to the Committee as well as to the Commission. If the Committee can agree on the topics they could quickly say the four meetings will be A. Stormwater, B. Transportation, etc. Mr. Berg, Mr. Adams, and Mr. Little committed to putting it out through their communication channel to include the consideration of a direct mailing if there is a budget available. The timing is important and a consensus of the two topics is needed.

Mr. Walters thought if the meetings were limited to two subjects per location a lot of information would be missed; however, eight topics at one meeting would be too much information at one time.

Chair Mammano agreed.

Mr. Kwoka commented that an alternative would be to extend the meetings by one hour so there are no late-night meetings using Topics A, B, and all other.

Mr. Orshefsky understood the Committee was supposed to be listening to the neighbors, it was not that the Committee was supposed to tell the public where they were going to meet at a specific time on specific issues. Mr. Orshefsky agreed with Mr. Walters. This was to provide as broad an outreach as possible and it seems unfair to take the issues of importance to that area. If doing this in addition to fulfilling the Mayor's requirement to outreach by specific District, it was suggested there be citywide meetings where people can come and talk about whatever they want.

Mr. Kwoka stated this was discussed and the reason it was thought that a structured meeting would be important because every meeting would be overrun by the WAVE or sewer and the idea is to gather useful information.

Mr. Zeltman believed the general list should be used. The public outreach meeting is for allowing the public to determine the priorities of their particular District, not the Committee.

Chair Mammano suggested going into each meeting with a list of eight topics, giving everyone stickers, and having them tell which ones are their priorities. That would be one part of the meeting.

Mr. Orshefsky commented that there are certain things that have been taken off the table, such as the WAVE and the Consent Agreement, which mostly takes water and sewer off the table.

Mr. Kwoka stated meeting structure needs to be in up front so it can be dealt with in person. The topics can be decided up front and announced so they can be discussed

or the Committee will be dealing with a free for all. The intent was not to have a presentation. The Committee does not have all the facts and it was believed that it would not be a good idea to make statements about numbers without having someone who has the facts in front of them. It is not meant to be a debate. Mr. Kwoka believed there should be a limit as to how much time each person has and it should be strictly maintained.

Chair Mammano advised that the Committee must be careful and disciplined and not engage in a dialogue.

Mr. Kwoka stated that while the City might want someone present, it might not be beneficial because that invites an adversarial dialogue. The Committee is there to gain input and insight into what the community is looking for as part of its resolution.

Chair Mammano mentioned there are eight topics on the board and it turns out that most of the dots are on transportation. It was questioned whether the Committee should take a few minutes on the dais to talk about it.

Mr. Kwoka is open to discussion about input on anything; however, there is no benefit to all the members going to four different meetings, having 100 residents show up and discussing one topic, consuming two hours times four. If residents are present to talk about the WAVE the discussion will have to be put off to the end if time permits.

Chair Mammano thought the public should be given the option to discuss what they want. Committee members must listen and at some point, the residents should be thanked and told that the WAVE is not an item before the Committee. The record is not only for the Committee, the record is for the next Commission and for the general public to hear what everyone is saying.

Mr. Kwoka indicated that the meeting has to be productive.

Mr. Orshefsky thought the concept should be refined. If someone mentions the WAVE the response should be thank you for the comment but the Committee is not authorized to look at that and perhaps that will limit further comments from the rest of the audience. People will geographically self-select because they will come to the meeting in their District and the concern is there will not be a much broader view citywide. The Resolution may be useful as an organizational matter to break it down into Districts.

Mr. Kwoka agreed that a structured four-meeting approach in select neighborhoods would be very beneficial and productive.

Chair Mammano expressed concern with timing and questioned if all the meetings should be rushed in February.

Mr. Orshefsky stated that the meetings are after the elections and after the State of the City. The consideration to get this out is so communication can begin in January and February. The meetings should begin late February into March.

Mr. Kwoka proposed to continue with four structured meetings as originally discussed where topics are selected for individual communities.

Mr. Orshefsky clarified that the Committee is going to define eight topics and people can self-select into the issue.

Mr. Kwoka stated that there will be four meetings with self-selection from the eight topics, timed and limited.

Chair Mammano advised there will be four meetings, one in each District and a follow-up meeting at City Hall citywide, and they will be structured with eight issues and the Committee will be soliciting from the community which of the eight issues are of most importance and then there will be a public meeting where they will have an opportunity to discuss those issues in the order in which they were described.

Mr. Walters requested that Committee members have an outline of their task.

Mr. Orshefsky mentioned that the meetings will have to happen after the election but the Committee will lead up with the beginning of the outreach before then. One of the other items discussed with the Commission was getting Chaz Adams' office to help with the web presence. There still is not a meaningful web presence to have a face for the public. There needs to be a front door where people can go to.

Mr. Kwoka stated that was discussed with Mr. Adams. The tone of the meeting was good but improved substantially when more structure was added to the planned meeting. The less structure, the less useful it was perceived from the City's standpoint and the less enthusiastic they will be about how much support they give to the Committee.

Mr. Orshefsky commented that all that is needed is setting up a web page and maintaining it. The issue was that Public Works staff did not have the capability to accomplish that.

Mr. Kwoka stated that this Task Force has been dumped on the City and everything the Committee imposes upon them is a burden.

Mr. Zeltman questioned if something could be inserted with the Utility bills for advertisement.

Mr. Kwoka emphasized that the more structure put behind this the more buy in and support the Committee will have from the City. The more freeform this is made, the less buy in and support there will be.

Chair Mammano stated there are two issues; one is setting up a structured meeting and the other is outreach to make people aware of the meetings.

Mr. Kwoka mentioned an email sent out weeks ago advising that the City is going to put everything out through their outreach channels; they are going to put it on the website and communicate it out.

Mr. Orshefsky thought it would be easier if the topics were in a place for people to leave comments and gather links to all the studies including the Riess Report.

Chair Mammano clarified that this is about structured meetings and how to get the information out to the general public.

Mr. Kwoka reiterated that the Committee must be careful how much is being asked. The information is important but we have asked for a website and that every comment be communicated in a summary format. There must be consideration of the burden being placed upon employees. This Committee has been in existence for nine months and since the duration has been extended to 36 months it may make more sense to invest in an infrastructure for a lasting Committee.

Ms. Shuster clarified that the consensus was for four individual outreach meetings, to be held after the March 13th elections with eight defined topics, which the attending public will self-select. The timing allotted to each subject and the structure of the meeting will be based on the self-selection along with an additional citywide meeting to aggregate and distribute the information.

Mr. Kwoka did not have a problem saying it is self-selection but the topics the Committee is willing to entertain should be listed.

Chair Mammano advised there is a list; an outline with seven topics.

Chair Mammano indicated that she will work with Ms. Shuster to make a list and will send it to everyone.

C. Debrief on Joint Workshop with the City Commission

Chair Mammano introduced Raj Verma, Interim Assistant Public Works Director - Engineering. During the discussion with the Commission the Committee requested there be dedicated staff to assist the Committee. As she recalled, the Mayor and the Vice Mayor said that a person who would provide the service would be in the City Manager's office and would be able to pull information from multiple departments. The

Committee is not just Public Works, they have been doing a lot of storm and sewer but eventually Parks and Transportation will be done and it would probably be institutionally better to have the City Manager's office pull from all the different departments.

Mr. Kwoka believed the Commission was emphatic in saying this gentleman is not entirely for the Committee.

Mr. Orshefsky stated it was only a partial body and where that body ended up in the organization chart has yet to be determined. The Committee was going to get Mr. Verma's services at least part time and then the balance of his time would be used elsewhere.

Mr. Berg assured that Mr. Verma has some assignments in Engineering but this Committee is one of his primary assignments. Mr. Verma is coming on temporarily while they are recruiting. Mr. Verma has graciously come on board to provide staff services to the Committee. Once there is someone full-time in the position it is the intent to continue assisting the Committee.

Mr. Kwoka questioned if Mr. Verma was a member of staff or if he was an external consultant.

Mr. Berg stated that Mr. Verna is a temporary employee.

Mr. Walters commented that present staff was overloaded and did not have time to assist. Now that Mr. Verma is assisting the Committee when something is requested it should be received.

Mr. Berg indicated that is the intent.

Chair Mammano questioned how this is any different than having Mr. Dodd.

Mr. Berg advised that in about 90 days Mr. Verma will not have the other task.

D. Priority Spending of the \$200 Million Dollar Bond Funds after the Consent Order

i. Consideration of Water Meters

Chair Mammano mentioned that a list was received from staff about what was allocated within the \$200 million.

Mr. Berg stated that there are three criteria for the bond; the Consent Order projects that are not already funded in the CIP; the projects that had funding taken away due to the emergency projects this year, which are being re-funded; and the third group is the

priority projects that the Strategic Master Plan identified as priority in the first five years. All three add up to \$200 million.

Chair Mammano commented that the question became the additional money and what it was being spent on. One of the items the money was being spent on was water meters.

Mr. Berg advised that is funded separately from the bond issue because that is a contract to guarantee that enough revenue will be raised from the new meters to pay for their replacement within a period of time. It was on the list initially because it is a priority but it was taken out of the \$200 million project because it will be funded through revenues.

Mr. Kwoka commented that the gain is from the accurate capture of how much water is going through and questioned if the meters are also smart in the sense that they report back and no longer require staff to go out and collect readings.

Mr. Berg indicated that the meters can be read remotely and they can be turned on or off remotely.

Mr. Kwoka questioned the mechanism and how that is accomplished in this type of community.

Mr. Berg stated it is part of the recovery cost in the whole project.

Mr. Zeltman asked what the life of the meter would be before it started slowing down and if there is some point that the meter would be a certain age and worn down.

Dr. Gassman stated that the meters are guaranteed within a certain percentage for the first ten years and then there is a rate that the expected accuracy will change over the next ten-year period. The meters are essentially a 20-year life piece of infrastructure. The idea is that the meter system is being modernized with smart meters. The generation of general revenue is from accurately accounting for how much volume a given individual property is using.

Chair Mammano heard some concerns about the fact that the meters use a lot of electricity.

Dr. Gassman advised this is essentially a wireless technology. They have a battery and an antenna associated with it. Every meter will be changed out for this new year and more money will be collected. The new meters will show an accurate amount of water being used and that is what the resident will be charged.

8. Public Comments

Alex Bogdanoff, resident, commented on the seawall conversation and believed there was a little misconception that people think of seawalls completely separate from stormwater master plans because that is what has been traditionally thought. With seawalls being overtopped with sea water that goes into the stormwater system, this is now a problem for the stormwater system. The City of Fort Lauderdale website was mentioned and it was noted that a lien is placed on the property if a property continues to remain out of compliance, talking about seawalls. The City cannot foreclose on a lien on a homesteaded property, which means the City can complete the work and put it on the tax roll. If the City waits until a property is completely flooded and worthless what happens?

Dr. Nancy Gassman advised that a lien remains on the individual property tax roll until the house is sold.

Mr. Kwoka stated that the property cannot be transferred with a clear title until the lien is cleared.

Mr. Bogdanoff indicated that people are going to wait in their home and pass the burden onto someone else and that will make the property unaffordable. Mr. Bogdanoff believes this is an infrastructure issue and thinks it is something the Committee should think about.

Some communities are doing seawall districts. In the realm of infrastructure there are a lot of seawalls and ways to do this creatively.

Mr. Orshefsky questioned who ends up bearing the cost of raising the seawalls. If it is going to be put on the public there has to be a way to net zero to the public or some sort of recapture mechanism.

Mr. Kwoka commented that if the property floods the City will fix it preventing further flooding so the burden is in the transfer of title.

Mr. Orshefsky mentioned if the property is made so expensive and/or continues to be a burden, the property has turned into zero on the tax roll because it will never be able to be sold.

Discussion ensued regarding nuisances and enforcement regarding seawalls and tidal flooding of homes and other properties.

Mr. Walters advised there was a similar situation with rain water and stormwater and in some areas where the road will have to be raised. When the road is raised the water runs into yards, which is another problem.

Dr. Gassman stated that currently in the Stormwater Master Plan none of those improvements include roads in those seven neighborhoods.

Mr. Berg indicated that if the roads were raised it would be the City's obligation to make sure the water would not run onto the adjacent properties and there would have to be something to capture the water. That is why a design is needed.

Mr. Zeltman questioned how many homes have a lower finished floor elevation because they are older.

Dr. Gassman stated many of the homes are slab on grade, which means they can be easily moved up or down and most are at or below the road elevation. If the road is raised all those homes would flood. If pump systems are put onto private properties and they do not work and the properties flood, that becomes a liability of the City. The City has been very careful in contemplating the elevation of roads.

Chair Mammano mentioned the priority spending of the \$200 million bond and noted that the concern during discussion was the lining of sanitary sewers. A graphic depiction of how many of the said sewers have been relined, how much money has been spent, and how many more need to go was requested.

Mr. Berg advised that the list is the latest reiteration. They bond issue is going to the Commission on January 23, 2018 and they are closing in February. There is a bond rating presentation on January 10, 2018.

Chair Mammano mentioned that the City would get the most out of the dollars if the Infiltration/Inflow (I/I) project was advanced, prioritized, and finished. She questioned what is the current status of the I/I project and how much more money is needed.

Mr. Orshesky stated the bond dollars are on top of the \$22 Million I/I are already there and Mr. Feldman is suggesting more.

Mr. Orshesky questioned what percentage of the potential I/I is the \$22 million. The \$22 million plus bond is what percentage of the universe of I/I that is known about now.

Mr. Kwoka did not think it was relevant because part of the consent order is to map out the whole system and determine that. It is premature to have that conversation.

Mr. Orshesky commented that it will take two years to do the part under the DEP order.

Mr. Berg stated there is never too much I/I. There are capacity issues and 85% in the bond must be done within four years to satisfy the bond order. They want to make sure the work being done can be completed. There will still be dollars coming in from CIP; the system is not broken financially or physically. There is still money coming in for capital projects and that money will be allocated based upon the CIP and all the studies. Adjustments will be made for things that have deteriorated quicker than anticipated. The bond money is there to keep the capital rolling.

Chair Mammano indicated that the Committee would like to make sure that it gets to the top of the list and that as much is done as possible.

Mr. Berg mentioned the system outside of the City. I/I needs to be part of their system. The problem can be fixed 100% but there are still other cities; therefore, the problem is still not solved. Part of the plan was putting flow meters in not only for our system but for non-jurisdictional systems that come in.

Mr. Kwoka questioned if they can be financially penalized.

Mr. Berg stated it is not in the contract but he believes they have the power to protect the system. He does not want to do that with neighboring communities until he knows we are aggressively addressing our I/I.

9. Adjournment – Next Regular Meeting – February 5, 2018

There being no further business to come before the Committee at this time, the meeting was adjourned at 4:45 p.m.

Any written public comments made 48 hours prior to the meeting regarding items discussed during the proceedings have been attached hereto.