

City of Fort Lauderdale
Infrastructure Task Force Committee
September 5, 2019
2:00pm to 5:00pm
Fort Lauderdale City Hall
100 N. Andrews Avenue
8th Floor Conference Room
Fort Lauderdale, FL 33301

MEMBERS		PRESENT	ABSENT
Marilyn Mammano	P	27	1
Ralph Zeltman	P	27	1
Peter Partington	P	7	1
Roosevelt Walters	P	25	3
Fred Stresau	P	23	5
Norm Ostrau	P	25	1
David Orshefsky	P	23	2
Jacquelyn Scott	P	11	2
Gerald Angeli	P	4	0

Staff Present

Chris Lagerbloom, City Manager
 Paul Berg, Director- Public Works
 Aneisha Daniel, Deputy Director- Public Works
 Talal Abi-Karam, Assistant Public Works Director-Utilities
 Omar Castellon, Chief Engineer
 Meredith Shuster, Senior Administrative Assistant

Roll was called at 2:00 p.m. and a quorum was established.

1. **Call to Order:**
 - Roll Call
2. **Approval of Agenda**
Motion to approve the September 5, 2019 Agenda made by Mr. Walters and seconded by Mr. Stresau.
 Item 6. A. will be addressed upon the arrival of the City Manager

Motion to approve the agenda approved unanimously by voice vote
3. **Approval of August 5th Meeting Minutes entertained by the Chair and voted unanimously by consensus.**
4. **General Discussion and Comments by Committee Members**

At the request of the Committee for information on the operations and maintenance in the Public Works Department, Paul Berg provided the comparison of the number of full time employees (FTE) from 2014 to the current fiscal year. He divided the FTE's by the supporting funds. Prior to 2014, there was an early retirement program and during the recession, positions were eliminated through vacancy and attrition. The increases in the past three years are mostly in the operations and maintenance areas. The skilled or licensed positions such as electricians, mechanics and plant operators are the most difficult to fill. Additionally, about 25% of the Public Works employees are eligible for retirement. Overall, the Department has hired an average of 120 persons per year for the last three years and averages a 7% vacancy rate.

In response to questions:

- Mr. Orshefsky informed the Committee that many of the positions are funded by the Enterprise Funds and therefore revenue neutral. Mr. Berg agreed. He further explained that the Vehicle Fund is an example of funding that is recovered by billing the other departments for the use of city vehicles.
- Priorities includes two large projects; enhancing the valve operation programs and dead end mains.
- The hybrid stormwater rates, court validation, and bond issuance is expected to be completed in the first part of 2020.
- The number of additional staff and operation dollars will be determined based on the amount of new infrastructure.
- ROI phase out will enable more funding into "R & R" (Repair and Replace) such as pumps and other large ticket items that are not CIP
- City is investing in asset management software and the training and mapping of the infrastructure required in the Consent Order for wastewater will be expanded to include water and stormwater.
- The software will also incorporate information on the age and condition of the infrastructure to enable the City to be proactive in its maintenance and prioritize projects and funding accordingly.
- The water/sewer bond does not cover operations
- The City has increased the number of contractors under continual contracts and increased the funding by several million dollars. The City can use those services for maintenance and repair operations.

Mr. Angeli mentioned again the newspaper article about city staff not knowing where a valve was located. He was concerned over a conceived lack of institutional knowledge and wanted to know what else may be unknown. (2:15 PM further General Discussion was postponed for the City Manager)

(2:52 PM General Discussion continues) Mr. Berg explained that much of the infrastructure was placed in the ground in the 1970's when the accuracy of GIS and other technology did not exist. In the long term the City is building an underground asset management program that will have all the information. It is currently estimated that about 2/3rds of the infrastructure has as-builts that are fairly accurate. The asset management program will add in new infrastructure systems both under and above ground. It will help the City in setting up its maintenance schedules as well as back up data for funding requests for people and equipment to operate and maintain those systems. It is a huge project being done "a bite at a time."

The City follows industry standards in maintaining assets. Currently, the amount of staff is appropriate. Determining new staff and the type of staff positions will begin again in November for FY2021. The Commission has been supportive in the expansion of Public Works. Valves and the dead end mains will not be resolved in one project. The mapping and the asset management is at least a three year project.

Mr. Orshefsky added that the \$10 Million in returned ROI has been directed mostly to R & R. He brought up that it will be less of an uphill struggle for Public Works because there will be less impact to the General Fund.

Mr. Berg also informed the Committee that the Central Region Wastewater System implemented an increase in fees for expanded capital programs. Primarily, this year the increase will take care of the added needs of the generator system and electrical upgrades; a \$10 Million undertaking.

Capital improvements can be paid with bond funds if the infrastructure has at least a 30 year life. Operation costs get funded by the rate structure. As new capital projects come on line, the formula in the rate structure by Stantec assumes the amount of expenses to maintain the added infrastructure. In the budget process it is up to the department to review its needs on an annual basis. On the capital side, there are budget items that are capital expenses but not CIP such as pumps. These capital expenses are also considered in the rate structure.

Mr. Walters suggested a new approach on how resources could be allocated more efficiently in conjunction with Mr. Angeli's query on whether a review of cost savings is also being worked into the equation.

Mr. Orshefsky stated that he is retiring from the Budget Advisory Board when his term ends at the end of September. This meeting will be his last as the BAB representative on the Infrastructure Task Force. The Board expressed its gratitude for his service and appreciation of his contributions during his tenure.

Mr. Partington asked if the BAB had entertained setting the 7% [of the General Fund for infrastructure issues not supported by an enterprise fund] Mr. Orshefsky stated that it had not. Most of the deferred projects were CIP and not operational and maintenance. He stated that "catch-up" was more on the CIP side than the operations side. He confirmed Mr. Berg's statement that once the costs are determined, Public Works can then make annual budget requests for the staff and resources to maintain it.

Mr. Angeli suggested a proactive approach of setting up reserve funds similar to condo reserves to be used to extend the useful life of an infrastructure asset and to be in a position to replace it when its useful life has been reached. Fleet works in that manner and the concept could be applied to larger infrastructure.

Using forcemains in the wastewater system as an example, Mr. Berg explained that critical analysis is done that assesses the condition of the forcemains. It includes the life expectancy of the asset, the likelihood of failure and the consequences of failure to determine the risk factor. In turn, the City can then plan to allocate its resources according to what has the highest risk factor. The same is being done for water and stormwater.

The whole goal of an asset management system is to replace the asset before it breaks. It is a great concept but difficult in that it is always cheaper to wait until it does break. Redundancy is also not at the level desired for the City. Redundancy would provide more flexibility in the event of a failure. Both are critical aspects of the master plan. At the policy level the question arises of what the public is willing to pay.

It was pointed out that the focus should not only be on Public Works. All capital assets use this concept of useful life. It was suggested that the scope of recommendation by this Committee be expanded to include all capital assets of the City.

Mr. Walters asked if the City is putting money aside to accommodate the needs to repair/replace capital assets. Mr. Berg explained that for the past 5-6 years, the City has used a master plan process. The master plan is the guide. Rates are then structured to fund these master plans. As an example, Stantec finished its rate structure study for water and sewer that will be presented to the Commission next week. It is a 10 year projection and includes a \$200 Million bond issue in FY 2023 and FY 2028. Utilizing bonds is the financing method favored by the current and past Commission.

There pursued a discussion on "pay as you go" vs. using bonds as financing methods. It was further discussed to set aside a prorated portion over the life of the asset to replace it when the useful life is completed. It was clarified that bond money cannot be held. It needs to be spent within a short period of time. It was determined that a portion of non-bond money could be put aside by ordinance. It was also noted "what is created by ordinance, can be changed by ordinance."

Mr. Ostrau noted that although the private property on Hendricks Isle raised its seawall, the adjacent city seawall has not been raised. It contributed to the flooding occurring during the hurricane. He was asking if the City would be cited under its own Code.

Mr. Partington asked about a reportable overflow at GTL that occurred during the heavy rain prior to the hurricane. Mr. Berg explained that after the water is treated, it goes into injection wells. There was an injection well under R & R creating less than peak capacity. The water that overflowed was treated clean water, not raw sewage. The injection well is now up and running.

Mr. Stresau commented that he attended the Planning and Zoning Board meeting on the Comprehensive Plan. It was brought up that all the waterways should be considered “open space”. The P & Z had a robust conversation of “what is open space.”

Mr. Stresau also added the value of having a representative from the BAB on the Infrastructure Task Force. The recommendation for the ongoing infrastructure board did not include a member of the BAB but did require someone with municipal financing knowledge from either the public or private sector.

Based on its recommendation for the establishment of an ongoing infrastructure advisory board, [April 1, 2019] Mr. Stresau suggested the Commission move forward on enacting this board prior to March of 2020 when this Committee’s term ends. The consensus of the ensuing discussion was to raise this issue when the Mayor addresses the Committee at the October meeting.

5. Old Business

A. Update on Fiveash Improvements – Rebidding

The Fiveash reliability project was originally budgeted at a single price of \$32 Million. A single bid was received and a second bid submitted at the City’s encouragement came in at \$47 Million. Both bids were higher due to higher than anticipated construction costs. When asked why the City’s bid was estimated lower, Mr. Berg stated higher than standard construction costs is happening to municipalities all over the State. He counted 27 cranes in the City and pointed out there is a lot of construction work to be had.

The decision has been made to rebid the project using a line item method. Mr. Berg provided a handout of the various components of the project arranged by priorities. The priority one issues are the most critical and are budgeted at \$32 Million. It is anticipated the rebid will go out in October with 60 days for response time. Two months is reasonable due to the size, complexity and duration of this project.

The study of whether to rehabilitate or build a new plant is expected in October. It was asked if there was value in the reliability project if the suggestion is to build a new plant. Mr. Berg pointed out that the time frame to rebuild or rehabilitate Fiveash will take several years. All priority one improvements have to do with safety and wellbeing and to keep Fiveash operational. They must be done regardless. The Reis report estimated the cost to rehabilitate Fiveash would be around \$125 Million and around \$200 Million for a new plant.

When asked if there are cross purposes if it should be determined that the GAC (Granulated Activated Carbon) system is the best method while the City is negotiating its replacement of the chlorination system; it was explained that the GAC system is a filtering method and at a different stage in the process. There would not be any conflict. In the rebid, the buildings built for this reliability repair will be reusable should it be determined that a new plant should be built.

It is anticipated that this item will appear at a Commission meeting in January/February 2020.

6. New Business (2:15 PM)

A. Accounting for the ROI Deduction in the FY 2020 Budget

Mr. Lagerbloom introduced Rob Hernandez, Deputy City Manager to the Committee and thanked him for shepherding the City through the 42” water main break. He also introduced Aneisha Daniel, Deputy Director – Public Works, Talal Abi-Karam, Assistant Public Works Director – Utilities and Omar Castellon, Chief Engineer and Acting Assistant Public Works Director – Engineering.

Chris Lagerbloom expressed the lesson learned from Hurricane Dorian that anytime a category five storm stays stationary for any length of time, it will change the landscape forever. In conversation it was acknowledged that should such an event occur in Fort Lauderdale, there is little infrastructure that could

withstand that force. It was also brought out that it would be not be economically feasible to try to build to withstand such a force.

Mr. Lagerbloom summarized the Commission directive that \$5 Million in ROI be removed beginning with FY 2019 and in each of the next three fiscal years to total \$20 Million. Increasing the millage rate was not entertained by the Commission. In the first year, \$5 Million was reduced by eliminating capital projects. The FY 2020 budget holds the millage rate steady and removes \$10.2 Million that would go into the General Fund. Positions from the Nighttime Economy were returned to the departments, training dollars were reduced and in-house work on projects will no longer utilize General Fund Dollars to pay staff. In-house work is being fully funded using project funds. This was not always done when city staff did the work in-house. The reduction of \$10.2 Million in ROI from the General Fund was achieved for FY 2020.

How difficult it will be to eliminate the additional \$5 Million in FY 2021 will depend on the amount of increase from appreciating property values, whether the millage rate is changed and if the Commission determines not to return the increases. The General Fund is driven in a large part by contractual issues to the employees and health care costs. In the FY 2020 budget the increase in the property values were just enough to offset the increase in contractual wage and health care costs. Of the \$338 Million General Fund only \$26 Million is for other expenses. Finding \$15 Million in General Fund reductions in FY 2021 will pose a challenge; however, as development projects become substantially complete, they will add to the tax digest beginning on January 1 of the following year.

At some point, the ceiling to cutback will meet its limits. Harder choices to balance the budget will need to be made or additional revenue will be needed.

In response to questions:

- The City does have several continual contracts with vendors to handle routine breaks and has the Procurement Ordinance for declarations of emergency
- In its ability to be proactive, the City has taken steps to determine the feasibility of building a new water plant or rehabilitating the current facility. One consideration is building a new plant at the wellfield where the City owns land and is closer to the water source.
- The ocean conditions are not optimal for building a desalination plant.
- Several members believed that most residents are willing to pay for what is needed in water and wastewater.
- Capital dollars exist for capital costs but a plant will be expensive. Whether a new plant is financed by millage rate increases, public/private partnerships or bonds, the current plant must be kept running.
- In response to whether there are other municipalities where Fort Lauderdale could have obtained water when the 42" main was drilled into, Mr. Abi-Karam explained that all interconnects were opened but there isn't enough capacity to sustain normal operations.
- How much will be saved by adding the in-house costs to the project total will depend on how well the project is managed by either the in-house staff or by consultants.
- As it stands, the cost savings from utilizing the MPO (Metropolitan Planning Organization) is about \$250,000.
- The police station is being built to a hurricane five standard but how long it would be able to sustain those forces cannot be predicted.
- The City is strong on its emergency management planning and continuity of operations planning. The City of Fort Lauderdale has one of the only accredited emergency management plans in the State. The City has gone the extra distance to respond to an emergency.
- Mr. Lagerbloom agreed that the bond market is favorable now but paying any interest for money that isn't ready to be spent is not favorable. The current expectation is the bond market will remain favorable as the rate studies finalize.

- Parks bond funds have not been drawn down as of yet; however, there are projects that can be reimbursed from these funds. Once the bond funds are received and the Commission adopts a reimbursement resolution, reimbursement can take place.
- The ordinance repealing the need to rebate water/sewer rates has gone for first reading and will go for 2nd reading in September. There has been no push back from any Commissioner.

7. Informational Items

A. Update on the AMI Meter Project (Paul Berg)

The Comprehensive Plan includes moving forward with the digital water meters. This \$41 Million project will be presented to the Commission at the 2nd meeting in October. It is too early in the process to set the dates but it is anticipated toward the end of the first quarter in 2020. After a 60-90 day period to set up the network and software to read the meters, the crews will begin managing the replacement of the meters using predetermined routes to have minimal disruption in the billing system.

It is estimated to take 2 years to install the 62,000 meters. The City will be buying the meters via direct purchase, saving the sales tax. Once installed, staff functions will change. Currently, the process is reactive. Neighbors call when unusual consumption appears on their bills. City staff then investigates the problem. With the digital meters the process becomes proactive. A warning will be received if an unusual consumption is denoted. Staff can then respond more quickly. In speaking to other cities using these meters, staff will be needed to maintain the meter boxes and repair/replace antennas. Neighbors will be able to monitor their usage via computer or a phone app. Bills will be easier to understand and odd occurrences explained.

The meters are guaranteed 100% accurate for 10 years with an additional 5 years of accuracy on a sliding scale. Currently, meters slow down with age thereby the City is not receiving accurate payment on water consumption. The electronic meters will not have the degradation and over time, payment will remain more accurate to the water consumed. It is the avoided loss of revenue that will repay the cost. The Siemens Corporation contract guarantees the avoided revenue loss will be sufficient to pay the cost of the meters. The payback is estimated at 8 years.

Digital meters have been installed on wholesale meters and the City is experiencing savings. A plan will be created to replace the 62,000 meters in 15 years.

When asked about the impact on staff, Mr. Berg explained; currently, there is a contractor that reads the meters for the City. Maintenance staff responds to complaints and repairs/replaces equipment as needed. Other staff is in the utility billing division. Installing the digital meters is unlikely to have an impact on number of people in billing.

The City of Pompano is using the meters and Oakland Park is installing them now. Rule of thumb is 3% - 5% savings.

On a different issue, KPMG LLP consultants are completing an assessment of the City's water meter and billing system and infrastructure. Its report is scheduled for the 2nd Commission meeting in October.

Mr. Berg informed the Committee, the company that did the recruitment for Joe Kenney has an 18 month guarantee. It will be recruiting for his replacement at no cost.

8. Public Comments None

9. Adjournment –Chair Ms. Mammano adjourned the meeting at 4:19p.m. Next Regular Meeting October 7, 2019

Infrastructure Task Force
September 5, 2019

5. Old Business

A. Update on Fiveash Improvements – Rebidding

The scope in the priority groups below will be re-bid as an itemized list so the City can select the items to be awarded to match available budget.

Itemized and Prioritized Scope

Priority 1 group - This group includes 16 items, with the main items being a replacement disinfection facility, a new carbon dioxide system, and roof replacement and architectural improvements (storm hardening) for the operations building, filter buildings, chemical building and FPL substation building. The estimated cost for these items includes construction cost, consultant construction management and City inspection services which totals approximately \$31.2 million.

Priority 2 group – This group includes 4 items, with the main items being construction of a new emergency generator facility and diesel emissions reduction system. The estimated cost for these items includes construction cost, consultant construction management and City inspection services which totals approximately \$13.5 million.

Priority 3 group - This group includes 3 items, with the main items being exterior painting and sealing of most of the buildings in the water treatment plant. The estimated cost for these items includes construction cost, consultant construction management and City inspection services which totals approximately \$2.6 million

The sum of all three phases is \$47.3 million which matches the low bid amount.

PUBLIC WORKS PERSONNEL COMPLEMENT
FY 2014 - FY 2020

PW FUNDS	FTE'S FY 2014	FTE'S FY 2020	+/-
GENERAL	39	22	-17
SANITATION	9	7	-2
WATER/SEWER	299	346.8	47.8
CENTRAL REGION	35	37	2
STORMWATER	28	39	11
VEHICLE RENTAL	3	5	2
PROJECT MGMT	0	22	22
Total Positions	413	478.8	65.8

FY 19 - 24 Water Utilities Action Plan

October 2, 2019



Bottom Line

- ▶ CIP invests \$610 million for Water, Wastewater and Stormwater infrastructure projects over the next five years
- ▶ Inclusive of \$200 million bond for Stormwater needs
- ▶ The next 20 Years requires over \$2 billion investment for infrastructure needs
- ▶ Investments at 3% of the systems asset value for Operations & Maintenance (Industry Best Practice) = \$33 million annually

Water, Wastewater and Stormwater Investments



- ▶ The System
 - ▶ Water Treatment Facilities
 - ▶ Fiveash & Peele-Dixie
 - ▶ Prospect & Peele-Dixie Wellfields
 - ▶ Water Distribution System
 - ▶ Wastewater Collection System
 - ▶ Wastewater Treatment Facility - George T. Lohmeyer (GTL)
 - ▶ Stormwater Infrastructure System

Peele-Dixie Water Facility

- ▶ Peele-Dixie
 - ▶ Current capacity of 12 millions of gallons per day (MGD); current use of 9 MGD
 - ▶ Capacity can be expanded
 - ▶ May need to consider expansion as part of Fiveash project
 - ▶ Evaluation of water allocations
 - ▶ Current technology provides quality water product; updates anticipated

Fiveash Water Facility



- ▶ Granular Activated Carbon (GAC)
 - ▶ GAC process not feasible for Fiveash
 - ▶ Operational costs too high
 - ▶ Results would not meet water quality expectations
- ▶ Fiveash Water Plant Evaluation
 - ▶ Plant is at the end of its useful life
 - ▶ Rebuild or refurbishment not feasible
 - ▶ Replacement is recommended

New Fiveash Water Facility Evaluation

- ▶ Potential Location
 - ▶ Adequate land available at Prospect wellfield site
 - ▶ Meets requirements for area needs, existing zoning, environmental conditions will need mitigation; site access routes will need to be determined, FAA height restrictions
 - ▶ Workable site based on initial review
 - ▶ Served by Prospect wellfield; Biscayne Aquifer
 - ▶ Future capacity needs not met
 - ▶ Future expansion requires consideration of Floridian Wells or C-51 Reservoir allocation

Fiveash Water Plant



- ▶ Considerations
 - ▶ Depends on level of risk City willing to assume
 - ▶ Conventional / Construction Manager at Risk / Public Private Partnership Options
 - ▶ Design/Build/Finance/Operate/Maintain
- ▶ Final Report due December, 2019 will include budgeted cost estimates

Peele-Dixie & Fiveash Wellfields

- ▶ Wellfields
 - ▶ Peele-Dixie - Broadview area
 - ▶ Fiveash - Prospect wellfields
 - ▶ Served by Biscayne wells
 - ▶ Expansion of capacity would require Floridian Aquifer Wells to be put into service
 - ▶ Current needs met with Biscayne Aquifer all allocations - future needs not met

Water Distribution



- ▶ Valve and water main location and mapping
 - ▶ Consultant contract on regular agenda
 - ▶ City Survey team and Distribution Crew engaged in location efforts
 - ▶ Update maps and atlas for locations - GIS ready
 - ▶ Requires future funding for installation of critical redundant valves and/or valve repairs
- ▶ Water main flushing / maintenance
 - ▶ Free chlorination per AWWA best management practices
 - ▶ Directional flushing program
 - ▶ Acquired the de-chlorination equipment used in watermain flushing
 - ▶ Consultant work on modeling water system
 - ▶ Installation of 22 auto-flushing devices by City crews plus manual flushing
 - ▶ Installation of 50 additional auto-flushing devices within the next year to maintain water quality

Water Distribution

- ▶ Elimination of dead-end water mains - develop annual program starting FY2021
 - ▶ Design work by consultant needed
 - ▶ Reserve portion of annual CIP funds for looping projects
 - ▶ Future funding needed for construction work
- ▶ CIP funding \$53 million for repair or rehabilitation of 315,300 linear feet of watermain pipes = 59.7 miles
- ▶ Complete multiple valve connections with Pompano Beach - Interlocal Agreement
 - ▶ Provides redundancy to both communities along northern border
 - ▶ Protects both systems from cross contamination
 - ▶ Additional funding needed ~ \$500,000

George T. Lohmeyer Wastewater Treatment Plant



- ▶ Rebuild Oxygen generation plant (Cryogenic Plant)
- ▶ Refurbish Injection Wells
- ▶ Continue to improve Electrical System
- ▶ Provide Generators for backup power to the entire plant
- ▶ Replacement of major pipe within plant underway
- ▶ Dedicated funding from the Regional System Partners

Wastewater Collection System

- ▶ CIP funding \$20 million for repair or rehabilitation for 29 of the 186 pump stations
- ▶ CIP funding \$177.5 million for repair or rehabilitation of 622,100 linear feet of major pipe - 117.8 miles
- ▶ Continue to locate valves and mapping
- ▶ Continue to upgrade and maintain pump stations

Wastewater Collection System

- ▶ Complete Inflow and infiltration work in 2020
 - ▶ 938 Maintenance holes assessed
 - ▶ 229,397 linear feet of sewer lines smoke tested - over 43.4 miles
 - ▶ 190,874 linear feet of sewers lined - over 36.1 miles
 - ▶ 1,634 laterals lined or closed
- ▶ Complete Force main assessments in 2020
 - ▶ 13,520 linear feet rehabilitated - 2.6 miles
 - ▶ 75,000 linear feet in design/permitting/construction - over 14.2 miles
- ▶ Continue Pump station replacements
 - ▶ 3 pump stations rehabilitated
 - ▶ 2 pump stations in design/permitting/construction
- ▶ 51 Consent Agreement milestones
 - ▶ 20 milestones completed
 - ▶ 15 completed ahead of schedule -

Stormwater



- ▶ Complete “hybrid” stormwater rate study by Stantec and present to Commission in November
- ▶ Critical funding for \$200 million in storm system improvements designed for seven neighborhoods/basins
- ▶ Funding for design of storm water system improvements for remaining fifteen neighborhoods/basins is needed
- ▶ Anticipated funding needs of nearly \$1 billion over next 20 years

Stormwater

- ▶ Currently have 165 tidal valves installed with 129 more scheduled to alleviate flooding and increase resiliency on sea level rise, pedestrian, and vehicle safety
- ▶ Installation of seven new stormwater pump stations improvements by performing an evaluation assessment of two stations to minimize flood risk
- ▶ Repair or rehabilitation of 115,000 linear feet of stormwater major pipe = 21.7 miles
- ▶ Perform dredging of various canals to provide proper flow of stormwater and reduce flooding

Technological Initiatives

- ▶ Supervisory Control and Data Acquisition (SCADA) improvements
- ▶ Asset Management Project
 - ▶ Implementation of Cityworks system
 - ▶ Provides an Asset Life Cycle which includes inventory, condition assessment, monitor, maintain and replace assets more cost effectively
 - ▶ Valued Based Decisions
- ▶ Smart Meters

Smart Metering



- ▶ Advanced Metering Infrastructure (AMI)
 - ▶ Contracts under review / financing being finalized for Commission consideration
 - ▶ Replaces all water meters with digital system
 - ▶ Improved accuracy will recoup lost revenues sufficient to pay for meters over 12 years
 - ▶ Allows pro-active notices to Neighbors of unusual usage or leaks before a large bill
 - ▶ Wireless reading eliminates manual reading of meters
 - ▶ Provides detailed usage reports to allow Neighbors to manage their water consumption and to alert them of potential high usage
 - ▶ Meter accuracy guaranteed 10 years

Work Smarter

- ▶ Expand Procurement Strategies
 - ▶ Bundling Projects
 - ▶ Conventional Procurement Methods
 - ▶ Job Order Contracts
 - ▶ Public Private Partnerships and Variations
- ▶ Add procurement staff
- ▶ Strategic Project Coordination

Summary

- ▶ Fiveash is at the end of it's normal life, replacement necessary - \$200+ million needed - not yet budgeted
- ▶ Additional staff and equipment will be needed to perform flushing, valve location, installation & maintenance of self-flushing devices - Planned for FY21Budget
- ▶ AMI system will provide accurate meter reading/usage information to Neighbors allowing them to manage their water consumption effectively
- ▶ CIP funding will be needed for redundant valves, valve repairs, elimination of dead-end water mains, installation of valves on water main connections with Pompano Beach
- ▶ Stormwater infrastructure improvements are dependent on funding source - Rate Study

Next Steps

- ▶ What we need from Commissioners
 - ▶ Need approval of the Stormwater Rate Study
 - ▶ Direction for the Fiveash Treatment Facility
 - ▶ Action on the AMI project
 - ▶ Budget approval for additional procurement staff
 - ▶ Consideration of a mid-year adjustment for water main connection with Pompano Beach
 - ▶ Funding consideration for additional staff and equipment needed for redundant valves, valve repairs, elimination of dead-end water mains