

# Department of Public Works

## City Commission Workshop January 6, 2021

*Jeff Odoms, Interim Director*

# Workshop Objectives

- Provide a Comprehensive View of the Department of Public Works Current Operations and Challenges
- Provide a 3-year Strategic Plan Outlook

# DPW Outlook Workshop FY21- Outline

## 1 Infrastructure

- Water Treatment
- Water Distribution
- Meter Services
- Wastewater
- Stormwater
- Streetlights & Poles
- Streets & Sidewalks

## 2 Facilities Maintenance

- Municipal Facilities

## 3 Green Initiatives

- Environmental Compliance
- Sustainability

## 4 Fleet Maintenance

- Police Vehicles
- Sanitation Vehicles
- Other Department Vehicles and Equipment

## 5 Sanitation

- Recycle & Trash
- Bulk
- Solid Waste Collection

## 6 Cemetery

## 7 Staff Training



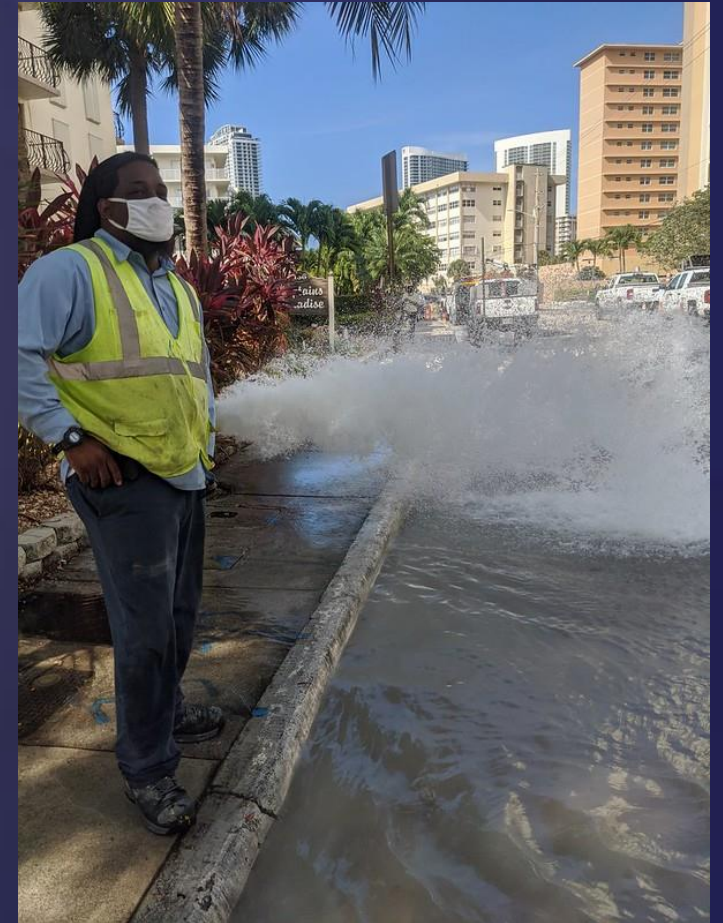
# Infrastructure

## Our Current Situation

On average, water-main and force-main infrastructure have an engineered life span of 50 years. In many areas of the City, infrastructure is either at, or significantly exceeds the engineered 50-year life span. Without a significant increase in rehabilitation and replacement efforts, we are in jeopardy of continued utility infrastructure failures.

Additionally, the City of Hallandale Beach's roadway & sidewalk infrastructure are in need of repair and maintenance. There are many locations in the City that are experiencing pavement failures due to increases in traffic volumes and natural degradation.

In the following sections we will discuss the challenges we face, our plans for success and our 3-year objectives for each area.



# Water Treatment

As growth and development continue, our water supply consumption will increase. Two major challenges to our water supply program are as follows:

## Future Challenges

- Saltwater Intrusion in our City owned Wells – Chloride Levels are slowly rising – ultimately forcing a treatment process change
- Process Change From Lime Softening To Membrane Softening



# Water Treatment

## Current Projects

- Foster Road Water Main improvements.*(Immediate)*
- Raw Water Well #9/Raw water Well #9 pipeline.*(Intermediate)*
- Water Treatment Plant Transfer Pump improvement projects.*(Intermediate)*
- Degasifier Packing Media Replacement – Two (2) Degasifier Towers.*(Immediate)*
- New Trane A/C Units: Membrane Plant , Generator Building and Control Room in High Service Pump area. - Five (5) A/C units.*(Immediate)*

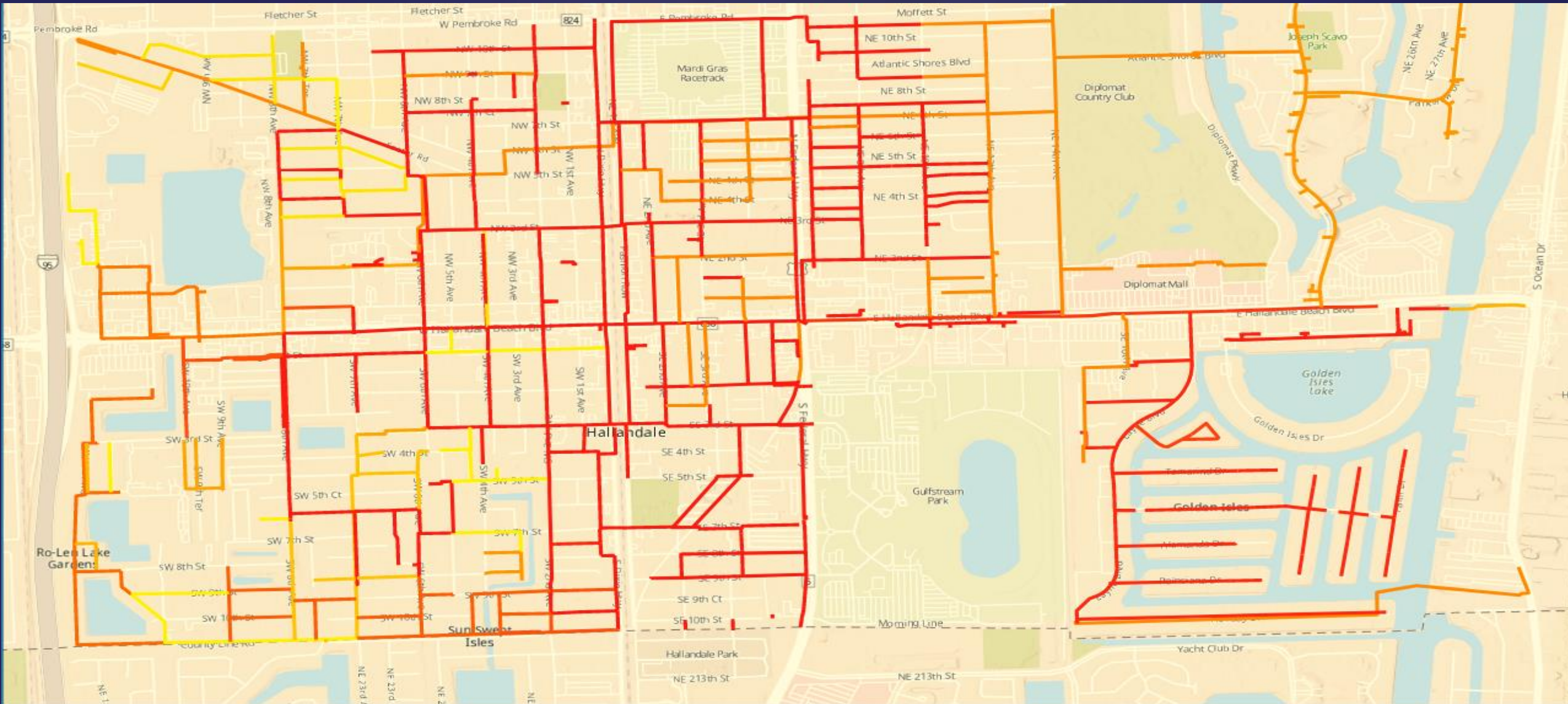
## Future Projects

- WTP Rehabilitation of Lime Plant Softening Units - Two (2) Softening Units
- Membrane Skid No.3 - Design Completed.*(Intermediate)*
- WTP Security Risk.*(Immediate)*
- Nano Filtration Plant Raw Water Influent modulating control valve – SCADA controlled.*(Intermediate)*
- Alternative Water Supply - Phase 1 - C51 Canal.*(Long Term)*
- Lime Slaker Replacements – Three (3) slakers.*(Long Term)*
- Lime Silo Rehabilitation – Two (2) Silo's.*(Long Term)*
- North Miami Beach Interconnect - Rehab.*(Intermediate)*
- City of Hollywood Interconnect Construction.*(Intermediate)*





# Water Challenges



Watermain Age 1950-1979

1950 year  
1958 year

1960 year  
1962 year  
1964 year

1965 year  
1966 year  
1967 year

1968 year  
1969 year  
1972 year

1973 year  
1974 year  
1975 year

1977 year  
1978 year  
1979 year



Hallandale Beach

# Water Distribution

## Water Distribution Challenges

There remains significant challenges to the water distribution and meter services division of Public Works.

- Water-mains aged and at end of lifecycle
- Insufficient number of isolation valves in the system
- Water-mains located behind homes are in need of relocation.





# Water Treatment and Distribution 3 Year Objectives

## Water Treatment

- Completion of all current water treatment projects.
- Complete application and receive a variance from Broward County for lime disposal.
- Membrane Skid No.3 construction and implementation.
- Deactivation of the Lime Plant.

## Water Distribution

- Replace 50,000 linear feet of water main throughout the City.
- Install 250-300 insertion valves.
- Develop and initiate a watermain relocation project.



# Meter Services

## Meter Services Challenges

- Many meter batteries which we were informed should last 8 to 10 years are failing now midway through their prospective lifecycle.
- Meters are located on sidewalks and behind homes
- Signal interference due to the use of metal lids, broken antennas and installations in driveways.
- Meters impacted by flooding
- Vandalism
- Warranty repair turnaround time





# Meter Services

## Meter Services 3-Year Objective

- Establish a separate budget account for Meter Services.
- Complete replacement of all failed meters across the city.
- Establish a minimum 50-meter inventory for quick replacement when failures occur.
- Add 2 additional Meter Services team members.
- Initiate the Citywide Meter Relocation project.



# Wastewater Challenges

## Wastewater Infrastructure

- The City of Hallandale Beach's Wastewater infrastructure is aged and in need of repair/ maintenance.
- Anticipated need for more staffing ( projects managers for future work).
- Inefficient internal project processes.





# Wastewater Infrastructure

## Current Projects

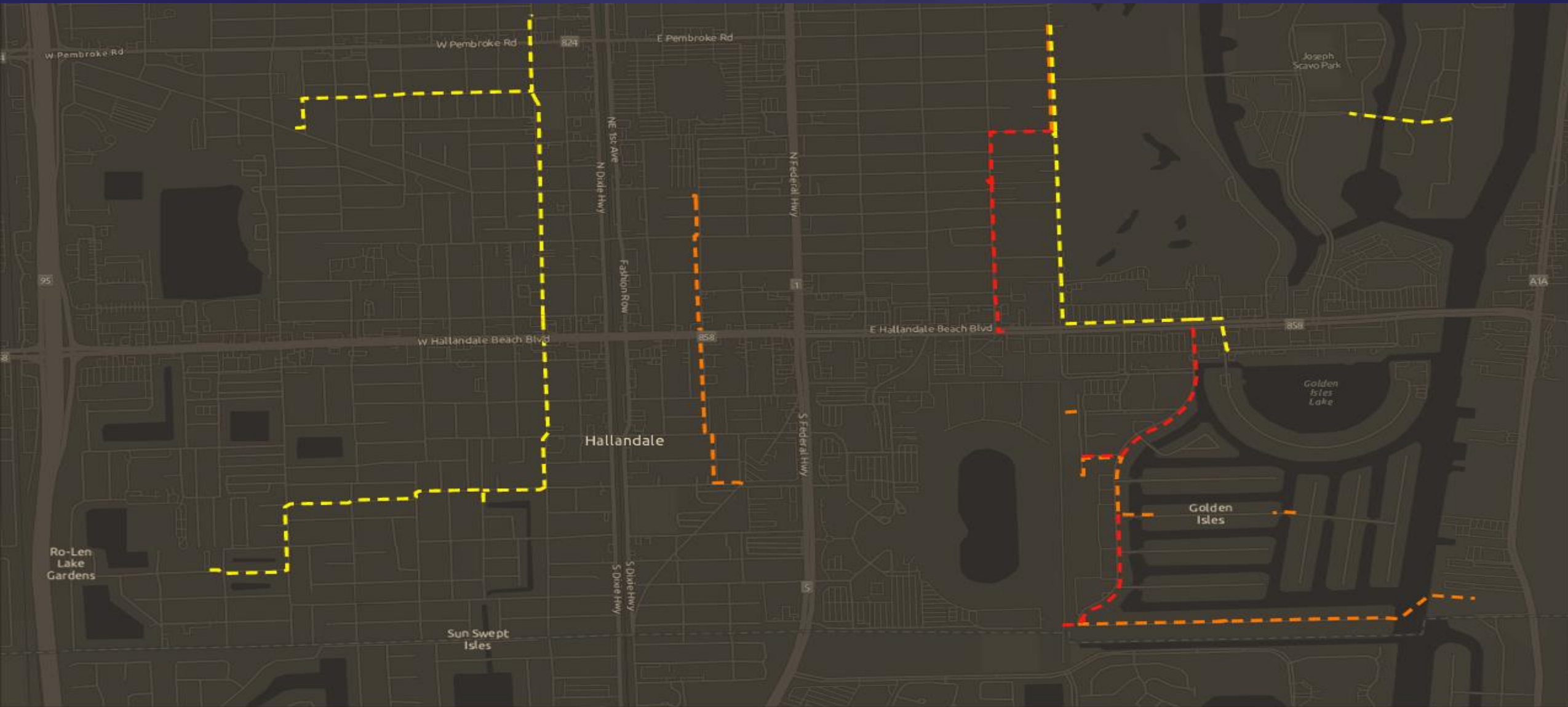
- Lift Station #8 Improvements.*(Intermediate)*
- Egret Lift Station Emergency Repairs.*(Immediate)*

## Future Projects

- Gravity Sewer Line Upgrades.*(Long Term)*
- Sewer Lift Station Upgrades and Rehabilitation ( Lift Station #1-15).*(Intermediate)*
- Sewer Force Main Upgrades.*(Long Term)*
- I&I Lateral Project.*(Intermediate)*



# Wastewater Challenges



Sanitary Age 1960-1979

- 1960 year
- 1967 year
- 1972-1979 year



Hollandale Beach

# Wastewater 3 Year Objectives

## Wastewater

- Replace 21,000 linear feet of force main throughout the City.
- Install 100 force main valves.
- Install 5 additional grinder pump units at critical lift stations.
- Completion of I&I lateral upgrade project.
- Implement the EPA CMOM system (Capacity, Management, Operations, and Maintenance).





# Stormwater Challenges

## Stormwater

- The City of Hallandale Beach's stormwater infrastructure is in need of replacement, repair, or maintenance. There are many locations in the City that are experiencing significant inflow and infiltration (I&I) challenges.
- Additionally, many areas of the City's large stormwater piping needs to be inspected and cleaned. The City is already experiencing the effects of climate change, which will require a complete evaluation of our stormwater infrastructure.





# Stormwater

## Current Projects

- SW Drainage Improvements (recently completed)
- Stormwater Wet Well Screens. (Intermediate)

## Future Projects

- Large Diameter Stormwater Pipe-Cleaning. (Immediate)
- Retention Pond Dredging and Banks Stabilization. (Intermediate)
- SE 14th Ave. Canal - Mangrove Trimming and Cleaning. (Intermediate)
- Shaffer Canal Dredging. (Intermediate)
- Bank Stabilization Permitting for Homeowners. (Intermediate)
- Community Development Block Grant Public Works Improvements (CDBG). (Immediate)
- Citywide Catch Basin/ Curb Inlet Cleaning and Repair. (Intermediate)
- Completion Of Stormwater Master Plan And Review For Increased Positive Displacement. (Intermediate)



# Stormwater 3 Year Objective

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## Stormwater

- The City will begin work on a Stormwater Master Plan in FY21. This will lay out the needed projects and take stock of our stormwater infrastructure.
- Increase the compliance enforcement of stormwater related ordinances.



# QUESTIONS

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# City Street Lighting Challenges

## Street Lighting

Streetlights currently use high pressure sodium bulbs and ballast kits which are not energy efficient and cause more frequent outages.

- Some City streetlight poles have become heavily corroded and need to be replaced.
- For most City streetlights, Staff must coordinate with FDOT to get any improvements approved. For A1A, the City also must get FWC approval.
- Funding and flexibility to get LED streetlights retrofitted, are currently at the pace of FDOT and FWC approvals.





# Street Lighting Infrastructure

## Current Projects

- Smart LED street light pilot at Three Islands. *(Intermediate)*
- Replacement of all bulbs that are currently out. *(immediate)*
- LED street light upgrade- We have begun changing existing lights to LED across the city. So far, we have done 83 *(immediate)*

## Future Projects

- Streetlight Pole Replacement. *(Immediate)*
- LED Streetlight Retrofitting, including sea turtle compliant lighting on A1A. *(Long Term)*
- FY21 we expect to retrofit 65 lights on the beach, and 70 lights on US-1. *(Intermediate)*



Staff has identified eleven (11) street light poles with corrosion issues along US-1, eight (8) of which need attention urgently.

# Streetlights 3 Year Objective

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## Streetlights

- Implement the City light maintenance and assessment program.
- Be able to monitor owned and maintained streetlights with an intelligent streetlight system.



# City's Sidewalk & Street (Roadways) Challenges

## Sidewalks/ Streets Infrastructure

Specific challenges facing sidewalk and streets.

- Funding





# Sidewalks & Street's Infrastructure

## Future Projects

- NE 12th Ave, From Hallandale Beach Blvd to Atlantic Shores Blvd on both sides of the roadway.*(Intermediate)*
- Atlantic Shores Blvd, From NE 14th Ave., to NE 8th Ave.*(Intermediate)*
- SE 4th Ave., from Hallandale Beach Blvd to SE 2nd Street.*(Intermediate)*
- SE 2nd Street, From SE 3rd Ave to Old Federal Hwy.*(Intermediate)*
- NW 10th Street, From NW 1st Ave to NW 6th Avenue.*(Intermediate)*
- NW 9th Street, from NW 1st Ave to NW 6th Ave.*(Intermediate)*
- NE 1st Street, from Federal Hwy to NE 6th Ave.*(Intermediate)*
- NE 1st Ct, from Federal Hwy to NE 6th Ave.*(Intermediate)*
- NE 1st Court from NE 1st Ave to NE 12th Ave.*(Intermediate)*
- NW 3rd Street Complete Streets Project.*(Intermediate)*
- Diplomat Parkway.*(Intermediate)*
- 620 NW 6th Terr.*(Immediate)*
- 207 NW 10th St.*(Immediate)*
- 918 NW 10th St.*(Immediate)*
- NW 9th St and 3rd Ave.*(Immediate)*
- 517 NW 9th St.*(Immediate)*
- 413 SW 4th Terr.*(Immediate)*
- 220 SE 2nd St.*(Immediate)*





# Sidewalks & Streets 3 Year Objective

## Sidewalks & Streets

- Reducing City's liabilities due to sidewalk injury-related lawsuits.
- Replace 50,000 linear feet of roadway throughout the City.
- Replace 40,000 linear feet of sidewalk throughout the City.
- Install 50 new ADA ramps.
- Continued application for surtax funding and other grant related funding opportunities.



# QUESTIONS

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# Facilities Maintenance

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## Our Current Situation

Many municipal buildings and assets have reached the end of their life cycle, for example the roofs of the Water Treatment Plant and City Hall. Additionally, the City Hall HVAC system needs upgrading and several buildings need painting.

In this section we will discuss the challenges we face, our plans for success and our 3-year objectives for each area.





# Municipal Facilities Challenges

## Municipal Facility Infrastructure

- Funding



# Municipal Facilities Infrastructure

## Current Projects

- Replacement of existing toilets with low flow fixtures.*(Immediate)*

## Future Projects

- The construction of the partition wall to divide the warehouse work area.*(Intermediate)*
- Initiate the Replacement of the existing Roof and Chiller at the Municipal Complex.*(Intermediate)*
- Initiate the Repainting of the Nano Water Plant.*(Intermediate)*



# Municipal Facilities 3 Year Objective

## Municipal Facilities

- Retrofit LED light for all municipal facilities.
- Review/update municipal facilities security.
- Complete the retrofit of all municipal facility bathroom fixtures to low flow.





# QUESTIONS

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# Green Initiatives

## Our Current Picture

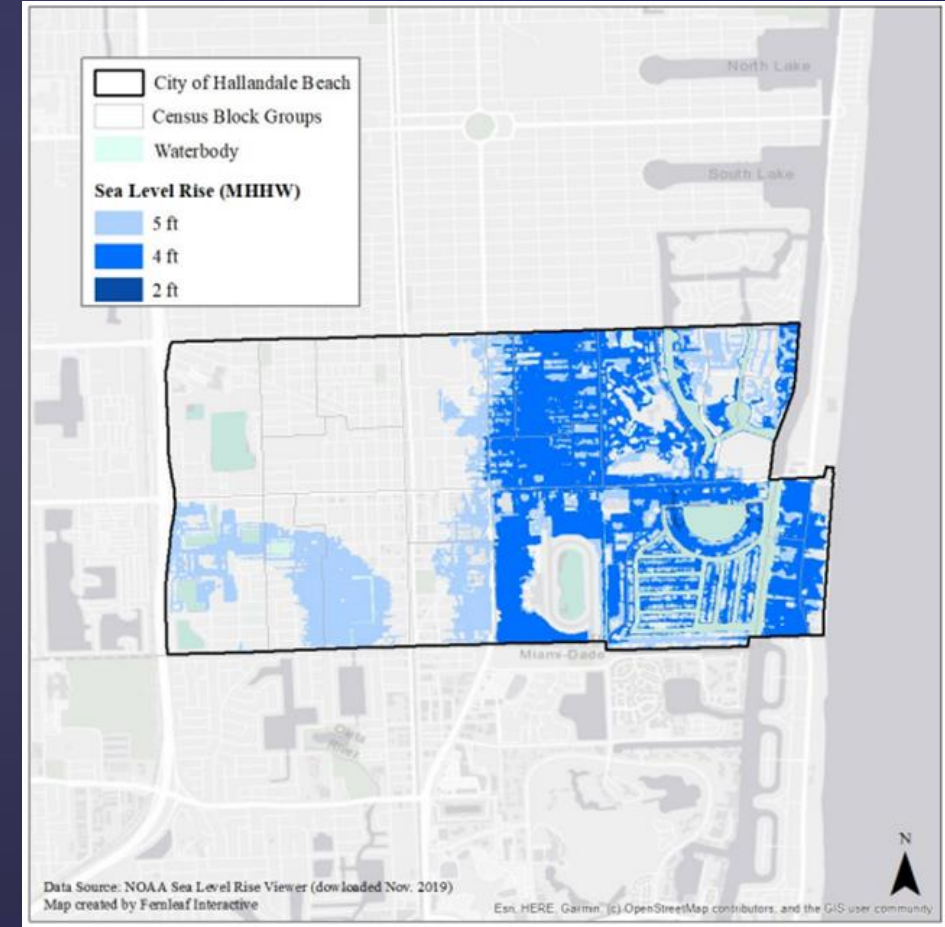
### Sustainability & Resilience

The 2018 Sustainability Action Plan, (SAP) passed by the City Commission outlined 28 projects and programs to be initiated to meet our environmental sustainability goals.

- 47 % of SAP Projects have been completed.
- 46 % are currently in progress
- 7% are on hold.

### Environmental Compliance

- There has been an increase in illicit discharge incidents into the environment within the City of Hallandale Beach. Grease Management Program, EPA Dental Amalgam and Pharmaceutical Rule are not strongly enforced.
- The Public Works team due to current staffing deficiencies is limited in mounting an effective response to these type of incidents and responsibilities.



# Green Initiatives Current Projects

## Current Projects

- Irrigation efficiency on City properties.*(Intermediate)*
- Citywide Dune restoration.*(Intermediate)*
- LEED for Cities Certification.*(Intermediate)*
- Electric Vehicle Charging Infrastructure (public and fleet) .*(Intermediate)*
- Urban Tree Canopy Assessment (with CRA) .*(Intermediate)*
- Review Green Building requirements for new and re-development.*(Intermediate)*
- Broward Water Partnership.*(Intermediate)*
- Water Conservation Education.*(Intermediate)*
- Nature Scape Irrigation Audits.*(Intermediate)*
- Climate Action Plan creation.*(Intermediate)*
- Sustainability Action Plan implementation.*(Intermediate)*
- Vulnerability Assessment and Adaptation Plan implementation.*(Intermediate)*





# Green Initiatives 3 Year Objective

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## Sustainability

- Establish a Division of Climate Change, Sustainability, & Resiliency with additional staff (potentially funded by 3-year AmeriCorps grant (with no city match)).
- Create the position of Chief Resilience Officer
- Attaining or exceeding short-term SAP goals and beginning work on long-term efforts (2040 goals).
- Capital projects completed related to renewable energy, electric vehicles, marina seawall rehabilitation, and sewer lift station resiliency upgrades.

## Resilience

- Install & maintain in-line tidal check valves for all stormwater outfalls
- Continue replacing fleet vehicles with electric vehicles and hybrid vehicles for Police
- Continued support of and funding for the implementation of the SAP and VAAP

# Environmental Compliance 3 Year Objective

## Environmental Compliance

- Implement an effective environmental compliance program.
- Implementation of the Grease Trap Ordinance compliance program.
- Ensure City of Hallandale Beach businesses are in compliance with the EPA Dental Amalgam Rule 40 CFR 441 and the Pharmaceutical Rule 40 CFR 261
- Review Industrial Pretreatment Program agreement with the City of Hollywood.



# QUESTIONS

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# Fleet Maintenance

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## Our Current Situation

The City's Fleet division currently takes care of 340 total pieces of equipment and all City vehicles. Much of the equipment is in service beyond the industry standard of useful life and in need of replacement.

In this section we will discuss the challenges we face, our plans for success and our 3-year objectives for each area.



# Fleet Challenges

## Fleet

- Sanitation and Police Vehicles beyond useful life
- Funding
- Scheduled Maintenance Delays



# Fleet 3 Year Objective

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## Fleet

- Increase mechanic team members.
- Reduce Scheduled Maintenance Delays.
- Decrease Vehicle Turnaround Times.
- Suspend use of aged Front loader Sanitation Vehicles.
- Develop and Implement a Police Vehicle Replacement Program.
- Reinstate the Equipment Replacement Program.
- Replace 50 percent of aged Police Vehicles.





# QUESTIONS

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# Sanitation

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## Our Current Situation

The Sanitation Division provides garbage and trash collection for residential, multi-family and commercial.

In this section we will discuss the challenges we face, our plans for success and our 3-year objectives for each area.



# Sanitation Challenges

## Sanitation

- City lacks an overall Litter Control Division/Program
- Inefficient internal project processes.
- Understaffing - There are six (6) vacant positions which cause excessive use of overtime.
- Aging fleet/Constant Breakdowns - There are six (6) front-load trucks used for the multi-family and commercial operation (2 diesel and 4 CNG). The two diesels are past due for replacement.
- The CNG trucks are inefficient due to the fact there no longer is a CNG fueling station close by.





# Sanitation Projects

## Current Projects

- Releasing the RFP to outsource the garbage collection of Multi-Family and Commercial accounts. *(Intermediate)*
- Hiring part time Heavy Equipment Operators as an interim solution until the RFP is awarded. *(Immediate)*

## Future Projects

- Renting/Leasing new and more reliable front end loader garbage trucks as in interim solution until the RFP is awarded. *(Intermediate)*
- Exploring utilizing the Sanitation fund to create a Litter Control Division/Program to address litter citywide. *(Intermediate)*
- Phasing out the use of CNG Trucks. *(Long Term)*



# Sanitation 3 Year Objective

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## Sanitation

- Release the RFP and award the contract – Next 6 to 9 months
- Replace remaining CNG trucks with Diesel Trucks (Retain one as back-up) Next 24 months.
- Award the RFP in order to move forward with stabilizing the Division's operations
- Instituting the Litter Control Division/Program



# Cemetery

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## Our Current Situation

The Cemetery is a historic landmark in the City of Hallandale Beach. It has been in existence since the early 1900's. The cemetery offers burial services to residents and non-residents. Burials are performed Monday thru Saturday.

The Cemetery offers below ground burial in single, double and oversized vaults, as well as niches for cremation remains. The cost for the various services typically includes the plot, the vault, perpetual care, opening and closing and the daisy marker.





# Cemetery Challenges

## Administration

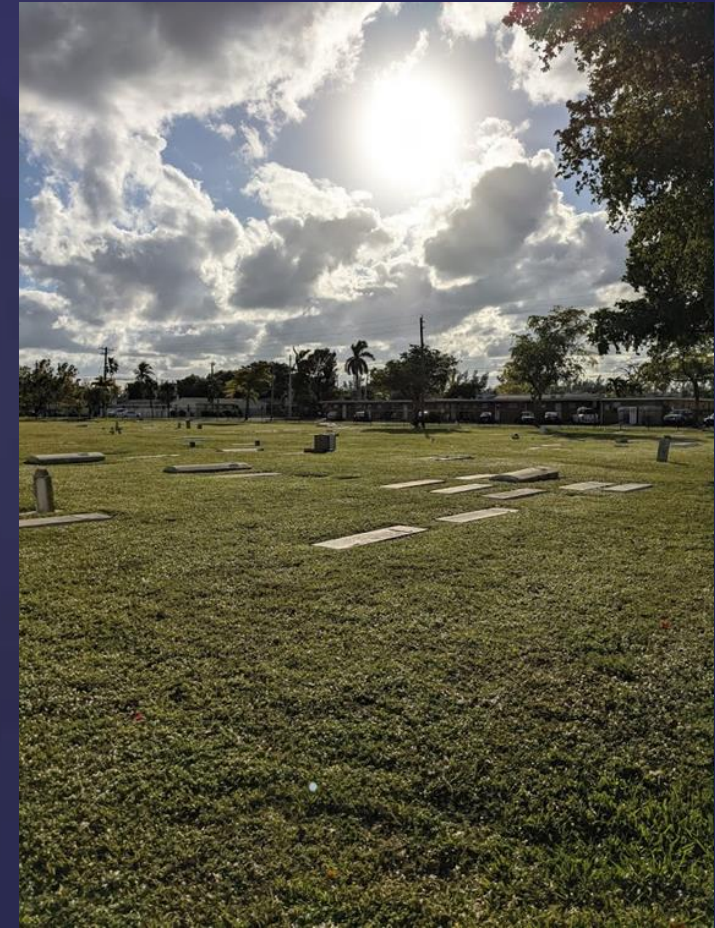
The Administrative functions have always been carried by staff on a P/T basis. There has not been dedicated staff person to work on addressing the record organization issues.

- The Cemetery Division's files need to be organized and digitized
- The Cemetery Division needs to have a comprehensive audit. Many graves are unmarked/unidentifiable. There is a disconnect between the information in CIMS (Cemetery Software) and what is physically in the Cemetery.
- The Cemetery Division needs dedicated staff to accomplish the above task and handle the daily request and inquiries.

## Field

The staffing level has moved from being 1 F/T and 2 P/T to now being 1 F/T with assistance from staff in the Park, Recreation and Open Space's Department. The F/T employee is a Heavy Equipment Operator.

- The Cemetery field operations needs the proper staffing to ensure efficient operation is being put in place. There is not a back-up for the Heavy Equipment Operator. Significant staff overtime.



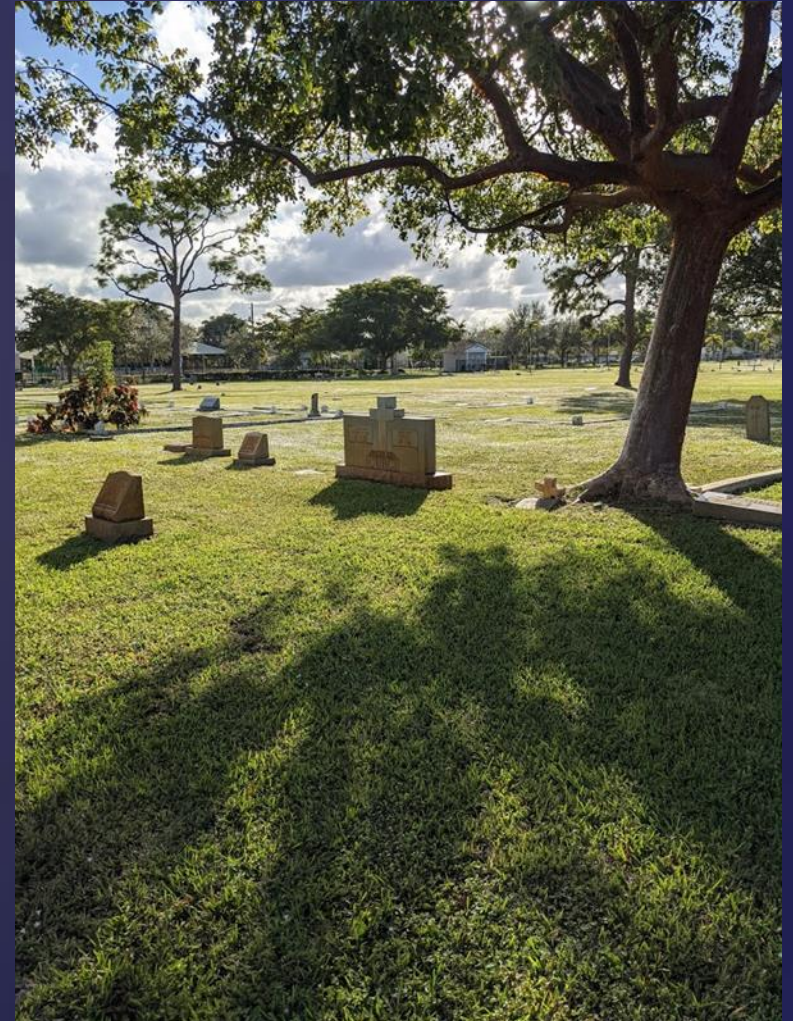
# Cemetery Projects

## Current Projects

- Data entry of burial records in CIMS.*(Intermediate)*
- Pressure Cleaning of above ground vaults.*(Intermediate)*
- Hiring of Heavy Equipment Operator (Shared between Sanitation and Cemetery).*(Immediate)*

## Future Projects

- Reclassifying Fleet Superintendent position to an Administrative Analyst.*(Immediate)*
- Hiring Administrative Coordinator and Administrative Assistant position to provide support.*(Immediate)*

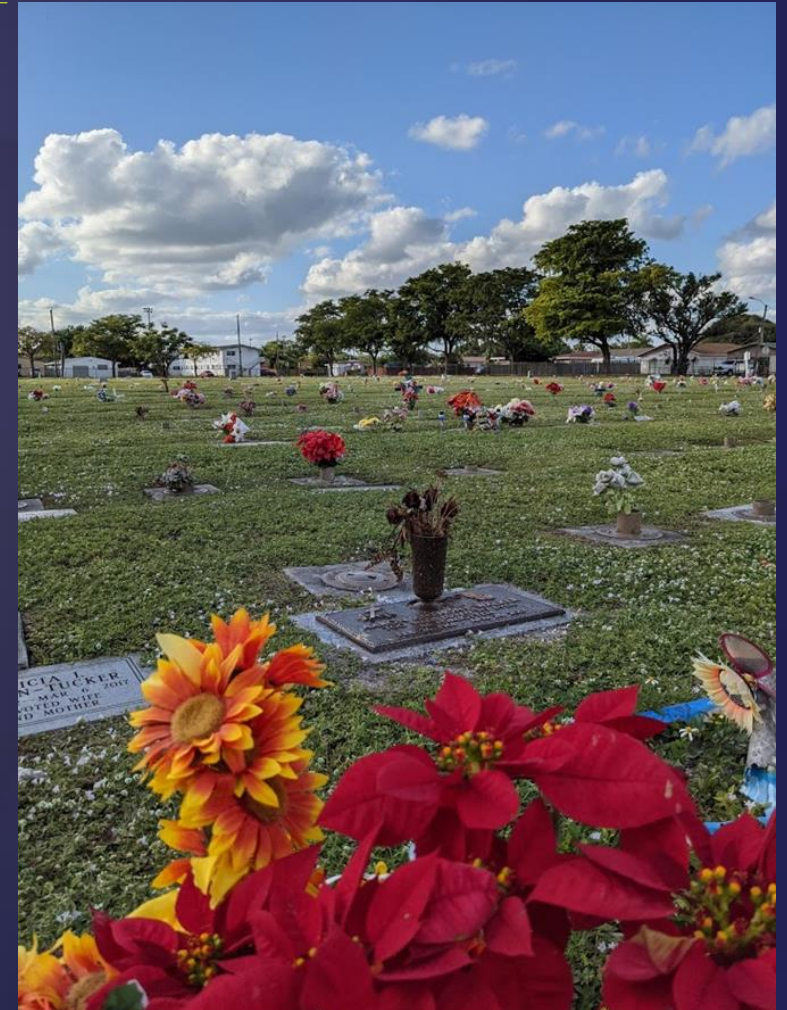




# Cemetery 3 Year Objective

## Cemetery

- Research the possibility of having the Cemetery managed by a private entity. Such company may consider constructing a mausoleum in order to increase capacity and realize more revenues.
- Complete comprehensive audit of current and historic records.
- Complete organizing and digitizing of records.
- Complete marking of above ground concrete vaults





# QUESTIONS

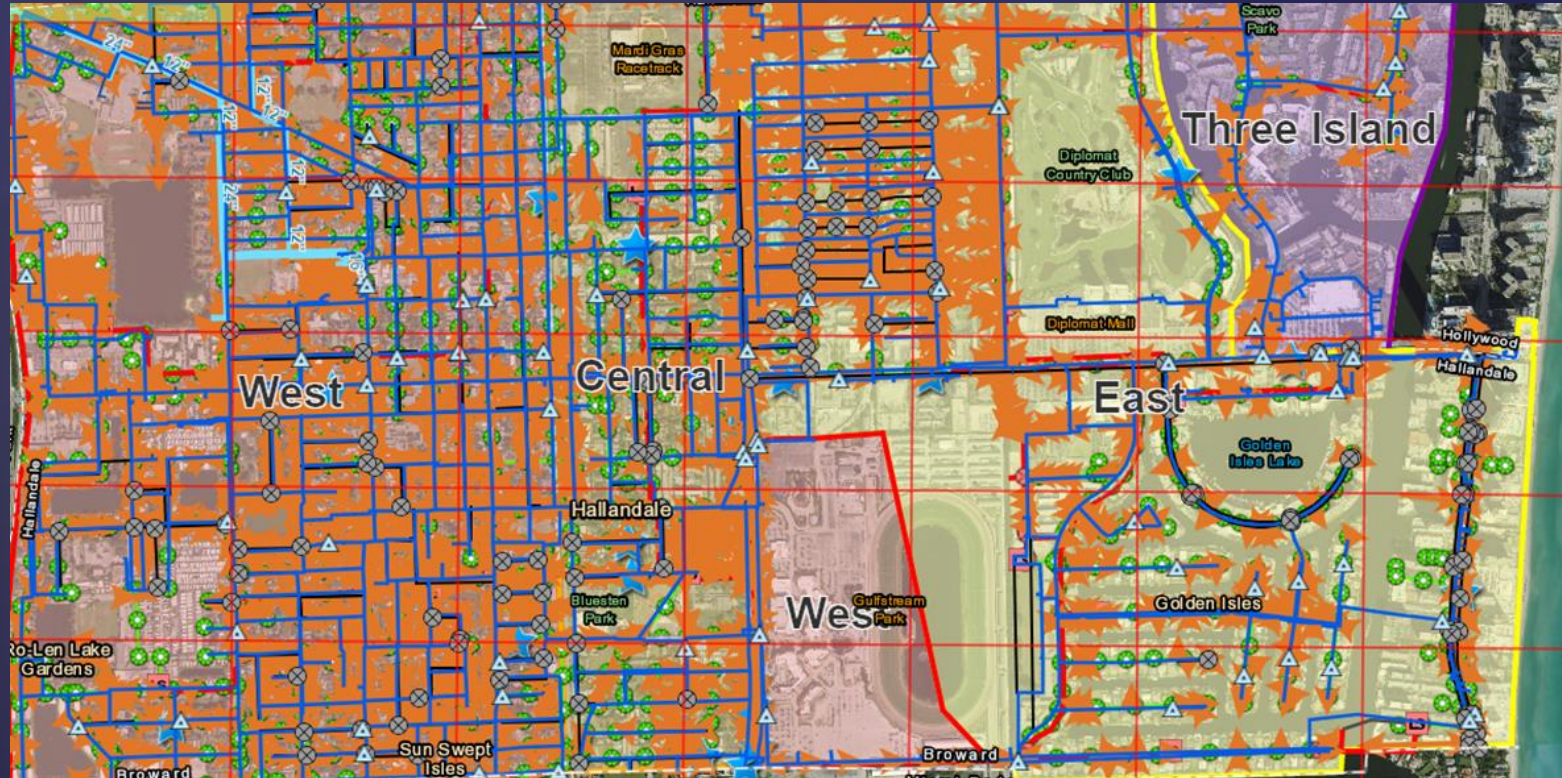
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# Overall DPW Operational 3 Year Objective

## Asset Management

- Geographic Information System (GIS)-Update All Infrastructure Maps
- Comprehensive Asset Management System including but not limited to:
  - Pumps
  - Equipment
  - Infrastructure
  - Fleet
  - Streetlights
  - Buildings
  - Etc.



# Organizational Staffing

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## Our Current Picture

The DPW Team continues to provide service to our residents in a professional manner. Team members are committed to the work they perform for the City. However, we are advancing the Team toward a rejuvenated focus on professional training and personal career progression. Increased training will lead to more effective operations by improving time management.

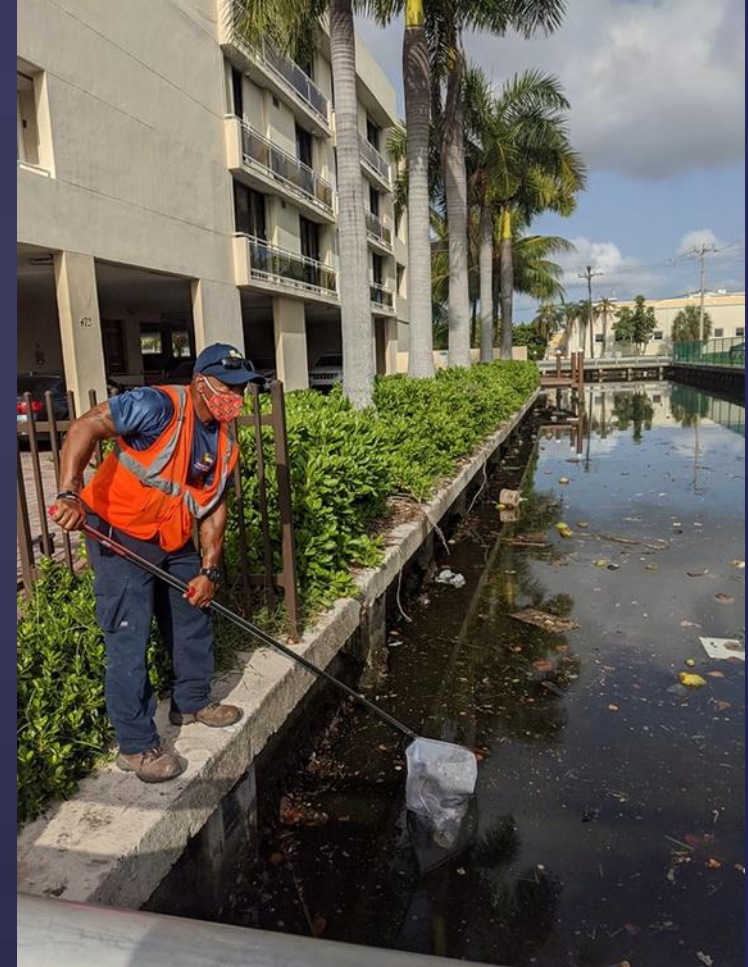




# Staff Training Challenges

## Staff

- Staff Retention and Talent Acquisition
- Cultivating Staff Appreciation Program
- Reduced Morale and Professional Ambition
- Inefficient Operation Practices
- Organizational Misalignment
- Inadequate Staffing for All Areas of Responsibility



# Staff Training 3 Year Objective

## Staff Training

- Develop a Staff Appreciation Program (i.e., Star Award Certificate for High Performance)
- Implement the Career Progression Program
- Complete Green Belt Six Sigma Certification training for all senior staff
- Complete Yellow Belt Six Sigma Certification training for all other staff
- Increased Professional Certification of Team Members Across Public Works and Utilities
- Assess and Realign The Organizational Chart Where Necessary



Thank You For  
Listening

