Public Workshop on the Bert Bostrom Park Green Infrastructure (GI) Project

Saturday, October 8, 2022, 10:00 AM - 1:00 PM

Commission Chambers, Town Hall

Workshop Agenda

Facilitator: Roberto Travieso, Director of Public Works

WELCOME/OPENING COMMENTS	**ROBERTO TRAVIESO**
INTRODUCTIONS	
BACKGROUND	
PRESENTATION	**MICHAEL MERCADO, P.E.** **RAUL MERCADO, P.E.** **JOHN WILLE**
TABLE DISCUSION	**TOWN AND WRMA STAFF**
CONSTRUCTION TIMELINE	**JOHN WILLE**
Q&A	**ROBERTO TRAVIESO**
CLOSING COMMENTS	**JOHN D'AGOSTINO**

Bert Bostrom Park Green Infrastructure Coastal Resiliency Project

Department of Public Works

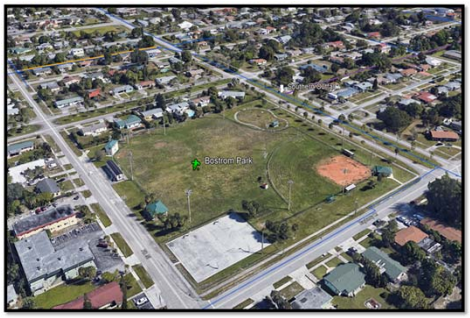
Public Meeting
Saturday, October 8, 2022

Cotleur & Hearing

WRMA

Public Meeting Agenda

1. Introductions
2. Presentation Of Project History
3. Proposed Design
4. Construction Timelines
5. Construction Outreach Issues
6. Construction Funding
7. Open Discussions
8. Table Discussions
9. Next Steps and Closing Comments



Project Team

- **John D'Agostino** – Town Manager
- **Roberto Travieso** – Public Works Director
- **John Wille** – Town of Lake Park Project Manager
- **Raul Mercado** – Principal Engineer, WRMA
- **Michael Mercado** – Lead Design Engineer, WRMA
- **Don Hearing** – Principal/Landcape Architect, Cotleur & Hearing

Project Background & Design Concept

MICHAEL MERCADO, PE

Stormwater Management Needs Assessment Water Quantity

- Study showed that 29% of the 10.62-mile drainage piping needs to be immediately (1-5 years) rehabilitated (Repaired/Replaced) and the rest within 20 years.
- Identifies key major capacity surcharge flooding problems along Southern Outfall (446 acre watershed)

Figure 2-9 Nuisance Flooding Locations by Type


Lack of Drainage
2nd Street Corridor)

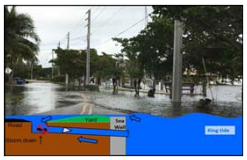

Sea Level Rise Sunny Day Flooding
Lake Shore Drive Corridor)

Stormwater Management Needs Assessment Water Quantity

- Identifies many areas without storm sewers with nuisance flooding
- Identifies long term climate change (Sea Level Rise) challenges along 0.8 miles of LWI waterfront

Figure 2-9 Nuisance Flooding Locations by Type


Lack of Drainage
2nd Street Corridor)

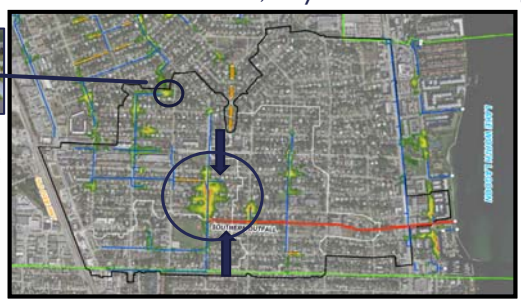

Sea Level Rise Sunny Day Flooding
Lake Shore Drive Corridor)

Stormwater Management Needs Assessment Water Quantity – Drainage Level of Service

Southern Outfall Watershed Tributaries

Ilex Court Inlet Surcharge

Southern Outfall Watershed 3-Year, 1 Day Storm Event Flooding



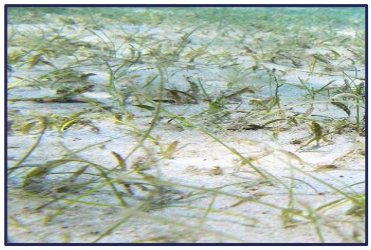
- Peak flows from the Northern and Southern Tributaries can not reach the Southern Outfall Main Trunk at the NE of Bostrom Park (due to undersized stormsewers)
- Major flooding occurs along 6th Street just north of Bostrom park
- Backups translates into inlet surcharges further upstream including at Ilex Court

Stormwater Management Needs Assessment – Water Quality

2/3 of the ToLP area Discharges untreated runoff to the impaired Lake Worth Lagoon

FDEP/NPDES Permit requires the ToLP to monitor runoff discharges from 14 outfalls

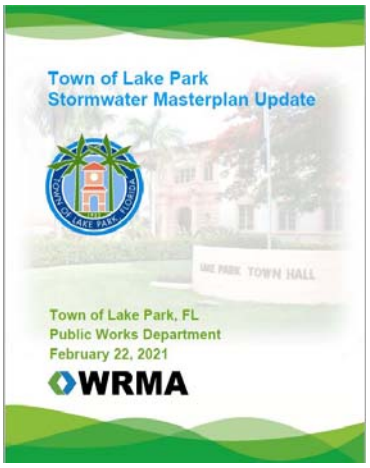
Southern Outfall is a Major Contributor of Sediment s to the LWL



- **83% of the total seagrass acreage is in the Northern ILWL along the Town waterfront**
- **LWLseagrass beds are fast disappearing due to sediments from urban runoff**

Stormwater Master Plan (SWMP)

- Updated in 2019-2020
- Adopted by Town Commission in February2021
- Provided the incremental conversion of 5% roadside Bioswales to green infrastructure, and the placement of Biodetention Facilities at specific areas
- Recommends the use of Stormwater fees exclusively to cover O&M costs (no Capital Improvements)
- Recommends the use of federal grants for project Capital Improvements



The SWMP Approach: Green Infrastructure For Climate Change

THE TOWN-WIDE PROJECT ADDRESSES CRITICAL STORMSEWER SYSTEM CAPACITY AND WATER QUALITY ISSUES ISSUESS THROUGH SUSTAINABLE GI/LID BEST MANAGEMENT PRACTICE S

The Southern Outfall Priority CIP Rehabilitation Project

- **PHASE 1- 72-Inch CAP Outfall Replacement at the Town's Marina (At 90% Design Stage)**

The SWMP Approach: Green Infrastructure For Climate Change

THE TOWN-WIDE PROJECT ADDRESSES CRITICAL STORMSEWER SYSTEM CAPACITY AND WATER QUALITY ISSUES ISSUESS THROUGH SUSTAINABLE GI/LID BEST MANAGEMENT PRACTICE S

The Southern Outfall Priority CIP Rehabilitation Project

- **PHASE 2 - Bostrom Park Underground Storage Filtration Chambers Peak Detention and Water Quality Project (At 90% Design Stage)**

The SWMP Approach: Green Infrastructure For Climate Change

THE TOWN-WIDE PROJECT ADDRESSES CRITICAL STORMSEWER SYSTEM CAPACITY AND WATER QUALITY ISSUES ISSUESS THROUGH SUSTAINABLE GI/LID BEST MANAGEMENT PRACTICE S

The Southern Outfall Priority CIP Rehabilitation Project

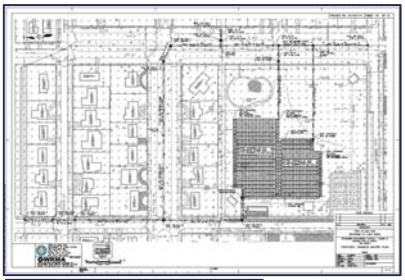
- **PHASE 3 -10th Street Right-of-Way GI/LID Water Quality Pilot Project (To be advertise in FY2023)**

Southern Outfall Phase 2: Bert Bostrom Park Underground Storage Filtration Chambers

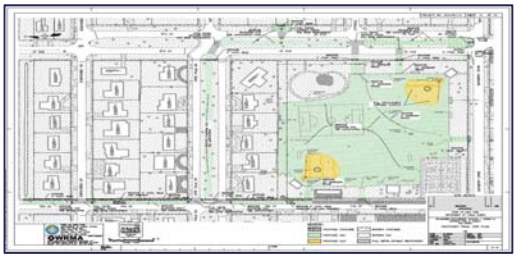
Five acres Park underground location is ideal as there is no land available for large surface detention pond facility in the Southern Outfall watershed

- Upstream Peak Discharge Diversion & Attenuation
- Water Quality Treatment Using GI/LID-based Underground Chamber Filtration
- Surface Playing Fields Remain Intact

State of the art GI/LID Design Solution Largest Underground Chamber Farm in SE Florida



- Underground *Storage* Chambers provide peak runoff detention
- Underground *Filtration* provides water quality treatment



Final Layout (Playing Fields Restore to improved Original Conditions)

Key existing choking flow locations from the north and south are removed

- ❑ Interconnected 3-acre farm chambers for maximum utilization of underground storage space
- ❑ Chambers can be accessed for maintenance to clear debris
- ❑ Combined with Phase I (Southern Outfall Replacement Project,) Bostrom Park drainage improvements will significantly decrease lack of capacity flooding issues in the watershed

Project Design Renderings

RAÚL MERCADO, PE, CFM

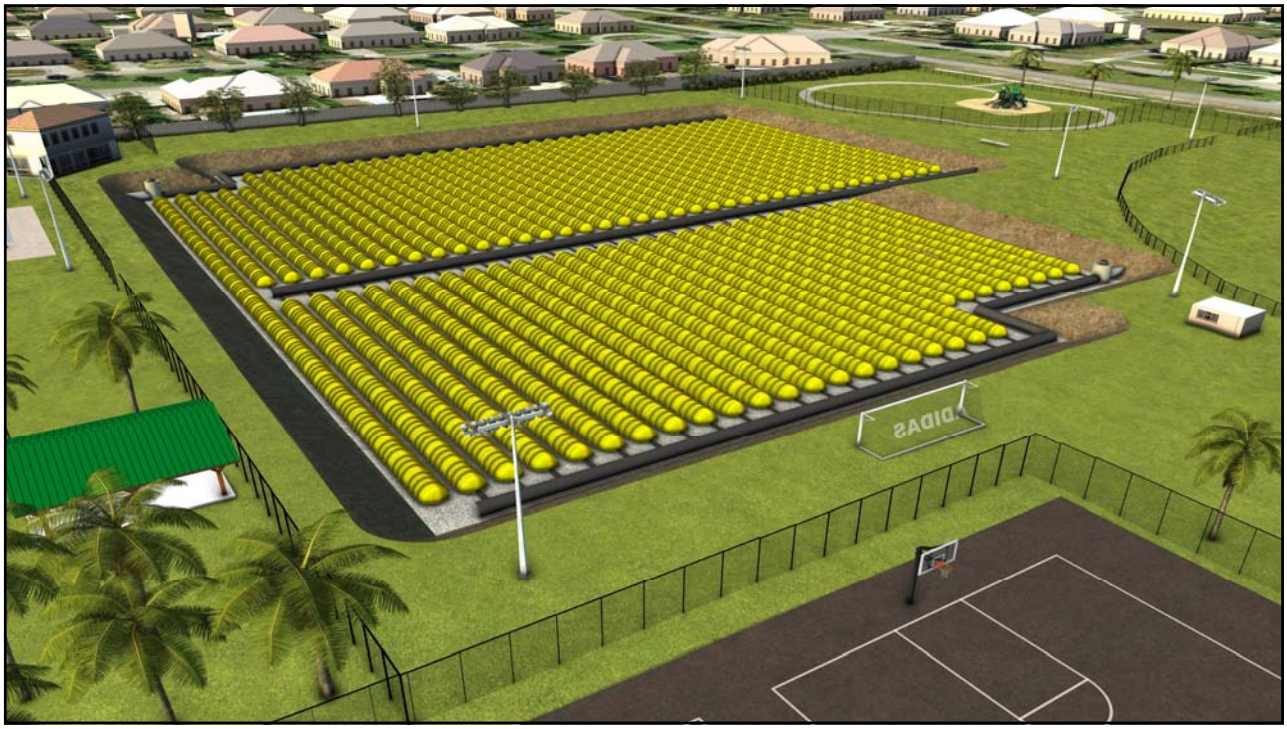


Table Discussion

UP TO 30 MINUTES

Implementation Timeline & Next Steps

JOHN WILLE, CAPITAL PROJECTS MANAGER

Project Timeframe

1. Design & Bidding

- 100% Design Plans & Specifications: November 2022
- Final Regulatory Permits: December 2022
- Qualification and Bidding Advertisement: January – February 2023
- Contractor Selection: February – March 2023
- Contract Negotiations: April – May 2023

Project Timeframe

2. Construction

- Mobilization/Start Up: June 2023
- Completion/Close Out: June 2024

Closing Comments

Please scan for additional information on this project: