Public Works Department

Stormwater Management: Moving Towards a Resilient Future

Session 2

May 23, 2023

Presentation Outline

- Purpose
- Recap of May 2, 2023 presentation
- Summary of March 14, 2023 Innovation Lab Workshop
- Stormwater Program Focus
  - Climate Change/Changes in Rainfall Intensity
  - Master Basin Studies – Proposed Updates & Changes
  - SORAP Collaboration
  - Innovative Ideas
  - Funding Needs
- Recommendations and Next Steps
- Summary

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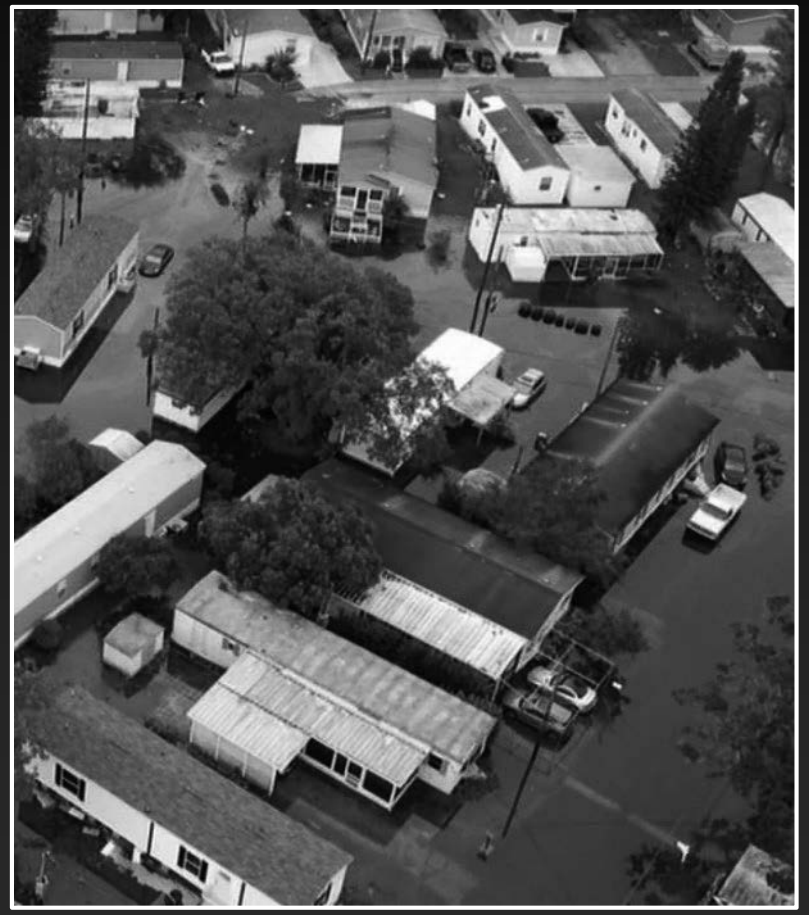
Purpose

- Discussion at the October 25, 2022 Board meeting regarding the following stormwater management concerns:
  - Intensity of future rainfall events
  - Sufficiency of existing design standards
  - Current maintenance standards
- Following the discussion, Mayor Demings directed staff to do research and update the Board regarding potential modifications to our stormwater program and standards



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Recap of May 2, 2023 Presentation

- Stormwater systems are an important part of our SORAP
- 2022 Flooding was due to historic rainfall well beyond traditional design storm
- Most homes that flooded were older or built in or near the floodplain
- County's current design standards are in line with other jurisdictions
- Existing maintenance operations are extensive
- We need to revisit the rainfall intensity data that we currently use for our design standards

Recap of May 2, 2023 Presentation

- Funding needs for capital projects are significantly higher than our annual budget
- Board commented on the following:
  - Coordination with Seminole, Osceola, SJRWMD and SFWMD
  - Coordination with FDOT regarding their stormwater management facilities
  - Retrofitting stormwater infrastructure in older neighborhoods and making the homes more resilient
  - Necessary resources for the future

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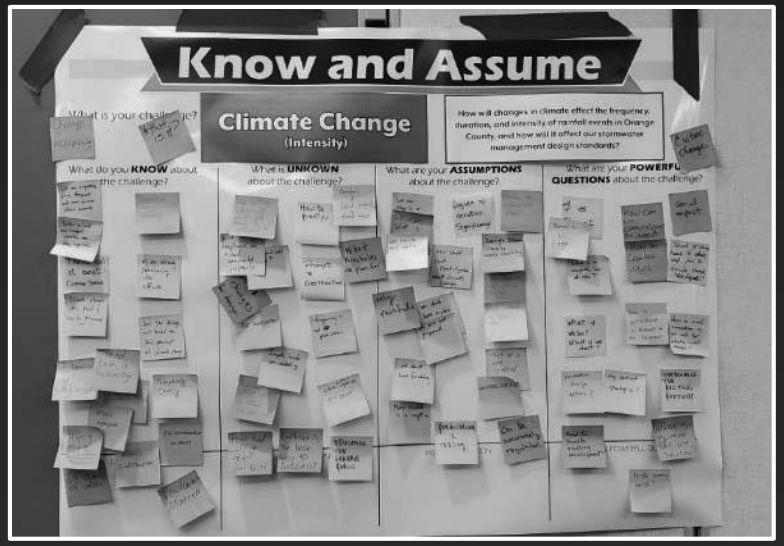
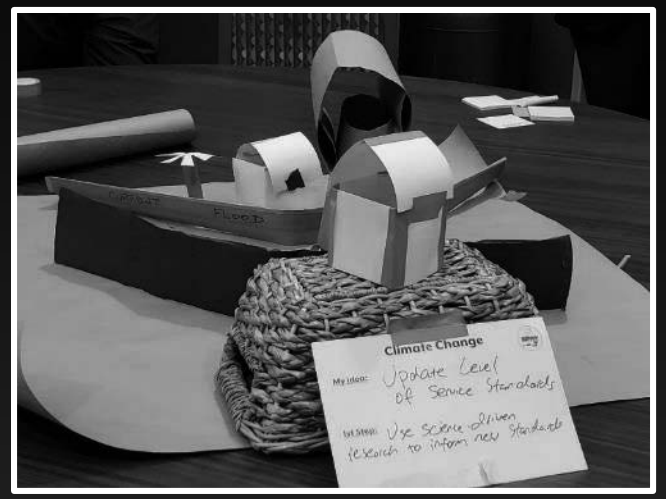
Stormwater Innovation Lab Workshop

- Facilitated by the County's Innovation Lab team
- Included about 35 staff from various Departments and Divisions
- The purpose was to:
  - Share knowledge across different Departments
  - Capture innovative ideas
  - Strengthen relationships and break down silos
- Focus areas included:
  - Climate Change
  - Flood Mitigation
  - Water Quality
  - Resiliency
  - Funding



Workshop – Insights from Participants

- Climate Change – *Our current design standards don't consider the effects of climate change*
- Water Quality – *Why do water bodies continue to be added to the impaired list?*
- Flood Mitigation – *Preserving wetlands could help reduce risk of flooding*
- Resiliency – *Some areas are more vulnerable than others and we need to protect critical infrastructure*
- Funding – *Needs for studies and projects exceed available funding*



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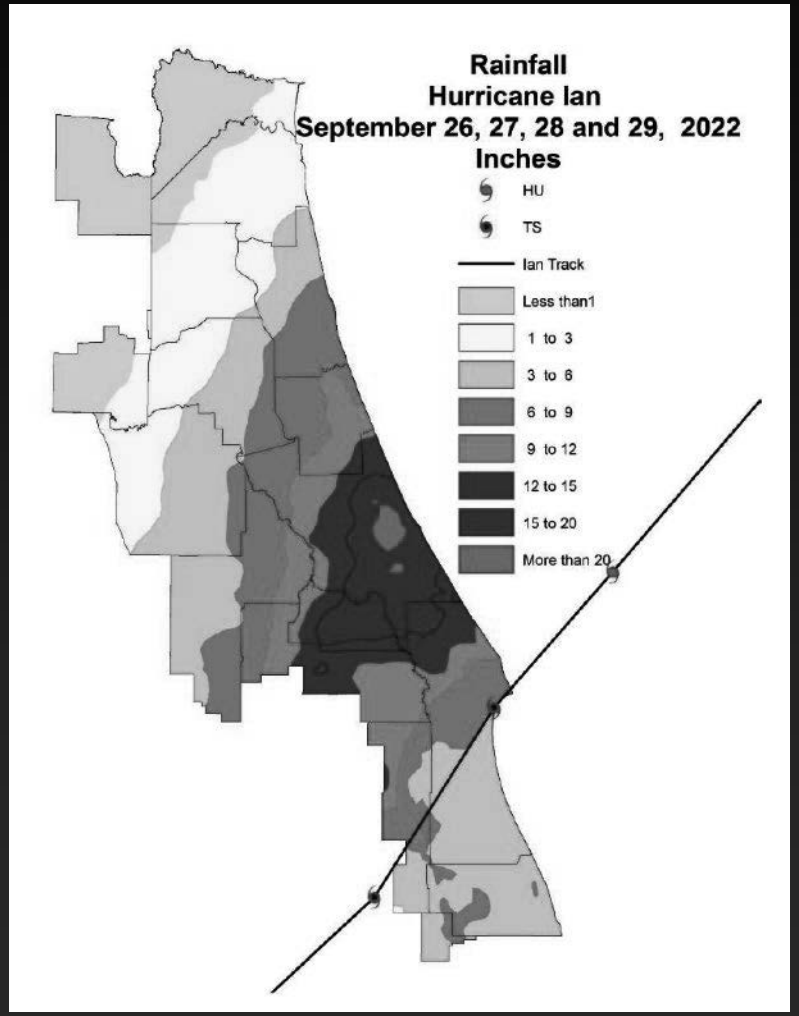
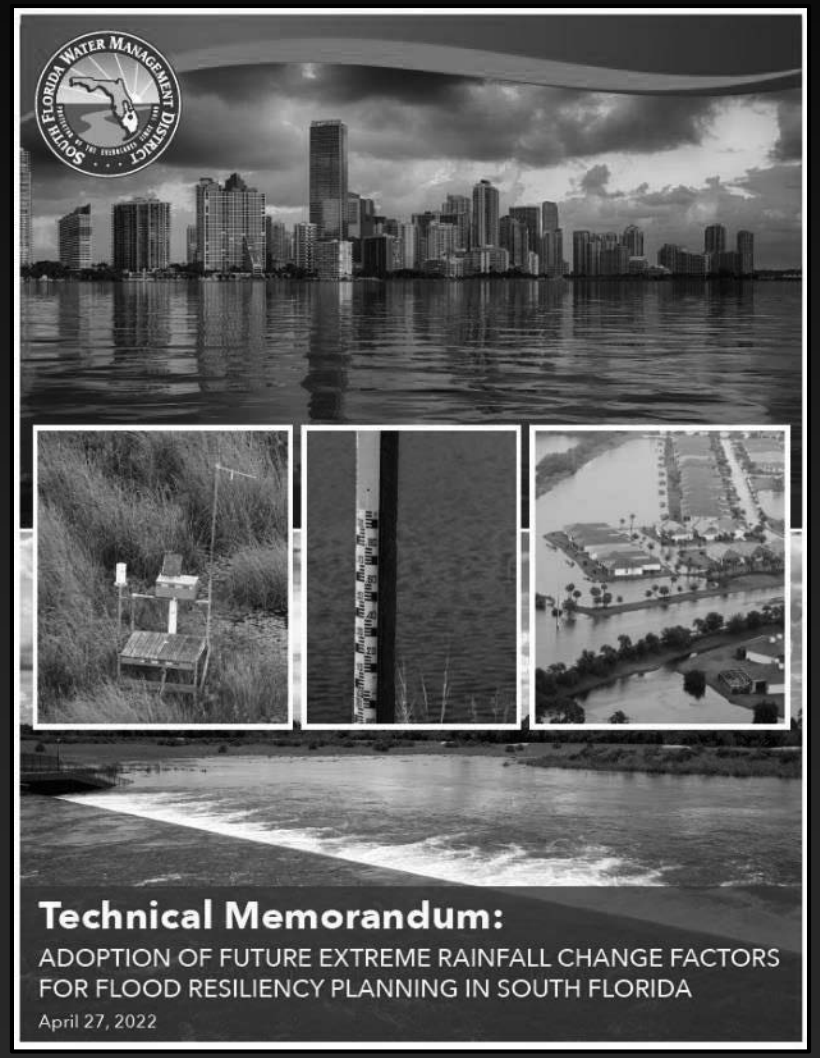
Climate Change/Changes in Rainfall Intensity

- How will climate change affect the rainfall intensity/frequency of storms in the future?
- Are our standard design storm intensities still accurate for future conditions?
- Are we able to still meet our stormwater level of service (LOS) criteria in the future using the existing data?



Climate Change/Changes in Rainfall Intensity

- SFWMD released a Technical Memorandum in April 2022 titled “Adoption of Future Extreme Rainfall Change Factors for Flood Resiliency Planning in South Florida”
- The report developed factors to apply to the design storms to take into effect increases in rainfall intensity due to climate change
- This is one study (prior to 2022 storms), but highlighted need to review local data and models



Climate Change/Changes in Rainfall Intensity

- Median Change Factors for Orange County are 1.22 for the 25-year design storm and 1.28 for the 100-year storm
- If implemented as presented:
  - 25-year storm would increase from 8.6 inches to 10.5 inches
  - 100-year storm would increase from 10.6 inches to 13.6 inches
- Staff analyzed how this would impact our design standards

Table 1. Computed median change factors for counties.

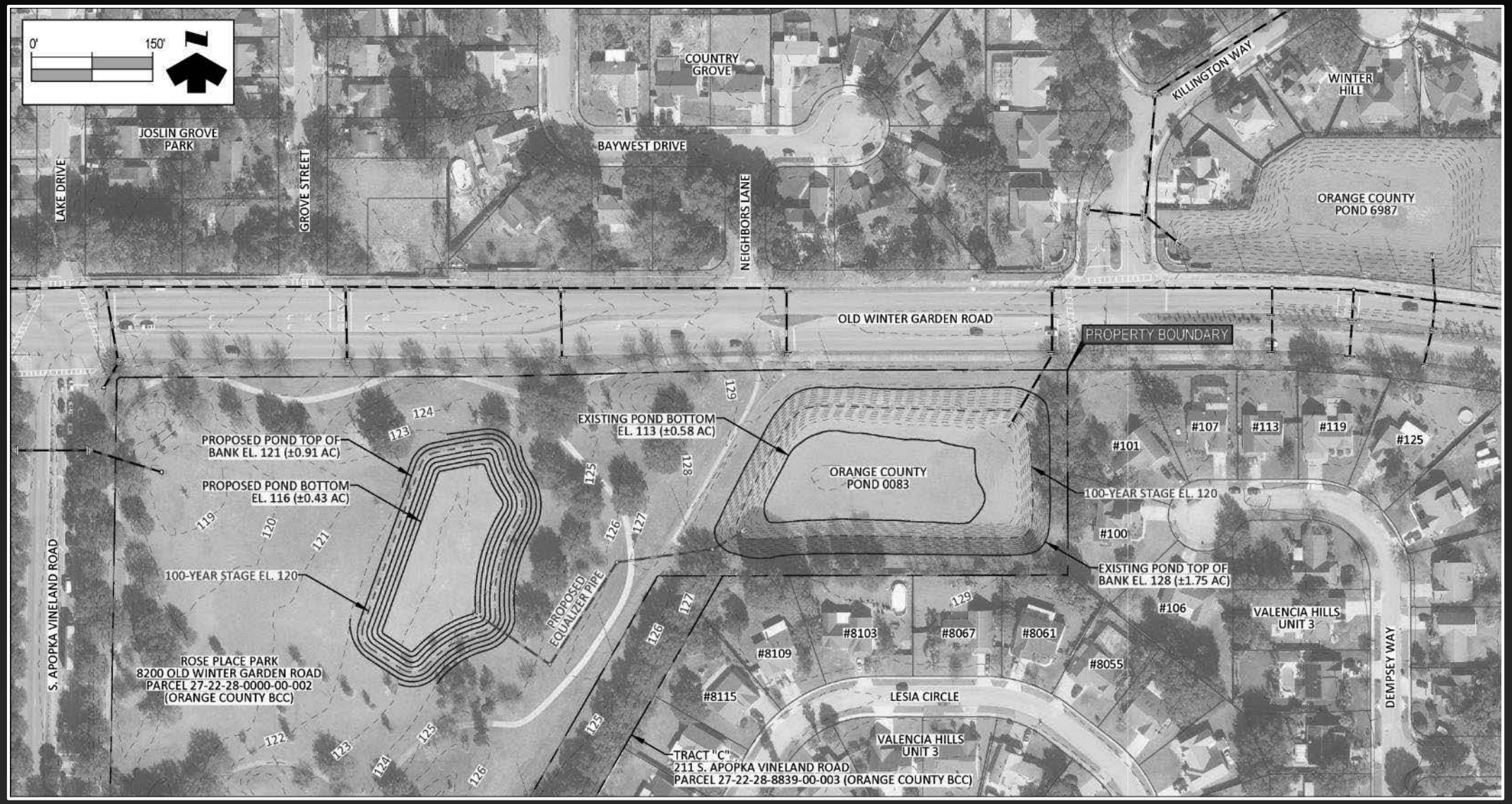
County[1]	Duration (days)	Return Period				
		5-year	10-year	25-year	50-year	100-year
Broward	1	1.11	1.13	1.17	1.21	1.25
	3	1.08	1.12	1.16	1.20	1.23
	7	1.06	1.09	1.13	1.17	1.19
Charlotte	1	1.12	1.16	1.23	1.28	1.35
	3	1.11	1.15	1.21	1.26	1.31
	7	1.08	1.11	1.16	1.20	1.24
Collier	1	1.11	1.14	1.18	1.21	1.25
	3	1.08	1.11	1.15	1.19	1.23
	7	1.04	1.07	1.12	1.15	1.19
Glades	1	1.11	1.14	1.17	1.19	1.22
	3	1.09	1.11	1.15	1.17	1.20
	7	1.05	1.08	1.13	1.16	1.19
Hendry	1	1.10	1.13	1.17	1.20	1.24
	3	1.08	1.11	1.15	1.18	1.21
	7	1.05	1.08	1.12	1.15	1.18
Highlands	1	1.13	1.16	1.20	1.23	1.26
	3	1.11	1.14	1.19	1.23	1.27
	7	1.07	1.11	1.17	1.22	1.26
Lee	1	1.12	1.15	1.19	1.25	1.29
	3	1.09	1.13	1.17	1.21	1.26
	7	1.05	1.08	1.12	1.17	1.21
Martin	1	1.10	1.12	1.15	1.17	1.19
	3	1.09	1.12	1.15	1.17	1.18
	7	1.07	1.11	1.14	1.16	1.19
Miami-Dade	1	1.09	1.12	1.16	1.18	1.21
	3	1.06	1.10	1.14	1.18	1.21
	7	1.05	1.08	1.14	1.18	1.22
Monroe[2]	1	1.08	1.10	1.14	1.16	1.19
	3	1.05	1.07	1.11	1.14	1.18
	7	1.03	1.07	1.10	1.13	1.16
Okeechobee	1	1.12	1.14	1.18	1.20	1.23
	3	1.10	1.13	1.17	1.20	1.24
	7	1.00	1.11	1.17	1.20	1.24
Orange	1	1.16	1.19	1.22	1.25	1.28
	3	1.13	1.16	1.20	1.23	1.26
	7	1.12	1.15	1.21	1.24	1.29
Osceola	1	1.15	1.17	1.19	1.20	1.22
	3	1.12	1.14	1.18	1.20	1.22

Increased Stormwater Pond Size

New Residential Construction Project

Increased Stormwater Pond Size

Roadway Expansion Project



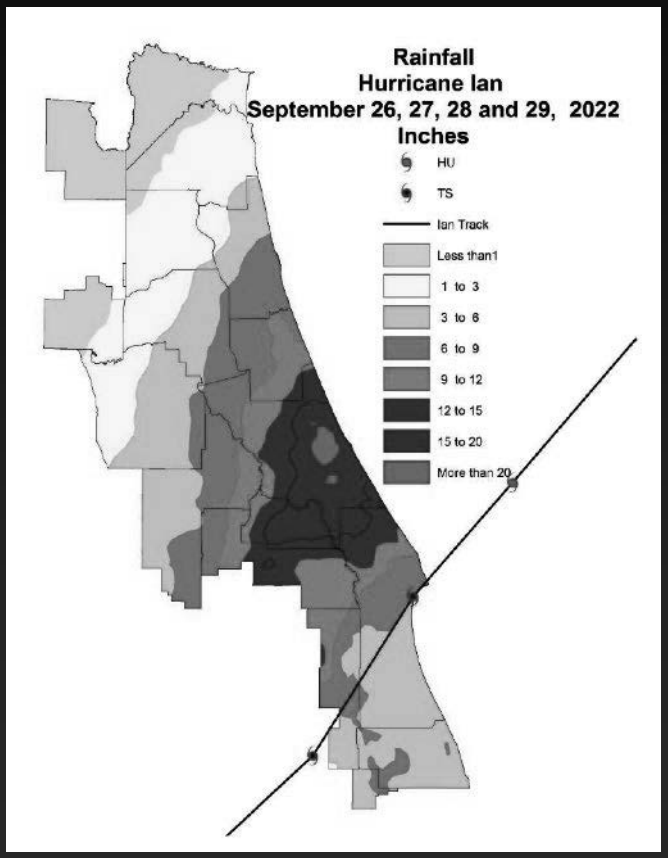
Impacts of Changes in Rainfall Intensity

- Increased stormwater design standards may increase new housing and development costs
  - More land area needed for stormwater management for new development (lowers the developable area)
  - Increased stormwater management costs
- Increased costs for County CIP projects, and increased ROW acquisition costs for larger pond sites
- Flood risks and insurance could be higher for more residents absent consideration

Climate Change/Changes in Rainfall Intensity

Recommendations

- Perform a study to update rainfall data for the 25-year and 100-year design storm events
- Utilize data from sources such as the University of South Florida (USF) Flood Hub for Applied Research and Innovation
- Coordinate with similar efforts being done by SJRWMD and the City of Orlando
- Study the cost impacts to housing and development if these changes are implemented



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Master Stormwater Basin Studies

Proposed Updates & Changes

- How will changes in rainfall intensity and frequency affect the basin studies and recommendations?
- How will this updated rainfall data change the 100-year floodplain maps?
- How can we implement projects that improve both flood mitigation and water quality?
- How will these changes affect the funding needed for capital projects?

Master Stormwater Basin Studies

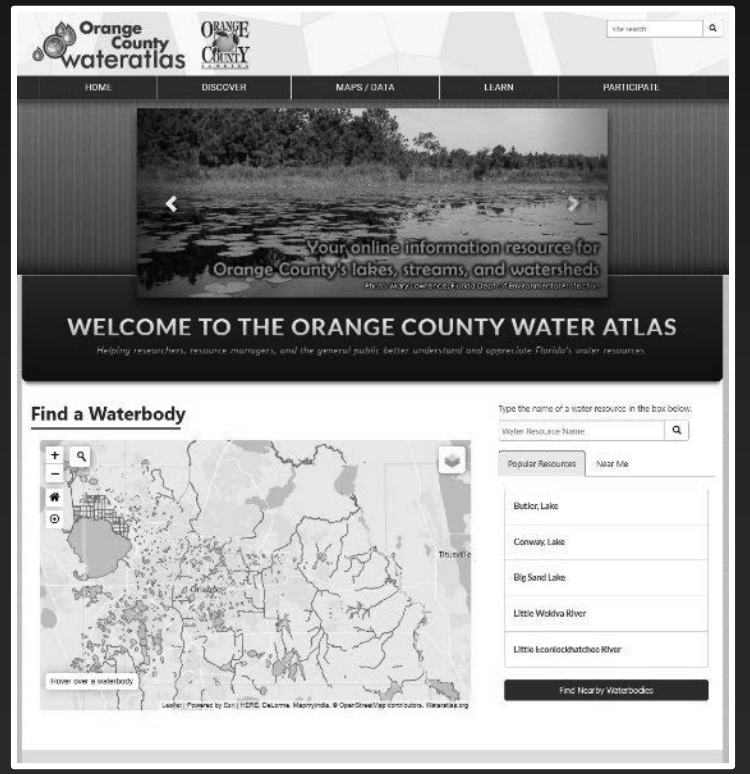
Proposed Updates & Changes

- **The update to the Master Stormwater Basin Studies is estimated to be completed by 2028**
- **The scope of these studies include:**
  - An inventory of drainage structures and conveyance systems
  - Analysis of drainage patterns and modeling of storm events
  - Identification of deficiencies
  - Preliminary evaluation of alternative solutions
- **The updated plans will be important tools for:**
  - Planning of capital improvement projects designed to alleviate flooding
  - Updating the FEMA floodplain delineations
  - Evaluation of proposed development impacts

Master Stormwater Basin Studies

Proposed Updates & Changes

- **Incorporate new rainfall intensity data in updated Studies**
- **Work with FEMA on updated floodplain maps and communication to affected residents as part of County's CRS program**
- **Solutions and projects may take the form of:**
  - **Regional, combined or enlarged stormwater ponds**
  - **Incorporation of water quality components where ponds and systems outfall to impaired waterbodies**
  - **Formalization of outfalls and canals including acquisition of maintenance corridors for historic natural systems**
  - **Expanded maintenance programs**



Master Stormwater Basin Studies

Proposed Updates & Changes

Recommendations

- Increase funding for Study updates to accelerate completion dates, incorporation of changes in rainfall intensity, and update of the FEMA 100-year floodplains
- Based on the needed capital projects generated by the updated basin studies, evaluate funding and staff resources to manage the increased workload

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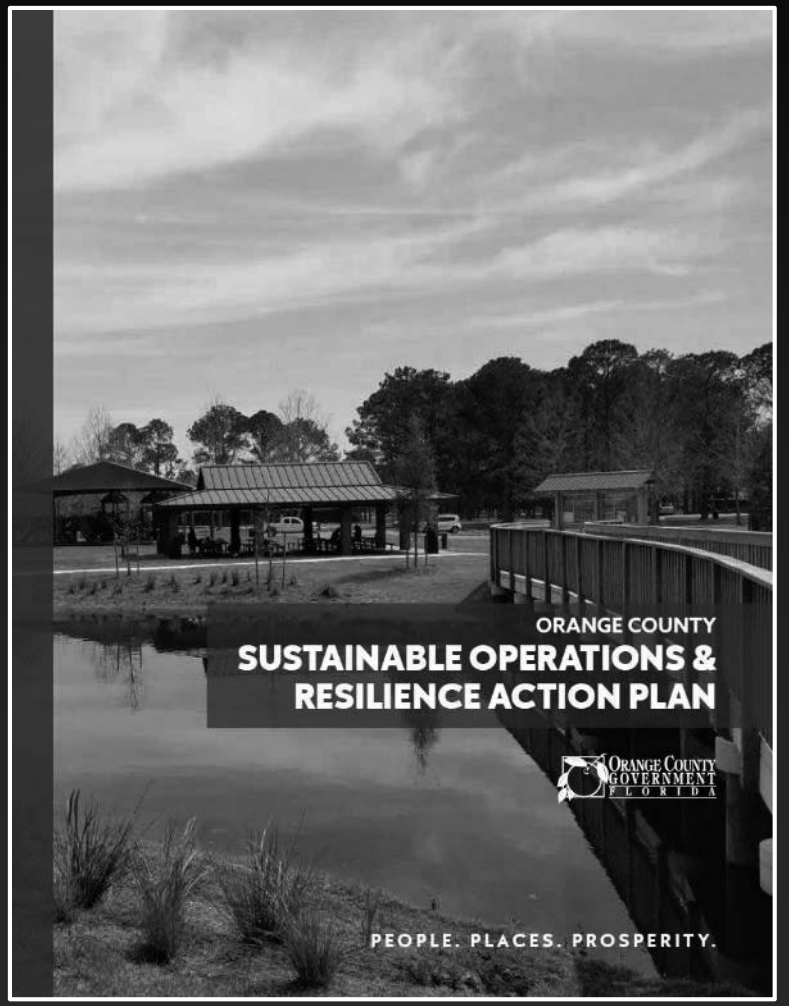
SORAP Collaboration

- What recommendations will impact stormwater from the countywide vulnerability assessment (funded by the Resilience Florida grant program)?
- How can we address the stormwater needs that result from the vulnerability assessment?
- How can we implement Low Impact Design (LID) strategies in the future for new projects and to retrofit existing systems?
- How can we utilize FEMA funding or other grants to become more resilient?

SORAP Collaboration

- Coordinate with ongoing efforts of the Sustainable Operations & Resilience Action Plan (SORAP)
- Coordinate with Countywide Vulnerability Assessment (recent State grant of $420,000)
- Budget for a Stormwater Resiliency Study which can build on the Countywide Vulnerability Assessment
- Potentially utilize future State resiliency implementation funding for stormwater management resiliency projects



SORAP Collaboration

Low Impact Development (LID) Design Manual

- **Florida Department of Environmental Protection New Florida Stormwater Rule**
  - **The rule development is required based on Senate Bill 712 (Chapter 2020-150, Laws of Florida) will be ratified in the 2023 Legislative Session**
  - **The new rule proposes specific water quality calculations rather than current presumptive best management practice design**
  - **It is not clear at this time the exact impacts that this will have on County's stormwater systems or future permit requirements**

SORAP Collaboration

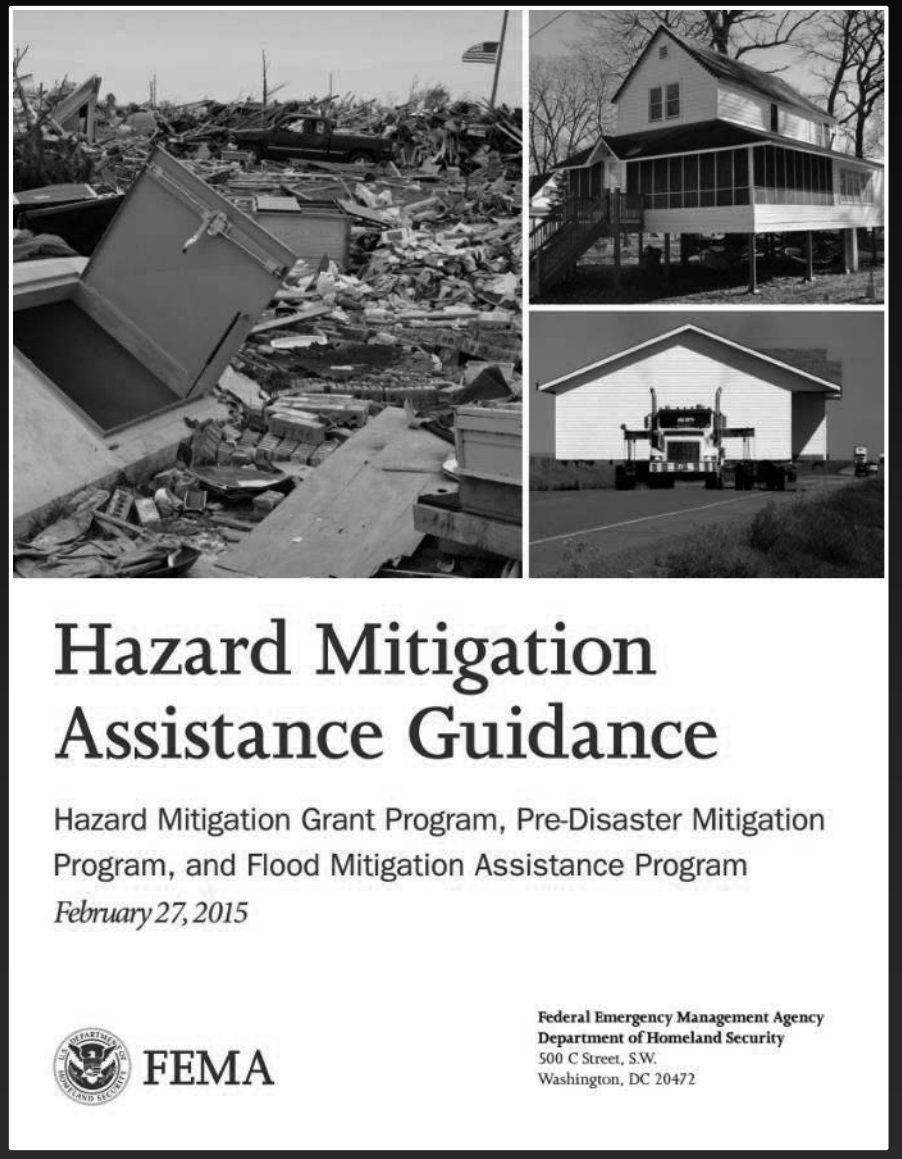
Low Impact Development (LID) Design Manual

- Low Impact Development (LID) refers to systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater in order to protect water quality and associated aquatic habitat
- Orange County's LID Manual will be finalized 2023
- Utilize LID methods for proposed projects and developments to help meet the requirements of the new proposed state stormwater rule
- Retrofit existing infrastructure with LID projects to improve water quality

SORAP Collaboration

Grant Funding

- FEMA Hazard Mitigation grant funding could be utilized for recommended strategies from the proposed stormwater resiliency study
- FEMA grant funding could also be used for:
  - Purchasing properties in the flood plain
  - Relocating residences outside of the flood plain
- HUD CDBG-DR funding allocated to our County could also be used to address resiliency issues



SORAP Collaboration

New Position

- A Project Manager position is being reclassified in Public Works to focus on Stormwater Resiliency
- Duties of the position include:
  - Act as the Public Works liaison for the Countywide SORAP
  - Manage future studies and initiatives proposed in this presentation (and present updates to BCC)
  - Research and apply for various grants
  - Coordinate and review any needed LDC or comp plan changes related to sustainability

SORAP Collaboration

Recommendations

- Budget for a Stormwater Resiliency study to build on the efforts of the countywide vulnerability assessment
- Budget long-term funds to retrofit existing stormwater systems with LID projects to improve water quality
- Pursue FEMA and other grant opportunities to address highest risk areas

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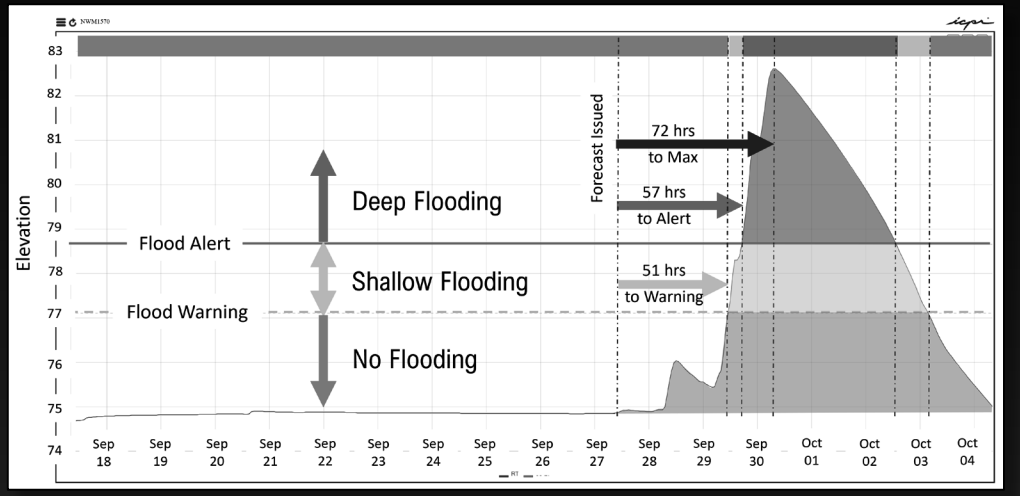
Innovative Ideas

- **Planning for the future will require reinvention of our stormwater management program as well as innovative thinking which could include:**
  1. **Development of predictive stormwater models to help to better prepare for future storm events**
  2. **Partnerships with the Utilities Department on Integrated Water Resources Projects**
  3. **Studies of the impacts of wetland loss on flood risk and water quality**
  4. **Improvements to the inspection and compliance of private stormwater systems**

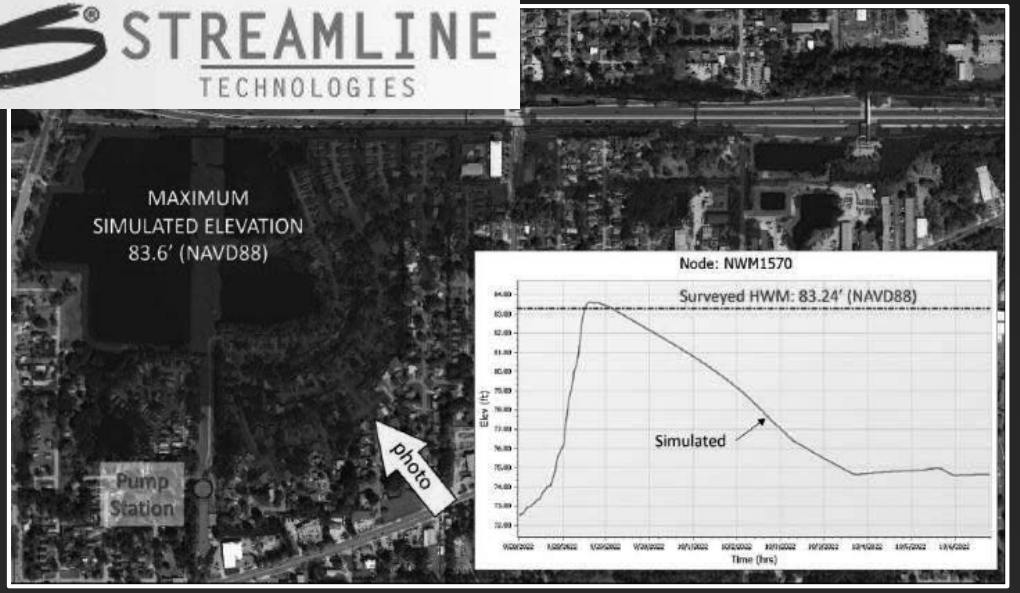
Innovative Ideas

1. Predictive Stormwater Model

- **Real-Time Flood Forecasting (RTFF) Predictive Modeling**
  - Cost-effective system that can be implemented quickly with models calibrated using recent storm events
  - Previously used for the Orlo Vista area
  - Forecasts for larger storms can be accurate 1-3 days in advance
  - Notifications of potential flooded areas can be automatically sent to key County staff
- **Updated basin study data can be incorporated as basin studies are finalized**



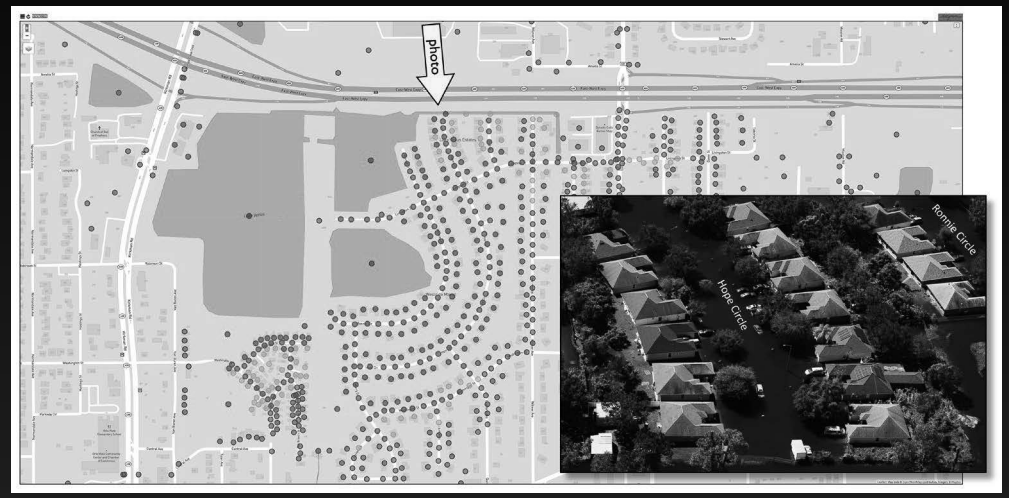
STREAMLINE TECHNOLOGIES

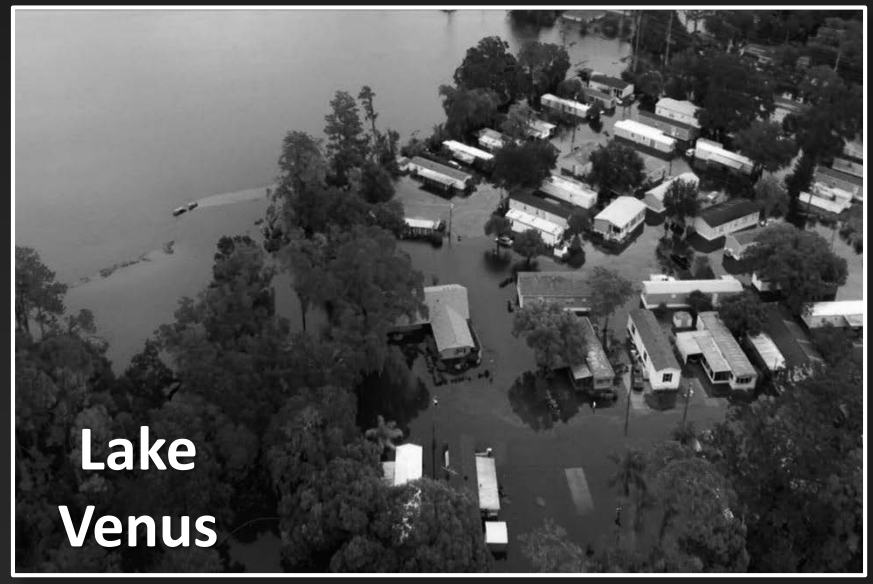


Innovative Ideas

1. Predictive Stormwater Model

- **A Countywide predictive stormwater model could be used to:**
  - **Predict flooding up to 72 hours in advance of major storm events**
  - **Determine areas for evacuation orders ahead of major storms**
  - **Protect or relocate assets 2-3 days ahead of major storm**
  - **Plan emergency response priorities during a major storm, including prioritization of staff resources**
  - **Support proactive analysis and resiliency planning for a variety of types of storm events**

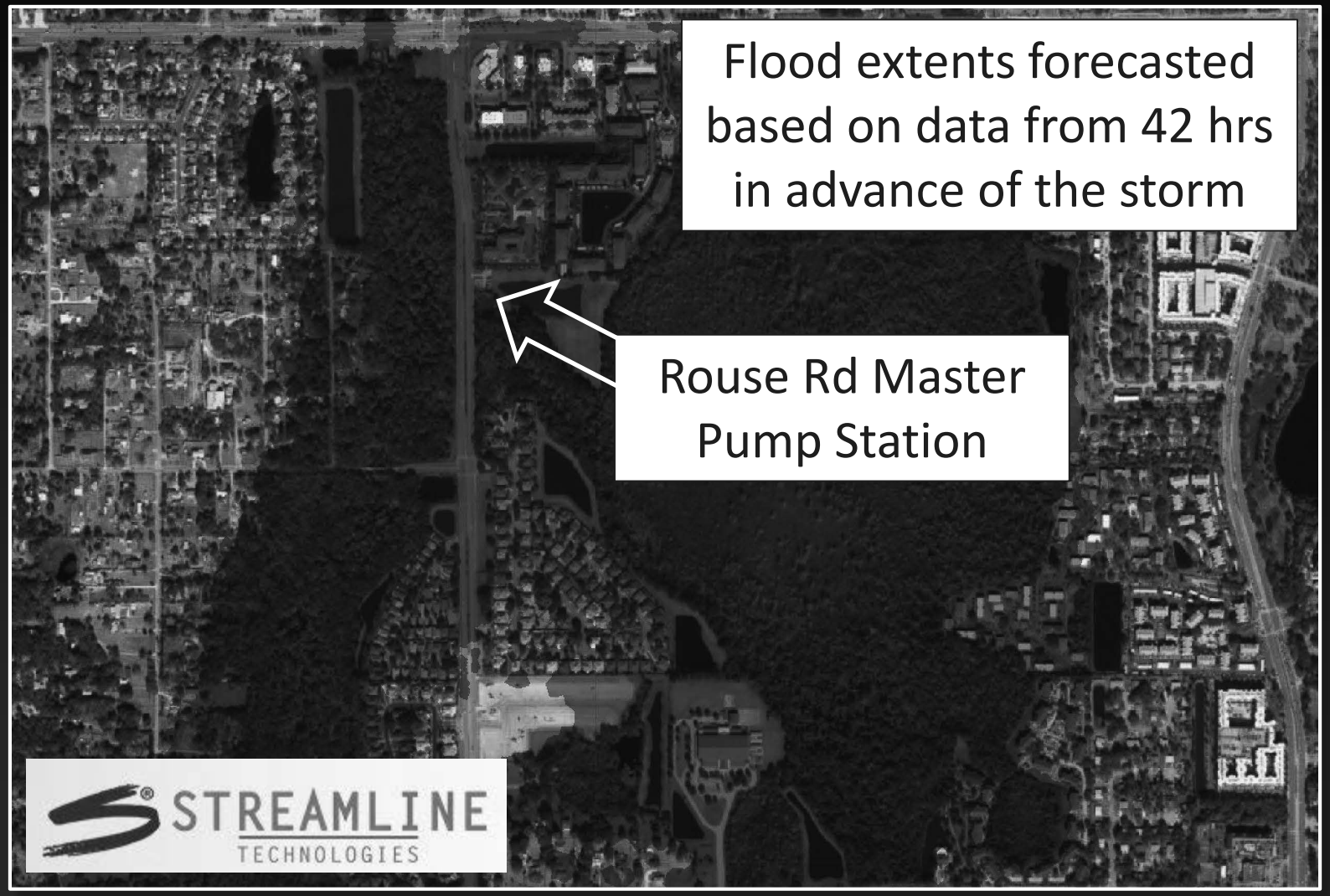




Innovative Ideas

1. Predictive Stormwater Model

- **The Rouse Rd Master Lift Station sustained about $3 million in damage during Hurricane Ian**
- **If RTFF models had been in place, the pump station could have been protected and the damage prevented or mitigated**



Innovative Ideas

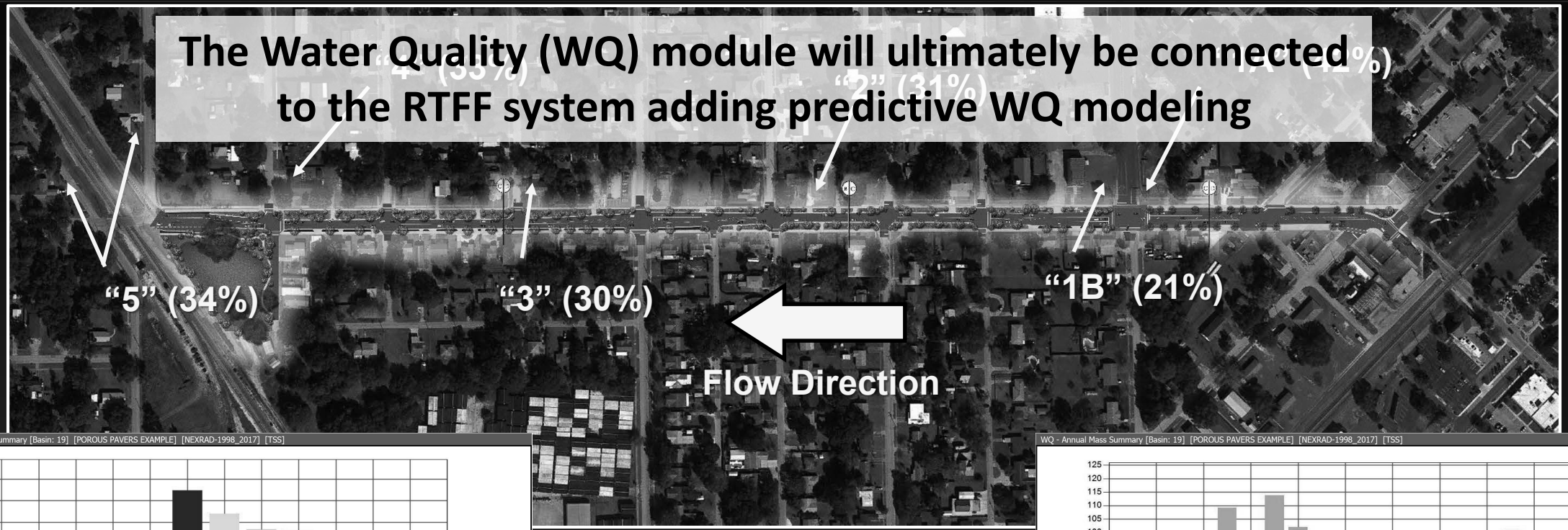
1. Predictive Stormwater Model

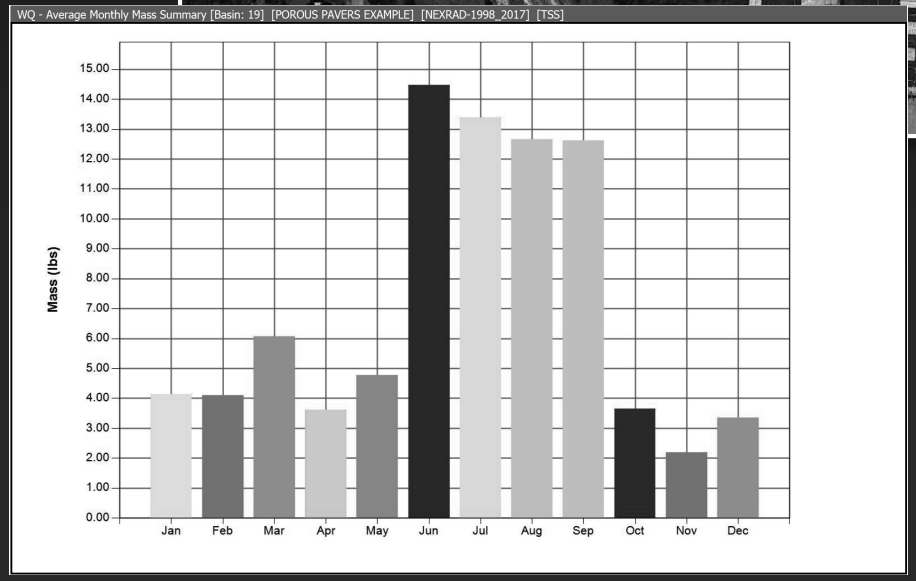
- **If RTFF models had been in place, residents could have been evacuated and hundreds of cars could have been relocated ahead of the storm, potentially saving millions in claims**

Photo Credits: Orlando Sentinel

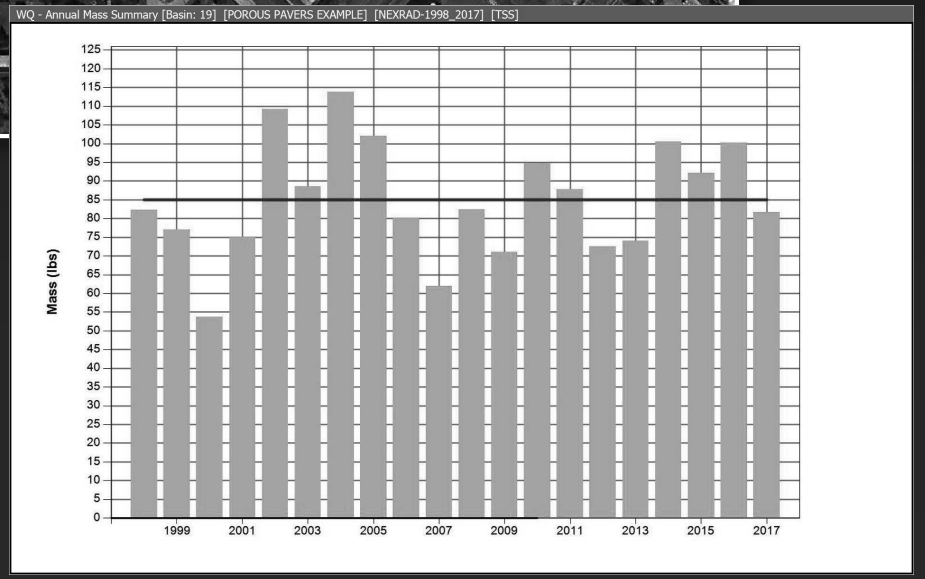
Innovative Ideas

1. Predictive Stormwater Model





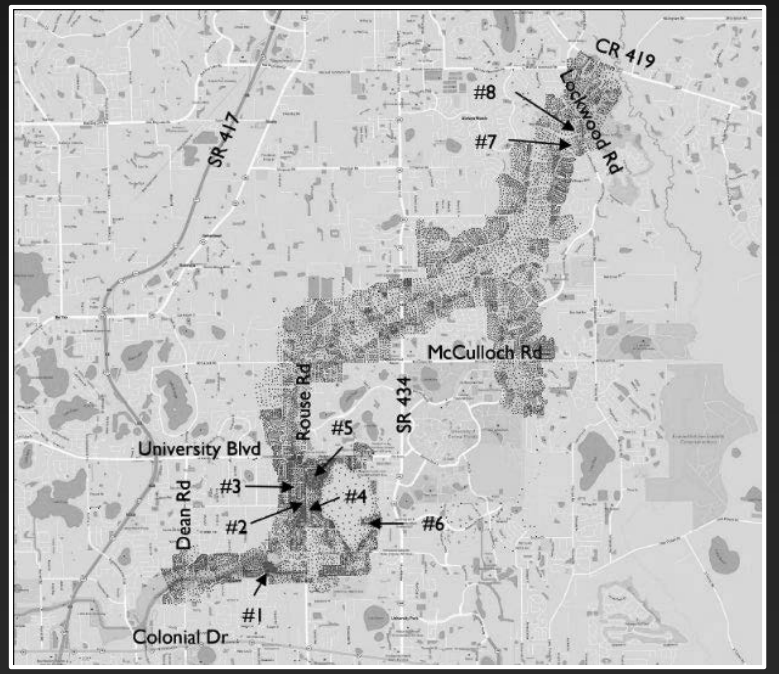
STREAMLINE TECHNOLOGIES



Innovative Ideas

1. Predictive Stormwater Model

- RTFF models could be implemented with existing models and would not have to wait for the updated basin studies
- The predictive models would be updated once the master basin studies are complete
- Preliminary estimate for the Countywide effort is est. $1 million and would take about 18 months
- The Little and Big Econ basins could be done first at a cost of about $175k
- Funding may come from resiliency grants



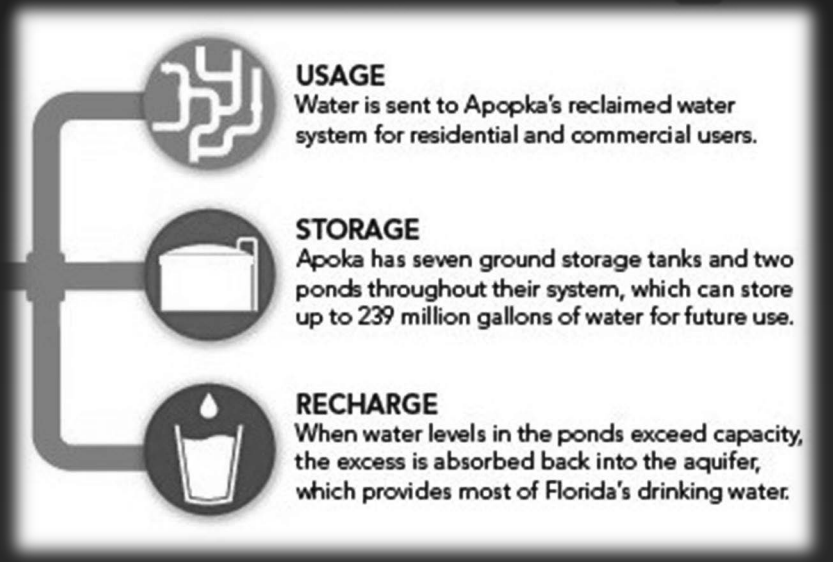
Innovative Ideas

2. Integrated Water Resources Solutions

- **Using excess surface waters to provide flood control AND water supply**
  - **Slightly lowering surface water body throughout the year, creating more flood attenuation volume**
  - **Surface water withdrawn is used to supplement the reclaimed water system or to recharge the aquifer elsewhere**
  - **Similar project (A-FIRST) implemented before for I-4 Ultimate and Cranes Roost Park in Altamonte**
  - **Successful operations for over 6 years, including Hurricanes Matthew, Irma, and Ian**

A FIRST
Altamonte Springs-FDOT Integrated Reuse and Stormwater Treatment

INNOVATE TODAY FOR
Water Tomorrow



Innovative Ideas

2. Integrated Water Resources Solutions

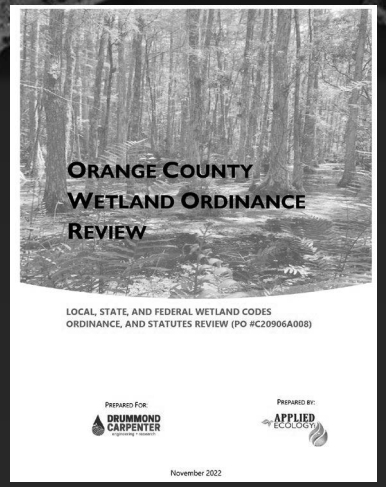
- **Potential Orlo Vista Application**
  - Lowering normal water level in ponds by pumping a baseflow throughout the year
  - Provides additional pond flood attenuation volume
  - Pumped baseflow is discharged to Shingle Creek
  - Flows are recovered 7 miles downstream at the South Water Reclamation Facility (SWRF)
  - Flows are recovered prior to reaching Osceola County, eliminating downstream flood concerns
  - Flows treated at SWRF to meet reclaimed water standards and used for irrigation and aquifer recharge

Innovative Ideas

3. Understanding Effects of Wetland Loss

- **Wetland loss is often viewed as negatively impacting both flooding and water quality**
  - **Does wetland loss from development increase flood risk?**
  - **Does wetland loss from development degrade water quality?**
- **Recent technical studies supporting the wetland code update evaluated these issues**

Image from Google Earth

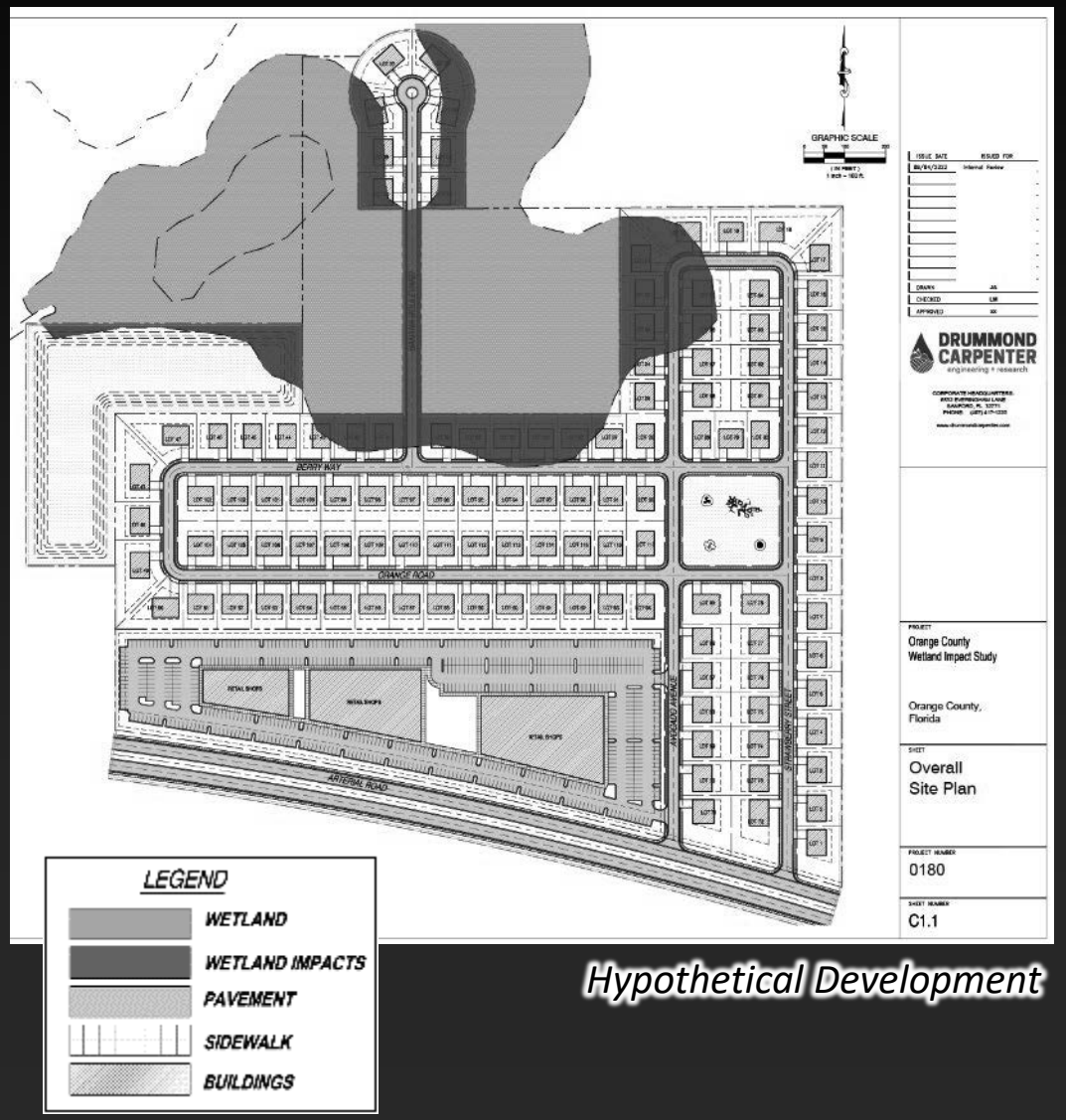


DRUMMOND CARPENTER
engineering + research

Innovative Ideas

3. Understanding Effects of Wetland Loss

- **Evaluation of impacts of wetland loss for Conceptual Development Scenarios**
  - Typical Mixed-Use Development (using wet detention stormwater)
  - 50-acre size
  - Designed to meet standard regulatory and County criteria (no special basin criteria)
  - Evaluation of flood risk and water quality pollution risk using typical design vs. low impact development and green infrastructure

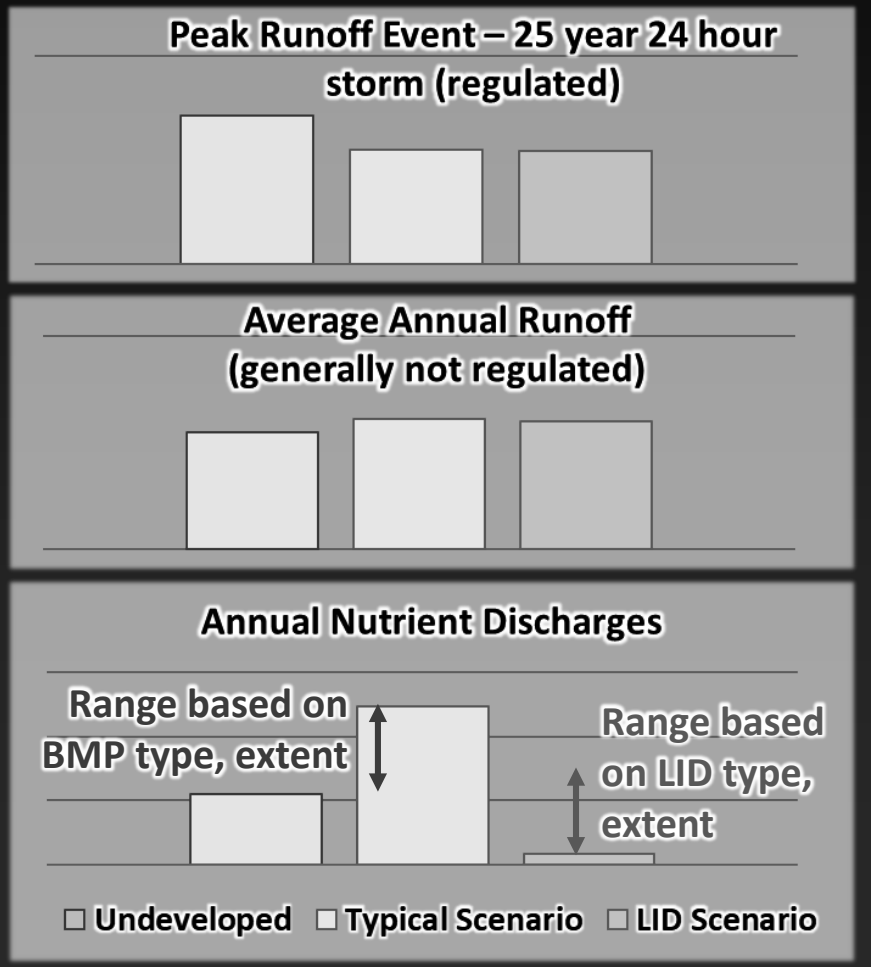


Hypothetical Development

Innovative Ideas

3. Understanding Effects of Wetland Loss

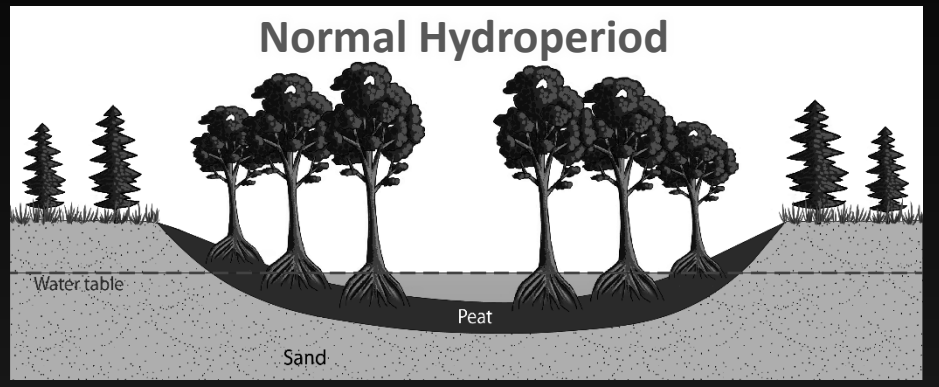
- **Results from evaluation of *Hypothetical Development*:**
  - Current stormwater regulations generally provide protection against flooding from wetland loss
  - Development around wetlands can impact wetland hydroperiods and contribute to wetland change and functional decline
  - Development meeting environmental regulatory criteria can still increase pollutant discharges off-site and contribute to surface water quality decline
    - Natural wetland systems generally don't 'treat' runoff pollution
    - Results can vary widely and depend on specifics of each site, development type, and proposed wetland impact

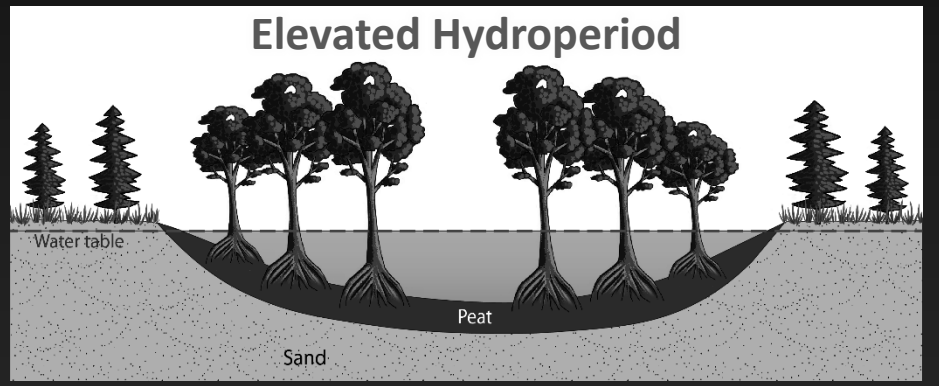


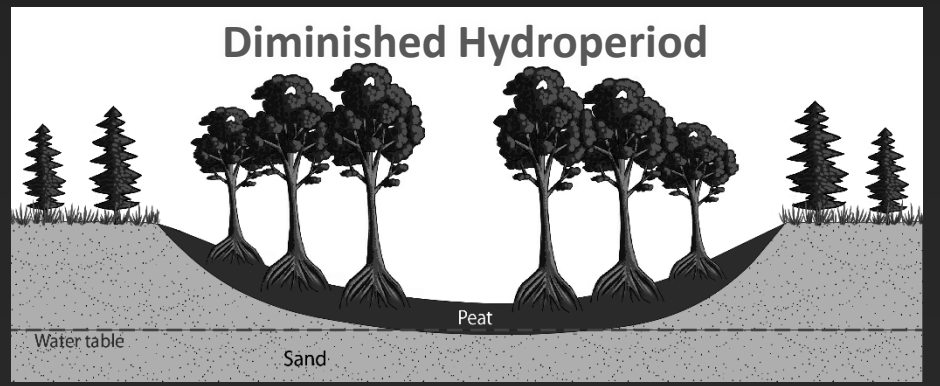
Innovative Ideas

3. Understanding Effects of Wetland Loss

- **Hydroperiod Impact**
  - Increases in impervious area generally cause volumetric discharges to increase and groundwater infiltration to decrease
  - When stormwater discharges do not mimic existing flow paths, water budgets and hydroperiod of existing systems may change
  - Hydroperiod changes can impact long-term wetland function







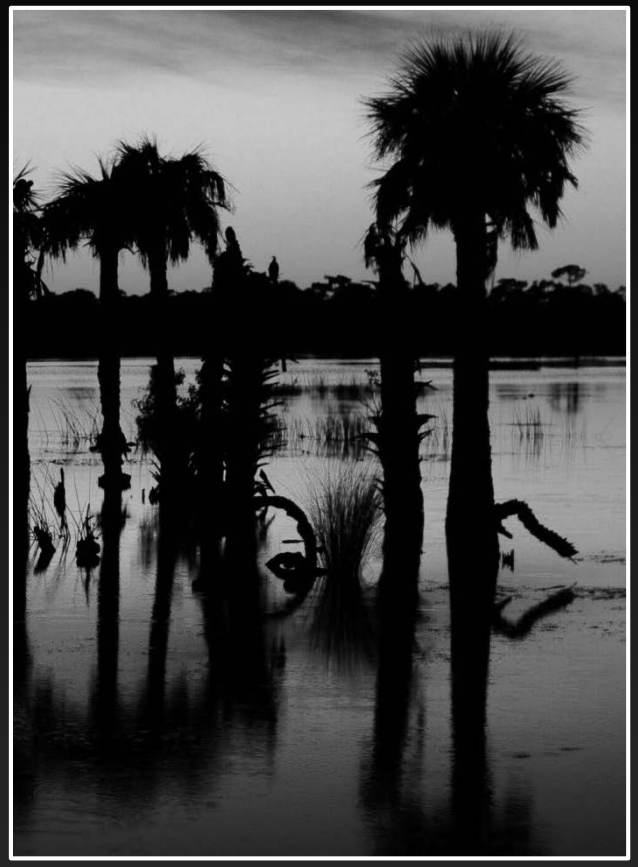
Innovative Ideas

3. Understanding Effects of Wetland Loss

Recommendations

- **New development review standards**
  - **Applicants to provide a detailed flow map to show that existing hydrologic patterns will be mimicked after construction**
    - **Often already provided as part of engineering design submittals**
  - **Codify the County's existing development review practice of requiring that applicants demonstrate that off-site wetland hydroperiods will not be significantly impacted by development activity**

Recommendations



- **New development review standards (cont.)**
  - **For mitigation wetlands, require groundwater monitoring and reporting for 10 years to assess long-term hydroperiod effects**
    - Limited new requirements because monitoring already is required
    - Orange County should study long-term groundwater trends of wetlands, and whether wetland hydroperiods should be more strictly regulated
    - Broward County recently adopted land development rules to address groundwater change
  - **Projects that incorporate Low Impact Design and achieve high pollutant reduction criteria are provided a wetland impact review modifier (positive incentive) that would likely reduce review and approval timelines**

Innovative Ideas

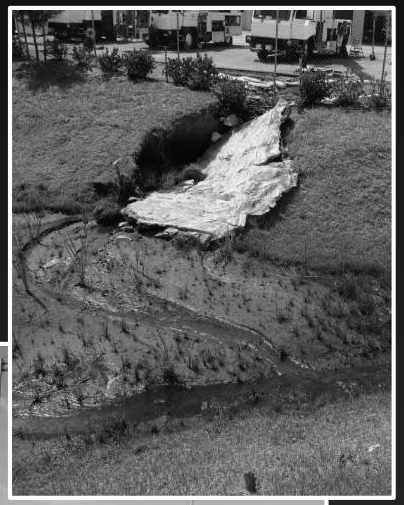
4. Proactively Monitor Private Stormwater Systems

- **What are the options to increase inspection and compliance of privately-owned stormwater systems to prevent negative impacts to our system and ensure compliance with MS4 and NPDES programs?**
  - **Approximately 8,000 privately-owned ponds (includes commercial properties and gated subdivisions)**
  - **Private property owners have the responsibility to maintain these systems**
  - **Only about 100 private ponds will be inspected this year**

Innovative Ideas

4. Proactively Monitor Private Stormwater Systems

- **Review County code and permit conditions in consultation with FDEP and WMDs regarding authority to:**
  - Require submittal of operations and maintenance plans on previously permitted projects
  - Require new private stormwater systems to submit to the County regular assessments and inspections by a professional engineer
  - Request copy of 3-year stormwater system assessment for gated communities
- **Bring forward recommendations regarding regulatory changes for compliance and inspection program, which could include increases in staffing**
- **FY 23/24 requested budget includes new position**



Innovative Ideas

Recommendations

1. In coordination with completion of rainfall intensity and basin studies, develop a Countywide predictive stormwater management model
2. Explore partnerships with Utilities to evaluate and implement integrated water resource solution projects
3. Continue to study the effects of wetland loss on flood risk and evaluate need to update permitting standards
4. Evaluate options for improving the compliance and inspection of private stormwater systems

Presentation Outline

- Purpose
- Recap of May 2, 2023 presentation
- Summary of March 14, 2023 Innovation Lab Workshop
- **Stormwater Program Focus**
  - Climate Change/Changes in Rainfall Intensity
  - Master Basin Studies – Proposed Updates & Changes
  - SORAP Collaboration
  - Innovative Ideas
  - **Funding Needs**
- Recommendations and Next Steps
- Summary

Funding Needs

- The total capital funding for the last 5 years was:
  - Stormwater Management: $28.75 Million
  - Roads & Drainage: $26.00 Million
  - EPD: $15.57 Million
  - Overall Total Capital Funding = $70.32 Million
- The total grant funding for the last 5 years was:
  - Stormwater Management: $20.93 Million
  - Roads & Drainage: $0.00 Million
  - EPD: $1.50 Million
  - Overall Total Grant Funding = $22.43 Million

Funding Needs

- **Funding is currently from the Transportation Trust Fund and MSBU program**
- **Future needs include:**
  - New capital projects that will be recommended based on updated basin studies
  - Retrofitting of older neighborhoods for both flooding mitigation and water quality improvements, including Low Impact Design (LID)
  - More stringent inspection requirements of new NPDES permit
  - Increased inspection of private stormwater systems
  - Inspection and removal of sediment buildup at lake outfalls
  - Integrated Water Resources Solutions
- **Current funding sources are not adequate to address these needs**

Funding Needs

Stormwater Utility Fee Background

- Approximately 170 stormwater utility fee (SUF) programs are implemented across Florida (156 Cities, 14 Counties)
  - Central FL counties with a SUF: Alachua, Brevard, Lake, Marion, Pinellas, Polk, Sarasota, and Volusia
  - Orange County municipalities with a SUF: Maitland, Ocoee, Orlando, Winter Park, and Winter Garden

- Average monthly Equivalent Residential Unit (ERU) rate is $8.05 ($96.60 annually). The current MSBU rate is $78.00 annually
  - City of Orlando (monthly rate of $9.99) generated almost $25 million in 2022
  - Hillsborough County (monthly rate of $6.40) generated almost $32 million in 2022

Funding Needs

Stormwater Utility Fee Background

- Orange County already has a Stormwater Utility Fee Ordinance in place!
  - Stormwater Utility Ordinance 96-20 located in Chapter 15 Article XII, was adopted on July 23, 1996
  - The rate was set at $0.00 and has never been modified
- At the time that the ordinance was implemented, County leadership took the steps to put the ordinance in place but decided to wait on implementing the fee

Funding Needs

Mayor's Transition Team Report

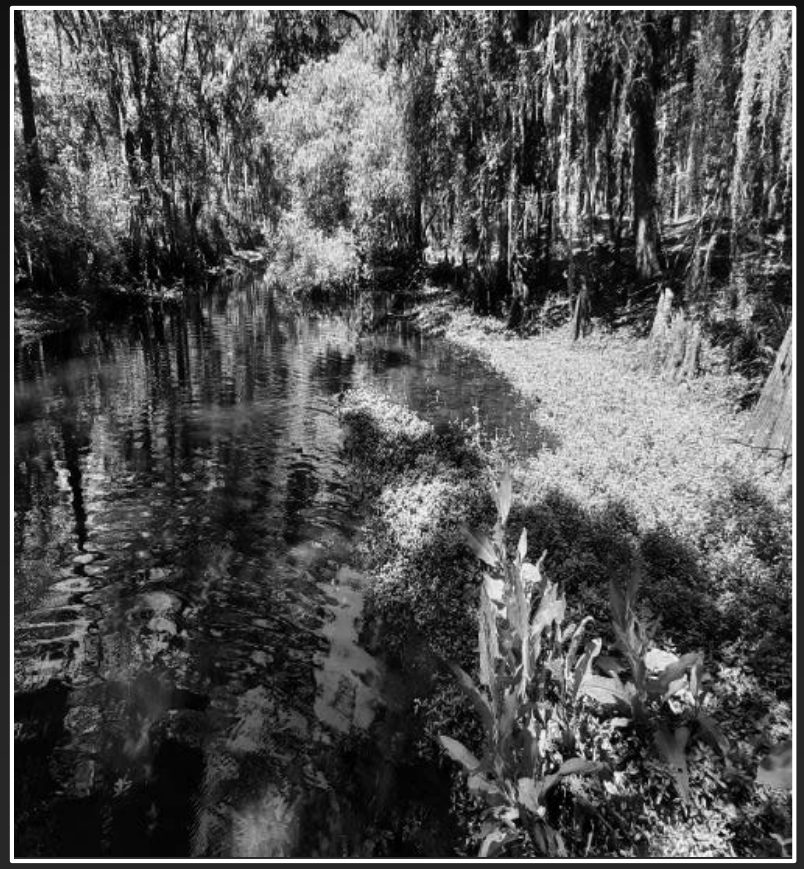
- As part of the Mayor's Transition Team Report, the Sustainability and Smart Growth Task Force recommended:
  - Increase the County's stormwater utility fee (currently set at $0) to fund water quality projects for our residents
  - Utilize the Stormwater Utility Fee as a dedicated funding source to address stormwater and water quality

Funding Needs

- **Potential uses of a Stormwater Utility Fee**
  - Improved stormwater maintenance activities
  - Capital projects to reduce the risk of flooding and to retrofit older neighborhoods to prevent water quality deterioration
  - Development of regional stormwater management systems
  - Increased inspection of private stormwater systems
  - More stringent inspection requirements of new NPDES permit
  - Inspection and removal of sediment buildup at lake outfalls
  - Local funding to match FEMA grants
  - New capital projects that will be recommended based on updated basin studies
- **If implemented, the fee could replace existing MSBU program and reduce reliance on transportation trust fund**

Funding Needs

- **Stormwater Utility Fee Feasibility Study approach**
  - **Phase 1 (2024)**
    - Summarize Needs and Analyze Funding Options
    - Preliminary Revenue Projection/Rate Model
    - Stormwater Utility Evaluation and Report
    - Presentation to Elected Officials
  - **Phase 2 (2025) – Contingent on Board's decision to move forward after Phase 1**
    - Public Awareness
    - Utility/Assessment Ordinance Support
    - Utility Database
    - Policies and Procedures Manual



Funding Needs

Recommendations

- Move forward with Phase 1 of the Stormwater Utility Feasibility Study utilizing existing budgeted funding
- Analyze how the stormwater utility could be used for the various funding needs identified in this presentation
- Present recommendations to the BCC at the completion of the study

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Next Steps

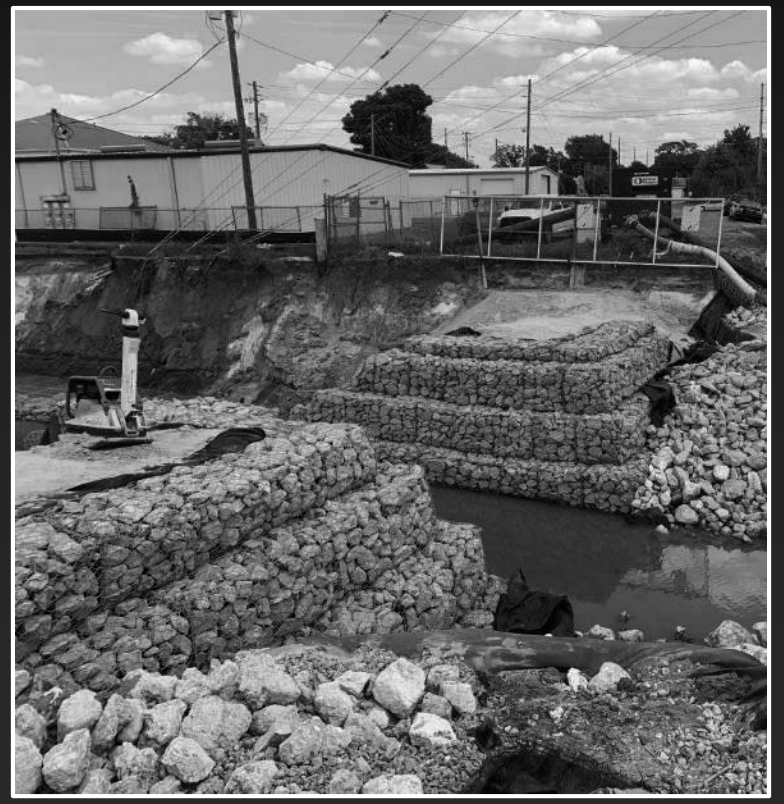
- **Short-Term *(6 months – 1 year)***
  - Perform rainfall intensity study and meet with various stakeholders (use $100k from current FY 22/23 budget)
  - Conduct Phase 1 of the Stormwater Utility Feasibility Study (use $250k from current FY 22/23 budget)
  - Fill the new Project Manager position in Public Works
  - Look at moving forward with predictive stormwater RTTF models for the Little and Big Econ basins
  - Complete analysis of private stormwater system compliance options including any necessary regulatory changes or increases in staffing

Next Steps

- **Mid-Term (*1 year – 2 years*)**
  - Conduct Phase 2 of the Stormwater Utility fee study (budget est. $300k FY 24/25) contingent on Board's decision to move forward
  - Perform a county-wide stormwater resiliency study (budget est. $300k FY 24/25) after conclusion of the countywide vulnerability study
  - Budget additional funds (budget est. $1.5 million FY 24/25 and 25/26) to update and expedite all the master basin studies
  - Implement any changes necessary to implement private stormwater system compliance program
  - Partner with the Utilities Department to implement integrated water resource solutions

Next Steps

- **Long-Term (*2 years or more*)**
  - Board decision on implementing recommendations from the Stormwater Utility Fee study
  - Budget funding to develop a countywide predictive stormwater management model in coordination with basin master plan updates (est. $1 million)
  - If additional funding is approved:
    - Increase budget and staff resources for the capital stormwater management program based on the recommendations from updated basin studies
    - Budget funds to retrofit existing stormwater systems with LID projects to improve water quality



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Summary

- Stormwater program is critically important to managing flooding and water quality issues
- Efforts involve coordinated engagement of numerous County departments and divisions
- Studies include expediting updates to master basin studies with increased rainfall data and stormwater resiliency study
- Innovative ideas include predictive modeling and integrated water resources solutions
- A Stormwater Utility Fee study is needed to address future capital project needs and funding shortfalls
- Additional funding requested in FY 23/24 & FY 24/25 to support program