

Public Works Department

Orange County Stormwater Utility Phase 1 Evaluation Findings

Discussion Item

May 6, 2025

- Background
- Level of Service Analysis
- Rate Methodology
- Next Steps
- Summary
- Board Direction



- **Background**
- Level of Service Analysis
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▪ Orange County's Stormwater Program Overview

—Primarily operated by three main divisions (\$50M)

- Stormwater
- Roads and Drainage
- Environmental Protection (EPD)

—Operation & Maintenance (O&M) responsibilities

- 95 miles of primary system canals, 90 miles of secondary system canals
- 382 non-MSBU (Municipal Service Benefit Unit) ponds
- 155 drain wells
- Navigation maintenance

—Capital Projects (CIP)

- Drainage infrastructure improvement and retrofits
- Water quality improvement

- **MSBU/TU operated differently by Division**
 - Not included in current program evaluation
 - **Stormwater Management Division**
 - 1,645 Stormwater ponds within an MSBU serving 99,432 parcels
 - MSBU fees collected for annual O&M is \$10.8 million
 - **Environmental Protection Division**
 - 19 MSTU and 20 MSBUs primarily supporting aquatic weed control for 68 lakes
 - 21,080 parcels are currently within an MSTU contributing ~ \$4.6M annually
 - **MSBU/TU options**
 - Apply as fee credit for this service
 - Disband and incorporate into Utility Fee



Background

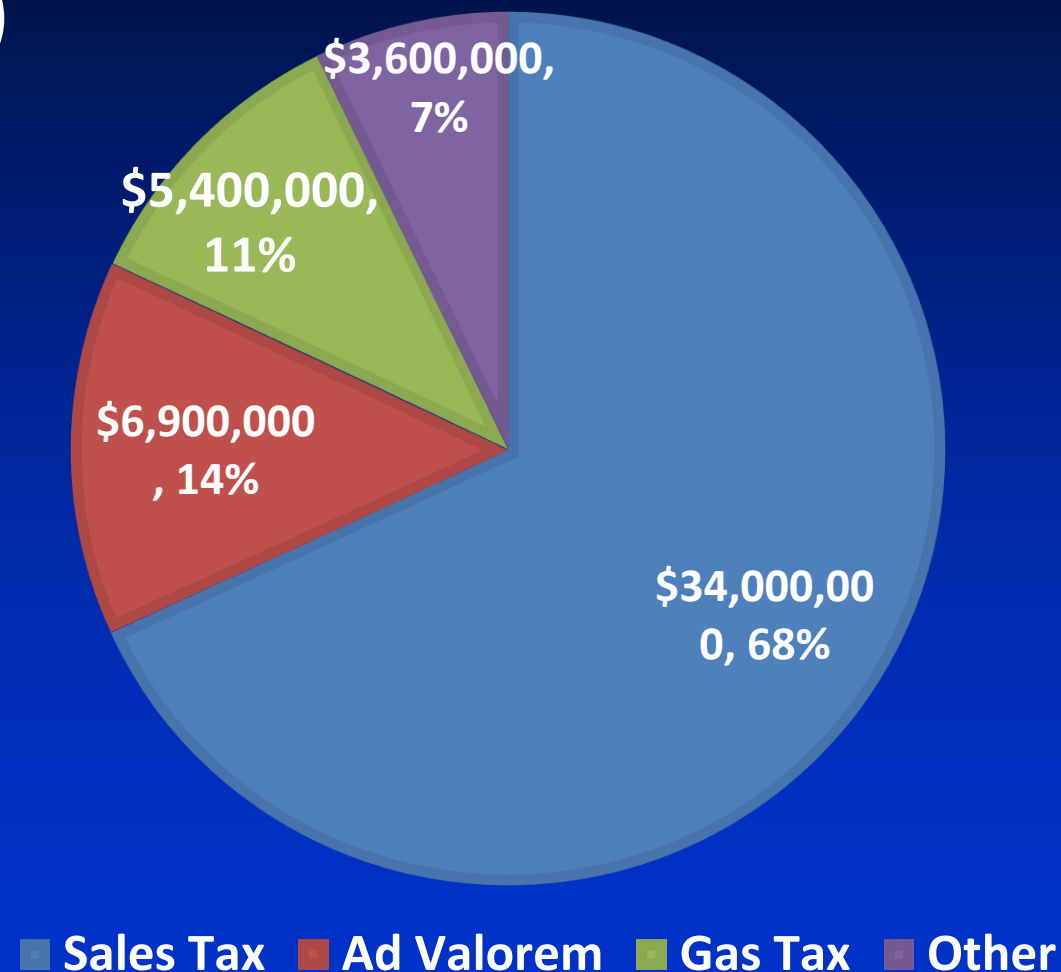
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■ Current funding sources (\$50 million)

- Sales Tax (\$34.0 million)
- Ad Valorem (\$6.9 million)
- Gas Tax (\$5.4 million)
- Other (\$3.6M million)

• Grants

- Federal
- State





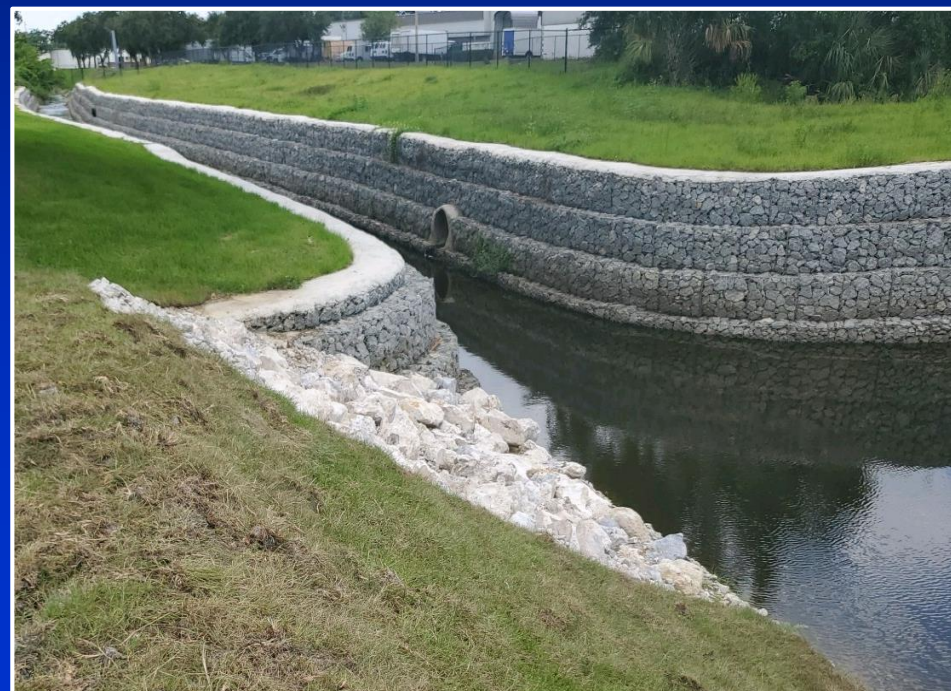
Background

Stormwater Program Challenges

7

■ Regulatory changes

- Update to the statewide stormwater rule (FAC 62-330 and Applicant's Handbook)
 - Additional maintenance/inspections required
 - Additional water quality treatment required to meet specific targets for nitrogen and phosphorus (8-10% more \$ per acre)
 - Increasing standards for all sites, highest for Impaired waters and Outstanding Florida Waters
- New Cycle 5 National Pollutant Discharge Elimination System (NPDES) permit
 - Increased inspection frequencies (costs TBD)



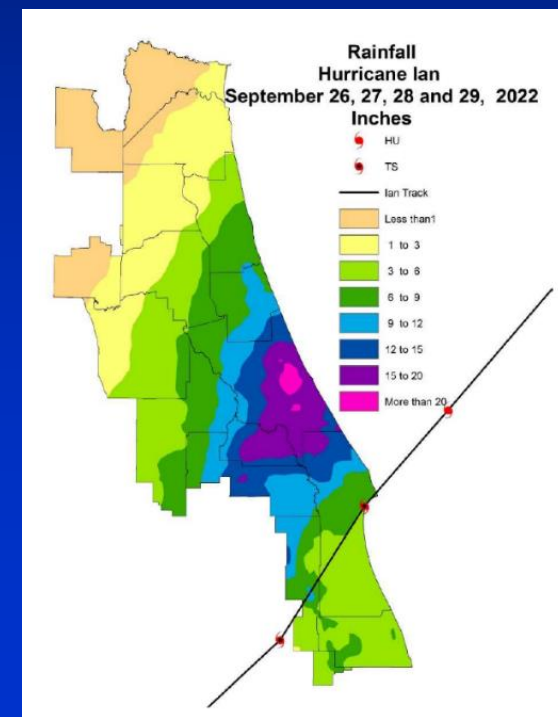


Background

Stormwater Program Challenges

8

- **CIP budget needs increasing**
 - Basin Master Plan updates – project needs analysis
 - Vulnerability Study – critical assets at risk
- **Countywide water quality requirements increasing**
 - Basin Management Action Plans (BMAPs)
 - New drafts will require stakeholders to account for future loads in the Wekiwa/Wekiva, Ocklawaha and Okeechobee BMAPs
- **Climate and rainfall changes**
 - Overwhelms existing secondary systems
 - Increased impacts to areas built prior to stormwater rules
 - Resulting in erosion and flooding





Background

- **Stormwater Utility Fee (SUF) Ordinance**
 - **1996 - Ordinance 96-20 approved**
 - **Necessitated by impervious area**
 - **Operation and maintenance of stormwater service area**
 - **Advisory Board**
 - **Rate set at \$0, deferred for one year after adoption**
 - **Does not include capital improvement**
 - **No support to move forward in 1997 to increase rate from \$0**

- **Mayor's Transition Team Report (2018)**
 - Long term action to evaluate the Stormwater Utility Fee
- **Multi-phase approach (as presented to the BCC in 2023 & 2024)**
 - **Phase 1**
 - Analyze current stormwater program and future LOS needs, develop preliminary impervious/rate model, recommend rate structure and LOS goal
 - **Phase 2**
 - Finalize Impervious Surface, community outreach/public meetings, develop credit policy, work sessions to discuss with BCC
 - **Phase 3 – Implementation**
 - Ordinance revisions, public hearings, finalize billing file, adopt rate structure, develop procedures

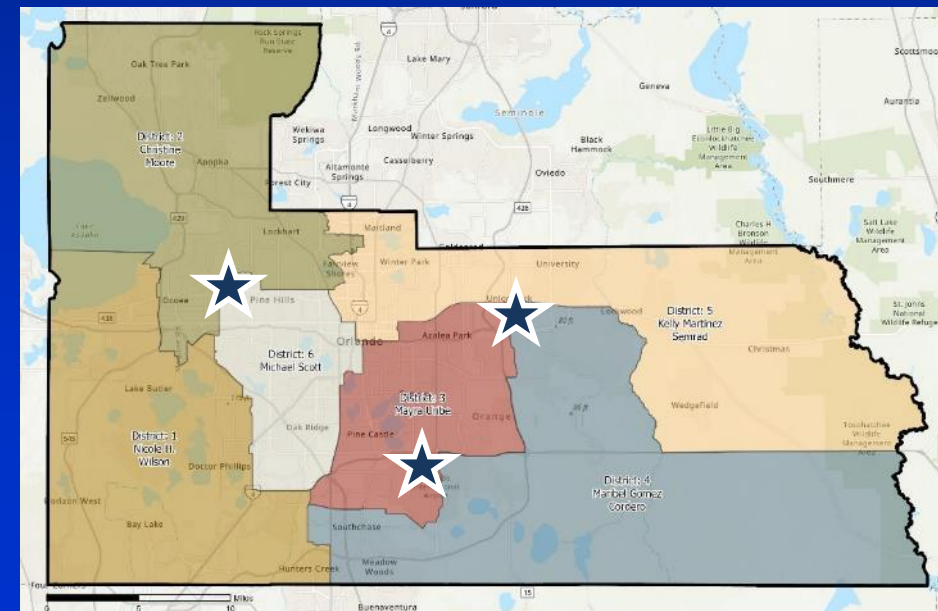
- **Phase 1 of the Stormwater Utility Feasibility Study**
 - Evaluation of stormwater needs
 - Current service level including CIP / O&M
- **Potential Areas of improvement**
 - New capital projects that will be recommended based on updated basin, vulnerability and resiliency studies
 - Retrofitting of older neighborhoods for both flooding mitigation and water quality improvements, including Low Impact Design (LID)
 - Development of regional stormwater management systems
 - More stringent inspection requirements of new NPDES permit
 - Increased inspection of private stormwater systems
 - Sediment Maintenance
 - Integrated Water Resources Solutions



Background

12

- Examples of a few current, unfunded projects and estimated costs
 - Taft drainage and sidewalk improvement (\$27M)
 - Improve drainage and add sidewalks
 - Dwarf lake pump station upgrade (\$6M)
 - Andover Lakes flooding improvement (\$3M)
 - Upgrade drainage infrastructure
 - Dredging to remove end of pipe sediment
 - Multiple lakes/canals (\$500,000 - \$1,000,000)



■ Comparison of selected local government Stormwater Utility Rates

2024 FSA Survey	Jurisdiction	Population Served	2024 Revenue	2024 Annual Rate	2024 Monthly Rate
Florida Counties	Alachua County	100,000	\$2,900,000	\$50.04	\$4.17
	Brevard County	226,092	\$6,689,000	\$63.96	\$5.33
	Hillsborough County	905,007	\$35,600,000	\$86.52	\$7.21
	Miami-Dade County	1,102,955	\$31,000,000	\$60.00	\$5.00
	Pinellas County	275,535	\$20,603,000	\$121.32	\$10.11
	Volusia County	122,633	N/A	\$96.00	\$8.00
Municipalities within Orange County	City of Maitland	N/A	N/A	\$128.64	\$10.72
	City of Ocoee	47,295	\$3,918,740	\$99.00	\$8.25
	City of Orlando	280,832	\$24,829,798	\$161.88	\$13.49
	City of Winter Garden	47,245	\$1,589,244	\$99.00	\$8.25
	City of Winter Park	30,522	\$4,500,000	\$282.00	\$23.50

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- **Level of Service Analysis**
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Level of Service (LOS) Analysis

15

- Stormwater, Roads and Drainage, and EPD were used for this evaluation as primary divisions
 - Program Management
 - Compliance Activities
 - Operation and Maintenance
 - Capital Improvement Projects
- Developed a project specific LOS criteria
 - Most implemented stormwater utilities are based upon a LOS criteria
 - Orange County does not have an “official” LOS criteria
- Identified areas for an improved LOS





Level of Service (LOS) Analysis

16

Level of Service	Program Management Activities	NPDES and TMDL Compliance Activities	Operation and Maintenance Program Activities	Estimated Capital Improvement Project Backlog
A	Comprehensive Planning + Full CIP Resource Capabilities	Exemplary Permit Compliance	Fully Preventative/ 100% Routine	Prioritized/Fully Funded (10-Year Implementation)
B	Pro-Active Planning + Systematic CIP Resource Capabilities	Pro-Active Permit Compliance	Mixture of Routine and Inspection Based	Phased Implementation/ Allocated Budgets (25-Year Implementation)
C	Priority Planning + Partial CIP Resource Capabilities	Minimum Permit Compliance	Inspection Based Only	Complaint, Inspection- Based/Moderate Budget (50-Year Implementation)
D	Reactionary Planning + Minimal CIP Resource Capabilities	Below Minimum Permit Compliance	Responsive Only (Complaint-based)	Critical Needs Only/ Minimum Budget (100-Year Implementation)



FY 23/24 - \$50 million program



Existing Program Level of Service Analysis Results:

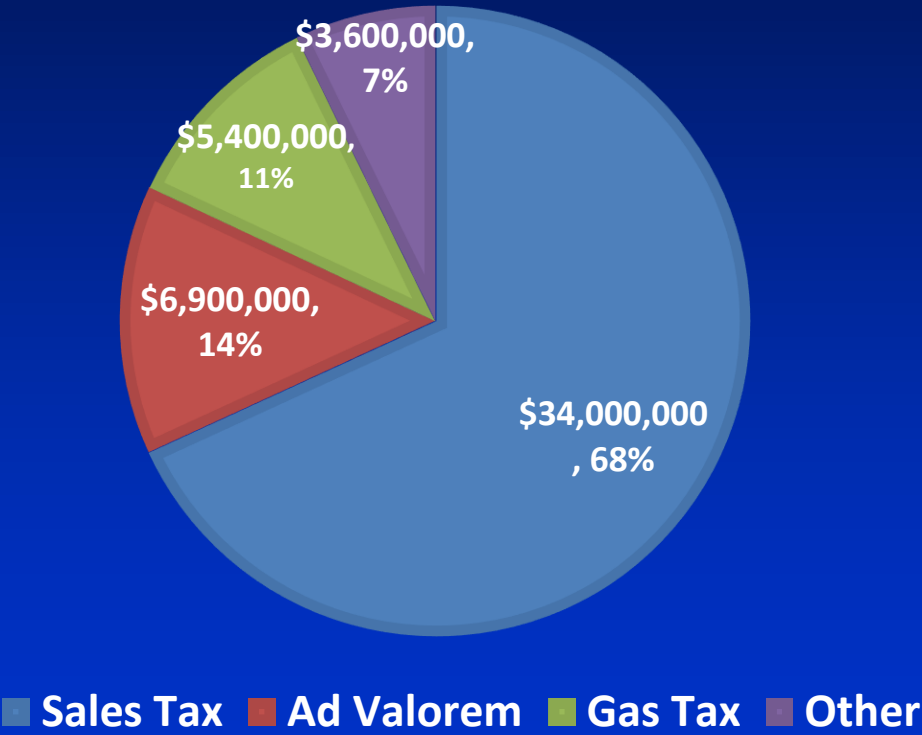
Drives Improvement Goal Decision Making

17

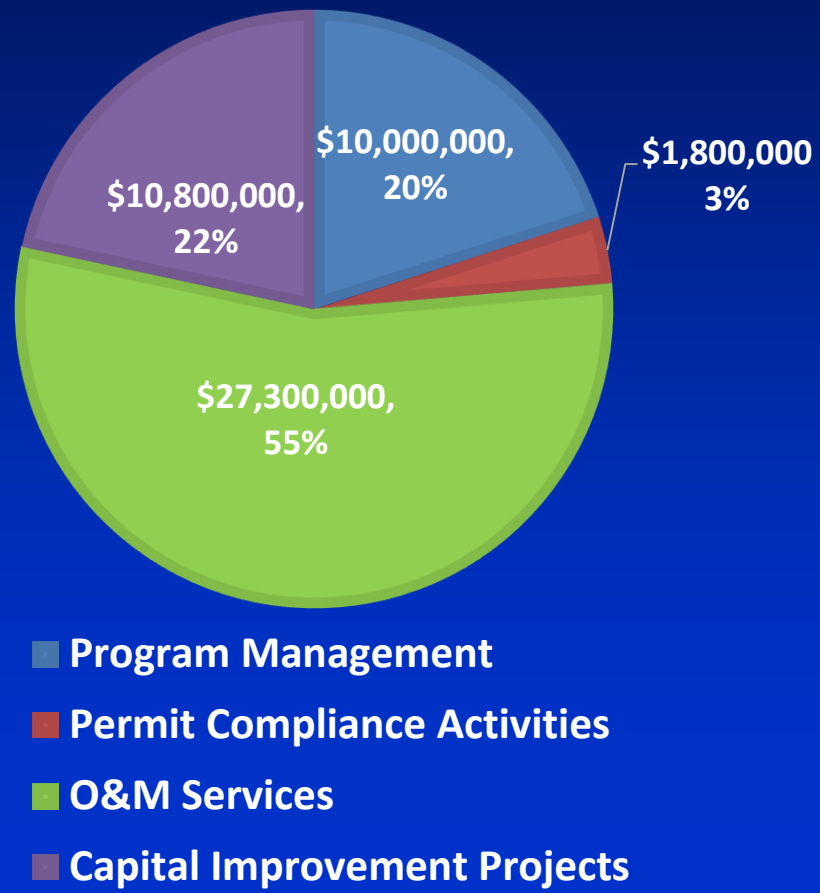
Level of Service	Program Management Activities	NPDES and TMDL Compliance Activities	Operation and Maintenance Program Activities	Estimated Capital Improvement Project Backlog
A	Comprehensive Planning + Full CIP Resource Capabilities	Exemplary Permit Compliance	Fully Preventative/ 100% Routine	Prioritized/Fully Funded
B	Pro-Active Planning + Systematic CIP Resource Capabilities	Pro-Active Permit Compliance	Mixture of Routine and Inspection Based	Phased Implementation/ Allocated Budgets
C	Priority Planning + Partial CIP Resource Capabilities	Minimum Permit Compliance	Inspection Based Only	Complaint, Inspection-Based/Moderate Budget
D	Reactionary Planning + Minimal CIP Resource Capabilities	Below Minimum Permit Compliance	Responsive Only (Complaint-based)	Critical Needs Only/ Minimum Budget
Funding	\$10.0 million	\$1.8 million	\$27.3 million	\$10.8 million

FY 23/24 - \$50 million program

Existing Funding Sources



Existing Funding Allocation





Level of Service Analysis

Identified Areas for Providing an Improved LOS

19

Stormwater Management

- Easement acquisition
- Pump stations rehabilitation
- Basin planning outcomes – Capital Improvement Project (CIP) retrofit
- Flooded structure CIP estimates
- Staffing level enhancements

Roads & Drainage

- Easement acquisition, unopened ROW
- Sediment Management
- Secondary system planning of Capital Improvement Projects
- Flooded roadway miles CIP retrofit estimate
- Staffing level enhancements

Environmental Protection

- Increased water quality monitoring
- Land acquisition
- Additional water quality retrofit CIP for permit compliance
- Staffing level and equipment enhancements
- BMAP/TMDL compliance CIP estimates



Level of Service Analysis

Estimated Additional CIP Needs

20

Stormwater Management

- 7,746 Structures identified by County in flood risk areas
- Estimated CIP Cost **\$415 million** to address over established LOS implementation period

Roads & Drainage

- 45 miles of road with more than 6-inches of flooding
- Estimated CIP Cost **\$497 million** to address over established LOS implementation period

Environmental Protection

- TMDL/BMAP regulatory compliance project to remove phosphorus & nitrogen
- Estimated CIP Cost **\$468 million** to address over established LOS implementation period

\$1.38 billion of Long-term *additional* CIP funding needed

Level of Service	Estimated Capital Improvement Project Backlog	CIP Implementation Plan Term
A	Prioritized Implementation	10 Years
B	Phased Implementation	25 Years
C	Inspection-Based Implementation	50 Years
D	Critical Needs Only Implementation	100 Years
	Current Funding	>100 Years

Annual CIP Budget Requirement/Funding Gap

\$10.8 million

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A	Prioritized Implementation	10 Years
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D	Critical Needs Only Implementation	100 Years
	Current Funding	>100 Years



Annual CIP Budget Requirement/Funding Gap

\$13.8 million

\$10.8 million



Level of Service	Estimated Capital Improvement Project Backlog	CIP Implementation Plan Term
A	Prioritized Implementation	10 Years
B	Phased Implementation	25 Years
C	Inspection-Based Implementation	50 Years
D	Critical Needs Only Implementation	100 Years
	Current Funding	>100 Years

Annual CIP Budget Requirement/Funding Gap

- \$27.6 million
- \$13.8 million
- \$10.8 million



Level of Service Analysis: LOS B

24



Level of Service	Estimated Capital Improvement Project Backlog	CIP Implementation Plan Term
A	Prioritized Implementation	10 Years
B	Phased Implementation	25 Years
C	Inspection-Based Implementation	50 Years
D	Critical Needs Only Implementation	100 Years
	Current Funding	>100 Years

Annual CIP Budget Requirement/Funding Gap

\$55.2 million

\$27.6 million

\$13.8 million

\$10.8 million



Level of Service Analysis: LOS A

25



Level of Service	Estimated Capital Improvement Project Backlog	CIP Implementation Plan Term
A	Prioritized Implementation	10 Years
B	Phased Implementation	25 Years
C	Inspection-Based Implementation	50 Years
D	Critical Needs Only Implementation	100 Years
	Current Funding	>100 Years

Annual CIP Budget Requirement/Funding Gap

\$138.0 million

\$55.2 million

\$27.6 million

\$13.8 million

\$10.8 million



Level of Service Recommendation

26

Level of Service	Estimated Capital Improvement Project Backlog	CIP Implementation Plan Term	Annual CIP Budget
A	Prioritized Implementation	10 Years	\$138.0 million
B	Phased Implementation	25 Years	\$55.2 million
C	Inspection-Based Implementation	50 Years	\$27.6 million
D	Critical Needs Only Implementation	100 Years	\$13.8 million
	Current Funding	>100 Years	\$10.8 million

- Most programs in FL target LOS C as a starting point (phase-in) and strive for LOS B
Staff Recommendation
- Long-term CIP funding demand is estimated at **\$1.38 billion**
- Determine if O&M, CIP or both will be funded or use other sources

- Background
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Rate Methodology

Parcel Impervious Area Analysis

28

- Fee assigned to residential and non-residential parcels is based on the impervious area of a parcel
 - More impervious area generates more stormwater runoff
- Measured Impervious area for 300 single-family residential parcels
 - Sample size should be increased
- Piloted 2018 NOAA impervious area coverage parcel analysis using GIS tools
 - Provided a higher level of confidence in statistical analysis compared to a small sample set measured by hand
 - Single Family Residential and Condominium parcel processing limitations needs to be addressed in Phase 2





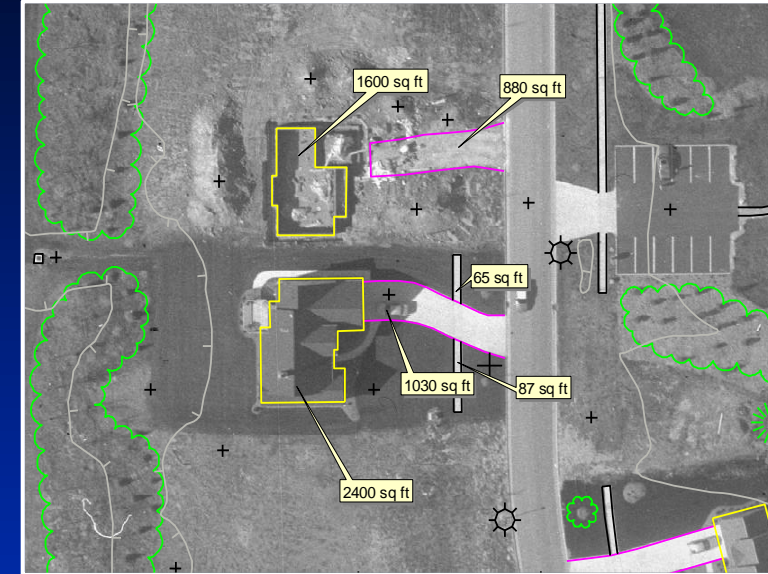
Rate Methodology

Stormwater Fee Options

29

■ Parcel Impervious Measurement Results

- **Option 1** - Median impervious area for *single-family* only parcels is 3,266 ft²
- **Option 2** - Median impervious area for *all residential* parcel types is 2,660 ft²
- **Option 3** - Residential parcels fees can be tiered into small, medium, and large categories
- Non-Residential properties are based upon measured impervious area on each parcel relative to a median residential parcel impervious area



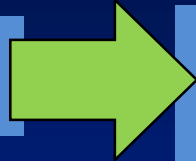


How is the Residential Fee Normally Calculated?

Residential Customers – Option 3 (residential tiers)

30

Single Family Units

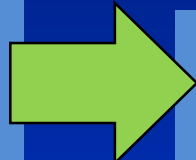


Each single family unit (SFU) is assigned a tier based upon size (small, medium, or large)

Multi-Family Units

Condominiums

Mobile Homes



Other residential units are assigned an ERU based upon type and is typically 1 or less SFU per dwelling unit

and

Fee = ERU x Rate For County

ERU = Equivalent Residential Unit (Billing Unit)



How is the Non-Residential Fee Calculated?

Non-Residential Customers – Option 1 or Option 3

31



In this example, the non-residential customer pays three times the amount as the residential customer since their impervious area represents three typical homes.



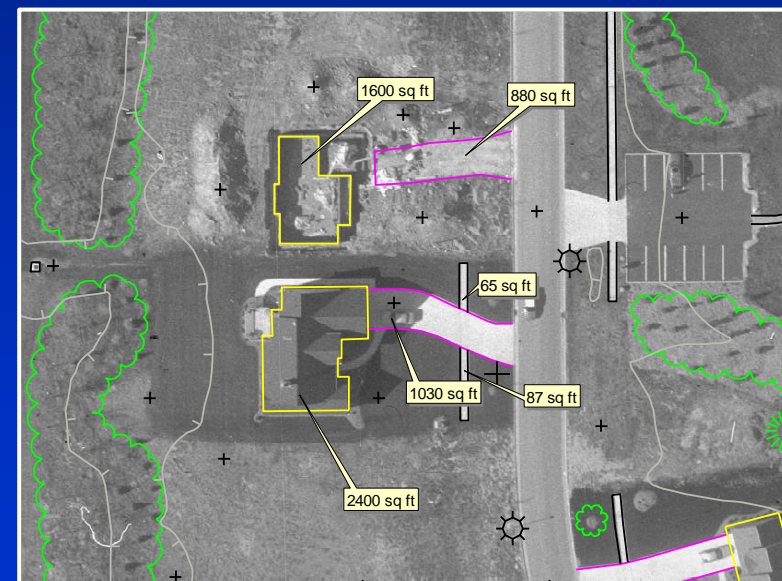
Rate Methodology Recommendation

Phase 1: Option 3 SFU Method with Impervious Area Tiers Recommended

32

- Tiering (Option 3) is the most common method used for stormwater utility billing
- It is the most publicly accepted method because it differentiates fees for small homes from large homes
- Fees are then proportionally applied to a residential parcel based upon the amount of impervious area
- **Staff recommends Option 3**

Category	Impervious Area (ft ²)	Billing Unit
Small	<1,800	0.75
Medium	3,266	1.0
Large	>6,500	1.25

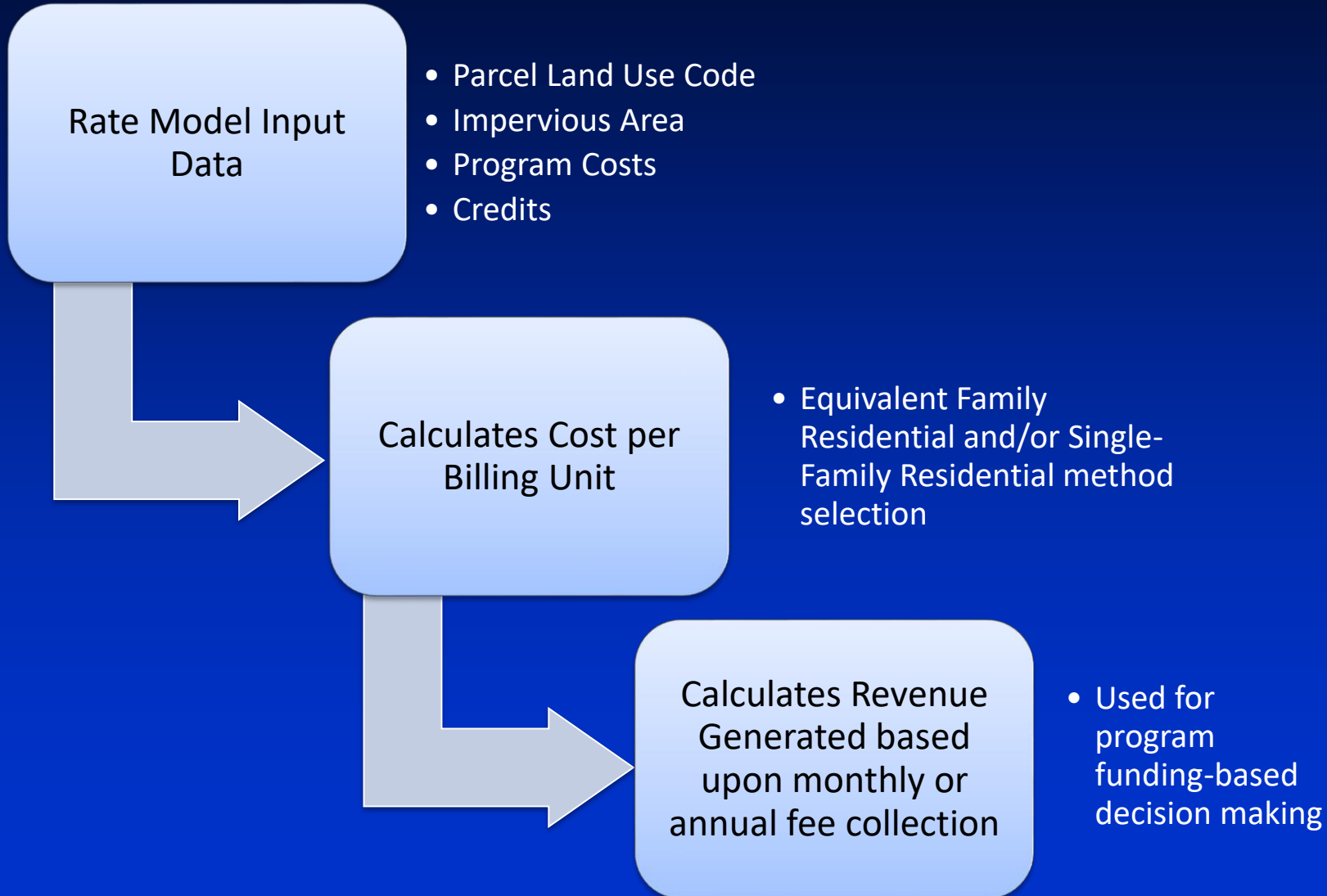




Rate Methodology

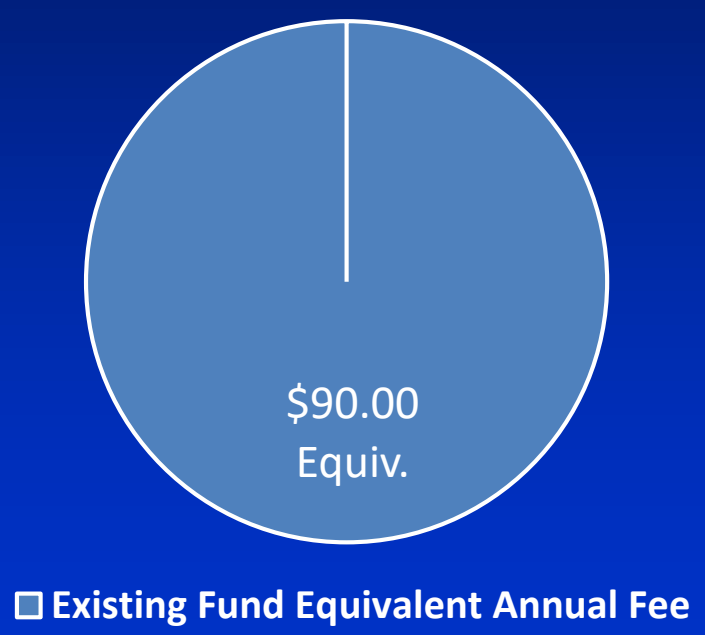
Model Analysis – Example

33

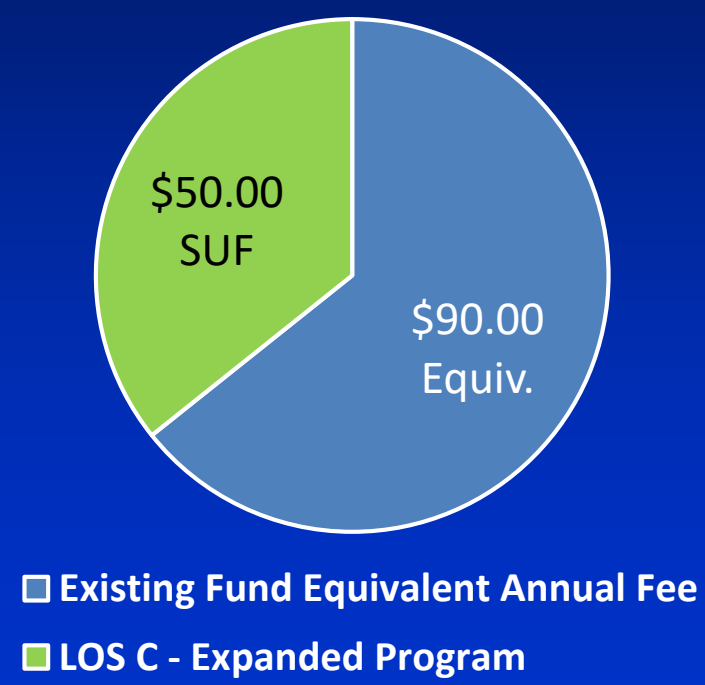


Annual Rate	Annual Revenue
\$36.00	\$19,907,000
\$42.00	\$23,225,000
\$48.00	\$26,543,000
\$54.00	\$29,861,000
\$60.00	\$33,179,000
\$66.00	\$36,497,000
\$72.00	\$39,815,000
\$78.00	\$43,133,000
\$84.00	\$46,451,000
\$90.00	\$49,769,000
\$96.00	\$53,087,000
\$102.00	\$56,405,000
\$108.00	\$59,722,000
\$114.00	\$63,040,000
\$120.00	\$66,358,000
\$126.00	\$69,676,000
\$132.00	\$72,994,000
\$138.00	\$76,312,000
\$180.00	\$99,537,000

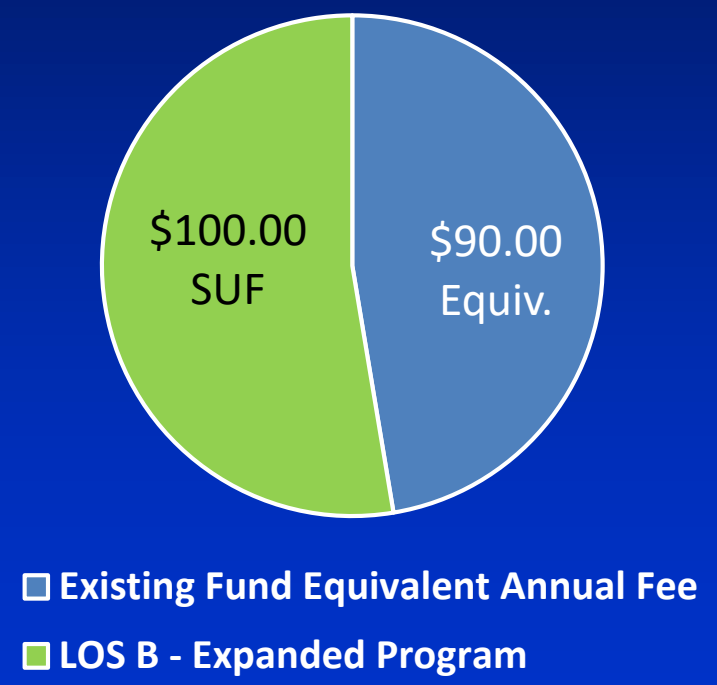
Current Program:
\$50 million
(Includes \$10.8 million CIP)



Augmented Program
(LOS C – 50 yr)
\$77.5 million



Augmented Program
(LOS B – 25 yr)
\$105.1 million



Rates may slightly change based upon options & credits chosen



Rate Methodology

Examples of Revenue Generation of Potential New Revenue Sources for Stormwater Needs 35

**Stormwater Utility
Fee
(\$100/year)**



\$55 Million

- Paid by all property owners based on impervious area
- \$100/year for average SF home with some properties paying more or less

**Infrastructure Surtax
(25% of 1/2 cent for
county portion)**



\$63 Million

- Infrastructure Surtax cannot be used for O&M
- \$63M Stormwater need represents ~25% of possible surtax revenues
- Annual cost of tax to typical family is \$57

**Countywide
Property Tax
Increase
(0.25 Mills)**



\$55 Million

- Paid by all property owners based on taxable value
- Tax increase of \$69 based on SF home price of \$325,000

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■ Phase 2

- Update the 2018 NOAA impervious area database to capture data for all County parcels
- Develop a draft Credit Policy that provides an opportunity for the public to receive a fee reduction for activities that reduce the burden of stormwater management services currently provided by the County
 - Need for Board direction on the future of MSBU/MSTU for stormwater related services (credit vs disband) and/or onsite treatment (LID/Green Stormwater)
- Develop and implement a Community Outreach Program
 - Example: 2 Public Meetings in each District
- Draft billing file
- Board work session late 2025/early 2026

■ Phase 3

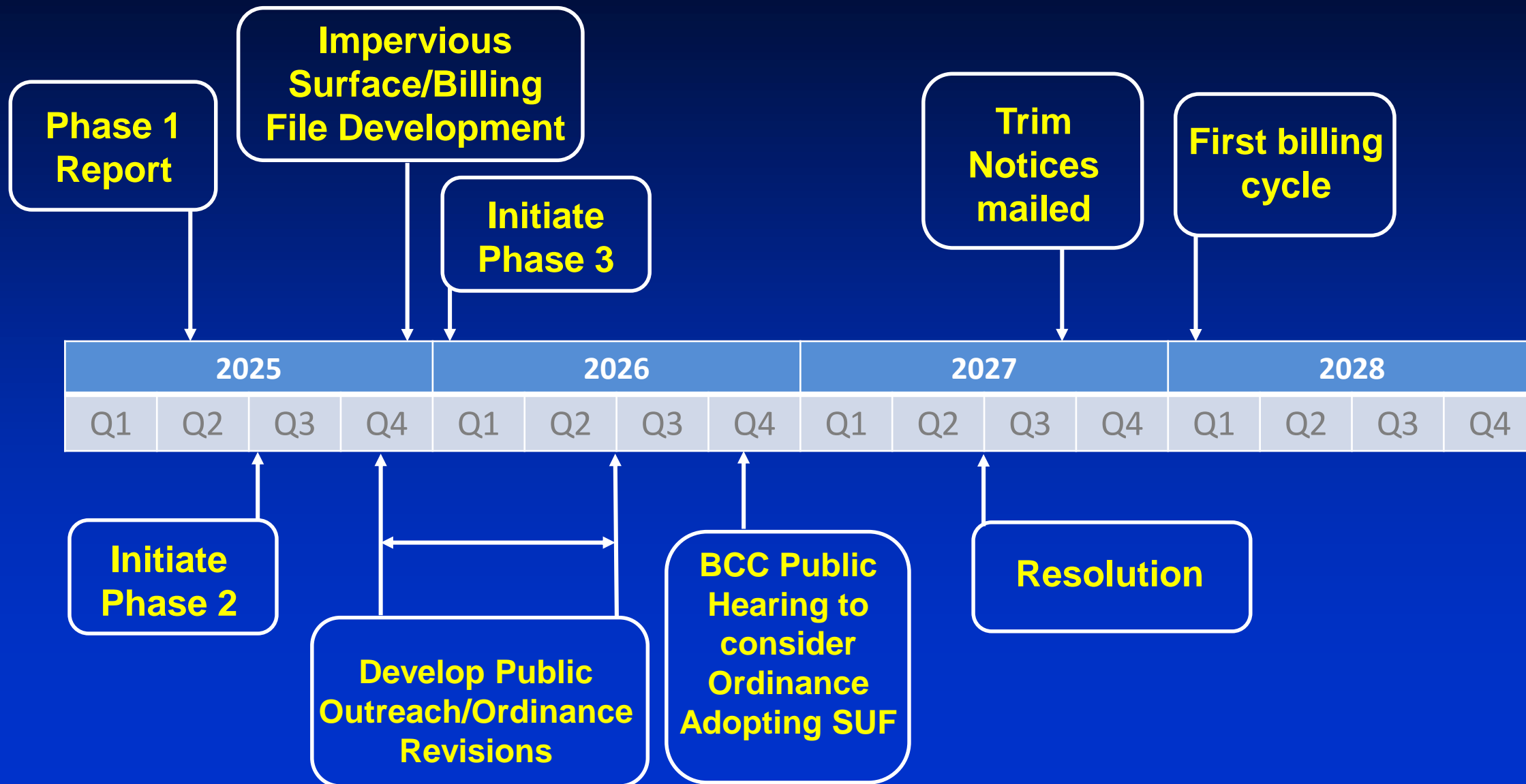
- Adopt final stormwater utility fee rate structure
- Prepare a draft and final revised Stormwater Utility Ordinance
- Hold public hearings October – December 2026
- Develop a policy and procedures manual
- Work with Property Appraiser to develop a final billing file



Next Steps

Timeline

39



- Background
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- Stormwater needs are increasing Countywide
- Current Utility set at \$0 since 1996, Chapter 15, Article XII
- Additional funding sources needed to fund projects and improve LOS
- Phase 1 of the SUF Feasibility Study is complete
 - Current \$50M program managed by Stormwater, EPD, R&D
 - Preliminary impervious area analysis
 - Improved CIP program options
 - Additional \$1.38B in capital needs
 - LOS Option B (25 year) recommended
 - Rate structure options
 - Recommended Single Family Residential with tiers (Option 3)

■ Future Phase 2 tasks:

- Finalize impervious area
- Create credit policy
- Community outreach
- Develop draft billing file
- **Work Session prior to moving on to Phase 3**

■ Future Phase 3 tasks:

- Prepare draft Ordinance
- Adopt a fee structure
- Develop procedures and policy manual
- Finalize billing file with Property Appraiser
- **Public Hearings**

- Orange County does not have a SUF to assist in funding needed stormwater infrastructure

Comparison of selected Stormwater Utility Rates for Municipalities in Orange County

	Jurisdiction	Population Served	2024 Revenue	2024 Annual Rate	2024 Monthly Rate
Cities within Orange County	Maitland	N/A	N/A	\$128.64	\$10.72
	Ocoee	47,295	\$3,918,740	\$99.00	\$8.25
	Orlando	280,832	\$24,829,798	\$161.88	\$13.49
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Board Direction

45

Staff is requesting direction from the Board to move forward with Phase 2 of the Stormwater Utility Fee Study with the following recommendations:

1. **Level of Service: Develop a Proposal Based on establishing a LOS of B as a countywide goal** Phased implementation of additional CIP funding over a 25 year period
2. **Rate Structure: Develop a Proposal Based on establishing Option 3 SFU Method with Impervious Area Tiers** Residential structures are assigned a percentage of 1 billing unit relative to the median impervious area of single-family residential homes (small, medium, large)

Phase 2 tasks will include:

- Finalize impervious area
- Create credit policy
- Develop draft billing file
- Community outreach
- Work session prior to moving on to Phase 3