



Flood Mitigation Action Plan

Consideration and Adoption of Stormwater Utility Fee Ordinance

City Council Legislative Meeting
January 26, 2021



Proposed Council Action

Staff recommends that City Council:

- Indicate its commitment to an aggressive approach to addressing flood mitigation on an accelerated basis;
- Establish an Ad Hoc Stormwater Utility and Flood Mitigation Advisory Group;
- Adopt the proposed ordinance on first reading which phases in a two-step increase in the current stormwater utility fee of \$140 per billing unit by \$70 to \$210 in May of 2021 and by another \$70 to \$280 in October of 2021, and schedule it for second reading, public hearing and final adoption on February 20, 2021; and
- Provide guidance to the City Manager to reflect this aggressive approach in the forthcoming FY 2022 Proposed Operating Budget and the FY 2022 to FY 2031 Capital Improvement Program.



Jan. 26 Meeting Follow Up

- Illustration of comprehensive nature of stormwater program
- Additional background on project management costs
- Typical schedule of delivery for major capital capacity projects & spot/localized neighborhood improvement projects

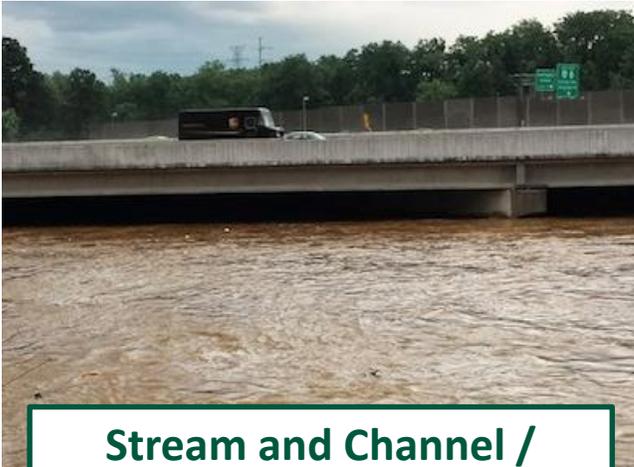
Stormwater Management: 5 Main Responsibilities



Storm Sewer Capacity Projects



Spot Improvements Projects



Stream and Channel / Infrastructure Maintenance

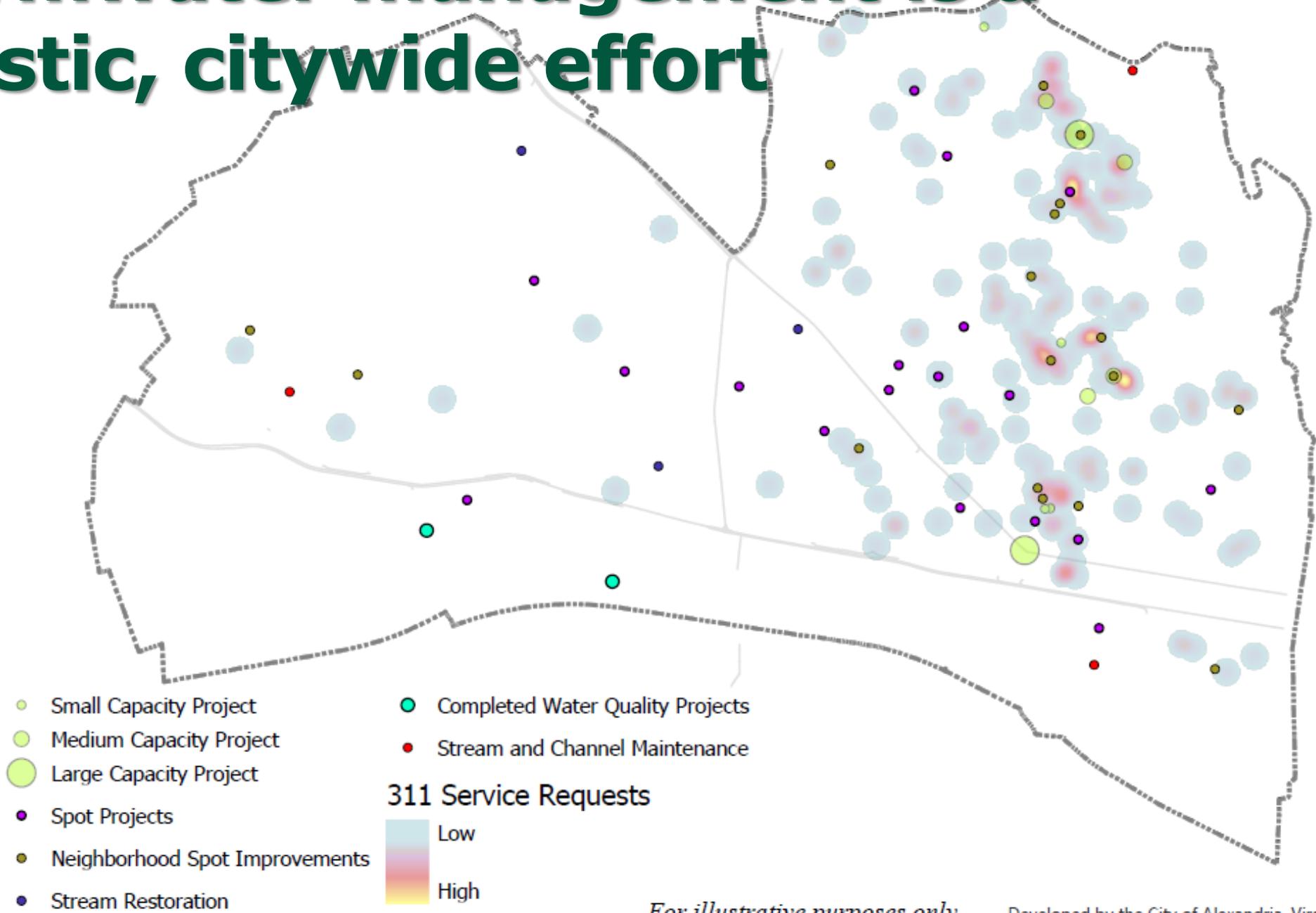


Infrastructure Maintenance



Water Quality Projects (Bay Mandates)

Stormwater management is a holistic, citywide effort



For illustrative purposes only.

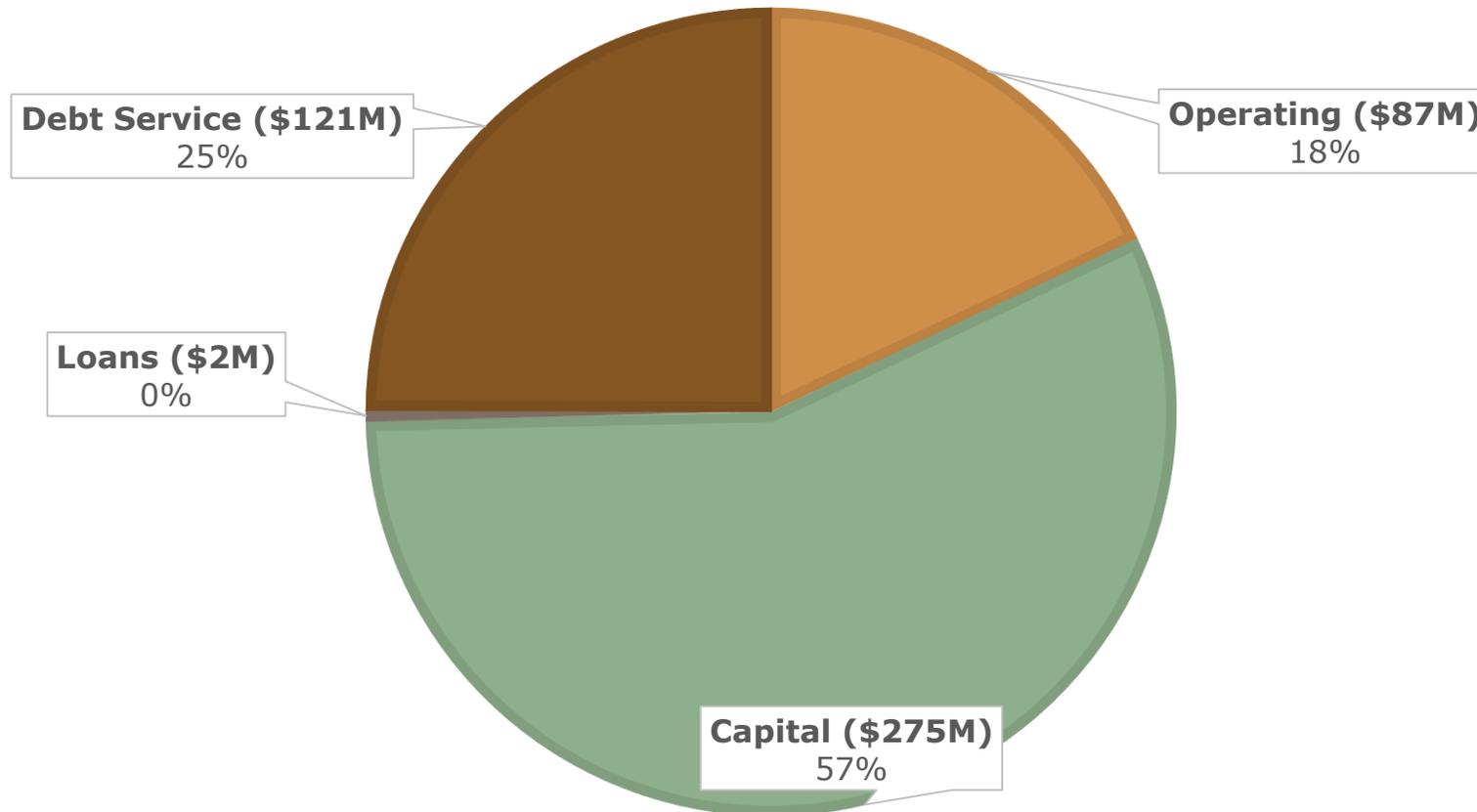
Developed by the City of Alexandria, Virginia



Stormwater Program Breakdown

PROPOSED FY2022- FY 2031

■ Operating (\$87M) ■ Capital (\$275M) ■ Loans (\$2M) ■ Debt Service (\$121M)

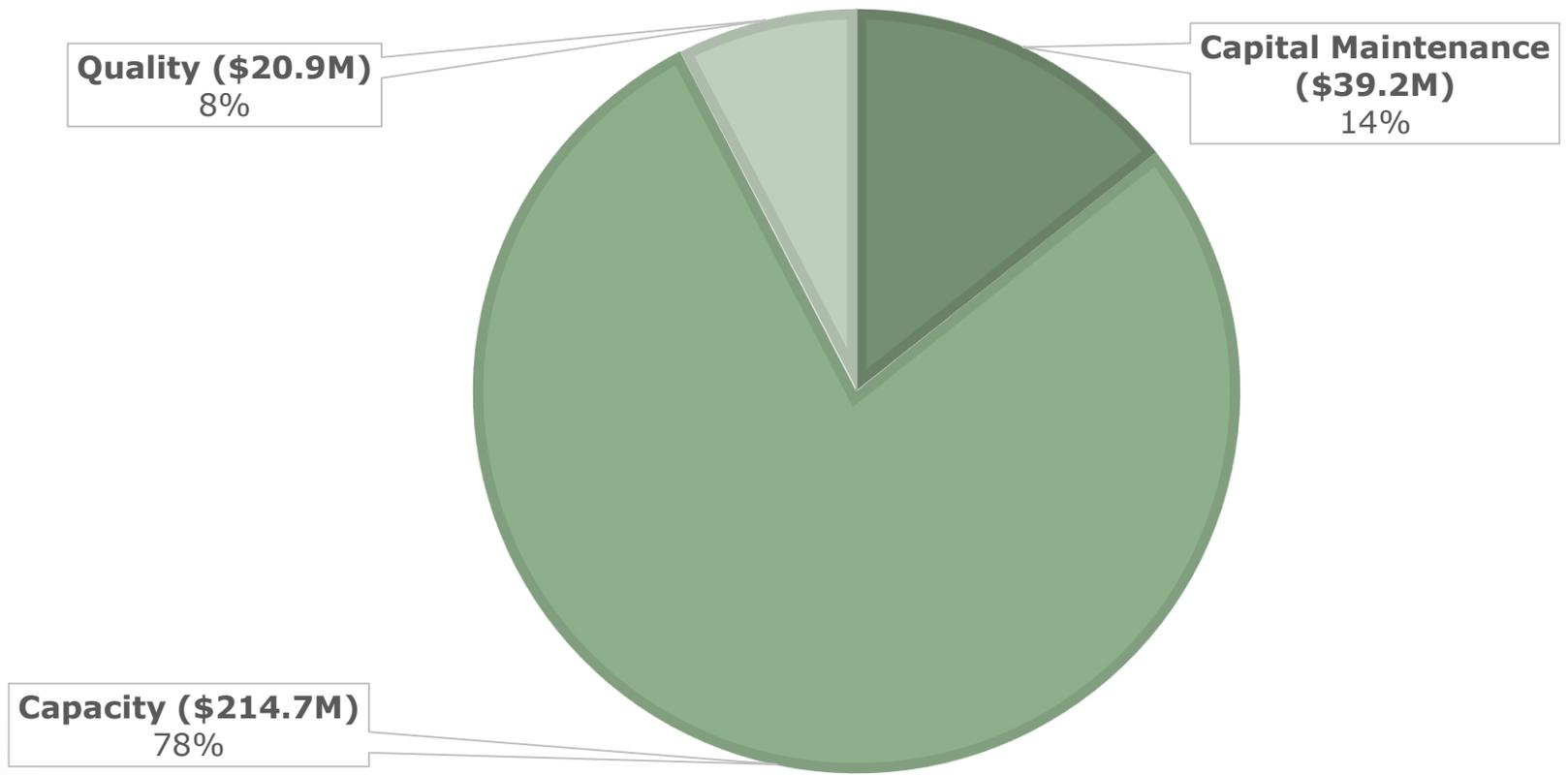




\$275M Capital Program Breakdown

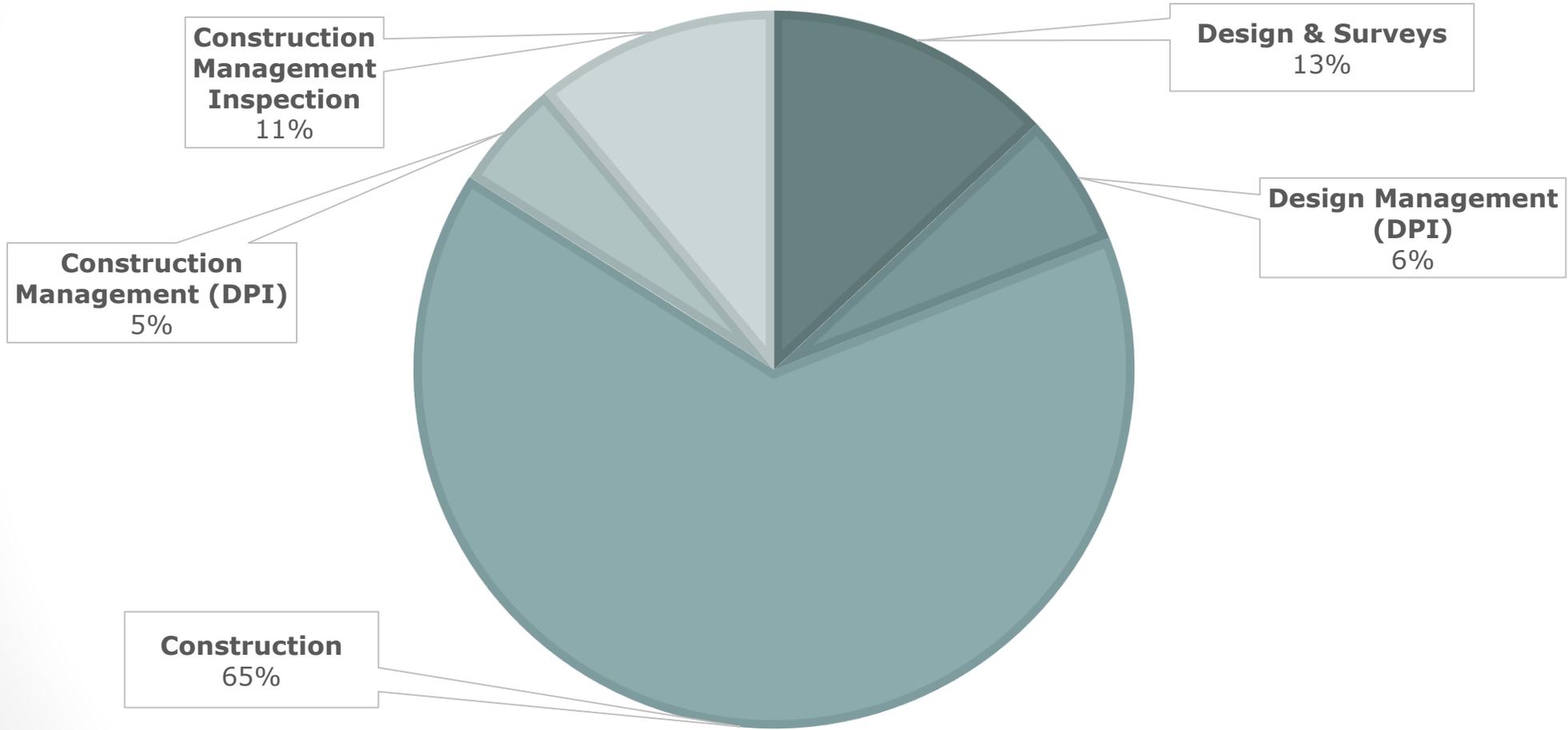
PROPOSED FY2022- FY 2031

■ Capital Maintenance (\$39.2M) ■ Capacity (\$214.7M) ■ Quality (\$20.9M)



Capital Project Component Costs

AVERAGE STORMWATER PROJECT COST

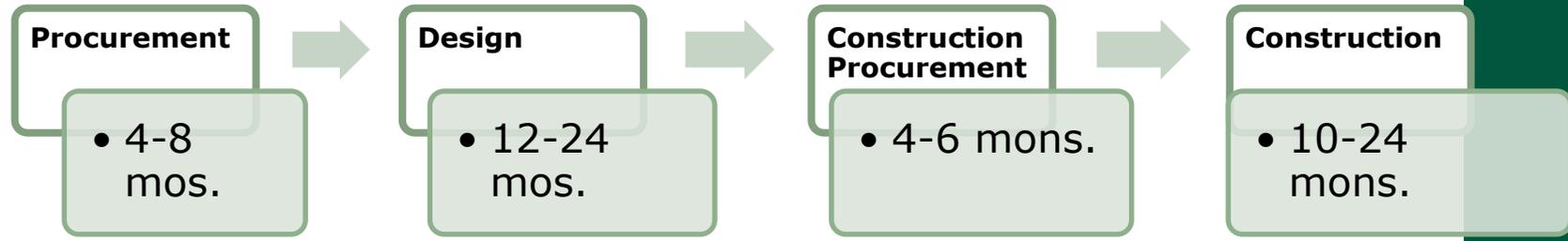


Typical Project Delivery Schedule (*Once Funded)



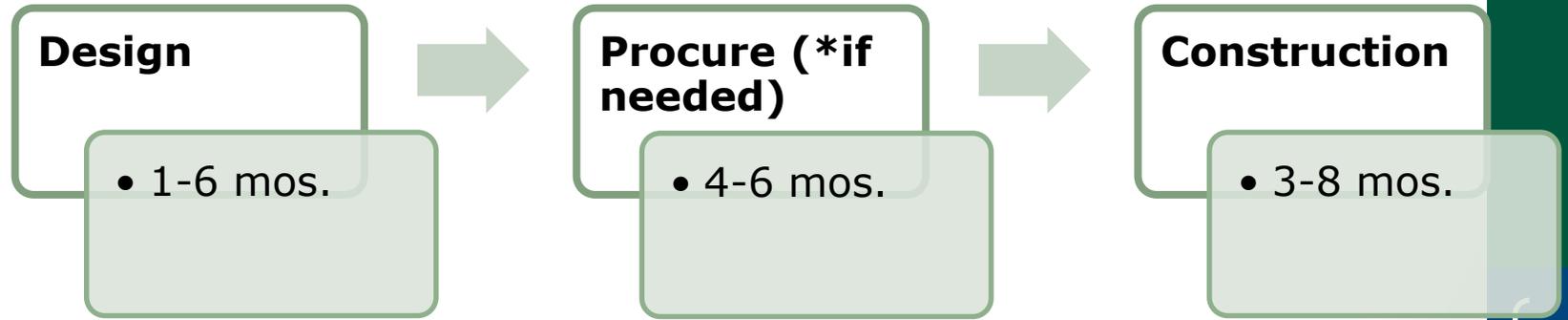
**Storm Sewer Capacity
Projects (Major CIP)**

Range of Average Timelines: 3-5 years



**Spot Improvements
Projects**

Average Time: 8-20 months





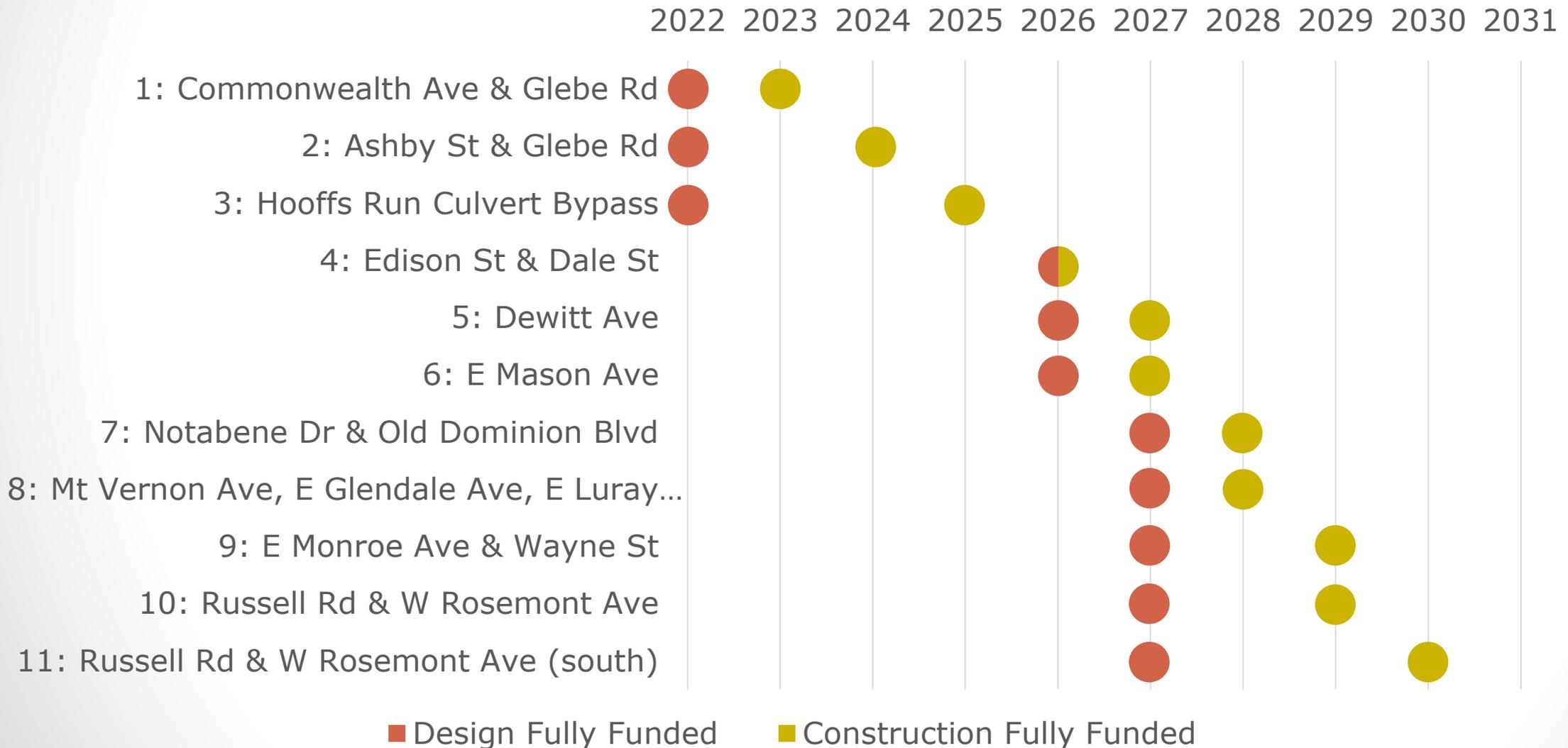
COMMON SOURCES OF DELAY & SCHEDULE RISK

- Protracted Stakeholder Engagement/Opposition to Project
- Obtaining Easements / Right of Access on private property
- Utility conflicts and/or relocation
- Changes in Funding (deferral, reprioritization, etc.)
- Contested Procurements / Lack of responsive bidders
- Project Prioritization changes based on new data/new issues
- Regulatory Approvals / Time of Year Restrictions
- Unforeseeable circumstances:
 - Change in property ownership/new stakeholder engagement
 - Changes in Regulatory or Environmental Requirements
 - New development/redevelopment



Funding* Timeline for Capacity Projects

(*for Planning & Budgeting Purposes, by fiscal year)



Capacity & Spot Improvement Near Term Task Schedule



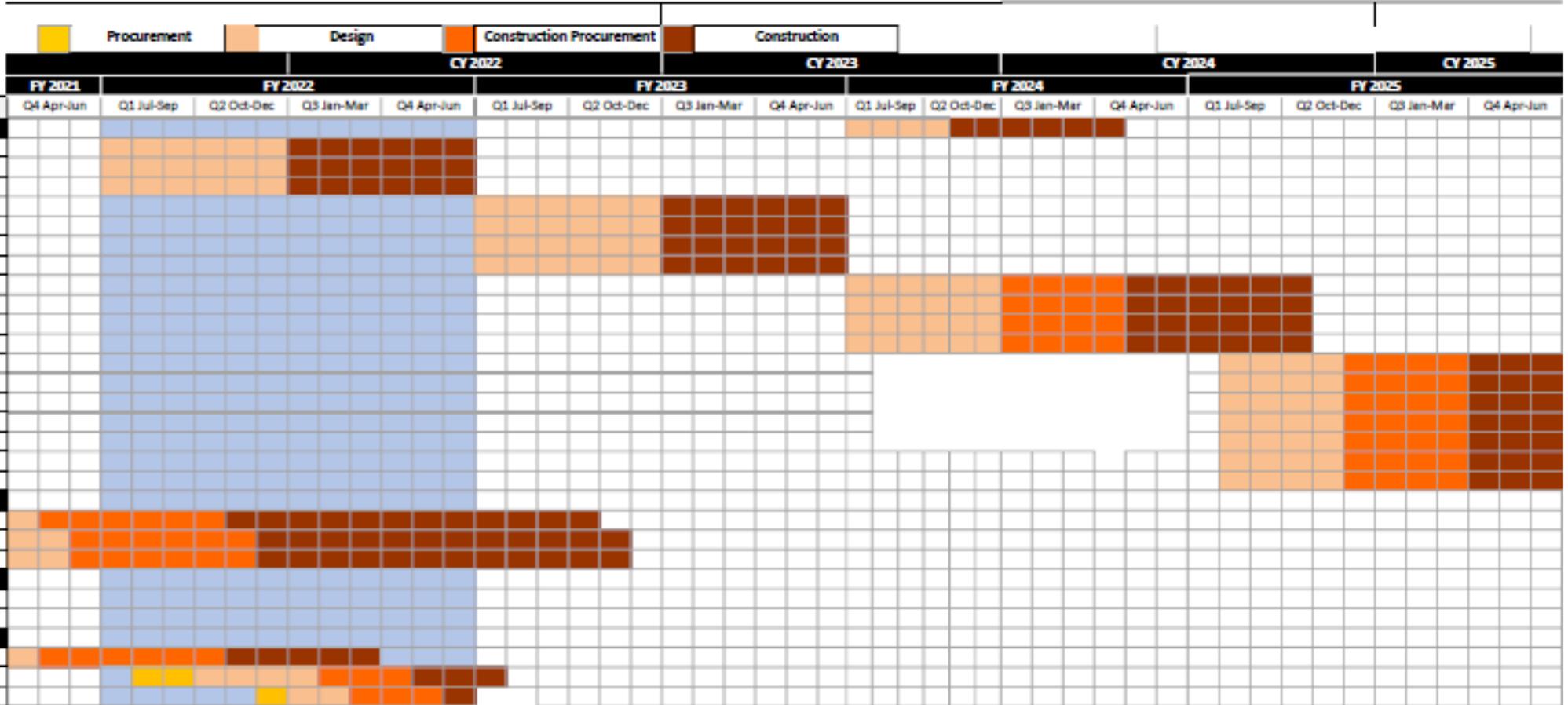
Comprehensive Stormwater Management Program	Procurement		Design				Construction Procurement		Construction								
	CY 2022		CY 2023				CY 2023		CY 2024				CY 2025				
	FY 2021		FY 2022		FY 2023		FY 2023		FY 2024		FY 2024		FY 2025		FY 2025		
	Q4 Apr-Jun	Q1 Jul-Sep	Q2 Oct-Dec	Q3 Jan-Mar	Q4 Apr-Jun	Q1 Jul-Sep	Q2 Oct-Dec	Q3 Jan-Mar	Q4 Apr-Jun	Q1 Jul-Sep	Q2 Oct-Dec	Q3 Jan-Mar	Q4 Apr-Jun	Q1 Jul-Sep	Q2 Oct-Dec	Q3 Jan-Mar	Q4 Apr-Jun
Capacity Projects																	
Commonwealth Avenue and E. Glebe																	
Ashby Street and Glebe Road																	
Hooff's Run Culvert Bypass																	
Edison and Dale Street																	
Dewitt Avenue																	
East Mason Avenue																	
Notabene Drive and Old Dominion Boulevard																	
Mt. Vernon Avenue, East Glendale Avenue, East Lury																	
East Monroe Avenue and Wayne Street																	
Russell Rd & W. Rosemont Avenue																	
Russell Rd & W. Rosemont Avenue																	
Spot Improvement Projects																	
Mt. Vernon Alley																	
Mt. Vernon Cul-de-sac Inlets																	
1345 Hancock Avenue Alley Flap Gate																	
Clifford / Manning Street Alley																	
1414 & 1416 Ruffner Drive																	
S. Jordan Street																	
N. Overlook Drainage																	
N. Columbus Street Alley																	
Carlisle Drive Alley																	
Douglas Cemetery																	
Monticello Park Outlet																	
Wallston Court Erosion																	
Lloyd's Lane																	
Key Drive Unnamed Tributary Channel																	
Oakland Terrace Timber Branch																	
Key Drive Unnamed Tributary Channel																	
Oakland Terrace Timber Branch																	
636 Timber Branch Pkwy																	
3929 Colonel Ellis Avenue																	
Key Drive Unnamed Tributary Channel																	
Oakland Terrace Timber Branch																	

Neighborhood Spot, Stream Restoration & Channel Maintenance Projects

Near Term Task Schedule



Comprehensive Stormwater Management Program





Key Outcomes

Mitigation Element	Current	Proposed	Change
Capacity Projects	\$19M over 10 years (3 projects)	\$170M over 10 years (11 projects)	+\$151M over 10 years (+6 FTEs)
Spot Improvement Projects	~\$0.5M/year (3-5 projects/yr)	~\$2.5M/year (8-11 projects/yr)	+\$2M/year (+2 FTEs)
Stream & Channel Maintenance	\$0.5M/year	\$0.9M/year	+\$0.4M/year
State of Good Repair	\$1M/year	\$2.5M/year	+\$1.5M/year (+4 FTEs)
Pilot Grant Program	\$0	\$750,000/year	\$750,000/year



Thank you!
Questions?



Background Slides

More Frequent, Intense Rainfall Events

- **2018:** Virginia's wettest year on record, 20"+ over normal
- **July 8, 2019:** Regional Flood
- **July 23, 2020:** Local Flash Flood
 - 60-80% of monthly avg in 30 minutes
- **Sept. 10, 2020:** Local Flash Flood
 - 2.5-4" with rates up to 3"/hr in 10 mins
 - Daily rainfall record at National Airport
- Increase in reported problems of property damage



Radar, September 10

Interdepartmental Flooding Management Task Force

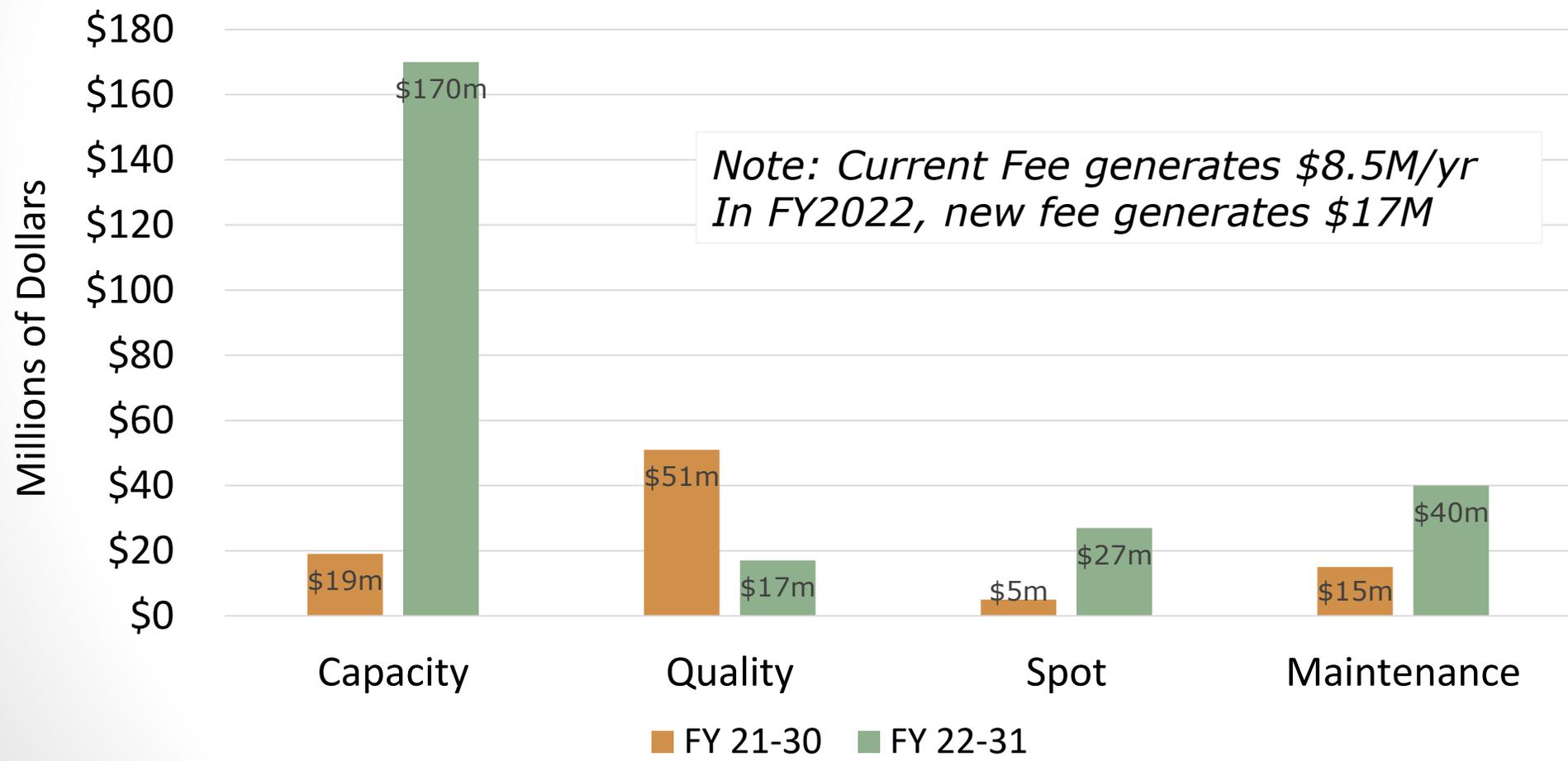


- Assembled to **urgently address** recent flash flooding from climate-change-induced severe rain events
- Six-week work period
- Developed recommendations for:
 1. Budget
 2. Programs & Legislation
 3. Early Warning & Communications
- **Extensive neighborhood-level engagement** ongoing to hear residents' concerns and identify additional needs



Reprioritized Stormwater Management Plan

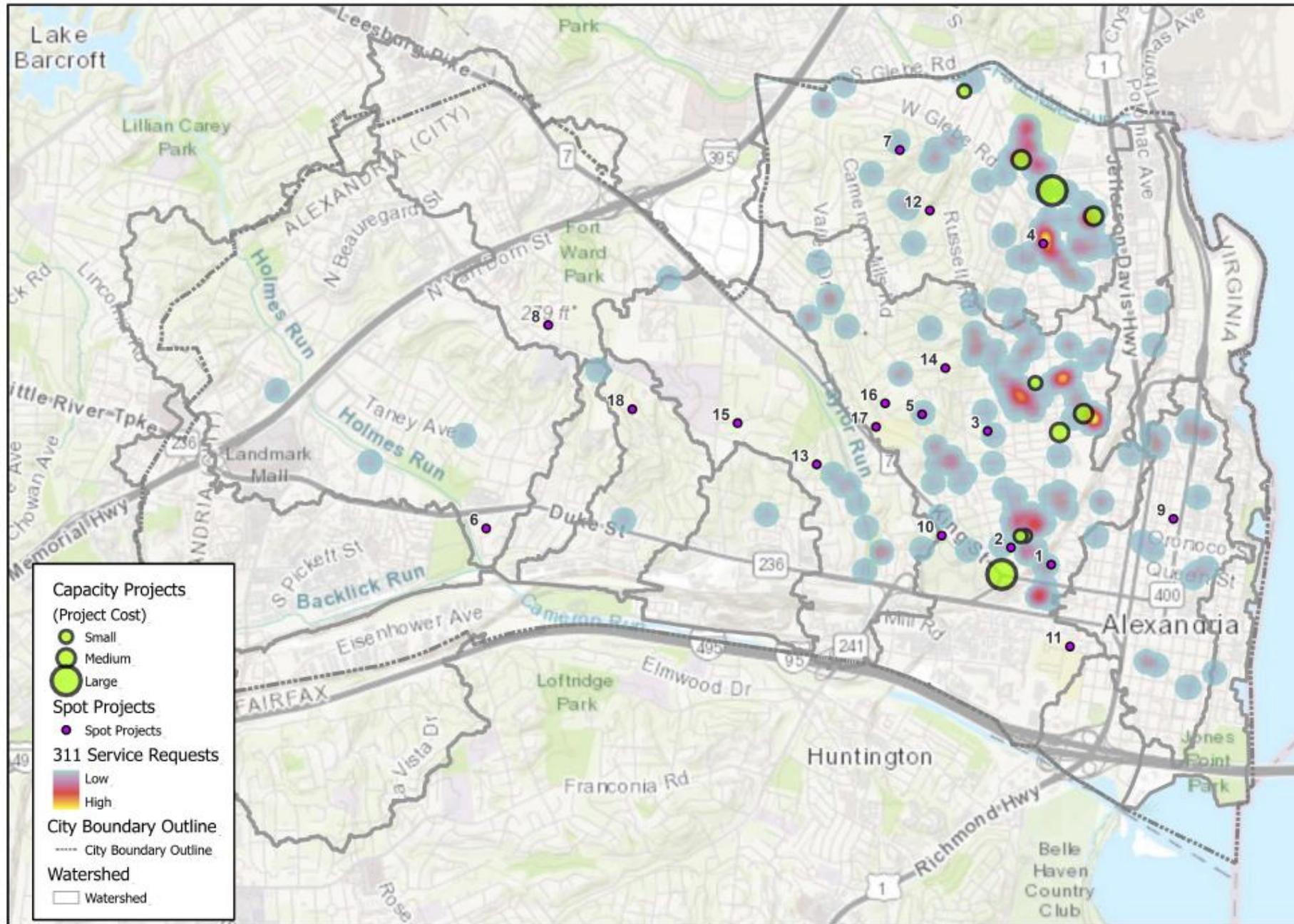
Change in spending from prior 10-yr. plan, plus added resources



Capacity and Spot Capital Projects



For illustrative purposes only





★ **Recommendation #1 (Budget)**: Approve a 100% SWU Fee rate increase with additional, varying increases in subsequent fiscal years

Increase bond capacity and reprogram water quality funding

Reflects Council directive on November 16 to **be more aggressive**

Bill fee increase in two steps to generate **\$14.8 million this calendar year**:

- May 2021 (FY2021)
- October 2021 (FY2022)

Increase of \$283.8 million in resources to apply to needs over the next 10 years



- ★ **Recommendation #2a (Programs)**: Develop a pilot grant program and technical assistance program to incentivize flood mitigation on private property.

Pilot Grant Program

- Partial reimbursement for flood-proofing on private property
- Retroactive to July 2019
- Examples include flood-proof doors, windows, and walls
- Program to be developed before FY 2022

Technical Assistance Program

- Help residents assess cause of flooding and identify potential solutions
- Complements pilot grant program
- Program has been initiated



- ★ **Recommendation #2b (Legislation)**: Support legislation that provides authority and funding to support localities dealing with the impacts of inland and urban flooding.

Legislative priorities approved by Council on December 8, 2020:

- ⑩ Increase Stormwater Local Assistance (SLAF) funding and evaluating scoring criteria to capture stormwater capacity needs
- ⑩ Joint Subcommittee on Inland and Urban Flooding
- ⑩ Authority to use City-sponsored grant funds on private property for flood protection measures that have a public benefit
- ⑩ Authority to regulate modifications to single-family detached residential structures where land disturbance is $<2,500 \text{ ft}^2$

★ **Recommendation #3a (Early Warning):** Enhance the City's flood early warning systems by taking the following actions by Summer 2021:



Add new stream and flow gauges



Upgrade rainfall data collection and flood warning systems



Enhance alert capabilities to reach more residents



Increase flood-related weather alerts



Explore a real-time stream gauge dashboard



Expand flood warning road signage



★ **Recommendation #3b (Communications):** Develop an enhanced outreach and communications strategy related to flooding.

Adopt a program brand (tentatively: "Be Flood Ready Alexandria")

