

# Baltimore City Department of Public Works



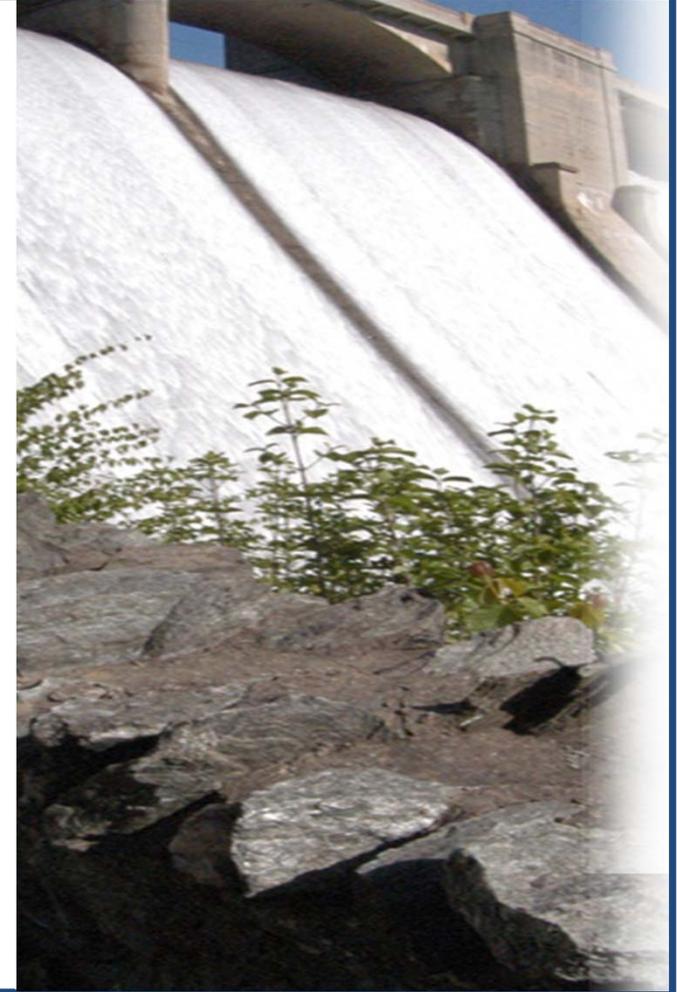
STEPHANIE  
RAWLINGS-BLAKE  
MAYOR

BALTIMORE CITY

**DPW**

DEPARTMENT OF PUBLIC WORKS

RUDOLPH S. CHOW, P. E.  
DIRECTOR



# Stormwater Management Program Fiscal 101



**Kimberly L. Grove, P.E.**  
**Department of Public Works**  
**City of Baltimore**

**April 2015**



**Baltimore City Department of Public Works**



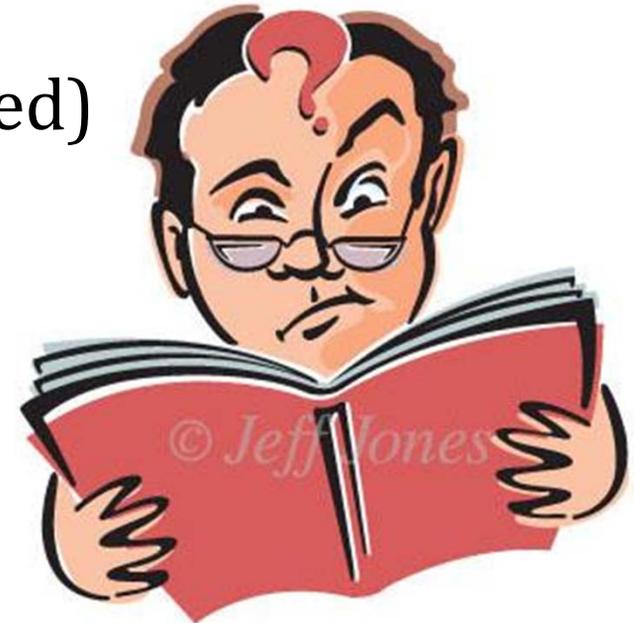
# Agenda

- Funding sources of the stormwater program
- Financing for capital projects
- Operations and capital expenditure forecasts
- Billing vs. revenue
- Budget planning vs. fiscal reporting
- WIP: projects, programs, and partnerships
- Grants
- Fiscal Timeline

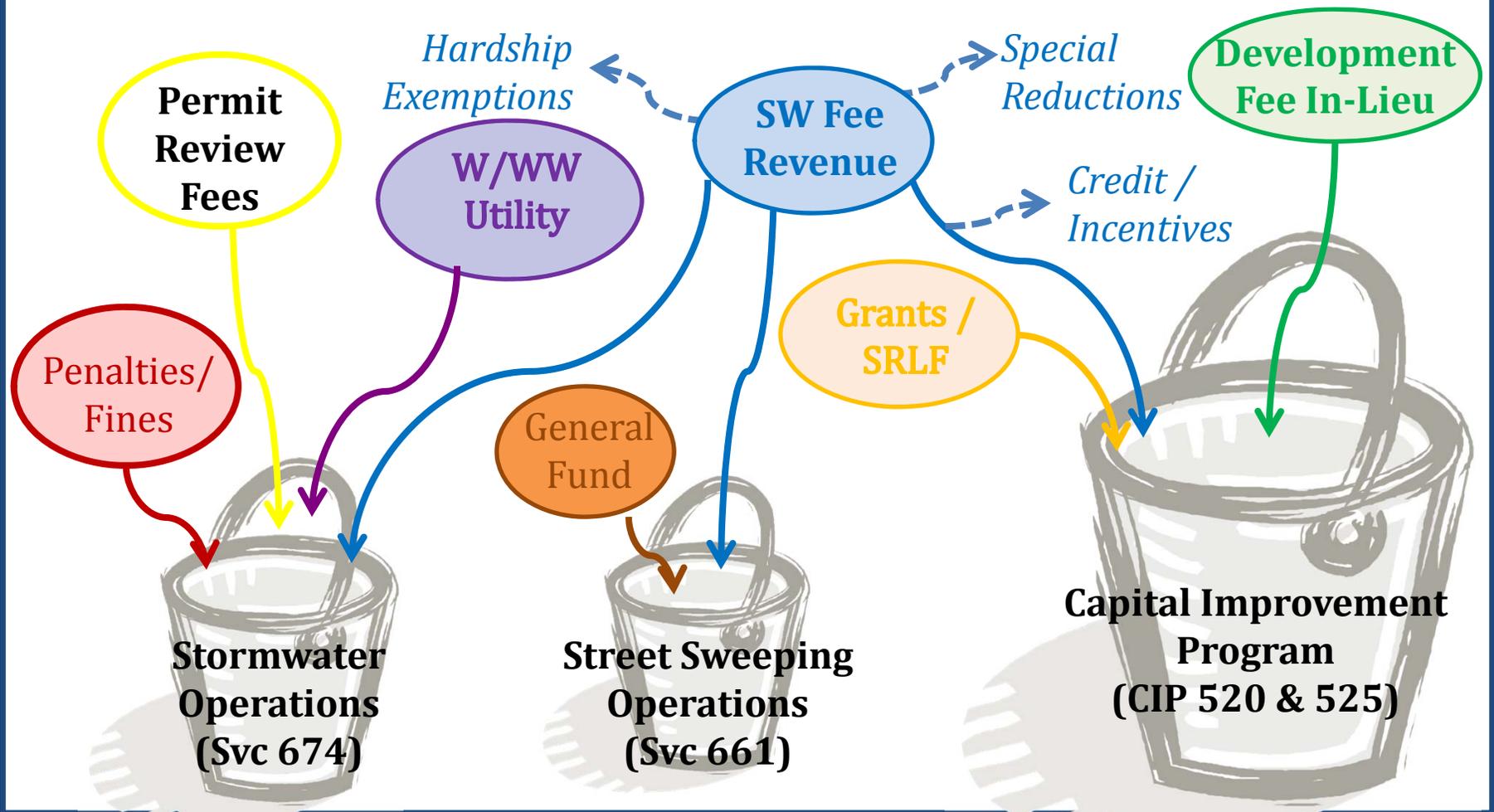


# Available Resources

- Plans and Projections (General)
  - Business Plan
  - MS4 WIP
- Annual Budget Proposals (Detailed)
  - CIP Budget
  - Operations Budget
- Reports (Actual)
  - State Fiscal Report
  - MS4 Annual Report



# Funding for Stormwater



# Financing CIP

- Existing Bonds
  - County Transportation Bonds (\$30.4M)
  - General Obligation Bonds (\$4.1M)
- Future Utility Revenue Bonds
  - Reserve amount
  - Bond duration
  - Interest
  - Administrative Fees

## How Debt Service Works

Projects in FY 17 will cost \$10M

If 100% paygo,  
FY 17 Revenue Req. = \$10M

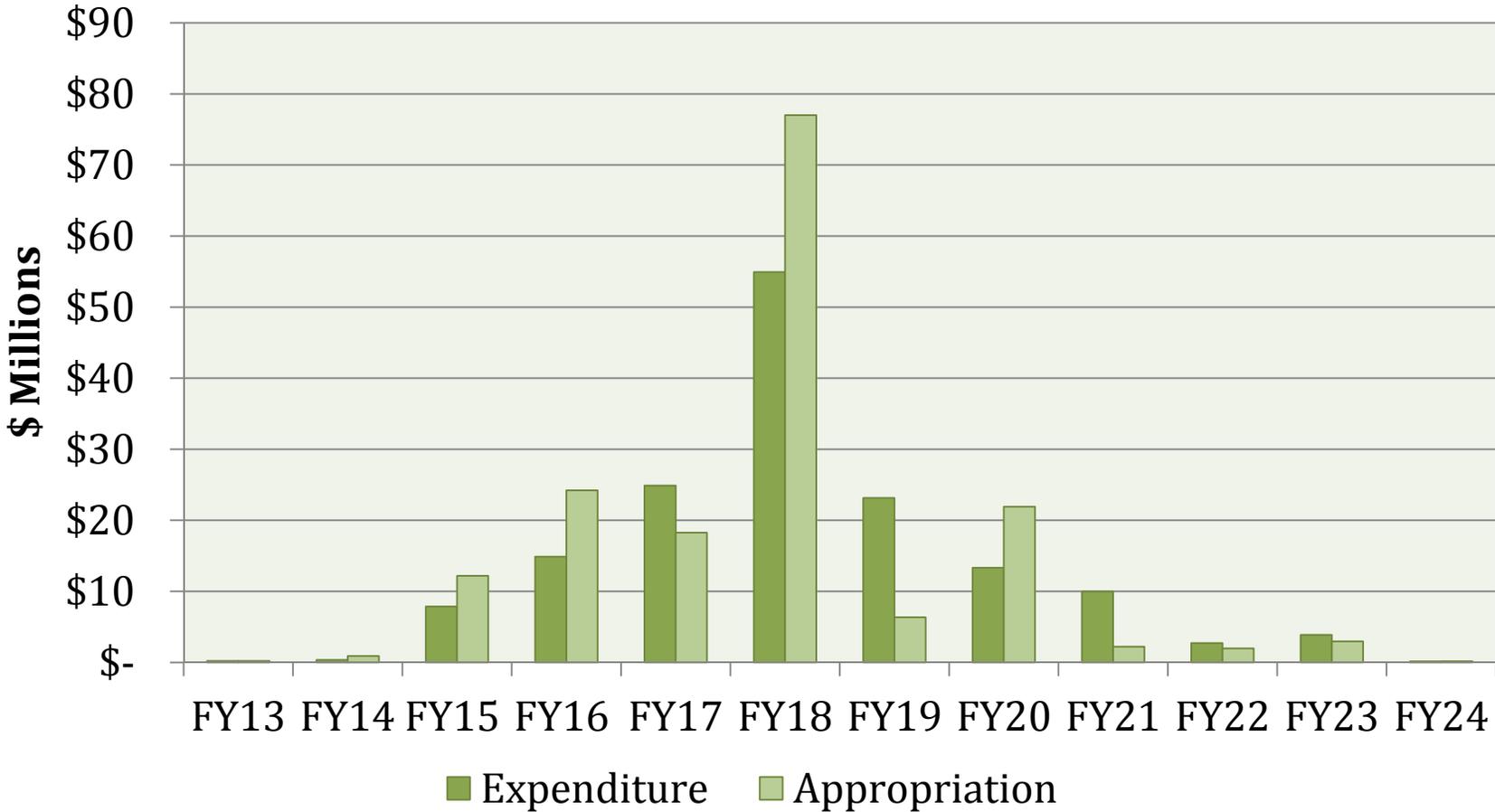
If 25% paygo, 75% is debt svc\*  
FY 17 Revenue Req. =  
\$2.5M (paygo)  
\$0.2M (debt srv)  
**\$2.7M (total)**

FY 18 – 47 Revenue Req. =  
**\$0.5M / year**

\* Assume 30 year @ 5%



# Current CIP Forecast



Baltimore City Department of Public Works

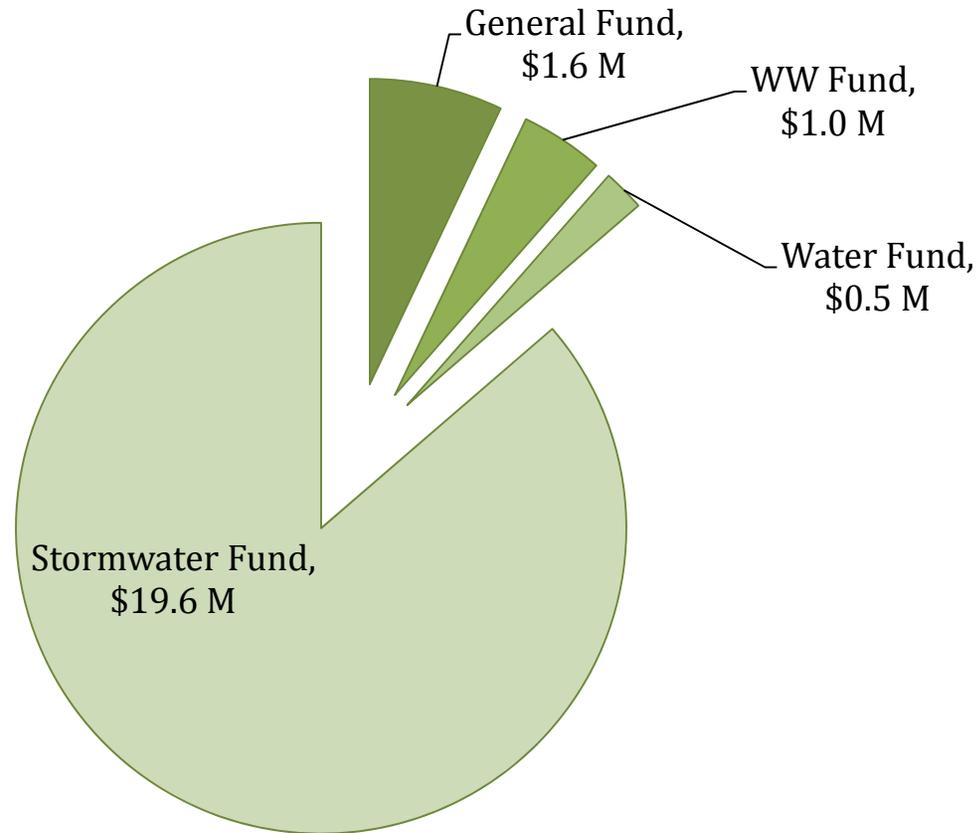


# Operations Funded by Stormwater Fee

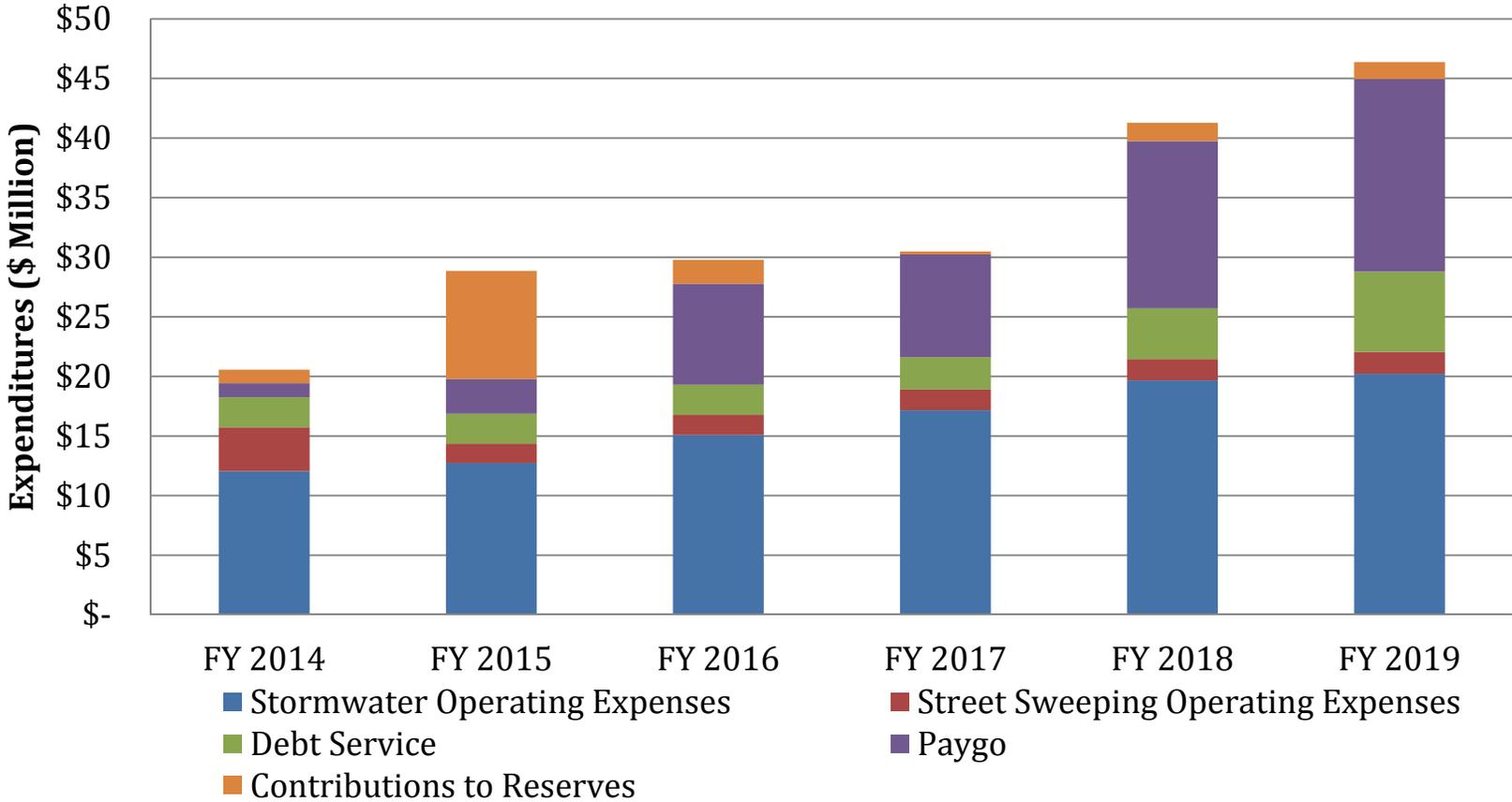
Activity	Amount (\$1,000)			
	Budget 2014	Actual 2014	Budget 2015	Proposed 2016
Storm Drain Maintenance	\$ 5,593	\$ 4,812	\$ 6,222	\$ 6,291
Waterway Maintenance	\$ 580	\$ 1,497	\$ 1,784	\$ 1,025
Water Quality Monitoring and IDDE	\$ 2,022	\$ 1,605	\$ 2,239	\$ 2,478
Watershed Liaison	\$ 446	\$ 49	\$ 479	\$ 628
Engineering	\$ 832	\$ 1,060	\$ 1,400	\$ 131
Administration	\$ 4,204	\$ 2,031	\$ 2,675	\$ 2,300
Debt Service	\$ -	\$ 618	\$ 2,929	\$ 3,222
Plans Review & Inspections	\$ -	\$ -	\$ 714	\$ 1,917
Street Sweeping	\$ 3,702	\$ 4,201	\$ 4,218	\$ 3,366
<b>Total</b>	<b>\$ 17,379</b>	<b>\$ 15,873</b>	<b>\$ 22,660</b>	<b>\$ 21,358</b>



# FY 15 Operations Budget for Stormwater



# Expenditure Projections



# FY 15 Program 674 Outcome Measures

- Impervious area treated : 200 acres (initiated by City)
- SWM/ESC inspections: 95% of construction sites / 2 weeks
- SWM/ESC plans review response within 14 days : 70%
- Inventory completed for small pipes for illicit connection:  
10 miles
- Inlets routinely cleaned on a quarterly basis: 500



# Stormwater Fee Structure

ERU = Equivalent Residential Unit  
1 ERU = 1,050 square feet



Single family  
residential  
(SFR)



Flat Fee  
(3 tiers)

- Tier 1: \$10/ Quarter
- Tier 2: \$15 / Quarter
- Tier 3: \$30 / Quarter



All other  
properties  
(NONSFR)



\$15 / Quarter per ERU



# Stormwater Utility Revenue

Fiscal Year	Storm Fee Billings	Projected Storm Fee Revenue
2014	\$23.4 M	\$16.7 M
2015	\$22.1 M as of 3/31/15	\$24.6 M

Estimated other revenue sources:  
 \$250 K / year in review fees  
 \$50 K / year in penalties/ fines



# MS4 and TMDL WIP



## • **Projects**

- Large Stormwater BMPS
- Stream Restoration Projects
- Urban ESD Projects
- Impervious area / Greening Projects

## **Budget**

CIP

## • **Programs**

- Increased street sweeping
- Preventative inlet cleaning
- Illicit Discharge Detection and Elimination Program

Operations  
(Direct)

## • **Partnerships**

- Volunteer projects
- Development regulations
- Grants and incentives
- Education / outreach

Operations  
(Indirect)

# Practice Details

MS4 WIP Project ID	BMP Type	Watershed	Location	Eq. Imp Area Restored (ac)	Estimated Pollutant Removal (lbs / yr)			Estimated Capital Cost	Schedule to Start (FY)		NOTES
					TN	TP	TSS		Design	Construction	
<b>Structural / Traditional BMPs</b>											
S01	SW Pond Retrofit	Gwynns Falls	Gwynns Run, Carrolton Park	25	132	17	15,525	\$505,000	2016	2018	Expansion and retrofit to increase pollutant removal efficiency
S02	SW Pond Retrofit	Gwynns Falls	SetonBusiness Park Park	41	214	27	25,169	\$795,000	2016	2018	Expansion and retrofit to increase pollutant removal efficiency
S03	Pond Retrofit and New Pond	Back River	North Point Road @ Kane and Quad	60	317	40	37,260	\$3,290,000	2015	2016	Ref: Drainage Study Report 2012. Includes infrastructure improvement for flooding.
S04	Wetland / Pond	Back River	Perring Parkway at Cloville (HR-R28B)	15	63	13	8,484	\$344,000	2016	2018	Ref:Back River SWAP
S05	Wetland / Pond	Back River	Herring Run Park below Shannon at Lyndale (HR-R15C)	20	84	17	11,465	\$550,000	2016	2018	Ref:Back River SWAP
S06	Wetland	Back River	Herring Run Park below Shannon at Kavon Ave (HR-R39)	20	84	17	11,465	\$550,000	2016	2018	Ref:Back River SWAP
S07	Wetland	Back River	Herring Run Park below Parkside at Sinclair (HR-R15A)	65	275	56	37,260	\$1,600,000	2016	2018	Ref:Back River SWAP
S08	Wetland	Back River	Chinquapin Run Park between Belvedere and Alameda (CH-R6A)	45	190	39	25,795	\$1,840,000	2016	2018	Ref:Back River SWAP
S09	Bioretention Area	Baltimore Harbor	Faring Baybrook Park Rec Center (MC-18a)	3	17	3	1,702	\$160,000	2016	2018	Ref: Masonville Cove SWAP 2014
S10	Bioretention Area	Gwynns Falls	Park Hts Virginia + Homer	2	11	2	1,135	\$60,000	2016	2018	Ref: UPWP / Sabra Wang Study
S11	Shallow extended detention wetland	Jones Falls	West Colspring and Brand Ave (LJ-R9)	9	46	8	4,624	\$212,000	2016	2018	Ref: Lower Jones Falls SWAP
S12	Shallow wetland	Jones Falls	Woodheights and La Plata (LJ-R38)	4	21	3	2,102	\$96,000	2016	2018	Ref: Lower Jones Falls SWAP
<b>Subtotal Structural / Traditional:</b>				<b>309</b>	<b>1,455</b>	<b>243</b>	<b>181,986</b>	<b>\$10,002,000</b>			

**What are we doing?**

**Where?**

**Env. benefit?**

**Cost? When?**



**Baltimore City Department of Public Works**



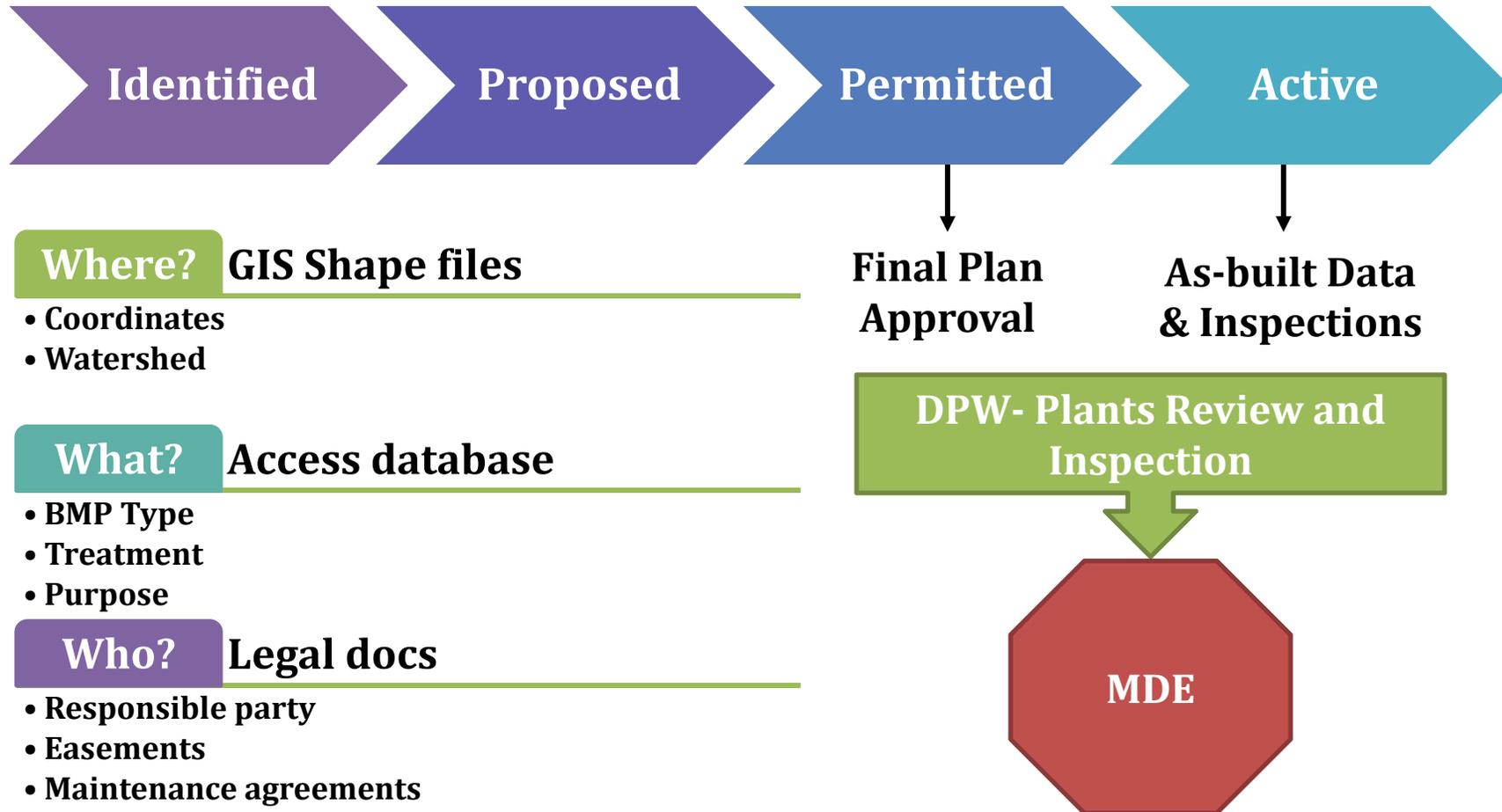
# MS4 Annual Report

Description of Total Annual Cost	FY 14 Expenditure	FY 15 Budget
Legal authority	\$0	\$0
Source ID	\$121,115	\$283,484
Stormwater management	\$840,054	\$1,100,831
Erosion and sediment	\$396,893	\$1,004,844
Illicit detection/elimination (IDDE)	\$1,765,662	\$2,120,269
Trash elimination	\$1,301,384	\$1,584,866
Property management	\$5,469	\$5,332
Inlet cleaning	\$4,319,011	\$5,467,298
Street sweeping	\$4,217,840	3,264,308
Road maintenance - other	\$0	\$0
Public education	\$278,159	\$499,563
Watershed assessment	\$149,784	\$299,368
Watershed restoration (all projects)	\$1,960,750	\$5,928,296
Chemical monitoring	\$104,543	\$195,924
Biological monitoring	\$8,857	\$11,191
Physical assessment	\$0	\$0
Design manual monitoring	\$0	\$0
TMDL assessment	\$59,653	\$71,363
<b>Total NPDES program</b>	<b>\$15,529,175</b>	<b>\$21,836,937</b>

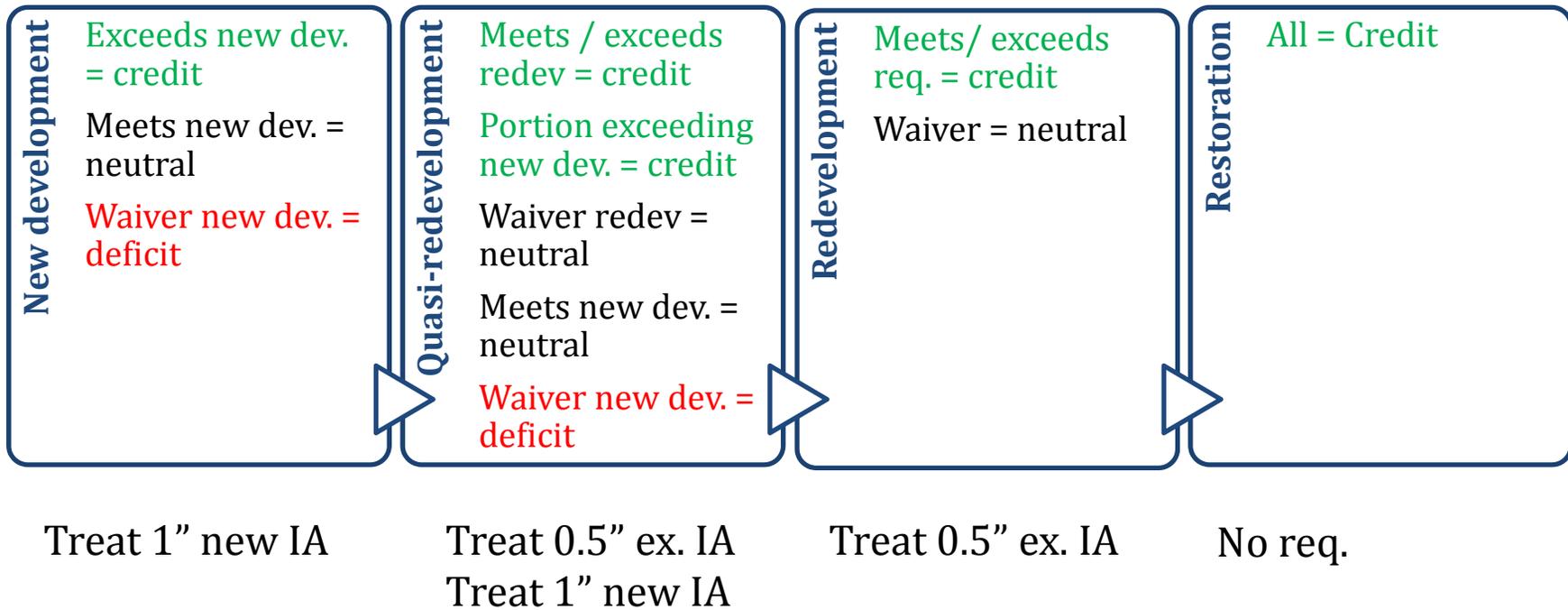
\*\* Table does not include other stormwater management costs.



# How Do Projects Get Counted?



# Partnerships - What Counts?



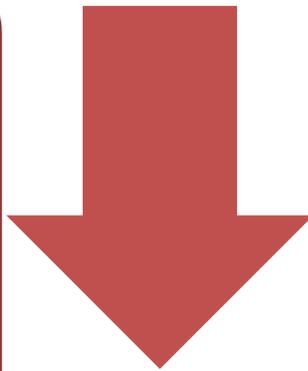
# Grants

- FY 16 Budget Proposal Grant Appropriations
  - \$2.75 M from NFWF, MEMA, and CBT for CIP
  - \$0.2 M from CBT for planning / incentive
  - \$0.1 M for City-funded grant program
- Staffing: Grant Procurement Officer
- Previous grant administration:
  - Chesapeake Bay Trust (Design Comp.)
  - Parks and People Foundation (small grants)



# Revenue Impact and Budget Decisions

- Diverted budget
- Poor revenue bond ratings
- Delayed WIP execution
- Decreased grant / incentive options
- Regulatory fines
- No water improvement



## Negative Impact

- Poor collections
- Budget excess
- No grants
- Low partnership
- Slow development
- Regulatory fines
- Emergency

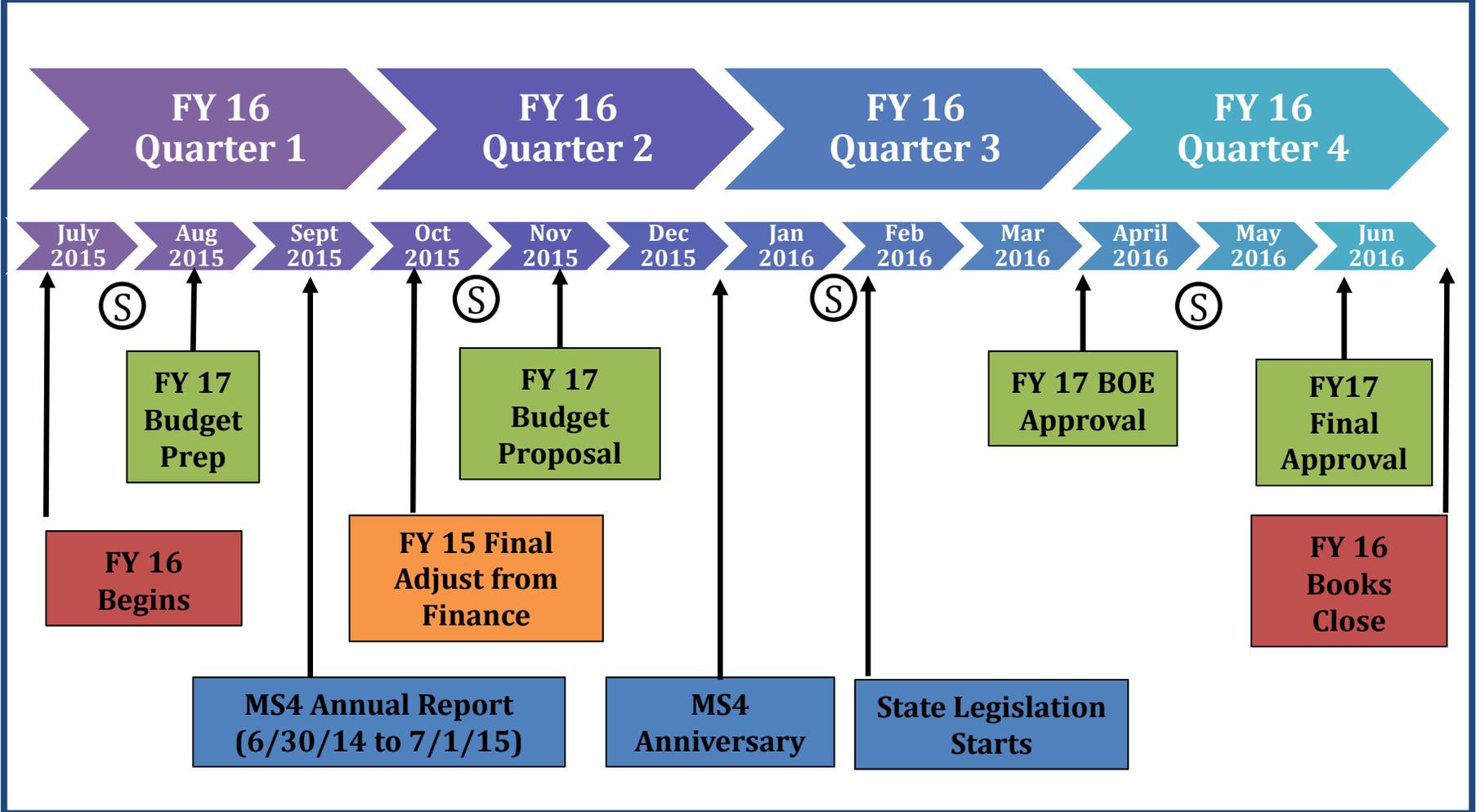
## Positive Impact

- Good collections
- Expenditures within budget
- Successful grant applications
- High partnership participation



- Increased reserve for contingencies
- Use of pay go instead of debt service
- Future rate stability
- Increased grants / incentives option
- Improved trust and accountability

# Fiscal Planning Timeline



Baltimore City Department of Public Works



**Thank you for your time.**

**Department of Public Works  
Office of Compliance and Laboratories**

**Ms. Kimberly L. Grove, P.E.  
Kimberly.grove@baltimorecity.gov  
410-396-0732**



**Baltimore City Department of Public Works**

