T&E COMMITTEE #3&4
March 2, 2020

Worksession

MEMORANDUM

February 26, 2020

TO: Transportation & Environment Committee

FROM: Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Worksession: FY21-26 Capital Improvements Program (CIP) Conservation of Natural Resources: Agenda Item #3: Storm Drains and Agenda Item #4: Stormwater Management**

NOTE: Both the Storm Drains CIP and the Stormwater Management CIP are funded via the Water Quality Protection Fund. Therefore, any potential expenditure changes in these programs do not affect the County's affordability calculations with regard to G.O. bonds or general current revenue. Instead, these projects, either through current revenue or debt repayment impact the Water Quality Protection Charge and the charge per "equivalent residential unit" to be assessed for FY21.

- **Storm Drains**
  Highlights:
  - All projects recommended to continue at the same annual funding levels as approved.
  - No new "stand alone" projects.
  - Backlogs being experienced in several projects
  - **Council Staff recommends increasing levels of effort in some projects.**
- **Stormwater Management: Approve as Recommended by the County Executive**
  - Six-year program is up by $7.2 million (6.9 percent)
  - Increase recommended in the SM Facility Major Structural Repair project
  - Multiple projects recommended to be consolidated into the Stormwater Retrofit: Countywide project.
  - Still waiting on State action on the County's NPDES-MS4 permit.
  - **Council Staff supports approval of the County Executive's recommendations**

NOTE: Council Staff has asked DEP and DOT to provide summary presentations of their programs, including some specific "before and after" examples of recently completed work funded out of these various CIP projects.

The following officials and staff will be attending this meeting:

Storm Drains CIP

- Dan Sheridan, Design Section Chief, Division of Transportation Engineering, Department of Transportation
- Mary Beck, OMB CIP Manager
- Veronica Jaua, OMB Fiscal and Policy Analyst

Stormwater Management CIP

- Patty Bubar, Deputy Director, Department of Environmental Protection (DEP)
- Frank Dawson, Chief, Watershed Restoration Division, DEP
- Jim Stiles, Chief, Design and Construction Section, DEP

Attachments

- County Executive's Recommended FY2126 CIP (Storm Drains) (©1-8)
- County Executive's Recommended FY21-26 CIP (Stormwater Management) (©9-17)
- Storm Drain-related Public Hearing Testimony (©18-23)
- Infrastructure Task Force Report (February 2020) Excerpt (©24)
- February 21, 2020 Memorandum from Councilmember Andrew Friedson to T&E Committee Members (©25-26)

AGENDA ITEM #3: FY21-26 STORM DRAINS CIP

Summary

The Department of Transportation (DOT) Division of Transportation Engineering manages the County storm drains program. Properly functioning storm drains remove excess water from the roads, ensuring safer road conditions while also protecting roads from water damage. Properly functioning storm drains also protect adjacent properties from water runoff damage. Work is identified through requests for assistance that come from property owners as well as from government agencies. DOT works in partnership with the state and other municipalities when state roads and/or municipal properties are involved.

DOT staff will provide a brief presentation of the storm drains program.

An excerpt from the Executive's Recommended FY21-26 CIP for storm drains is attached on ©19-27. The Executive is recommending $16.8 million for FY19-26 (the same amount as the Approved FY19-24 CIP) for four Storm Drain projects. No new projects are recommended. The following table shows the recommendation by fiscal year compared to the latest Approved FY19-24 CIP.

Table #1
Storm Drains CIP (in 000s)

	Six-Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
FY19-24 Latest Approved	**16,836**	**2,806**	**2,806**	**2,806**	**2,806**	**2,806**	**2,806**		
FY21-26 CE Recommended	**16,836**			**2,806**	**2,806**	**2,806**	**2,806**	**2,806**	**2,806**
percent change from approved	0.0%			0.0%	0.0%	0.0%	0.0%		

The sources of funds for the Storm Drains CIP are shown in the following chart.

Table #2
Storm Drains CIP (in $000s)

	FY19-24 Total	FY21-26 Total	$$$ Change	% Change
Total	**16,836**	**16,836**	**-**	**0.0%**
Long-Term Financing	13,220	13,500	280	2.1%
Water Quality Protection Charge	3,616	3,336	(280)	-7.7%

The chart shows that Long-Term Financing (paid with Water Quality Protection Charge current revenue) is the dominant funding source for this program. There is also some Water Quality Protection Charge current revenue included as well. Some storm drain projects can involve State or other outside participation, although none of these sources are assumed in the Approved or Recommended CIP at this time.

Public Hearing Testimony (see ©18-23)

The Council received public hearing testimony from the President of the Civic Association of River Falls (CARF) in Potomac expressing support for drainage projects to address flooding experienced in this community in July 8, 2019 and again on August 6. DOT did some clearing of debris after the July flood and are currently doing additional planning work to develop a comprehensive solution for this area.

The Council also heard from a resident of the Laurel Hill neighborhood in Bethesda (near Bradley Boulevard and Seven Locks Road) which has been working with DOT for some time on drainage issues in their area. The resident supports increased funding for storm drain projects to address these issues.

DOT staff will be available to discuss these and other issues at the Committee worksession.

Project Review

Facility Planning: Storm Drains (PDF on ©2-3)

Facility Planning: Storm Drains

	Six-Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
FY19-24 Latest Approved	**1,740**	**290**	**290**	**290**	**290**	**290**	**290**		
FY21-26 CE Recommended	**1,740**			**290**	**290**	**290**	**290**	**290**	**290**
change from approved	-			-	-	-	-		
percent change from approved	0.0%			0.0%	0.0%	0.0%	0.0%		

This project provides for the investigation and analysis of various storm drainage assistance requests (DARs) initiated by private citizens and public agencies. Non-capital maintenance work (such as cleaning out storm drains) is referred immediately for quick turnaround. For capital work,

depending on the complexity of the project, in-house staff or consultants design projects to a 35 percent design level. At that point, projects that cost over $500,000 become stand-alone projects if approved. Projects costing less than $500,000 are constructed in the Storm drain: General project.

A large portion of funds from this project covers the costs of responding to Drainage Assistance Requests (DARs), background research, data collection, survey, and concept alternative evaluation.

According to DOT staff, there has been an uptick in the number of requests in recent years with 205 drainage assistance requests in FY19 and 106 drainage assistance requests in FY20 to date. DOT responds (email or phone call) to requests within 48 hours with a goal of doing site visits/evaluations within two weeks. DOT's goal is to establish a plan of action within two weeks of a site evaluation. However, the severity of the issues and the volume of work has lengthened the timeframe for inspections and evaluations. The actual design work can take 6 months to a year depending on the complexity of the project.

The County Executive is recommending $290,000 annually in FY21 and beyond (the same annual level of funding in the FY19-24 approved project), funded entirely with Water Quality Protection Charge current revenue funding. These dollars cover both in-house staff and consultant services.

The annual level of effort in this project was $250,000 as far back as FY09 but was increased to its current level of $290,000 in FY17 (a 16 percent increase). At the same time, as noted earlier, the DARs have risen in volume and the solutions have gotten more complex and expensive leading to a backlog in planning work after the initial site visits are completed.

Council Staff recommends stepping up the annual level of effort in this project by $30,000 per year (about a 10 percent increase) beginning in FY21 to help address the planning backlog. The impact of this (and increases being considered in other projects) on the Water Quality Protection Fund and Charge will need to be revisited during the DEP Operating Budget review later this spring.

Outfall Repairs (PDF on ©4-5)

Outfall Repairs

	Six-Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
FY19-24 Latest Approved	**2,772**	**462**	**462**	**462**	**462**	**462**	**462**		
FY21-26 CE Recommended	**2,772**			**462**	**462**	**462**	**462**	**462**	**462**
change from approved	-			-	-	-	-		
percent change from approved	0.0%			0.0%	0.0%	0.0%	0.0%		

This project provides for the repair of existing storm drain outfalls into stream valleys. The priorities for this project are developed in coordination with DEP. In addition to planned projects (see below), DOT also receives and coordinates efforts for one or two requests per month from various sources, including DOT, DHS, DEP, WSSC, and M-NCPPC.

Projects completed in FY19 and FY20 include:

Daniel Road-This project included grading, reconstruction of a storm drain structure, plunge pools, and stream bed improvements adjacent to 2901 Daniel Road. Construction cost $73,728.21

Hatherleigh Drive-This project included grading, reconstruction of a storm drain structure, and stream bed improvements adjacent to 10205 Hatherleigh Drive. The invoice for the final construction cost has not been submitted by the contractor yet. The estimated construction cost is $15,000.

Bennington Drive -This project included grading, reconstruction of a storm drain structure, slope repair with coir matting, installation of rip rap, installation of a swale approximately 2-3 feet off Bennington Drive, planting of trees and shrubs and stream bed improvements across from 618 Bennington Drive. Construction cost $71,432.36

Charred Oak at Hollyoak (Site One) - This project included grading, installation of a storm drain structure, storm drainpipe, rock sills, step pools and planting of trees and shrubs and stream bed improvements adjacent to 9112 Charred Oak. Construction cost $159,981.88.

Charred Oak Site Two- This project included grading, installation of a storm drain structure, storm drainpipe, rock sills, step pools and planting of trees and shrubs and stream bed improvements between 9100 and 9104 Charred Oak. Construction cost $73,678.88.

Menlo Avenue – This project included the installation of a new inlet, replacement of an existing storm drain pipe, extension of the storm drain outfall to an existing stream, and the installation of a plunge pool and stabile outfall between 10217 and 10219 Menlo Avenue. Construction cost is $30,291.00.

Kemp Mill Road – This project included the installation plunge pools, step pool, rock, and outfall stabilization between 12201 and 12203 Kemp Mill Road. Construction cost is $33,992.40.

DOT staff has noted that, *"there are currently 13 outfalls qualifying for repair that are considered non-emergency requiring survey, design, permitting, and MNCPPC coordination when time and budget allows."*

For FY21-26, the County Executive recommends an annual expenditure level of $462,000, which is the same annual level as in the approved CIP. Funding is split between Water Quality Protection Charge current revenue and Long-Term Financing. The Executive recommends a two-year appropriation ($924,000) to give DOT more flexibility in year one of the CIP.

Storm Drain Culvert Replacement (PDF on ©6)

Storm Drain Culvert Replacement

	Six-Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
FY19-24 Latest Approved	**7,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**		
FY21-26 CE Recommended	**7,200**			**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**
change from approved	-			-	-	-	-		
percent change from approved	0.0%			0.0%	0.0%	0.0%	0.0%		

This project provides for the replacement of failed storm drain pipes and culverts that are less than 6 feet in roadway longitudinal length.[1] The project does not make major changes to the location or size of the existing storm drain facilities. The work done out of this project includes systematic work and emergency work. DOT defines this work as follows:

> ***Systematic work*** *would be characterized as the repairs of fatigued and/or damage to the storm drain infrastructure, that is most likely reported by residents to MC311 or other agencies within the County Government. Those repairs or storm drain replacements are subsequently scheduled to be performed as funding allows. These projects sometimes require permit acquisition and coordination.*
>
> ***Emergency work*** *would be characterized as reported failures that require immediate attention for the safety of the public. Staff moves swiftly to ensure that the site is made safe. Critical coordination efforts begin as plans are then made for repairs.*

Emergency work, by definition, is unforeseen and therefore when this type of work arises, it is funded out of the same annual level of effort in this project as the systematic work unless supplemental funding is sought.

For FY21-26, the County Executive recommends the $1.2 million per year; the same annual level of expenditures as in the Approved FY19-26 CIP. The project is funded entirely with Long-Term Financing.

In the FY15-20 CIP, funding was included in this project for an asset inventory and condition assessment. According to DOT this work is now 85 percent complete.

The Eighth Report of the Infrastructure Maintenance Task Force (February 2020) includes the results of the survey work to date (see ©24) and identifies a backlog of $47.3 million and an "Acceptable Annual Replacement Cost" of $4.04 million. The current level of effort is about 30 percent of that level.

DOT has identified the following work completed and/or scheduled in this project:

FY19
Turkey Foot Culvert Replacement
Wembrough Storm Drain Repairs
Kinster Drive Culvert Replacement
Falling Creek Road Culvert Repair
River Road Culvert Replacement
Hidden Valley Storm Drain Repairs
Aldershot Storm Drain Replacement
Memory Lane Storm Drain Repair

FY 20
Belfast Road Culvert Replacement
Fenway Road Culvert Replacement
Spicewood Lane Culvert Replacement
Gridley Lane Culvert Lining

[1] Structures longer than 6 feet in longitudinal length would continue to be addressed in the Bridge Renovation Program project (No. 509753).

Randolph Rd. @ Burkhart St. Storm Drain Repairs
Avoca Lane Storm Drain Repairs
Cherry Grove Drive Storm Drain Replacement
FY 21
8409 Garland Ave. Storm Drain Repairs
Germantown Road Culvert Lining
4703 DeRussey Parkway Storm Drain Repairs
7303 Rollingwood Drive Storm Drain Repairs
Alderton Drive Culvert Replacement

Other projects will be added as determined in coordination with Transportation Engineering.

Given the large backlog of replacement work for storm drain pipes and culverts as identified in the Infrastructure Task Force Report, Council Staff suggests that the T&E Committee consider phasing in a higher annual level of effort in the Storm Drain Culvert Replacement project. This additional funding would also provide DOT more flexibility to deal with emergencies in a timely manner. As a placeholder, Council Staff suggests increasing the annual level of effort by $500,000 per year.

Council Staff recommends that the funding come from the Water Quality Protection Fund (long-term financing if available or Water Quality Protection Charge Current Revenue or Bonds) The T&E Committee can consider what level of increased funding to support as part of its review of the Water Quality Protection Fund during its Operating Budget review of the Department of Environmental Protection later this spring.

Storm Drain General (PDF on ©7-8)

Storm Drain General

	Six-Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
FY19-24 Latest Approved	**5,124**	**854**	**854**	**854**	**854**	**854**	**854**		
FY21-26 CE Recommended	**5,124**			**854**	**854**	**854**	**854**	**854**	**854**
change from approved	-			-	-	-	-		
percent change from approved	0.0%			0.0%	0.0%	0.0%	0.0%		

This project includes any storm drain projects costing less than $500,000, as well as funding to address "spot" projects that can be addressed relatively quickly throughout the year. Projects are prioritized based on their public safety impact (if any), cost, readiness (i.e., facility planning must be completed), potential community benefits, and order the issue was first identified (if projects are of equal merit).

For FY21-26, the County Executive recommends an annual funding level of $854,000 which is the same as in the Approved CIP. A two-year appropriation has been provided for this project through the last several CIP cycles to provide flexibility to DOT to plan and complete projects through its work order contractor without having to have artificial delays waiting for the next fiscal year to begin. In past years, DOT has noted that it has exhausted its past two-year appropriations ($1.7 million) early in Year Two.

A list of work completed in FY18 and FY19 is noted on the PDF and some additional details are provided below:

Windmill Lane- This project was able to be expedited due to a safety concern with a tree. The project included the installation of a headwall, 42" PVC pipe, a rock sill, and rip rap to remedy erosion problem between 924 and 928 Windmill Lane. Construction cost $91,256.51.

Ashburton Lane-This project included the modification of an existing manhole, installation of a new inlet and the installation of new storm drainpipe at the intersection of Ashburton Lane and Belhaven Road. The invoice for the final construction cost has not been submitted by the contractor yet. The estimated construction cost is $35,000.

Aubinoe Farm Drive-The project included grading and backfilling the eroded areas, reconstruction of the headwall, installation of rip rap, and the installation of standard duty mulch mats across from 6313 Berkshire Drive. The invoice for the final construction cost has not been submitted by the contractor yet. . The estimated construction cost is $25,000.

Stable Lane-The project included grading and backfilling the eroded areas, reconstruction of a storm drain structure, installation of rip rap, and the installation step pools adjacent to 10609 and 10617 Stable Lane. Construction cost $124,358.07.

Ogden Court-The project included the installation of storm drainpipe, a concrete channel, a net inlet and rip rap between 5817 and 5819 Ogden Court. Construction cost is $37,300.80.

Lockridge Drive-The project included the installation of riffle grade controls, cross vanes, rock sills the planting of shrubbery in the median north of the intersection of Lockridge Drive and Lombardy Road. The construction cost is $72,764.00

Quincy Street-The project included the installation and relocation of 6" PVC pipe in the right of way and sump pump connections from 118 Quincy Street to 203 Oxford Street. $30,790.

2nd Avenue/Lanier Drive-The project included installation of an inlet, a bioswale, an underdrain pipe and reconstruction of the curb and gutter and one driveway apron. Construction cost is $38,920.46

At the Committee meeting, DOT will present some "before and after" examples of work completed. Several future projects are also listed. However, DOT has noted that additional projects can be completed in this project once planning is complete.

DOT has noted that *"There are currently 10 storm drain projects and three curb requests that qualify for the program but are considered non-emergency and stable and will be completed on a priority basis."*

On February 21, Councilmember Friedson sent a memorandum to Councilmembers supporting a doubling of the annual level of effort in this project (see ©25-26). The level of effort in this project was most recently increased in FY17 (from 800,000 to 854,000 per year). The Committee can discuss with DOT the implications of doubling funding in this project. **Given the backlog of work in the Storm Drain: General project, Council Staff agrees that the Committee should consider an increased annual level of effort in this project but would like to work further with DOT on what additional level of work could be absorbed in FY21 and whether a phase-in to a higher level of effort is needed.**

Council Staff recommends that the funding come from the Water Quality Protection Fund (long-term financing if available or Water Quality Protection Charge Current Revenue) The Committee can revisit the level of increase for this effort when it takes up the DEP Operating Budget (and the Water Quality Protection Fund) later this spring.

AGENDA ITEM #4: FY21-26 STORMWATER MANAGEMENT CIP

Summary

Stormwater management is a shared responsibility among several County departments and agencies. DEP plans and implements the stormwater management CIP program. The Department of Permitting Services reviews, approves, inspects, and enforces requirements for construction of privately-owned stormwater management facilities. DEP works with the County's Department of Transportation (DOT) to address storm drain outfall repair issues, as well as with the Washington Suburban Sanitary Commission (WSSC) when WSSC infrastructure work is needed. DEP also inspects and provides structural maintenance for most Montgomery County Public Schools (MCPS) and the Montgomery County facilities on Maryland-National Capital Park and Planning Commission (M-NCPPC) land.

An excerpt from the Executive's Recommended FY21-26 CIP is attached on ©1-9. Overall, there are nine ongoing projects and one new project. As shown in the following chart, the Executive is recommending an increase of $7.2 million (6.9%) in the six-year program (from $105 million to $112.2 million). This follows major changes in the program two years ago which included a substantial reduction in six-year spending.[2]

Table #1
Stormwater Management CIP (in $000s)

	Six-Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
FY19-24 Latest Approved	**104,990**	**27,430**	**23,240**	**14,810**	**14,870**	**14,000**	**10,640**		
FY21-26 CE Recommended	**112,230**			**21,120**	**26,530**	**16,870**	**15,590**	**16,130**	**15,990**
change from Approved	7,240			6,310	11,660	2,870	4,950		
percent change from Approved	6.9%			42.6%	78.4%	20.5%	46.5%		

For the FY19-24 CIP two years ago, DEP was assuming to complete the acreage requirement for retrofit work associated with the 2010-2015 permit by 2020 (it in fact did so by December 2018) and begin work to meet the expected requirements of the next permit. (see discussion later in this memorandum). In addition, a new Design/Build/Maintain contract approach was recommended by the Executive (and later approved by the Council with some additional requirements) to replace the current design-bid-build process for the bulk of the retrofit work to be done in the six-year period.

[2] The FY17-22 Amended CIP for this program was $345.5 million. This prior high level of spending was reflective of the County's efforts to implement its work associated with the County's 2010 to 2015 National Pollution Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit and the later Consent Decree with the Maryland Department of the Environment to complete the permits impervious acreage retrofit requirements after the conclusion of the permit period.

The issuance of a draft next permit has been continually delayed. The current expectation is that a draft permit may be issued by September. The FY19-24 Approved CIP and now the FY21-26 Recommended CIP assume this next permit will include a requirement for another 10 percent of acreage to be addressed. However, changes in this program may be needed once the permit conditions are more firm.

While overall spending is only marginally changing, there are some significant changes in various project costs (both up and down) as reflected in the chart below. Most notably, the separate Design/Build/Maintain project approved with much controversy two years ago is recommended to continue (with some scope changes) but be consolidated along with the SM Retrofit – Government Facilities, SM Retrofit Roads, SM Retrofit Schools, Watershed Restoration – Interagency, and the Misc Stream Valley Improvements projects in the SM Retrofit- Countywide project.

Table 2:
Stormwater Management Projects: Six-Year Spending Changes (in $000s)

Project	Six-Year Costs		Change from App.	
	Approved	1/15/20	$$	%
Facility Planning: SM	4,580	5,510	930	20.3%
Misc Stream Valley Improvements	16,770	5,110	(11,660)	-69.5%
SM Facility Major Structural Repair	11,720	21,960	10,240	87.4%
SM Design/Build/Maintain Contract	46,300	-	(46,300)	n/a
SM Retrofit - Roads	50	-	(50)	-100.0%
SM Retrofit - Schools	1,000	-	(1,000)	-100.0%
SM Retrofit - Countywide	19,040	74,750	55,710	292.6%
Wheaton Regional Dam Flooding Mitigation	5,530	4,900	(630)	-11.4%
Total Expenditure Changes	**104,990**	**112,230**	**7,240**	**6.9%**
Change from Approved	$	7,240		
	%	6.9%		

The sources of funds for the Approved FY19-24 CIP and the FY21-26 Recommended CIP are shown in the following chart.

Table #3
Stormwater Management CIP Funding (in $000s)

	FY19-24 Total	FY21-26 Total	% of Total	Change from FY19-24 $$	Change from FY19-24 %
Six-Year Total	**104,990**	**112,230**		**7,240**	**6.9%**
Contributions	60	-		(60)	-100.0%
Long-Term Financing	55,758	71,320	63.5%	15,562	27.9%
State Aid	14,368	14,250	12.7%	(118)	-0.8%
Federal Aid	3,000	3,000	2.7%	-	n/a
SWM Waiver Fees	1,235	1,100	1.0%	(135)	n/a
Water Quality Protection Charge - Bonds	3,582	-	0.0%	(3,582)	-100.0%
Water Quality Protection Charge	26,987	22,560	20.1%	(4,427)	-16.4%

Almost a decade ago, the Council approved the Executive's recommendation to use bonds paid for with Water Quality Protection Charge (WQPC) revenue to cover the majority of spending in this program (an estimated 85 percent in the FY17-22 CIP). These bonds are separate from the County's General Obligation Bond Spending Affordability limits. For FY19-24, the Executive

recommended and the Council approved transitioning most of these WQPC bonds to long-term financing. State aid assumptions are discussed later.

National Pollution Discharge Elimination System Municipal Separate Storm Sewer System Discharge (NPDES-MS4) Permit

MS4 Permit Status

The County's most recent National Pollution Discharge Elimination System Municipal Separate Storm Sewer System (NPDES-MS4) Permit[3] expired in February 2015 (although the requirements remain in effect pending the issuance of a new permit).

The County's Coordinated Implementation Strategy (CCIS)[4] (dated January 2012) provided the planning basis for the County to meet the following goals in the County's (now expired) NPDES-MS4 Permit:

1. Meet Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) approved by EPA.

2. Provide additional stormwater runoff management on impervious acres equal to 20 percent of the impervious area for which runoff is not currently managed, to the maximum extent practicable (MEP). (***This requirement continues to be the primary driver of DEP's CIP expenditures)***

3. Meet commitments in the Trash Free Potomac Watershed Initiative 2006 Action Agreement, which include support for regional strategies and collaborations aimed at reducing trash, increasing recycling, and increasing education and awareness of trash issues throughout the Potomac Watershed.

4. Educate and involve residents, businesses, and stakeholder groups in achieving measurable water quality improvements.

5. Establish a reporting framework that will be used for annual reporting, as required in the County's NPDES-MS4 Permit.

6. Identify necessary organizational infrastructure changes needed to implement the Strategy.

The requirement most affecting the County's Stormwater Management CIP was the restoration/retrofit requirement of 20 percent of the County's impervious surface not currently treated

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[3] The County's 2010-2015 MS4 permit is available on the DEP website at: https://www.montgomerycountymd.gov/DEP/Resources/Files/downloads/water-reports/npdes/MOCO_MS4_Permit.pdf.

[4] The County's Coordinated Implementation Strategy (January 2012) is available on the DEP website at: https://www.montgomerycountymd.gov/DEP/Resources/Files/ReportsandPublications/Water/Countywide%20Implementation%20Strategy/Countywide-coordinated-implemented-strategy-12.pdf.

to the maximum extent practicable (3,778 acres). The County was not able to fully meet this requirement by the end of the permit period (February 2015) and negotiated a time extension through a Consent Decree with the Maryland Department of the Environment (MDE). Ultimately this requirement was met by December 2018.[5]

What will be interesting to see in the coming years is whether (and by how much) water quality improvements occur in the project areas (and whether the associated TMDLs are met). These results, in turn, can inform future permit priorities to ensure the County's large investment in funding is allocated where it can have the biggest impact on water quality.

Cost Implications

As previously discussed by the Committee, the cost implications for implementation of the MS4 permit are substantial. Several years ago, DEP estimated the permit costs to be about $305 million through 2015 and nearly $1.9 billion through 2030.

Over the past decade, the DEP budget (not counting the Division of Solid Waste Services) has become dominated by water quality-related efforts. In FY20, the Water Quality Protection Fund budget is $28.8 million compared to $3.1 million in the General Fund, or about 90 percent of the total.

Project Review

Wheaton Regional Dam Flooding Mitigation (PDF on ©17)

	Total Cost	Six-Year	Thru FY19	FY20	FY21	FY22	FY23	FY24
FY19-24 Latest Approved	**5,530**	**5,530**	**70**	**80**	**330**	**3,130**	**1,920**	
FY21-26 CE Recommended	**5,530**	**4,900**	187	443	**170**	**3,760**	**970**	-
change from approved		(630)			(160)	630	(950)	-
percent change from approved		-11.4%			-48.5%	20.1%	-49.5%	

This project was first approved as part of the FY17-22 CIP to provide for the acquisition of properties located in Wheaton along Glenhaven Drive and Dennis Avenue, an area prone to severe flooding during a 100-year storm event because of the Wheaton Regional Dam downstream, the Dennis Avenue Culvert, and an undersized stream channel along Glenhaven Drive. The properties to be acquired were to be turned into non-structural recreational open space for the community. DEP began the process with the Federal Emergency Management Agency (FEMA) to update the boundaries of the 100-year floodplain in this area and the County planned to seek hazard mitigation assistance grants for property acquisition. However, DEP was unsuccessful in getting any property owners to agree to sell their properties.

The Executive later transmitted a CIP amendment (ultimately approved by the Council) to this project with a new scope to upgrade the dam, the culvert, and/or the stream channel (as well as replacing the Dennis Avenue Bridge as a separate DOT project) to avoid future potential flooding.

[5] For more information, please see DEP's FY19 NPDES-MS4 Annual Report submitted to MDE on February 15, 2020; available for download at: https://www.montgomerycountymd.gov/DEP/Resources/Files/downloads/water-reports/npdes/AnnualReport-FY18-2-22-19-Final.pdf.

The total project cost has remained unchanged from the FY19-24 approved project ($5.53 million) as has the Federal aid assumption ($3.0 million). Completion is scheduled for FY23, although some delays in the Dennis Avenue Bridge project have pushed the start of construction in this project out of FY21.

DEP is seeking funding through the FEMA Pre-Disaster Mitigation Grant program for the channel modifications and is also seeking potential State aid to bolster the County's chances of getting the $3.0 million in outside funding assumed in this project.

Facility Planning: SM (PDF on ©11)

	Six-Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
FY19-24 Latest Approved	**4,580**	**750**	**730**	**750**	**790**	**780**	**780**		
FY21-26 CE Recommended	**5,510**			**710**	**920**	**940**	**960**	**980**	**1,000**
change from approved	930			(40)	130	160	180		
percent change from approved	20.3%			-5.3%	16.5%	20.5%	23.1%		

This project funds evaluations of watershed needs and identifies alternatives to address these needs, including possible CIP projects. It provides approximately 30 percent design completion to projects generated from this program. The project is funded with Water Quality Protection Fund current revenue dollars.

The project is recommended to increase by approximately 20% over the six-year period per DEP's information below about the updating of watershed assessments.

> *"Beginning in FY22, DEP will begin updating watershed assessments. The following watershed assessments will be updated: Anacostia, Potomac Direct, Seneca Creek, Patuxent, Lower Monocacy. Many of these watershed assessments will be over 10 years old and required review and update to ensure they reflect current water quality conditions. These assessments will become critical information for developing new TMDL Implementation Plans, that will be required under the new MS4 permit."*

SM Retrofit: Countywide (PDF on ©15-16)

	Six-Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
FY19-24 Latest Approved	**19,040**	**17,090**	**1,950**						
FY21-26 CE Recommended	**74,750**			**11,400**	**16,030**	**11,810**	**11,480**	**12,090**	**11,940**
change from approved	55,710			11,400	16,030	11,810	11,480		
percent change from approved	292.6%			n/a	n/a	n/a	n/a	n/a	n/a

This project provides for the design and construction of stormwater management retrofit projects Countywide.

For the FY21-26 CIP, the Executive recommends moving project costs from the Design/Build/Maintain, SM Retrofit – Government Facilities, SM Retrofit Roads, SM Retrofit Schools, Watershed Restoration – Interagency, and the Misc Stream Valley Improvements projects to this project.

The Executive is recommending a total of $74.8 million over the six-year period (a substantial increase because of the other projects moving into this project. The approved project had spending ending after FY20. Because of continued delays in the issuance of a draft MS4 permit by MDE, the

DBM contracting mechanism has remained on hold. Instead, DEP has moved forward with several previously suspended projects under its prior design/bid/build construction process. These include Grosvenor Stream, Glenmont Forest, and Old Farm Creek. DEP has also noted that,

> *"In addition, due to the delay by MDE in issuing the next Montgomery County MS4 permit and the 2019 Accounting Guidance, DEP has been evaluating potentially designing and building 4-6 additional CIP projects in advance of the finalization of the next MS4 permit restoration requirements. These potential projects are currently being evaluated based on our new project targeting models and maps. MDE has assured us that any work completed between MS4 permits will count towards the new MS4 permit restoration goals."*

Misc. Stream Valley Improvements (PDF on ©12-13)

	Six-Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
FY19-24 Latest Approved	**16,770**	**5,160**	**9,440**	**1,630**	**180**	**180**	**180**		
FY21-26 CE Recommended	**5,110**			**3,980**	**1,130**				
change from approved	(11,660)			2,350	950	(180)	(180)		
percent change from approved	-69.5%			144.2%	527.8%	-100.0%	-100.0%		

This project funds the design and construction of restoration and corrective measures to stream reaches having severe channel erosion, sedimentation, habitat degradation, and flooding problems. Priorities are based on watershed studies done out of the Facility Planning: SM project.

As noted on the PDF, this project will be closed out after the completion of the Glenstone and Booze Creek Repair projects. Future stream restoration work done by DEP will be part of the Stormwater Management Retrofit: Countywide project.

As part of the approval of the DBM project two years ago, the Council also approved moving $2.0 million in funding for four stream restoration projects (Grosvenor, Stoney Brook, Glenallan, and Clearspring Manor) from the Stormwater Management CIP to the Montgomery Parks CIP (the Stream Protection SVP) to be designed and constructed by Parks. The projects are assumed to be funded with long-term financing from Maryland Water Quality Revolving Loan Funds (loan payments covered by Water Quality Protection Charge current revenue). The resulting impervious area restoration credits are to be recognized under DEP's new MS4 permit.

Stormwater Management Facility Major Structural Repair (PDF on ©14)

	Six-Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
FY19-24 Latest Approved	**11,720**	**1,480**	**2,320**	**3,330**	**1,630**	**1,480**	**1,480**		
FY21-26 CE Recommended	**21,960**			**4,860**	**4,690**	**3,150**	**3,150**	**3,060**	**3,050**
change from approved	10,240			1,530	3,060	1,670	1,670		
percent change from approved	87.4%			45.9%	187.7%	112.8%	112.8%		

This project provides for the design and construction of major structural repairs to County maintained stormwater management facilities. Smaller, less complex projects are funded out of the Operating Budget.

The Executive is recommending a six-year total of about $21.97 million (an increase of $10.2 million). The recommended increase is intended to begin to address a backlog of 65 projects. Each project is expected to cost approximately $700,000 to $1.0 million.

The project is funded mostly with long-term financing with some WQPF current revenue used as well.

Council Staff Recommendation

The Stormwater Management CIP remains in a bit of a holding pattern; waiting for MDE to finalize the requirements to be assumed in the next MS4 permit. However, Council Staff is supportive of DEP's approach of restarting some suspended projects and increasing funding in the structural repair project to begin to address that project's backlog. Council Staff recommends approval of the Stormwater Management CIP as recommended by the County Executive.

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Storm Drains

PROGRAM DESCRIPTION AND OBJECTIVES

The Department of Transportation (DOT) involvement in the County Conservation of Natural Resources program is mandated by Section 2 58A (c) of the County Code which requires DOT to be responsible for control, supervision, design, construction, and maintenance of all culverts and storm drainage systems under the jurisdiction of the County.

The DOT Storm Drains Capital Program consists of the construction of storm drainage structures such as curbs, gutters, drainage inlets, pipes, and channels. Such networks are constructed to provide for the conveyance of stormwater from impervious surfaces into natural drainage swales and stream channels. This program is focused on storm drainage projects outside the scope of the larger DOT Roads program, which also installs storm drainage systems at the time of new road construction or existing road reconstruction or enhancement.

A second component of the storm drainage program involves County-developer and homeowner participation in the construction of storm drainage facilities. Construction of storm drainage facilities provides a public benefit by reducing drainage problems, flooding, property damage, and contributing to the orderly development of the County. In participation projects, the County and the developer or the homeowner agree to share the costs of storm drainage facilities in which the benefit of storm drainage extends beyond the developer's or homeowner's own property. The County pays only for that portion of the project which benefits properties other than the developer's or homeowner's, not to exceed 50 percent of the total cost. Homeowners can satisfy their portion of the cost-share through in-kind contributions.

STORMWATER MANAGEMENT COORDINATION

In February 2010, the Maryland Department of the Environment issued the County a National Pollutant Discharge Elimination System (NPDES) Permit. This permit requires that the County develop and implement a Stormwater Management program to prevent harmful pollutants from being washed or dumped into the Municipal Separate Storm Sewer Systems (MS4). The DOT is partnering with the County's Department of Environmental Protection (DEP) in implementing the MS4 Permit by 1) constructing Stormwater Management (SWM) retrofit programs which have been developed through DEP's MS4 planning studies, 2) providing opportunities for curb bump-outs and road narrowing where feasible to permit implementation of Low-Impact Development (LID) SWM provisions within the right-of-way, 3) seeking DEP guidance on prioritization of storm drain outfall repairs, and 4) coordinating with DEP on storm drain projects developed in the Storm Drain General and Facility Planning Storm Drain programs to identify opportunities for enhancements which would assist in meeting the requirements of the MS4 permit.

In recognition of the Stormwater Management added value to the Storm Drains projects, Storm Drains have historically been funded through Water Quality Protection Bonds and the Water Quality Protection Charge. In FY19, going forward, Water Quality Protection Bonds were replaced with long-term financing based on the Maryland Water Quality Revolving Loan Fund (WQRLF) from the Maryland Department of Environment (MDE) to finance water quality improvement projects with low-interest loans which are less costly than bond sales. Funding schedules in project description forms (PDFs) reflect MDE's cost eligibility rules.

PROGRAM CONTACTS

Contact Dan Sheridan of the Department of Transportation at 240.777.7283 or Veronica Jaua of the Office of Management and Budget at 240.777.2782 for more information regarding this department's capital budget.

CAPITAL PROGRAM REVIEW

The Storm Drainage program for FY21-26 includes four ongoing projects. The overall cost of the recommended six year program is $16.8 million, representing the same level of funding as the FY19-24 Amended Program.

Facility Planning: Storm Drains
(P508180)

Category	Conservation of Natural Resources	**Date Last Modified**	01/03/20
SubCategory	Storm Drains	**Administering Agency**	Transportation
Planning Area	Countywide	**Status**	Ongoing

	Total	Thru FY19	Est FY20	Total 6 Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Beyond 6 Years
EXPENDITURE SCHEDULE ($000s)											
Planning, Design and Supervision	7,917	5,788	389	1,740	290	290	290	290	290	290	-
Land	142	142	-	-	-	-	-	-	-	-	-
Construction	40	40	-	-	-	-	-	-	-	-	-
Other	5	5	-	-	-	-	-	-	-	-	-
TOTAL EXPENDITURES	**8,104**	**5,975**	**389**	**1,740**	**290**	**290**	**290**	**290**	**290**	**290**	**-**
FUNDING SCHEDULE ($000s)											
Current Revenue: General	4,103	4,103	-	-	-	-	-	-	-	-	-
Current Revenue: Water Quality Protection	3,900	1,771	389	1,740	290	290	290	290	290	290	-
G.O. Bonds	101	101	-	-	-	-	-	-	-	-	-
TOTAL FUNDING SOURCES	**8,104**	**5,975**	**389**	**1,740**	**290**	**290**	**290**	**290**	**290**	**290**	**-**

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 21 Request	290	Year First Appropriation	FY81
Appropriation FY 22 Request	290	Last FY's Cost Estimate	7,524
Cumulative Appropriation	6,364		
Expenditure / Encumbrances	6,035		
Unencumbered Balance	329		

PROJECT DESCRIPTION

This project provides for the investigation and analysis of various storm drainage assistance requests initiated by private citizens and public agencies. These requests are related to the design, construction, and operation of public drainage facilities where flooding and erosion occur. This project includes expenditures for the preliminary and final design and land acquisition for storm drain projects prior to inclusion in the Storm Drain General project, or as a stand-alone project in the Capital Improvements Program (CIP). Prior to its inclusion in the CIP, the Department of Transportation (DOT) will conduct a feasibility study to determine the general and specific features required for the project. Candidate projects currently are evaluated from the Drainage Assistance Request list. As part of the facility planning process, DOT considers citizen and public agency requests and undertakes a comprehensive analysis of storm drainage issues and problems being experienced in the County. This analysis is used to select areas where a comprehensive long-term plan for the remediation of a problem may be required. No construction activities are performed in this project. When a design is 35 percent complete, an evaluation is performed to determine if right-of-way is needed. Based on the need for right-of-way, the project may proceed to final design and the preparation of right-of-way plats under this project. The cost of right-of-way acquisition will be charged to the Advanced Land Acquisition Revolving Fund (ALARF). When designs are complete, projects with a construction cost under $500,000 will be constructed in the Storm Drain General project. Projects with a construction cost over $500,000 will be constructed in stand-alone projects.

CAPACITY

Projects will be designed to accommodate the ten year storm frequency interval.

COST CHANGE

Increase due to the addition of FY25 & FY26 to this on-going level of effort project.

PROJECT JUSTIFICATION

Evaluation, justification, and cost-benefit analysis are completed by DOT as necessary. In the case of participation projects, drainage studies and preliminary plans will be prepared by the requestor's engineer and reviewed by DOT. Traffic signals, streetlights, crosswalks, bus stops, ADA ramps, bikeways and other pertinent issues are being considered in the design of the project to ensure pedestrian safety.

OTHER

Before being added as a sub-project, concept studies are evaluated based on the following factors: public safety; damage to private property; frequency of event; damage to public right-of-way; environmental factors such as erosion, general public benefit, availability of right-of-way; and 5:1 cost benefit damage prevented ratio. In the case of public safety or severe damage to private property, the 5:1 cost benefit damage prevented ratio can be waived. Drainage assistance requests are evaluated on a continuing basis in response to public requests. DOT maintains a database of complaints. Recent construction projects completed include: Crown Street, Grafton Street, Lanier Drive, Ogden Court, Ashburton Lane, Mintwood Street, Woodland Drive, Stable Lane and Charred Oak Drive. Candidate Projects for FY21 and FY22: Tranford Road, Windmill Lane, and Conway Drive.

DISCLOSURES

A pedestrian impact analysis has been completed for this project. Expenditures will continue indefinitely.

COORDINATION

Montgomery County Department of Environmental Protection, Maryland-National Capital Park and Planning Commission, Maryland Department of the Environment, United States Army Corps of Engineers, Montgomery County Department of Permitting Services, Utility Companies, and Sidewalk Program - Minor Projects (CIP No. 506747).

Outfall Repairs
(P509948)

Category	Conservation of Natural Resources	**Date Last Modified**	12/31/19
SubCategory	Storm Drains	**Administering Agency**	Transportation
Planning Area	Countywide	**Status**	Ongoing

	Total	Thru FY19	Est FY20	Total 6 Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Beyond 6 Years
EXPENDITURE SCHEDULE ($000s)											
Planning, Design and Supervision	4,374	2,763	489	1,122	187	187	187	187	187	187	-
Land	12	12	-	-	-	-	-	-	-	-	-
Construction	6,440	4,515	275	1,650	275	275	275	275	275	275	-
Other	3	3	-	-	-	-	-	-	-	-	-
TOTAL EXPENDITURES	**10,829**	**7,293**	**764**	**2,772**	**462**	**462**	**462**	**462**	**462**	**462**	**-**
FUNDING SCHEDULE ($000s)											
Current Revenue: Water Quality Protection	1,823	667	364	792	132	132	132	132	132	132	-
G.O. Bonds	5,357	5,357	-	-	-	-	-	-	-	-	-
Long-Term Financing	2,540	160	400	1,980	330	330	330	330	330	330	-
Water Quality Protection Bonds	1,109	1,109	-	-	-	-	-	-	-	-	-
TOTAL FUNDING SOURCES	**10,829**	**7,293**	**764**	**2,772**	**462**	**462**	**462**	**462**	**462**	**462**	**-**

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 21 Request	924	Year First Appropriation	FY99
Appropriation FY 22 Request	-	Last FY's Cost Estimate	9,905
Cumulative Appropriation	8,057		
Expenditure / Encumbrances	7,583		
Unencumbered Balance	474		

PROJECT DESCRIPTION

This project provides for the repair of existing storm drain outfalls into stream valleys. Design of corrective measures is included when in-kind replacement of original outfall structures is not feasible. Candidate outfall repairs are selected from citizen and public agency requests. The Department of Environmental Protection's (DEP) Miscellaneous Stream Valley Improvements project generates and assists in rating the outfalls, which are identified as that project expands into additional watersheds.

COST CHANGE

Increase due to the addition of FY25 & FY26 to this on-going level of effort project.

PROJECT JUSTIFICATION

Collapsed storm drain pipe sections, undermined endwalls, and eroded outfall channels create hazardous conditions throughout the County. The course of drainage could be altered endangering private property or public roads and speeding the erosion of stream channels. Erosion from damaged outfalls results in heavy sediment load being carried downstream that can severely impact aquatic ecosystems and exacerbate existing downstream channel erosion. As part of its watershed restoration inventories, DEP identifies storm drain outfalls that are in need of repair in County stream valleys and respective watersheds. As this program expands to include additional watersheds, each outfall is categorized and, where damaged, rated. A functional rating and evaluation process is used to prioritize each outfall.

OTHER

The number of outfall locations being repaired per year varies based on the severity of the erosion and damage, the complexity of the design, and the complexity of the needed restorative construction work. Completed outfalls in FY18-19: Elsmere Road, Brentford Drive, Hollyoak Drive, Charred Oak Drive, Woodbine Road, Kemp Mill Road and Lockridge Drive. Scheduled for repairs (FY20 - beyond): Daniel Road, Glen Road, Whisperwood Road, Margate Road, and Shiloh Church Road.

FISCAL NOTE

In FY19, Water Quality Protection Bonds were replaced with long-term financing based on the Maryland Water Quality Revolving Loan Fund (WQRLF) to finance water quality improvement projects with low interest loans which are less costly than bond sales. Funding schedule reflects MDE's cost eligibility rules.

DISCLOSURES

A pedestrian impact analysis has been completed for this project. Expenditures will continue indefinitely.

COORDINATION

Montgomery County Department of Environmental Protection, Maryland-National Capital Park and Planning Commission, Maryland Department of the Environment, United States Army Corps of Engineers, Montgomery County Department of Permitting Services, Utility Companies, and Miscellaneous Stream Valley Improvements (CIP No. 807359).

Storm Drain Culvert Replacement
(P501470)

Category	Conservation of Natural Resources	**Date Last Modified**	12/31/19
SubCategory	Storm Drains	**Administering Agency**	Transportation
Planning Area	Countywide	**Status**	Ongoing

	Total	Thru FY19	Est FY20	Total 6 Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Beyond 6 Years
EXPENDITURE SCHEDULE ($000s)											
Planning, Design and Supervision	2,625	1,200	345	1,080	180	180	180	180	180	180	-
Construction	14,873	7,822	931	6,120	1,020	1,020	1,020	1,020	1,020	1,020	-
Other	2	2	-	-	-	-	-	-	-	-	-
TOTAL EXPENDITURES	**17,500**	**9,024**	**1,276**	**7,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**-**
FUNDING SCHEDULE ($000s)											
Current Revenue: Water Quality Protection	4,000	4,000	-	-	-	-	-	-	-	-	-
G.O. Bonds	1,500	1,500	-	-	-	-	-	-	-	-	-
Long-Term Financing	9,600	1,124	1,276	7,200	1,200	1,200	1,200	1,200	1,200	1,200	-
Water Quality Protection Bonds	2,400	2,400	-	-	-	-	-	-	-	-	-
TOTAL FUNDING SOURCES	**17,500**	**9,024**	**1,276**	**7,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**-**

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 21 Request	1,200	Year First Appropriation	FY14
Appropriation FY 22 Request	1,200	Last FY's Cost Estimate	15,100
Cumulative Appropriation	10,300		
Expenditure / Encumbrances	9,038		
Unencumbered Balance	1,262		

PROJECT DESCRIPTION

This program will provide for the replacement of failed storm drain pipes and culverts. The County's storm drain infrastructure is aging and many of the metal pipe culverts installed from 1960 through the 1990's have reached the end of their service life. An asset inventory with condition assessments has been developed to better forecast future replacement needs. Going forward, funding will be programmed for both systematic and emergency replacement of these pipes and culverts. Program scope includes: storm water pipe and culvert replacement of both metal and concrete less than six (6) feet in roadway longitudinal length; headwalls, end sections, replacement, or extension of culverts to assure positive flow of stormwater and channeling of stormwater into existing ditch lines or structures. Repairs also include roadside pipe and culvert end treatment safety improvements to eliminate safety hazards. This project will not make major changes to the location or size of existing storm drainage facilities. Structures greater than six-feet-roadway-longitudinal length are repaired under the Bridge Renovation Program, (CIP No. 509753).

COST CHANGE

Cost increase due to the addition of FY25-26 to this ongoing level of effort project.

PROJECT JUSTIFICATION

This program will address emergency pipe replacements of aging metal and concrete pipes that have reached the end-of-their-service life. The result of these pipe failures has been deep depressions, sinkholes, sediment build-up, open pipe joints, and metal pipe inverts to an unacceptable levels. Existing storm drain conditions are extremely poor. Repairs are needed to improve safety and reduce the potential for hazards and associated public inconvenience. Failure of a storm drain pipe will precipitate emergency repairs at much higher prices. Furthermore, this program provided funding towards developing an asset inventory of the storm drain system including pipe and culvert conditions that helps forecast future funding requirements.

FISCAL NOTE

In FY19, Water Quality Protection Bonds were replaced with long-term financing based on the Maryland Water Quality Revolving Loan Fund (WQRLF) to finance water quality improvement projects with low-interest loans which are less costly than bond sales.

DISCLOSURES

Expenditures will continue indefinitely.

COORDINATION

Washington Suburban Sanitary Commission, Washington Gas Company, Montgomery County Department of Permitting Services, Pepco, Cable TV, Verizon, Montgomery County Public Schools, Regional Service Centers, Community Association's, Commission on People With Disabilities, Maryland Department of Environment, Montgomery County Department of Environmental Protection, and United States Army Corps of Engineers.

Storm Drain General
(P500320)

Category	Conservation of Natural Resources	**Date Last Modified**	01/03/20
SubCategory	Storm Drains	**Administering Agency**	Transportation
Planning Area	Countywide	**Status**	Ongoing

	Total	Thru FY19	Est FY20	Total 6 Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Beyond 6 Years
EXPENDITURE SCHEDULE ($000s)											
Planning, Design and Supervision	4,417	2,070	823	1,524	254	254	254	254	254	254	-
Land	103	103	-	-	-	-	-	-	-	-	-
Construction	15,178	10,965	613	3,600	600	600	600	600	600	600	-
Other	1	1	-	-	-	-	-	-	-	-	-
TOTAL EXPENDITURES	**19,699**	**13,139**	**1,436**	**5,124**	**854**	**854**	**854**	**854**	**854**	**854**	-
FUNDING SCHEDULE ($000s)											
Current Revenue: Water Quality Protection	2,852	1,600	448	804	134	134	134	134	134	134	-
G.O. Bonds	9,169	9,169	-	-	-	-	-	-	-	-	-
Intergovernmental	223	223	-	-	-	-	-	-	-	-	-
Long-Term Financing	5,619	311	988	4,320	720	720	720	720	720	720	-
State Aid	162	162	-	-	-	-	-	-	-	-	-
Water Quality Protection Bonds	1,674	1,674	-	-	-	-	-	-	-	-	-
TOTAL FUNDING SOURCES	**19,699**	**13,139**	**1,436**	**5,124**	**854**	**854**	**854**	**854**	**854**	**854**	-

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 21 Request	1,708	Year First Appropriation	FY03
Appropriation FY 22 Request	-	Last FY's Cost Estimate	17,991
Cumulative Appropriation	14,575		
Expenditure / Encumbrances	13,496		
Unencumbered Balance	1,079		

PROJECT DESCRIPTION

This project provides the flexibility to construct various sub-projects that might otherwise be delayed for lack of funds or difficulty in acquiring right-of-way. This project provides for right-of-way acquisition and construction for storm drain projects resulting from the Drainage Assistance Request Program. Individual projects range from retrofitting existing storm drainage systems to developing new drainage systems required to upgrade the existing systems in older subdivisions. Projects formerly handled through the Neighborhood Storm Drain Improvements Project are usually small, unanticipated projects initiated by requests from citizens whose homes and properties are subject to severe flooding or erosion and where there is a demonstrated need for early relief. Potential new storm drain projects are studied under the Facility Planning: Storm Drain project. Concept studies are evaluated based on the following factors: public safety, damage to private property and frequency of event, damage to public right-of-way, environmental factors such as erosion, general public benefit, availability of right-of-way and 5:1 cost benefit damage prevented ratio. After the completion of facility planning, projects with construction estimated to cost less than $500,000 are included in this project. Prompt relief is frequently achieved by the use of Department of Transportation (DOT) personnel to construct and provide construction management. The project also facilitates financial participation with developers up to 50 percent share of construction cost for storm drainage projects where such construction would yield a public benefit to properties other than that of homeowner or developers. Right-of-way is acquired under the Advanced Land Acquisition Revolving Fund (ALARF).

CAPACITY

Projects will be designed to accommodate the ten-year storm frequency interval.

COST CHANGE

Increase due to the addition of FY25 & FY26 to this on-going level of effort project.

OTHER

On Participation projects, cost sharing between the County and either homeowners or developers varies and is based upon a signed Letter of Understanding. Some funds from this project will go to support the Renew Montgomery program. Completed Projects in FY18 and FY19: Crown Street, Grafton Street, Lanier Drive, Ogden Court, Ashburton Lane, Mintwood Street, Woodland Drive, Charred Oak Drive, and Stable Lane. Potential Future projects: Tranford Road, Windmill Lane and Conway Road.

FISCAL NOTE

In FY19, Water Quality Protection Bonds were replaced with long-term financing based on the Maryland Water Quality Revolving Loan Fund (WQRLF) to finance water quality improvement projects with low-interest loans which are less costly than bond sales. Funding schedule reflects MDE's cost eligibility rules. The FY21 appropriation has been programmed to cover both FY21 and FY22 project expenditures; consistent with past practice for this project.

DISCLOSURES

A pedestrian impact analysis will be performed during design or is in progress. Expenditures will continue indefinitely. The County Executive asserts that this project conforms to the requirement of relevant local plans, as required by the Maryland Economic Growth, Resource Protection and Planning Act.

COORDINATION

Montgomery County Department of Environmental Protection, Maryland-National Capital Park & Planning Commission, Maryland Department of the Environment, United States Army Corps of Engineers, Montgomery County Department of Permitting Services, Utility Companies, and Sidewalk Program - Minor Projects (CIP No. 506747).

Stormwater Management

PROGRAM DESCRIPTION AND OBJECTIVES

Uncontrolled stormwater runoff from developed areas leads to erosion of stream banks, siltation and widening of stream channels, and localized flooding. Urbanization often impacts stream habitats, leading to declines in the diversity of fish and other aquatic species. Urban runoff also adds to downstream pollution in the Anacostia, Patuxent, and Potomac rivers and the Chesapeake Bay. Multi-state agreements as well as State legislation and programs emphasize the importance of watershed-based programs to protect aquatic habitats and reduce pollution in the Bay and its tributaries.

The objectives of the Stormwater Management program are: protecting natural waterway environments; addressing the impacts of stormwater runoff by enhancing existing best management practices such as ponds, restoring streams previously damaged by excessive erosion and sedimentation, and installing other best management practices to capture runoff and allow for treatment to prevent impaired water quality. The County's Stormwater Management program is watershed-based and focuses on mitigating problems caused by development that was constructed prior to implementation of current stormwater management controls and on proactive planning in the developing portions of the County.

Residential and Commercial property owners pay a Water Quality Protection Charge (WQPC) to fund the Stormwater Management program. The WQPC funds are used to install new treatment facilities and retrofit existing facilities, maintain treatment facilities, monitor the effects of the treatment, ensure an active public education and engagement program, and ensure compliance with the multiple requirements of the permit issued to the County under the Clean Water Act, National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit. The WQPC, financing secured by the WQPC, as well as a State-facilitated long-term loan, are the main funding mechanisms for treatment facility projects.

The County's stormwater control requirements are established in the MS4 Permit, issued by the Maryland Department of the Environment (MDE). The third generation permit, issued in 2010, required watershed restoration of 20% of the County's impervious area not already controlled to the Maximum Extent Practicable, and the County has achieved that goal. A fourth generation permit is in development and its issuance is expected at the beginning of FY21.

The Stormwater Management capital program includes facility planning studies and the development of Watershed Restoration Action Plans, design and construction of stormwater retrofit projects (including low-impact development and green infrastructure), and stream restoration projects. These projects reduce pollution in streams and manage peak runoff flows to improve stream channel habitat and reduce sedimentation impacts from watershed development and urbanized areas.

Since FY04, the County has performed structural maintenance for qualified private stormwater management facilities such as ponds, sand filters, and underground facilities located on homeowner and condominium association and commercial properties. The WQPC funds the maintenance of these privately-owned structures as well as County-owned facilities. This program improves the long-term operational effectiveness of these facilities and increases their pollution removal efficiency. Inspection and routine maintenance of these facilities are funded in the operating budget, while major structural repairs that require extensive engineering design and permitting are funded in the CIP.

The Stormwater Management program, which was developed by the Department of Environmental Protection (DEP) to comply with the NPDES MS4 permit, continues to act as a model for jurisdictions throughout Maryland who are required to develop and implement a Stormwater Management program.

The CIP budget represents the resources necessary to complete the requirements anticipated in the next permit and maintain improvements already completed. Additionally, DEP continues to identify program efficiencies to allow for better informed decision making and restoration outcomes at reduced costs. These include the pursuit of lower-cost funding through the Maryland Water Quality Revolving Loan Fund and the increased utilization of Public Private Contracts and Partnerships.

The FY21-26 CIP program for Stormwater Management continues the County's commitment to treat impervious surfaces within the County to the maximum extent practicable. Total six-year program expenditures are $112.2 million, a $7.2 million increase compared to the previously approved budget of $105.0 million.

The Department of Transportation (DOT) and the Maryland-National Park and Planning Commission also assist in achieving the County's stormwater management goals, and hold regular meetings with DEP staff looking for additional areas of cooperation.

HIGHLIGHTS

- Several individual stormwater management projects are consolidated into a single Countywide stormwater management program to streamline project administration.
- Use of Maryland Water Quality Revolving Loan funds will bring down program costs through lower interest financing.
- Continue to construct new stormwater management facilities and retrofit old stormwater controls to prevent property damage, improve water quality, and protect habitat.
- Continue to perform major structural repairs on public and private stormwater facilities accepted into the County's maintenance program.

PROGRAM CONTACTS

Contact Jim Stiles of the Department of Environmental Protection at 240.777.7789 or Richard H. Harris of the Office of Management and Budget at 240.777.2795 for more information regarding this department's capital budget.

CAPITAL PROGRAM REVIEW

A total of five projects are recommended for FY21-26 and are described in detail in the Project Description Forms. The Recommended FY21-26 Stormwater Management capital program totals $112.2 million, an increase of $7.2 million or 6.9 percent from the amended approved FY19-24 program of $105.0 million.

The stormwater management capital program will be funded primarily by long-term debt financing through the Maryland Water Quality Revolving Loan Fund and Current Revenue: WQPC. Previously issued WQPC-backed Bonds are also used, though no additional bonds will be issued. The stormwater management program assumes multiple awards of Maryland Water Quality Revolving Loan Funds over the six-year period, which replace WQPC Bonds as the primary source of funding for the program. Maryland Water Quality Revolving Loan Funds are a low-interest form of borrowing that brings down the overall cost of the program. The loans and bonds will cover expenditures incurred for the design and construction of additional stormwater facilities needed to comply with the requirements of the County's MS4 permit. Cost containment efforts have been aggressively pursued to avoid large increases in the WQPC.

Also included in the funding of the stormwater management projects is an assumption of $14.3 million in State Aid based on the State's interest in supporting stormwater management efforts throughout the state. Federal Aid will cover $3.0 million of the costs to mitigate Wheaton Regional Dam Flooding Mitigation.

Facility Planning: Stormwater Management
(P809319)

Category	Conservation of Natural Resources	**Date Last Modified**	01/08/20
SubCategory	Stormwater Management	**Administering Agency**	Environmental Protection
Planning Area	Countywide	**Status**	Ongoing

	Total	Thru FY19	Est FY20	Total 6 Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Beyond 6 Years
EXPENDITURE SCHEDULE ($000s)											
Planning, Design and Supervision	19,729	13,259	960	5,510	710	920	940	960	980	1,000	-
Other	295	295	-	-	-	-	-	-	-	-	-
TOTAL EXPENDITURES	**20,024**	**13,554**	**960**	**5,510**	**710**	**920**	**940**	**960**	**980**	**1,000**	**-**
FUNDING SCHEDULE ($000s)											
Current Revenue: General	5,000	5,000	-	-	-	-	-	-	-	-	-
Current Revenue: Water Quality Protection	14,087	7,617	960	5,510	710	920	940	960	980	1,000	-
State Aid	140	140	-	-	-	-	-	-	-	-	-
Stormwater Management Waiver Fees	797	797	-	-	-	-	-	-	-	-	-
TOTAL FUNDING SOURCES	**20,024**	**13,554**	**960**	**5,510**	**710**	**920**	**940**	**960**	**980**	**1,000**	**-**

APPROPRIATION AND EXPENDITURE DATA ($000s)			
Appropriation FY 21 Request	560	Year First Appropriation	FY93
Appropriation FY 22 Request	940	Last FY's Cost Estimate	17,441
Cumulative Appropriation	14,687		
Expenditure / Encumbrances	13,741		
Unencumbered Balance	946		

PROJECT DESCRIPTION

This project provides for facility planning and feasibility studies to evaluate watershed conservation needs and to identify remedial projects for stormwater management, stormwater retrofit, Environmental Site Design (ESD)/Low Impact Development (LID), and stream restoration projects. Projects in facility planning may include the preparation of watershed plans assessing stream restoration, stormwater management retrofit projects, and ESD/LID projects to help mitigate degraded stream conditions in rural and developed watersheds. Water quality monitoring and analysis is required to quantify impacts of watershed development and projects implemented in Stormwater Management Retrofit Countywide project (No. 808726). The projects generated in facility planning support the requirements in the County's Municipal Separate Storm Sewer System (MS4) Permit. Facility planning represents planning and preliminary design and develops a program of requirements in advance of full programming of a project. This project also provides for operation of automated fixed monitoring stations as required by the MS4 Permit.

COST CHANGE

Project increase due to addition of FY25 and FY26 to this on-going level of effort project, and estimated costs for watershed updates beginning in FY22.

PROJECT JUSTIFICATION

The facility planning products support the requirements outlined in the County's MS4 Permit. This project establishes the facilities planning data and alternatives analysis needed to identify and set priorities for individual capital projects. Facility planning costs for projects which are ultimately included in stand-alone Project Description Forms (PDFs) are reflected here and not in the resulting individual project. Future individual CIP projects which result from facility planning will reflect reduced planning and design costs.

FISCAL NOTE

Expenditures in the outyears include expected costs to meet the requirements of the County's next MS4 permit. The scope of the next MS4 permit is subject to negotiation with the Maryland Department of Environment.

DISCLOSURES

Expenditures will continue indefinitely. The County Executive asserts that this project conforms to the requirement of relevant local plans, as required by the Maryland Economic Growth, Resource Protection and Planning Act.

COORDINATION

Maryland-National Capital Park and Planning Commission, U. S. Army Corps of Engineers, Washington Suburban Sanitary Commission, Department of Transportation, Montgomery County Public Schools, Stormwater Management Retrofit Government Facilities (No. 800900), Stormwater Management Retrofit Roads (No. 801300), Stormwater Management Retrofit Schools (No. 801301), Stormwater Management Retrofit Countywide (No. 808726), Misc. Stream Valley Improvements (No. 807359).

Misc Stream Valley Improvements
(P807359)

Category	Conservation of Natural Resources	**Date Last Modified**	01/08/20
SubCategory	Stormwater Management	**Administering Agency**	Environmental Protection
Planning Area	Countywide	**Status**	Ongoing

	Total	Thru FY19	Est FY20	Total 6 Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Beyond 6 Years
EXPENDITURE SCHEDULE ($000s)											
Planning, Design and Supervision	6,118	4,838	1,090	190	130	60	-	-	-	-	-
Land	2	2	-	-	-	-	-	-	-	-	-
Site Improvements and Utilities	1	1	-	-	-	-	-	-	-	-	-
Construction	17,055	5,885	6,250	4,920	3,850	1,070	-	-	-	-	-
Other	2,335	2,335	-	-	-	-	-	-	-	-	-
TOTAL EXPENDITURES	**25,511**	**13,061**	**7,340**	**5,110**	**3,980**	**1,130**	**-**	**-**	**-**	**-**	**-**
FUNDING SCHEDULE ($000s)											
Current Revenue: Water Quality Protection	4,722	1,582	1,940	1,200	1,200	-	-	-	-	-	-
Long-Term Financing	9,175	65	5,200	3,910	2,780	1,130	-	-	-	-	-
State Aid	4,106	4,106	-	-	-	-	-	-	-	-	-
Stormwater Management Waiver Fees	1,490	1,290	200	-	-	-	-	-	-	-	-
Water Quality Protection Bonds	6,018	6,018	-	-	-	-	-	-	-	-	-
TOTAL FUNDING SOURCES	**25,511**	**13,061**	**7,340**	**5,110**	**3,980**	**1,130**	**-**	**-**	**-**	**-**	**-**

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 21 Request	-	Year First Appropriation	FY73
Appropriation FY 22 Request	(2,582)	Last FY's Cost Estimate	25,713
Cumulative Appropriation	28,093		
Expenditure / Encumbrances	18,831		
Unencumbered Balance	9,262		

PROJECT DESCRIPTION

This project provides for design and construction of habitat restoration or stabilization measures for stream reaches having significant channel erosion, sedimentation, and habitat degradation. Developed areas constructed without current stormwater controls contribute uncontrolled runoff which results in eroded streambanks, excessive sediment, tree loss, and degraded habitat for fish and aquatic life. Stormdrain outfalls damaged from severe erosion are identified and, where possible, the outfalls are repaired - funded from the Outfall Repairs project (No. 509948).

COST CHANGE

Project decrease due to transfer of future stream restoration work to CIP Project #808726 - Stormwater Management Retrofit Countywide.

PROJECT JUSTIFICATION

The project supports the requirements of the County's MS4 permit and addresses the goals of the Chesapeake Bay Watershed Agreement, Anacostia Watershed Restoration Agreement, and the County's adopted water quality goals (Chapter 19, Article IV). The project will stabilize and improve local stream habitat conditions where streams have been damaged by inadequately controlled stormwater runoff.

OTHER

Projects planned for design and construction include Glenstone and Booze Creek Repairs. The CIP project includes funding for the stream restoration study of Anacostia Watershed by the Army Corps of Engineers.

The Montgomery Parks Department of the Maryland-National Capital Park and Planning Commission (M-NCPPC) and the Montgomery Department of Environmental Protection (DEP) have agreed that M-NCPPC will serve as the lead agency for implementing stream restoration projects including long-term monitoring and maintenance that are located wholly or mostly on parks property in support of the County's MS4 permit. Previously, DEP had begun design work on the following stream restoration projects which meet these criteria: Clearspring Manor, Glenallan, Stoneybrook (Beach Drive to Montrose Avenue), and Grosvenor (Beach Drive to Rockville Pike). DEP has provided all design work for these projects to M-NCPPC for design completion, permitting, and construction under M-MNCPPC's Stream Protection: SVP (P818571) project. M-NCPPC has agreed that all MS4 credits generated from these projects will be credited towards the County's future MS4 permit with delivery of the restored impervious acres no later than Dec. 31, 2023. M-NCPPC will provide appropriate updates at key project milestones to ensure that MS4 credits are achieved in the timeframe required, in addition to providing the long-term monitoring and maintenance required for the County to maintain the impervious acreage credit. These projects are currently estimated to have a combined cost of $2.4M and will provide approximately 44 acres of credit; funding was provided under M-MNCPPC's Stream Protection: SVP (P818571) project. Parks will provide updated schedule and cost information on all projects for construction allocation funding beginning in FY 20, based on MDE's Water Quality Revolving Loan Fund cycle timeframes. M-NCPPC and DEP

developed a Memorandum of Understanding that details how projects completed by M-NCPPC, funded with WQPC dollars, with MS4 credits going to DEP, will be handled. M-NCPPC will document all MS4 credits created through these projects in accordance with MDE requirements to obtain State approval for the permit credits. M-NCPPC recognizes that stream restoration projects with relatively small segments located on Parks property may be selected by the County's DBM contractor. If selected by the County's contractor and approved by DEP with concurrence by M-NCPPC, the contractor will need to obtain a Park Permit and comply with all M-NCPPC requirements.

FISCAL NOTE

This project assumes the award of Maryland Water Quality Revolving Loan Funds (Long-Term Financing) over the six-year period, which would replace Water Quality Protection Bonds as the primary source of funding for the program.

This CIP Project will be closed after the completion of the Booze Creek Repair project, expected in FY22. Any future stream restoration work shall be performed under CIP Project # 808726 - Stormwater Management Retrofit: Countywide.

DISCLOSURES

The County Executive asserts that this project conforms to the requirement of relevant local plans, as required by the Maryland Economic Growth, Resource Protection and Planning Act.

COORDINATION

Department of Transportation, Maryland-National Capital Park and Planning Commission, Washington Suburban Sanitary Commission, Department of Permitting Services, Maryland Department of the Environment, and Maryland Department of Natural Resources.

Stormwater Management Facility Major Structural Repair (P800700)

Category	Conservation of Natural Resources	**Date Last Modified**	01/08/20
SubCategory	Stormwater Management	**Administering Agency**	Environmental Protection
Planning Area	Countywide	**Status**	Ongoing

	Total	Thru FY19	Est FY20	Total 6 Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Beyond 6 Years
EXPENDITURE SCHEDULE ($000s)											
Planning, Design and Supervision	13,125	5,205	1,430	6,490	1,290	990	1,050	1,050	1,060	1,050	-
Construction	30,273	12,063	2,740	15,470	3,570	3,700	2,100	2,100	2,000	2,000	-
Other	1	1	-	-	-	-	-	-	-	-	-
TOTAL EXPENDITURES	**43,399**	**17,269**	**4,170**	**21,960**	**4,860**	**4,690**	**3,150**	**3,150**	**3,060**	**3,050**	**-**
FUNDING SCHEDULE ($000s)											
Current Revenue: Water Quality Protection	15,805	9,485	810	5,510	1,630	1,290	650	630	660	650	-
Long-Term Financing	20,122	312	3,360	16,450	3,230	3,400	2,500	2,520	2,400	2,400	-
State Aid	399	399	-	-	-	-	-	-	-	-	-
Water Quality Protection Bonds	7,073	7,073	-	-	-	-	-	-	-	-	-
TOTAL FUNDING SOURCES	**43,399**	**17,269**	**4,170**	**21,960**	**4,860**	**4,690**	**3,150**	**3,150**	**3,060**	**3,050**	**-**

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 21 Request	6,530	Year First Appropriation	FY07
Appropriation FY 22 Request	2,820	Last FY's Cost Estimate	27,994
Cumulative Appropriation	22,931		
Expenditure / Encumbrances	18,820		
Unencumbered Balance	4,111		

PROJECT DESCRIPTION

This project provides for the design and construction of major structural repairs to County maintained stormwater management facilities. The County is responsible for structural maintenance of over 6,800 stormwater management facilities. Major structural repairs can include dredging and removing sediment, removal and replacement or relining of failing pipes and principal spillways, replacing failing riser structures, and repairing failing dam embankments. The repair work under this project is more significant than routine maintenance and requires engineering analysis and design and application for Federal, State, and/or local permitting.

COST CHANGE

The six-year cost increase is due to an increased number of major structural repair projects.

PROJECT JUSTIFICATION

This project provides for major structural repairs in order to comply with the County's municipal separate storm sewer system (MS4) permit. It is limited to funding repairs at facilities that require extensive engineering design and permitting that cannot be accomplished within a single fiscal year due to the time required to obtain State and Federal permits.

Current projects include: Wheaton Branch overtopping protection, Persimmon Tree Ponds, Peachwood Pond, Briars Acres Pond, Railroad Branch Dam, Lake Hallowell dredging project, and Lake Whetstone Toe Drain repair.

FISCAL NOTE

This project assumes the award of Maryland Water Quality Revolving Loan Funds (long-term financing) over the six-year period, which would replace Water Quality Protection Bonds as the primary source of funding for the program. No State Aid is assumed for this project in FY21-26.

DISCLOSURES

Expenditures will continue indefinitely. The County Executive asserts that this project conforms to the requirement of relevant local plans, as required by the Maryland Economic Growth, Resource Protection and Planning Act.

COORDINATION

Department of Transportation, Maryland-National Capital Park and Planning Commission, Department of Permitting Services, Homeowners Associations, Montgomery County Public Schools, Department of General Services, Maryland State Highway Administration, Stormwater Management Retrofit: Countywide (No. 808726), and Maryland Department of Natural Resources.

Stormwater Management Retrofit: Countywide
(P808726)

Category	Conservation of Natural Resources	**Date Last Modified**	01/08/20
SubCategory	Stormwater Management	**Administering Agency**	Environmental Protection
Planning Area	Countywide	**Status**	Ongoing

	Total	Thru FY19	Est FY20	Total 6 Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Beyond 6 Years
EXPENDITURE SCHEDULE ($000s)											
Planning, Design and Supervision	52,232	20,672	3,520	28,040	5,070	5,040	4,680	3,420	5,900	3,930	-
Land	3	3	-	-	-	-	-	-	-	-	-
Site Improvements and Utilities	10	10	-	-	-	-	-	-	-	-	-
Construction	77,628	25,438	5,480	46,710	6,330	10,990	7,130	8,060	6,190	8,010	-
Other	3,889	3,889	-	-	-	-	-	-	-	-	-
TOTAL EXPENDITURES	**133,762**	**50,012**	**9,000**	**74,750**	**11,400**	**16,030**	**11,810**	**11,480**	**12,090**	**11,940**	**-**
FUNDING SCHEDULE ($000s)											
Contributions	60	-	60	-	-	-	-	-	-	-	-
Current Revenue: Water Quality Protection	22,540	11,549	2,551	8,440	2,440	1,000	1,000	1,000	2,000	1,000	-
Intergovernmental	1,000	1,000	-	-	-	-	-	-	-	-	-
Long-Term Financing	60,383	3,679	5,744	50,960	7,100	11,850	8,450	7,620	7,850	8,090	-
State Aid	18,594	3,699	645	14,250	1,660	3,000	2,180	2,680	2,060	2,670	-
Stormwater Management Waiver Fees	1,100	-	-	1,100	200	180	180	180	180	180	-
Water Quality Protection Bonds	30,085	30,085	-	-	-	-	-	-	-	-	-
TOTAL FUNDING SOURCES	**133,762**	**50,012**	**9,000**	**74,750**	**11,400**	**16,030**	**11,810**	**11,480**	**12,090**	**11,940**	**-**
OPERATING BUDGET IMPACT ($000s)											
Maintenance				600	-	-	150	150	150	150	
NET IMPACT				**600**	**-**	**-**	**150**	**150**	**150**	**150**	

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 21 Request	27,640	Year First Appropriation	FY87
Appropriation FY 22 Request	2,700	Last FY's Cost Estimate	59,805
Cumulative Appropriation	68,900		
Expenditure / Encumbrances	60,170		
Unencumbered Balance	8,730		

PROJECT DESCRIPTION

This project provides for the design and construction of new and upgraded stormwater management facilities throughout the County under the County's Municipal Separate Storm Sewer System (MS4) Permit. Facilities include but are not limited to new or upgraded stormwater management ponds, Environmental Site Design (ESD) / Low-Impact Development (LID) facilities, and stream restorations.

COST CHANGE

The increase is due to the consolidation of the following Watershed Restoration CIP projects into this CIP project:

- Stormwater Management Design/Build/Maintain Contract (P801901),
- Stormwater Management Retrofit - Government Facilities (P800900),
- Stormwater Management Retrofit - Roads (P801300),
- Stormwater Management Retrofit - Schools (P801301),
- Watershed Restoration - Interagency (P809342), and
- Misc Stream Valley Improvements (P807359).

PROJECT JUSTIFICATION

This project is needed to comply with the County's MS4 permitting requirements and to implement the County's adopted water quality goals (COMCOR Chapter 19, Article IV) and protect habitat conditions in local streams. In addition, the project supports the goals of the Anacostia Watershed Restoration Agreement.

OTHER

This project assumes the award of Maryland Water Quality Revolving Loan Funds (long-term financing) over the six-year period, which would replace Water Quality Protection Bonds as the primary source of funding for the program. Expenditures in the out-years include expected costs to meet the requirements of the County's next MS4 permit. The scope of the next permit is subject to negotiation with the Maryland Department of Environment.

FISCAL NOTE

This project assumes the award of Maryland Water Quality Revolving Loan Funds (long-term financing) over the six-year period, which would replace Water Quality Protection Bonds as the primary source of funding for the program.

The Department of Environmental Protection will provide quarterly Program status updates to the Council. The work Program will be based on permits requirements, an assessment of priority needs and community input including feedback from stormwater partners.

DISCLOSURES

Expenditures will continue indefinitely. The County Executive asserts that this project conforms to the requirement of relevant local plans, as required by the Maryland Economic Growth, Resource Protection and Planning Act.

COORDINATION

Department of Transportation, Maryland National Capital Park and Planning Commission, Department of Permitting Services, Maryland Department of the Environment, Natural Resources Conservation Service , U.S. Army Corps of Engineers, Facility Planning: Stormwater Management (No. 809319), and Maryland Department of Natural Resources.

Wheaton Regional Dam Flooding Mitigation
(P801710)

Category	Conservation of Natural Resources	**Date Last Modified**	01/08/20
SubCategory	Stormwater Management	**Administering Agency**	Environmental Protection
Planning Area	Kensington-Wheaton	**Status**	Planning Stage

	Total	Thru FY19	Est FY20	Total 6 Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Beyond 6 Years
EXPENDITURE SCHEDULE ($000s)											
Planning, Design and Supervision	1,030	187	443	400	170	160	70	-	-	-	-
Construction	4,500	-	-	4,500	-	3,600	900	-	-	-	-
TOTAL EXPENDITURES	**5,530**	**187**	**443**	**4,900**	**170**	**3,760**	**970**	**-**	**-**	**-**	**-**
FUNDING SCHEDULE ($000s)											
Current Revenue: Water Quality Protection	2,530	187	443	1,900	170	1,090	640	-	-	-	-
Federal Aid	3,000	-	-	3,000	-	2,670	330	-	-	-	-
TOTAL FUNDING SOURCES	**5,530**	**187**	**443**	**4,900**	**170**	**3,760**	**970**	**-**	**-**	**-**	**-**

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 21 Request	-	Year First Appropriation	FY16
Appropriation FY 22 Request	2,580	Last FY's Cost Estimate	5,530
Cumulative Appropriation	2,950		
Expenditure / Encumbrances	622		
Unencumbered Balance	2,328		

PROJECT DESCRIPTION

This flood mitigation project, located along Glenhaven Drive and Dennis Avenue in Wheaton, will excavate and expand the stream channel upstream of the Wheaton Regional Pond and modify the pond's riser structure. This project will be constructed in parallel with the Department of Transportation's (DOT) Dennis Avenue bridge replacement. The two projects will modify the current 100-year floodplain boundary just upstream of the pond. The post-project 100-year floodplain will not include the residential properties located in the current 100-year floodplain.

ESTIMATED SCHEDULE

The riser modification and channel design began in FY18 with the riser repair construction expected to start in FY22. The excavation of the channel will occur in coordination with DOT's culvert replacement in FY23 and FY24.

COST CHANGE

Faster than expected design resulted in acceleration of the design phase, though redesign in the Dennis Avenue Bridge Replacement project (P501701) will delay construction to FY22.

PROJECT JUSTIFICATION

An engineering analysis by the Department of Environmental Protection indicates that the effect of the riser structure associated with the Wheaton Regional Pond, the Dennis Avenue Culvert, and an undersized stream channel along Glenhaven Drive, cumulatively, will cause flooding of roads and private property during a 100-year storm event. Flooding of adjacent roads and private property has already occurred in 2006 and 2010. The County is seeking a map revision to the Federal Emergency Management Agency (FEMA) panel for this area to have the 100-year floodplain updated to reflect existing conditions.

FISCAL NOTE

This project will be done in conjunction with the DOT Dennis Avenue bridge replacement project (P501701). The County will also partner with the Maryland Emergency Management Agency (MEMA) to seek FEMA Pre-Disaster Mitigation Grant Program funding for the channel modifications.

COORDINATION

Department of Transportation, Federal Emergency Management Agency, Maryland Emergency Management Agency, and Dennis Ave Bridge M-0194 Replacement (No. 501701).

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TESTIMONY BEFORE THE MONTGOMERY COUNTY COUNCIL

IN SUPPORT OF INCREASED FUNDING FOR DRAINAGE CONTROL PROJECTS

FEBRUARY 5, 2020

Thank you for the opportunity to testify this afternoon in support of increasing the budget to fund desperately needed DOT storm runoff drainage improvement projects to reduce the ever-worsening damage caused by storm water runoff.

My name is Tom Coogan and I am a resident of the Laurel Hill neighborhood in Bethesda near Bradley Boulevard and Seven Locks Road. We and our neighbors, many of whom are longtime County taxpayers, have seen our property literally washed away as a result of uncontrolled runoff, largely the result of County roads that lack adequate storm water control. For almost a decade we have been working with DOT officials to address our concerns. DOT along with DEP and Maryland State officials have met with us and all acknowledge the severity of the problem; however, there has not ~~had~~ been adequate funding to perform the necessary work. Fortunately, with the assistance of Councilmember Friedson and his assistant, Aaron Kraut, we and our neighbors are cautiously optimistic that this year DOT may finally have adequate funding to correct this longstanding problem in our neighborhood.

So I am here today not only for my family and my neighbors but for all residents in the County who are suffering from damage to their homes and property due to inadequate funding of drainage control projects. This problem has been plaguing many of us for many, many years, and has gone unresolved due to lack of funding. We and our neighbors deserve better, other County residents deserve better, and DOT deserves more funding. Over the past decade, whether the result of increased building, infrastructure deterioration, or climate change, storm water runoff has been destroying private and public property and polluting our waterways. Just on our property, for example, raging torrents of water from an unmaintained County drainage easement have swept away the foundation of a massive retaining wall next to our house, toppled enormous trees, undermined a large footbridge, and left our property flooded. Photographs to illustrate the damage are included in my written testimony.

The damage caused by storm water runoff is not limited to private property. Rushing water causes drains to get clogged, sidewalks and roads to be damaged, and eventually streams and rivers to be polluted, all of which not only harms our neighborhood, which is next to Cabin John Creek, but everyone in the County who pays for that damage.

We and our neighbors hope that the County Council will increase funding for drainage improvements in the capital budget that is before you, and that the County Executive will support those increases in future budget recommendations. Thank you for your consideration of our request, for your time and attention, and for your service to our community.

Thomas D. Coogan
7926 Bradley Boulevard
Bethesda, MD 20817

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Statement of Eugene Ebner
President, Civic Association of River Falls (CARF)
February 5, 2020

My name is Eugene Ebner and I am President of the Civic Association of River Falls. Thank you for the opportunity to address the Montgomery County Council on the impact of last summer's storms, subsequent flooding in the River Falls community and the steps needed to ensure that those impacts are mitigated and funded.

On July 8, 2019 the River Falls community experienced a major flood event from an extreme storm followed by another storm of shorter duration on August 6, 2019, which resulted in additional flooding, though not as severe as the first storm.

During the initial flood, a portion of the River Falls neighborhood incurred significant street flooding of several feet of water, making those roads impassable and resulting in the partial submergence of parked cars, some of which floated away. There was also major property damage to a number of homes on those streets, including loss of personal property and the extensive flooding of basements.

Homes and streets in the neighborhood impacted by these floods include (but are not limited to) portions of River Falls Drive, Coach Street and Horseshoe Lane located between Hackamore Drive and Brickyard Road, as well as portions of Hackamore Drive, Stable Lane, and Little MacArthur Blvd.

Flooding on Horseshoe Lane also resulted in the submerging of the River Falls Community Center Association's swimming pool, tennis courts, and portions of the clubhouse. These facilities are available for use not only by Association members, but also by other Montgomery County communities for swim meets and related events. As a result of the flooding, the swimming pool and clubhouse incurred significant damage.

Statement of Eugene Ebner, CARF (continued)

Since the occurrence of the first storm on July 8, it is our understanding that the Montgomery County Department of Transportation (DOT) Division of Highway Services inspected and took steps to clear drains in our neighborhood. We should note however, that even after the County cleared the drains of debris, that action alone was not sufficient because the neighborhood still experienced subsequent flooding issues as evidenced by the smaller August 6 storm previously mentioned.

In addition, we were informed that the DOT Division of Transportation Engineering conducted an initial on-site survey of our community's drainage system infrastructure thereafter, and decided to undertake a further comprehensive hydrologic and hydraulic study and analysis of our neighborhood's draining issues. We urge that this study be completed expeditiously and be made public as soon as possible.

We know that there are many competing demands for resources in the County Budget. However, given the flooding impacts described above and the DOT's analysis and findings regarding on-going drainage issues in our neighborhood, we strongly urge that the County's Budget include the additional funding required for the continued assessment and implementation of essential drainage system improvements and flood mitigation projects for River Falls in the County's Capital Improvement Program (CIP) and future budgets.

Specifically, we request that these resources be allocated on a priority basis for River Falls towards the identification in the CIP of specific immediate, near, and long-term follow-on infrastructure and related projects to solve the problems identified in the DOT drainage analysis and that a timetable be established, specifying when those projects will be implemented and completed.

The County's efforts on behalf of our community are necessary and greatly appreciated. We look forward to hearing back from you as soon as possible as to how and when these issues will be addressed and resolved.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1										CIP				
2	Capital Project	Major Element	Notes	Acceptable Life Span (Years)	Inventory	Units	How much/many should be replaced annually	Average Cost	Acceptable Annual Replacement Cost	FY20 Approved	FY21 Request	Future Funding Level	Backlog	Criticality Rating
18	Infrastructure Revit. Sidewalk	Sidewalks Repairs		30	1,668	miles	56	$74,000	$4,114,400	$3,350,000	$2,250,000	Higher	$82,288,000	4
19	Infrastructure Revit. Curb & Gutter	Curb & Gutter Repairs		30	3,336	miles	111	$105,000	$11,676,000	$3,350,000	$2,250,000	Higher	$233,520,000	4
20	Street Tree Preservation	Neighborhood Block Pruning		10	500,000	each	50,000	$375	$18,750,000	$3,100,000	$3,100,000	Same	$187,000,000	4
21	County Maintained Storm Drain	Storm Drain	Survey is 85% completed, as of 2019. Size under 5'	40-75	Pipes 12,130 Culverts 1,368	each	Pipes 303 Culverts 18	Pipes $10,725 Culverts $43,250	$4,041,000	$1,200,000	$1,200,000	Higher	$47,300,000	4
22	Guardrail Projects	Guardrails & End Treatments		30	100	miles	3.5	$316,800	$1,108,800	$25,000	$25,000	Same	$15,840,000	3
23	Streetlighting	Pole & luminare fixtures		25	29,500	street lights	1180	$1,575	$1,858,000	$100,000	$90,000	Same	$23,231,250	4
24	Traffic Signals	County owned signalized intersections		25	278	signals	11	$300,000	$3,300,000	$1,725,000	$1,725,000	Same	$33,360,000	5

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MONTGOMERY COUNTY COUNCIL
ROCKVILLE, MARYLAND

ANDREW FRIEDSON
COUNCILMEMBER
DISTRICT 1

February 21, 2020

TO: T&E Committee Members

FROM: Councilmember Friedson

SUBJECT: Storm Drain General Capital Budget (P500320)

Dear Colleagues,

In summer 2019, two intense rainstorms within 30 days severely flooded County neighborhoods and homes, causing significant property damage and disruption. The storms of July 8, 2019, August 6, 2019, and other more isolated events underscored the inadequacy of County-maintained storm drain systems just as we can expect to experience increasingly intense rainstorms because of climate change.

To meet the demands of this new reality, we must focus more of our attention and resources on upgrading the County's storm drain systems. The Eighth Report of the County's Infrastructure Maintenance Task Force released this month shows a $47.3 million backlog in maintenance of County-maintained Storm Drains. According to the report, even if we were able to eliminate the backlog, the County would need to spend $4 million annually to keep the entire storm drain and culvert inventory in acceptable condition. The proposed FY21 Appropriation Request for the Storm Drain General project (P500320), which funds storm drain retrofits, is $1.708 million.

I ask the T&E Committee to recommend increasing the FY21 Appropriation for the Storm Drain General project (P500320) by $1.708 million to a total of $3.416 million. Doubling the appropriation for this project in FY21 would allow DOT to do more storm drain retrofits and storm drain additions, especially in older County neighborhoods where existing storm drains were simply not designed to handle the amount of water we saw in last year's severe storms and will see with increasing frequency.

We heard compelling testimony during the CIP and capital budget public hearings in support of more funding for storm drains from community leaders in the Laurel Hill neighborhood of Bethesda and the River Falls neighborhood of Potomac. My office has received correspondence from residents in many other communities where basements and garages were flooded, streets and sidewalks were made impassable, and – in the case of Belfast Road – where a failed culvert led to a sinkhole that cut off the only route into or out of a neighborhood.

MONTGOMERY COUNTY COUNCIL
ROCKVILLE, MARYLAND

ANDREW FRIEDSON
COUNCILMEMBER
DISTRICT 1

I know you are equally committed to ensuring the safety of our residents. I believe this additional and much-needed funding can help more neighborhoods before the next big storm hits. Thank you for your consideration of this request.

CC: Keith Levchenko, Senior Legislative Analyst, Montgomery County Council