

SECTION 3 PLANNED PROGRAM

This section identifies and organizes the program needs and issues of Section 2 into a recommended stormwater program, including projected program costs.

OVERVIEW OF PLANNED PROGRAM

After completing a review of the priorities and needs identified through the assistance of the Stormwater Advisory Committee and County staff interviews, AMEC identified key operational impacts that should be addressed in a comprehensive stormwater program for James City County. This section summarizes the potential initiatives that must be considered in developing the long-term program.

For this funding feasibility project, it is important to evaluate the overall costs and impacts of a county-wide stormwater management program, not just those specific to Powhatan Creek. Preparation of watershed management plans should be planned for the other 14 county watersheds and sub-watersheds, with the study for Yarmouth Creek currently being done at a cost of \$70,000. The recommended stormwater improvements for these additional 14 watersheds are expected to be similar to, though on a smaller scale than, those of Powhatan Creek. However, even at one-quarter the cost of CWP's Powhatan Creek recommendations, each additional watershed management plan could add \$75,000 per year (and increased capital expenditures) to the overall county stormwater management budget.

In addition to the recommendations in the watershed management plans being prepared by the County, the stormwater program for the County needs to consider the impact of the requirements resulting from the Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Phase II regulations. In December 1999, EPA published the Phase II Final Rule, which named James City County, among several Virginia jurisdictions, as needing to submit a stormwater management plan to the regulatory authority for permit coverage no later than March 10, 2003. The Virginia Department of Environmental Quality (VDEQ) has primacy over the Phase II program in Virginia and has recently developed a draft General Permit for Virginia's Phase II permit applicants. The NPDES Phase II program centers on the identification and implementation of Best Management Practices (BMPs) to address the program's six minimum control measures. These control measures include: public education and outreach programming; public involvement and participation programming; development of an illicit discharge detection and elimination program; a construction site stormwater management program; a post construction stormwater management program; and a municipal operations "good housekeeping" protocol dealing with pollution prevention at municipally owned and operated facilities. An estimate of the additional costs are incorporated into the stormwater operating and funding program.

Currently, JCC has a small staff dedicated to developing and enforcing stormwater-related ordinances. The vast majority (99%) of BMPs located in the County are privately owned. The County performs routine inspections and monitoring of BMPs and oversees a small BMP restoration program, but does not install or maintain stormwater control facilities. To implement the enhanced Stormwater Policy and watershed management plans, as recommended by the Center for Watershed Protection, the County will have to increase staff, revise ordinances, provide maintenance services, perform public outreach, construct and operate regional stormwater facilities, and raise operating and capital monies.

Table 3-1 represents a translation of the program priorities into broad program elements. These elements represent the general direction and emphasis of the new stormwater program. Cost estimates are based on information developed for other James City County reports and on past experience in other communities, as applied to James City County.

Program Enhancements

- ENGINEERING & PLANNING CAPITAL EXPENDITURES
- 1. Continue Watershed Planning Studies 9. Restore Impaired Stream Segments
- 2. Perform Stormwater Retrofits 10. Construct Regional SW Facilities
- 3. Add Stormwater Management Staff 11. Install Watershed-Related Signs
- 4. Improved Technical Tools 12. Purchase/Preserve Land
- OPERATION & MAINTENANCE FINANCE & ADMINISTRATION
- 5. Monitor Program Compliance 13. Develop SW Funding Structure
- 6. Maintain Database 14. Costs for SW Program Management
- 7. Increase Public Outreach/Education REGULATION & ENFORCEMENT
- 8. BMP Maintenance Program (Routine) 15. Implement New Planning Policies and Regulations
- 8a. BMP Maintenance Program (Non-Routine) 16. Comply with NPDES Phase II

Table 3-1 (Revised)

	%	Year 2	Year 3	Year 4	Year 5
Stormwater Program Cost Estimates	FY 06	FY 05	FY 06	FY 07	FY 08
		\$ x 1000	\$ x 1000	\$ x 1000	\$ x 1000
NEW PROGRAM ELEMENTS					
ENGINEERING & PLANNING					
1. Continue Watershed Planning Studies	2.6	40	40	40	40
2. Perform Stormwater Retrofits	5.0	60	75	90	105
3. Add Stormwater Management Staff	3.3	50	50	50	50
4. Improved Technical Tools	0.3	5	5	5	5
OPERATION & MAINTENANCE					
5. Monitor Program Compliance	1.0	15	15	15	15
6. Maintain Database	0.3	5	5	5	15
7. Increase Public Outreach/Education	3.0	45	45	45	45
8. BMP Maintenance Program (Routine)	4.6	40	70	100	120
8a. BMP Maintenance Program (Non-Routine)	13.2	150	200	250	350
CAPITAL EXPENDITURES					
9. Restore Impaired Stream Segments	8.3	100	125	150	175
10. Construct Regional SW Facilities	33.0	250	500	500	500
11. Install Watershed-Related Signs	0.3	10	5	5	5
12. Purchase/Preserve Land	6.6	100	100	100	100
FNANCE & ADMINISTRATION					
13. Develop SW Funding Structure	3.3	300	50		
14. Costs for SW Program Management	7.9	50	120	120	120
REGULATION & ENFORCEMENT					
15. Implement New Planning Policies and Regulations	0.7	10	10	10	10
16. Comply with NPDES Phase II	6.6	100	100	100	100
TOTAL NEW PROGRAM	100	1330	1515	1585	1755
EXISTING PROGRAM ELEMENTS					
ADMINSTRATION & OVERHEAD					
ENVIRONMENTAL DIVISION	500	500	500	500	500
CAPITAL PROJECTS					
TOTAL EXISTING PROGRAM	958	618	538	538	538
TOTAL NEW & EXISTING PROGRAMS	958	1948	2053	2123	2293

LINE ITEM DESCRIPTION: PLANNED PROGRAM LAYOUT TABLE

Item #	Description of Cost Center
1	Watershed Planning of the major watersheds is on going and will continue with a minimum of one study area to be completed each year.
2	The watershed planning studies are identifying necessary stormwater retrofits in each area. In Year 1 it is expected that in-house design will take place, allowing retrofit work to begin in Year 2. This program element is expected to grow by 25% a year, as additional retrofit needs are identified in watersheds other than Powhatan Creek.
3	To support the increases in engineering requirements with an expanded program, additional resources will be provided to the Environmental Division by the addition of one stormwater engineer in Year 2.
4	To keep up with changes in technology (GIS, mapping, and updated design standards) the proposed level of funding recognizes a need to provide minor updates annually.
5	This item includes costs identified in the Powhatan Creek study for contracts with the College of William & Mary for monitoring activities.
6	Database maintenance includes annual inventory and software updates and an additional \$10,000 expenditure in Year 5 for updating impervious cover computations.
7	Public Education and outreach is a key focus of the expanded Stormwater Program. A Public Education program will be developed and implemented to ensure that the community has a broad understanding of the needs being addressed by the Stormwater Program. The costs include funding a public education coordinator (0.5 FTE) in Year 2 and expenses.
8	Additional resources will likely be required as the County further defines their long-term maintenance policies and level of service strategies. This line item addresses annual Best Management Practice (BMP) inspections and routine maintenance of county-owned BMPs. The costs include one additional inspector in Year 2, as well as routine maintenance costs.
8a	Additional resources will likely be required as the County further defines their long-term maintenance policies and level of service strategies. This line item addresses non-routine maintenance of county-owned and privately-owned BMPs.
9	This item includes the costs identified in the Powhatan Creek study for stream restoration projects. Planning for this work will be done in Year 1 with construction activities to begin in Year 2. This program element is expected to grow by 25% a year, as additional impaired stream segments are identified in watersheds other than Powhatan Creek.
10	This item includes costs for construction of regional stormwater control facilities identified in watershed management plans.
11	This item includes costs identified in the Powhatan Creek study for producing and erecting watershed-related signs.
12	Purchasing or otherwise preserving environmentally sensitive lands is a high priority for the County. No specific properties have been identified at this time. These efforts will be coordinated with the Greenspace program.

Item #	Description of Cost Center
13	Development of a dedicated funding mechanism is a priority for meeting the goals of an expanded stormwater program. The cost reflected is based on the implementation of a stormwater utility. If another funding mechanism is chosen as the primary resource, this cost may be increased, reduced, or even eliminated.
14	This line item addresses other administrative costs (billing, accounting, etc.) which will be incurred by the stormwater program. These costs will be influenced by the funding mechanism chosen by the County to support the expanded program. This estimate is based on the implementation of a stormwater utility and includes a new stormwater coordinator, two new billing clerks, plus administrative costs.
15	This item includes costs identified in the Powhatan Creek study for implementing new stormwater policies and any regulatory changes approved by the Board.
16	These funds address potential costs associated with NPDES Phase II compliance. Year 1 includes the permit application costs and the following years represent compliance and reporting costs.
Note 1	The costs for the Environmental Division under Existing Program Elements include personnel costs (\$458,635), operating costs (\$18,695) and capital costs (\$23,000) for all stormwater management aspects of the division (i.e. erosion and sediment control, plan review, inspections, etc.)
Note 2	The costs included in this table do not include costs for new space and equipment that may be required for the addition of new employees.

TABLE 1-1. CURRENT BUDGET FOR STORMWATER PROGRAM

Program Element	Costs	Staffing
Administration and Overhead		
<i>Personnel</i>		
Development Manager (5%)	4,480	0.05
County Engineer (30%)	17,391	0.3
Administrative (15%)	3,800	0.15
Fringe (33%)	8,471	
<i>Current Operating Costs</i>		
15% of budget	2,200	
<i>Capital Expenditures</i>		
15% of budget	1,500	
Environmental Division		
<i>Personnel</i>		
Director, Environmental Division (80%)	53,391	0.8
Engineering Assistant (50%)	16,249	0.5
Civil Engineer (90%)	43,999	0.9
Engineering Inspector Supervisor (90%)	41,086	0.9
Engineering Inspectors (85%) (4 people)	111,066	3.4
Environmental Assistant (50%) ¹	15,297	0.5
Environmental Specialist (75%) ²	33,750	0.75
Watershed Planner (90%)	30,000	0.9
Fringe (33%)	113,797	
<i>Current Operating Costs</i>		
7% of budget	18,695	
<i>Capital Expenditures</i>		
1 car/yr, furniture	23,000	
Capital Projects		
Water Quality Improvements ³	420,000	
Total	958,172	

¹ Position currently funded by Mosquito Control.

² Position currently funded by Development Management.

³ Includes Drainage Improvement Program.