

**A G E N D A**

**JAMES CITY COUNTY BOARD OF SUPERVISORS**

**READING FILE**

**November 28, 2006**

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FOR YOUR INFORMATION

1. James City County Stormwater Utility Update Support Information
  - a. Stormwater Management Program Elements and Level of Service Revised Based on SWAC Recommendations
  - b. Proposed Enhanced Stormwater Program

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MEMORANDUM

DATE: November 28, 2006  
TO: The Board of Supervisors  
FROM: Wayland N. Bass  
SUBJECT: James City County Stormwater Utility

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In early 2006 the Board of Supervisors instructed staff to draft a Stormwater Utility Program for the County. We employed AMEC Earth and Environmental, Inc. consultants. The Board appointed 13 citizens to serve on the Stormwater Advisory Committee to guide staff and consultants.

The Stormwater Advisory Committee held five two-hour meetings. We will present the Committee and staff recommendations at the Board Work Session at 4 p.m., November 28.

The PowerPoint presentation is attached.

Attachment 1 is a paper describing the recommended Stormwater Utility Program. The paper describes each program element, level of service (minimal, moderate, and aggressive), and funding level recommended by the Committee and staff.

Attachment 2 is a proposed five-year program summarizing recommended new program elements, new program costs, existing program elements, existing program costs, and potential funding sources.

The presentation consists of three steps, with Board questions and comments following each step.

- Step 1. Identifying issues and problems.
- Step 2. Building the program.
- Step 3. Establishing the rate. This is a discussion of rate concepts. The rate model is scheduled for completion in January and will be based on program direction provided by the Board at this work session..

The draft Stormwater Utility Program is at the point where guidance is needed from the Board as we go forward on the following proposed schedule:

- 1. Completion of rate model - January 2007;
- 2. Draft stormwater ordinance for Board consideration - March 2007; and
- 3. Complete the billing account file - June 2007.

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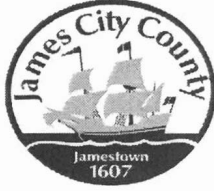
Wayland N. Bass

CONCUR:

  
John T. P. Horne

WNB/cec  
JCCStormUtil.mem

Attachments



## ATTACHMENT 1

# Stormwater Management Program Elements and Level of Service Revised Based on SWAC Recommendations

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This paper summarizes a range of program elements, including estimated cost, to address program priorities previously developed with input from the Committee and staff. The discussion is somewhat general in nature with details provided to identify the difference between a minimal approach, a moderate approach and an aggressive approach to storm water services in the County. Cost estimates are based on staff estimates and past experience in other places, as applied to James City County. Final costs will be based on specifics still to be determined (i.e. office space, specific job duties, and timing of implementation).

### Watershed Studies and Updates

*Minimum:* Proceed with watershed studies for the remaining ten watersheds in the County at the pace of one every three years. Maintain the current approach to focus on water quantity impacts only.

*Moderate:* Accelerate the planning process to a minimum of one every two years; performing studies in the most critical watersheds first (i.e. those with the highest potential development impact or highest value water protection issues). Provide funding for continued planning updates and maintenance of completed studies in Powhatan and Yarmouth Creeks.

*Aggressive:* Following the same degree of implementation as in the moderate approach, but accelerate the pace to one watershed study per year.

Annual costs for the various approaches above are estimated as follows:

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$70,000	\$120,000	\$220,000

### Stormwater Retrofit/Repair of County Facilities

*Minimum:* Set aside dedicated resources to cover basic retrofits and repairs for non-routine BMP maintenance of County facilities.

*Moderate:* Increase funding set-aside to cover county-wide retrofit projects, as dedicated under the minimal approach, and assign a project engineer responsible for the timely completion of the projects.

*Aggressive:* Increase funding to twice the level of the minimal set-aside and assign one new project engineer to the program.

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$50,000	\$125,000	\$175,000

## Inspection of BMP Construction Activities

*Minimum:* Assign one new engineering inspector to provide inspection of construction of new BMP facilities. Based on the current rate of development of about 40 BMPs per year, this would allow weekly inspections.

*Moderate:* Assign two new engineering inspectors to provide inspection, allowing twice weekly inspections of sites.

*Aggressive:* Assign three new inspectors with one assigned to full time on-site assignments of major facilities. Schedule inspections for critical milestones during construction.

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$52,000	\$104,000	\$156,000

## Inventory and Conditions Assessment

*Minimum:* Map all system components and perform baseline conditions assessment. Work to be completed over three years. After year three provide bi-annual updates to the database.

*Moderate:* Map all system components and perform baseline conditions assessment within two years. After year two provide annual updates to the database.

*Aggressive:* Map all system components and perform baseline conditions assessment within one year and provide annual updates to the database.

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$70,000 for three years and then \$20,000 a year for updates	\$100,000 for two years and then \$40,000 a year for updates	\$200,000 for one year and then \$40,000 a year for updates

## Public Outreach & Education

*Minimum:* Continue with current outreach efforts, as required under the NPDES program – current spending approximately \$40,000/year.

*Moderate:* Increase spending on outreach to educate public about the enhanced stormwater program and the importance of maintenance to minimize flooding impacts. Moderate budget set at \$.50/person per year.

*Aggressive:* Increase spending at a more aggressive rate to target specific audiences such as homeowners associations, developers, new residents, etc. Aggressive budget would be \$1.00/person per year.

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$0 new costs	\$25,000	\$50,000

## Inspection and Enforcement of Private BMP Maintenance Agreements

*Minimum:* Assign one new project engineer to spot check private BMP maintenance facilities, provide basic education on the responsibilities of owners, and oversee enforcement of maintenance agreements. One additional dedicated staff person could complete inspection and enforcement of approximately 100 facilities per year.

*Moderate:* Assign two new project engineers to inspect, educate and enforce maintenance agreements, resulting in oversight of 200 facilities per year.

*Aggressive:* In addition to two project engineers, provide resources to do some field testing (sediment loads, soils testing, pipe conditions, etc.)

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$70,000	\$140,000	\$200,000

## Voluntary Program to start taking over private BMP Maintenance

*Minimum:* Develop a program to allow up to 20 BMPs a year to be turned over to the County for non-routine maintenance. Establish criteria for the conditions of the BMP prior to acceptance by the County. Maintenance easements would be required. *Additional costs* for accepting the new facilities to be negotiated based on specific site conditions. Estimated cost for minimal program includes funding for field work and for one administrative person.

*Moderate:* Increase program to allow up to 40 BMPs per year.

*Aggressive:* Increase program to take over 100 per year with the intention of maintaining all facilities with 5 years.

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$150,000	\$250,000	\$500,000

## Capital Improvements - Implementation of Watershed Study Recommendations

*Minimum:* Provide funding at a base rate of \$500,000 per year (average over the past several years) to allow implementation of watershed study improvements. The estimated backlog of known improvements is \$16M which would require 32 years to eliminate at this rate of investment, using a pay-as-you-go program approach.

*Moderate:* Provide funding at a base rate of \$800,000 per year to eliminate current backlog in 20 years. Consider using the sale of bonds in year 3 or 4 of the utility to accelerate the rate of expenditures. Add a project manager to deal with the increased workload including the need for permit and right-of way acquisition.

*Aggressive:* Provide funding at a base rate of \$1,600,000 per year to eliminate current backlog in 10 years. Consider using the sale of bonds in year 3 or 4 of the utility to accelerate the rate of expenditures. This cost includes one new project manager.

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$500,000	\$900,000	\$1,700,000

### **Increase Drainage Improvement/Retrofit Expenditures**

*Minimum:* Provide funding at a base rate of \$100,000 per year to fund smaller drainage improvement projects such as retrofits, repairs, bank stabilization, etc. This level of service will result in a continued annual backlog of problems.

*Moderate:* Provide funding at a base rate of \$200,000 per year to keep up with projected annual drainage improvement needs plus add the services of a project manager (at \$100,000 per year with benefits) to handle the increase in project work.

*Aggressive:* Provide funding at a base rate of \$300,000 per year to provide upkeep and preventative maintenance on the drainage system plus add costs for one project manager.

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$100,000	\$300,000	\$400,000

### **VPDES Compliance**

*Minimum:* Provide for training and implementation of an Illicit Discharge and Elimination program, as required by the existing VPDES permit.

*Moderate:* In addition to the minimum approach above, add resources for expected new permit requirements starting in 2008, including baseline water quality monitoring.

*Aggressive:* Provide for minimum requirements under VPDES and establish aggressive compliance approach to set standards for water quality protection.

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$30,000	\$50,000	\$100,000

### **General Construction Program delegation/enforcement**

*Minimum:* Provide for one new plan reviewer/inspector to handle the potential major increase in construction plan reviews (estimated to increase by as many as 1000 additional permit applications per year). This level of service would likely create a substantial backlog in processing permit approvals (over 30 day turnaround). Program expected to begin in 2009.

*Moderate:* Provide for two new plan reviewers plus one administrative assistant to handle large increase in volume of plan review. Goal would be to turn around permit requests in 21 business days.

*Aggressive:* Add an additional plan reviewer to the moderate approach above and cut turn around time to 14 business days.

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$52,000	\$144,000	\$196,000

## Program Administration - Stormwater Program Manager

*Minimum:* A Stormwater Program Manager position would be created to centralize responsibility for managing the enhanced comprehensive program. The position would not have new funding, but would come from reassigning existing staff.

*Moderate:* A new Stormwater Program Manager position would be added to centralize responsibility for managing the enhanced comprehensive program. The need for creating an additional position is driven by the need for consistent oversight of the watershed planning and implementation activities, addition of maintenance and inspection staff, expanded public education program and other program demands.

*Aggressive:* Same as Moderate with one administrative staff person added to assist the stormwater program manager.

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$0 additional cost	\$115,000	\$155,000

## Manage accounts, finance, and customer services

*Minimum:* Require the new stormwater program manager to manage all account issues, financial planning, reporting, and customer interaction.

*Moderate:* Add one administrative/customer service representative to assist with account management and coordination with the public.

*Aggressive:* Add an account manager to the moderate approach described above to concentrate on billing, collections, and new account management.

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$0 additional cost	\$40,000	\$100,000

## Cost of Billing & Collections

*Minimum:* Annual costs for billing services through current County tax system.

*Moderate:* Create new stormwater only billing system to prepare and send bills.

*Aggressive:* Non-considered

<b>Minimal</b>	<b>Moderate</b>	<b>Aggressive</b>
\$40,000	\$100,000	N/A

## Summary

The program elements above can be mixed and matched to reflect the priorities of the community and are presented to show the spectrum of costs associated with varying levels of service provided. To show more graphically the financial differences between a minimal approach, a moderate approach, and an aggressive approach, the following table summarizes the potential

annual costs for various program elements. These are costs for new or enhanced services and focus on year one cost projections.

**Cost Table for Minimum – Moderate – Aggressive Approaches**

Program Element	Minimum	Moderate	Aggressive
Watershed Studies & Updates	70,000	120,000	220,000
Retrofit/Repairs for County Facilities	50,000	125,000	175,000
Inspection of BMP Construction	52,000	104,500	156,000
Inventory and Conditions Assessment	70,000	100,000	200,000
Public Education & Outreach	0	25,000	50,000
BMP Inspection and Enforcement	70,000	140,000	200,000
Voluntary Program to Maintain Private BMPs	150,000	250,000	500,000
Capital Improvements Program	500,000	900,000	1,700,000
Drainage Improvements/Retrofits	100,000	300,000	400,000
VPDES Compliance	30,000	50,000	100,000
General Construction Permits (start in 2009)	0	0	0
Stormwater Program Manager	0	115,000	155,000
Managing Accounts, Finance, Customers	0	40,000	100,000
Costs of Billing & Collections	40,000	100,000	175,000
Totals	\$1,132,000	\$2,369,500	\$4,131,000

**Cost for Recommended Approach**

(note: this estimate does not include office space, equipment, or vehicles which will add \$200,000 - \$250,000 per year to the following costs)

Program Element	Year One Projected Cost	Level of Service	Proposed Funding Source
Watershed Studies & Updates	120,000	moderate	Utility
Retrofit/Repairs for County Facilities	50,000	minimal	Utility
Inspection of BMP Construction	156,000	aggressive	General Fund
Inventory and Conditions Assessment	200,000	aggressive	Utility
Public Education & Outreach	0	minimal	General Fund
BMP Inspection and Enforcement	70,000	minimal	Utility
Voluntary Program to Maintain Private BMPs	150,000	minimal	Utility
Capital Improvements Program	900,000	moderate	Utility
Drainage Improvements/Retrofits	300,000	moderate	Utility
VPDES Compliance	50,000	moderate	Utility
General Construction Permits (start in 2009)	0	moderate (2009)	General Fund
Stormwater Program Manager	115,000	moderate	Utility
Managing Accounts, Finance, Customers	40,000	moderate	Utility
Costs of Billing & Collections	40,000	minimal	Utility
Totals	\$2,191,000		



**ATTACHMENT 2 - Proposed Enhanced Stormwater Program - James City County**

21-Nov-06

<b>NEW PROPOSED ELEMENTS</b>	<b>Year 1 (FY 08)</b>	<b>Year 2 (FY 09)</b>	<b>Year 3 (FY 10)</b>	<b>Year 4 (FY 11)</b>	<b>Year 5 (FY 12)</b>	<b>Funding Source</b>	<b>Notes</b>
Watershed Studies & Updates	120,000	120,000	120,000	120,000	120,000	Utility	
Retrofit/Repairs for County Stormwater Facilities	50,000	50,000	50,000	50,000	50,000	Utility	
Inspection of BMP Construction Activities	156,000	156,000	156,000	156,000	156,000	General Fund	Revenue from increased fees to off-set portion of costs
Inventory and Conditions Assessment	200,000	40,000	40,000	40,000	40,000	Utility	
Public Education and Outreach	0	0	0	0	0	General Fund	Existing funding level found acceptable
Inspection and Enforcement of Private BMP Maintenance Agreements	70,000	70,000	70,000	70,000	70,000	Utility	
<b>Voluntary</b> Program to Maintain Private BMPs (Majority of cost covered by add-on to utility fee)	150,000	200,000	250,000	300,000	350,000	Utility	Significant portion of costs to be covered by additional fee
Capital Improvements Program	900,000	900,000	900,000	900,000	900,000	Utility	
Drainage System Improvements/Retrofits	300,000	300,000	300,000	300,000	300,000	Utility	
VPDES Compliance	50,000	50,000	50,000	50,000	50,000	Utility	
General Construction Permits Delegation/Enforcement (starts in 2009)	0	0	92,000	144,000	144,000	General Fund	Revenue from permit fees to off-set costs
Stormwater Program Manager	115,000	115,000	115,000	115,000	115,000	Utility	
Managing Utility Accounts, Finance, and Customer Service	40,000	40,000	40,000	40,000	40,000	Utility	
Costs of Billing & Collections	40,000	40,000	40,000	40,000	40,000	Utility	
Proposed new staff	6 for utility and 3 for GF activities	6 for utility and 3 for GF activities	6 for utility and 6 for GF activities	6 for utility and 7 for GF activities	6 for utility and 7 for GF activities		
Estimated costs for employee set-up, space and vehicles	237,000	237,000	312,000	346,000	346,000		
<b>Summary New Costs</b>	<b>\$2,428,000</b>	<b>\$2,318,000</b>	<b>\$2,535,000</b>	<b>\$2,671,000</b>	<b>\$2,721,000</b>		

<b>EXISTING PROGRAM ELEMENTS</b>							
Engineering & Planning - includes plan review	410,000	410,000	410,000	410,000	410,000	General Fund	Costs partially covered by permit/development fees
Regulation & Enforcement - includes field inspections and permit compliance	550,000	550,000	550,000	550,000	550,000	General Fund	Costs partially covered by permit/development fees
Operations & Maintenance - includes mowing and oversight	40,000	40,000	40,000	40,000	40,000	General Fund	
Existing Stormwater Program Administration	80,000	80,000	80,000	80,000	80,000	General Fund	
Capital Improvements	0	0	0	0	0		No money budgeted beyond 2007
Public Education & Outreach	40,000	40,000	40,000	40,000	40,000	General Fund	
Capital Program Management	60,000	60,000	60,000	60,000	60,000	Utility	
Summary Existing Costs	1,180,000	1,180,000	1,180,000	1,180,000	1,180,000		
<b>TOTAL PROJECTED COSTS</b>	<b>3,608,000</b>	<b>3,498,000</b>	<b>\$3,715,000</b>	<b>3,851,000</b>	<b>3,901,000</b>		
Note: these are present day dollars not yet adjusted for inflation.							

<b>Projected Program Costs by Funding Source</b>					
<b>Stormwater Utility User Fees</b>					
New Proposed Services	2,035,000	1,925,000	1,975,000	2,025,000	2,075,000
Existing Services	60,000	60,000	60,000	60,000	60,000
Employee set-up	134,000	134,000	134,000	134,000	134,000
Total	\$2,229,000	\$2,119,000	\$2,169,000	\$2,219,000	\$2,269,000
<b>General Fund (partially covered by permit/development fees)</b>					
New Proposed Services	156,000	156,000	248,000	300,000	300,000
Existing Services	1,120,000	1,120,000	1,120,000	1,120,000	1,120,000
Employee set-up	103,000	103,000	178,000	212,000	212,000
Total	\$1,379,000	\$1,379,000	\$1,546,000	\$1,632,000	\$1,632,000
<b>Total Program Costs</b>	<b>\$3,608,000</b>	<b>\$3,498,000</b>	<b>\$3,715,000</b>	<b>\$3,851,000</b>	<b>\$3,901,000</b>