A G E N D A

JAMES CITY COUNTY BOARD OF SUPERVISORS

WORK SESSION

November 28, 2006

4:00 P.M.

A. CALL TO ORDER

B. ROLL CALL

C. BOARD DISCUSSION

1. Stormwater Utility Update

D. ADJOURNMENT

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James City County
Stormwater Funding and Operating Program

Board of Supervisors Presentation
November 28, 2006

AMEC Earth & Environmental, Inc.

Outline of BOS Presentation

- Background Information
- Step 1 - Identifying Issues and Problems
  - The Process
  - Key Objectives
  - Gap Analysis
    - * Questions & Answers
- Step 2 – Building the Program
  - Recommended Program Elements and Costs
  - Projected 5-year Program
    - * Questions and Answers
- Step 3 – Establishing the Rate
  - Methodology and Structure
  - Rate Base Policies
  - Next Steps
    - * Questions and Answers

Stormwater Funding and Operating Program – Phase 3

Background

- AMEC was hired by the County in 2001 to evaluate the existing stormwater program and funding options
- Recommendation was made in 2002 to fund a $2M program through development of a user fee
- Decision made to move forward with implementation of the utility in late 2005
- Began work in May 2006
- Held first Stormwater Advisory Committee meeting in July 2006; 5 meetings to date

Step 1 – Identify the Issues/Problems

- Set goals and objectives for the stormwater program
- Review current services and compare to program objectives
- Identify program gaps
- Examine a range of solutions to fill gaps

Utility Development Process

- Work with Development Management staff to define the issues and draft recommendations
- Review drafts with internal review committee - FMS, JCSA, Treasurer, Administration, County Attorney
- Present to SWAC and incorporate feedback
- Finalize recommendations

Key Objectives

- *effectively enforce existing regulations*
- *insure appropriate maintenance of BMPs, both public and private*
- *continue to conduct watershed studies and implement effective and innovative recommendations*
- *continue to improve design standards & technical tools*
- *comply with the County's VPDES Phase II permit*

Key Objectives

- ***perform capital improvements to optimize the effectiveness of the stormwater management infrastructure and to protect and restore the natural drainage system to the maximum extent practicable***
- ***educate the public about stormwater management***
- ***provide consistent, equitable funding for the stormwater program***

Identifying Gaps between Existing Services and Desired Future Program

- **Regulatory Compliance & Enforcement**
  - **Illicit Discharge and Detection Program**
  - **On-site construction inspection**
  - **Compliance with new General Construction Permit Requirements - May add hundreds of additional plan reviews per year**

- **Watershed Studies and Implementation**
  - **Performing studies on other watershed areas**
  - **Implementing recommendations for Powhatan and Yarmouth creeks ($8-$9M)**

Identifying Gaps between Existing Services and Future Needs

- **Other Capital and Drainage Improvement Needs**
  - **Backlog of Known Stream Channel Restoration Work ($6M)**
  - **Miscellaneous Outfall Upgrades/Drainage Improvement Projects($2M)**
  - **County BMP Rehabilitation ($50,000)**
- **Operational Issues**
  - **Voluntary Private BMP Maintenance/ Rehabilitation Program**
  - **Inventory and Conditions Assessment**
  - **Program Coordinator – to provide centralized management of all stormwater services**

Step 2 – Build a Program to Address the Gaps

- Identify each program element needed
- Agree on the Level of Service to be provided (minimal, moderate, or aggressive)
- Establish resource needs to provide the appropriate LOS (see attachments 1 and 2)
- Build the enhanced program

Preliminary Program Elements

Program Element	Key Objective Met	Level of Service/ Funding Source
Watershed Studies & Updates	Continue to conduct watershed studies	Moderate/ Utility
Retrofit/Repairs to County Facilities	Insure appropriate maintenance of BMPs	Minimal/ Utility
Inspection of BMP Construction	Enforce requirements; comply with VPDES	Aggressive/ General Fund
Inventory & Conditions Assessment	Optimize the effectiveness of the drainage system; prioritize capital needs	Aggressive/ Utility

Preliminary Program Elements

Program Element	Key Objective Met	Level of Service/ Funding Source
Public Outreach and Education	Educate the public about stormwater management	Minimal/ General Fund
Inspection/Enforcement of BMP Maintenance Agreements	Effectively enforce regulations; insure maintenance of BMPs	Minimal/ Utility
Voluntary Program to Maintain Private BMPs	Insure appropriate maintenance of BMPs	Minimal/ *Additional Fee*
Capital Improvements Program	Implement watershed recommendations; perform capital work to optimize system	Moderate/ Utility

Preliminary Program Elements

Program Element	Key Objective Met	Level of Service/ Funding Source
Drainage System Improvements/Retrofits	Optimize effectiveness of the drainage system	Moderate/ Utility
VPDES Compliance – Illicit Discharge Program	Comply with County's VPDES permit	Moderate/ Utility
General Construction Permits (to start in 2009)	Effectively enforce regulations	Moderate/ GF/Permit fees
Stormwater Program Manager	Provide centralized stormwater utility management	Moderate/ Utility

Preliminary Program Elements

Program Element	Key Objective Met	Level of Service/ Funding Source
Manage Accounts, Finance, and Customer Service	Provide consistent funding; educate the public	Moderate/ Utility
Cost of Billing & Collections	Provide consistent funding	Minimal/ Utility

Summary – Recommended Program Costs – First 5 years

	Year 1	Year 2	Year 3	Year 4	Year 5
New Costs	2,428,000	2,318,000	2,529,000	2,665,000	2,715,000
Existing Costs	1,180,000	1,180,000	1,180,000	1,180,000	1,180,000
Total Program	3,608,000	3,498,000	3,709,000	3,845,000	3,895,000

Note: these costs have not been adjusted for inflation

Summary – Program Costs by Funding Source – First 5 years

	Year 1	Year 2	Year 3	Year 4	Year 5
Utility Fee (avg 60%)	2,229,000	2,119,000	2,169,000	2,219,000	2,269,000
General Fund/Fees (avg 40%)	1,379,000	1,379,000	1,540,000	1,626,000	1,626,000
Total Program	3,608,000	3,498,000	3,709,000	3,845,000	3,895,000

Note: these costs have not been adjusted for inflation

What will be different?

- Ability to address problems more efficiently and more effectively through increased knowledge of the system (inventory, watershed study results, BMP inspections)
- Improved water quality protection through consistent planning and funding of stormwater improvement projects
- Centralized stormwater operation that can be more proactive in response to community needs and can address County-wide problems (VDOT coordination)
- More effective response to regulations and enforcement needs
- Consistent, equitable funding source will raise program to higher level of importance

Step 3 – Establishing the Rate

- Evaluate available data sources
- Select rate methodology
- Establish rate base and structure
- Determine number of billing units
- Combine with total program costs to establish the rate

Rate Methodologies

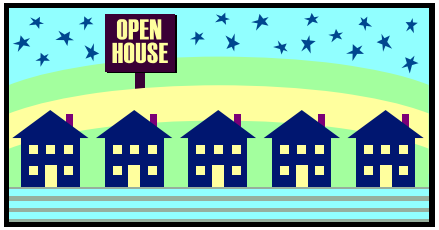
- Most Common
  - Impervious Area (54%)
  - Impervious Area and Gross Area (21%)
  - Gross Area/Intensity of Development (16%)

Rate Methodology for James City County

- **Imperviousness is the recommended rate methodology:**
  - **Sound engineering standards link runoff and demand for service to imperviousness**
  - **Available aerial data and GIS layers**
  - **Easily understood and legally defensible; meets VA legislative requirements**

Rate Structure - SFR

Flat rate **for single family residential (SFR) properties**



- **typically are most homogenous types of property**
- **approximately 90% of the total developed parcels in JCC**
- **minimizes maintenance of accounts, limiting administrative costs**
- **accepted, common approach under utility law**

Rate Structure - NSFR

Rate for non-single family residential (NSFR) properties based on measured impervious area per parcel and a multiplier of the measured median SFR property impervious cover (ERU)

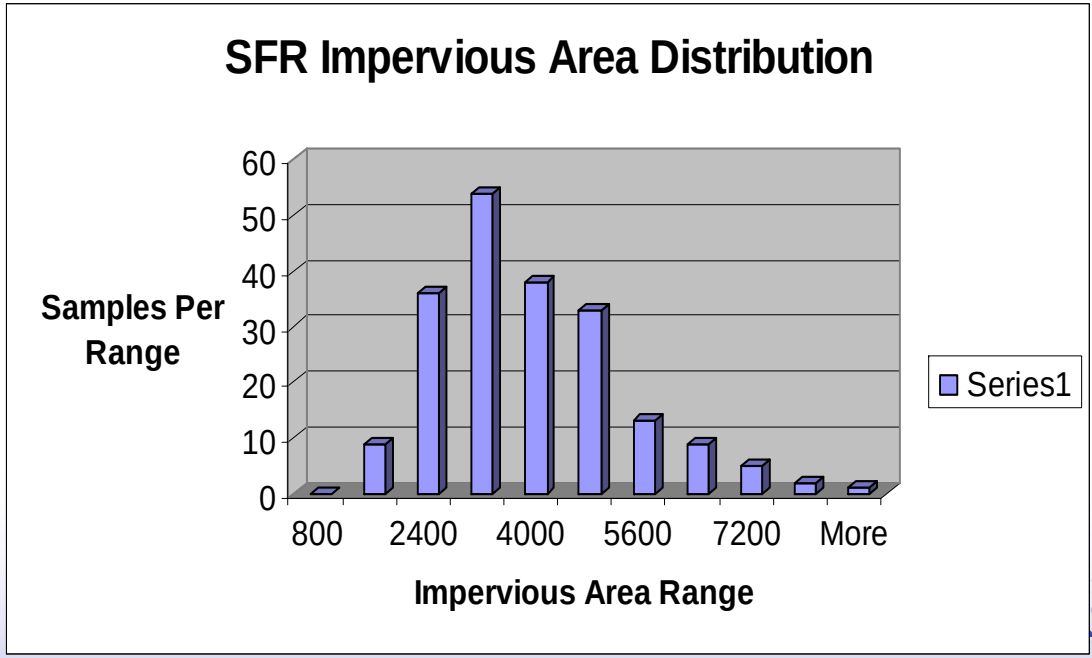
- **requires annual updating of all NSFR parcels**
- **is easy to demonstrate how it was measured**
- **simple to explain in terms of impact vs. a SFR property**
- **accepted, common approach under utility law**

All Non-single family residential properties will have actual impervious area measured

Typical Sample Results

Results of Single Family Residential Property Sample

Bin	Frequency
800	0
1600	9
2400	36
3200	54
4000	38
4800	33
5600	13
6400	9
7200	5
8000	2
More	1



Median value – 3,235 sq ft

Rate Base Policy

- All developed properties within the County limits will be billed, except those exempted by VA law.
- Like properties will be treated similarly – SFR will be flat rated (1 ERU) and NSFR will be billed at multiplier of ERU based on measured impervious area.
- A credit policy should be established for those properties that reduce demand for County stormwater services.

VA Legislation

- **<u>Shall</u> provide for full waivers of charges:**
  - **for state and local public roads and rights-of-way**
  - **to federal, state, and local agencies when the agency owns and provides maintenance on their stormwater facilities**
  - **to units of the locality administering the program (i.e. County schools)**

- **<u>May</u> provide for full or partial waivers of charges to any person who develops, redevelops or retrofits outfalls, discharges or property so that there is a permanent reduction in post-development stormwater flow and pollutant loading.**

VA Legislation

- **Charges will be assessed to owners based on their contribution to stormwater runoff**
- **Income from fees may not exceed actual costs of services**
- **Public hearing and notice required prior to adoption**

Various Credit Approaches

Type of Credit	% of fee Credited
Detention/Retention – typically requires reduction of peak flows; water quality treatment; or stream protection *above requirements*. Annual certification required.	25 – 50%
Good Design Practices – usually includes retrofits to *increase design capacity*; use of buffers or plantings to minimize site run-off. Typically reviewed on a case-by-case (application) basis. Must show quantifiable benefit.	Dependent on demonstrated benefit
Conservation Easements – developable land dedicated to perpetual conservation (*above minimum required*). Must provide deed or plat.	Dependent on % of property put in easement

Program Comparisons

Locality	Rate Structure	Credit System
Hampton	$3.60/ERU/month 1 ERU = 2,429 sq ft	Non-residential properties may receive up to 45% credit based on the type of BMP employed.
Newport News	$4.35/ERU/month 1 ERU = 1,777 ft sq	For non-residential parcels, up to 25% credit for sites draining into the City system, depending on type of facility.
Virginia Beach	$5.13/ERU/month 1 ERU = 2,269 sq ft	Adjustment policy will allow 20% credit for volume control; 30% for BMPs that meet criteria.

Next Steps

- Finalize the program based on BOS direction – December 2006
- Prepare Rate Model – January 2007
- Prepare draft ordinance to enact the stormwater system of charges – March 2007
- Create the final billing account file – June 2007

Questions??