



*City of Lynchburg*

# Stormwater Management

## Stormwater Advisory Committee

*September 28, 2010*

*Work Session*



**CDM**

# Estimated Annual Program Cost for Stormwater Management (based on FY11)



Primary Stormwater Program Costs	Program Management	Regulatory Services	Operation & Maintenance	Capital Improvements	Totals
<b>Utilities</b>					
<i>Non-Departmental</i>	\$19,000				\$19,000
<i>Stormwater System Maintenance</i>	\$162,000		\$234,000		\$396,000
<b>Public Works</b>					
<i>Streets</i>		\$30,000	\$642,000		\$672,000
<i>Engineering</i>	\$139,000	\$4,000			\$143,000
<i>Parks / Grounds</i>		\$4,000	\$96,000		\$100,000
<i>Refuse</i>		\$5,000	\$174,000		\$179,000
<b>Community Development</b>					
<i>Zoning and Natural Resources</i>		\$166,000			\$166,000
<i>Inspections/Code Enforcement</i>		\$26,000			\$26,000
<i>GIS</i>	\$22,000				\$22,000
<b>Parks &amp; Recreation</b>		\$45,000			\$45,000
<b>Soil and Water Conservation District</b>		\$10,000			\$10,000
<b>Capital Improvements</b>				\$554,000	\$554,000
<b>SUBTOTALS</b>	<b>\$342,000</b>	<b>\$290,000</b>	<b>\$1,146,000</b>	<b>\$554,000</b>	<b>\$2,332,000</b>
<b>Other Storm-Related Program Costs</b>					
<i>Loose Leaf Collection</i>			\$319,000		\$319,000
<i>Transportation Capital Projects</i>				\$1,340,000	\$1,340,000
<b>SUBTOTALS</b>	<b>\$0</b>	<b>\$0</b>	<b>\$319,000</b>	<b>\$1,340,000</b>	<b>\$1,659,000</b>

# How is Level of Service (LOS) Defined for Stormwater?



- Erosion
- Water Quality
- Flood protection
- Safety
- Aesthetics

## Important Questions Regarding Stormwater Level of Service

1. Regulations define the minimum, but should we do more?
2. Citizens' choice, but how much \$\$?

- VPDES Rules
- VA Impaired Waters
- TMDLs
- FEMA Floodplain

# Level of Service Evaluation: Summary



<i>Level of Service</i>	<i>Program Management</i>	<i>Regulatory Compliance</i>	<i>Operation and Maintenance</i>	<i>Capital Improvement Projects</i>
5	Comprehensive Planning & Full Implementation Capabilities	Exemplary Permit Compliance	Fully Preventative/ 100% Routine	Prioritized / Fully-Funded
4	Pro-Active Planning & Systematic CIP Implementation Capabilities	Pro-Active Permit Compliance	Mixture of Routine and Inspection Based	Phased Implementation / Allocated Budgets
3	Priority Planning & Partial CIP Implementation Capabilities	Minimal Permit Compliance	Mixture of Inspection and Responsive Based	Complaint, Inspection-Based / Moderate Budget
2	Reactionary Planning & Minimal CIP Implementation Capabilities	Below Minimum Permit Compliance	Responsive Only	Critical Needs Only / Minimum Budget
1	No Planning & No CIP Implementation Capabilities	Non-Compliance	Non-Responsive	No Planning / No Budget

Note:  denotes CDM level of service determination for given program area

# How Can the City Improve Its Level of Service for Stormwater Management?



- **Increase knowledge base of system** with inventory, condition assessment, and basin planning
- **Routine and preventative maintenance** of the stormwater collection and conveyance system
- **Prioritize capital improvements** based on projected need and goals for stormwater level of service

# Future Level of Service Cost Summary

Example Costs for Levels of Service w/o Chesapeake Bay



<i>Level of Service</i>	<i>Program Management</i>	<i>Regulatory Compliance</i>	<i>Operation and Maintenance</i>	<i>Capital Improvement Projects</i>	<i>Total Program Cost</i>
5	\$1,137,000	\$828,000	\$1,712,000	\$854,000	\$4,531,000
	Comprehensive Planning & Full Implementation Capabilities	Exemplary Permit Compliance	Fully Preventative/ 100% Routine	Prioritized / Fully-Funded	
4	\$790,000	\$530,000	\$1,487,000	\$754,000	\$3,561,000
	Pro-Active Planning & Systematic CIP Implementation Capabilities	Pro-Active Permit Compliance	Mixture of Routine and Inspection Based	Phased Implementation / Allocated Budgets	
3	\$551,000	\$384,000	\$1,262,000	\$654,000	\$2,851,000
	Priority Planning & Partial CIP Implementation Capabilities	Full Permit Compliance	Mixture of Inspection and Responsive Based	Complaint, Inspection-Based / Moderate Budget	
Existing LOS (2.5)	\$342,000	\$290,000	\$1,146,000	\$554,000	\$2,332,000
	Well-Trained, In-House Staff Minimal Long Range Planning	Minimum Permit Compliance Resources At Capacity	Limited Routine Activities Lack of Dedicated Resources	Critical Needs Only / Minimum Budget	

# Initial SWAC Feedback on Future LOS



- What is the most appropriate level of service for the City of Lynchburg?\*

– Program Management	4.4	<b>Overall: 3.5</b>
– Regulatory Compliance	3.0	
– O&M	3.4	
– CIP	3.5	

- How would you prioritize the areas of the City's stormwater management program?\*

  - #1: Program Management
  - #2: O&M
  - #3: CIP
  - #4: Regulatory Compliance

\* Based on average of four SWAC break-out groups



# Update on Chesapeake Bay TMDL



- Virginia submitted DRAFT plan to EPA on Sept 1
  - 2017: Urban Stormwater focus on expanding Nutrient Trading Program and Nutrient Management Plan
  - 2025: Meet target pollutant reductions for Urban Stormwater contingent upon study of James River
- EPA responded to DRAFT on Sept 24
  - EPA found Virginia’s plan (along with 4 other states plans) to have significant deficiencies.
  - EPA’s plan includes “backstops” to ensure that goals are met: (1) much lower allocations for WWTP’s that would require significant upgrades; (2) a minimum of 50% urban stormwater retrofits
  - EPA’s main concern with the state’s plan includes: controls proposed would not meet allocations; lacks reasonable assurance that pollution controls could be implemented; lack of milestones; few enforceable commitments.



# Update on Chesapeake Bay TMDL (cont.)



- Virginia has until November 29, 2010 to revise their plan to be more stringent and address EPA's concerns.
- Currently in a 45 public comment period that ends November 8, 2010.
- 2 year milestones- would eliminate ability to study James and refine model before immediate and significant financial impact.
- WWTP upgrade requirements could significantly impact Nutrient Trading Program.

# Potential Cost Impact of Chesapeake Bay TMDL



- Multiple Cities in VA working on cost estimates
- Total Capital Cost estimate for Lynchburg:
  - \$300 million to \$900 million for urban stormwater
  - \$70 million for WWTP
- Fate of \$300 million CSO Program uncertain

# Existing Stormwater Funding

City of Lynchburg – Adopted 2011 Budget



Total City Revenues and Expenditures:  
\$314,000,000

## Existing Stormwater Program Funding Sources

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• General property taxes	\$ 1,261,000
• VDOT State Funds	\$ 656,000
• Charges for Services (utility)	<u>\$ 415,000</u>
• Total	\$ 2,332,000

# Potential Program Funding Options with Existing Sources of Funding



	Existing	LOS 4	Minimum TMDL
General property taxes	\$ 1,261,000	\$ 2,490,000	\$ TBD
VDOT State Funds	\$ 656,000	\$ 656,000	\$ 0
Charges for Services (utility)	<u>\$ 415,000</u>	<u>\$ 415,000</u>	<u>\$ 0</u>
Total	\$ 2,332,000	\$ 3,561,000	\$ TBD

•Equivalent tax rate                      \$0.025 per \$100    \$0.048 per \$100

•Equivalent tax rate increase  
over existing rate (\$1.05)                      0%                      2.2%                      TBD%

# Funding Mechanisms



## Primary Funding

1. Fund with General Fund dollars. (Current funding source for most City operations)
2. Make the program user funded.

## Secondary Funding

1. Use Grants and Loans.
2. Issue Bonds.
3. Levy Special Assessments.
4. Assess Development/ Impact Fees.
5. Others.

# Primary Funding Options for Consideration

## – A First Cut



### *Tax-Based Systems*

- #1 – Status Quo – (i.e. reallocation of existing revenue)
- #2 – Increase Tax Rate

### *Dedicated Stormwater User Fee*

- #3 – Equivalent Residential Unit Basis [ERU]
- #4 – Single Family Unit Basis [Tiered Residential - SFU]
- #5 – Equivalent Hydraulic Area Basis [EHA]

### *Combinations*

- #6 – Property Tax + General Budget
- #7 – User Fee + General Budget

# Status Quo

*(Reallocation of existing revenue)*



- Advantages
  - No additional financial impact on citizens
- Disadvantages
  - Potential loss of other services
  - Long-term deterioration of storm sewer system and impaired performance of existing system
  - Major capital investment requirements would not be accomplished
  - Increased risk of US EPA/VDCR fine City for non-compliance



# Increase Tax Rate



- Advantages
  - Provides additional revenue for stormwater program
  - Stable source of revenue
  - Maintain existing billing/collection process
  - Can be tax deductible for businesses
- Disadvantages
  - Only taxable properties pay
  - Not linked to stormwater needs/requirements
  - Equity concern between residential and non-residential properties
  - Potential financial impact to citizens
  - Would represent a significant change in City policy

# What is a Stormwater User Fee?



- Enterprise Fund Similar to Water, Wastewater, Electric Utilities
- Dedicated Funding through User Fee
- Fee Related to Needs or Services Provided
- Needs and Services Correspond to the Impervious Surface on a Property

# Dedicated Stormwater User Fee



- Advantages
  - Equitable – charge to payer is in proportion to the contribution to stormwater runoff burden (typical proxy is impervious area)
  - Stable source of revenue
  - Linked to stormwater needs/requirements
  - Can incentivize the use of best management practices on-site
- Disadvantages
  - New source of funding
  - Potential financial impact to citizens including traditionally tax-exempt properties

# Example Impervious Area Calculation

## Using Equivalent Residential Unit Approach



- **Single Family Dwelling**

- Imp. Area = 2,176 sq. ft.
- ERUs = 1

- **Non-Residential**

- Imp. Area = 681,000 sq. ft.
- ERUs =  $681,000 / 2,176 = 313$



# Dedicated Stormwater Funding Programs in Virginia



- 15 programs have dedicated funding
  - 13 are fee-based
  - 2 are tax-based
- 3 programs have pending user fee programs
- 2 programs are currently evaluating funding options

City/County	Population	Funding
Fairfax County	1,015,302	Implemented
Virginia Beach	435,619	Implemented
Prince William County	379,166	Implemented
Loudoun County	301,171	Implemented
Henrico County	296,415	Feasibility
Norfolk ★	229,112	Implemented
Chesapeake	220,560	Implemented
Arlington County	217,483	Implemented
Richmond ★	192,913	Implemented
Newport News ★	178,281	Implemented
Hampton ★	145,017	Implemented
Alexandria	143,885	Implemented
Portsmouth ★	101,377	Implemented
Roanoke ★	91,552	Pending
Suffolk	81,071	Implemented
Lynchburg ★	72,000	Feasibility
James City County	63,735	Implemented
Charlottesville ★	41,487	Pending
Staunton ★	23,853	Implemented
Colonial Heights	17,768	Pending

★ - Virginia First City



# SWAC Process and Schedule



**Stormwater Management Overview: May 20 – 6:00 p.m.**

**Program Components & Expenditures: June 24 - 6:00 p.m.**

**Level of Service Analysis & Alternatives: July 15 – 6:00 p.m.**

**Future Cost and Stormwater Funding Options: September 16 - 6:00 p.m.**

**Revenue Scenarios: October 21 - 6:00 p.m.**

**Review Recommendations: November 18 - 6:00 p.m.**

**Evaluate/Modify Recommendations for Council: December 16 - 6:00 p.m.**

**Finalize Recommendations for Council: January 20, 2011 - 6:00 p.m.**