



Town of Centreville

Stormwater Utility Public Meetings

Fall, 2012



What is Stormwater?

- Precipitation (i.e. rainstorms and melting snow)
- Runoff from impervious areas
- Becomes surface runoff
- Enters storm drains
- Eventually discharges to Millstream, Gravel Run and into the Corsica River.



Why does stormwater have to be managed?

Flooding

- Flows from all properties contribute to the overall flow and must be managed



Conveyance

- Stormwater runoff must be channeled through a system of inlets and pipes, before being safely discharged into local streams and rivers.



Why does stormwater have to be managed?

- Protect local waterways. Stormwater conveys sediment, metals, oils, gasoline and pesticides as it flows over construction sites, farm fields, lawns and streets.
- Pollution impairs local waterways and ultimately the Chesapeake Bay.
- The Clean Water Act requires total maximum daily loads (TMDL's) in the Chesapeake Bay to be reduced Key milestones are Nitrogen, Phosphorous and Sediments. Think of it as a weight watchers plan for the Bay.
- Urban stormwater is one sector in the watershed improvement plan (WIP).



Need – Water Quality

The Corsica River is a community resource that all property owners in the Town have a vested interest in – these resources must be protected.



Watershed Restoration Action Strategy (WRAS)

- The WRAS documents, including a Characterization, Synoptic Survey, Stream Corridor Assessment, and a Strategy/Business Plan, were completed in 2004.
- A Six Year Progress Report (2005-2011) was completed in Summer 2012



The Corsica River Restoration project has been an extraordinary effort and partnership which includes state, federal and local agencies as well as conservation organizations, universities, research institutions and local watershed groups.



This effort involves outreach to the community, monitoring, research and implementation of water quality and habitat enhancement projects.



All of these efforts have provided insight and lessons on how to effectively communicate conservation goals in the watershed, engage local communities in restoration, determine research priorities and monitoring priorities, and focus restoration efforts that provide the best overall and long-term gains.



WHAT IS THE TOWN DOING FOR

STORMWATER MANAGEMENT?

- Retrofit projects
- Street sweeping
- Cleaning storm drains





Town Retrofits

Banjo Lane Coastal Plain Outfall

Under construction



Corsica River Gen. Funds & 2010 Trust Funds

- Completed, spring 2012



Wooded Wetland Completed Spring 2010 located behind Corsica Technologies, drains 17 acres

Under construction- 3 cells

- Discharges directly into Gravel Run



MDE Monitoring device

- Fore-bay collects sediment

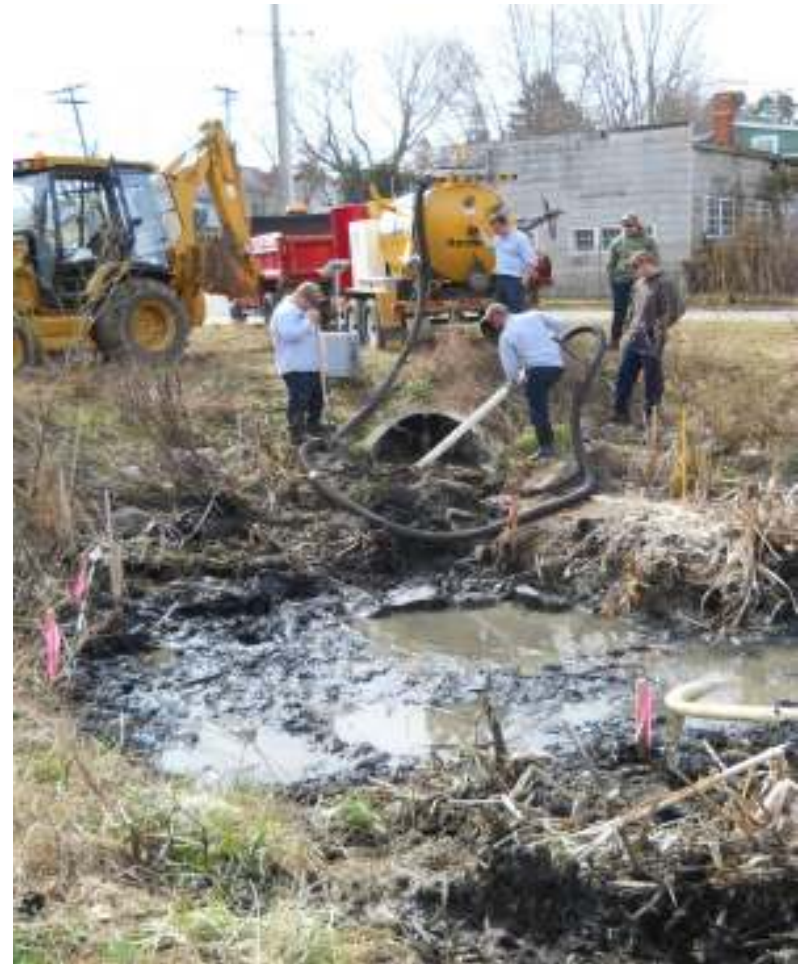


DPW crews perform maintenance

In two years 4 cubic yards of sediment and are removed



The sediment would have been deposited in Gravel Run



DPW Yard Bio Retention MDE 319 Funds Fall 2011



DPW Yard

Pre- construction Gravel Run on left



Post construction Flows intercepted and treated



Need - Maintenance



WWTP Outfall Improvements Phase I Completed Winter 2012

- Broken headwall and 24 “ storm drain pipe
- Flows are from stormwater not waste water
- Re-grade the slopes at the outfall
- Install three vegetated plunge pools in a stepped fashion constructed with large sandstone boulders and smaller silica cobbles



Stormwater Utility Studies

- URS Phase 1 in February 2010
- Municipal Financial Services Group in February, 2011 to complete the Phase II Study.
- Both studies were completely paid for with a grant from DNR.

Background

- The Town hired URS Corporation in February 2010 to complete a Stormwater Utility Phase I Study.
- The study included:
 - Evaluation of the current stormwater infrastructure and operations and a high-level forecast of future stormwater needs (defining level of service).
 - Evaluation of the potential issues associated with creating a stormwater utility for the Town.

Phase I Findings

Stormwater Assets	Town Stormwater Practices	Town Stormwater Expenses	Performance of Current Stormwater System
Approximately 700 inlets	Maintenance of inlets	3 Full time equivalent	Inlets in good shape
Unknown number of miles of pipe	Mowing of open channels	Current annual expenses estimated at \$122,000	Town experiences ponding during rain events
43 Best Management Practices *	Daily / weekly street sweeping	Expenses include gas, equipment, staff time, etc	System may be undersized
Vac-Tron and Sweeper Truck**	Construction on as needed basis		Age and condition of lines unknown

*41 are privately owned and maintained

**10 years old

Street Sweeping, Chesterfield Ave Spring 2012



Phase I

- Town created Stormwater Citizens Advisory Committee (SWAC) – to assist in defining the program.
- Town needs to prepare a business plan - provide solid foundation for implementation of utility.
- Town needs to research and decide on level of service utility will provide.

Phase 2

- The objective of the study was to build upon the work completed in the Stormwater Phase I Feasibility Study
- Developing a specific business plan for the implementation of a stormwater utility for the Town.

Phase 2 Conclusions

- The Town has been able to provide a high level of service largely due to grant funding and the Watershed Manager position.
- Grant funding will not continue indefinitely and therefore is not a reliable source of revenue.
- Recommend the Town augment the existing level of service to meet an essential level to allow for management and maintenance of the stormwater system.

Why Treat Stormwater Management as a Utility?

The Town of Centreville is accustomed to managing its infrastructure through a utility or enterprise fund

- Water
- Wastewater

At its basic level a utility is comprised of:

- Asset Management
- Service Delivery

The stormwater system must be managed and provides a vital service to all residents and businesses in the Town.

What are the Benefits of Managing Stormwater as a Utility?

- Fiscally accountable
 - ✓ Fees are driven by level of service and needs

- Dependable revenue stream
 - ✓ Allows for pro-active management of system resulting in lower life-cycle costs.

- More equitable – based on demands placed on system
 - ✓ As compared to general fund / property value rate
 - ✓ More water generated the more pollution, users will pay based on amount of stormwater generated.
 - ✓ Tax-exempt currently pay nothing

Simple Solutions

Police Station Rain Garden



Kennard Elementary School Rain Barrels



Level of Service to Meet Needs- each level builds upon the one prior

Existing - includes current costs related to providing stormwater services by the Town. No project monies.

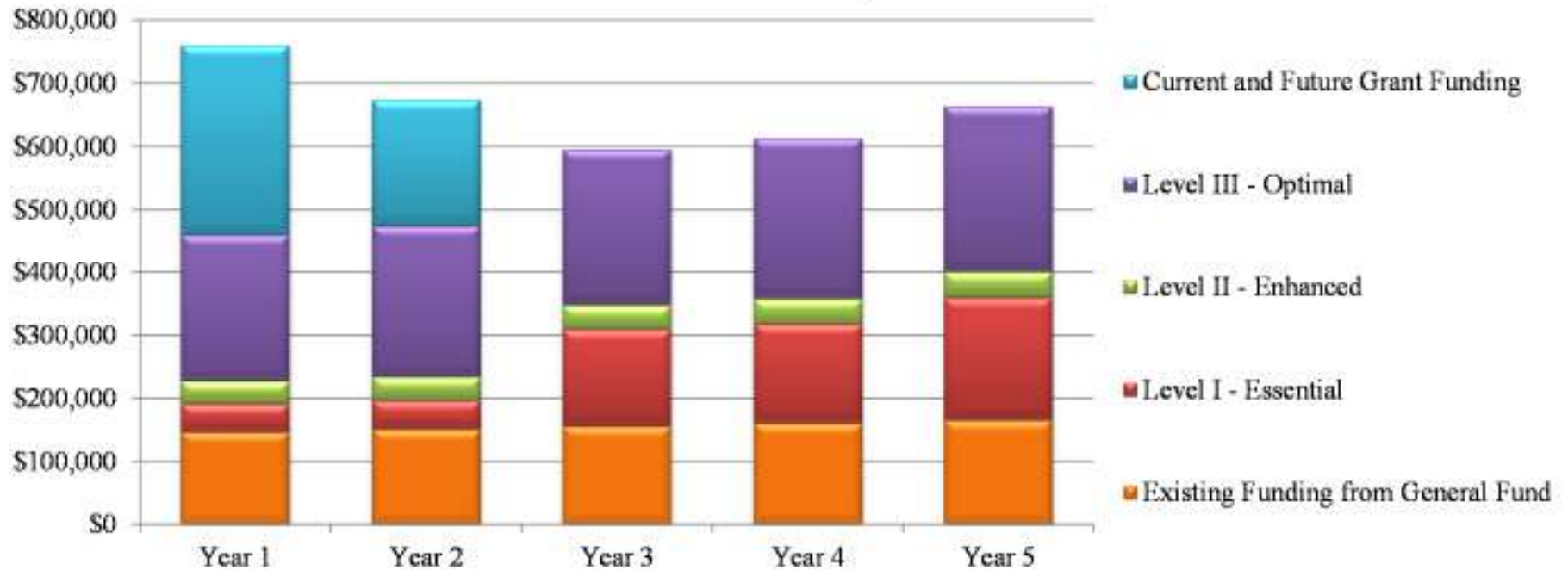
Essential - includes the existing costs **plus** basic costs of implementing a stormwater utility along with a basic capital improvement program.

Enhanced - includes costs which allow the Town to become proactive in its approach to managing stormwater in the capital improvement plan **plus** all costs associated with an essential level of service.

Optimal - includes an aggressively proactive capital improvement plan for managing stormwater **plus** all costs associated with an enhanced level of service.

Essential Level of Service – Forecast

Annual Revenue Requirements



	Year 1	Year 2	Year 3	Year 4	Year 5
Current and Future Grant Funding	\$300,000	\$200,000	\$ -	\$ -	\$ -
Current Funding from the General Fund	\$122,193	\$122,193	\$122,193	\$122,193	\$122,193
Existing Incremental Costs above Current	\$24,287	\$28,703	\$33,253	\$37,940	\$42,768
Essential Incremental Costs above Current	\$44,500	\$45,585	\$153,711	\$157,548	\$194,510
Enhanced Incremental Costs above Current	\$80,571	\$82,824	\$192,156	\$197,240	\$235,488
Optimal Incremental Costs above Current	\$314,000	\$323,370	\$440,037	\$452,681	\$498,721

Recommend - Essential Level of Service

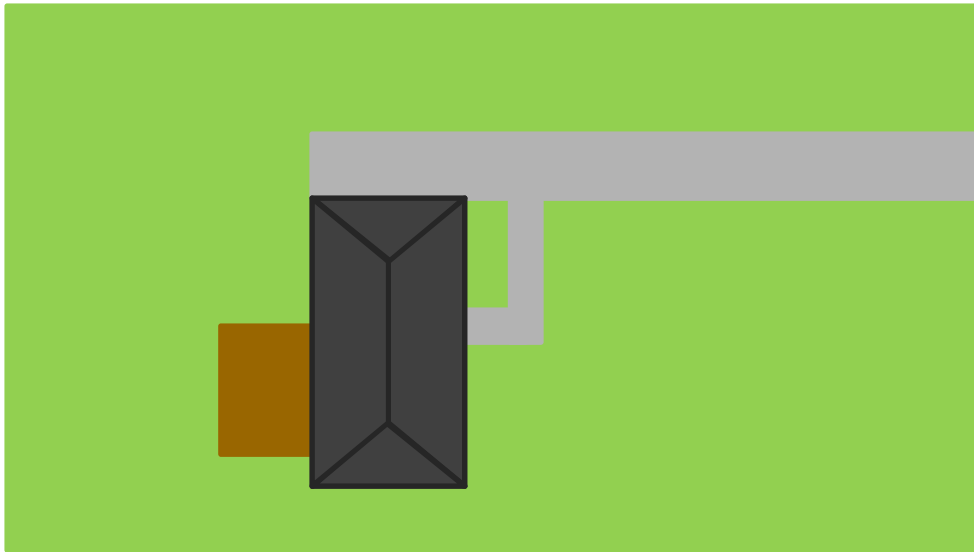
	Year 1	Year 2	Year 3	Year 4	Year 5
Operating & Maintenance Expenses	\$170,980	\$175,681	\$165,524	\$170,514	\$175,653
Capital Projects	\$300,000	\$200,000	\$89,000	\$91,670	\$94,420
Capital Equipment	-	-	\$33,000	\$33,000	\$66,000
Repair and Rehabilitation	\$20,000	\$20,800	\$21,632	\$22,497	\$23,397
<i>Total Revenue Requirements</i>	\$490,980	\$396,481	\$309,156	\$317,681	\$359,471
Less Grant Funding	\$300,000	\$200,000	-	-	-
Less General Fund Contribution	\$122,193	\$122,193	\$122,193	\$122,193	\$122,193
Funding Gap	\$68,787	\$74,288	\$186,963	\$195,488	\$237,278

Key Policy Issues Addressed

Policy Issue	Consideration
Fee Structure	How should the fee be imposed?
Exemptions	Public Roads
Credits	Rain barrels, rain gardens, any onsite BMP gets credit.
Billing Methodology	How should the fee be billed? On the property tax bill, utility bill, separate bill

Fee Structure - Impervious Area

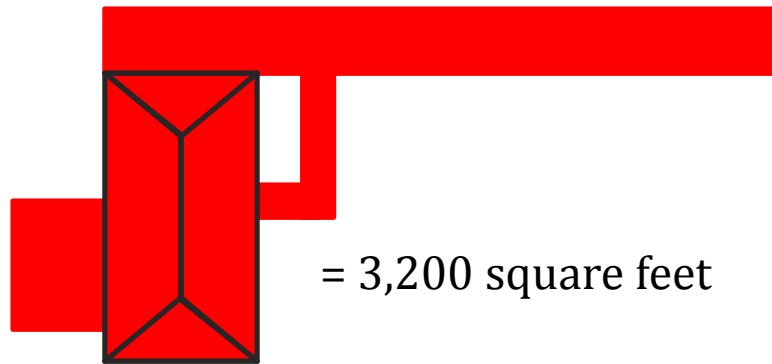
- The most common approach is the use of impervious area.
- Impervious area relates directly to runoff and demand on system.
- Easily measured and verified.



- Upheld by courts.

Fee Structure - Impervious Area

Average Single Family Impervious Area



= 1 Equivalent Residential Unit (ERU)

Customer Class	Square Footage	ERU's
Single Family	4,267,138	1,333
Multi-Family	162,043	51
Commercial/Industrial	2,691,137	841
Public/Institutional	1,400,018	438
Roads	3,957,426	1,237
Total	12,477,762	3,899

Fee Structure - Recommendation

- Impose stormwater fee based on impervious area
 - Standard average size for all single family residential (1ERU)
 - Property by property basis for non-residential.
- Implementation will require assignment of ERU to each non-single family residential customer.
- Recommend the Town impose the stormwater fee on a quarterly basis and be represented on the utility bill, similar to water and sewer charges.

Level of Fee - Recommendation

- We recommend that the Town:
 - ✓ Continue the existing level of funding for the Stormwater Utility through the General Fund.
 - ✓ **Implement a stormwater fee at a level that will allow the Town to fund the essential level of service.**

	Year 1	Year 2	Year 3	Year 4	Year 5
Total Incremental Costs : Essential Level of Service	\$68,787				
Total ERU's	2,663				
Recommended Monthly Fee per ERU	\$2.50				

Benchmarking Comparison

Municipality	Population	Billing Rate Per ERU	Annual Revenue Generated
Virginia Beach, VA	433,746	\$7.23	\$21,058,267
Takoma Park, MD	18,027	\$4.00	\$350,000
Rockville, MD	60,734	\$4.10	\$1,927,928
Suffolk, VA	83,659	\$5.24	\$4,056,979
Fayetteville, NC	121,015	\$3.00	\$4,800,000
Chesapeake, VA	220,111	\$7.35	\$14,431,471
Norfolk, VA	234,220	\$8.33	\$3,500,000
Lewes, DE	2,932	\$5.00 Residential, \$10 Commercial, \$20 Industrial	\$200,000
Washington, DC	599,657	\$2.67	\$13,000,000

QUESTIONS??

