

SPC Stormwater Management Workshop March 27 – 28, 2018









Presentation Overview

- · Stormwater Utilities Background
- Legal Aspects of Stormwater Utilities
- Bradford Sanitary Authority Case Study
 - Tips and Tricks for Successful Implementation
- Regional Approaches to Stormwater Management
 - Case Study Example: WVSA
- Regional and Statewide Trends Relative to Stormwater Management







Introductions

Herbert, Rowland & Grubic, Inc. (HRG)

- > 54 years experience providing municipal services
 - 20+ MS4 clients in over six PA Counties
 - Working with over 100 municipalities on SWU development/Regional Management
- ≥ 200 employees
 - 7 office locations serving PA, Ohio, and West Virginia











Introductions

Salzmann Hughes, P.C.

- ➤ South-central Pennsylvania based law firm engaged in a state-wide practice that concentrates on municipal, environmental, land use and real estate law along with related litigation and appeals.
- > Four (4) office locations:
 - Harrisburg
 - Carlisle
 - Chambersburg
 - Gettysburg
- Currently represents over thirty (30) Pennsylvania municipalities and/or authorities, either as solicitor or as special counsel on various matters.
- ➤ Served in the past as solicitor and/or special counsel to over ten (10) other municipalities and/or authorities







Introductions

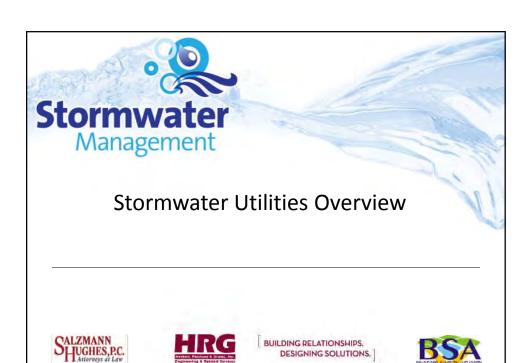
Bradford Sanitary Authority (BSA)

- > Operating authority for the City of Bradford
- Created in 1957
- Separate sanitary sewer system serving the city and four other tributary municipalities.
- 13 full-time employees, 6 licensed operators, 3 collection system certified staff, 2 office staff, 2 foreman, Op's Manager, Executive Director, 7 member board.
- \$33 Million in ongoing treatment plant upgrades.
- Amended Articles of Incorporation to include stormwater management for the City in June 2016.









Stormwater Issues & Challenges facing Municipalities

Challenge #1: Aging/insufficient infrastructure

Challenge #2: New development and redevelopment; more stormwater/flooding; new discharges

Challenge #3: Regulations/record-keeping/mapping/administration

Challenge #4: Available funding/sources







Aging/Insufficient Stormwater Infrastructure

(Challenge #1)

- 1. Stormwater Infrastructure = Forgotten Asset
- 2. Majority of pipe reaching end of using life
- 3. Large portion previously not funded by Municipalities





New Development and Redevelopment = More **Stormwater** (Challenge #2)

- 1. Lack of stormwater regulation until 1972 / 1990
- 2. Increases/changes in development in many Municipalities in recent decades
- 3. Possibility for capacity issues from increased runoff
 - a) Flooding issues can impact
 - Negatively Impact public safety
 - Cause property damage





PAG-13 History Regulatory Timeline 1972 1999 2003 2013 2018 1990 Clean **NPDES NPDES** First Second Third Water PAG-13 **Permits Permits PAG-13 PAG-13 Permit Permit Permit** Act required for required for Issued Issued Issued * Phase II Phase I MS4 MS4 *Significant



Municipalities



Municipalities

Regulations, etc. (Challenge #3)

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New Permit Requirements



Requirements – as applicable per DEP Table (Statewide)

- Appendix A AMD Sources
- Appendix B Pathogen Sources
 - eg. Fecal Coliform
- Appendix C Priority Organic Compounds Sources
 - Polychlorinated Biphenyls (PCBs)
 - Pesticides
 - Etc...
- Appendix E PRP for Nutrient or Sediment Impaired Streams
- Additional requirements for Chesapeake Bay

http://files.dep.state.pa.us/Water/BPNPSM/StormwaterManagement/MunicipalStorm water/Municipal MS4 Requirements Table.pdf

MS4 Permit Requirements (2013 vs. 2018)

Stormwater Management Programs (SWMP)

- 6 Minimum Control Measures (MCMs)
- •Complete full system mapping

Pollutant Reduction Plans (PRPs)

- Develop PRP
- •Show Incremental Progress
- Plan, design and implement BMPs to reduce pollutants (App D and/or E):
- •10% Sediment
- •5% Phosphorus
- •3% Nitrogen

Pollutant Control Measure (PCMs)

- Mapping, testing, analysis related to:
 - AMD (App A)
 - Pathogens (App B)
 - Priority organic compounds (App C)
- Funding and staffing to fully comply

(Bolded text are new requirements of the 2018 Permit.)





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Timeline for Compliance

Regulation	Due Date September 16, 2017		
NOI for PAG-13 MS4 General Permit			
Chesapeake Bay PRP	September 16, 2017		
Impaired Waterway PRP	September 16, 2017		
Individual Permit in to the 2018 to 2023 permit cycle, including Tributary to TMDL	Varies		
Mapping for potential AMD and Priority Organic Compounds sources	September 30, 2020		
Potential AMD and Priority Compounds source investigation and sampling	September 30, 2020		
MS4 status report	Annually		
Minimum Control Measures (MCMs)	Annually		
Implementation of PRPs	March 2023 (approx.)		

*Note: It is anticipated for requirements to get more stringent with future permit cycles.

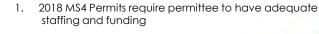






Available Funding/Sources (Challenge #4)

- 1. Costs of infrastructure maintenance increase with inflation
- 2. Costs of maintenance/replacement
- 3. Original infrastructure may not have been municipally funded
- 4. New regulations leading to increased cost







Stormwater Authorities (SWA)... **A Growing Trend**

- Over 1,800 stormwater utilities in the U.S.
- First utility formed in 1974
- Continued growth over past 5 decades due to:
 - Increased regulation
 - Significant precipitation events
- Enabling legislation in PA passed in 2013
- By end of 2015, 8 PA municipalities had a SWA or SWU
- In 2016, ~ 20 municipalities were in the process of forming SWA
- In 2017, ~ 40 municipalities formed SWAs
- Currently there are 101 municipalities in PA who are at some level of SWA formation or regional collaboration





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Financial Benefits of a Stormwater Fee?

Benefit #1: Stormwater fees are more equitable than a tax



 Fairly apportions costs to the burden each property contributes to the system

In roughly 40 municipalities surveyed, an avg residential property owner saves between 50% - 70% by paying a fee vs. through taxes.

- Fees can be collected from tax exempt users
- · Credits provided based on level of service received
- Provides an incentive for businesses to reduce impervious surface





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Financial Benefits of a Stormwater Fee?

Benefit #2: Provides a steady dedicated revenue stream

- Dedicated source of funds
- Funds directed solely to stormwater management
- Need for capital improvements and revenue requirements increase as infrastructure ages
- More predicable and steady stream
- Tax revenue often static as cost of improvements/regulatory requirements increase







Financial Benefits of a Stormwater Fee?

Benefit #3: Provides financial relief to municipalities

- Allows funds previously directed towards stormwater and pavement facilities to be redirected to other municipal needs
- For SWA's, new debt associated with the stormwater system not recognized as direct municipal debt
- Fees may allow the utility to incur more debt





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Benefits of a Stormwater Authority (SWA)

Financial

- Steady/dedicated revenue stream
- Collect revenue from tax exempt properties
- Ability to charge for use of system – more equitable charge mechanism
- Ability to generate revenue to proactively address needs and improve water quality

Administrative

- Operation of projects does not compete with other municipal responsibilities
- Relieves burden of responsibility from elected officials
- Economies of Scale realized with multifunction authority

Jurisdictional

- Service area can extend beyond municipal boundary
- Pollutant load reductions more cost effectively met through regional planning efforts







Challenges and Concerns

Challenge: Startup costs associated with implementing a SWU

- Mapping/Impervious Area Coverage
- Develop Rates, Credit Policy, Customer database
- Public Education

Solutions:

- Upfront planning costs = investment into future revenue stream
- Public agencies and P3s eager to provide support
- Potential to delay certain aspects of the Stormwater Management Program











Challenges and Concerns

Concern: Community may be against new fees for stormwater

- · May be seen as a tax instead of a fee
- May be difficult for customers to understand benefits



- Extensive community involvement is key
- Convince public revenue will go only towards the SW Program
- Emphasize Fairness
- Discuss fee in smallest increment
- Develop Public Education & Outreach Strategy
- Implement a credit policy



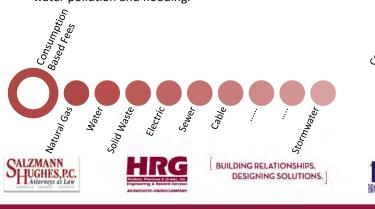




Importance of Public Education

Stormwater utilities are different than other utilities property owners are currently paying for...

- 1. Customers used to utility services and pay to receive them on demand.
- 2. Stormwater ratepayers pay to prevent things they don't want, such as water pollution and flooding.



Challenges and Concerns

Challenge: Loss of Control for Elected Officials with SWAs

- Elected officials prefer to maintain control

Solutions:

- Opportunities exist for establishing the type of Authority, its purpose and powers
- Use of Management Agreement may provide efficiencies, allows for continued municipal involvement











- Stormwater Management Program Review
 - Stormwater Infrastructure Review
 - Stormwater Problem Identification
 - Regulatory Requirement Determination
 - Review of Desired Levels of Service
 - Cost of Service Review
 - Impervious Area Analysis
- Public Outreach and Education
- Evaluation of Rate Structures/Fee Development
- Evaluation and Recommendation for an Appeals Process / Credit Policy Development
- Billing and Database Options Review
- Stormwater Fee Ordinance Adoption









Public Outreach and Education

- 1. Use of Stakeholder Advisory Committee (SAC)
- 2. Public Meetings:
 - New Stormwater Management Program (SWMP)
 - SWMP and Funding Structure
 - Fee Implementation and Credit Policy
- 3. Community Education (Public Education Strategy):
 - Information on Websites
 - Email blasts or social media
 - Bill Inserts
 - Newsletters
 - News Reporter Meetings
 - Pamphlets/Handouts
 - · Community Events









Legal Aspects of Stormwater Utilities









In Pennsylvania, who can charge a Stormwater Fee?

- Municipal Authorities (Act 68 of 2013)
- Second Class Townships (Act 62 of 2016)
- Home Rule Municipalities (ability is dependent upon charter)
- Legislation is currently before the House & Senate to enable the following to charge fees:
 - First Class Townships (HB 1661)
 - Boroughs (HB 1394)







Legal Aspects of Formation

- Resolution of Intent Section 5603(a)
- Municipality or municipalities forming authority must adopt a resolution or ordinance signifying intent to do so
- General Notice of Adopted Resolution Section 5603(b)
- Once adopted, notice of resolution or ordinance must be published at least once in legal periodical and newspaper in general circulation
- Filing article of incorporation Section 5603(c)
- Articles must contain: Name, statement of formation under MAA, statement of formation of other authorities, name and address of incorporating municipalities, names/address/terms of office of members, and term of existence
- Execution of articles Section 5603(d)
- Certification of incorporation Section 5603(e)
- Certification of officers Section 5603(f)





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Amending Articles

- Amendment of Articles is recommended because of Act 73 of 2012
- Resolution Proposing Amendment Section 5605(b)
- Amendment must be proposed by adoption of amendment and submission to governing authorities of the municipality
- Amendment is adopted or rejected by municipality by resolution or ordinance
- Execution Section 5605(c)
- After adoption by municipality, articles of amendment shall be executed by the Authority
- Advertisement Section 5605(d)
- Authority shall advertise its intention to file articles of amendment with Secretary of the Commonwealth
- Filing Amendment Section 5605(e)
- Articles and proof of advertisement shall be delivered to the Secretary of the Commonwealth







Management Agreement

- Management Agreements serve to clearly delegate duties between the incorporating municipality and the authority
 - Rate setting should always remain with the authority
 - Which entity is responsible for billing and collection?
 - Use of municipal employees for certain functions?
 - Term the term of the Management Agreement should be tied to the lease term
 - Plan review?





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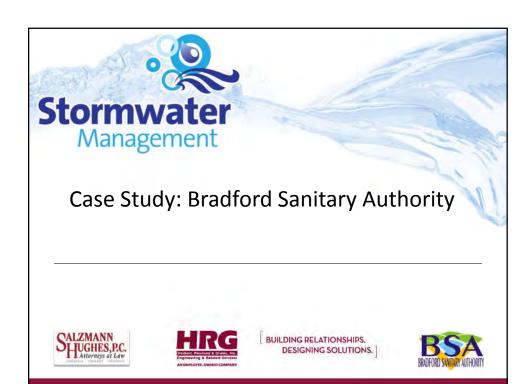
Asset Transfer Agreements

- · Lease or Sale?
 - There are advantages to both options, but a decision will require consideration of the goals of the authority and municipality
 - Considerations
 - Form of authority operating authority or a leaseback authority?
 - Are the assets encumbered?
 - Easements?
 - Term if a lease, consider the term of the Management Agreement
 - Bond counsel review









Bradford's Stormwater Infrastructure:

- About 35 miles of storm lines.
- About 1,300 catch basins & inlets.
- Typical age 75-100 years old.
- Centered on Tuna Creek, designated warm water fishery, tributary to the Allegheny River.
- Large industrial presence.
- One prior City stormwater project with PENNVEST.
- Repair & maintenance was historically the responsibility of the City DPW.







How it Started in the City of Bradford:

- City believed that storm water revenue presented the opportunity to off-set general fund costs for DPW work.
- Started with local engineering help and then obtained outside engineering support.
- Had not resolved how to manage the program (City council, city department, new authority?)
- City solicitor had limited stormwater experience.
- Had not resolved how to implement a tax or fee.
- Credits & appeals policies were not established.
- Limited PR and stakeholder engagement.
- Expended funds in an attempt to develop a program & fee.
- Were not prepared for a legal challenge.





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BSA Becomes Involved:

- BSA offers to help. (City obliges)
- Gathers information on all work done to that point by the city.
- Obtains special counsel and engineering support. (Lease, agreements, policies, resolutions, rates, budgets, long-range planning, coordination.)
- Amends it's Articles of Incorporation to include stormwater management. (Responsibility)
- Leases the asset from the City. (Ownership)
- Established a Management Agreement with the City regarding DPW labor.
- Develop a stormwater budget. (Methods for expense sharing with the sanitary budget.)







BSA Becomes Involved (Cont.)

- Increased staff training on Stormwater management.
- Obtained GPS/GIS equipment and commits to doing all GIS work in-house. (Added PC's and iPads for the field crews.)
- Created a GIS based complaint/appeal log. (focused on personal follow-up with customers.)
- Review all Impervious Area (IA) data and establish access to County GIS data on property parcels.
- Commits to a full asset management approach.





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BSA Tips & Tricks:

- It takes longer than you think!
- Get involved with your municipality early.
- Promote the authority's experience, resources, and economies of scale with this type of infrastructure.
- Authority capabilities & efficiencies equals greater return on the stormwater fees in managing and restoring the infrastructure. (Proactive vs. Reactive)
- Customer support burden is very high in the first year. (Assign dedicated support staff.)
- Staff must be able to speak the language! (Fees, calculations, Impervious area, ERU's, credits, appeals, etc.)







BSA Tips & Trick (Cont.)

• Connect the need to immediate benefits in your PR efforts. (Before & after photos)













BSA Tips & Tricks (Cont.)

· Connecting the need to the benefit:











BSA Tips & Tricks (Cont.)

• Connecting the need to the benefit:













BSA Tips & Tricks (Cont.)

- Public outreach is ongoing. Start a web page, use social media, local paper, to promote the good work you are doing!
- Address labor utilization thoroughly in your management agreements. (Union/non-union, job descriptions, skill sets, training, certifications, etc.)
- Plan to educate & coordinate with other city services. (property Maintenance, Code Enforcement, DPW)
- Identify/define intended stormwater functions and components. (Leaf collection, street sweeping, curbs, sidewalks,)
- Learn how to identify property locations and owners.







BSA Tips & Tricks (Cont.)

- Engage the large stakeholders early and directly.
- Be ready to assist with the property development process.
- Be proactive with assisting property owners or engineers with new BMP options and incentives from Credits.
- Thoroughly assess you authority's ability, capacity, and readiness, to tackle stormwater program management.
- Consider up-front funding for program start-up.
- Must keep stormwater funds separate.
- Asset management will help secure future funding.





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Multi-Municipal Approach and Benefits

Uniform Benefits from Multi-Municipal SW Management



- 2. Eliminate duplication of services
- 3. Economies of Scale
- 4. Uniform Policies and Procedures
- 5. Increased Purchasing and Borrowing Power
- 6. Enhanced opportunities for Government Grants and Loans
- 7. Expanded Cost Share Options
- 8. More cost effective and equitable approach to rate payers





EFFICIENCY

COST QUALITY

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Multi-Municipal Approach and Benefits

Addl. Regulatory Benefits for MS4 & Impaired Waterways

- Single Pollutant Reduction Plan TSS, Phosphorus and Nitrogen for Impaired Waterways and/or Chesapeake Bay Reductions
 - Regional stormwater entity manages plan for all municipalities
- 2. Economies of scale realized in tackling MCMs
- 3. Streamlined MS4 permitting
- 4. Cost for regional reduction plan (design and implementation) paid for with a regional fee

Separate planning	Joint planning	
Each municipality prepares separate CB PRP	One regional PRP	
Each municipality prepared PRP for each impaired watershed in their boundary	One PRP for each watershed	
Existing loads for each watershed within each municipality required	Existing loads for each watershed only	
BMPs sited in drainage way of each watershed of each municipality	BMPS sited anywhere within watershed	
Drainage of each outfall mapped	Not required for regional PRP	

Examples of Multi-Municipal Approaches

Regional/County Stormwater Authorities (SWA):

- Implement programs
- Provide Services
- · Implement fee
- · Co-Permit holder

Examples: Wyoming Valley Sanitary Authority, York County



<u>Regional Council of Governments:</u>

 Platform to collaborate on solutions which are then individually implemented by each municipality

Examples: Blair County Intergovernmental Stormwater Committee Abington COG





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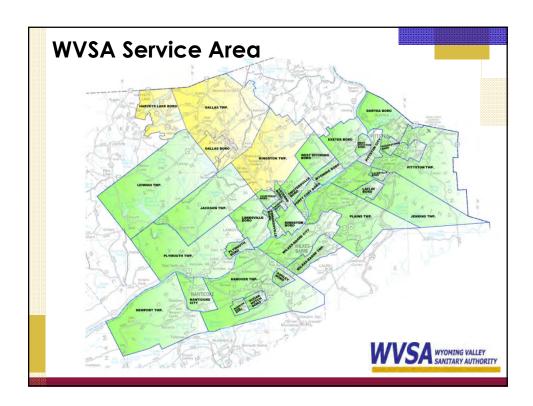
CASE STUDY



Providing the highest quality wastewater treatment in a cost-effective, environmentally safe manner.





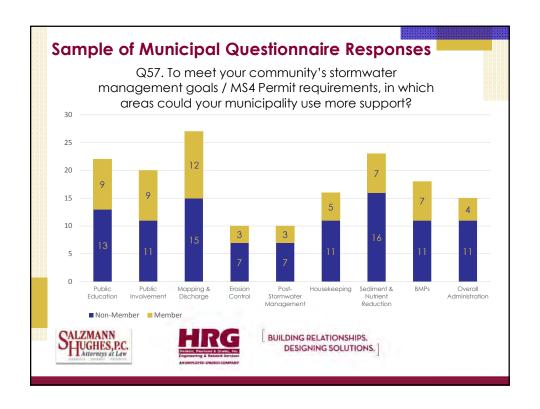


WVSA's Process for Multi-Municipal Collaboration

- 1. Commenced Study to determine feasibility & benefits 9/2016
- 2. Commenced discussions with legislators and DEP 10/2016
- 3. Developed presentation to Municipalities 11/2016
- 4. Surveyed Municipal Needs 12/2016
- 5. Commenced Multi-Municipal PRP and developed Agreements 1/2017
- 6. Met with Municipalities to discuss: 4/2017
 - 1. Study Results
 - 2. Agreements
 - 3. Amending Articles of Incorporation
- 7. Authority Expanded, Programs are being developed and PRP is being implemented



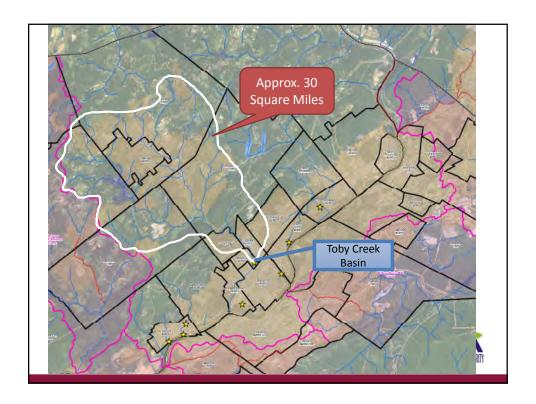


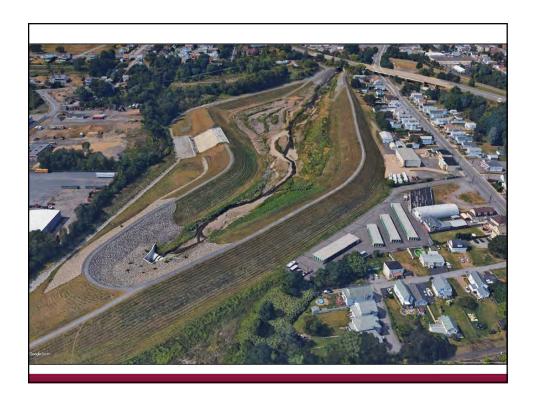






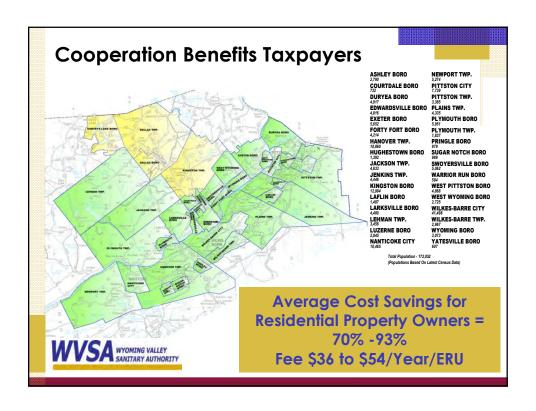








Initial Capital Cost Benefit to Municipalities Multi-Multi-Multi-Separate Separate Separate Municipal Municipal Municipal Total estimated capital cost \$ 3,282,000 \$ 7,723,000 \$ 4,521,000 \$ 11,310,000 \$ 241,000 \$ 807,000 Savings from regional approach \$ 4,441,000 \$6,789,000 % savings 58% 60% 70% SALZMANN HUGHES,P.C. BUILDING RELATIONSHIPS. DESIGNING SOLUTIONS.



Comparison of SW Fees

NOTE: Fees shown do not include new permit requirements, with the exception of WVSA.

Service Area	Municipality	Monthly Fee /ERU	IA/ERU	Monthly Fee/ 1,000 sq.ft. IA
Single Municipalities	City of Philadelphia	\$ 13.48	1,050	\$12.84
	City of Lancaster	\$ 9.12	1,000	\$9.12
	Mount Lebanon Municipality	\$ 8.00	2,400	\$3.33
	City of Bradford	\$ 7.90	2,750	\$2.87
	City of Meadville	\$ 7.50	2,660	\$2.82
	Jonestown Borough	\$ 6.67	3,100	\$2.15
	Derry Municipality	\$ 6.50	3,800	\$1.71
	Hampden Municipality	\$ 4.41	3,534	\$1.25
Regional Authority	WVSA	\$ 3.00 - \$4.50		
	ERU = Equivalent Residential Unit			





Moving Forward Toward Regional Cooperation

- Have a single lead entity
- Define local government needs
- Define benefits of Multi-Municipal Stormwater Management (specific to community)
 - Financial
 - Administrative
 - Environmental
 - Other
- Establish vision
 - Set scope and timeline
- Summarize via Feasibility Study
- Meet regularly with other municipal leaders to educate and develop a dialogue for collaboration.











Regional and Statewide Trends Relative to Stormwater Management







