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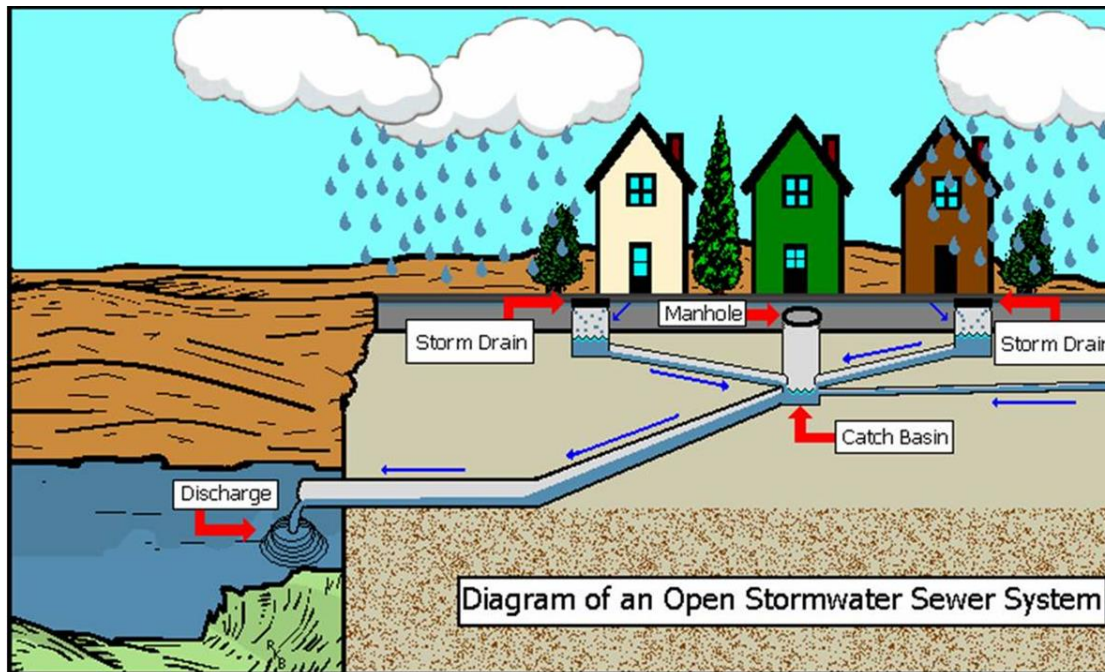
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Evans City Borough MS4 Compliance and Flooding Informational Presentation



Stormwater Basics

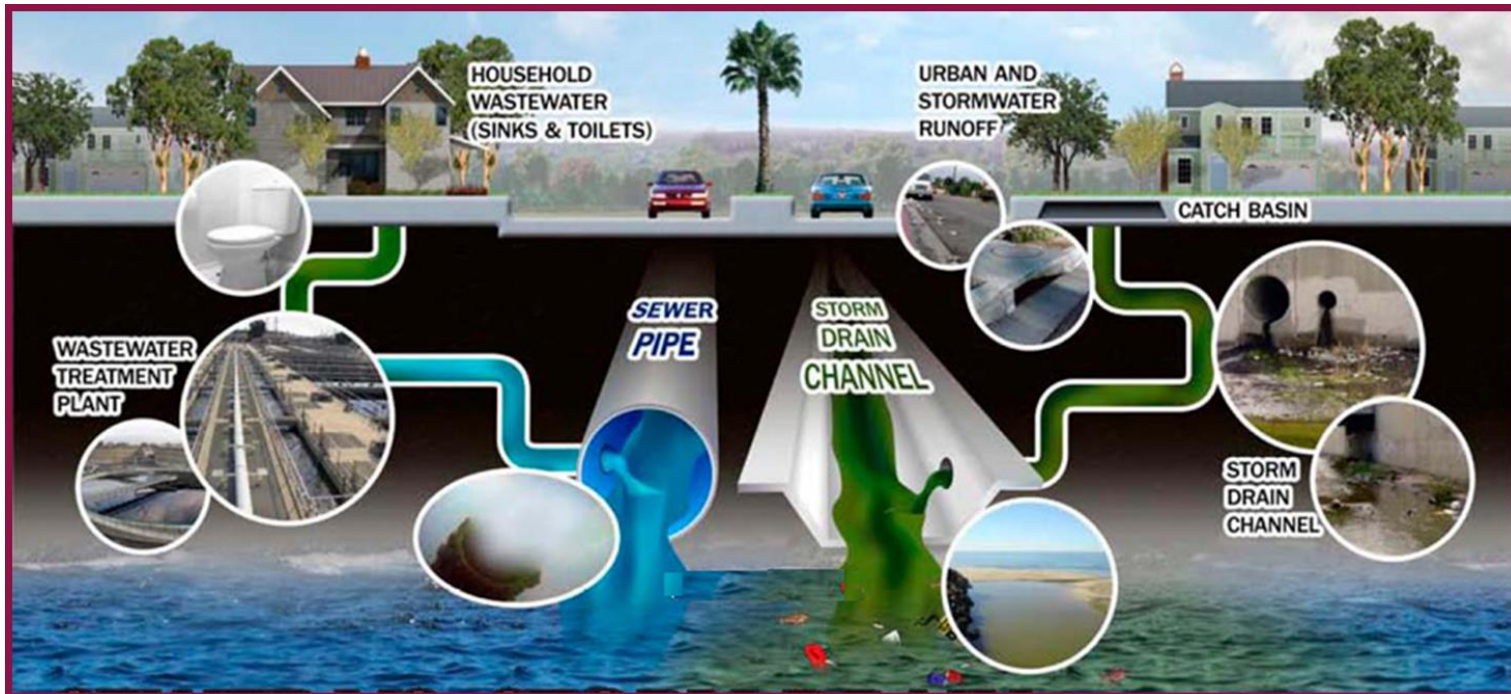
Stormwater is water runoff after a rain storm from streets, construction sites, parking lots, buildings and other areas that goes directly into storm drains and eventually into local streams and rivers.



Stormwater Basics

Municipal Separate Storm Sewer System (MS4)

- An MS4 is a conveyance system owned by a municipality and used to collect and convey stormwater.
- Unlike potable water systems, water collected by an MS4s is not treated before being discharged.

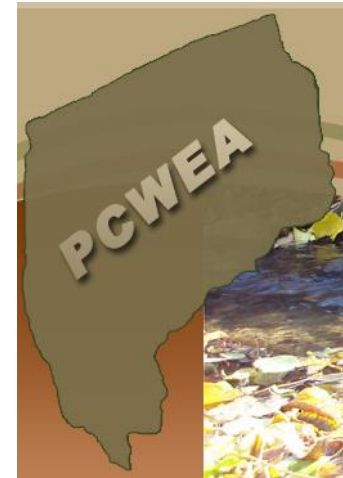


Stormwater Basics

MS4 Permitting

- MS4 Discharges are regulated by National Pollutant Discharge Elimination System (NPDES) Permits
 - General Permit (PAG-13) or
 - Individual Permit (IP)
- State Mandated Requirements
 - Minimum Control Measures (MCMs)
- Water Quality Permit for Stormwater Runoff in Urbanized Areas

MCM #1 - Public Education and Outreach & MCM #2 - Public Involvement/Participation



MCM #3 - Illicit Discharge Detection and Elimination

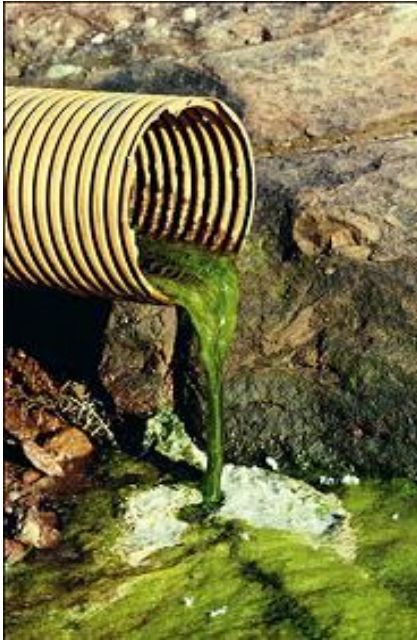


Photo credit: Kseniya Voznyuk, Fortin Consulting



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MCM #4 - Construction Site Stormwater Runoff Control & MCM #5 - Post-Construction Stormwater Management



MCM #6 - Pollution Prevention and Good Housekeeping for Municipal Operations



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WHAT IS A PRP?

Pollution Reduction Plans (PRPs)

- PRP requirement extended to a wider group of MS4s.
- PRPs required for all waters impaired by nutrient or sediment loadings that do not have a TMDL.
- Just having a plan is not enough; the plan needs to be implemented in a demonstrative way.
- Project implementation in a 5-year period – completion by 2023



Strategies for Compliance

Municipal Collaboration

- Consider working with **local sportsmen's groups, environmental groups, school districts, colleges, and others** on public education efforts required by MCMs 1 and 2 and long-term implementation of BMP installation.
- Check with **county government** and other entities for mapping data.
- If not already working with **local conservation district**, consider cooperation with the conservation district on construction and post-construction stormwater management plans.

How to Pay for It?– Leverage Opportunities

- **Grant Funding:** Funding opportunities vary by project program
 - CFA
 - DEP
 - DCED
 - DCNR
- **Leverage Other Projects:**
 - Incorporate aspects of MS4 into more traditional MS4 Projects
- **Leverage Development:**
 - Leverage Developers to incorporate MS4 components into development
- **Stormwater Fee/Utility:**
 - Funding based on impervious area
 - Funding used solely for stormwater projects/costs

Why is MS4 Important?

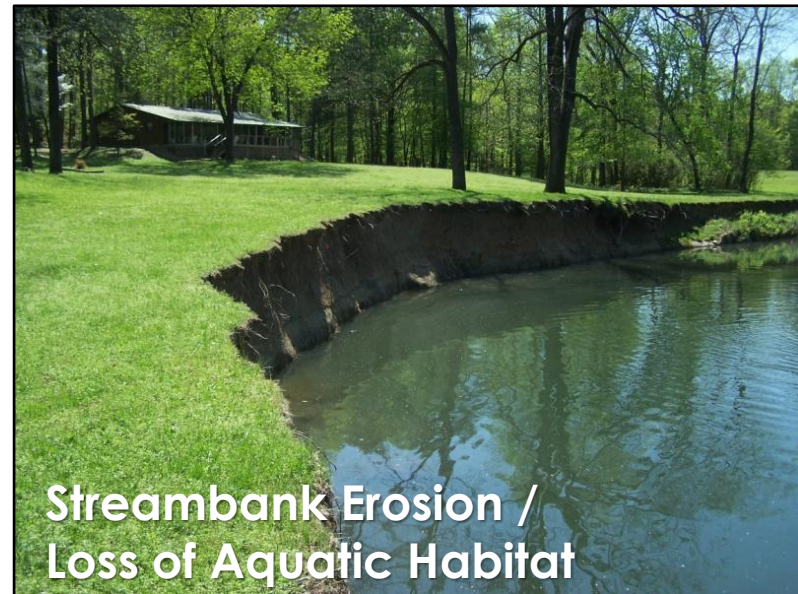
Water Quality / Pollution

- Polluted stormwater runoff is commonly transported through the MS4, from which it is often discharged untreated into local water bodies.
- Common pollutants:
 - Sediment
 - Nutrients (nitrogen & phosphorus)
 - Bacteria
 - Oxygen Demand
 - Oil and Grease
 - Metals
 - Toxic Chemicals
 - Chlorides
 - Thermal Impacts
 - Pesticides & Herbicides



Why is MS4 Important?

Stormwater Volume



Why is MS4 Important?

Stormwater Volume



PAN L
42019C(38)D
eff. 8/2/2018

Possible Relief

FEMA/PEMA Funding: HMA Program

- The key purpose of this grant program is to enact mitigation measures that reduce the risk of loss of life and property from future disasters.
- Property Acquisitions for Open Space
- Hazard Mitigation Assistance (HMA)
 - Pre-Disaster Mitigation Program (PDM)
 - Hazard Mitigation Grant Program (HMGP)
 - Flood Mitigation Assistance (FMA)

Pre-Disaster Mitigation Assistance (HMA)

FEMA/PEMA FUNDING

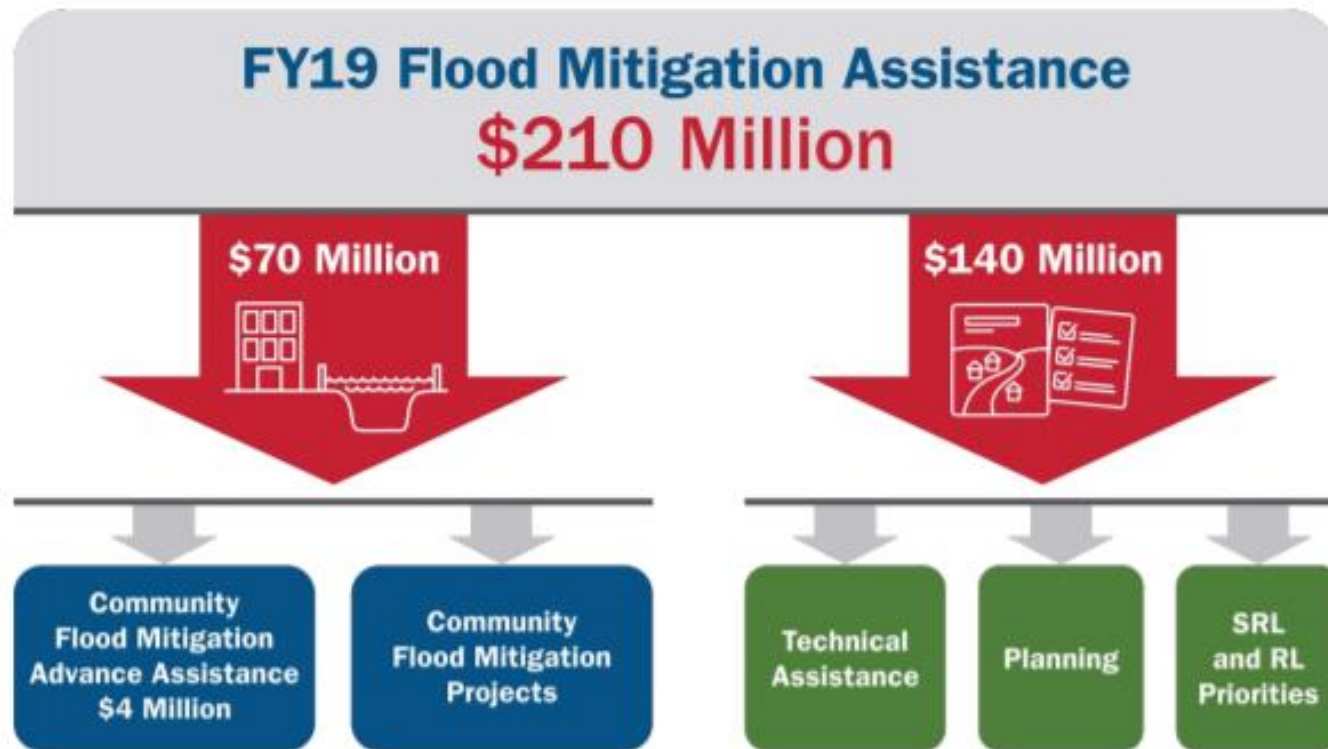
- Assists municipalities implementing pre-disaster natural hazard mitigation programs
- Must develop and adopt hazard mitigation plans to receive money from other FEMA funded grants
- \$400,000 for new mitigation plans consistent with 44 CFR Part 201
- \$150,000 for mitigation plan updates



FEMA

Flood Mitigation Assistance Grant Program

FEMA/PEMA FUNDING



Flood Mitigation Assistance Grant Program

FEMA/PEMA FUNDING

- Reduce or eliminate the flood risk of severe repetitive and repetitive flood damages to building insured by NFIP
- Advance Assistance – monies provided to develop mitigation strategies and obtain data to prioritize, select and develop mitigation projects. This will help future grant applications
- Community Flood Mitigation Projects – fund projects for proven techniques that integrate cost effective natural floodplain restoration solutions and improvements to NFIP-insured properties



FEMA



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Flood Mitigation Assistance Grant Program

FEMA/PEMA FUNDING

- Severe Repetitive Loss Properties
 - May Qualify Up To 100% Federal Cost Share
 - Four Or More Separate Claims Payments (Building And Contents) Have Been Made Exceeding Over \$5,000 And Cumulative Amount Of \$20,000 Or
 - Two Separate Claims Payments (Building Only) Have Been Made Exceeding The Market Value Of Insured Structure



FEMA



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Flood Mitigation Assistance Grant Program

FEMA/PEMA FUNDING

➤ Repetitive Loss Properties

- May Qualify Up To 90% Federal Cost Sharing
- Two Flood-related Damage Incidents In Which Cost Of Repair Equaled Or Exceeded 25% Of Market Value And
- At The Time Of Second Incidence Of Flood Damage, The Contract For Flood Insurance Contains Increased Cost Of Compliance Coverage



FEMA



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Hazard Mitigation Grant

FEMA/PEMA FUNDING

- Reduce the risk of loss of life and property from future disasters
- Long term efforts to reduce the impact of future events
- Individuals may not apply directly for grant for assistance, but local municipalities can “sponsor” an application on their behalf
- 75% of funds for projects provided by FEMA
- Truly a collaboration between the individual homeowner/business owner and the municipality



FEMA

Hazard Mitigation Grant

FEMA/PEMA FUNDING

- Acquisition And Demolition
 - Desirable To Completely Eliminate All Risks
 - Will Provide Fair Market Value Of Property
 - Property Must Remain Green Space And Owned By Municipality
- Elevation Of Home
- Wrapping Of Home
- Elevating Or Moving Utilities In Home I.E. Furnace



FEMA

What is Going on In the Watershed

Lower Connoquenessing Creek Stormwater Planning Study

➤ General Project

- Project Partners Include Nine(9) Municipalities In Lower Connoquenessing Watershed
- Costs Shared By County And Partnering Municipalities
- Butler County To Fund 20% Of The Stormwater Study
- Remaining Portion Of The Study To Be Shared My Municipalities
- Cost To Municipalities Weighted By Land Area

What is Going on In the Watershed

Lower Connoquenessing Creek Stormwater Planning Study

➤ Cost Break Down

Cost Sharing Based on Similar Land Area and Population Density		
Municipality	Cost Share Factor	Cost Share
Adams	1.2	\$ 8,147.20
Cranberry	1.2	\$ 8,147.20
Evans City	0.8	\$ 5,431.47
Harmony	0.8	\$ 3,500.00 *
Jackson	1.2	\$ 10,000.00 *
Lancaster	1.2	\$ 8,147.20
Seven Fields	0.8	\$ 5,431.47
Mars	0.8	\$ 5,431.47
Zelienople	1.0	\$ 6,789.33
Total		\$ 61,025.34

* Negotiated special agreement between both municipalities

What is Going on In the Watershed

Lower Connoquenessing Creek Stormwater Planning Study

➤ Phase 1-Evaluation of Rate Controls

- Evaluate Previous ACT 167 Hydrologic Model
- Update Model with Current and Future Land Use Assumptions
- Look at Breakneck Creek and Lower Connoquenessing Creek
- Reevaluate the Model to see the Impacts of Rate Controls on Future Development

What is Going on In the Watershed

Lower Connoquenessing Creek

Stormwater Planning Study

- **Phase 2-Evaluation of Problem Areas**
 - Each Municipality Will Submit Their Three Best Problem Areas
 - Problem Area May Generally Consist Of:
 - Flooding
 - Stream Channel Or Bank Erosion
 - Property Damage
 - Detention Basins (Retrofitting).
 - A Site Visit Will Be Performed For Each Site And Planning Level Solution Will Be Generated
 - Planning Level Cost Estimate Will Be Prepared To Be Used In Obtaining Funding

What is Going on In the Watershed

Lower Connoquenessing Creek Stormwater Planning Study

➤ Project Goals

- Look at Stormwater Solutions Regionally Based on Watershed
- Possible Stormwater Mitigation of Future Development From Rate Controls
- Provide Communities with Document to Strengthen Grant Applications
- Foundation for Future Stormwater Utility for Those Interested



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