



*Excellence Delivered **As Promised***

FUNDING A STORMWATER MANAGEMENT PROGRAM

CONEWAGO TOWNSHIP, ADAMS COUNTY

November 15, 2016



Presentation Agenda



What next?

What is the Township doing?

Why should we care?

What is the need?

What is the need?

- An aging infrastructure consisting of several miles of stormwater collection piping and more than a thousand drainage inlets

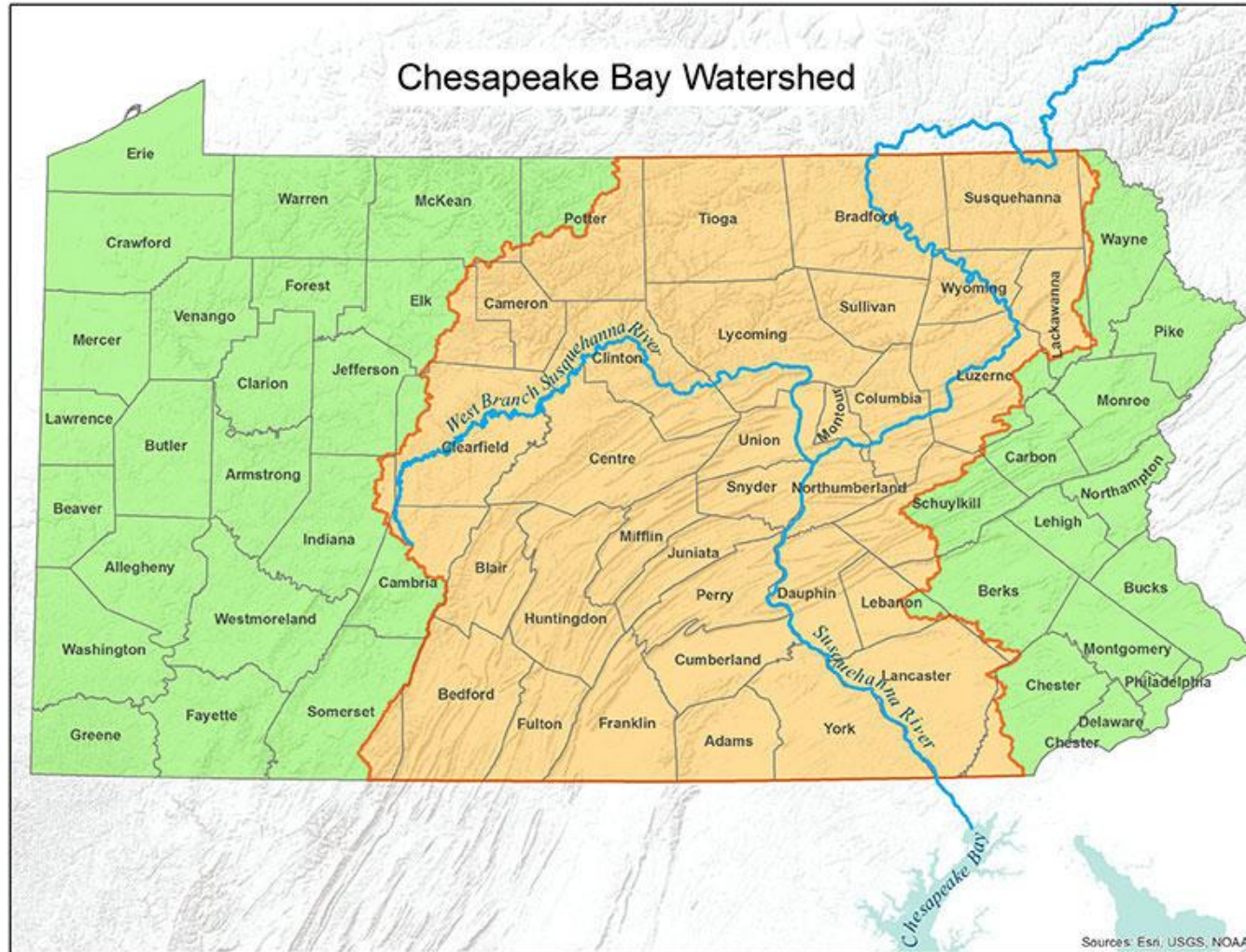


What is the need?

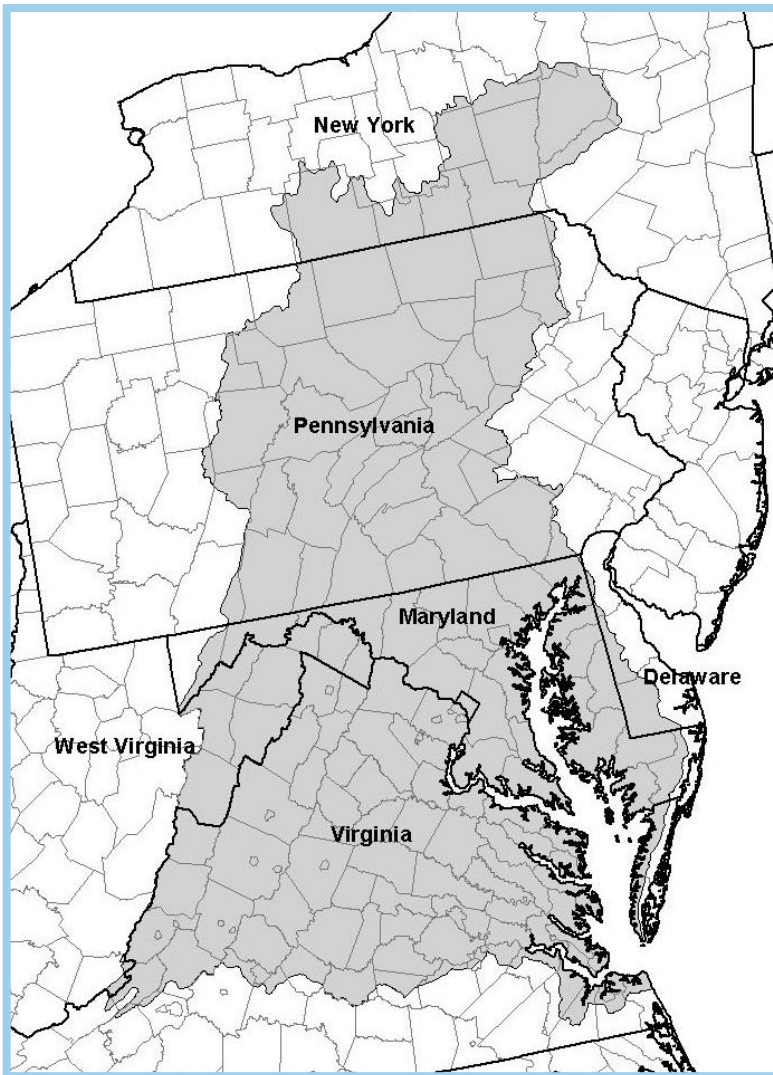
- **Construction of drainage improvement projects (to alleviate flooding, increase efficiency, reduce potential for sinkholes)**



What is the need? - Chesapeake Bay



The Chesapeake Bay Facts



- The Bay contains more than 18 trillion gallons of water.
- Half of the Bays water volume comes from the Atlantic Ocean, the other half from a 64,000 square-mile watershed.
- The Susquehanna, Potomac, and James Rivers provide 80% of the fresh water into the Bay.
- The Susquehanna is the single largest river in the Bay watershed.
- There are more than 100,000 streams, creeks and rivers that travel through the watershed.
- 19,000 miles of stream are polluted

What is the need? – Pollution Reductions

- The 2010 pollution diet, formally called a **Total Maximum Daily Load (TMDL)**, spells out the amount of **nitrogen**, **phosphorus** and **sediment** that needs to be reduced to bring the Bay back to health. The TMDL calls for a 25 percent reduction in nitrogen, 24 percent reduction in phosphorus and 20 percent reduction in sediment.
- The **TMDL** is driven primarily by detailed plans created by the six Bay states and the District of Columbia to put all needed pollution controls in place by 2025, with at least 60 percent of the actions completed by 2017.

Source: Chesapeake Bay News (December, 2010)

What is the need?

EPA Oversight Status of Bay Jurisdictions' Progress (June 2015)

	Agriculture:	Urban/Suburban:	Wastewater:	Trading/Offsets:
DE	Ongoing Oversight *	Ongoing Oversight	Enhanced Oversight	Ongoing Oversight
DC	Not Applicable	Ongoing Oversight	Ongoing Oversight	Ongoing Oversight
MD	Ongoing Oversight	Ongoing Oversight	Ongoing Oversight	Ongoing Oversight
NY	Ongoing Oversight	Ongoing Oversight	Enhanced Oversight	Ongoing Oversight
PA	Backstop Actions Level	Backstop Actions Level	Ongoing Oversight	Enhanced Oversight
VA	Ongoing Oversight	Enhanced Oversight	Ongoing Oversight	Ongoing Oversight
WV	Enhanced Oversight	Ongoing Oversight *	Ongoing Oversight	Ongoing Oversight



* Green fading to yellow indicates potential downgrade at end of 2014-2015 milestone period if specific actions are not taken

What is the need?

Tighter Regulations (more scrutiny)



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION



NPDES Timeline / History

1972

NPDES created in Section 402 of the Clean Water Act (CWA) (actually exempted stormwater...too expensive)

1977

Congress amends CWA to enhance NPDES Program

1987

Water Quality Act passed (added non-discrete outfalls)



1990

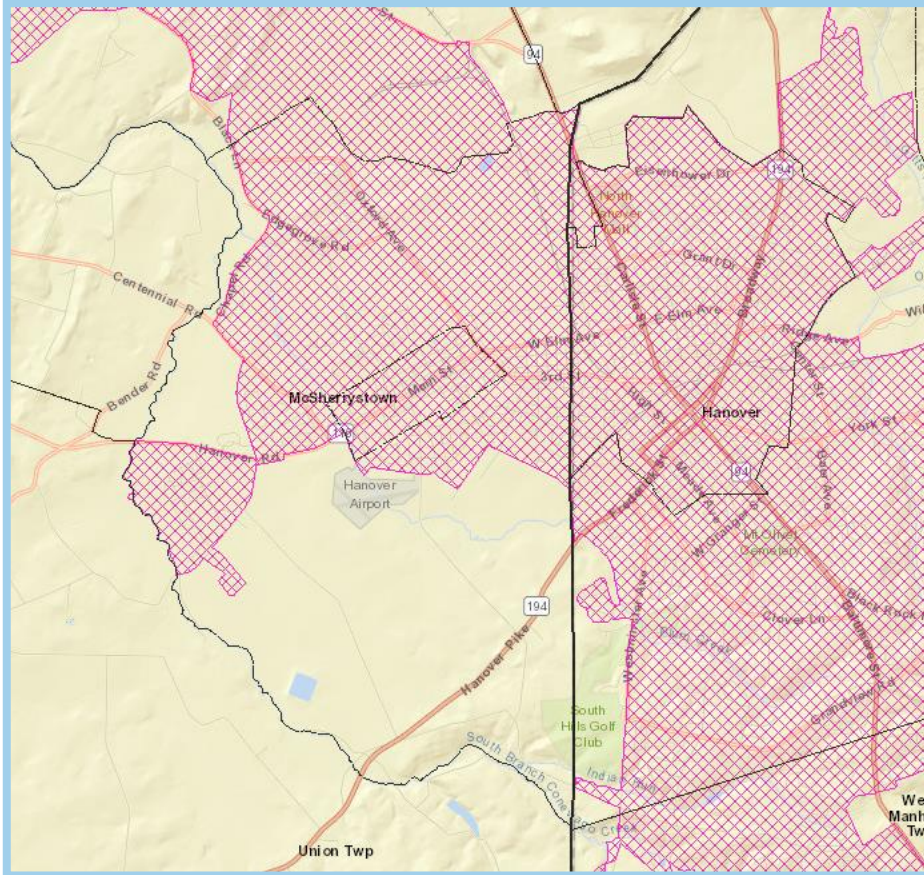
Updates made to CWA to require Phase I NPDES Permits

1999

US EPA establishes regulations requiring Phase II NPDES permits:

- Regulated small MS4s
- Regulates “small” construction sites

What defines an “Urban Area”?



“Hanover UA” has population of 66,301 with density of 1,837 per sq.mi. (per US EPA)

- Urban Areas are currently delineated based on 2010 Census data.
- “An urbanized area is a land area comprising one or more places -- central place(s) -- and the adjacent densely settled surrounding area -- urban fringe -- that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile.”
(taken from EPA website)

What is Involved in the MS4 Permit?

1. Each municipality must submit an application (known as an NOI) to the PA DEP.
2. In the NOI, the municipality agrees to meet the Minimum Control Measures (MCMs) specified by the PA DEP. There are six MCMs.
 - Best Management Practices (BMPs) are included within each MCM and provide more tangible goals to be implemented and achieved in an effort to prevent or reduce pollution to the waters of the Commonwealth.
3. Once the DEP has reviewed and accepted the NOI, the DEP will issue a permit to the municipality.
4. The municipality/permit holder must submit an report every year (Annual Report) to DEP to show that the permit holder is meeting or exceeding the MCM requirements.
5. An additional requirement in the new NOI's is every municipality within the Chesapeake Bay watershed must create and implement a Chesapeake Bay Pollution Reduction Plan.

MCM 1: PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS



- **Create and Implement a written Public Education and Outreach Program (PEOP).**
- **Develop and maintain a list of target audience groups within the regulated MS4 areas.**
- **Publish at least one issue of a newsletter, pamphlet, flyer, or website that includes general stormwater education information.**
- **Distribute stormwater educational materials to the municipalities specified target audiences in the PEOP.**

MCM 2: PUBLIC INVOLVEMENT & PARTICIPATION



- **Create and Implement a written Public Involvement and Participation Plan (PIPP).**
- **Provide notice and opportunities for public review of any ordinance required by the General Permit.**
- **Conduct one public meeting per year to promote public involvement and participation from the specified target audience groups listed in the PIPP.**

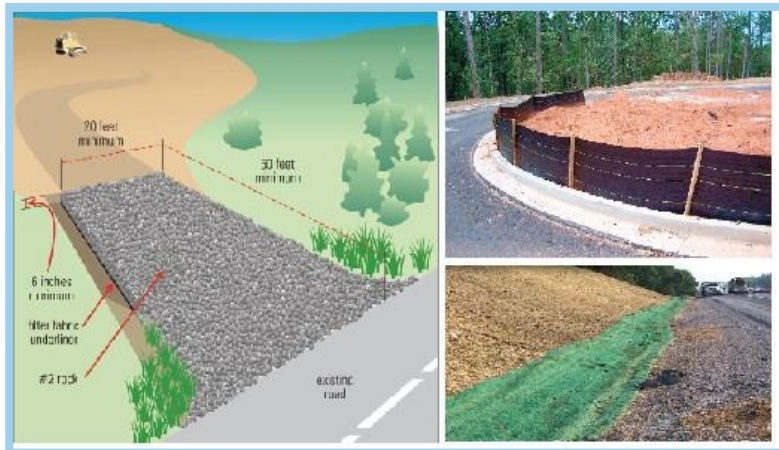
MCM 3: Illicit Discharge Detection and Elimination

- **Create and implement a program for the detection, elimination, and prevention of illicit discharges into the municipalities MS4 system.**
- **Create a map of the MS4 area showing roads, inlets, piping, swales, catch basins, channels, basins, and regulated outfalls.**
- **All new permittees are to inspect/screen all of the identified outfalls within the MS4 area during the first year of coverage. Every year after this, forty percent of the total number of outfalls are to be screened.**



MCM 4: Construction Site Stormwater Runoff Control

- Create a program of procedures that provide requirements for construction stormwater permitting, construction inspection, and enforcement of and installation of E&S control measures.



- Enforce an ordinance regarding the implementation of Erosion & Sediment control Best Management Practices
- Ensure and verify construction waste is handled and disposed of properly.
- Create a system for implementing and logging any public complaints or concerns regarding construction activities.

MCM 5: Post-Construction Stormwater Management Activities



- **Require the implementation of structural and/or non structural Best Management Practices for new development and/or redevelopment projects.**
- **Inspect Post-Construction Best Management Practices during construction.**
- **Implement and enforce an ordinance to ensure the implementation of the Best Management Practices.**
- **Track locations of all BMP's as installed to enforce inspection(s).**
- **Conduct random inspections of BMP facilities (to document compliance)**

MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations



- **Identify and document all municipal operations, facilities, and activities that contribute to runoff within the regulated MS4 area.**
- **Create and implement a written operation and management program for municipal operations that contribute to the discharge of pollutants within the regulated MS4 area.**
- **Create and implement an employee training program that educates each employee about preventing and reducing the discharge of pollutants from municipal operations.**



Why Should We Care?

Times are changing (more public awareness)



Coast Guard links Potomac sheen to Dominion oil spill

Water samples taken in Roaches Run waterfowl sanctuary have "common source" with power substation

By Whitney Pipkin on February 12, 2016

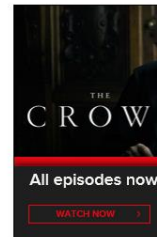


NEWS

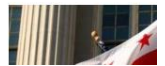
Will It Ever Be Safe to Swim in the Potomac?

Athletes shouldn't be the only people concerned that the Nation's Triathlon canceled its swimming leg.

By Benjamin Freed on September 14, 2016

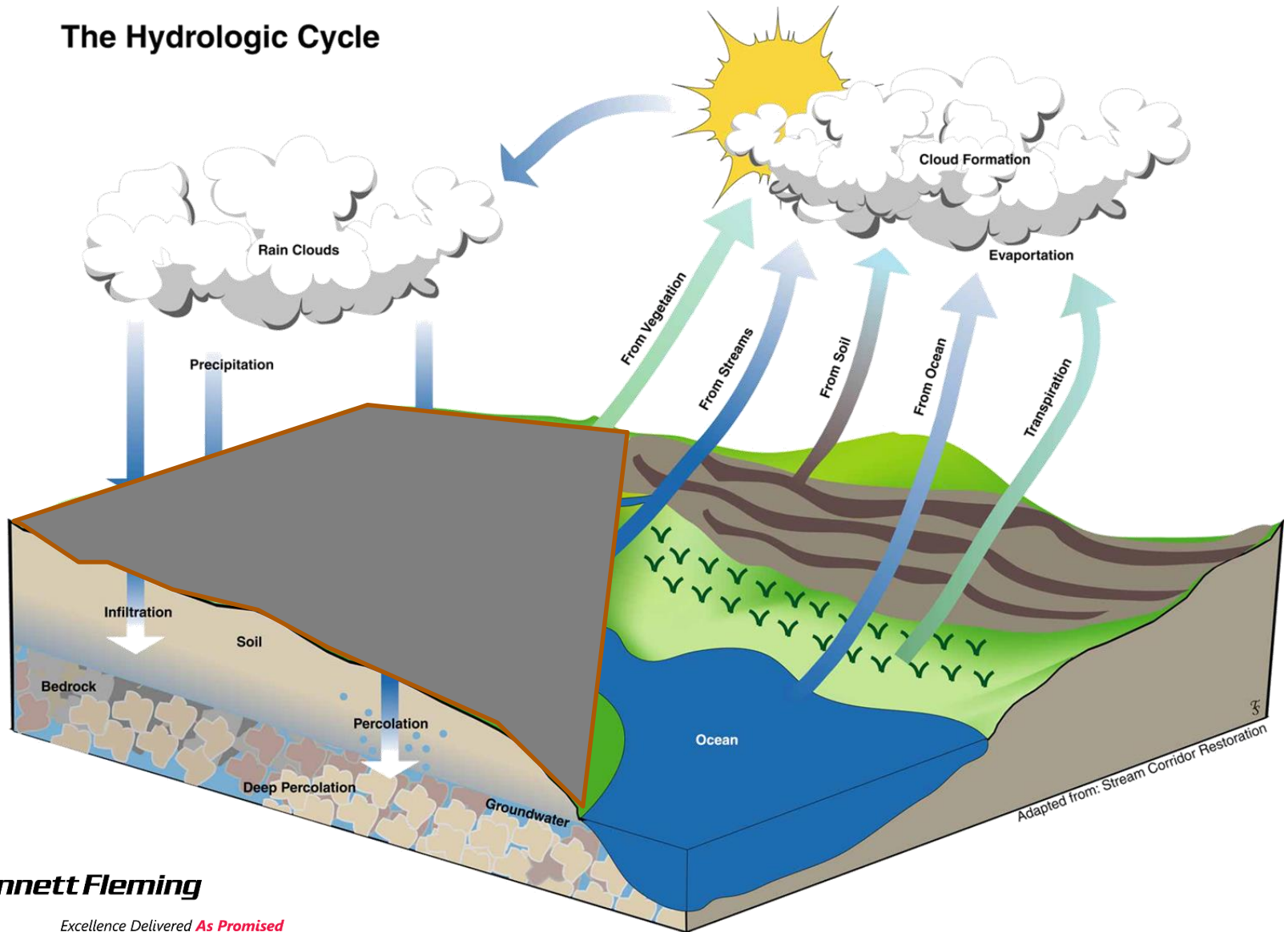


Must Read



Why Should We Care?

The Hydrologic Cycle



Urban Development Effects to the Hydrologic Cycle

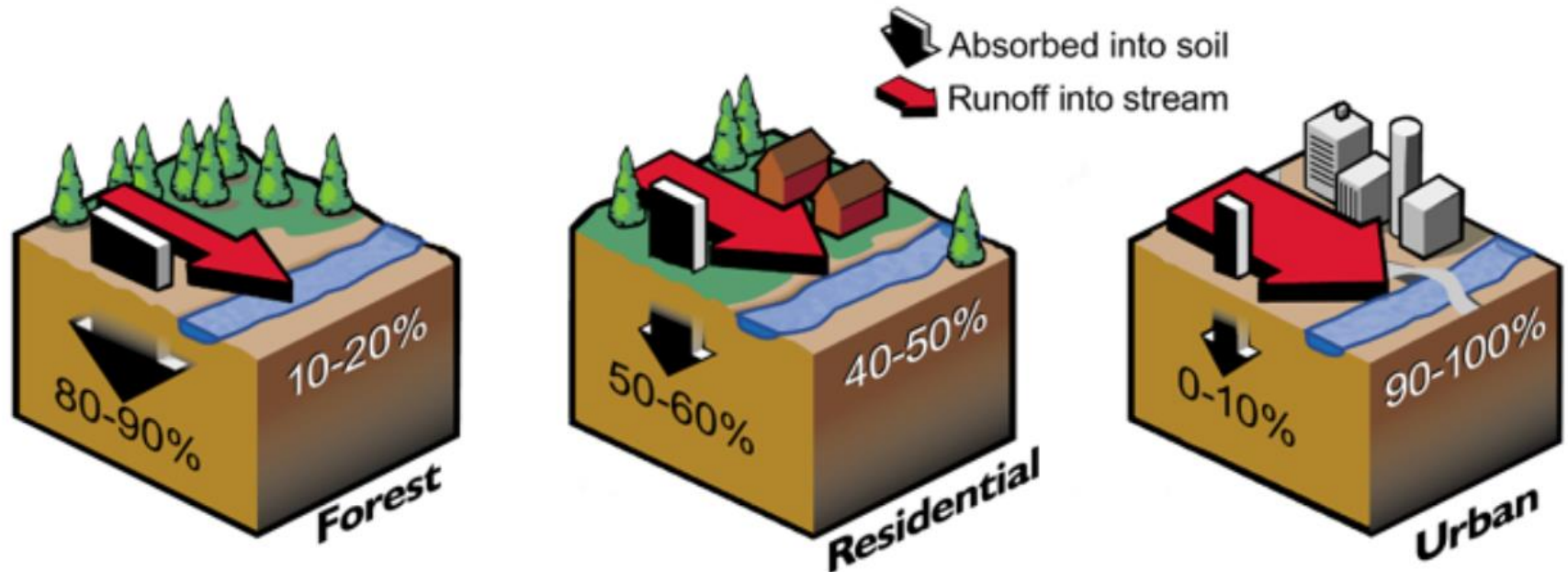
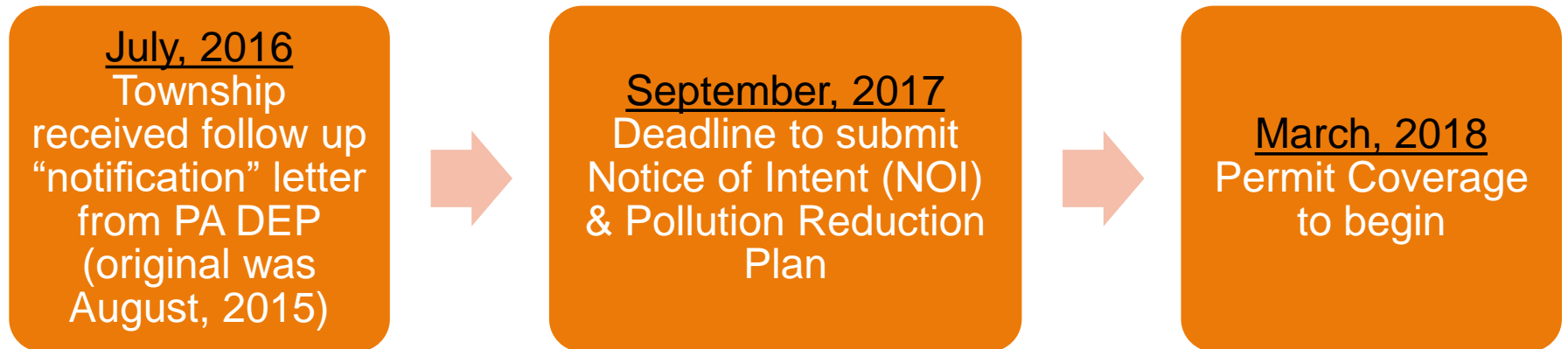


Figure 2.1-3 Changes in Hydrology and Runoff Due to Development
Based on Marsh, 1983. Graphic courtesy of Atlanta Journal-Constitution

Timeline (Current & Future)



So what is Conewago Township doing?

In September of 2015, the Township began an internal audit;

- **What General Revenue was currently being spent on Stormwater efforts**
- **Formed a Stormwater Advisory Committee (residents, business people, industry staff, regulatory officials, etc.) to offer outside perspectives**
- **Obtained updated aerial mapping to assess impervious coverage**
- **Began to evaluate future program costs (infrastructure, operational and permitting)**
- **Began to assess current staffing roles and future roles**
- **Began to evaluate options to more effectively and equitably fund a compliant stormwater management program**

Stormwater Management Functions and Expenses

- Stormwater management planning and administration
- System inventory and mapping
- Illicit discharge detection and elimination program
- BMP inspection and oversight
- Asset maintenance
- System improvements
- Street sweeping (increase)
- Regulatory reporting
- Public education and involvement



Conclusions of Report

- Current spending in Stormwater is approx. \$ 130,000.
- Estimated cost of stormwater program in Year 1 = \$ 500,000.
- Tax increase would not be preferred for following reasons;
 - Not “connected” to the amount of runoff being generated.
 - Not separately managed (comingled with General Funds), subject to be reallocated to Police, Roads, Etc.
 - Tax exempt properties would not pay though they contribute to the issue.
- Loan Funding was determined to not be sustainable, and wouldn't provide long term funding mechanism (plus added cost of borrowing).
- Grant funding is too variable and not sustainable. (used for projects)
- User Fee determined to offer the most equitable means to fund program (likened to Water Fee or Sewer Fee)

What is a Stormwater User Fee?

A stormwater user fee is a fee that is collected solely for the purposes of funding stormwater related projects, maintenance of stormwater infrastructure, compliance with permits, etc.

Act 62 of 2016 enables 2nd Class Townships to collect a stormwater fee.

**SECOND CLASS TOWNSHIP CODE - STORM WATER MANAGEMENT ORDINANCES
AND FEES**

Act of Jul. 1, 2016, P.L. 439, No. 62

Cl. 73

Session of 2016
No. 2016-62

HB 1325

AN ACT

Amending the act of May 1, 1933 (P.L.103, No.69), entitled, as reenacted and amended, "An act concerning townships of the second class; and amending, revising, consolidating and changing the law relating thereto," in storm water management plans and facilities, further providing for ordinances and providing for fees.

How is a Stormwater User Fee Administered?

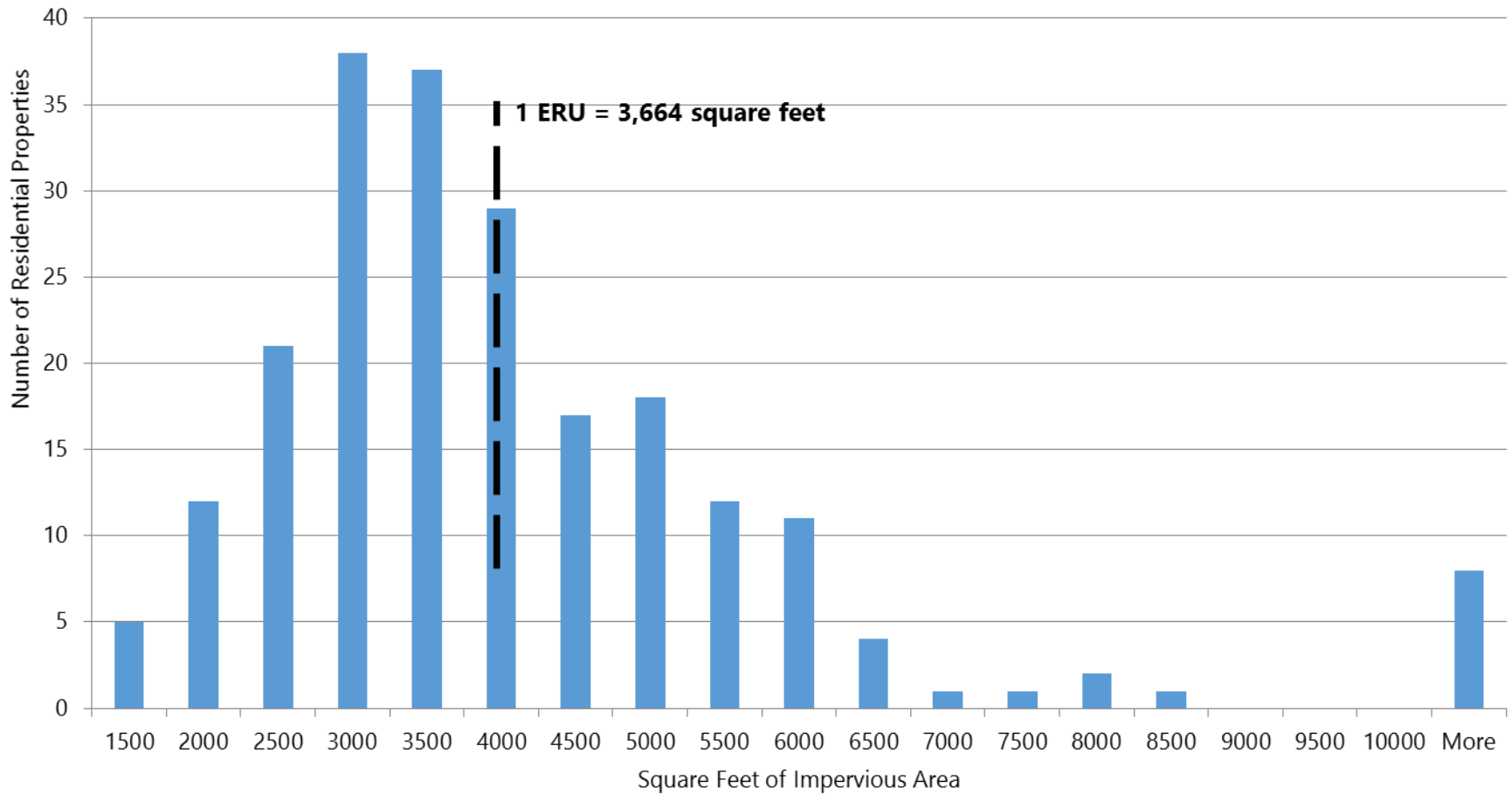
It is assessed and managed much like a sewer, water or trash fee. It is a payment for a specific service.

- Residential properties would be assessed a flat fee based on the typical value of impervious coverage in Conewago Township, known as an ERU (Equivalent Residential Unit).
- Non-Residential would be assessed based on their total coverage, divided by the value of an ERU. (how many single family residences worth of coverage does this property contribute?).



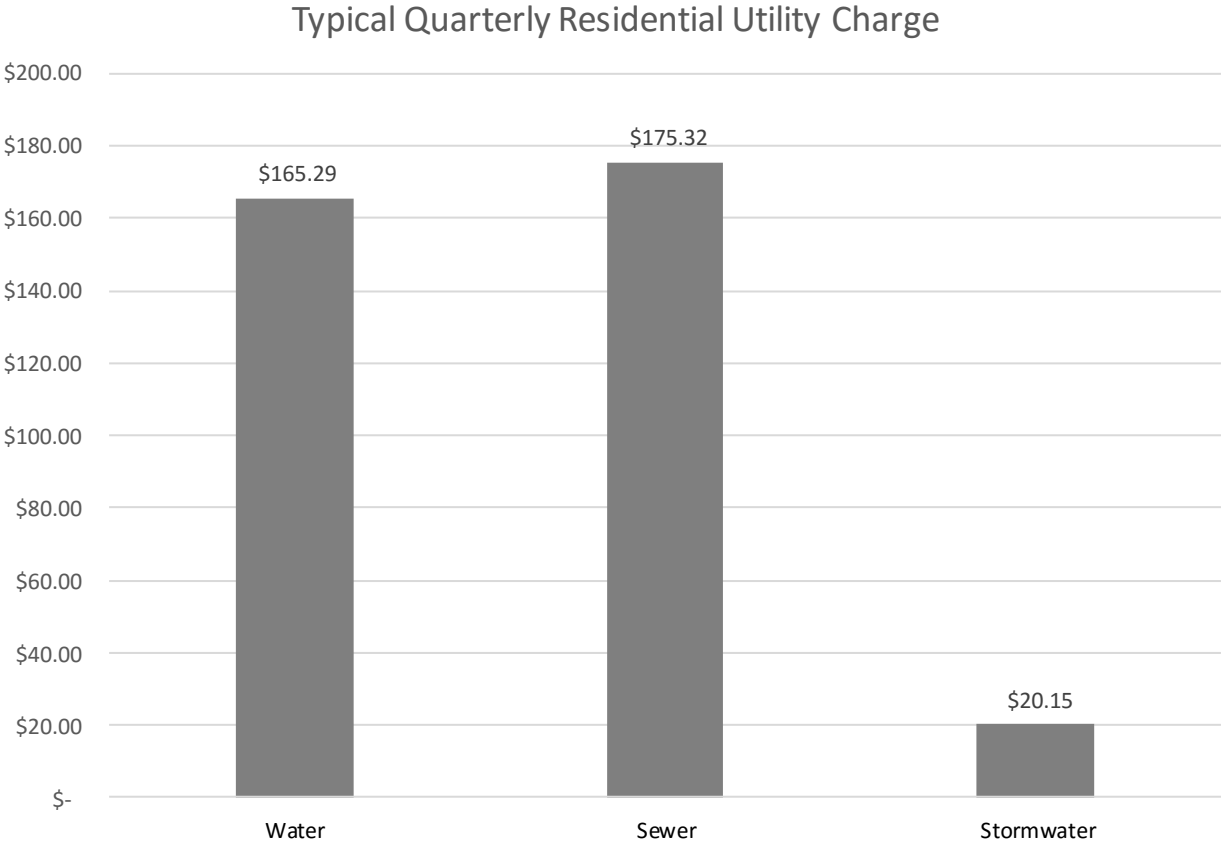
What is the unit value of a single ERU?

**Histogram of Impervious Area on
Sampled Residential Parcels (217 total)**



How much is the anticipated User Fee (per ERU)?

The current projected cost of a single ERU is \$ 20.15 per quarter.



BASED ON WATER USAGE OF APPROX. 400 GALLONS (PER DAY) FOR FAMILY OF FOUR, PER US EPA



How does the anticipated User Fee (per ERU) compare to averages?

Based on 2016 Western Kentucky University Stormwater Utility Survey;

- National average for stormwater utility fees - \$ 15.42 / quarter

Other communities;

Radnor Township - \$ 29.00 per 1,500 SF (equates to \$ 17.71 / qtr.)

Hampden Township - \$ 13.25 per quarter (per ERU)

Lancaster City - \$ 28.36 per quarter (based on 3,664 sq.ft. per ERU)



Can I lower my User Fee?

Yes!

In Year 2 of this program, the SAC agreed that the user fee program must have a “credit program” that would allow a user to lessen their fee.

In order to participate, user would construct or “retrofit” a stormwater facility. The amount of pollution reduction achieved by that facility would be used to determine the degree of discount (up to 50%) of the total fee.

What if I disagree with the ERU assessment?

The Township will develop a system by which a user could file an “appeal” of the assessment, providing reasons it may be incorrect. It is likely that the SAC or a version of the group, would review the request and recommend action to the Board of Supervisors.



Will the User Fee change from year to year?



Maybe!

The program is not allowed (per Act 62 of 2016) to generate windfall amounts of excess revenue but it must meet the needs of the program. At the end of the year, the stormwater program budget will be thoroughly reviewed and adjustments made as appropriate.

What Next?

- **November / December, 2016** – Township Board will review Summary Report of SAC “Stormwater User Fee Evaluation/Study Report”
- **December, 2016** – Township Board of Supervisors will advertise for adoption of necessary documents to support enactment of stormwater user fee (per Act 62 of 2016).
- **January, 2017** - Township Board of Supervisors will adopt Ordinance and Resolution for Stormwater Fee Program.
- **January / February, 2017** Initial ERU Assessments will go out to Township parcel owners.
- **March, 2017** – First Semi-Annual Bill Issued.
- **April, 2017** – First Stormwater User Fee will be due to Township.



Thank You

Questions?



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