Tredyffrin Township

2018 Stormwater Permit Requirements

Est. TREDYFFRIN TOWNSHIP CHESTER COUNTY, PA 1707

ch2m

Agenda

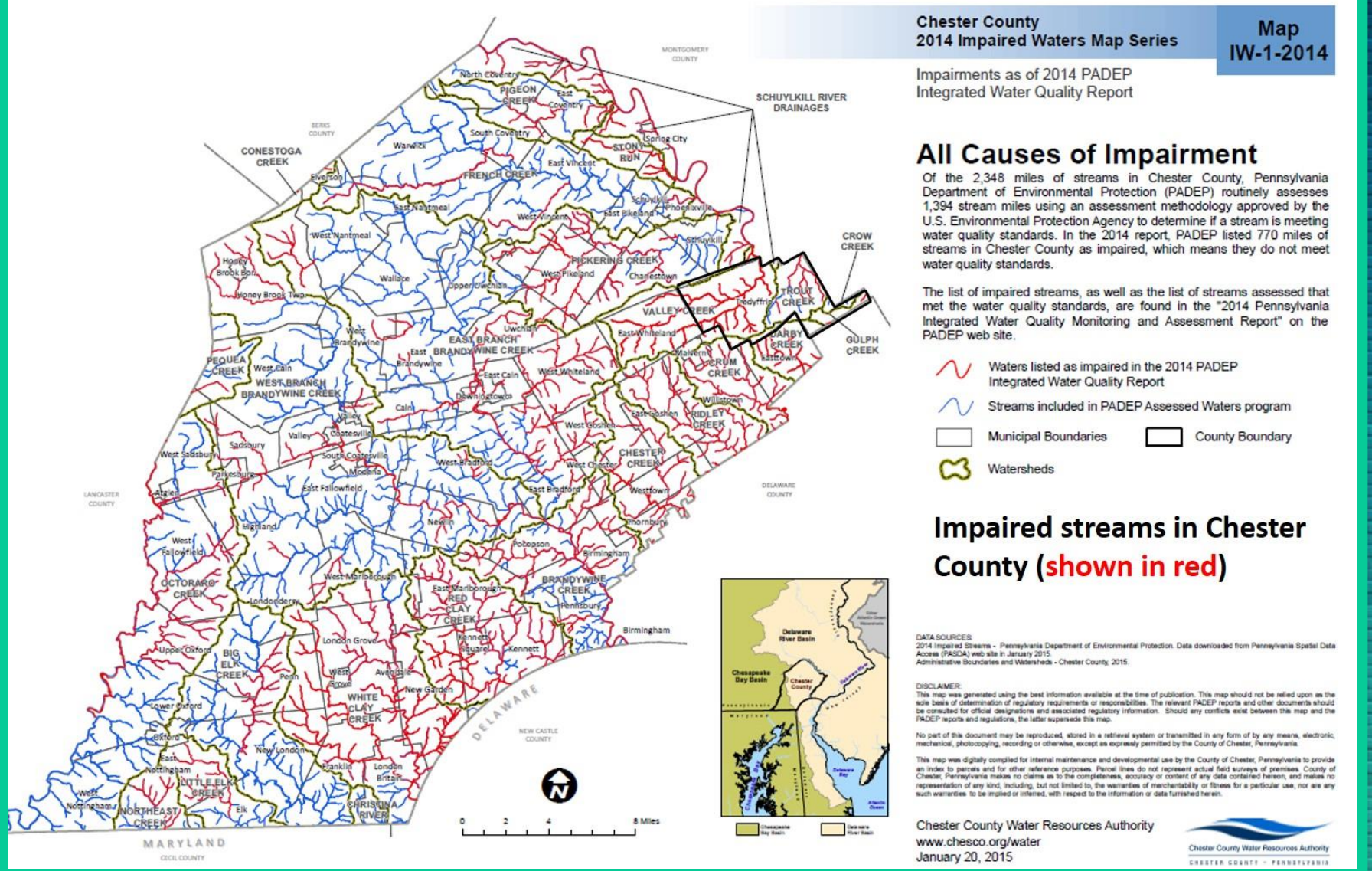
- What is the municipal stormwater permit ?
- Why is the permit needed ?
- What are the new requirements ?
- What can we do to comply ?
- What will it cost ?
- What is the Public Comment Process ?

What is the Municipal Separate Storm Sewer System (MS4) Permit ?

- The Federal Clean Water Act and Pennsylvania Department of Environmental Protection (PADEP) require the Township to comply with stormwater regulations and obtain a permit.
- The Permit allows pipes, inlets, and roads that collect stormwater to discharge the stormwater to creeks, rivers, and streams.
- The Township renews the permit every 5-years and has to meet new requirements.

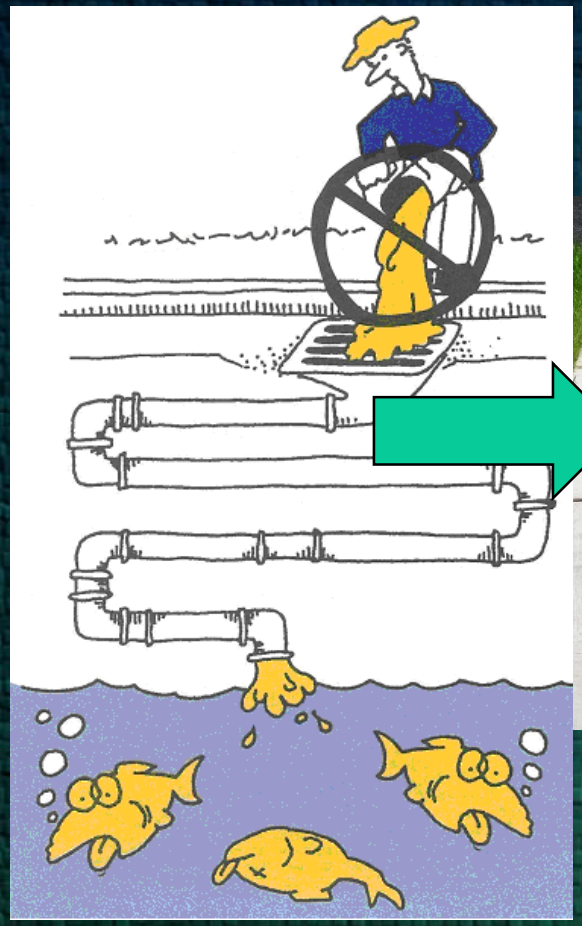


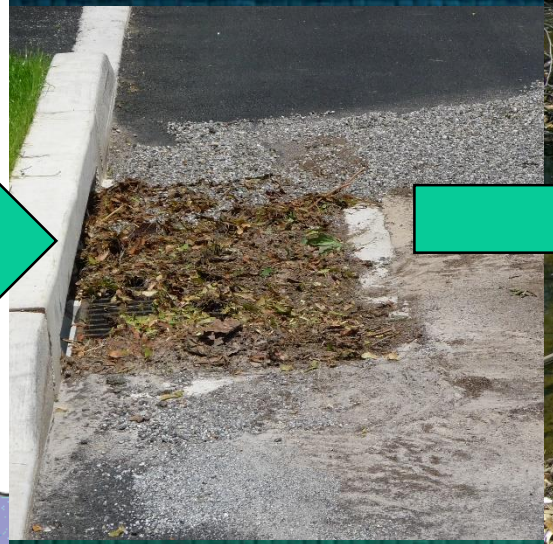

Why is the Permit needed ?

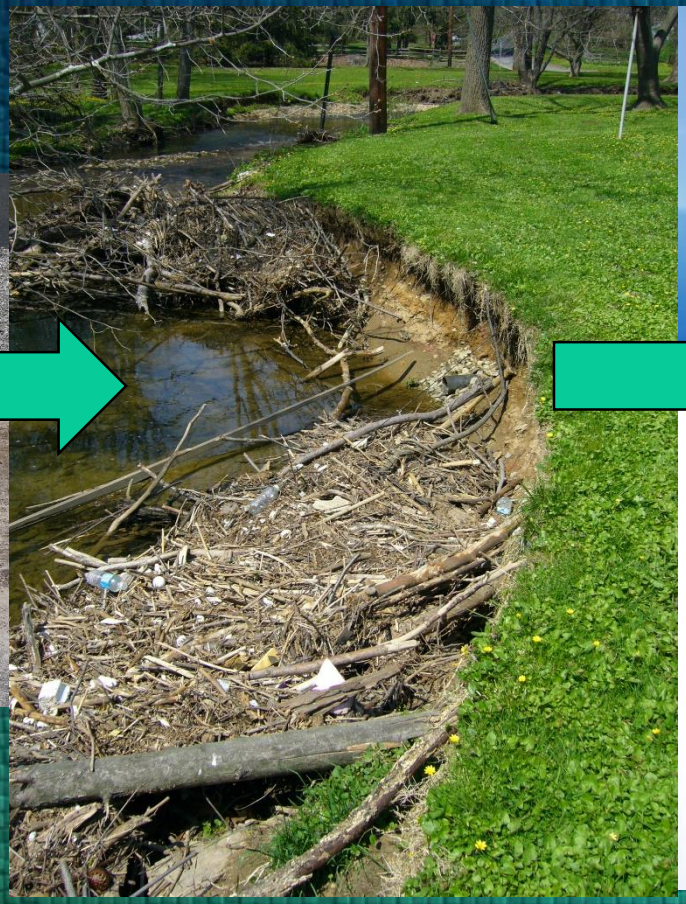



Impaired Streams (shown in red) have too much pollution
Chesterbrook
Wilson Park
Mill Rd Park
L.A.D Park
Trout Creek
Little Valley Creek
W Swedesford Rd
E Swedesford Rd
Walker Rd
Yellow Springs Rd
Howell Rd
Church Rd
Bear Hill Rd
Cassatt Rd
N Valley Rd
W Valley Rd
N Valley Forge Rd
Old Lancaster Rd
Lancaster Ave
W Lancaster Ave
Eagle Rd
Paoli
Paoli Hospital
Easttown Twp
Darby Creek
Julip Run
Newtown Rd
Church Rd
Mill Road Park
King of Prussia
King of Prussia Mall
Valley Forge Memorial Gardens
W Dekalb Pike
N Gulph Rd
S Gulph Rd
Crow Creek
Croton Rd
King of Prussia Rd
Wendley Rd
Henderson Rd
Devon Park Dr
Old Eagle School Rd
Push Rd
MONTGOMERY
CHESTER
DELAWARE
Upper Gulph Rd
St Davids Golf Club
Cabrini College
Eastern University
Gulph Creek
Encke Park
Ithan Creek
S Ithan
Bundry Way
Grubb Rd
S Warren
S Valley
Darby
503 ft
500 ft
250 ft
555 ft
Bucks County, PA, County of Chester, State of New Jersey, Esri, HERE, Garmin, INCREM

Pollution in our Waters



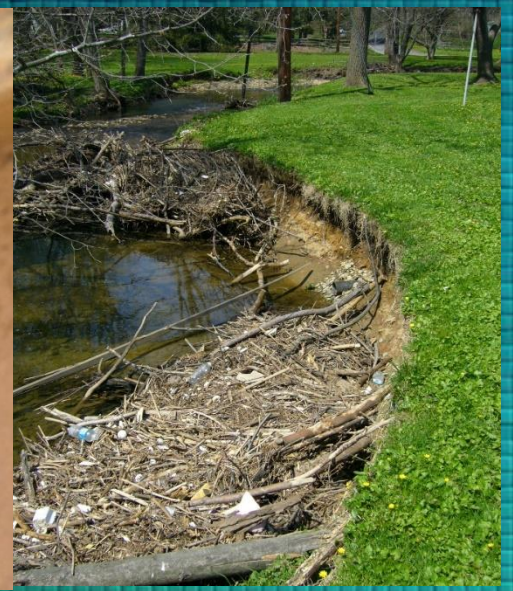




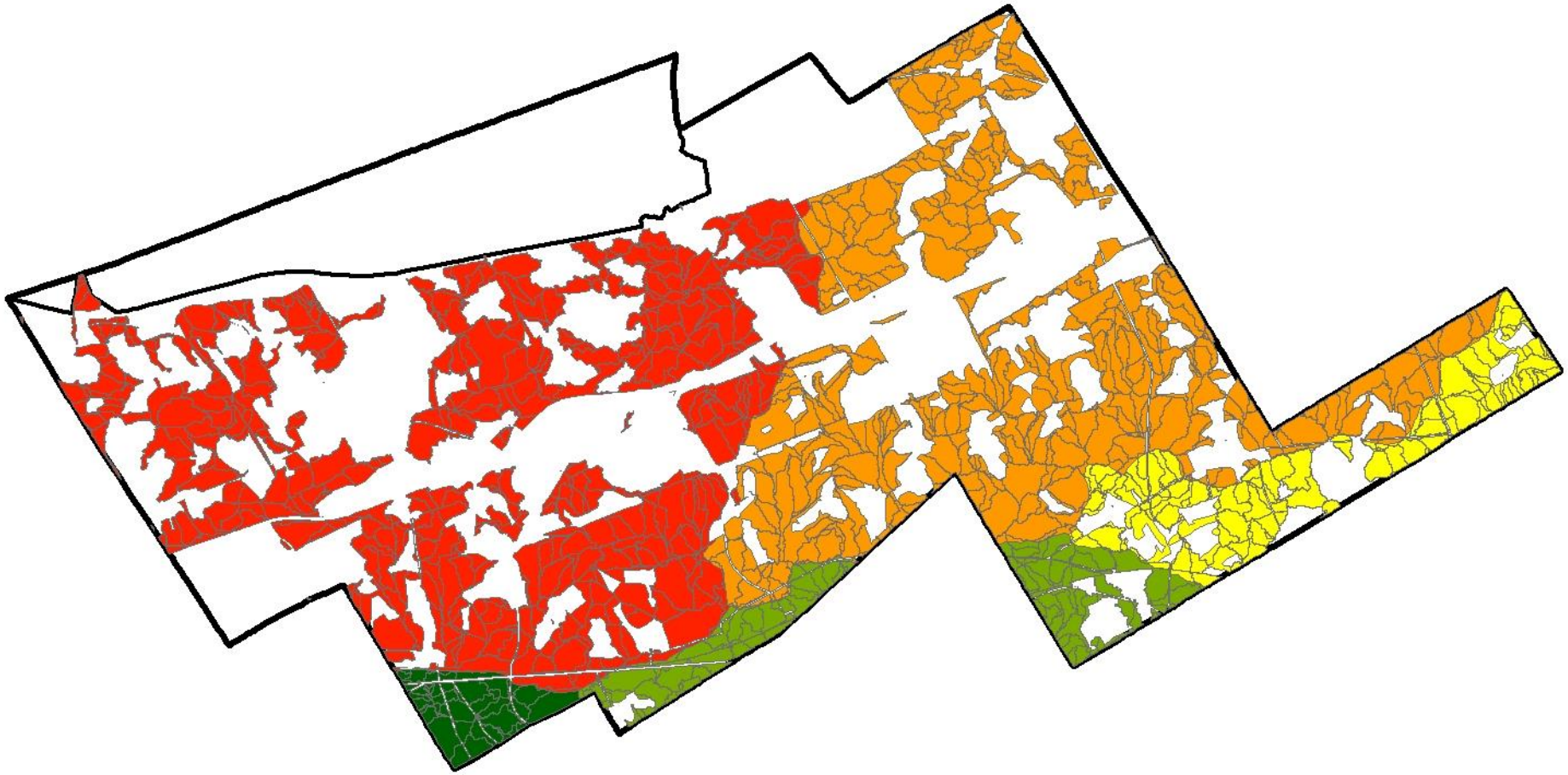
What are the new requirements for this permit ?

- The new permit requires a **Pollution Reduction Plan (PRP)** for streams impaired for sediment or nutrients.
- Municipalities must **reduce existing sediment loads by 10%** over the 5-year permit cycle (2018-2023)



Total Township = 12,600 Acres
Township in Urbanized Area = 11,382 Acres
MS4 Planning Area = 6,266 acres



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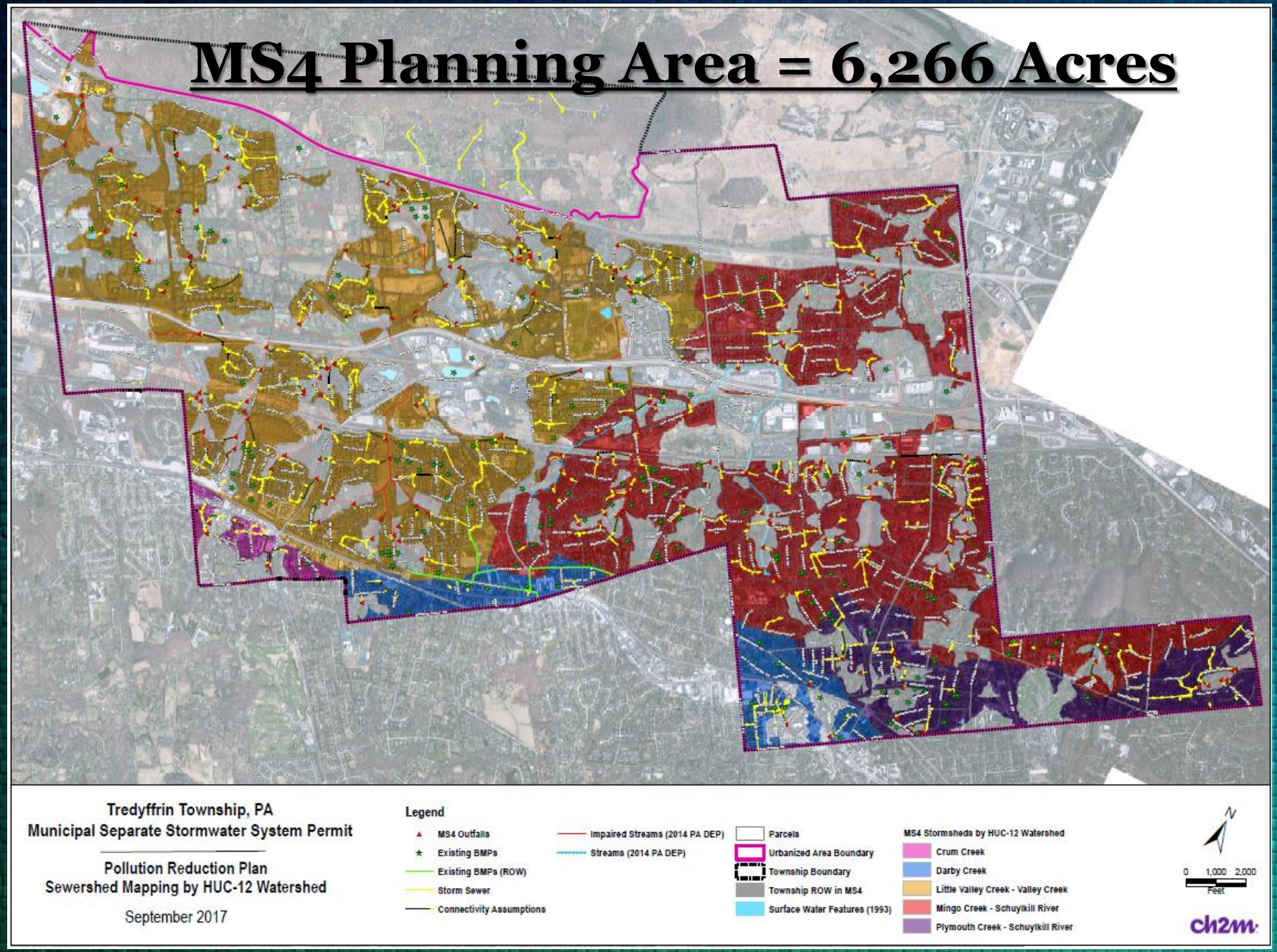


Existing Baseline Sediment Loading is 2,807,000 lbs/yr

- 10% Required Reduction: approx. 281,000 lbs/yr

Condition	Total Area (ac)	Sediment loads (lbs/yr)
Full Township	11,382	8,115,469
MS4 Planning Area - No BMPs	6,266	2,881,834
Sediment Reduction from Existing BMPs		(74,591)
MS4 Planning Area - With BMPs	-	**2,807,243**
10% Required Sediment Reduction		**280,724**

What can we do to comply ?

….Street Sweeping

….Inlet Cleaning

…Street Sweeping

…Inlet Cleaning

Existing Stormwater Ordinance

- One of the most pro-water quality ordinances in the state
- Requires infiltration for more then 500 square feet of impervious (new and rehab)
- Private land development will help achieve target at $0 cost to township

ORDINANCE NO. HR-375

Tredyffrin Township
Chester County, Pennsylvania

AN ORDINANCE DELETING APPENDIX I, EROSION, SEDIMENTATION AND STORMWATER CONTROL OF CHAPTER 181, SUBDIVISION AND LAND DEVELOPMENT, AND CREATING CHAPTER 174, STORMWATER MANAGEMENT, OF THE CODE OF TREDYFFRIN TOWNSHIP.

BE IT ENACTED AND ORDAINED by the Board of Supervisors of Tredyffrin Township as follows:

SECTION I: Chapter 181, Subdivision and Land Development, is hereby amended by deleting Appendix I, Erosion, Sedimentation and Stormwater Control, in its entirety.

SECTION II: Article II, Section 6.B of Chapter 181, Subdivision and Land Development, is hereby amended by deleting the definitions for the following terms and replacing them with the following new definitions:

Detention Basin – An impoundment designed to collect and retard stormwater runoff by temporarily storing the runoff and releasing it at a predetermined rate. Detention basins are designed to drain completely shortly after any given rainfall event and are dry until the next rainfall event.

Erosion – The process by which the surface of the land, including water/stream channels, is worn away by water, wind, or chemical action.

Retention Basins/Ponds – A structure in which stormwater is stored and not released during the storm event. Retention basins/ponds are designed to retain a permanent pool of water during dry weather and potentially detain waters from a specific drainage area, or designed for infiltration purposes and do not have an outlet. The retention basin designed for infiltration purposes must infiltrate stored water in three (3) days or less.

Sediment – Solid material, both mineral and organic, that is in suspension, is being transported or has been moved from its site of origin by water or air.

Watercourse – A channel or conveyance of surface water having a defined bed and banks, whether natural or artificial, with perennial or intermittent flow.

…Retrofit existing detention basins

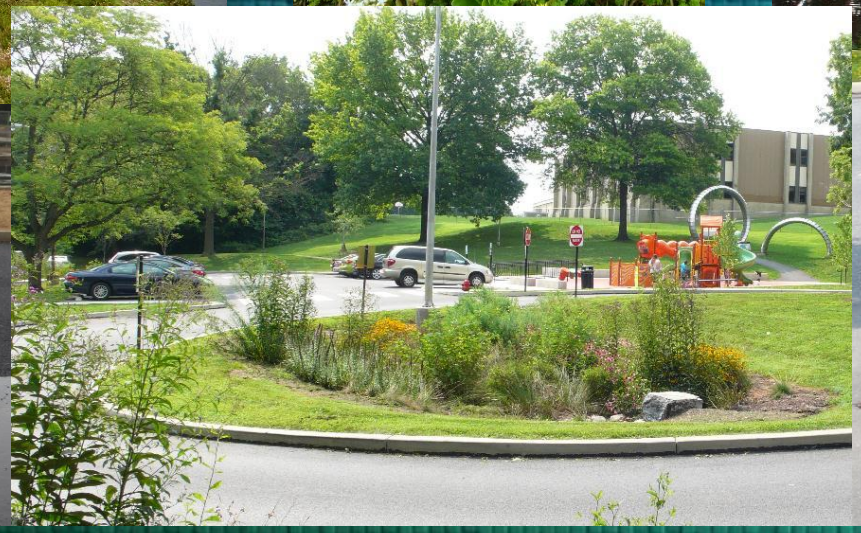
…Add native vegetation

….Modify outlet

…Streambank stabilization and restoration

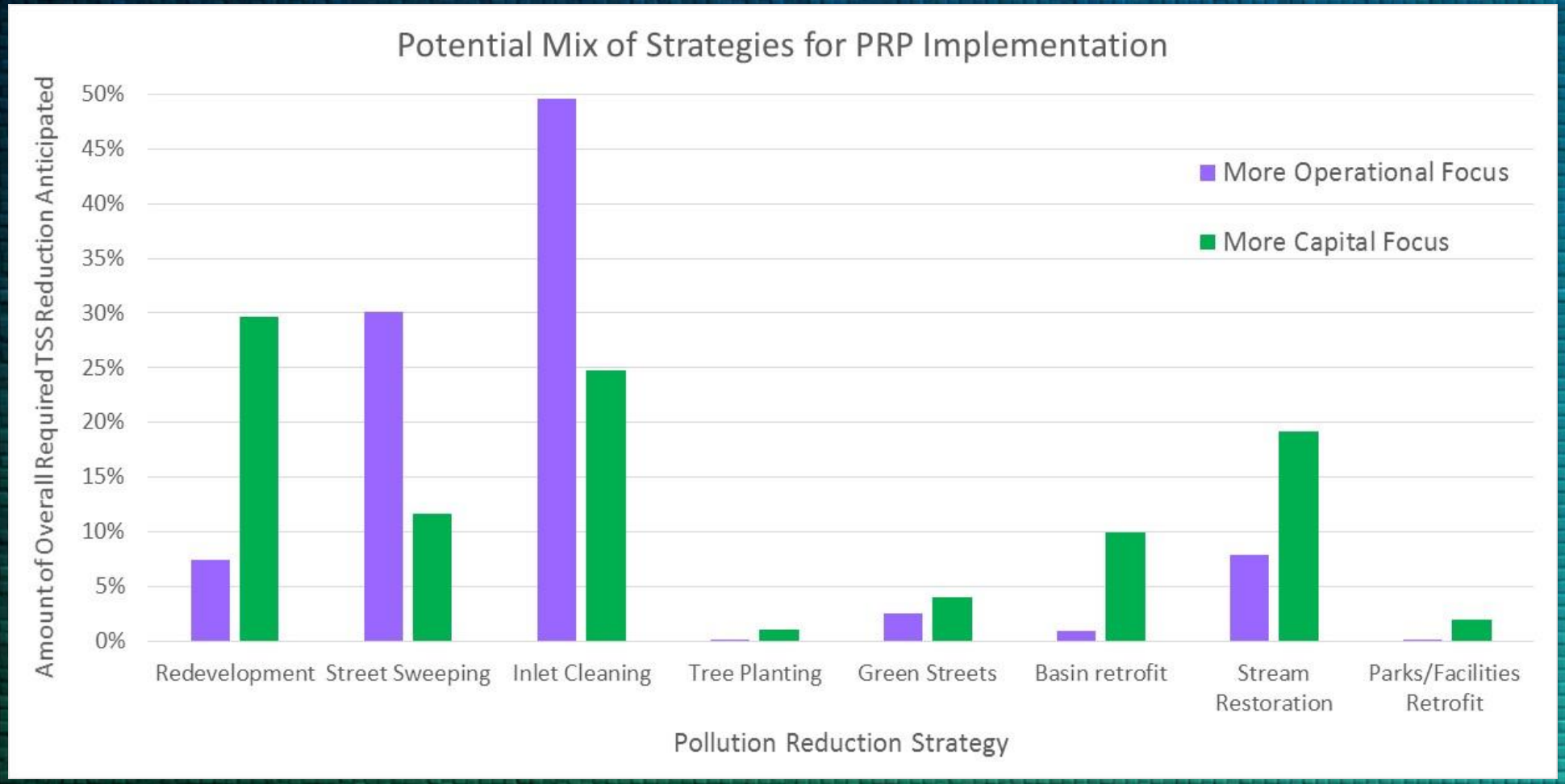
…Stabilize eroded streambanks
…Add riparian buffer plantings

Green Infrastructure



Green Roofs, Rain Gardens, Street Curb Bump outs, etc.

Reduction Range by Stormwater Control Measure



Reduction Range by Stormwater Control Strategy

Amount of Total Pollutant Reduction Goal Anticipated by Strategy

Pollutant Reduction Strategy	Minimum Anticipated	Maximum Anticipated
Future Redevelopment	7%	30%
Street Sweeping	12%	30%
Inlet Cleaning	25%	50%
Tree Planting	0%	1%
Green Streets	3%	4%
Detention Basin Retrofits	1%	10%
Public Stream Restoration	8%	19%
Twp. Parks/Facilities Retrofit	0%	2%

What will it cost?

Depending on the mix of strategies implemented, the average annual cost over the 5-year permit term is estimated to be approximately $500,000 to $1 million per year.

- **More Operational Focused → ~$500,000/year**
  - **Heavy on street sweeping and inlet cleaning**
- **More Capital Focus → ~$1 million/year**
  - **More capital projects (green streets, basin and township property retrofits, stream restoration)**

Public Comment Process

- Draft PRP on Township website - http://www.tredyffrin.org/
- Today (November 8): Public Comment period officially opens
- December 8: Public Comment period closes:
  - (All comments due in writing by 5 pm)
- December 9 – 22: Incorporate Comments and revise PRP
- Final PRP and permit application due to DEP by January 1, 2018

Questions?

2018 Stormwater Permit Requirements

Contact Stephen Burgo, P.E. at EngineeringDept@tredyffrin.org