

# West Chester Borough's Stream Protection Fee Program



Public Meeting February 2, 2017



# Stream Protection Fee Public Meeting Agenda

- **Stormwater Runoff – What is it?**
- **Why is it a problem?**
- **How is the Borough going to address it?**
- **Who is paying the fee?**
- **How can I reduce my fee?**
- **Questions from Audience**



ch2m.

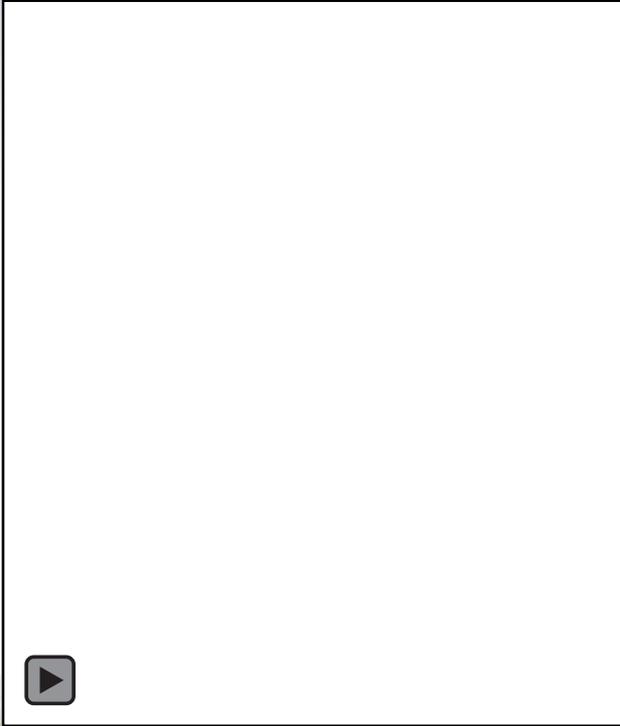
# Stormwater Runoff – Why is it a problem?

- **Pollutants from the Borough affect our local streams**
  - Goose Creek
  - Taylor Run
  - Blackhorse Run
  - Plum Creek
- **Excessive amounts of runoff impact our health, safety, and welfare**
  - Flooding
  - Stream bank erosion
- **Strains our historic infrastructure**
  - Pipes, inlets, and other stormwater infrastructure require inspections, cleaning, and rehabilitation and replacement

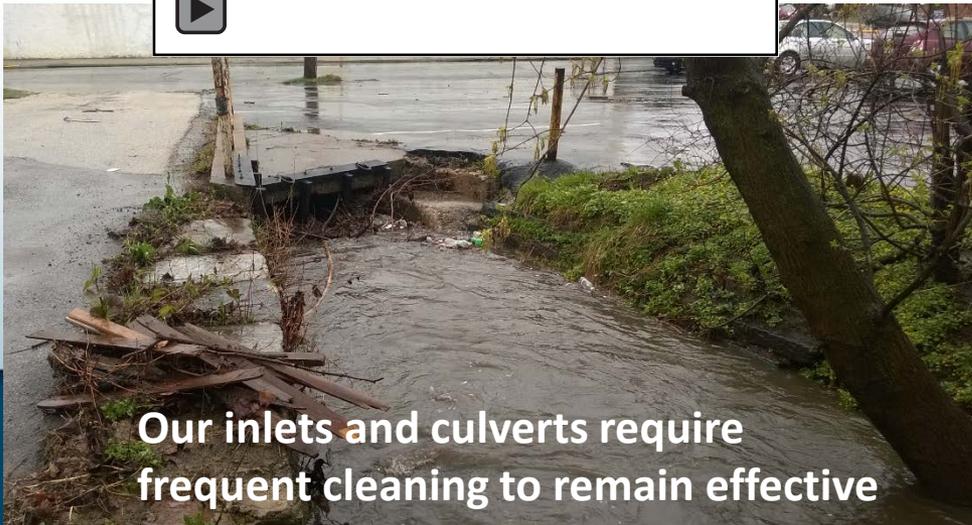


ch2m.

**Impervious surfaces generate excess runoff that washes pollution into nearby storm inlets which usually outfall directly to our streams**



**Sediment-laden runoff**



**Our inlets and culverts require frequent cleaning to remain effective**



**Trash and other pollutants accumulate and wash off our impervious surfaces**

# Goose Creek after a storm



ch2m.

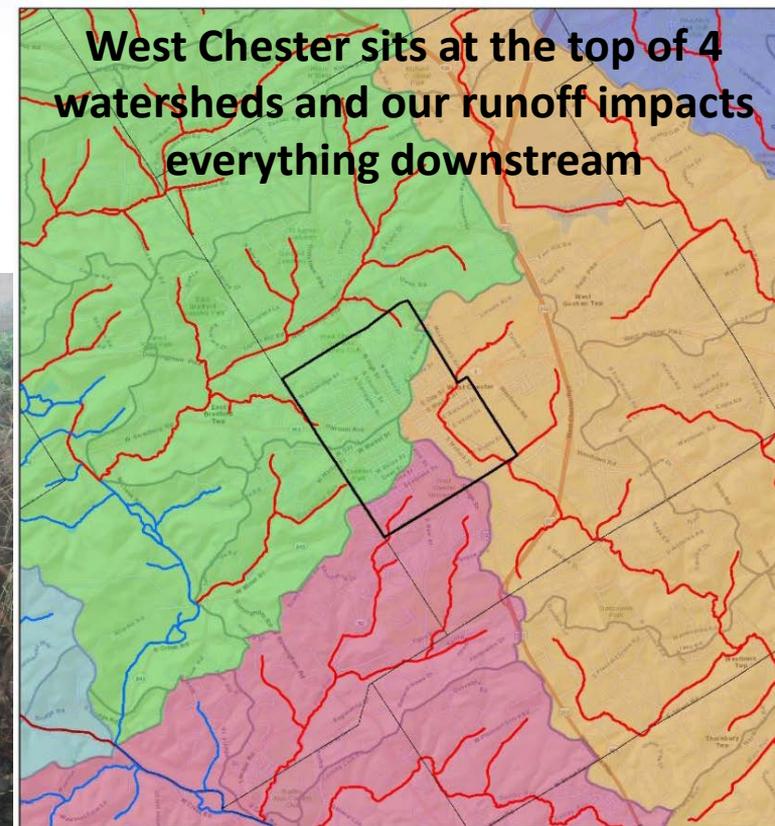
# Goose Creek erosion issues



ch2m.

# All of our local streams are “Impaired” (red on the map)

**Regulatory Mandate:** comply with a stormwater (“MS4”) permit issued by the PA Dept. of Environmental Protection (DEP) that **requires us to reduce pollution** in all of the watersheds so the streams can become fishable and swimmable



**West Chester Watersheds and Impaired Streams**



**Severely eroded stream banks on Goose Creek and Plum Run**

# Regulatory: Municipal Separate Stormwater System (MS4) Requirements

- **New Stormwater MS4 Permit application to PADEP by September 2017 requires:**
  - **10% reduction in Sediment over 5 years**
  - **54% reduction in Phosphorus (Goose Creek)**
- **The new permit must define specific projects to show that pollution reduction can and will be achieved in 5 years!**
  - Ignoring this regulation is not an option
- **More info on Pollution Reduction Plans will be shared later this summer**



ch2m.

# Infrastructure Needs: West Chester's stormwater infrastructure, built in the early 1900's, and our streams, need repair and maintenance

- **Cost** of providing municipal services is increasing faster than revenue in General Fund



Base 5-year CIP Items (prepared in 2013)	Estimated Cost
<b>Equipment</b>	
Replace 1997 Sewer Jet, 44-30 (30% for SW)	\$36,000
Replace Street Sweeper 44-40	\$210,000
<b>Pipes</b>	
Replace Pine Alley Brick Sewer	\$195,000
Replace N. High St. (Virginia-Ashbridge)	\$150,000
Replace West Union St. (Darlington-New)	\$250,000
Reline New St. (Union-Holly Alley)	\$75,000
Replace Wollerton Alley (New-Darlington)	\$90,000
Reline W. Washington (Hannum-New)	\$160,000
Replace Hoopes Alley (Everhard-Outfall)	\$115,000
Reline N. High St. (Chestnut to Washington)	\$218,750
<b>Stream Improvements</b>	
E. Barnard St. Culvert Replacement	\$250,000
Franklin at Linden Culvert Replacement	\$290,000
Plum Run (College-Bradford)	\$687,500
Goose Creek (Franklin-Nields)	\$375,000
<b>TOTAL (nearest \$1,000)</b>	<b>\$3,102,000</b>



# Stormwater Runoff – How should the Borough address it?

- Stormwater Assessment Advisory Committee (SWAAC) was formed in 2013 to recommend to Borough Council how to address the problem & fund it
- Included representatives from:
  - Residential
  - Business
  - Institutions (Chester County Hospital)
  - Non-Profits (Church)
  - West Chester University
  - Chester County
  - Borough Council and Staff

*The SWAAC :*

Met 7 times between July 2013 and October 2015 on funding options and policy issues



ch2m.

# Public Outreach process

Outreach Effort	# Of Meetings	Dates
Advisory Committee	7	2013 – 2015
Council Committees and Worksessions	10 (est.)	2013 – 2016
Public Meetings	3	2014 Winter/Spring
Comprehensive Plan Open House	2	2015
SPF Open House	1	2016 April
Public Meetings	1	2017 February
Stakeholder Meetings	8	2014, 2016
Public Hearing on Ordinance	2	2016, May and June
Facebook, website, articles, etc.	>>	2013 - 2017



# How can we address the problems and regulatory requirements related to stormwater?

## ■ Develop a rigorous stormwater program

- Repair and rehabilitation projects
- Regulatory compliance activities
- Community improvements
  - Urban Forestry
  - Integrated infrastructure (e.g., drainage improvements integrated with road work)
  - Green infrastructure (e.g., rain gardens, stormwater tree trenches, vegetated roofs)
  - Stream restoration
- Flood reduction projects

## ■ This requires a dedicated, long-term funding mechanism



Bioswale in curb extension also provides traffic calming and ADA improvements

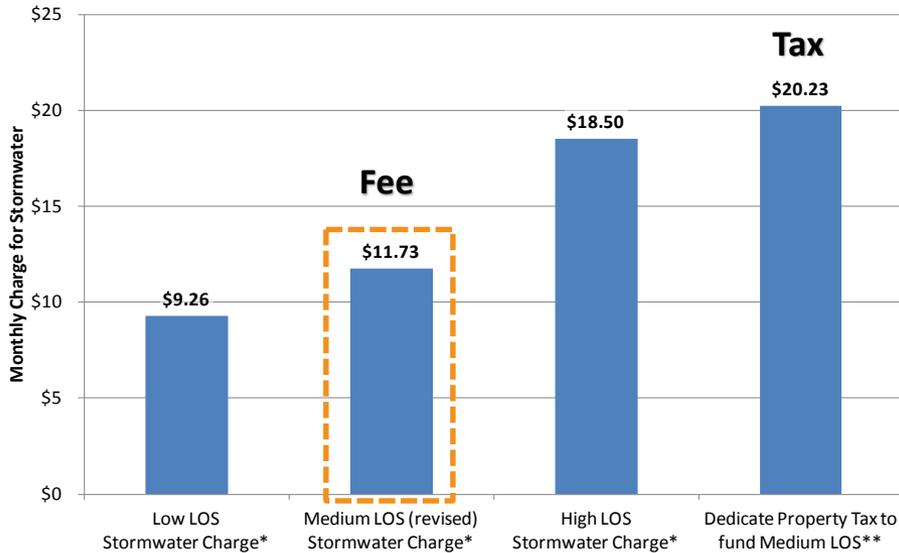


Green Alley with permeable pavers



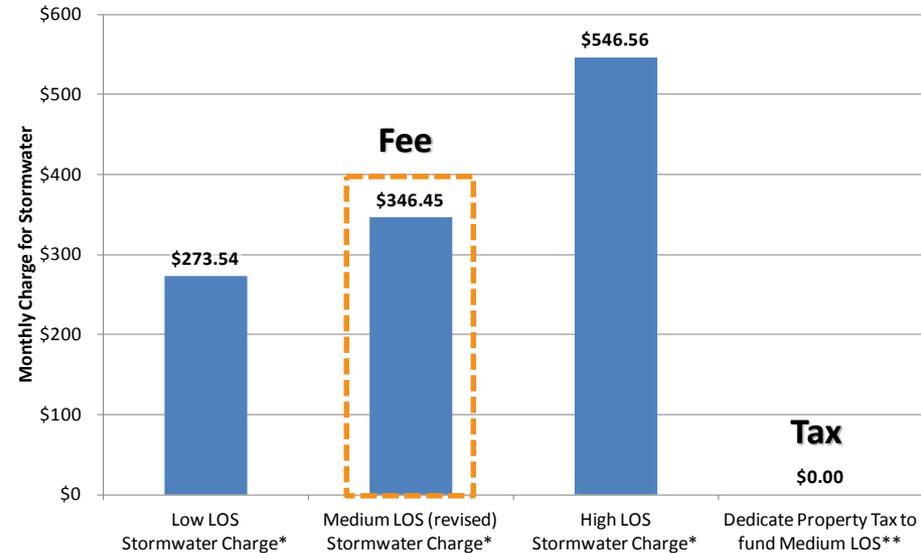
# Stormwater fee based on impervious area as the most equitable approach to pay for stormwater

Tier 3 – Residential – DETACHED SINGLE



Typical residential owner would pay a **fee of \$11.73/month** or **additional taxes of \$20**

Tier 6 – Chester County Justice Center



A large tax-exempt property would pay a **fee of \$346/month** or **additional taxes of \$0**



# Stormwater fee based on impervious area as the most equitable approach to pay for stormwater



Typical residential owner would pay a **fee of \$11.73/month** or **additional taxes of \$20**



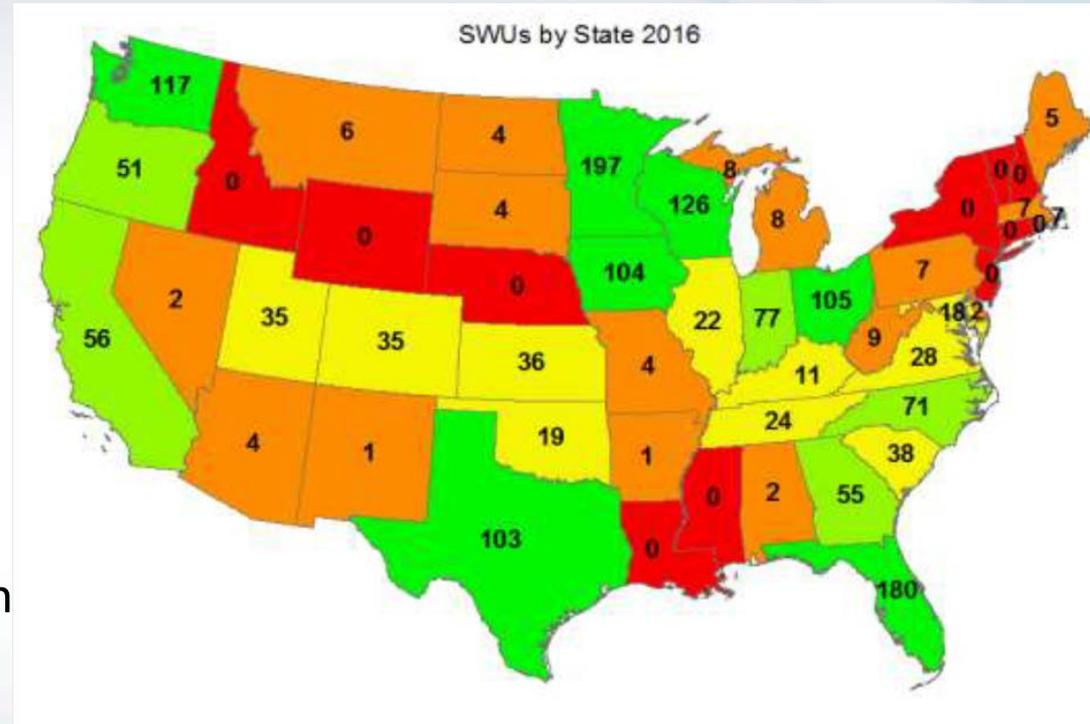
A large tax-exempt property would pay a **fee of \$346/month** or **additional taxes of \$0**

Increasing property taxes or sewer bills is not fair because they are not directly linked to how much stormwater a property generates



# West Chester Borough is not alone in looking at a stormwater fee: municipalities across the country are increasingly relying on them

- Over 1,600 stormwater utilities exist across the country\*
- In PA, 7 are collecting (up from 3 in 2013):
- West Chester, Philadelphia, Lancaster, Meadville, Mount Lebanon, and Radnor are collecting revenues
- Enabling legislation introduced in 2015 (HB 1325)
- A lot of local interest from neighboring municipalities

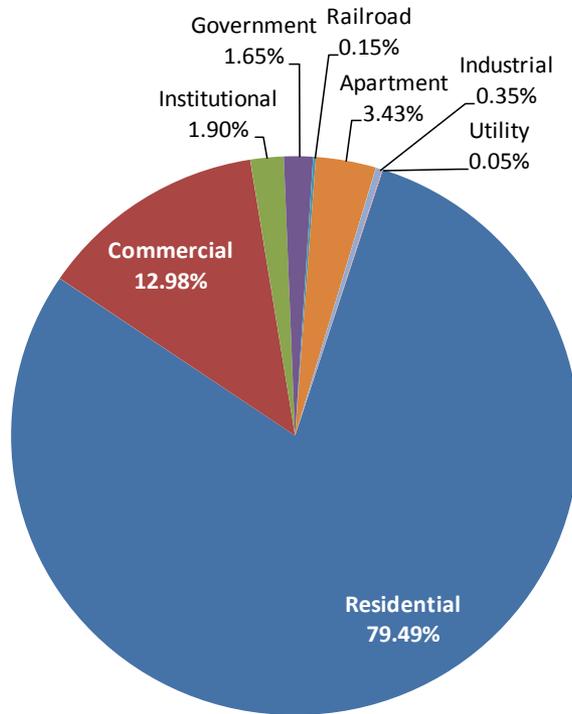


\* Source: Western Kentucky University Stormwater Utility Survey, 2016

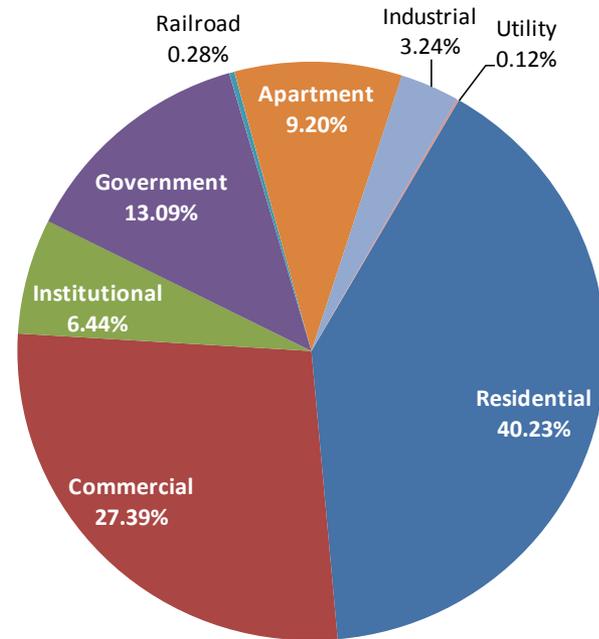


# Impervious Area by Stormwater Class

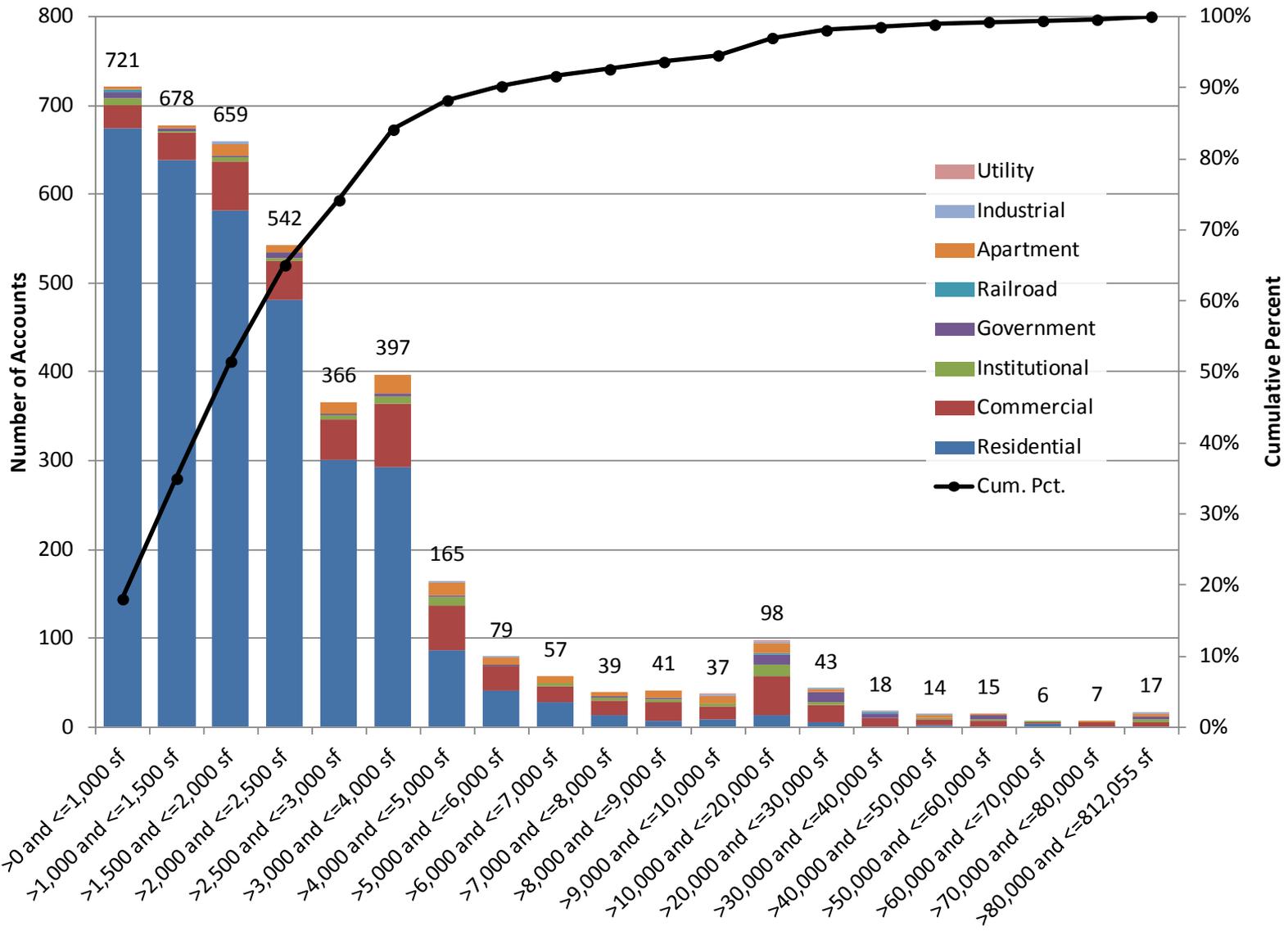
## Number of Properties



## Impervious Area



# How were the Tiers developed?



**Six “tiers” based on amount of impervious area.  
A property’s tier determines the monthly charge.**



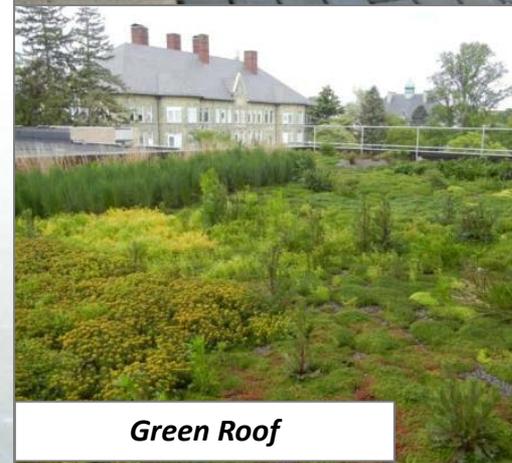
Tier	Amount of Square Feet of Impervious Area	Percent of Total Accounts
Tier 1	>0 and <=1,000 sf	18%
Tier 2	>1,000 and <=1,500 sf	17%
Tier 3	>1,500 and <=2,000 sf	16%
Tier 4	>2,000 and <=2,500 sf	14%
Tier 5	>2,500 and <=3,000 sf	9%
Tier 6	>3,000 sf	26%

- Each Tier is charged based on the recommended monthly fee of \$6.70/1,000 ft<sup>2</sup> of Impervious Area using the midpoint of the range
- **Median Monthly Fee:**
  - Residential: \$11.73
  - Commercial: \$25.87



## Develop an incentive program for all property owners to be able to reduce their fees

- Maximum credit is 60% of the fee – no one can receive 100% credit
- Residential properties can receive a **Rebate** (one time cash back) and/or a **Credit** (recurring fee reduction)
- Nonresidential properties (which includes multi-family-res) can receive a **Credit only** (up to 60% max).
- Manual, Application and Forms online
- Existing projects that installed an approved stormwater Best Management Practice (BMP) can apply for a credit



# Types of BMPs that are eligible for a rebate or a credit



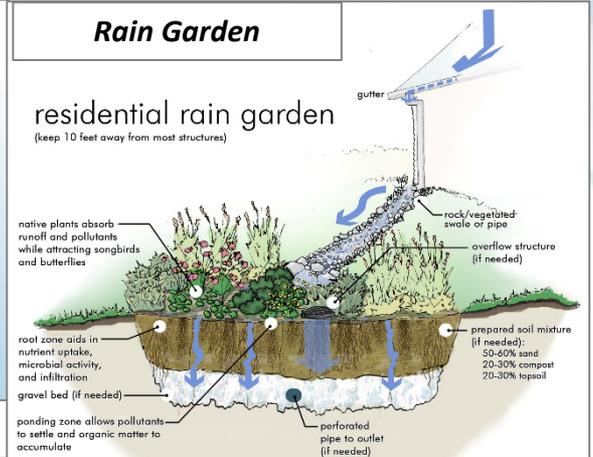
**Tree planting**



**Rain Barrel**



**Downspout Disconnect**



**Permeable pavers**



**Green Infrastructure**

Plus....

- *Environmental outreach programs*
- *Water quality treatment BMPs (filters, etc.)*
- *Flood control BMPs*

*.....and more*



ch2m

# Credit/Rebate (updates since January 2017)

- **Application due to Public Works by September 30, 2017**
- **If approved, credit/rebate will be retroactively applied to 2017 bills**
- **Three-year cycle (2017, 2018, 2019)**
- **Application Fee waived for 2017**
- **Need to sign an Operations and Maintenance Agreement**



# Appeals (updates since January 2017)

- Council approved a one-year waiver for all Appeal Application fees
- Required documentation:
  - Google Earth Aerial – measure tool – send screen shot
  - Photographs with graph paper measurements
  - “Plot plan” if you have one

## STREAM PROTECTION FEE APPEAL APPLICATION

The Borough has established a Stream Protection Fee (SPF) and all developed parcels in the Borough are required to pay the fee, which is based on the impervious coverage of the parcel. Property owners are entitled to appeal the user fee in accordance with the procedures in the Appeals Manual and the Stream Protection Fee Ordinance 2015-##

Submit completed form: [stormwater@west-chester.com](mailto:stormwater@west-chester.com)

or mail to:

Borough of West Chester Stormwater Program  
401 E. Gay Street,  
West Chester, PA 19380

Application Date:	SPF Account No.:
Owner Name:	Mailing Address:
Property Address:	
Phone Number:	Email Address:

### Reason for Appeal (Check all that apply):

- Incorrect parcel information
- Inaccurate impervious area calculation
- Inaccurate Tier category assignment
- Mathematical error

### Special Condition Appeal

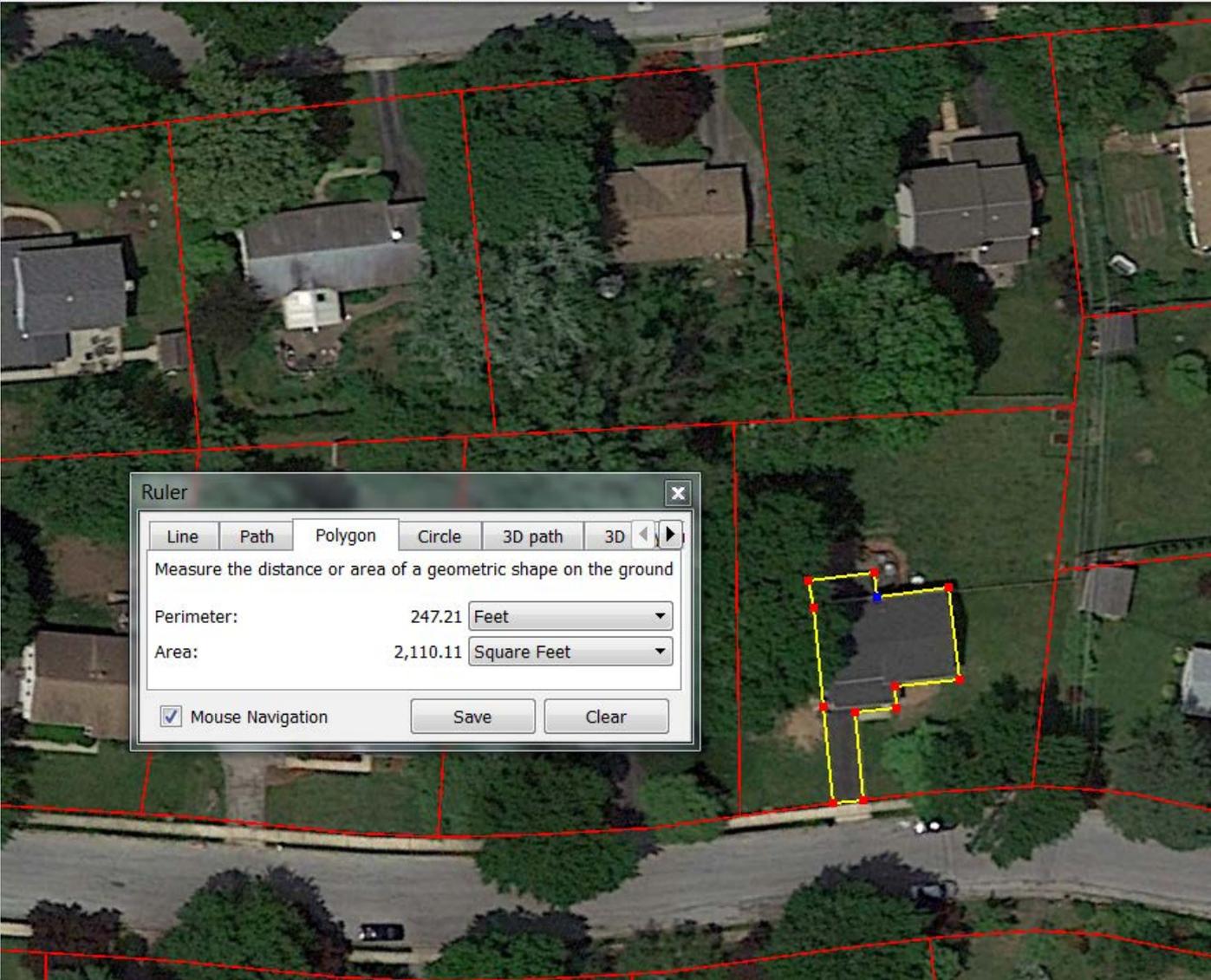
If the applicant is choosing this appeal, both reasons below must be true:

- The stormwater runoff impact on the stormwater system or services is significantly less than suggested by its amount of impervious area; and
- Applicant's parcel or a portion thereof drains completely outside of the Borough.

### Supporting Documentation Checklist (provide all items listed below)

- Copy of SPF Bill
- Plot plan, map, aerial image or similar information detailing actual impervious surfaces currently on-site
- Requested value for the correct impervious area/ associated with the property for which an appeal is being requested (provide in Description, page 2)





**Ruler** [X]

Line Path Polygon Circle 3D path 3D [Left Arrow] [Right Arrow]

Measure the distance or area of a geometric shape on the ground

Perimeter: 247.21 Feet

Area: 2,110.11 Square Feet

Mouse Navigation

Save Clear



ch2m

# What is the SPF funding?

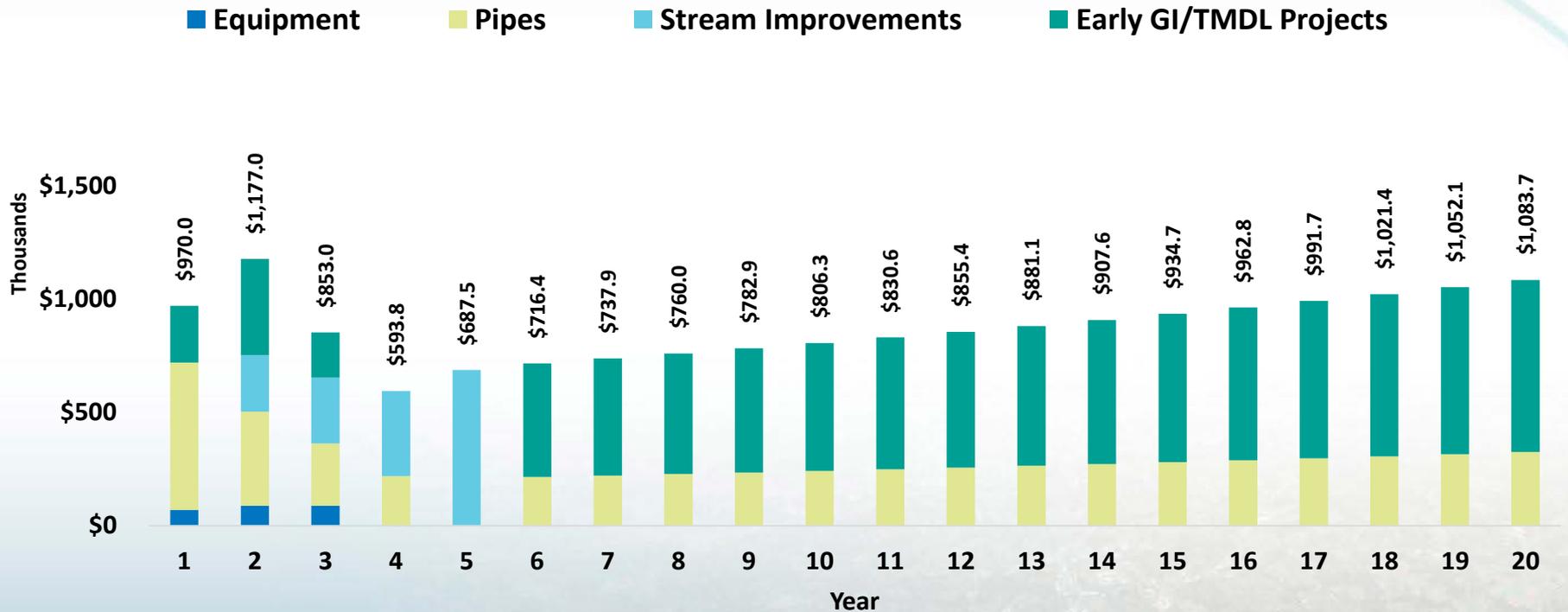
## Capital Projects/O&M/Administration

- Pipe replacement and relining projects (Barnard St Culvert; Pine Alley relining)
- Equipment
- Matching funds received for \$220,000 County Grant funding for 3 Green Streets to serve as demonstration sites
  - Pine Alley (along with a planned pipe relining project)
  - Everhart and Niels (in conjunction with repaving project)
  - Hoopes Alley (significant streambank erosion issue)
- GI Projects planned for constructed in 2017
  - GI Demonstration at Borough Hall
  - GI Enhancements to Veteran's Park
- List for 2018 and beyond...



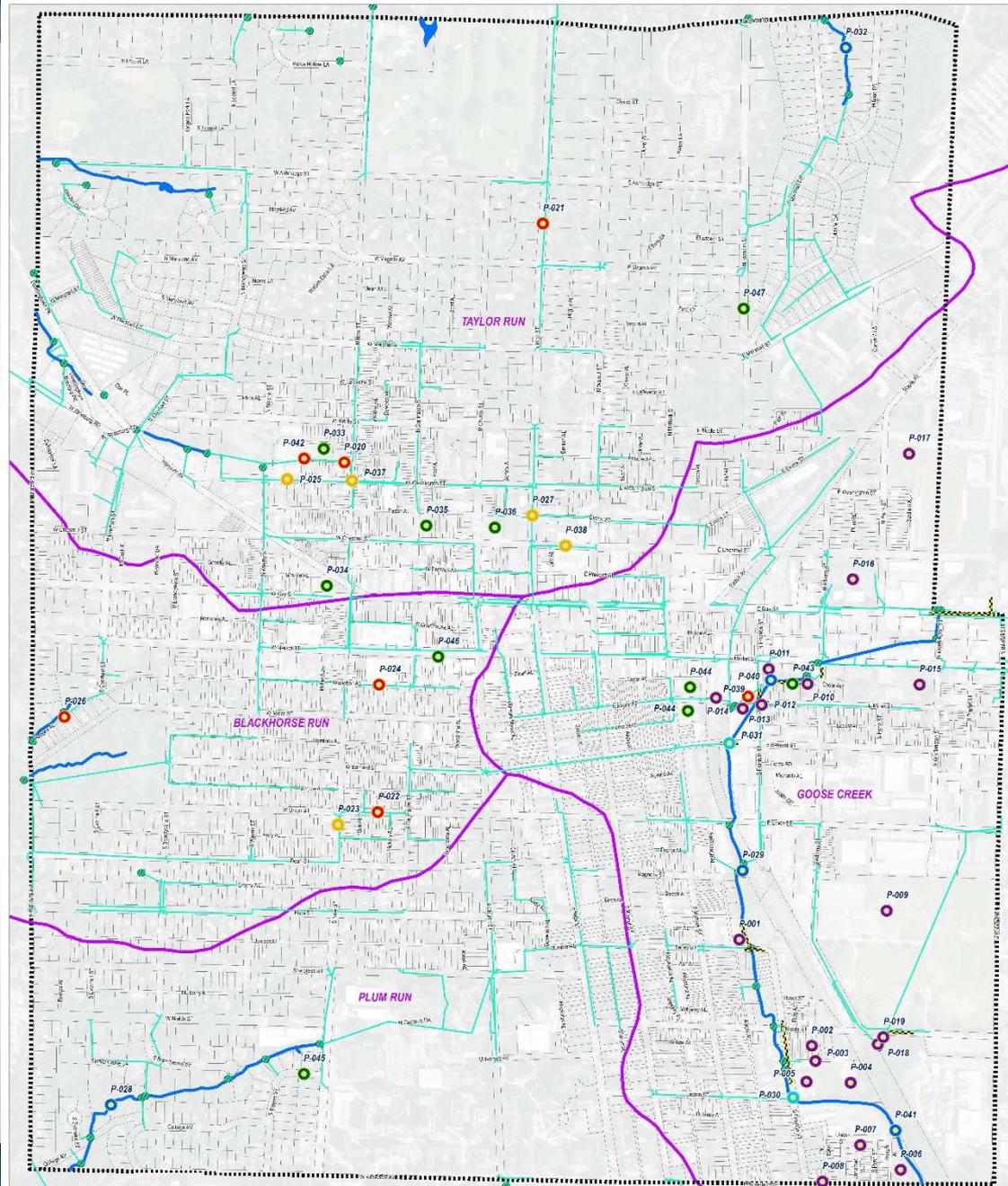
# What is being funded?

## CIP components of the Fee by Project Category (escalated \$)



# 50 Potential Projects

- Green Infrastructure
- Stream Improvement
- Pipe Relining and Replacements



**Proposed Project Types**

- TMDL SMP Project (19) \*
- Green Infrastructure (9)
- Stream Improvement (5)

- Culvert Replacement (2)
- Pipe/Sewer Replacement (7)
- Pipe Relining (5)

- Stormwater Outfalls
- Stormwater Pipes
- Flooding Locations (Draft)
- Streams

- Parcels
- Watersheds
- Municipal Boundary

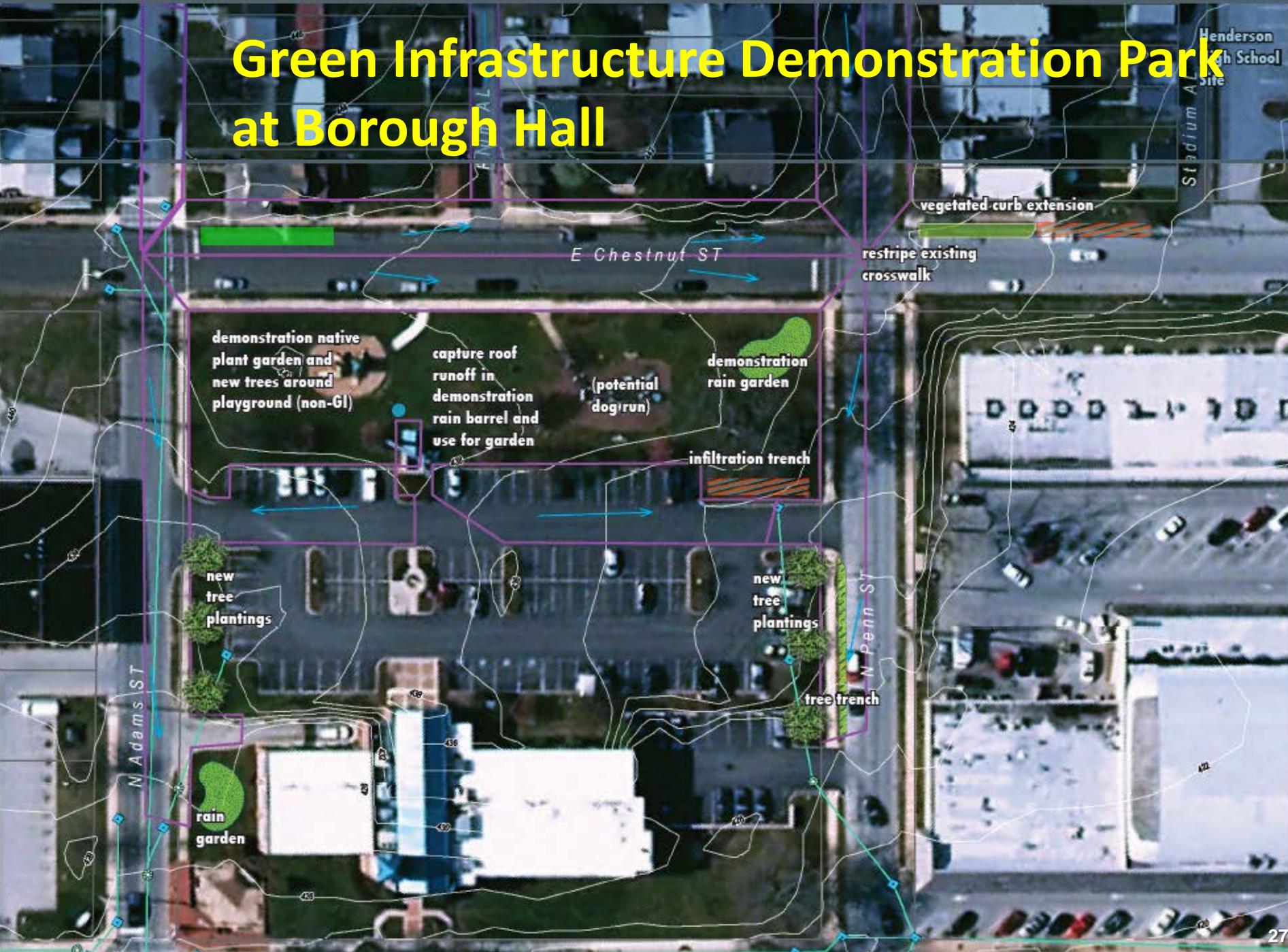
\*Stormwater Management Practice (SMP) project identified as part of the Goose Creek Total Maximum Daily Load (TMDL) Strategic Plan submitted to PADEP in February 2016.



ch

# Green Infrastructure Demonstration Park at Borough Hall

Henderson High School Site  
Stadium A



# Fugett Park/Borough Hall: Existing Conditions



ch2m.

Google  
© 2014 Google

# Fugett Park/Borough Hall: Proposed Rain Garden



ch2m.

# Green Park at Veteran's Park / Pine Alley



# Veterans Park/Pine Alley: Existing Play Area



ch2m.



Google  
Satellite  
Street View  
3D

# Veterans Park/Pine Alley: Proposed Features



ch2m.



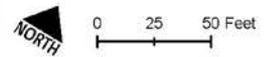
Google  
© 2014 Google  
All rights reserved.

**West Chester Borough  
SPF Project**

**Hoopes Alley  
Green Infrastructure Concept**



- Inlet
- Stormwater MH
- Stormwater Outfall (53)
- Existing Stormwater Pipes
- Surface Waterways
- 2 ft Contours
- Surface Flow
- Parcels
- Drainage Area
- Proposed GI Features**
- Porous Pavement

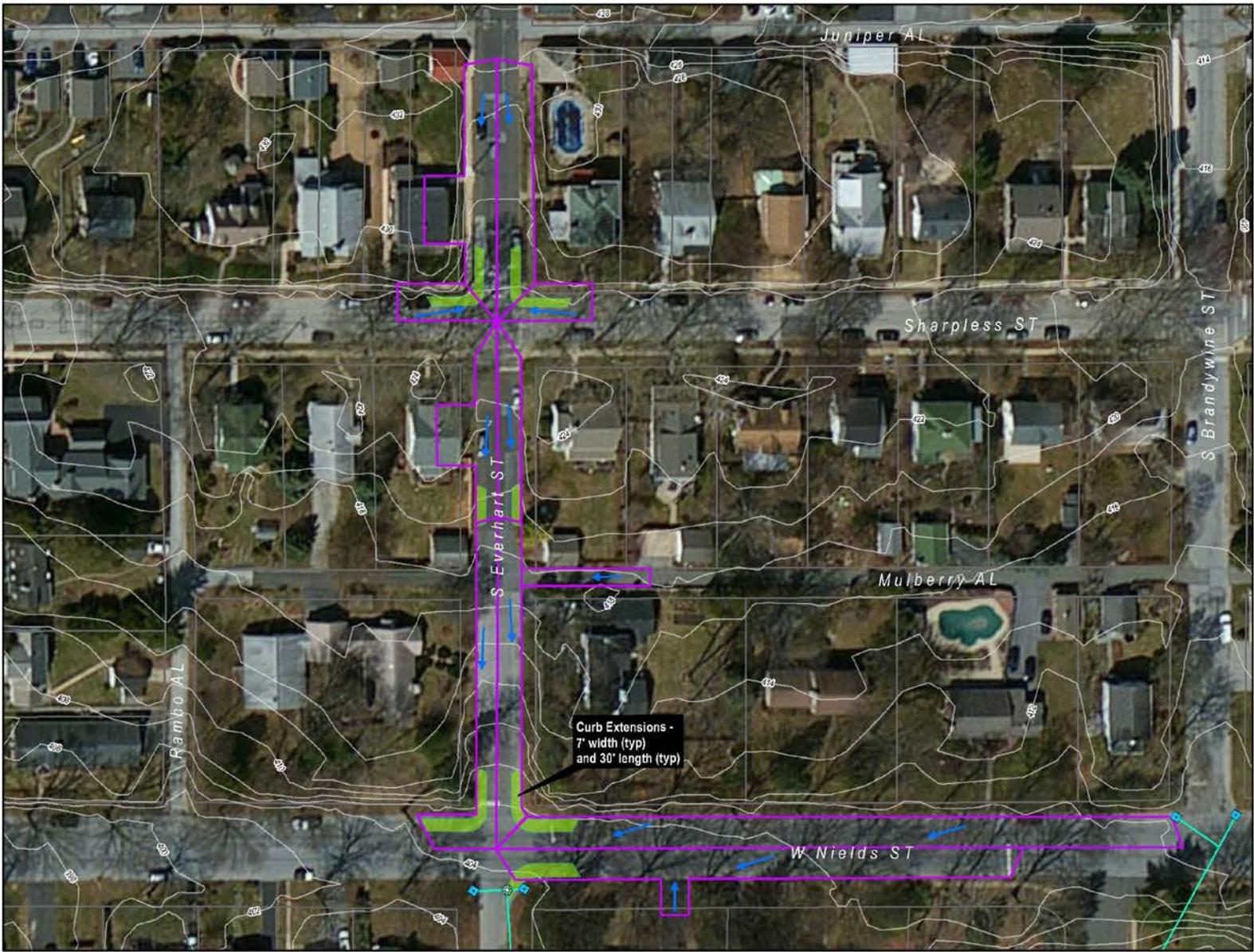


ch2m.

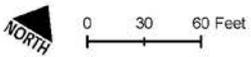
Google  
© 2014 Google

**West Chester Borough  
SPF Project**

**S. Everhart Street  
Green Infrastructure Concept**



- Inlet
- Stormwater MH
- Existing Stormwater Pipes
- 2 ft Contours
- Surface Flow
- Parcels
- Drainage Area
- Proposed GI Features**
- Vegetated Curb Extensions



ch2m.

Google  
© 2014 Google

Impervious Drainage Area (SF)	Impervious Drainage Area (ac)	Annual Runoff Coefficient	Annual Runoff (gal)	Annual Runoff Reduction (gal)	Event Mean Total Phosphorus (TP) Concentration (mg/L)	TP load (lb/yr)	% TP Reduction	TP Reduction (lb/yr)	% of Goose Creek TP Goal	Conceptual Cost Estimate
56,391	1.3	80%	1,328,000	1,195,200	0.36	3.99	85%	3.39	8%	\$259,000



**E MINER ST IDEAS**

**OPTION A:**

- close E Miner St to traffic and turn into play area space/extension of playground
- use creative street paint/imprints and have hopscotch and other games on former street
- use Railroad St for parking

**OPTION B:**

- keep E Miner St open to traffic
- deter high speed traffic on E Miner St by adding speed bumps, areas of raised pavement, and curb extensions
- add creative street paint/imprints to street illustrating water flow patterns

# Green Park – John O Green Memorial

# John O. Green Memorial Park: Existing Play Area



ch2m.

# John O. Green Memorial Park: Proposed Rain Garden



ch2m

# What can you do to stay involved?

- **Plant a Tree! February 10<sup>th</sup> deadline for free Street Trees from Borough (to be planted in April by Public Works) – Qualify for Rebate and Credit!**
- **Website, search “Stormwater” or “Stream Protection Fee”**
- **Sustainability Advisory Committee**
  - Meeting last Thursday of every month
  - Hosting a future Credit/Rebate Workshop in the spring
- **Attend Public Works Committee Meetings**
- **Sign up for Alerts on Borough Website**



Michael Cotter: [mcotter@west-chester.com](mailto:mcotter@west-chester.com)

# Questions or Comments



ch2m.