



West Chester Borough Stream Protection Fee Overview



May 5, 2016 – Public Hearing

May 5, 2016 Public Hearing Presentation Overview

- Stormwater Runoff – Why is it a problem?
- How can we address it?
- What are the next steps?
- How can I get involved?
- Questions from Audience



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Stormwater Runoff – Why is it a problem?

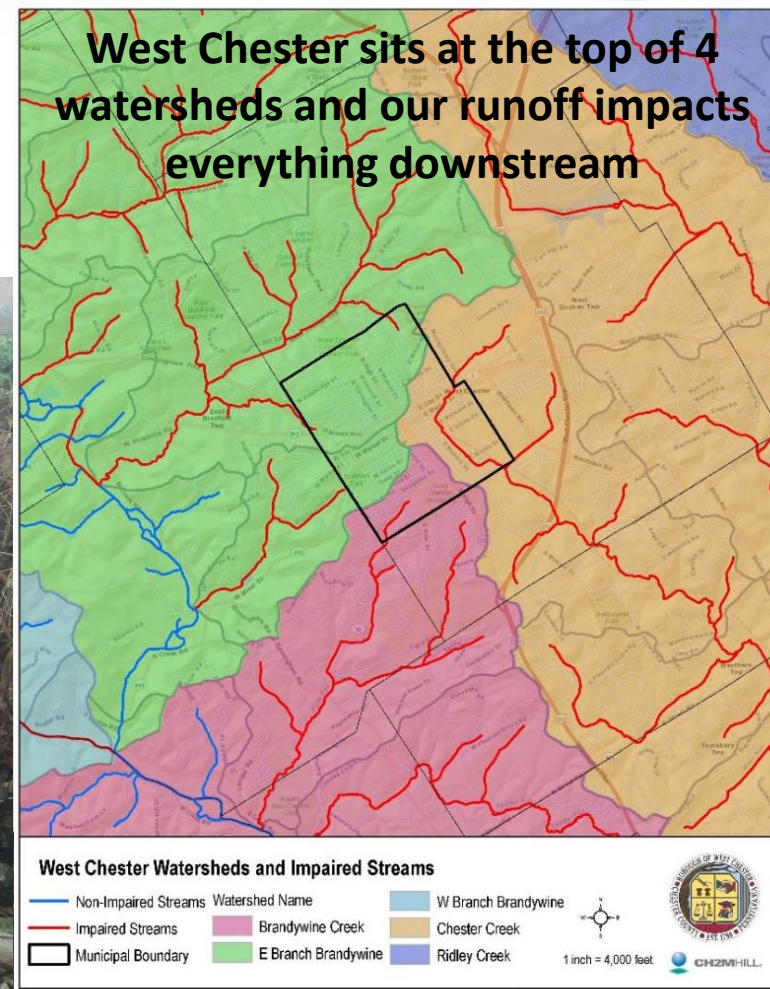
- **Pollutants from the Borough affect our local streams**
 - Goose Creek
 - Taylor Run
 - Blackhorse Run
 - Plum Creek
- **Excessive amounts of runoff impact our health, safety, and welfare**
 - Flooding
 - Stream bank erosion
- **Strains our historic infrastructure**
 - Pipes, inlets, and other stormwater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



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

Clean Water Act 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



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



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Google
Earth
Imagery
Satellite
Street View
Historical

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

■ Develop a rigorous stormwater program

- Repair and rehabilitation projects
- Regulatory compliance activities
- Multi-purpose 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

■ Establish a dedicated, long-term funding mechanism for the program



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



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



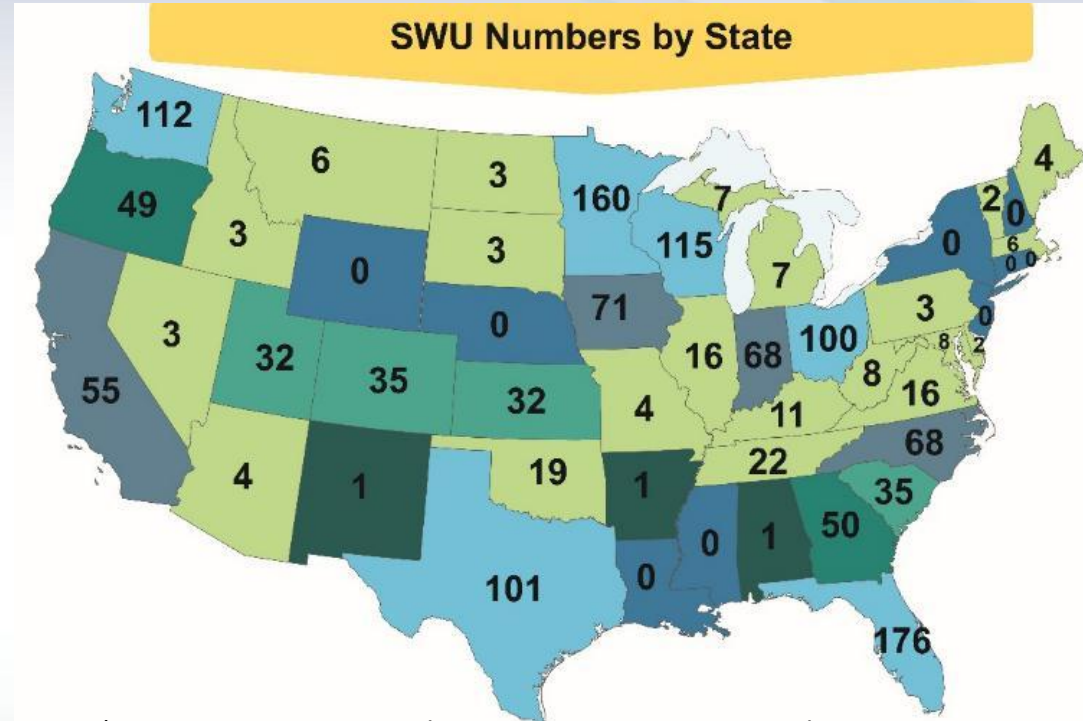
A large tax-exempt property would pay a **fee of \$346/month** or **additional taxes of \$0**

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 1400 stormwater utilities exist across the country*
- In Pennsylvania; Philadelphia, Lancaster City, Meadville, Mount Lebanon, and Radnor are collecting revenues
- A lot of local interest from neighboring municipalities (West Goshen, Upper Uwchlan, Pottstown)
- West Chester invited to present at prominent 2015 Villanova Stormwater Conference



* Source: Western Kentucky University Stormwater Utility Survey, 2013

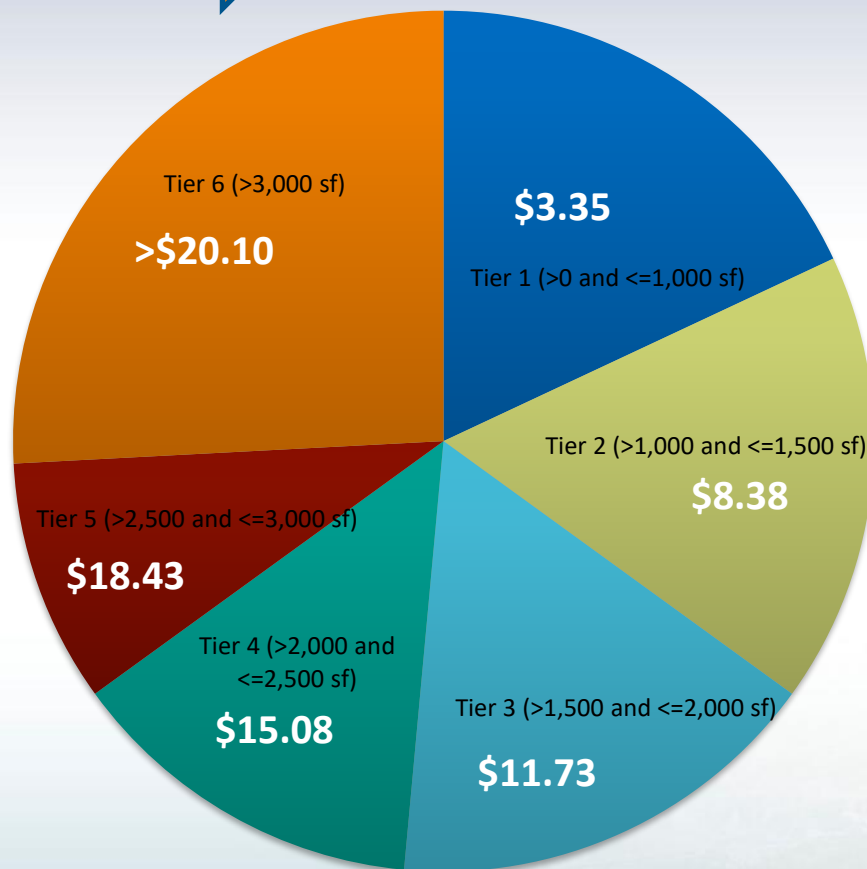
Managing the Costs of Municipal Stormwater Management:
Collaborative and Financial Strategies for Meeting Water Quality Requirements

Hosted by Villanova University and the Pennsylvania Environmental Council
October 13, 2015 at Villanova University, CEER 001



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



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%

- All properties are distributed into one of six tiers
- Each Tier is charged based on the recommended monthly fee of \$6.70/1,000 ft² of Impervious Area
- **Median Monthly Fee:**
 - Residential: \$11.73
 - Commercial: \$25.87

**All dollar figures shown are based on a base monthly rate of \$6.70/1000 SF as recommended by the SWAAC. The actual base rate will be set by Borough Council.*

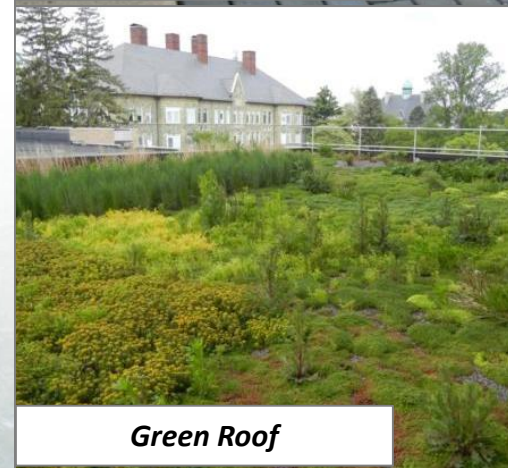


Develop an incentive program for all property owners to be able to reduce their fees

- Maximum credit is 60% of the fee – no one can receive 100% credit since we need funding for the public stormwater system
- Residential properties can receive a **Rebate** (one time cash back) and/or a **Credit** (recurring fee reduction)
- Nonresidential and multi-family properties can receive a **Credit** (up to 60% max).
- Manual, Application and Forms online
- Properties that already have an eligible stormwater management practice (SMP) in place, can apply for a credit



Permeable Pavers



Green Roof



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



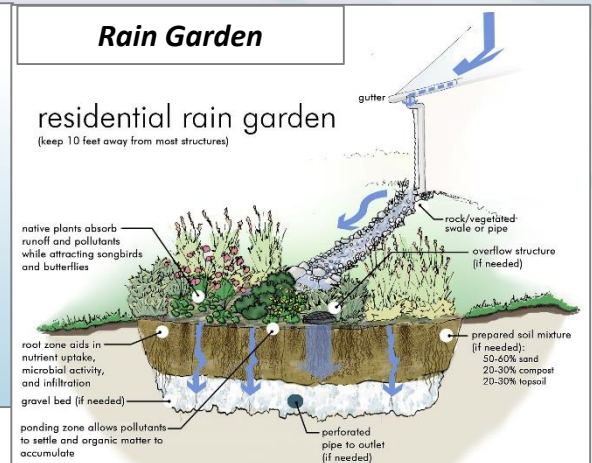
Tree planting



Rain Barrel



Downspout Disconnect



Plus....

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

.....and more



Permeable pavers



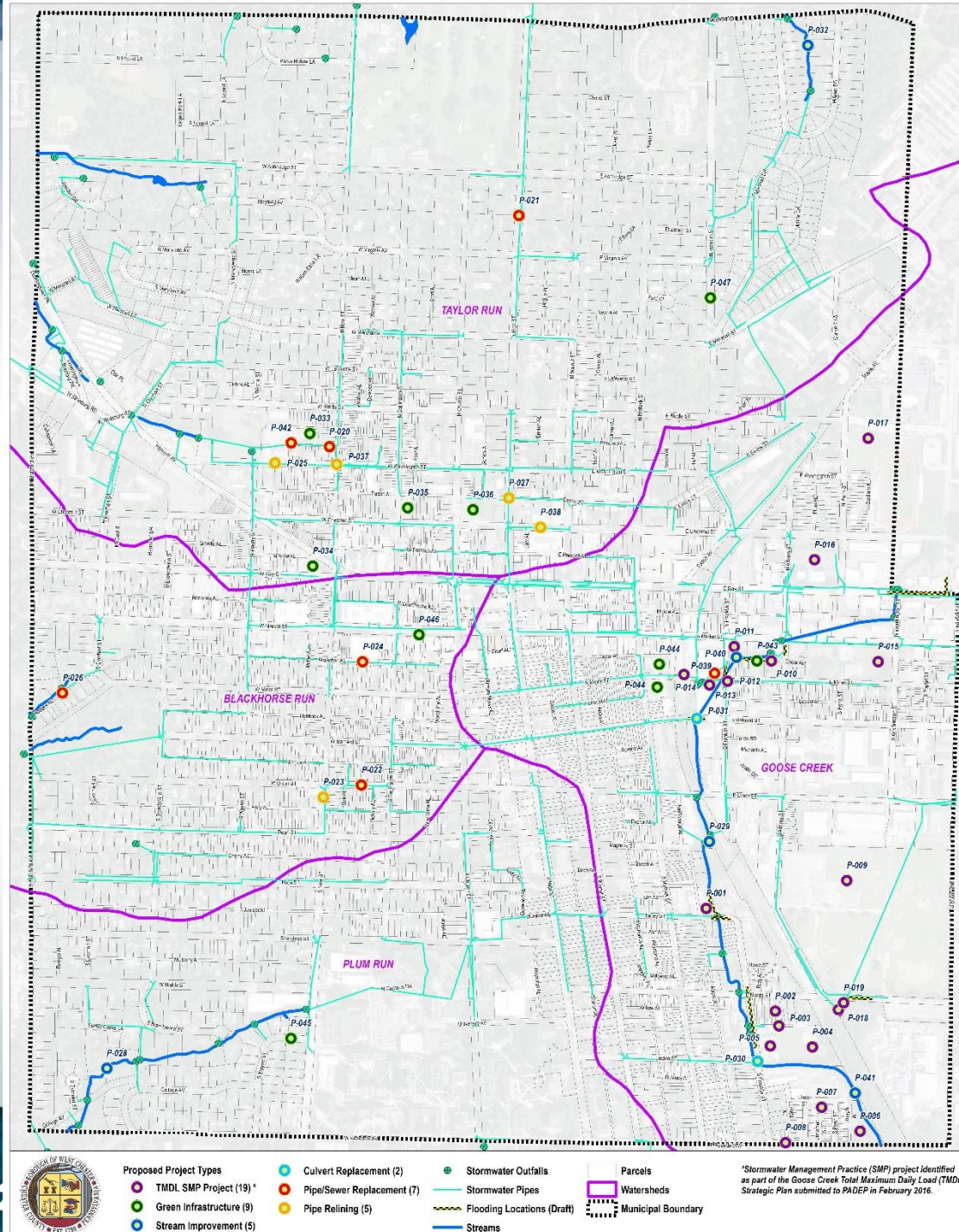
Green Infrastructure



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50 Potential Projects

- Green Infrastructure
- Stream Improvement
- Pipe Relining and Replacements



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Green Infrastructure Demonstration Park at Borough Hall

Henderson High School

Stadium Ave

vegetated curb extension

vegetated curb extension

restripe existing crosswalk

demonstration native plant garden and new trees around playground (non-GI)

capture roof runoff in demonstration rain barrel and use for garden

(potential dog run)

demonstration rain garden

infiltration trench

new tree plantings

new tree plantings

tree trench

rain garden

N Adams ST

N Penn ST

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
92,076	2.1	80%	2,168,000	1,951,200	0.36	6.51	85%	5.54	14%	\$423,000

Fugett Park/Borough Hall: Existing Conditions



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Fugett Park/Borough Hall: Proposed Rain Garden

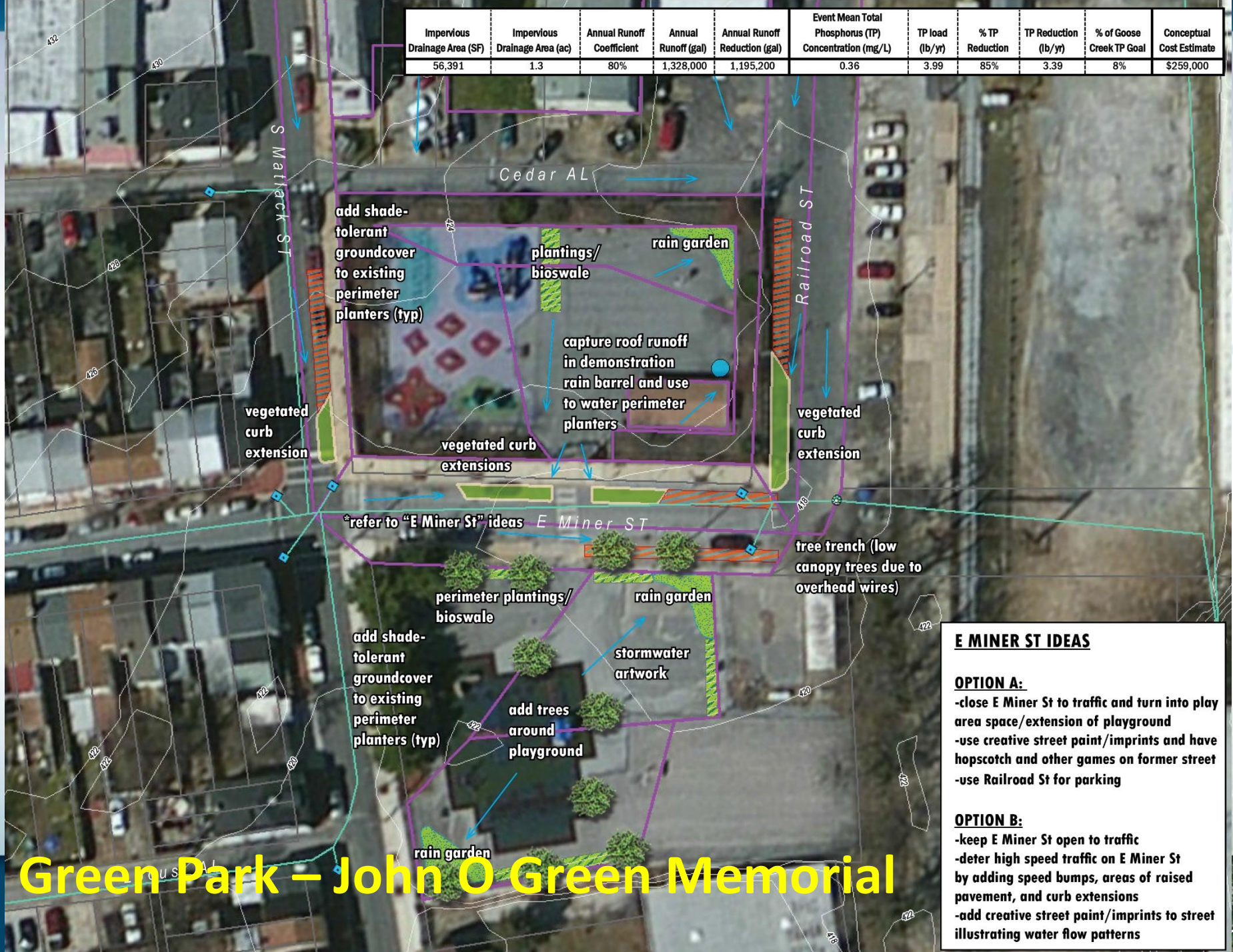


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Google
Earth
Imagery

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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



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Digitized by Google

John O. Green Memorial Park: Proposed Rain Garden



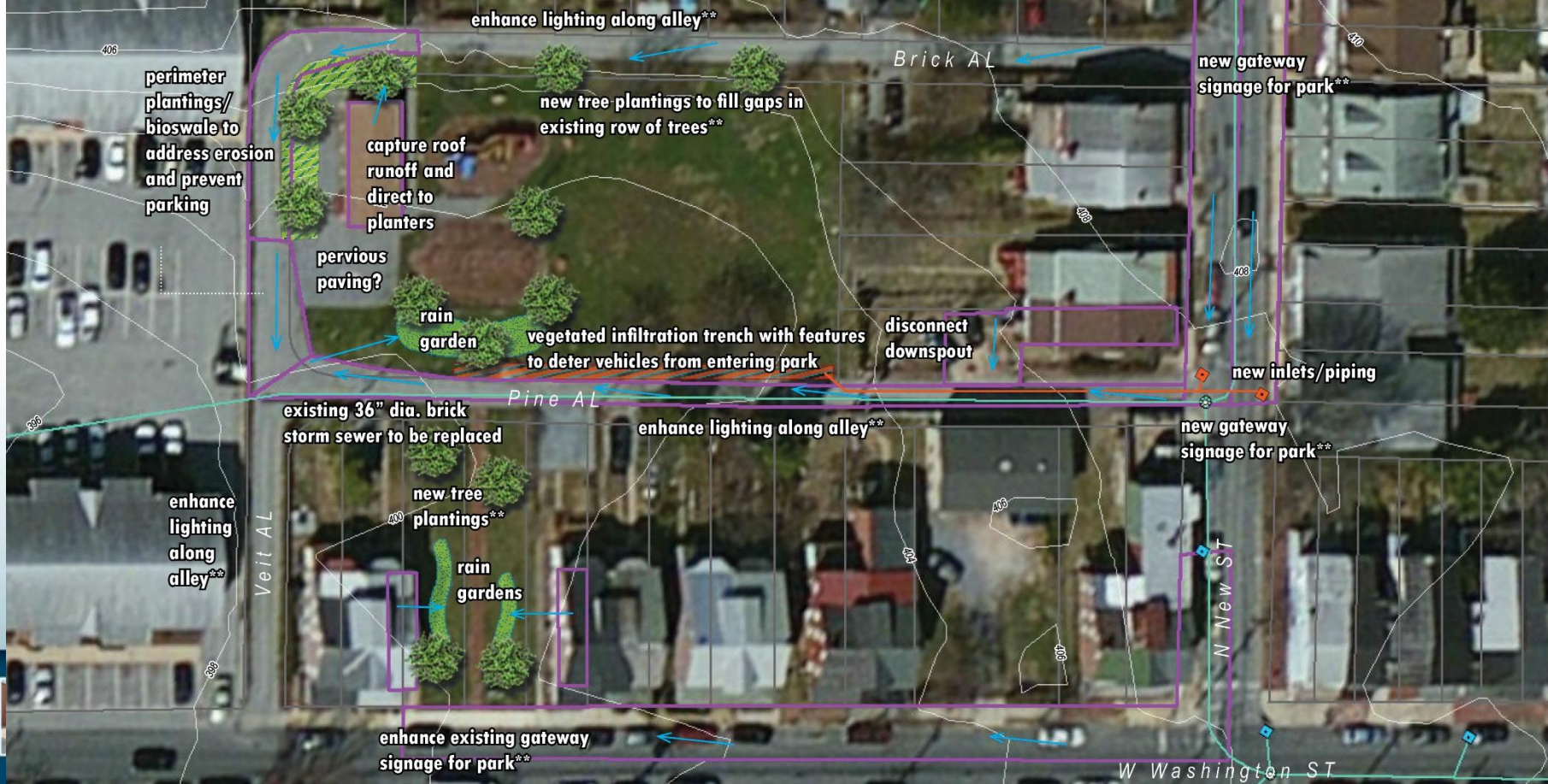
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Earth
Satellite
View
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20,749	0.5	80%	489,000	440,100	0.36	1.47	85%	1.25	N/A	\$95,000

** indicates non-stormwater elements proposed for Park

Green Park at Veteran's Park / Pine Alley



Veterans Park/Pine Alley: Existing Play Area



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Satellite imagery provided by Google Earth.

Veterans Park/Pine Alley: Proposed Features



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Next Steps

- Meetings with stakeholder groups (e.g., BID, Council of Churches, Neighborhood groups, rental community)
- Council committee meetings to discuss GI project development
- Submit grant applications
- Targeting October 2016 for first bills;
 - Annual billing with coupons for quarterly payment



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How can I get involved?

- Get us feedback tonight!
- Contact your Borough Council representatives
- Talk to your neighbors and friends
- Attend Council meetings and ordinance hearings
- Visit <http://www.west-chester.com/187/Stormwater-Management>
 - Frequently Asked Questions (FAQs)
 - Posters on stormwater program
 - Online map showing the impervious area on your property



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Questions or Comments



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