Introduction
DEP & PWD Sign Green City, Clean Waters Agreement
June, 2011
What is a greened acre?

Greened Acre = Impervious Cover Managed x Depth of Water Managed

PHILADELPHIA WATER DEPARTMENT | GREEN CITY, CLEAN WATERS: FIRST 5 YEARS
Sources of Greened Acres

- Stormwater Regulations (Development)
- Incentivized Retrofits (SMIP/GARP)
- Public Retrofits (Green Streets, Parks, Facilities, etc.)
- PWD Renew + Replace Infrastructure

Greened Acres
5 Year Goal:

744

greened acres
5 Year Achievement:

837

greened acres
BOOM! We exceeded our goal.
Active & Completed GSI Projects in Philadelphia

1.5 BILLION GALLONS
in Combined Sewer Overflow reduction volume

6,000 TONS TRASH & DEBRIS
removed from Philadelphia’s waterways through our skimming vessel and on land

1,600+ STORMWATER TOOLS
constructed and in progress

$51 MILLION
Grant funds from public and private sources invested in Philadelphia parks, streets, schools and public housing as a result of leveraged GSI investments

Approximately
306,500 CITIZENS ENGAGED

2985 RAIN CHECK PROJECTS
installed at homes across Philadelphia

8 AWARDS
won in the fields of Government Systems, Water Quality, Planning, Green Building, and Communications

10.3%
Estimated Property Value Gain from Proximity to GSI Investment

430 NEW JOBS & 14% GROWTH
In Greater Philadelphia Green Stormwater Infrastructure Industry

† Source: The Economic Impact of Green City, Clean Waters: The First Five Years
And we’ve changed a lot in five years:

- Philadelphia has a new Mayor.
- PWD has a new Water Commissioner.
- We’ve celebrated our first official vacant lot GSI project.
- We’ve started new programs for our customers like Rain Check and GSI Adoption.
There is a long way to go...

This chart shows new greened acres each year.

So between years 20 and 25, we’ll have to build 3,200 new greened acres. More than 4 times our goal for the first five years.
Program Differences

There are many differences between Green City, Clean Waters and other green stormwater programs.

- Funding
- Staffing
- Jurisdiction & Authority
- Regulatory requirements
- Physical landscape & existing infrastructure
There is still a lot to share & learn.

Planning

Outreach
Green Stormwater Infrastructure

Planning
Scale: manage 35% of the CSO area

10,000 acres
Building GSI in Philadelphia

Green Street Practices: Planter and Bumpouts
Building GSI in Philadelphia

Parcel Practices: Rain Garden
Comprehensive Planning Framework

- Stormwater Regulations (Development)
- Incentivized Retrofits (SMIP/GARP)
- Public Retrofits (Green Streets, Parks, Facilities, etc.)
- PWD Renew + Replace Infrastructure

Greened Acres
Why Comprehensive GSI Planning?

- Scale of program
- Numerous sources of greened acres
- Follows comprehensive implementation on long time horizon – 2036 and beyond
- Budget projections and resource allocation
- Greened acres tracking, reporting and progress benchmarking
- Planning process and structure is adaptable to changing factors
- Proactive vs reactive: other PWD capital alignment, grants, partnerships, development
Planning Structure + Organization

District Planning

Modeled off of the Philadelphia City Planning Commission (PCPC) Districts
Planning Structure + Organization

District Planners

- area experts
- clear point of contact
- address area specific issues
- conduct physical analysis
- guide prioritization

Work with a team of designers, public affairs staff, and partnership specialists.
Public Retrofits Implementation Process

**Planning**
- Existing Conditions Analysis
- Drainage Area Delineation
- Feasibility Analysis
- Alternative Selection
- Final Recommendations

**Packaging**
- Site Selection
- Concept Development
- Implementation Schedule

**Design**
- Survey & Geotech
- Baseplan & Concept 30%
- Substantially Complete 70%
- P.S & E 90%
- Final Design

**Construction**
- Preconstruction
- Submittals
- Final Walk-Thru
- As Builts

**Maintenance**
- Field Based Observations
- Retrofit Design
- Update Standards
Key Planning Tools + Process

Used by internal PWD staff and external consultants

- GIS mapping
- Utility information
- Land use history review
- Site visits
- Data tracking: within GIS and new database creation, PlanIT
Key Resources

GSI Planning Guidelines
GSI Design Process Workflow Packet
GSI Design Requirements & Guidelines
GSI Drawing Requirements Packet
  • OOW GSI CAD Standards
GSI Standard Details
GSI Project Implementation Workflows
Landscape Guidebook

www.phillywatersheds.org/gsi_design_resources
High Level Analysis

Where are the opportunities?
High Level Analysis

Where are the opportunities?

Inventory of “Publicly” Owned Land
High Level Analysis

BREAK DOWN OF “PUBLIC” IMPERVIOUS ACRES IN CSO AREA

- FACILITIES: 1,097 - 11%
- SCHOOLS: 953 - 10%
- CAMPUSES: 513 - 5%
- PARKS: 305 - 3%
- VACANT LAND: 138 - 1.5%
- PARKING: 134 - 1.5%
- STREETS: 6,530 - 68%

9,670 IMPERVIOUS ACRES
High Level Analysis

BREAK DOWN OF “PUBLIC” IMPERVIOUS ACRES IN CSO AREA

<table>
<thead>
<tr>
<th>Category</th>
<th>Acres</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACILITIES</td>
<td>1,097</td>
<td>11%</td>
</tr>
<tr>
<td>SCHOOLS</td>
<td>953</td>
<td>10%</td>
</tr>
<tr>
<td>CAMPUSES</td>
<td>513</td>
<td>5%</td>
</tr>
<tr>
<td>PARKS</td>
<td>305</td>
<td>3%</td>
</tr>
<tr>
<td>VACANT LAND</td>
<td>138</td>
<td>1.5%</td>
</tr>
<tr>
<td>PARKING</td>
<td>134</td>
<td>1.5%</td>
</tr>
<tr>
<td>STREETS</td>
<td>6,530</td>
<td>68%</td>
</tr>
</tbody>
</table>

3,140 IMPERVIOUS ACRES OUTSIDE THE ROW

9,670 IMPERVIOUS ACRES
High Level Analysis

Where can we manage street runoff? (6,530 acres!)

<table>
<thead>
<tr>
<th></th>
<th>Impervious Acres</th>
<th>Total Available Acres</th>
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</thead>
<tbody>
<tr>
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<td>1,480 - 27%</td>
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<tr>
<td>SCHOOLS</td>
<td>953</td>
<td>1,433 - 26%</td>
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<tr>
<td>CAMPUSES</td>
<td>513</td>
<td>731 - 13%</td>
</tr>
<tr>
<td>PARKS</td>
<td>305</td>
<td>1,160 - 21%</td>
</tr>
<tr>
<td>VACANT LAND</td>
<td>138</td>
<td>484 - 9%</td>
</tr>
<tr>
<td>PARKING</td>
<td>134</td>
<td>154 - 3%</td>
</tr>
</tbody>
</table>

3,140  5,444
Planning Goals

Consider Site Context
- Coordinate with other planning initiatives to create holistic projects
- Communicate with partners to align goals
- Consider current and future uses of the space and the relationship to the surrounding area

Maximize Proposed Drainage Area Capture and Water Quality Benefits
- Locate GSI where maximum volume capture can occur
- Consolidate the number of stormwater management practices (SMPs) where possible
- Maximize opportunities for surface practices
- Consider all SMP alternatives

Provide Strategic Planning Recommendations
- Recommend appropriate alternatives for the design phase
- Consider timing of implementation, balancing short-term opportunities with long-term strategies
- Group identified opportunities into proposed project packages that make sense from engineering, construction, and community impact perspectives
- Record site considerations and coordinate with partners when possible
- Balance Philadelphia Water’s objectives with community needs
Planning Process

**Methods for Project ID**
- Study Area Analysis
- Large Area Disconnection Analysis
- Capital Alignment

**Planning Process**
- Existing Conditions Analysis
- Drainage Area Delineation
- Feasibility Analysis
- Alternative Selection
- Final Recommendations

**Recommended Projects**
Large Area Disconnection

Large Area Disconnection (LAD) analysis is performed when there are open space areas that appear to provide the opportunity to manage runoff from areas beyond those immediately adjacent to the site.

Process for LAD

- Drainage Area Analysis
- Potential Pipe Runs
- Cost Analysis
- Final Recommendations
Capital Alignment

Capital Alignment seeks to integrate GSI into every city capital investment where feasible and cost-effective:

**Capital Budget Procedure:** Engage city agencies during capital planning to identify and prioritize GSI opportunities

- Streets, Parks, Commerce, Health, Fire, Prisons, Police, Free Library, Art Museum

**Partner Agency Coordination:** Discuss capital project priorities, design of partnership projects and grant fund opportunities.

- Parks and Recreation Stormwater Review Team
- Green Streets Committee
- Philadelphia Planning Commission 2035 District Planning Process
- School District of Philadelphia coordination
Study Areas

Goal: Provide a baseline analysis for the entire CSS area

Standard scope of work
Create GIS layers for future analysis and use
Develop data table for tracking in PlanIT
Kensington

Study Area Boundary

Total Area: 450 acres

Mix of Landuses:

- Parks
- City Owned Facilities
- City Owned Vacant
- School Properties
- Residential
- Commercial
Impervious Cover

- Total Area: 450 acres
- Pervious: 100 acres

Total Impervious Area:
- 350 acres (78%)
  - 140 acres ROW
  - 50 acres ground
  - 160 acres roof top

Area Goal:
150 greened acres
Opportunities for Public GSI

ROW Already Managed

8 acres of ROW drainage area is already being managed by street SMPs
Opportunities for Public GSI

- **ROW Already Managed**

- **Recommended Street Projects**

40 acres can be managed following standard GSI design guidelines.
Opportunities for Public GSI

- **ROW Already Managed**
- **Recommended Street Projects**
- **City Owned Parks**
- **12 Acres** of drainage can be managed on Park Sites

4 of these acres could be managed in the ROW but would be more cost effectively managed on the parks.
Opportunities for Public GSI
- ROW Already Managed
- Recommended Street Projects
- City Owned Parks

Opportunities for Private GSI
- REGS

2 Acres Already Managed by Private Development
Opportunities for Public GSI
- ROW Already Managed
- Recommended Street Projects
- City Owned Parks

Opportunities for Private GSI
- REGS
- SMIP/GARP
- Future Development
Planning Process

Methods for Project ID

- Study Area Analysis
- Large Area Disconnection Analysis
- Capital Alignment

Planning Process

- Existing Conditions Analysis
- Drainage Area Delineation
- Feasibility Analysis
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Recommended Projects
## Project Implementation Process

<table>
<thead>
<tr>
<th>Planning</th>
<th>Packaging</th>
<th>Design</th>
<th>Construction</th>
<th>Maintenance</th>
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<tr>
<td>Existing Conditions Analysis</td>
<td>Site Selection</td>
<td>Survey &amp; Geotech</td>
<td>Preconstruction</td>
<td>Field Based Observations</td>
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<td>Drainage Area Delineation</td>
<td>Concept Development</td>
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<td>Submittals</td>
<td>Retrofit Design</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Final Design</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Site Analysis- Duckrey School
Site Analysis- Duckrey School

Tanner G. Duckrey Schoolyard Redevelopment Plan
May 2016

Schoolyard Elements
1. The Front Porch
2. Gateway
3. Turf Play Zone
4. Play Equipment Zone
5. Performance Space
6. Stormwater Rain Garden
7. Outdoor Classroom
8. Asphalt Games
9. Community Entry
10. Pre K and Kinder Play
11. Main Front Entry
12. School/Comm Garden
13. The Hill & Lawn
14. 16th & Susquehanna

Chairs
Priscilla Cohen
Dorit Bates, Duckrey SAC
Lolita Vettors
Trey Hamlin, Community Ventures
Megan Reisch, Temple
Isiah Mathewson, Colson Technologies
Pete Johnson, North Central Alliance League

PHILADELPHIA WATER DEPARTMENT | GREEN CITY, CLEAN WATERS: FIRST 5 YEARS
Site Analysis

General Principles for SMP Selection:

1. Surface features are preferred over sub-surface features.
2. Vegetated features are preferred over non-vegetated features.
3. Tree should be planted in most GSI.

1. Does the drainage area meet the minimum size guidelines for GSI (~ 300 - 1,000 ft, though may vary by location. Drainage areas can be combined to meet these guidelines)

2. Is there sufficient space for an SMP footprint?

3. Does the location of water or sewer infrastructure pose a challenge? (i.e. - multiple residential water service lines, utilities near the curb line running parallel to the side walk, water service line connecting to a restroom in a park site)

4. Have Highway Supervisor Plans and PLW gas plates been referenced to confirm there are no additional utilities present in these locations?

5. Are there mature trees or other constraints (utility poles, lights, etc.) present where the SMP footprint would be located?

6. Is steep topography present? (the SMP footprint should generally fit between two 7-foot topographic contour lines)

7. Make note of any potential programming conflicts that should be verified in the field: (ball fields, playgrounds, gardens, plazas, entrances, etc.)

8. Professional judgment – Does this SMP location make sense?
Packaging Process

“Packaging” is the bundling of multiple SMPs to create a larger grouping of work, similar to combining multiple blocks of water or sewer work into a larger project.

Considerations include:

• **Geographic orientation**
  – Select SMPs in the same general area to create one or more clusters of SMPs
  – Attempt to create linear corridors with repeating SMPs

• **Size and cost of overall project**
  – Attempt to make all packages larger than 2 acres
  – Packages with more than 15 SMPs become unwieldy

• **Type of proposed SMP**
  – Balance the amount of work for various contractor skill sets

• **Timing of implementation**
  – Creating packages where no single SMP ends up holding up the larger package
  – Coordinating schedules on capital alignment projects
Packaging Process

**External Review**
Additional review steps are typically required by projects proposed on property managed by other agencies
- PW/PP&R Stormwater Review Team
Reviews are sometimes needed from Council or community representatives

**Internal Review**
Packages are typically created by the GSI Planning and GSI Design team and reviewed by Planning and Research, GSI Planning and Design Managers, Public Affairs, Capital Alignment, and GSIIP Manager
Planning and Research identify any potential overlap with upcoming water and sewer design
GSIIP holds monthly meeting to review packages and make decisions on project initiation
Example Package

CONCEPT REPORT FOR
GREEN STORMWATER INFRASTRUCTURE PROJECTS
BERKS & SEDGLEY GREENING

ESTIMATED DRAINAGE AREA

Streets
1. (Plan ID: 31344) Ridge Ave from W Dauphin St to midblock N Natrona St and N 32nd St - EPRA Garden 1: 5,430 SF
2. (Plan ID: 31339) Ridge Ave from N Natrona St. to N 32nd St - EPRA Garden 1: 15,470 SF
3. (Plan ID: 31340) N 32nd St from Ridge Ave to W Susquehanna Ave - EPRA Garden 1: 11,520 SF
4. (Plan ID: 31341) N 30th St from W Nears St to W Sedgley Ave - EPRA Garden 2: 81,240 SF
5. (Plan ID: 31342) W Sedgley Ave from Hollywood St to Euclid Ave - EPRA Garden 2: 15,200 SF
6. (Plan ID: 31343) W Berks St from N 33rd St to N Natrona St - EPRA Garden 2: 9,120 SF
7. (Plan ID: 31346) Montgomery Ave from N 31st St to W Sedgley Ave - EPRA Garden 3: 53,600 SF
8. (Plan ID: 31347) Montgomery Ave from N Natrona St to N 32nd St - EPRA Garden 3: 35,480 SF
9. (Plan ID: 31348) Montgomery Ave from N 33rd St to N Natrona St - EPRA Garden 3: 12,650 SF

PACKAGE TOTAL: 239,260 SF (5.49 AC)

Work Number: 50179
Total Package: 5.5 acres
Locations/Sites: 9
Systems: 18
Example Package

For each proposed system in a package a project sheet is created to illustrate the intended drainage area to be captured and the available space for management. When applicable recommendations may be made for the type of SMP to install at a location. This report serves as the initial basis of design for development of the scope of work for the selected design team.
Completed City-Wide GSI Projects

141 Public Projects

111 GREEN STREETS

Queen Lane: Green Streets emphasize the capture of stormwater runoff from public right-of-ways, such as streets. Various green stormwater infrastructure practices can be employed, such as stormwater tree trenches, planters, and bump-outs, or pervious pavement.

20 PARKS & OPEN SPACES

Citizen Park: Draining the nearby highly impervious areas to the open spaces enhances the visual appearance and the amenities at parks. In addition to managing stormwater runoff, parks and recreation centers provide excellent opportunities to implement highly visible demonstration projects.

11 GREEN SCHOOLS*

George W. Neiburger: Schools are important neighborhood anchors and therefore offer excellent opportunities to educate the local community about green stormwater infrastructure. Other green schoolyards are being implemented through our private incentive programs.*Including stormwater incentive grant projects.

3 CITY FACILITIES

Edmond Street Parking Lot: Riot control and redesign of existing parking lots presents an opportunity to reduce stormwater runoff while also improving the visual appearance within communities. For example, vegetated strips and swales, rain gardens, infiltration beds and trenches, and pervious pavements can be used to manage stormwater.

Other completed GSI Projects

266 Regulated Development Projects

38 Stormwater Incentive Grant Projects

Sample of Stormwater Tools

- Stormwater Planters
- Stormwater Tree Trench
- Stormwater Bumps
- Rain Gardens
- Swales
- Pervious Pavements

PHILADELPHIA WATER DEPARTMENT | GREEN CITY, CLEAN WATERS: FIRST 5 YEARS
Looking Ahead

Access to property

Timeline coordination

Increase city agency and partner coordination
- Philadelphia Parks & Recreation ReBuild program
- School District of Philadelphia and other schools

Increase incentive utilization
- Create phased approach to SMIP and GARP applications
- Piloting a green streets “buy-back” program
- Exploring use of creative funding streams

Design Constraints
Green Stormwater Infrastructure

Outreach
Determining Outreach Goals

Look to Federal and State requirements.
- Drinking water information
- General Watershed education
- Not specific

Look at urban planning outreach theory.
- Ex: Sherry Arnstein’s Ladder of participation
- How does this relate to mandatory infrastructure investments?

Look to Philadelphia citizens.
- Increased use of social media and increased communication expectations
- Want advanced notice, input and connection to resources to take action.
Outreach Overview

PWD provides a two-pronged approach towards Green City, Clean Waters outreach.

1. **GSI Notification Process**
   - Formal process for notifying communities about each GSI project
   - Primary goal is to inform

2. **GSI Wraparound Programming**
   - Programs and tools that reach a broader audience
   - Primary goal is to inspire and help people take action
GSI Notification Process

**Planning**
- Notify community representatives
- Attend or host community meetings
- Solicit feedback on how space is used (depending on project type)

**Design**
- Notify community representatives
- Attend or host community meetings
- Deploy environmental educators at local schools

**Construction**
- Send letters to residents, City Council and community representatives
- Attend or host community meetings
- Make automated calls to residents

**Post Construction**
- Plan ribbon cuttings
- Engage communities in Soak it Up Adoption
- Continue education and partnership

**Goals**
1. Inform
2. Cultivate understanding
3. Address major concerns
4. Provide resources for people inspired to take action.
Tales from the field
case studies in community outreach for green infrastructure projects

The success of Green City, Clean Waters and the sustainability of our investments hinge on the support of our communities.

Prior to 2014, PWD used a different process for each type of GSI project.

- Different and varied steps for various types of projects.
- Less formal collaboration between outreach, planning and engineering staff.
- Emphasis on project type vs. location/neighborhood

In 2014, PWD introduced the first iteration of our GSI Outreach Notification Process.

- Standard timeline applied across all project types.
- Clear responsibilities for project staff
- Implemented lessons learned from previous three years
Kemble Park
Green Stormwater Infrastructure Features

Note: This is a drawing meant to illustrate the general size and location of stormwater management features in the park.
Kemble Park – Outreach Overview

- Phase II of a larger project initiated in 2013.

- Outreach for this initial project was completed by a local nonprofit partner in 2012-2013.

- Predated Stormwater Review Team and PWD notification model

- Project at Kemble Park built on the lessons learned in phase I to help construct the largest stormwater basins in Philadelphia to date.
Kemble Park – Outreach Overview

- Initial Community Outreach
- Outreach Letters Distributed & School Partnerships
- Project Bid
- 90% Designs Completed
- Construction Letters Sent
- Community Meeting
- Construction Starts
- In-depth Outreach
- Construction Pauses
- 2nd Community Meeting
- Construction Resumes
Kemble Park

- Community unprepared for the impact of construction
- Lack of awareness about the project.
- Community programming interrupted.
- Limited contacts within the community to address concerns
- Lack of coordination between PWD units on upcoming projects.
Kemble Park – Post Construction
Kemble Park – Post Construction
Baker Playground & Heston Lot

1. Rain Garden
2. Stormwater Trench (Underground)
Heston Lot & Baker Playground

Planning
- Attended local community meeting to present project – November 2013
- Communicated regularly with City Council Staff and Dept. of Public Property and Parks Dept. Staff

Design
- Provided 30% design update at local community meeting – June 2014
- Provided 90% design update at local community meeting – May 2015
- Volunteered at community clean-up day onsite at Heston Lot – May 2015

Construction
- Attended community meeting to explain contract bidding process – June 2015
- Construction letters sent – Late Summer 2015
- Notification Phone calls & Groundbreaking – October 2015

Post Construction
- Mural Installed – Summer 2016
- Ribbon Cutting Celebration – October 2016
- Continue education and partnership – Ongoing
Heston Lot & Baker Playground

- Early Coordination between the community and City partners yielded new opportunities
- Challenges of building on a vacant lot
- Addressing community needs vs. project outreach
Heston Lot & Baker Playground
Heston Lot & Baker Playground
Lessons Learned

1. Make it Local
   Philadelphia is a city of neighborhoods. Politics and planning happen at a block level.

2. Find the Right Audience
   They may live in the neighborhood, but do they use the park? The right stakeholder feedback can help avoid design mistakes.

3. Take Advantage of Existing Resources
   Some of our most successful engagement opportunities have come from existing community meetings and events.

4. Make it Their Own
   There are only so many ways to customize the design of a tree trench or rain garden.

5. Who’s on First?
   An additional update to the notification process more clearly defined the individual roles of PWD staff throughout the project timeline.
After the Ribbon Cutting
maintaining community partnerships post-construction

Project notification is a linear process

Design  Construction

However, a long-term program like Green City, Clean Waters requires a broader and more flexible approach

Education  Stewardship

Demonstration Projects  Partnership Development
Soak It Up Adoption

• Soak It Up Adoption is a grant funded community maintenance program.

• Grants are available to Philadelphia civic groups and non-profits to help maintain PWD green infrastructure.

Soak It Up, Philly Adoption Activity Chart

Roles & Responsibilities

<table>
<thead>
<tr>
<th>Green Stormwater Infrastructure Care and Maintenance Activity</th>
<th>PWD / Contractor Activity (only during scheduled maintenance visits)</th>
<th>Adoptee Activity</th>
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<tbody>
<tr>
<td>Remove trash and debris</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Monitor plant health and water during extended periods of dry weather</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Check for Erosion</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Maintain and Repair site infrastructure (i.e., inside the stormwater planter)</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Add soil, fertilizer, or other growing medium</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Install or remove vegetation</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Look for structural damage to the facility</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Repair structural damage to the facility</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Monitor water ponding in the facility for more than 72 hours following major rain storms</td>
<td>✓</td>
<td>✓</td>
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</tbody>
</table>
Soak It Up Adoption
2014-2015 Summary

14 Adoption Partners
- Representing communities throughout Philadelphia
- Civic groups, CDCs and Urban Gardeners

139 SMPs Adopted
- Inclusive of all types of GSI in use by PWD

6800.25 lbs of Waste Removed!
- Approximately 346 bags of trash
- Includes 50 tires (~20lbs each)
Rain Check – Residential Program

Cost Share

Rain Garden

Masonry
(De-paving & Porous Paving)

Downspout Planter

Free Rain Barrels!

Over 4,000 barrels distributed since 2006!
# Rain Check Installations

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<th>Service</th>
<th>Count</th>
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<tr>
<td>Depaving</td>
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<tr>
<td>Rain Gardens</td>
<td>37</td>
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<tr>
<td>Permeable Paving</td>
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<tr>
<td>Downspout Planters</td>
<td>183</td>
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<tr>
<td>Rain Barrels</td>
<td>2,730</td>
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<tr>
<td><strong>Total Residential Installations</strong></td>
<td><strong>3,035</strong></td>
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Keep It Clean!
Philadelphia Water’s Storm Drain Marking Program

- There are 75,000 storm drains in Philadelphia
- Serve as placemakers that highlight our city’s seven unique watersheds
- Free supplies are available for any community event.

Learn more by visiting: www.phillywatersheds.org/inletmarkers
New for 2017- Storm Drain Marking App!
Stormwater Art
Stormwater Art
THANK YOU!

We Are Green City Clean Waters
We Are Wissahickon Creek Champions!

We Are Creating A Greener Future For Philly.