



# Community-Driven Geodesign Process in Philadelphia



**EPA Urban Waters Small Grant 2014-16**

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**Center for Sustainable Communities | Temple University**  
**May 12, 2015**



# Project Purpose

- **Planning project**
- **Framework for creating a Green Stormwater Infrastructure (GSI) plan through a participatory Geodesign process**
- **Application of the framework – two watersheds**
- **Dual purpose: Green stormwater infrastructure & recreational amenities**
- **Develop conceptual site plans based on community-driven design charrettes**



# **Presentation Outline**

- **Framework for participatory Geodesign process**
- **Formation of project and site partners**
- **Application of the framework**
- **Lessons learned**
- **Next steps**



# **Geodesign Framework**

- **Geodesign**

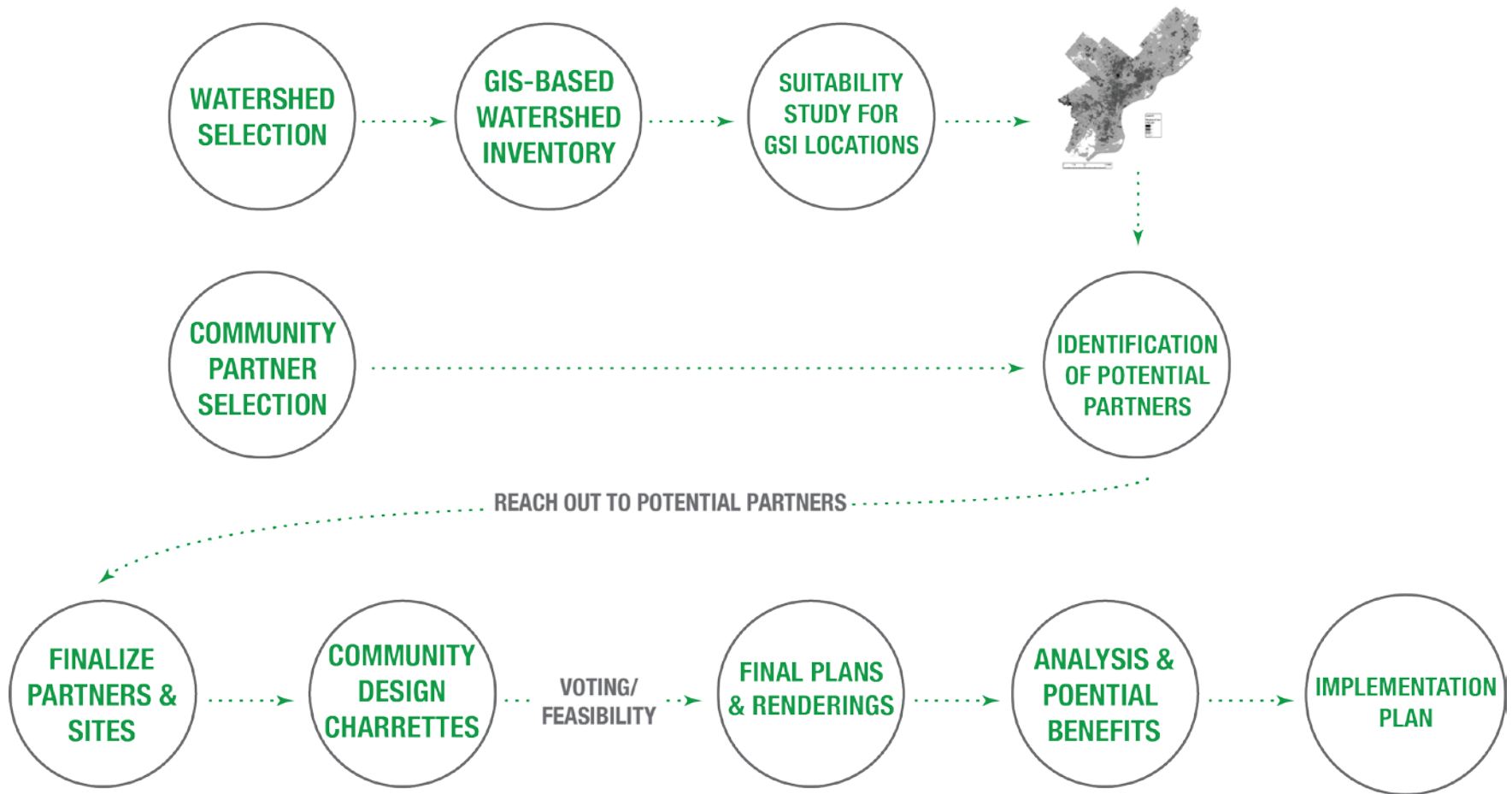
- ✓ **Intersection of GIS analysis, place-based social analysis, and environmental design**
- ✓ **Informed by expertise from the “people of the place” and a variety of professionals (i.e., geologists, urban planners, ecologists, engineers, landscape architects)**
- ✓ **Tools used: GIS, statistics, qualitative data analysis, environmental visualizations, and communication models**

- **Public-participatory Geodesign process**





# Geodesign Framework



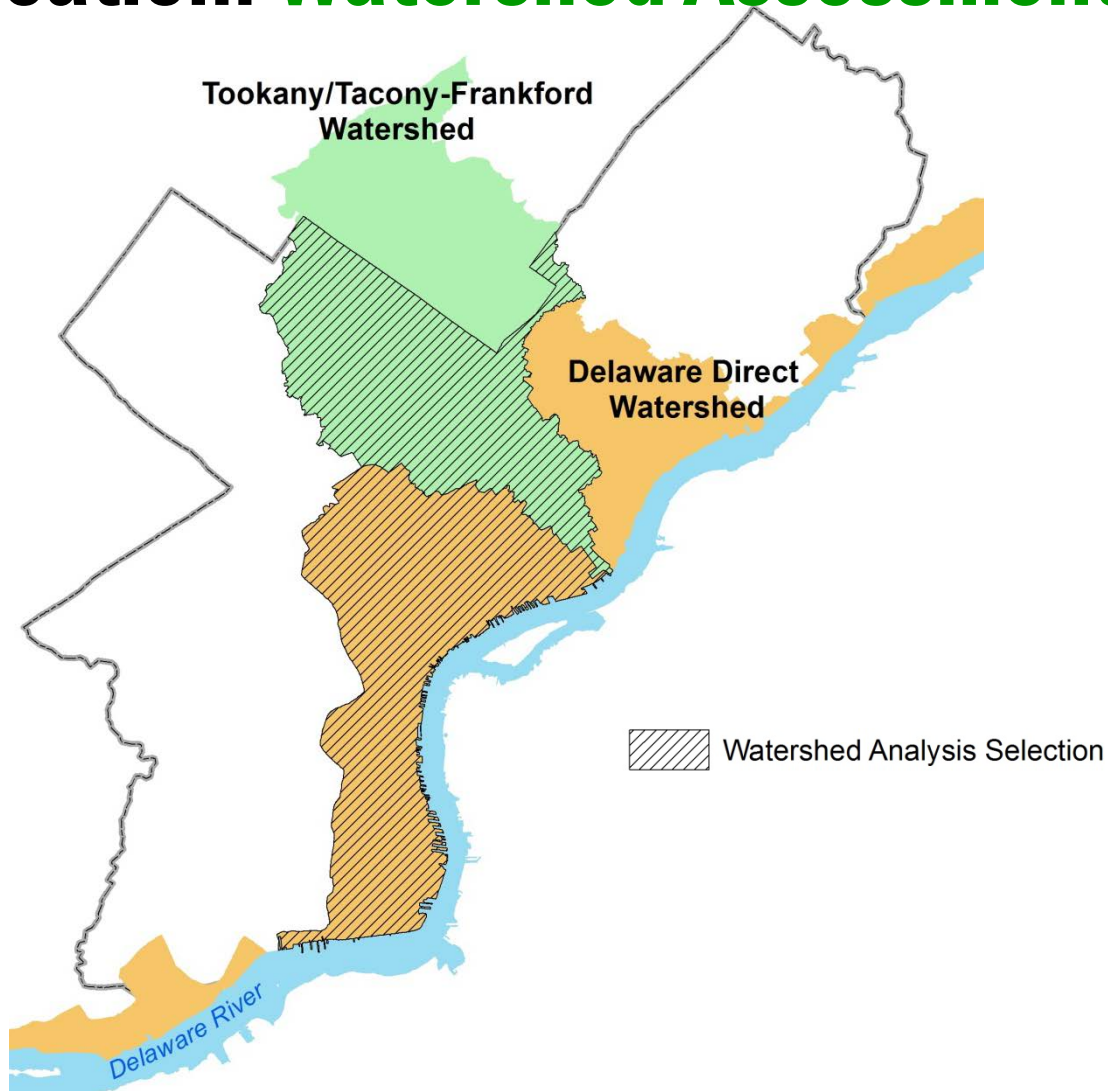


# Application: **Watershed Selection**

- **Watersheds**
  - **Delaware Direct**
  - **Tookany/Tacony-Frankford**
- **Lower-income communities**
- **Community partners**



# Application: Watershed Assessment



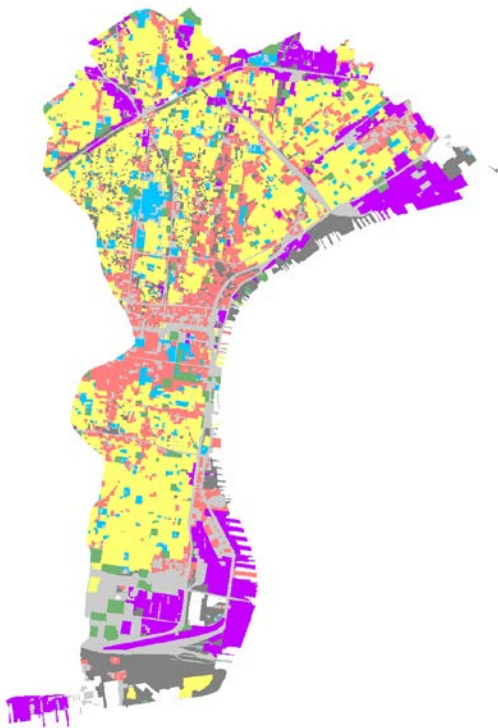




# Application: Watershed Assessment

Delaware Direct (portion)

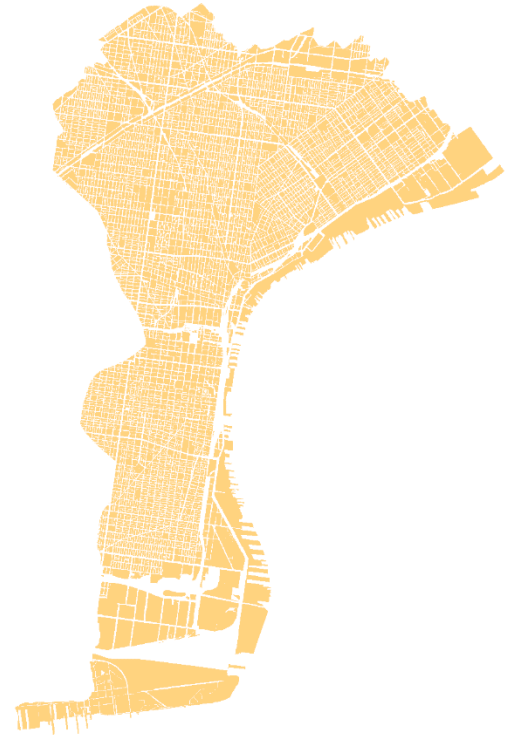
**Land Use**



**Slope**



**Impervious**

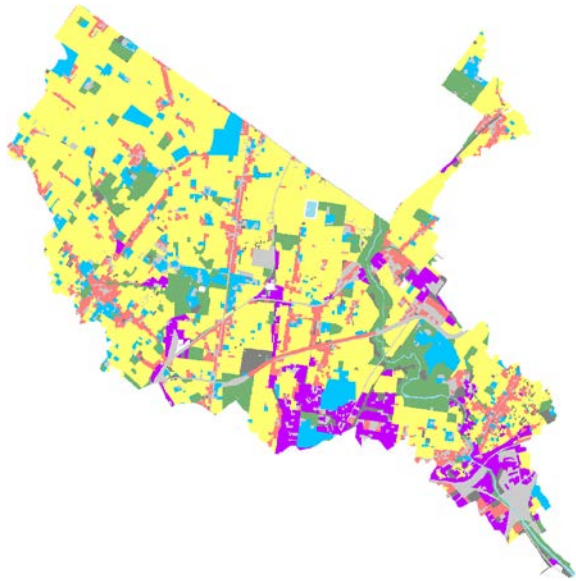




# Application: Watershed Assessment

Tookany/Tacony-Frankford

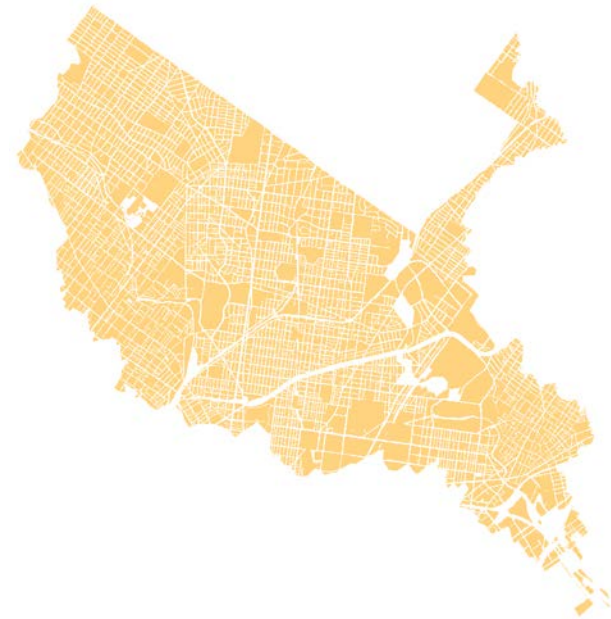
**Land Use**



**Slope**



**Impervious**







# Application: **Community Partners**



**Tookany/Tacony-Frankford**  
Watershed Partnership, Inc.





# Application: Suitability Study

## Built and Natural Environment Analysis

Criteria	Weight
Away from existing GSI	28%
On impervious surface	16%
Density of CSO Inlets	18%
Soil type-runoff intensity	18%
Closer to historic streams	10%
On low elevation	10%
	100%

## Social Environment Analysis

Criteria	Weight
Within disadvantaged areas	70%
Within areas with high % youth population	30%
	100%



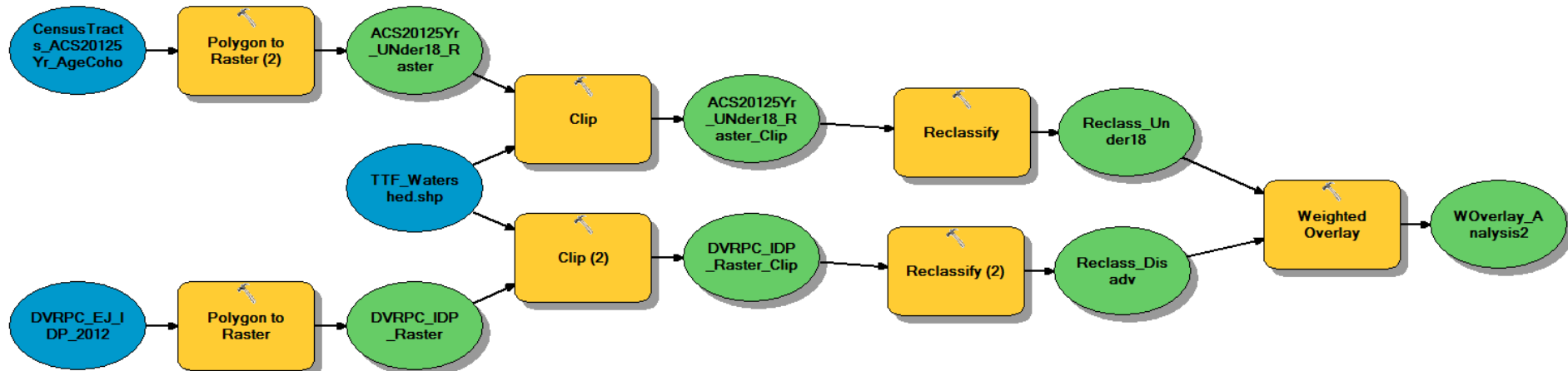
# Application: Suitability Study

Data Layer	Data Source	Data Creation Date
Green Stormwater Infrastructure Projects	PWD	3/25/2014
Impervious Cover	Office of Innovation and Technology, City of Philadelphia	4/23/2004
Philadelphia CSO Inlets	PWD	2013
Soil Type	US Dept. of Agriculture	2009
Historic Hydro Lines	PWD	2010
Elevation	U.S. Geologic Survey	2008
DVRPC Disadvantaged Indicators	DVRPC	2012
Youth Population	U.S. Census Bureau	2014
Parcel Boundaries	PWD	2014
TTF Watershed/Delaware Direct	PWD	3/27/2014



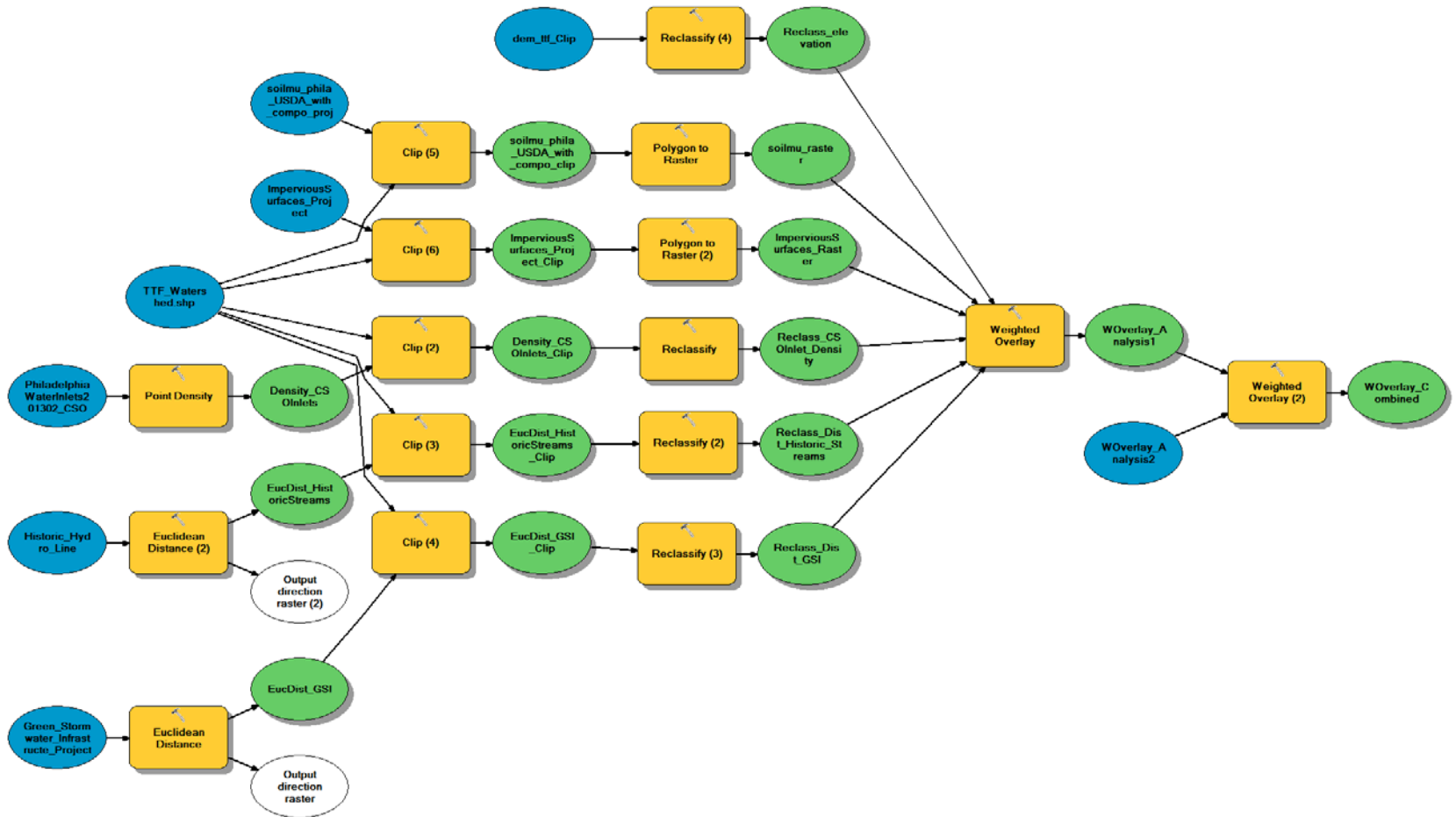


# Application: Suitability Study





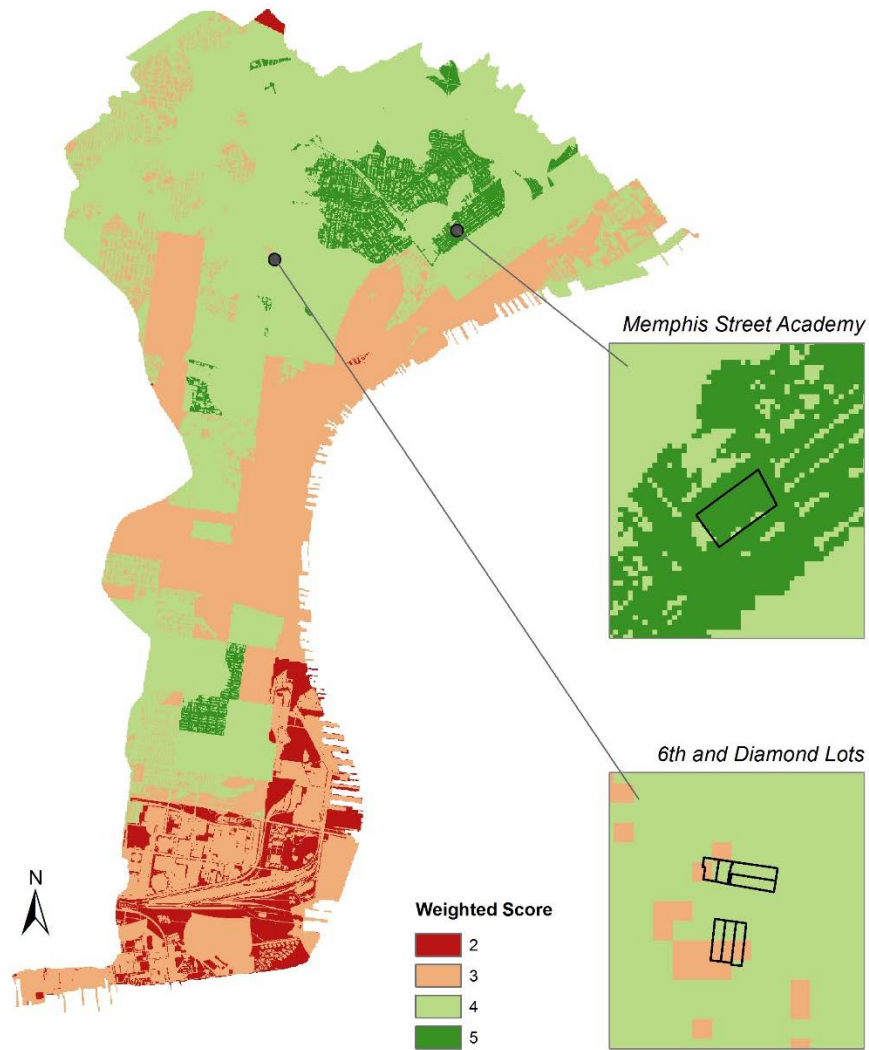
# Application: Suitability Study





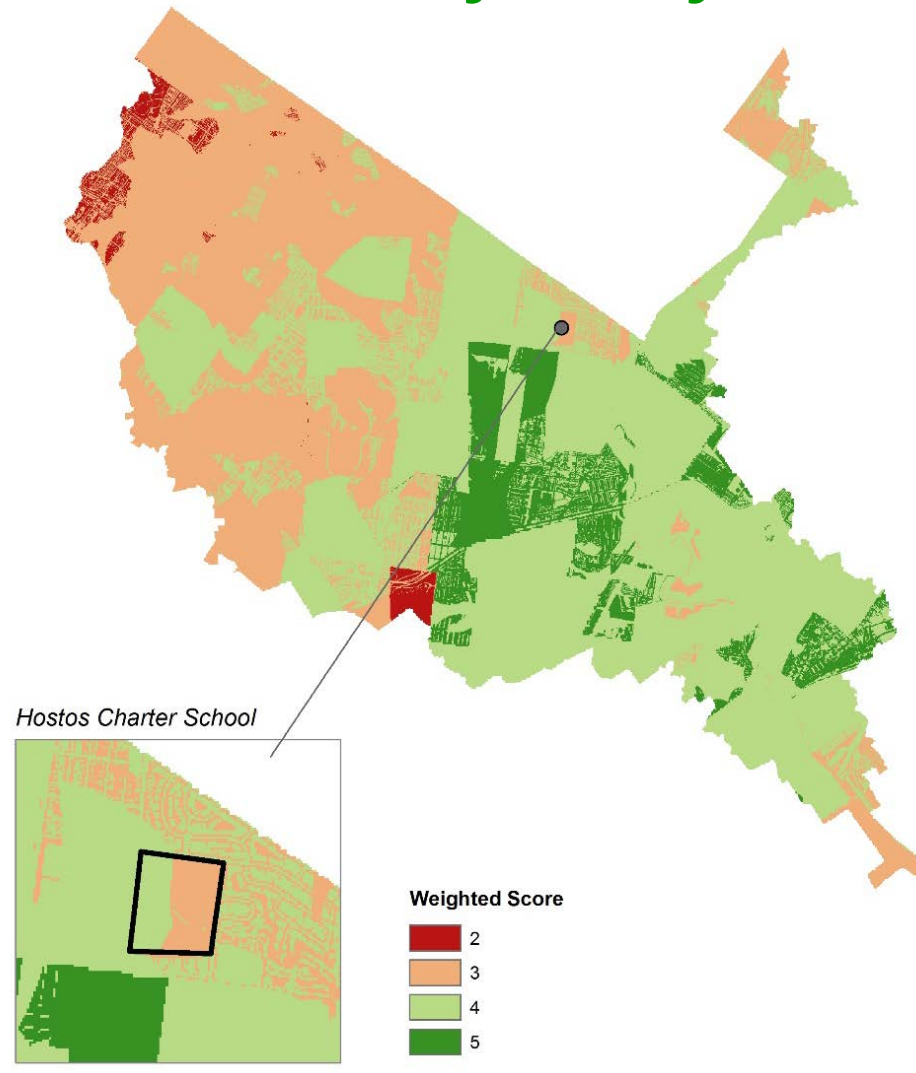


# Application: Suitability Study





# Application: Suitability Study



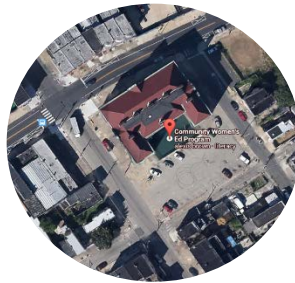


# Application: **Site Partners**

**APM**



**NKCDC**



**TTF**







# Application: Design Charrette

## PUBLIC DESIGN CHARETTE

**Come discuss your vision for the lots at 6th and Diamond Streets!**

**Design green stormwater infrastructure improvements and recreational facilities!**

**RSVP Required by February 15, 2015**  
Email [antonio.romero@apmphila.org](mailto:antonio.romero@apmphila.org) with your name, organizational affiliations, and residential zip code

To learn more visit:  
[www.phillygreendesign.wordpress.com](http://www.phillygreendesign.wordpress.com)

**March 14, 2015**

**Paseo Verde**  
1950 N. 9th Street  
11:00 AM to 2:00 PM  
Food Will Be Provided



Center for Sustainable Communities  
TEMPLE UNIVERSITY

WE WANT YOUR INPUT:

## ENVISION A PLAN FOR THE HOSTOS CHARTER SCHOOL CAMPUS!

Join us for a public design charrette. Hostos Charter School, Temple University, TTF Watershed Partnership, community stakeholders, teachers, parents and residents will participate in a fun, community-driven design exercise to re-imagine this campus. We will look at ways to increase outdoor learning and play, manage stormwater, create and protect habitat and much more!


Spaces are limited, please **RSVP** to [robin@ttfwatershed.org](mailto:robin@ttfwatershed.org) (215.744.1853) with your name, organizational affiliation (if any) and residential zip code. Food will be provided.

 **April 2, 2015**

 **6 pm to 9 pm**

 **Hostos Charter School**  
6301 North 2nd Street



 Center for Sustainable Communities  
TEMPLE UNIVERSITY



To learn more: [www.phillygreendesign.wordpress.com](http://www.phillygreendesign.wordpress.com)

## MEMPHIS ST. ACADEMY SCHOOLYARD VISIONING PROJECT

**MARCH 26, 2015**

**6:00 PM to 9:00 PM**

**LOCATION: MEMPHIS ST. ACADEMY**  
2950 MEMPHIS ST.

**COME DISCUSS WHAT GREENING & PUBLIC SPACE IMPROVEMENTS YOU WOULD LIKE TO SEE AT THE MEMPHIS STREET ACADEMY SCHOOLYARD**

**RSVP BY FEBRUARY 26, 2015**  
EMAIL [MALLWINE@NKCDC.ORG](mailto:MALLWINE@NKCDC.ORG) WITH YOUR NAME, ORGANIZATIONAL AFFILIATION (IF ANY), & RESIDENTIAL ZIP CODE  
FOOD WILL BE PROVIDED



 Center for Sustainable Communities  
TEMPLE UNIVERSITY

FOR MORE INFORMATION: [PHILLYGREENDSIGN.WORDPRESS.COM](http://PHILLYGREENDSIGN.WORDPRESS.COM)



# Application: **Design Charrette**

- **Community representatives, invited experts, facilitators**
- **Presentation, group design exercise, voting**
- **[phillygreendesign.wordpress.com](http://phillygreendesign.wordpress.com)**



TABLE



BENCH



SIGN



PERVIOUS PAVING



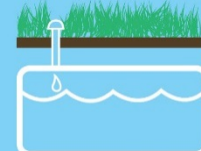
WATER CATCHER



FENCE



TOOL STORAGE



WATER CISTERN





# Application: **Lots at 6<sup>th</sup> & Diamond**







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## Application: **Lots at 6<sup>th</sup> & Diamond**







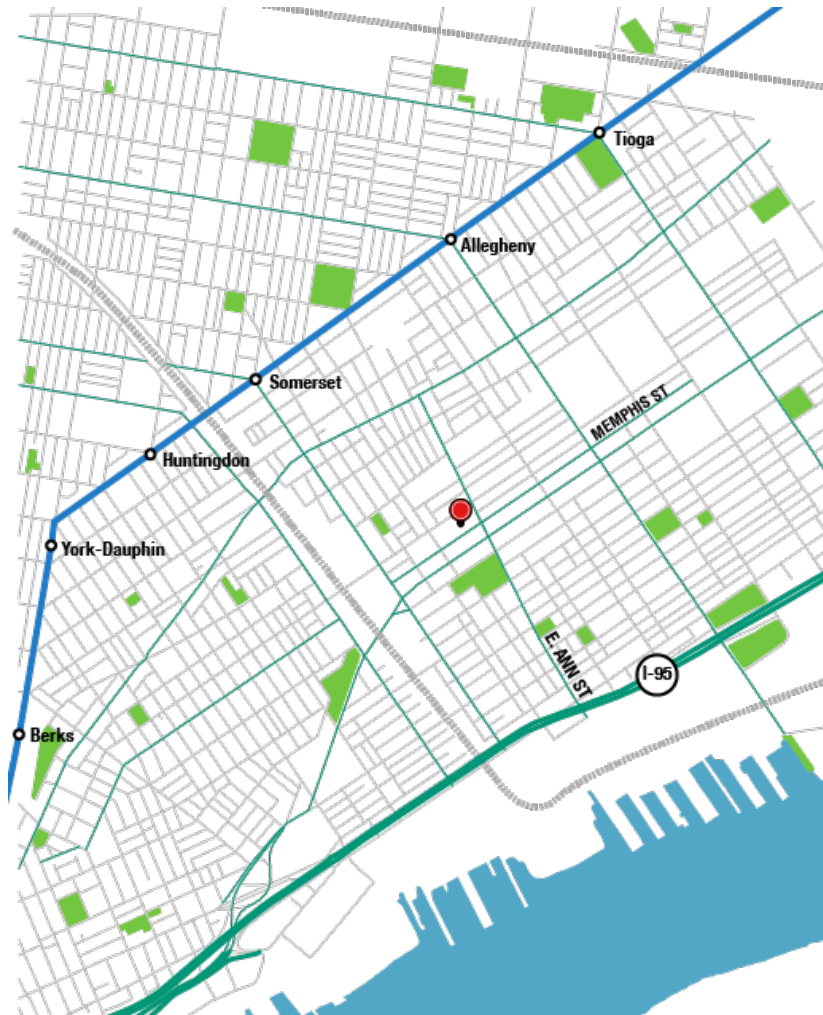
# Application: Lots at 6<sup>th</sup> & Diamond







# Application: **Memphis Street Academy**







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## Application: **Memphis Street Academy**







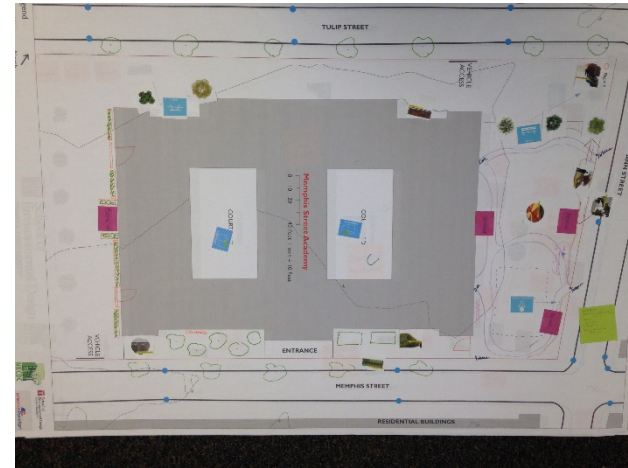
# Application: **Memphis Street Academy**







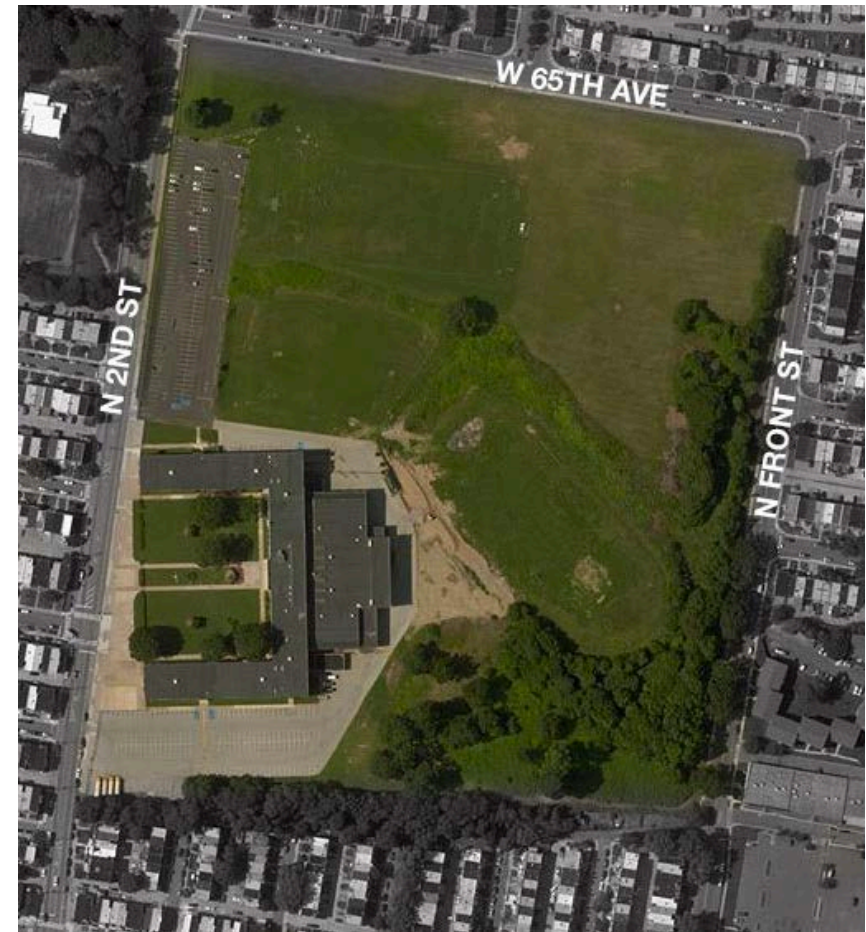
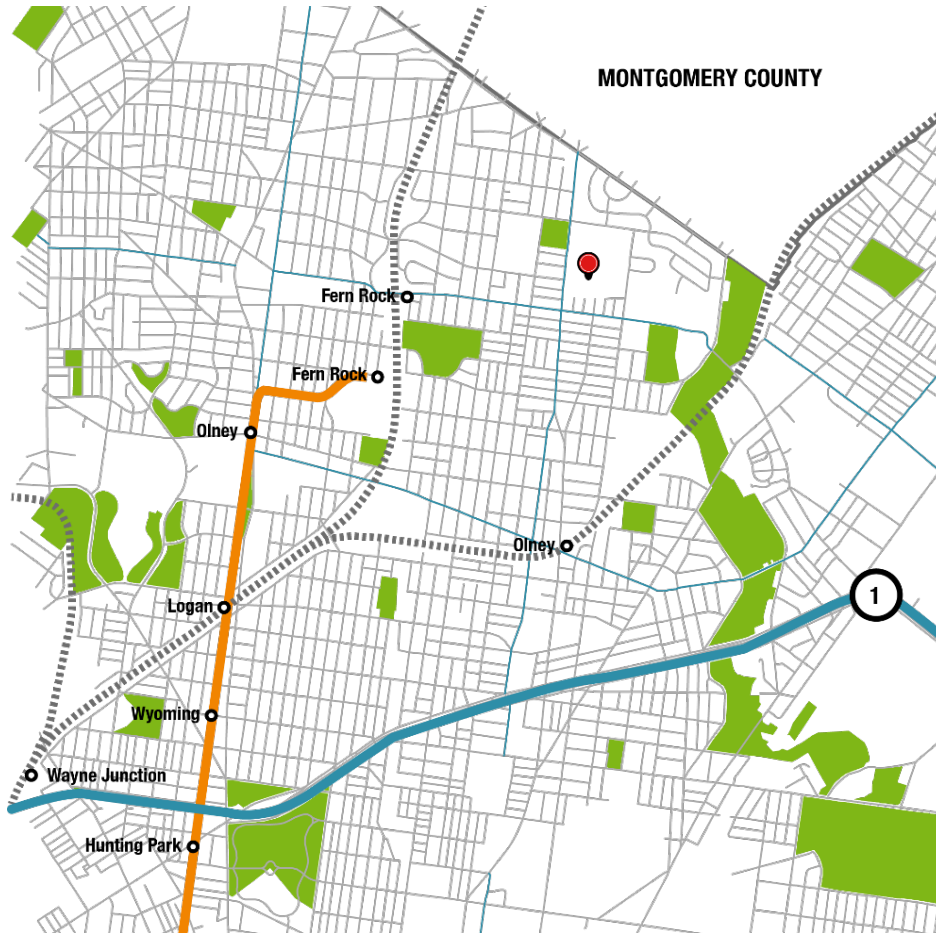
# Application: **Memphis Street Academy**







# Application: Hostos Charter School







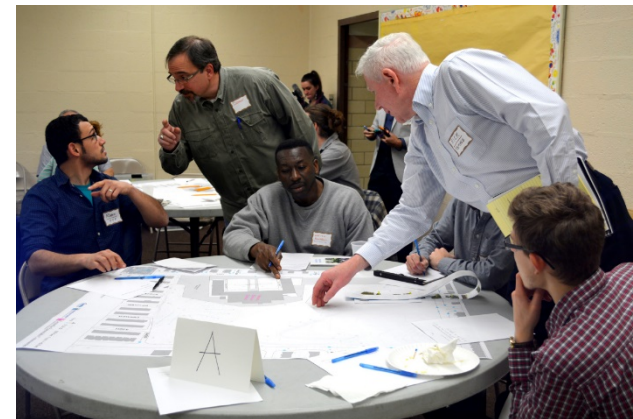
# Application: **Hostos Charter School**







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# Application: Hostos Charter School





# Lessons Learned

- **Partnerships**
- **Design elements unique to sites**
- **Challenges with outreach, participation**



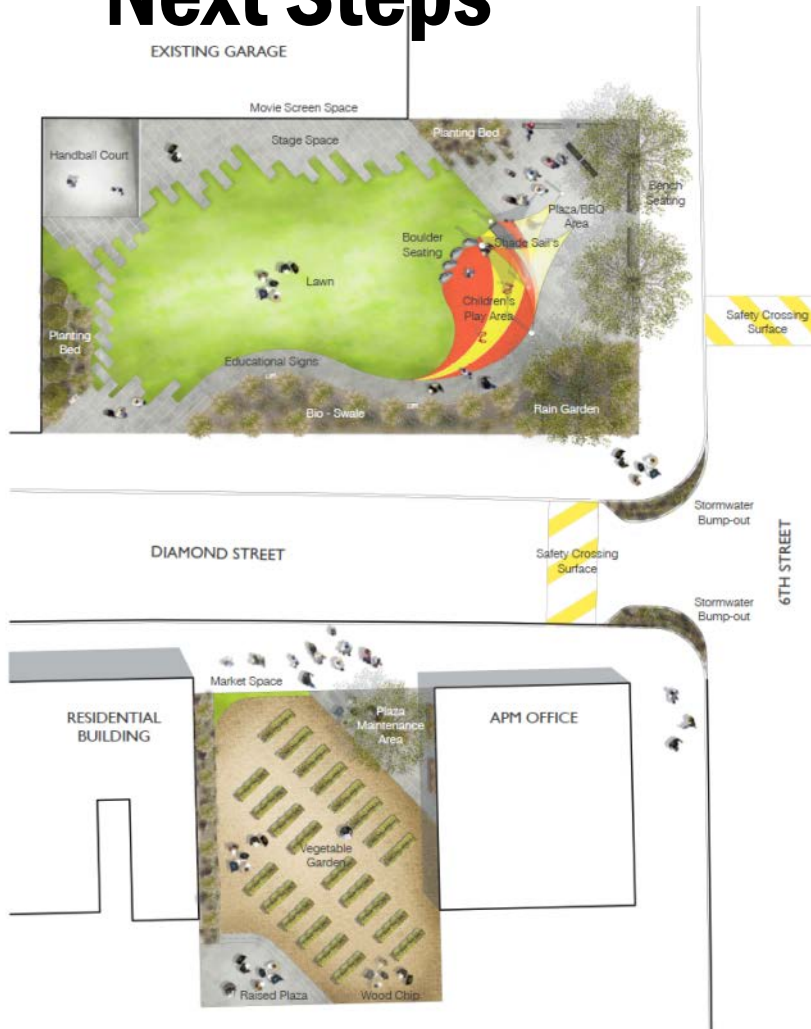


# Next Steps

- **Site plans and renderings**
- **Potential benefits of GSI projects**
- **Potential funding sources**
- **New partnerships**
- **Assistance with RFPs**



# Next Steps







# Next Steps





# Project Web Site

[phillygreendesign.wordpress.com](http://phillygreendesign.wordpress.com)