



CAMDEN, NEW JERSEY

Reinvesting in Urban Water Infrastructure through Combined Sewer Overflow Long Term Control Plans

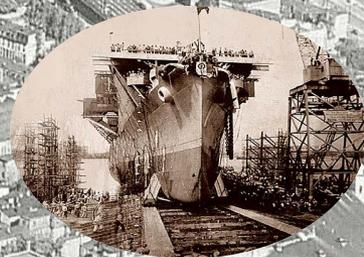


01.08.15

Mayor Dana L. Redd, City of Camden

Meishka L. Mitchell, AICP, PP, Cooper's Ferry Partnership

CAMDEN 1957



CAMDEN: A City of Great Need



CAMDEN: A City on the Rise

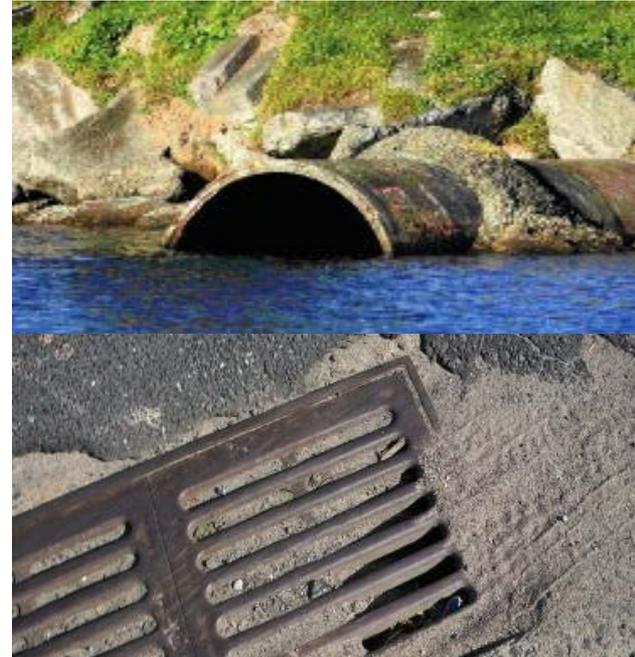


- ❑ Regional Waterfront Destination
- ❑ Multi-Modal Transportation Options
- ❑ Educational & Medical Hub
- ❑ Private Sector Expansion
- ❑ New Approach to Public Safety
- ❑ Growing Neighborhoods
- ❑ Environmental Improvements



Reinvesting In Our Infrastructure

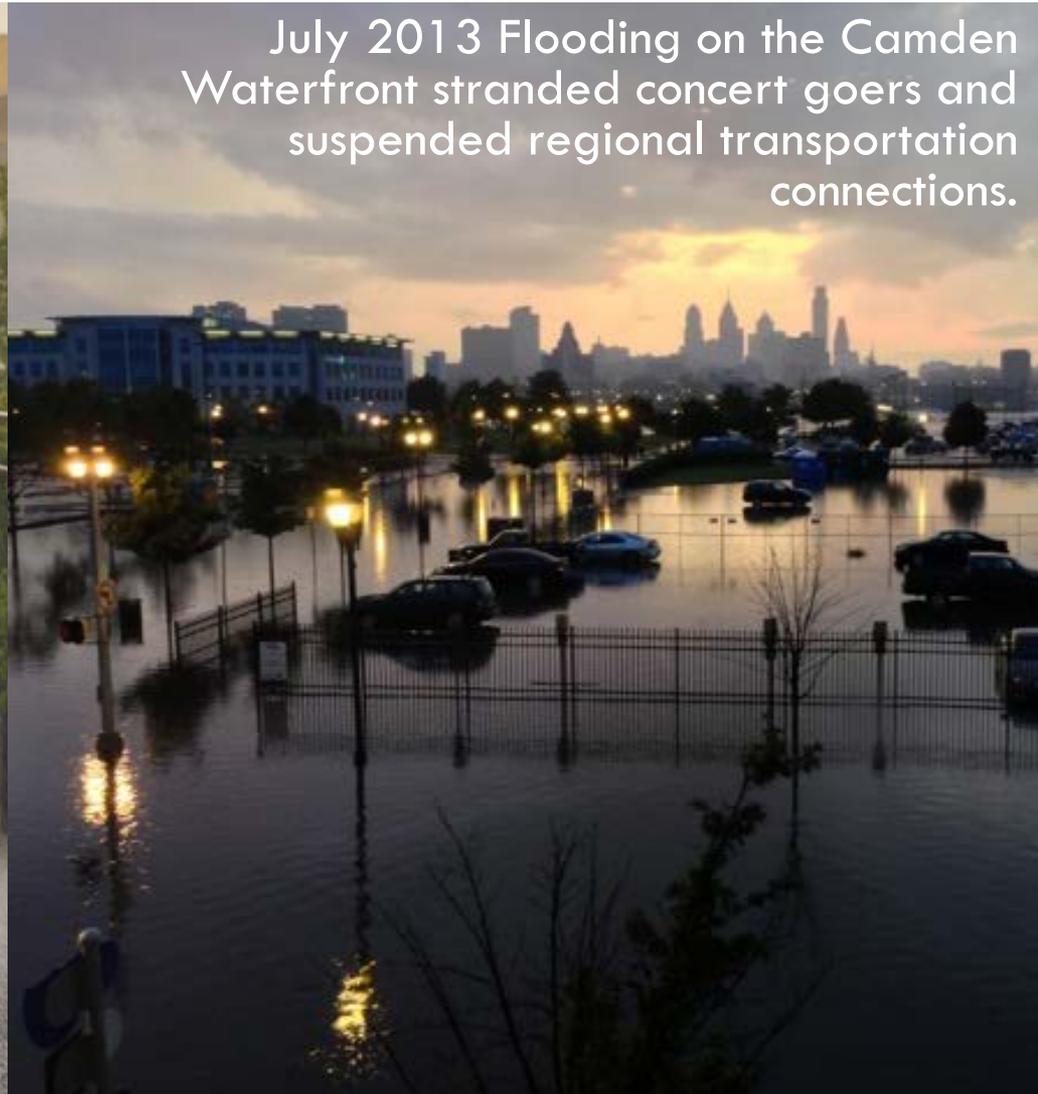
- Infrastructure Investment Critical for Current Residents and New Development
- 100 Year Old Combined Sewer System
 - ~180 miles
- 22 City-owned CSO's
- 1 CCMUA-owned CSO
- Delaware River, Cooper River, Newton Creek



Camden's Struggle With Stormwater



Camden's Struggle With Stormwater



July 2013 Flooding on the Camden Waterfront stranded concert goers and suspended regional transportation connections.

SMART – COLLECTIVE IMPACT



**COMMON
AGENDA**

**SHARED
MEASUREMENT**

**MUTUALLY
REINFORCING
ACTIVITIES**

**CONTINUOUS
COMMUNICATION**

**BACKBONE
SUPPORT**

THE SMART TEAM



City of Camden



Cooper's Ferry Partnership



NJ Department of
Environmental Protection



Rutgers Cooperative Extension
Water Resources Program



Camden County Municipal
Utilities Authority

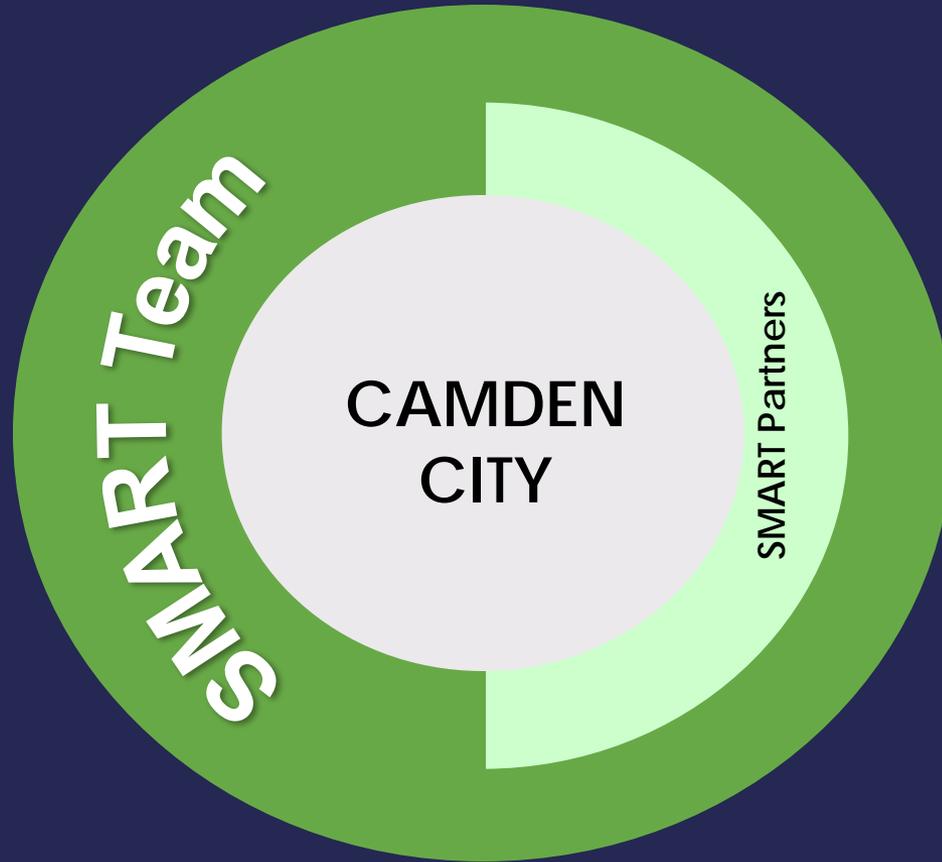


NJ Tree Foundation

The Camden SMART Initiative a community-driven movement to protect human health, improve conditions for economic development, improve water quality, and enhance the quality of life for Camden City, its residents, and the Delaware River watershed through the broad use of green and grey infrastructure techniques for stormwater management.

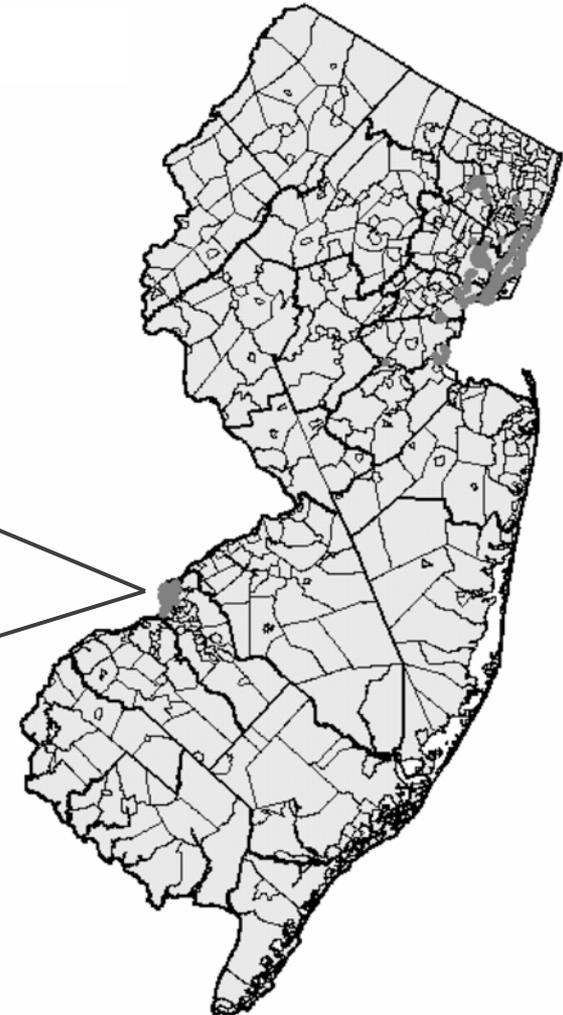
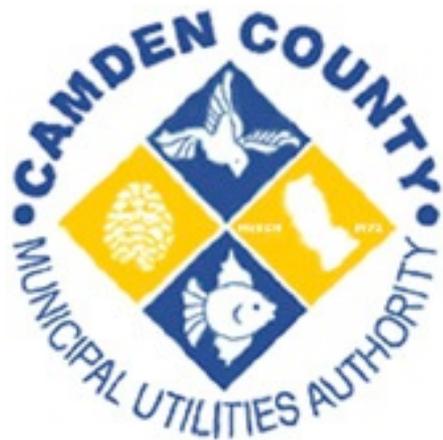
EDUCATE. IMPLEMENT. ENGAGE.

The Camden SMART Initiative



SMART - A Collaboration

Long-Term Control Plan



Infiltration/Inflow Removal

- Mixing a gallon of clean storm water or groundwater with a gallon of sewage results in two gallons of sewage.
- Infiltration of groundwater, or inflow from storm water, through leaky pipe joints, into wastewater increases pumping and treatment costs and increases the risk of flooding.

Optimization of Combined Sewer System Operations

- Maximize combined sewer storage capacity
- Clean stormwater inlets; jet sewer lines
- Minimize potable water loss
- Install solids/floatables control to minimize impact to water quality of receiving streams



- Green Infrastructure
- Neighborhood Beautification
- Key Infrastructure Upgrades
- River Access & Enjoyment
- Economic Development
- Innovative Technology Solutions
- Sustainability
- Brownfield Redevelopment



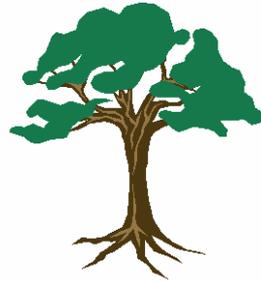
Park Boulevard Rain Garden in Parkside

SMART Accomplishments

2011-2013



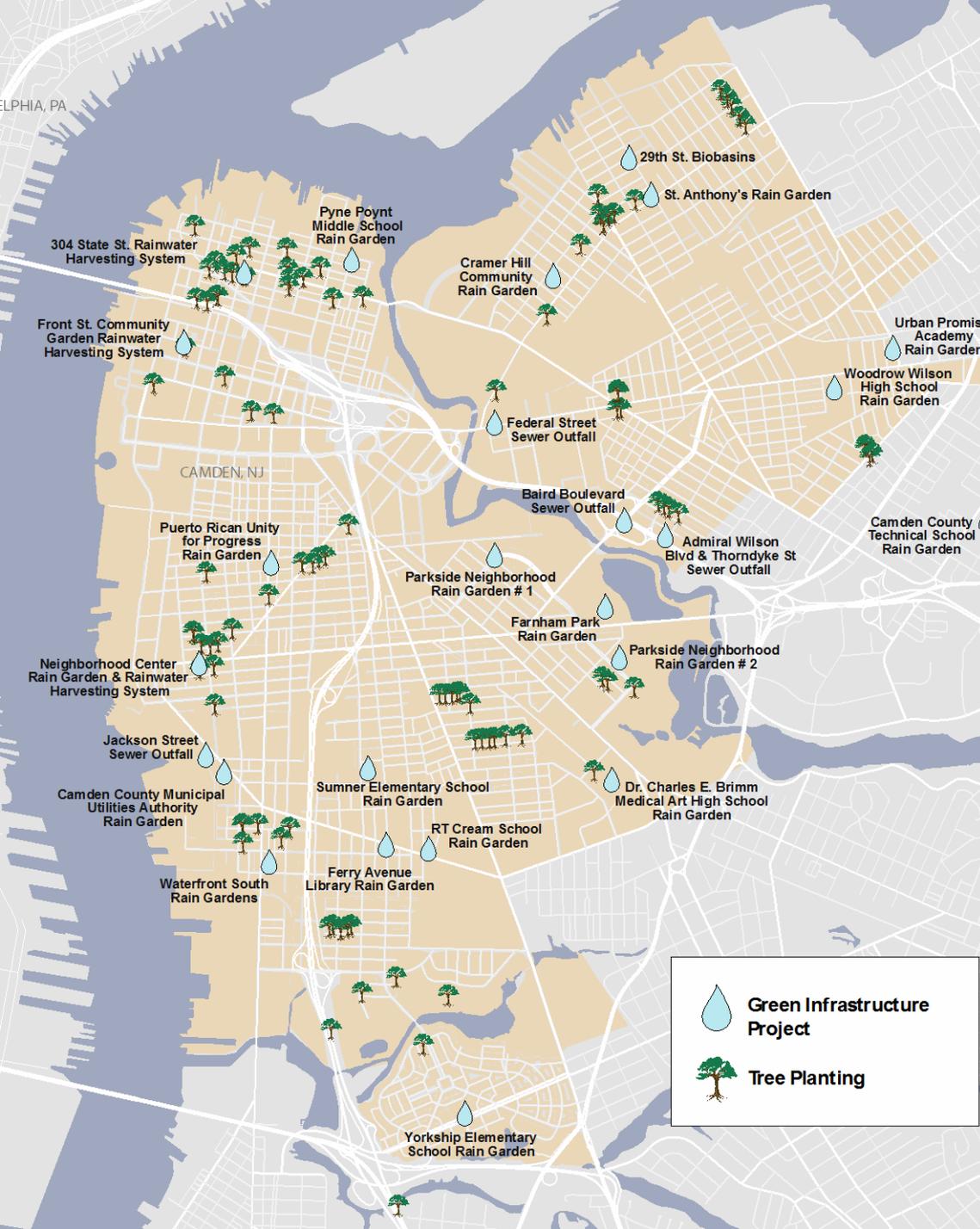
27 Green Infrastructure Projects Installed



992 Trees Planted



120 Rain Barrels Distributed



3,836,950+ Gallons of Stormwater

Project Name	Street Address	Neighborhood	Completion Date	Gallons of Stormwater Captured per Year
20th St. Community Garden Rain Gardens	N 20th at River Ave	Cramer Hill	June-10	63,000
Sumner Elementary School Rain Gardens	1600 S 8th Street	Liberty Park	June-10	110,000
Ferry Avenue Rain Garden	1645 Ferry Avenue	Waterfront	March-11	75,000
Waterfront South Native Plant Nursery	1645 Ferry Avenue	Waterfront	April-11	
Waterfront South Rain Garden	S Broadway @	Waterfront	July-11	470,000
Ferry Avenue Library Rain Garden	852 Ferry Avenue	Centerville	April-12	62,500
Parkside Rain Barrel Workshop (25 Barrels)	Camden City	Parkside	April-12	32,500
Brimm School Rain Garden	1626 Copewood	Whitman Park	May-12	81,000
Camden County Technical School	6008 Browning Road	Pennsauken	May-12	12,500
RT Cream School Rain Garden	1875 Leon Huff Street	Centerville	June-12	25,000
PRUP Rain Garden and Rainwater Harvesting	818 S. Broadway	Bergen Square	June-12	31,250
Woodrow Wilson High School Rain Garden	3100 Federal Street	Stockton	July-12	30,000
29th St. Rain Gardens	29th St @ Pierce St &	Cramer Hill	July-12	400,000
Park Blvd Rain Garden #1	Park Blvd @ Magnolia	Parkside	August-12	60,000
Park Blvd Rain Garden #2	Park Blvd @ Vesper	Parkside	August-12	40,000
304 State St. Rainwater Harvesting	304 State Street	North Camden	September-12	3,000
Neighborhood Center Rain Garden and	278 Kaighns Ave	Central	September-12	119,000
Front St. Community Garden Rainwater	N Front St at Penn	Cooper Grant	March-13	5,000
Pyne Poynt Middle School	N 7th Street @ Erie	North Camden	April-13	47,700
Yorkship Elementary School Rain Garden	1251 Collings Ave	Fairview	May-13	22,500
Urban Promise Academy Rain Garden	27 N 36th Street	Rosedale/East	May-13	22,500
2013 Rain Barrel Program (95 Rain Barrels)	Camden City	Camden City	June-13	123,500
St. Anthony's Rain Garden	29th St @ River Ave	Cramer Hill	July-13	175,000
Liney Ditch Park Shelterbelt Tree Planting	Jasper Street	Waterfront	October-13	117,000
1108 Street Trees Planted (community-	Camden City	Camden-Wide	November-13	1,108,000
Trenton Ave Rain Garden	Trenton & Newton	Cooper Grant	June-14	
CSO Thorndyke Rain Garden	Route 30 & Thorndyke	Marlton	June-14	221,000
CSO Baird Blvd Rain Garden, C27	Baird Blvd & Cooper	Marlton	June-14	122,000
CSO Jackson Rain Garden, C03	200 Jackson Street	Waterfront	June-14	258,000
07/14/14			TOTAL:	3,836,950



Join Mayor Dana L. Redd
in celebration of the

GRAND REOPENING of Farnham Park

Park improvements include new amenities,
stormwater management upgrades, and a
connection to the Camden GreenWay trail network

Wednesday July 20th, 2011
11:00 AM

Park Blvd. & Raleigh Ave.
Camden, NJ



Join the pre-event
River to River Ride to Farnham Park
Find more info at www.coopersferry.com

For more information please contact Merigan Mulhern at (856) 757-9154.



Green Infrastructure on Brownfield Sites

Waterfront South Rain Gardens

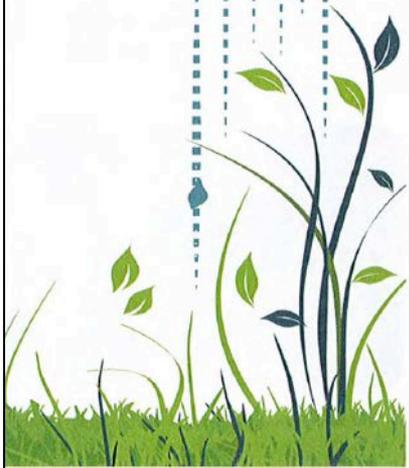
- 1,850 tons of contaminated soil
- 12 USTs removed from site
- 4 rain gardens designed to manage about 1 million gallons of stormwater per year
- A green gateway into the Waterfront South neighborhood



Community Education & Outreach

CAMDEN COUNTY CONSERVES

Saving Water,
Saving Money



“Sewer in a Suitcase”

Camden SMART Initiative - Home

http://www.camdensmart.com/

Reading Eggs Federal Regu...re | US EPA Marley-Sprout Apple Yahoo! Google Maps YouTube Wikipedia News (735) Popular

Home Camden SMART SMART Team Photos Projects Resources Volunteer more...

Camden SMART Initiative

Stormwater Management and Resource Training

REGISTER TODAY!

Go Green at Home!

Help Camden become a certified green city by taking the **GREEN CHALLENGE**

[Click here](#) to participate

Sponsor a Rain Garden!

2013 Rain Garden SPONSORSHIP PROGRAM

(Click image above for more details!) Support this vital community improvement program by sponsoring a rain garden project in the City of Camden. The 2013 Rain Garden Sponsorship Program will leverage existing funding to complete additional rain garden projects in the city.

2ND ANNUAL Camden SMART FORUM

Initiative

Featuring

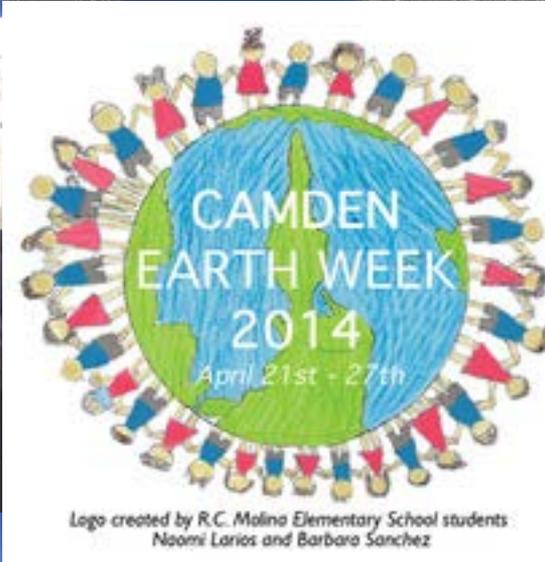
2014 City of Camden SUSTAINABILITY ADDRESS
Mayor Dana L. Redd

WATER IS LIFE
A Talk by George S. Hawkins, Esq.
General Manager
D.C. Water and Sewer Authority

Thursday, January 30, 2014
11 am - 2 pm

Adventure Aquarium
Currents Ballroom

Educational
Pamphlet



2014 RAINWATER HARVESTING INITIATIVE

April 9	St. Joseph's Carpenter Society	10
April 21	Cooper Sprout's Community Garden	10
April 23	Puerto Rican Unity for Progress (PRUP)	18
May 17	Camden Children's Garden	16
May 31	BPSOS	10
June 5	Trenton Ave. Pocket Park	2
June 11	Eco-Charter School	4
June 18	Fairview Neighbors	8
June 25	BPSOS-Community Garden	<u>20</u>
	TOTAL	98



Real Results ?

70% Installed



860 Mt. Ephraim Ave.



916 Chelton Ave.



2739 Tyler Ave.

Research Policy & Planning

- ❑ Water Conservation Ordinance
- ❑ Sustainable Jersey Certification
- ❑ Sustainable land use pledge
- ❑ Green Infrastructure Handbook
- ❑ SMART Team Collective Impact Vision
- ❑ Sustainability Ordinance



United States
Environmental Protection
Agency

2012 GREEN INFRASTRUCTURE TECHNICAL ASSISTANCE PROGRAM
Coopers Ferry Partnership
Camden, New Jersey



City of Camden Green Infrastructure Design
Handbook: Integrating Stormwater Management
into Sustainable Urban Design

Photo: Camden Waterfront, US EPA

AUGUST 2013
EPA 830R13003

CAMDEN SMART

2014 Infrastructure Initiative

- ❑ Von Niede Park Stormwater Management Project, \$2.5 million
- ❑ Baldwin's Run Urban Daylighting Project, \$1.1 million
- ❑ Green Infrastructure Projects, \$1 million
- ❑ Sewer Rehabilitation Project, \$2.5 million
- ❑ Wastewater Pump Station Rehabilitation, \$14 million
- ❑ Water Storage Tank Rehabilitation, \$5 million
- ❑ Phoenix Park Project, \$1.4 million

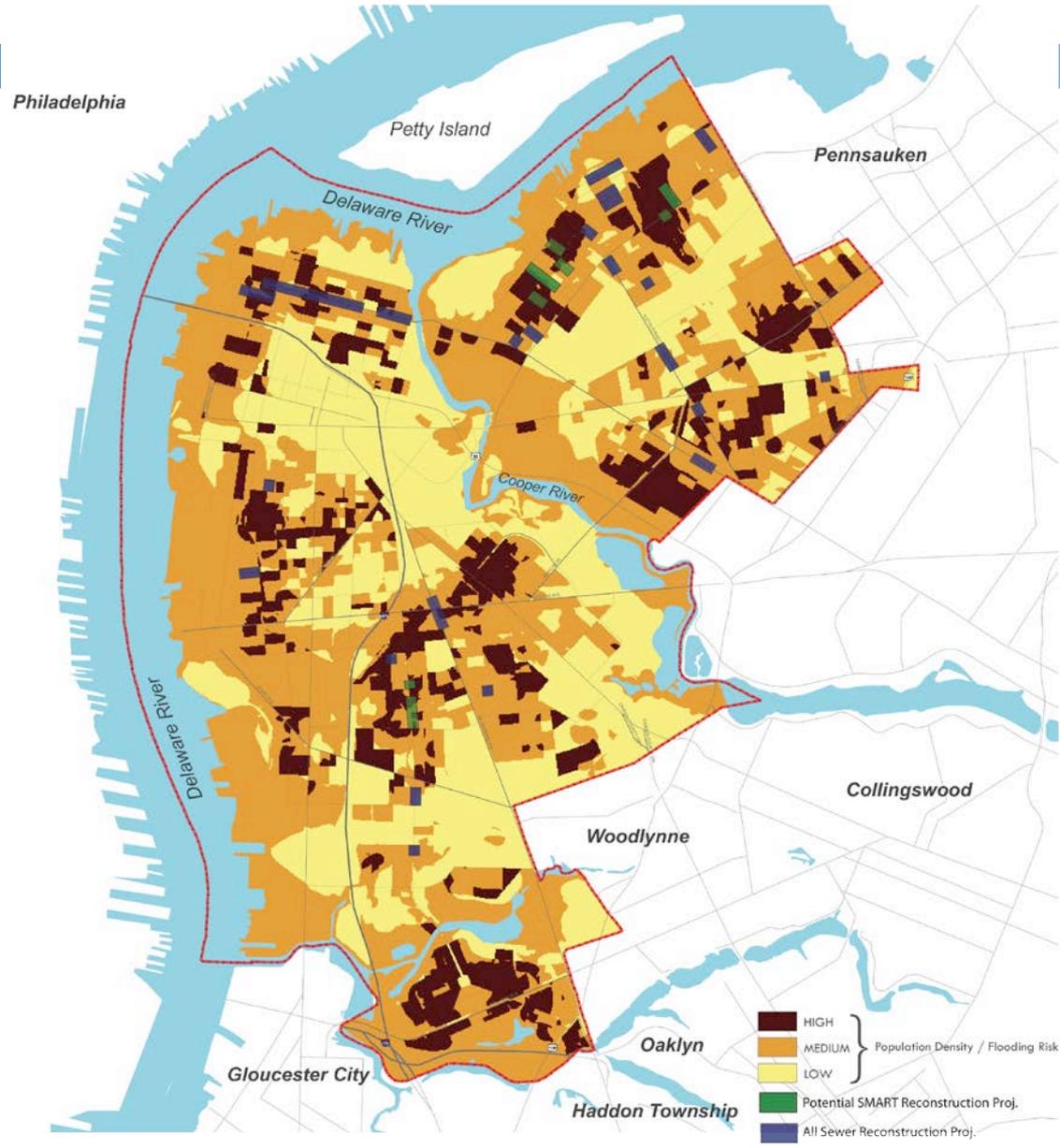




GREY INFRASTRUCTURE

SMART Map
At Risk Areas and Sewer Reconstruction Projects

- 4,000 LF of Sewer Replacement/Reconstruction
- Targeted Investment
- \$1.5 million





Brimm School

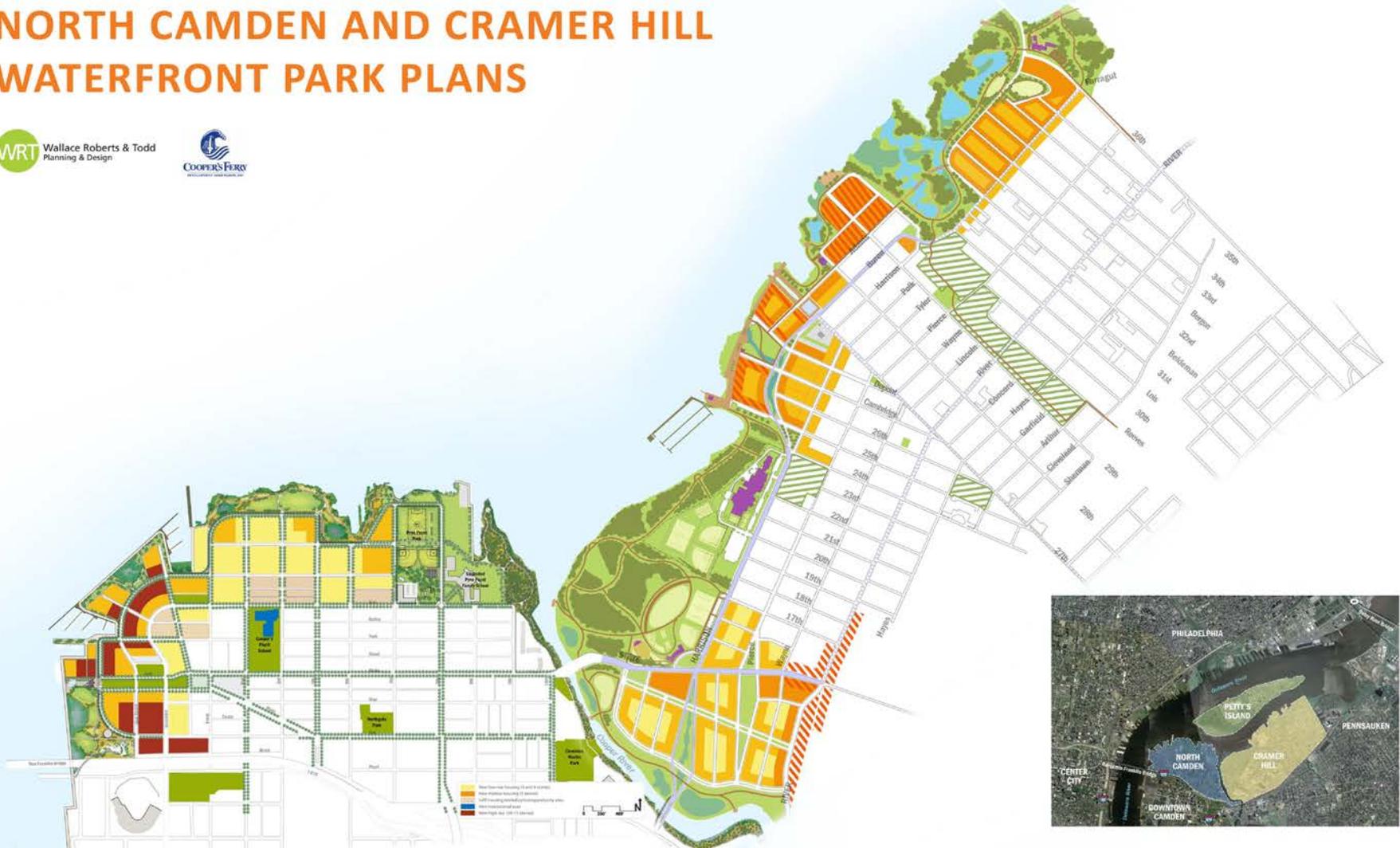


BEFORE



Sustainability in Neighborhood Planning

NORTH CAMDEN AND CRAMER HILL WATERFRONT PARK PLANS



Sustainable Jersey Certification



In October 2013, the City of Camden became **one of only 20 municipalities** statewide to receive Sustainable Jersey silver level certification

Camden Collaborative Initiative



The purpose of the Camden Collaborative Initiative is to eliminate gaps and barriers to sustainable development and smart growth.



Dana L. Redd
Mayor
City of Camden

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LIVE. WORK. GREEN. CAMDEN.

