More Bang for the Buck: Integrating Green Infrastructure into Existing Public Works Projects

Tuesday, May 6th, 2014
1:00 – 2:30pm EST

Speakers:
Charlotte Katzenmoyer, City of Lancaster, PA
Matthew J. Millea, Onondaga County, NY

Sponsored by U.S. EPA Office of Wastewater Management

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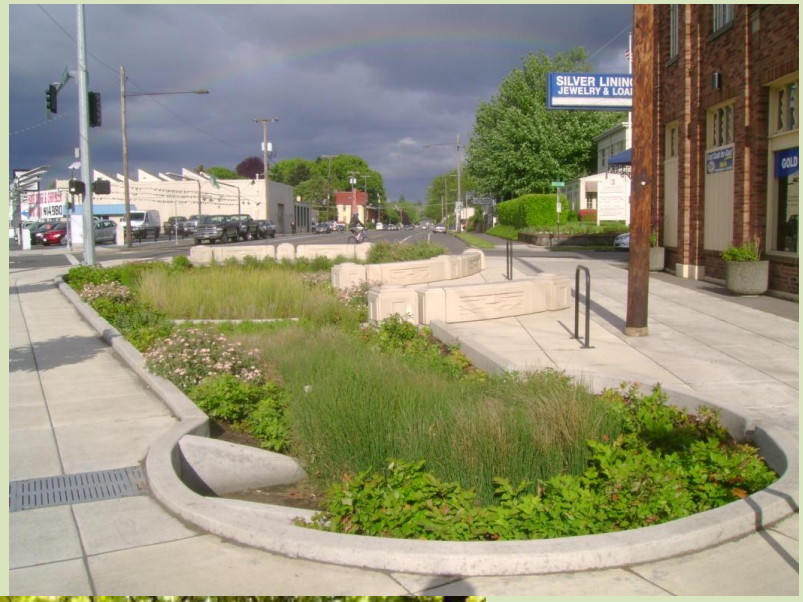
Webcast Agenda

- **Introduction**
- **Charlotte Katzenmoyer**, Director of Public Works, City of Lancaster, PA
- **Q&A session**
- **Matthew J. Millea,** Deputy County Executive for Physical Services, Onondaga County, NY
- **Q&A session**
- **Wrap up**



Now to our speakers!

Speaker Contacts

Charlotte Katzenmoyer City of Lancaster

ckatzenm@cityoflancasterpa.com | http://www.saveitlancaster.com/thecost/

EPA Technical Assistance Report: *The Economic Benefits of Green Infrastructure*
http://water.epa.gov/infrastructure/greeninfrastructure/gi_support.cfm

Matthew Millea, Onondaga County

MatthewMillea@ongov.net| http://savetherain.us/

For questions about EPA's Green Infrastructure Webcast Series:

Emily Ashton, ORISE Fellow, U.S. EPA Office of Wastewater Management

Ashton.emily@epa.gov

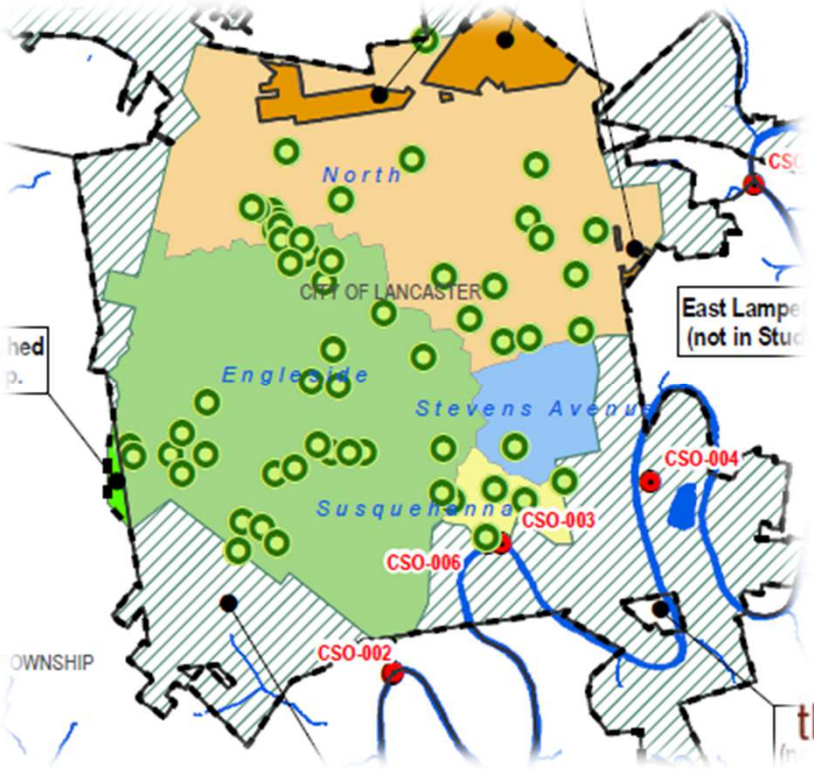
(202) 564-3324

Eva Birk, ORISE Fellow, U.S. EPA Office of Wastewater Management

Birk.eva@epa.gov

(202) 564-3164

GREEN IS THE NEW COLOR FOR STORMWATER



the city of Lancaster
a city authentic

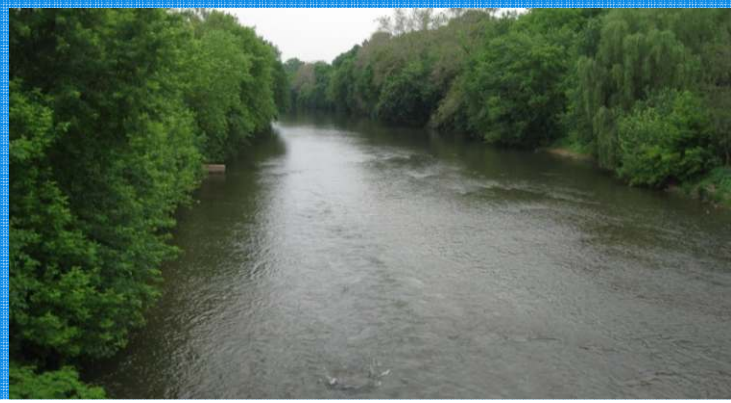
Charlotte Katzenmoyer

Director of Public Works

MORE BANG FOR THE "GREEN" BUCK: INTEGRATING GREEN INFRASTRUCTURE INTO EXISTING PUBLIC WORKS PROJECTS"

THE CITY OF LANCASTER – OVERVIEW

- Incorporated in 1742 as a borough and in 1818 as a City
- Served as the temporary National Capital during the Revolution
- ~60,000 residents in the 2010 census
- 7.34 square miles
- Historic building stock (median home age of 100 years)
- One of 770 combined sewer communities in US
- Surrounded by some of the most productive non-irrigated farmland in the U.S.



THE CHALLENGE

Cost of Solutions Are Significant

750 million gal. polluted stormwater discharge

= 1150 Olympic-sized swimming pools

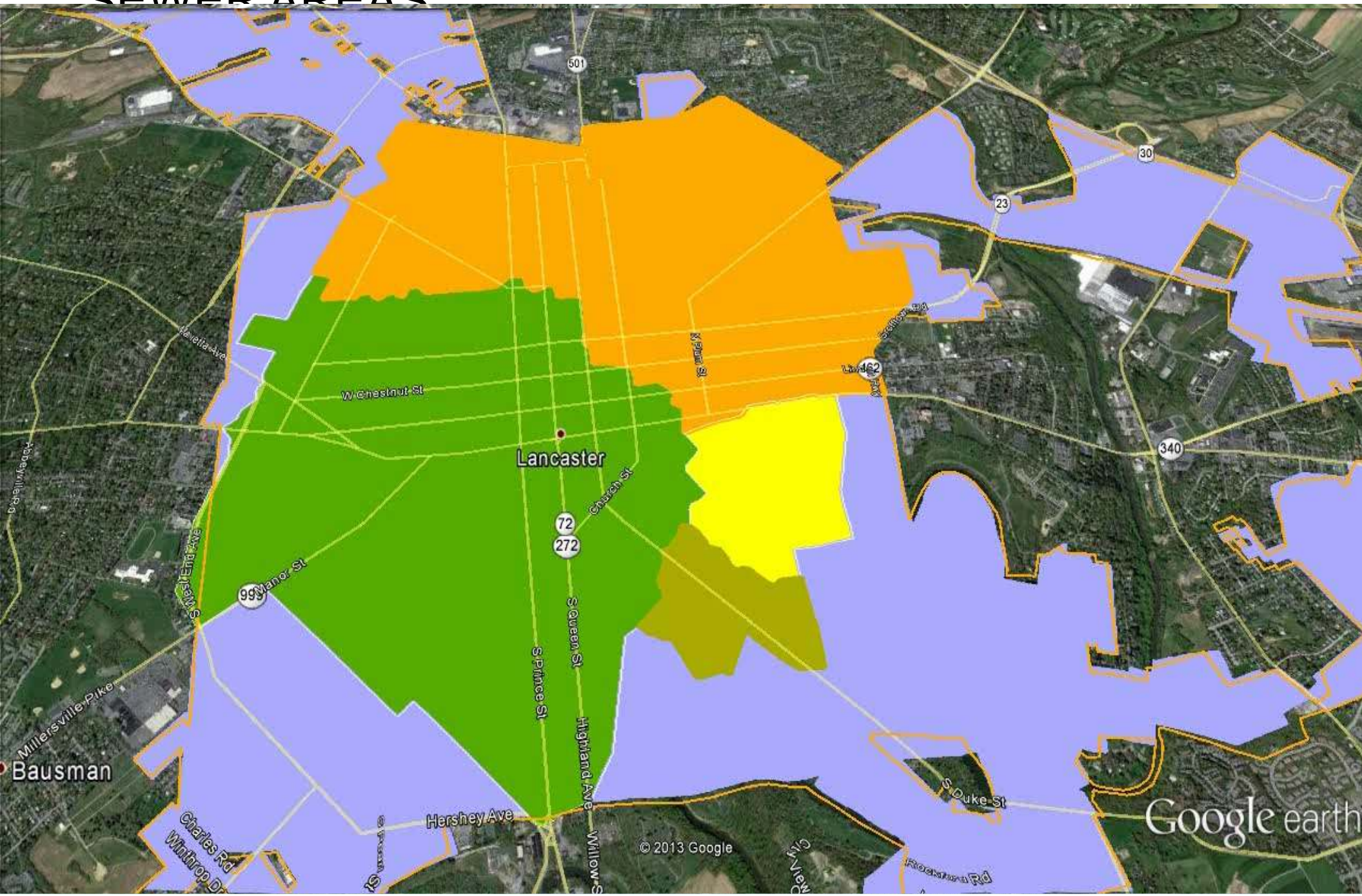
Previous Solution

Proposed Solution

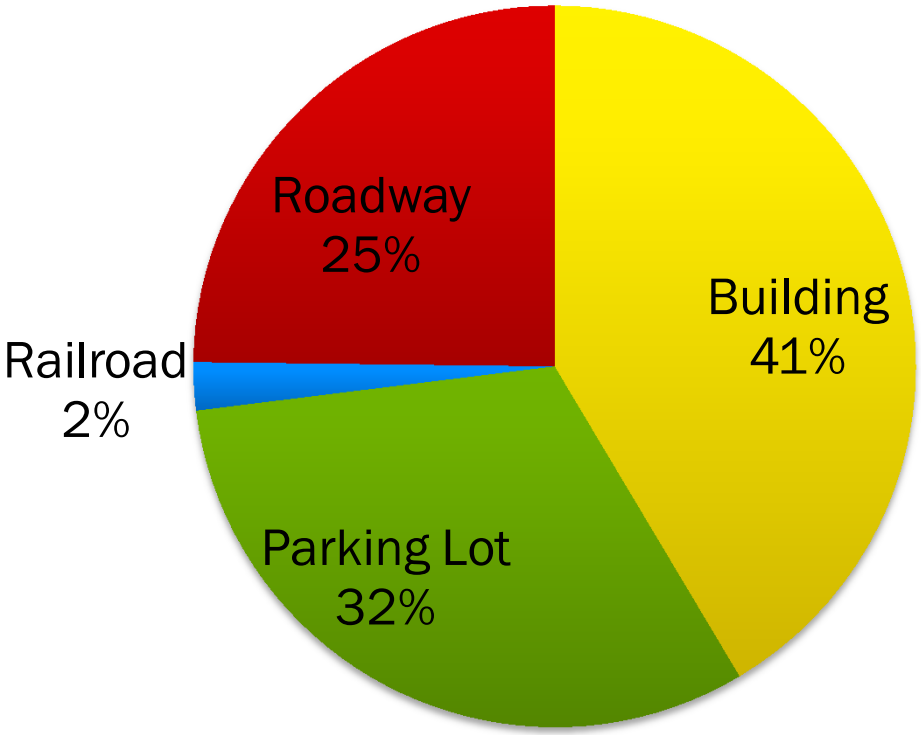
"Lancaster is in violation of the AO, and needs to address these deficiencies as soon as possible. Violation of the terms of the AO may result in further EPA enforcement action for violation of the order and for the underlying violations including, but not limited to, imposition of administrative penalties, 33 U.S.C § 1319(g), and/or initiation of judicial proceedings that allow for civil penalties of up to $37,500 per day, 33 U.S.C § 1319 (b) and (d), for each day of violation."

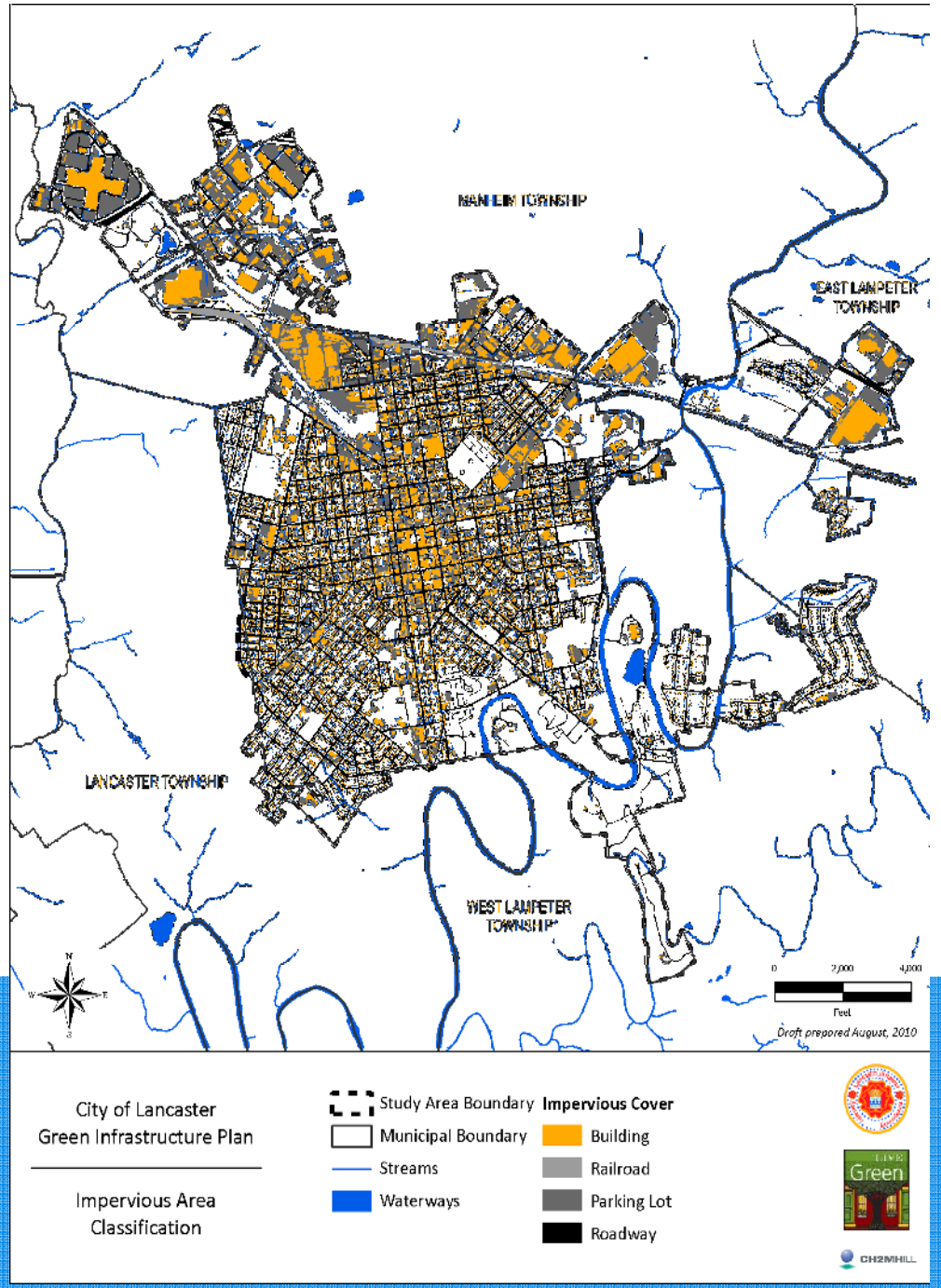
Doing Nothing is Not an Option

45% OF THE CITY IS SERVED BY COMBINED SEWERS, NEWER AREAS BY SEPARATE STORM SEWER AREAS



IMPERVIOUS AREA = 48% OF CITY





CURRENT EFFORTS FOCUS ON EARLY ACTION AND CONTINUOUS IMPROVEMENT

Maximize existing infrastructure for CSO Capture

- Pumping station upgrades, screening, etc.
- $20 M since 2001
- $17 M bond issue in 2011 for additional upgrades

Lead by Example: Modify current/proposed capital projects to incorporate GI

Secure funding for demonstration projects

Develop plan to scale up for city-wide implementation

Review all City ordinances to incorporate/require GI for redevelopment

Develop stormwater website

Conduct community education/outreach

Look ahead and develop incentives for private sector participation (i.e. stormwater utility)

THE GREEN INFRASTRUCTURE BENEFIT CALCULATOR PROJECTS FUTURE BENEFITS FOR CSO AND MS4 AREAS

Table 5-11 – Green Infrastructure Calculator for long-term (approximately 25-year) period

Area / Impervious Source	Impervious / Contributing Area (acres)	Approx. Percent Imperv.	Green Infrastructure Project / Program Type	Assumed Percent Impervious Area Managed	Impervious Area Managed (acres)	Total SW Runoff (MG/yr)	Assumed WQv or BMP Volume	Average Runoff Reduction	Runoff Reduction (MG/yr)
Roads / Alleys	529	100%	Green Streets	30%	159	513	1.0	86%	132.4
Parks	241	8%	Park Improvements / Greening	85%	17.0	19	1.0	86%	14.2
Sidewalks	124	100%	Disconnection, Porous Pavement	35%	43.3	120	1.0	86%	36.1
Parking Lots	648	100%	Porous Pavement, Bioretention	20%	130	628	2.0	97%	121.3
Flat Roofs	218	100%	Vegetated Roofs / Disconnection	15%	32.7	212	1.0	86%	27.3
Sloping Roofs	654	100%	Disconnection/Rain Gardens	25%	164	635	1.0	86%	136.5
Street Trees	N/A	N/A	Enhanced Tree Planting	N/A	45.1	44	0.3	49%	21.5
Public Schools	175	29%	Green Schools	75%	38.4	50	1.0	86%	32.0
Various (Ordinance)	1274	100%	First-Flush Ordinance	50%	637	1236	1.0	86%	531.6
Total					**1,265**	**3,752**			**1,053**
					55%				

Impervious Area Type

Impervious Area

Green Technology

Impervious Area Managed

Annual Runoff / Runoff Reduction

Pollutant	Average Stormwater Concentration* (ug/L)	Average CSO Discharge Concentration* (mg/L)	Pollutant Reduction from Stormwater (lb/yr)	Pollutant Reduction from CSOs (lb/yr)	Total Est. Pollutant Reduction (lb/yr)
Total Suspended Solids (TSS)	84	275	243,938	1,213,345	**1,457,000**
Total Phosphorus (TP)	1.2	5.5	3,485	24,267	**27,800**
Total Nitrogen (TN)	0.7	13.5	2,033	59,564	**61,600**

Pollutant Load Reductions

** Based on the midpoint pollutant concentrations in USEPA's CSO Report to Congress, 2001*

Manage over 1,200 Acres of Impervious Area

Capture over 1 Billion Gallons of Stormwater Runoff over the long term

THE APPROACH

GREEN PARKS

Lancaster
Bausman
W King St
W Chestnut St
Columbia Ave
Millersville Pike
Hershey Ave
S Duke St
Millport Rd
Eshelman Mill Rd
Willow Street Pike
Highland Ave
Wabank St
999
72
272
324
462
501
30
23
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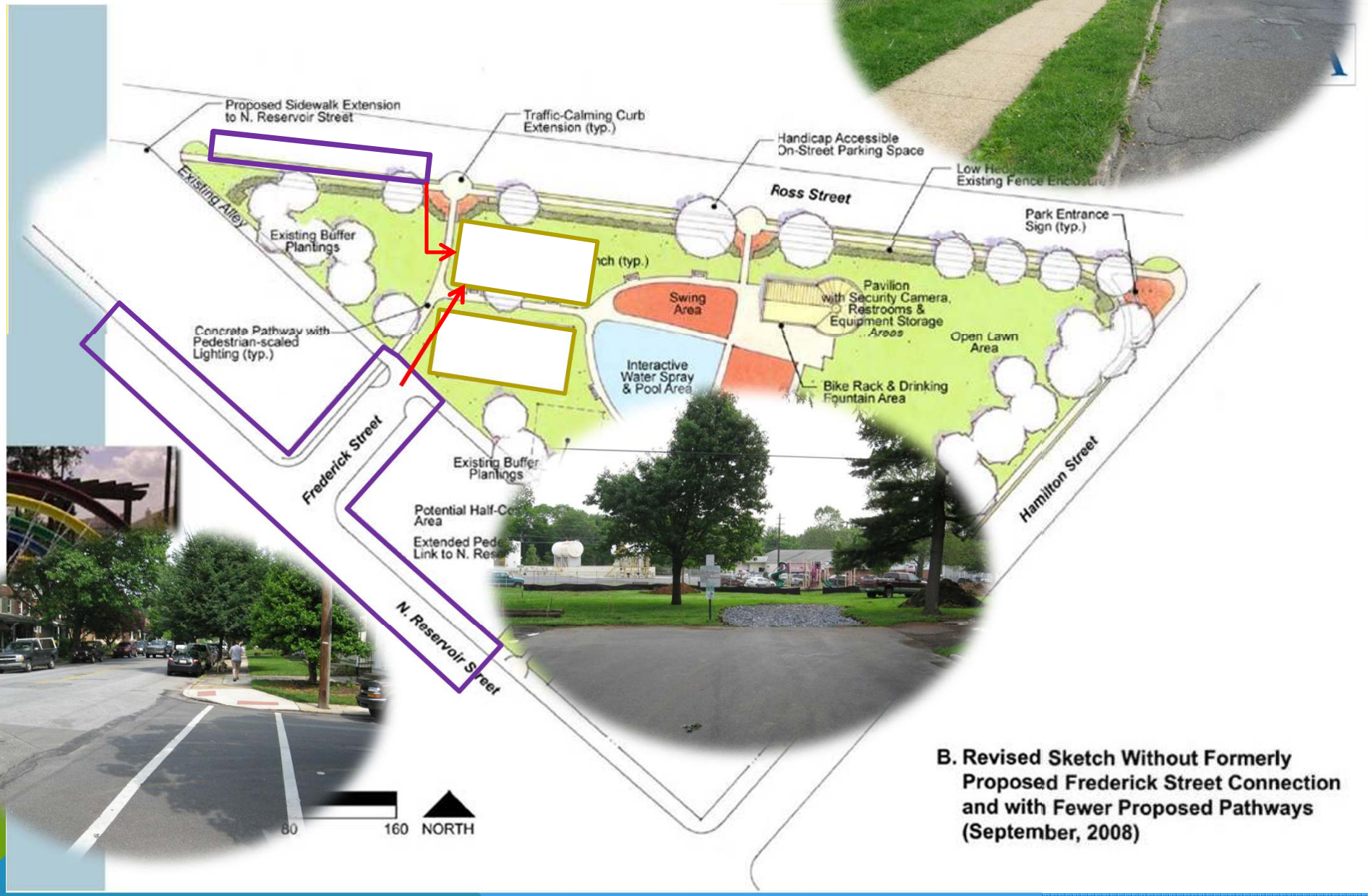
Google

6TH WARD PARK PLAN – EXTENDING THE BENEFIT OF THE PLAYCOURT



B. Revised Sketch Without Formerly Proposed Frederick Street Connection and with Fewer Proposed Pathways (September, 2008)

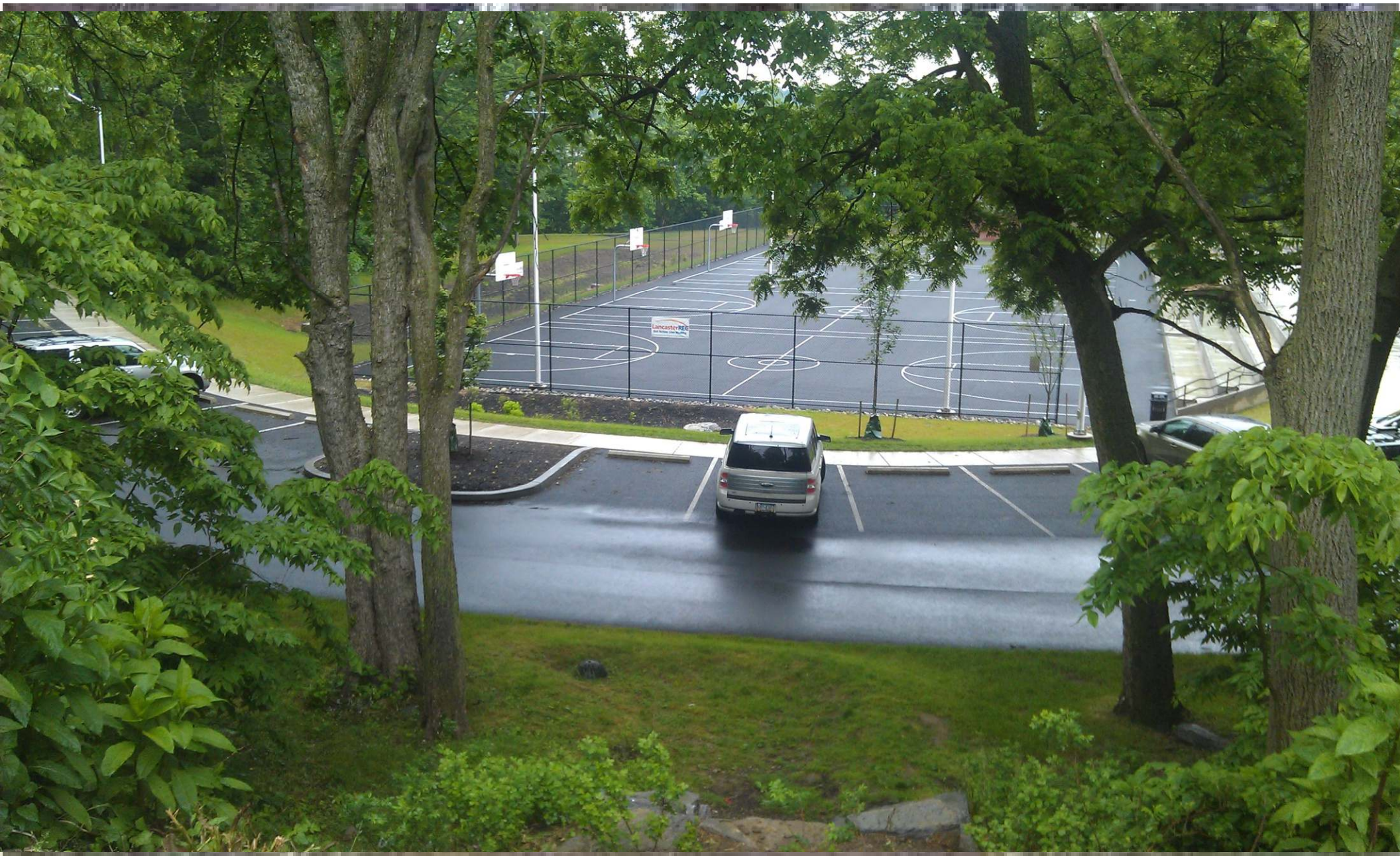
6TH WARD PARK RE-DEDICATION CEREMONY

BRANDON PARK

4 Million Gallons / year reduction in runoff volume
$0.15 / gal

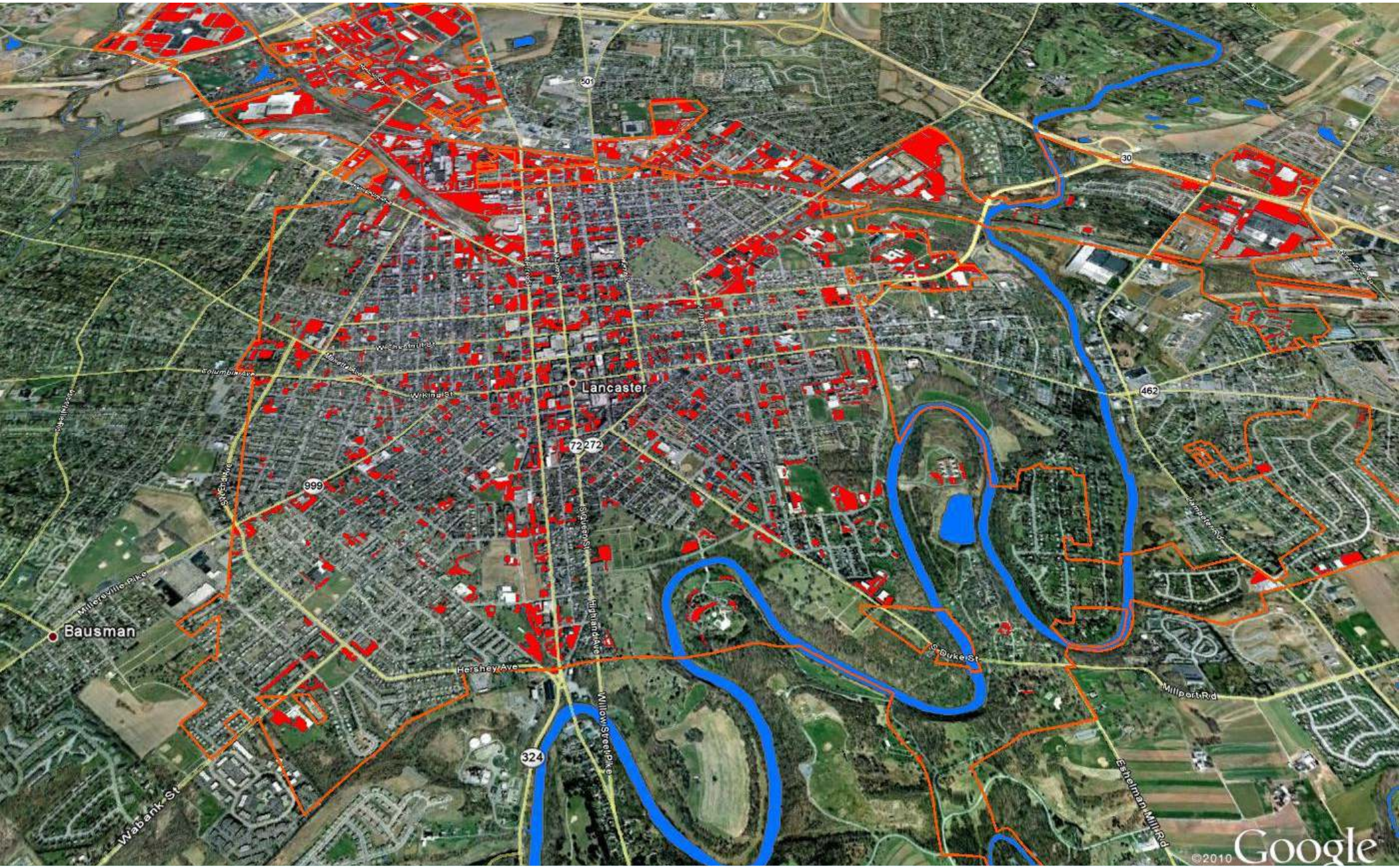
BRANDON PARK – WABANK ST. CURB EXTENSIONS

BRANDON PARK



BRANDON PARK

PARKING LOTS



MIFFLIN STREET PARKING LOT

265,000 Gallons / year reduction in runoff volume
$0.10 / gal

PLUM STREET PARKING LOT

511,000 Gallons / year reduction in runoff volume
$0.17 / gal

TOTAL

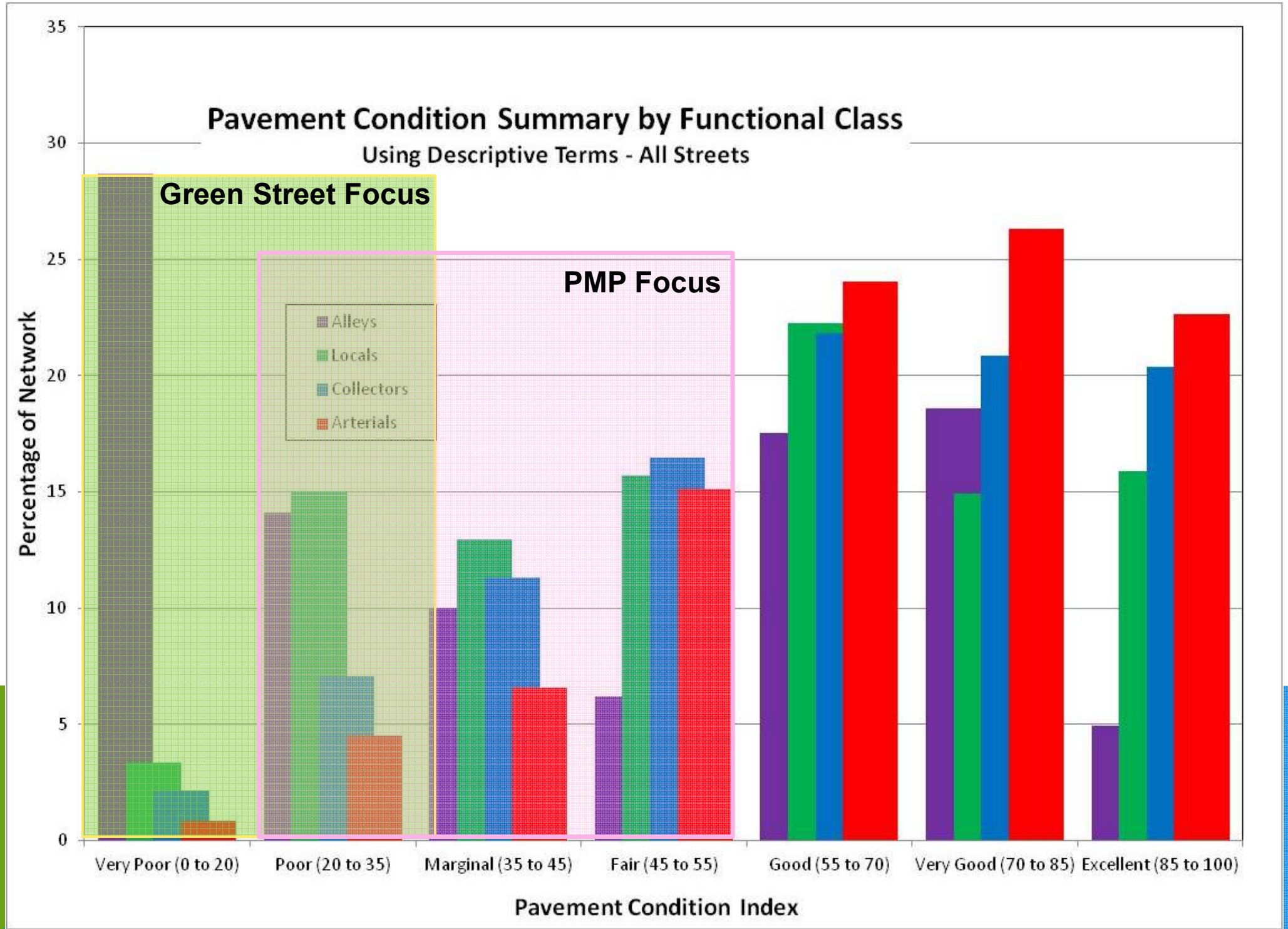
Parking Lot	Drainage Area	GI Area	Capture Volume	Capital Costs with Contingency
Plum Street	23,402	4,680	511,000	$89,862
Dauphin	20,582	4,516	411,000	$61,822
Penn	22,758	4,219	455,000	$60,749
Mifflin	13,242	1,324	265,000	$27,013
TOTAL			1,642,000	$239,446

COST PER GALLON = $0.14/gallon

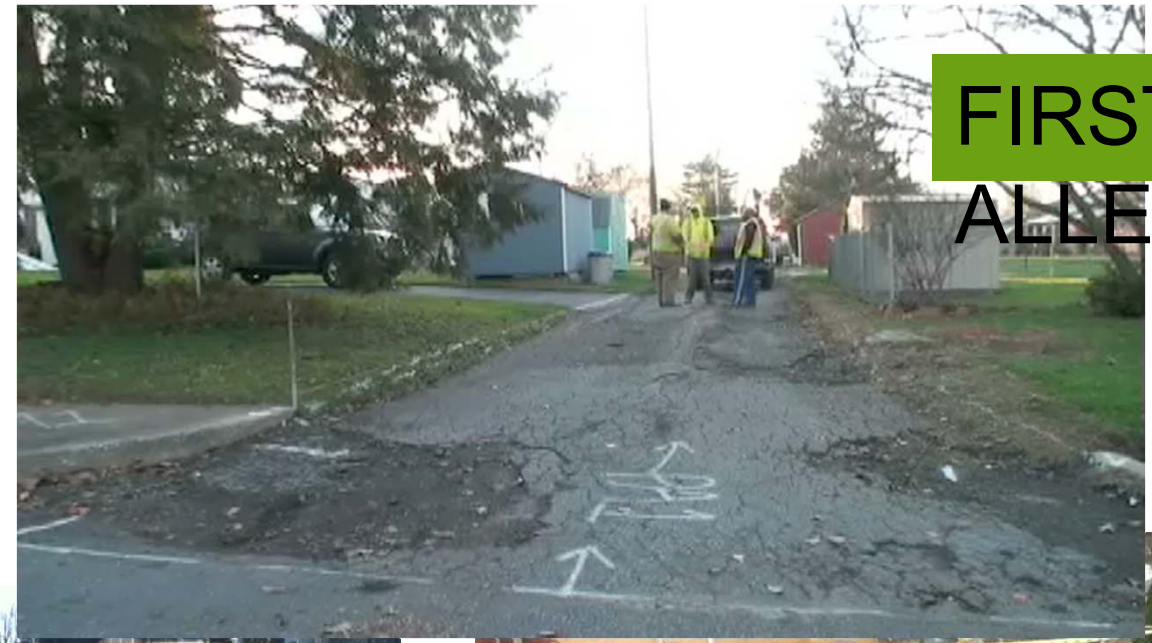
GREEN ROOFS

Over 100,000 square feet of green roofs in Lancaster City.

Green Streets & Alleys


Pavement Condition Summary by Functional Class
Using Descriptive Terms - All Streets
Green Street Focus
PMP Focus
Alleys
Locals
Collectors
Arterials
Percentage of Network
35
30
25
20
15
10
5
0
Very Poor (0 to 20)
Poor (20 to 35)
Marginal (35 to 45)
Fair (45 to 55)
Good (55 to 70)
Very Good (70 to 85)
Excellent (85 to 100)
Pavement Condition Index

FIRST GREEN ALLEY



ALLEY 148 GREENED FOR 10% ADDITIONAL COST

+ CAPTURES 200,000 GALLONS PER YEAR

Before (July 2011) ~$20.30/SF

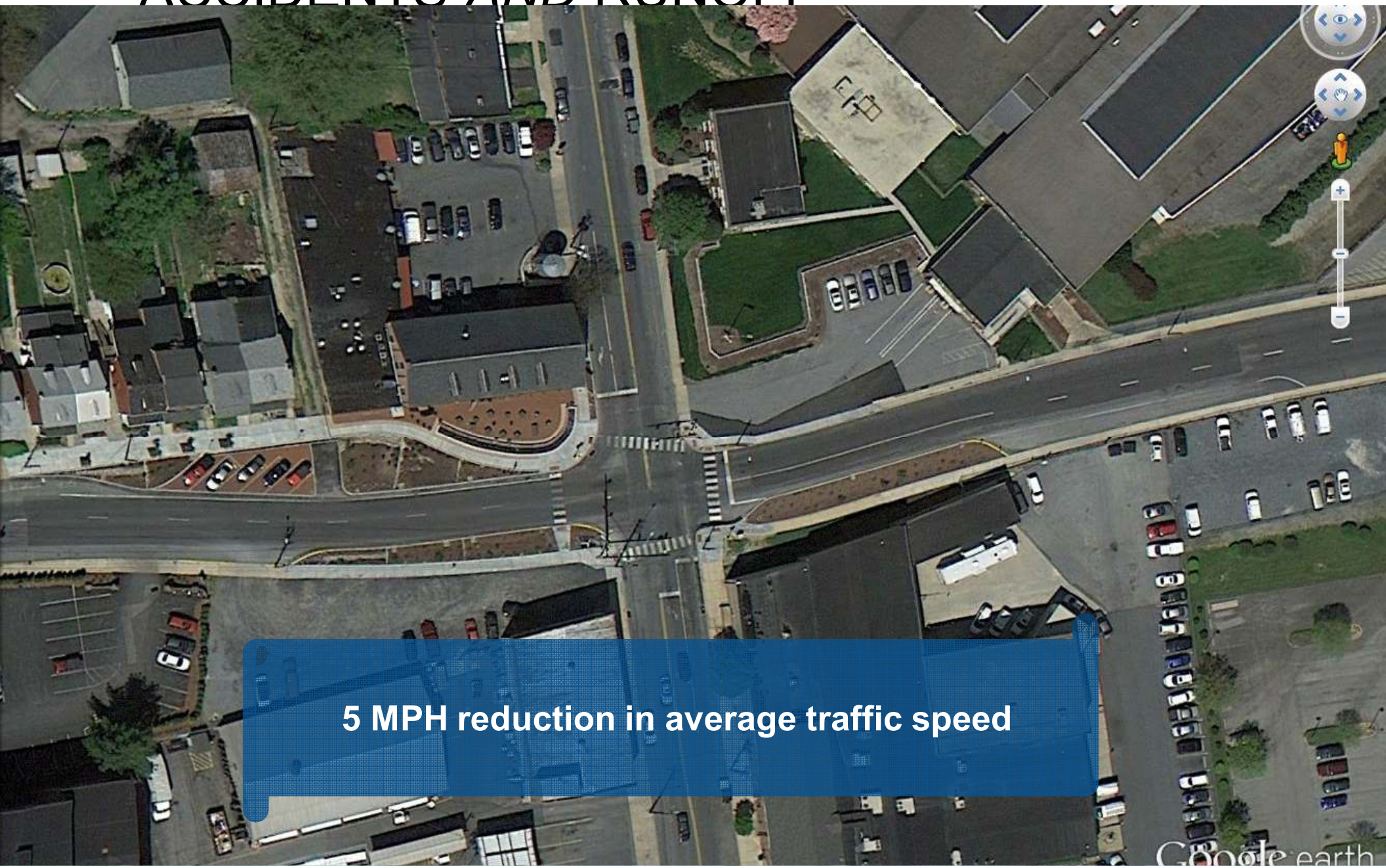
After (February 2012) ~$22.40/SF

Component	Conventional Unit Cost ($/square foot)	Green Unit Costs ($/SF)
Pavement Removal/Excavation	$1.08	$1.08
Crushed Stone w/ geotextile	$0.35	$1.39
Pipes/Cleanouts/etc.	---	$0.82
8-inch reinforced concrete	$18.89	$18.89
Permeable Pavers	---	$19.44
Total Weighted Average	**$20.32**	**$22.37**
Additional Green Cost ($/SF)	---	$2.05
Additional Green Cost (%)	---	10%

Conventional reconstruction (8-inch reinforced concrete)

Green alley retrofit (permeable pavers with infiltration trench)

USING TRAFFIC SAFETY AND TRANSPORTATION FUNDING TO REDUCE ACCIDENTS *AND* RUNOFF



The Lancaster Brewing Company "Beer Garden" is Coming!

700 Gallon Cistern functions as public art and irrigates planters

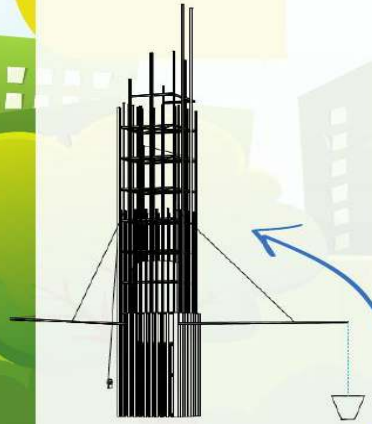
HEY KIDS!

Ever wonder where all the rain and snow goes after a storm?

Water that rains down washes over streets, lawns, parking lots and off of roofs, like the one over your head, and eventually into storm drains (the grates you see on sidewalks and streets). Along the way, the water gets really dirty from things like litter, pet waste, chemicals, oils and car fluids.

While some of it can be cleaned up at a treatment center, some of that dirty water ends up in our creeks, ponds and lakes like the Conestoga River, and eventually flows all the way to the Chesapeake Bay!

Each year, 750 million gallons of polluted water from Lancaster City ends up in the Bay. That's a lot of dirty water! *What if we could keep it clean?!*



There are lots of ways we can all help recycle water.

And one of those ways is *right here where you are eating*— the cool Public Artwork outside this restaurant, called **"Lancaster's Gateway Bundle."**

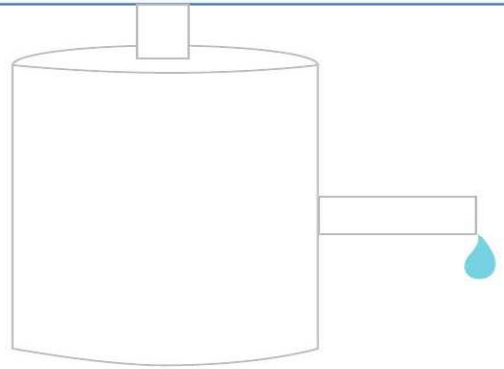
When rain falls or snow melts on the roof, it flows right into the giant "bucket" (called a cistern) attached to the building. The cistern catches that water before it flows through the drains into the rivers. It can hold 750 gallons of water (thats enough to fill your bathtub over 30 times!)

And guess what? Not only do we keep that dirty water from going into our rivers and streams, that water can be used to water the plants in the restaurant's garden outside.

NOW THAT'S COOL!

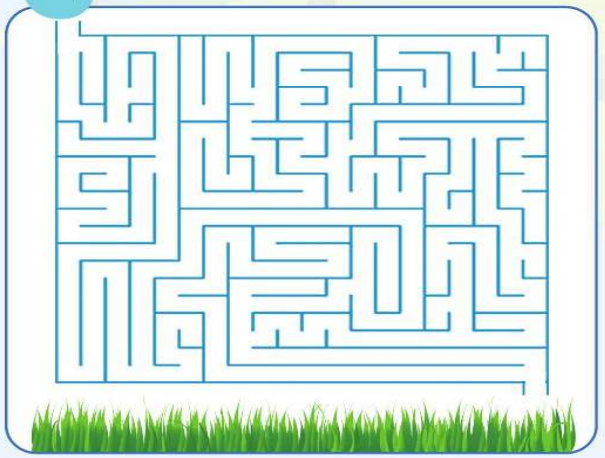
Lancaster's Gateway Bundle

TURN THIS CISTERN INTO YOUR OWN PIECE OF ENVIRONMENTAL ART:



(don't forget to draw all the plants the cistern will help water!

HELP THE RAINDROP FIND ITS WAY TO THE RAIN GARDEN



SAVE IT!
YOUR WATER. YOUR MONEY. YOUR CITY.
www.saveitlancaster.org

Lancaster Brewing Company

A+M

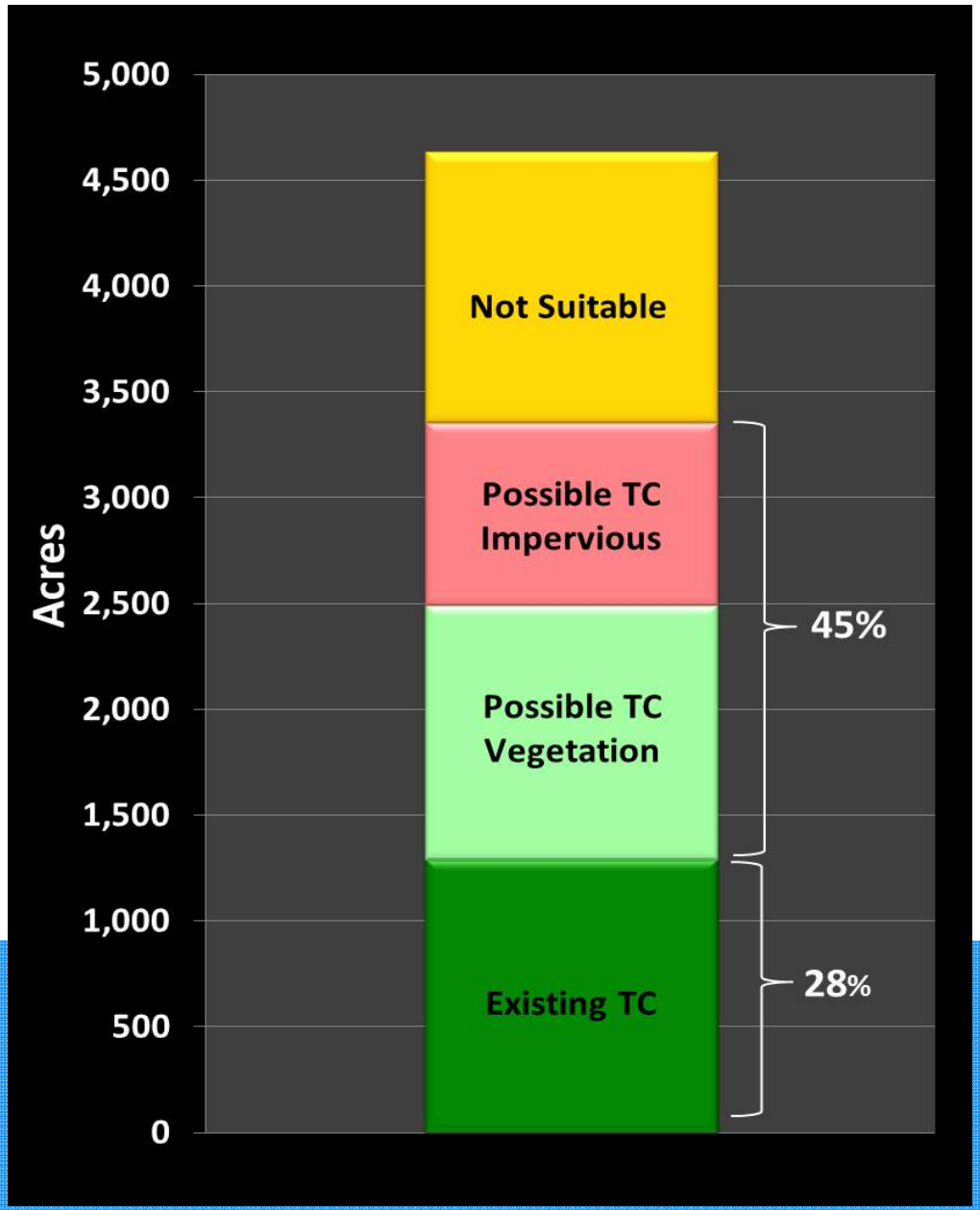
gsm INDUSTRIAL
Metal Fabrication & Installation Contractor
A Gooding Company

URBAN TREE CANOPY

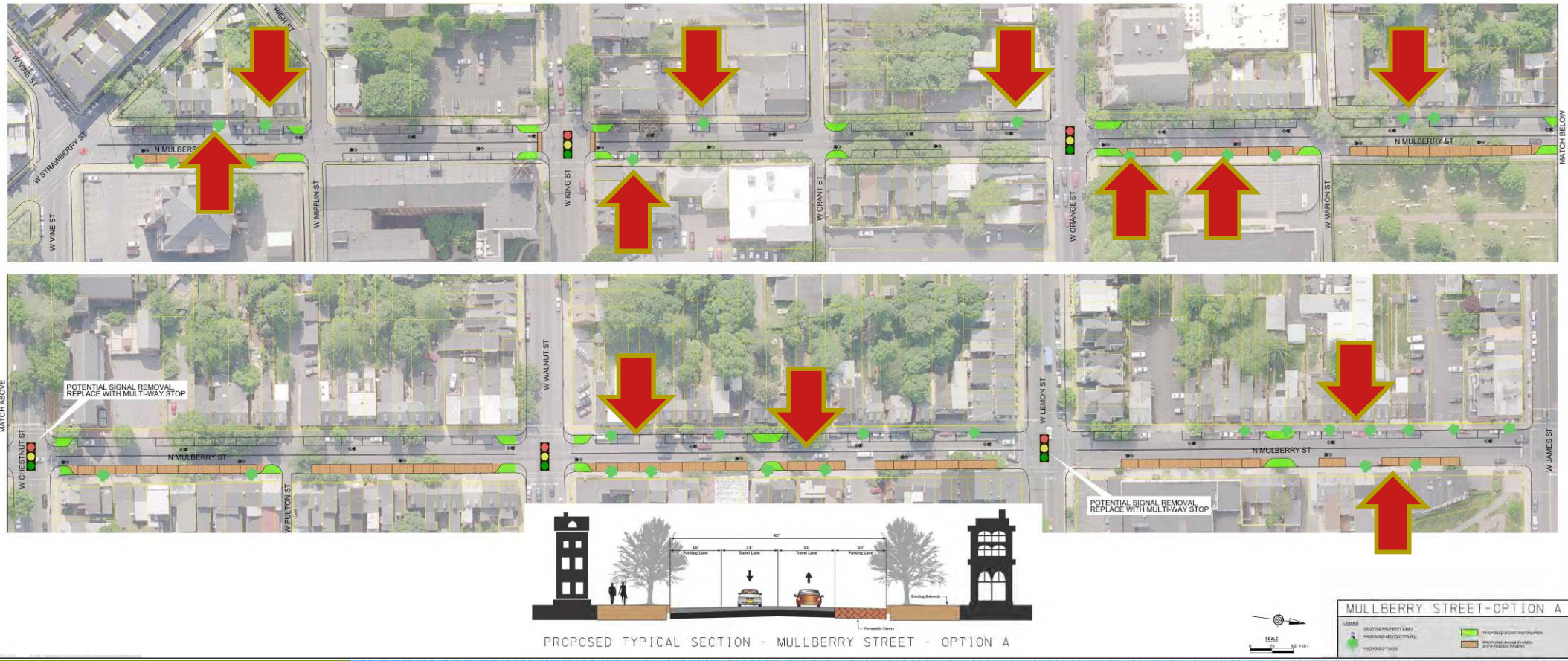
Current: 28%

Potential: 45%

Goal: 40%



MULBERRY STREET TWO-WAY CONVERSION PROJECT

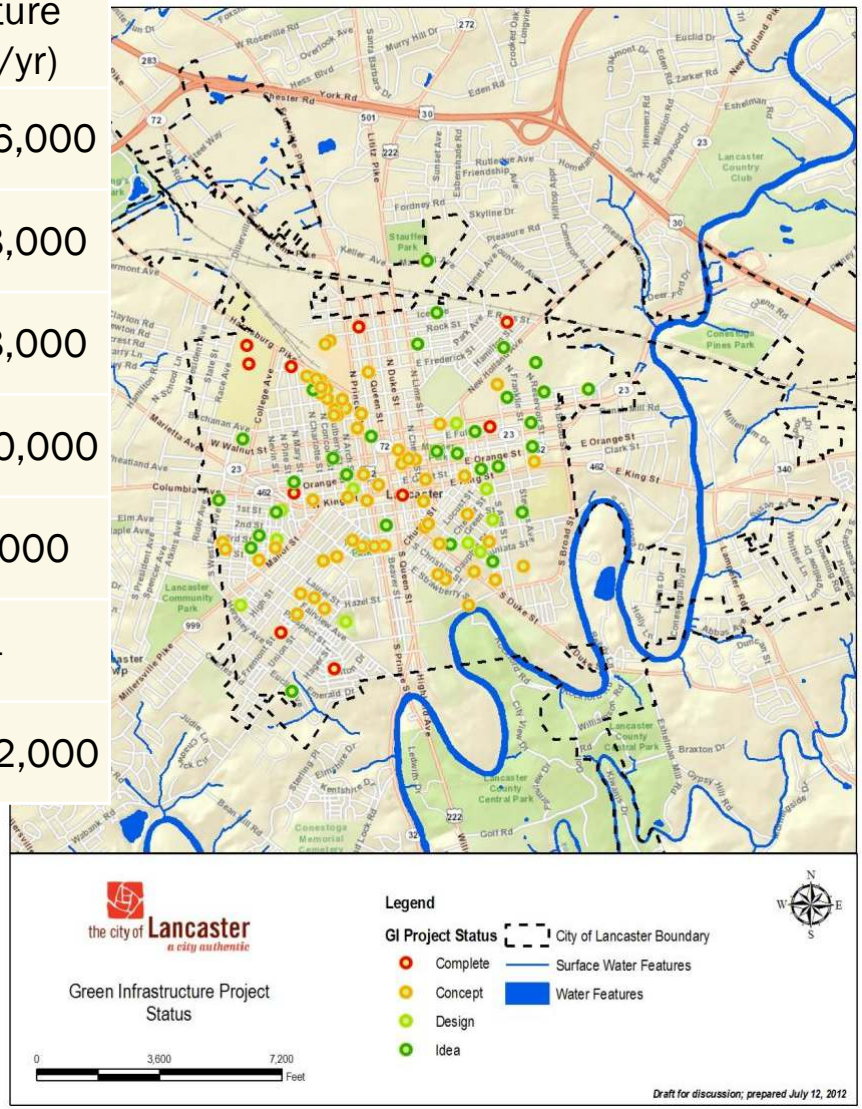


INNOVATIVE FINANCING USING SRF

STATUS

Summary of Green Infrastructure Program Implementation
Status as of 03/28/14

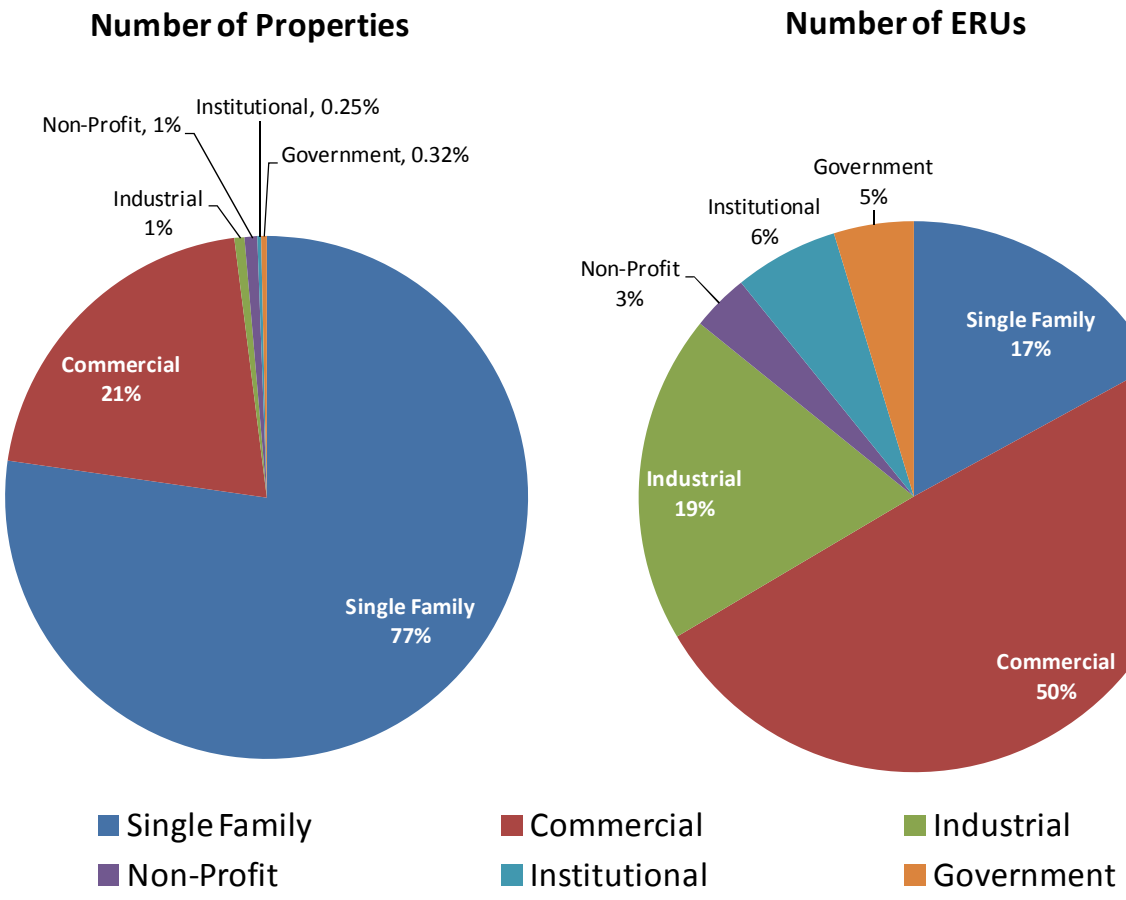
Status	Number of Projects	Impervious Area Managed (sq. ft.)	Impervious Area Managed (acres)	Annual Runoff Capture (Gal/yr)
Constructed / Under Construction	44	891,000	20	17,146,000
In Design for Construction	12	530,000	12	7,798,000
Conceptual Designs (non-PV/GGP)	26	696,000	16	8,358,000
PENNVEST Concepts	25	555,000	13	11,360,000
Growing Greener Plus Concepts	1	14,000	0.3	280,000
In Project Planning	51	-	-	-
Total	159	2,686,000	62	44,942,000



$3.64 M in grants used to date
Matched by $3.7 M in local/city funds

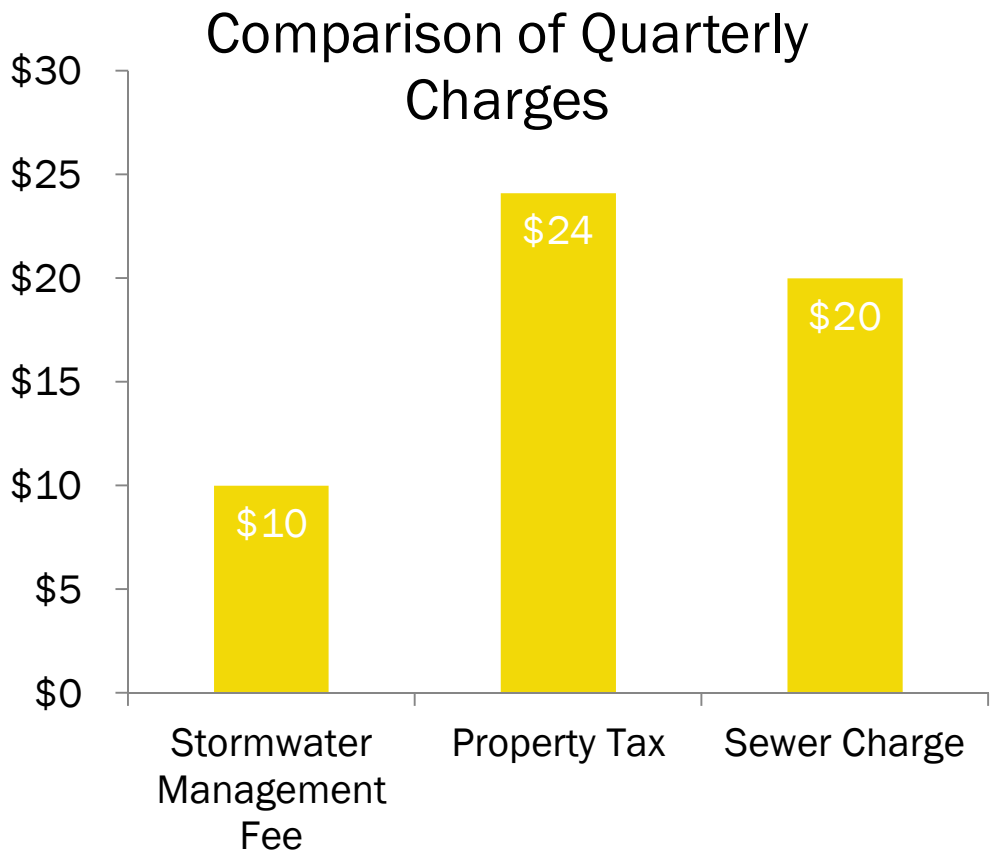
PAYING FOR IT!

IMPERVIOUS AREA FEE ANALYSIS

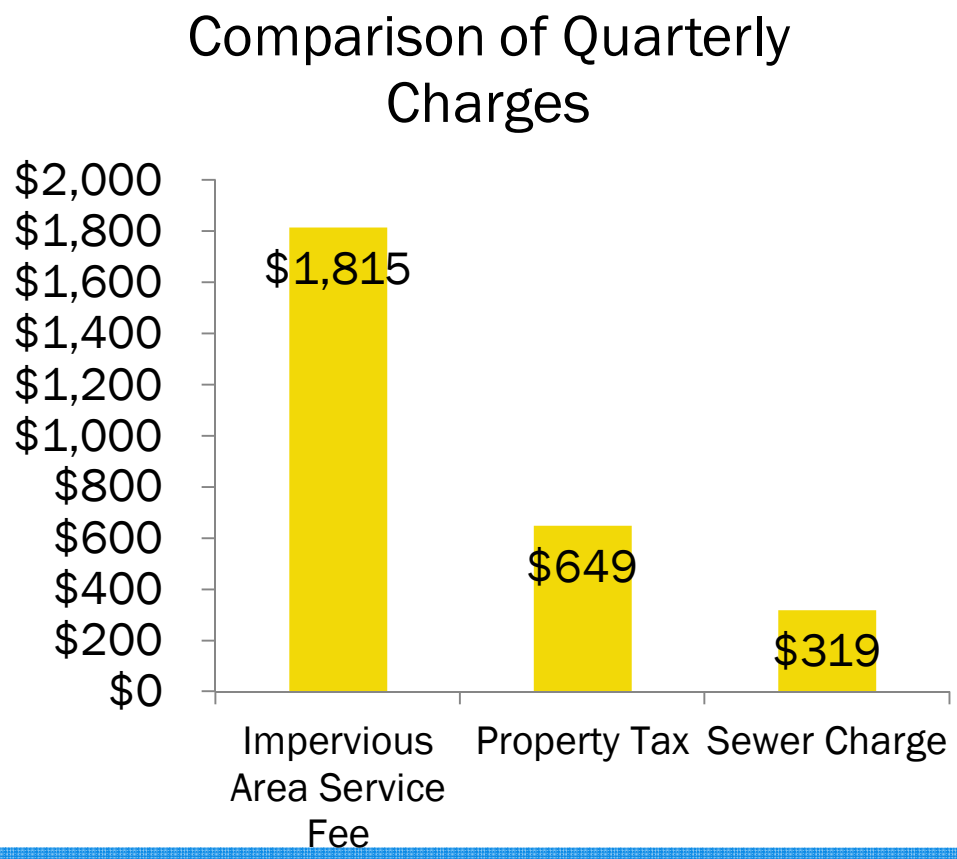


COMPARISON OF CHARGES

AVERAGE RESIDENTIAL



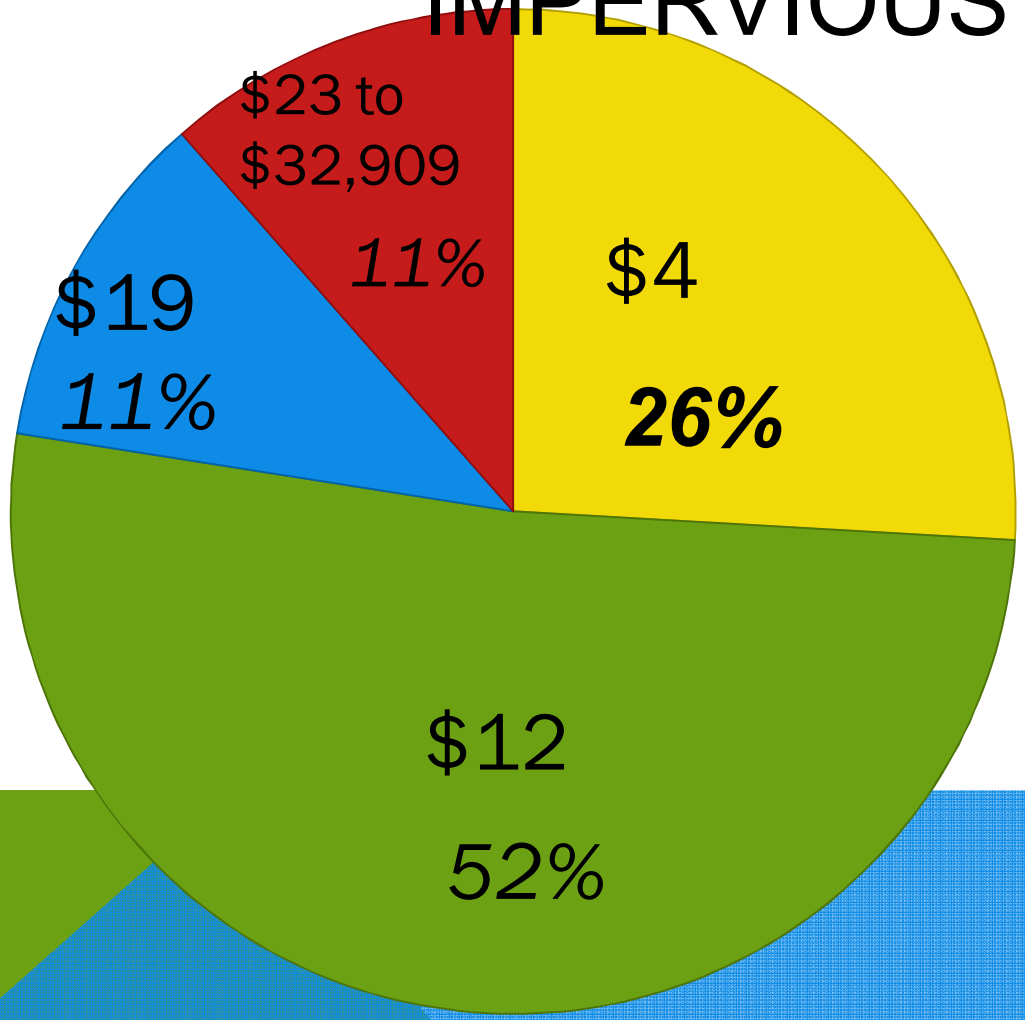
AVERAGE INDUSTRIAL



Rates and charges assume medium level of service
($4,800,000 annual program)
And rate of $7.74/1,000 square feet/quarter

The GIAC recommends:

IMPLEMENTING A RATE STRUCTURE WITH FOUR "TIERS" BASED ON IMPERVIOUS AREA.



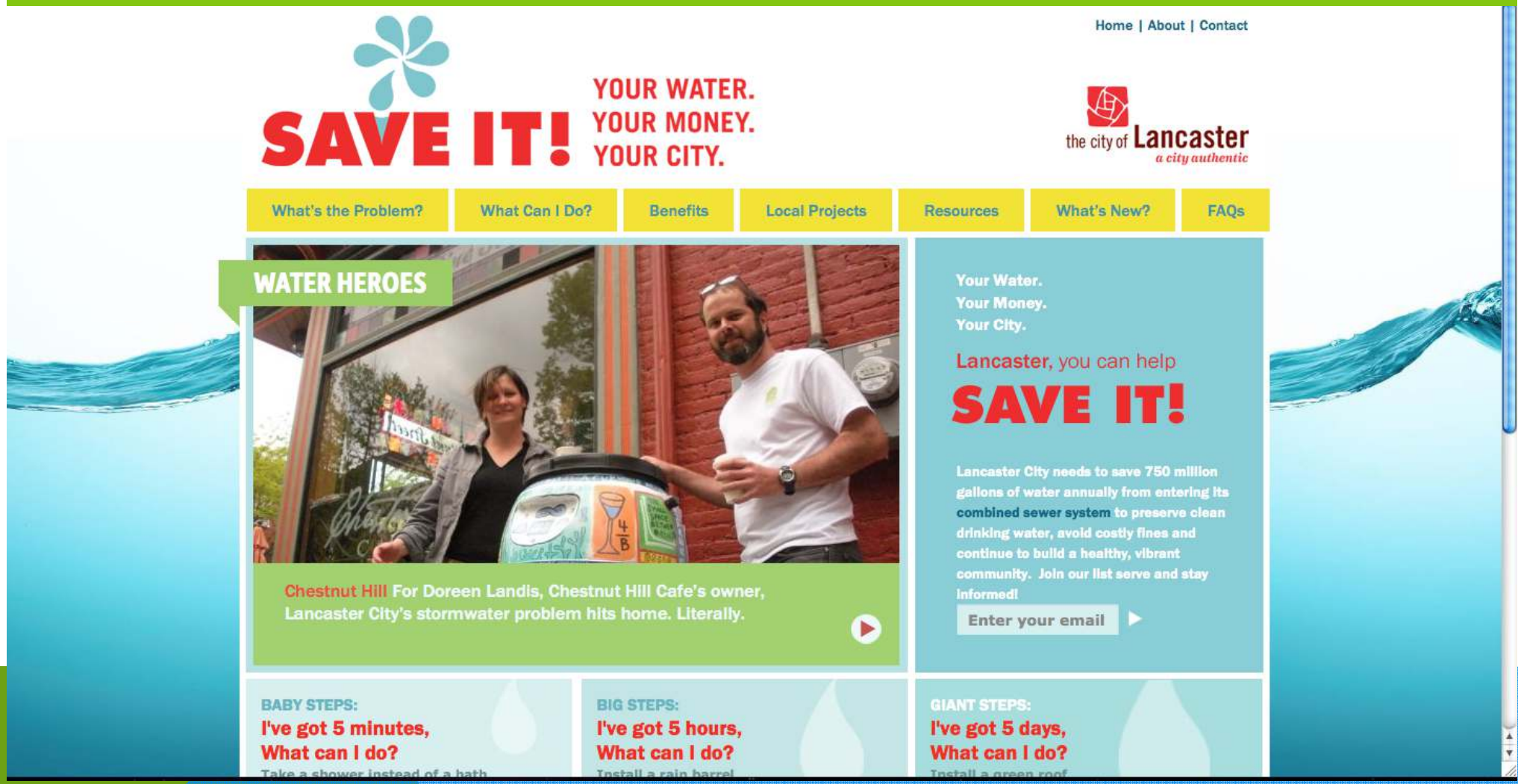
- Tier 1 (0-999 sq. ft.)
- Tier 2 (1,000-1,999 sq. ft.)
- Tier 3 (2,000-2,999 sq. ft.)
- Tier 4 (≥3,000 sq. ft.)

Percentages refer to percent of all properties

Rates are estimated first year fees per quarter, for Medium Level of Service, at $31/1000 sf/yr, or $7.50/1000 sf/qu.

For example – average fee per quarter:
Residential: $10
Commercial: $139

COMMUNITY EDUCATION AND OUTREACH



LESSONS LEARNED OR KEYS TO SUCCESS

- Garner political or high level leadership support early in process
- Start the public education or "setting the stage" from the get go – MESSAGE, MESSAGE, MESSAGE – test the messaging and hone as you proceed.
- Lead by example – NOT "do as I say, not as I (don't) do"!
- Use stakeholders from all affected rate paying classes and geographical representation on a GI advisory group
- Use demonstration projects to rally neighbors around the issues and garner their support of the overall program
- Figure out your funding strategies; use the GI to leverage other funding; and stretch the limited dollars and resources that we all face – INTEGRATED INFRASTRUCTURE
- Grants, grants, grants!
- Include 3 years of maintenance in contract as part of rain gardens since there is a high mortality rate
- Do NOT underestimate the value of educating the public throughout the process

QUESTIONS?

CONTACT INFORMATION

Charlotte Katzenmoyer
Director of Public Works, City of Lancaster

ckatzenm@cityoflancasterpa.com
717-291-4739

Thank you.

Please visit SavetheRain.us

For Updates:
@SavetherainUS &
@MJMillea_OC

Save
The Rain
Clean
The Lake

Every drop counts.
We can all make a difference.

Joanne M. Mahoney
County Executive

Save the Rain

Onondaga County

www.savetherain.us

No one had an iPhone seven years ago....

We didn't even know we needed one....

Onondaga County, New York

- 8 CSO sewersheds
- 7,660 acres
- 49 CSOs
- 380 million gallons/year CSO

Why Are We Saving The Rain?

MUNICIPAL
SEWER & WATER™
FOR SANITARY, STORM AND WATER SYSTEM MAINTENANCE PROFESSIONALS
September 2012
www.mswmag.com

TECHNOLOGY TEST DRIVE: CUES DIGITAL UNIVERSAL CAMERA
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HUMAN SIDE: BRIDGING THE COMMUNICATION GAP
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WATER: CONSERVATION AND CAREFUL MANAGEMENT PRESERVE SUPPLY
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MUNICIPAL SEWER & WATER is FREE!
SEE PAGE 26

A BETTER WAY FORWARD

Onondaga County, N.Y., turns to green infrastructure improvements to alleviate CSOs

PAGE 10

Joanie Mahoney
County executive
Onondaga County, N.Y.

2012-2013 BUYER'S GUIDE
PAGE 60

There Was A Better Way To Clean Up Onondaga Lake Than Building Three More of These

Midland Avenue Sewage Treatment Plant


Smart Gray Investments Made Green Possible
$173 Million
Closing CSO-044
Fuel Sewer Separation Project
The Gray
Clinton Sewershed - Six Million Gallons Subsurface Storage
$77.8 Million
Construction Start - 09/12/2011
What Have We
Been Up To Since
2008?
The Green

The Gray

Smart Gray Investments Made Green Possible

= $173 Million

Metropolitan Waste Water Treatment Facility (90 MGD)

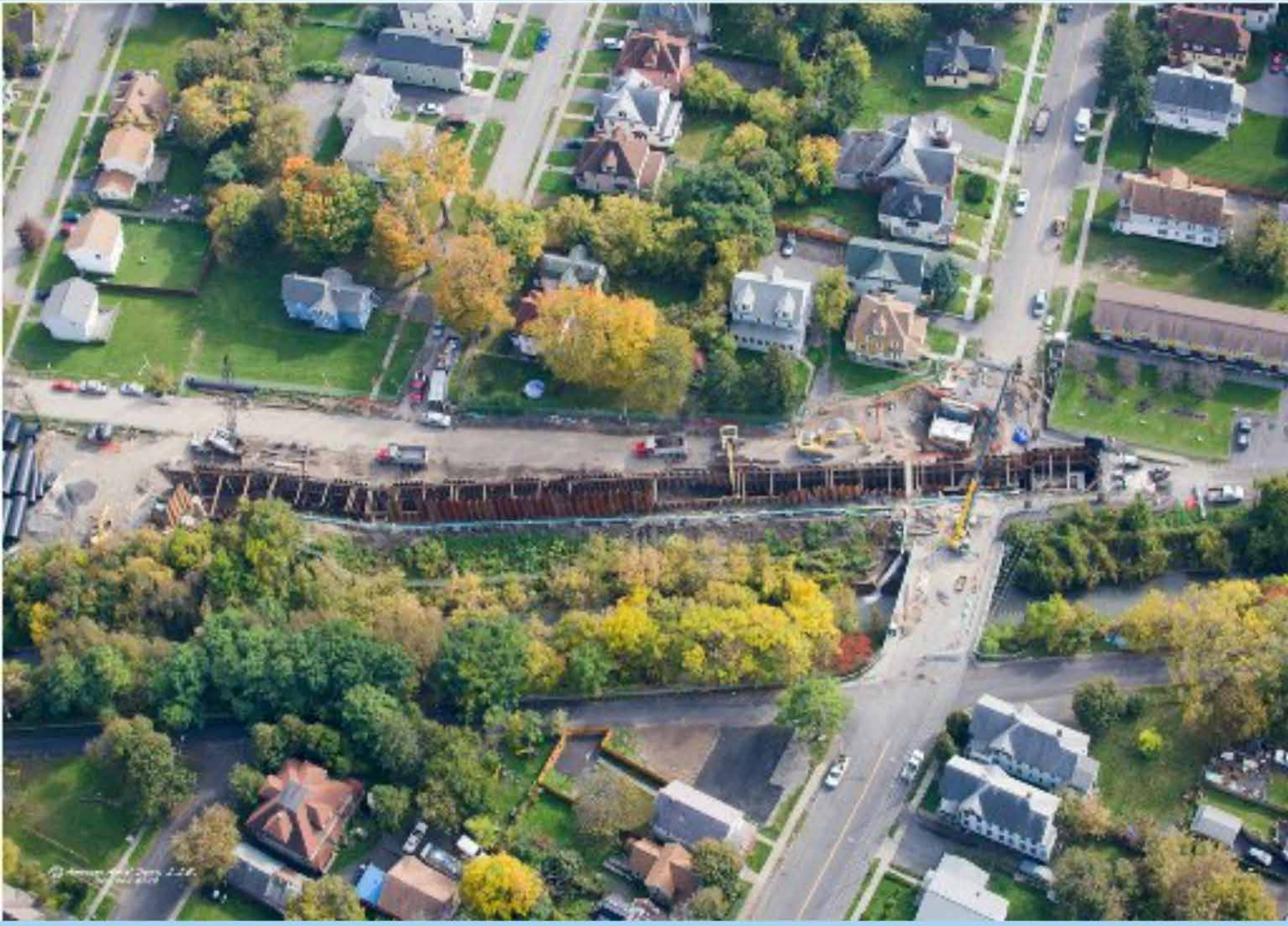
Advanced Amonia and Phosphorous Removal

Gray Projects = $150 Million

- Harbor Brook Interceptor (ARRA)

Gray Projects = $150 Million

- Harbor Brook Interceptor (ARRA)
- Midland Conveyance (CSO 044)
- Clinton Storage Facility
- Harbor Brook Storage Facility and Conveyances
- Sewer separation projects (022/045)
- Facilities Planning
- Floatable Control
- Remaining CSO Facilities Plan



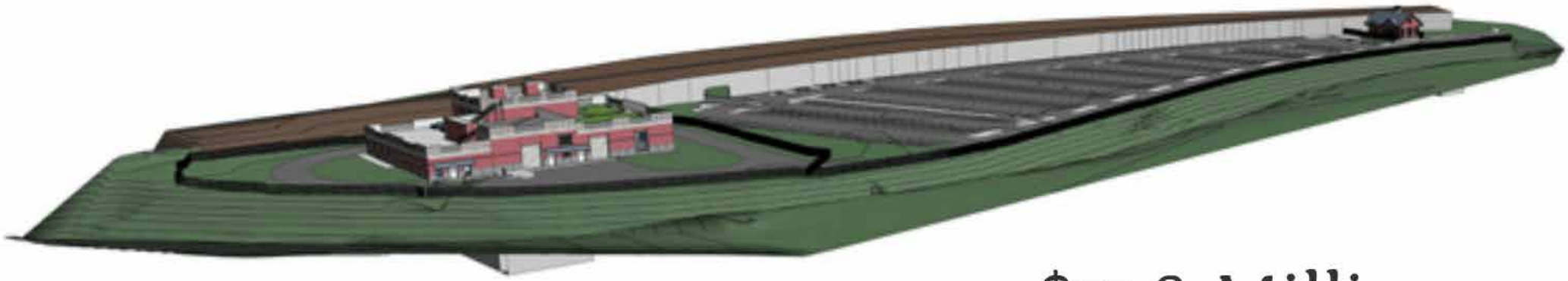
LOWER HARBOR BROOK CSO STORAGE FACILITY

VIEW FROM NORTHEAST

Save the Rain

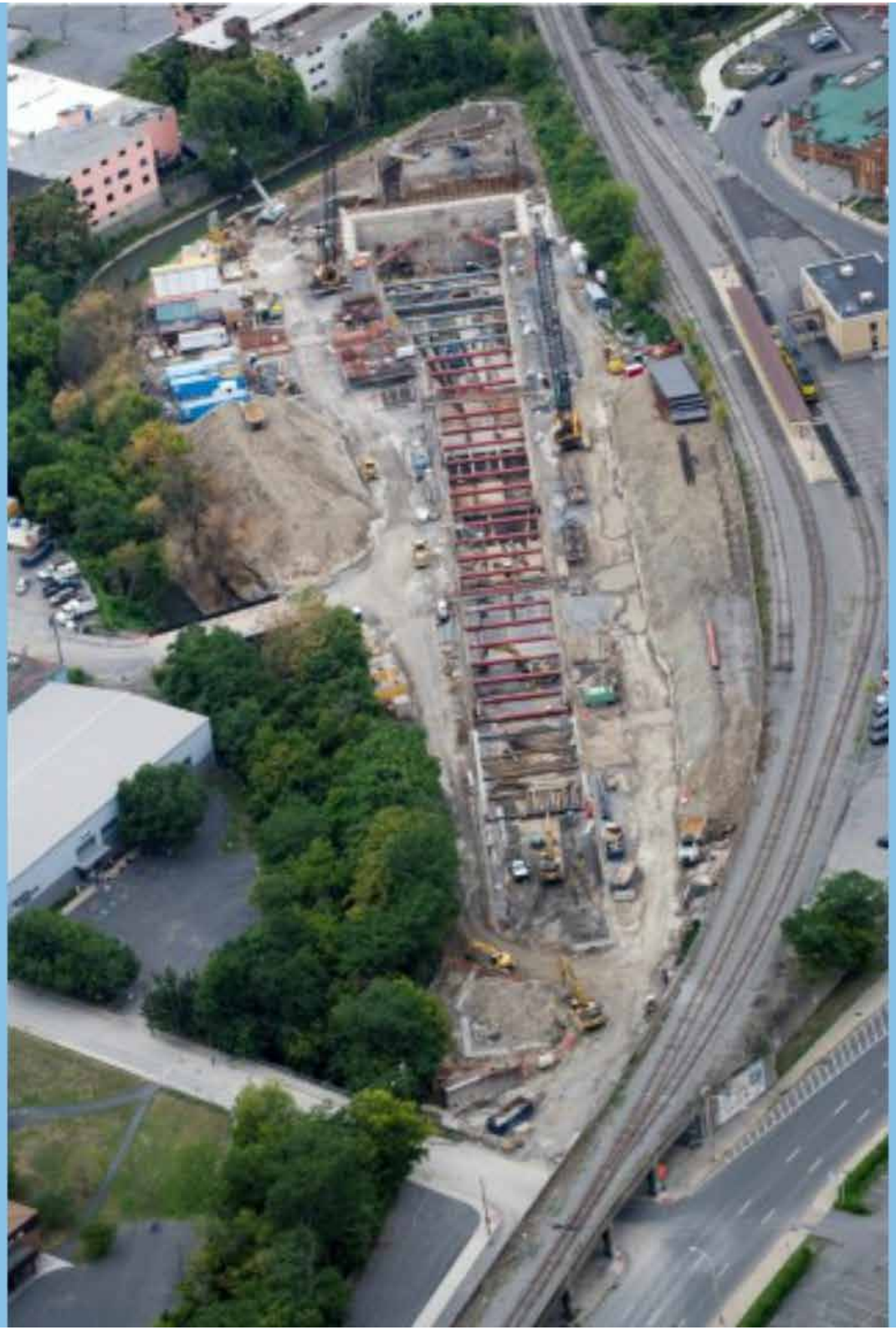

American Aerial Scenes
315-422-4722

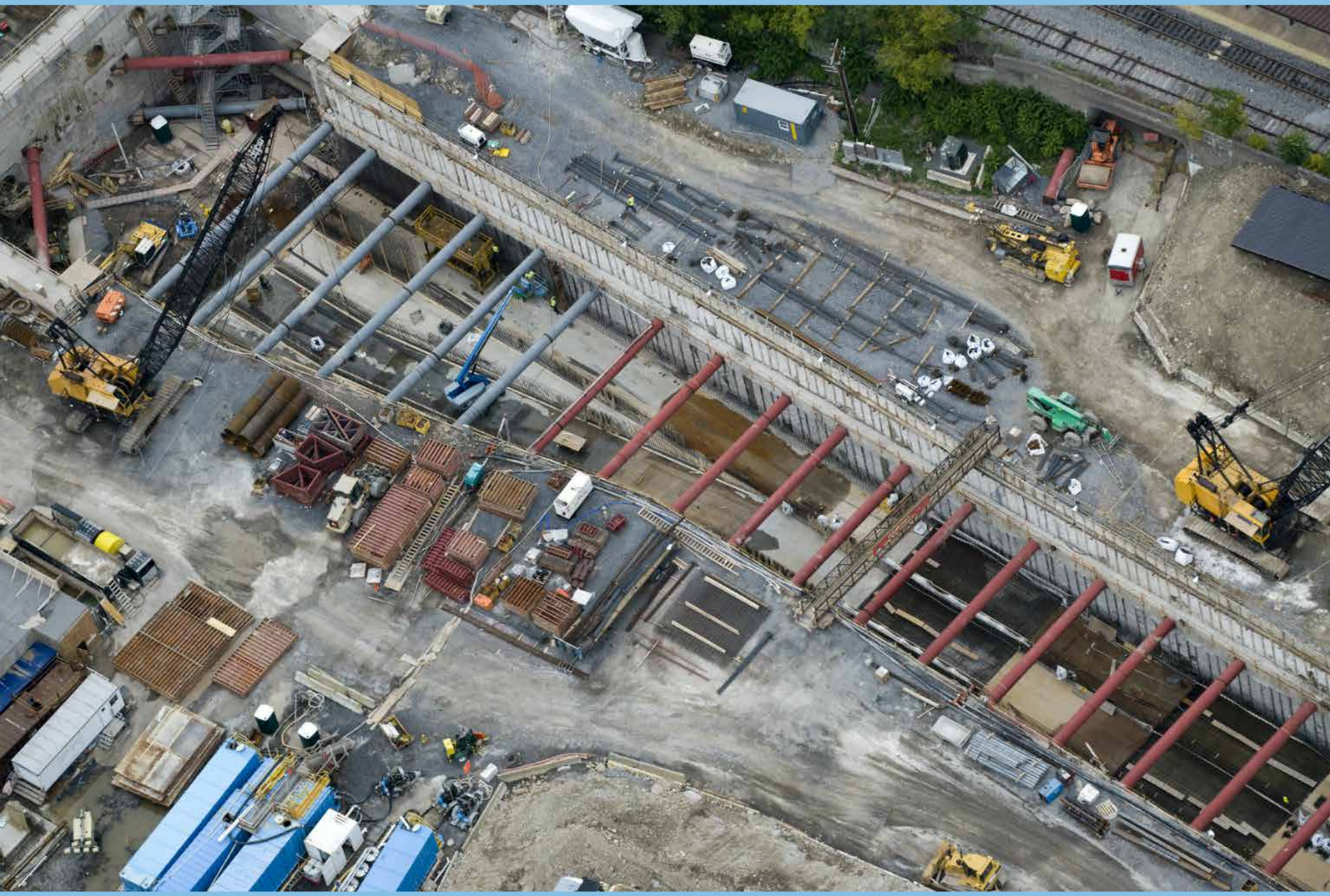
Clinton Sewershed - Six Million Gallons Subsurface Storage

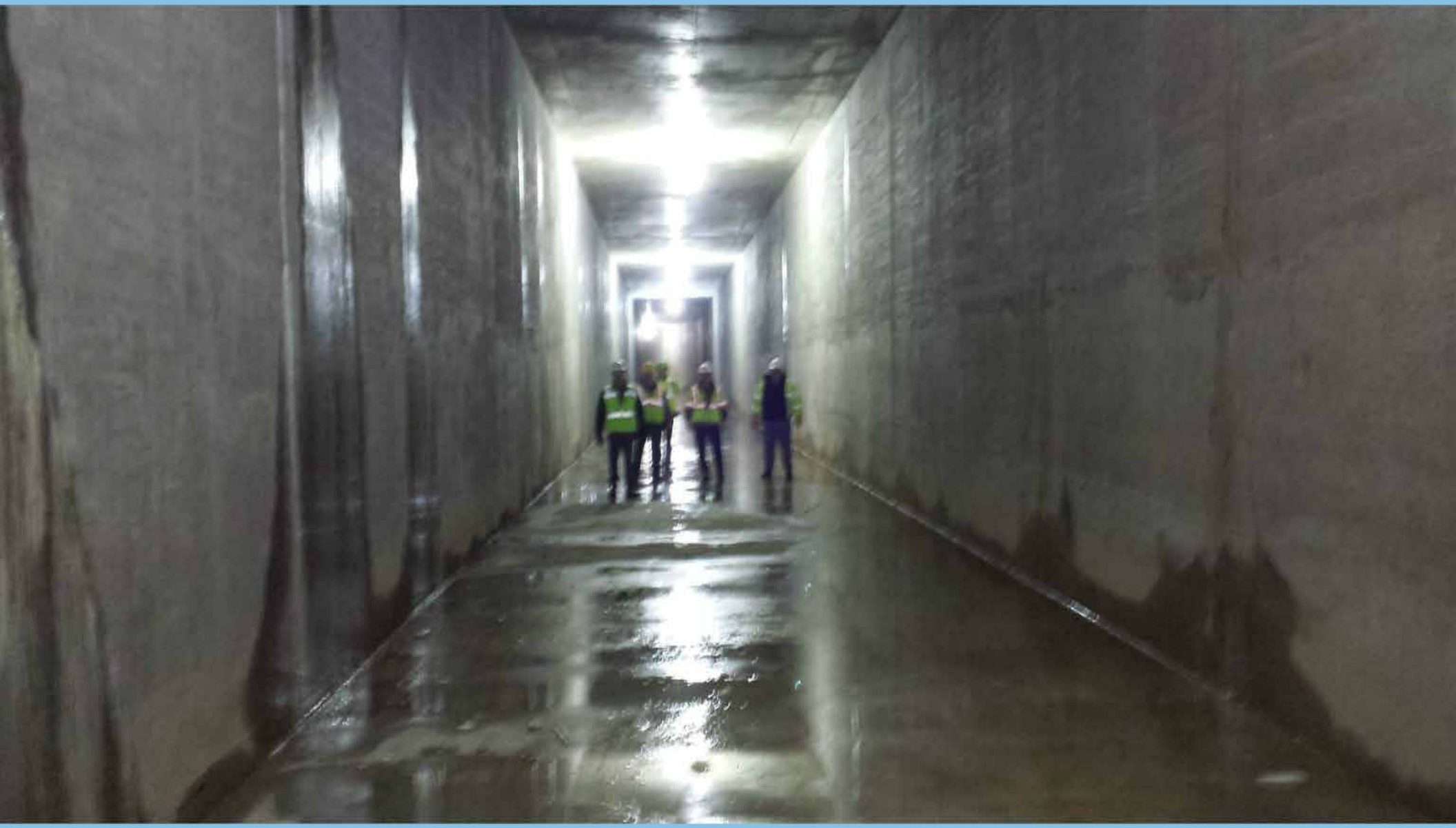


$77.8 Million

Construction Start - 09/15/2011







Smart Gray Investments Made Green Possible
= $173 Million
Fund Sewer Separation Project
The Gray
Clinton Sewershed - Six Million Gallons Subsurface Storage
$77.8 Million
The Green
What Have We Been Up To Since 2008?

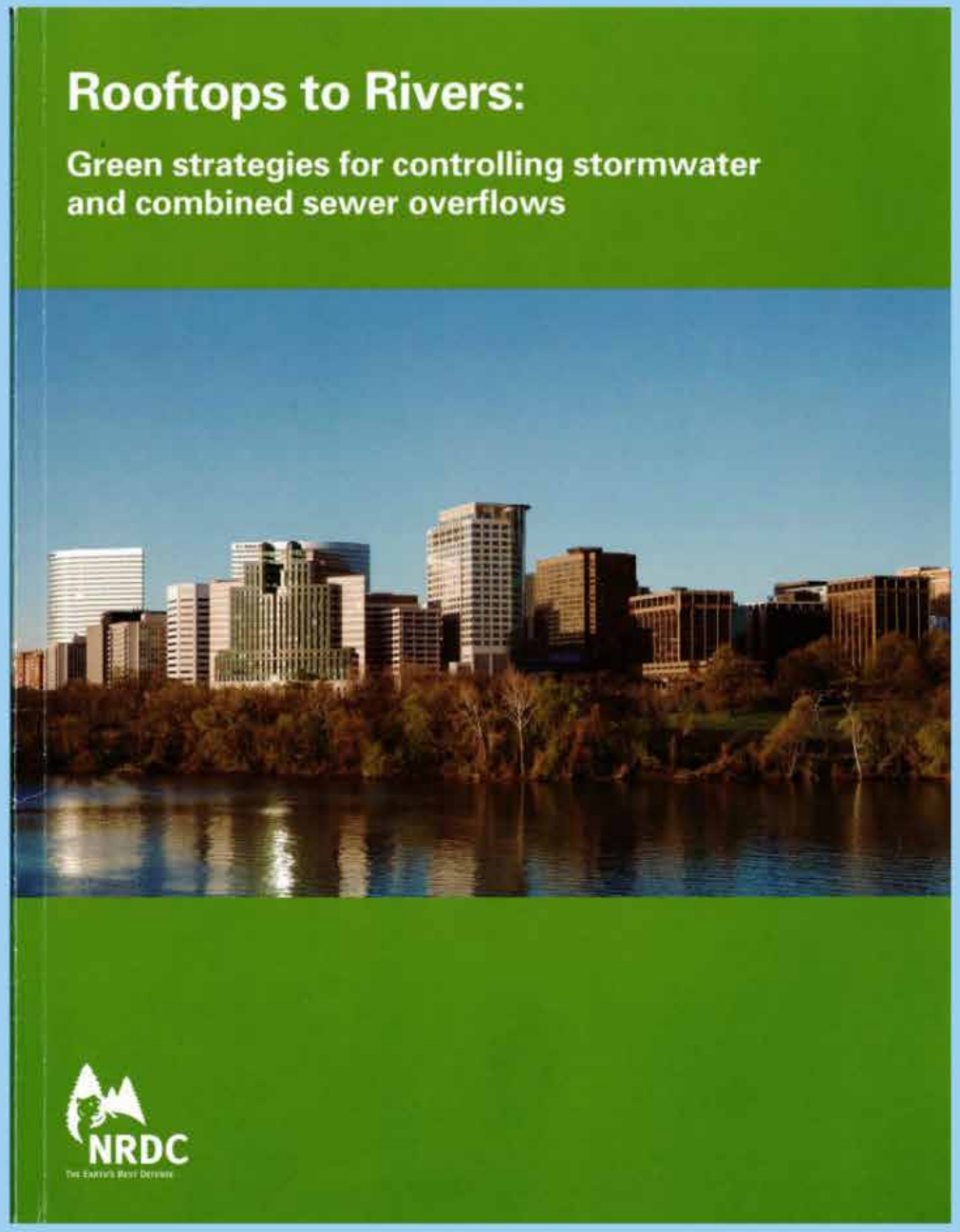
been up to since 2008?

The Green

We Started By Asking, "What If..."

"To work in sustainability is to work in complexity," PATRICIA URQUIOLA

Our Journey Begins:



Published 2006

A Plan Developed:

Onondaga County Department of Water Environment Protection
Green Infrastructure Program Summary

	Where		What	How	Who	How Much		Progress to Date	Where are We Going?	
	Program Type Roll-up (6)	Area / Impervious Source (1)	Primary Green Infrastructure Technology (2)	Implementation Strategy (5)	Owner	Target CSO Reduction Volume (gal)	Target CSO Volume Reduction (% of Total)	Projects Completed or Under Construction (gal)	Additional CSO Reduction from Identified Projects (gal)*	Deficit/Surplus (gal)
Public	01-Streets	Residential/Commercial Roads/Boulevards	Green Streets	Road and Utility Improvement/Redevelopment	City DPW	89,940,000	36%	176,118	14,027,553	-75,736,329
				Greening the Grey	OCWEP					
		Highways	Dry Well/Infiltration Trenches	New York DOT Road Rehabilitation & Reconstruction Program	New York DOT					
		Median/Traffic Islands	Bioretention	Road and Utility Improvement/Redevelopment	City DPW					
		Sidewalks	Porous Pavement	Sidewalk Reconstruction with new detail	City DPW					
		Streets/ROW (Ad Hoc)	Enhanced Street Trees	Road and Utility Improvement/Redevelopment	Parks					
				Canopy Study Planting Plan	Parks					
	02-Parks & Open Space	Parks (including adjacent Streets)	Disconnection into Park	Develop Park Green Plan	Parks	13,992,000	6%	1,504,578	2,501,789	-9,985,633
		Stream Inflow Removal	Use natural area & drainage to detain/remove inflow	Delineate Drainage Area, monitor & update model (e.g. Thorden Park; Colvin St. / Oakwood Cementary)	Parks					
		Stormwater Areas (e.g. EBSS)	Constructed Wetland	Feasibility Studies	OCWEP					
		Vacant Lots	Urban Forestry/Gardens	Vacant Land Strategy	Parks					
	03-Parking	Parking - Public	Porous Pavement	City/County	City/County	6,510,000	3%	2,701,023	4,183,162	374,185
	04-Public Facilities	Public Schools	All	School District, Reconstruction program	SCSD	14,003,000	6%	287,000	9,755,595	-3,960,405
				Partner Programs	ESF, Other					
		County Facilities	Green Roof, Capture Reuse	Owner Redevelopment Schedule	Facilities					
				Libraries	Facilities					
	05-Roofs	Flat Roofs	Green Roof	County Facilities	Facilities	3,201,000	1%	146,979	5,348,550	2,294,529
Private	06-Impervious Area Data	Residential Roofs/Driveways	Disconnection	Model Calibration to measured DCIA / Flow	CH2M HILL	35,474,000	14%	29,800,000	0	-5,674,000
	07-Voluntary	Flat Roofs	Green Roof - Private	Track	various	11,372,000	5%	645,033	0	-10,726,967
		Parking Lots	Porous Pavement - Private							
		Residential	Downspout Discon w/ Rain Barrel							
		Residential	Downspout Discon w/ Cistern or Rain							
		Residential Driveways	Driveway Disconnection							
		Commercial/Industrial	All							
	08-Green Improvement Fund (GIF)	All	All	Review / Administer / Track Awards	OCWEP	11,372,000	5%	1,132,000	1,252,500	-8,987,500
	09-Ordinance	All	All	Revise ordinance for redevelopment to manage 1 inch of rainfall. Develop checklists/procedures & track	City	46,257,000	19%	3,870,767	0	-42,386,233
	10-Impervious Area Based Rate Incentive	Commercial/Industrial	All	Allocate ACJ funding requirements by impervious area to incentivize retrofit	various	3,452,000	1%	0	0	-3,452,000
		Residential								
	11-Non GIF Incentive	Commercial/Industrial	All	Track	various	11,372,000	5%	305,000	188,000	-10,879,000
		Residential								
					Total CSO Reduction (gal)	**247,000,000**	**100%**	**40,568,498**	**37,257,149**	**-169,174,353**

*** In progress**

A Plan Evolves:

ONONDAGA COUNTY CSO PROGRAM:

Green Infrastructure Plan

Prepared for
Onondaga County,
Syracuse, New York

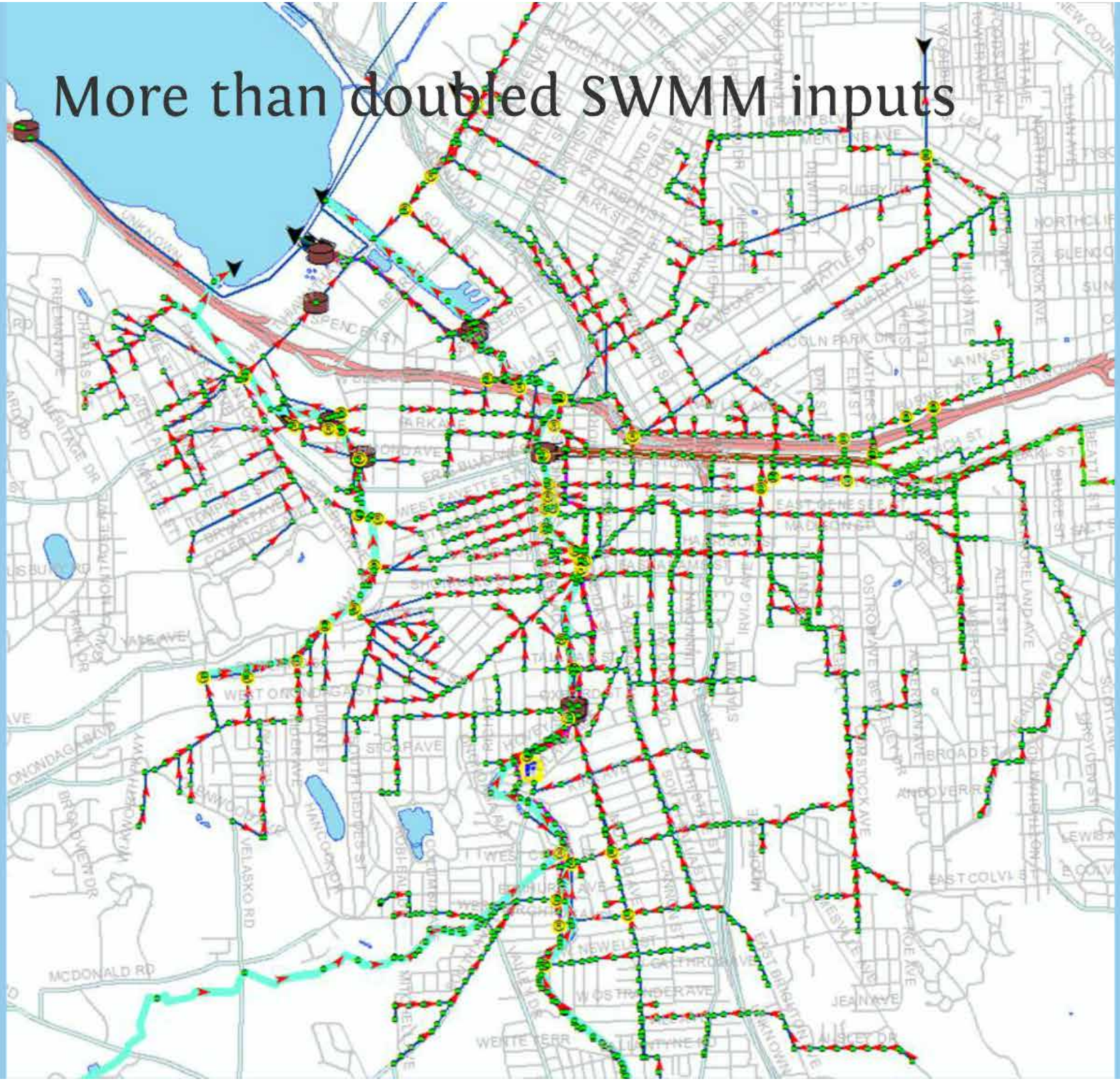
Onondaga County Department of
WATER ENVIRONMENT PROTECTION

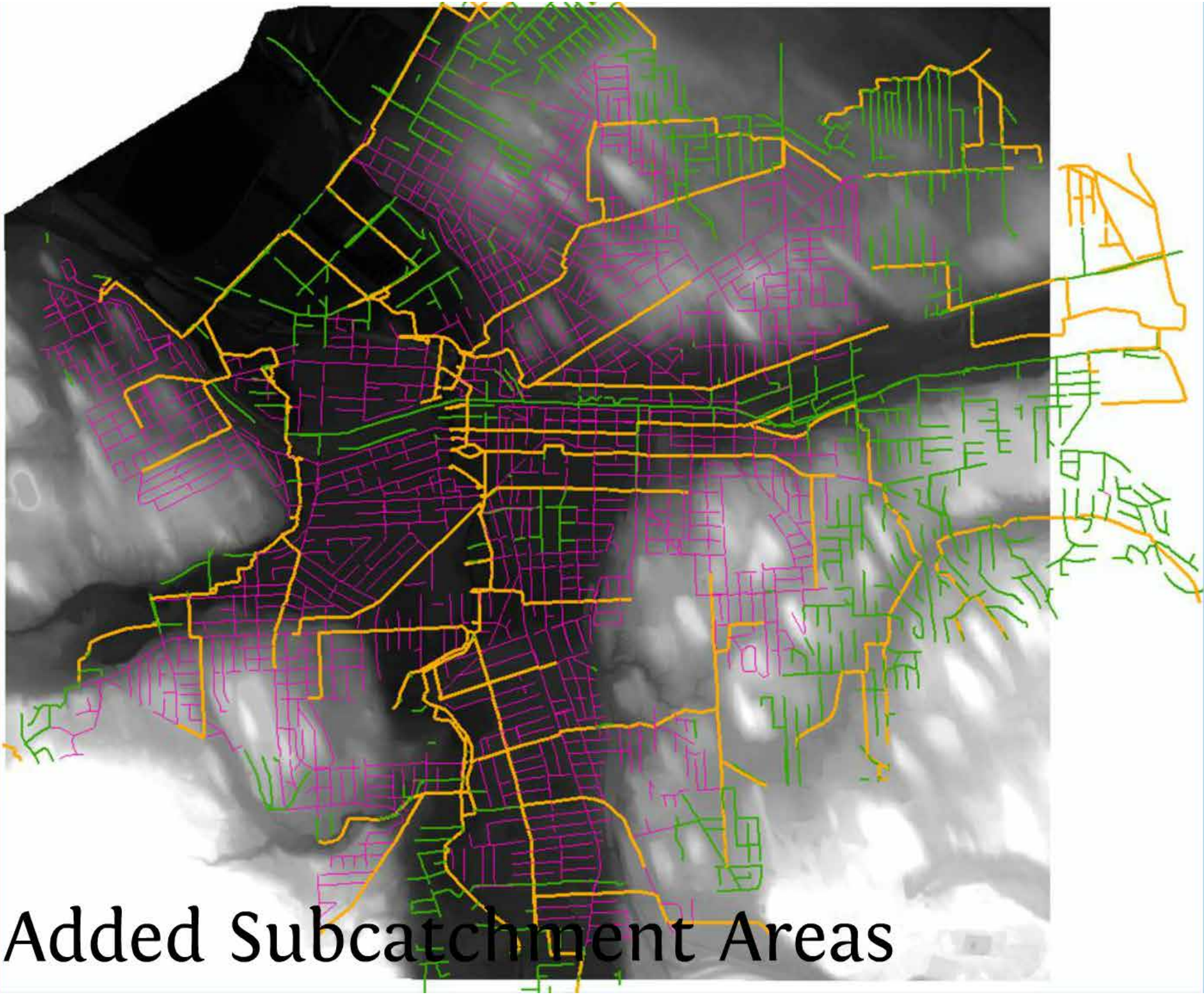
NOVEMBER 2010

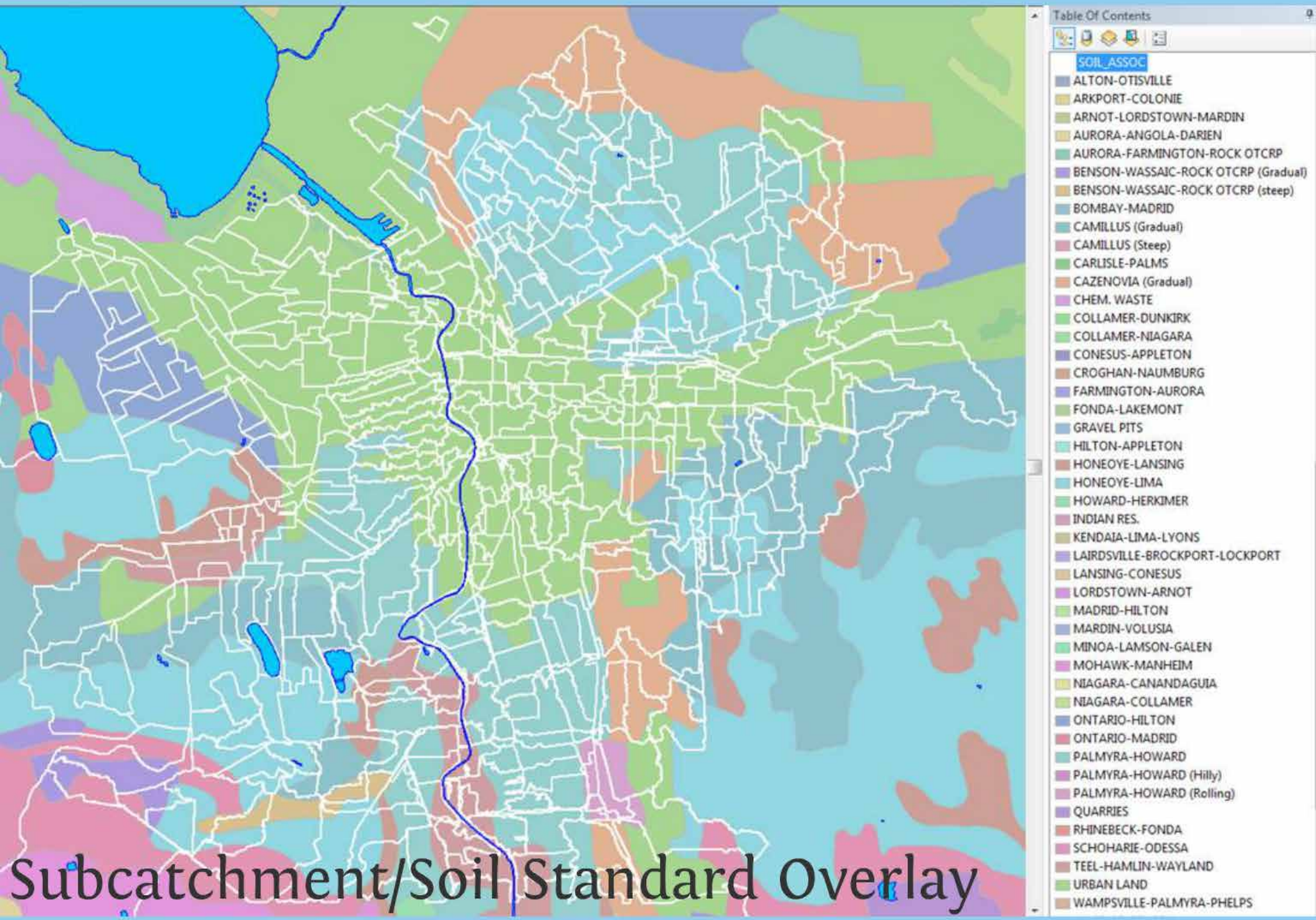
Prepared by
CH2MHILL.

Storm Water Management Model

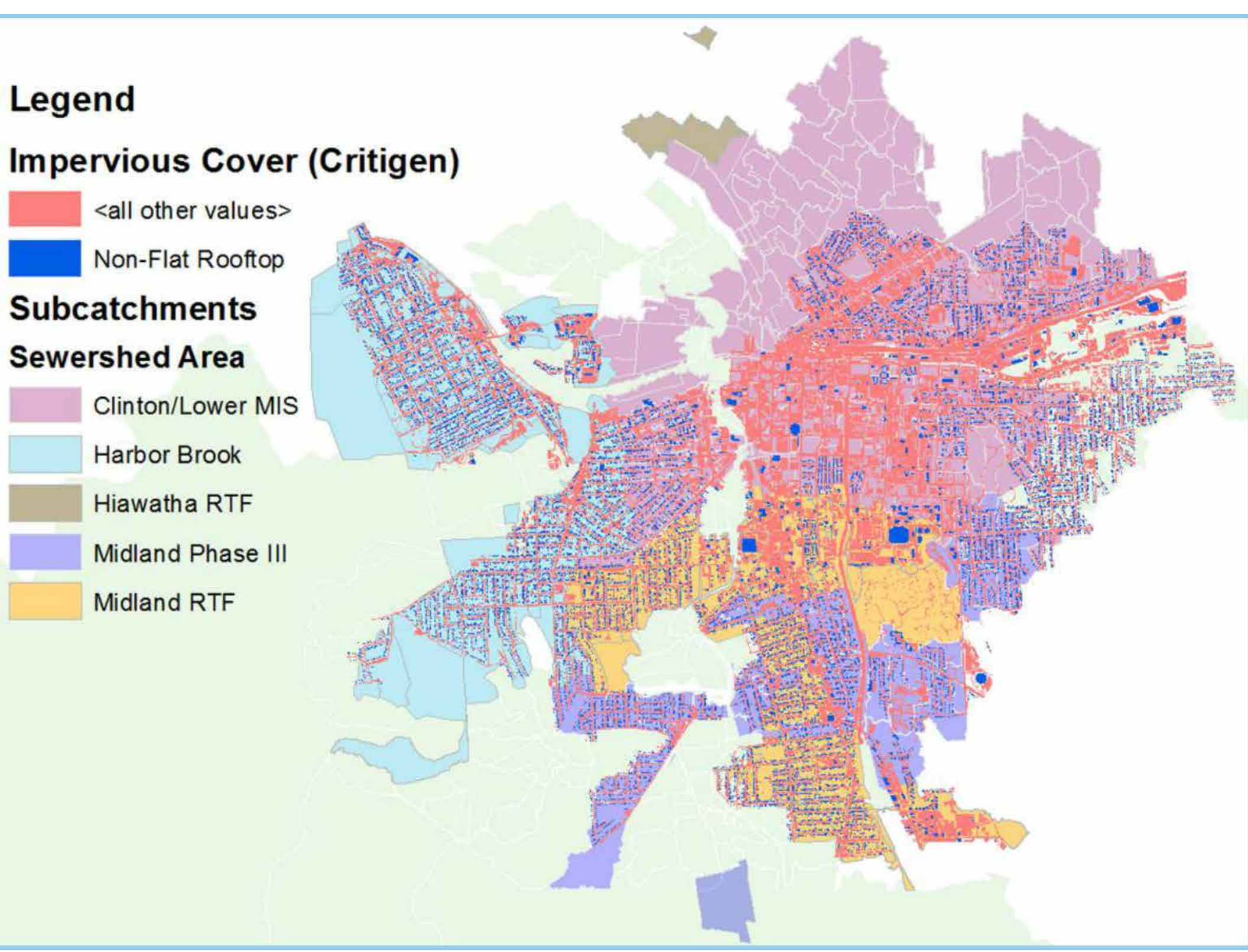
More than doubled SWMM inputs

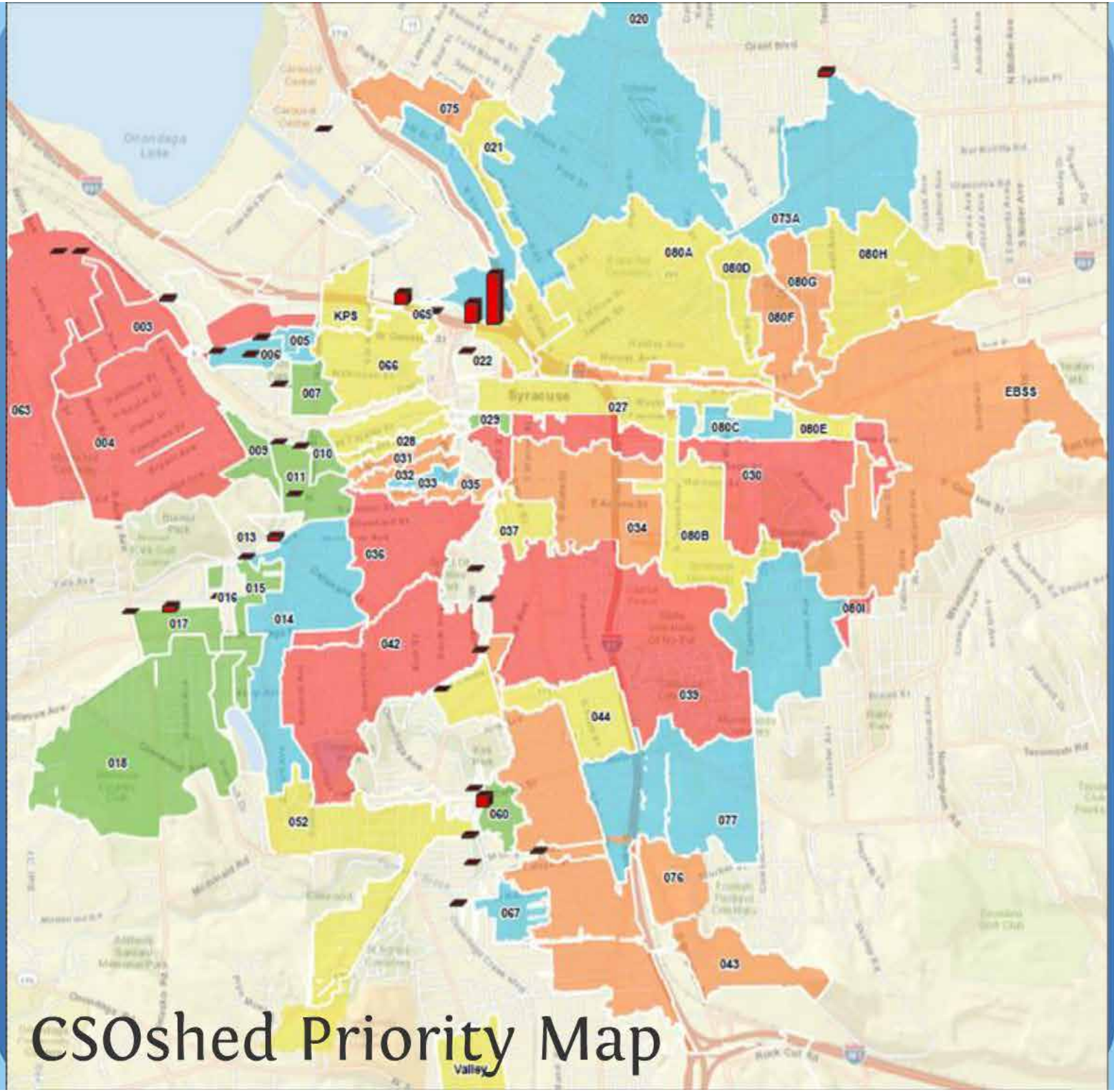



Added Subcatchment Areas



Subcatchment/Soil Standard Overlay


Legend
Impervious Cover (Critigen)
<all other values>
Non-Flat Rooftop
Subcatchments
Sewershed Area
Clinton/Lower MIS
Harbor Brook
Hiawatha RTF
Midland Phase III
Midland RTF



CSOshed Priority Map

We Started By Asking, "What if.."

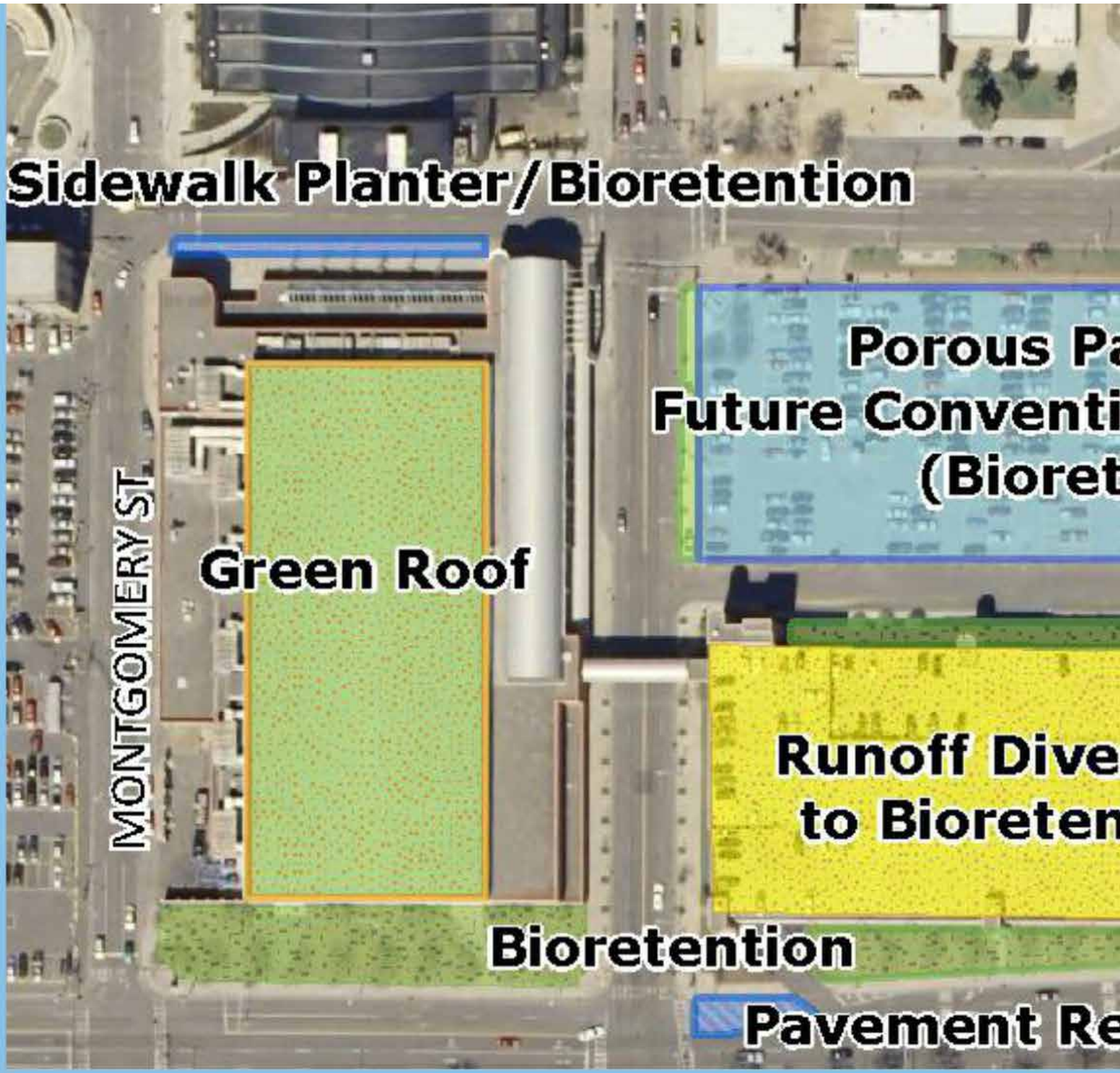
11/12/2010

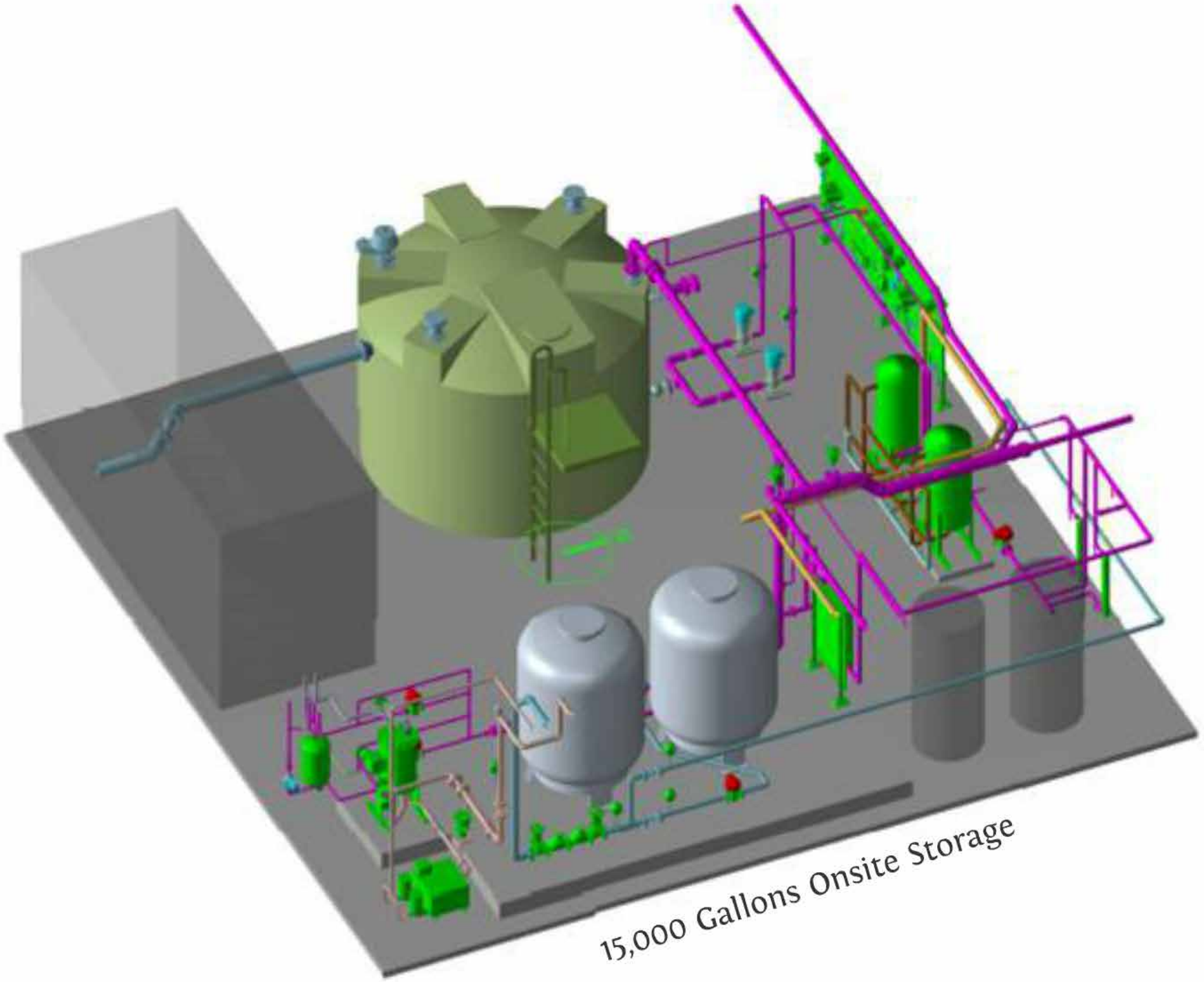
County Facilities

Greening the Civic Strip Utilizing Multiple Green Infrastructure Technologies

Location	Green Technology	Impervious Drainage Area (SF)	Estimated CSO Volume Reduction
Court House	Vegetated Roof	20,100	290,203
	Bioretention	6,100	88,072
Civic Center	Vegetated Roof	68,600	990,444
War Memorial	Cistern System	20,300	293,090
Convention Center	Vegetated Roof	58,700	847,508
	Pavement Removal/Bioretention	9,650	139,326
	Bioretention	15,100	218,013
Sheriff's Office HQ	Vegetated Roof	15,100	218,013
	Porous Parking Lot	11,550	196,628
Criminal Court House	Vegetated Roof	22,400	323,410
	Porous Parking Lot	30,750	523,491
Public Safety Building	Vegetated Roof	29,000	418,701
Justice Center	Vegetated Roof	53,200	768,099
Steam Station	Vegetated Roof	3,400	49,089
Community Plaza	Bioretention	43,000	620,832
County Parking Lot	Porous Parking Lot	53,940	918,280
Convention Center Parking Lot	Porous Parking Lot	95,950	1,633,462
Convention Center Garage	Downspout Diversion to Bioretention	72,500	1,046,752
	Pavement Removal/Bioretention	6,650	96,012
S. Townsend St. Median	Enhanced Street Trees	20,520	252,988
	TOTAL	**656,510**	**9,932,412**

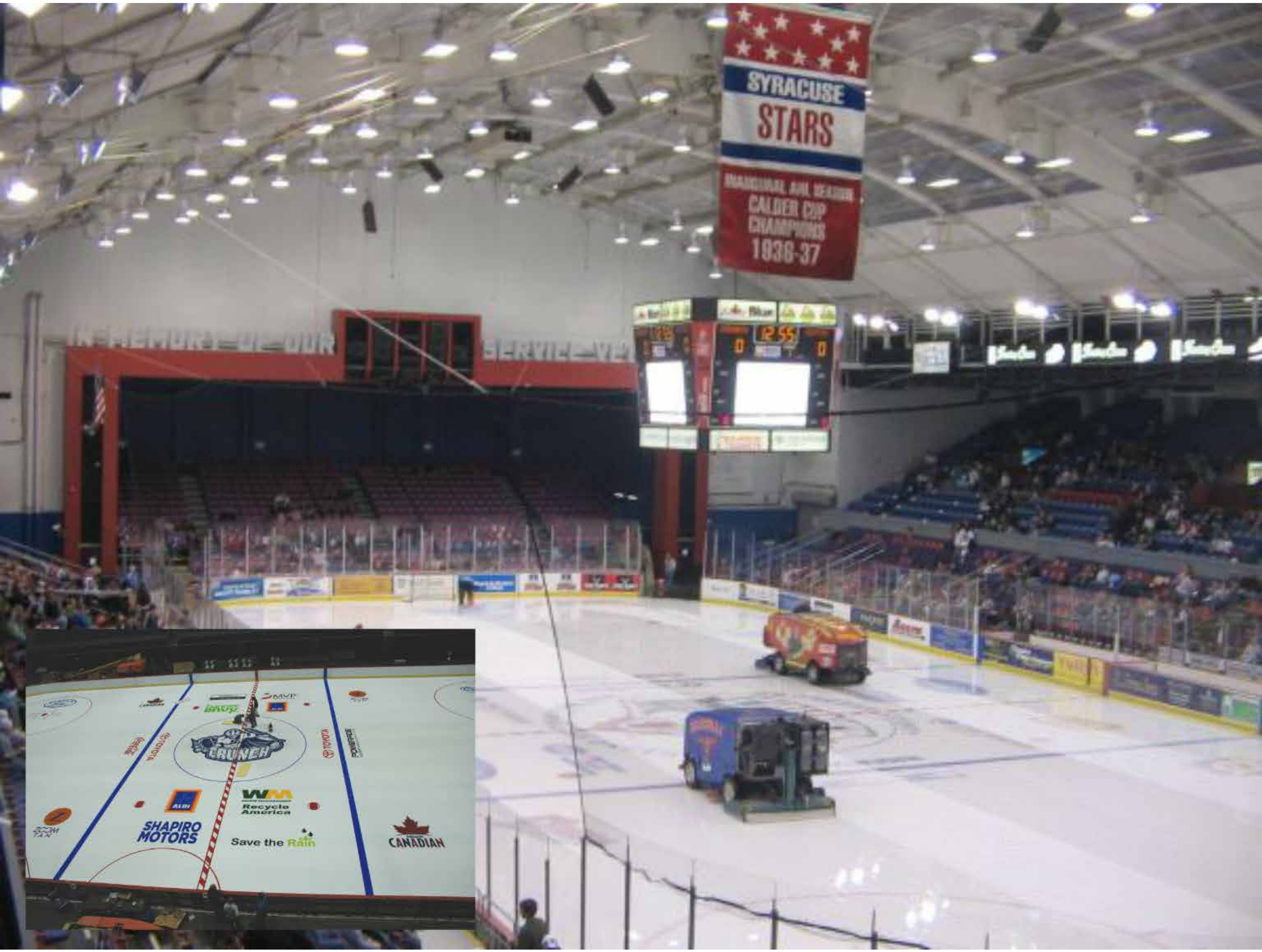
Save the Rain

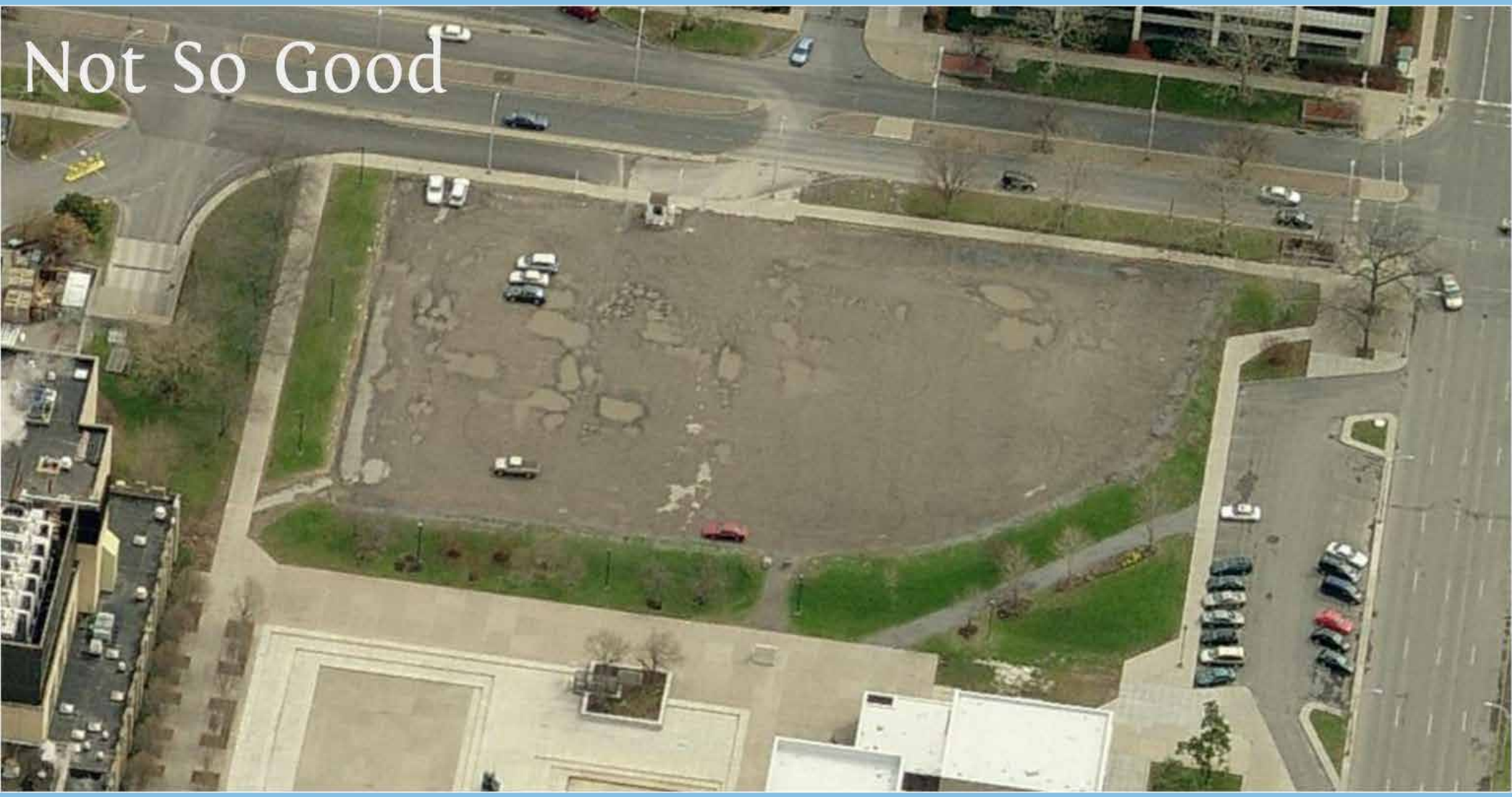

Sidewalk Planter/Bioretention
Porous Pa
Future Conventi
(Bioret
MONTGOMERY ST
Green Roof
Runoff Dive
to Bioreten
Bioretention
Pavement Re



15,000 Gallons Onsite Storage

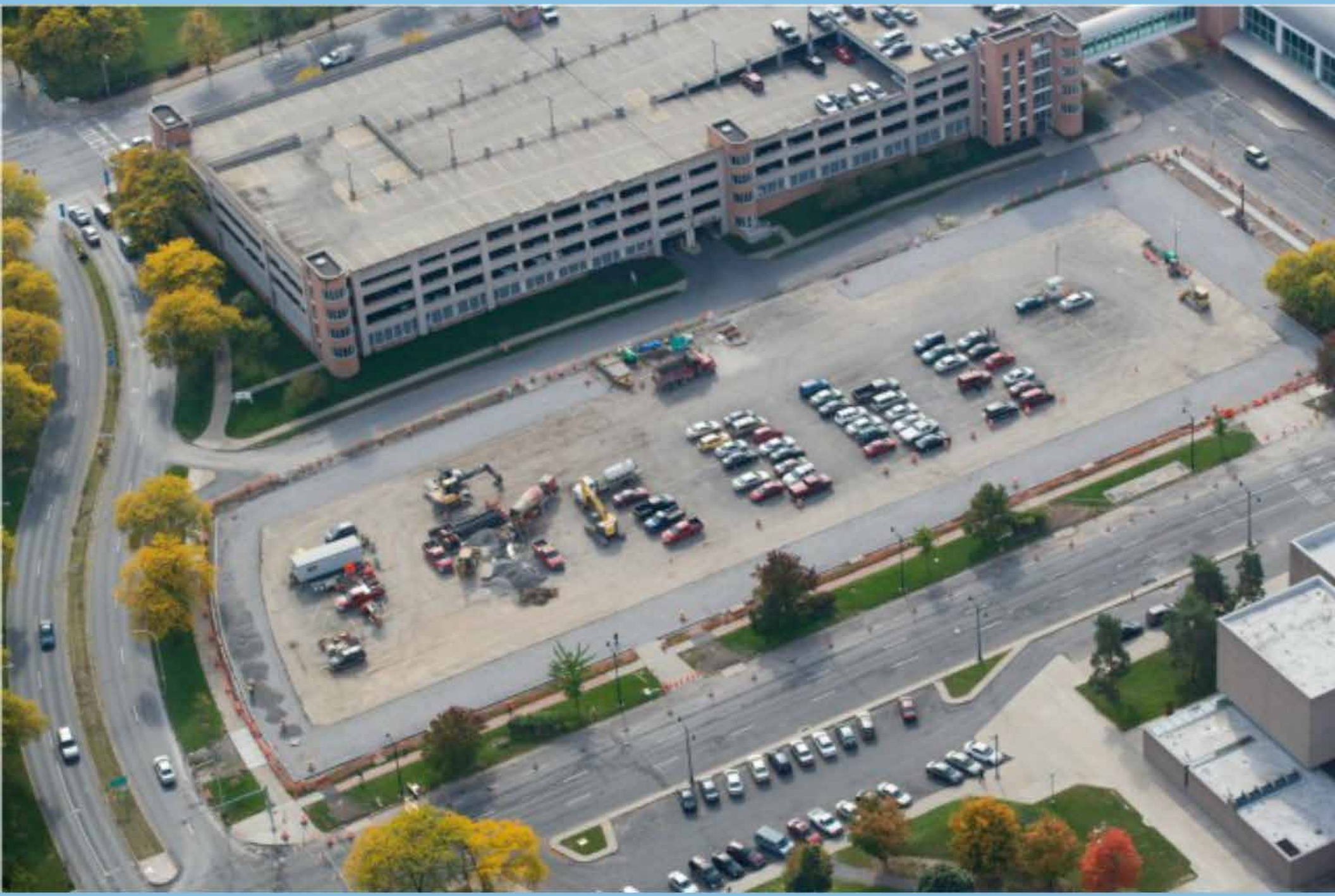

CAUTION
Equipment Starts
Automatically
RAIN WATER
RAIN WATER
05/02/2013


SYRACUSE
STARS
CALDER CUP
CHAMPIONS
1936-37
CRUNCH
SHAPIRO
MOTORS
Recycle
America
Save the Rain
CANADIAN


Not So Good

Getting Better

On-Center Surface Lot



On-Center Surface Lot

Further Action Needed: The Save the Rain website will continue to act as the primary public outreach method for all of the Save the Rain green projects. However, targeted outreach will occur in more highly populated and sensitive areas to inform the public of the project.

Project Metrics Summary

Embrace The Change (order)

Bid Price	$529,040
Change Order Total (as of 12/31/11)	$149,778.39*
Total Project Cost (as of 12/31/11)	$529,040
Total CSO Reduction	1,676,000 gallons
Cost per CSO Reduction	$0.32 per gallon

*Asphalt Thickness Change Order to be paid for out of OC Facilities Management Budget


Health Care Center
VOLT


2010


2012


2010


2012

Convention Center

Sheriff's Office HQ

Criminal Court House

Public Safety Building

Justice Center

Steam Station

Community Plaza

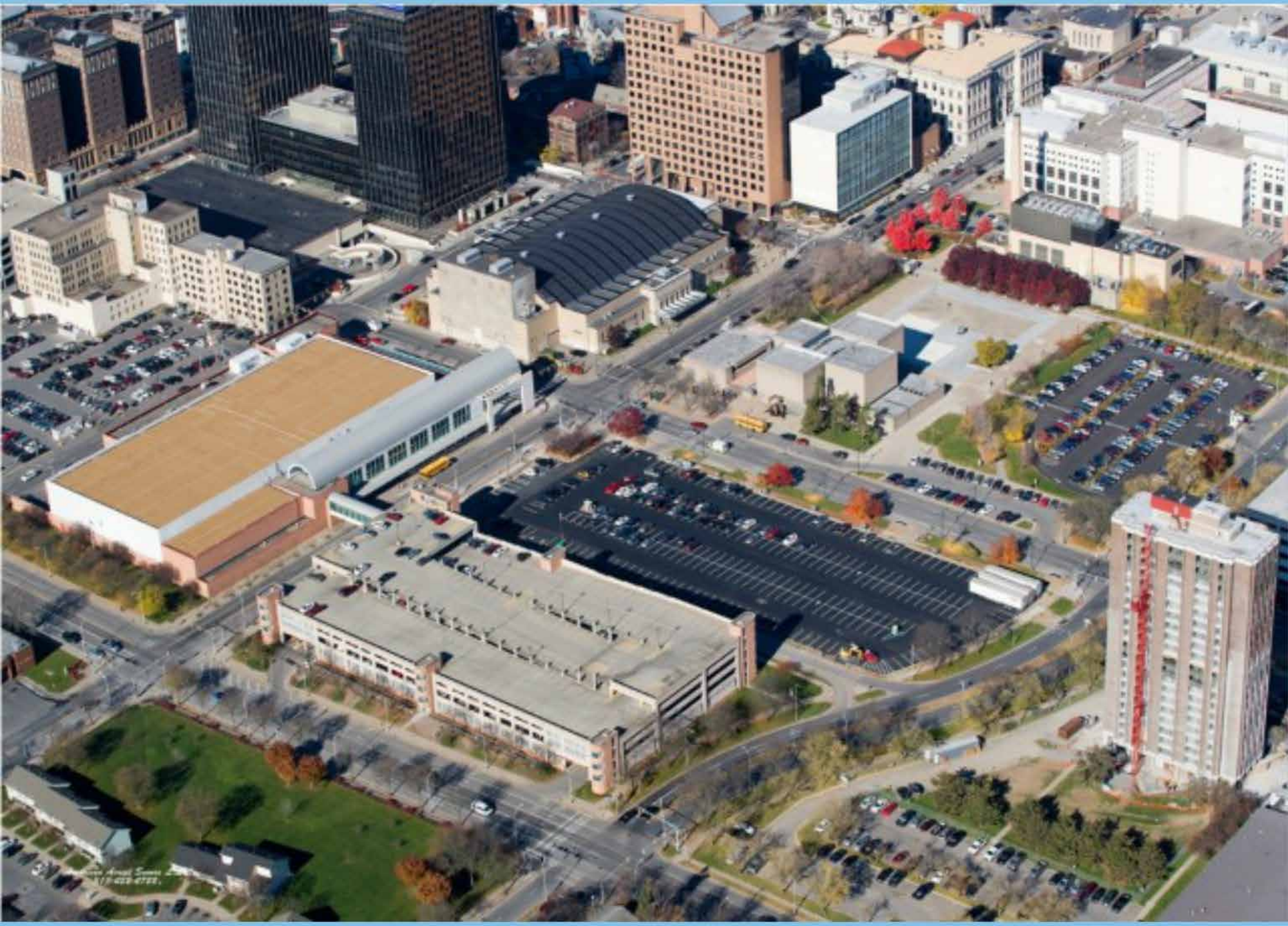
County Parking Lot

Convention Center Park

Convention Center Gar

S. Townsend St. Media

From This...



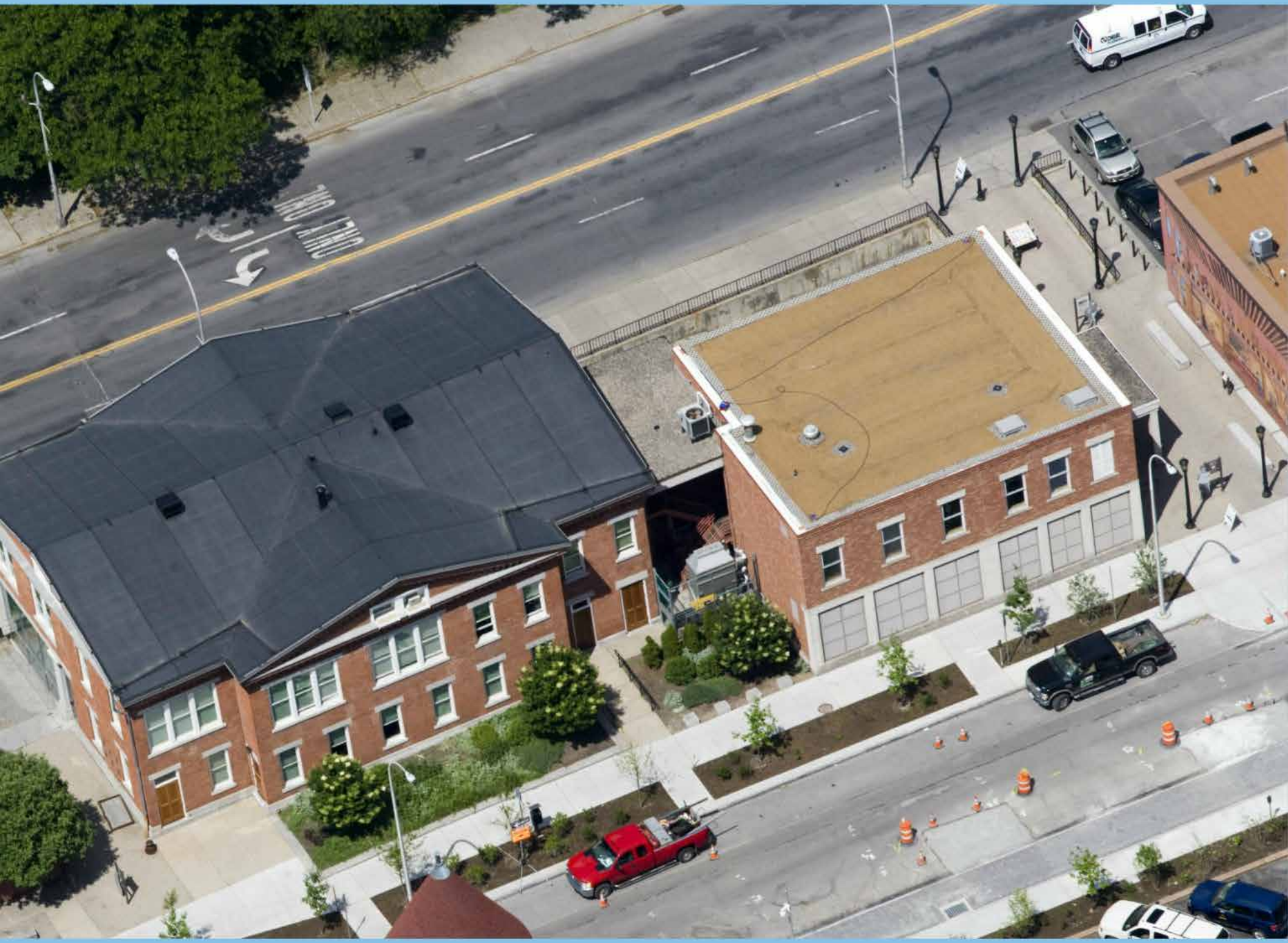
What About Green Streets, Do You Have Any Of Those?

Water Street Gateway Project - Before

nose?

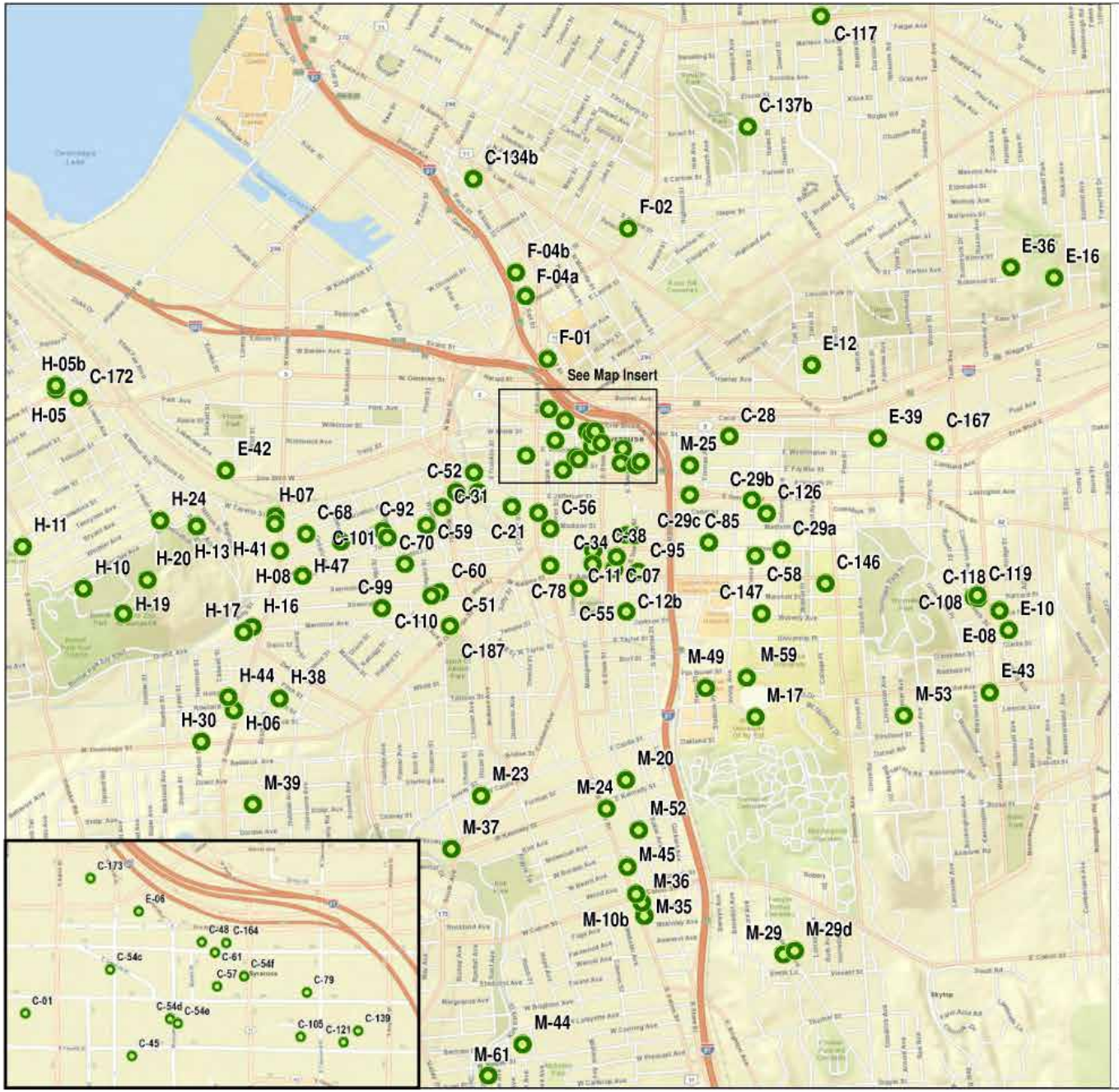
Water Street Gateway Project - Before

Viewing towards the Northwestern Corner of E. Water St. and S. State St. The old gym bldg is shown here with a greenhouse, a section of greenroof and solar panels on its rooftop, and the Water Street is shown as a green street for stormwater management.




E28

2011



Save the Rain...

Onondaga County Department of WATER ENVIRONMENT PROTECTION

Green Infrastructure Project Status
December 2012

GI Projects Completed/Substantially Complete

C-01	City Parking Lot #21
C-07	Municipal Parking Garage: OnCenter
C-09	County Parking Lot B at S. Townsend Street
C-101	Green Park: Skiddy Park (Site)
C-105	GIF#041 CNY Philanthropy Center
C-108	GIF#044 American Beech
C-11	Commercial Green Streets: Harrison Street
C-110	Seymour Academy Parking Lot
C-117	Tree Plantings in Court Woodlawn
C-118	GIF#047 Gemmi Boy
C-119	GIF#048 Mister Lady Bug
C-121	GIF#051 Park Central Presbyterian Church
C-126	GIF#056 Copper Beech Comm. Student Housing
C-12a	Townsend St Median Revegetation Phase 1
C-12b	Townsend St Median Revegetation Phase 2
C-134b	Tree Planting at Union & Demong Parks
C-137b	Tree Planting at Schiller Park
C-139	GIF#060 Kopp Billing Agency
C-146	Havens Parking Lot at SU
C-147	Waverly Parking Lot at SU
C-164	GIF#074 Synapse Downtown
C-167	GIF#078 Teall Centre
C-172	GIF#081 Brooklyn Pickle
C-173	GIF#082 100 Clinton Square
C-186	Tree Pit Pilot Project
C-187	IMA: Syracuse Housing Authority
C-21	GIF#004 Jefferson Clinton Commons
C-28	IMA: SUNY Upstate: Biotechnology Center
C-29a	Connective Corridor Phase 1 - Cont.1 (Univ. Ave)
C-29b	Connective Corr Phase 1 - Cont. 2 (E. Genesee St)
C-29c	Forman Park
C-31	GIF#010 Near Westside Initiative Lincoln Supply
C-34	Green Roof at OnCenter
C-38	County Parking Lot: OnCenter
C-45	GIF#018 Putnam Properties
C-48	Green Roof at Erie Canal Museum/Visitor Center
C-51	GIF#001 The Spa at 500 W. Onondaga
C-52	GIF#006 Green Roof at King & King Architects
C-54c	Downtown Streetscape @ Water St
C-54d	Downtown Streetscape @ Montgomery St
C-54e	Downtown Streetscape @ Montgomery St (East Side)
C-54f	Downtown Streetscape @ West Side 100 S. State St.
C-55	Green School: SCSD Institute of Technology
C-56	GIF#012 The Galleries Office Towers
C-57	GIF#013 The Monroe Building
C-58	GIF#007 Hotel Skyler
C-59	GIF#015 Near West Side Initiative: Artist Studio
C-60	Green School: Seymour Academy Playground
C-61	Gateway Project at Water Street
C-68	Street Trees along Marcellus Ave
C-70	GIF#020 St Lucy's Church
C-74a	Otisco Street Green Corridor - Phase 1
C-78	GIF#024 CNY Regional Transportation Authority
C-79	GIF#026 Central New York Jazz Arts Fndtn
C-85	SCSD Central Offices
C-92	GIF#040 Courts4Kids: Skiddy Park Porous BB Courts
C-95	IMA: SUNY Upstate: Townsend Towers
C-99	Vacant Lot: 701 Oswego St.
CW-01	Creekwalk: Jefferson to Walton Streets
CW-02	Creekwalk: Walton to E. Fayette Streets
E-06	City Parking Lot #3
E-08	Green Library: Petit Branch
E-10	Road Recon. Project No. 3: Concord Pl.
E-12	Dr Edwin E Weeks Elementary School
E-16	Lower Sunnycrest Park
E-36	Upper Sunnycrest Park
E-39	East Water Street Pavement Removal
E-42	County Board of Election Building
E-43	Westcott Community Center
F-01	City Parking Lot at Pearl Street
F-02	Green Library: White Branch
F-04a	City Parking Lot #4
F-04b	Green Street: N State St at City Lot 4
H-05	Green Roof at Hazard Branch Library
H-05b	Green Library: Hazard Branch Site Improv.
H-06	Green Library: Mundy Branch
H-07	GIF#011 Vibrant Syracuse Spaces
H-08	Road Recon. Project No. 8: Geddes Street
H-10	Tree Planting in and around Burnet Park
H-11	Avery Ave Greening at Pass Arboretum
H-13	Wilbur Avenue Zoo Entrance Enhancement
H-16	Porous concrete sidewalk on Grand Ave
H-17	Rain Garden at Grand & Delaware
H-19	Rosamond Gifford Zoo: Elephant Exhibit
H-20	Rosamond Gifford Zoo: Primate Exhibit
H-24	GIF#031 ARC of Onondaga County
H-30	Vacant Lot: 1344-50 W. Onondaga St
H-38	Vacant Lot: 224-226 Putnam Street
H-41	GIF#069 Vibrant Syracuse Spaces Green Roof
H-44	Vacant Lot: 109 Hartson Street
H-47	Road Recon #12: 600 Block Gifford St
M-10b	Green Library: Beauchamp Site Improvements
M-17	GIF#009 SUNY ESF Residence Hall (Centennial Hall)
M-20	GIF#008 Dunbar Association
M-23	Greening the Grey in Basin 044
M-24	GIF#003 Syracuse Model Neighborhood Corp
M-25	GIF#017 Create Public Art
M-29	Hughes Magnet School Parking Lot
M-29d	Arbor Day Tree Plantings: Hughes Magnet School
M-35	GIF#030 The People's Community Development Corp.
M-36	GIF#033 Matawon Development Group
M-37	Rooftop Disconnect in CSO 045
M-39	Bellevue Academy Tree Plantings
M-44	Site Improvements at Bishop Foery Center
M-45	Rain Garden at Barnabas Center
M-49	Stadium Parking Lot at SU
M-52	Road Recon #4: S State Street
M-53	Road Recon #5: Sumner Ave
M-59	IMA: SUNY ESF: 930 Irving Ave
M-61	OEI Demonstration Rain Garden: 133 Vale Street

N W E S

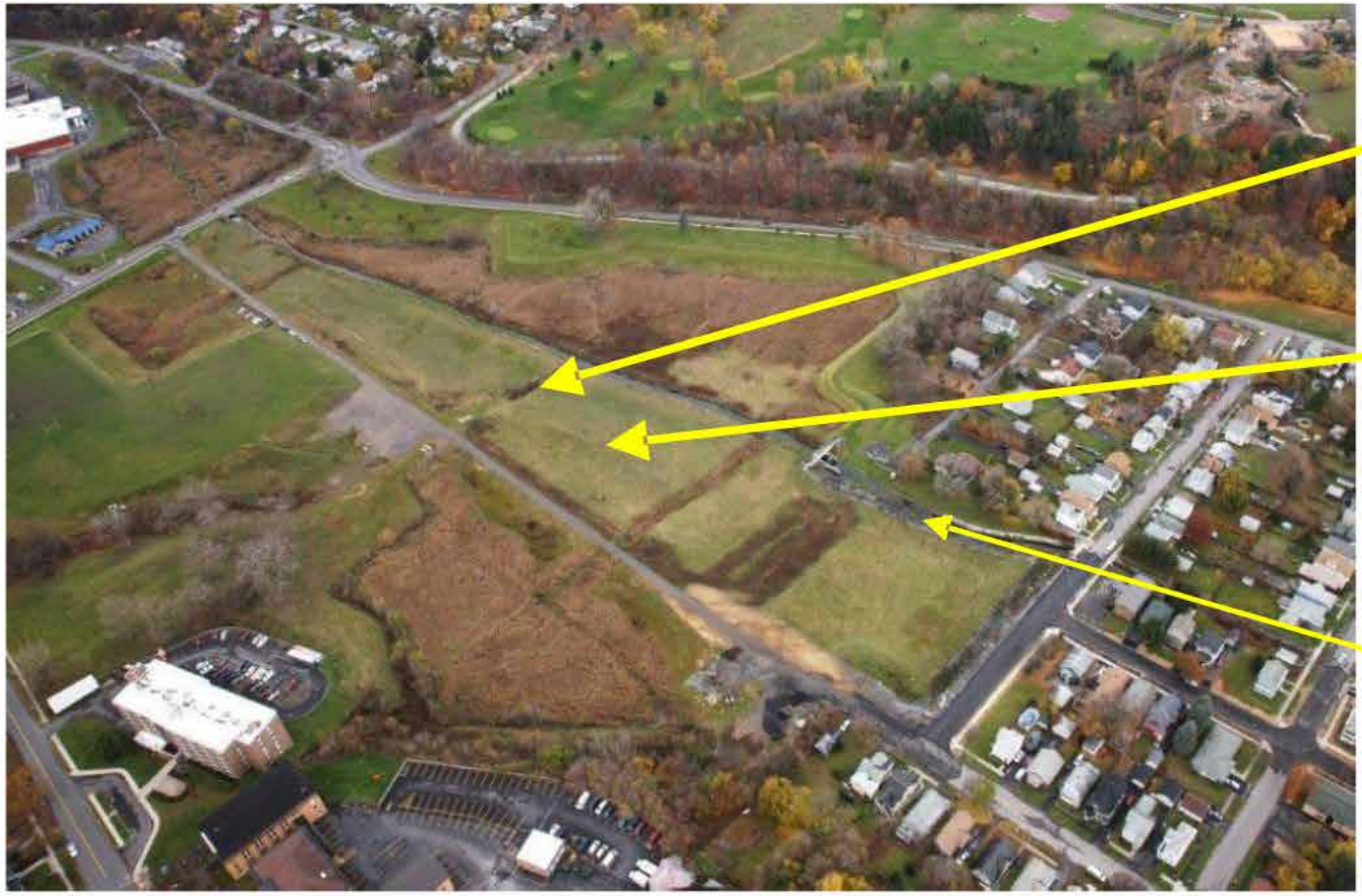
0 2,000 4,000
Feet

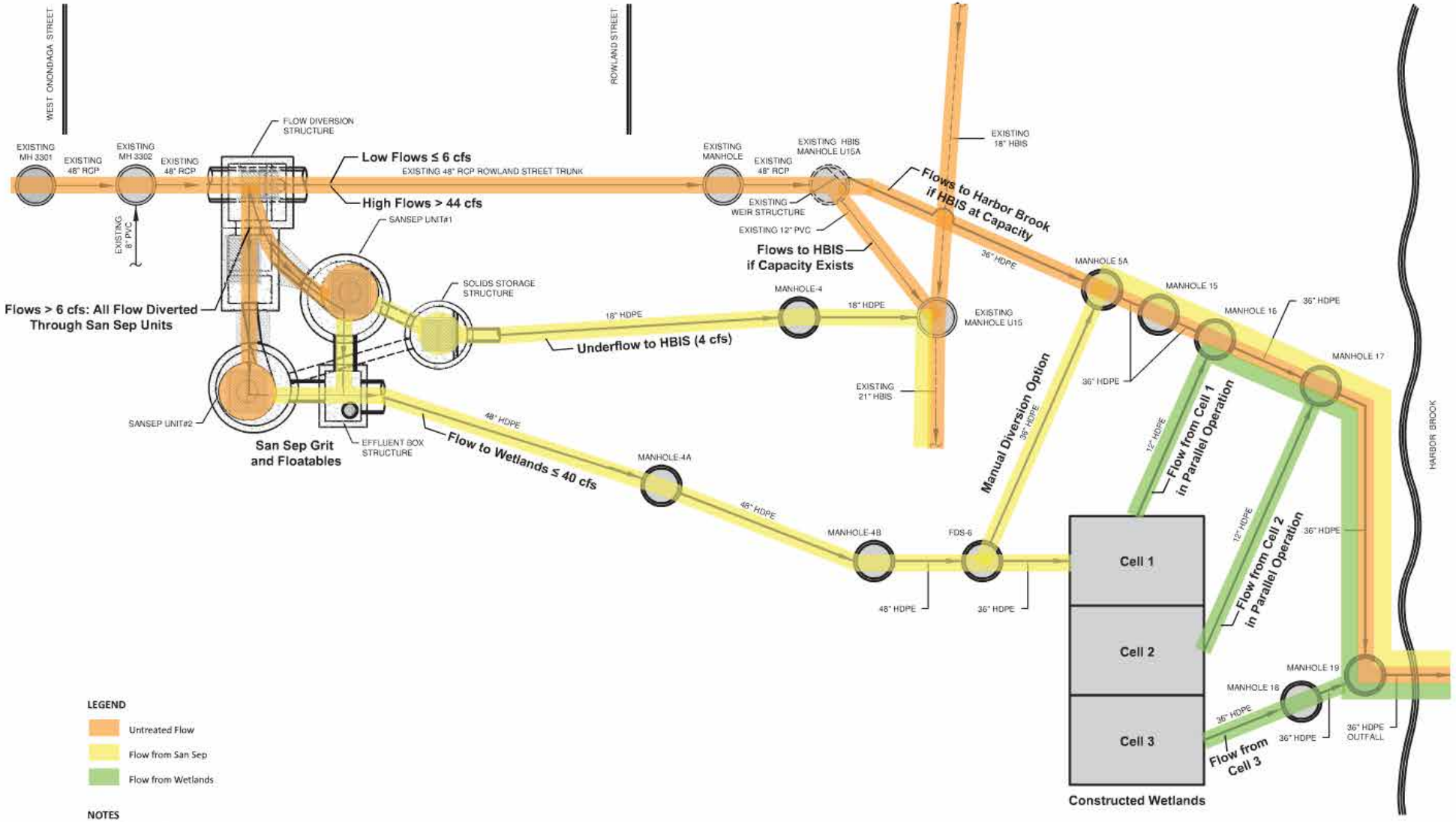
CH2MHILL

1" = 2000' on 11" x 17" sheet. Map prepared 12.20.12

Green Infrastructure 2011 Signature Projects

Treatment Wetland and Restoration Project



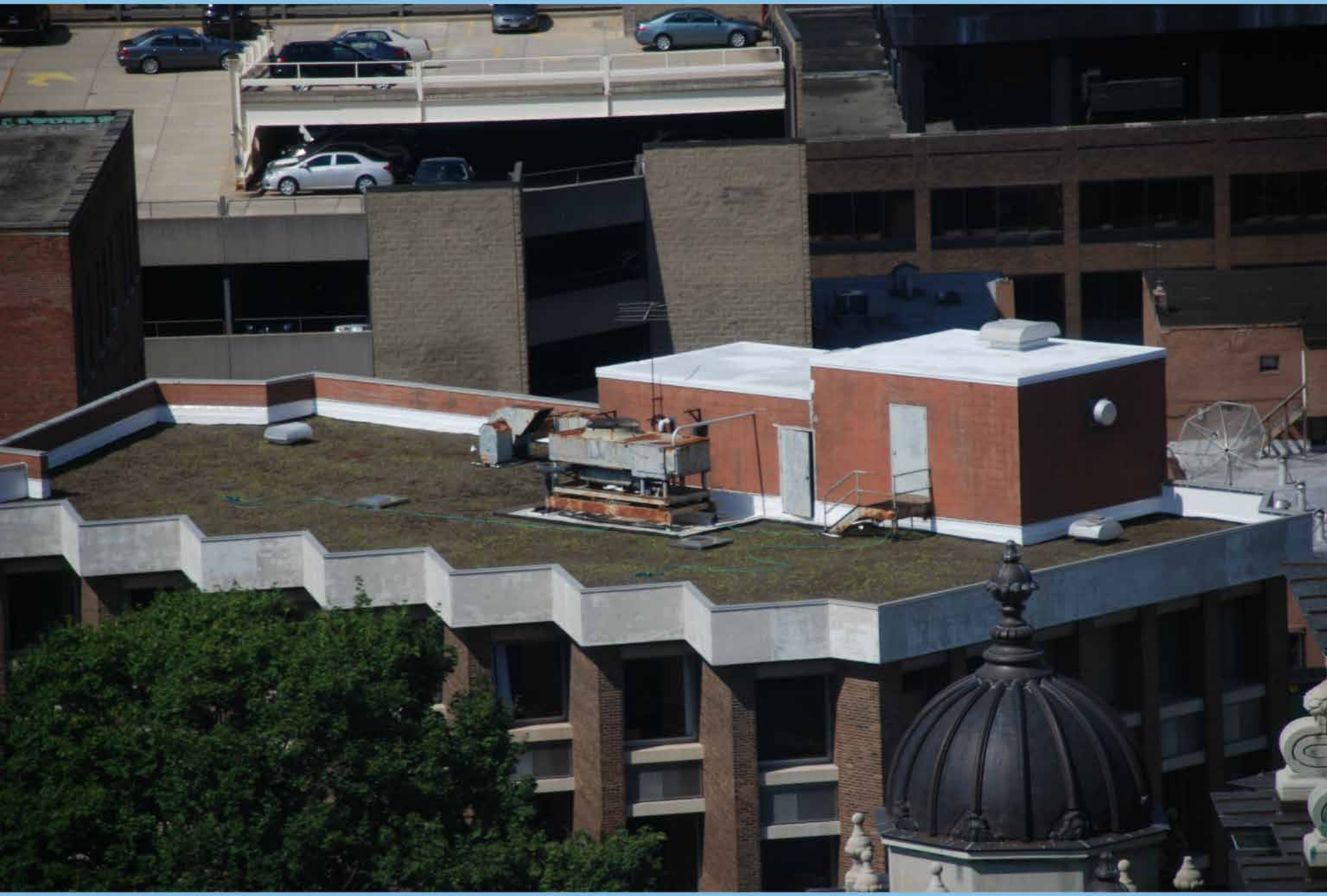


Process Flow Diagram - San Sep Units
Harbor Brook CSO 018
City of Syracuse, New York

CH2MHILL.

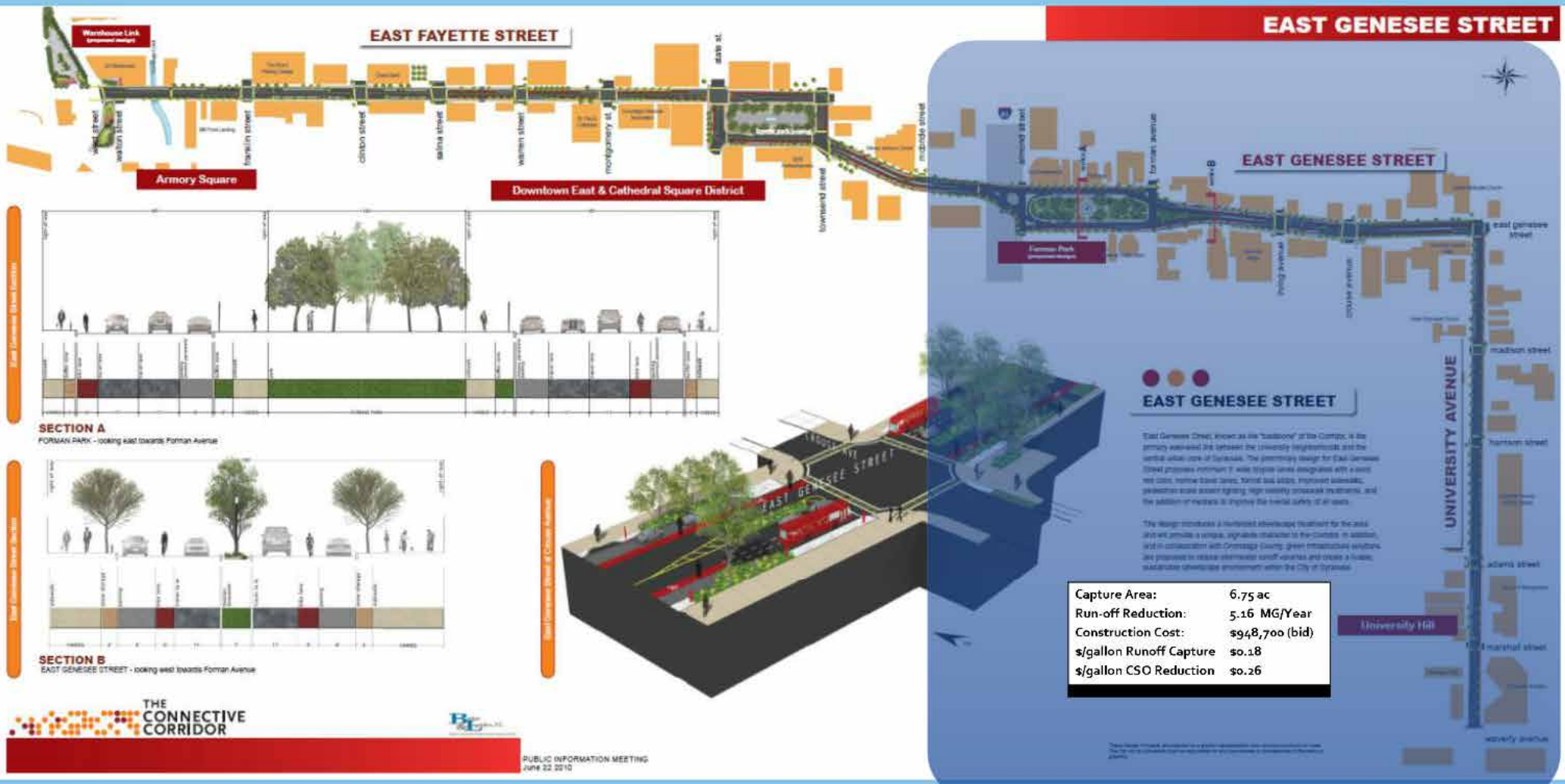

American Aerial Scenes
315-422-4722

Public Private Partnerships
Green Improvement Fund




It Takes
Many Hands
to Save the
Rain

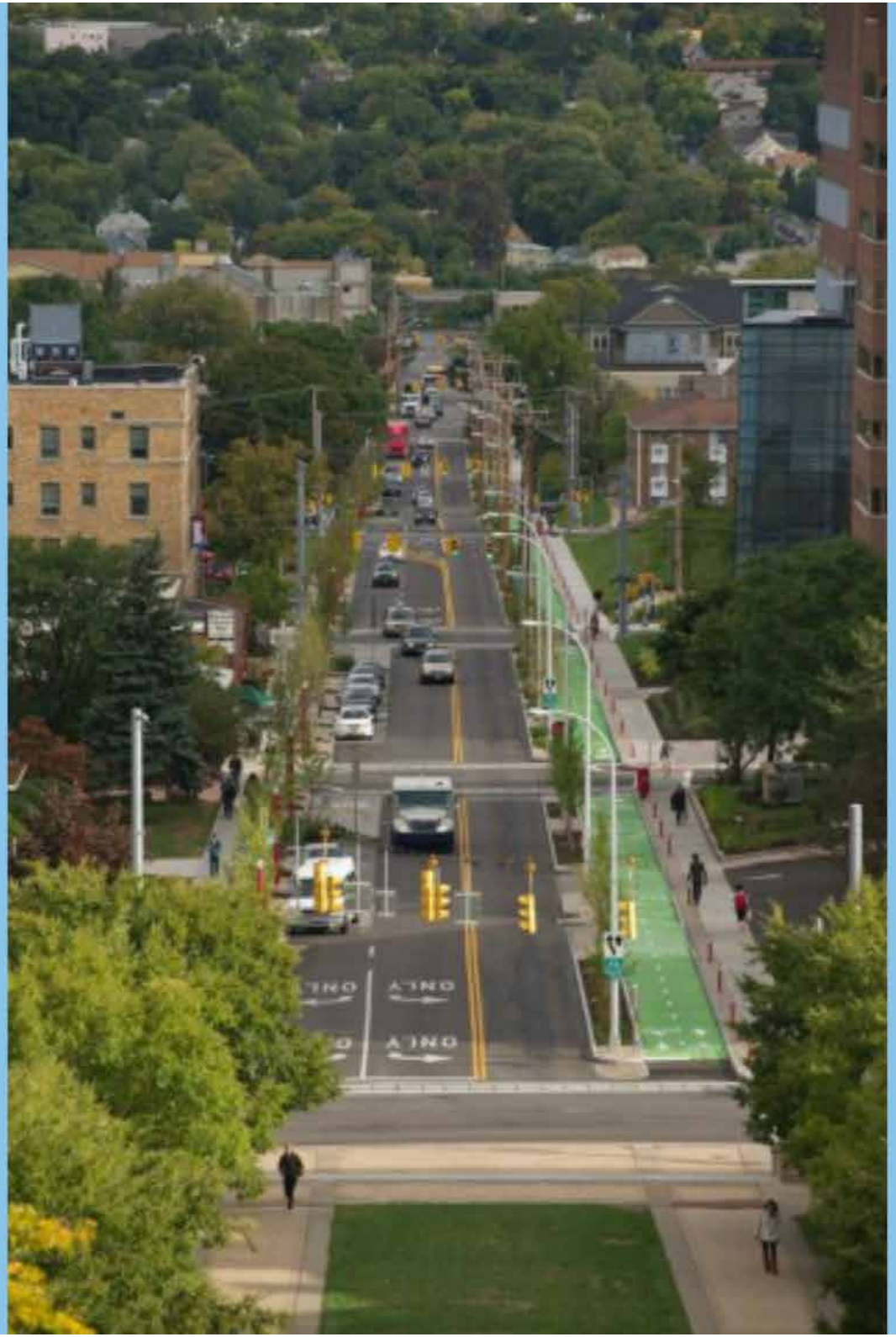
Strategic Partnerships:



The Connective Corridor


AM 8:30 JUL/16/2012


HARVEY'S PHARMACY



City DPW Road Recon

Save
The Rain
Clean
The Lake
Joanna M. Mahoney
County Executive

FACT SHEET
Oneida Street
Road Reconstruction

Project:	Oneida St. Road Reconstruction
Project Owner:	City of Syracuse
Project Location:	Oneida Street (W. Adams St. to Temple St.)
Sewershed:	Clinton
CSO:	037
GI Technology:	Underground Infiltration
Capture Area:	89,380 sq. ft.
Runoff Reduction:	1,464,000 gal/yr
Year Contracted:	2013
Construction Cost:	$188,000 (est.)
Prime Contractor:	Ballard Construction

Project Description: The Oneida Street Road Reconstruction Project exemplifies the continued partnership between the City of Syracuse and Onondaga County through the Save the Rain Program. The City of Syracuse had planned to reconstruct Oneida Street in 2013, and Onondaga County partnered with the City to construct an underground infiltration trench system prior to the road reconstruction. This project was constructed by the City's contractor under their annual Street Structures contract, providing further cost savings for both City and County.

Oneida Street was the second road reconstruction project to be completed in the CSO 037 area in 2013, along with the South Clinton Street project. The combined stormwater capture of these two projects significantly decreases the overflow from CSO 037.

The underground infiltration trench on Oneida Street is four and a half feet wide and eight feet deep located between existing underground utilities. Stormwater is fed to the infiltration trench via pre-existing street catch basins with filter inserts and then infiltrates into the ground. The infiltration trench system on this project captures approximately 1,464,000 gallons annually.

Top: Drainage Areas Collected by the Oneida Street Road Reconstruction Project

Left: Infiltration Trench During Construction

Version 12/31/2013

Save the Rain

Green Parks!


COURTS 4 KIDS
Save the Rain


Sunnycrest Park


Levenworth Park

A Key Component: Education & Outreach

Outreach Partners:

- Environmental Finance Center @ SU
- Baltimore Woods
- Onondaga Environmental Institute
- Onondaga Earth Corps
- Atlantic State Legal Foundation
- SUNY ESF

SAVE THE RAIN

CLEAN WATER FAIR

TAKE FACILITY AND GREEN INFRASTRUCTURE SITE TOURS
RAIN BARREL WORKSHOPS · EDUCATIONAL EXHIBITS
ENTERTAINMENT AND ACTIVITIES FOR KIDS · FREE FOOD

learn, explore, discover!

SEPT. 22 · 9AM-2PM · AT THE

ONONDAGA COUNTY

DEPARTMENT OF WATER ENVIRONMENT PROTECTION

650 HIAWATHA BLVD., SYRACUSE NY

TO LEARN MORE, VISIT: SAVETHERAIN.US/2012FAIR

Joanne M. Mahoney
County Executive

www.SaveTheRain.us

Steal These Projects!

We Are Committed to Open Sourcing Our Program

@SaveTheRainUS

Save The Rain - Windows Internet Explorer

http://savetherain.us/

File Edit View Favorites Tools Help

Favorites | American Rivers American ... | DRUDGE REPORT 2012® | DeWitt backs wetland garde... | passport - Google Search | CSEA 834 Officers, staff | Suggested Sites

Save The Rain

Page Safety Tools

See how **you can** make a difference...
every drop counts.

Save the Rain

ABOUT NEWS GREEN PROGRAMS COMMUNITY RESOURCES CONTACT

The "Save the Rain" program is a comprehensive stormwater management plan intended to reduce pollution to Onondaga Lake and its tributaries. During wet weather events, stormwater flows into the local sewer system, causing heavy flow periods that can overload the system.

Water from the roof of the Carrier Dome to be captured & reused

The university last month received a $1.35 million state grant to install a system to collect the rainwater that runs off the fabric roof of the Carrier Dome, the 49,262-seat arena where SU's basketball, football and other teams play. Approximately 880,000 of the 6.6 million gallons...
(read more)

Search Search

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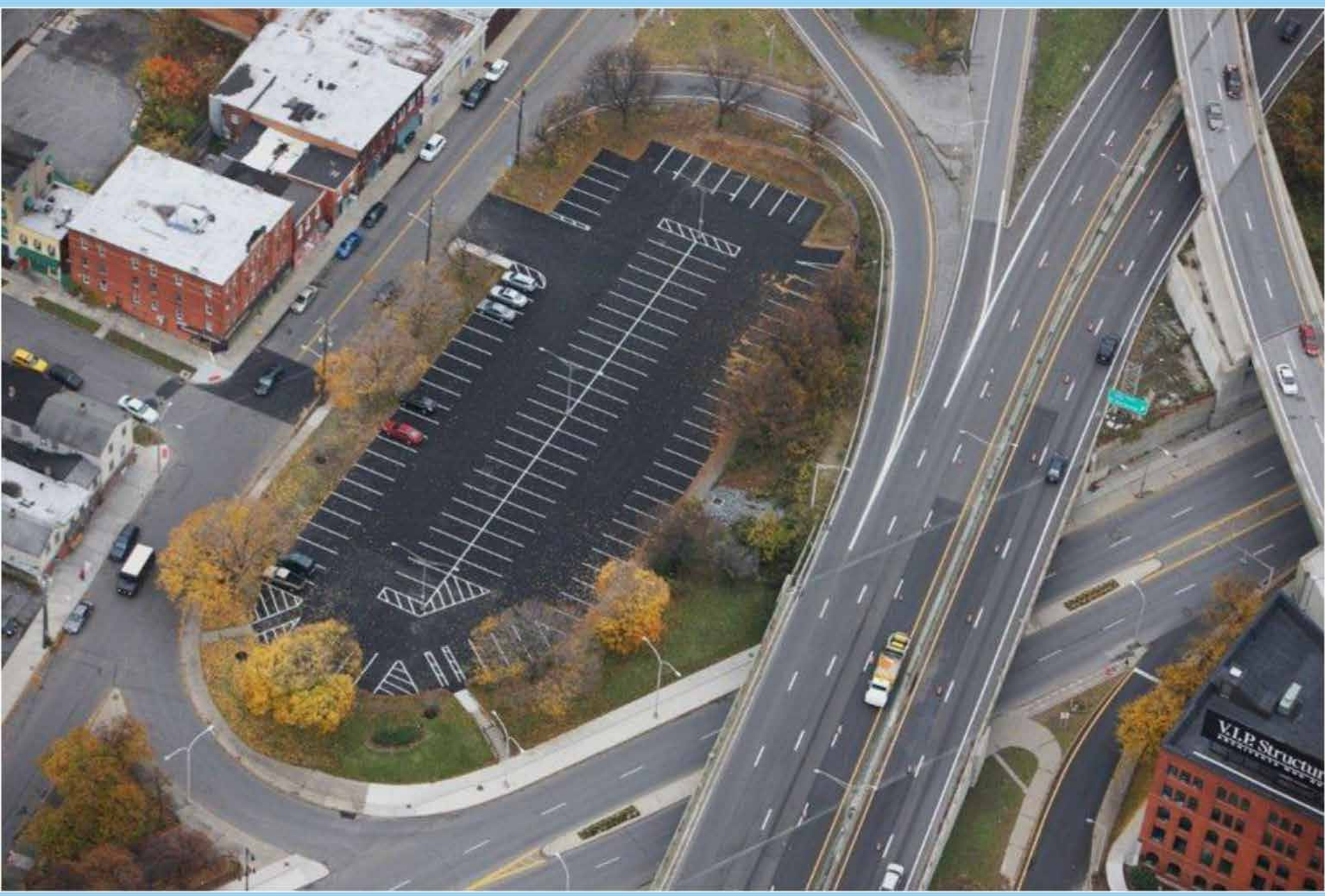
Case Studies

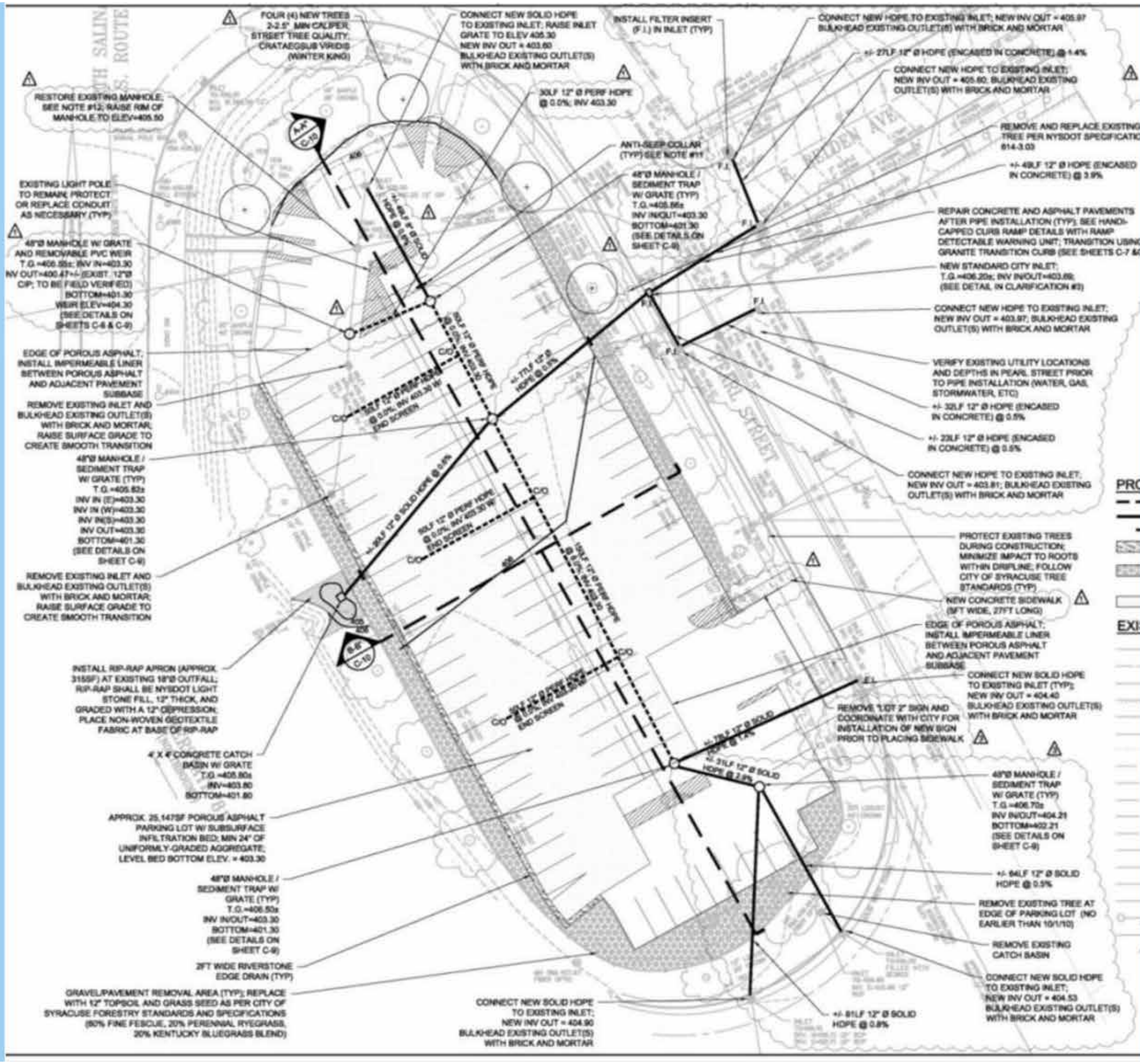
Skiddy Park Enhancements »

Milestones | Green Projects | Gray Projects | Reports Monthly

Done | Internet | 95%



Pearl Street Parking Area


FOUR (4) NEW TREES 2-2.5" MIN CALIPER, STREET TREE QUALITY; CRATAEGSUS VIRIDIS (WINTER KING)
CONNECT NEW SOLID HDPE TO EXISTING INLET; RAISE INLET GRATE TO ELEV 405.30 NEW INV OUT = 403.60 BULKHEAD EXISTING OUTLET(S) WITH BRICK AND MORTAR
INSTALL FILTER INSERT (F.I.) IN INLET (TYP)
CONNECT NEW HDPE TO EXISTING INLET; NEW INV OUT = 405.97 BULKHEAD EXISTING OUTLET(S) WITH BRICK AND MORTAR
+/- 27LF 12" Ø HDPE (ENCASED IN CONCRETE) @ 1.4%
CONNECT NEW HDPE TO EXISTING INLET; NEW INV OUT = 405.60; BULKHEAD EXISTING OUTLET(S) WITH BRICK AND MORTAR
RESTORE EXISTING MANHOLE; SEE NOTE #12; RAISE RIM OF MANHOLE TO ELEV=405.50
30LF 12" Ø PERF HDPE @ 0.0%; INV 403.30
REMOVE AND REPLACE EXISTING TREE PER NYSDOT SPECIFICATION 614-3.03
ANTI-SEEP COLLAR (TYP) SEE NOTE #11
+/- 49LF 12" Ø HDPE (ENCASED IN CONCRETE) @ 3.9%
EXISTING LIGHT POLE TO REMAIN; PROTECT OR REPLACE CONDUIT AS NECESSARY (TYP)
48"Ø MANHOLE / SEDIMENT TRAP W/ GRATE (TYP) T.G.=405.86± INV IN/OUT=403.30 BOTTOM=401.30 (SEE DETAILS ON SHEET C-9)
REPAIR CONCRETE AND ASPHALT PAVEMENTS AFTER PIPE INSTALLATION (TYP); SEE HANDI-CAPPED CURB RAMP DETAILS WITH RAMP DETECTABLE WARNING UNIT; TRANSITION USING GRANITE TRANSITION CURB (SEE SHEETS C-7 &C-
48"Ø MANHOLE W/ GRATE AND REMOVABLE PVC WEIR T.G.=405.55±; INV IN=403.30 INV OUT=400.47+/- (EXIST. 12"Ø CIP; TO BE FIELD VERIFIED) BOTTOM=401.30 WEIR ELEV=404.30 (SEE DETAILS ON SHEETS C-8 & C-9)
NEW STANDARD CITY INLET; T.G.=406.20±; INV IN/OUT=403.89; (SEE DETAIL IN CLARIFICATION #3)
CONNECT NEW HDPE TO EXISTING INLET; NEW INV OUT = 403.97; BULKHEAD EXISTING OUTLET(S) WITH BRICK AND MORTAR
EDGE OF POROUS ASPHALT; INSTALL IMPERMEABLE LINER BETWEEN POROUS ASPHALT AND ADJACENT PAVEMENT SUBBASE
VERIFY EXISTING UTILITY LOCATIONS AND DEPTHS IN PEARL STREET PRIOR TO PIPE INSTALLATION (WATER, GAS, STORMWATER, ETC)
REMOVE EXISTING INLET AND BULKHEAD EXISTING OUTLET(S) WITH BRICK AND MORTAR; RAISE SURFACE GRADE TO CREATE SMOOTH TRANSITION
+/- 32LF 12" Ø HDPE (ENCASED IN CONCRETE) @ 0.5%
+/- 23LF 12" Ø HDPE (ENCASED IN CONCRETE) @ 0.5%
48"Ø MANHOLE / SEDIMENT TRAP W/ GRATE (TYP) T.G.=405.82± INV IN (E)=403.30 INV IN (W)=403.30 INV IN(S)=403.30 INV OUT=403.30 BOTTOM=401.30 (SEE DETAILS ON SHEET C-9)
CONNECT NEW HDPE TO EXISTING INLET; NEW INV OUT = 403.81; BULKHEAD EXISTING OUTLET(S) WITH BRICK AND MORTAR
PROTECT EXISTING TREES DURING CONSTRUCTION; MINIMIZE IMPACT TO ROOTS WITHIN DRIPLINE; FOLLOW CITY OF SYRACUSE TREE STANDARDS (TYP)
REMOVE EXISTING INLET AND BULKHEAD EXISTING OUTLET(S) WITH BRICK AND MORTAR; RAISE SURFACE GRADE TO CREATE SMOOTH TRANSITION
NEW CONCRETE SIDEWALK (5FT WIDE, 27FT LONG)
EDGE OF POROUS ASPHALT; INSTALL IMPERMEABLE LINER BETWEEN POROUS ASPHALT AND ADJACENT PAVEMENT SUBBASE
INSTALL RIP-RAP APRON (APPROX. 315SF) AT EXISTING 18"Ø OUTFALL; RIP-RAP SHALL BE NYSDOT LIGHT STONE FILL, 12" THICK, AND GRADED WITH A 12" DEPRESSION; PLACE NON-WOVEN GEOTEXTILE FABRIC AT BASE OF RIP-RAP
CONNECT NEW SOLID HDPE TO EXISTING INLET (TYP); NEW INV OUT = 404.40 BULKHEAD EXISTING OUTLET(S) WITH BRICK AND MORTAR
REMOVE "LOT 2" SIGN AND COORDINATE WITH CITY FOR INSTALLATION OF NEW SIGN PRIOR TO PLACING SIDEWALK
4' X 4' CONCRETE CATCH BASIN W/ GRATE T.G.=405.80± INV=403.80 BOTTOM=401.80
48"Ø MANHOLE / SEDIMENT TRAP W/ GRATE (TYP) T.G.=406.70± INV IN/OUT=404.21 BOTTOM=402.21 (SEE DETAILS ON SHEET C-9)
APPROX. 25,147SF POROUS ASPHALT PARKING LOT W/ SUBSURFACE INFILTRATION BED; MIN 24" OF UNIFORMLY-GRADED AGGREGATE; LEVEL BED BOTTOM ELEV. = 403.30
48"Ø MANHOLE / SEDIMENT TRAP W/ GRATE (TYP) T.G.=405.50± INV IN/OUT=403.30 BOTTOM=401.30 (SEE DETAILS ON SHEET C-9)
+/- 64LF 12" Ø SOLID HDPE @ 0.5%
REMOVE EXISTING TREE AT EDGE OF PARKING LOT (NO EARLIER THAN 10/1/10)
REMOVE EXISTING CATCH BASIN
2FT WIDE RIVERSTONE EDGE DRAIN (TYP)
GRAVEL/PAVEMENT REMOVAL AREA (TYP); REPLACE WITH 12" TOPSOIL AND GRASS SEED AS PER CITY OF SYRACUSE FORESTRY STANDARDS AND SPECIFICATIONS (60% FINE FESCUE, 20% PERENNIAL RYEGRASS, 20% KENTUCKY BLUEGRASS BLEND)
CONNECT NEW SOLID HDPE TO EXISTING INLET; NEW INV OUT = 404.90 BULKHEAD EXISTING OUTLET(S) WITH BRICK AND MORTAR
CONNECT NEW SOLID HDPE TO EXISTING INLET; NEW INV OUT = 404.53 BULKHEAD EXISTING OUTLET(S) WITH BRICK AND MORTAR
+/- 81LF 12" Ø SOLID HDPE @ 0.8%
PEARL STREET
PRO
EXIS

Asset Management: Program Innovation

SUNY Upstate Cancer Center Rain Garden
Life-Cycle Management

2222847

Onondaga County, New York
Save the Rain Program
Green Infrastructure
Maintenance Manual

Prepared for

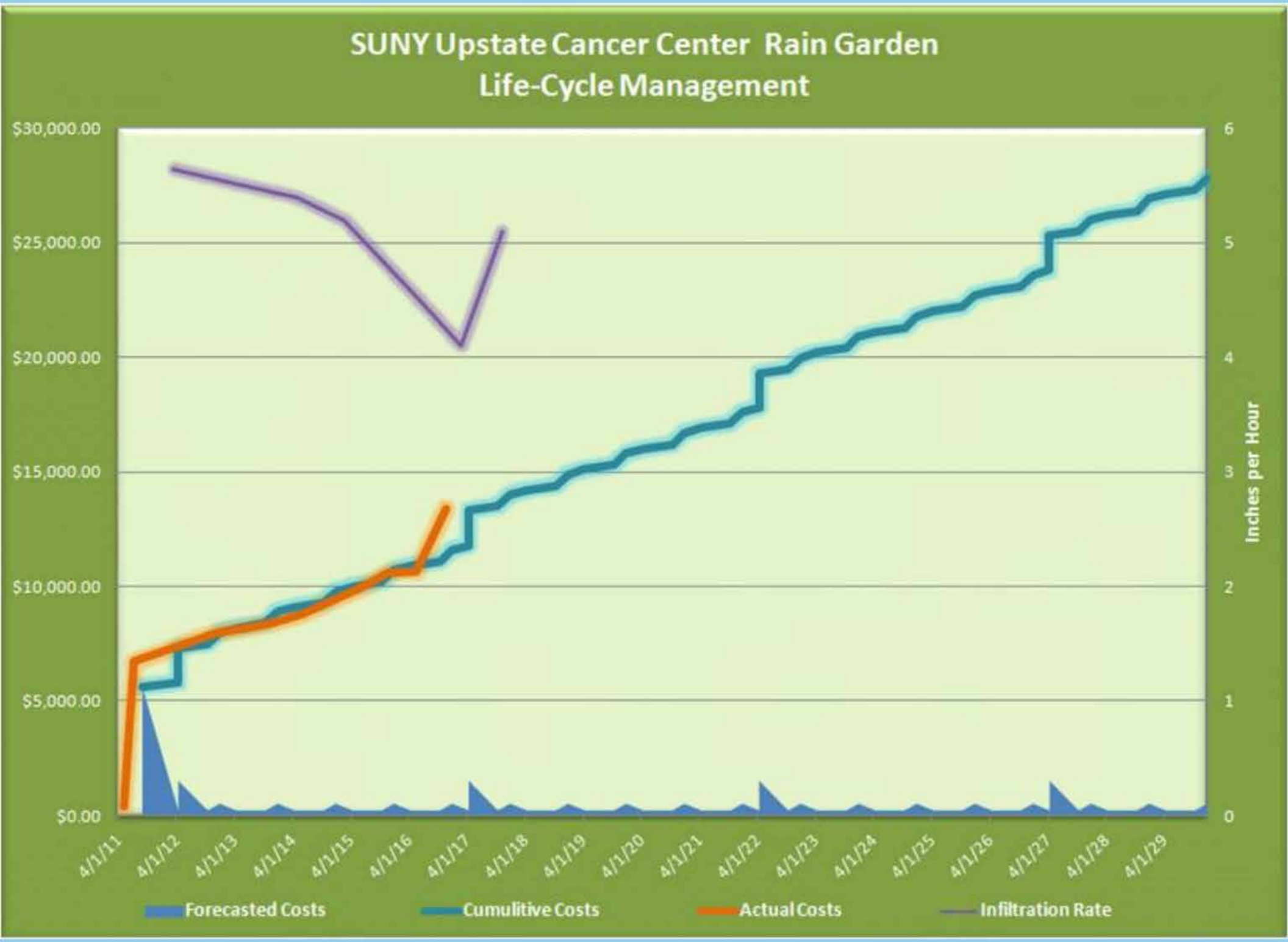
Onondaga County, New York

Prepared by

CH2MHILL

January 2012

Save the Rain


SUNY Upstate Cancer Center Rain Garden
Life-Cycle Management
$30,000.00
$25,000.00
$20,000.00
$15,000.00
$10,000.00
$5,000.00
$0.00
6
5
4
3
2
1
0
Inches per Hour
4/1/11
4/1/12
4/1/13
4/1/14
4/1/15
4/1/16
4/1/17
4/1/18
4/1/19
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4/1/21
4/1/22
4/1/23
4/1/24
4/1/25
4/1/26
4/1/27
4/1/28
4/1/29
Forecasted Costs
Cumulitive Costs
Actual Costs
Infiltration Rate

2222847

2222847 - Porous Pavement Vacuuming Lot # 3

Work Description

WO: 2222847 | Report Date: 1/31/2012 10:38:41 AM | Reported By: HJOHNS

Work Type: PM | Status: WSCH | Supervisor: PCENTO

Job Plan: 5384 SMP-01 Porous Pavement Vacuuming | Asset: 15199 Porous Asphalt Parking Lot | Location: 10714 E-06 City Lot # 3 Oswego Blvd.

2222847 Porous Pavement Vacuuming Lot # 3

Equipment 15199 Porous Asphalt Parking Lot

Location 10714 E-06 City Lot # 3 Oswego Blvd.

Job Plan

Task	Task Description	Equipment Description	Location Description	WO #	Meas. Point	Value	Date	Observation
10	Safety set-up: Set up safety perimeter. Ensure that no cars are parked in the lot and that the parking lot is closed/ not accessible to the public. Public notice announcing lot closing needs to be posted per City/County standards of notification.	Porous Asphalt Parking Lot	E-06 City Lot # 3 Oswego Blvd.	2222848				
20	Inspect: Visually inspect porous pavement for damage, including holes, cracks, pavement slumpage and areas of standing water. Inspect status of aggregate between voids in porous pavement to see if additional replacement aggregate is needed. Record.	Porous Asphalt Parking Lot	E-06 City Lot # 3 Oswego Blvd.	2222849				
30	Prepare site for vacuuming: Remove (by hand) bulky debris and waste materials from surface of porous pavement that may block/clog vacuum hose (i.e. litter, tree branches, wire, car parts) prior to using vacuum. Use a rigid street broom to loosen de	Porous Asphalt Parking Lot	E-06 City Lot # 3 Oswego Blvd.	2222850				
40	Vacuum: Vacuum porous pavement per the vacuum manufacturer recommendations. Follow all steps in the Operation Checklist for the specified vacuum.	Porous Asphalt Parking Lot	E-06 City Lot # 3 Oswego Blvd.	2222851				
42	Engage the Water Feature/ Water Dust Control Option of the vacuum (or equivalent on specific vacuum model).	Porous Asphalt Parking Lot	E-06 City Lot # 3 Oswego Blvd.	2222852				
44	Drive the vacuum over the porous pavement, operating at a slow speed setting not greater than 5 to 10 miles per hour. Overlap the edges of the vacuum runs and make two passes over the entire porous pavement area	Porous Asphalt Parking Lot	E-06 City Lot # 3 Oswego Blvd.	2222853				

Save the Rain: Green Infrastructure Program Maintenance Report Log

PM Task Name: _____

Truck Number: _____ Weather Conditions: _____

Location Name: _____ Location Address: _____

Task Code: _____ Task Description: _____

Task Start Date: _____ _____

Task End Date: _____ _____

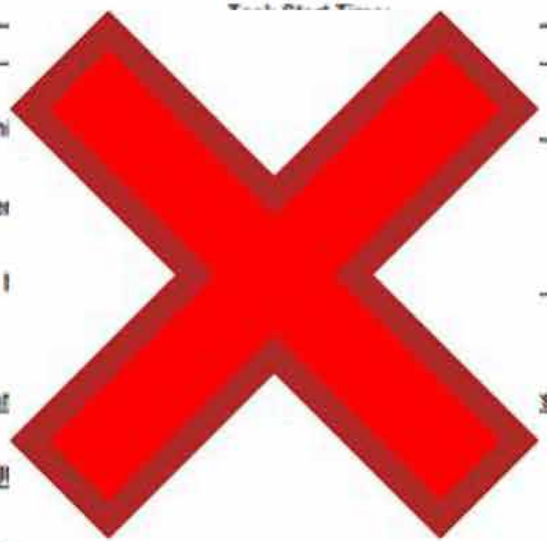
Labor Personnel Name: Phi _____

Tools Used (List Maximo Ite

Material Used (List Maximo I _____

Porous Pavement Maintenar s, Flexipave

POROUS PAVEMENT VACUI



Vacuum Type/Manufacturer: _____

Hour Meter Start: _____ Hour Meter End: _____ Number of Passes: _____

Vacuuming Notes: _____

POROUS PAVEMENT DEBRIS ANALYSIS *(Please submit photos if necessary)*

Weight of Material (in bag) or Approx. Amount of Material in Bag (x/x): _____

Description of Vacuumed Materials: _____

Notes about Vacuumed Materials: _____

POROUS PAVEMENT POWER WASHING DETAILS *(Please submit photos if necessary)*

Power Washer Type/Manufacturer: _____


Start
68°
Los Angeles
Sunny


Onondaga
Earth Corps

We've Come A Long Way In Four Years....

TODAY'S WEATHER
DETAILS | PAGE B-8
CHILLY WITH A MIX OF CLOUDS AND SUN
48 29

DOW JONES
BUSINESS | PAGE A-10
12,453.54
▲+186.79

LOCAL

Top doc: Upstate Medical University's first woman surgeon, Dr. Patricia J. Numann, has been named the new head of the American College of Surgeons after the former president resigned amid controversy over an article he wrote that was deemed offensive to women. A-3

WORLD

Medical warning: Doctors met Wednesday with workers battling the crisis at Japan's stricken nuclear plant and said the conditions are physically and mentally draining the workers. A-11

Aid to Libya: The Obama administration plans to give the Libyan opposition $25 million in non-lethal assistance in the first direct U.S. aid to the rebels, officials said Wednesday.

In related news, Europe has increased efforts with Libyan rebels to overthrow Moammar Gadhafi. A-11

BUSINESS

Fracking: Pennsylvania on Tuesday asked companies drilling in the Marcellus Shale natural gas formation to stop disposing of millions of gallons of contaminated wastewater through treatment plants that discharge into rivers and streams. A-10

CORRECTIONS

Office lease at St. Joseph's Hospital Health Center. City Neighbors, Page 12

To discuss a correction on a news story call 470-2240.

INDEX

CONTACT US

Subscription questions? Call 470-NEWS (470-6397).

WHAT PEOPLE ARE READING ON syracuse.com

Find the list of the most popular items on A-2

ONONDAGA COUNTY EXPECTS A NEARLY $75M SURPLUS THIS YEAR A-3

The Post-Standard
syracuse.com

INSIDE

WHAT TO WATCH FOR WHEN YOU WATCH LACROSSE B-1

FEDERAL REGULATIONS FUEL COMPLAINTS AT HEARING CHAIRED BY BUERKLE A-6

THURSDAY, APRIL 21, 2011 | FINAL EDITION | 75 CENTS

ENVIRONMENTAL PROTECTION

GREEN EFFORTS WIN RECOGNITION

FEDERAL GOVERNMENT SINGLES OUT SYRACUSE AND ONONDAGA COUNTY AS ENVIRONMENTAL LEADERS

Four pieces of the local effort

The U.S. Environmental Protection Agency has named the Syracuse area one of 10 communities across the nation that are demonstrating smart "green" practices. Among them:

CLEANING THE CREEK
Onondaga County has adopted green strategies to avoid building sewage treatment plants.

GROWING GREEN
Rain gardens and rooftop gardens keep precipitation from entering storm sewers.

SLOWING RUNOFF
Porous bricks in a parking lot help prevent sewers from overflowing.

CONSERVING ENERGY
New homes built on the Near West Side use insulated panels.

By Teri Weaver
Staff writer

More than two decades ago, Onondaga County was a community filled with environmental finger-pointing about a near-dead lake at its center.

Lawsuits and hundred-million-dollar fees made headlines as governments and industries tried to deflect responsibility for dumping more than a century's worth of sewage and pollutants into Onondaga Lake. Taxpayers helped foot the cleanup bill, while officials mapped out unpopular plans. The debate grew so heated that protesters took to flushing the county's top official down a toilet bowl in effigy.

But on Wednesday, the U.S. Environmental Protection Agency named Onondaga County and Syracuse one of the country's top 10 leaders in green infrastructure.

The designation as an EPA "green infrastructure partner" doesn't come with money or jobs.

Instead, it puts a green badge on the community's shoulder, a stamp of approval that says the county and city are models for using environmentally sound practices in public projects, business investments and educational curricula.

"Today, to have everyone standing together, almost arm in arm — no one was fighting," said Judith Enck, the EPA's regional administrator, after a morning press conference that included leaders from the city, the county, the Onondaga Nation, companies that worked on the lake cleanup, Syracuse University staff, and neighborhood advocates.

"I think it's extraordinary," said Enck. "What that says to me is it's sometimes unpleasant. But these are things that are worth fighting for."

The other communities on the EPA's top-10 green list don't have the same recent history of environmental strife, Enck said.

Those communities include the Anacostia River basin in Washington, D.C.; Cleveland; Denver; Jacksonville, Fla.; Kansas City, Mo.; Los Angeles; Mystic, Mass.; and Puyallup, Wash. The 10th community has not been named yet.

"It's an amazing vision," said EPA Deputy Administrator Bob Perciasepe, No. 2 official at the agency, who traveled to Syracuse to make the announcement.

He singled out for praise Onondaga County Executive Joanie Mahoney's shift in tactics to clean Onondaga Lake.

In her first term, the Republican pushed a controversial plan to scrap brick-and-mortar sewage treatment plants in favor of dozens of projects throughout the city to keep rainwater out of sewage drains, a key step toward keeping raw sewage out of Onondaga Lake.

ENVIRONMENTAL, PAGE A-14

GOVERNMENT

Obama at Facebook shows rising status of social media

AP

President Barack Obama likely has a few more "friends" after a town hall at Facebook headquarters Wednesday, but the real winner may be the medium of social networking itself, which commands not just the attention of politicians but now an appearance from the president.

To anyone who tuned in to the live online feed, it wasn't very different from its televised counterparts. The only difference might have been the average age of the audience, many of whom appeared to be the same age as event moderator and Facebook founder Mark Zuckerberg, 26. Topics of questions ranged from the national debt and immigration to education and health care.

Obama is the first sitting head of state to visit Facebook's brick-and-mortar home. He will likely not be the last: the 2012 presidential race is expected to see unprecedented use of social media to reach voters.

ART

Nontraditional billboards in Syracuse meant to stimulate the mind

It might be the biggest personal ad in Syracuse. Or it might not be. You decide.

The billboard depicting "Lonely Unsatisfied Wife ... Looking for a Sugar Daddy" at South McBride and East Washington streets is drawing a lot of attention — much to the creators' delight.

The creators, a group of Syracuse University art students, designed that billboard and two others on display in the city as art to expose truths that are often invisible to society, said assistant professor Susannah Sayler.

A second billboard shows a woman surrounded by children's toys to illustrate how contrived advertising photography can be. The third shows a bowl with one giant strawberry surrounded by smaller ones to celebrate diversity. A-3

WEEKEND

Do you have mad air-guitar skills? Show them Saturday

Dan Crane quit his computer software job in 2004 to dedicate all his time to perfecting his air guitar skills with hopes of becoming the world's best air guitarist.

On Saturday, Crane will be at the Red House Arts Center in Syracuse to host a competition to find Central New York's best pretend player. The winner will get the chance to compete at the U.S. Air Guitar regional in Boston. A screening of Crane's film "Air Guitar Nation" is planned for tonight and Friday at Syracuse University. INSIDE

Rooftops to Rivers II:

Green strategies for controlling stormwater and combined sewer overflows

AUTHORS
Noah Garrison
Karen Hobbs
Natural Resources Defense Council

PROJECT DESIGN AND DEVELOPMENT
David Beckman
Jon Devine
Natural Resources Defense Council

CONTRIBUTING AUTHORS
Anna Berzins, *Natural Resources Defense Council*
Emily Clifton, *Low Impact Development Center*
Larry Levine, *Natural Resources Defense Council*
Rebecca Hammer, *Natural Resources Defense Council*

NRDC
THE EARTH'S BEST DEFENSE

SYRACUSE, NEW YORK

A CASE STUDY OF HOW GREEN INFRASTRUCTURE IS HELPING MANAGE URBAN STORMWATER CHALLENGES

TYPES OF GREEN INFRASTRUCTURE USED: Green roofs, rain barrels/cisterns, permeable pavement, rain gardens, vegetated swales, street trees, green streets, planter boxes

In 2009, when Onondaga County gained federal court approval of its new Save the Rain program, Syracuse became the first community in the United States with a legal requirement to reduce sewage overflows with green infrastructure. The county's strategy integrates both green and gray approaches to meet binding CSO targets phased in over nine years. Green infrastructure investments, totaling nearly $80 million, will account for nearly two-thirds of future CSO reductions. The program is funded with a combination of sewer fees and low-interest loans and grants from the state. The county has installed a number of demonstration projects and expects to complete at least 50 projects by the end of 2011. To encourage green infrastructure on private property, the county has launched a comprehensive public outreach and education program and provides financial incentives in the form of a direct grant program and rain barrel giveaways. There is currently no retention standard for new development or redevelopment, but the county is working with the city of Syracuse on a new ordinance that may include such a standard.

SYRACUSE, NEW YORK

BACKGROUND


UNITED STATES
WATER PRIZE


EXIT

National Green Infrastructure Summit: October 2013


SYRACUSE UNIVERSITY
FOUNDED A·D· 1870
SUOS CULTORES SCIENTIA CORONAT
SYRACUSE UNIVERSITY
SYRACUSE UNIVERSITY
SYRACUSE UNIVERSITY
ESF
OFFICE OF THE
COUNTY EXECUTIVE


ESF

The Results: Remarkable

A Cleaner More Vibrant Lake


Foot Switch

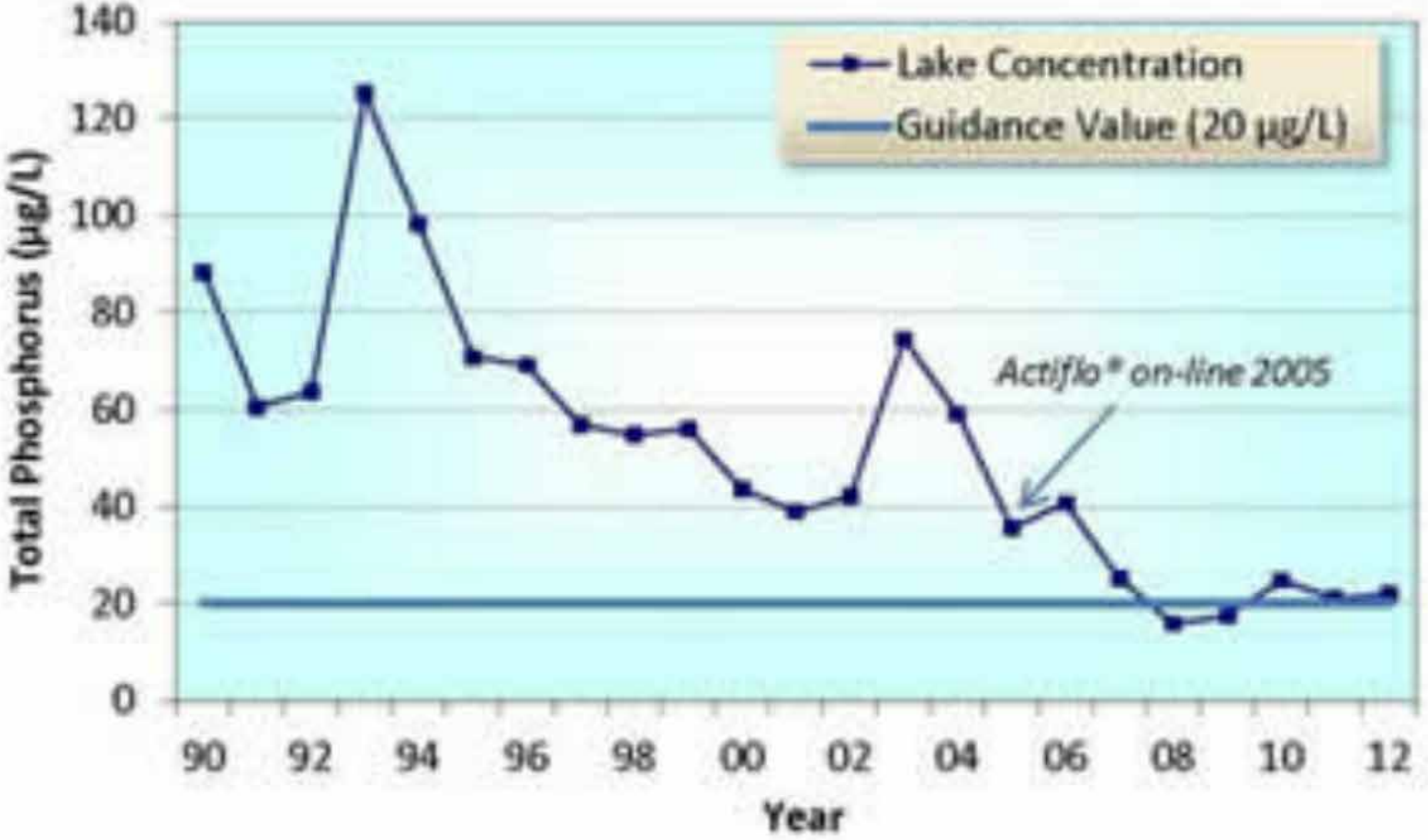
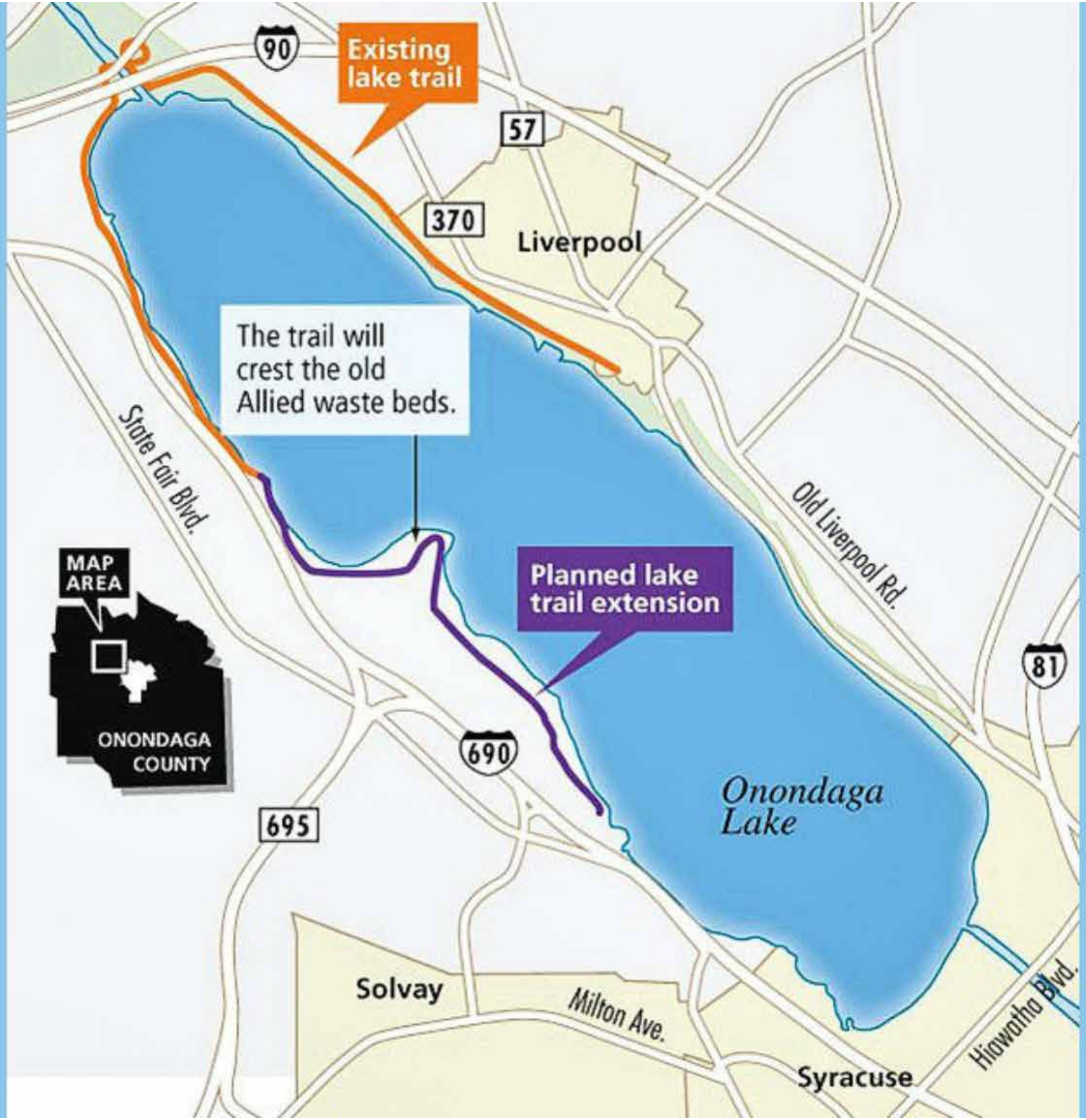


Figure III-6. Summer (June to September) average total phosphorus concentration in the upper waters (0-3 meters) of Onondaga Lake, 1990–2012.

What's Next?


90
Existing lake trail
57
370
Liverpool
The trail will crest the old Allied waste beds.
State Fair Blvd.
Old Liverpool Rd.
MAP AREA
ONONDAGA COUNTY
Planned lake trail extension
81
690
695
Onondaga Lake
Solvay
Milton Ave.
Syracuse
Hiawatha Blvd.


2015
edr

Learning and innovation go hand in hand.
The arrogance of success is to think that what you did yesterday will be sufficient for tomorrow -
William Pollard

We are allowed to get smarter... - Matt Millea

Thank you.

Please visit SavetheRain.us

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@MJMillea_OC