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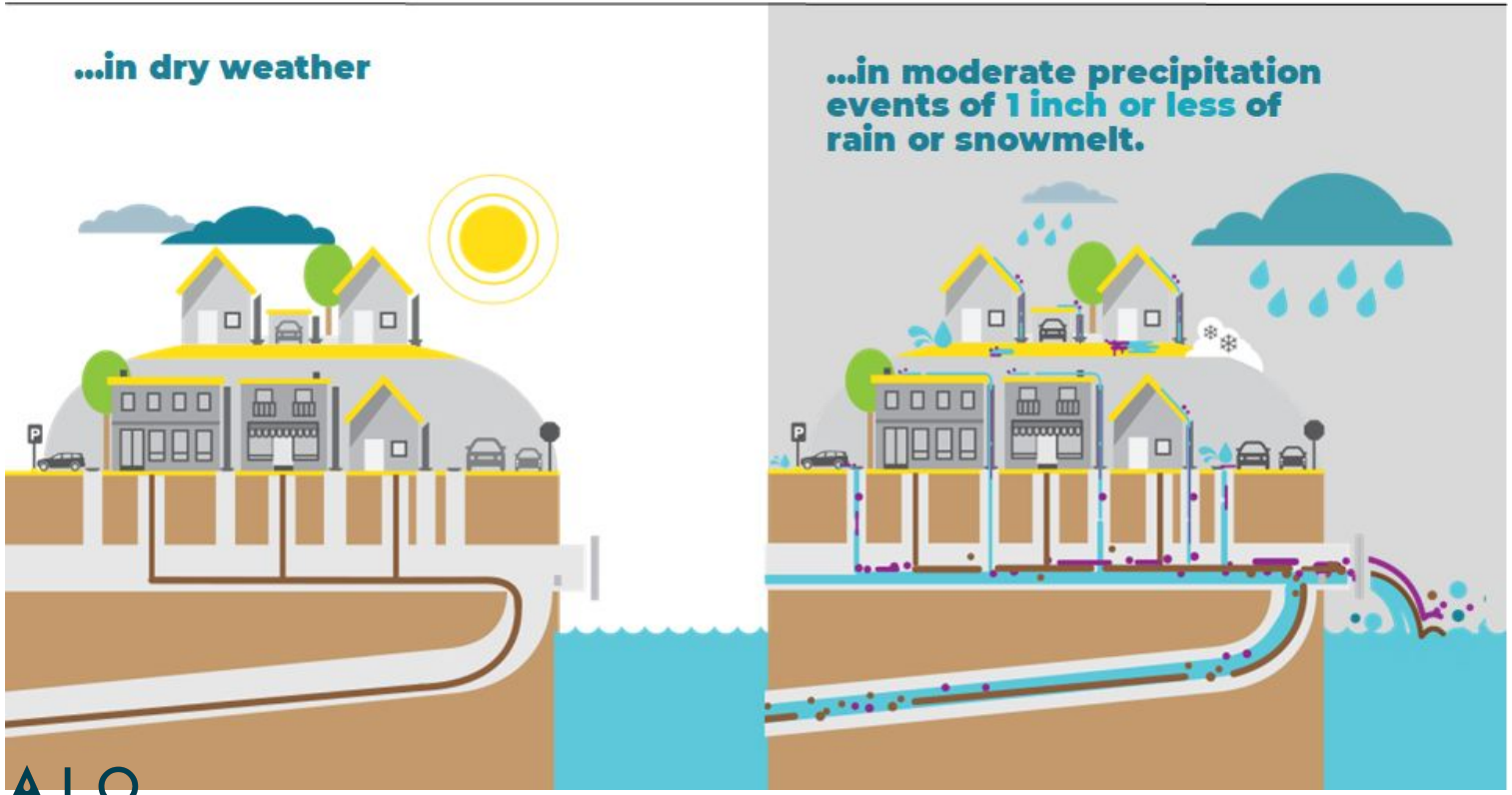
RAIN CHECK
GREEN INFRASTRUCTURE

How our combined sewer system works...



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- Long Term Control Plan (LTCP) Approved by Agencies in 2014
- 20 year plan to be completed by March, 2034
- BSA Committed to Invest $430 Million Over 20 Years on Projects
- 97% of Wet Weather Flows to be Captured upon Completion of LTCP
- Manage 1,315 acres of impervious surface area with Green Infrastructure

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Gray

Expanding the capacity and efficiency of our pipes, pumps, and underground infrastructure.

Smart

Using "real time" sensors to move stormwater away from parts of the sewer system hit with lots of rain and snowmelt.

Green

Preventing or slowing water from reaching the sewer system with "green infrastructure."

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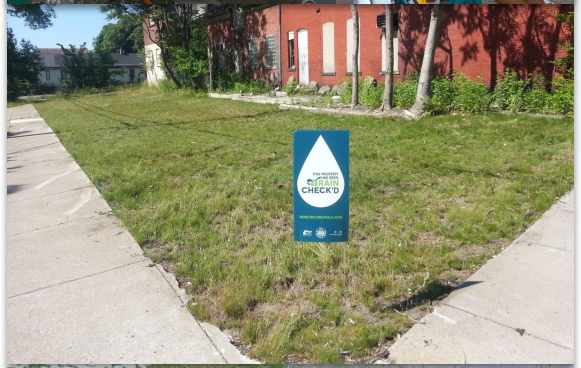

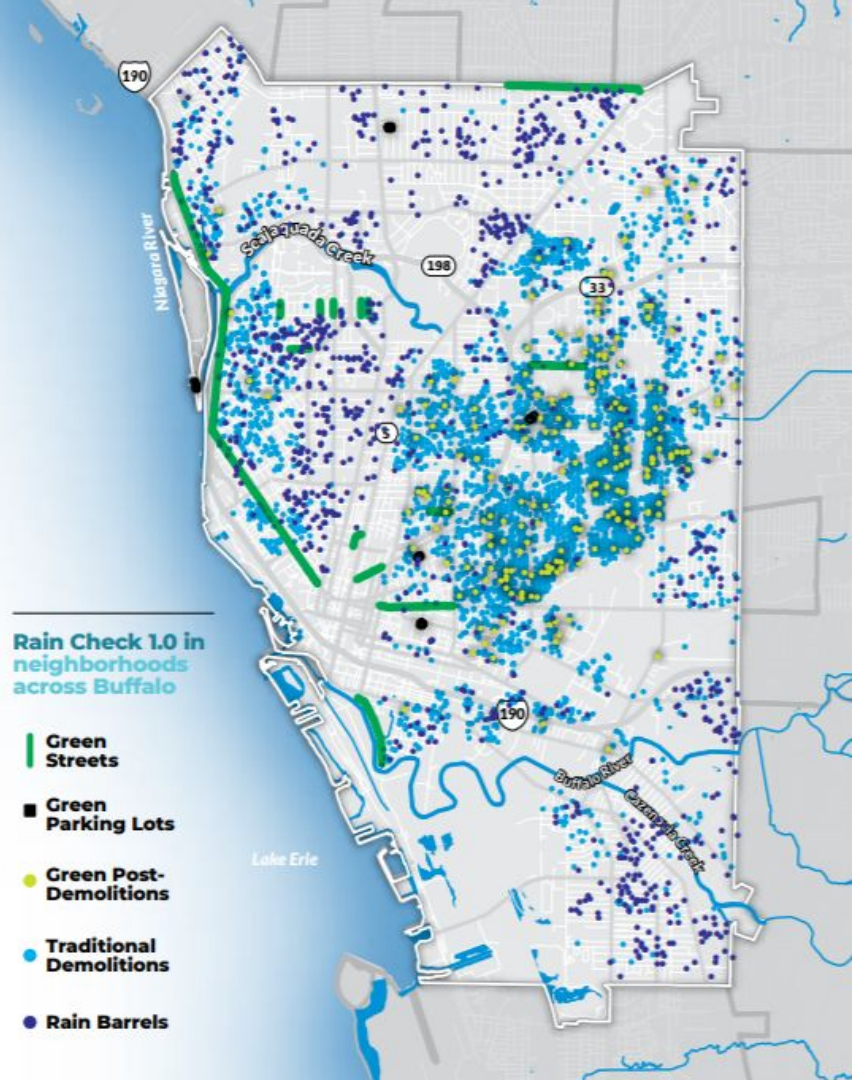

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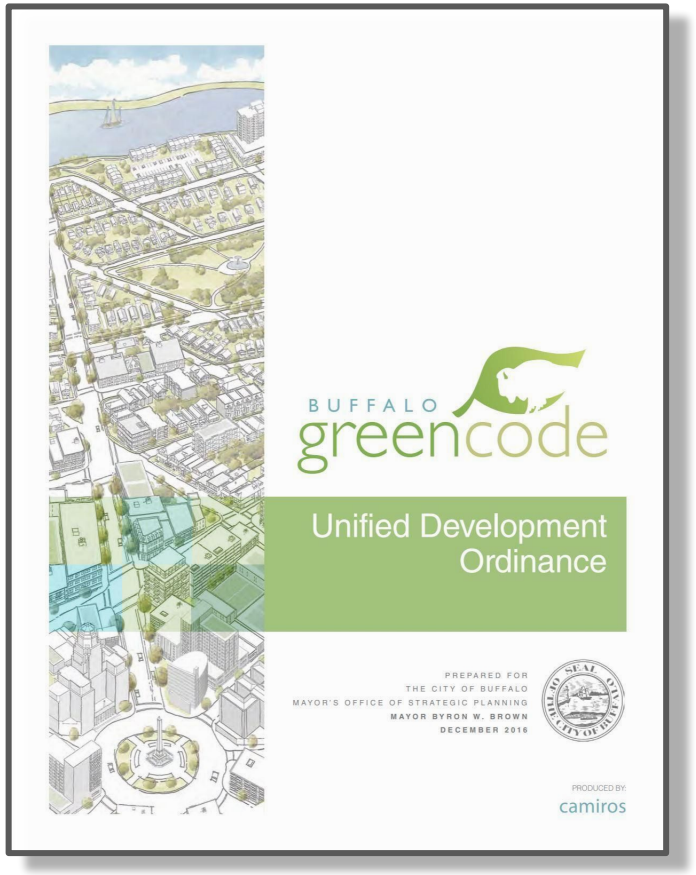

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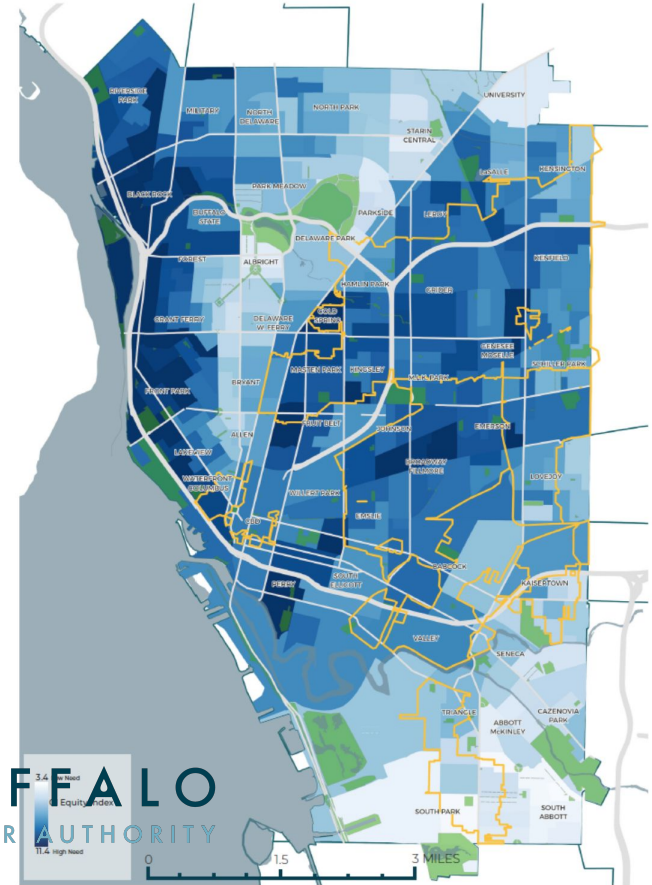
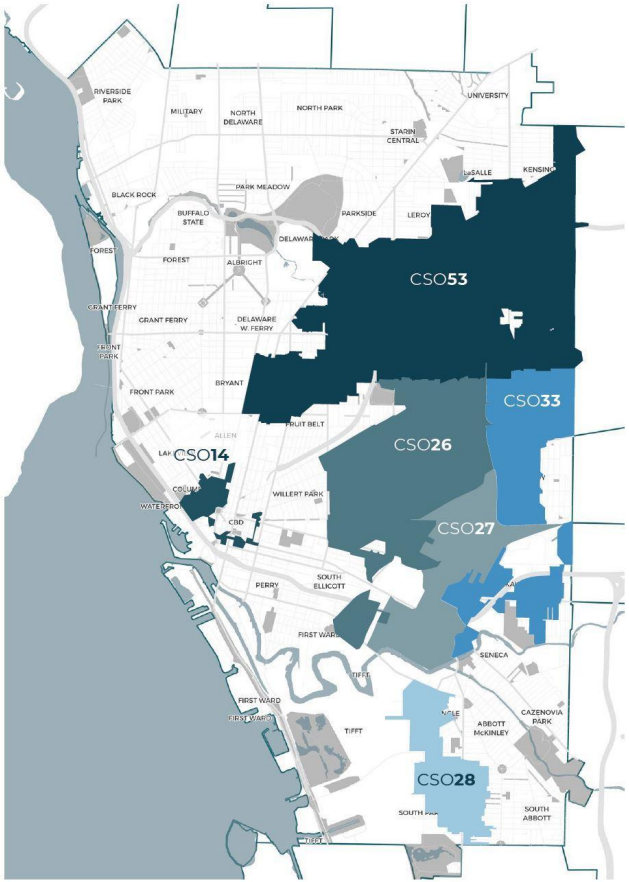
RAIN CHECK 2.0

PRIORITY BASINS





GOAL
569
impervious acres managed

- CSO53 298ac
- CSO33 94ac
- CSO28 27ac
- CSO27 73ac
- CSO26 64ac
- CSO14 13ac

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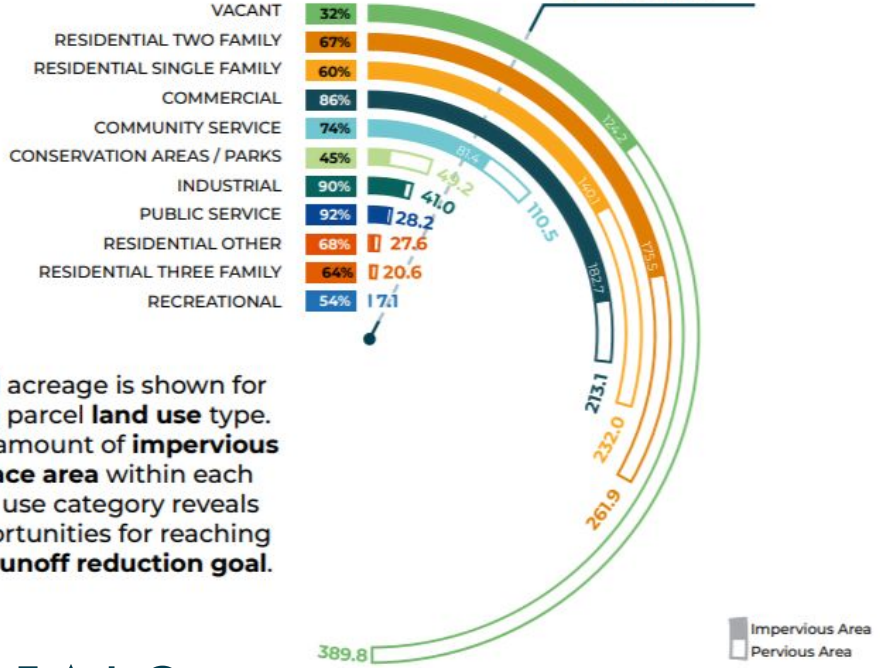
BY THE NUMBERS...

Land Use Opportunity and Impervious Surfaces by Area

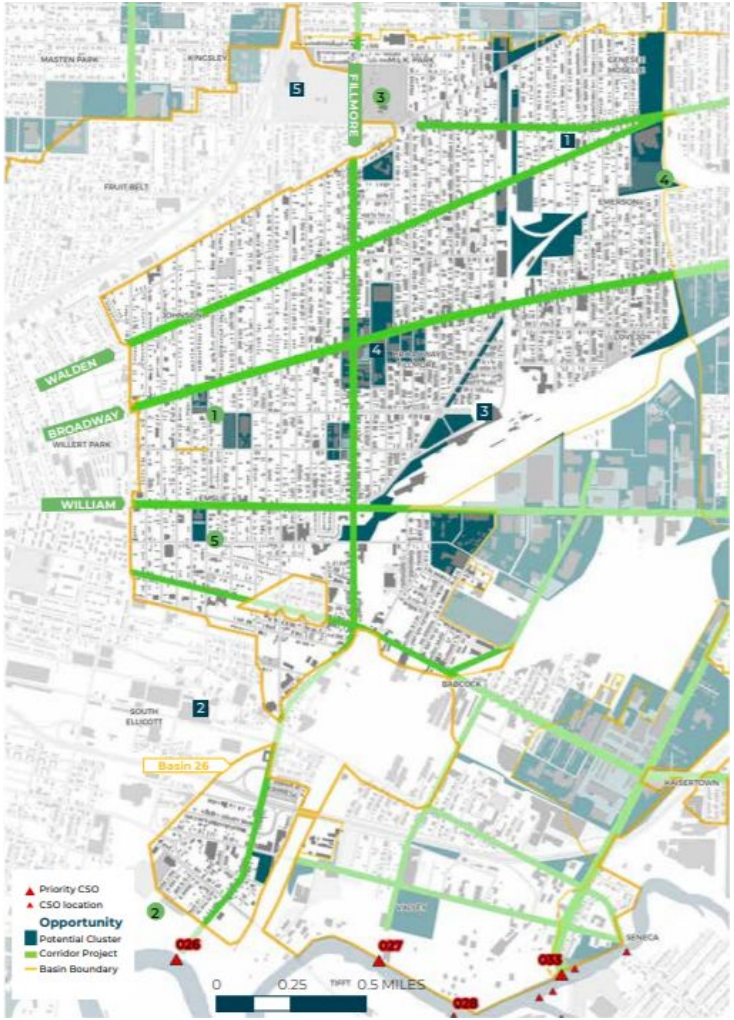
Basin 26

1901 total acres

GOAL **64** acres runoff reduction



Total acreage is shown for each parcel **land use** type. The amount of **impervious surface area** within each land use category reveals opportunities for reaching the **runoff reduction goal**.



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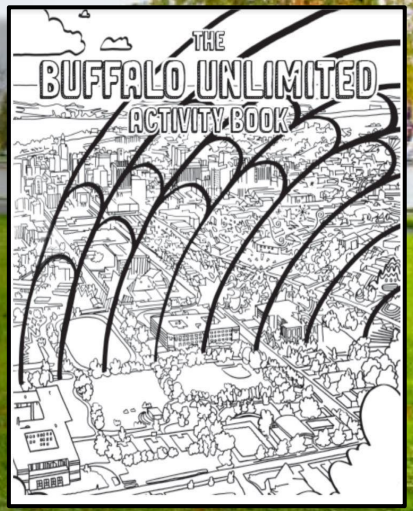

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Pollution Mitigation Benefits

Rain gardens, bioswales, and wetlands remove pollutants from air and water. The pollution removal increases if tree area is added at a density of 5 trees per 1,000 square feet.

Benefit	No Trees	Trees
Carbon Dioxide sequestered	581 lbs/year	728 lbs/year
Ozone Removed	0.49 lbs/year	1.1 lbs/year
Particulates Removed	0.43 lbs/year	0.84 lbs/year
Nitrogen Dioxide Removed	0.39 lbs/year	0.81 lbs/year
Sulfur Dioxide Removed	0.23 lbs/year	0.46 lbs/year
Carbon Monoxide Removed	0.12 lbs/year	0.2 lbs/year

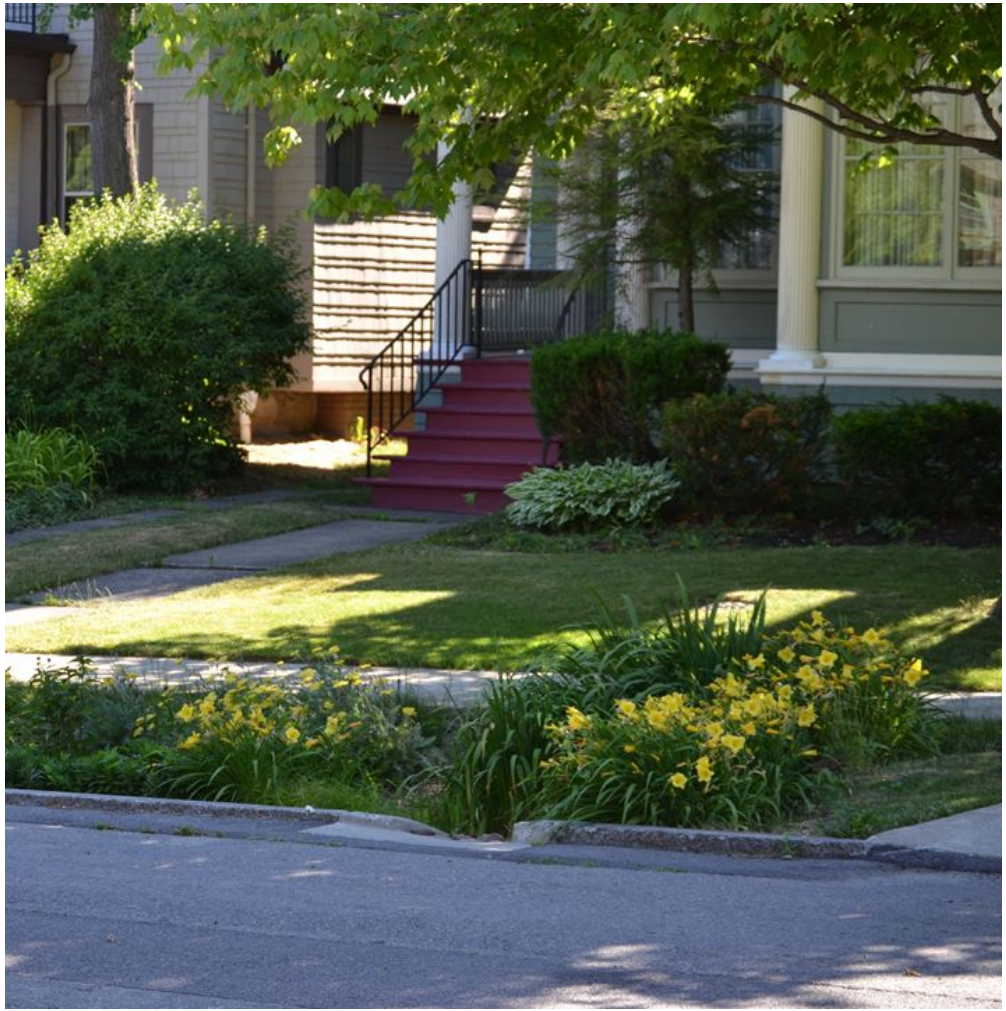
Numbers are for 1,000 s.f. installation and are based on NYC Green Infrastructure Co-Benefits Calculator.

Tree Benefits

Buffalo's 3,830 acres of tree canopy provides the following benefits on an annual basis

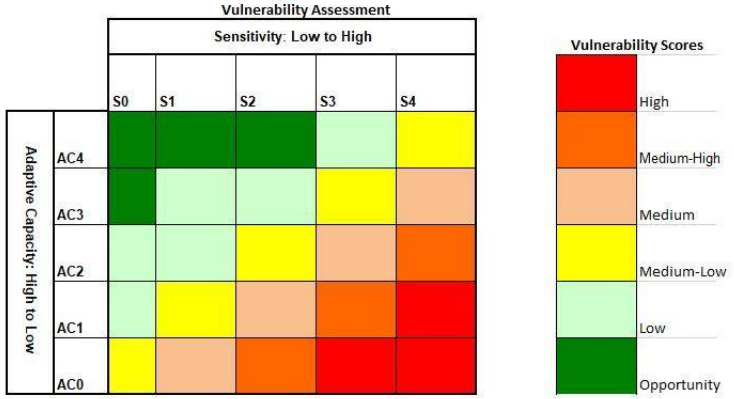
Benefit	Buffalo Canopy
Carbon dioxide sequestered	2,523,374 lbs
Water Saved	40,882,251 gallons
Energy Saved	271 Kwh
Energy Saved	80 Therms

Based on City of Buffalo Open Data Portal



CLIMATE CHANGE VULNERABILITY ASSESSMENT

Built Environment	Impervious Surfaces
	Active Industrial Sites
	Brownfields
Sewer Infrastructure	Sanitary Sewer Pipes
	Stormwater Conveyance Pipes
	Combine Sewage Overflow
	Sanitary Sewage Overflow
	Main Pump Stations
	Combined Sewage System
	Wastewater Treatment Facility
Natural Systems	Seiche
	Buffalo River, Cazenovia Creek, and Scajaquanda Creek
	Lake Erie
	Ice Jam Flooding
	Biodiversity
	Street Trees
	Parks
	Invasives
Socially Vulnerable Population	Families in Poverty
	People with Disabilities
	Households that Rent
	Population over age of 65
	Non-white people
	Under Age 5
	Individuals in Deep Poverty
	Limited English
	Households Receiving Public Assistance
	Mortgage greater than 30% of household income
	Population Without a High School Diploma
	Food Desert
	Asthma
	Vehicle Ownership
	Elderly and Living Alone
	No Health Insurance
	Access to Leisure Activities
	Poor Mental Health
	Coronary Heart Disease



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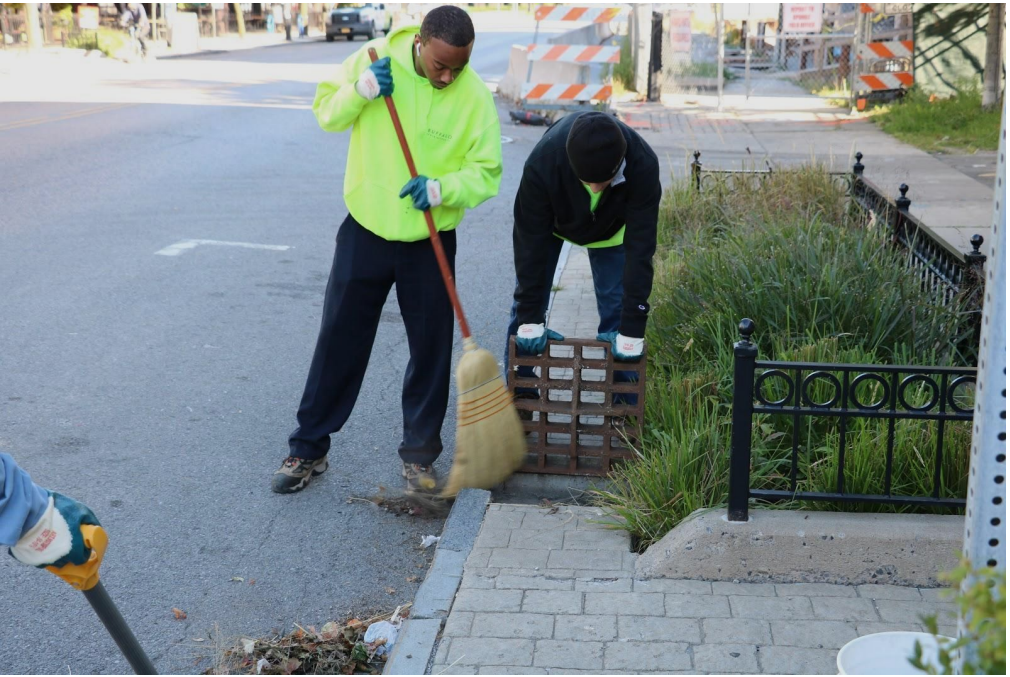

Table 6 Summary of Economic Impacts

Impact Type	Employment	Labor Income ($)	Value Added ($)	Output ($)
Direct Effect	8.7	476,980	613,516	828,588
Indirect Effect	1.5	86,317	132,728	235,590
Induced Effect	3.3	148,173	274,474	456,769
Total Effect	**13.5**	**711,470**	**1,020,719**	**1,520,947**

The Green Infrastructure Workforce in Buffalo

The $1 million project would be expected to generate approximately 13 jobs during its design and construction, primarily in the construction, water/sewer systems, and landscaping industries.

As of May 2017, the Buffalo Metropolitan Area had approximately 13,840 jobs in industry sectors related to green infrastructure design, construction, and maintenance (the total number of jobs in all occupations in the Buffalo MSA in 2017 was 547,750, according to BLS). These jobs had an average median hourly wage of $23.04, which is 30 percent higher than the median hourly wage for the Metropolitan Area as a whole, $17.77.[1]

PUBLIC AND PRIVATE COST SAVINGS

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COMMUNITY ENGAGEMENT

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Questions?

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