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Onondaga Lake Amended Consent Judgment Compliance Program Monthly Report



October -
December
2012



Joanne M. Mahoney,
County Executive

ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION

VISION

To be a respected leader in wastewater treatment, storm water management, and the protection of our environment using state-of-the-art, innovative technologies and sound scientific principles as our guide.

MISSION

To protect and improve the water environment of Onondaga County in a cost-effective manner ensuring the health and sustainability of our community and economy.

CORE VALUES

Excellence

Teamwork

Honesty

Innovation

Cost-Effectiveness

Safety



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Project Progress

Report from Commissioner

The United States Green Building Council (USGBC) recognized County Executive Joanne Mahoney as a winner of their 2012 Global Community Leadership award. In conjunction with efforts by the City of Syracuse and Syracuse University, our community was selected for its leadership in stormwater management, green infrastructure, and sustainability initiatives.

The USGBC is widely recognized as the leader in green and sustainable advocacy, and its rating system is the internationally recognized standard for the building industry. Recognition by USGBC is a tremendous honor for our entire community. The USGBC award is but another recognition of the importance of the County's continued efforts in public education on the Save the Rain program.

While awards resulting from public education may seem intangible to others, in my opinion they result in very tangible savings for the County. Syracuse University recently released its plans to capture over 880,000 gallons per year in stormwater runoff from the Carrier Dome. This is real ACJ capture resulting from the County's Save the Rain public education message permeating the larger community. Our program catalyzed others: if the County can do it, why shouldn't we? As a result we have another tremendous capture program in the works. This is the value of public education in very measurable capture; leveraging County money to accomplish more through grants and partnerships with others.

In this report I also wish to focus on the status of the several large "gray" storage projects under construction. The Clinton CSO Storage Facility Project is now approximately fifty percent complete with roughly half of the 868 construction days utilized, and through the September 30, 2012, billing period, payments of over \$35,000,000 have been authorized--representing approximately fifty percent of the contract value of \$70,435,000. The geotechnical conditions at the site (soils, groundwater discharges/chlorides) make this first half of the massive project especially challenging, and it is a real credit to the contractor, Jett Industries, Inc., for their continued excellent progress to meet both their construction contract deadline and the ACJ major milestone of substantial completion by December 31, 2013.

The other significant gray storage project currently under construction in the Save the Rain portfolio is the Lower Harbor Brook CSO Storage Facility project. With approximately fifty percent of the contract time utilized, billings through November 11, 2012, represented 31 percent of the entire \$25,039,100 contract value. The site along State Fair Boulevard is very limited, and the Contractor, C.O. Falter Construction Corp., has done a very good job progressing the project. While much still remains on this project, it still remains on schedule to meet contractual substantial completion by December 31, 2013—another major ACJ milestone as well.

To tie it all back together, the Carrier Dome's rainwater capture will be used to flush toilets during dome events. At each of the County's large CSO storage facilities the storage tanks are flushed after their use to store wet weather combined sewer volume spikes. And at both of the big grey projects, Clinton and Lower Harbor Brook Storage, we will use rainwater to flush and cleanup after peak storage events are

over. The ideas we have designed and discussed in our community presentations are being adopted throughout our community.

In the sections of this year end written report that follow these remarks, we present project updates on the current green and gray projects in progress. Every green project fact sheet has been updated to include the latest information. 2012 was a very busy year; the County continues to make very serious progress and is on track to meet its capture goals. The next capture deadline milestone established in the Amended Consent Judgment is 12/31/2013; we remain on track at this writing to achieve that milestone. We encourage interested parties to review all project information as well as timely updates on Save the Rain news and events. We encourage frequent visits to www.savetherain.us for those needing additional or more frequent information updates than these written reports.

Respectfully Submitted,



Tom Rhoads P.E.,
Commissioner

GRAY PROJECTS UPDATE

Gray Projects Update

Clinton CSO Storage Facility Project (Construction Phase)

The contractor continued construction activities associated with the storage facility that will collect 6 million gallons of combined sewage from 8 downtown Syracuse CSOs during wet weather events. The contractor completed the installation of mini-piles for the valve house and the east side of the West Chamber, the concrete for the north and south inverts of the outfall to Onondaga Creek, the 48" casing under Onondaga Creek by micro-tunneling, and the mud mat from station 6+50 to 8+50. In December 2012, the contractor installed the 36" HOBAS pipe into the previously installed casing under Onondaga Creek. In addition, construction continued work on the cast-in-basin, East and West Chambers, and overflow to Onondaga Creek.

CSO 022/045 Sewer Separation Project (Construction Phase)

Final pavement, sidewalk, and curbing restoration in the CSO 022 project area is 100 percent complete. In addition, the general contractor completed the installation of the new enhanced tree pits on North Clinton, West Genesee, and West Willow; the trees were planted in December. Work on Haggard Park, the pocket park at North Clinton and West Genesee streets, continued in October, November, and December. It will be completed in January of 2013. The interior and exterior plumbing modifications required in CSO Area 022 are complete.

Harbor Brook Interceptor Sewer (HBIS) Replacement and CSO Abatement Project (Construction Phase)

The contractor, Joseph J. Lane, was issued partial beneficial occupancy and substantial completion for all project work except for the "Greening the Gray" components of the project. The green infrastructure in the rain garden at Delaware Street and Grand Avenue and the enhanced tree pits throughout the Skunk City neighborhood are still being installed.

In December the contractor, Joseph J. Lane, was issued Change Order No. 2 which provided for the installation of new sidewalks on West Onondaga Street and additional enhanced tree basins within the HBIS project area. Approximately 900 linear feet of new sidewalk was installed on County property that is located on the north side of West Onondaga Street between Velasko Road and Catholic Charities. Also, the contractor began installation of enhanced tree basins on Herriman and Hoeffler streets between Rowland and Hartson streets.

To date the project has installed 7,503 linear feet (LF) of new 18" to 36" interceptor sewer between Velasko Road and West Fayette Street on the west side of Syracuse and 5,222 LF of new local sewers, ranging in size from 8" to 42" in diameter. The sewer installation is 100 percent complete, and the project overall is approximately 99 percent complete. The remaining project items will be completed by the summer 2013.

Lower Harbor Brook CSO Conveyance Project (Construction Phase)

The contractor continued work in October, November, and December on the conveyance sewers from CSO 003 and 004 that will transmit combined sewage during wet weather events to the new storage tank. The contractor completed the installation of Manhole SF1 and began installation of manholes SF-3 and 4 on the CSO 004 section of the conveyance pipeline. The contractor completed the installation of piles and pile cap for CSO 004 section of the conveyance pipeline. In addition, the contractor completed the pipe ramming under the Harbor Brook culvert within State Fair Blvd. and continued work rehabilitating the top of the culvert per the construction plans.

Lower Harbor Brook CSO Storage Facility Project (Construction Phase)

In October and November the contractor completed 100 feet of the 54-inch conveyance sewer to CSO 004 and continued to install piles and pile cap for the remaining length of 54-inch pipeline. In addition, the contractor drove piles for the 84-inch sewer from the junction chamber to the storage tank and installed the sluice gates for the 84-inch and two 24-inch connections to the junction chamber. In December the contractor completed the installation of the 54-inch conveyance sewer to CSO 004 and continued to work on the 84-inch sewer from the junction chamber to the storage. Work on the storage tank, which will store combined sewage from the three CSOs (003, 004, & 063) during storm events, included the excavation and pouring of the concrete slurry walls.

Midland CSO 044 Abatement Project (Construction Phase)

Construction on the “Greening the Gray” portion of the CSO 044 project (including a rain garden) was completed in November along with the electrical work for the three flushing chambers. The contractor also performed test flushing of the pipeline and removed debris from the previously installed 144-inch diameter sewer that connects the new 96-inch pipeline to the Midland RTF which will transmit combined sewage from CSO 044 in South Avenue during wet weather overflow events.

Construction on the CSO 044 Conveyance was completed in December. The contractor performed testing, startup and training for the flushing system of the new 96-inch pipeline which will transmit combined sewage from CSO 044 in South Avenue during wet weather overflow events through the previously installed 144-inch diameter sewer that connects to the Midland RTF.



Project:	Clinton CSO Storage
Project Owner:	Onondaga County
Project Location:	Trolley Lot, Syracuse
Sewershed:	Clinton/Lower MIS
Technology:	Storage Facility
Capacity:	6 million gallons
CSO Capture:	114 million gal/yr
# CSOs Abated:	9
Completion Date:	12/ 31/13
Contract amount:	\$70,640,000
Bid Date:	7/14/11
Prime Contractor:	Jett Industries

FACT SHEET

Clinton CSO Storage Facility

Project Description: The Clinton CSO Storage Facility Project is a 6 million gallon combined sewer overflow storage facility that will be constructed in the parking area between the elevated rail tracks and Onondaga Creek just south of the Armory Square area of downtown Syracuse (formerly known as the Trolley Lot). During wet weather events, the facility's three, parallel 18-foot diameter, underground storage tunnels will capture flow from 9 combined sewer overflows (CSOs) in the vicinity of the former Trolley Lot. The wastewater will be stored in the tunnels until it can be conveyed via the main interceptor sewer to the Syracuse Metropolitan Sewage Treatment Plant (Metro) for treatment. The off-site conveyance piping, which will transmit the flow to the facility, was installed under the Clinton CSO Phase 1 and 2A conveyances projects completed in 2009. There will be additional on-site conveyance piping installed under this project to connect the existing sewers to the new facility. In addition to the tunnels there will be two above ground structures located at either end (east and west) of the parking lot which provide access to the tunnels and house the pumping, grit collection and odor control facilities.

Green Components: To further enhance the sustainability of the facility, the project includes green infrastructure components. The stormwater runoff from the entire site that measures approximately 275,000 square feet or 6.3 acres will be managed by green infrastructure. The stormwater from the area surrounding the main structure on the western half of the site will be collected by a series of catch basins and stormwater piping that will outfall into two bioretention basins. The bioretention basins will allow the stormwater to infiltrate into the ground rather than immediately runoff to the creek. In addition, stormwater runoff from the eastern half of the project site, to be restored as a parking area, will be directed to a subsurface collection facility and used to flush the storage tunnels to clear them of grit and debris that may have settled or been left behind after the stored combined sewage was transmitted to Metro. In addition, a green roof will be installed on the west building.

Construction Update: The contractor continued construction activities associated with the storage facility. The contractor completed the installation of mini-piles for the valve house and the east side of the West Chamber; the concrete for the north and south inverts of the outfall to Onondaga Creek; the 48" casing under Onondaga Creek by micro-tunneling; and the mud mat from station 6+50 to 8+50. In December 2012, the contractor installed the 36" HOBAS pipe into the previously installed casing under Onondaga Creek. In addition, construction continued work on the cast-in-basin, East and West Chambers, and overflow to Onondaga Creek.



Clinton CSO Storage Facility – Construction 12/20/12



Underground Storage Tank - Concrete Base under Construction (5 Stories below Surface)



Clinton CSO Storage Facility Construction Backfilling over the Tunnels (12/01/12)

Version 12/28/2012



Project:	CSO 022/045 Sewer Separation
Project Owner:	Onondaga County
Project Location:	Syracuse
Sewershed:	Clinton/Lower MIS & Midland
Technology:	Sewer Separation
CSO Capture:	1 million gal/yr
# CSOs Abated:	2
Completion Date:	12/31/12
Project Cost:	General - \$4,581,888 Plumbing - \$1,031,235
Bid Date:	November 29, 2011
Prime Contractor:	General – J. J. Lane Plumbing – Joy Process Mechanical

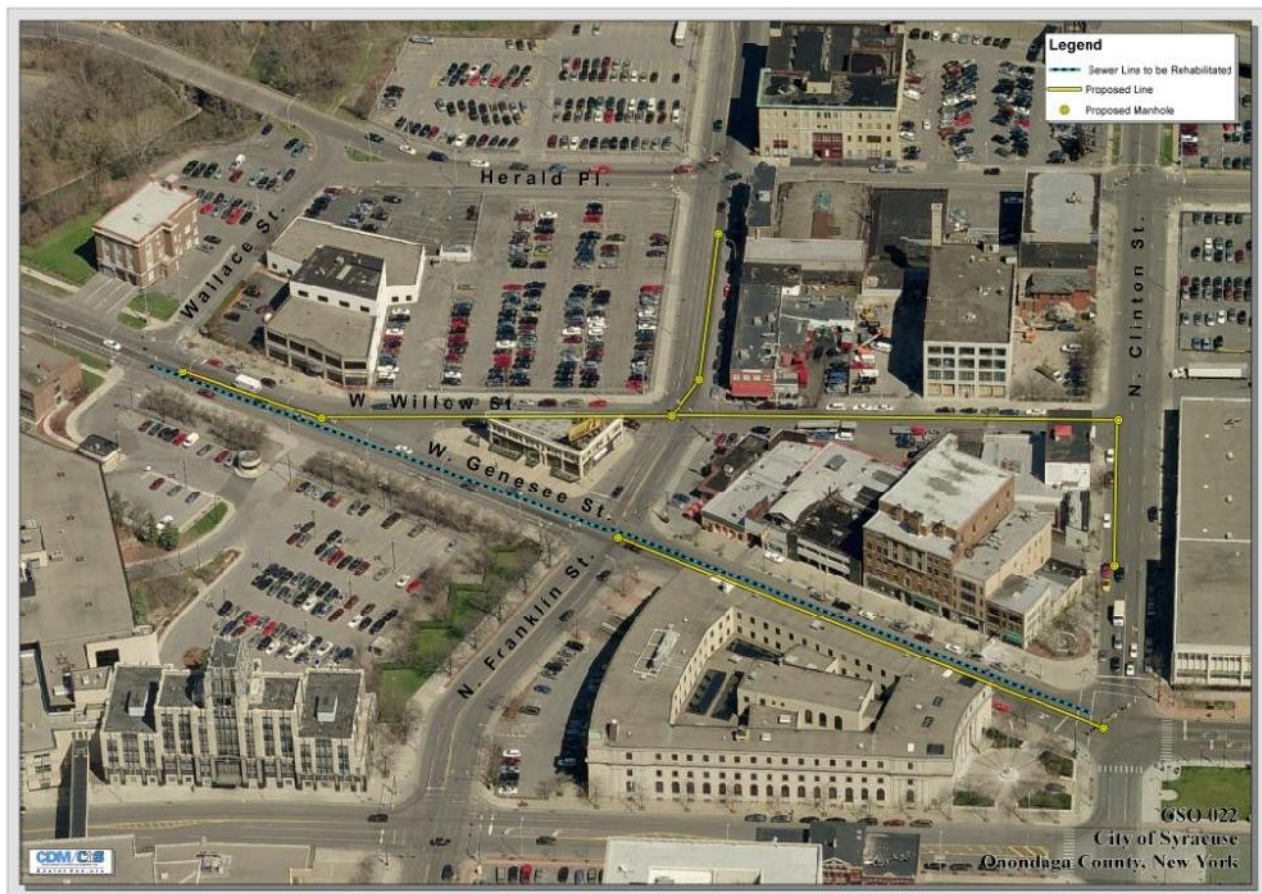
FACT SHEET

CSO Area 022 and 045 Sewer Separation Project

Project Description: In 2000, the separations of 13 separate CSO basins were designed to the 95 percent stage. The CSO areas represented basins whose full separation would be cost effective compared to other CSO abatement technologies. The remaining basins where the full separation has not been constructed were CSO areas 022 and 045. CSO area 022 is located in downtown Syracuse and the tributary sewers are located in North Franklin, West Genesee, and Willow streets. The proposed work to be performed includes 2,000 linear feet (LF) of new sanitary sewer; 800 LF of sewer lining; and twenty (20) internal building separations. CSO Area 045 is located south of downtown Syracuse with the outfall at the intersection of West Castle Street, Hudson Street, and Onondaga Creek. The combined sewage tributary to this outfall is conveyed by combined sewers located in Crescent and Hudson streets. The proposed work to be performed includes: 700 LF of new storm sewer in Hudson and Crescent streets, 1200 LF of sewer lining to convert the existing combined sewers in Crescent and Hudson streets to sanitary sewers, rehabilitation of the existing sanitary sewer in Rich Street between Hudson and Onondaga Creek, and one (1) private property separation.

Green Components: The County has successfully applied its "Greening the Gray" mission to the project through the implementation of Green Infrastructure as it related to the reconstruction of Haggard Park, the pocket park on the corner of West Genesee and North Clinton Streets. The park had fallen into disrepair due to settlement issues and will be rehabilitated with green components under the CSO 022 project.

Project Update: Final pavement, sidewalk, and curbing restoration in the CSO 022 project area is 100% complete. In addition, the general contractor completed the installation of the new enhanced tree pits on North Clinton, West Genesee, and West Willow and the trees were planted. Work on Haggard Park, the pocket park at North Clinton and West Genesee streets continued and will be completed in January of 2013. The interior and exterior plumbing modifications required in CSO Area 022 are complete.



CSO 022 Project Area



CSO 022 Project Area After Construction



FACT SHEET

Harbor Brook Interceptor Sewer (HBIS) Replacement and CSO Abatement Project

Project:	HBIS Replacement & CSO Abatement
Project Owner:	Onondaga County
Project Location:	Harbor Brook Corridor Fayette St. to Velasko Rd.
Sewershed:	Harbor Brook
Technology:	Interceptor Replacement
CSO Capture:	36 million gal/yr
CSOs Addressed:	9
Completion date:	6/30/2012
Contract amount:	\$21,536,849
Bid Date:	11/2/09
Prime Contractor:	J.J. Lane Construction

Project Description: The HBIS Replacement Project provides for a much needed upgrade to the existing Harbor Brook Interceptor between West Fayette Street and Velasko Road on the west side of Syracuse. This length of the interceptor sewer conveys dry weather flow and a portion of the combined flow from CSOs 009, 010, 011, 013, 014, 015, 016, 017, and 018 for conveyance to Metro for treatment. The existing interceptor is a U-shaped cast-in-place concrete pipe constructed in the 1920s and has fallen into disrepair. Due to the shape and age of the HBIS, flow restrictions have developed which have decreased capacity and increased infiltration in some areas. The project includes the installation of 7,600 linear feet (LF) of new HBIS ranging in size from 18- to 36-inches in diameter, 1,500 LF of new local sewers, rehabilitation of 860 LF of 30-inch brick sewer, installation of 4 new regulator manholes, and rehabilitation or replacement of 2500 LF of Harbor Brook Culvert. In addition, during construction the available funding allowed CSO Areas 013 and 016 to be completely separated which will increase CSO capture and eliminate two CSO discharge points. As a result, the capture projection for this project is anticipated to be 0.9 percent or 36 million gallons.

Green Components: In addition the County has successfully applied its "Greening the Gray" mission to the HBIS Replacement Project. The GI components incorporated into this gray construction project include the installation of approximately 40 enhanced tree basins with infiltration zones and the construction of a bioretention area that will manage stormwater runoff from an area of approximately 3.2 acres. The enhanced tree basins will be located on Hartson, Herriman and Hoeffler Streets in the Skunk City area of Syracuse. The bioretention area will be located at the corner of Grand Avenue and Delaware Street and will contain a series of rain gardens and bioretention swales which will collect off-site runoff from impervious areas and manage the on-site stormwater as well. The site will have a "park-like" setting with an educational theme.

Construction Update: The contractor Joseph J. Lane was issued partial beneficial occupancy and substantial completion for all project work except for the "Greening the Gray" components of the project. The green infrastructure in the rain garden at Delaware Street and Grand Avenue and the enhanced tree pits throughout the Skunk City neighborhood are still being installed.

In December, the contractor Joseph J. Lane was issued Change Order No. 2 which provided for the installation of new sidewalks on West Onondaga Street and additional enhanced tree basins within the

HBIS project area. Approximately 900 linear feet of new sidewalk was installed on County property that is located on the north side of West Onondaga Street between Velasko Road and Catholic Charities. Also, the contractor began installation of enhanced tree basins on Herriman and Hoeffler streets between Rowland and Hartson streets.

To date the project has installed 7,503 linear feet (LF) of new 18" to 36" interceptor sewer between Velasko Road and West Fayette Street on the west side of Syracuse, and 5,222 LF of new local sewers, ranging in size from 8" to 42" in diameter. The sewer installation is 100% completed and the project overall is approximately 99% complete. The remaining project items will be completed by the summer 2013.



**New HBIS Alignment
through Skunk City
(in yellow)**

Version 12/28/2012



FACT SHEET

Lower Harbor Brook CSO Storage and Conveyances Project

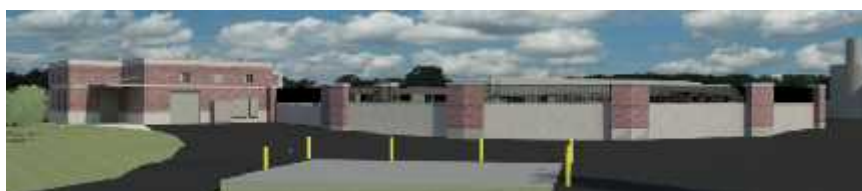
Project:	LHB CSO Conveyances & Storage
Project Owner:	Onondaga County
Project Location:	State Fair Blvd, Syracuse
Sewershed:	Harbor Brook
Technology:	Underground Tank
Capacity:	4.9 million gallons
CSO Capture:	55 million gal/yr
# CSOs Abated:	3
Completion Date:	12/31/13
Contract Amount:	Conveyances – \$4,147,888 Storage – \$25,039,101
Bid Date:	Conveyances – 8/30/11 Storage – 10/18/11
Prime Contractor:	Conveyances – J.J. Lane Storage – C.O. Falter

Project Description: The Lower Harbor Brook CSO Conveyances and Storage Facility Project is a 4.9 million gallon combined sewer overflow storage facility that will be located on County owned property on State Fair Boulevard between Hiawatha Blvd. and West Genesee Street in the City of Syracuse. The facility will capture and store the overflows from CSOs 003, 004 and 063 for up to the 1-year, 2-hour design storm event. After the storm event subsides, the contents of the storage tank will be pumped to the existing Harbor Brook Interceptor Sewer for conveyance to the Metropolitan Treatment Plant (Metro) for full treatment. The project also includes construction of CSO conveyance pipelines on State Fair Blvd., Hiawatha Blvd., and Erie Blvd. to convey combined sewage from the overflow regulators to the storage tanks during rainfall and snowmelt events. Floatables and grit removal will be included in this facility. Odor control provisions will be incorporated into the facility design and the tank will be completely enclosed.

Green Components: To further enhance the sustainability of the facility, the project includes green infrastructure components. The stormwater runoff from the rooftops of the storage tank and controls building will be stored within the CSO storage tank and used for a second and third cleaning flush of the tank. This water will ultimately be treated at Metro eliminating the need for this stormwater to be treated on-site. The stormwater storage is designed to capture the 100-year storm (5.2 inches) from the tank and the control building rooftop.



Rendering – view from State Fair Blvd.



Rendering – view from the northeast



Lower Harbor Brook CSO Storage Facility - Construction Progress Photos

Project Update: Conveyances - The contractor continued work in October, November and December on the conveyance sewers from CSO 003 and 004 that will transmit combined sewage during wet weather events to the new storage tank. The contractor completed the installation of MH-SF1 and began installation of manholes SF-3 and 4 on the CSO 004 section of the conveyance pipeline. The contractor completed the installation of piles and pile cap for CSO 004 section of the conveyance pipeline. In addition, the contractor completed the pipe ramming under the Harbor Brook culvert within State Fair Blvd. and continued work rehabilitating the top of the culvert per the construction plans.

Storage - In October and November, the contractor completed 100 feet of the 54-inch conveyance sewer to CSO 004 and continued to install piles and pile cap for the remaining length of 54-inch pipeline. In addition, the contractor drove piles for the 84-inch sewer from the junction chamber to the storage tank and installed the sluice gates for the 84-inch and two 24-inch connections to the junction chamber. In December, the contractor completed the installation of the 54-inch conveyance sewer to CSO 004 and continued to work on the 84-inch sewer from the junction chamber to the storage. Work on the storage tank, which will store combined sewage from the three CSOs (003, 004 & 063) during storm events, included the excavation and pouring of the concrete slurry walls.



Lower Harbor Brook CSO Storage & Conveyances Project Area



Project:	CSO 044 Conveyances
Project Owner:	Onondaga County
Project Location:	Syracuse
Sewershed:	Midland
Technology:	Storage & RTF
CSO Capture:	6,000,000 gal/yr
# CSOs Abated:	1
Completion Date:	Partial - 12/31/11
Contract amount:	\$7,978,282
Bid Date:	9/21/10
Prime Contractor:	J.J. Lane Construction

FACT SHEET

Midland CSO 044 Conveyances

Project Description The CSO 044 Conveyances Project provides for the transmission of wet weather flow from CSO 044, which discharges to Onondaga Creek at South Avenue and West Castle Street, to the Midland Regional Treatment Facility (RTF) on the south side of Syracuse. Conveyance of the combined sewer flow to the Midland RTF will be via approximately 500 linear feet of 96-inch diameter pipeline between the terminus of the 144-inch pipeline installed under the Midland Phase Two RTF and Conveyances Project to CSO 044.

Green Components: In addition to the pipeline, the project will include the construction of a new regulator structure in South Avenue, and two conveyance flushing chambers. The "Greening the Gray" components incorporated include the utilization of captured stormwater for the flushing chambers, the installation of rain gardens for stormwater infiltration, and an educational interpretive walkway.



CSO 044 Conveyances
Construction January 11, 2012

Project Update: Construction on the "Greening the Gray" portion of the CSO 044 project (including a rain garden) was completed in October and November along with the electrical work for the three flushing chambers. The contractor also performed test flushing of the pipeline and removed debris from the previously installed 144-inch diameter sewer that connects the new 96-inch pipeline, to the Midland RTF which will transmit combined sewage from CSO 044 in South Avenue during wet weather overflow events.

Construction on the CSO 044 Conveyances was completed in December. The contractor performed testing, startup and training for the flushing system of the new 96-inch pipeline which will transmit combined sewage from CSO 044 in South Avenue during wet weather overflow events through the previously installed 144-inch diameter sewer that connects to the Midland RTF..

Version 12/28/2012

GREEN PROJECTS UPDATE

Green Projects Update

The final months of 2012 proved to be very productive for the Save the Rain green infrastructure program. Several projects have recently been completed with several additional projects starting construction.

Work has been completed for the green street project at Otisco Street. The project included the construction of a bioretention system with additional landscaping and tree plantings planned for Spring 2013. The project will capture an estimated 2.5 million gallons of stormwater annually. Another green street project has also entered the final stages of construction. Phase 1 of the Connective Corridor project is substantially complete. This phase of the Connective Corridor extends from University Avenue along E. Genesee Street. The project features extensive green infrastructure elements including porous pavement with enhanced tree trenches and landscaping.

Renovations at City Lot # 4 are complete. The lot, located next to the I-81 ramp on N. State Street received a new surface with landscaping features around the perimeter of the lot. In addition, the Save the Rain Vacant Lot program continued to advance projects with the completion of projects at W. Onondaga and Hartson streets.

The Courts-4-Kids project at Leavenworth/Barker Park was completed. The project included the reconstruction of basketball courts at Barker Park and was done in collaboration with the City of Syracuse Parks Department and the Jim & Juli Boenheim/Carmelo K. Anthony Foundations. In November, a second Courts-4-Kids project began construction with renovations at Lewis Park. The project is scheduled for completion in 2013.

While many projects have recently been completed, there have also been several construction projects initiated at the end of 2012. Work has started at the Rosamond Gifford Zoo on green infrastructure renovations for the parking lot and an extensive wetland construction on the Zoo campus. Construction has also started on the green roof project at the Colvin-Elmwood Station of the US Post Office, located on South Salina Street. The project marks one of the first Post Office facilities in the country to construct a green roof. Work has also started on the Harbor Brook Treatment Wetland project in Skunk City. The treatment wetland will be the first of its kind in the country.

With an impressive list of projects identified for Spring of 2013, the program looks to keep the momentum going in the upcoming construction season. The Vacant Lot program looks to expand in 2013 with several lots currently under design and procurement. A major gateway project on W. Onondaga Street between South Ave and Seymour Ave is scheduled to begin construction early spring. Plans are also being finalized for green improvements at Loguen Park. Work will include construction of bioretention areas, pavement removal and landscaping enhancements.

2011 Projects

Completed	58
Under Construction	2
Total Projects (as of 12/31/12)	60

2012 Projects

Projects Completed	40
Projects Under Construction	8
Total Projects (as of 12/31/12)	48

2013 Projects

Projects Completed	0
Projects Under Construction	0
Projects in Contracting Phase	0
Projects in Bid Phase	0
Projects in Final Design	4
Projects in 90% Design Phase	4
Projects in 50% Design Phase	11
Fieldwork Phase	3
Concept Phase	13
Other Projects	9
Total Projects (as of 12/31/12)	44



FACT SHEET

Atrium Garage Pilot Stormwater Cistern

Project Description: The Atrium Garage is a pilot Stormwater Cistern Project, which is the first of its kind to be constructed as part of the Save the Rain program. Phase 1 of this pilot project will reduce runoff by 38,400 gallons per year, by intercepting stormwater from one of the drain inlets on the top floor of the Atrium Garage parking deck. The suitability of the design will be monitored after installation so that future cistern projects can be optimized for performance.

The parking deck drains into multiple inlets on the top floor, which are conveyed by 4-inch diameter roof drains to a discharge pipe in the ground floor slab, and into the combined sewer system. By intercepting one of these 4-inch roof drains on the ground floor with a cistern tank, the discharge opening is reduced via a 1-inch diameter opening that allows the runoff to collect in the tank and slowly discharge into the combined sewer system after the rain has subsided.

The 500-gallon polyethylene cistern tank features a bypass system that allows normal flow from the roof drain when the tank is completely filled. The tank is sized to fit within a vacant area of the parking deck, so that no existing parking spaces will be lost.

The cistern has been ordered. It will be installed in the Atrium Garage in 2013.

Project:	Atrium Garage Pilot Stormwater Cistern
Project Owner:	Partnership Properties
Project Location:	201 S. Franklin Street
Sewershed:	Clinton/ Lower MIS
GI Technology:	Stormwater Detention Cistern
Capture Area:	6,000 sq. ft.
Runoff Reduction:	38,400 gal/yr
Year Contracted:	2012
Construction Cost:	\$2,875
Prime Contractor:	Plumbers Association



Prior Conditions



Conceptual Rendering of Stormwater Cistern



FACT SHEET

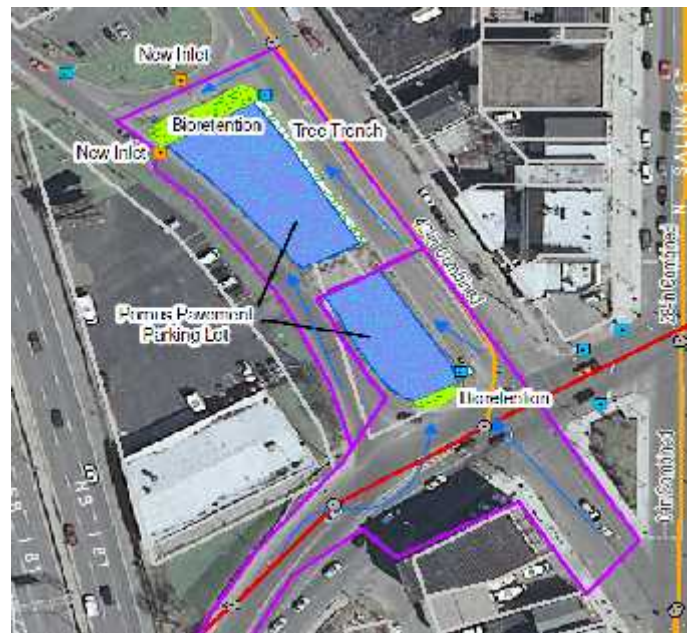
City Parking Lot #4

Project Description: This project involved the construction of two infiltration trenches under porous asphalt within City Lot #4. The porous asphalt infiltration beds were designed to capture runoff from the parking lot itself, as well as from the I-81 NB ramp and portions of N. State Street.

In addition, a bioretention area was installed that is designed to capture runoff from the State Street I-81 NB ramp. Further, a tree trench was installed along State Street which captures runoff from the street.

In total, the green infrastructure included in this project captures 1,248,000 gallons of stormwater per year. Additionally, this project was constructed at the same time as the N. State Street Green Street project, and in total the two projects capture 2.4 million gallons of runoff annually.

Project:	City Lot #4
Project Owner:	NYS DOT
Project Location:	Butternut and N. State St.
Sewershed:	Franklin
GI Technology:	Porous pavement, Bioretention, Tree Trench
Capture Area:	71,000 sq. ft.
Runoff Reduction:	1,248,000 gal/yr
Year Completed:	2012
Construction Cost:	\$381,000
Bid Date:	5/16/12
Prime Contractor:	Paul F. Vitale, Inc.



Conceptual Rendering of City Lot #4 Project



Porous Pavement and New Bioretention Area at Northern End of Lot 4



Tree Trench along State Street



FACT SHEET

Downtown Streetscapes: 100 South State Street

Project Description: Onondaga County worked with the City of Syracuse to develop streetscape improvements on the 100 block of South State Street on the west side of the street. The project included the installation of planter boxes along State Street adjacent to the State Office Building. The design of the planters mimics that of the first block of South State Street which was retrofitted as part of the Water Street Green Gateway project.

The planter boxes capture runoff from State Street as well as from the wide sidewalk areas adjacent to the State Office Building. In total, the project captures 268,000 gallons of stormwater annually.

The project was part of the Save the Rain Urban Forestry program that will plant over 8,500 trees in the City of Syracuse by 2018.

Project:	Downtown Streetscapes
Project Owner:	City of Syracuse
Project Location:	West Side of 100 S. State St.
Sewershed:	Clinton/Lower MIS
GI Technology:	Enhanced Street Trees
Capture Area:	15,200 sq. ft.
Runoff Reduction:	268,000 gal/yr
Year Constructed:	2012
Construction Cost:	\$118,802
Prime Contractor:	Davis Wallbridge



Conceptual Rendering of the 100 S. State Street Project



Before and After Installation of Planter Boxes along
the 100 Block of S. State Street



Project:	Downtown Streetscapes
Project Owner:	City of Syracuse
Project Location:	East Side 200 block of Montgomery St.
Sewershed:	Clinton/Lower MIS
GI Technology:	Enhanced Street Trees
Capture Area:	10,000 sq. ft.
Runoff Reduction:	195,000 gal/yr
Year Completed:	2012
Bid Amount:	\$92,317

FACT SHEET

Downtown Streetscapes 200 Montgomery East

Project Description: Onondaga County worked with the City of Syracuse to develop streetscape improvements on the east side of the 200 block of Montgomery Street. Enhanced street trees were planted in the right-of-way. This design mirrors the west side of 200 Montgomery Street which was constructed in the spring of 2012.

The enhanced tree pit design provides a wide storage and soil trench area for trees to maximize stormwater intake. This enhanced tree system dramatically improves the growth, vitality and life span of the tree. In total, this project captures 195,000 gallons of stormwater annually.

The project is part of the Save the Rain Urban Forestry Program that will plant over 8,500 trees in the City of Syracuse by 2018.



Installation of porous pavers around a street tree on the 200 block of Montgomery Street



Photograph of Prior Conditions of the West Side of the 200 block of Montgomery Street

Version 12/30/2012



FACT SHEET

Harbor Brook Wetlands Pilot Project

Project:	Harbor Brook Wetlands Pilot Project
Project Owner:	Onondaga County
Project Location:	Velasko Road & Grand Avenue
Sewershed:	Harbor Brook
GI Technology:	Constructed Wetland
Capture Area:	1,966,000 sq. ft.
Runoff Reduction:	34,626,000 gal/yr
Year Contracted:	2012
Bid Date:	7/25/12
Bid Amount:	\$3,192,888
Prime Contractors:	Compensatory Storage – AJ Montclair General Construction – JJ Lane Electrical – Patricia Electric

Project Description: The Harbor Brook CSO 018 Constructed Wetlands Pilot Treatment System will treat overflows from CSO018, currently discharged into Harbor Brook, and serve as a demonstration project to test the effectiveness of three types of constructed wetland treatment systems. In 2011, the Compensatory Storage portion of the work was completed. Construction of the pilot wetlands treatment system began in 2012, and completion is slated for spring 2013.

Based on the knowledge gained from this pilot project, these wetland systems may be integrated as part of a larger constructed wetland treatment system along Harbor Brook with additional water quality, natural habitat, recreational, educational, and other community benefits. The project is located within the approximately 34 contiguous acres of county-owned land known as the Velasko Road Detention Basin. This constructed wetland pilot project will capture and treat approximately 34.6 million gallons of combined sewage each year and substantially improve the quality of the stormwater discharge into Harbor Brook.



Conceptual Renderings of the Harbor Brook Wetland System



FACT SHEET

Hughes Magnet School

Arbor Day 2012 Tree Plantings

Project Description: This tree planting effort involved the installation of 10 new trees around the parking lot and sidewalks at Hughes Magnet School on Jamesville Road. These features serve to beautify the grounds of the school while also capturing stormwater runoff. With each tree capturing approximately 2,000 gallons of stormwater per year, the project helps capture a total of 20,000 gallons annually.

The 10 new trees planted at the school provide increased stormwater capture and improved aesthetics along at Hughes Magnet School, but also provide greater stability and erosion control to the sloped areas they are planted on. These aspects of the project will continue to benefit both the school and watershed for many years to come.

This also provided an engaging educational opportunity for students at Hughes Magnet School, some of whom assisted in the planting of these trees. The City/County Arborist and personnel from Cornell Cooperative Extension of Onondaga County educated the children about the benefits of planting trees – including stormwater capture. The Commissioner of the Onondaga County Department of Water Environment Protection the Commissioner of the City of Syracuse Parks Department, and the Regional Director of NYSDEC also visited the school and spoke to the children at an Arbor Day celebration outside of the school.

Project:	Arbor Day Tree Plantings at Hughes Magnet School
Project Owner:	Syracuse City School District
Project Location:	Hughes Magnet School
Sewershed:	Midland
GI Technology:	Tree Plantings
Runoff Reduction:	20,000 gal/yr
Year Completed:	2012
Construction Cost:	\$0
Primary Contractor:	City/County Arborist



Trees along the sidewalk at Hughes Magnet School



Trees Along the School's Parking Lot



FACT SHEET

Leavenworth/Barker Park

Project Description: The green improvements to Leavenworth/Barker Parks capture stormwater runoff from numerous adjacent streets and allow it to infiltrate through several different green infrastructure features. Stormwater is captured from Matty Avenue, Park Avenue, Barker Avenue, Wilkinson Street, and Tracy Street as part of this project. Around the perimeter of Leavenworth Park, vegetated swales atop stone infiltration beds capture roadway runoff and allow it to infiltrate directly into the groundwater below. These swales are planted with two groundcover species and a native wetland grass species that can tolerate both wet and dry soil conditions.

At the adjacent Barker Park, a rain garden was installed between Tracy and Wilkinson streets. The rain garden was planted with a mixture of native shrubs, flowering perennials, and grass species that will foster evapotranspiration and infiltration, preventing runoff from entering the combined sewer system.

The final feature of Barker Park was a new basketball court that is paved with porous asphalt, allowing stormwater to infiltrate directly through the surface. This reduces runoff and prevents puddles on the court after a rain storm. This basketball court was installed in cooperation with Courts4Kids, an initiative of the Jim and Juli Boeheim Foundation and the Carmelo K. Anthony Foundation.

The green infrastructure components at Leavenworth/Barker Park are designed to capture up to 1" of rainfall at a given time, reducing annual stormwater runoff by approximately 1,574,000 gallons.

Project:	Leavenworth/Barker Park
Project Owner:	City of Syracuse Parks Dept.
Project Location:	301 Park Ave and Matty Ave
Sewershed:	Clinton
GI Technology:	Bioswale, Bioretention, Porous Pavement
Capture Area:	24,000 sq. ft.
Runoff Reduction:	1,574,000 gal/yr
Year Completed:	2012
Construction Cost:	\$574,500
Bid Date:	6/27/12
Prime Contractor:	John R. Dudley Construction



Courts 4 Kids and Save the Rain Logos on Porous Basketball Court at Barker Park



Aerial View of Leavenworth/Barker Parks (Oct. 2012)



FACT SHEET

Lewis Park Enhancement Green Park Project

Project Description: This project is a collaborative effort between Save the Rain and the Syracuse Parks Department. It provides improved basketball courts and a new parking lot, while preventing 524,000 gallons of runoff from entering the combined sewer system annually.

One prominent feature is a new basketball court made of porous asphalt, allowing stormwater to infiltrate directly through the asphalt surface and allowing the courts to be used even after a rain storm. Runoff is collected from Lewis Street to the north, Milton Ave to the east, walkways within the park, and the court itself. This is the third basketball court renovated in conjunction with Courts4Kids, an initiative of the Jim and Juli Boeheim Foundation and the Carmelo K. Anthony Foundation.

Additionally, the parking area is being replaced with porous pavers to collect runoff from structures and walkways within the park as well as from Lewis Street along the north side of the park.



**Aerial Image of Lewis Park Basketball Court
Prior to Project Construction**

Project:	Lewis Park
Project Owner:	Syracuse Parks Dept.
Project Location:	305 Lewis St. & 825 Milton Ave
Sewershed:	Harbor Brook
GI Technology:	Porous Pavement
Capture Area:	30,000 sq. ft.
Runoff Reduction:	524,000 gal/yr
Year Contracted:	2012
Construction Cost:	\$207,152
Bid Date:	9/13/12
Prime Contractor:	ACTS II Construction



Renovated Porous Basketball Court at Lewis Park



Courts 4 Kids Porous Basketball Court at Lewis Park



FACT SHEET

N. State Street Green Street

Project Description: This project involved the construction of a reverse diagonal porous pavement parking lane along N. State Street. The parking lane was designed for capturing runoff from the sidewalk, a portion of N. State Street and a large portion of Ash Street via the disconnection of existing catch basins. This will provide significant aesthetic benefits to the area, while also capturing stormwater.

In addition, the bioretention area is designed to capture runoff from State Street and a portion of Ash Street. This will be constructed on NYSDOT property, continuing the Save the Rain partnership with NYSDOT.

In total, all of the green infrastructure elements included in this project will capture 1,197,000 gallons of stormwater per year. Additionally, this project was constructed at the same time as the City Lot #4 project, and in total the two projects capture 2.4 million gallons of stormwater runoff annually.

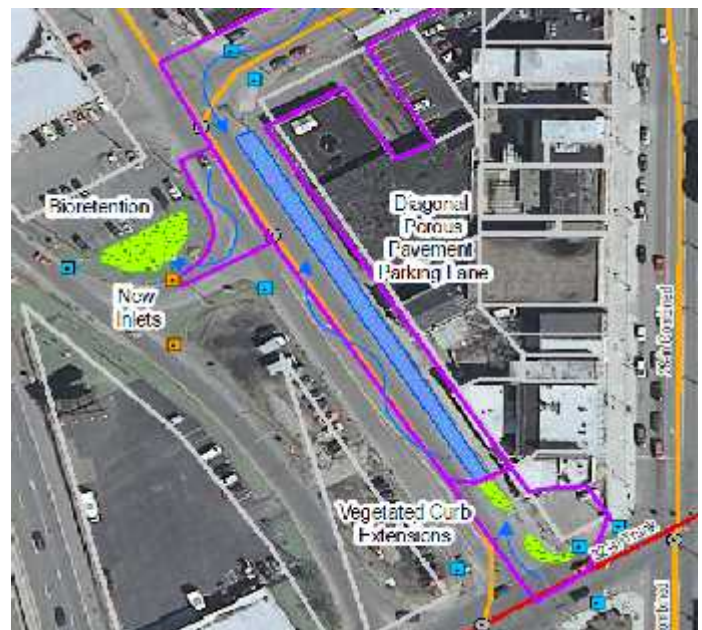


Bioretention Area on NYSDOT Property

Project:	N. State St. Green Street
Project Owner:	City of Syracuse/NYSDOT
Project Location:	State Street from Butternut St. to Ash St.
Sewershed:	Franklin
GI Technology:	Porous pavement, Bioretention
Capture Area:	69,000 sq. ft.
Runoff Reduction:	1,197,000 gal/yr
Year Completed:	2012
Construction Cost:	\$206,000
Bid Date:	5/16/12
Prime Contractor:	Paul F. Vitale, Inc.



New Porous Pavement Parking Lane across from City Lot 4



Conceptual Rendering of the N. State St. Green Street Project



FACT SHEET

Onondaga County Public Libraries: Beauchamp Library

Project Description: The Beauchamp Library project was part of the Onondaga County Public Libraries (OCPL) "Green Library Initiative," a partnership between the Save the Rain program and OCPL to capture stormwater while providing aesthetic benefits to the libraries.

A large bioretention area was installed adjacent to the Beauchamp Library building to capture runoff from the library roof, the main library parking lot and from East Colvin Street. In the conceptual rendering below, the green area represents bioretention area (also known as a rain garden) and the purple outlines the areas from which stormwater will flow into the garden.

The bioretention area was designed to capture this stormwater and has an overflow that does not allow water to pond more than 6 inches deep at any time.

This green infrastructure project captures approximately 265,000 gallons of stormwater annually.

Project:	Beauchamp Branch Library
Project Owner:	City of Syracuse
Project Location:	2111 South Salina Street
Sewershed:	Midland
GI Technology:	Bioretention
Capture Area:	13,000 sq. ft.
Runoff Reduction:	226,000 gal/yr
Year Completed:	2012
Construction Cost:	\$113,075
Bid Date:	04/02/12
Prime Contractor:	Davis Wallbridge



Completed Bioretention Area at Beauchamp Library



Conceptual Rendering of Beauchamp Library Project



FACT SHEET

Onondaga County Public Libraries: Hazard Library

Project Description: The Hazard Library project was part of the Onondaga County Public Libraries (OCPL) "Green Library Initiative," a partnership between the Save the Rain program and OCPL to capture stormwater while providing aesthetic benefits to the libraries.

The Hazard Library site improvements included the installation of porous concrete areas in the existing parking lot, as well as two new rain gardens at the edges of the parking lot to capture stormwater runoff from Emerson Avenue and St. Marks Avenue. Beneath the porous concrete areas in the parking lot are infiltration beds that are connected via stormwater piping. The advantage to connecting these infiltration beds is that the piping between the infiltration beds will convey stormwater throughout the infiltration system. This maximizes the capture volume of this system. These green improvements reduce stormwater runoff by 370,000 gallons each year.

This was the second Save the Rain project to be completed at the Hazard Library. In June 2011, the Hazard Library Green Roof project was bid and awarded to J&B Installations, who installed the green roof in 2012.

Version 12/27/12

Project:	Hazard Branch Library Site
Project Owner:	City of Syracuse
Project Location:	1620 West Genesee St.
Sewershed:	Harbor Brook
GI Technology:	Porous Pavement, Bioretention
Capture Area:	21,000 sq. ft.
Runoff Reduction:	370,000 gal/yr
Year Completed:	2012
Construction Cost:	\$174,846
Bid Date:	04/02/12
Prime Contractor:	Davis Wallbridge



Aerial View of Hazard Library after Green Improvements



Rain Garden at Hazard Library



FACT SHEET

Onondaga County Public Libraries: Mundy Library

Project Description: The Mundy Library project was part of the Onondaga County Public Libraries (OCPL) "Green Library Initiative," a partnership between the Save the Rain program and OCPL to capture stormwater while providing aesthetic benefits to the libraries.

The entire parking lot surface was removed and a new porous surface was installed at Mundy Library. The porous areas are designed to allow stormwater to infiltrate through them into a subsurface infiltration bed. Stormwater piping also was installed to capture runoff from portions of the roof of the library.

Additionally, a new tree trench was installed along Rowland St. to capture street runoff. The tree trench was installed with curb stormwater inlets to convey water from the street into the tree trench. These green improvements reduce stormwater runoff by 215,000 gallons per year, preventing that water from entering the combined system.

Project:	Mundy Branch Library
Project Owner:	City of Syracuse
Project Location:	1204 South Geddes St.
Sewershed:	Harbor Brook
GI Technology:	Porous Pavement, Tree Trench
Capture Area:	12,000 sq. ft.
Runoff Reduction:	213,000 gal/yr
Year Completed:	2012
Construction Cost:	\$204,075
Bid Date:	04/02/12
Prime Contractor:	Davis Wallbridge



Before and After Construction Photos of Tree Trench along Rowland Street



Porous Pavers in Mundy Library Parking Lot



FACT SHEET

Onondaga County Public Libraries: Petit Library

Project Description: The Petit Library project was part of the Onondaga County Public Libraries (OCPL) "Green Library Initiative," a partnership between the Save the Rain program and OCPL to capture stormwater while providing aesthetic benefits to the libraries.

Porous concrete areas were installed within the pre-existing parking lots of Petit Library. Beneath the porous concrete areas are large stone infiltration basins designed to capture runoff from the whole parking lot. The two infiltration basins are also connected to an existing catch basin along Victoria Place, so that in the event of a large storm event, stormwater that exceeds the capacity of the infiltration basin systems will be allowed to overflow into the combined system.

Project:	Petit Branch Library
Project Owner:	OCPL
Project Location:	105 Victoria Place
Sewershed:	Clinton/Lower MIS
GI Technology:	Porous Concrete, Roof Leader Disconnection
Capture Area:	14,000 sq. ft.
Runoff Reduction:	254,000 gal/yr
Year Completed:	2012
Construction Cost:	\$132,146
Prime Contractor:	Davis Wallbridge



Porous Concrete Area Behind Petit Library



Construction of Infiltration Bed



**Construction of Infiltration Bed
Beneath Porous Concrete**



Conceptual Rendering of Petit Library Project



FACT SHEET

Onondaga County Public Libraries: White Library

Project:	White Branch Library
Project Owner:	City of Syracuse
Project Location:	763 Butternut Street
Sewershed:	Franklin
GI Technology:	Porous Pavement, Rain Garden, Rain Barrel, Infiltration Trench
Capture Area:	24,000 sq. ft.
Runoff Reduction:	427,000 gal/yr
Year Contracted:	2012
Construction Cost:	\$185,187
Prime Contractor:	Davis Wallbridge

Project Description: The White Library project was part of the Onondaga County Public Libraries (OCPL) "Green Library Initiative," a partnership between the Save the Rain program and OCPL to capture stormwater while providing aesthetic benefits to the libraries.

Stormwater runoff from the roof of White Library is being captured in two ways: (1) via rerouting roof leaders into a rain garden and (2) capturing stormwater in a rain barrel. The rain garden was constructed with an underground infiltration bed that allows for the infiltration of stormwater into the ground.

The White Library project also included a porous concrete area within the existing parking lot that allows stormwater to infiltrate through the pavement into an underground infiltration bed. Additionally, excess pavement was removed from the parking lot, and a new infiltration trench was installed to capture stormwater runoff from Peters Street.

These green improvements contribute to a reduction of 424,000 gallons of stormwater from entering the combined sewer system annually.



Completed Rain Garden at White Library



Conceptual Rendering of White Branch Library Green Infrastructure Project



FACT SHEET

Post Office Green Roof at the Colvin-Elmwood Station on Salina Street

Project Description: The Green Roof at the Colvin-Elmwood Station of the U.S. Postal Service (USPS) highlights the growing partnership of the Save the Rain program with other municipal and federal entities in Onondaga County. This project is the first Save the Rain project on USPS property, and the second green roof on a USPS building.

This project is a green roof system on the entirety of the post office roof. The roof will feature sedum plantings in a lightweight growing medium on top of a waterproof membrane, designed to capture stormwater, irrigate the plantings, and allow excess stormwater to evapotranspire. The existing roof system was removed and the new membrane was installed in 2012. The sedum turf will be planted in Spring 2013. This green roof will capture a total of approximately 226,000 gallons of stormwater annually when it is complete.



Post Office Roof Prior to the Green Roof Installation

Project:	Green Roof at the Post Office
Project Owner:	US Postal Service
Project Location:	2200 South Salina Street
Sewershed:	Midland
GI Technology:	Green Roof
Capture Area:	13,000 sq. ft.
Runoff Reduction:	226,000 gal/yr
Year Contracted:	2012
Bid Price:	\$242,860
Prime Contractor:	Weatherguard Tecta America



Conceptual Rendering of the Green Roof at the Salina Street Post Office Project

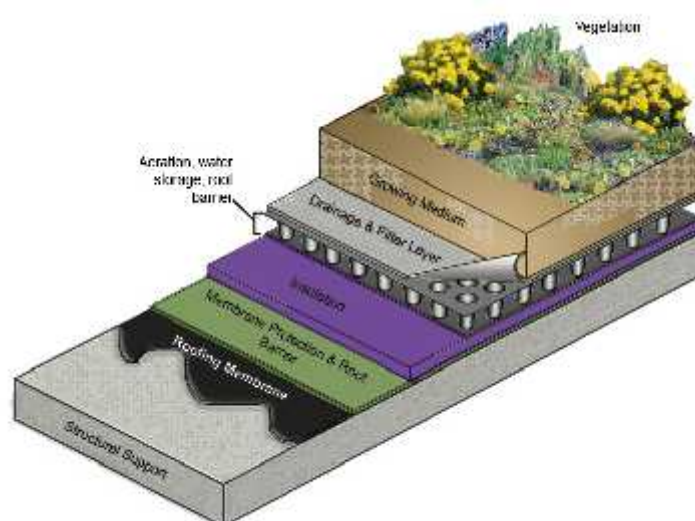


Diagram of Green Roof Installation

Revised 12/27/12



FACT SHEET

Rosamond Gifford Zoo Parking Lots

Project Description: The green renovation of the Rosamond Gifford Zoo parking lots will contribute significantly to the CSO reduction efforts of Onondaga County. The parking lots have generated a tremendous amount of runoff in the past, a problem that will be alleviated with the implementation of several new green infrastructure features. The main technologies incorporated in the design are areas of porous pavement within the parking lots and multiple large subsurface infiltration beds. Working in combination with bioretention areas vegetated with native plants, the green infrastructure technologies of this project will capture approximately 4.2 million gallons of stormwater annually, making it one of the largest projects to date in the Save the Rain program.

This project will be the fourth of five planned green infrastructure projects at and within the Rosamond Gifford Zoo. The first project included a cistern and a section of porous pavement installed in the courtyard along with a rain garden adjacent to the primate exhibit in 2010. The second was the green roof on the new elephant barn in 2011. The third was a series of bioretention areas at the zoo entrance on Wilbur Ave, adjacent to Conservation Place, constructed over the course of 2011-2012. A future project to be completed in 2013, the fifth Save the Rain project at the zoo, will create a stormwater wetland and recirculation system between it and the existing duck and swan ponds and add a stormwater cistern at the bear exhibit. These five projects combined will capture nearly 10 million gallons of stormwater annually.

Project:	Rosamond Gifford Zoo Parking Lots
Project Owner:	County of Onondaga
Project Location:	Rosamond Gifford Zoo
Sewershed:	Harbor Brook
GI Technology:	Porous Pavement, Bioretention, Infiltration Beds
Capture Area:	238,000 sq. ft.
Runoff Reduction:	4,213,000 gal/yr
Construction Cost:	TBD
Bid Date:	10/31/2012
Primary Contractor:	Zoladz Construction



**Aerial Photograph of Rosamond Gifford
Zoo Parking Lots**



**Photograph of Existing Median in the
Zoo Parking Lots**



Project:	South State St. Road Reconstruction
Project Owner:	City of Syracuse
Project Location:	State Street (E. Kennedy St. to E. Colvin St.)
Sewershed:	Midland Phase 3
GI Technology:	Underground Infiltration Trench
Capture Area:	133,000 sq. ft.
Runoff Reduction:	2,346,000 gal/yr
Year Completed:	2012
Construction Cost:	291,044
Prime Contractor:	Ballard Construction

FACT SHEET

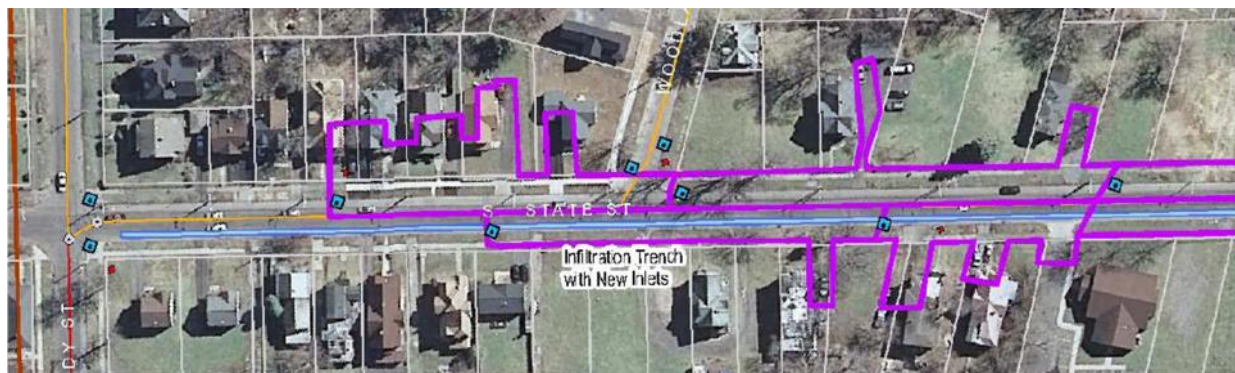
South State Street Road Reconstruction

Project Description: The S. State Street Road Reconstruction Project exemplifies the growing partnership between the City of Syracuse and Onondaga County through the Save the Rain Program. The City of Syracuse had planned to reconstruct State Street in 2012, and Onondaga County partnered with the City to construct an underground infiltration trench system at the time of the road reconstruction. Further, the work for this project was completed by the City's Contractor under their annual Street Structures contract, providing further cost savings for both the City and the County.

A 4.5-foot wide underground infiltration trench was installed within State Street, designed to capture runoff from the entire street from E. Kennedy St. to E. Colvin St. The infiltration system is completely underground that is not visible to the naked eye. This type of system is used where above ground systems cannot be constructed. This project captures a total of 2,911,000 gallons of stormwater annually.



Construction Photographs of the S. State Street underground infiltration trench



Conceptual Rendering of the S. State Street Road Reconstruction Project



FACT SHEET

Street Trees Planted along Marcellus Street

Project Description: The Street Tree Project along Marcellus Street involved the installation of eight new trees on Marcellus Street, between Geddes Street and Ontario Street. These features serve to beautify the street while also capturing stormwater runoff. This approach was chosen for this site due to environmental concerns of doing a full-scale green infrastructure project.

Each tree captures approximately 2,000 gallons of stormwater per year – totaling of 16,000 gallons of capture for this project each year.

The eight new trees planted along the street include Chinese Elm Hybrids and State Street Maples. These trees provide increased stormwater capture and improved aesthetics along Marcellus Street for many years to come.

Project:	Street Trees along Marcellus St.
Project Owner:	City of Syracuse
Project Location:	Marcellus St. between Geddes St. & Ontario St.
GI Technology:	Street Trees
Sewershed:	Harbor Brook
Capture Area:	2,250 sq. ft.
Runoff Reduction:	16,000 gal/yr
Year Completed:	2012
Construction Cost:	\$0
Prime Contractor:	City/County Arborist



New street trees along the north side of Marcellus Street, between Geddes Street and Ontario Street

Version 12/27/2012



FACT SHEET

Sumner Ave. Road Reconstruction

Project Description: The Sumner Ave. Road Reconstruction project highlights the growing partnership between the City of Syracuse and Onondaga County through the Save the Rain Program. The City of Syracuse had planned to reconstruct Sumner Ave. in the early spring of 2012, and Onondaga County partnered with the City to construct an underground infiltration trench system at the same time of the road reconstruction. Further, the work for this project was completed by the City's Contractor under their annual Street Structures Contract, providing further cost savings for both the City and the County.

A 6-foot wide underground infiltration trench was installed within Sumner Ave, designed to capture runoff from the entire street from Euclid Ave to Stratford Street. The underground infiltration system is unique in that it is a completely underground system that is not visible above ground. This type of system is used when site conditions are such that above ground systems cannot be constructed. In total, this project captures 315,000 gallons of stormwater annually.

Project:	Sumner Ave Reconstruction
Project Owner:	City of Syracuse
Project Location:	800 Block of Sumner Ave.
Sewershed:	Midland
GI Technology:	Underground Infiltration Trench
Capture Area:	17,000 sq. ft.
Runoff Reduction:	315,000 gal/yr
Year Completed:	2012
Construction Cost:	117,288
Prime Contractor:	Ballard Construction (City Street Structures Contract)



Construction of the Underground Infiltration Trench in the Sumner Ave Road Reconstruction Project



Conceptual Rendering of the Sumner Ave Road Reconstruction Project



FACT SHEET: SUNY Upstate Biotechnology Center

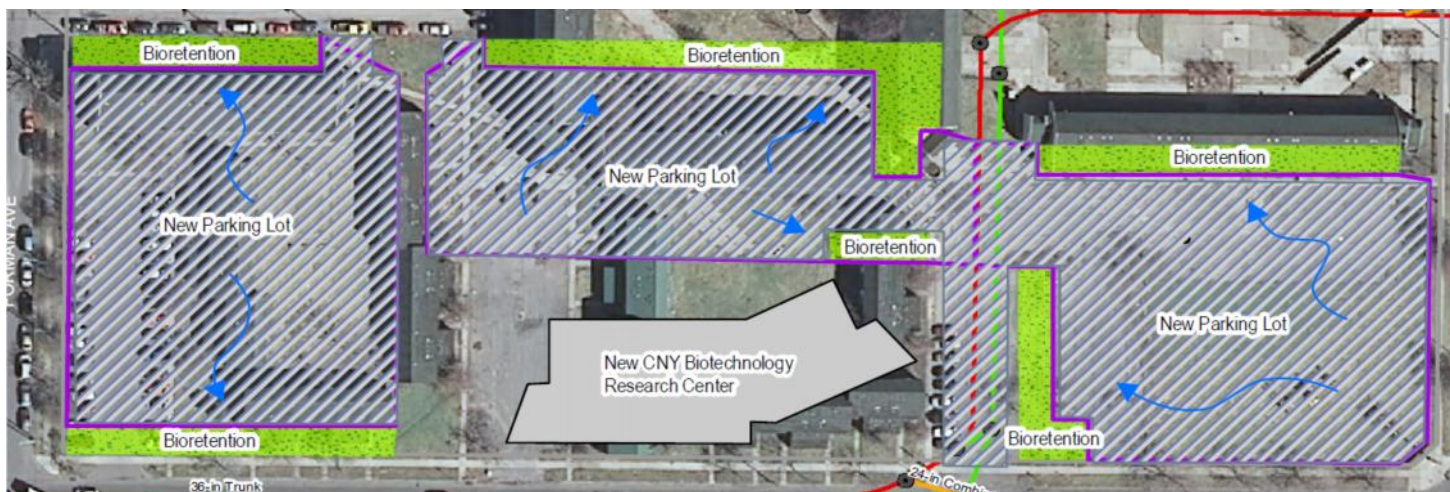
Project Description: The SUNY Upstate Biotechnology Center project is part of a continuing collaboration between the Save the Rain Program and SUNY Upstate. This project was the fourth SUNY Upstate project to be a part of the Save the Rain Program to date, and was completed in conjunction with the redevelopment of Kennedy Square.

Along with the demolition of the former apartment complex and construction of the new biotechnology center and new parking lots, multiple bioretention areas were constructed to manage stormwater runoff from the site. In total, runoff from an area of 179,000 square feet will be managed, resulting in an annual stormwater capture of over 3 million gallons.

Project:	SUNY Upstate Biotechnology Center
Project Owner:	SUNY Upstate
Project Location:	820-900 E. Water Street
Sewershed:	Clinton/Lower MIS
GI Technology:	Bioretention
Capture Area:	179,000 sq. ft.
Runoff Reduction:	3,167,000 gal/yr
Year Completed:	2012
Construction Cost:	TBD
Contractor:	TBD



Aerial View of SUNY Upstate Biotechnology Center after Project Completion



Conceptual Rendering of SUNY Upstate Biotechnology Center Project

Version 12/27/2012



Project:	SUNY Upstate – Townsend Towers
Project Owner:	City of Syracuse
Project Location:	507-523 E. Adams Street
Sewershed:	Clinton/Lower MIS
GI Technology:	Vegetated Swale
Capture Area:	39,000 sq. ft.
Runoff Reduction:	690,000 gal/yr
Year Completed:	2012
Construction Cost:	\$149,900 (STR Contribution)
Prime Contractor:	Hueber Breuer

FACT SHEET

SUNY Upstate Townsend Towers Green Improvements

Project Description: The SUNY Upstate Townsend Towers project is one of many projects that highlight the partnership between SUNY Upstate and the Save the Rain program. This project was part of a larger redevelopment of the Townsend Towers, to become residential housing for students at SUNY Upstate.

The reconstruction efforts for the parking lot behind the residential towers included renovating the median in the parking lot to include green infrastructure in the form of a vegetated swale. The existing median was completely removed, and a new green median was installed complete with bioretention plantings and trees. The vegetated swale captures approximately 690,000 gallons of stormwater annually.



Conceptual Rendering of the SUNY Upstate Townsend Towers Project



New Parking Lot Median with Vegetated Swale

Version 12/27/12



FACT SHEET

Tree Pit Pilot Project

Project Description: The Tree Pit Pilot Project highlights the growing partnership between the City of Syracuse and Onondaga County through the Save the Rain Program. Onondaga County partnered with the City to construct a pilot project to test performance and aesthetics of different types of porous resin-bound aggregates around downtown tree pits.

Resin-bound tree pit surfaces were installed in 8 existing tree pits along the 400 block of South Salina Street in downtown Syracuse. This project featured 5 different porous resin-bound aggregate surfaces, from 4 different vendors. The tree pits were designed to capture runoff from the adjacent sidewalk, while creating a hardscape surface to handle pedestrian traffic without compacting the soil or limiting the amount of water getting to the trees.

The project captures approximately 53,000 gallons of stormwater per year. The performance of each of the resin-bound aggregates will be monitored over time with the intention of creating a standard for downtown Syracuse in the future.



Tree Pits Looking North on Salina St.

Project:	Tree Pit Pilot Project
Project Owner:	City of Syracuse
Project Location:	400 Block South Salina Street
Sewershed:	Clinton/Lower MIS
GI Technology:	Enhanced Street Trees
Capture Area:	3,000 sq. ft.
Runoff Reduction:	53,000 gal/yr
Year Completed:	2012
Construction Cost:	\$0 (Materials Donated by Vendors and City of Syracuse)
Resin Types:	Flexi-Pave, Flexi-Stone, AddaPave, Arboresin, Gravel-Lok



Close-Up of Several of the Pilot Tree Pits on Salina St.



FACT SHEET

Vacant Lot Project: 109 Hartson Street

Project Description: The Vacant Lot Project at 109 Hartson Street involved the installation of an urban forest and rain garden, which will both beautify the lot and provide increased ecological benefits and will also capture stormwater runoff from adjacent Hartson Street. After capturing the runoff, the rain garden will allow the runoff to infiltrate into the ground as it would in a natural environment instead of entering into the sewer system, which stormwater typically does in paved, urban environments.

The trees planted at this site included Eastern Redbud, Black Gum, and Wafer Ash. The rain garden features a mix of native shrubs, flowering perennials, and ornamental grasses designed to attract butterflies and provide a mix of color and seasonal interest.

The green infrastructure at 109 Hartson Street is designed to capture up to 1" of rainfall at a given time, reducing annual stormwater runoff by approximately 93,000 gallons.

Project:	Vacant Lot at 109 Hartson Street
Project Owner:	City of Syracuse
Project Location:	109 Hartson Street
Sewershed:	Harbor Brook
GI Technology:	Bioretention, Urban Forestry
Capture Area:	2,000 sq. ft.
Runoff Reduction:	93,000 gal/yr
Year Completed:	2012
Construction Cost:	\$36,831
Bid Date:	7/12/12
Prime Contractor:	Cornerstone Paving



Photograph of the Conditions Prior to Construction on the 109 Hartson Street Vacant Lot Project



Conceptual Rendering of the Vacant Lot Project at 109 Hartson Street Project

Version 12/27/2012



FACT SHEET

Vacant Lot Project: 224-226 Putnam Street

Project Description: The Vacant Lot Project at 224-226 Putnam Street included the installation of seven new trees and a rain garden, which capture stormwater runoff from Putnam Street and improve the aesthetics and ecological function of the vacant lot. After capturing the runoff, the rain garden uses the process of bioretention allowing the runoff to infiltrate as it would in a natural environment instead of entering into the sewer system, which stormwater typically does in paved, urban environments.

A variety of trees were planted at this site, including White Peach and Allegheny Serviceberry trees. The rain garden features a mix of native shrubs, colorful flowering perennials, and ornamental grasses.

This green infrastructure captures up to 1" of rainfall at a given time, reducing annual stormwater runoff by approximately 120,000 gallons.

Version 12/27/2012

Project:	Vacant Lot at 224-226 Putnam St.
Project Owner:	City of Syracuse
Project Location:	224-226 Putnam Street
Sewershed:	Harbor Brook
GI Technology:	Bioretention, Urban Forestry
Capture Area:	6,000 sq. ft.
Runoff Reduction:	120,000 gal/yr
Year Completed:	2012
Construction Cost:	\$43,787
Bid Date:	07/12/12
Prime Contractor:	Cornerstone Paving



Photograph of the Existing Conditions of the 224-226 Putnam Street Vacant Lot



Conceptual Rendering of the 224-226 Putnam Street Vacant Lot Project



FACT SHEET

Vacant Lot Project at 1344-50 W. Onondaga St.

Project Description: The Vacant Lot Project at 1344-50 West Onondaga Street involved the installation of an urban forest and rain garden. These features serve to beautify the lot while also capturing stormwater runoff from West Onondaga Street. The project captures approximately 4,000 square feet of runoff from the impervious roadway and an additional 4,000 square feet from the vacant lot itself.

After capturing the runoff, the rain garden allows it to infiltrate as it would in a natural environment. A variety of shrubs and flowering perennials were planted in the rain garden, along with seven new trees planted on the lot including attractive, flowering species such as Eastern Redbud and Flowering Dogwood. As this site is naturally hilly, the new tree plantings and grass groundcover also serve to prevent erosion and loss of topsoil from the site.

This green infrastructure project captures up to 1" of rainfall at a given time, reducing annual stormwater runoff by approximately 120,000 gallons.

Project:	Vacant Lot Project at 1344-50 W. Onondaga Street
Project Owner:	City of Syracuse
Project Location:	Arthur St. and W. Onondaga St.
Sewershed:	Harbor Brook
GI Technology:	Bioretention, Urban Forestry
Capture Area:	8,000 sq. ft.
Runoff Reduction:	120,000 gal/yr
Year Completed:	2012
Construction Cost:	\$68,577
Bid Date:	07/12/12
Prime Contractor:	Cornerstone Paving



Prior Condition of the Vacant Lot at 1344-50 W. Onondaga Street



Conceptual Rendering of the Vacant Lot Project at 1344-50 W. Onondaga Street

Version 12/27/2012



FACT SHEET

Wadsworth Park Green Park Renovation

Project Description: The Wadsworth Park project is one of many collaborative efforts between Onondaga County and the Syracuse Parks Department to renovate parks and capture stormwater runoff. The existing basketball court will be removed and an infiltration bed is being constructed, with 3 associated bioretention basins which will collect stormwater runoff from Glenwood and Wolcott avenues.

The bioretention basins will be planted with a variety of plant species that will greatly improve the aesthetics of the park while allowing for the infiltration and evaporation of captured rain water, preventing it from entering the combined sewer system. The amount of stormwater capture for this project is approximately 1,111,000 gallons per year.

Project:	Wadsworth Park
Project Owner:	Syracuse Parks Dept.
Project Location:	1204 Glenwood Ave and Wolcott Ave
Sewershed:	Harbor Brook
GI Technology:	Infiltration Bed, Bioretention Basins
Capture Area:	61,000 sq. ft.
Runoff Reduction:	1,111,000 gal/yr
Year Contracted:	2012
Bid Amount:	\$344,596
Prime Contractor:	Davis Wallbridge



**Wadsworth Park Bioretention Basin
Under Construction**



**Wadsworth Park Basketball Court Area
Before Construction**



**Conceptual Rendering of Bioretention Basin
and Basketball Court Removal**
(Credit: Viridian Landscape Studio)

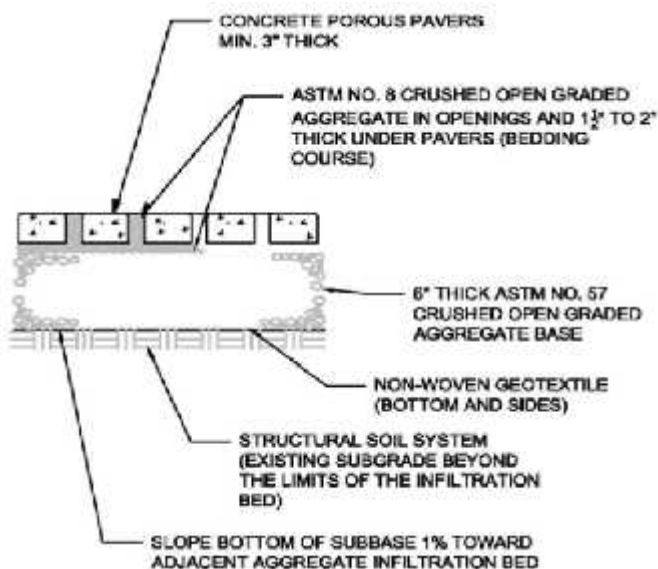


FACT SHEET

Westcott Community Center

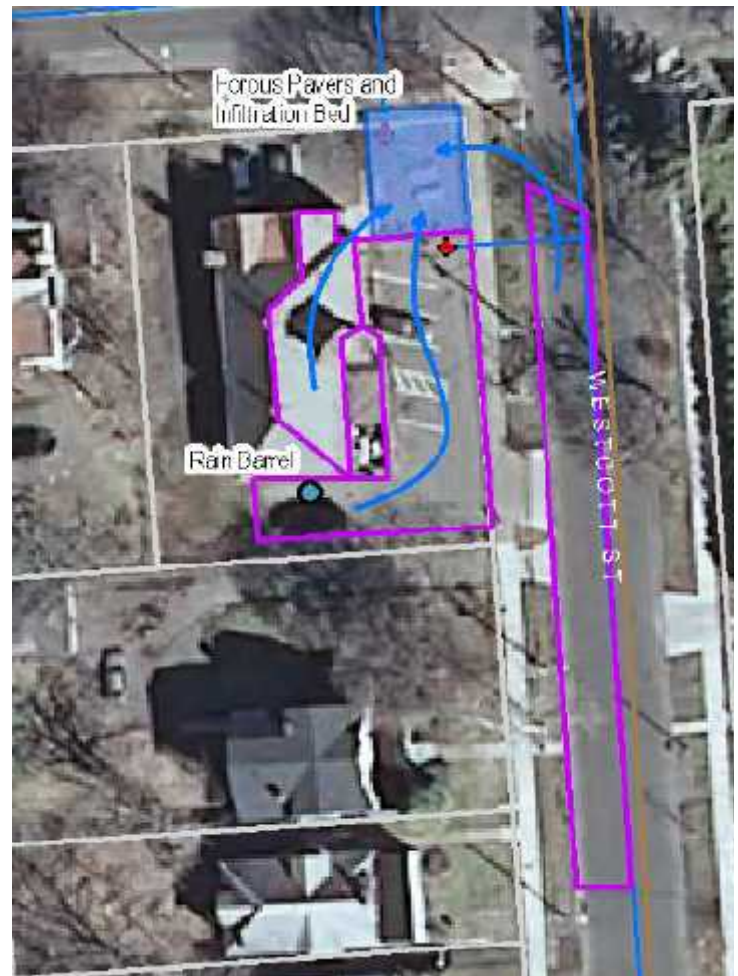
Project Description: The Westcott Community Center project is part of a larger 2012 Save the Rain initiative involving both County- and City-owned parks located within the combined sewershed.

The project consisted of retrofitting an existing plaza area adjacent to the community center by removing the existing compacted soils and installing new porous pavers. The porous pavers and associated infiltration bed were designed to handle runoff from the roof of the building as well as from Westcott Street. Additionally, two new rain barrels were installed in the rear of the building to capture runoff from a small portion of the roof. In total, this project captures 153,000 gallons of stormwater runoff annually.



Typical Porous Paver Installation Detail

Project:	Westcott Community Center
Project Owner:	City of Syracuse Parks Dept.
Project Location:	822 Euclid Ave.
Sewershed:	Clinton/Lower MIS
GI Technology:	Porous Pavers, Rain Barrel
Capture Area:	9,000 sq. ft.
Runoff Reduction:	153,000 gal/yr
Year Contracted:	2012
Construction Cost:	\$52,500
Bid Date:	04/30/12
Prime Contractor:	Ballard Construction



Conceptual Rendering of the Green Infrastructure Project at the Westcott Community Center

Version 12/27/12

GREEN IMPROVEMENT FUND

Green Improvement Fund Update

The 2012 construction season has also been successful for the Green Improvement Fund (GIF). To date, 103 applications have been submitted to the program.

The end of year saw the completion of several GIF projects. Complete projects include: Park Central Presbyterian Church, 100 Clinton Square, Mister Lady Bug, Gemmi Boy, and Teall Center. In addition, several GIF projects are currently under construction with completion slated for next year. Current projects under construction include: Loon Creek & McMahon Ryan properties, Home Headquarters -Marcellus Street, and Pike Block.

Additional opportunities for potential partnerships are currently being developed and the program continues to review current practices to ensure program efficiency.

Green Improvement Fund Summary (as of 12/30/12)

Applications Received	103
Projects Completed	34
Contract/Implementation Phase	45
Projects in Award Phase	3
Applications Under Review	4
Inactive/Ineligible	17



FACT SHEET

100 Clinton Square

Project:	100 Clinton Square
Project Owner:	Private
Project Location:	126 North Salina Street
Sewershed:	Clinton
GI Technology:	Underground infiltration, Porous Pavement, Dry Well System, Tree Trench/Planting
Capture Area:	115,000 sq. ft.
Runoff Reduction:	2,025,400 gal/yr
Year Contracted:	2012
Year Completed:	2012
GIF Award:	\$533,300

Project Description: The 100 Clinton Square project is located at 2307-2315 Erie Blvd. East. The Green Improvement Fund project on this site was part of a larger redevelopment project and included the reconstruction of an existing 288 car parking lot.

An underground infiltration system was installed under the parking lot to collect runoff from the existing building roof, adjacent streets, and most of the parking lot. Runoff from the surface of the parking lot and sidewalks near the building is able to infiltrate through the porous pavement into an underground infiltration system.

Runoff from adjacent streets and sidewalks is also collected in a tree trench to maximize the potential for stormwater storage onsite. In total, the 100 Clinton Square project captures an estimated 2,025,400 gallons annually.



Vegetated Planter Boxes



Porous Pavement Parking Stalls

Version 12/28/2012



FACT SHEET

Arc of Onondaga

Project Description: Arc of Onondaga, a chapter of NYSARC, Inc., is the largest provider of services for to people with developmental disabilities in Onondaga County. Arc offers these services at several different facilities located throughout the city.

Save the Rain partnered with Arc of Onondaga to redevelop a parking lot at their Monarch Vocational Center located at 401 Lowell Ave. The Center provides employment opportunities and training for people with developmental disabilities.

An 8,000 square foot porous asphalt parking lot was constructed and roof leaders from the building were diverted to the parking lot to capture runoff from the roof in the infiltration basin below the surface of the lot. This project will capture approximately 300,000 gallons of stormwater annually.

Project:	Arc of Onondaga
Project Owner:	Private
Project Location:	401 Lowell Ave.
Sewershed:	Harbor Brook
GI Technology:	Porous Pavement
Capture Area:	8,000 sq. ft.
Runoff Reduction:	299,400 gal/yr
Year Completed:	2012
GIF Award:	\$93,504



Parking Lot During Construction



Porous Pavement Application



Parking Lot Project Completed



FACT SHEET

Brooklyn Pickle

Project:	Brooklyn Pickle
Project Owner:	Private
Project Location:	166 W. Genesee Street
Sewershed:	Harbor Brook
GI Technology:	Rain Garden, Enhanced Landscaping
Capture Area:	5,567 sq. ft.
Runoff Reduction:	104,500 gal/yr
Year Completed:	2012
GIF Award:	\$30,555

Project Description: Since 1975, the Brooklyn Pickle has been a staple of the Syracuse community, offering homemade style sandwiches and soups. With two locations in the City, Brooklyn Pickle has become a Syracuse favorite for good food made to order.

Recently, the shop located at 1600 West Genesee Street underwent a substantial renovation that included green infrastructure elements funded through the Green Improvement Fund.

The project featured enhanced landscaping around the perimeter of the redeveloped facility as well as a porous concrete strip on the east side of the facility that allows runoff to enter the enhanced landscaping features. The landscaping is enhanced by the newly constructed rain garden to capture stormwater runoff from the roof of the facility.



The East Side of the Building During Project Construction



Rain Garden on the South Side of Building



The East Side of the Building after Project Completion



FACT SHEET

CNY Regional Transportation Authority: Centro Transit Hub

Project Description: The Centro Transit Hub is the CNY Regional Transportation Authority's downtown common center for Centro Bus Services for the City of Syracuse and surrounding areas. The new facility is home to a 53,000 square foot canopy landing that features 22 passenger loading bays. The entire footprint of the facility extends nearly 1.5 acres and includes customer service areas, public restrooms, electronic schedule information and several other commuter-friendly amenities.

The new site also features an innovative stormwater capture system made possible by the Save the Rain program. An elaborate underground chamber system was installed on the site to prevent stormwater from entering the sewer system during wet weather events. The chamber system intercepts runoff from approximately 70,000 square feet of surface area and capture over 1 million gallons of stormwater annually.

Project:	Centro Transit Hub
Project Owner:	Private
Project Location:	624 S. Warren Street
Sewershed:	Clinton
GI Technology:	Underground Infiltration Chambers
Capture Area:	70,576 sq. ft.
Runoff Reduction:	1,243,000 gal/yr
Year Completed:	2012
GIF Award:	\$65,390



Chamber Units



Excavation of Underground Storage



Stone Back-Fill of Chambers Units



FACT SHEET

Gemmi Boy

Project Description: The Gemmi Boy project is located at 508-510 Westcott Street. The project was a comprehensive renovation of an existing, previously unused courtyard behind two businesses in the Westcott business district.

The project included several green infrastructure elements.

The first was the reconstruction of the courtyard utilizing porous pavers to accommodate an outdoor eating area.

Second, an overflow drywell and underground infiltration system with a cistern were installed to capture runoff from an adjacent building's roof.

Finally, the project included added green space to reduce the amount of impervious area and improve the overall aesthetics.

In total, the Gemmi Boy project captures an estimated 108,200 gallons of stormwater annually – preventing that water from entering the combined sewer system and thus reducing the occurrence of combined sewer overflows.

Version 12/28/2012

Project:	Gemmi Boy
Project Owner:	Private
Project Location:	508-510 Westcott Street
Sewershed:	Clinton
GI Technology:	Underground Infiltration System, Porous Pavement Cistern, Added Green Space
Capture Area:	5,926 sq. ft.
Runoff Reduction:	108,200 gal/yr
Year Contracted:	2011
Year Completed:	2012
GIF Award:	\$47,537



View of Seating Area w/Porous Pavers



Porous Paver Walkway



FACT SHEET

Mister Lady Bug Green Improvements

Project Description: The Mister Lady Bug project is located at 500-506 Westcott Street east of downtown Syracuse and is part of a larger redevelopment project in the heart of the Westcott business district. The property site is home to Papa John's Pizzeria. The green infrastructure design focused on the replacement of an existing parking lot adjacent to the property.

The traditional asphalt surface was removed and replaced with approximately 5,733 square feet of porous pavement to capture stormwater on the lot. Additionally, a porous paver walkway was installed for pedestrian traffic along the southern perimeter of the lot. Enhanced landscaping, including tree plantings, was also featured throughout the site.

In total, the project captures an estimated 113,200 gallons of stormwater annually.

Project:	Mister Lady Bug
Project Owner:	Private
Project Location:	500-506 Westcott Street
Sewershed:	Clinton
GI Technology:	Porous Pavers, Porous Concrete, Tree Planting
Capture Area:	5,733 sq. ft.
Runoff Reduction:	113,200 gal/yr
Year Completed:	2012
GIF Award:	\$46,700



Parking Lot Reconstruction



View of Porous Pavers in Parking Lot

Version 12/28/2012



FACT SHEET

Park Central Presbyterian Church

Project:	Park Central Presbyterian Church
Project Owner:	Private
Project Location:	509 E. Fayette Street
Sewershed:	Clinton
GI Technology:	Porous Pavement, Tree Planting
Capture Area:	8246 sq. ft.
Runoff Reduction:	145,300 gal/yr
Year Contracted:	2011
Year Completed:	2012
GIF Award:	\$61,050

Project Description: The Park Central Presbyterian Church is located at 509 East Fayette Street. Founded in 1846, the church has been a pillar of the downtown community for 166 years and works closely with several organizations to provide services for local residents.

An existing asphalt parking lot was retrofitted in this Green Improvement Fund project. Conditions at the site allowed for the use of porous pavement to capture stormwater. The design also featured enhanced landscaping with tree plantings throughout the site. The new design provides 28 parking spaces for the church community and will capture approximately 145,300 gallons of stormwater runoff annually.



Parking Lot after Construction – Street View



Parking Lot before Construction



Parking Lot after Construction



FACT SHEET

People's Community Development Corporation

Project Description: People's Community Development Corporation is a nonprofit organization located S. Salina Street in the City of Syracuse. The corporation provides resources to local residents to support efforts of community development through projects, neighborhood initiatives and special events.

The Save the Rain program provided funding through the Green Improvement Fund for the People's Community Development Corp. to construct a green roof at the organization headquarters. Approximately 4,000 square feet of roof surface has been covered with vegetation and soil medium to capture stormwater runoff.

This project was one of the first green roof projects on the south side of Syracuse and is expected to capture an estimated 77,000 gallons of stormwater each year.

Project:	People's Development Corporation
Project Owner:	Private
Project Location:	2307 S. Salina Street
Sewershed:	Midland
GI Technology:	Green Roof
Capture Area:	4,010 sq. ft.
Runoff Reduction:	77,200 gal/yr
Year Completed:	2012
GIF Award:	\$80,200



View of Roof before Construction



View of Green Roof (Northern view)



Vegetated Plantings and Soil Medium



FACT SHEET

Teall Centre: PriceRite Grocery Store

Project Description: Teall Centre is located on the property of 1605-1641 Erie Boulevard East and is the site is home to the new PriceRite Grocery Store. The Green Improvement Fund project was completed as part of a 6.4 acre redevelopment of the previously vacant lot at the corner of Teall Avenue and Erie Boulevard.

This expansive project included stormwater planter and dry well systems to manage the runoff from the roof the building. Additionally, approximately 27,600 square feet of porous pavement was installed in the parking area, designed to capture and store a majority of the runoff from the lot. Three bioretention areas were also installed to capture the remaining parking lot runoff.

The Teall Centre project will capture an estimated total of 2,700,400 gallons of stormwater runoff annually.

Project:	Teall Centre
Project Owner:	Private
Project Location:	1605-1641 Erie Blvd. E.
Sewershed:	Clinton
GI Technology:	Bioretention System, Porous Pavement, Drywell System, Planter Box
Capture Area:	152,408 sq. ft.
Runoff Reduction:	2,700,400 gal/yr
Year Contracted:	2012
Year Completed:	2012
GIF Award:	\$204,000



Tree Pit w/Infiltration Trenches



Porous Pavement Parking Lot

Version 12/28/2012



FACT SHEET

Vibrant Syracuse Spaces Green Roof

Project Description: The Vibrant Syracuse Spaces Green Roof project is located at 200-206 Geddes Street, west of downtown Syracuse.

A green roof was installed on the Gear Factory building. The five story building has a roof surface that covers approximately 12,831 square feet of total area. The green roof manages stormwater on the rooftop and provides extra savings in reducing energy costs for the facility. In total, the Vibrant Syracuse Spaces Green Roof project captures an estimated 226,000 gallons of stormwater annually.

This project was the second Green Improvement Fund project associated with this property. In 2011, Vibrant Syracuse Spaces completed a parking lot redevelopment across the street from the building that incorporated the application of porous pavement to capture stormwater runoff.

Project:	Vibrant Syracuse Spaces Green Roof
Project Owner:	Private
Project Location:	200-206 Geddes Street
Sewershed:	Harbor Brook
GI Technology:	Green Roof
Capture Area:	12,831 sq. ft.
Runoff Reduction:	226,000 gal/yr
Year Contracted:	2012
Year Completed:	2012
GIF Award:	\$199,781



Green Roof with Protective Wind Blanket



Green Roof Soil Medium

Version 12/28/2012

**METRO WWTP PHOSPHORUS
PROJECTS/TMDL/AMBIENT
MONITORING PROGRAM
UPDATE**

Metro WWTP Phosphorus Projects/Ambient Monitoring Program Update:

Metro WWTP Phosphorus Optimization Project

Phosphorus optimization testing is complete; a final draft report will be available in February.

Metro WWTP Phosphorus Work Plan Project

Final report is pending NYSDEC approval.

Ambient Monitoring Program

WATER QUALITY MONITORING PROGRAM

Sampling Summary (October, November and December 2012):

Tributary Sampling Program

- Tributary Quarterly sampling event: November 6.
- Tributary Biweekly sampling events: October 9, 24, November 1, 20, December 4 and 11.
- Tributary Bacteria sampling events: October 4, 18, 25, 29, November 15, 19, 29, December 5, 13 and 20.

Tributary Bacteria Monthly Compliance Assessment (September-November 2012):

AMP Tributary Sampling Site¹	Compliance²		
	September 2012	October 2012	November 2012
Bloody Brook at Onondaga Lake Parkway	X	√	√
Harbor Brook at Bellevue Avenue ³	-	-	-
Harbor Brook at Velasko Road	X	√	√
Harbor Brook at Hiawatha Boulevard	X	X	X
Ley Creek at Park Street	X	X	√
Ninemile Creek at Lakeland (Route 48)	X	√	√
Onondaga Creek at Dorwin Avenue	√	√	√
Onondaga Creek at Water Street	X	X	X
Onondaga Creek at Plum Street	X	X	X
Onondaga Creek at Kirkpatrick Street	X	X	X
Sawmill Creek at Onondaga Lake Recreational Trail	X	-	-
Tributary 5a at State Fair Boulevard	√	√	√

¹ Includes data from any additional samples collected at AMP sampling site as part of the 2012 Microbial Trackdown Project (Phase 2) undertaken as a joint Onondaga Environmental Institute (OEI) and Onondaga County (OCDWEP) project.

² The applicable NYS Ambient Water Quality Standard (AWQS) for Fecal Coliform bacteria in the surface water as set forth in 6NYCRR Part 703.4 is as follows: "The monthly mean geometric mean, from a minimum of five examinations, shall not exceed 200."

³ Compliance could not be assessed as the required minimum number of samples (5 samples/month) were not collected.

Onondaga Lake Sampling Program

- Lake South Deep Biweekly sampling events: October 2, 16, November 27 and December 18.
- Lake Weekly sampling events: October 11 and 15.
- Lake Quarterly (South and North Deep stations) sampling event: November 14.
- Lake Bacteria sampling event: October 22*.

* Note: Lake turnover evidenced as of October 22; Dissolved Oxygen levels averaged approximately 8.2 mg/l from 0 meters through 18 meters of the water column at South Deep monitoring station.

Onondaga Lake - South Deep Upper Waters Total Phosphorus 2010-2012

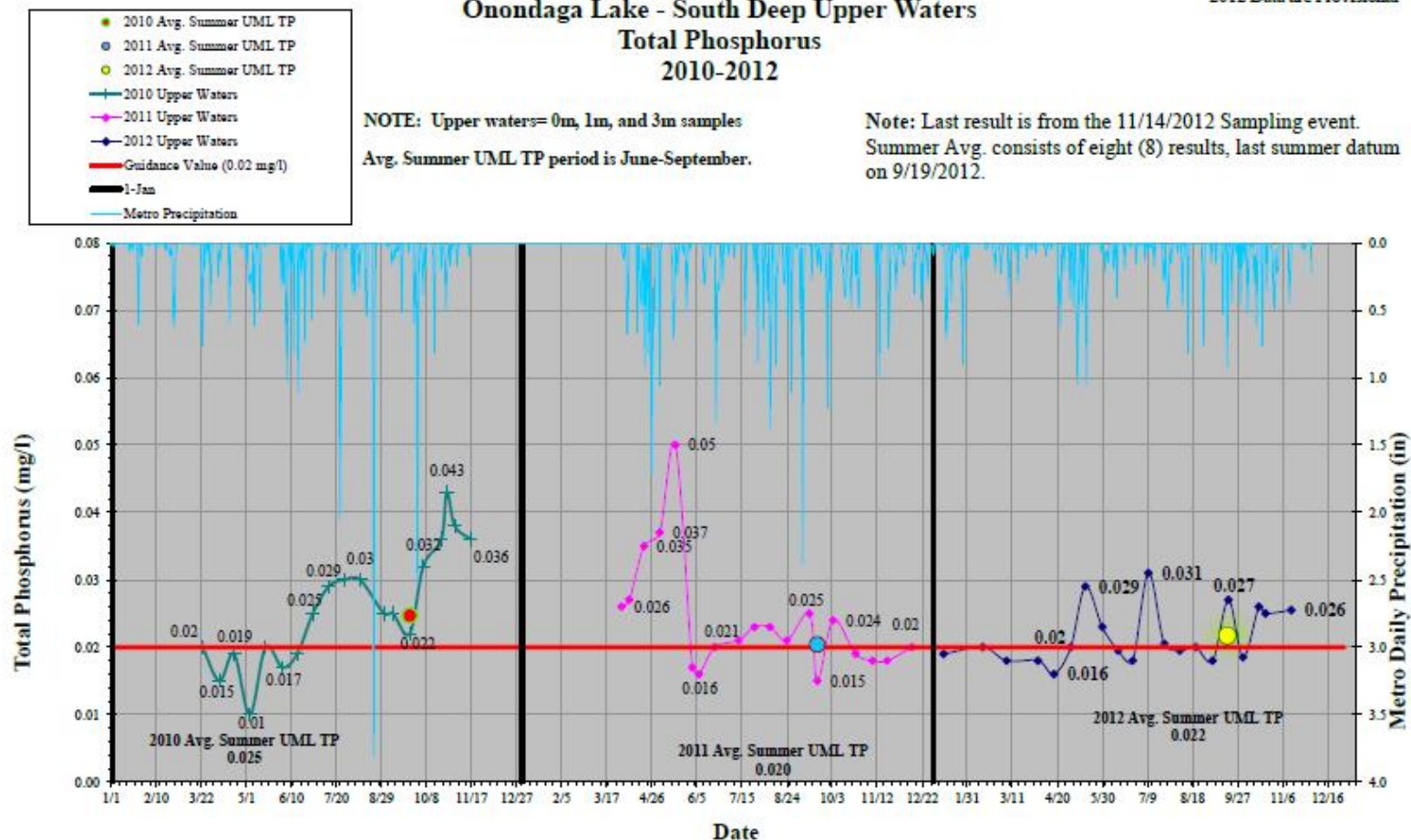
2012 Data are Provisional

NOTE: Upper waters= 0m, 1m, and 3m samples

Avg. Summer UML TP period is June-September.

Note: Last result is from the 11/14/2012 Sampling event.

Summer Avg. consists of eight (8) results, last summer datum on 9/19/2012.



12/10/2012

BIOLOGICAL MONITORING PROGRAM

Sampling Summary (October - December 2012)

- Completed gill net sampling of adult fish on October 3.
- Lake sampling for zebra and quagga mussels was completed October 15.
- No biological sampling to report in November.
- No biological sampling to report in December.

Onondaga Lake Zebra and Quagga Mussels

Zebra mussels (*Dreissena polymorpha*) were introduced into the Great Lakes from Eurasia in ballast water from international shipping. They were first recorded in Onondaga Lake in 1992, although they did not become abundant until 2000. A second related species, the quagga mussel (*Dreissena bugensis*), appeared in Onondaga Lake in 2005. Their abundance and distribution has been tracked as part of the Annual Monitoring Program since 2005.

Colonies of mussels can be comprised of many individuals. Densities of greater than 700,000 zebra per square meter have been reported on a power plant in western Lake Erie. Densities of zebra mussels on natural shoals in western Lake Erie have averaged 147,000 per square meter. Although not as high as those reported in Lake Erie, in 2010 the average density of mussels in Onondaga Lake was 5,952 per meter squared, more than doubling in 2011 to 12,777 mussels per meter squared.

These benthic mussels are filter feeders, and, have the capability of affecting the nitrogen and phosphorus dynamics of a water body. A zebra mussel (20 mm in length) can effectively filter over 280 ml of water per hour and remove all particles as small as 1 micron up to the size of their inhalant siphon. The waste produced by the zebra mussels has also been documented to affect nitrogen and phosphorus in lakes and rivers.



Zebra Mussels collected from Onondaga Lake.



Zebra Mussel (Left side) and a Quagga Mussel (Right side)

LEGISLATIVE / REGULATORY / MEDIA UPDATE

Legislative/Regulatory Update

Action Items for the County Legislature (October – December)

- Authorizing the County Executive to enter into a contract with the United States Department of the Interior for the operation and maintenance of stream gaging stations in the County of Onondaga.
- Amending the 2013 County Budget to provide for the Clay Business Park and Authorizing the County Executive to enter into contracts to implement this resolution.
- A resolution calling a public hearing in connection with proposed improvements for the Onondaga County Sanitary District.
- Calling a public hearing in connection with proposed improvements for the Onondaga County Sanitary District.
- Authorizing and ratifying the County of Onondaga to act as lead agency for the design and construction of new tankage or the retrofit of existing clarifiers and installation of associated equipment to meet NYSDEC permit requirements under the State Environmental Quality Review Act and the State Environmental Review process determining the classification of a Type 1 action, adopting a negative declaration and authorizing the publication, circulation, service, and filing of the Environmental Assessment Form and the negative declaration.

Action Items for the Environmental Protection Committee (November – January 2013):

- ACJ Update
- A resolution approving engineering design of phosphorous treatment system improvements at the Metro Waste Water Treatment Plant in and for the Onondaga County Sanitary District of the County of Onondaga, New York.
- A resolution authorizing the issuance of \$2,840,000 bonds of the County of Onondaga, New York to pay the cost of engineering design of phosphorous treatment system improvements at the Metro Waste Water Treatment Plant in and for the Onondaga County Sanitary District in and for said County (\$2,840,000).
- A resolution approving pump replacements at the Metro Waste Water Treatment Plant in and for the Onondaga County Sanitary District of the County of Onondaga, New York
- A resolution authorizing the issuance of \$3,500,000 bonds of the County of Onondaga, New York to pay the cost of pump replacements at the Metro Waste Water Treatment Plant in and for the Onondaga County Sanitary District in and for said county (\$3,500,000).
- A resolution approving bypass treatment improvements at the Metro Waste Water Treatment Plant in and for the Onondaga County Sanitary District of the County of Onondaga, New York
- A resolution authorizing the issuance of \$20,200,000 bonds of the County of Onondaga, New York to pay the cost of bypass treatment improvements at the Metro Waste Water Treatment Plant in and for the Onondaga County Sanitary District in and for said county (\$20,200,000).

- A resolution approving engineering design of improvements to the Oneida Lake Pump Stations at the Metro Waste Water Treatment Plant I and for the Onondaga County Sanitary District of the County of Onondaga, New York.
- A resolution authorizing the issuance of \$2,00,000 bonds of the County of Onondaga, New York to pay the cost of engineering design of improvements to the Oneida Lake Pump Stations in and for the Onondaga County Sanitary District I and for said County (\$2,000,000).
- A resolution amending the 2013 County Budget to provide for ongoing County participation in Honeywell and Onondaga Lake remediation issues.

US Green Building Council 2012 Global Community Leadership Award Video

Featuring County Executive Joanne M. Mahoney, Mayor Stephanie A. Miner, and SU Chancellor Nancy Cantor

The image is a screenshot of a Vimeo video player. At the top, the Vimeo logo is on the left, and navigation links for 'Join', 'Log In', 'Create', 'Watch', and 'Upload' are in the center. A search bar is on the right. The video player itself has a blue header with the text 'Water Magazine September 2012 Cover' and 'September 2012'. Below this, there are four circular icons: 'Milestones' (yellow), 'Green Projects' (green), 'Gray Projects' (gray), and 'Reports Monthly' (blue). To the right of these icons are three buttons: 'LIKE' (heart icon), 'LATER' (clock icon), and 'SHARE' (share icon). Below the icons, there are two main sections. The left section is titled 'Latest News' and shows a date '09.17.12' followed by the text 'Onondaga County Executive Featured on Municipal Sewer & Water Magazine September 2012 Cover'. The right section is titled 'See how you can help:' and lists four categories: 'Home', 'Business', 'Schools', and 'Community', each with a corresponding icon. Below these sections is a video player interface with a play button, a progress bar showing '03:10', and a 'Click here to find out how to get involved' link. At the bottom of the video player, there is a large title 'USGBC 2012 Leadership Award Syracuse' and a subtitle 'from U.S. Green Building Council 5 days ago'. Below the title, there are four buttons: '3 Follow', '& Add to...', 'Stats', and 'Download'.

Water Magazine September 2012 Cover
September 2012

Milestones
Green Projects
Gray Projects
Reports Monthly

LIKE
LATER
SHARE

Latest News
09.17.12
Onondaga County Executive Featured on
Municipal Sewer & Water Magazine
September 2012 Cover

See how you can help:
Home Business Schools Community

USGBC 2012 Leadership Award Syracuse
from U.S. Green Building Council 5 days ago

3 Follow & Add to... Stats Download

<http://vimeo.com/54384823>



Save the Rain program: Your Stories

Images



Published: 11/27 3:14 pm

Updated: 11/27 4:43 pm

Syracuse (WSYR-TV) -- Joanna lives in a part of the city that is benefiting from Onondaga County's "Save the Rain" urban forestry program. She says she's received a pamphlet indicating the Parks and Recreation department will be responsible for watering and pruning the trees. But she also got care instructions on how to do these things herself. So, whose job is it, she wants to know?

Ideally, it's hers said the city's Arborist Stephen Harris. The Syracuse Department of Parks, Recreation and Youth programs is asking homeowners to care for their trees – among 500 to be planted this fall – if possible.

Harris says this is the most efficient and effective way to ensure that the trees thrive.

Where property owners, renders and local stakeholders cannot, follow-up care will be provided.

People interested in getting a tree through the Save the Rain program or those seeking more information on the program may contact Brenda Bennett at Cornell Cooperative Extension of Onondaga County at at (315) 424-9485 x230 or email bmb255@cornell.edu.

Workshops on follow-up care will be provided in the spring.

Got a question for the Your Stories team? Call 446-9900 or email YourStories@9WSYR.com.

At last, the Creekwalk shows Syracuse is treating Onondaga Creek like it's an asset



Published: Monday, November 26, 2012, 11:38 AM Updated: Monday, November 26, 2012, 12:04 PM

By **Dennis J. Connors**, Post-Standard contributing columnist

In 1977, I was a new employee with the Onondaga County Department of Parks and Recreation, hired to run its history museums. At that time, one could drive a car straight through **Onondaga Lake Park**, from the parkway all the way to Longbranch Road. Automobile traffic passed right in front of the **Salt Museum**.



A family strolls along the Syracuse Creekwalk earlier this year.

David Lassman / The Post-Standard

Many commuters used that park road during afternoon rush hour as a Liverpool bypass. If I were walking from the parks headquarters to the Salt Museum anytime after 3 p.m., I took my life in my hands, dodging traffic.

Parks Commissioner Jim Johst had a controversial plan that year to eliminate cars from most of the park road and to turn it into a bike and pedestrian trail. Some officials feared a public backlash and asked that bollards be installed on a trial basis, so the road could easily be re-opened.

One day, the commissioner stopped me and essentially said, "Forget that!"

He wanted to remove the road in front of the museum entirely and replace it with a landscaped, pedestrian plaza. He was convinced that an auto-less trail would be a

success, and he wanted to eliminate the chance of turning back. He asked if I were OK with that. It took me about two seconds to agree.

Of course, he was right. The **Onondaga Lake Park Trail** has been a huge success — so much so, that it now is two trails: the original park road for rollerbladers, bicycles and trams and a smaller, more meandering path for pedestrians, closer to the water.

Humans are drawn to water. And cities across the world have long recognized water as one of the great urban amenities. European cities were generally ahead of American towns in making pedestrian access to waterfronts, be they rivers, lakes or the oceans. But over time, many U.S. cities have re-discovered waterfronts once covered with industrial ruins or even highways.

One of the earliest was the Paseo del Rio, in San Antonio, Texas. In seeking to control flooding of the San Antonio River — a small, unattractive stream running through town — officials in the 1920s proposed cutting a bypass channel, then draining the river bed to make it a storm sewer with a street built over it.



The River Walk in San Antonio, Texas, includes water taxis, restaurants, shops and plenty of walking paths. The project is considered a model for urban development that values public access to a water feature ... like Syracuse's Creekwalk.

Sue Ogrocki / AP

Citizens argued against covering it and advocated for enhancing the riverbanks. Eventually, they won, with a good deal of the money for improvements coming from President Franklin D. Roosevelt's Works Progress Administration in the 1930s.

Today, **San Antonio's River Walk** is a remarkable urban corridor, with restaurants and shops lining its path and water taxis plying its course, all along a stream no bigger than Onondaga Creek.

More recently, cities as diverse as Richmond, Va., Milwaukee, Wis., Covington, Ky., and Providence, R.I., have invested considerable financial and design resources to create imaginative river walkways in their urban cores. In **Providence**, especially, it has been credited as one of the major catalysts for that city's downtown rejuvenation.

Our urban waterway is, unfortunately, not

tagged with the nobler name of "river." It is a "creek," which sounds a bit ... well, uninspiring. But Onondaga Creek flows as well as many rivers elsewhere and sure looks nicer than what they call a "river" in Los Angeles.

Additionally, it has some very appealing history.

For starters, did you know the creek was one of the reasons Syracuse was founded, a dozen years before the first shovel was turned to build the Erie Canal? And that three magnificent 19th century stone bridges still span the creek in the heart of downtown?

Yet much of the stream and its banks were turned to industrial uses from the beginning. A multitude of factories and salt fields concealed its northern reaches from view, making it a convenient place to pollute with sewage and industrial waste. People complained about its odors for decades.

With downtown portions hemmed in by industry, its southern section often flooded after heavy rains, causing more negative associations. It was artificially channeled and fenced off. By the 1970s, we had abused and shunned the creek, a waterway running through the middle of our city, while at the same time lamenting that we had allowed the Erie Canal to be filled.

We first got a taste for Onondaga Creek's potential in the 1980s, when the revitalization of **Franklin Square** got under way and the first portion of the Creekwalk was finished. Now we have finally linked that section on both its north and south ends, creating a 2.6-mile urban path from downtown's Armory Square all the way to the shore of Onondaga Lake.

It was not an easy task. Money had to be secured, and when found, it came with tight budgets and strings attached that, together, limited some of the more imaginative design options. A route had to be snaked through complex property ownerships. But the city and its consultants stuck with it, and the public has embraced the result.

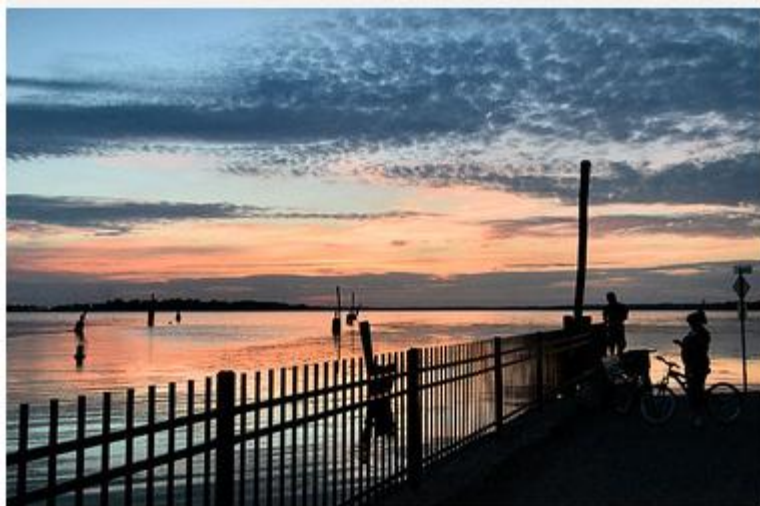
The city is looking to extend the Creekwalk farther south, toward Kirk Park. And Onondaga County has begun to re-focus on completing the "Loop-the-Lake" trail.

Truly, the Creekwalk is just getting started. The Onondaga Historical Association and the city are working together to add creative interpretive stations that will explore the route's history.

And we already have Walt, the imaginative blue sea serpent guarding the Creekwalk at Fayette Street. There should be other places along the Creekwalk identified for public art, perhaps some that speaks to cultural characteristics that define Syracuse.

The addition of landscaping would be a benefit, as well as some selected pruning and clearance of the creek bed. And there is no reason why we cannot consider some side extensions to the walk, especially ones that would help us discover other hidden nuggets of city history.

Even today, if one detours west where the Creekwalk hits Water Street, to loop around back to Erie Boulevard, you can get another close-up view of the creek, walk past the 1860s Empire Mill, enjoy the ornate 1885 former office of the Amos Flour Mill, touch perhaps the last surviving Erie Canal docking hardware in the city and stand just above an 1838 canal culvert — a worthwhile, two-block-long option.



Ursula and Joe Maunder, of Syracuse, enjoy a quiet moment at the Creekwalk's end as the sun sets in July over Onondaga Lake.

Lauren Long / The Post-Standard

And I am sure there are many other enhancements that the city can consider ... which, of course, begs questions about money, maintenance and upkeep — always a task in an urban setting with challenging winters. Perhaps, as a community, we need to begin thinking about a "Friends of the Creekwalk." New York City has a model of citizen support for a linear park with its successful **High Line**.

We are very fortunate that we have this opportunity as a community to re-discover and re-connect with this waterway. It has tremendous potential to be a catalyst for substantial economic rejuvenation along its route while enhancing our overall quality of life. As a community, we are finally starting to look at it as an asset rather than a source of embarrassment.

*Dennis Connors is curator of history at the **Onondaga Historical Association** and an occasional columnist with The Post-Standard. He has been a resident of Syracuse since 1974 and has written books and articles about the city's history.*

Collaboration Turning Syracuse Into Incubator Of Great Ideas



By **The Post-Standard**

on November 20, 2012 at 5:00 AM, updated November 20, 2012 at 6:41 AM

By Linda Dickerson Hartsock

Contributing writer

How does change happen? Through creative partnerships that better connect people to places. Transformation comes from the convergence of civic engagement, economic development and entrepreneurship — and that spirit is infusing great collaborations that are changing this city and region.

Syracuse University, the city of Syracuse and Onondaga County, along with federal, state, regional and local partners, have joined forces to work on ambitious revitalization projects. The first phase of the Connective Corridor came to fruition this year with new streetscapes, bike lanes, networks of green infrastructure, technology showcase projects, redesigned urban green spaces at Forman Park and gateway entrances to Armory Square, and public art and façade improvements across the city. Next phases include The Civic Strip and continuing the connector streetscape across downtown where it will link with the Onondaga Creekwalk and the Near West Side SALT District — a neighborhood that is seeing civic, economic and physical change that is nothing short of remarkable. These are all the result of focused, dedicated and meaningful partnerships, and they have been winning national awards and attention for Syracuse.

This construction season, it's easy to see change. There are more cranes in the air and construction on the ground than anyone can recall. That's not an accident. A laser-sharp strategic plan, key public infrastructure investments and catalytic projects by many entrepreneurial private sector businesses and developers, as well as other anchors such as State University College of Environmental Science and Forestry, State University of New York Upstate Medical University and major medical institutions that are part of this energized collaboration, are producing tangible, palpable change.

There is \$1.4 billion in new investment underway in Syracuse, and it's creating the kind of vibrant place that attracts top talent and retains our best and brightest young people who want to be part of this new dynamic urban landscape. It's the reflection of vision, collaboration and scholarship in action.

Beyond catalyzing investment, we're also seeing the transformation to a new economy — particularly as more young people are launching ventures downtown, supported by great community-university partnerships. There is a very robust innovation ecosystem at work here that is frankly the envy of many other places. In a global marketplace, this is key to regional economic strength, as well as quality of place.

So how can you engage? Change is more than doing projects. It's working synergistically to create a culture of civic entrepreneurship. It's putting educators, students, community experts and practitioners together to work on innovative projects that leverage our assets and address our challenges. That's the really exciting part. Syracuse is becoming a community incubator — a place where great new ideas, businesses and ambitious projects can emerge and flourish.

Want to be part of it? Got an idea? We want to hear from you: corridor@syr.edu.

Linda Dickerson Hartsock is director of Syracuse University's Office of Community Engagement and Economic Development.



REGIONAL COVERAGE

6:07 AM

Mon November 19, 2012

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Group studies Onondaga Lake use - past & future

By [Ellen Abbott](#)



Before deciding what the Onondaga Lake shoreline should look like in the future, FOCUS, is looking at what the community has wanted in the past. The community group that is creating a roadmap for the future of the polluted lake's shore, has issued a preliminary report documenting 84 years of studies of the lake.



1:05

Graduate student Cat Foley and her team have been pouring over engineer, government and non-profit reports dating back to 1928. All of them have suggestions about how to use the shoreline of Onondaga Lake, one of the most polluted lakes in the country. Foley says hands down, the most popular suggestions through the years have involved recreation -- calling for hiking trails and access to swimming. But nothing seemed to get done.

<http://wrvo.org/post/group-studies-onondaga-lake-use-past-future>

"There were these very thought out plans that were done and never implemented," said Foley. "I suppose that jumped out -- how many different visions have been not just generalized visions, but very specific ways that people have wanted to shape the shoreline, and it hasn't come to manifest itself."

Foley wonders if things could be changing, noting that Onondaga County has approved funding for a "loop the lake" trail that includes improvements to the west shore trail and a pedestrian bridge on the lake's southwest shoreline.

"Half those desires are already being implemented so we have that momentum going forward, and I think that's what makes a big difference," Foley said.

FOCUS is in the midst of analyzing more than 1,100 surveys about the future of the lakeshore, that will be released early next year. This comes as Honeywell is embarking on a Lake restoration project that is taking two million cubic yards of polluted sediment out of the bottom of the lake.

Save the Rain Community Meeting: Loguen Park

When: Monday, November 19, 2012, 6 p.m.

Where: Westcott Community Center, 826 Euclid Avenue, Syracuse, NY 13210

Cost: Free

Age limit: All ages

Categories: [Community](#)



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—The Loguen Park project is a collaboration between Save the Rain and the City of Syracuse Parks Department.

—The green infrastructure within the park will include two bioretention areas to capture street runoff, and removing some walkways at the Cherry Street park entrance. The project also includes the removal of excessive roadway on E. Genesee Street and at the intersection of Lexington, Cherry and E. Genesee. Bioretention areas and tree trenches will be installed where pavement is removed.



NEWS: CONNECTIVE CORRIDOR PHASE ONE CONSTRUCTION WRAPS UP



The Connective Corridor closes out the construction season on a high note as the City of Syracuse, Onondaga County and Syracuse University were recognized this week with the U.S. Green Building Council's **Global Community Leadership Award** at its annual Greenbuild Conference which attracts more than 20,000 participants.

The prestigious award recognized the team's unique partnership and shared vision around sustainability. Chancellor Nancy Cantor, County Executive Joanie Mahoney and Syracuse Mayor Stephanie A. Miner received the award for their collective work on LEED building projects, as well as innovative initiatives such as Save the Rain and the Connective Corridor.

This is truly an honor and sends a strong message that Syracuse is defined by bold vision, collaboration and results. It's a great venue to tell our sustainability story: The Greenbuild International Conference & Expo convenes the industry's largest global gathering for extensive educational workshops and demonstrations of design innovations.

Kudos to all!

[Read the U.S. Green Building Council story here.](#)

[Read the Syracuse University news story here.](#)

We are at the finish line ...

<http://connectivecorridor.syr.edu/2012/11/16/connective-corridor-phase-one-construction-wraps-up/>

Phase one wraps up as the green bike lanes are installed Friday, Saturday and Sunday. It's very exciting. There are only a few minor details on the punch list, and University Avenue and East Genesee Street will be substantially complete next week. You'll see the last of the pavers, a few more trees, some fine tuning and the installation of the City parking meters. Then the construction barrels, barriers and cones will be gone, and the new streetscape will be open in time for Thanksgiving. (Something to be really thankful for!)

Don't get too comfortable, though, because:

- The advanced design plans for complete streetscape reconstruction for **phase two** (Forman Avenue to Montgomery Street) and **phase three** (Montgomery Street to West Street) were completed and submitted this week to the NYS DOT. You can exhale, because those plans will be going through DOT and FHWA review, and that construction will not likely start before fall 2013, so there will be a breather period as the project is reviewed and approved by regulatory entities, then bid and contracts let. However, some prep work will begin in spring 2013, so the City and SU will begin an active community outreach and information process starting just after the New Year.
- The **Civic Strip** portion of the project is also advancing to the next stage, with several key projects planned in 2013 for the convention, cultural, museum and tourism district bounded by Montgomery and State Streets, and the Erie Canal Museum to the north and OnCenter to the south. Watch for them at the Everson Plaza, OHA, Erie Canal Museum and Civic Center, along with new wayfinding signage through that district.
- We are hopeful to hear about our phase two façade improvement program funding request soon. Watch for details.
- A major public art solicitation will be released in early 2013. Watch for those details as well.

SO NOW IT'S TIME TO ACTIVATE THE CORRIDOR. PHASE ONE INFRASTRUCTURE IS IN PLACE. BUT IT IS JUST THE STAGE TO CREATE UPON. WHAT ARE GREAT WAYS TO BRING THE CORRIDOR TO LIFE? THE CORRIDOR BELONGS TO THE COMMUNITY AND IT IS ONLY AS GOOD AS OUR BEST IDEAS.

We're working on a historic walking path with our friends at OHA and talented SU industrial design students, and launching a bike share program with area businesses and enterprising ESF students in 2013.

WHAT ELSE DO YOU WANT TO SEE? SEND YOUR THOUGHTS! INSPIRE AND CHALLENGE US.

Want to be part of a work group to help activate the corridor? Let us know. The next step is catalyzing a creative brain trust. We'd love to have you part of it. (You can never get enough good brains working together!) Connect with us at: corridor@syr.edu

[« Previous Story](#)
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Forum to share 84 years of citizens' visions for Onondaga Lake



By **Paul Riede, The Post-Standard**

on November 15, 2012 at 7:02 AM, updated November 15, 2012 at 9:41 AM



The sun comes up over the equipment Honeywell is using in its cleanup of Onondaga Lake.

Dick Blume / The Post Standard

FOCUS Greater Syracuse will hold a forum Friday to preview its **study of citizens' hopes** for Onondaga Lake from 1928 to 2012.

Cat Foley, a Syracuse University graduate student, will discuss what she and others found in 54 reports on the lake spanning 84 years.

In addition, Craig Milburn, a Honeywell/Brown and Sanford Consulting communications specialist, will discuss the

new visitors' center on the lakeshore and **the cleanup** Honeywell is leading.

The forum will run from 7:30 a.m. to 8:45 a.m. Friday in the Common Council chamber at Syracuse City Hall.

Contact Paul Riede at priede@syracuse.com or 470-3260.



Photos from The Post-Standard

News, Sports, Entertainment, CNY Life & More Pictures

Gallery: Clinton Storage Facility (9 photos)

Description: Work continues on the County's Save the Rain Project at the former Trolley Lot near Armory Square. The multi-million dollar Clinton Storage Facility will prevent sewage and storm water from going into Onondaga Creek. It will store combined sewage and storm water of over 6-million gallons in tunnels until it is transferred to the Syracuse Metropolitan Treatment Plant. The project is expected to be finished in December of 2013. Jett Industries is the general contractor. Over 50 workers are on the project.



Clinton Storage Facility
from Stephen D.
Cannerelli, The Post-
Standard



Clinton Storage Facility
from Stephen D.
Cannerelli, The Post-
Standard



Clinton Storage Facility
from Stephen D.
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Environmental Building News

WHAT **REALLY** MATTERS IN SUSTAINABLE DESIGN & CONSTRUCTION

Newsbrief from **Environmental Building News**

USGBC Honors Green Building Leaders

By Erin Weaver

The U.S. Green Building Council (USGBC) has announced the nine recipients of its 2012 Leadership Awards, to be presented during the 2012 Greenbuild conference in San Francisco. The awards recognize “individuals who embody the vision, leadership and commitment to the evolution of green buildings and communities,” and this year’s announcement includes several shared awards.

- **Tom Darden**, executive director of the Make It Right Foundation, received the NGO Sector award for the nonprofit’s work providing LEED Platinum homes to the Lower Ninth Ward of New Orleans after Hurricane Katrina.
- **Tom Lent and Bill Walsh**, policy director and founder, respectively, of the Healthy Building Network, received the Advocacy award for their work in encouraging healthier replacements for materials, including PVC and wood treated with chromated copper arsenate.
- **Steve Saunders**, CEO of Texas Energy Solutions, received the Residential Sector award for advancing LEED for Homes.
- **Nancy Cantor**, Chancellor and President of Syracuse University; **Joanie Mahoney**, Onondaga County Executive; and **Stephanie A. Miner**, Mayor of Syracuse, received the Global Community Leadership Award for collaborative efforts across central New York, including Syracuse University’s goal of carbon neutrality by 2040.
- **M. Arthur Gensler Jr.**, founder of Gensler, and **Donald Simon**, attorney with Wendel, Rosen, Black & Dean, LLP, received the President’s Award; Gensler has been a green pioneer in the design industry, and Simon has led environmental law initiatives in California.

Saving the Rain, One Project At a Time

Posted on [October 17, 2012](#) by [Macy Jenkins](#)

Syracuse initiative soaks up stormwater around the city



Onondaga Lake
© 2012 Macy Jenkins

By Macy Jenkins SYRACUSE (NCC NEWS) – The “[Save the Rain](#)” Program is a stormwater management plan that aims to reduce pollution in Onondaga Lake.

It began in 2009, with Onondaga County Executive Joanie Mahoney as the project’s leader. Over 100 projects have been completed in under 3 years.

A major issue for the city occurs when snowmelt and stormwater mix with sewage water and create what is called Combined Sewage Overflow (CSO). During a storm, the treatment facilities can’t treat the increased amount of water at the rate that water flows in.

Area projects

One project that helps with CSO is the Rain Barrel Program.

“Save the Rain” Program Coordinator, B.J. Adigun, said residents can get free rain barrels from the city, collect water, and use it at their convenience. They can also simply dump it in the gutter after the storm has passed.

“Once that peak flow is gone, then the sewer system can handle that water that has been collected in the rain barrel,” said Adigun.

Another project is at the Onondaga County War Memorial, where internal roof liters collect water, treat it and freeze it. That ice makes the hockey rink for the Syracuse Crunch AHL Hockey Team.

Green Roof: One of Syracuse's biggest rain savers

The green roof on the Syracuse Convention Center, aka the OnCenter, spans for one and a half acres. It's the 3rd largest green rooftop in the U.S.

Cliff Davidson, Syracuse University Engineering Professor, works with Syracuse University students on [research at the OnCenter](#).

"We're interested in the behavior of the roof with regard to water flows through the roof and how much water is being stored in the roof and in the plants," said Davidson.

His research began in the summer of 2011 and continues throughout all of the year's seasons.

Recognizing local leaders

Davidson said when political leaders come together it "can put Syracuse into a real leadership position, in terms of testing and discovering a lot that is unknown about sustainable water management."

This November, the U.S. Green Building Council will award Joanie Mahoney one of their 2012 Leadership Awards for her achievements with "Save the Rain." Awards will also be given to Syracuse Mayor Stephanie Miner and Syracuse University President, Nancy Cantor, for environmental progress made in the city.

And, Oprah's "O Magazine" has recognized Mahoney as one of the 12 political leaders who "actually gets stuff done."

([See all of the Save the Rain projects](#))

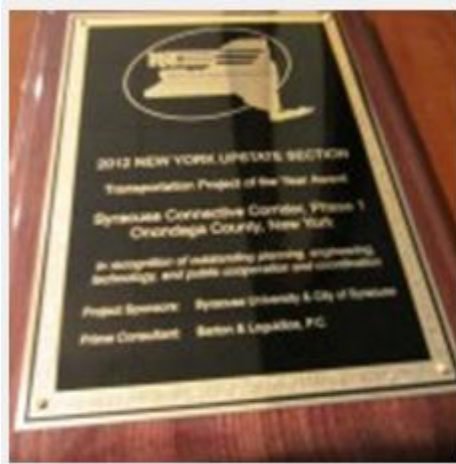
Watch the story here:



<https://nccnews.expressions.syr.edu/?p=65249>



NEWS: CONNECTIVE CORRIDOR WINS TRANSPORTATION PROJECT OF THE YEAR AWARD



The completed first phase of the Connective Corridor project has earned Syracuse University, the City of Syracuse, Barton & Loguidice P.C. and Onondaga County the 2012 Transportation Project of the Year Award from The Institute of Transportation Engineers (ITE) New York Upstate Section.

The award is given each year in recognition of “outstanding planning, engineering, technology and public cooperation and coordination.” The award ceremony was a feature of the 2012 ITE New York Upstate Annual Meeting, held Oct. 10 and 11 at the Sheraton Syracuse University Hotel and Conference Center. The two-day meeting attracted transportation professionals from across New York State for technical workshops – one of which featured a tour of the Connective Corridor.

Accepting the award on behalf of the project team was Mark Budosh, project engineer; John P. Donohue, LEED AP and senior vice president; and Mary Rowlands, senior managing transportation planner with Barton & Loguidice. Joining them were Matthew Millea, Onondaga County deputy executive; Mary Robison, City of Syracuse engineer; and Linda Dickerson Hartsock, director in Syracuse University’s Office of Community Engagement and Economic Development.

The Connective Corridor was recognized as a complex project involving numerous sponsors, stakeholders, and a large, diverse team of sub-consultants, contractors and suppliers.

The first phase encompasses East Genesee Street from Forman Park to University Avenue, and University Avenue between East Genesee Street and Waverly Avenue. Two subsequent phases will extend the Corridor west along East Genesee Street and Fayette Street to the Near West Side of Syracuse.

The University Avenue section of the project includes improved access to businesses, a safe, dedicated, two-way cycle track, dedicated turn lanes, new sidewalks, and energy efficient LED lighting. The design also included converting University Avenue from a one-way street to a two-way street.

The East Genesee Street section serves as the spine of the Syracuse Connective Corridor. This comprehensive streetscape reconstruction provides considerable safety improvements for all modes of travel by reducing pedestrian crossing distances, slowing traffic speeds, providing new, dedicated turning lanes, installing new pedestrian audible count-down timers, and providing new ADA compliant curb ramps, sidewalks and durable crosswalks.

An extensive green infrastructure network was developed in collaboration with Onondaga County and funded by Save the Rain. The network includes subsurface infiltration trenches, Silva cells, geogrids, bioswales, porous pavement, rain gardens, extensive plantings and bioretention. Forman Park's green infrastructure includes more than 4,000 shrubs and perennials which will capture 119,000 gallons of storm water a year, and estimated savings from the East Genesee Street project are 1,771,000 gallons annually. When the Corridor is complete (from University Avenue to the Warehouse at Armory Square), it is expected to harvest and manage 5.9 million gallons annually.

The first phase project team included UPSTATE: A Center for Design Research and Real Estate in SU's School of Architecture (design); Barton & Loguidice P.C. of Syracuse (project engineer); C&S Companies of Syracuse (construction management); Barrett Paving Materials of Liverpool (contractor/streetscape) and Ballard Construction (contractor/Forman Park).

Millea was the keynote speaker at the ITE meeting, focusing on Onondaga County's "Save The Rain Program" – a comprehensive stormwater management plan intended to reduce pollution to Onondaga Lake and its tributaries that has received national attention for its implementation of multiple techniques that balance "gray and green" infrastructure. Millea noted that, "A great deal of credit goes to the Connective Corridor design team who did a terrific job bringing together transportation engineering and green infrastructure, and implementing them in creative ways across the project with great success."

"This honor from a recognized professional institute validates the Connective Corridor as a great working model for other communities—as a signature strip of cutting-edge design and engineering, a test bed for new technologies and a very unique collaborative endeavor," says Hartsock.

Donohue said, "While it is certainly special to have this project be recognized by our peers, this award wouldn't have been possible without the continued cooperation between the City of Syracuse, Syracuse University, Onondaga County, and the design team."

ITE New York Upstate Section President Meaghan Capuano said that the SU conference location provided a "perfect opportunity to network with professionals from the public and private sectors, as well as students from surrounding colleges" in an effort to attract more students to the profession. She also noted that the conference's setting on the Connective Corridor afforded attendees to see first-hand "innovative urban environments, transportation best practices and Upstate New York initiatives."

ITE is an international educational and scientific association of transportation professionals. The New York Upstate Section covers all counties in the state north of the NYC metropolitan region. Nominations are <http://connectivecorridor.syr.edu/2012/10/11/connective-corridor-wins-transportation-project-of-the-year-award/>

received annually from across the state for projects that demonstrate leadership and high standards in the application of planning and engineering, as well as coordination with multiple jurisdictions and project partners. Nominees are drawn from institutions, organizations, government or legislative bodies and award recipients are selected by a committee of transportation professionals.

Onondaga County Executive Joanie Mahoney recognized as an elected official who actually gets stuff done



Published: October 11, 2012 at 1:07 PM, updated October 11, 2012 at 6:38 PM
By **Rick Moriarty, The Post-Standard**

O, Oprah Winfrey's magazine, has included Onondaga County Executive Joanie Mahoney in a list of 12 elected officials that it says "actually get stuff done."

Mahoney made the list because of her **"Save the Rain"** program, which aims to reduce rainwater infiltration into Syracuse's wastewater collection system.

During heavy storms, rainwater overloads the city's sewer system, forcing raw sewage into Onondaga Lake.

The county is under a federal court order to reduce the flow of sewage into the lake. Its program does that by paving streets with porous materials that reduce runoff, promoting the use of rain barrels and retrofitting buildings with green roofs.

EPA Administrator Lisa Jackson last year designated Onondaga County as one of the nation's **top 10 green** infrastructure demonstration communities.

Thanks to **YNN's Liz Benjamin** for spotting the item in O and posting a link to it.





ARTICLES



Media



USGBC's 2012 Leadership Awards Highlight Innovation and Vision in the Sustainability Sector

Published on 9 Oct 2012

Written by [Jennifer Easton](#)Posted in [Media](#)

Annual awards to be celebrated at Greenbuild International Conference and Expo

Washington, D.C. – (Oct. 9, 2012) – The U.S. Green Building Council (USGBC) has announced the recipients of its 2012 Leadership Awards, recognizing outstanding individuals who embody the vision, leadership and commitment to the evolution of green buildings and communities as a vehicle to enhance our quality of life. The awards will be presented at the Leadership Luncheon on Thursday, Nov. 15 during USGBC's [Greenbuild International Conference and Expo](#) held in San Francisco, Calif.

<https://new.usgbc.org/articles/usgbcs-2012-leadership-awards-highlight-innovation-and-vision-sustainability-sector>

"The green building industry didn't grow in to a global movement by chance. We got here because of the hard work and innovation of sustainability pioneers and visionaries," said Rick Fedrizzi, President, CEO and Founding Chair, USGBC. "We are thrilled to recognize many of those individuals in this year's awards."

Tom Darden, Executive Director of Make It Right, a non-profit organization that builds sustainable homes and buildings for communities in need, received the Leadership in the NGO Sector Award. Make It Right has led the charge in redeveloping the Lower Ninth Ward with resource-efficient, durable homes after the devastation of Hurricane Katrina.

"Since the groundbreaking of Make It Right's first house, USGBC has been an important partner in our efforts to build affordable, LEED Platinum homes for families in need in New Orleans and beyond," said Darden. "I'm honored to receive this award and look forward to continuing our work together."

Healthy Building Network's Tom Lent, Policy Director and Bill Walsh, Founder, each received the Leadership in Advocacy Award. Lent has advocated for the banning of arsenic-treated wood and educates on the environmental and health hazards of polyvinyl chloride (PVC), among many initiatives. Under the leadership of Walsh, Healthy Building Network has introduced new, healthier building materials into commercial markets and shifted more than \$4 billion in materials purchases from toxic materials to healthier alternatives.

"We are proud to accept this Leadership in Advocacy Award with thanks to all the USGBC member firms who are stepping forward with us to advocate for healthy materials using our Pharos Project and the new Health Product Declaration," said Lent.

"The Healthy Building Network is working shoulder to shoulder with leaders in the green building movement to make healthy building products a fundamental component of green building," said Walsh. "I'm proud to accept this award honoring these efforts."

Steve Saunders, CEO, Texas Energy Solutions, received the Leadership in the Residential Sector Award. Texas Energy Solutions is a LEED for Homes Provider, and Saunders has done extensive work to expand and advance the LEED for Homes program.

"This award is really a tribute to the leadership commitment of our wonderful clients and the dedicated effort of my coworkers – two groups I am proud to serve," said Saunders. "I am grateful to the USGBC – particularly to the LEED for Homes team - for building a terrific platform for residential sustainability."

Nancy Cantor, Chancellor and President, Syracuse University; Joanie Mahoney, Onondaga County Executive; and Stephanie A. Miner, Mayor of Syracuse each received the 2012 Global Community Leadership Award for their collective and collaborative efforts to foster substantive change across the Syracuse and Central New York landscape. Among their many projects: Cantor has elevated the mission of green building on Syracuse University's campus through numerous LEED building projects and a school-wide goal to achieve carbon neutrality by 2040. County Executive Mahoney led the charge on the Save the Rain program for stormwater management and advocates for green roofs, among many sustainability initiatives. Mayor Miner has advocated for local green buildings and worked to create a vibrant, revitalized connective corridor in the city of Syracuse.

"This USGBC Leadership Award speaks to the power of innovation through collaboration," said Cantor. "We can only tackle the profoundly complex challenges we face today such as achieving sustainability if we partner across sectors and roll up their sleeves together. That's exactly what we're trying to do in Syracuse and across Central New York, not only among City, County, and University leaders, but with the private sector and our neighborhoods, as well. We're deeply grateful for this recognition, which we consider an achievement for our entire community."

"It is a tremendous honor to be recognized by USGBC with this award," said Mahoney. "Syracuse Mayor Stephanie Miner and Syracuse University Chancellor Nancy Cantor have been excellent partners and we appreciate our sustainability efforts being recognized in a global way."

"It is a great honor receiving this award from USGBC," said Miner. "I am glad to accept this recognition on behalf of the Syracuse community. We have worked very hard to become a leader in the green economy, working with start-up green tech firms, building LEED buildings across our city, renovating our airport to LEED standards, and creating a more sustainable community. I am proud to lead a city with this level of commitment to our green future."

M. Arthur Gensler Jr., Founder, Gensler; and Donald Simon, Attorney, Wendel, Rosen, Black & Dean, LLP received the President's Award. Founder of global architecture, design, planning and consulting firm, Gensler, M. Arthur Gensler has helped pioneer green building as a business visionary and legend of the design industry.

"It is an honor for me to be a recipient of this award, but it should really be given to all the members of the Gensler design firm for their commitment to the green building movement since the founding of the USGBC," said Gensler.

<https://new.usgbc.org/articles/usgbcs-2012-leadership-awards-highlight-innovation-and-vision-sustainability-sector>

Simon co-founded his firm's Green Business Practice Group as well as USGBC's Northern California Chapter, and has been instrumental in leading the charge behind green and sustainability law.

"I'm humbled by this honor and eternally grateful for the opportunity USGBC has provided me to blend my passion with my profession," said Simon. "The green building movement's overwhelming and growing success is proof positive that a small group of passionate people can start a contagion that changes the world."

2012 Leadership Awards Recipients

- **Leadership in the NGO Sector:** Tom Darden, Executive Director, Make It Right Foundation
- **Leadership in Advocacy:** Tom Lent, Policy Director, Healthy Building Network; Bill Walsh, Founder, Healthy Building Network
- **Leadership in the Residential Sector:** Steve Saunders, CEO, Texas Energy Solutions
- **Global Community Leadership Award:** Nancy Cantor, Chancellor and President, Syracuse University; Joanie Mahoney, Onondaga County Executive; Stephanie A. Miner, Mayor of Syracuse
- **President's Award:** M. Arthur Gensler Jr., Founder, Gensler; Donald Simon, Attorney, Wendel, Rosen, Black & Dean, LLP

About U.S. Green Building Council (USGBC)

The U.S. Green Building Council (USGBC) is committed to a prosperous and sustainable future through cost-efficient and energy-saving green buildings. USGBC works toward its mission of market transformation through its LEED green building certification program, robust educational offerings, a nationwide network of chapters and affiliates, the annual Greenbuild International Conference & Expo, and advocacy in support of public policy that encourages and enables green buildings and communities. For more information, visit usgbc.org and follow us on Twitter [@USGBC](https://twitter.com/USGBC), and Facebook at facebook.com/USGBC.

About Greenbuild

The U.S. Green Building Council's Greenbuild International Conference & Expo convenes the industry's largest gathering of representatives from all sectors of the green building movement. Three days of extensive educational programming, workshops, a vast exhibition floor and ample networking events provide unrivaled opportunities to learn about the latest technological innovations, explore new products, and exchange ideas with other professionals. Greenbuild is the four-time recipient of IMEX Green Meetings Award and the 2012 show will be held on Nov. 14-16, in San Francisco, Calif. Last year's conference in Toronto, Ontario, drew more than 23,000 attendees and featured a sold out exhibit hall floor with more than 1,700 exhibit booths. For more information, visit greenbuildexpo.org and follow us on Twitter [@Greenbuild](https://twitter.com/Greenbuild), and Facebook at facebook.com/Greenbuild.

Cranes in the Air: Save the rain



By **Charles McChesney**, *The Post-Standard*

on November 06, 2012 at 6:30 AM, updated November 12, 2012 at 10:37 AM

What once was the Trolley Lot, just on the other side of the train tracks from Syracuse's Armory Square, has become a construction project designed to capture and store overflow from the city's sewer system during wet weather.

The project replaces a sewer treatment facility that was planned for Armory Square but scrapped by Onondaga County Executive Joanie Mahoney in 2008.

The Clinton Combined Sewer Overflow Storage Facility will be able to handle 6 million gallons of overflow in three 18-foot-wide tunnels.

Designers said the project, set to be completed at the end of next year, will capture sewage from nine sewer overflows which currently empty into Onondaga Creek.

The wastewater will be stored in the tunnels until it can be sent to the Syracuse Metropolitan Sewage Treatment Plant.

While much of the work takes place below ground, the project includes two above-ground structures to allow access to the tunnels and house the pumping, grit collection and odor-control equipment.



THREE TUNNELS, each 18-feet-wide, will store the wastewater overflow from Syracuse's sewer system during wet weather.

Stephen D. Cannarella, The Post-Standard

Clinton combined sewer overflow storage facility

Location: The former Trolley Lot off West Jefferson Street, Syracuse

Size: 6.3 acres

Completion date: December 2013

Cost: \$70,640,000

Design Engineer: Environmental Engineering Associates

Construction manager: CDM/C&S joint venture

Cranes in the Air: Connective Corridor Phase I along East Genesee Street in Syracuse



By **Jennifer Creighton, The Post-Standard**

on October 09, 2012 at 6:30 AM, updated October 09, 2012 at 7:20 AM



Dick Blume / The Post Standard

Connective Corridor Phase I along East Genesee Street in Syracuse.

Connective Corridor: Phase I

Work is underway on phase one of the **Connective Corridor**, which includes a new streetscape for University Avenue (from Waverly Avenue to East Genesee Street) and East Genesee Street from University Avenue to Forman Park. Forman Park reconstruction has also recently wrapped up.

The project includes new roadways, brick pavers, sidewalks, medians, bike lanes,

advanced energy-efficient LED lighting, road markings and curbs, new bus pads, bike racks, benches and other street furniture, along with extensive landscaping.

A unique aspect of the project is an extensive green

infrastructure network, developed in collaboration with Onondaga County and funded by Save the Rain, which includes subsurface infiltration trenches, Silva cells, geogrids, bioswales, porous pavement, rain gardens, extensive plantings and bioretention. Forman Park's green infrastructure included more than 4,000 shrubs and perennials that will capture 119,000 gallons of stormwater a year. Estimated savings from the East Genesee Street project are 1,771,000 gallons annually. When the Corridor is complete (from University Avenue, to the Warehouse at Armory Square), it is expected to harvest and manage 5.9 million gallons annually.

Location: University Avenue to Genesee Street and Forman Park

Completion: Fall 2013

Cost: \$10.5 million (total)

Forman Park: \$1.8 million

University Avenue: \$4.6 million

East Genesee Street (to Forman): \$4.1 million

Project Engineer: Barton & Loguidice, of Syracuse

Construction Management: C&S Cos., of Syracuse

General Contractor: Barrett Paving Materials, of Liverpool (Streetscape); Ballard Construction Co., of Syracuse (Forman Park)

Onondaga County Exec putting her vision for sustainability into action

by Laura Hand

Posted: 12.16.2012 at 3:59 PM



Input is welcome at ongov.net website

Read more: [Local](#), [Economy](#), [Agriculture](#), [Environment](#), [Water Issue](#), [Community](#), [News](#), [Onondaga County](#), [Joanie Mahoney](#), [Sustainability Plan](#), [Sewer District](#), [Save the Rain](#), [Infilling](#), [Land Development](#)

Onondaga County Executive Joanie Mahoney is pushing for a county-wide approach to development, that she says will 'infill' places that have already been developed once, such as in the city of Syracuse and inner suburbs with financial incentives.. She points out that the county's population has not increased in several years, and that expansion is not truly growth, just development in different directions which are not necessarily economically or ecologically sound.

Mahoney says that most towns have development plans, but she hopes to weave in a bigger picture, by enforcing regulations already in place, like non-expansion of existing sewer districts. Mahoney says that because she's elected, she has the mandate to enforce the regulations, which, she says, will save taxpayers money by not expanding government-provided infrastructure like roads, power and water lines.

Besides controlling where the development happens, Mahoney says she has a commitment to the rural parts of the county, and wants to financially help farmers---and a new generation of farmers-to-be---hold onto the land for agriculture.

The County Executive, talking with us on the CNY in Focus segment of Weekend Today in CNY, says we're not talking about stopping development, just being smarter about it. And, she says, if there is an economic spurt, actual growth into new areas is not precluded.

Mahoney says public comment on her direction has been positive and encouraging, and she welcomes ongoing comment. Go to the www.ongov.net website and click on the green 'Sustainable Development Plan' link to see more, and to comment. There's also a blue 'Save the Rain' link with more information and resources.



Onondaga County escapes huge additional cost for lake cleanup



By [Rick Moriarty, The Post-Standard](#)

on December 16, 2012 at 6:01 AM, updated December 16, 2012 at 6:05 AM

Onondaga County dodged a bill of potentially hundreds of millions of dollars this summer when environmental regulators eased restrictions on the amount of phosphorus that its sewage treatment plant can dump into Onondaga Lake.



Employees walk past settling tanks at Onondaga County's wastewater treatment plant in Syracuse. The plant's phosphorus removal system has greatly improved the quality of Onondaga Lake and allowed the county to dodge a potentially huge bill for additional upgrades to the plant.

Dick Blume/The Post Standard

Phosphorus is a mineral that in high concentrations poses one of the greatest threats to the lake's health. Commonly found in fertilizer and animal and human waste, it can choke a lake to death by promoting the excessive growth of algae, microorganisms that feed on phosphorus.

When algae grows out of control, it gives a lake a cloudy, green appearance and makes it stink, rendering the lake unfit for swimming or other recreational uses. It also sucks up the oxygen that fish need to breathe.

A 1998 federal court order required the county to lower the amount of phosphorus in

the treatment plant's discharge to a level that would have required spending \$265 million to \$1 billion, county officials said.

Those costs would have come on top of the approximately \$400 million the county already has spent upgrading the plant in Syracuse since the court decree.

But to the great relief of county officials, the federal Environmental Protection Agency and the state Department of Environmental Conservation agreed in June to ease the restriction.

The regulators accepted the county's position that so much progress has been made removing phosphorus from the lake that the additional improvements necessary to meet the standard set in 1998 would not be worth the enormous expense.

Two environmental groups that have not always seen eye to eye with the county when it comes to the lake's cleanup supported the county's argument.

Used as a cesspool by local industry and governments for decades, Onondaga Lake developed a well-earned reputation as a stinky, dirty body of water that fish and humans alike should avoid. Pollution forced a ban on swimming in 1940 and on fishing in 1970.

The 1998 federal court decree began a process that has dramatically [improved the health of the lake](#) — and, slowly, its reputation.



A machine adds iron to sewage as part of the phosphorus removal process at Onondaga County's wastewater treatment facility on the southern shore of Onondaga Lake.

Dick Blume/The Post Standard

The decree required the county to slash phosphorus levels in the lake to 20 micrograms per liter — an amount about equal to the size of a grain of salt in 15 gallons of water. That's the maximum level deemed by the Environmental Protection Agency and the Department of Environmental Conservation to meet the requirements of the federal Clean Water Act.

Ten years before the court order, phosphorus levels in the lake were six times that level. And in 1998, the year the decree was issued, the level was still almost three times more than the level considered safe.

At the time, the county's Metropolitan Wastewater Treatment Plant on the lake's southern shore accounted for 61 percent of the phosphorus entering the lake. The rest came from the five creeks and brooks that empty into the lake.

Improvement in '08

Onondaga County met the new requirement for the lake for the first time in 2008, three years after the county opened a \$126 million phosphorus removal facility within its sewage treatment plant in Syracuse.

But the court order also required the county to reduce the amount of phosphorus in the discharge from its sewage treatment plant to the same level. At the time the order was issued, regulators thought the only way the county could get and keep phosphorus levels in the lake to a safe level was to reduce the concentration in the sewage discharge to the same level. In 1998, the plant's output contained 524 micrograms of phosphorus per liter of water — 26 times the limit.

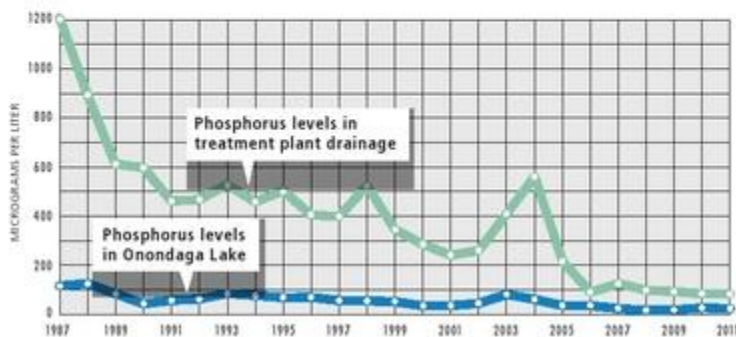
“We thought in 1998 that metro had to get down to 20 to get the lake to 20,” said DEC Regional Director Ken Lynch.

That standard was far stricter than the limits set for any other sewage plant in the state. Most treatment plants in the state discharge into fast-moving rivers that carry the phosphorus away or into large lakes that dilute it.

The city of Oswego's two sewage plants, for example, are allowed to discharge water with concentrations of phosphorus up to 1,000 micrograms a liter. But their discharges go into Lake Ontario and Oswego Harbor, which flows into the lake. Onondaga County's treatment facility dumps into a relatively small body of water.

A LAKE GETS HEALTHIER

The level of phosphorus (blue line) in Onondaga Lake has been decreasing for 25 years, primarily because of improvements at the Onondaga County's Metropolitan Wastewater Treatment Plant, which discharges treated water into the lake. High levels of phosphorus promote excessive algae growth, decrease the oxygen available for fish and make the water cloudy, green and smelly. Since 1987, the sewage treatment plant has significantly reduced the concentration of phosphorus in its discharges into Onondaga Lake (green line). In 2005, the plant installed a \$126 million system that cut the amount of discharged phosphorus that causes algae growth. In 2008, Onondaga Lake's phosphorus level dipped for the first time below the 20 micrograms per liter dose required by the federal Clean Water Act.



Onondaga County's 2005 upgrades to its treatment plant managed to cut the level of phosphorus to a little below 100 micrograms. That was a significant improvement, and it meant that the plant was now the source for just 20 percent of the phosphorus in the lake. But it still left the concentration of phosphorus in the plant's discharge almost five times greater than the court-ordered limit.

Matt Millea, deputy county executive for physical services, said the strict standard would not be possible to meet without diverting the treated sewage around Onondaga Lake to the Seneca River or installing filters to catch the remaining phosphorus before it leaves the plant. Either plan would have been enormously expensive.

Millea said building a pipeline to carry the sewage plant's discharge along its eastern or western shores to the Seneca River would have cost an estimated \$265 million.

Millea said installing filters on the scale that would be required to get phosphorus levels in the discharge to the standard required by regulators would have cost even more — an estimated \$700 million to \$1 billion.

And county officials said the additional investment would not significantly improve the lake's quality because the treatment system the county installed in 2005 removes most of the phosphorus capable of causing algae growth.

The system removes phosphorus by injecting iron chloride into the sewage. Phosphorus molecules cling to the iron and, with the help of sand added to the mix, drop out of the water.



Daniel Jean, operations superintendent at Onondaga County's wastewater treatment plant in Syracuse, checks flasks that measure the volume of sand used in the plant's phosphorus removal process.

Dick Blume/The Post Standard

So county officials asked state and federal regulators to raise the phosphorus limit for the plant's discharge to 100 micrograms.

"It wasn't a contentious discussion," said Millea. "Nobody was really surprised by the outcome because we all agreed the lake is doing quite well."

Environmentalists approve

Lynch said the easing of the restriction will cause no harm to the lake. Any further reduction in phosphorus from the plant would not measurably improve the lake's quality, he said.

Although it avoided a huge expense, Onondaga County will still incur some new phosphorus-related costs at the sewage treatment plant. Earlier this month, the county Legislature voted 15-0 to borrow \$2.84 million to design improvements to the phosphorus removal system.

Instead of iron, which can corrode the plant's pipes and cloud the ultraviolet light bulbs that disinfect the sewage, aluminum will be added to the water. County officials say their testing has shown that the aluminum will be at least as effective and maybe a little better at removing phosphorus, without the corrosive effects of iron.

Millea said the total cost of the new improvements will probably be around \$14 million. The cost will be paid by sewer rate payers.

Two environmental groups that have aggressively pushed the county for years to clean up Onondaga Lake agree that the less-restrictive phosphorus discharge standard will not harm the lake.

Sam Sage, president of Atlantic States Legal Foundation, said the organization supported the change. The foundation is the environmental group that sued the county in 1988 over pollution caused by the sewage plant. The lawsuit resulted in the 1998 decree.

Steven Effler, director of research for the Upstate Freshwater Institute, said the new treatment system has produced one of the most "clear-cut cases of phosphorus load reduction" anywhere in the country.

"Not all phosphorus is created equally," he said. "A lot of it is tied up in this inorganic chemical form. It's pretty stable the way it is."

Effler said the phosphorus reduction has improved the clarity and quality of Onondaga Lake to the point that it is once again safe to swim in most sections of it. The lake now meets clarity and bacteria standards for swimming, except along its southeastern shoreline adjoining Onondaga Creek.

It's not likely anyone will be swimming in the lake for at least a few more years, however. The resorts and beaches that once dotted the lake's western shore have been gone for more than 70 years. And the lake's reputation as the county's cesspool will take time to change.

FINANCIAL UPDATE

Financial Update

Contracts

New Contracts

Green Infrastructure Program

- Contract with Davis Wallbridge, Inc. for green infrastructure improvements at Wadsworth Park.

Contract Amount: \$349,000

Executed: 10/3/12

Green Infrastructure Program

- Contract with Weather Guard Tecta America for the green roof at Salina Street Post Office.

Contract Amount: \$242,860.

Executed: 10/18/12

Green Infrastructure Program

- Contract with Acts II Construction, Inc. for green infrastructure improvement at Lewis Park.

Contract Amount: \$210,800.

Executed: 10/22/12

Green Infrastructure Program

- Contract with Syracuse Center for Peace & Social Justice for reimbursement of green improvements in the Clinton sewershed.

Contract Amount: \$53,100.

Executed: 11/9/12

Amendments to Existing Contracts

ACJ Project Management

- Contract with CDM/C&S amended to include ongoing project management.

Amendment Amount: \$1,330,531.

Executed: 12/4/12

Change Orders

Green Infrastructure Program (GIF) – Geddes Street Reconstruction

- Contract with John R. Dudley Construction amended to include reinforced curbing and additional site restoration.

Change Order Amount: \$47,260.82

Executed: 10/4/12

Green Infrastructure Program (GIF) – OnCenter Parking Lot & Garage

- Contract with Economy Paving, Co. amended to include cost of additional stone, soil, piping, and landscaping.

Change Order Amount: \$19,897.20

Executed: 10/4/12

Green Infrastructure Program (GIF) – Skiddy Park/Sunnycrest Park

- Contract with Acts II Construction amended to include cost of additional asphalt and planting changes.

Change Order Amount: \$4,656.98

Executed: 10/4/12

Green Infrastructure Program (GIF) – Syracuse City School District

- Contract with Orchard Earth & Pipe amended to include replacement of sewer manholes and relocation of catch basin trap.

Change Order Amount: \$19,296.

Executed: 11/4/12

Funding

Grants

State Bond Act Funds

- Reimbursements **requested**:
October:
Clinton Storage for \$6,679,426.03 on 10/1/12
November: None
December:
Clinton for \$3,102,126.12 on 12/18/12
- Reimbursements **received**:
October: None
November:
Clinton Storage for \$6,679,426.03 on 10/26/12
December:
Clinton Storage for \$3,102,126.12 on 12/18/12

Federal EPA Funds

- Reimbursements **requested**:
October: None
November: None
December:
HB for \$825,222.91 on 12/7/12
Midland for \$273,436.82 on 12/7/12
- Reimbursements **received**:
October: None
November:
HB storage for \$624,066.08 on 11/21/12
Midland for \$493,869.56 on 11/21/12
December:
HB for \$851,056.10 on 11/29/12
Midland for \$419,402.65 on 11/29/12

Federal Army Corps of Engineers Funds

- Reimbursements **requested:**
October: None
November: None
December: None
- Reimbursements **received:**
October:
Sewer Sep 022/045 for \$671,768.21 on 10/5/12
Sewer Sep. 022/045 for \$438,087.73 on 10/5/12
Sewer Sep 022/045 for \$525,301.39 on 10/5/12
WQM for \$8,800.77 on 10/5/12
November: None
December: None

EFC Loans

- Reimbursements **requested:**
October:
Clinton ST for \$3,213,754.07 on 10/23/12
Midland LT for \$598,551.62 on 10/23/12
Harbor Brook ST for \$41,826,078.39 on 10/23/12
November: None
December:
Clinton ST for \$1,140,268.61 on 12/13/12
HB ST for \$1,887,801.15 on 12/13/12
Midland LT for \$298,216.71 on 12/13/12
- Reimbursements **received:**
October: None
November:
Sewer Separation 022/045 for \$1,641,268.98 on 11/21/12
December: None

Total reimbursement monies received to date through EFC loans for the funded ACJ projects: \$188,403,461 (short term) and \$54,919,367 (long term).

Onondaga County Lake Improvement Project

4th Stipulation of the ACJ

Clinton/Lower MIS CSO Improvements

Summary of Current and County Authorizations

<i>Project/Task/Line Item</i>	Total Project Costs		
	Total Proposed Budget	Expended To Date	Authorization Remaining
<u>Clinton Street CSO Facility Planning (Original)</u>			
Engineering Services (EEA)	\$ 751,266	\$ 751,266	\$ (0)
Original Facility Plan Subtotal	\$ 751,266	\$ 751,266	\$ (0)
<u>Clinton Street CSO Conveyances Project</u>			
Contract No. 1 - Phase 1 Conveyances (Delaney)	\$ 14,478,053	\$ 14,478,053	\$ (0)
Contract No. 2 - Phase 2A Conveyances (Delaney)	\$ 4,074,455	\$ 4,074,455	\$ (0)
Construction Testing (CME)	\$ 5,095	\$ 46,980	\$ (41,885)
Engineering/Construction Services (CDM/C&S)	\$ 2,738,000	\$ 2,746,814	\$ (8,814)
Conveyances Subtotal	\$ 21,295,603	\$ 21,346,302	\$ (50,699)
<u>Clinton Storage Project</u> ⁽¹⁾			
Construction Estimate (with contingency)	\$ 58,000,000	\$ 29,495,172	\$ 28,504,828
Engineering Services (EEA and others)	\$ 8,500,000	\$ 8,449,877	\$ 50,123
Construction Management and Administration	\$ 3,600,000		\$ 3,600,000
Project Escalation to Midpoint of Construction	\$ 3,500,000		\$ 3,500,000
CSO Storage Subtotal	\$ 73,600,000	\$ 37,945,049	\$ 35,654,951
<u>Facility Plan for CSOs 027 & 029</u>			
Construction Estimate	\$ 3,100,000		\$ 3,100,000
Engineering Services (Ch2MHill)	\$ 88,944	\$ 91,186	\$ (2,242)
Engineering Services (TBD)	\$ 770,000	\$ 3,517	\$ 773,517
County Administration and Other Costs	\$ -		\$ -
Facility Plan Subtotal	\$ 3,958,944	\$ 94,703	\$ 3,871,276
<u>Clinton/Lower MIS Green Implementation Program</u>			
Construction Contracts incl. GIF Public/Private	\$ 38,508,611	\$ 10,603,748	\$ 27,904,863
Ch2MHill Program Management & Engineering	\$ 15,900,000	\$ 8,364,793	\$ 7,535,207
Green Subtotal	\$ 54,408,611	\$ 18,968,541	\$ 35,440,070
<u>Program Management</u>			
Project Management (CDM/C&S)	\$ 1,811,903	\$ 2,301,553	\$ (489,650)
Project Management for Facility Plan (CDM/C&S) ⁽²⁾	\$ -		\$ -
Program Management Subtotal	\$ 1,811,903	\$ 2,301,553	\$ (489,650)
<u>Miscellaneous County Costs</u>			
Land Acquisition	\$ 4,132,400	\$ 2,077,350	\$ 2,055,050
IMA	\$ 4,861,000	\$ 3,912,544	\$ 948,456
Legal	\$ 64,564	\$ 50,608	\$ 13,957
Consulting (John Clare & Mezey)	\$ 226,334	\$ 226,334	\$ 0
Debt	\$ 175,832	\$ 184,885	\$ (9,053)
Other	\$ 117,644	\$ 186,860	\$ (69,216)
Miscellaneous Subtotal	\$ 9,577,774	\$ 6,638,580	\$ 2,939,194
Total	\$ 165,404,101	\$ 88,045,995	\$ 77,365,141
Authorized Master Budget 165,500,000			

Notes:

(1) Includes engineering costs from original Clinton RTF Project

(2) CDM/C&S Project Management costs are included in the total facility plan costs

Onondaga County Lake Improvement Project
4th Stipulation of the ACJ
Harbor Brook Drainage Basin CSO Abatement
Summary of Current and Proposed Costs, and County Authorizations

<u>Project/Task/Line Item</u>	Total Project Costs		
	Total Proposed Budget	Expended to Date	Authorization Remaining
<u>Harbor Brook CSO Abatement Project</u>			
Original Engineering Expenses	\$ 5,500,000	\$ 5,500,000	\$ -
<u>HBIS Replacement and CSO Abatement Project</u>			
Construction Contract No. 1 (1) (JJ Lane)	\$ 18,289,918	\$ 21,466,536	\$ (3,176,618)
Other Miscellaneous Work	\$ 2,482,920	\$ -	\$ 2,482,920
Engineering/Construction Services (CDM/C&S)	\$ 2,012,615	\$ 2,759,724	\$ (747,109)
County Administration and Other Costs	\$ 114,547	\$ 191,917	\$ (77,370)
HBIS Replacement and CSO Abatement Project Total	\$ 22,900,000	\$ 24,418,177	\$ (1,518,177)
<u>Lower Harbor Brook Storage & Conveyance</u>			
Construction Estimate (with contingency)	\$ 34,502,000	\$ 9,373,035	\$ 25,128,965
Engineering Services (EEA)	\$ 4,200,000	\$ 2,464,715	\$ 1,735,285
Engineering Services (CDM/C&S)	\$ 3,390,000	\$ 245,212	\$ 3,144,788
Project Escalation to Midpoint of Construction	\$ 2,280,000	\$ 2,891,014	\$ (611,014)
Lower Harbor Brook Storage & Conv Total	\$ 44,372,000	\$ 14,973,976	\$ 29,398,024
<u>Harbor Brook CSOs FCF Program</u>			
Construction Estimate	\$ 12,000,000		\$ 12,000,000
Engineering Services (Arcadis)	\$ 1,878,731	\$ 105,092	\$ 1,773,639
County Administration and Other Costs	\$ 800,000		\$ 800,000
Project Escalation to Midpoint of Construction	\$ 400,000		\$ 400,000
FCF Program Total	\$ 15,078,731	\$ 105,092	\$ 14,973,639
<u>Other Harbor Brook Green</u>			
Construction Contracts incl. GIF Public/Private & Rain Barrels	\$ 9,300,000	\$ 3,475,354	\$ 5,824,646
Ch2MHill Engineering & Program Management	\$ 3,650,000	\$ 2,667,402	\$ 982,598
Harbor Brook Green Project Total	\$ 12,950,000	\$ 6,142,756	\$ 6,807,244
<u>Program Management</u>			
Project Management (CDM/C&S)	\$ 499,269	\$ 863,221	\$ (363,952)
Project Management for FCF Plan Implem (CDM/C&S)	\$ -		
Program Management Total	\$ 499,269	\$ 863,221	\$ (363,952)
<u>Harbor Brook Mitigation</u>	\$ 3,500,000	\$ 3,265,000	\$ 235,000
Total Costs for Harbor Brook CSO Area under 4th Stip	\$ 104,800,000	\$ 55,268,221	\$ 49,531,779

Onondaga County Lake Improvement Project

4th Stipulation of the ACJ

Midland CSO Abatement

Summary of Current and Proposed Costs, and County Authorizations

<i>Project/Task/Line Item</i>	Total Project Costs		
	Total Proposed Budget	Expended to Date	Authorization Remaining
<u>Midland Ave. RTF & Conveyances</u>			
Midland Phase 1 Conveyances - Construction	\$ 1,836,434	\$ 1,836,434	\$ (0)
Midland Phase 2 RTF & Conveyances - Construction	\$ 53,372,390	\$ 53,372,689	\$ (299)
Midland Demolition Contracts - Construction	\$ 748,483	\$ 748,483	\$ 0
Other Construction	\$ 124,579	\$ 136,342	\$ (11,763)
Phase 1 and 2 Engineering (Parsons & EEA)	\$ 14,717,163	\$ 12,503,353	\$ 2,213,810
CME Construction Testing	\$ 213,745	\$ 217,342	\$ (3,597)
RTF Modifications (Construction, Eng, CM, Admin)	\$ 3,000,000		\$ 3,000,000
Facility Plan Total	\$ 74,012,794	\$ 68,814,643	\$ 5,198,151
<u>CSO 044 Conveyances Project</u>			\$ 5,198,151
Contract No. 6. - JJ Lane	\$ 7,701,898	\$ 9,448,885	\$ (1,746,987)
Construction Contingency 5%	\$ 770,190	\$ -	\$ 770,190
Engineering Services (EEA)	\$ 664,921	\$ 694,158	\$ (29,237)
Construction Management Services (CDM/C&S) see below			\$ -
Conveyances Project Total	\$ 9,137,009	\$ 10,143,043	\$ (1,006,034)
<u>ECF Facility Plan</u>			\$ (1,006,034)
Construction Estimate	\$ 5,000,000	\$ -	\$ 5,000,000
Engineering Services (Arcadis and others)	\$ 623,954	\$ 27,953	\$ 596,001
Construction Management and Administration	\$ 210,000		\$ 210,000
Project Escalation to Midpoint of Construction	\$ -		
Clinton Storage Project Total	\$ 5,833,954	\$ 27,953	\$ 5,806,001
<u>Facility Plan for Midland CSOs</u>			\$ 5,806,001
Construction Estimate	\$ 14,900,000	\$ -	\$ 14,900,000
Engineering Services (Ch2MHill)	\$ 118,384	\$ 121,368	\$ (2,984)
Engineering Services, County Admin, ect (TBD)	\$ 3,720,000	\$ -	\$ 3,720,000
Facility Plan Total	\$ 18,738,384	\$ 121,368	\$ 18,617,016
<u>Midland Green Implementation Program</u>			\$ 18,617,016
Construction Contracts incl. GIF Public/Private	\$ 7,500,000	\$ 1,086,052	\$ 6,413,948
Ch2MHill Program Management & Engineering	\$ 3,202,341	\$ 1,419,006	\$ 1,783,335
Clinton Green Program Total	\$ 10,702,341	\$ 2,505,057	\$ 8,197,284
<u>Program Management</u>			\$ 8,197,284
Project Management (CDM/C&S) includes CSO 044	\$ 6,530,602	\$ 6,343,683	\$ 186,919
Project Management for Facility Plan (CDM/C&S) ⁽¹⁾		\$ -	
Program Management Total	\$ 6,530,602	\$ 6,343,683	\$ 186,919
			\$ 186,919
<u>Miscellaneous County Costs</u>			
Land Acquisition	\$ 1,806,946	\$ 1,809,802	\$ (2,856)
IMA			
Legal	\$ 182,323	\$ 181,975	\$ 348
Consulting (John Clare & Mezey)	\$ 208,317	\$ 194,317	\$ 14,000
Debt	\$ 635,031	\$ 597,119	\$ 37,912
Other	\$ 509,615	\$ 518,122	\$ (8,507)
Miscellaneous Costs Total	\$ 3,342,232	\$ 3,301,335	\$ 40,897
Total Cost for Midland project under 4th stipulation	\$ 128,297,316	\$ 91,257,082	\$ 37,040,234
Authorized Master Budget \$128,300,000			

Onondaga County Lake Improvement Project

4th Stipulation of the ACJ

Sewer Separation of CSO Areas 022/038/040/045/046A/046B/047/048/050/051/053/054

Summary of Current and Proposed Costs, and County Authorizations

<u>Project /Task/Line Item</u>	Total Project Costs		
	Total Proposed Budget	Expended to Date	Authorization Remaining
<u>Sewer Separation Construction Contracts</u>			
CSO 024 (Falter)	\$698,864	\$698,864	\$0
CSO 053/054 (Falter)	\$2,000,817	\$2,000,817	\$0
CSO 038//40/046A/046B (Falter)	\$3,598,931	\$3,524,487	\$74,444
CSO 047/048 (Falter)	\$1,654,022	\$1,654,022	\$0
CSO 050 (Lane)	\$4,362,188	\$4,362,188	\$0
CSO 051 (Lane)	\$5,037,280	\$5,037,280	\$0
CSO 022/045 (estimated Project Costs)	\$6,750,000	\$4,450,605	\$2,299,395
Construction Total	\$24,102,102	\$21,728,264	\$2,373,838
<u>Service Contracts (Engineering /Consulting /Program Management)</u>			
ACE	\$484,286	\$484,286	\$0
CDM/C&S	\$1,446,468	\$1,332,171	\$114,297
CME	\$109,492	\$49,704	\$59,788
Department of the Army	\$153,504	\$153,504	\$0
Spectra	\$437,996	\$437,996	\$0
Engineering/Management Total	\$2,631,746	\$2,457,661	\$174,086
<u>Miscellaneous County Costs</u>			
City of Syracuse	\$135,084	\$135,084	\$0
Consulting (John Clare & Mezey)	\$101,425	\$101,425	\$0
Debt	\$116,269	\$142,816	-\$26,547
Legal	\$14,235	\$14,235	\$0
Other	\$13,540	\$4,093	\$9,447
Miscellaneous Costs Total	\$380,553	\$397,652	-\$17,099
Total	\$27,114,401	\$24,583,577	\$2,530,824
Authorized by Legislature \$27,684,286			

Onondaga County Lake Improvement Project
 Save The Rain Education and Outreach Grant
 Summary of Current and Additional Costs, and County Appropriations
 December 2012

Funding Sources			Appropriations
Program Funding			
09,10,11 Appropriations			\$ 875,000
2011 Suburban Green Infrastructure			\$ 200,000
2012 Appropriation			\$ 400,000
2011 Trolley Lot Parking Mitigation Appropriation*			\$ 125,000
2012 Green grant education			\$ 200,000
Total Appropriation			\$ 1,800,000
Funding Uses			
<u>Retz Advertising + Design</u>	Contract Amount	Expended to Date	Difference + (-)
2010/2011 Marketing Services	\$ 411,789	\$ 411,789	\$ -
2012 Marketing Services	\$ 218,211	\$ 217,567	\$ 644
Marketing Services Subtotal	\$ 630,000	\$ 629,356	\$ 644
<u>Environmental Finance Center Education and Outreach</u>	Contract Amount	Expended to Date	Difference + (-)
2011 Education and Outreach	\$ 346,677	\$ 346,677	\$ (0)
<i>Environmental Finance Center</i>	\$ 48,475	\$ 37,641	\$ 10,834
<i>SUNY ESF</i>	\$ 25,027	\$ 20,660	\$ 4,367
<i>Onondaga Environmental Institute</i>	\$ 120,500	\$ 75,543	\$ 44,957
<i>Onondaga Earth Corps</i>	\$ 23,503		\$ 23,503
<i>Baltimore Woods Nature Center</i>	\$ 35,190	\$ 35,190	\$ -
<i>ASLF</i>	\$ 2,937	\$ 13,363	\$ (10,426)
Non Labor Expenses (EFC)			
<i>Printing</i>	\$ 20,461	\$ 8,618	\$ 11,843
<i>Postage</i>	\$ 5,922	\$ 112	\$ 5,810
<i>Travel</i>	\$ 196	\$ 2,427	\$ (2,231)
<i>Facilities</i>	\$ 6,665		\$ 6,665
<i>Program Related Supplies</i>	\$ 7,282	\$ 5,633	\$ 1,648
<i>Indirect/Overhead</i>	\$ 51,062	\$ 26,776	\$ 24,286
2012 Education and Outreach	\$ 347,219	\$ 225,964	\$ 121,255
Education & Outreach Subtotal	\$ 693,896	\$ 572,641	\$ 121,255
<u>Miscellaneous Ed/Outreach Expenses</u>	Contract Amount	Expended to Date	Difference + (-)
2010/2011 Miscellaneous Exp.	\$ 105,764	\$ 105,764	\$ -
2012 Miscellaneous Exp.	\$ 321,590		\$ 321,590
Purchase Card		\$ 1,645	
Just the right stuff		\$ 1,260	
Water Envir Federation		\$ 295	
Range Klee		\$ 1,262	
Eastwood Litho		\$ 1,115	
CME		\$ 280	
Travel		\$ 2,637	
Plan & Print		\$ 792	
NYS Industries for Disabled		\$ 57,113	
STR Fair		\$ 4,377	
2010/2011 media	\$ 28,750	\$ 28,750	\$ -
2012 Media	\$ 20,000	\$ 1,500	\$ 18,500
Miscellaneous Subtotal	\$ 476,104	\$ 206,790	\$ 269,314
STR Education and Outreach Totals	Contract Amount	Expended to Date	Difference + (-)
	\$ 1,800,000	\$ 1,408,787	\$ 391,213
Remaining Balance			\$ 391,213

*Trolley lot parking mitigation money is from the Clinton CSO Storage Facility Budget and is funding education and outreach specific to that project.

APPENDIX

December 2012

	FINANCIAL TRACKING SUMMARY: FEDERAL & STATE GRANTS/LOANS APPROVED & RECEIVED										
		NYS GRANT	NYS GRANT	FED EPA GRANT	FED EPA GRANT	SHORT-TERM EFC LOAN	SHORT-TERM EFC LOAN	LONG-TERM EFC LOAN	LONG-TERM EFC LOAN	ACE GRANT	ACE GRANT
PROJECT NAME	PROJECT BUDGET	APPROVED	RECEIVED	APPROVED	RECEIVED	APPROVED	RECEIVED	APPROVED	RECEIVED	APPROVED	RECEIVED
METRO - CURRENT											
AERATION SYSTEM UPGRADE	\$8,500,000	\$5,834,381	\$5,834,381			\$7,365,000	\$6,868,954	\$1,049,185	\$14,613		
AMMONIA REMOVAL DEMO	\$2,000,000	\$1,145,109	\$1,145,109			Full-Scale	\$202,078				
BIOSOLIDS-MECHANICAL THICKENERS ^(c)								\$14,676,422	\$14,711,148		
DIGESTER MOD/CHEMICAL STORAGE	\$5,600,000	\$4,319,819	\$4,319,819			\$4,938,419	\$4,938,419	\$775,509	\$154,126		
DIGITAL SYSTEM IMPROVEMENTS	\$2,900,000	\$1,563,317	\$1,563,317			\$1,849,000	\$1,849,000	\$285,682	\$3,833		
MISCELLANEOUS IMPROVEMENTS	\$1,400,000										
ODOR CONTROL	\$7,700,000							\$7,413,199	\$7,389,197		
AMMONIA REMOVAL FULL SCALE/ STAGE II PHOSPHORUS REMOVAL	\$190,000,000	\$47,331,203	\$47,331,203	\$54,705,015	\$54,705,015	\$108,000,000	\$105,860,930	\$17,200,000	\$989,323		
PHOSPHORUS REMOVAL PILOT	\$5,000,000					Full Scale	\$1,936,991				
CSO - CURRENT											
CLINTON ST CONVEYANCE & RTF	\$31,245,000	\$54,120,000	\$45,617,846			\$37,788,890	\$9,334,263	\$15,603,494	\$3,731,790		
ERIE BLVD SEW SEP STORAGE	\$3,000,000	\$1,700,000	\$1,700,000			\$2,301,876	\$2,094,314	\$923,162	\$216,543		
FRANKLIN ST FCF	\$3,200,000	\$3,828,053	\$3,828,053			\$4,726,762	\$4,589,759	\$1,179,012	\$296,823		
HARBOR BROOK FCF	\$250,000	\$384,200	\$384,200					\$343,500	\$348,596		
HARBOR BROOK CSO ABATEMENT	\$5,444,000	\$3,880,000	\$3,880,000	\$14,003,569	\$4,202,502	\$53,689,500	\$20,000,000				
HIAWATHA INTERCEPTOR/RTF ^(a)	\$8,000,000							\$2,710,169	\$37,749	\$3,406,000	\$3,406,000
KIRKPATRICK ST PUMP STATION	\$5,642,000	\$7,502,302	\$7,502,302			\$12,000,000	\$10,940,632	\$4,246,376	\$828,115		
MALTBIE ST FCF	\$250,000	\$211,097	\$211,097			\$212,000	\$188,106				
MIDLAND AVE CONVEYANCE	\$3,000,000	\$26,055,238	\$26,055,238	\$34,900,616	\$33,252,444						
MIDLAND AVE PHASE II & RTF	\$45,000,000					\$15,000,000	\$15,000,000	\$36,550,745	\$17,785,646		
MIDLAND AVE PHASE III	\$27,000,000					\$10,000,000					
MIDLAND AVE MITIGATION COSTS											
NEWELL ST FCF ^(b)	\$1,310,000	\$367,737	\$367,737								
ONONDAGA CREEK FCF	\$3,000,000	\$442,154	\$442,154								
SEWER SEPARATION ^(a)	\$7,704,000							\$11,332,407	\$8,397,543	\$14,050,177	\$14,050,177
SIPHON REHABILITATION	\$1,230,000	\$870,768	\$870,768			\$1,435,500	\$1,024,433	\$140,623	\$1,958		
TEALL BROOK FCF	\$175,000	\$1,045,162	\$1,045,162			\$1,236,594	\$1,094,139	\$188,809	\$5,743		
WEST ST SEWER SEPARATION	\$1,000,000	\$2,299,460	\$2,299,460			\$3,059,716	\$2,481,443	\$395,540	\$6,621		
OTHER											
AMBIENT WATER MONITORING	\$8,000,000										
OXYGENATION DEMO	\$2,400,000										
SEQR REGULATORY	\$50,000										
TOTAL DOLLARS	*\$380,000,000	\$162,900,000	\$154,397,846	\$103,609,200	\$92,159,961	\$263,603,257	\$188,403,461	\$115,013,834	\$54,919,367	\$17,456,177	\$17,456,177
*Original budget figures were based on 1997 dollars											
NYS includes awards beyond original pledge (i.e. civic strip)											
(a) NOTE: PROJECT IS US ARMY CORPS OF ENGINEERS PROJECT											
(b) NOTE: PROJECT RECEIVED \$40,500 COST SHARE GRANT FROM (NYSERDA)											
(c)NOTE: PROJECT RECEIVED \$87,500 COST SHARE GRANT FROM (NYSERDA)											

Lake Improvement Project Status Report For The Period Ending 12/31/2012

	Project Title	ACJ START DATE	ACJ FINISH DATE	COUNTY FINISH DATE	ORIGINAL BUDGET(2)	AUTHORIZED BUDGET	ENGINEER
	METRO - Current						
1	AERATION SYSTEM UPGRADE		7/1/2002	01/03/00	\$ 8,500,000	\$ 6,925,115	EEA
2	AMMON. REMOVAL DEMONSTRATION	11/1/1998	3/1/2000	12/31/99	\$ 2,000,000	\$ 1,350,000	EEA
3	BIOSOLIDS - MECHANICAL THICKENERS					\$ 15,100,000	
4	DIGESTER MOD/CHEMICAL STORAGE		7/1/2002	10/31/00	\$ 5,600,000	\$ 5,092,545	C&S
5	DIGITAL SYSTEMS IMPROVEMENTS		7/1/2002	06/31/01	\$ 2,900,000	\$ 3,520,317	Systems Integrated
6	MISCEL. IMPROVEMENTS		7/1/2002	01/31/99	\$ 1,400,000	\$ 1,400,000	
7	ODOR CONTROL		7/1/2002	12/20/00	\$ 7,700,000	\$ 8,393,855	OBG
8	AMMONIA REMOVAL FULL SCALE/ STAGE II PHOSPHORUS REMOVAL	10/1/2001 10/1/2003	11/1/2003 4/1/2005	11/01/03	\$ 125,000,000 \$ 65,000,000	\$ 129,386,187	EEA
9	PHOSPHORUS REMOVAL - PILOT	4/1/2006	4/1/2007	12/31/00	\$ 5,000,000	\$ 4,300,000	EEA
	CSO - Current						
10	CLINTON ST. CONVEYANCE/ CLINTON ST. RTF	5/1/2003 5/1/2007	5/1/2007 1/1/2012	10/28/06 12/28/10	\$ 15,987,190 \$ 15,258,090	\$ 165,500,042	EEA
11	ERIE BLVD STORAGE SYSTEM		7/1/2002	04/13/02	\$ 3,000,000	\$ 2,684,523	Barton & Loguidice
12	FRANKLIN ST. FCF	4/26/1999	5/1/2000	05/01/00	\$ 3,200,000	\$ 5,216,618	EEA
13	HARBOR BROOK FCF		7/1/2002	07/01/02	\$ 250,000	\$ 889,109	EEA
14	HARBOR BROOK CSO ABATEMENT		7/1/2002		\$ 5,443,980	\$ 104,800,000	Moffa & Assoc.
15	HIAWATHA INTERCEPTOR/RTF		7/1/2002	12/31/00	\$ 8,000,000	\$ 6,047,183	EEA/Parsons
16	KIRKPATRICK ST. PUMP STATION		7/1/2002	10/29/02	\$ 5,641,860	\$ 12,558,335	EEA
17	MALTBIE STREET FCF	8/31/1998	7/1/2002	04/26/99	\$ 250,000	\$ 362,028	EEA
18	MIDLAND AVE RTF & CSO ABATEMENT	5/1/1999	5/1/2004	12/06/00	\$ 75,000,000	\$ 145,368,853	EEA
19	MIDLAND AVE MITIGATION COSTS					\$ 3,000,000	
20	NEWELL STREET RTF		7/1/2002	07/01/01	\$ 1,310,000	\$ 473,132	Moffa & Assoc.
21	ONONDAGA CREEK FCF		7/1/2002	07/01/02	\$ 3,000,000	\$ 648,342	Parsons
22	SEWER SEPARATION		1/1/2012	01/01/12	\$ 7,703,880	\$ 27,684,286	OBG
23	SIPHON REHABILITATION		7/1/2002	06/11/99	\$ 1,230,000	\$ 1,026,391	C&S
24	TEALL BROOK FCF		7/1/2002	12/01/01	\$ 175,000	\$ 1,235,346	EEA
25	WEST ST SEWER SEPARATION	5/1/1999		01/14/00	\$ 1,000,000	\$ 2,720,572	CHA
26	ERIE BLVD CSO ABATEMENT						New Project
	OTHER						
27	AMBIENT WATER MONITORING		7/1/2002		\$ 8,000,000		
28	OXYGENATION DEMO PROJECT	5/1/1999	4/1/2003	02/25/04	\$ 2,400,000	\$ 10,087	
29	SEQRA REGULATORY COMPLIANCE ⁽¹⁾				\$ 50,000	\$ 50,000	Parsons
	TOTAL DOLLARS ⁽²⁾			*	\$ 380,000,000	\$ 655,742,866	
*Original budget figures were based on 1997 dollars							
	(1) SEQR costs are reflected in the individual projects under total payments to date						
	(2) Original budget figures were based on 1997 dollars						

Lake Improvement Project Status Report For The Period Ending 12/31/2012

	<u>SOFT COST CONTRACTS</u>	<u>CONSTRUCTION CONTRACT AMOUNTS</u>	<u>TOTAL PAYMENTS TO DATE</u>	<u>FORECASTED COSTS</u>	<u>TOTAL ESTIMATED COST</u>	<u>OVER/UNDER BUDGET</u>	<u>% COMPLETED EXPENDITURES</u>
1	\$ 352,747	\$ 6,473,110	\$ 6,925,115		\$ 6,925,115	\$ (1,574,885)	100.00%
2	\$ 1,346,856		\$ 1,347,187		\$ 1,347,187	\$ (652,813)	100.00%
3	\$ 1,266,345	\$ 13,131,105	\$ 14,809,233	\$ 5,500	\$ 14,814,733	\$ 14,814,733	99.96%
4	\$ 748,386	\$ 4,357,480	\$ 5,092,545		\$ 5,092,545	\$ (507,455)	100.00%
5	\$ 451,713	\$ 2,974,514	\$ 3,520,317		\$ 3,520,317	\$ 620,317	100.00%
6			\$ 1,400,000		\$ 1,400,000	\$ -	100.00%
7	\$ 999,299	\$ 6,956,868	\$ 8,393,855		\$ 8,393,855	\$ 693,855	100.00%
8	\$ 21,289,868	\$ 106,962,810	\$ 128,688,040		\$ 128,688,040	\$ (61,311,960)	100.00%
9	\$ 4,055,734		\$ 4,111,714	\$ 2,109	\$ 4,113,823	\$ (886,178)	99.95%
10	\$ 33,156,861	\$ 104,039,026	\$ 98,649,996	\$ 66,850,046	\$ 165,500,042	\$ 134,254,762	59.61%
11	\$ 901,556	\$ 1,734,929	\$ 2,684,523		\$ 2,684,523	\$ (315,477)	100.00%
12	\$ 973,543	\$ 3,920,238	\$ 4,948,516	\$ 2,018,689	\$ 6,967,205	\$ 3,767,205	71.03%
13	\$ 436,363	\$ 373,370	\$ 889,109		\$ 889,109	\$ 639,109	100.00%
14	\$ 17,357,901	\$ 61,770,516	\$ 55,268,220	\$ 49,531,780	\$ 104,800,000	\$ 99,356,020	52.74%
15	\$ 540,945	\$ 5,535,152	\$ 6,047,183	\$ 3,406,000	\$ 9,453,183	\$ 1,453,183	63.97%
16	\$ 2,520,394	\$ 9,882,154	\$ 12,558,335		\$ 12,558,335	\$ 6,916,475	100.00%
17	\$ 109,483	\$ 152,418	\$ 362,028		\$ 362,028	\$ 112,028	100.00%
18	\$ 24,641,678	\$ 67,438,157	\$ 91,257,083	\$ 37,042,917	\$ 128,300,000	\$ 53,300,000	71.13%
19			\$ 3,000,000	\$ -	\$ 3,000,000	\$ 3,000,000	100.00%
20	\$ 472,572		\$ 473,132		\$ 473,132	\$ (836,868)	100.00%
21	\$ 503,551		\$ 648,342		\$ 648,342	\$ (2,351,658)	100.00%
22	\$ 2,400,052	\$ 23,340,827	\$ 24,583,577	\$ 1,532,684	\$ 26,116,261	\$ 18,412,381	94.13%
23		\$ 1,021,823	\$ 1,026,391		\$ 1,026,391	\$ (203,609)	100.00%
24	\$ 320,039	\$ 903,566	\$ 1,235,346		\$ 1,235,346	\$ 1,060,346	100.00%
25	\$ 403,332	\$ 2,311,126	\$ 2,720,572		\$ 2,720,572	\$ 1,720,572	100.00%
26					\$ -		
27			\$ 16,943,938	\$ -	\$ -		
28	\$ 10,087		\$ 10,087		\$ 10,087	\$ (2,389,913)	100.00%
29							
	\$ 115,259,303	\$ 423,279,190	\$ 497,594,382	\$ 160,389,726	\$ 641,040,170	\$ 269,090,170	

December 2012

	Project Title	TOTAL PAYMENTS TO DATE 12-31-12	TOTAL PAYMENTS TO DATE 11-30-12	Change
	METRO - Current			
1	AERATION SYSTEM UPGRADE	\$ 6,925,115	\$ 6,925,115	\$ -
2	AMMON. REMOVAL DEMONSTRATION	\$ 1,347,187	\$ 1,347,187	\$ -
3	BIOSOLIDS - MECHANICAL THICKENERS	\$ 14,809,233	\$ 14,792,446	\$ 16,787
4	DIGESTER MOD/CHEMICAL STORAGE	\$ 5,092,545	\$ 5,092,545	\$ -
5	DIGITAL SYSTEMS IMPROVEMENTS	\$ 3,520,317	\$ 3,520,317	\$ -
6	MISCEL. IMPROVEMENTS	\$ 1,400,000	\$ 1,400,000	\$ -
7	ODOR CONTROL	\$ 8,393,855	\$ 8,393,855	\$ -
8	AMMONIA REMOVAL FULL SCALE/ STAGE II PHOSPHORUS REMOVAL	\$ 128,688,040 \$ -	\$ 128,688,040 \$ -	\$ -
9	PHOSPHORUS REMOVAL - PILOT	\$ 4,111,714	\$ 4,111,714	\$ -
	CSO - Current			\$ -
10	CLINTON ST. CONVEYANCE/ CLINTON ST. RTF	\$ 98,649,996 \$ -	\$ 94,613,503	\$ 4,036,492 \$ -
11	ERIE BLVD STORAGE SYSTEM	\$ 2,684,523	\$ 2,684,523	\$ -
12	FRANKLIN ST. FCF	\$ 4,948,516	\$ 4,948,516	\$ -
13	HARBOR BROOK FCF	\$ 889,109	\$ 889,109	\$ -
14	HARBOR BROOK CSO ABATEMENT	\$ 55,268,220	\$ 53,082,149	\$ 2,186,071
15	HIAWATHA INTERCEPTOR/RTF	\$ 6,047,183	\$ 6,047,183	\$ -
16	KIRKPATRICK ST. PUMP STATION	\$ 12,558,335	\$ 12,558,335	\$ -
17	MALTBIE STREET FCF	\$ 362,028	\$ 362,028	\$ -
18	MIDLAND AVE RTF & CSO ABATEMENT	\$ 91,257,083	\$ 91,070,684	\$ 186,399
19	MIDLAND AVE MITIGATION COSTS	\$ 3,000,000	\$ 3,000,000	\$ -
20	NEWELL STREET RTF	\$ 473,132	\$ 473,132	\$ -
21	ONONDAGA CREEK FCF	\$ 648,342	\$ 648,342	\$ -
22	SEWER SEPARATION	\$ 24,583,577	\$ 24,423,062	\$ 160,515
23	SIPHON REHABILITATION	\$ 1,026,391	\$ 1,026,391	\$ -
24	TEALL BROOK FCF	\$ 1,235,346	\$ 1,235,346	\$ -
25	WEST ST SEWER SEPARATION	\$ 2,720,572	\$ 2,720,572	\$ -
26	ERIE BLVD CSO ABATEMENT	\$ -	\$ -	\$ -
	OTHER			
27	AMBIENT WATER MONITORING	\$ 16,943,938	\$ 15,849,937	\$ 1,094,001
28	OXYGENATION DEMO PROJECT	\$ 10,087	\$ 10,087	\$ -
29	SEQRA REGULATORY COMPLIANCE	\$ -	\$ -	\$ -
				\$ -
	TOTAL DOLLARS	\$ 497,594,382	\$ 489,914,117	\$ 7,680,265

Chronology of Project Construction Starts

	<u>Status</u>	<u>Location</u>
<u>Pre-ACJ Signing (1/20/98)</u>		
• General Improvements	Complete	Metro
• Odor Control and Residuals Handling	Complete	Metro
 <u>1998</u>		
• Digital Systems Upgrade	Complete	Metro
• Ammonia Removal Demonstration	Complete	Metro
• Aeration System Upgrade	Complete	Metro
• Hiawatha RTF - ACOE	Complete	Regional Market
• Newell St. RTF Demo/Improvements	Complete	W. Newell/Vale St.
• Maltbie St. FCF	Complete	Maltbie/Plum St.
• Siphon Rehab	Complete	Various
 <u>1999</u>		
• Digester Modifications/Chemical Storage	Complete	Metro
• Franklin St. FCF	Complete	I-690/Franklin
• West Street Sewer Separation	Complete	W. Genesee, Plum, Tracy, N. West St.
• Ammonia Trackdown	Complete	Metro
 <u>2000</u>		
• Midland Ave. Conveyance Phase I	Complete	Tallman/Oxford St.
• Phosphorus Removal – Phase I Pilot	Complete	Metro
 <u>2001</u>		
• Erie Blvd. Storage System Upgrade	Complete	Franklin to Teall
• Full Scale Ammonia Removal/ Stage II Phosphorus Removal	Complete	Metro
• Kirkpatrick St. Pump Station & Force Main	Complete	Kirkpatrick St.
• Onondaga Creek FCF	Complete	Inner Harbor
• Teall Brook FCF	Complete	Teall Ave.
• Water Street Sewer Separation (CSO 024)	Complete	Water Street
 <u>2002</u>		
• Harbor Brook FCF	Complete	W. Hiaw./I-690
• Brighton Ave Sewer Separation (CSO 053/054)	Complete	Brighton/Bishop Ave

<u>Project</u>	<u>Status</u>	<u>Location</u>
<u>2004</u>		
• Tallman/Onondaga Sewer Separation (CSO 038, 040, 046A & 046B)	Complete	Tallman/Onondaga
• Midland Phase II RTF/Conveyances	Complete	Blaine/Oxford St.
<u>2005</u>		
• Phosphorus Removal – Phase II Pilot	Complete	Metro
• Biosolids Handling Improvements	Complete	Metro
<u>2006</u>		
• Sewer Separation – CSO 047 & 048	Complete	South Ave/ Bissell St.
<u>2007</u>		
• Sewer Separation – CSO 050	Complete	Parkway/Rockland
• Clinton Phase I Conveyances	Complete	
<u>2008</u>		
• Clinton Phase IIA Conveyances	Complete	
<u>2009</u>		
• Sewer Separation – CSO 051	Complete	Colvin St.
<u>2010</u>		
• Harbor Brook Interceptor Sewer	Authorized/Underway	Velasko/Fayette
<u>2011</u>		
• Midland CSO 044	Authorized/Underway	W. Castle/South Ave
• Clinton Storage Facility	Authorized/Underway	Armory Square
• Lower Harbor Brook (Conveyance & Storage)	Authorized/Underway	Hiawatha/State Fair Blvd.
• Save the Rain Green Projects	Authorized/Underway	Various
• CSO 022 Sewer Separation Project	Authorized/Underway	West Genesee/Franklin
• CSO 045 Sewer Separation Project	Authorized/Underway	South Avenue
<u>2012</u>		
• Save the Rain Green Projects	Authorized/Underway	Various

**CONTRACTORS FOR
CONSTRUCTION PROJECTS
Metro Treatment Plant**

AERATION SYSTEM UPGRADE

Bongiovanni Construction (General)	\$ 5,626,956.41
Ridley Electric (Electrical)	\$ 846,154.00

DIGITAL SYSTEM UPGRADE

Systems Integrated	\$ 2,974,514.27
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ODOR CONTROL CONTRACT #1

Falconet, Inc. (General)	\$ 4,872,660.53
Scriba Electric (Electrical)	\$ 315,580.30
Burns Bros. (Heating/Ventilation)	\$ 82,459.00
Burns Bros. (Plumbing)	\$ 50,168.00

ODOR CONTROL CONTRACT #2

Murnane Construction	\$ 1,636,000.00
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**PHASE III IMPROVEMENTS CONTRACT 1 - DIGESTER & LAGOON
IMPROVEMENTS**

Maxim Construction	\$ 645,730.74
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**PHASE III IMPROVEMENTS CONTACT 2 - CHEMICAL STORAGE & FEED
FACILITIES**

C.O. Falter Construction Corp. (General)	\$ 2,527,300.08
Barry & Barry Electrical Co. (Electrical)	\$ 193,665.22
Burns Bros. (HVAC)	\$ 224,232.51
Edward Joy Company (Plumbing)	\$ 38,669.35

PHASE III IMPROVEMENTS CONTRACT 3 - DIGESTER & LAGOON CLEANING

Waste Stream Environmental Inc.	\$ 727,881.80
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FULL SCALE AMMONIA/PHOSPHORUS REMOVAL - FIELD OFFICE

James & Son Constrction	\$ 28,388.00
Resun Leasing, Inc.	\$ 112,224.00
Ridley Electric Co.	\$ 32,295.00
Burns Brothers	\$ 18,440.00

FULL SCALE AMMONIA/PHOSPHORUS REMOVAL

U.S. Filter - Kruger Products, Inc.	\$ 8,261,182.00
U.S. Filter - Kruger Products, Inc.	\$ 3,918,080.00

CONTRACTORS FOR CONSTRUCTION PROJECTS Metro Treatment Plant

FULL SCALE AMMONIA/PHOSPHORUS REMOVAL

SITE PREPARATION - CONTRACT 2

C.O. Falter Construction Corp. (General)	\$ 22,243,604.98
Ridley Electric (Electrical)	\$ 255,627.00
C.O. Falter Construction Corp. (Pile Testing)	\$ 431,008.00
Moretrench Environmental	\$ 4,602,086.57

PILE INSTALLATION - CONTRACT 3

M.A. Bongiovanni Construction	\$ 9,045,731.95
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GENERAL - CONTRACT 4

The Pike Company (General)	\$ 46,860,263.46
Ridley Electric Co. (Electrical)	\$ 6,927,238.00
Edward Joy Company (HVAC)	\$ 3,009,057.61
Burns Brothers (Plumbing/Fire Protection)	\$ 1,217,583.74

BIOSOLIDS HANDLING IMPROVEMENTS

C. O. Falter Construction Corp. (General)	\$ 10,929,016.19
Ridley Electric (Electrical)	\$ 1,476,223.00
Airside Technology (HVAC)	\$ 532,187.00
Burns Bros. (Plumbing)	\$ 173,679.09
Independent Fiedl Svs (Cogen)	\$ 20,000.00

CSO's

CLINTON CONVEYANCES PHASE I & 2A

The Delaney Group, Inc.	\$ 14,478,053.39
The Delaney Group, Inc.	\$ 4,074,455.32
SIDA	\$ 2,620,015.43
MOU (City of Syracuse)	\$ 168,000.00

CLINTON CSO ABATEMENT

Ruston Paving (Farmers' market Lot)	\$ 188,046.14
Davis Wallbridge (Pearl St/Lot 3)	\$ 635,873.93
Davis Wallbridge (Townsend St.)	\$ 476,625.39
J&B (Pirro Conv. Center)	\$ 1,083,727.39
C.O. Falter (War Memorial)	\$ 692,298.87
Ridley (War Memorial)	\$ 436,060.22
Economy Paving (On Center)	\$ 1,064,866.69
J&B (Erie Canal Museum)	\$ 73,480.00
Jett Industries (Clinton Storage)	\$ 70,435,000.00
Joy Process Mechanical (Cistern War Memorial)	\$ 82,615.00
C&S Technical (Cistern War Memorial)	\$ 205,304.56
Green Culture (Rain Barrels)	\$ 44,335.50
Syracuse Utilities (Duct Bank)	\$ 59,982.56
Water Cooling Corp. (Storage Tank)	\$ 2,875.00
Walbridge (Streetscape/Water St)	\$ 1,401,823.51

**CONTRACTORS FOR
CONSTRUCTION PROJECTS
CSO's (cont)**

Ruston Paving (Sunnycrest Parking Lot)	\$ 410,372.00
MA Bongiovanni Inc.	\$ 3,000.00
Acts II Construction (Skiddy Park)	\$ 550,916.44
D.E. Tarolli (Otisco Street)	\$ 1,766,635.35
Orchard Earth & Pipe (Syr School dist Park Lot)	\$ 422,796.00
Slate Hill Construction (E. Water St)	\$ 147,952.84
Davis Wallbridge (Onon Cty Pub Library)	\$ 315,146.20
Tumbers (Trees)	\$ 121,360.00
Acts II (Seymour Academy)	\$ 367,000.00
Paul R. Vitale (City Lot 4)	\$ 587,000.00
John R. Dudley (Leavenworth Park)	\$ 654,450.00
VIP (Onon Public Library)	\$ 54,160.06
Ballard Construction (Westcott Comm Ctr)	\$ 52,500.00
Cornerstone Paving (Oswego St)	\$ 109,046.54
ProScapes (Sunnycrest Arena)	\$ 87,585.22
Jeffrey DeRoberts (GIF)	\$ 99,311.00
King & King Architects (GIF)	\$ 100,000.00
Jefferson Clinton Commons (GIF)	\$ 100,000.00
ESF Foundation, Abby Lane Housing (GIF)	\$ 78,000.00
Hotel Skyler (GIF)	\$ 100,000.00
Near West Side Initiatives, Inc. (GIF)	\$ 22,730.69
Near West Side Initiatives, Inc. (GIF)	\$ 78,000.00
Tash Taskale (GIF)	\$ 89,211.00
St. Lucy's Church (GIF)	\$ 125,000.00
Putnam Properties (GIF)	\$ 75,757.00
Centro (GIF)	\$ 65,390.00
500 W. Onondaga St. Inc. (GIF)	\$ 52,740.00
CNY Jazz Arts Foundation (GIF)	\$ 52,188.00
Jim & Juli Boeheim Foundation (GIF)	\$ 163,203.51
Home Headquarters, Inc. (GIF)	\$ 36,045.00
Galleries of Syr, 147 E. Onondaga St. (GIF)	\$ 100,000.00
Syracuse Housing (GIF)	\$ 120,290.00
Kopp billing Agency (GIF)	\$ 25,300.00
American Beech (GIF)	\$ 53,050.00
Park Central Presbyterian Church (GIF)	\$ 61,050.00
CNY Philanthropy (GIF)	\$ 62,700.00
Loon Creek (GIF)	\$ 137,350.00
McMahan/Ryan Child Advocacy (GIF)	\$ 178,050.00
St. Lucy's Church (GIF)	\$ 17,700.00
St. Lucy's Church (GIF)	\$ 51,900.00
500 W. Onondaga St. Inc. (GIF)	\$ 34,347.00
Our Lady of Pompei (GIF)	\$ 142,031.00
Onondaga Commons LLC (GIF)	\$ 124,200.00
Onondaga Commons LLC (GIF)	\$ 199,500.00
Onondaga Commons LLC (GIF)	\$ 198,949.00
Onondaga Commons LLC (GIF)	\$ 77,800.00

**CONTRACTORS FOR
CONSTRUCTION PROJECTS
CSO's (cont)**

Gemmi Boy (GIF)	\$ 47,537.00
Mr. Lady Bug (GIF)	\$ 46,700.00
Grace Episcopal Church (GIF)	\$ 99,400.00
Snapse Downtown (GIF)	\$ 35,700.00
360 Warren Associates (GIF)	\$ 107,864.00
Housing Visions Unlimited (GIF)	\$ 194,650.00
Near West Side Initiatives, Inc. (GIF)	\$ 34,500.00
Scannell Properties (GIF)	\$ 204,000.00
Genesee Armory (GIF)	\$ 144,400.00
Third National Associates (GIF)	\$ 533,300.00
Center for Peace & Social Justice (GIF)	\$ 53,100.00
Graham Millwork (GIF)	\$ 123,326.00
PEACE (GIF)	\$ 23,500.00

ERIE BOULEVARD STORAGE SYSTEM

M. Hubbard Construction	\$ 1,556,752.00
Rdiley Electric (Electrical)	\$ 154,059.00
Endeco/YSI (SE33923)	\$ 24,117.90

FRANKLIN STREET FCF

Burns Bros (Mechanical)	\$ 179,167.67
Scriba electric (Electrical)	\$ 144,640.61
Burns Bros. (Plumbing)	\$ 28,400.00
Maxim	\$ 3,568,029.43

HARBOR BROOK CSO ABATEMENT

Joseph J. Lane Construction (Interceptor Sewer Replacement)	\$ 23,432,053.20
Bette Cring (Elephant Barn Greening)	\$ 207,701.00
John Dudley Construction (Geddes St)	\$ 279,068.06
J&B Installaions (Hazard Library/Erie Canal Museum)	\$ 67,275.00
Economy Paving (Rosamond Gifford Zoo)	\$ 688,638.00
J.J. Lane (Lower HB)	\$ 4,147,888.00
A.J. Montclair (HB CSO Storage)	\$ 260,000.00
C.O. Falter (HB CSO Storage)	\$ 25,039,101.00
Davis Wallbridge (onon Cty Pub Library)	\$ 377,845.90
Cornerstone Paving (Parking Lots)	\$ 149,195.48
Green Culture	\$ 80,665.00
Tumbers	\$ 47,144.00
City of Syracuse	\$ 3,342,875.63
VIP	\$ 54,160.06
Steadman Old Farm	\$ 11,480.00
Butler	\$ 11,053.85
OnSite	\$ 8,755.00
J J Lane (CSO 18)	\$ 2,672,888.00
Patricia Electric (Wetland Pilot)	\$ 120,440.00
Davis Wallbridge (Wadsworth Park)	\$ 349,000.00

**CONTRACTORS FOR
CONSTRUCTION PROJECTS
CSO's (cont)**

Acts II (Lewis Park)	\$ 210,800.00
Vibrant Spaces, LLC (GIF)	\$ 153,618.00
NYSARC, Inc. (GIF)	\$ 95,053.00
Consuela's Westside Taqueria (GIF)	\$ 47,552.00
PEACE (GIF)	\$ 28,700.00
Vibrant Spaces, LLC (GIF)	\$ 198,680.00
Brooklyn Pickle (GIF)	\$ 30,675.00
Smith Housing (GIF)	\$ 52,600.00

HARBOR BROOK FCF

C.O. Falter Construction Corp. (General)	\$ 373,370.21
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KIRKPATRICK ST. PUMP STATION & FORCE MAIN

C.O. Falter Construction Corp.	\$ 4,398,009.12
C.O. Falter Construction Corp.	\$ 4,425,766.31
Patricia Electric	\$ 761,184.63
King & King Mechanical	\$ 245,569.51
G.J. Adams Plumbing	\$ 51,624.16

MALTBIE STREET FCF

Over & Under Piping	\$ 152,418.00
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MIDLAND AVENUE CONVEYANCES

Marcellus Construction (General)	\$ 1,836,434.47
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MIDLAND AVENUE PHASE II CONVEYANCES & RTF

Empire Dismantlement Corp. (Demolition)	\$ 457,681.50
Murnane Building Contractors, Inc. (General)	\$ 47,929,392.75
Ridley Electric Company (Electrical)	\$ 2,904,771.00
Edward Joy Company (HVAC)	\$ 2,053,808.50
Edward Joy Company (Plumbing)	\$ 484,717.17

MIDLAND AVENUE PHASE III CONVEYANCES

Titan Wrecking & Environmental, LLC (Demolition)	\$ 290,801.39
J.J. Lane	\$ 10,704,569.14
Acts II (Hugh's Magnet School Parking Lot)	\$ 314,439.81
Davis Wallbridge (Onon Cty Pub Library)	\$ 112,000.00
VIP (Onon Public Library)	\$ 27,080.03
Green Culture (Rain Barrels)	\$ 44,335.50
Tumbers (Trees)	\$ 20,092.00
Ricelli (CSO 044)	\$ 15,000.00
Weather Guard Tecta (USPO Salina St)	\$ 242,860.00
Jubilee Homes of Syracuse (GIF)	\$ 100,000.00
Dunbar Association, Inc. (GIF)	\$ 99,840.00
Syracuse Model Neighborhood (GIF)	\$ 250,000.00

**CONTRACTORS FOR
CONSTRUCTION PROJECTS
CSO's (cont)**

Alexander Property West (GIF)	\$ 81,000.00
Viraj, NY, LLC (GIF)	\$ 95,650.00
People's AME Zion Church (GIF)	\$ 54,700.00
People's Community Dev. Corp (GIF)	\$ 80,825.00
Matawon Development Group (GIF)	\$ 24,214.00
Salina Shoe Salon (GIF)	\$ 85,000.00
People's AME Zion Church (GIF)	\$ 80,677.00
Viraj, NY, LLC (GIF)	\$ 48,437.00
SUNY Env. Science & Forestry (GIF)	\$ 100,000.00

SEWER SEPARATION - CSO 022/045

Joy Process Mechanical (Plumbing)	\$ 1,205,567.00
Joseph J. Lane Construction	\$ 4,867,219.35

SEWER SEPARATION - CSO 024

C.O. Falter Construction Corp.	\$ 698,863.74
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SEWER SEPARATION - CSO 053/054

C.O. Falter Construction Corp.	\$ 2,000,817.40
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SEWER SEPARATION - CSO 038, 040, 046A&B

C.O. Falter Construction Corp.	\$ 3,524,487.29
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SEWER SEPARATION - CSO 047 & 048

C.O. Falter Construction Corp.	\$ 1,654,022.34
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SEWER SEPARATION - CSO 050

Joseph J. Lane Construction	\$ 4,360,527.06
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SEWER SEPARATION - CSO 051

Joseph J. Lane Construction	\$ 5,029,323.00
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SIPHON REHABILITATION

Insituform Metropolitan	\$ 1,021,822.99
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TEALL BROOK FCF

C.O. Falter Construction Corp. (General)	\$ 877,095.43
Scriba Electric (Electrical)	\$ 26,470.20

WEST STREET AREA SEWER SEPARATION

Maxim Construction (General)	\$ 2,311,125.85
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WEP ACRONYMS

ACJ	Amended Consent Judgment
AMP	Ambient Monitoring Program
AMSA	Association of Metropolitan Sewerage Agencies
AWQS	Ambient Water Quality Standards
ARRA	American Recovery and Reinvestment Act
ASLF	Atlantic States Legal Foundation
BAF	Biological Aerated Filter (Biostyr)
BMP	Best Management Practice
BPJ	Best Professional Judgment
CAA	Clean Air Act
CALM	Consolidated Assessment and Listing Methodology
CAMP	Community Air Monitoring Plan
CIP	Capital Improvement Plan
CMOM	Capacity, Management, Operation, and Maintenance
CSLAP	Citizens Statewide Lake Assessment Program
CSO	Combined Sewer Overflow
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
EBM	Ecosystem-Based Management
ECM	Energy Conservation Measures
EECBG	Energy Efficiency and Conservation Block Grant
ELAP	Environmental Laboratory Approval Program
EMS	Environmental Management System
ERM	Environmental Resource Mapper
FCF	Floatable Control Facility
GIF	Green Improvement Fund
HRFS	High Rate Flocculation Settling
I & I	Inflow & Infiltration
IW	Industrial Wastewater
km	Kilometers
km ²	Square Kilometers

LA	Load Allocations
LF	Linear Feet
LAN	Local Area Network
m	Meters
MCP	Municipal Compliance Plan
Metro	Metropolitan Syracuse Wastewater Treatment Plant
MGD	Million Gallons Per Day
mg/L	Milligrams Per Liter
MIS	Main Interceptor Sewer
MS4s	Municipal Separate Storm Sewer Systems
mt	Metric Tons
NACWA	National Association of Clean Water Agencies
NBP	National Biosolids Partnership
NELAC	National Environmental Laboratory Accreditation Conference
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSEFC	New York State Environmental Facilities Corp.
NYWEA	New York Water Environmental Association
OLP	Onondaga Lake Partnership
OLWQM	Onondaga Lake Water Quality Model
OU	Odor Unit
P2	Prevention Program
P2CO	Prevention Program County Operations
PdM	Predictive Maintenance
PIDs	Photo-ionization Detectors
PFRP	Process to Further Reduce Pathogens
PLA	Project Labor Agreement
POTW	Publicly Owned Treatment Works
RTF	Regional Treatment Facility
PWL	Priority Waterbodies List
SCA	Sediment Consolidation Area
SCADA	Supervisory Control and Data Acquisition
SEPS	Secondary Effluent Pump Station
SEQR	State Environmental Quality Review

SGIP	Suburban Green Infrastructure Program
SHB	Solids Handling Building
SMPs	Storm Water Management Practices
SOP	Standard Operating Procedure
SPDES	State Pollutant Discharge Elimination System
SRP	Soluble Reactive Phosphorus
SSes	Sanitary Sewer Evaluation Study
SSI	Sewage Sludge Incinerator
SSV	Site-Specific Variance
SUNY-ESF	State University of New York College of Science and Forestry
SWMM	Storm Water Management Modeling
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TDP	Total Dissolved Phosphorus
TMDL	Total Maximum Daily Load
TP	Total Phosphorus
TSI	Trophic State Index
UAA	Use Attainability Analysis
UFI	Upstate Freshwater Institute
ug/l	Micrograms per liter
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
WAN	Wide Area Network
WLA	Waste Load Allocations
WEF	Water Environment Federation
WEP	Water Environment Protection
WSE	Waste Stream Environmental

