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# HARBOR BROOK WETLAND PROJECT

STATUS:

Completed

GI TECHNOLOGY:

Bioswale

PROJECT YEAR:

2014

\$4,519,790

14,880,000



**Fall 2019**

### **Project Description:**

The Harbor Brook CSO 018 Constructed Wetlands Pilot Project serves the dual purposes of treating overflows from CS0018, currently discharged into Harbor Brook, while also acting as a demonstration project to test the effectiveness of three types of constructed wetland treatment systems.

Based on the knowledge gained as a result of 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 Onondaga County-owned land known as the Velasko Road Detention Basin.

This constructed wetland pilot project captures and treats approximately 14.8 million gallons of combined sewage each year and substantially improves the quality of the stormwater discharge into Harbor Brook.

**Spring 2017 photos:**







**[Download Treating CSOs Naturally: Onondaga County's CSO 018 Harbor Brook Wetlands Pilot Treatment System \(PDF\)](#)**

To find out general information regarding this project, please click on the Frequently Asked Questions (FAQ) sheet below.

**Download project details below:**







**FACT SHEET**  
**Harbor Brook CSO #38**  
**Constructed Wetlands**  
**Pilot Treatment System**

**Project Description:** The Harbor Brook CSO #38 Constructed Wetlands Pilot Treatment System serves dual purposes of treating overflow from CSO #38, currently discharged into Harbor Brook, while also acting as a demonstration project to test the effectiveness of three types of constructed wetland treatment systems (floating wetland island, vertical down flow, and surface water treatment wetlands). In 2010, the Complementary Storage portion of the work was completed. Construction of the pilot wetlands treatment system began in 2011, and the system was put online in April of 2012.

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 30 contiguous acres of Onondaga County owned land known as the Volusia Road Detention Basin. This constructed wetland pilot project treats approximately 14.5 million gallons of combined sewage each year and substantially improves the quality of the stormwater discharge into Harbor Brook.

<b>Project:</b>	Harbor Brook CSO #38 Constructed Wetlands Pilot Treatment System
<b>Project Owner:</b>	Onondaga County
<b>Project Location:</b>	Volusia Road & General Avenue
<b>Sewer/Well:</b>	Harbor Brook
<b>CSO:</b>	#38
<b>CS Technology:</b>	Constructed Wetland
<b>Capture Area:</b>	4,388,000 sq. ft.
<b>Runoff Reduction:</b>	24,880,000 gallon
<b>Year Constructed:</b>	2011
<b>Year Completed:</b>	2012
<b>Constructed Cost:</b>	\$4,015,799.83
<b>Prime Contractors:</b>	Complementary Storage - AJ Roberts Inc. General Construction - JF Lane Electric - Patrick Electric





Aerial View of Harbor Brook Wetlands (September 2013) and Ground Photos of Each Cell (2013)





**Basis of Design Report  
Harbor Brook CSO 018  
Constructed Wetlands Pilot  
Treatment System**

Joanne M. Mahoney, County Executive



Prepared for  
Onondaga County Department of  
Water Environment Protection  
Onondaga County, New York

Prepared jointly by



May 2011

**Save the Rain**

**Joint Application for Permit  
Harbor Brook CSO 018  
Constructed Wetlands Pilot  
Treatment System**

Joanne M. Mahoney, County Executive



Prepared for  
Onondaga County Department of  
Water Environment Protection  
Onondaga County, New York

Prepared jointly by



July 2011

**Save the Rain**

**Design Report  
Harbor Brook CSO 018  
Constructed Wetlands Pilot  
Treatment System**

Joanne M. Mahoney, County Executive



Prepared for  
Onondaga County Department of  
Water Environment Protection  
Onondaga County, New York

Prepared jointly by



July 2011

**Save the Rain**

**Technical Specifications  
Harbor Brook CSO 018  
Constructed Wetlands Pilot  
Treatment System**

Joanne M. Mahoney, County Executive



Prepared for  
Onondaga County Department of  
Water Environment Protection  
Onondaga County, New York

Prepared jointly by



Submitted for Regulatory Review, July 2011

**Save the Rain**



# Operations & Maintenance Plan Harbor Brook CSO 018 Constructed Wetlands Pilot Treatment System

Joanne M. Mahoney, County Executive



Prepared for  
Onondaga County Department of  
Water Environment Protection  
Onondaga County, New York



and  
STATE UNIVERSITY OF NEW YORK  
COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY (ESF)

July 2011



# Quality Assurance Project Plan Harbor Brook CSO 018 Constructed Wetlands Pilot Treatment System

Joanne M. Mahoney, County Executive



Prepared for  
Onondaga County Department of  
Water Environment Protection  
Onondaga County, New York



and  
STATE UNIVERSITY OF NEW YORK  
COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY (ESF)

July 2011



## HARBOR BROOK CSO 018 CONSTRUCTED WETLANDS PILOT TREATMENT SYSTEM

CITY OF SYRACUSE, ONONDAGA COUNTY  
NEW YORK

CONTRACT NO. 1  
GENERAL CONSTRUCTION

CONTRACT NO. 2  
ELECTRICAL

LOCATION MAP

JULY 22, 2011  
FOR REGULATORY AGENCY REVIEW

CH2MHILL CHA

OWNER:  
OCOWEP  
810 HANATHA BOULEVARD WEST  
SYRACUSE, NY 13204

## HARBOR BROOK TREATMENT WETLANDS CSO STORAGE

CONTRACT NO. 1 - GENERAL  
OCOWEP PROJECT NO. 18764-001  
BD REFERENCE NO. ONG04-00-02

ONONDAGA COUNTY DEPARTMENT OF  
WATER ENVIRONMENT PROTECTION  
SYRACUSE, NEW YORK

MAY 2020

CH2MHILL

CH2MHILL & ASSOCIATES, INC.

KEY TO DRAWINGS

- 1. GENERAL CONSTRUCTION
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- 6. ROADS
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- 48. SECTION
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Project Plans (Original Design)

Project Plans (2019 Redesign)

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