

September 11, 2014

Martha Spurbeck  
Grants Administrator  
Ohio EPA, Division of Surface Water  
P.O. Box 1049  
Columbus Ohio 43216-1049

RE: Section 319(h) Nonpoint Source Program  
Project Number 11(h) EPA-18  
Lower Olentangy River Ecosystem Restoration & 5<sup>th</sup> Ave Dam Removal  
Project (CIP# 650706)  
FINAL Technical Report

Dear Ms. Spurbeck:

Enclosed please find the FINAL Technical Report for the above referenced project, for the grant period June 1, 2012 through the grant end date of July 31, 2014.

If you have any questions concerning this report, please contact me directly at (614) 645-6617.

Sincerely,



Melissa D. Tucker  
Loans & Grants Section Manager  
Columbus Department of Public Utilities

Enclosures

pc: Mike Griffith, P.E.  
File





**Section 319(h) Nonpoint Source Final Report**

**Grantor** Ohio Environmental Protection Agency  
**Project Title** Lower Olentangy River Ecosystem Restoration Project, 5th Avenue Dam Removal Design & Construction  
**Project Number** #11(h)EPA-18  
**Sub-Grantee** Columbus Public Utilities Department  
**County** Franklin  
**Watershed** Lower Olentangy River, 05060001-120  
**Grantee ID** 34-6400226

**Project Representative** **Michael Griffith**  
 Columbus Public Utilities Department  
 910 Dublin Road  
 Columbus, Ohio 43215

**Telephone** 614-645-2416  
**Email Address** [mpgriffith@columbus.gov](mailto:mpgriffith@columbus.gov)

**Project Schedule**

<b>ORIGINAL Project Period:</b>	June 1, 2012	thru	June 30, 2014
<b>ACTUAL Project Period:</b>	June 1, 2012	thru	July 31, 2014

**ORIGINAL Project Costs** (These should reflect your original awarded budget)

Federal Grant \$\$	State Match \$\$	Local Match \$\$	Total
\$500,000		\$275,120	\$775,120

**Actual FINAL Project Costs** (Provide FINAL costs charged to the grant)

Federal Grant \$\$	State Match \$\$	Local Match \$\$	Total
\$498,932.97		\$5,729,663.35	\$6,228,586.32

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## Project Summary

Completion of this project assisted the city of Columbus with stream restoration efforts following the removal of the 5th Avenue Dam on the Olentangy River. Removal of the 5th Avenue Dam has been recommended numerous times in a variety of documents and reports. The impounded area behind this dam is noted in the Olentangy TMDL as one of the most biologically impaired segments of the lower Olentangy.

This project facilitated riparian restoration and installation of in-stream habitat and grade structures designed to stabilize the streambanks and stream channel and to prevent headcutting following dam removal. The project is being supported with extensive outreach and public involvement due to the high profile nature of the structure and project location. This project is an extension of the project planning and design work that was completed under provisions of #06(h)EPA-27.

Specifically, the project included:

- Removal of one (1) dam.
- In-stream channel and riparian area restoration of 8,395 linear feet of riparian areas including plantings and grading as needed. In-stream restoration will include the installation of grade structures and habitat features as needed to eliminate headcutting and other instability that may occur.
- Disposal of 6,350 cubic yards of dam debris.
- Reduction in NPS-related impairment in the Lower Olentangy River by restoring approximately two (2) miles of the Olentangy River to an unimpeded natural state.
- Public outreach including a video, website link, signage, fact sheet, tours, newsletters, a survey and project signage.

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**Project Deliverables:** Attach a copy of the final semi-annual report to use as a reference for your responses to the following question.

- 1. Identify the deliverables that you were unable to complete and provide a brief explanation of contributing factors:**

The public education/outreach deliverables for this project originally included the production of a video and installation of two signs along the project corridor. It was decided that the goal of education/outreach would be better served by installing a third permanent sign at the project site in lieu of the video.

Permanent educational signs were installed at the former dam site, on the pedestrian bridge at Drake Union, and on the Woody Hayes Bridge. All three sites are highly visible to the numerous pedestrians and OSU students using the bridges and Olentangy Trail (bike path).

The deliverables for this project also included an estimated quantity of 5,978 LF of Live Branch Layering. The amount of Live Branch Layering installed based on the actual field conditions was 5,784 LF and has been 100% completed.

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# Project Outcomes

## 1. Summarize any noteworthy outcomes and/or successes resulting from the activities completed under this grant:

Approximately 7500 mussels were rescued and relocated from the project area prior to construction commencing.

This project received a fair amount of attention from local news media which resulted in articles and reports about the project, associated benefits, and construction throughout the course of the dam removal and restoration work.

Friends of the Lower Olentangy Watershed (FLOW), a local watershed group, hosted river cleanups and site tours along the project corridor engaging student volunteers from OSU and the general public who were interested in the project and helping the environment. Additionally, FLOW produced fact sheets and newsletter articles; kept current project information posted on their website, and made numerous presentations to the public and interested parties throughout the course of the project.

The project site has been included in several tours during local functions including the recent "One Water Ohio" conference of water and wastewater professionals held in Columbus.

With the river now free flowing, it is being utilized by canoers and kayakers; there's been at least one organized float trip through the reach and another is being planned.

## 2. Briefly describe any challenges encountered and the solutions that you implemented to successfully address these challenges:

First challenge: The contractor found that some of the materials excavated from the river that were to be used to create the new overbank areas were too wet to work with. Equipment couldn't be run over the material without getting mired in it. Space was limited so spreading the material out and diking it dry wasn't an option. Mixing in an additive to dry the material was also not an option because of proximity of the river. The river in this stretch was being narrowed. The contractor using decent material built a berm along the new channel bank and then ran his equipment along the berm excavating the slop material out of the channel and then placing it in the area on the backside of the berm. The Contractor then placed a couple feet of good material over top of the slop essentially bridging it and was then able to run equipment over the area to form the new over bank areas.

Second challenge: Geese. It was not uncommon for there to be 150-200 Canada geese on the site vacuuming up the seed and eating any new growth as soon as it popped up. The Contractor tried various means to ward off the geese, coyote decoys, reflective tape, pie tins, spraying the seed to make it unpalatable; all to no avail. The USDA, Wildlife Services was brought on board the project as a sub to the Contractor to provide goose management. They were on site daily scaring off

geese by using lasers during early morning (low light times) and pyrotechnics that made either a loud boom or a whistling sound during the day. Wildlife Services also erected exclusion fencing and wire grid system around major areas to keep geese from walking on or landing in the areas.

**3. Identify the environmental benefits of project implementation:**

The dam removal and river restoration work has restored free flow condition to almost 2 miles of the Olentangy River. The newly constructed channel with its riffle and pools, vegetated slopes, rock weirs, and toe wood armored banks has resulted in a stable river corridor. The project has created an environment that is improving aquatic habitat that will increase fish diversity. Over 9 acres of wetlands have been constructed that will improve water quality. The newly constructed overbank areas have been planted with native vegetation that has improved the river's riparian corridor. Over the next several years, as the project area matures, it is anticipated the river through this reach will improve from a modified warm water habitat designation to a warm water habitat.

# Project Submittals

Materials listed in the following table were to be completed as a result of your Section 319(h) grant funded project. If you have not already done so, please submit 2 hard copies and 1 electronic copy (if available) of each of the items listed. If items have already been submitted, please identify the date when they were provided in the table below. If you were unable to complete one or more item(s), please indicate so.

Item	Submitted Previously?	Submittal Date	Did Not Complete
Fact Sheet	Yes	1-29-2013	
6 Newsletters	4 – Yes 2 – No	9-11-2014	
Presentation materials from the public meetings	No	9-11-2014	
Presentation materials from the project site tours	No	9-11-2014	
Surveys	Yes	1-29-2013 1-16-2014	
Video	No	N/A	✓ (see explanation)
Other Project Specific Publications or Website Addresses, if applicable:			
Columbus Dept. of Public Utilities Project webpage: <a href="http://publicutilities.columbus.gov/content.aspx?id+17304">http://publicutilities.columbus.gov/content.aspx?id+17304</a>	YES	1-29-2013	
FLOW's website project page: <a href="http://sites.google.com/a/olentangywatershed.org/fifthavenuedam/">http://sites.google.com/a/olentangywatershed.org/fifthavenuedam/</a>	YES	1-29-2013	
OSU's Fact Sheet: <a href="http://fod.osu.edu/dam/2012_8-6.htm">http://fod.osu.edu/dam/2012_8-6.htm</a>	YES	1-29-2013	
OSU's Before & After Renderings: <a href="http://fod.osu.edu/dam/files/comparison.pdf">http://fod.osu.edu/dam/files/comparison.pdf</a>	YES	1-29-2013	
Project Overview: <a href="http://fod.osu.edu/dam/files/exhibit_1.pdf">http://fod.osu.edu/dam/files/exhibit_1.pdf</a>	YES	1-29-2013	
OSU's Framework Plan including Fact Sheet: <a href="http://www.oneframework.osu.edu">www.oneframework.osu.edu</a>	YES	7-31-2013	
WBNS 10-TV Report: <a href="http://www.10tv.com/content/stories/2013/06/25/columbus-olentangy-dam-removal.html">http://www.10tv.com/content/stories/2013/06/25/columbus-olentangy-dam-removal.html</a>	YES	7-31-2013	
OSU Bus Advertisements – copy provided with 1-16-2014 Semi-Annual report	YES	1-16-2014	
Full-page Columbus Dispatch feature story: <a href="http://dispatch.com/content/stories/local/2014/06/15/paddle-in-the-city-shows-off-olentangys-restoration-work.html">http://dispatch.com/content/stories/local/2014/06/15/paddle-in-the-city-shows-off-olentangys-restoration-work.html</a>	YES	7-24-2014	
5 Animated Videos Produced through Ohio State Advanced Computing Arts & Design Group: <a href="http://accad.osu.edu/womenandtech/2014/2014project.html">http://accad.osu.edu/womenandtech/2014/2014project.html</a>	YES	7-24-2014	
City of Columbus "Get Green" Initiative and Action Plan – copy provided 9-11-2014 with Final Semi-Annual Technical Report submission	NO	9-11-2014	