

# Ohio Section 319 Success Story



## **Project Title:** Middle Cuyahoga Watershed Restoration Project

**NPS Problem Addressed:** Ohio EPA completed a TMDL study on the Middle Cuyahoga River during 1999. This project was conducted to implement recommendations of the TMDL to address the following NPS cause of impairments:

1. Stagnant flows and eutrophication within the dam pool were causing dissolved oxygen levels to fall well below water quality standards during periods of low flow.
2. Hydromodification dramatically altered aquatic habitat within the dam pool, impairing both the diversity and biological health of fish species.
3. The dam was a physical barrier to fish migration within the Middle Cuyahoga.

Completion of this project successfully addressed each of the above problems.

**Project Highlights:** The highlight of this project was the successful removal of the 12-foot high Munroe Falls dam which restored natural stream flow throughout the area. Accompanying the dam removal was the successful restoration of nearly three miles of streambank as well as stabilization of several tributaries flowing into the former impoundment caused by the dam.

Following a list of cumulative progress on this project:

1. Successfully removed the Munroe Falls dam.
2. Renaturalized and restored nearly 3 miles of exposed stream bank.
3. Restored and stabilized two tributary areas that showing signs of head-cutting due to the return of the river to its historic channel and elevation. More than 600 linear feet of tributary areas were stabilized and restored as a result of this project.
4. Conducted extensive community outreach and public educational activities.

**Project Results:** Based on results observed in 2005 with the Kent Dam Modification project that was completed upstream from Munroe Falls Dam, Ohio EPA expects to identify dramatic water quality improvements resulting from this project. Within six weeks of modifying Kent Dam, fish diversity and QHEI (physical habitat) measures increased dramatically, from non-attaining WWH standards to full attainment within a matter of six months. Follow-up monitoring is currently underway with the Munroe Falls Dam Removal Project however final analysis of samples has not yet been completed. Preliminary results should be available during summer of 2007. We fully expect that the Middle Cuyahoga upstream, downstream and within the project area will be in full attainment of WWH aquatic life use as a result of this project.

An additional benefit resulting from this project is the cost-savings that Summit County and the city of Kent will realize. Prior to removal of the Munroe Falls Dam and modification under a previous 319(h) sub-grant to the Kent Dam, it was estimated that \$5-\$7 million in wastewater treatment upgrades would be necessary to meet water quality standards. As a result of the water quality benefits from these two NPS projects, it is anticipated that no wastewater treatment facility upgrades will be necessary.

**Partners & Funding:** Completion of the Middle Cuyahoga Restoration Project required primarily a partnership of various local & state government agencies and officials. Following are those partners providing material and/or technical support for this project:

- Summit County Department of Environmental Services
- NEFCO
- City of Munroe Falls
- Ohio EPA-Division of Surface Water, Northeast District Office
- Ohio EPA-Division of Environmental & Financial Assistance

Funding for this project was provided by a section 319(h) sub-grant totaling \$500,000 (Project #02(h)EPA-14) for restoration and stabilization work completed following removal of the Munroe Falls Dam. Funding for the dam removal and other infrastructure improvements in the project area following removal was provided by Ohio EPA-Division of Environmental & Financial Assistance through the Water Resources Restoration Sponsor Program (WRRSP). Additional funds were provided as matching contributions by Summit County and others.

**Photos and/Tables:** Following are a variety of photos of the project site illustrating conditions PRIOR to removal of the Munroe Falls dam and FOLLOWING removal:



**PHOTO 1-1**

This 2005 photo shows conditions at the Munroe Falls dam PRIOR to removal. Note the large dam pool created by this dam. Low flow period caused serious dissolved oxygen shortages behind the dam extending for nearly three miles.



**PHOTO 1-2**

This 2006 photo shows how free-flowing conditions have been restored and exposed riverbanks exhibiting vigorous plant growth.

**GRTS Project Number: #975500020-14**  
Sub-grant closes 9/30/06

**Date Delisted:** The Middle Cuyahoga watershed is not yet delisted however water quality improvements resulting from this project and the previous modification of the Kent Dam a few miles upstream have been remarkable. It is anticipated that except for a mercury listing, the Middle Cuyahoga watershed may be delisted with the next cycle of monitoring results and completion of the next 303(d) report. Delisting may occur as soon as FFY2008.

**Contacts:** Local and state personnel involved or familiar with this project may be contacted as listed below:

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**OHIO EPA**

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**Additional details about this project available at:**  
<http://www.co.summit.oh.us/executive/mfd/mfdhome.htm>

**Middle Cuyahoga River at the  
Site of the Munroe Falls Dam  
— What a difference a Year Makes!**

August 15, 2005



August 16, 2006



Daily Discharge at Portage Path streamgage:  
~190 cfs—low flow



Daily Discharge at Portage Path streamgage:  
~180 cfs—low flow