

MONDAY CREEK WATERSHED

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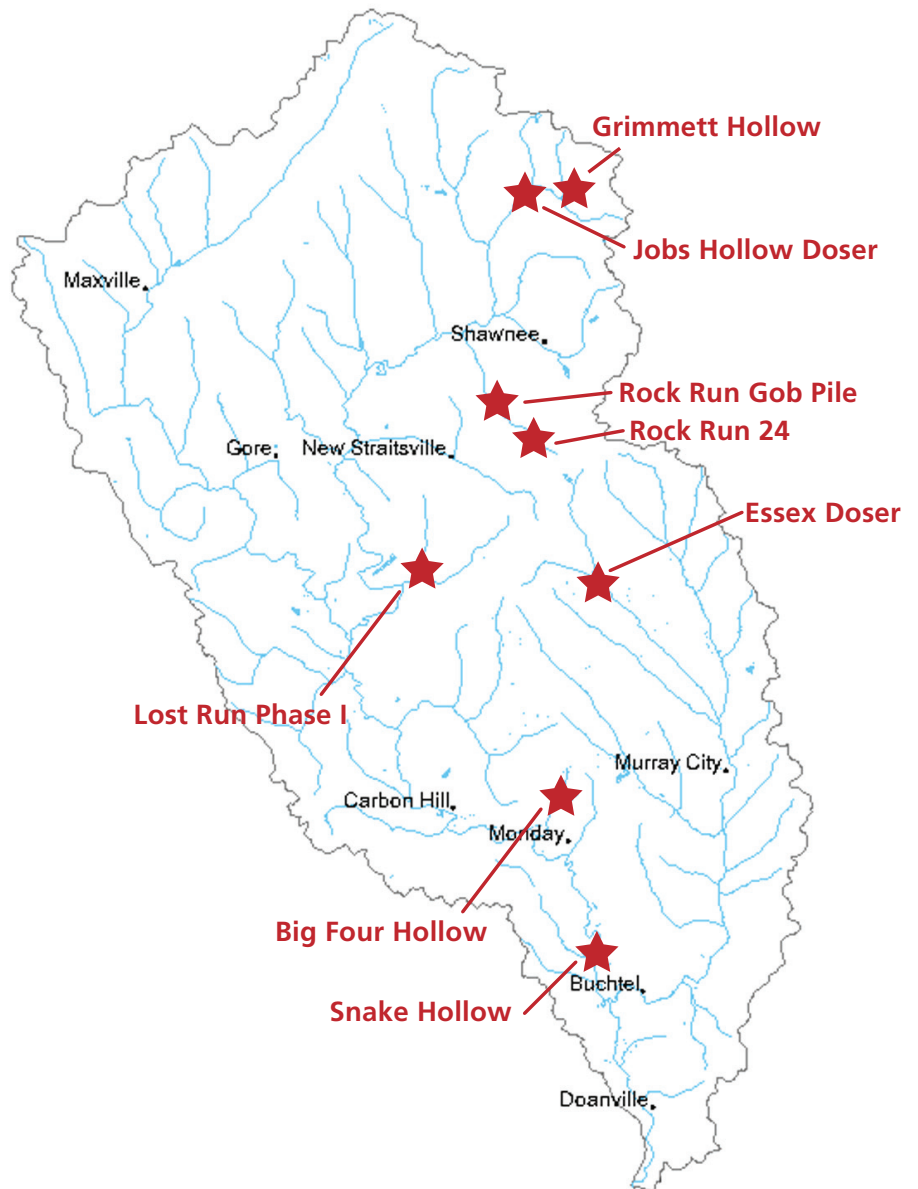
- Monday Creek, located in the Appalachian Region of southeastern Ohio, is a 27-mile long tributary of the Hocking River, the latter which flows directly into the Ohio River. The Monday Creek Watershed drains a 116 square-mile area, with streams winding through portions of Athens, Hocking, and Perry Counties.

- Our project is a collaborative partnership of officials and residents of the Monday Creek watershed, along with more than 20 other organizations and state and federal agencies. Our shared goal is to restore the watershed for the benefit of local communities. Large portions of Monday Creek and its tributaries are dead due to acid mine drainage (AMD) left behind from a century of coal mining.

- Since 1994, our partnership has worked together to identify water quality problems, conduct field research and site characterization, and prioritize and plan on-going restoration activities. The MCRP has completed the reclamation of the Rock Run gob pile in southern Perry County through an EPA Section 319 grant and is beginning another project in the headwaters of Jobs Hollow through 319.

- In 1997-1998, we identified issues to be addressed for the long-term improvement of the watershed, and to the benefit of local communities. These issues, along with goals, objectives, action strategies, and progress indicators are discussed in detail in the Monday Creek Comprehensive Management Plan.

- To learn more about the Monday Creek Restoration Project, visit our website at www.mondaycreek.org or call 740-394-2047



298,935,000 gallons per year eliminated from entering into the deep mines as the result of conducting five stream capture closure projects in Monday creek

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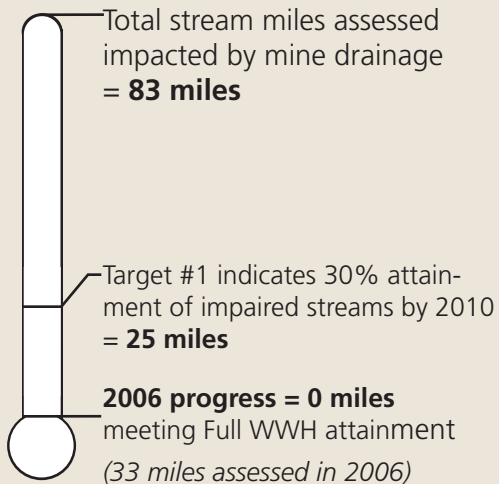
Reductions

Total acid load reduction = 2,570 lbs/day

Total metal load reduction = 378 lbs/day

Data derived using the Mean Annual Load Method (Stoertz, 2004).

Attainment Miles



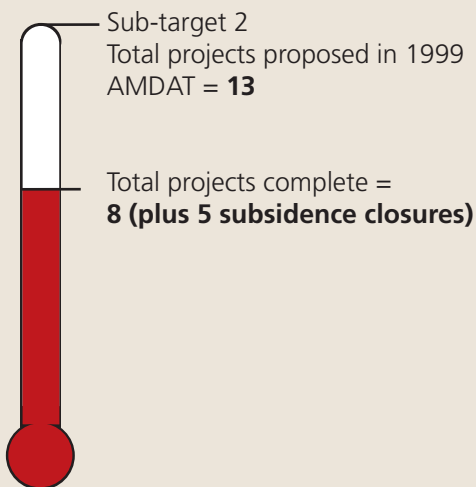
Monday Creek Stream Capture Projects

Project status: Five subsidence closures projects were completed from 1995-2004

Project Name	Year project complete	Acres captured	Agencies funding	Estimated gallons/yr of water diverted from entering the deep mine.
Majestic Mine	1999	100	ODNR-DMRM	36,860,000
Salem Hollow	2000	60	ODNR-DMRM	22,116,000
Murray City	2004	5	ODNR-DMRM	1,843,000
Goose Run	1995	506	ODNR-DMRM	186,512,000
Snow Fork	1999	140	ODNR-DMRM	51,604,000

Five stream captures located in the Monday Creek Watershed were closed and completed from 1995 to 2004. A total of 811 acres surface drainage area drained year round into the deep mines and as a result of closing these subsidence holes, 298,935,000 gallons per year were diverted from entering into the deep mine thus abating the generating of acid mine drainage.

Completion



Costs

Design \$213,077
(excluding Snake Hollow)
Construction \$2,647,248

Total costs through 2006 = \$2,860,325

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Projects Completed July 1, 2006 – June 30, 2007

Essex Doser	\$319,720
Lost Run Phase I	\$510,00
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total	\$829,720

Load Reductions

	Essex Doser	Lost Run Phase I
Acid Load	724 lbs/day	NA
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Metal Load	200 lbs/day	NA

Cumulative BMP's installed

Treatment Installed

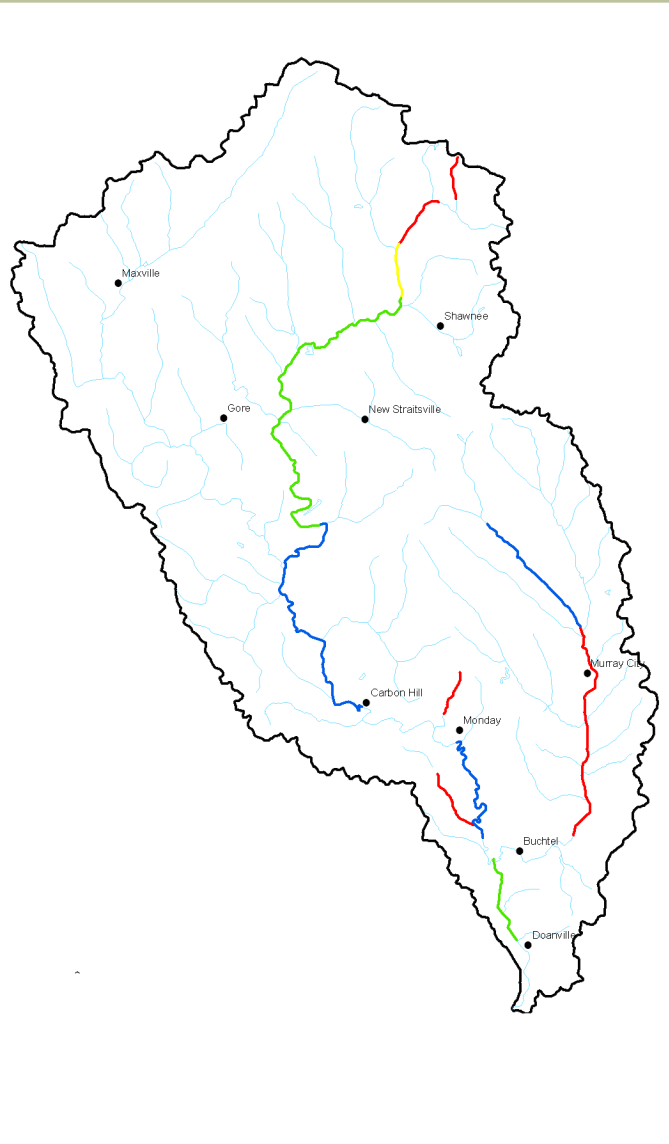
Doser	1
Open Limestone Channel	3,540 <i>linear feet</i>
Limestone Leech Bed	13,700 <i>square feet</i>

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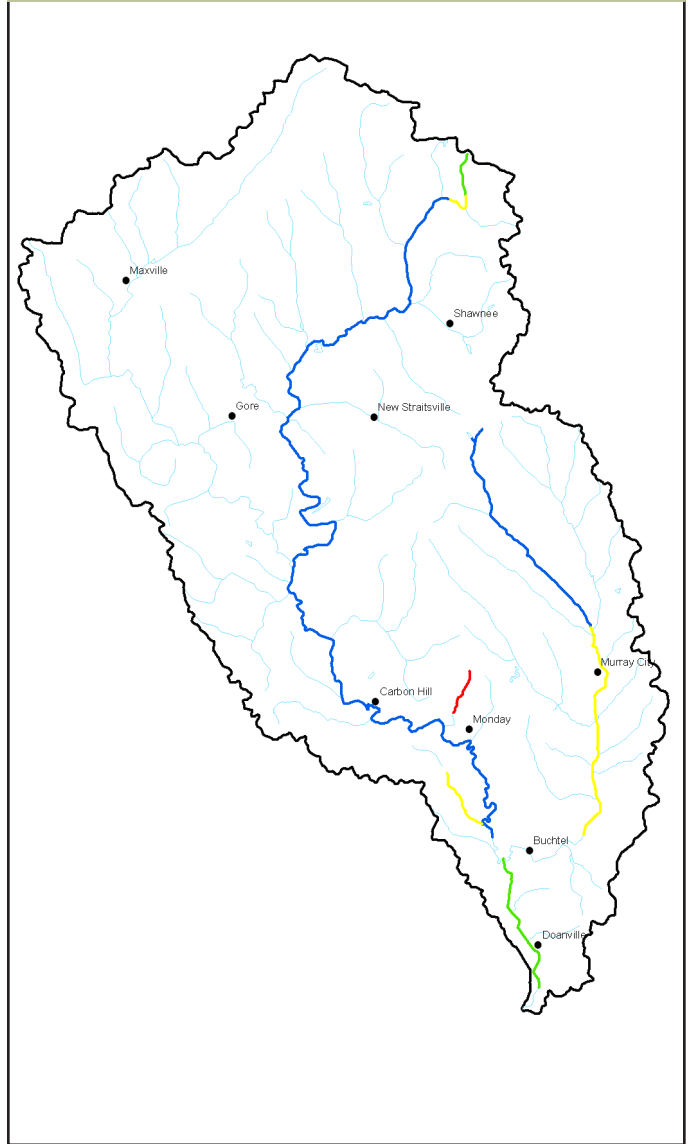
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Chemical Water Quality

Monday Creek baseline pH



Monday Creek 2006 pH



Lab pH

-  < 4
-  4 - 5.4
-  5.5 - 6.4
-  > 6.4

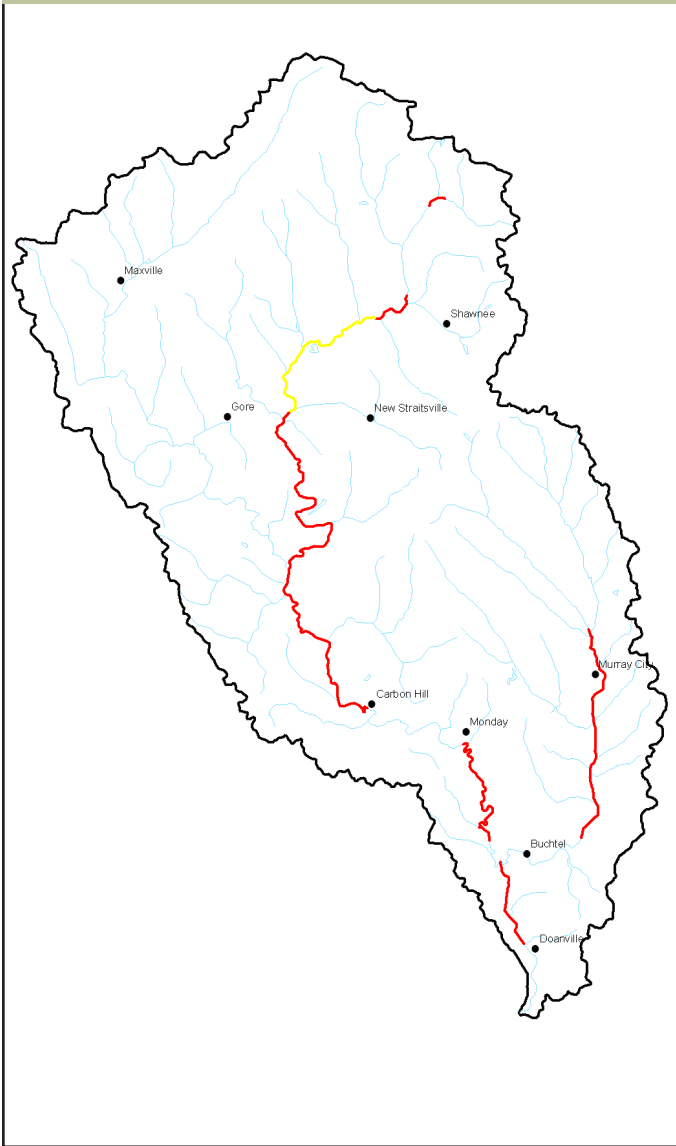
In Monday Creek pH values have improved throughout the watershed from baseline conditions (2001) to 2006. Twenty-three steam miles along the mainstem of Monday Creek now meet water quality standards (>6.4) from Snake Hollow to headwaters of Jobs Hollow. In Snow Fork pH has improved from Buchtel to Murray City. For three miles in the headwaters of Snow Fork, Essex mine to Murray City pH now meets water quality standards (>6.4).

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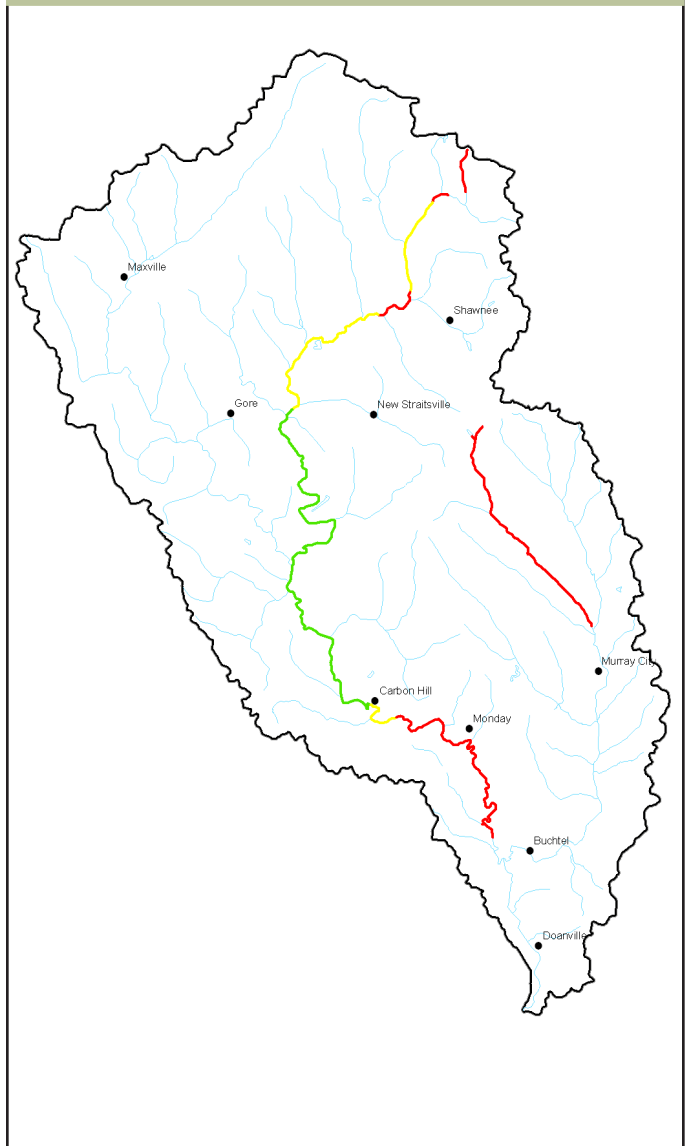
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Biological Water Quality

Monday Creek baseline MAIS



Monday Creek 2006 MAIS



Macroinvertebrate Aggregated Index for Streams

-  0 - 7
-  8 - 11
-  12 - 15
-  > 15

Monday Creek aquatic use attainment has not changed over the past five years however smaller incremental changes in fish and bugs have improved downstream of reclamation projects. The MAIS scores have increased from baseline conditions (2001) to 2006 for 15.44 miles along the mainstem from Snake Hollow up to Rock Run. During baseline conditions the MAIS scores ranged from 0-11, these scores increased into the range 8-15. These increases in the biological integrity are related to the reclamation projects occurring in these sub-watersheds.