

# Mohican State Scenic River Water Quality Update



## Introduction

Two segments of the Mohican River were designated as “scenic” in 2006, including 4.8 miles of the lower Clear Fork and the entire main stem of the river. The area harbors a lush, forested river valley and valuable habitats for numerous flora and fauna.

At the time of designation, the Mohican State Scenic River exhibited excellent water quality and was classified by the Ohio Environmental Protection Agency (EPA) as Exceptional Warmwater Habitat (EWH) based on very good water quality and sensitive aquatic life. In Ohio, only 25% of the state’s rivers meet this classification.

The Ohio EPA report, **2020-2021 Water Quality Survey of Ohio’s Large Rivers**, found a significant decline in water quality and cited high levels of nutrients and sediment as probable causes.

## Declining Water Quality

The Ohio EPA standards for aquatic life uses are based on surveys of fish and macroinvertebrates (small organisms with no backbones such as crayfish and insect larvae).

According to the 2020-2021 Ohio EPA report, the Mohican River was the only large river that declined, with some sites no longer meeting EWH standards. For example, the fish population score (Index of Biotic Integrity, or IBI) near the mouth of the Mohican River dropped from an “exceptional” score of 58 in 2007 to a “fair” score of 39 in 2021. Sediment and nutrients were identified as causes for the decline.

## Pollution Sources

### Sediment

- Sediment harms wildlife by smothering rocky stream bottom habitats and the sensitive organisms that live there.
- Two primary sources of sediment are runoff from construction sites and agricultural fields.

### Nutrients

- Nutrients stimulate the growth of algae, which leaves the water depleted of oxygen.



*The Ohio Scenic Rivers Program offers a variety of public programs related to the importance of protecting healthy rivers such as stream quality monitoring workshops*

## *Pollution Sources continued*

- Nutrients can reach rivers when rain washes them off the land. Sources can include:
  - Rural areas with home sewage treatment systems, livestock in streams, and application of manure or chemical fertilizer to row crops
  - Urban areas with sources such as pet waste, wild animal waste, and lawn fertilizers
  - Reservoirs when sediment and nutrients that have settled to the bottom become resuspended as reservoirs fill over time.

The form of nitrogen associated with raw sewage or manure--ammonia--was relatively low. Increased water temperatures may also be linked to increased nitrogen. Statewide, water temperatures were on average 4.8 degrees Fahrenheit warmer in the 2023 report than in the 1980s.

## **Taking Action to Improve Water Quality**

With support and collaboration among organizations and multiple levels of government, many actions are underway which can address likely pollution sources.

**Data collection:** The 2020-2021 Ohio EPA report did not include surveys of smaller tributary streams, which are needed to better understand all sources of pollution. The last watershed survey that included tributary surveys was conducted by the Ohio EPA in 2007; the next survey is tentatively scheduled for 2027.

**Analysis:** State and local conservation partners in the watershed are studying pollution sources like home sewage treatment systems, lake reservoirs, and farming practices. These efforts along with reviewing existing water monitoring data will help guide local efforts to implement water quality improvement measures across the Mohican watershed.

**Watershed Planning:** Conservation partners have initiated watershed planning in six sub-watersheds (see Fig. 1) in the Mohican basin, funded through Muskingum Watershed Conservancy District (MWCD) planning grants. The watershed plans are referred to as Ohio EPA NPS Implementation Strategies, or NPS-IS. With approved plans in hand, the Ohio EPA offers grants of up to \$400,000 for pollution reduction.

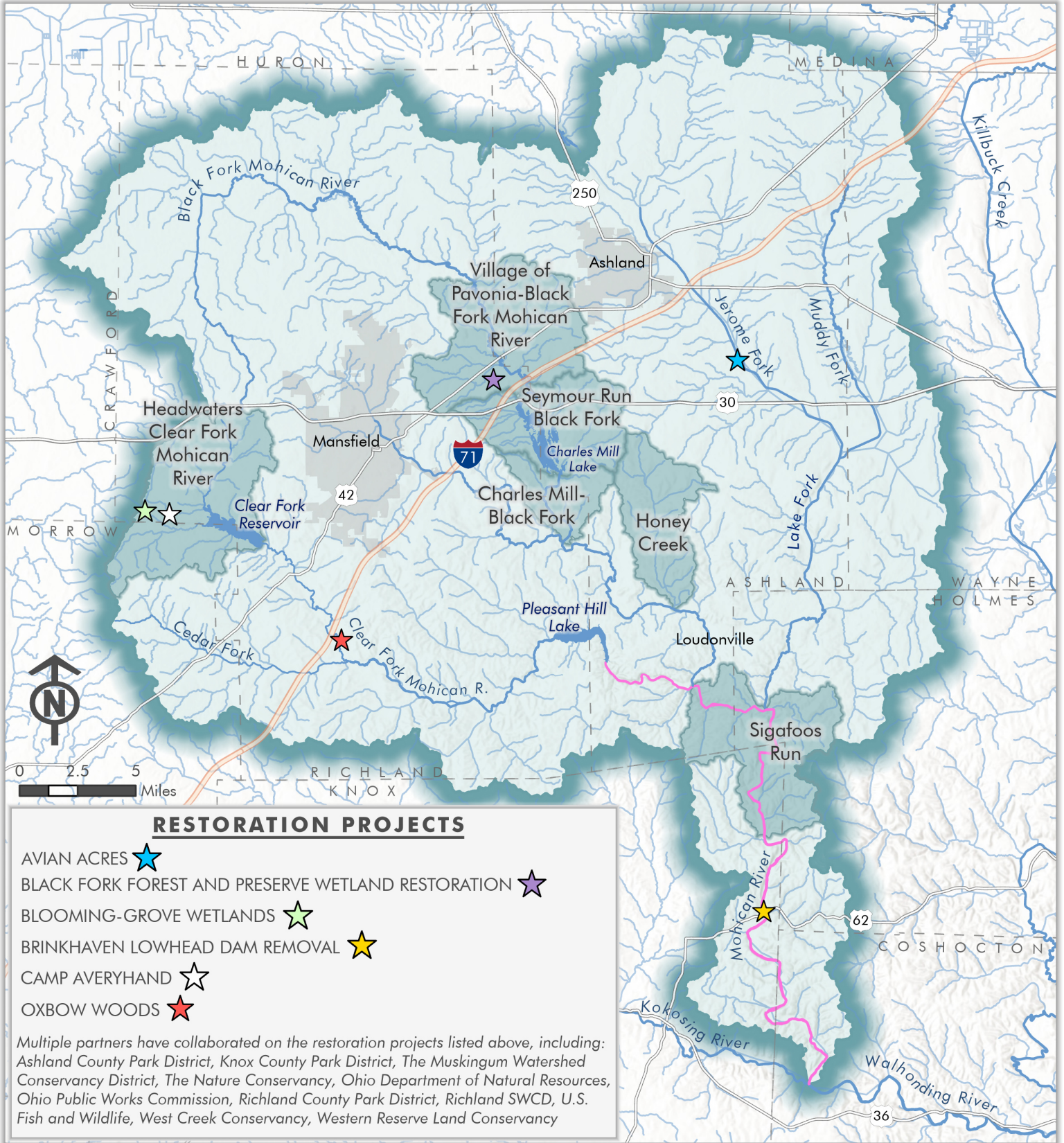
**Restoration:** Wetlands, floodplains, and streamside forests filter nutrients and sediment from waterways. Projects restoring and protecting these features have been supported by the Ohio Department of Natural Resources (ODNR) H2Ohio grants on the Black Fork and Clear Fork rivers as highlighted in the map. A restoration project, which removed an aged, lowhead dam on the Mohican River in Brinkhaven, was completed in 2024. Having new NPS-IS plans will help to identify other potential restoration projects.

## **Additional Funding Resources**

- Ohio Department of Agriculture H2Ohio grants support voluntary agricultural nutrient management planning.
- County Health Department Home Sewage Treatment System (HSTS) Repair/Replace grants offer financial assistance to repair failing septic systems.
- MWCD Partners in Watershed Management offer grants to support activities such as data collection or restoration projects.

# MOHICAN RIVER WATERSHED

## RESTORATION & WATERSHED PLANNING PROJECTS



## We Need YOUR help!

As a resident of the Mohican River watershed, you can help reduce runoff pollution by learning how rain falling on your property travels as it drains away. When rain moves across land, it carries a variety of materials to ditches, streams, and rivers.

### Landowners

- Maintain your septic system by following the recommended maintenance cycle.
- Limit soil loss by seeding and mulching bare ground.
- Plant a tree... or lots of trees!
- If you live near a stream, allow natural plants and trees to grow along the banks. Streamside vegetation reduces erosion and filters pollutants.

### Farming

If your land is being used for agricultural activities, it's critical to use best management practices to prevent excess sediment and nutrients from running off of your land with precipitation and entering waterways, which will negatively impact aquatic habitat and water quality.

- Prevent gully erosion.
- Keep pastures healthy with dense forages.
- Leave a natural vegetation buffer between agricultural land and any streams.
- Prevent livestock from entering streams.
- Use cover crops on row crop acres.

### Forestry

Approximately half of the Mohican Watershed is forest; woodlands absorb more rainfall than other land uses. Consider leaving these areas for conservation, or if you are planning to harvest your timber, work with professionals who follow best practices. This means minimizing soil disruption and allowing sustainable regeneration to protect both your property and the watershed.

## Get Involved

To learn more about the Mohican State Scenic River, watershed, best management practices, or how you can help improve the Mohican River's water quality, contact:

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