



# Hoosic River Watershed Association

*Dedicated to the Restoration, Conservation, and Enjoyment of the Hoosic*

## **2023 Watershed Report Card**

### **Introduction**

The following is a report card on the water quality of the Hoosic River, prepared by the Hoosic River Watershed Association (HooRWA), a private, non-profit 501(c)3 organization dedicated to the restoration, conservation, and enjoyment of the Hoosic River. HooRWA regularly evaluates the water quality of the river to supplement existing data generated by the Massachusetts Department of Environmental Protection (MA DEP) and the Vermont and New York Departments of Environmental Conservation (VT DEC and NY DEC). This information is useful for public education, water supply planning, evaluation of recreational resources, and protection of watershed habitat.

### **Evaluation of stream biological communities**

Evaluation of biological communities is a useful, cost-effective method of providing information on degree of water quality. Stream community population attributes (number of unique taxa, tolerance to pollutants, and similarity to a regional reference stream) are used to detect or infer the water quality condition. Although a variety of biological communities may be used in stream assessments, the use of benthic macroinvertebrate (stream insect) communities is advantageous because benthic macroinvertebrates are abundant in most streams, relatively easy and inexpensive to sample, and sensitive to a wide range of environmental stressors. Also, benthic communities serve as indicators of overall, integrated water quality, including effects of intermittent discharges and lapses in treatment, synergistic effects, sediment pollution, impacts from upstream land use, and non-chemical impacts to surrounding habitat.

The structure of a macroinvertebrate community within a waterbody determines the water quality category. New York and Massachusetts have similar water quality categories and the non- and slightly impacted water quality category is considered supportive of the waterbody's expected aquatic life, whereas the moderately and severely impacted category is not, and may be considered "impaired." It should be pointed out that a slightly impacted water quality category is altered from the pristine state and fish propagation (but not survival), particularly sensitive fish like trout, may be limited.

### **Hoosic River Report Card**

This publication summarizes the 2023 stream biomonitoring results and provides a brief comparison of these results to previous studies. Eleven stations were sampled in 2023 following NYS DEC protocols for benthic macroinvertebrate collection, habitat assessment, and laboratory sample processing. Use of these sampling methods enables comparison and trend monitoring since all of these stations have been intermittently sampled by NYS DEC since 1983. The 2023 overall water quality of the Hoosic River, based on stream insect communities, is non to slightly impacted. Comparative analysis to previous NYS DEC data shows that most stations water quality, in 2023, is similar in pattern to the median for all previous years sampled.

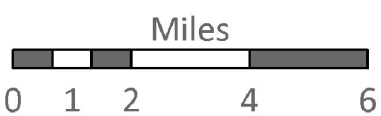
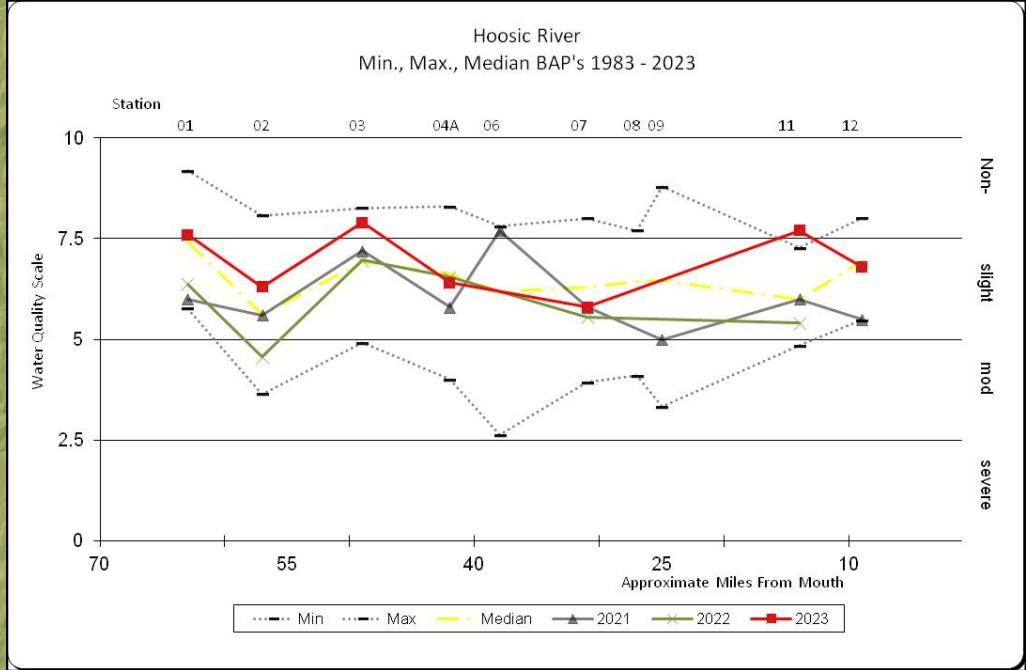
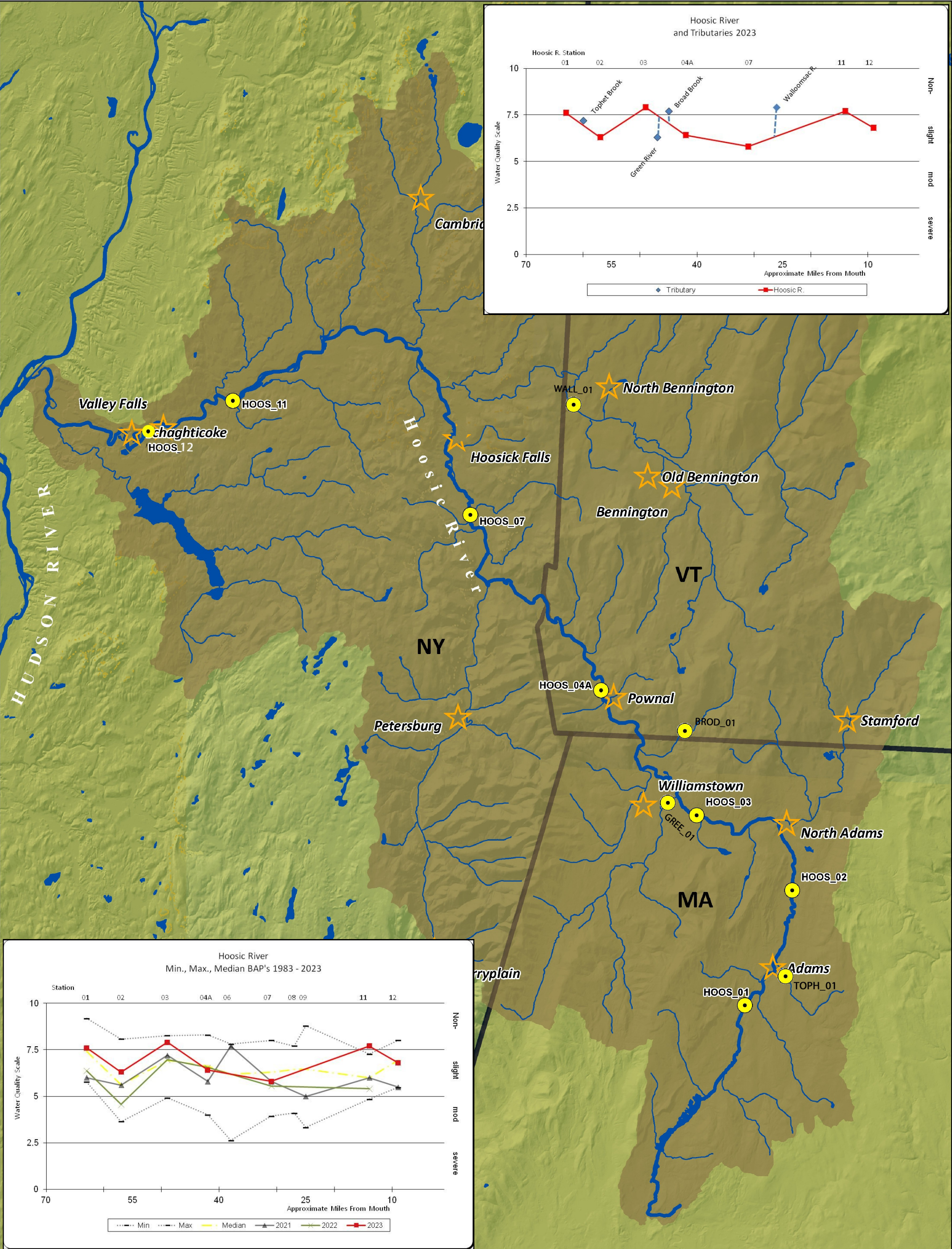
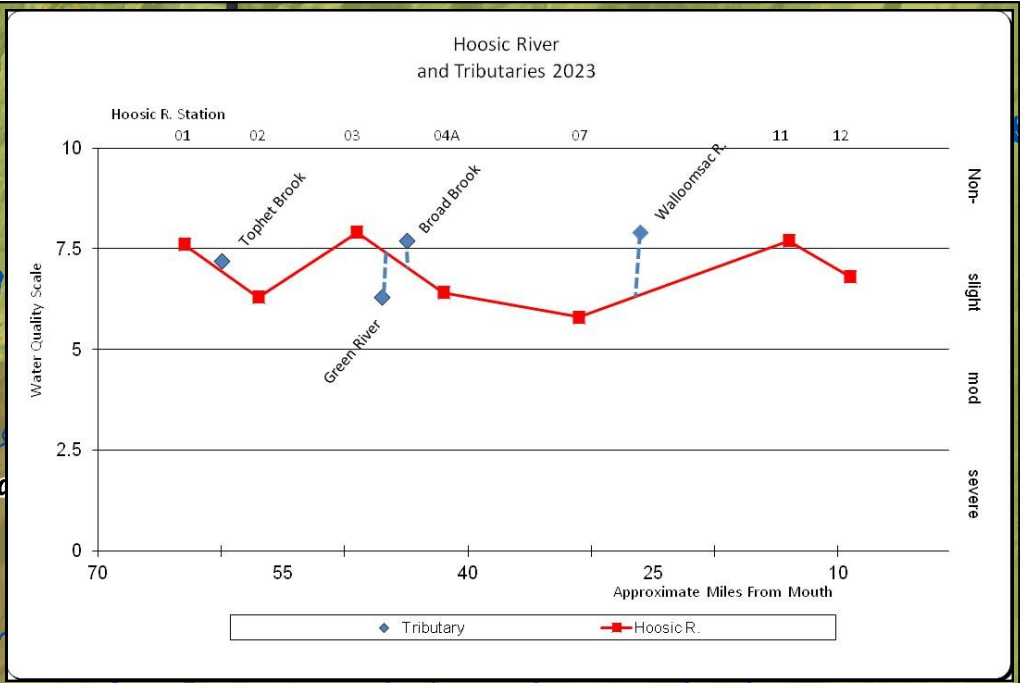
The following is a summary of the water quality conditions at 7 stations of the Hoosic River main-stem and four different tributaries of the Hoosic River, based on the resident benthic macroinvertebrates collected at each station (see back page). A map depicting the station locations along with trend and current water quality graphs are contained on the inside pages.

Hoosic River Watershed Association membership supports the generation of this data. Please consider becoming a member of HooRWA to enable continued monitoring of the Watershed. For additional information regarding what you can do that to make a difference in the Hoosic Watershed visit: <https://www.epa.gov/waterdata/how-my-waterway>

**Hoosic River Watershed Association**

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Hoosic River  
Biomonitoring Study  
Hoosic River Watershed Association

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Stream Name (Station/State) Water quality	<b>2023 Stream Community Assessments</b>
Hoosic River (01/MA) <b>Non-impacted</b>	This station is located just off Route 8 south of Adams, MA and just south of Phillips Hill Road. NYS DEC assessed this station in 1984 and 1986 as slightly impacted and in 1986 as non-impacted. Assessment here by HooRWA in 2006, 2011, 2012, 2014, 2016, 2017, 2019, 2020, 2021, and 2022 indicated non or slightly impacted water quality over various years. BAP in 2023 indicated non-impacted water quality.
Tophet Brook (01/MA) <b>Slightly impacted</b>	Tophet Brook, a tributary of the Hoosic River, station is located just above the end of Siara Street. Adams, Ma. First assessed by HooRWA in 2022 the benthic macroinvertebrate sample was diverse with a total of 29 unique taxa including taxa from the sensitive orders of mayflies, stoneflies, and caddisflies (Ephemeroptera, Plecoptera, and Trichoptera; EPT). The water quality, based on the macroinvertebrate community was assessed as slightly-impacted in 2023.
Hoosic River (02/MA) <b>Slightly impacted</b>	Station HOOS 02 is located above the Hodges Cross Road (Route 8) bridge. NYS DEC first assessed this site in 1984 as non-impacted, then in 1985 and 1986 as slightly impacted. Assessment by HooRWA in 2006, 2011, 2014, 2015, 2016, 2017, 2019, 2020, 2021 and 2022 ranged from non to moderately water quality over various years. This station is located downstream from the Adams Sewage Treatment Plant which was built in 1971 and upgraded in 2005. Water quality assessment trends continue to indicate a persistent and various fluctuation in water quality (between moderately and slightly impacted) compared to the upstream station HOOS 01. BAP in 2023 indicated slightly impacted water quality (see graph on page 3).
Hoosic River (03/MA) <b>Non impacted</b>	Station HOOS 03 is located below the Galvin Road bridge in Williamstown, MA. The site was assessed by NYS DEC in 1984, 1985 and 1986, and by HooRWA in 2006, 2011, 2012, 2015, 2016, 2017 and 2019. Assessments have indicated slightly impacted water quality in years 2014, 2015, 2016, 2020, 2021, and 2022; non impacted in other years however in 2019 it was assessed as moderately impacted. The 2023 assessment indicated non-impacted conditions.
Green River (01/MA) <b>Slightly impacted</b>	This station is located just down stream from the Route 2 bridge in Williamstown, MA. Green River has been previously assessed by MA DEP. A 2007 MA DEP assessment, at a station just above route 2 bridge, the water quality was determined to be slightly impacted based on resident benthic macroinvertebrates. This 2023 assessment, as well as the HooRWA assessment in 2022, determined water quality as slightly impacted.
Broad Brook (01/VT) <b>Non-impacted</b>	Located in Vermont, just below White Oaks Road bridge, Broad Brook station water quality is non-impacted based on resident benthic macroinvertebrates and is similar to the previous assessment completed by HooRWA in 2022.
Hoosic River (04A/VT) <b>Slightly impacted</b>	This station is located just below the Main Street bridge in Pownal, VT. Water quality in 1984, 1985, and 1986 was moderately, moderately and slightly impacted, respectively. HooRWA assessment here in 2006, 2011, 2012, 2014, 2015, 2016, 2017, 2019, 2020, 2021, and 2022 ranged from non to slightly impacted over the various years. The 2023 assessment indicated slightly impacted conditions.
Hoosic River (07/NY) <b>Slightly impacted</b>	Station HOOS 07 is located approximately 400 meters below the Route 7 bridge, and adjacent to Route 22. The site was assessed in years 1983 – 1986, 2001, and 2004 by NYS DEC and in 2006, 2007, 2010, 2011, 2012 and 2014—2022 by HooRWA. Water quality ranged from non to moderately impacted over the various years. The 2023 assessment indicated slightly impacted water quality.
Walloomsac River (01/VT) <b>Non-impacted</b>	WALL_01 is located approximately 30 meters downstream from the Henry covered bridge in North Bennington, VT. This station has been previously assessed by NYS DEC in 1984, 1985, 1991, and 2003. Water quality was assessed as slightly, slightly, non, and non-impacted respectively. Current water quality indicates non-impacted conditions in years 2022 and 2023.
Hoosic River (11/NY) <b>Non-impacted</b>	Station HOOS 11 is located just above Bridge Street bridge in Johnsonville, NY. The 2015, 2016, 2017, 2019, 2020, 2021 and 2022 assessment indicated slightly impacted conditions. The site was assessed in years 1984 – 1986 by NYS DEC and in 2006, 2012, and 2014 by HooRWA. This station has been consistently on the boarder between slightly and moderately impacted since 1984. Located below an impoundment with variable water releases from the dam the benthic macroinvertebrate community is likely influenced by the water releases and may not reflect genuine water quality. Current water quality assessment indicates non-impacted conditions.
Hoosic River (12/NY) <b>Slightly impacted</b>	Station HOOS 12 is located just off River Road in Valley Falls, NY. The site was assessed in years 1984 by NYS DEC and in 2006, 2012, 2014, 2015, 2016, 2017, 2019, 2020, and 2021 by HooRWA. As non, non, slightly, non, non, slightly, non, slightly, slightly and slightly impacted respectively. The water quality in 2023 was slightly impacted.
<b>Summary</b>	Comparison of the 2023 water quality assessments to prior year assessments indicates, largely, that water quality remains similar to previous years assessments. Of note: Station HOO_11 reached a new high category of non-impacted water quality.