

# Water Quality Report for the Marengo River at Wisco Rd.

The Marengo River at Wisco Rd. is listed as a Class II trout stream\* and has an Outstanding Resource Water classification\*\* by the State of Wisconsin. These classifications identify the Marengo River at this location as one of Wisconsin's highest quality waters, with no changes in baseline water quality allowed. The data collected from this site will help establish those baseline conditions. Future monitoring can be compared to the baseline to see if changes are occurring and whether action may be needed to address pollution sources.

<p><b>*Trout Stream Classification (State of Wisconsin)</b> <b>Class 1:</b> Highest quality trout waters. No stocking needed to maintain populations. <b>Class 2:</b> Some natural reproduction, but stocking is needed to maintain a desirable sport fishery. <b>Class 3:</b> No natural reproduction. Populations maintained by stocking.</p>	 <p>Brook Trout <i>Salvelinus fontinalis</i></p>
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To date, five macroinvertebrate samples have been collected from this site over four different years. This provides enough information to meet BRWA's goal in establishing a baseline at this site. The following is a summary of macroinvertebrate data for the Marengo River at Wisco Rd. using data through 2010. We will be presenting these data compared to other volunteer data in the Bad River Watershed at a public meeting later in 2011.

<p><b>**Water Classification</b> Wisconsin's highest quality surface waters are classified as: <b>Outstanding Resource Waters (ORW):</b> Highest quality waters, typically no human point sources of pollution exist, no changes in baseline water quality allowed. <b>Exceptional Resource Waters (ERW):</b> Similar to ORW but some human point sources of pollution exist. No changes in baseline water quality allowed.</p>
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## Macroinvertebrate Data Summary

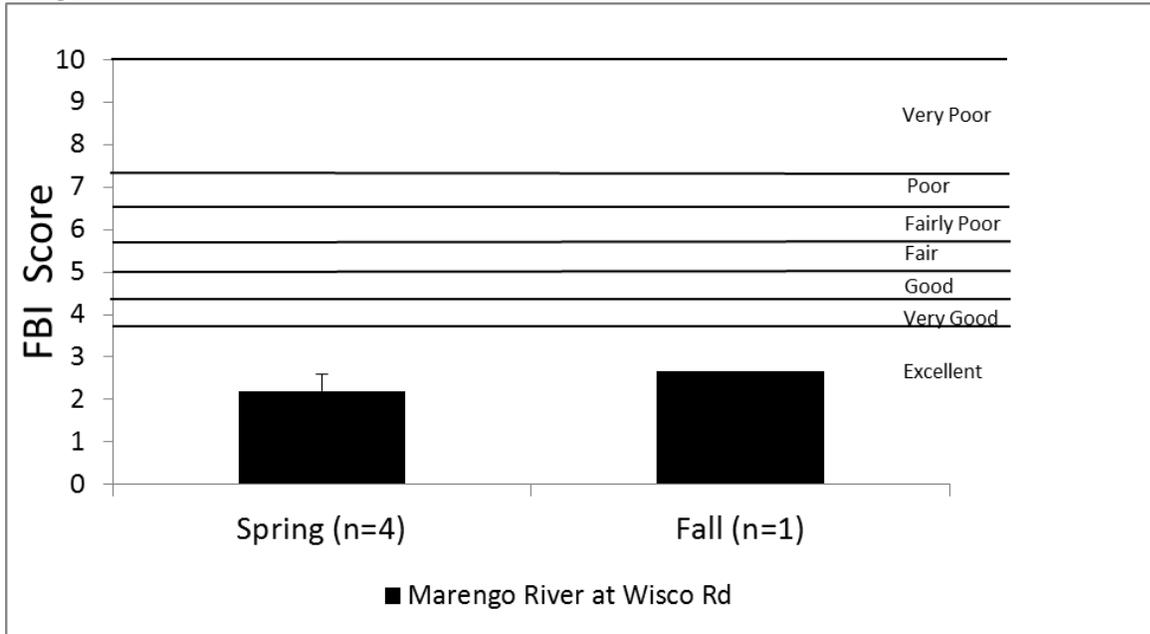
Macroinvertebrates (different types of aquatic bugs) provide important long term information about water quality in a stream because they typically spend a large part of their lives in the water and differ in their tolerance to pollution. The types of macroinvertebrates found at a site are translated into a score called the Hilsenhoff Family Biotic Index (HFBI), which allows us to interpret the macroinvertebrate data and get an idea of water quality at the site. The HFBI score can range between 0 and 10, with lower scores indicating the best water quality.

Macroinvertebrate samples were collected in spring over four different years and once in fall at this site. The spring samples averaged an HFBI score of 2.2, indicating "Excellent" water quality. The one fall sample collected scored a 2.7, also indicating "Excellent" water quality (Graph 1).

## Conclusion

Macroinvertebrate data from the Marengo River at Wisco Rd. indicates this site has excellent water quality. This is what we would expect from a remote site like this with little human influence. The results provide a baseline to help ensure this site continues to meet its designation as an Outstanding Resource Water and a Class II trout stream by the State of Wisconsin

Graph 1. Average Hilsenhoff Family Biotic Index (HFBI, with one standard deviation) scores for spring and fall macroinvertebrate samples collected from the Marengo River at Wisco Rd. The lines indicate the water quality rating scores used in the HFBI.



Thanks to volunteers that collected data at this site: and Andrea Pokrzywinski , Mike Stobbe, and Mike Klump.