

Menomonee River Watershed Restoration Plan Fact Sheet

MN-2, Reach 803, Upper Menomonee River

Data resulting from model runs:

Figure	Overall Project Team Assessment	Analysis
Flashiness index	Very Good	The Flashiness Index quantifies the frequency and rapidity of short-term changes in stream flow. The index ranges from 0 to 2, with 0 being constant flow. The flashiness is reasonably low at this location.
Dissolved oxygen v. days per year	Good to Moderate	Typically, aquatic communities need 5 mg/l or more of dissolved oxygen to survive. Concentrations at this site periodically fall below this level.
Fecal coliform v. days per year	Good	For recreational uses, lower fecal coliform counts (a measure of bacteria) are better (preferably under 400 counts / 100ml). The counts on majority of the days are 'below 400'. Unlike many of the downstream sites, this site does not exhibit frequent spikes of 'above 5,000' counts.
Phosphorus v. days per year	Good to Moderate	Phosphorus is a nutrient that can lead to increased growth of algae. The concentrations of phosphorus, on most of the days, are at or below the 0.1 mg/l planning guideline. Throughout the year, the phosphorus concentrations do not exceed 0.35 mg/l on any day.
Suspended solids v. days per year	Very Good	Suspended solids cause water to become cloudy, which is aesthetically unpleasant. They can also clog the gills of fish and invertebrates, make feeding difficult, and lead to sediment deposition (poor habitat). The concentrations are less than 25 mg/l on most of the days and the concentrations of suspended solids do not exceed 100 mg/l on any day. This may be related to settling in the wetlands.
Monthly dissolved oxygen	Good	Note the lower dissolved oxygen concentrations during the summer. This is expected and due to the decreased solubility of oxygen in warmer water. The moderate variability suggests that there may be algal growth, organic enrichment and increased oxygen demand in the stream.
Monthly fecal coliform	Good to Moderate	While the ranges of values are fairly consistent throughout the year, note that the median and 75 th percentile values decline during the summer swimming season. This may be related to the die-off of bacteria due to solar radiation. Also note that the conditions are poorest in March and are likely related to snow melt.
Monthly phosphorus	Moderate	Phosphorus concentrations are lowest in late winter and early spring and are highest in the summer and early fall. The increases during the summer may be related to fertilizer inputs and runoff from agricultural fields.
Monthly suspended solids	Very Good	The concentrations of suspended solids are relatively low year-round and lower during the winter months. The lower concentrations during the winter months are likely due to a number of factors including frozen conditions and low-impact storms (snow doesn't pound the soil like rain).

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Dissolved oxygen by flow	Good	Note that the largest decreases in dissolved oxygen concentrations occur at low flows. This is likely due to a combination of decreased water agitation and higher temperatures (low flow conditions are often associated with the warm summer months).
Fecal coliform by flow	Moderate	Generally, a pollutant that is present at high concentrations during high flows and low concentrations during low flows (fecal coliform, in this case) is attributed primarily to non-point sources. Note that during any period with high flows, fecal coliform counts exceed the regulatory standard about 50% of the time. During low flows and dry conditions, the standard is met over 75% of the time. This would be the safest time for any recreational uses (boating, swimming, wading, etc.), although the amount of water in the stream may limit recreational use to wading.
Phosphorus by flow	Moderate	Concentrations of phosphorus are greatest at low flows. This suggests a background source of phosphorus that may be associated with agricultural drain tile discharge or releases from private onsite wastewater treatment systems (including agricultural lagoons).
Suspended solids by flow	Very Good	The concentrations of suspended solids increase with increased flows, suggesting contributions from non-point sources. The suspended solids may come from runoff that carries a sediment load, from stream bank erosion, or re-suspended stream sediments.