Fecal Coliform Map

Root River Watershed

- Meets Water Quality Standards at least 85% of the time.
- Meets Water Quality Standards between 50% and 85% of the time.
- Meets Water Quality Standards less than 50% of the time.

Fecal Coliform & E. coli Bacteria

One of the greatest threats to swimmable water is the presence of bacteria or other pathogens in the water. Common indicators used to determine the potential presence of human pathogens (disease-causing organisms) are ***fecal coliform and E. coli bacteria***. These microscopic organisms live in the intestines of warm-blooded animals, including humans, and can be found in fecal waste. Although these bacteria don't necessarily cause disease themselves, they do indicate the possible presence of other disease-carrying organisms that live in the same environment.

Testing water for either fecal coliform or E. coli bacteria is important for public safety. Fecal coliform or E. coli bacteria in high numbers, whether from stormwater runoff, agricultural or livestock management practices, or combined and sanitary sewer overflows, indicates a potential health risk for drinking, bathing, and swimming in contaminated water.

Fecal Coliform bacteria levels in urban stormwater runoff can range from several 100 counts per 100 milliliters of water to well over a million counts!

Fecal coliform and E. coli bacteria survival is dependent on specific environmental conditions that are highly variable and change quickly. This makes predicting bacteria populations within the waterways difficult. For example, although spring rains may wash more fecal matter into the waterway, cool water temperatures may prevent it from flourishing. During the summertime, increased exposure to sunlight (with its ultraviolet disinfection properties) may limit bacterial numbers even though warmer water temperatures exist.

Higher amounts of fecal contamination normally occur during wet weather from contaminated runoff reaching the waterways. The monitoring of stormwater runoff in urbanized areas has shown surprisingly high levels of fecal coliform bacteria. Common sources for these high bacterial levels found in urban and rural stormwater runoff include pet wastes, gull and goose droppings, wildlife or livestock operations, or manure spreading on farmlands. Other major sources include; sanitary sewer (SSO) overflows and failing septic systems.

Fecal coliform bacteria is routinely tested in the upper Root River while E. coli is not. Fecal coliform concentrations are reported in units of bacterial colonies per 100 milliliters of water. The Wisconsin Water Quality Standard for fecal coliform for most surface water designated for recreational use is 200 counts per 100 milliliters of water.

Fecal Coliform Stats

All locations in the upper Root River Watershed exceed the fecal coliform Water Quality Standard 50% or more of the time. Fecal coliform data is lacking for most of the Root River south of Milwaukee County; however, it is suspected that most of the waterways within the Root River Watershed would not meet Water Quality Standards more than 50% of the time. Bacteria sources include stormwater runoff, domestic and wildlife inputs, manure from livestock, failing septic system, and sanitary sewer overflows.