

Thermal, Hydrologic, and Water Quality Impacts of Kinnickinnic River Hydropower Impoundments



Junction Falls Dam on the Kinnickinnic River River Falls, WI

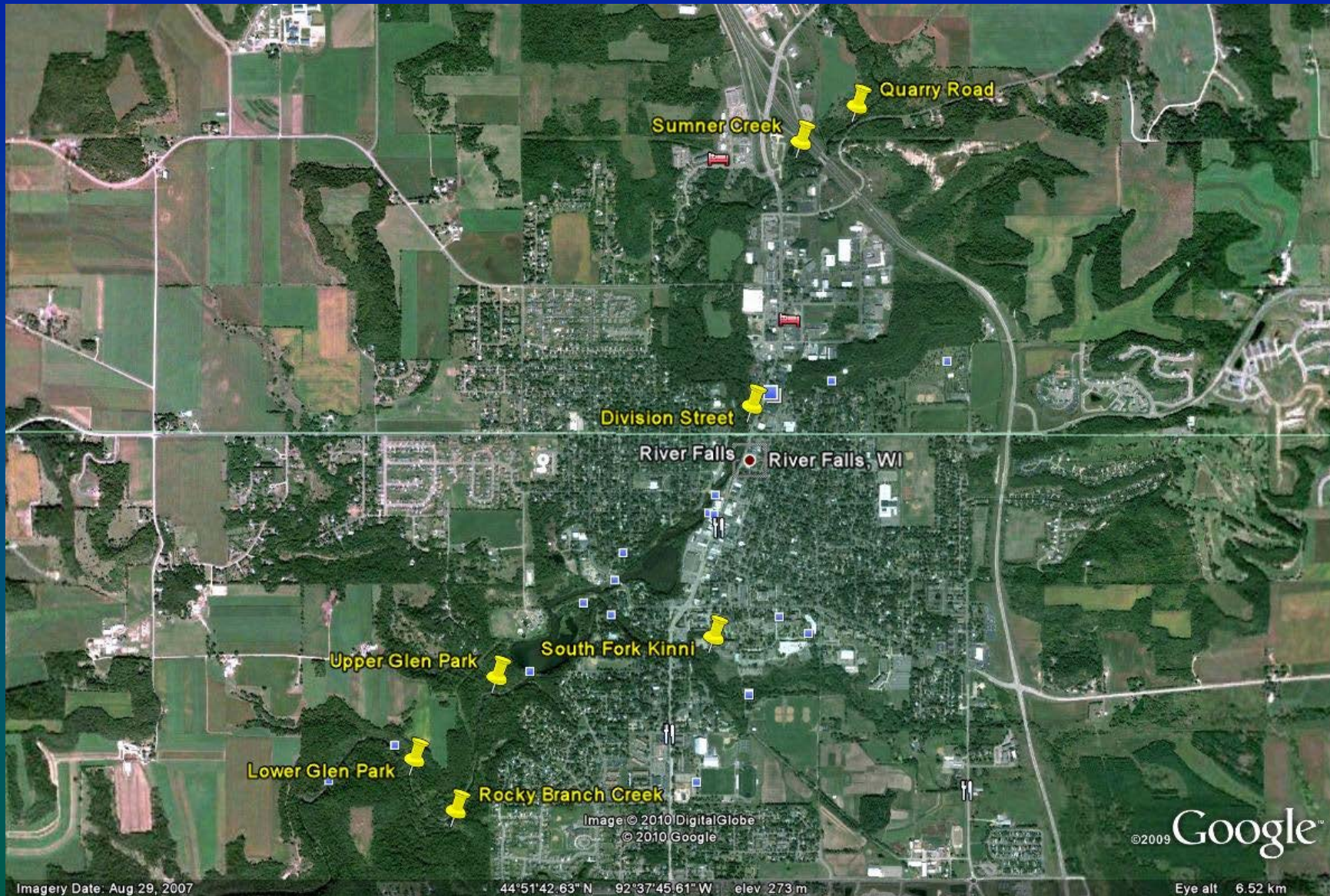


Powell Falls Dam on the Kinnickinnic River River Falls, WI



Kinnickinnic River Thermal Monitoring Sites: 1992-2019

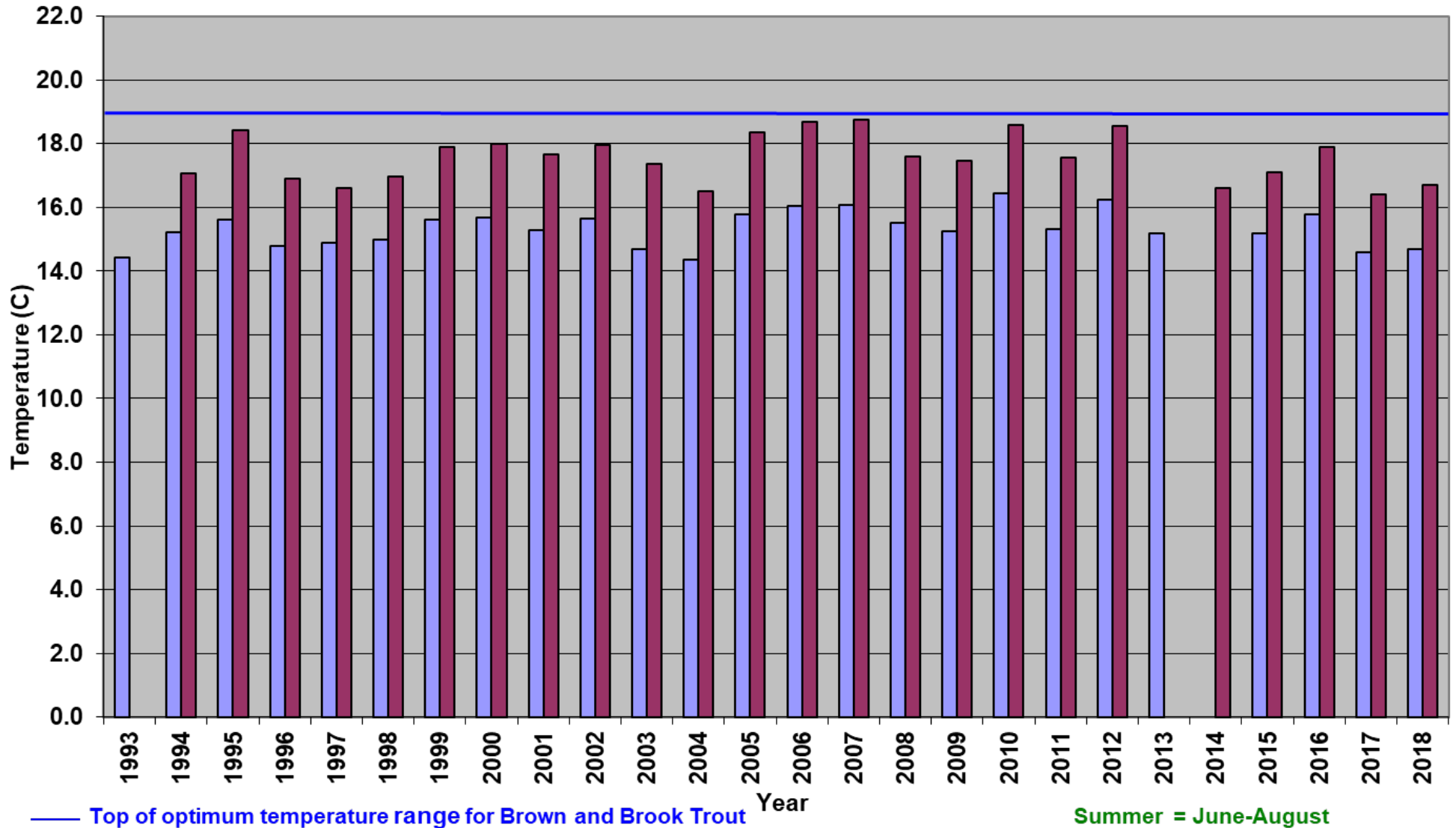
Kiap-TU-Wish Chapter, Trout Unlimited



Thermal Impacts

Kinnickinnic River Mean Summer Temperatures: 1993-2018

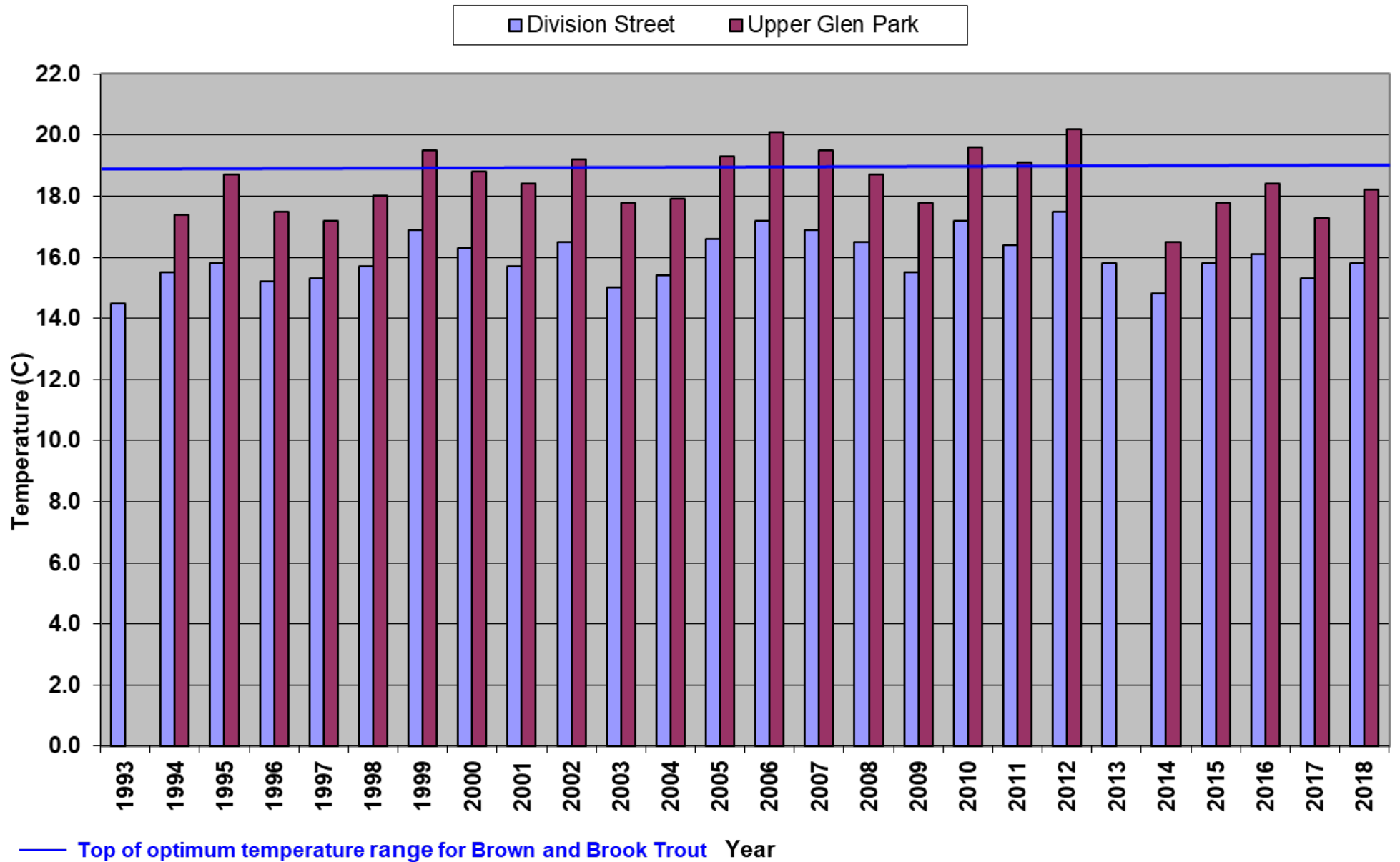
■ Division Street ■ Upper Glen Park



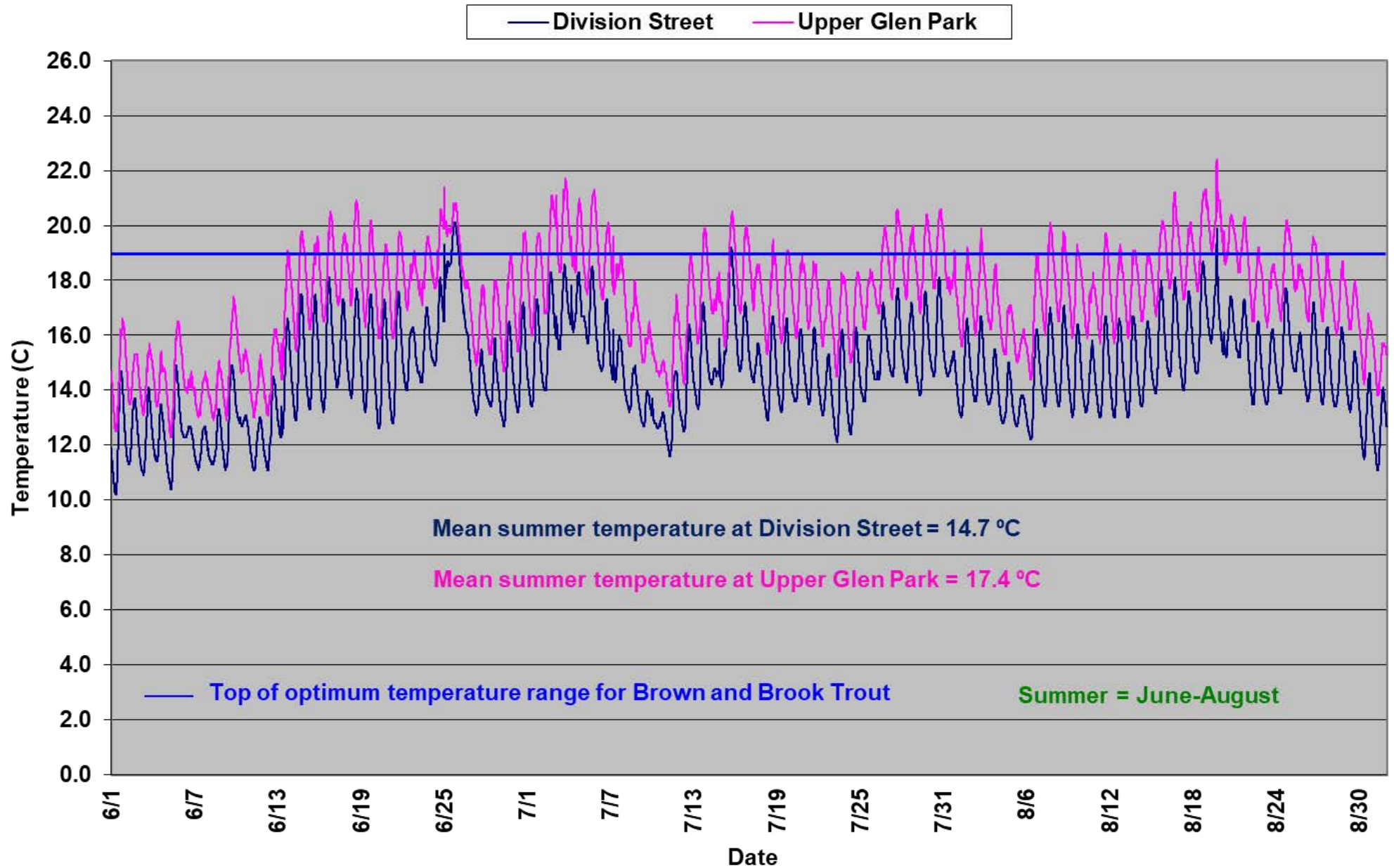
— Top of optimum temperature range for Brown and Brook Trout

Summer = June-August

Kinnickinnic River Mean July Temperatures: 1993-2018

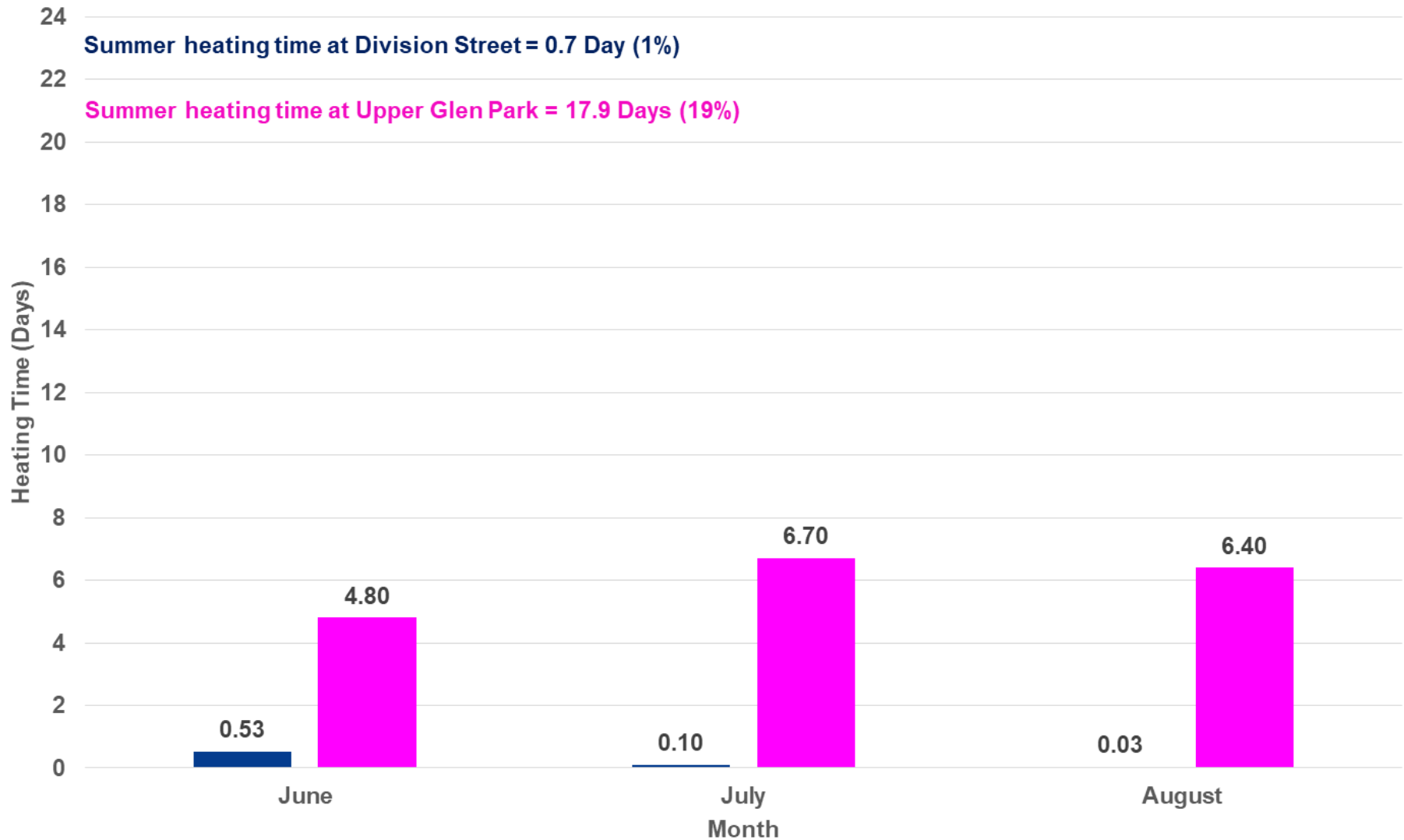


Kinnickinnic River Temperatures: Summer 2003

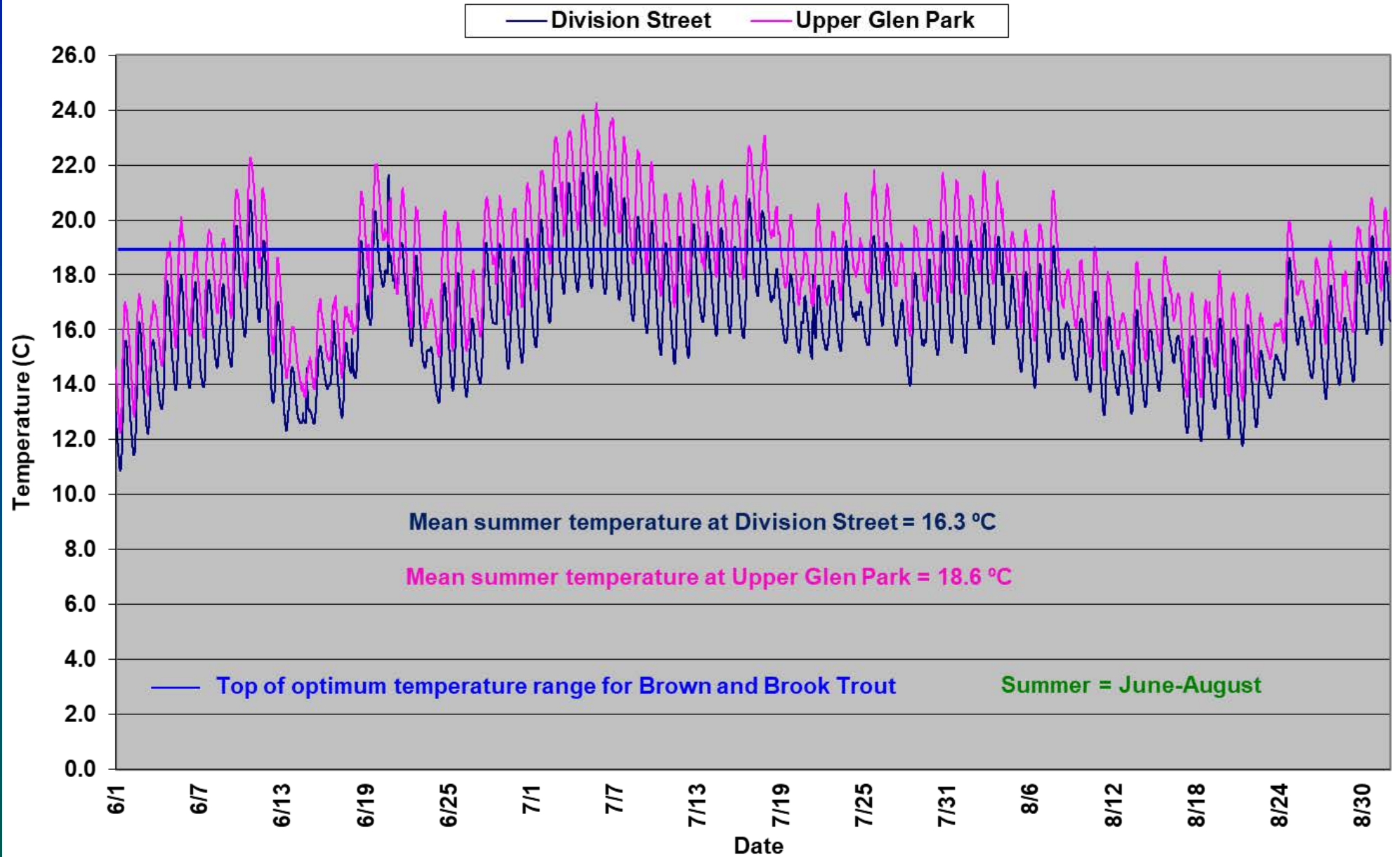


Kinnickinnic River at Division Street and Upper Glen Park
Monthly Heating Time Above Optimum Brown Trout Temperature ($\sum \Delta 19\text{ }^{\circ}\text{C}$)
June-August 2003

■ Division Street ■ Upper Glen Park

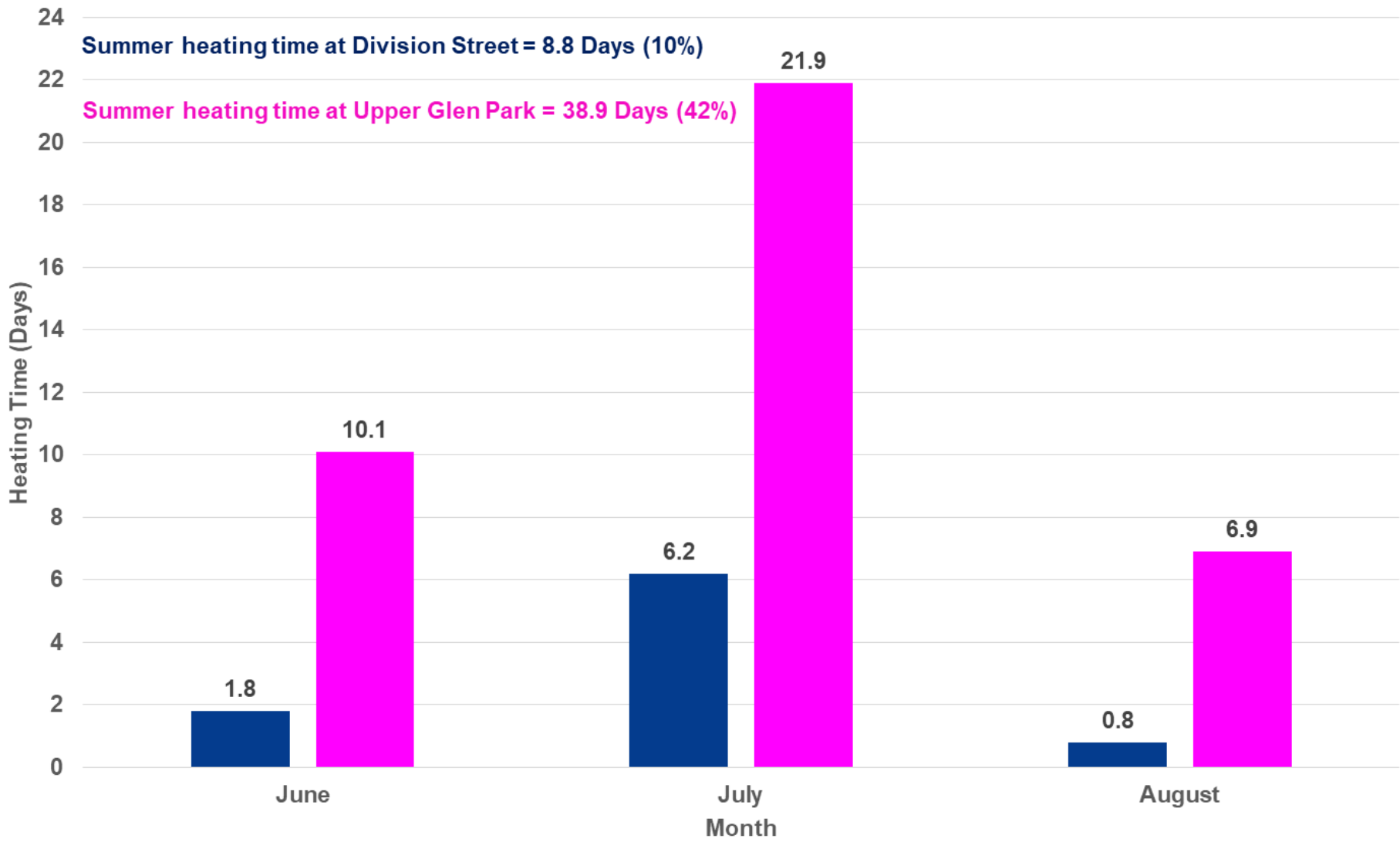


Kinnickinnic River Temperatures: Summer 2012

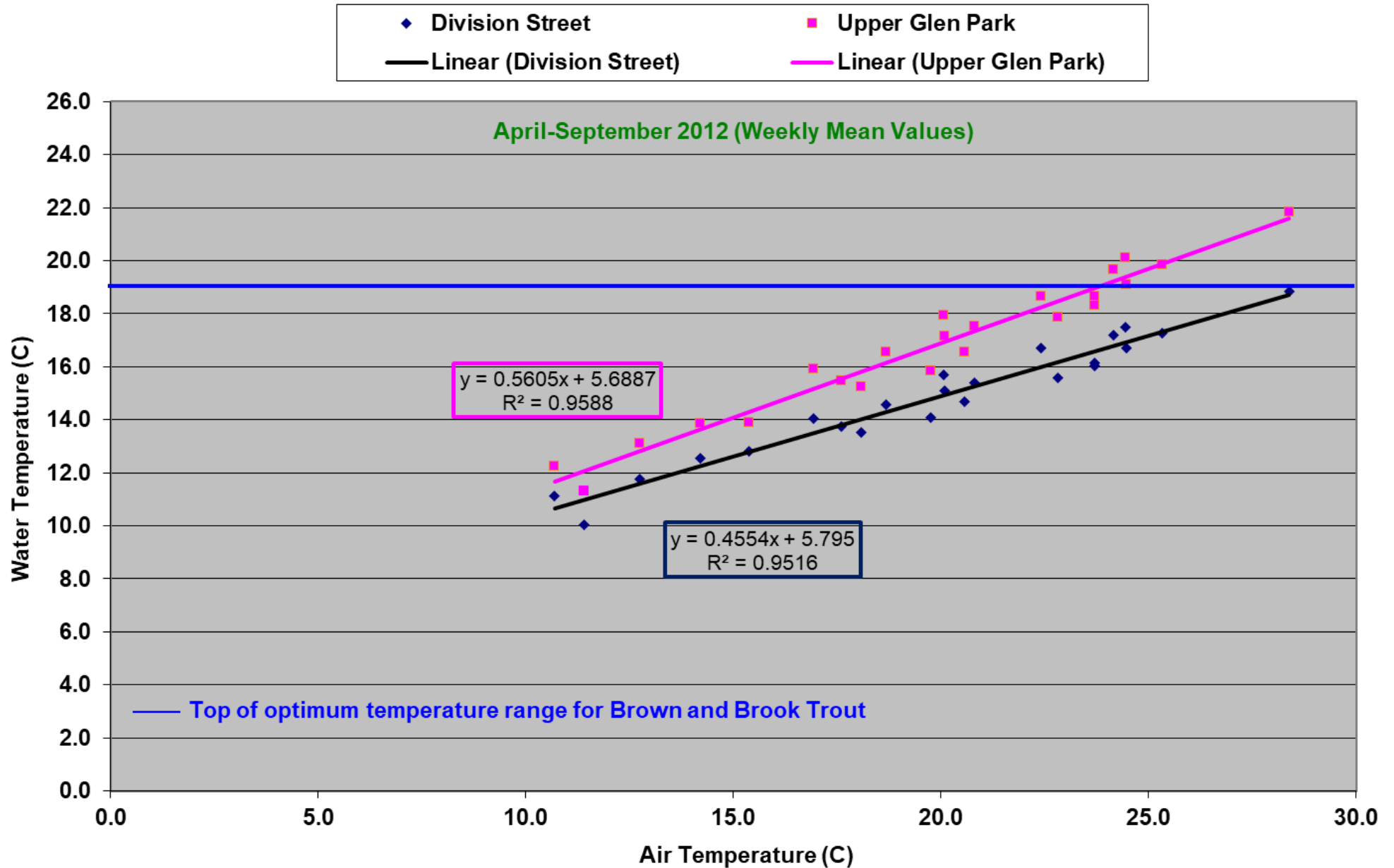


Kinnickinnic River at Division Street and Upper Glen Park
Monthly Heating Time Above Optimum Brown Trout Temperature ($\sum \Delta 19\text{ }^{\circ}\text{C}$)
June-August 2012

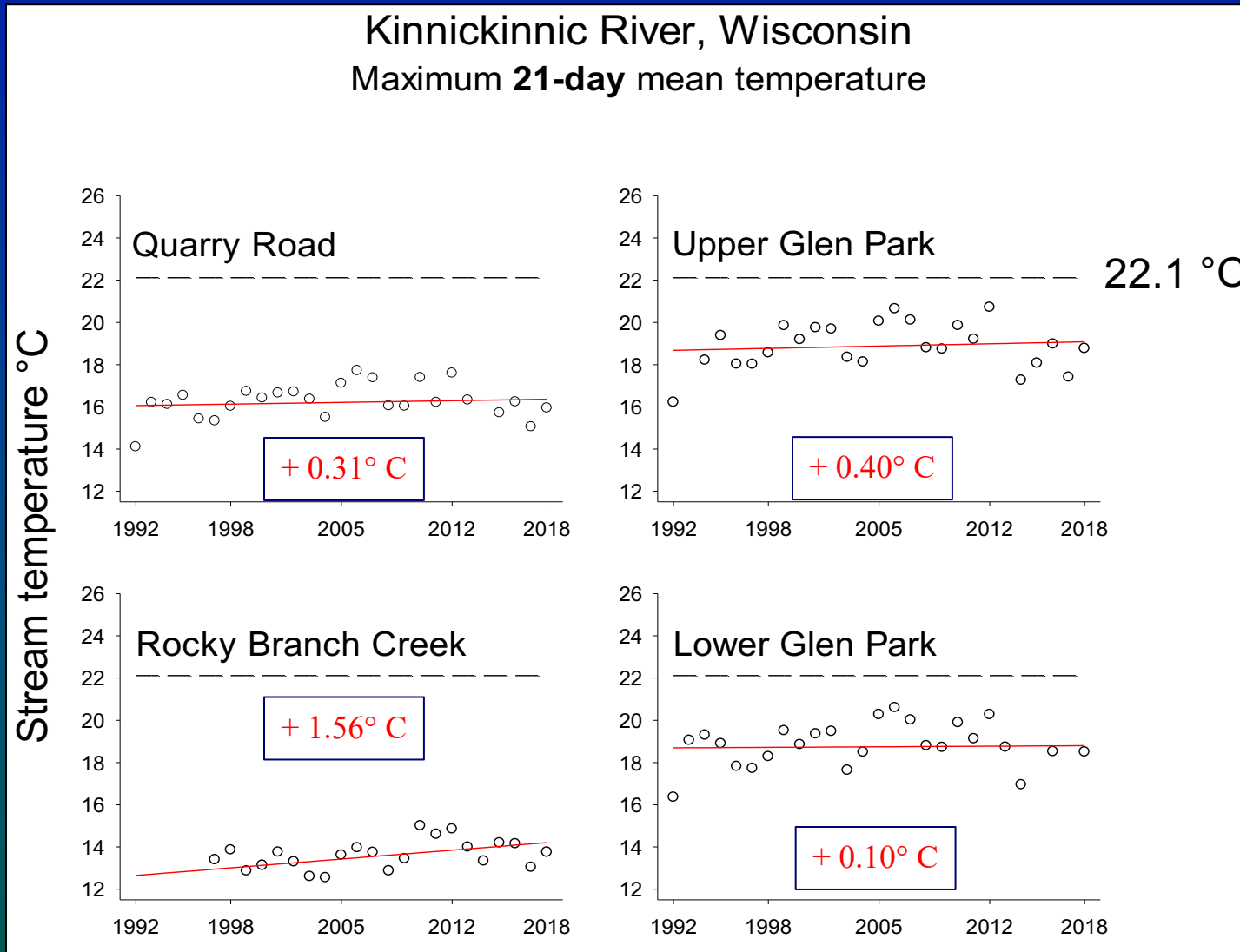
■ Division Street ■ Upper Glen Park



Kinnickinnic River Air Temperature vs Water Temperature at Division Street and Upper Glen Park

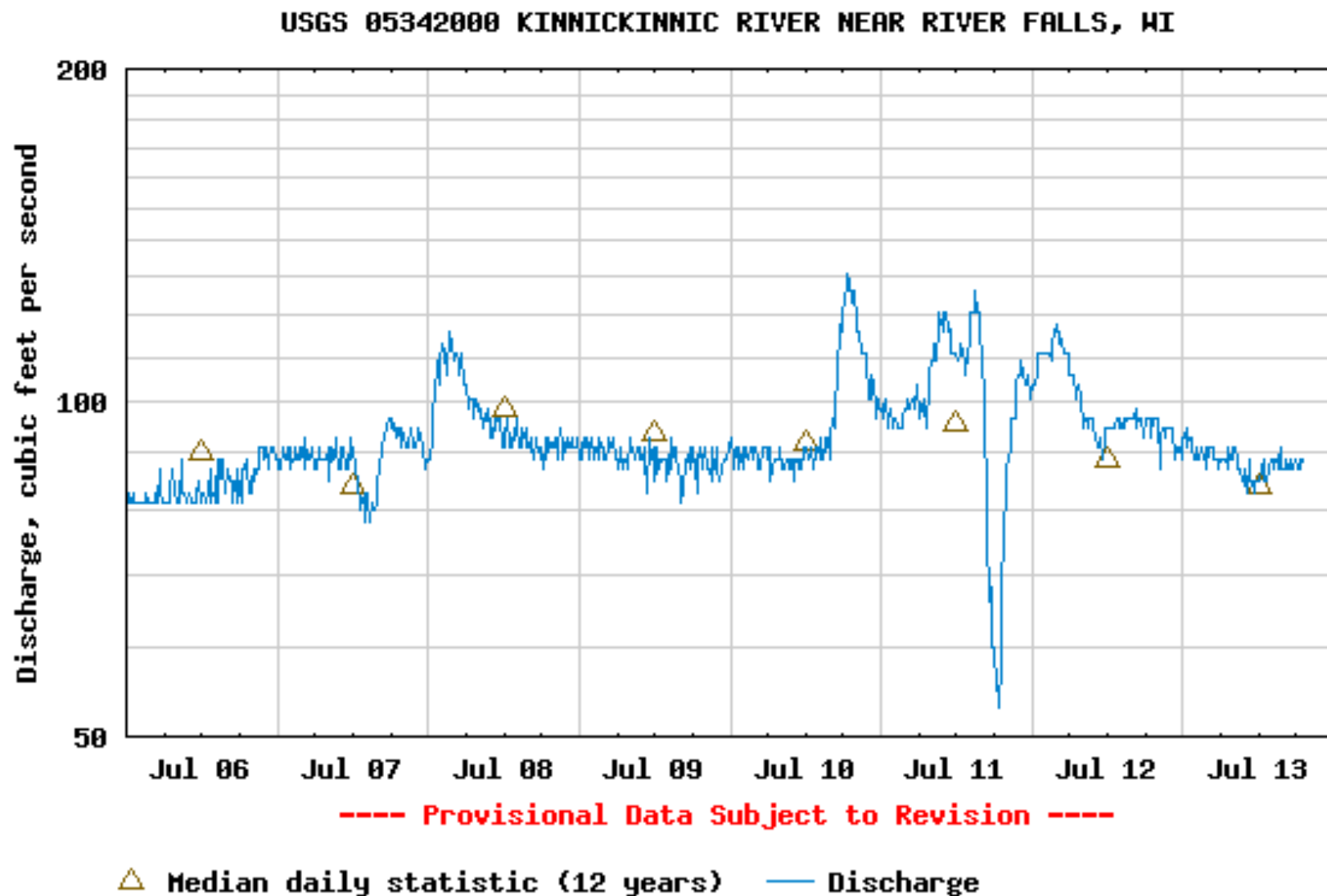


Climate Change Impacts on the Kinnickinnic River: 1992-2018



Hydrologic Impacts

Hydropower-related Kinnickinnic River Flow Irregularity: July 11, 2008



Water Quality Impacts

Algae Mats on Lake George (Above Junction Falls Dam)



Algae Mats on Lake Louise (Above Powell Falls Dam)





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