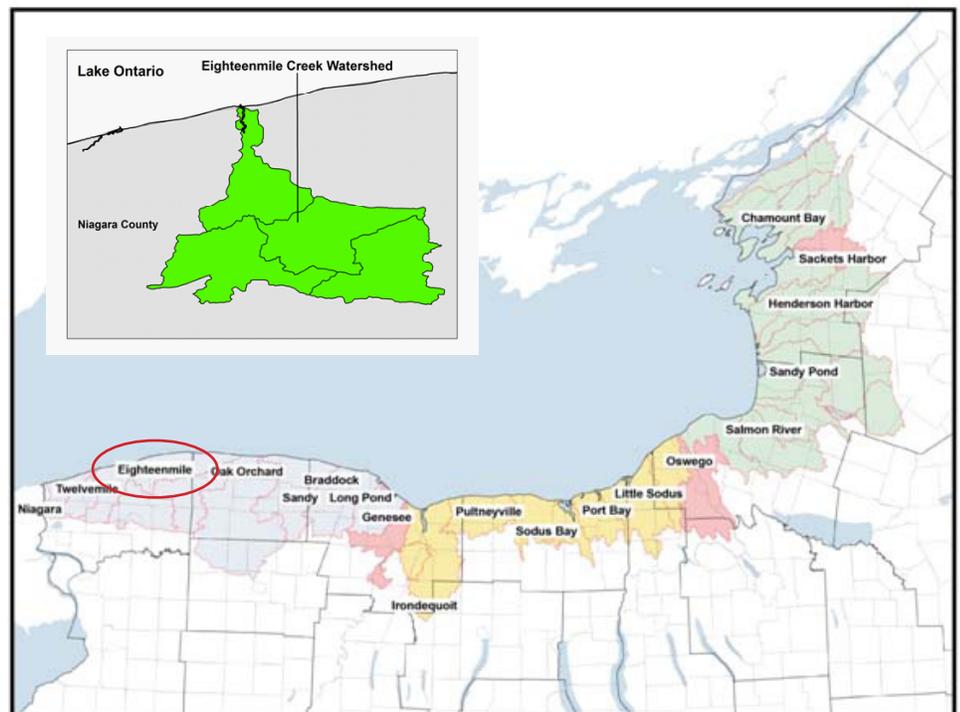


## Eighteenmile Creek Niagara County, NY

**E**ighteenmile Creek drains 93 mi<sup>2</sup> of land as it travels 26 miles before emptying into Lake Ontario. Topography is generally flat and comprised primarily of agricultural and rural residential development, with most of the industrial influences concentrated in the City of Lockport. The creek is a Great Lakes Area of Concern and has a Remedial Action Plan currently headed by the Niagara County Soil and Water Conservation District. PCBs, specifically, represent the area of stress that receives the most attention. In addition to a history of industrial waste exposure, the Lockport Sewage Treatment Plant diverts treated sewage to the stream. Despite these water quality issues, Eighteenmile Creek is a popular fishing stream due to major salmon runs, while Olcott Harbor at the mouth of the river is the home of much of the Niagara County sport fishing industry. Nuisance algae, turbid waters, and algal mat development impact the drowned river mouth and the nearshore waters along the southern shoreline of Lake Ontario. This short report provides a synopsis of data collected monthly from May through September (2003 to 2009) on the water quality of Eighteenmile Creek and the lakeside (swimmable depth) of Lake Ontario near the mouth of the creek.



*Mouth of Eighteenmile Creek, Lake Ontario*



*Map of Lake Ontario. Insert of Eighteenmile Creek*

Phosphorus is of concern as it stimulates the growth of plants, causing blooms of algae such as Cladophora.

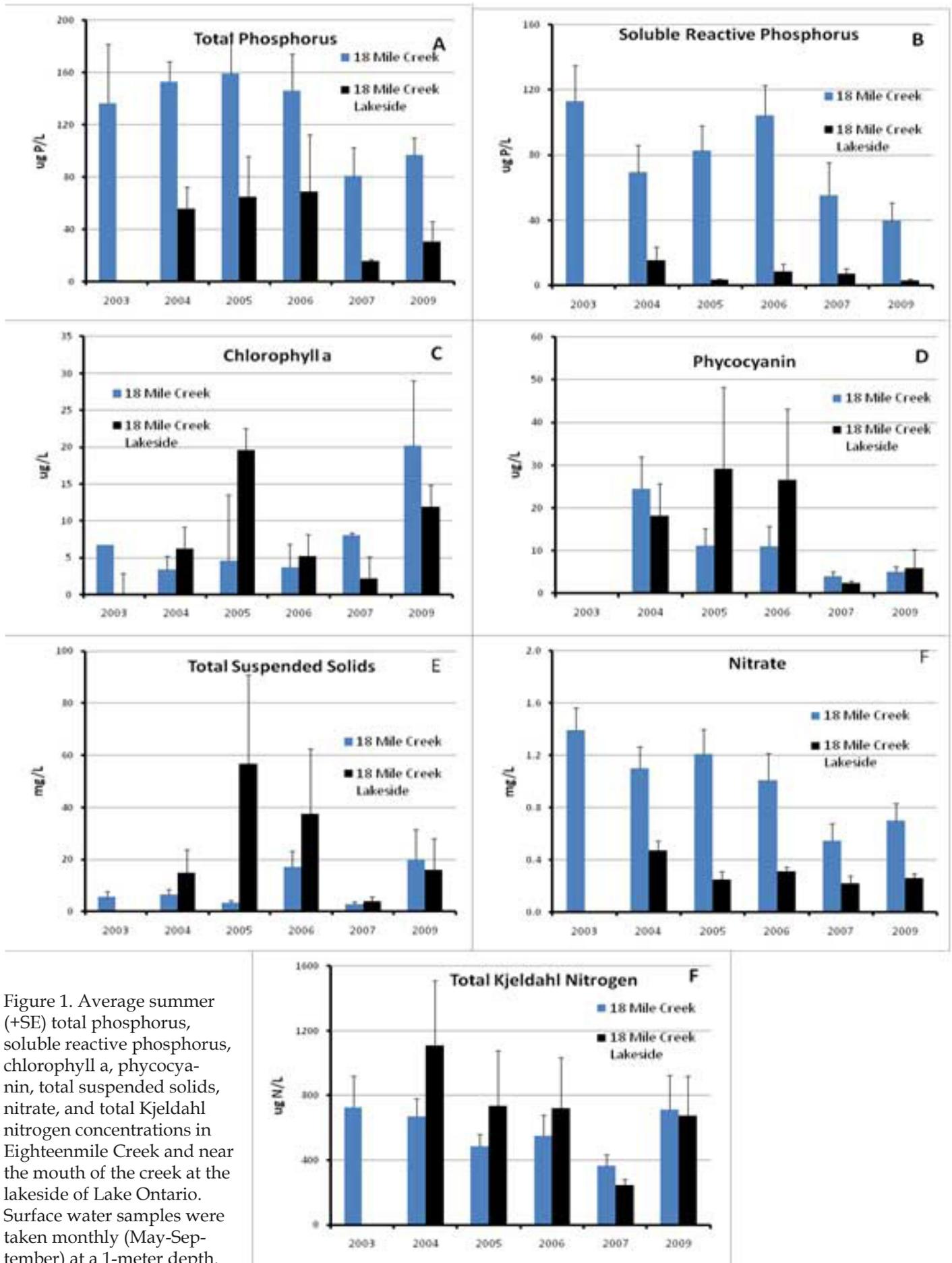


Figure 1. Average summer (+SE) total phosphorus, soluble reactive phosphorus, chlorophyll a, phycocyanin, total suspended solids, nitrate, and total Kjeldahl nitrogen concentrations in Eighteenmile Creek and near the mouth of the creek at the lakeside of Lake Ontario. Surface water samples were taken monthly (May-September) at a 1-meter depth.