Seneca Lake PURE WATERS Association

STREAM MONITORING PROGRAM

Water Quality Summary

Kashong Creek

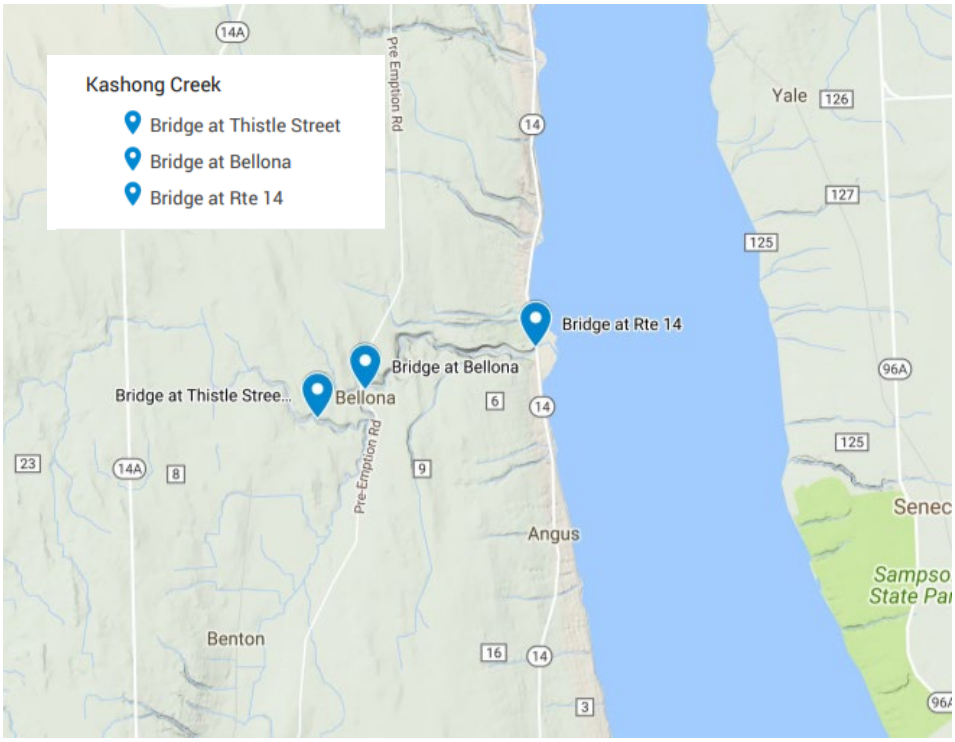
Area of Kashong Creek

Description of Kashong Creek

Kashong Creek flows into the west shore of Seneca Lake about seven miles south of Geneva. It has a relatively large watershed area that makes up approximately 6% of the total Seneca Lake watershed area. Its watershed is roughly 83% agriculture and 15% forested land, and includes only very minimal residential or urban areas.

SPWA Water Sampling Locations

SLPWA, with assistance from its partner CSI, sampled and tested Kashong Creek at locations shown on the map below. SLPWA's monitoring of Kashong Creek began in the fall of 2016 so fewer monitoring results are available relative to other streams. Sampling is conducted at three locations, from upstream sites in Bellona to the Route 14 bridge near the mouth of Seneca Lake. This stream is highly variable in its normal annual flow cycle, with very high flows in the spring to a completely dry streambed in late summer.

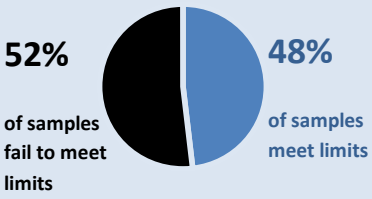
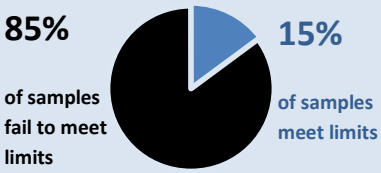


Waterbody Classification and Contamination Sources

Kashong Creek is designated as a DEC Class C stream. Agriculture represents the majority of land use for this watershed, which can be helpful in learning the specific issue with runoff from farm fields.

Water Quality Summary

SLPWA conducts water quality testing at three creek locations, sampling three to five times each year, spring through fall. Tests include bacteria (*E. Coli* and total coliform), nutrients (phosphorus and nitrogen) and total suspended solids--a measure of water clarity. These tests provide information on the water quality status of the creek and how Seneca Lake might be affected. The table below provides parameters of particular concern and the compliance with established guidance or DEC limits.

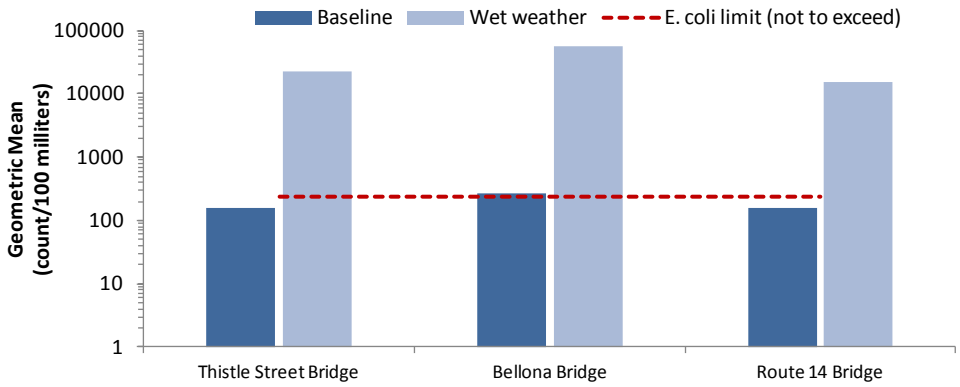
Parameter tested	Why is it measured?	% of water samples meeting guidelines in Kashong Creek	Is there a potential concern for Seneca Lake water quality?
Bacteria - *E. Coli*	To evaluate bacterial water quality impact of septic systems, wastewater treatment plants, and animal waste entering the creek		**Yes.** More than half of all samples collected fail to meet the DEC limit for safe swimming.
Total Phosphorus	To evaluate the impact of agricultural and residential phosphorus runoff that can cause excessive algae growth.		**Yes.** Very few samples (15%) meet the phosphorus guideline, the majority fail to meet the guideline.
Dissolved Oxygen (mg/L)	To evaluate the impact of erosion, agricultural or residential runoff or algal growth that can increase oxygen demand, removing oxygen needed by fish and other wildlife.	No data	

Highlights of Monitoring Results

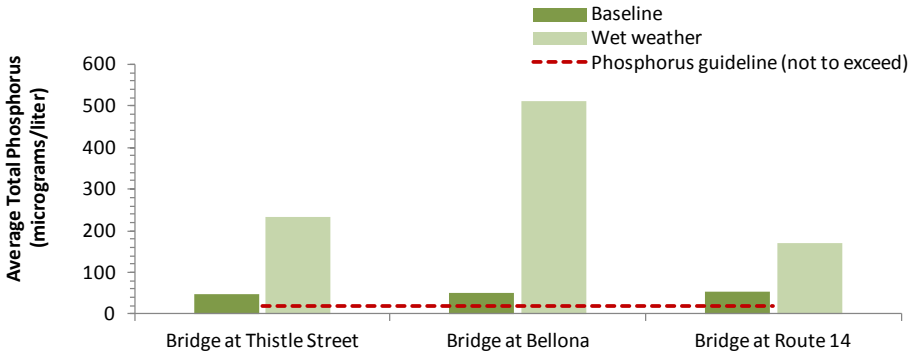
- Elevated results for phosphorus and bacteria are concerning, suggesting that creek discharges are potentially affecting Seneca Lake.
- Wet weather bacteria levels are very high, with all three locations more than 50 times the swimming limit.
- Wet weather suspended solids results--measured by SLPWA in the Creek for the first time in 2017--continue to be extremely high relative to baseline conditions, which indicates sediment runoff/erosion from the creek may be affecting lake water quality.

Kashong Creek
Water Quality by Location, 2016-2018

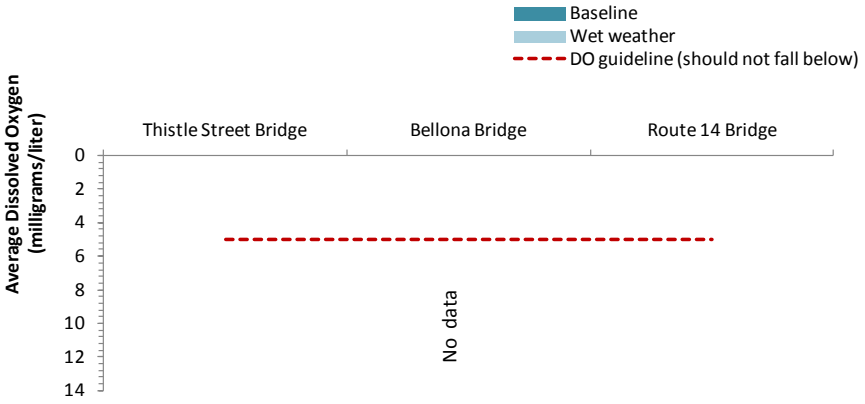
E. COLI BACTERIA (note log scale)



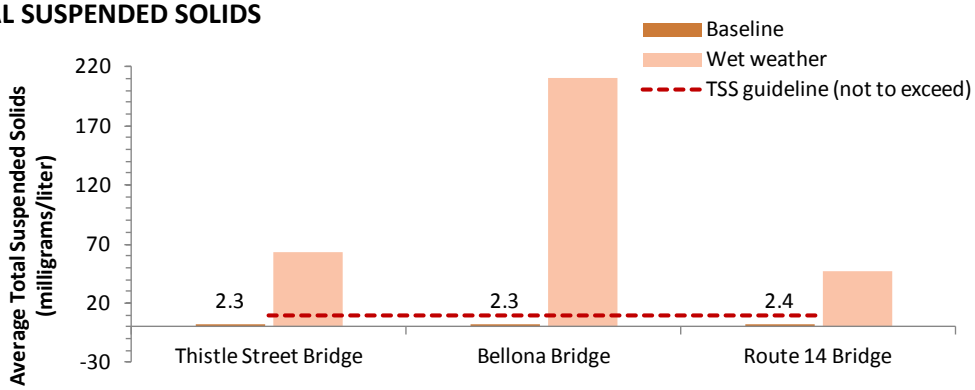
PHOSPHORUS



DISSOLVED OXYGEN



TOTAL SUSPENDED SOLIDS



Upstream → ***Downstream (near lake confluence)***