



Le Sueur River Watershed

Clean Water Accountability Progress Report

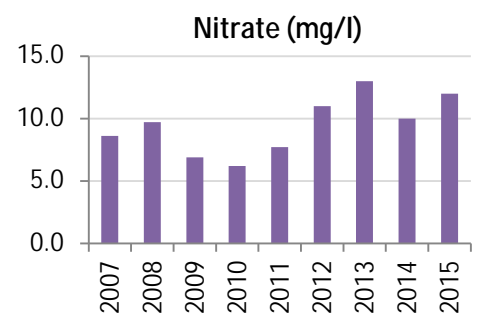
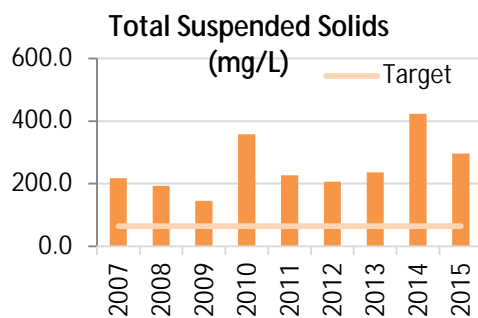
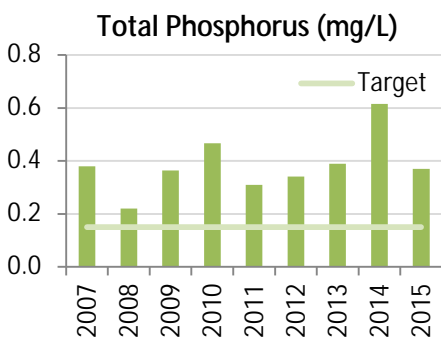
The Le Sueur River major Watershed is located in south central Minnesota and drains approximately 711,000 acres 1,110 square miles into the Le Sueur River. The watershed is largely rural with 82% of the land under agricultural cultivation. The Le Sueur River flows to the Blue Earth River and these waters join the Minnesota River near Mankato.

Monitoring and assessment reveals many aquatic life impairments due to low Indices of Biological Integrity (IBI) scores, with fish or macroinvertebrate populations low or dominated by pollution-tolerant species. The Le Sueur River is a major source of both sediment and nutrients to the Minnesota River. Primary stressors identified included: altered hydrology; poor habitat; and high turbidity, nitrate, and phosphorus concentrations; low dissolved oxygen concentrations; and lack of connectivity. Pollutant source contributions are generally dominated by agriculture, reducing pollutant/stressor contributions from agricultural sources is a high priority. To improve and protect water quality conditions, strategies need to be implemented across the watershed and should be customized based on locally-led prioritizing and targeting work.



Water quality measurements

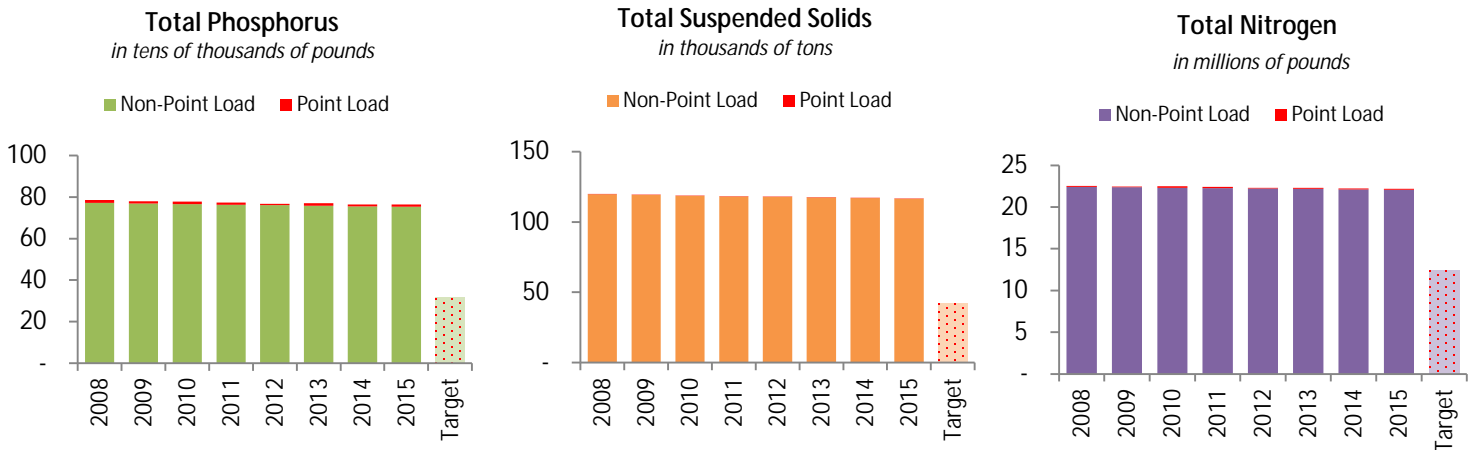
The graphs below show the annual flow weighted mean concentration (FWMC) of total phosphorus (TP), total suspended solids (TSS), and nitrate. FWMCs help to normalize pollutant loads across years with varying precipitation. The target identified for TP and TSS is the water quality standard. There is no surface water quality standard for nitrate.



Compared to other watersheds in the state, the LeSueur Watershed exhibits somewhat higher than average water runoff and substantial variability in runoff from year to year. Such high runoff variability may have negative impacts on fish and other stream life. For water quality, the LeSueur River near the mouth has levels of TP and TSS well above targets, indicating very poor conditions and the transport of large pollutant loads. There are no apparent trends in these two indicators; nitrate on the other hand appears to be edging somewhat higher in recent years.

Progress toward load reduction targets, 2008-2015

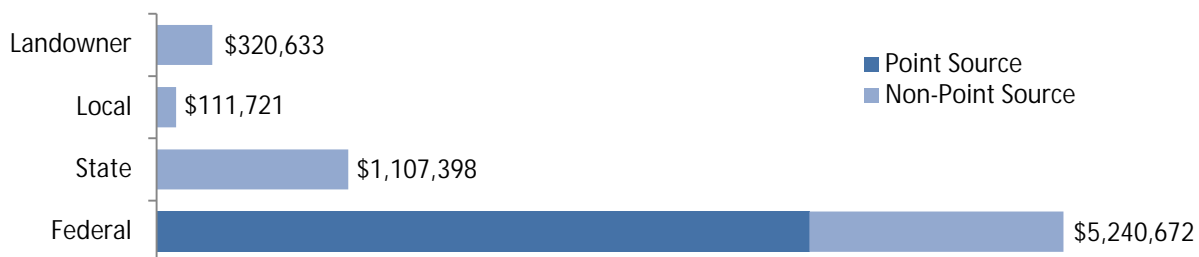
The Le Sueur River Watershed Restoration and Protection Strategy calls for a minimum 60% reduction in TP, a 65% reduction in sediment, and a 45% reduction in nitrogen, in order to achieve water quality goals. These charts display the annual load reductions for nitrogen, TP and TSS estimated as a result of best management practices (BMPs) reported to U.S. Natural Resources Conservation Service and to the Minnesota Board of Soil and Water Resources, for the period of 2008-2015. These charts do not take into account factors such as land use changes, climate change, or privately funded BMPs. The modeled load for 2008 serves as the baseline load, with the estimated reductions shown relative to that baseline.



Top non-point source BMP activities in the LeSueur River Watershed, 2008 – 2015

BMP Type	Projects	Acres	N reduced (lbs)	P reduced (lbs)	TSS reduced (tons)
Nutrient Management	651	40,215	170,425	3,396	0
Residue & Tillage Management	531	24,808	60,702	12,400	2,636
Cropland Diversity/Seasonal Cover	118	5,585	42,451	1,334	178
Water & Sediment Control Basins	96	1,444	11,057	1,050	206
Permanent Vegetative Cover	68	378	3,057	102	18

Water quality improvement spending in the LeSueur River Watershed, 2008 – 2015



The figures in this report are based on data from several agencies. For details, see: www.pca.state.mn.us/water/clean-water-fund.