

**PROJECT:** Pond Improvement and Surface Sand Filter Retrofit (South St. Paul, 2012)  
**CLIENT:** Industrial Facility, Metal Manufacturing

**CHALLENGE:** In a proactive effort to meet runoff pollutant benchmarks set by the MPCA's Industrial Stormwater Permit, this metal manufacturing facility sought an assessment and recommendation for a cost-effective means to Permit compliance.

**SOLUTION:** Hydromethods was hired to assess the facility's stormwater runoff patterns and identify treatment alternatives that would provide the necessary reduction in pollutant concentrations. A range of options were considered, and pollutant modeling was done to quantify and compare expected load reductions, as well as weigh these reductions with life-cycle costs for each BMP.

Due to the nature of the property and the pollutant concentrations present, as well as the low probability that non-structural BMPs would provide the necessary pollutant removal, the owner decided to proceed with a retrofit alternative likely to result in immediate permit compliance. Given the site constraints, available funds, and considering the annual maintenance requirements of all options, it was determined that retrofitting an existing undersized dry pond with a media filter would be the most effective alternative. The construction documents included drafted plans for a new settling forebay to remove large particles, as well as a surface sand filter "finishing" area for removal of fine solids.

