

### **Automated Stream Data Notes: Jan 2011- Sept 2011**

Six stream sites have water quality sensors and all six now have flow as of the end of May. The summer again produced some repair expenses related to end of life and apparent vandalism in one instance. This was the tenth year for some of the equipment in the streams. The fall period has been very dry with few rain events. A lab tech and student worker performed most of the maintenance and calibration which resulted in short periods of missing data but more consistent visits.

#### **Amity Creek:**

Fewer sonde burial issues were encountered this summer though the fine silt still is causing some interference with the turbidity sensor. Raising the sonde last summer may have made it more visible. The increased visibility may have led to the suspected vandalism of the cable in the middle of the summer. The suspected vandalism resulted in lost data for most of August and part of Sept. The heavy sediment load of Amity is consistent with the stream's federal/state listing as being Impaired ([lakesuperiorstreams.org/weber/index.html](http://lakesuperiorstreams.org/weber/index.html)) for turbidity due to excess sediment loading.

#### **Chester Creek:**

This sonde is fully functional and has functioned throughout the summer with the exception of a period in July when the sonde cable was replaced due to corrosion of the connectors. The sonde was sent in for repairs in March but was replaced with a spare to prevent large holes of missing data.

#### **Tischer Creek:**

This sonde is fully functional and has functioned throughout the summer though the flow/depth sensor has been erratic. The turbidity sensor was replaced in early March. The sonde was sent in for repairs but a spare sonde was available to prevent large holes of missing data.

#### **Kingsbury Creek:**

This site was returned to the stream at the end of March and has functioned throughout the summer. The erratic communication connection issues have been alleviated with the addition of a new antenna.

#### **Miller Creek (@ Lake Superior College):**

This site is functioning, the equipment was returned to the stream in April with the exception of the depth sensor/flow sensor which was replaced in mid-May. Maintenance and operation of the unit has been the responsibility of Lake Superior College (owners of the equipment) and the college has included this in an employee's duties. Actual maintenance dates have not been received as of yet.

#### **Poplar River:**

Poplar River data collection was terminated 10/7/08 due to a lack of funding.

#### **Duluth Inlet Ship Canal:**

The water quality sonde has operated throughout the summer though the required weekly maintenance was inconsistent. This effort has been funded by a grant from the U. of Minnesota's Institute on the Environment to the Large Lakes Observatory at UM-Duluth as part of a Global Great Lakes ( [www.globalgreatlakes.org](http://www.globalgreatlakes.org) ) project. We are grateful to USGS's collaboration which has provided us with the use of their data logger and modem as well as direct access to their real-time velocity data. It was returned to the harbor at the end of April.