

Automated Stream Data Notes: Oct 2011- Mar 2012

Six stream sites had water quality sensors in place through the end of October. Five of the six have been returned this spring and have flow as of March. Most equipment was removed in mid-January to prevent ice damage and was returned in March. Though the winter was the mildest on record, the paucity of snow coupled with the fall drought and corresponding low flows allowed ice depths to threaten the equipment. The fall and spring again produced some repair expenses related to end of life as some equipment is entering its eleventh year of service.

Amity Creek:

Fewer sonde burial issues were encountered this fall though the fine silt still is causing some interference with the turbidity sensor. The sonde was removed in mid-January to prevent ice damage and returned in early March. No further vandalism has occurred. The heavy sediment load of Amity is consistent with the stream's federal/state listing as being Impaired (lakesuperiorstreams.org/weber/index.html) for turbidity due to excess sediment loading.

Chester Creek:

This sonde is fully functional and has functioned throughout the fall and into the mid-winter until ice depths in January enveloped the sonde and damaged the turbidity sensor. The sensor was replaced and the sonde returned to service in early March and is fully functional.

Tischer Creek:

This sonde is fully functional and has functioned throughout the fall though the flow/depth sensor has been erratic. The sonde was removed in mid-January and the flow/depth sensor calibrated normally in the lab. When returned to the stream in early March the sensor again acted erratically and was sent in for repair. It has been replaced with a spare to prevent large holes of missing data.

Kingsbury Creek:

This site was removed in mid-January and but wasn't returned until late March as it had ice laminated much deeper than the other streams which was slow to melt. It is fully functional.

Miller Creek (@ Lake Superior College):

This site was functioning throughout the fall. It was removed at the end of October and has yet to be re-installed. 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 fall and the required weekly maintenance has been more consistent. 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) 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 March.