

## Automated Stream Data Notes: Jan – Oct 2009

Five sites are currently in operation and these water quality sondes will continue to monitor the streams as long as the ice thickness does not become a threat to their integrity. Funding from the City of Duluth and from Minnesota's Lake Superior Coastal Program has allowed maintenance to be performed on a regular basis on four of the five. The fifth is a unit owned and operated by Lake Superior College which will be removed when the stream begins to ice over.

### Amity Creek:

The bridge reconstruction over Amity Creek was finally completed in the summer of 2008. As anticipated the sonde has suffered from periods of burial under sediment as the river adjusts to this intrusion. The sonde has been functional for the summer.

### Chester Creek:

This site has been (and continues to be) fully functional. Fall rains have increased the flows after a very dry Sept.

### Tischer Creek:

This site has also been completely functional but has seen some sedimentation impacts from both a broken water main and a nearby street reconstruction.

### Kingsbury Creek:

This site has also been completely functional but has seen some sedimentation of medium sand from an unknown source.

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

Though this site has operated throughout the summer it has not been without its problems. Cell phone coverage has been improved through the use of a new antenna mounted 18 feet in the air. The location of the monitoring unit restricts the amount of sunlight reaching the solar panel and with the cooling and shortening of daylight hours it has become necessary to place the modem on a timer to reduce the demand on the battery. Maintenance and operation of the unit has been the responsibility of Lake Superior College (owners of the equipment), though little has been done throughout the summer. Stage height is currently not functioning (Oct 15, 2009).

### Poplar River:

Poplar River data collection was terminated 10/7/08 due to a lack of funding. In concert with a different study of North Shore streams that did not include the Poplar River, NRRI-UMD staff were able to collect and freeze water from the original site on a number of dates in 2009, and perform a limited number of field measurements.