

## Telemetry and the monitoring program – Diane McKnight

Beginning the 2010-2011 season, we have installed a telemetry network that utilizes the Iridium satellite network and radios to connect 14 meteorological stations, 8 stream gages, and five lake monitoring stations to transfer data year round. Four hubs, often co-located at a monitoring site when topography allows, receive satellite phone calls originating in the US to open a connection, then sequence through as many as seventeen different data loggers via radio communications to harvest the latest data. This connectivity allows for crucial end-of-melt-season data collection, and over-winter monitoring of system components allowing the prompt repair of faulty equipment as soon as possible. Additionally, real-time summer connectivity to remote locations allows us to prioritize site visitation: we can quickly respond to changing environmental conditions, like peak stream discharges; or determine if a visit to a remote, and difficult to reach location is warranted.

Data is collected every six hours in summer, and daily in the winter (stream gages only transmit data from Oct – Mar) and promptly sent to the main LTER server (<http://www.mcmlter.org/nearRT.htm>).

