Community-based monitoring

News
LWF
September 26, 2016
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Community-based monitoring (CBM) engages citizen volunteers in collecting, analyzing, interpreting and using data about their environment. LWF has previously supported individual CBM efforts through our grants program. In October 2015, we brought together 32 participants representing 15 organizations to discuss additional opportunities in the area of community-based water monitoring.

Since then, we have been co-ordinating an emerging CBM network in Manitoba, supported by LWF's Science Advisory Council (SAC), which is comprised of nationally recognized freshwater experts.

Volunteer SAC members have developed scientifically robust sampling protocols and are training citizen volunteers in data collection and processing techniques. In 2016, LWF undertook a CBM pilot field season in partnership with LaSalle Redboine Conservation District, Seine-Rat River Conservation District and Brokenhead Ojibway Nation. Approximately 200 samples were taken throughout the summer at 12 sample sites, coinciding with Water Survey of Canada hydrometric data stations.

LWF science advisors processed collected samples in a lab on the campus of the University of Manitoba. Results and interpretation are currently being shared back to community partners.

The analysis demonstrated the importance of collecting water samples at times of high water flow, when high levels of phosphorus are generally flushed off the landscape and into our lakes and rivers. Samples taken during spring melts, flood events and after severe summer storms are crucial to improving our understanding of where, when and how phosphorus is entering our waterways.

The analysis is also identifying nutrient hotspots – areas with high levels of phosphorus export where implementing nutrient-reduction interventions will produce the strongest return on investment.

CBM data can be used by local communities and organizations to assist in planning and management for improved water quality. CBM protocols can also be used to measure the impact of water stewardship investments being made across the landscape, including water retention and wetland restoration projects. Because CBM protocols are compatible with existing long-term data sets from across Manitoba, citizen-generated data can also be used to enrich existing data sets and deepen our understanding of water quality trends, challenges and solutions.

This initiative is creating opportunities for citizens to roll up their sleeves and get involved in generating data that can inform research and policy priorities.

In 2017 we'll continue to grow our network, bringing on new partners and providing more training opportunities for conservation districts, students, landowners, First Nations and other concerned lake-lovers. CBM data will be housed in the Lake Winnipeg Basin Information Network, an online portal at the University of Manitoba.

For more information about LWF's CBM work or to get involved, contact Kirsten Earl McCorrister.

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