

APPROACH, DEVELOPMENT AND TESTING OF A SOURCE WATER MONITORING MANUAL FOR CANADA'S FIRST NATIONS

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ABSTRACT

Initiated in May 2003 the First Nations Water Management Strategy (FNWMS) was a Canadian federal program dedicated to improving water quality in and around First Nations reserves in Canada. The strategy included seven principal components:

1. establishment of a set of clearly-defined standards, protocols and policies;
2. upgrading, building water and wastewater facilities;
3. effective water quality monitoring in combination with a comprehensive and coordinated compliance and reporting regime;
4. an operation and maintenance program designed to ensure the quality of water supplies;
5. operator training and certification programs;
6. integrated water quality management protocols;
7. a public awareness campaign.

The third component above was addressed by the National Water Quality Monitoring Office of Environment Canada through development of a Source Water Monitoring protocol under the source water protection component of FNWMS.

Baseline monitoring is considered a starting point, both in delineating source water quality prior to initiation of a source water protection plan, and in detecting and addressing threats to water quality within a watershed. Essentially, the Source Water Monitoring protocol would provide plain-language "how-to" instructions for reserve-based monitoring of source water quality. Additionally a range of source water types and water quality threats specific to selected source water types would be addressed through a range of pilot projects. The First Nations Source Water Monitoring manual also needed to facilitate science-based and truly sustainable monitoring.

As such NWQMO developed the SWM manual utilizing a plain-language approach which included consideration of Aboriginal Traditional Knowledge (ATK) and other cultural perspectives shared by many of Canada's First Nations. The manual was then field-tested by carrying out training and pilot projects related to specific threats at selected First Nation locations across Canada. Additionally a collaborative international workshop was carried out in conjunction with the USGS, the Alaska-based Yukon River Inter-Tribal Monitoring Council, the Yukon Territorial Government and Environment Canada water quality scientists.

KEYWORDS

Source water quality monitoring, First Nations, plain-language, training, traditional knowledge, cultural perspectives, threats, international collaboration.