

Implementation Highlights 2015-2018

Mackenzie River Basin Bilateral Water Management Agreement between the Government of British Columbia and the Government of the Northwest Territories

October 2018

Transboundary Water Management in the Mackenzie River Basin

To promote a cooperative approach to water management in the Mackenzie River Basin, the governments of Canada, British Columbia (BC), Alberta, Saskatchewan, Northwest Territories (NWT) and Yukon signed the *Mackenzie River Basin Transboundary Waters Master Agreement* (Master Agreement) in 1997. The Master Agreement commits all six governments to work together to maintain the ecological integrity of the aquatic ecosystem of the entire Mackenzie River Basin and develop Bilateral Water Management Agreements (Bilateral Agreements).

Bilateral Agreements provide a framework to manage shared water resources in the Mackenzie River Basin.

Bilateral Agreements are important to both upstream and downstream jurisdictions because they:

- Provide a framework to manage shared water resources in the Mackenzie River Basin (MRB) in a sustainable manner for current and future generations.
- Help to ensure that upstream jurisdictions do not unreasonably harm the aquatic ecosystem of downstream jurisdictions.
- Commit the jurisdictions to consult, notify and share information on developments and activities that might affect the aquatic ecosystem in other jurisdictions.
- Establish a common and agreed-to set of conditions regarding water quality, water quantity, aquatic life and monitoring that will demonstrate how jurisdictional interests are being achieved.
- Establish learning plans and reporting schedules to inform decision making and aquatic ecosystem health throughout the MRB.

Transboundary waters for this Agreement refer to those within the Liard, Petitot and Kakisa sub-basins.

*Members of the Bilateral Management Committee are:
Lynn Kriwoken,
Government of British Columbia Member
Katherine Capot Blanc,
BC Indigenous Member
Dr. Erin Kelly,
Government of Northwest Territories Member
Forthcoming,
NWT Indigenous Member*

Bilateral Water Management

The BC-NWT Bilateral Agreement was signed on October 15, 2015. In this Agreement, the NWT and BC agree to be proactive and to facilitate joint learning that will inform bilateral water management actions on transboundary waters. Technical details related to learning, transboundary objective setting, monitoring and management actions are set out in the Appendices to the Agreement. Transboundary waters for this Agreement refer to those within the Liard, Petitot and Kakisa sub-basins.

The Agreement does not negatively affect any recognized or asserted Aboriginal or treaty rights and is intended to protect the waters upon which the exercise of those rights depends.

Implementation Highlights 2015-2018

Since signing the BC-NWT Bilateral Agreement, both jurisdictions have begun collaborative implementation of the Agreement. An update on progress of key commitments is provided below.

- BC and NWT have appointed government members to the Bilateral Management Committee (BMC). A BC Indigenous member from the Fort Nelson First Nation has also been appointed to the BMC. The NWT is in discussion with the NWT Water Strategy Aboriginal Steering Committee to nominate an Indigenous member to the BMC.
- A literature review of traditional knowledge research for the Liard River sub-basin through the Tracking Change research project¹ was completed. The project contributes to learning plan development.
- A [*Preliminary State of Groundwater Knowledge in the Transboundary Regions of the Mackenzie River Basin, NWT*](#) report was completed. The report contributes to learning plans and informs the classification of transboundary groundwater.
- The *Liard and Petitot River Basins State of Knowledge Report* was completed and will inform learning plan development.
- [*The Liard and Petitot Sub-basins Transboundary Groundwater Resources Assessment*](#) project and report were completed and published in the BC Water Science Series.
- A technical workshop with MRB jurisdictional representatives and subject matter experts was held to discuss methods to derive site-specific water quality tracking metrics, triggers and objectives. A second technical workshop is being planned for 2018-2019.

¹ Tracking Change is a research project led by University of Alberta in partnership with the Government of the NWT and the Mackenzie River Basin Board, along with many Indigenous governments and organizations throughout the Mackenzie River Basin as well as academic partners from across Canada. The project also has international community and academic partners. See www.trackingchange.ca for more information.



Liard River, GNWT

Five-year Implementation Plan

Following its establishment, the BMC will meet annually, in person. A five-year implementation plan will guide members on key actions and tracking progress on implementation. The BMC is supported by a technical committee, which will meet more often. Over the next five years, the committees will continue to pursue the commitments in the Agreement, including:

- Annually review transboundary water classification (currently the Liard and Petitot Rivers are classified as Class 2 for surface and groundwater quality). Class 2 rivers are described as water bodies with a moderate level of existing and/or projected development.
- Exchange information about the ecological integrity of the aquatic ecosystem.
- Exchange information about current and future development and activities.
- Establish and implement learning plans for the Liard and Petitot Rivers.
- Identify and implement approaches to synthesize and blend traditional and local knowledge, western science and social science, and other forms of knowledge relevant to the setting and assessment of transboundary objectives.
- Work towards developing transboundary water quality tracking metrics for the Liard River. Tracking metrics will reflect seasonal site-specific characteristics of each water body and will be used to identify water quality changes over time.
- Improve monitoring programs, where necessary, to facilitate learning plan development.

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Current Water Monitoring Near the BC-NWT Border

Long-term monitoring is critical to understand whether changes are taking place in the natural environment. Long-term datasets can reveal important patterns, which allow trends, cycles and rare events to be identified. This is particularly important for complex, large systems such as the Liard River, where signals may be subtle and slow to emerge. With increasing variability in hydrological regimes associated with increasing climatic variability, long-term monitoring is very important.

The primary goals of water quantity and quality monitoring of transboundary waters are to track changes in water quantity and quality over time, determine anthropogenic and natural drivers for change, and ensure that sufficient water is available and of good quality for all downstream uses.

As part of implementation, in 2018, BC is progressing on drilling one, possibly two, monitoring wells in the Fort Nelson, BC, area. Working together, the Fort Nelson First Nation and the Province are coordinating efforts to move forward on establishing these wells. The NWT is also looking at drilling new monitoring wells on the NWT side of the border near Fort Liard. The information from both sides of the border will improve understanding of the shared groundwater in the Liard Basin.

Water Quantity Sites in the BC-NWT Transboundary Reach:

- Liard River at Fort Liard
- Petitot River below Highway No. 77

Water Quality Sites in the BC-NWT Transboundary Reach:

- Liard River at Fort Liard
- Liard River above Kotaneelee River
- Petitot River downstream of Tsea River
- Petitot River below Highway No. 77

There are also two additional BC water quantity and quality sites located upstream of the BC-NWT border that are important for regional and basin-level monitoring. Both of these can be used to inform BC-NWT transboundary conditions. These are:

- Liard River at Upper Crossing
- Liard River at Lower Crossing

For More Information

NWT:

<https://www.enr.gov.nt.ca/en/services/water-management/transboundary-water-agreements>

nwtwaterstrategy@gov.nt.ca

BC:

<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-planning-strategies/water-management-agreements>

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