



Agency Report to the Mackenzie River Basin Board

**Meeting 61 of the
Mackenzie River Basin Board**

**December 4-5, 2019
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1. Bilateral Water Management Agreements

British Columbia/Northwest Territories

British Columbia (BC) and the Northwest Territories (NWT) signed a Bilateral Water Management Agreement (BWMA) in October 2015. The BC-NWT BWMA applies to all transboundary waters shared by the NWT and BC in the Mackenzie River Basin, including the Liard and Petitot River Watersheds. In November 2018, BC and NWT released an Implementation Highlights Report that outlines implementation activities undertaken from 2015-2018. A Bilateral Management Committee (BMC) was established to administer the agreement. The first BMC meeting took place in April 2019.

Alberta/Northwest Territories

Alberta (AB) and the NWT signed a BWMA in March 2015. The AB-NWT BWMA applies to all transboundary waters shared by the NWT and AB in the Mackenzie River Basin including the Hay and Slave River Watersheds. The Parties have established a BMC to administer the agreement as well as a technical committee to support the agreement. Annual reports for the first and second years of implementation were released November 2017 and December 2018 respectively. The annual report for 2017-18 is scheduled to be released in the early 2020.

Yukon/Northwest Territories

Yukon (YT) and the NWT signed a BWMA in 2002. This BWMA applies to the Peel River Watershed. Planning related to the management of transboundary water resources continued through the implementation of the NWT Water Stewardship Strategy and the Yukon Water Strategy. YT and NWT are actively working on updating the current agreement to bring it in line with the recently signed BWMA's. Two distinct Yukon-NWT intentions documents and appendices are being developed – one for the Peel/Mackenzie Delta Basins and one for the Liard Basin.

Saskatchewan/Northwest Territories

Saskatchewan (SK) and the NWT have shared information and discussed respective interests for each component of the BWMA. The SK-NWT BWMA will apply to all transboundary waters shared by SK and the NWT in the Mackenzie River Basin.

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2. Water-Related Legislation / Policy / Regulations / Planning

NWT Water Stewardship Strategy

Beginning in 2008, the Government of the Northwest Territories (GNWT) and Crown Indigenous Relations and Northern Affairs Canada (CIRNAC) (formally Indigenous and Northern Affairs Canada) worked with representatives from Indigenous governments, NWT communities, regulatory boards, environmental organizations, industry, academic institutions and the general public to develop a water strategy for the NWT. *Northern Voices, Northern Waters: NWT Water Stewardship Strategy* (the Water Strategy) was released in May 2010, and updated in January 2018 to reflect changes in organizational responsibilities and policies. Implementation of the Water Strategy is guided by five-year Action Plans. The 2011-2015 Action Plan was released in May 2011, followed by the current 2016-2020 Action Plan in June 2016.

The 2016-2020 Action Plan builds on the 2011-2015 Action Plan and continues to put the vision of Water Strategy into motion – *‘the waters of the NWT will remain clean, abundant and productive for all time’*. The Action Plan identifies Keys to Success with associated action items, performance indicators, deliverable dates, and lead and supporting water partners.

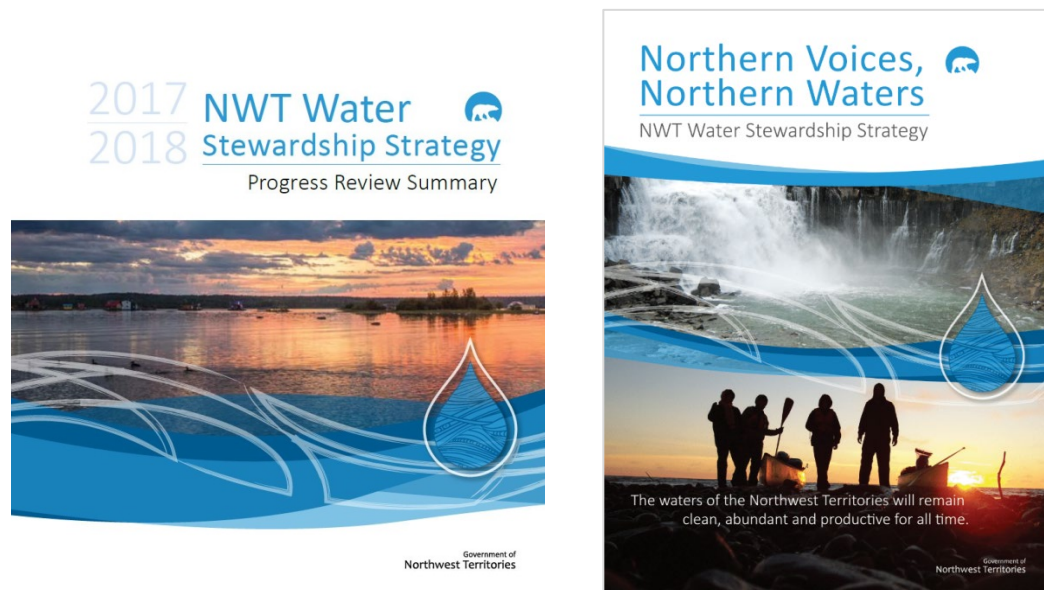
Key approaches identified in the Action Plan include:

- Collaboration and coordination among water partners
- Capacity building, leadership training and education
- Transboundary water agreement negotiation and implementation
- Increased understanding of aquatic ecosystem health
- Community-based monitoring
- Support for municipal water licence compliance
- Expert knowledge and advice on industrial development

The Water Strategy is coordinated by the Department of Environment and Natural Resources Department (ENR), Water Management and Monitoring Division of the GNWT, but it is based on collective implementation activities by all water partners, including Indigenous governments and organizations, non-governmental organizations, federal and territorial government departments, community organizations, regulatory boards and academic institutions.

Indigenous governments guide implementation of the Water Strategy through an Aboriginal Steering Committee (ASC). The ASC first formed in 2009 to guide the development of the Water Strategy. The ASC continues to guide implementation of the Action Plans and ensure that implementation activities reflect the needs and values of Indigenous governments and people.

Annual progress reviews of the Water Strategy and Action Plan are conducted to ensure that progress is being made, and to adjust actions as necessary. Progress review results were most recently released in October 2018; the next progress review report will be released in late 2019. Independent evaluations of the Water Strategy are also undertaken every five years to determine progress and address challenges. An independent evaluation was conducted in 2015, the findings from which informed the development of the current Action Plan for 2016-2020. The findings from the independent evaluation of 2016-2020 Action Plan, scheduled for 2020, will inform the subsequent development of the five-year Action Plan for 2021-2025.



For more information visit: www.nwtwaterstewardship.ca

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NWT Waters Act

In April 2014, the federal *NWT Waters Act* was devolved to the NWT along with its regulations becoming the territorial *Waters Act* and Waters Regulations. Since that time, the GNWT has initiated a process to amend and modernize the Act. This process is ongoing and requires substantial engagement and collaboration with Indigenous governments and organizations, the federal government, non-government organizations, communities and industry. This work is anticipated to continue during the life the 19th legislative assembly.

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GNWT Drinking Water Action Plan

Managing Drinking Water Quality in the Northwest Territories (May 2005) outlines a safe drinking water framework and strategy for the NWT that includes keeping NWT water clean. The current focus is on supporting communities in areas of community-based monitoring, source water protection planning, water treatment plant infrastructure management (planning, design, construction, and operations), operator certification, meeting regulatory requirements, and monitoring water quality.

Increasing public awareness and making drinking water quality data available through a drinking water quality database have been key activities. The public can access information about drinking water in the NWT at the website: www.nwt drinkingwater.ca. This website describes the mandates and responsibilities of GNWT Departments and outlines the steps involved in ensuring drinking water remains safe. It provides information about water treatment measures, monitoring and testing, source water protection and other important aspects of our territory's drinking water. Community source water [catchment maps](#) are also available.

The GNWT, represented by the Interdepartmental Drinking Water and Waste Committee, regularly releases reports on drinking water for NWT communities. Full reports are released every two years and summary reports are released every other year. These reports are available on the NWT drinking water website.

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Conservation Planning in the NWT

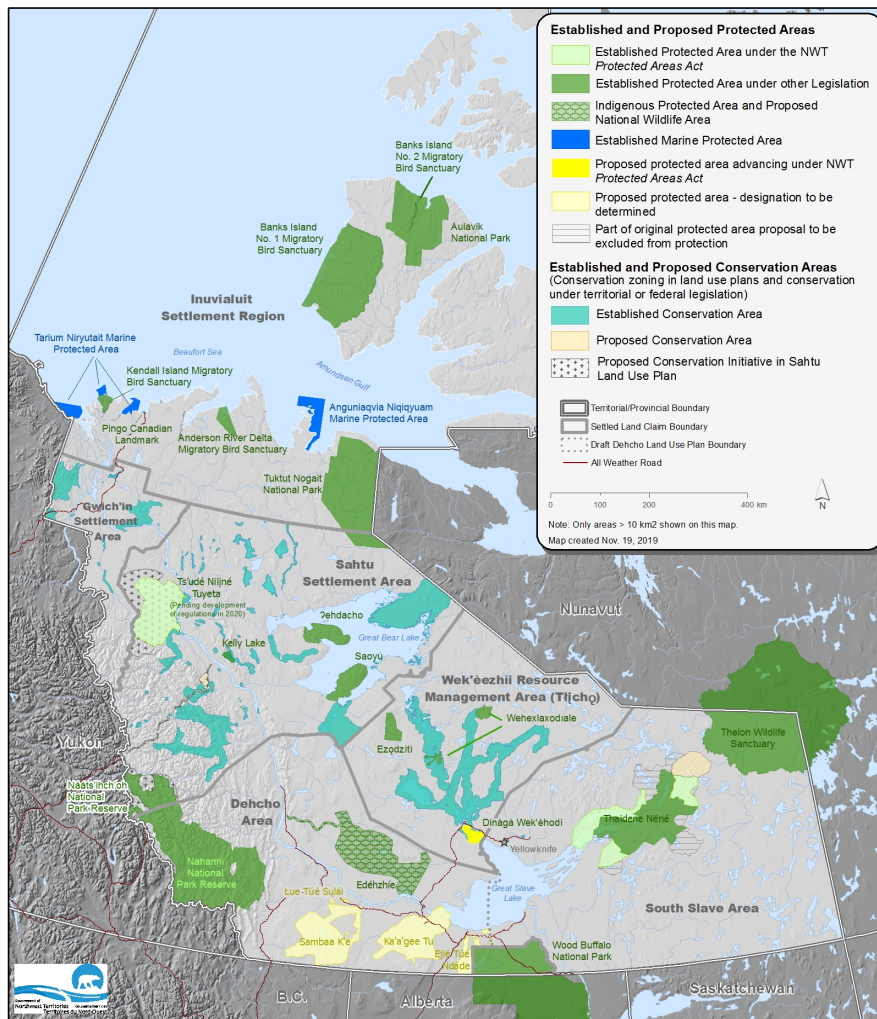
In October 2016, the GNWT released *Healthy Land, Healthy People: GNWT Priorities for Advancement of Conservation Network Planning 2016-2021* (www.enr.gov.nt.ca/programs/conservation-network-planning/healthy-land-healthy-people), a five-year work plan to advance conservation network planning in the NWT. The document outlines key tasks the GNWT will undertake to pursue a comprehensive and collaborative approach to conservation network planning to ensure biodiversity and ecosystem integrity are maintained into the future. Conservation network planning includes the establishment and management of a conservation network, including protected areas and conservation areas. It also involves the consideration of ecosystem patterns and processes, and landscape connectivity. The plan includes two priority outcomes for the GNWT to achieve by 2021 in partnership with Indigenous governments and organizations (IGOs) and other planning partners.



One priority outcome is to conclude planning and decision-making processes for the establishment of eight proposed protected areas. As part of this outcome, the GNWT collaboratively and cooperatively developed the new *Protected Areas Act* with a technical working group of IGOs. The new Act came into force in June 2019.

Under this Act, the GNWT concluded negotiations for establishment agreements with Indigenous governments and organizations for two territorial protected areas under the new Act: Thaidene Nënë (East Arm of Great Slave Lake) and Ts'udé Niljné Tuyeta (Ramparts Wetlands and River). Next steps for both areas are the establishment of a management board, the completion of regulations and the development of a management plan within five years. The GNWT is also in the process of negotiating an establishment agreement for a third area, Dìnàgà Wek'èhodì (on the North Arm of Great Slave Lake), completion of which is anticipated for 2020.

Established and Proposed Conservation Network in the Northwest Territories



The Northwest Territories State of the Conservation Network 2016, a status report on indicators of the health of the NWT conservation network, was released in August 2016 (see www.enr.gov.nt.ca/en/services/conservation-network-planning/state-conservation-network-report). The objective of the report is to provide a comprehensive overview of the present state of the conservation network in the NWT. The *Protected Areas Act* requires a report to be released at least every five years and it is anticipated that the next iteration will be in 2021.



For the most current information on conservation network planning visit the ENR Conservation Planning page at www.enr.gov.nt.ca/programs/conservation-planning or email ConservationPlanning@gov.nt.ca.

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Regional Land-Use Planning

[Northern Lands, Northern Leadership: The GNWT Land Use and Sustainability Framework](#) outlines the GNWT's Vision and Guiding Principles for land management in the NWT. Released in early 2014, it identifies regional land-use planning as the primary instrument to define where certain activities can take place and affirms the importance of incorporating community and regional aspirations in land use plans.

Land-use plans provide local input into the overall framework for resource management in the NWT. Land-use plans are used to establish regional zones and broad criteria that help evaluate and screen project proposals as part of regulatory permitting processes. Zoning provisions identify the following:

- areas that are well suited for industrial development;
- areas that can support industrial development while respecting specific cultural or ecological values; and
- areas where, for cultural or ecological reasons, development is prohibited.

The GNWT participates in land-use planning initiatives throughout the territory as a planning partner, regulator and, in some cases, approver. In addition, the GNWT may also participate in transboundary planning initiatives in Alberta, Nunavut and the Yukon. The GNWT's participation in land-use planning processes is guided by a suite of land interests. One of the interests is that water quality, quantity and flow are maintained in a sustainable manner to support the health and well-being of NWT residents, land and animals.

Land Use Plans and Water Management

Legally binding land-use plans are in place in the Sahtú and wìch'in land claim regions and on Tłı̄chǫ private lands in the Tłı̄chǫ region. The NWT is also working collaboratively with Indigenous Government Organizations and Canada to advance land-use planning in unplanned areas of the NWT, including public lands in the Wek'èezhìi and the Southeastern part of the NWT. The Dehcho Land Use Planning Committee is working to finalize the Draft Interim Dehcho Land Use Plan. In the Inuvialuit Settlement Region, Community Conservation Plans (non-legally binding) guide acceptable activities within specific regions. Collectively, the guidance and/or legally binding direction in land-use plans play an integral role in managing waters in the NWT.

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Climate Change

The GNWT is actively involved in national and territorial climate change work.

Pan-Canadian Framework on Clean Growth and Climate Change

The 21st Conference of the Parties (COP 21), held in December 2015, resulted in the adoption of a new international agreement on climate change referred to as the Paris Agreement. A key long-term goal of the Paris Agreement is to limit the increase in global average temperatures below 2°C (above pre-industrial levels), with an aspirational aim to limit the increase to 1.5°C.

The Pan-Canadian Framework on Clean Growth and Climate Change was released in 2016 and is Canada's response to implementing the Paris Agreement by meeting emissions reductions targets, growing the economy, and building resilience to a changing climate. The GNWT participated in the development of the Pan-Canadian Framework, which was signed by 12 of 13 provinces and territories during a First Ministers of Canada meeting on December 9, 2016.

Reporting on the progress made to implement the Pan-Canadian Framework is released annually by the Government of Canada. Specifically, the 2018 progress report was released in December 2018, and, similarly, the 2019 progress report is expected to be released this calendar year.

2030 NWT Climate Change Strategic Framework

The GNWT released the 2030 NWT Climate Change Strategic Framework (the Strategic Framework) on May 1, 2018. The Strategic Framework provides a roadmap for how the NWT will address climate change in the short and long term, as reflected in its goals and cross-cutting themes:

- Goal #1 – Transition to a strong, healthy economy that uses less fossil fuel, thereby reducing greenhouse gas emissions by 30% below 2005 levels, by the year 2030
- Goal #2 – Improve knowledge of the climate change impacts occurring in the NWT
- Goal #3 – Build resilience and adapt to a changing climate.
- Cross-cutting – Leadership, communication and capacity
- Cross-cutting – Economic impacts and opportunities

It was informed by valuable input from Indigenous and community governments, territorial and federal departments, co-management boards, non-government organizations, academic institutions, industry, and the general public. This was achieved through a series of regional workshops, an online survey, individual stakeholder meetings, and a public review process.

Released on April 3, 2019, the 2019-2023 NWT Climate Change Action Plan is the first of two five-year action plans to guide the implementation of the Strategic Framework over the next five years. The Action Plan was developed with input from GNWT departments, federal government departments, Indigenous governments and organizations, non-governmental organizations, co-management boards, industry and other partners, including the NWT Association of Communities. Part 1 of the Action Plan includes 104 action items that are resourced and scheduled to be completed over the next five years. Part 2 includes areas for future collaboration where resources, both financial and human, are required to develop and initiate actions.

For further information please visit: www.enr.gov.nt.ca/en/services/climate-change

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3. Science, Monitoring and Information

NWT Cumulative Impact Monitoring Program

The Northwest Territories Cumulative Impact Monitoring Program (NWT CIMP) is an environmental monitoring and research program within the Government of the Northwest Territories Department of Environment and Natural Resources. NWT CIMP uses science, traditional and local knowledge to understand cumulative impacts and environmental trends. Program activities are designed to meet the information needs of northern decision-makers, particularly NWT regulators and the public that contributes to wise resource management decisions. The program is based in land claim agreements and the *Mackenzie Valley Resource Management Act* (MVRMA).

Projects are underway in all regions of the NWT and support community participation in all aspects of monitoring. NWT CIMP currently focuses on cumulative impacts related to three valued components decision-makers agree are of critical importance to the people of the NWT: caribou, water and fish. The program is guided by the NWT CIMP Steering Committee, which is a partnership among NWT Indigenous governments, the federal and territorial governments, and several co-management boards. Program information including annual reports and project summaries are available at www.nwtcimp.ca.

NWT CIMP also facilitates the NWT Environmental Audit which is a requirement of land claim agreements and the MVRMA and is conducted every five years by an independent auditor. The NWT Environmental Audit checks to see how well efforts are working to protect the environment. If the Audit finds something that is not working as well as it could, it can recommend action to make things better. Previous audits were done in 2005, 2010, and 2015. The 2020 NWT Environmental Audit technical and plain language reports are expected to be made public by summer 2020. More information is available at www.enr.gov.nt.ca/en/services/nwt-environmental-audit.

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Environmental Monitoring on Transboundary Rivers

Water and Suspended Sediment Quality

Water and suspended sediment quality samples have been collected from the major NWT transboundary rivers for over thirty years: Slave (since 1990), Hay (since 1994), Liard (est. 1992) and Peel (est. 2002). Since 2011, up to 3 sample events occur on each river every year

and, depending on the river, are analyzed for physical parameters, major ions, nutrients, metals, hydrocarbons, organochlorines, chlorinated phenols and dioxins and furans.

The data generated from this program are used to: 1) provide a general overview of the current state of water and suspended sediment quality; 2) determine if water quality has changed over time; 3) help to address community concerns about metals and organic compounds in the rivers; and 4) support the development of site-specific water quality triggers and objectives for established and future bilateral water management agreements.

Technical and plain language summary reports are available for the Slave, Hay and Peel rivers. State of Aquatic Knowledge Reports for the Liard/Petitot and Hay River Basins have also been completed, in collaboration with BC and AB, respectively. These reports can be found at: www.enr.gov.nt.ca/en/services/water-management/reports-and-publications-water-management.

Water Quantity

In addition to water quality monitoring, the Water Management and Monitoring Division collaborates with Environment and Climate Change Canada (ECCC) in a cost-shared hydrometric monitoring program, where ECCC administers the program. Water quantity information is collected by ECCC (Water Survey) at over 100 stations across the NWT. In relation to transboundary monitoring locations, there are three stations where water quantity information is collected: 1) Liard River at Ft. Liard (since 1942), 2) Peel River above Fort Macpherson (since 1969) and 3) Hay River near NWT/Alberta border (since 1986). Note: There is another hydrometric monitoring site near Ft Smith, NT on the Alberta side of the NWT-AB border monitoring the Slave River near Ft. Fitzgerald, AB.

Groundwater

The GNWT, in collaboration with the University of Guelph and the University of Calgary, is conducting a baseline groundwater quality investigation in the NWT portion of the Liard Basin. The objectives of this groundwater monitoring project are: 1) to determine the quantity and quality of groundwater; 2) to characterize the groundwater flow system and interaction with nearby surface water bodies; 3) to define the sequence of hydrogeologic units; and 4) to evaluate the vulnerability of the local and basin-scale aquifers. A first field campaign took place August 2-25, 2019. Drilling occurred at two locations at a depth of 35 and 51.5 meters, and downhole geophysics and coring activities took place. A second field campaign is planned for March 2020, where up to six boreholes in total will be drilled at up to three sites, with a targeted depth of 110 to 149 meters. The combination of core and downhole geophysical data will be used to install either multi-level systems or downhole tools to allow continued groundwater monitoring in these wells.

Biology

To fulfill the commitments of the AB-NWT BWMA, a benthic macroinvertebrates monitoring program was initiated in 2017 in the Slave and Hay rivers near the NWT-AB border. The objective of the monitoring program is to determine current conditions and establish a baseline that can be used to track the status of those organisms over time. On each the two transboundary rivers (Slave and Hay rivers), between 30 to 35 kick samples were collected each year at six different locations.

NWT and AB have also been working with community members in Fort Smith and Fort Resolution and researchers from Wilfrid Laurier University and the University of Saskatchewan to develop a pilot fish monitoring program for the Slave River. The objective of the program is to track fish health and tissue contaminant levels over time and to provide an early warning of change in the aquatic environment. In September 2019, large- and small-bodied fish were collected in the Slave River near Fort Smith and Fort Resolution. Fish were sampled for health indicators (e.g., length, weight, and organ sizes) and contaminants. Samples are currently being analyzed at the University of Saskatchewan.

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Guidelines for the Determination of Water Quality Objectives

In 2018, the GNWT did not advance work on this initiative as amendments to the *Waters Act* were a priority. However, the GNWT will continue work to develop these guidelines following completion of amendments to the *Waters Act*.

These guidelines will contribute to the development of a consistent and clear process for the determination of downstream site-specific water quality objectives (SSWQOs) for industrial projects in the NWT, as well as assist in the implementation of the bilateral water management agreements.

A key component of this work is incorporating traditional knowledge and traditional use considerations into the trigger/objective development. When work on these guidelines is reinitiated, the GNWT will continue to engage with Indigenous organisations to identify appropriate approaches and methods for identifying and accessing traditional knowledge that can guide setting SSWQOs.

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Guideline for Baseline Development

The collection of water quality data and the development of water quality monitoring programs are an important part of the regulatory regime in the NWT. Baseline monitoring is necessary to provide the data and information needed to assess water quality and make informed decisions regarding the current and future uses of aquatic ecosystems. To characterize and manage water resources across the NWT, reliable and consistent baseline and monitoring information is necessary.

ENR, in collaboration with the Land and Water Boards of the Mackenzie Valley and the Mackenzie Valley Environmental Impact Review Board (MVEIRB), has initiated the development of this guidance document to provide direction regarding the development and implementation of baseline water quality monitoring programs and to foster improved data collection and overall knowledge about water quality in the NWT. It is anticipated that these guidelines would be released in early 2020.

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4. Major Projects

Water Boards

Regional land and water boards were created in the NWT pursuant to lands, resources, self-government agreements and federal legislation (i.e., *Mackenzie Valley Resource Management Act*). The territorial *Waters Act* also directs the Boards' activities. Various departments of the GNWT and Canada review and provide comment on applications for water licences from the following Boards:

- Mackenzie Valley Land and Water Board (NWT unsettled areas)
- Sahtu Land and Water Board (Sahtu Settlement Region)
- Gwich'in Land and Water Board (Gwich'in Settlement Region)
- Wek'èezhìi Land and Water Board (Tłìchò Settlement Region)
- Inuvialuit Water Board (Inuvialuit Settlement Region)

The Mackenzie Valley Land and Water Board posts all applications for land-use permits and water licences on its website (www.mvlwb.com). The site also tracks applications for the Wek'èezhìi Land and Water Board, the Sahtú Land and Water Board, and the Gwich'in Land

and Water Board. The Inuvialuit Water Board also posts applications for water licences on its website (www.inuvwb.ca).

Environmental Assessments

The body responsible for conducting environmental assessments in the NWT portion of the Mackenzie River Basin (MRB) depends on the location of the proposed development. In the Mackenzie Valley region, MVEIRB carries out environmental assessments. In the Inuvialuit Settlement Region, the Environmental Impact Review Board (EIRB) carries out environmental assessments under the Inuvialuit Final Agreement. Additionally, the newly enacted *Impact Assessment Act* (2019), which replaced the *Canadian Environmental Assessment Act* (2012), also applies in the Inuvialuit Settlement Region.

There is one environmental assessment currently being undertaken by the MVEIRB that falls within the MRB:

- Diavik Diamond Mines Inc., Depositing Processed Kimberlite in Pits and Underground – *Report of Environmental Assessment and Reasons for Decision* expected circa December 2019 / January 2020

There are no environmental assessments currently being carried out by the EIRB that falls within the MRB.

Both the MVEIRB and EIRB have searchable public registries for information related to the environmental assessment of projects. Databases are found at the following addresses, respectively: reviewboard.ca and eirb.ca.

In February of 2016, the AB government issued a Final Terms of Reference for the Amisk Hydroelectric Dam. Located in north-western AB, the proposed Amisk Dam would be constructed on the Peace River. The assessment of potential transboundary effects on the Slave River have been scoped into the environmental assessment. The GNWT is monitoring the progress of this environmental assessment and will participate as required. As of November 2019, the project has not passed Environmental Impact Assessment submission stage of the Alberta Environment and Parks and the Impact Assessment Agency process.

Bill C-88, An Act to amend the Mackenzie Valley Resource Management Act and the Canada Petroleum Resources Act and to make consequential amendments to other Acts, was passed by Parliament June 19, 2019. The GNWT participated during the review period.

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5. Events, Conferences and Seminars

GNWT held its annual Water Strategy implementation workshop on October 22-23, 2019 in Dettah, NWT. The workshop brought water partners together to share the recent implementation work and discuss how we can contribute to work together towards the vision of the NWT Water Strategy. The theme of this year's workshop was "Northern Waters in a Changing Climate".