



# Agency Report to the Mackenzie River Basin Board

**Meeting #59**  
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## 1. Bilateral Water Management Agreements

### Bilateral Water Management Agreement

The governments of Yukon and NWT have worked together to integrate the current Transboundary Water Management Agreement with the multilaterally negotiated template developed by the MRBB. The Agreement and process for consultation were discussed at the last Yukon-NWT bilateral meeting with First Nation governments in Inuvik (March, 2017). The process will advance once the Peel Regional Land Use Planning consultation process has been concluded.

The governments of Yukon and NWT are currently working to draft a Bilateral Water Management Agreement that covers 64km<sup>2</sup> in the Liard basin, which is not covered by the either of the BC-Yukon or BC-NWT BWMA's. This Agreement will seek to mirror the Agreements currently in place.

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

### Regional Land Use Planning

The process to finalize the regional land use plan for the Peel watershed is underway. Following the March 2017 decision of the Supreme Court of Canada, and consistent with direction provided at that time, Yukon government is currently consulting affected communities and stakeholders on the 2011 Final Recommended Plan. The final step will be to submit the Plan to Cabinet for review and approval.

The Yukon government continues to work with First Nations on many important initiatives vital to Yukon's social and economic well-being. The Government of Yukon values the Final Agreements and is committed to upholding them.

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### **3. Science, Monitoring and Information**

#### Monitoring Update

##### **Peel Watershed**

After several years of review, long-term monitoring in the Peel watershed was approved. Funds received through the Yukon Water Strategy were used to implement this work. A water quality monitoring station was reactivated on the Ogilvie River in 2016. This station is road-accessible and serves as a reference site for the upper portion of the watershed. Cross-basin (synoptic) monitoring will occur as opportunities arise and basin activities dictate.

The Yukon government collected baseline data in the Eagle Plains area from 2013 to 2018, and worked with the University of Calgary on a Natural Sciences and Engineering Research Council (NSERC) project to collect groundwater and surface water samples for the analysis of isotopes and dissolved gases. One of the sample sites is located in the Peel watershed and includes a stream gauging station. Six shallow baseline groundwater monitoring wells were added in the Eagle Plains area in September 2016. Three groundwater monitoring wells are located in the Peel watershed. A draft synthesis report entitled “Eagle Plains Baseline Water and Sediment Quality Characterization,” of all water data collected by Water Resources Branch in the Eagle Plains Basin, has been completed; however, not yet released.

##### **Southeast Yukon**

There are several drivers to initiate and renew water monitoring in the Liard Basin. Trans-boundary MRBB/Liard discussions with B.C. are expected to prioritize monitoring at agreed location(s). Yukon has partnered with Environment Canada in the operation of the long-term water quality trend monitoring station, Liard River at Upper Crossing.



The Yukon government collected baseline data in the Kotaneelee area from 2014 to 2018, and worked with the University of Calgary on a Natural Sciences and Engineering Research Council (NSERC) project to collect groundwater and surface water samples for the analysis of isotopes and dissolved gases.

Six surface water quality sites were established in the region in 2014. A surface water (quality/quantity) site on the Beaver River site was chosen as a reference site due to its proximity to the La Biche River. There are currently nine long-term groundwater monitoring wells in the Liard Basin, one of which resides in the Kotaneelee area. Six shallow groundwater wells were installed in the Kotaneelee area in 2015: two on the Beaver River and four on the La Biche River. An RFP is presently being drafted to procure a contractor to prepare a baseline characterization report of the water quality of the Kotaneelee area, which will be completed by March 31, 2019.

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## **Snow Survey Network Survey Bulletin and Water Supply Forecast**

Environment operates 10 snow survey stations within the Yukon portion of the Mackenzie River Basin, with three stations in the Peel Basin and seven stations in the Liard Basin. The snowpack at these stations is sampled three times annually for depth, density, and snow water equivalent (SWE). Results are published in the [Yukon Snow Survey & Water Supply Forecast](#) at the beginning of March, April and May each year. Past editions of the bulletin can also be viewed on the website.



Starting in 2018, a new version of the Snow Bulletin will be produced, and some snow survey stations outside of the basins' margin will be included in the runoff potential analysis for a total of eight stations in the Peel Basin and nine stations in the Liard Basin. The information collected will continue to be used to make projections of total runoff volumes for the spring and summer periods as well as to roughly estimate the potential for higher-than-normal flows for the river basins, including some sub-basins.

## **Hydrometric Network**

Environment's current small stream hydrometric network has two stations in the Liard Basin and one station in the Peel Basin. Continuous water level measurements are recorded at each station using electronic data loggers deployed in stilling wells. Regular discharge measurements are taken seasonally (May through September) with a particular emphasis on capturing discharge during spring peak flow. Starting in 2019, some stations will become equipped with real-time data transmitters and winter flow estimates will eventually become available.

Environment also maintains a cost-sharing agreement with Environment Canada to operate four hydrometric stations within the Peel Basin and eight hydrometric stations within the Liard Basin.

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## Yukon Water Online Information

**Water Monitoring:** The Yukon government maintains an online water information portal ([YukonWater.ca](http://YukonWater.ca)), which is the primary source for information about water monitoring in Yukon. The website houses the [water data catalogue](#), a centralized database that provides water monitoring information through an interactive map (e.g., site location, period of record, type of data collected, etc.).

Additional monitoring locations continue to be added to the water data catalogue. The catalogue now contains over 2700 monitoring locations from 20 networks. In addition to the metadata that is provided through the catalogue, the long-term goal is to provide direct access to water data for certain networks.

[YukonWater.ca](http://YukonWater.ca) also provides a range of educational material and information about Yukon's water resources including:

- Water facts and information (e.g., water cycle, water use, etc.);
- Water management;
- Legislation that guides interactions with water; and
- News and updates related to water in Yukon.

**Access to Water Data:** Yukon recently launched an open data portal as a single point of access to publically accessible data. All historical [snow survey data](#) collected as part of the government network is now accessible through the platform.

Additionally, a project is underway to improve the accessibility to make water well drilling records. Over the past year, considerable effort has been put into improving the quality of records by assigning map coordinates and quality controlling data with the goal of providing access to well logs through a web-based interactive map.



**Regulatory Data:** The Yukon Water Board maintains an online public registry called [Waterline](#) that stores and disseminates information related to water licensing processes in Yukon. The system allows licence holders to submit reports and data as required by water licences and allows for public access to this information. Significant improvements to the registry's notification process allows regulators to track reports that are late or have not been submitted.

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## 4. Major Projects

### Regulatory Update

#### Mineral Exploration

No mineral exploration programs have been proposed in the Peel watershed in 2018. There are two current Class 3 (advanced exploration) Mining Land Use Approvals in the watershed, both in the southern portions of the basin.

There are twelve current Class 3 Mining Land Use Approvals in the Liard watershed. Four properties are located along the northern portion of the Nahanni Range Road, four in the northwest portion of the basin and the remaining four in the southern half.

#### Major Mines

##### *Liard Watershed*

*Wolverine Mine:* Yukon Zinc Corporation put the Wolverine Mine, located 180 km southeast of Ross River, into Temporary Closure on January 27, 2015.

The company continues to work with regulators to secure the site related to closure.

*Sä Dena Hes Mine:* Teck Resources is working towards concluding closure/reclamation activities of the Sä Dena Hes lead-zinc mine.

*Kudz Ze Kayah Mine:* BMC Minerals has applied to the Yukon Environmental and Socio-economic Assessment Board for an Executive Committee screening of its mine plan, with permitting anticipated to be completed by 2020.



## Oil and Gas

*Kotaneelee Gas Project:* The Kotaneelee gas field and plant are currently inactive and an assessment has been completed by the Yukon Environmental and Socio-economic Assessment Board for well abandonment and closure activities.

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