December 14, 2018

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Research Liaison
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Nunavut Impact Review Board (NIRB)
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Cambridge Bay, NU
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RE: Scientific Research License #04 037 18N-M 2018 Annual Summary Report and 2019 Plans.

Dear NRI, NIRB and interested parties,

With this letter, I report on the river sampling activities of the project entitled, *Monitoring Seasonal Environmental Change in Rivers of the Kitikmeot Region*, permitted under the multiyear NRI licence number: 04 037 18N-M. The goal of this project is to enhance our capacity to directly observe physical and biogeochemical characteristics of rivers across the Kitikmeot through the use of in-situ observational systems ("river moorings") to collect measurements continuously over the deployment period. These river moorings will provide the first time series observations of river physical and biogeochemical parameters in the Kitikmeot Region, observations that are crucial to understanding and predicting the impacts of terrestrial change on the Kitikmeot marine system. This report describes the project activities carried out in 2018, and also details our plans for the 2019 field season, under the same license.

2018 Annual Summary:

Unfortunately, planned activities for the 2018 field season did not advance as anticipated. We were unable to secure float plane access to the designated river sites early in the season, and our ship-based attempts at deployment later in the summer were thwarted by maintenance issues with the research vessel. This meant that none of the four river moorings were deployed in 2018. However, progress has been made with the development of the river moorings themselves, and testing will continue throughout the winter to ensure they are ready for deployment at the beginning of the 2019 field season.

2019 Plans:

Due to the unforeseen circumstances of 2018, we are now planning to carry out the entirety of the 2018 study in 2019. As detailed in our original permit application, river moorings will be deployed in four (4) rivers throughout the Kitikmeot Region using a float plane (Figure 1). The rivers will be accessed early in the season after spring ice break up (mid-June 2019). Site selection will be as close to the river mouth as possible, based on float plane access to the main channel, keeping up-stream of the tidal influence. Once each mooring is deployed, river water samples for the determination of geochemical parameters will be collected to calibrate instruments. Mooring recovery will take place in late August or early September, either by water (small boat) or by air (float plane). Ship access to the river mouth may be possible aboard the RV Martin Bergmann, in which case the ship's aluminum skiff will be used to access the river and recover the moorings. Alternatively, the mooring may be recovered by air using a float plane, with the same approach as deployment.

We appreciate your support and commitment to this investigation of rivers within the Kitikmeot. Any comments, suggestions, and/or ideas you may have related to this research are most welcome. If you have any questions, please contact myself or one of my collaborators and we would be happy to talk to you. We look forward to working with you in 2019.

Sincerely,

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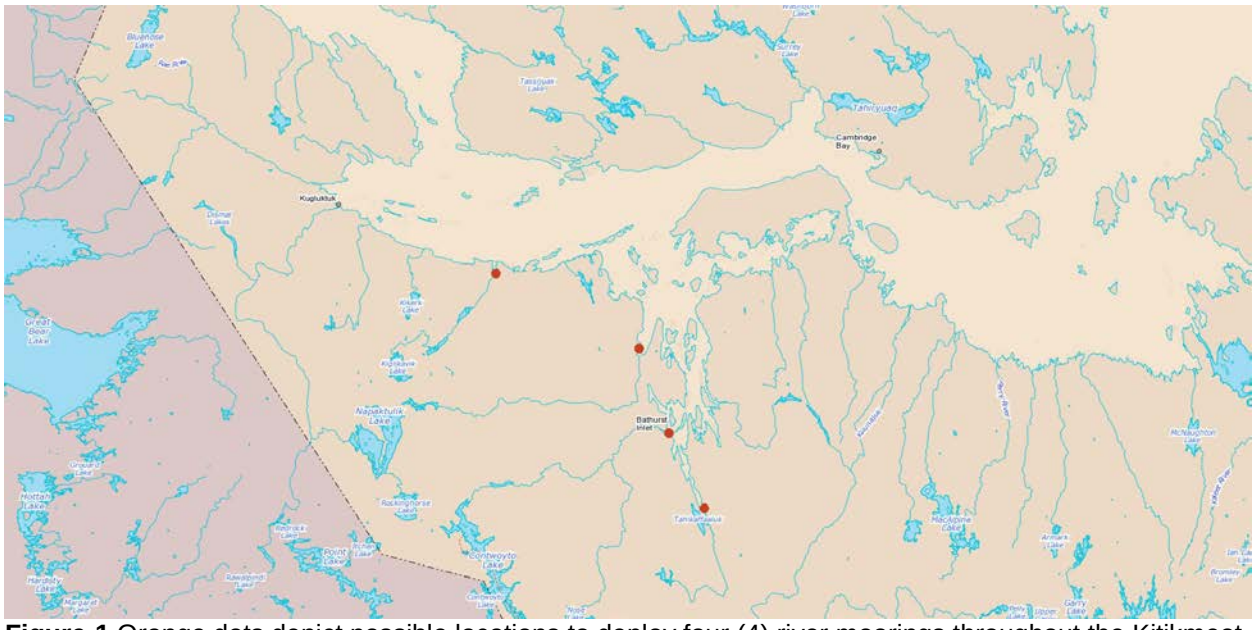

Figure-1 Orange dots depict possible locations to deploy four (4) river moorings throughout the Kitikmeot Region in reference to the Nunavut communities of Cambridge Bay, Bathurst Inlet, and Kugluktuk (map generated with http://atlas.gc.ca/toporama)