

Field	Response
1. Contact Information Name	Brent Wolfe
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1. Contact Information Phone	519.884.0710 x3470
2. Please indicate the alignment of your research expertise to one or more of the following GWF objectives/ deliverables:	<p>Predict water futures – use Big Data to make informed decisions, better models to assess change in human/natural land and water systems Inform adaptation to change and risk management – propose governance mechanisms, management strategies, and policy tools to reduce the risk of water threats, design adaptive strategies, and enhance economic opportunities</p>
3.1 Please indicate the alignment of your research expertise to the GWF Science Pillar 1 – Diagnosing and Predicting Change in Cold Regions:	<p>Hydrology and Terrestrial Ecosystems – improve understanding and prediction of hydrological and terrestrial processes and watershed hydrology and how processes and systems will evolve and interact under a changing climate Water Quality and Aquatic Ecosystems – improve understanding and prediction of how climate changes in climate, hydrology, and land use impact water quality and the health of aquatic ecosystems</p>
3.2 Please indicate the alignment of your research expertise to the GWF Science Pillar 2 – Developing Big Data and Decision Support Systems:	
3.3 Please indicate the alignment of your research expertise to the GWF Science Pillar 3 – Designing User Solutions:	<p>Water Environment – ecosystem health and conservation, water management Indigenous Communities</p>

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4. Please indicate the alignment of your research expertise to one or more of the following user needs:	<p>Projects to improve environmental monitoring, including sensors, drones, satellites, river basin observatories, lake buoys, software development, chemical fingerprinting, real-time monitoring, citizen science, and integration of Big Data platforms for Cold Region water science.</p> <p>Model development to support climate change impact assessment, including regional climate change modeling, hydrological and ecological modeling, specifically involving improvements in forecasting and predictive capacity, downscaling, and scenario development of water futures.</p> <p>Merging Indigenous traditional knowledge with science for more effective climate adaptation, risk management, water governance, and sustainable development. Studies of environmental change and long-term, generational impacts of economic development on First Nations ecosystems and water resources.</p>
5. Please list regions of Canada and the biomes (e.g. mountains, boreal forest, Great Lakes–St Lawrence), watersheds, and/or river basins where you are interested in conducting research for GWF:	Peace–Athabasca–Slave river watershed
6. Please list any other expertise or recent experience (subjects, river basins, technology) not covered by above query that could help us in assessing your alignment with the GWF programme:	<p>15 years of hydrological and environmental science research experience in the Peace–Athabasca–Slave river watershed; contemporary and paleoenvironmental studies of lake hydrology, ecology, and contaminant deposition in the Peace–Athabasca and Slave River deltas; multiple partnerships with industry, government agencies and northern communities</p>