Field	Response
1. Contact Information | Name	Jim McGeer
1. Contact Information | Department	Biology & Institute for Water Science & Cold Regions Research Centre
1. Contact Information | Email	jmcgeer@wlu.ca
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1. Contact Information | Phone	519-884-0710 or 226-868-7429
2. Please indicate the alignment of your research expertise to one or more of the following GWF objectives/ deliverables:	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
3.1 Please indicate the alignment of your research expertise to the GWF Science Pillar 1 – Diagnosing and Predicting Change in Cold Regions:	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 Human-Water Systems – address the human dimensions that will determine water futures, including governance, policy, communities, border, and water resources management
3.2 Please indicate the alignment of your research expertise to the GWF Science Pillar 2 – Developing Big Data and Decision Support Systems:	Decision Support Systems – predictive and diagnostic modelling system development and deployment for hydrology, water quality and water resources
3.3 Please indicate the alignment of your research expertise to the GWF Science Pillar 3 – Designing User Solutions:	Water Environment – ecosystem health and conservation, water management Energy & Natural Resources – including mining and hydroelectricity Indigenous Communities Government and Governance

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4. Please indicate the alignment of your research expertise to one or more of the following user needs:	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. Risk reduction and analysis tools, including forecasts of floods, droughts, wildfires, and freezing rain (and other weather and climate extremes); water quality assessments; disease risk analyses; and integrated assessments. These tools alert industry and government to potential problems and allow cost/benefit analyses for potential risk mitigation. Complex system modeling and analyses reflect the growing awareness of interacting dynamics in human-natural coupled systems. These studies emphasize the inter-relationships between water resources and transportation systems, infrastructure, energy generation, mining, food production, and source water protection. Knowledge mobilization for decision support, including the facilitation of communities of practice, stakeholder engagement with science, visualization and Decision Theatres, development of place-based solutions for climate adaptation, and evidence-based decision making.

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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:	Boreal forest Great lakes and St. Lawrence Peace Athabasca and Slave Peel Mackenzie Coppermine Thelon Churchill Severn Attawapiskat Albany Mistassini Northern Quebec Labrador Newfoundland And others
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:	