

Field	Response
1. Contact Information Name	Josh Neufeld
1. Contact Information Department	Department of Biology
1. Contact Information Email	jneufeld@uwaterloo.ca
1. Contact Information University	University of Waterloo
1. Contact Information Personal Web Page	https://uwaterloo.ca/neufeld-research-group/
1. Contact Information Phone	519-888-4567 x38344
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</p> <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</p> <p>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> <p>Human-Water Systems – address the human dimensions that will determine water futures, including governance, policy, communities, border, and water resources management</p>
3.1 Please indicate the alignment of your research expertise to the GWF Science Pillar 1 – Diagnosing and Predicting Change in Cold Regions:	
3.2 Please indicate the alignment of your research expertise to the GWF Science Pillar 2 – Developing Big Data and Decision Support Systems:	<p>Big Data for Water – sensors, sensing, instrumented river basins, data analysis systems</p> <p>Decision Support Systems – predictive and diagnostic modelling system development and deployment for hydrology, water quality and water resources</p>
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

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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. 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.</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:	<p>Experimental Lakes Area and the Grand River Watershed</p>
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>Microbiology, microbial communities, metagenomics, bioinformatics</p>