Field	Response
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2. Please indicate the alignment of your research expertise to one or more of the following GWF objectives/ deliverables:	Improve disaster warning – develop scientific knowledge, monitoring and modelling technologies, and national forecasting capacity to predict the risk and severity of extreme events Predict water futures – use Big Data to make informed decisions, better models to assess change in human/natural land and water systems
3.1 Please indicate the alignment of your research expertise to the GWF Science Pillar 1 – Diagnosing and Predicting Change in Cold Regions:	Hydrometeorology and Climate Change – improve understanding and prediction of how climate change influences water availability and extreme events 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 Human-Water Systems – address the human dimensions that will determine water futures, including governance, policy, communities, border, and water resources management Water and Health – determine how changes to climate, extreme events, hydrology and water quality will affect human health in urban, rural and Indigenous communities
3.2 Please indicate the alignment of your	

research expertise to the GWF Science Pillar 2 – Developing Big Data and Decision Support Systems:

Big Data for Water - sensors, sensing, instrumented river basins, data analysis systems

Field

3.3 Please indicate the alignment of your research expertise to the GWF Science Pillar 3 – Designing User Solutions:

4. Please indicate the alignment of your research expertise to one or more of the following user needs:

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:

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: 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. 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.

S. Ontario Great Lakes Basin watersheds (e.g. Grand river basin), Trail Valley Creek NWT; Marmot Creek, AB; Victoria Island, NV; Brunkil Watershed, MB; Brightwater creek, SK; and other basins aligned with a recent CFI proposal. Mu own research focuses on TVC and S. ontario watersheds.

Response