Field	Response
1. Contact Information | Name	Sigrid Peldszus
1. Contact Information | Department	Civil & Environmental Engineering
1. Contact Information | Email	speldszus@uwaterloo.ca
1. Contact Information | University	University of Waterloo
1. Contact Information | Personal Web Page	www.civil.uwaterloo.ca/watertreatment/
1. Contact Information | Phone	519 888 4567 ext. 3511
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 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:	
3.3 Please indicate the alignment of your research expertise to the GWF Science Pillar 3 – Designing User Solutions:	Urban and Rural Communities 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:	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.
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:	Open to participate in various systems - have experience with Great Lakes, Grand River watershed etc.

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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:	I perform research at the IRC in water treatment which has more than 15 industrial partners. My core expertise relates to water treatment for public water supplies including treatment of contaminants (e.g. cyanotoxins or perfluorinated compounds), and energy efficiency of advanced treatment technologies such as membranes. The increased frequency and magnitude of floods and droughts is severely impacting source water quality and quantity which in turn affects the design and operation of water treatment processes at large and small scales. To ensure public health treatment processes have to be designed and manged to deal with the consequences of changes in climate. Linking prediction and assessment of our changing climate to a changing paradigm for water treatment is critical in ensuring public health.