

| Field  | Response   |
|--|--|
| 1. Contact Information   Name  | Karsten Liber  |
| 1. Contact Information   Department  | Toxicology Centre  |
| 1. Contact Information   Email   | <a href="mailto:karsten.liber@usask.ca">karsten.liber@usask.ca</a>   |
| 1. Contact Information   University  | University of Saskatchewan   |
| 1. Contact Information   Personal Web Page   | <a href="http://www.usask.ca/toxicology/people/faculty/karsten-liber.php">http://www.usask.ca/toxicology/people/faculty/karsten-liber.php</a>  |
| 1. Contact Information   Phone   | 306-966-7444   |
| 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   |
| 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   |
| 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  |
| 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<br>Energy & Natural Resources – including mining and hydroelectricity  |
| 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. |

| Field   | Response  |
|---|---|
| <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> | <ul style="list-style-type: none"> <li>– Western Canada largely (Great Plain, Boreal, Mountain)</li> <li>– Saskatchewan River basin (Prairie) and northern Saskatchewan mining areas (Boreal)</li> <li>– Elk River, Kootenay River, Columbia River Basins (coal mining areas in mountains)</li> </ul> <p>But I'm interested in conducting research in any region of Canada where a water quality sensor system could be fruitfully deployed.</p>  |
| <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>     | <ul style="list-style-type: none"> <li>– Autonomous water quality sensor network that automatically uploads water quality data in real time to the Cloud and is accessible from any PC.</li> <li>– Willing to work with anybody (any team) that has a need for real-time, continuous monitoring of routine water quality parameters.</li> <li>– Development (with European industrial partner) of sensors for specific contaminants of concern (contaminants for which 'off the shelf' sensors are not available).</li> </ul> |