Global Water Futures 2021 Operations Team Meeting – Project Reporting Template

Instructions: All GWF projects are asked to provide a summary update on their activities and accomplishments in preparation for the upcoming Operations Team meeting. **Please submit these by email to chris.debeer@usask.ca by no later than December 2.** These will be used to help guide discussions and breakout synthesis activities and will be made generally accessible on our website in advance of the meeting.

Project Name:	*Proof of Concept- Agent Based Modeling as a tool to Investigate Comprehensive Indigenous Health Impacts of Flooding*

Our major accomplishments to date are:

- Demonstrated Agent Based Modelling feasibility, capability and practicality for supporting community decision making for flood health services, emergency planning and management.
- Advanced understanding of social, cultural, behavioural, and ecological interactions from floods affecting Indigenous Health
- Improved efforts to support Indigenous centered health and flood risk management strategies
- Built a tool to support scenario creation for community analysis and decision making about possible flood related health risk management in Indigenous.
- Created a platform from which substantive research questions on Indigenous communities and changing water futures can emerge
- Supported a MSc in Computer Science to complete degree and move on to PhD
- Supported a Research Scientist to move on to a faculty position
- Leveraged support for successful First Nations Adapt Program and Environment and Climate Change grant funding
- Supported two community research associates. One is now in a Master's program and another is in a Council position.

Our current activities are:

- Supporting two SENS Masters Students in completing their data analyses and knowledge mobilization.
- Working with Pomeroy and Clark on an additional NRFR application (Bradford)

The main accomplishments expected by the end of the project are:

- Continuation of engagement and research partnership towards meeting community objectives and goals
- Supported communities' applications for increased operational funding to reduce vulnerabilities discovered using the ABMs.

Here is a key visual from the project (figure, photo, table, graph, etc.)

Table 2.3. Summary of the scenario variations comprising each of the experiments

Scenario	Variation	Description
Contaminated Truck	Baseline	Baseline scenario
	Alt 1	Disease is not transmissible person-to-person
	Alt 2	2-day longer illness duration
	Alt 3	Disease is not transmissible person-to-person; 2-day longer illness duration
	Cleaning 1	Truck is decontaminated daily
	Cleaning 1 Alt 1	Truck is decontaminated daily; disease is not transmissible person-to-person
	Cleaning 5	Truck is decontaminated every 5 days
	Cleaning 5 Alt 1	Truck is decontaminated every 5 days; disease is not transmissible person-to-person
Pow Wow	Baseline	Baseline scenario
	Alt 1	Disease is not transmissible person-to-person
	Alt 2	2-day longer illness duration
	Alt 3	Disease is not transmissible person-to-person; 2-day longer illness duration
Movement	Baseline	No flooding
	10 mm	Flood due to 10 mm precipitation event
	20 mm	Flood due to 20 mm precipitation event
	100 mm	Flood due to 100 mm precipitation event