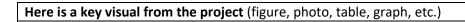
Global Water Futures 2021 Operations Team Meeting – Project Reporting Template

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** <u>chris.debeer@usask.ca</u> **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:	Boreal Water Futures 2: Modelling Hydrological Processes for Wildfire and Carbon Management
Our major accomplishments to date are:		
Completion of parameterization and testing of the Peatland Hydrological Impacts model		
•		partnership with fire managers and visited new field site - Tomahawk Peat Fire in ounty, Alberta.
•	Coordinati	on with Sungro Horticulture Ltd to gain access to recently burned and undisturbed reld sites in Parkland County, Alberta
•		of vegetation, soil moisture, water table and carbon fluxes at Parkland County field onths immediately following fire
•		n in Journal of Hydrology of restored-burned peatland carbon loss and modelling ng potential at Wainfleet Bog
•	Publication in International Journal of Wildland Fire using multi-criteria decision analysis based on hydrological and wildfire expert opinion to estimate peat fire risk in Alberta's Boreal Plains	
•	Instrument	tation of field sites at the Parry Sound 33 wildfire
Our cu	rrent activit	ies are:
٠	Model output analysis of the Peatland Hydrological Impacts model run under steady state conditions	
•	Testing the coupling of the Peatland Hydrological Impacts model with both the PSI (smouldering) and CHI (carbon) sub-models	
•	Modelling of peatland carbon recovery near completion. High impact paper under development and led by Dr. Sophie Wilkinson	
•	Developing partnership with Parkland County to provide data for future objectives	
•	Analysis of	field carbon flux data from Parkland County study sites and combination with
	literature o	data to build post-fire ecosystem trajectory and evapotranspiration partitioning
•	Determinir	ng changes in methane production and consumption potentials relative to
		peatlands from peat samples from Parry Sound 33 wildfire and Parkland Country,
	AB and eva	aluating the role of charcoal in these shifts.
The ma	ain accompl	ishments expected by the end of the project are:
•		paper on the importance of peat properties and hydrologic feedbacks using the from the Peatland Hydrological Impacts model
•	High impact paper on modelled peatland carbon recovery	
•	Modelling effort contributions to development of Peat Moisture Code with Canadian Forest Service	
•	High impac solution	ct paper on potential of fuel management in peatlands as nature-based climate
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Field visit to new research site on the Tomahawk Peat Fire in Parkland County, Alberta.