



	2016 – 2017		2017 – 2018	
	Ice-on	Ice-off	Ice-on	Ice-off
Cameras				
— SWIP	16-Dec	22-Apr	12-Dec	08-May
Original ice albedo				
— unadjusted CLIMo	13-Dec	31-Mar	13-Dec	08-Apr
— modified ice melt $\alpha = 0.55$	13-Dec	05-Apr	13-Dec	14-Apr
— modified snow $\alpha = 0.82$	13-Dec	01-Apr	13-Dec	08-Apr
Modified ice albedo				
— modified ice $\alpha = 0.75$	13-Dec	11-Apr	13-Dec	17-Apr
— modified ice $\alpha = 0.75$, ice melt $\alpha = 0.55$	13-Dec	18-Apr	13-Dec	04-May
— modified ice $\alpha = 0.75$, ice melt $\alpha = 0.55$, snow $\alpha = 0.82$	13-Dec	19-Apr	13-Dec	05-May
Final adjusted CLIMo				
— modified ice $\alpha = 0.75$, ice melt $\alpha = 0.55$, snow $\alpha = 0.85$	13-Dec	20-Apr	13-Dec	06-May

Supplementary Figure S1. Model output for MacDonald Lake highlighting the effects of the field-based albedo measurements on the simulated ice thickness and timing of ice-off for the two field seasons with detailed ice thickness measurements from the Shallow Water Profiler (SWIP).