

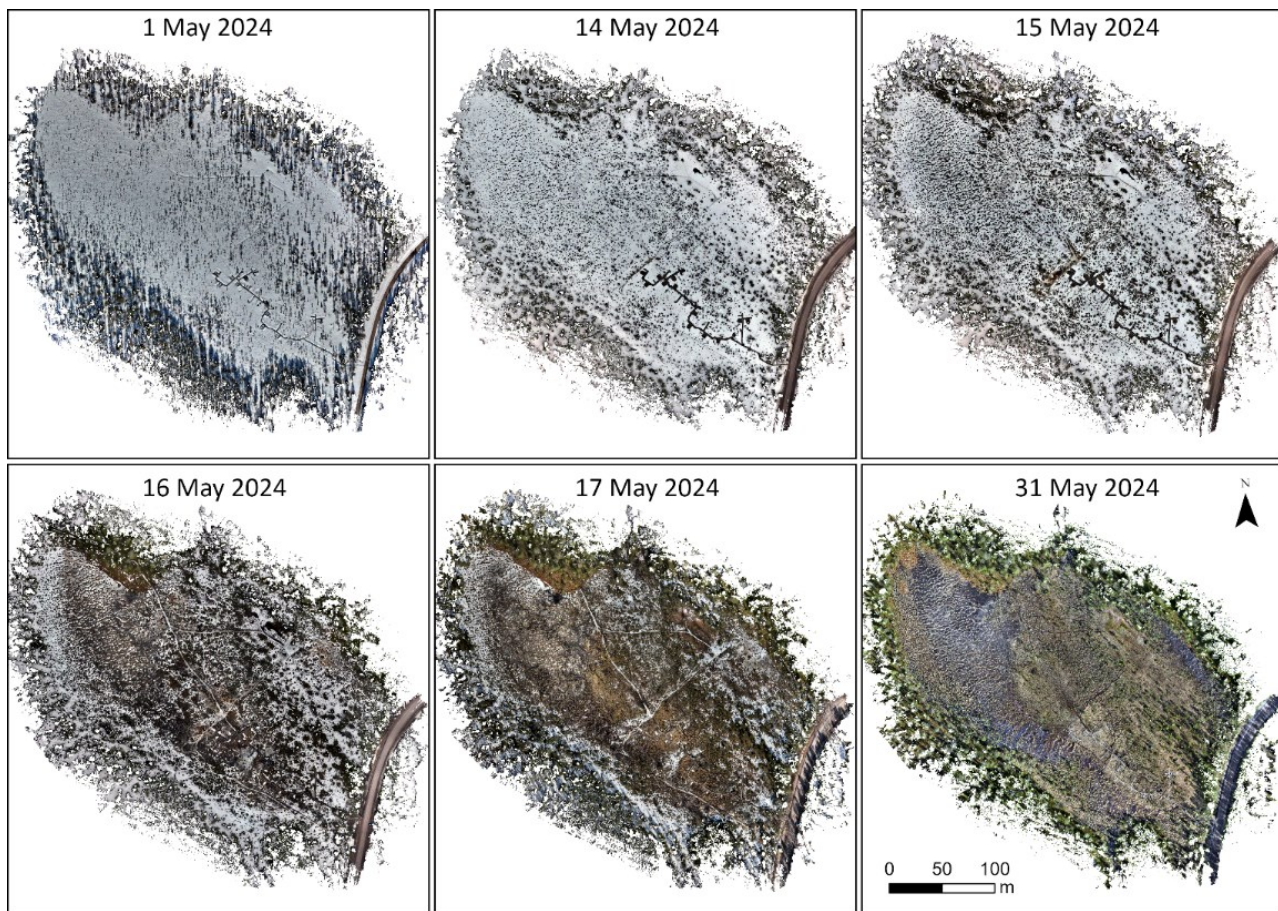


Figure S1. RGB orthomosaics for each UAS survey during the study period.

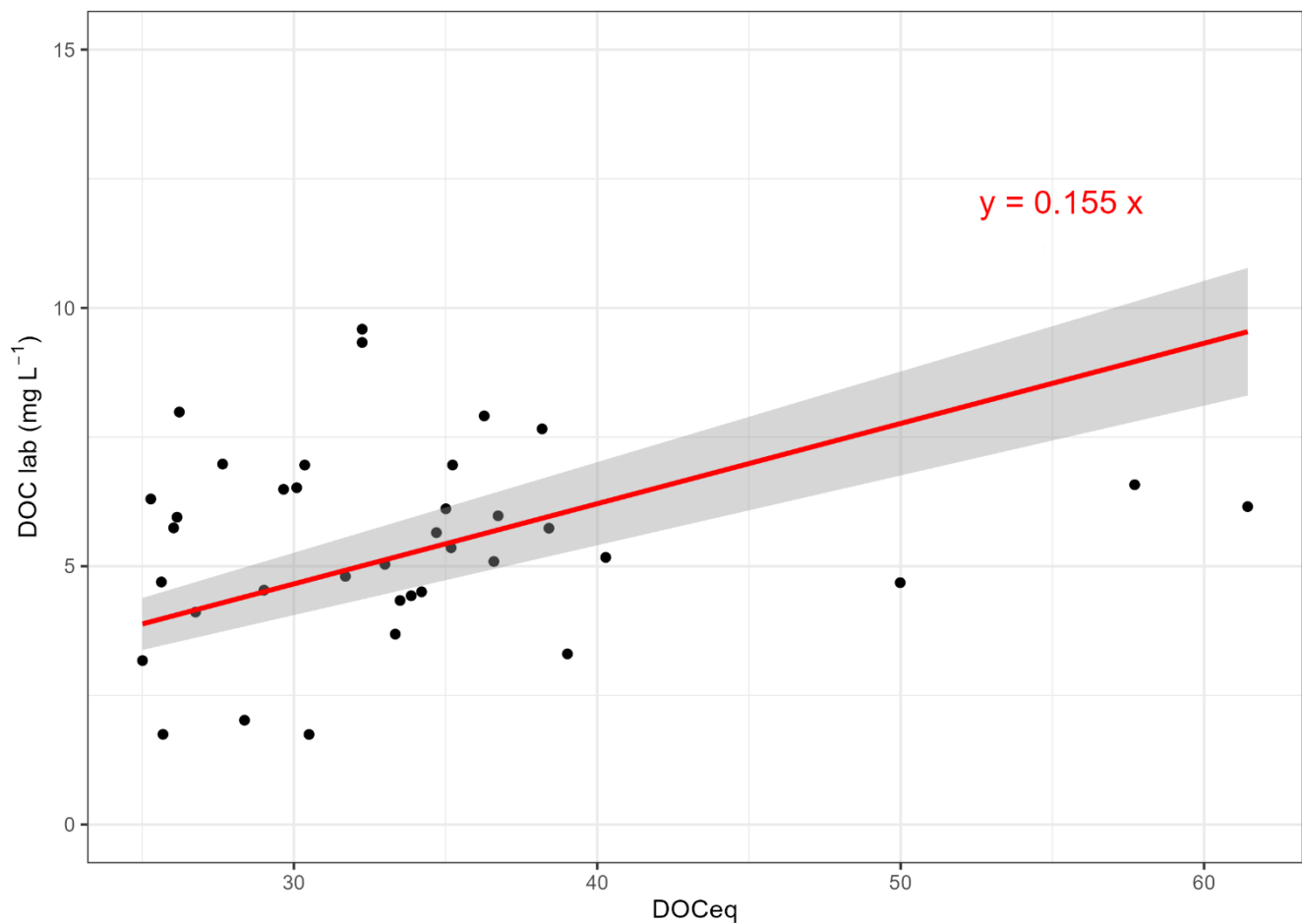


Figure S2. DOC measured by the Trios OPUS sensor and DOC analyzed from the grab samples during the study period.

5

Table S1. Root mean square error (RMSE), mean error (ME), mean average error (MAE), standard deviation of errors (SD), and minimum and maximum errors for each snow depth survey based on the difference between UAS-derived snow depths and manual snow course measurements.

	RMSE (cm)	ME (cm)	MAE (cm)	SD (cm)	Min (cm)	Max (cm)
1 May	7.67	-5.97	6.94	5.20	-13.12	3.40
14 May	6.65	-5.66	5.70	3.77	-10.93	0.13
15 May	12.46	-12.07	12.07	3.30	-17.54	-7.76
16 May	12.56	-11.69	11.69	4.96	-19.24	-5.20
17 May	9.61	-8.17	8.17	5.46	-15.96	-2.03

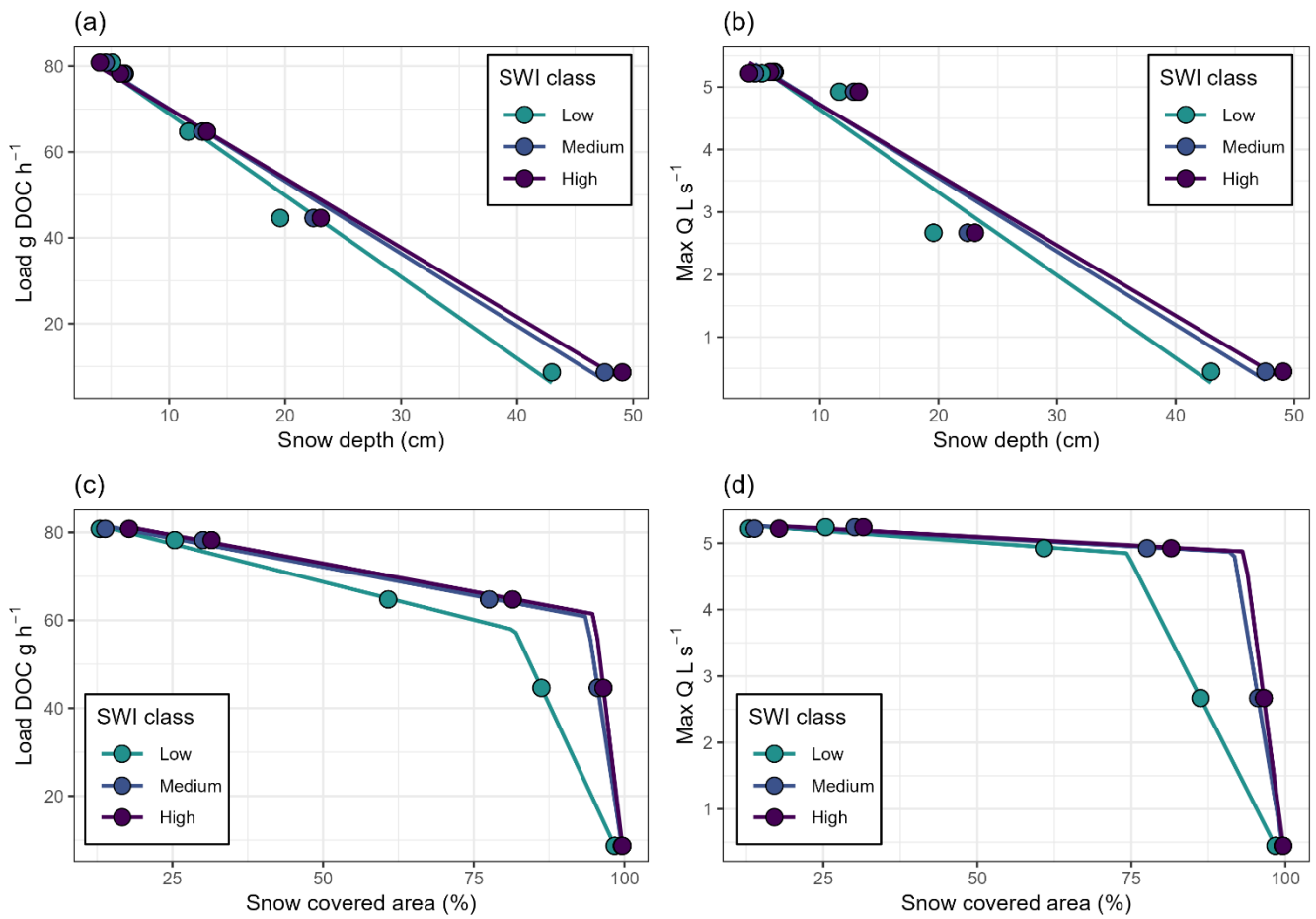


Figure S3. Events' hourly DOC load and maximum discharge, shown with mean snow depth (a, b) and snow-covered area (c, d) in different SAGA Wetness Index (SWI) zones.

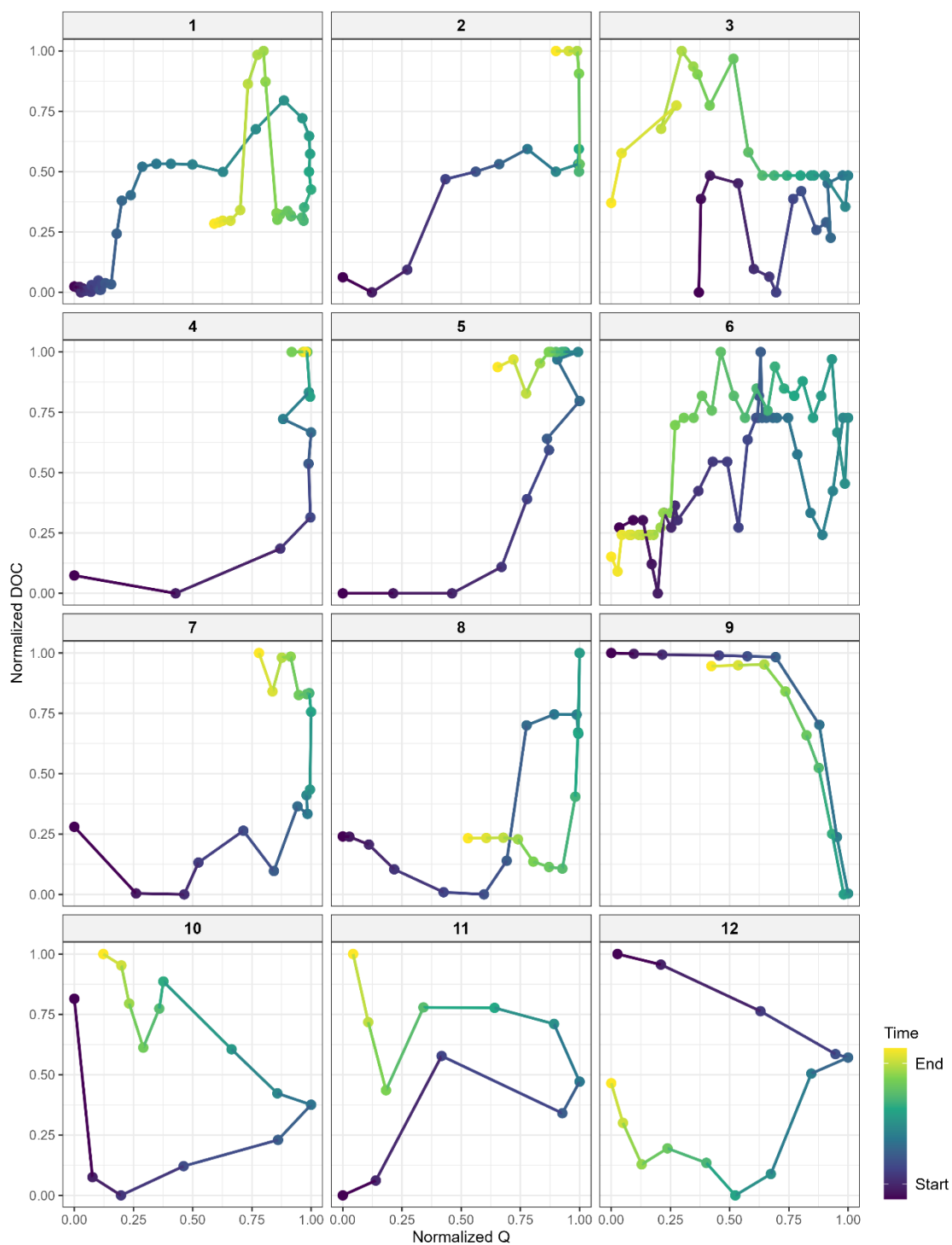


Figure S4. Hysteresis loops for normalized Q and DOC for events 1–12.