



Supplement of

Northern Hemisphere in situ snow water equivalent dataset (NorSWE, 1979–2021)

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Table S1. Number of sites and their corresponding station IDs from adjoining agencies dropped during duplicate check (Sect. 5, Fig. 2). Agency pairings not listed had no inter-agency duplicate sites. Station IDs are those of the providing agency without the NorSWE prefix.

Agencies compared	Number of sites dropped		Dropped Station IDs	
	Agency 1	Agency 2	Agency 1	Agency 2
CanSWEv6 – Maine	9	1	'ENB-001', 'ENB-090', 'ENB-019', 'ENB-084', 'ENB-085', 'ENB-088', 'ENB-034', 'ENB-032', 'ENB-033'	'1141'
Maine – NH	6	0	'1479', '1480', '1481', '1482', '1483', '1478'	
CanSWEv6 – NRCS	40	0	'BCE-AK02', 'BCE-AK03', 'BCE-ID01', 'ALE-MT01', 'ALE-13A05', 'ALE-13A16', 'ALE-MT02', 'ALE-MT06', 'BCE-MT01', 'BCE-MT02', 'ALE-MT04', 'ALE-14A12', 'BCE-MT03', 'BCE-MT04', 'BCE-MT06', 'BCE-MT05', 'BCE-WA01', 'BCE-WA02', 'BCE-WA03', 'BCE-WA04', 'BCE-WA05', 'BCE-WA06', 'BCE-WA09', 'ALE-05AE804', 'ALE-05AE805', 'ALE-05AE806', 'ALE-05AE807', 'ALE-05AE808', 'ALE-13A05', 'ALE-13A16', 'ALE-13A26', 'ALE-14A12', 'ALE-MT01', 'ALE-MT02', 'ALE-MT04', 'ALE-MT06', 'BCE-AK02', 'BCE-AK03', 'BCE-ID01', 'BCE-MT01', 'BCE-MT02', 'BCE-MT03', 'BCE-MT04', 'BCE-MT05', 'BCE-MT06', 'BCE-WA01', 'BCE-WA02', 'BCE-WA03', 'BCE-WA04', 'BCE-WA05', 'BCE-WA06', 'BCE-WA07', 'BCE-WA08', 'BCE-WA09', 'BCE-WA11', 'YT-08AK-SC01'	
CanSWEv6 – Snotel	7	0	'ALE-13A19', 'ALE-13A26X', 'ALE-13A27', 'ALE-13A27SP', 'ALE-14A12S', 'ALE-MT03', 'ALE-MT05'	

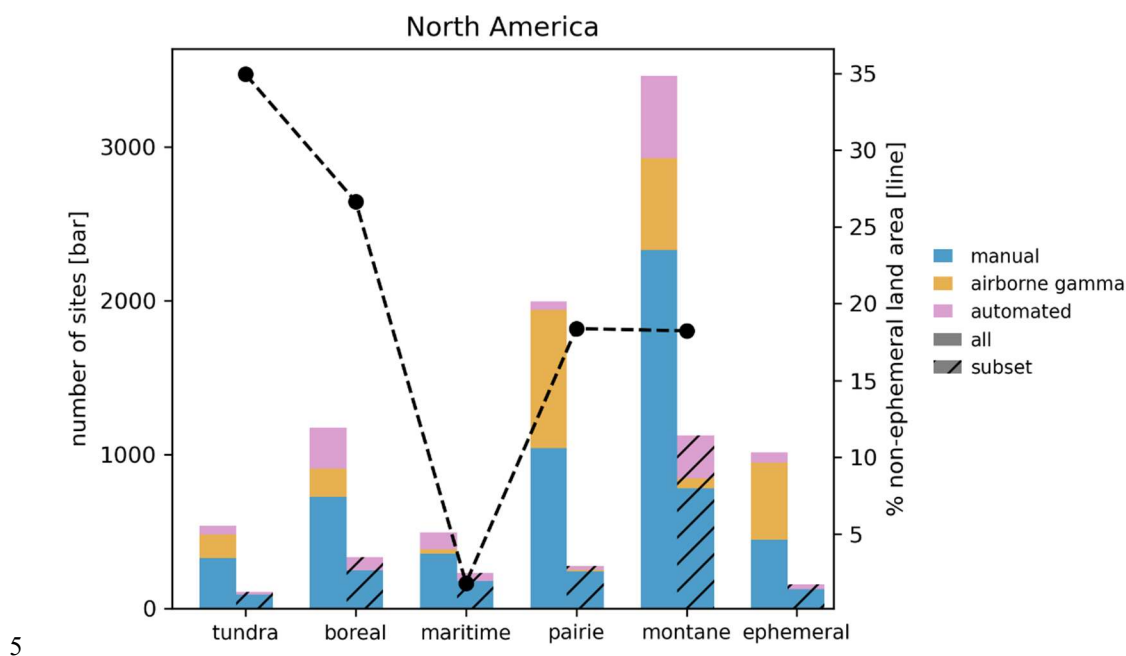


Figure S1. Same as Fig. 3a but for North America (Canada and United States).

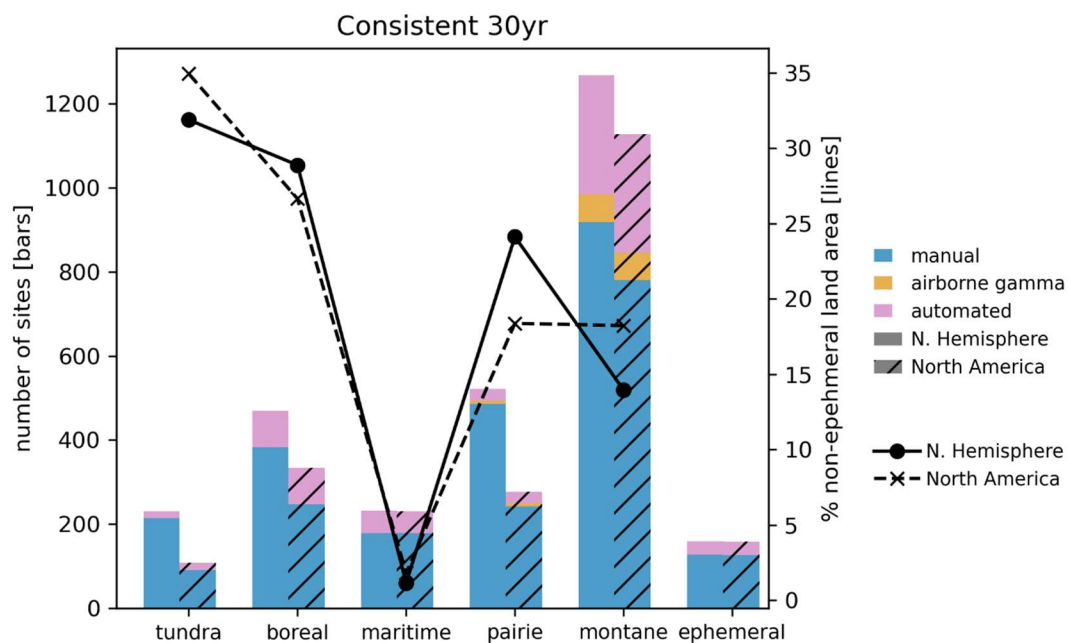


Figure S2. NorSWE site distribution by Sturm and Liston (2021) snow class for the consistent subset (Fig. 5) versus the proportional land area by snow class for the full spatial domain (sites: solid bars, land area: solid line) and for North America only (sites: hatched bars, land area: dashed line). The ephemeral snow class is excluded from the land area calculations because it does not differentiate between no snow and ephemeral. Permanent land ice is also excluded. Montane: montane forest, Boreal: boreal forest.

Gamma SWE record length by state and province

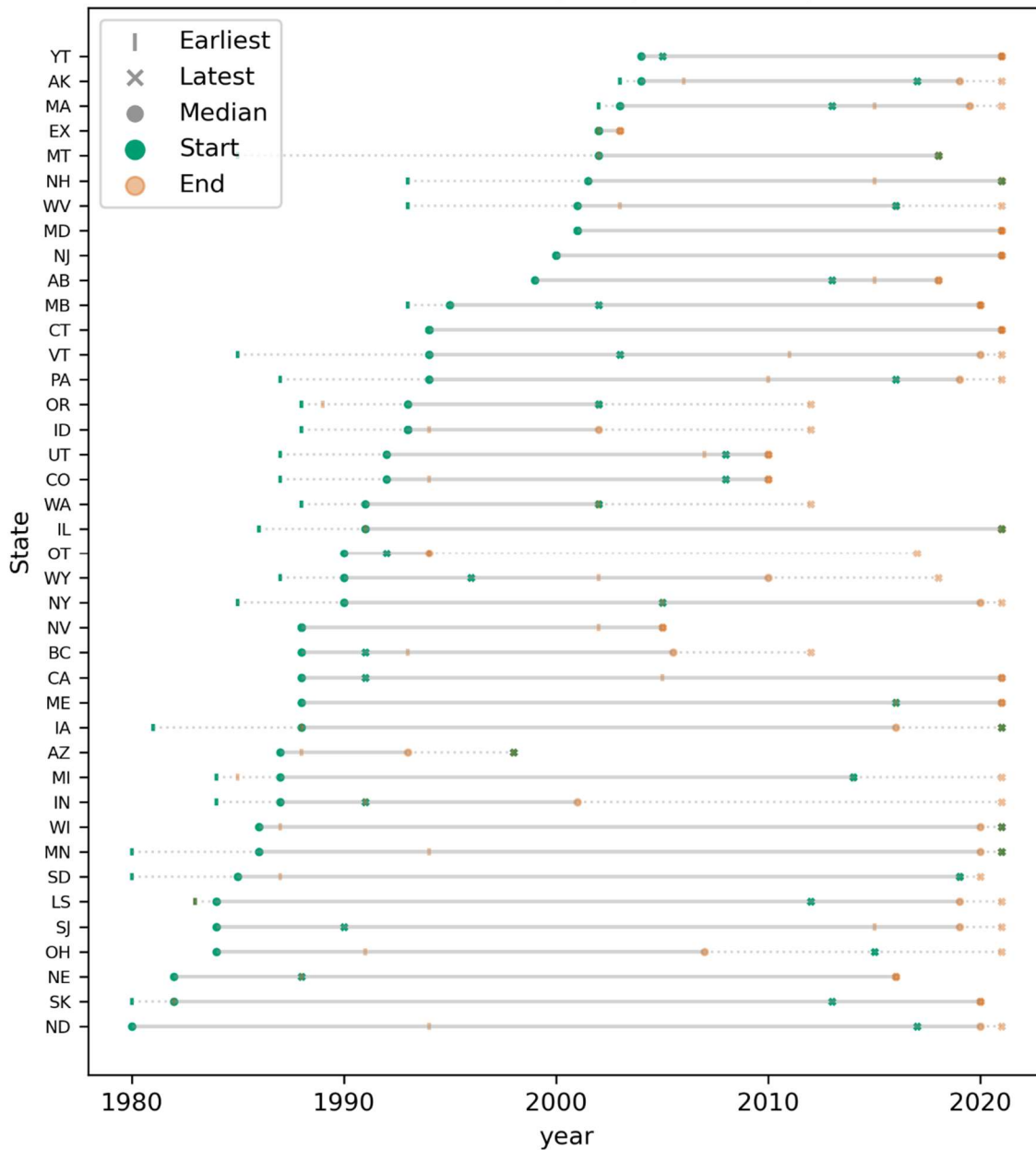


Figure S3. Time span of gamma flight line records by state, province, or region. Median start (blue) and end (green) year of all flight lines within each state, province or region connected by solid horizontal line. Earliest (vertical bar) and latest (cross) start and end year of any site within a domain illustrate variations in record length. The earliest start and latest end are connected to the median start and end by dotted horizontal line.