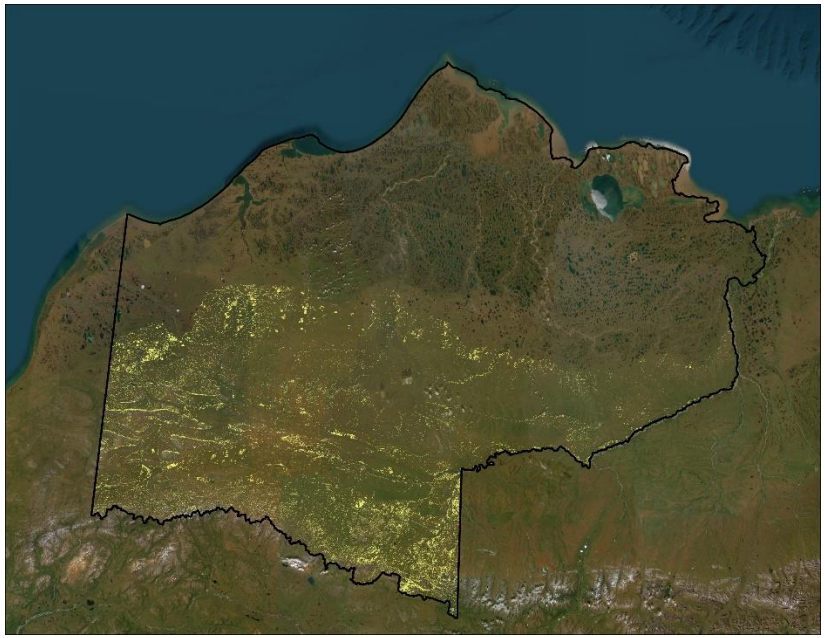
Foothills Wetland



Stratum code: FWMM

Number of plots sampled: 12

Physiography: subalpine (Brooks Range Foothills physiographic unit)

Geomorphology: basin, valley

Landform: depression, planoconcave slopes

Hydrology: hygric to aquatic, poorly-drained to flooded **Classification**: An herbaceous wetland type. Average cover of obligate wetland plants is 82.8%. Surface water is present during the growing season and averages 25.0% cover. Total cover of surface water increases at the expense of emergent sedge cover. Moss cover is high with species in the *Sphagnum* genus dominating with an average cover of 27.6%. Average shrub cover is 15.1%

Site characteristics: Occurs at mid-elevations on low gradient sites. Permafrost is ice-rich and the depth of seasonal thaw is consistently deep, averaging 41.3 cm. A non-patterned, homogenous, and large patch type.

Soil characteristics: The mean thickness of moss and duff together is 4.9 cm. Moss and duff is underlain by a thick organic soil horizon averaging 30.5 cm. Organics typically overlie a silty mineral horizon. An A horizon may develop at the transition from organic to mineral soils. Average soil water pH measured at 10 cm depth is 5.9.

Vegetation: The wetland sedges *Carex aquatilis* and *Carex chordorrhiza* are dominant and differentiate the Foothills Wetland from other wetland types. The wet-site willow, *Salix fuscescens*, further differentiates the stratum. The low shrub, *Betula nana*, the obligate wetland sedge, *Eriophorum angustifolium,* and moss species in the *Sphagnum* genera show high relative abundance and

frequency in the stratum. Vascular plant richness is relatively low, averaging18 taxa.

Dominant species (greater than 25% average cover):

- *Carex aquatilis*
- *Carex chordorrhiza*

Indicator species Taxa with significant potential ($p<0.0002$) to indicate wetlands (listed in decreasing order of indication) include:

- *Carex aquatilis*
- *Carex chordorrhiza*
- *Scorpidium*

Differential species Taxa with significant potential to differentiate the Foothills Wetland from other wetland strata include:

- *Carex aquatilis*
- *Carex chordorrhiza*
- *Salix fuscescens*

Succession and disturbance: A mid-successional type where permafrost dynamics are the disturbance process. Thermokarst, wetland drying.

Indicators of change: change in composition; change in hydrologic regime (more or less standing water); change in active layer; change in permafrost features (thermokarst).

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Table 8. Cover and constancy of plant taxa occurring in the Foothills Wetland stratum. Species listed by habit, in decreasing order of percent cover.

Habit	Scientific Name	Average Cover (%)	Standard Deviation (%)	Minimum Cover (%)	Maximum Cover (%)	Constancy (%)
tall shrub	*Betula nana*	6.5	4.5	1.3	12.7	92
	Salix pulchra	5.6	8.1	1.3	20.0	42
low shrub	*Salix fuscescens*	5.9	3.6	1.3	12.0	67
	Vaccinium uliginosum	3.3	na	3.3	3.3	8
	Rhododendron tomentosum ssp. *decumbens*	2.7	1.8	1.3	4.7	25
dwarf shrub	*Vaccinium vitis-idaea*	4.7	na	4.7	4.7	8
	Andromeda polifolia	4.4	2.0	3.3	6.7	25
graminoid	*Carex aquatilis*	41.4	16.1	16.0	66.7	100
	Carex chordorrhiza	21.6	14.9	6.0	51.3	75
	Carex rotundata	21.6	21.1	2.0	44.0	25
	Eriophorum angustifolium	17.9	14.4	2.7	38.0	67
	Eriophorum scheuchzeri	12.6	6.4	5.3	17.3	25
	Eriophorum russeolum	11.1	6.8	3.3	16.0	25
	Eriophorum chamissonis	10.4	12.5	1.3	24.7	25
	Carex saxatilis	4.0	na	4.0	4.0	8
	Carex rariflora	2.7	na	2.7	2.7	8
	Carex vaginata	2.7	na	2.7	2.7	8
	Eriophorum vaginatum	2.0	na	2.0	2.0	8
forb	*Comarum palustre*	4.2	1.0	3.3	5.3	25
	Utricularia	3.3	na	3.3	3.3	8
	Pedicularis lapponica	2.0	na	2.0	2.0	8
	Saxifraga cernua	1.3	na	1.3	1.3	8
moss	*Sphagnum*	13.7	20.5	1.3	87.3	100
	Scorpidium	12.3	14.7	2.0	39.3	50
	Meesia	3.7	2.3	2.0	5.3	17
	Aulacomnium	3.5	1.3	1.3	5.3	50

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Habit	Scientific Name	Average Cover (%)	Standard Deviation (%)	Minimum Cover (%)	Maximum Cover (%)	Constancy (%)
	Polytrichum	3.3	2.8	1.3	5.3	17
	Dicranum	3.3	na	3.3	3.3	8
	Hamatocaulis	2.7	na	2.7	2.7	8
	Drepanocladus	1.8	0.8	1.3	2.7	25
	Hylocomium	1.7	0.5	1.3	2.0	17
	Tomentypnum	1.7	0.5	1.3	2.0	17
	Campylium	1.3	0.0	1.3	1.3	17
	Cinclidium	1.3	na	1.3	1.3	8
	Sarmentypnum	1.3	na	1.3	1.3	8
lichen	*Flavocetraria*	1.3	na	1.3	1.3	8
	Nephroma	1.3	na	1.3	1.3	8
	Peltigera	1.3	na	1.3	1.3	8
liverwort	liverwort	5.1	3.7	1.3	9.3	42