

Appendix 3. Approximate equivalent vegetation units in several northern Alaska and northwestern Canadian studies

R4D Community Types or Subtypes	Yukon Delta	Chukchi-Imuruk	Cape Thompson	NW Alaska	Atkasook	Umiat	Arrigetch Peaks	Yukon	Yukon, N.W.T.	Alaska Statewide Classification	Alaska Statewide Classification
Walker (1987, Level C)	Tande and Jennings (1986)	Racine and Anderson (1979)	Johnson et al. (1966)	Hanson (1953)	Komarkova and Webber (1980)	Churchill (1955)	Cooper (1986)	Lambert (1968)	Ritchie (1984)	Viereck et al. Level IV (1986)	Viereck et al. Level V (1986)
Dry Dryas octopetala, Selaginella sibirica dwarf-shrub, fruticose-lichen tundra	Dry, non-tussock sedge, dwarf shrub, fruticose lichen type (D1)	Dryas dwarf shrub tundra	Dryas fell-field					Salicetum phlebophyllae	Salix phlebo-phylla type	Dryas tundra [2.D.(1)a.]	
Dry Dryas octopetala, Vaccinium vitis-idaea dwarf-shrub, fruticose-lichen tundra		Lichen dwarf shrub tundra, also Dryas dwarf shrub tundra	Dryas fell-field							Dryas tundra [2.D.(1)a.]	Dryas octopetala-Vaccinium spp. (Talbot 1984; Jorgenson 1984; Racine and Young 1978)
Dry Arctous alpina, Hierochloa alpina dwarf-shrub, fruticose-lichen tundra		Lichen Dwarf shrub tundra	Dry	Alpine bear-berry-mountain cranberry type	Diapensia lapponica, Alectoria spp. evergreen dwarf scrub		Vaccinio uliginosi-Salicetum	Salicetum phlebophyllae phlebophyllae	Salix phlebo-phylla type	Bearberry tundra [2.D.(2)a.]	Arctostaphylos alpina-Vaccinium vitis-idaea (Hanson 1953) Arctostaphylos alpina-Vaccinium spp. -Empetrum nigrum-Cassiope tetragonolichens (Jorgenson 1984)

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Walker (1987, Level C)	Tande and Jennings (1986)	Racine and Anderson (1979)	Johnson et al. (1966)	Hanson (1953)	Komarkova and Webber (1980)	Churchill (1955)	Cooper (1986)	Lambert (1968)	Ritchie (1984)	Viereck et al. Level IV (1986)	Viereck et al. Level V (1986)
Dry <i>Vaccinium uliginosum</i> , <i>Arctous alpina</i> dwarf shrub, fruticose-lichen tundra		Lichen Dwarf shrub tundra						<i>Vaccinio-Betuletum glandulosae</i>		<i>Vaccinium tundra</i> [2.D.(2)b.]	<i>Vaccinium</i> spp.- <i>Ledum palustre</i> - <i>Arctostaphylos alpina</i> - <i>Cassiope tetragona</i> (Johnson et al. 1966; Hanson 1958), <i>Vaccinium uliginosum</i> - <i>V. vitis idaea</i> (Bettinger and Janz 1974), <i>Vaccinium uliginosum</i> - <i>Empetrum nigrum</i> - <i>Ledum palustre</i> - <i>Cladonia</i> spp. (Steiger et al. 1983)
Dry <i>Cassiope tetragona</i> , <i>Dryas integrifolia</i> dwarf-shrub, fruticose-lichen tundra			Ericaceous snow-bed community	Heather-blueberry-moss type	<i>Cassiope tetragona</i> , <i>Dryas integrifolia</i> evergreen dwarf scrub		<i>Cassiope tetragonae</i> - <i>Dryadetum alaskensis</i>		<i>Dryas</i> - <i>Carex scirpoidea</i> type	<i>Cassiope tundra</i> [2.D.(2)e.]	<i>Cassiope tetragona</i> - <i>Dryas integrifolia</i> (Komarkova and Webber 1978; Koranda 1960)
Dry <i>Festuca altaica</i> , <i>Carex microchaeta</i> grass, fruticose-lichen tundra										Midgrass-shrub [3.A.(1)c.]	
Dry <i>Cassiope tetragona</i> , <i>Calamagrostis inexpansa</i> dwarf-shrub, fruticose-lichen tundra			Ericaceous snow-bed community	Heather-blueberry-moss type	<i>Diapensia lapponica</i> , <i>Alectoria</i> spp. evergreen dwarf scrub			<i>Betulo-Ledetum decumbentis</i> , <i>Facies cassiopeetrum tetragonae</i>		<i>Cassiope tundra</i> [2.D.(2).]	

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Walker (1987, Level C)	Tande and Jennings (1986)	Racine and Anderson (1979)	Johnson et al. (1966)	Hanson (1953)	Komarkova and Webber (1980)	Churchill (1955)	Cooper (1986)	Lambert (1968)	Ritchie (1984)	Viereck et al. Level IV (1986)	Viereck et al. Level V (1986)
Moist Cassiope tetragona, Hylocomium splendens dwarf-shrub, fruticose-lichen tundra			Ericaceous snow-bed community	Heather-blueberry-moss type						Cassiope tundra	Cassiope tetragona-Vaccinium vitis-idaea-Carex bigelowii-Hylocomium splendens-lichens (Jorgenson 1984)
Moist Salix rotundifolia, Saxifraga rivularis dwarf-shrub, fruticose-lichen tundra										Willow tundra [2.D.(3)a.]	Salix rotundifolia (Klein 1958; Komarkova and Webber 1978; White et al. 1975) Salix rotundifolia-Oxyria digyna (Anderson 1974)
Moist Juncus biglumis, Luzula arctica barren											
Moist Carex bigelowii, Dryas integrifolia nontussock-sedge, dwarf-shrub tundra		Bigelow's sedge dwarf shrub tundra								Sedge-Dryas tundra [3.A.(2)j.]	Carex bigelowii-Dryas integrifolia (Childs 1969; Bettinger and Janz 1974; Webber et al. 1978)

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Walker (1987, Level C)	Tande and Jennings (1986)	Racine and Anderson (1979)	Johnson et al. (1966)	Hanson (1953)	Komarkova and Webber (1980)	Churchill (1955)	Cooper (1986)	Lambert (1968)	Ritchie (1984)	Viereck et al. Level IV (1986)	Viereck et al. Level V (1986)
Moist Eriophorum vaginatum, Sphagnum spp. tussock-sedge, dwarf-shrub tundra	Moist Eriophorum vaginatum-Ledum decumbens-Betula nana-Rubus chamaemorus-fruticose lichen tussock sedge, dwarf shrub, fruticose lichen type (M12A)	Cottongrass tussock-dwarf shrub tundra, also Cottongrass-Bigelow's sedge tussock-dwarf shrub tundra	Eriophorum tussock	Cottongrass-sedge-dwarf heath shrub complex	Eriophorum vaginatum seasonal short grass	Eriophorum tussock-dwarf shrub heath subtype		Betulo-Eriophoretum vaginati, Facies eriophoretosum vaginati, also salicetosum reticulatae	Betula glandulosa-Eriophorum type, also Eriophorum vaginatum type	Mixed shrub-sedge tussock tundra [2.C.2(a).] tussock tundra [3.A.(2)d.]	Eriophorum vaginatum-Betula nana-Ledum palustre-Vaccinium spp.-Carex bigelowii (Churchill 1955; Hopkins and Sigafos 1951; Racine 1977; Viereck 1966; Young and Racine 1977; Racine and Anderson 1979; Brock and Burke 1980; Nodler et al. 1978)
Moist Carex bigelowii, Sphagnum spp. nontussock-sedge, dwarf-shrub tundra	Moist non-tussock sedge, dwarf shrub, fruticose lichen type (M3)	Bigelow's sedge tussock-dwarf shrub tundra	Carex bigelowii high center polygon			Carex-dwarf shrub heath type				Mixed shrub-sedge tussock tundra [2.C.(2) a.] Sedge-willow tundra [3.A.(2)h.]	Carex bigelowii-Betula nana-Salix planifolia-Ledum palustre-Vaccinium spp. (Racine and Anderson 1979; Racine and Young 1978) Carex bigelowii-Salix planifolia (Bettinger and Janz 1974, Johnson et al. 1966, Koranda 1960)

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Walker (1987, Level C)	Tande and Jennings (1986)	Racine and Anderson (1979)	Johnson et al. (1966)	Hanson (1953)	Komarkova and Webber (1980)	Churchill (1955)	Cooper (1986)	Lambert (1968)	Ritchie (1984)	Viereck et al. Level IV (1986)	Viereck et al. Level V (1986)
Moist <i>Betula nana</i> , <i>Rubus chamaemorus</i> dwarf shrub, moss tundra	Moist <i>Petasites frigidus</i> - <i>Rubus chamaemorus</i> - <i>Ledum decumbens</i> - <i>Betula nana</i> (<i>Empetrum nigrum</i>)-moss spp. forb, dwarf shrub moss type (M11b)			Cloudberry-dwarf shrub-marsh type, also sedge-Sphagnum-moss marsh	<i>Betula nana</i> , <i>Rubus chamaemorus</i> , Sphagnum spp. open deciduous dwarf scrub			<i>Betulo-chamaemoretum</i>		Shrub-birch ericaceous [2.C.(2).d.]	<i>Betula glandulosa</i> - <i>Vaccinium vitis-idaea</i> - <i>Rubus chamaemorus</i> -Sphagnum spp. (Bos 1967; Dachnowski-Stokes 1941; Drew and Shanks 1965; Fries 1977; Hanson 1953; Hogan and Tande 1983; Johnson et al. 1966; Jorgenson 1984; Komarkova and Webber 1978; Racine 1976; Racine and Anderson 1979; Rigg 1914; Steiger et al. 1983; Tande 1983; Webber et al. 1978; Young and Racine 1978)
Moist <i>Betula nana</i> low-shrub tundra (includes numerous birch low shrub stand types)				Dwarf birch-heath-lichens type				<i>Betulo-Ledum decumbens</i> , <i>Facies betulo-ledetum decumbens</i>	<i>Betula-Ledum</i> type	Shrub birch-willow [2.C.(2).f.]	

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Walker (1987, Level C)	Tande and Jennings (1986)	Racine and Anderson (1979)	Johnson et al. (1966)	Hanson (1953)	Komarkova and Webber (1980)	Churchill (1955)	Cooper (1986)	Lambert (1968)	Ritchie (1984)	Viereck et al. Level IV (1986)	Viereck et al. Level V (1986)
Moist <i>Salix planifolia</i> ssp. <i>pulchra</i> low-shrub tundra (includes numerous diamond-leafed willow low shrub stand types)		Low-medium willow shrub thicket		Greenleaf willow type						Willow [2.C.(1)b.] also shrub birch-willow [2.C.(1)c.]	
Wet <i>Salix fuscescens</i> , <i>Sphagnum lenense</i> sedge, dwarf-shrub, moss tundra	Wet <i>Carex rariflora</i> - <i>Betula nana</i> - <i>Salix fuscescens</i> -brown <i>Sphagnum</i> non-tussock sedge, dwarf shrub moss type (W4b)							<i>Caricetum rariflorae</i>		Wet sedge meadow tundra [3.A.(3)a.]	
Wet <i>Carex aquatilis</i> , <i>Salix fuscescens</i> sedge, dwarf-shrub, moss tundra	Wet <i>Carex aquatilis</i> - <i>Sphagnum</i> spp. sedge, moss type (W3e), also Wet <i>Carex aquatilis</i> - <i>Eriophorum russeolum</i> - <i>Ledum decumbens</i> -brown <i>Sphagnum</i> non-tussock sedge, dwarf shrub, moss type (W4a)		<i>Eriophorum</i> - <i>Carex</i> wet meadow					<i>Caricetum aquatilis</i> , <i>Facies salicosum arbutifoliae</i>	<i>Carex aquatilis</i> type	Wet sedge meadow tundra [3.A.(3)a]	
Wet <i>Salix planifolia</i> ssp. <i>pulchra</i> , <i>Eriophorum angustifolium</i> low-shrub, sedge tundra	Wet <i>Salix planifolia</i> low shrub type (W13a)							<i>Eriophoretum angustifolii</i> , <i>Facies salicosum pulchrae</i> , also <i>salicetum pulchrae</i> , <i>Facies betulosum glandulosae</i>		Low willow [2.C.(1)b.]	

R4D Com- munity Types or Subtypes	Yukon Delta	Chukchi- Imuruk	Cape Thompson	NW Alaska	Atkasook	Umiat	Arrigetch Peaks	Yukon	Yukon, N.W.T.	Alaska Statewide Classifica- tion	Alaska Statewide Classifica- tion
Walker (1987, Level C)	Tande and Jennings (1986)	Racine and Anderson (1979)	Johnson et al. (1966)	Hanson (1953)	Komarkova and Webber (1980)	Churchill (1955)	Cooper (1986)	Lambert (1968)	Ritchie (1984)	Viereck et al. Level IV (1986)	Viereck et al. Level V (1986)
Wet Carex rotundata, Sphagnum lindbergii sedge tundra				Sedge-Sphag- num-moss marsh				Eriophoretum scheuchzeri		Wet sedge meadow tundra [3.A.(3)a.]	
Wet Carex aquatilis, Eriophorum angustifolium sedge tundra		Water sedge wet meadow, also tall cot- tongrass wet meadow	Eriophorum- Carex wet meadow	Sedge marshes	Carex aquatilis seasonal short grass	Carex aquatilis marsh type		Eriophoretum angustifoli- lii, Facies eriphorosum angustifolii, also Caricetum aquatilis, Fa- cies caricosum aquatilis		Wet sedge meadow tundra [3.A.(3)a.]	Carex aquatilis- Eriophorum angustifolium (Batten 1977; Bergman et al. 1977; Childs 1969; Hopkins and Sigafoos 1951; Porter 1966; Spetzman 1959; Racine 1977, 1978)
Aquatic Carex aquatilis, Eriophorum angustifolium sedge marsh		Water sedge wet meadow, also tall cot- tongrass wet meadow	Eriophorum- Carex wet meadow	Sedge marshes, also aquatic types	Carex aquatilis seasonal short grass			Eriophoretum angustifoli- lii, Facies eriphorosum angustifolii, also Caricetum aquatilis, Fa- cies caricosum aquatilis		Wet sedge meadow tundra [3.A.(3)a.]	Carex aquatilis- Eriophorum angustifolium (Batten 1977; Bergman et al. 1977; Childs 1969; Hopkins and Sigafoos 1951; Porter 1966; Spetzman 1959; Racine 1977, 1978)
Aquatic Sparga- nium hyperbo- reum, Hippuris vulgaris forb marsh		Aquatic meadow	Aquatic com- munity	Aquatic types						Burreed [3.D.(1)d.]	Sparganium hyperboreum (Johnson et al. 1966; Murray 1974; Spetzman 1959; Heusser 1960)

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Aquatic <i>Arctophila fulva</i> grass marsh	Wet <i>Arctophila fulva</i> -(<i>Hippuris tetraphylla</i>) grass forb type (W5a)	Aquatic meadow	Aquatic community		<i>Arctophila fulva</i> seasonal short grass			<i>Arctophiletum fulvae</i>		Fresh grass marsh [3.A.(3) e.]	<i>Arctophila fulva</i> (Batten 1977; Bergman et al. 1977; Britton 1967; Childs 1969; Clebsch 1957; Hulten 1966; Komarkova and Webber 1978; Murray 1974; Potter 1972; Racine and Anderson 1979; Rausch and Rausch 1968; Strevler et al. 1973; Webber et al. 1978; Wiggins and Thomas 1962)
Dry <i>Rhizocarpon geographicum</i> , <i>Cetraria nigricans</i> lichen barren		Rock desert		Lichen-moss barrens			<i>Umbilicarietum-pensylvanico-caroliniana</i>			Crustose lichen [3.C.(2)a.]	<i>Umbilicaria</i> spp.- <i>Rhizocarpon</i> spp. (Anderson 1974; Hanson 1953; Kessel and Schaller 1960; Klein 1958; Pegau 1968; Rausch and Rausch 1968; Webber et al. 1978)
Dry <i>Festuca rubra</i> , <i>Poa glauca</i> grass barren				Grassland type						Midgrass herb [3.A.(1)d.]	