

APPENDIX 4-1

SOIL TAXONOMY IN THE PROJECT VICINITY

Yentna Soil Survey and Surrounding Area										building site development				
Landscape Class	from surve	composition	Taxonomic class	Position on landscape	slope	dpth to water table (in)	erosion hazard	equipment limitation	shallow excavation	surface dwellings	local roads	soil reaction	subsidence total (in)	potential frost action
River basins and floodplains	211	Hewitt peat	Terric Borohemists	muskegs on floodplains	0 to 2	0 to 6	n/a	n/a	severe: excess humus, wetness	severe: flooding, wetness, low strength	severe: wetness, flooding, frost action	5.1-7.3	10 to 15	high
	214	Killey and Hiline silt loams	Typic Cryaquents	floodplains and stream terraces	0 to 2	0 to 18	n/a	n/a	severe: cutbanks cave,	severe: flooding wetness	severe: wetness, flooding, frost action	4.5-5.5	n/a	high
	229	Riverwash.	n/a	Floodplains of rivers	any							n/a	n/a	n/a
	242	Susitna-Niklason silt loams	Typic Cryofluvents	floodplains, alluvial terraces, and natural levees	0 to 2	>72	n/a	n/a	severe: wetness	severe: flooding, wetness	severe: flooding, frost action	4.5-5.5	n/a	n/a
	245	Wasilla silt loam	Humic Cryaquepts	floodplains and alluvial terraces	0 to 2	12 to 36	n/a	n/a						
Tidal flats	207	Clunie peat	Terric Borofibrists	tidal flats	0 to 2	(+)12 to 12	n/a	n/a	severe: cutbanks cave, excess humus, ponding	severe: subsides, flooding, ponding	severe: subsides, ponding, flooding	5.1-7.3	n/a	high
	209	Cryaquents, tidal	Cryaquents	tidal flats	0 to 2	0 to 6	n/a	n/a	severe: wetness	severe: flooding, wetness	severe: wetness, flooding, frost action	6.1-7.3	n/a	high
Inclusions: muskegs, depressional, stream and alluvial terraces, moraines and mountain footslopes	203	Chichantna peat	Euic Fluvaquentic Borosaprists	muskegs and depressional areas	0 to 8	0 to 6	n/a	n/a	severe: excess humus, severe: slope	severe: subsides, wetness, low severe: slope	severe: subsides, wetness, frost action	5.1-6.5	15-20	high
	216	Kroto-Strandline-Cryorthents	Andic Haplocryods-Cryorthents	moraines, hills, and mountain footslopes and	30 to 45	>72	severe	severe	severe: slope	severe: slope	severe: slope, frost action	3.6-5.5	n/a	high
	217	Lucile silt loam	Andic Cryoaquods	stream terraces	0 to 2	18 to 30	n/a	n/a	severe: cutbanks cave, wetness	moderate: wetness	severe: frost action	4.5-5.5	n/a	high
	218	Nancy-Kashwitna complex	Andic Haplocryods	alluvial terraces	0 to 2	>72	slight	moderate	severe: cutbanks cave	slight	severe: frost action	3.6-5.5	n/a	high
	219	Nancy-Kashwitna complex	Andic Haplocryods	alluvial terraces	2 to 7	>72	slight	moderate	severe: cutbanks cave	slight	severe: frost action	3.6-5.5	n/a	high
	239	Strandline-Spenard-Kroto	Andic Haplocryods	moraines and moutain footslopes	1 to 12	>72; 0 to 24	moderate	slight	severe: slope and wetness	severe: slope and wetness	severe: slope, frost action	3.6-6.6	n/a	high
	240	Strandline-Spenard-Kroto	Andic Haplocryods	moraines and moutain footslopes	2 to 30	>72; 0 to 24	moderate	slight	severe: slope and wetness	severe: slope and wetness	severe: slope, frost action	3.6-6.6	n/a	high
Alluvial terraces, moraines, mo	218	Nancy-Kashwitna complex	Andic Haplocryods	alluvial terraces	0 to 2	>72	slight	moderate	severe: cutbanks cave	slight	severe: frost action	3.6-5.5	n/a	high
	219	Nancy-Kashwitna complex	Andic Haplocryods	alluvial terraces	2 to 7	>72	slight	moderate	severe: cutbanks cave	slight	severe: frost action	3.6-5.5	n/a	high
	220	Nancy-Kashwitna complex	Andic Haplocryods	alluvial terraces	7 to 12	>72	slight	moderate	severe: cutbanks cave	moderate: slope	severe: frost action	3.6-5.5	n/a	high
	221	Nancy-Kashwitna complex	Andic Haplocryods	alluvial terraces	12 to 20	>72	slight	moderate	severe: cutbanks cave	severe: slope	severe: frost action	3.6-5.5	n/a	high
	222	Nancy-Kashwitna complex	Andic Haplocryods	alluvial terraces	20 to 30	>72	slight	moderate	severe: cutbanks cave	severe: slope	severe: frost action	3.6-5.5	n/a	high
	231	Salamatof peat	Dysic Sphagnic Borofibrists	muskegs	0 to 2	(+)12 to 6	n/a	n/a	severe: excess humus, ponding	severe: subsides, ponding, low strength	severe: subsides, ponding, frost action	<4.5	30 to 60	high
	236	Starichkof peat	Dysic Fluvaquentic Borohemists	muskegs	0 to 7	(+)12 to 6	n/a	n/a	severe: excess humus, ponding	severe: subsides, ponding, low strength	severe: subsides, ponding, frost action	3.6-5.0	20 to 26	high
	238	complex	Andic Haplocryods-Euic Fluvaquentic Borosaprists	moraines and moutain footslopes	1 to 20	>72; 0 to 6	moderate	moderate	moderate: slope	moderate: slope	severe: frost action	3.6-5.5	n/a	high
	240	complex	Andic Haplocryods	moraines and moutain footslopes	2 to 30	>72; 0 to 24	moderate	slight	severe: slope and wetness	severe: slope and wetness	severe: slope, frost action	3.6-6.6	n/a	high
Mountain slopes and surroundi	226	Puntilla silt loam	Andic Humicryods	mountain side slopes	7 to 20	>72	n/a	n/a	moderate: slope	moderate: slope	severe: frost action	3.6-5.5	n/a	high
	227	Puntilla silt loam	Andic Humicryods	mountain side slopes	20 to 30	>72	n/a	n/a	severe: slope	severe: slope	severe: slope, frost action	3.6-5.5	n/a	high
	228	Puntilla silt loam	Andic Humicryods	mountain side slopes	30 to 45	>72	n/a	n/a	severe: slope	severe: slope	severe: slope, frost action	3.6-5.5	n/a	high
	240	Strandline-Spenard-Kroto	Andic Haplocryods	moraines and moutain footslopes	2 to 30	>72; 0 to 24	moderate	slight	severe: slope and wetness	severe: slope and wetness	severe: slope, frost action	3.6-6.6	n/a	high
	206	Chuit and Nakochna silt loams	Andic Humicryods and Lithic Humicryods	mountain sideslopes	3 to 30	>72	n/a	n/a	severe: slope; depth to rock	severe: slope; depth to rock	severe: slope, frost action, depth to rock	4.5-5.5	n/a	high
Moraines and moutain footslop	203	Chichantna peat	Euic Fluvaquentic Borosaprists	muskegs and depressional areas	0 to 8	0 to 6	n/a	n/a	severe: excess humus, wetness	severe: subsides, wetness, low strength	severe: subsides, wetness, frost action	5.1-6.5	15-20	high
	226	Puntilla silt loam	Andic Humicryods	mountain side slopes	7 to 20	>72	n/a	n/a	moderate: slope	moderate: slope	severe: frost action	3.6-5.5	n/a	high
	237	Strandline-Kroto complex	Andic Haplocryods	moraines and moutain footslopes	20 to 45	>72	severe	severe	severe: slope	severe: slope	severe: slope, frost action	3.6-5.5	n/a	high
	240	complex	Andic Haplocryods	moraines and moutain footslopes	2 to 30	>72; 0 to 24	moderate	slight	severe: slope and wetness	severe: slope and wetness	severe: slope, frost action	3.6-6.6	n/a	high
Toeslope of eastern bluff	208	Doroshin peat	Terric Borohemists	muskegs	0 to 5									
	211	Hewitt peat	Terric Borohemists	muskegs on floodplains	0 to 2	0 to 6	n/a	n/a	severe: excess humus, wetness	severe: flooding, wetness, low strength	severe: wetness, flooding, frost action	5.1-7.3	10 to 15	high
	214	Killey and Hiline silt loams	Typic Cryaquents	floodplains and stream terraces	0 to 2	0 to 18	n/a	n/a	severe: cutbanks cave,	severe: flooding wetness	severe: wetness, flooding, frost action	4.5-5.5	n/a	high
	216	complex	Andic Haplocryods-Cryorthents	moraines, hills, and mountain footslopes and sideslopes	30 to 45	>72	severe	severe	severe: slope	severe: slope	severe: slope, frost action	3.6-5.5	n/a	high
	217	Lucile silt loam	Andic Cryoaquods	stream terraces	0 to 2	18 to 30	n/a	n/a	severe: cutbanks cave, wetness	moderate: wetness	severe: frost action	4.5-5.5	n/a	high
	231	Salamatof peat	Dysic Sphagnic Borofibrists	muskegs	0 to 2	(+)12 to 6	n/a	n/a	severe: excess humus, ponding	severe: subsides, ponding, low strength	severe: subsides, ponding, frost action	<4.5	30 to 60	high
	232	Schrock silt loam	Entic Haplocryods	stream terraces	0 to 2	>72			severe: cutbanks cave	severe: flooding	severe: frost action	3.6-6.0	n/a	high
	235	Spenard silt loam	Andic Cryoaquods	moraines, mountain footslopes, and side slopes	0 to 7									
	242	Susitna-Niklason silt loams	Typic Cryofluvents	floodplains, alluvial terraces, and natural levees	0 to 2	>72	slight	slight	severe: cutbanks cave	severe: flooding	severe: flooding	4.5-6.0	n/a	moderate
	244	Tyonek peat	Euic Fluvaquentic Borosaprists	toeslopes of moraines	0 to 2	0 to 6	n/a	n/a	severe: excess humus, wetness	severe: wetness, low strength, subsides	severe: wetness, frost action, subsides	3.6-6.0	15 to 40	high
upper reaches of the Lowlands	211	Hewitt peat	Terric Borohemists	muskegs on floodplains	0 to 2	0 to 6	n/a	n/a	severe: excess humus, wetness	severe: flooding, wetness, low strength	severe: wetness, flooding, frost action	5.1-7.3	10 to 15	high
	217	Lucile silt loam	Andic Cryoaquods	stream terraces	0 to 2	18 to 30	n/a	n/a	severe: cutbanks cave, wetness	moderate: wetness	severe: frost action	4.5-5.5	n/a	high
	218	Nancy-Kashwitna complex	Andic Haplocryods	alluvial terraces	0 to 2	>72	slight	moderate	severe: cutbanks cave	slight	severe: frost action	3.6-5.5	n/a	high
	231	Salamatof peat	Dysic Sphagnic Borofibrists	muskegs	0 to 2	(+)12 to 6	n/a	n/a	severe: excess humus, ponding	severe: subsides, ponding, low strength	severe: subsides, ponding, frost action	<4.5	30 to 60	high
236	Starichkof peat	Dysic Fluvaquentic Borohemists	muskegs	0 to 7	(+)12 to 6	n/a	n/a	severe: excess humus, ponding	severe: subsides, ponding, low strength	severe: subsides, ponding, frost action	3.6-5.0	20 to 26	high	
lower reaches of the Lowlands	202	Chedatna silt loam	Andic Cryochrepts	alluvial terraces	0 to 2	>60	slight	slight	severe: cutbanks cave	severe: flooding	moderate: flooding, frost action	n/a	n/a	moderate
	211	Hewitt peat	Terric Borohemists	muskegs on floodplains	0 to 2	0 to 6	n/a	n/a	severe: excess humus, wetness	severe: flooding, wetness, low strength	severe: wetness, flooding, frost action	5.1-7.3	10 to 15	high
	214	Killey and Hiline silt loams	Typic Cryaquents	floodplains and stream terraces	0 to 2	0 to 18	n/a	n/a	severe: cutbanks cave, severe: cutbanks cave, wetness	severe: flooding wetness	severe: wetness, flooding, frost action	4.5-5.5	n/a	high
	217	Lucile silt loam	Andic Cryoaquods	stream terraces	0 to 2	18 to 30	n/a	n/a	severe: cutbanks cave, wetness	moderate: wetness	severe: frost action	4.5-5.5	n/a	high
	218	Nancy-Kashwitna complex	Andic Haplocryods	alluvial terraces	0 to 2	>72	slight	moderate	severe: cutbanks cave	slight	severe: frost action	3.6-5.5	n/a	high
	231	Salamatof peat	Dysic Sphagnic Borofibrists	muskegs	0 to 2	(+)12 to 6	n/a	n/a	severe: excess humus, ponding	severe: subsides, ponding, low strength	severe: subsides, ponding, frost action	<4.5	30 to 60	high
236	Starichkof peat	Dysic Fluvaquentic Borohemists	muskegs	0 to 7	(+)12 to 6	n/a	n/a	severe: excess humus, ponding	severe: subsides, ponding, low strength	severe: subsides, ponding, frost action	3.6-5.0	20 to 26	high	