ATTACHMENT E: SOILS

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Table E-1. Soils

Soil Unit Number	Soil Name	Acres in Projcet Area	% of Area	Acres in Solar Array Micrositing Area	% of Area	Acres in Gen-tie Micrositing Corridor	% of Area	Wind erodibility group	Water erodibility K factor	Slopes greater than 30%	primary soil type	Bedrock expected at less than 60in
100	Cheviot-Ralls-Grinrod complex, 15 to 30 percent slopes	2.66	0.11%		0.00%	2.66	2.30%	7	0.15-0.20	no	silt loam	no
101	Cheviot-Ralls-Rubble land complex, 30 to 65 percent slopes	52.60	2.20%	39.57	1.74%	13.03	11.23%	7	0.15-0.20	yes	silt loam	no
16	Alstown-Cheviot complex, 30 to 65 percent slopes	8.41	0.35%		0.00%	8.41	7.25%	5	0.32-0.64	yes	silt loam	no
187	Grinrod-Rock outcrop-Rubble land complex, 30 to 70 percent slopes	3.68	0.15%	3.68	0.16%		0.00%	7	0.10-0.17	yes	other	yes
193	Haploxerolls, moderately well drained, nearly level to gently sloping	4.06	0.17%	4.06	0.18%		0.00%	5	0.05-0.37	no	other	no
222	Logy cobbly sandy loam, 3 to 15 percent slopes	1.05	0.04%		0.00%	1.05	0.91%	5	0.02-0.10	no	sandy loam	no
224	Logy very stony sandy loam, 3 to 15 percent slopes	4.22	0.18%		0.00%	4.22	3.64%	6	0.02-0.10	no	sandy loam	no
239	Morrow silt loam, 3 to 8 percent slopes	200.46	8.39%	200.46	8.82%		0.00%	5	0.43-0.55	no	silt loam	no
240	Morrow silt loam, 8 to 15 percent slopes	45.40	1.90%	45.40	2.00%		0.00%	5	0.43-0.55	no	silt loam	no
241	Morrow-Argabak complex, 3 to 8 percent slopes	80.73	3.38%	80.73	3.55%		0.00%	5	0.43-0.55	no	silt loam	no
242	Morrow-Argabak complex, 8 to 15 percent slopes	20.08	0.84%	20.08	0.88%		0.00%	5	0.43-0.55	no	silt loam	no
243	Morrow-Argabak-Badge complex, 15 to 30 percent slopes	40.08	1.68%	40.08	1.76%		0.00%	5	0.43-0.55	no	silt loam	no
28	Argabak-Morrow complex, 0 to 30 percent slopes	149.61	6.26%	148.11	6.51%	1.50	1.29%	7	0.10-0.37	no	silt loam	no
286	Renslow silt loam, 15 to 30 percent south slopes	3.45	0.14%		0.00%	3.45	2.97%	5	0.49-0.55	no	silt loam	no
287	Renslow silt loam, cemented substratum, 0 to 8 percent slopes	2.79	0.12%		0.00%	2.79	2.40%	5	0.49-0.64	no	silt loam	no
288	Renslow silt loam, cemented substratum, 8 to 15 percent slopes	15.70	0.66%		0.00%	15.70	13.53%	5	0.49-0.64	no	silt loam	no
289	Renslow silt loam, cemented substratum, 15 to 30 percent slopes	12.67	0.53%		0.00%	12.67	10.92%	5	0.49-0.64	no	silt loam	no
297	Ritzville silt loam, cemented substratum, 0 to 8 percent slopes	20.81	0.87%		0.00%	20.81	17.94%	5	0.24-0.64	no	silt loam	no
298	Ritzville silt loam, cemented substratum, 8 to 15 percent slopes	23.39	0.98%		0.00%	23.39	20.17%	5	0.24-0.64	no	silt loam	no
300	Ritzville silt loam, cemented substratum, 30 to 65 percent slopes	2.79	0.12%		0.00%	2.79	2.41%	5	0.24-0.64	yes	silt loam	no
306	Rubble land-Rock outcrop complex, very steep	0.02	0.00%	0.02	0.00%		0.00%	NA	NA	yes	other	yes
391	Terlan silt loam, 0 to 8 percent slopes	10.93	0.46%	10.93	0.48%		0.00%	5	0.2-0.49	no	silt loam	no
406	Titchenal silt loam, 3 to 8 percent slopes	27.92	1.17%	27.92	1.23%		0.00%	5	0.49-0.55	no	silt loam	no
407	Titchenal silt loam, 8 to 15 percent slopes	49.73	2.08%	49.73	2.19%		0.00%	5	0.49-0.55	no	silt loam	no
41	Bagdad silt loam, 0 to 8 percent slopes	1.07	0.04%	1.07	0.05%		0.00%	5	0.49-0.55	no	silt loam	no

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42	Bagdad silt loam, cemented substratum, 0 to 8 percent slopes	311.74	13.04%	311.73	13.71%	0.01	0.01%	5	0.24-0.64	no	silt loam	no
43	Bagdad silt loam, cemented substratum, 8 to 15 percent slopes	13.00	0.54%	13.00	0.57%		0.00%	5	0.24-0.64	no	silt loam	no
447	Van Nostern silt loam, 3 to 8 percent slopes	32.28	1.35%	32.28	1.42%		0.00%	5	0.43-0.55	no	silt loam	no
448	Van Nostern silt loam, 8 to 15 percent slopes	52.46	2.20%	52.46	2.31%		0.00%	5	0.43-0.55	no	silt loam	no
449	Van Nostern silt loam, 15 to 30 percent slopes	0.53	0.02%	0.53	0.02%		0.00%	5	0.43-0.55	no	silt loam	no
452	Van Nostern-Camaspatch complex, 8 to 15 percent slopes	38.47	1.61%	38.47	1.69%		0.00%	5	0.43-0.55	no	silt loam	yes
453	Van Nostern-Camaspatch complex, 15 to 30 percent slopes	4.67	0.20%	4.67	0.21%		0.00%	5	0.43-0.55	no	silt loam	yes
59	Benwy-Selah-Alstown complex, 15 to 30 percent slopes	3.32	0.14%		0.00%	3.32	2.86%	5	0.49-0.64	no	silt loam	yes
66	Broadax silt loam, cemented substratum, 3 to 8 percent slopes	151.28	6.33%	151.28	6.65%		0.00%	5	0.49-0.55	no	silt loam	no
67	Broadax silt loam, cemented substratum, 8 to 15 percent slopes	50.99	2.13%	50.99	2.24%		0.00%	5	0.49-0.55	no	silt loam	no
68	Broadax-Morrow-Spofford complex, 3 to 8 percent slopes	231.09	9.67%	231.09	10.16%		0.00%	5	0.43-0.64	no	silt loam	yes
69	Broadax-Morrow-Spofford complex, 8 to 15 percent slopes	106.06	4.44%	106.06	4.66%		0.00%	5	0.43-0.64	no	silt loam	yes
70	Broadax-Titchenal complex, 3 to 15 percent slopes	610.04	25.52%	610.04	26.83%		0.00%	5	0.49-0.64	no	silt loam	no
	Total	**2,390**		**2,274**		**116**						
	Soils in moderate to high water erosion potential soils areas	**2,157.16**	**90.26%**	**2,067.63**	**90.92%**	**89.54**	**77.19%**					
	Soils in slope greater than 30%	**67.50**	**2.82%**	**43.26**	**1.90%**	**24.23**	**20.89%**					
	Soils that are primarily silt loam	**2,372.97**	**99.29%**	**2,266.24**	**99.66%**	**106.73**	**92.01%**					
	Soils with bedrock reported at less than 40 inches	**387.30**	**16.21%**	**383.98**	**16.89%**	**3.32**	**2.86%**					

*A wind erodibility group (WEG) consists of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.
**Erosion factor K (Kw for the whole soil) indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.