

**APPENDIX E.6.1**  
***SOILS CHARACTERISTICS***  
***ENLOE DAM***

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Table  
Characteristics of ENLOE Soils

DRAFT

Map Symbol	Map Unit Name	Selected Physical Properties											Selected Chemical Properties				Selected Soil Features							
		Depth <i>in</i>	Clay <i>pct</i>	Moist Bulk Density <i>g/cc</i>	Saturated Hydraulic Conductivity <i>micro m/sec</i>	Available Water Capacity <i>in/in</i>	Linear Extensibility <i>pct</i>	Organic Matter <i>pct</i>	RUSLE Erosion Factors <sup>1</sup>			Wind Erodibility Group <sup>2</sup>	Wind Erodibility Index <sup>3</sup>	Cation exchange capacity <i>meq/100 g</i>	Soil reaction <i>pH</i>	CaCO <sub>3</sub> <i>pct</i>	Salinity <i>mmhos/cm</i>	Hydric Soils		Restrictive Layer		Frost Free Days <i>days</i>	Hydrological Group <sup>4</sup>	Farmland Classification
									<i>Kw</i>	<i>Kf</i>	<i>T</i>							<i>pct</i>	<i>location</i>	<i>depth (in)</i>	<i>type</i>			
4	Badland	0 - 60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	D	--		
26	Concally gravelly sandy loam, 8 to 25 percent slopes	0 - 13 13 - 33 33 - 60	3 - 8 3 - 10 3 - 10	1.10 - 1.50 1.70 - 1.85 1.70 - 1.85	14 - 42 14 - 42 14 - 42	0.07 - 0.10 0.07 - 0.13 0.08 - 0.12	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0 - 1.0 0 - 0.5	.15 .24 .15	.37 .37 .37	5	3	86	0.0 1.0 - 3.0 1.0 - 3.0	6.6 - 7.3 6.6 - 7.3 6.6 - 7.3	0 0 0	0 0 0	nm nm nm	nm nm nm	>60 >60 >60	roots roots roots	130	B	--
53	Ewall loamy fine sand, 0 to 15 percent slopes	0 - 15 15 - 26 26 - 60	5 - 10 0 - 5 0 - 5	1.25 - 1.45 1.45 - 1.60 1.45 - 1.60	42 - 141 141 - 705 141 - 705	0.08 - 0.11 0.05 - 0.07 0.04 - 0.07	0 - 2.9 0 - 2.9 0 - 2.9	0.5 - 1.0 0 - 0.5 0 - 0.5	.28 .10 .10	.28 .10 .24	5	2	134	1.0 - 3.0 1.0 - 2.0 1.0 - 2.0	6.6 - 7.3 6.6 - 7.3 6.6 - 7.3	0 0 0	0 0 0	nm nm nm	nm nm nm	>60 >60 >60	roots roots roots	145	A	Farmland of statewide importance
93	Lithic Xerochrepts-Nighthawk complex, 15 to 45 percent slopes	0 - 8 8 - 22 22 - 60	10 - 20 10 - 20 10 - 15	1.15 - 1.35 1.30 - 1.45 1.35 - 1.50	4 - 14 4 - 14 4 - 14	0.08 - 0.11 0.10 - 0.13 0.07 - 0.10	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0.5 - 1.0 0 - 0.5	.10 .15 .10	.32 .37 .37	5	8	0	10 - 20 10 - 20 10 - 15	6.6 - 7.3 7.4 - 7.8 7.4 - 9.0	0 0 0 - 30	0 0 - 2.0 0 - 4.0	nm nm nm	nm nm nm	>60 >60 >60	roots roots roots	135	D	--
95	Lithic Xerochrepts-Vallan complex, 15 to 45 percent slopes	0 - 4 4 - 15	18 - 25 20 - 30	1.15 - 1.35 1.25 - 1.40	4 - 14 4 - 14	0.12 - 0.15 0.15 - 0.19	0 - 2.9 3.0 - 5.9	1.0 - 3.0 0 - 0.5	.24 .24	.28 .28	1	6	48	15 - 25 10 - 20	6.1 - 7.3 6.1 - 7.3	0 0	0 0	nm nm	nm nm	6 - 20	roots, lithic	135	D	--
122	Newbon loam, 3 to 8 percent slopes	0 - 13 13 - 25 25 - 60	10 - 18 10 - 18 7 - 15	1.15 - 1.30 1.65 - 1.80 1.65 - 1.80	14 - 42 1.4 - 4 4 - 14	0.16 - 0.18 0.13 - 0.16 0.10 - 0.14	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0 - 1.0 0 - 0.5	.43 .20 .20	.43 .43 .43	3	5	56	5.0 - 15 5.0 - 15 3.0 - 10	6.6 - 7.3 6.6 - 7.3 6.6 - 7.3	0 0 0	0 0 0	nm nm nm	nm nm nm	>60 >60 >60	roots roots roots	140	B	Farmland of statewide importance
124	Newbon loam, 15 to 25 percent slopes	0 - 13 13 - 25 25 - 60	10 - 18 10 - 18 7 - 15	1.15 - 1.30 1.65 - 1.80 1.65 - 1.80	14 - 42 1.4 - 4 4 - 14	0.16 - 0.18 0.13 - 0.16 0.10 - 0.14	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0 - 1.0 0 - 0.5	.43 .20 .20	.43 .43 .43	3	5	56	5.0 - 15 5.0 - 15 3.0 - 10	6.6 - 7.3 6.6 - 7.3 6.6 - 7.3	0 0 0	0 0 0	nm nm nm	nm nm nm	>60 >60 >60	roots roots roots	140	B	--
125	Newbon gravelly loam, 0 to 8 percent slopes	0 - 13 13 - 25 25 - 60	10 - 18 10 - 18 7 - 15	1.15 - 1.30 1.65 - 1.80 1.65 - 1.80	14 - 42 1.4 - 4 4 - 14	0.13 - 0.16 0.13 - 0.16 0.10 - 0.14	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0 - 1.0 0 - 0.5	.24 .20 .20	.37 .43 .43	3	6	48	5.0 - 15 5.0 - 15 3.0 - 10	6.6 - 7.3 6.6 - 7.3 6.6 - 7.3	0 0 0	0 0 0	nm nm nm	nm nm nm	>60 >60 >60	roots roots roots	140	B	--
130	Newbon extremely stony loam, 0 to 45 percent slopes	0 - 13 13 - 25 25 - 60	10 - 18 10 - 18 7 - 15	1.15 - 1.30 1.65 - 1.80 1.65 - 1.80	14 - 42 1.4 - 4 4 - 14	0.11 - 0.14 0.13 - 0.16 0.10 - 0.14	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0 - 1.0 0 - 0.5	.15 .20 .20	.37 .43 .43	3	8	0	5.0 - 10 5.0 - 10 3.0 - 7.0	6.6 - 7.3 6.6 - 7.3 6.6 - 7.3	0 0 0	0 0 0	nm nm nm	nm nm nm	>60 >60 >60	roots roots roots	140	B	--
131	Nighthawk loam, 3 to 8 percent slopes	0 - 8 8 - 13 13 - 60	10 - 20 10 - 20 10 - 15	1.15 - 1.35 1.30 - 1.45 1.35 - 1.50	4 - 14 4 - 14 4 - 14	0.16 - 0.19 0.10 - 0.13 0.07 - 0.10	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0 - 1.0 0 - 0.5	.32 .15 .10	.37 .37 .37	5	5	56	10 - 20 10 - 20 10 - 15	6.6 - 7.3 7.4 - 7.8 7.4 - 9.0	0 0 0 - 30	0 0 - 2.0 0 - 4.0	nm nm nm	nm nm nm	>60 >60 >60	roots roots roots	163	B	--
132	Nighthawk loam, 8 to 15 percent slopes	0 - 8 8 - 13 13 - 60	10 - 20 10 - 20 10 - 15	1.15 - 1.35 1.30 - 1.45 1.35 - 1.50	4 - 14 4 - 14 4 - 14	0.16 - 0.19 0.10 - 0.13 0.07 - 0.10	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0 - 1.0 0 - 0.5	.32 .15 .10	.37 .37 .37	5	5	56	10 - 20 10 - 20 10 - 15	6.6 - 7.3 7.4 - 7.8 7.4 - 9.0	0 0 0 - 30	0 0 - 2.0 0 - 4.0	nm nm nm	nm nm nm	>60 >60 >60	roots roots roots	163	B	Farmland of unique importance
133	Nighthawk loam, 15 to 25 percent slopes	0 - 8 8 - 13 13 - 60	10 - 20 10 - 20 10 - 15	1.15 - 1.35 1.30 - 1.45 1.35 - 1.50	4 - 14 4 - 14 4 - 14	0.16 - 0.19 0.10 - 0.13 0.07 - 0.10	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0 - 1.0 0 - 0.5	.32 .15 .10	.37 .37 .37	5	5	56	10 - 20 10 - 20 10 - 15	6.6 - 7.3 7.4 - 7.8 7.4 - 9.0	0 0 0 - 30	0 0 - 2.0 0 - 4.0	nm nm nm	nm nm nm	>60 >60 >60	roots roots roots	163	B	Farmland of unique importance

Source: USDA 2007, National Cooperative Soil Survey, Web Soil Survey 1.1

(1) RUSLE Erosion Factors:

- Kw* Susceptibility of whole soil to sheet and rill erosion by water. Range 0.02 - 0.69. Higher values indicate greater susceptibility.
- Kf* Susceptibility of fines to sheet and rill erosion by water. Range 0.02 - 0.69. Higher values indicate greater susceptibility.
- T* Estimated maximum average annual rate of soil erosion (tons/acre per year) by wind/water that can occur without affecting crop productivity over a sustained period

(2) Wind Erodibility Group: Group 1 soils are most susceptible, group 8 soils are least susceptible to wind erosion.

(3) Wind Erodibility Index: Susceptibility to wind erosion; tons/acre per year that can be expected to be lost.

(4) Hydrologic Group:

- A High infiltration rate (low runoff potential) when thoroughly wet. High rate of water transmission
- B Moderate infiltration rate when thoroughly wet. Moderate rate of water transmission
- C Slow infiltration rate when thoroughly wet. Slow rate of water transmission.
- D Very slow infiltration rate when thoroughly wet. Very slow rate of water transmission.

(5) '-' indicates criteria not present in soil description, 'nm' indicates criteria not met

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Table  
Characteristics of ENLOE Soils

DRAFT

Map Symbol	Map Unit Name	Selected Physical Properties											Selected Chemical Properties				Selected Soil Features							
		Depth <i>in</i>	Clay <i>pct</i>	Moist Bulk Density <i>g/cc</i>	Saturated Hydraulic Conductivity <i>micro m/sec</i>	Available Water Capacity <i>in/in</i>	Linear Extensibility <i>pct</i>	Organic Matter <i>pct</i>	RUSLE Erosion Factors <sup>1</sup>			Wind Erodibility Group <sup>2</sup>	Wind Erodibility Index <sup>3</sup>	Cation exchange capacity <i>meq/100 g</i>	Soil reaction <i>pH</i>	CaCO <sub>3</sub> <i>pct</i>	Salinity <i>mmhos/cm</i>	Hydric Soils <i>pct</i>	Hydric Soils <i>location</i>	Restrictive Layer <i>depth (in)</i>	Restrictive Layer <i>type</i>	Frost Free Days <i>days</i>	Hydrological Group <sup>4</sup>	Farmland Classification
134	Nighthawk extremely stony loam, 8 to 25 percent slopes	0 - 8 8 - 13 13 - 60	10 - 20 10 - 20 10 - 15	1.15 - 1.35 1.30 - 1.45 1.35 - 1.50	4 - 14 4 - 14 4 - 14	0.08 - 0.11 0.10 - 0.13 0.07 - 0.10	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0.5 - 1.0 0 - 0.5	.10 .15 .10	.32 .37 .37	5	8	0	10 - 20 10 - 20 10 - 15	6.6 - 7.3 7.4 - 7.8 7.4 - 9.0	0 0 0 - 30	0 0 - 2.0 0 - 4.0	nm	nm	>60	roots	163	B	Farmland of unique importance
135	Nighthawk extremely stony loam, 25 to 65 percent slopes	0 - 8 8 - 13 13 - 60	10 - 20 10 - 20 10 - 15	1.15 - 1.35 1.30 - 1.45 1.35 - 1.50	4 - 14 4 - 14 4 - 14	0.08 - 0.11 0.10 - 0.13 0.07 - 0.10	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0.5 - 1.0 0 - 0.5	.10 .15 .10	.32 .37 .37	5	8	0	10 - 20 10 - 20 10 - 15	6.6 - 7.3 7.4 - 7.8 7.4 - 9.0	0 0 0 - 30	0 0 - 2.0 0 - 4.0	nm	nm	>60	roots	163	B	--
136	Nighthawk extremely stony loam, 25 to 65 percent slopes, eroded	0 - 4 4 - 13 13 - 60	10 - 20 10 - 20 10 - 15	1.15 - 1.35 1.30 - 1.45 1.35 - 1.50	4 - 14 4 - 14 4 - 14	0.08 - 0.11 0.10 - 0.13 0.07 - 0.10	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0.5 - 1.0 0 - 0.5	.10 .15 .10	.32 .37 .37	5	8	0	10 - 20 10 - 20 10 - 15	6.6 - 7.3 7.4 - 7.8 7.4 - 9.0	0 0 0 - 30	0 0 - 2.0 0 - 4.0	nm	nm	>60	roots	163	B	--
145	Pogue fine sandy loam, 0 to 3 percent slopes	0 - 12 12 - 29 29 - 60	5 - 10 5 - 10 0 - 5	1.20 - 1.40 1.35 - 1.55 1.50 - 1.65	14 - 42 14 - 42 141 - 705	0.11 - 0.15 0.10 - 0.13 0.02 - 0.04	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0 - 1.0 0 - 0.5	.32 .17 .05	.32 .43 .24	3	3	86	2.0 - 5.0 1.0 - 3.0 1.0 - 2.0	6.6 - 7.3 6.6 - 7.3 6.6 - 7.3	0 0 0	0 0 0	nm	nm	>60	roots	160	B	Prime farmland if irrigated
151	Pogue extremely stony fine sandy loam, 0 to 25 percent slopes	0 - 12 12 - 29 29 - 60	5 - 10 5 - 10 0 - 5	1.20 - 1.40 1.35 - 1.55 1.50 - 1.65	14 - 42 14 - 42 141 - 705	0.12 - 0.14 0.10 - 0.14 0.02 - 0.04	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0 - 1.0 0 - 0.5	.15 .17 .05	.37 .43 .24	3	8	0	2.0 - 5.0 1.0 - 3.0 1.0 - 3.0	6.6 - 7.3 6.6 - 7.3 6.6 - 7.3	0 0 0	0 0 0	nm	nm	>60	roots	160	B	--
152	Pogue extremely stony fine sandy loam, 25 to 65 percent slopes	0 - 12 12 - 29 29 - 60	5 - 10 5 - 10 0 - 10	1.20 - 1.40 1.35 - 1.55 1.50 - 1.65	14 - 42 14 - 42 141 - 705	0.12 - 0.14 0.10 - 0.14 0.02 - 0.04	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 0 - 1.0 0 - 0.5	.15 .17 .05	.37 .43 .24	3	8	0	2.0 - 5.0 1.0 - 3.0 1.0 - 3.0	6.6 - 7.3 6.6 - 7.3 6.6 - 7.3	0 0 0	0 0 0	nm	nm	>60	roots	160	B	--
161	Riverwash	0 - 60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	D	--	
162	Rock outcrop	0 - 60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	D	--	
173	Tonasket silt loam, 0 to 3 percent slopes	0 - 8 8 - 28 28 - 60	10 - 15 10 - 15 10 - 15	1.10 - 1.35 1.30 - 1.45 1.40 - 1.65	4 - 14 4 - 14 1.4 - 4	0.16 - 0.19 0.14 - 0.17 0.19 - 0.21	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 1.0 - 2.0 0 - 1.0	.49 .49 .37	.49 .49 .37	5	5	56	8.0 - 12 5.0 - 10 4.0 - 8.0	6.6 - 7.8 6.6 - 7.8 7.9 - 9.0	0 0 1-15	0 0 0 - 4.0	nm	nm	>60	roots	163	B	Prime farmland if irrigated
174	Tonasket silt loam, 3 to 8 percent slopes	0 - 8 8 - 28 28 - 60	10 - 15 10 - 15 10 - 15	1.10 - 1.35 1.30 - 1.45 1.40 - 1.65	4 - 14 4 - 14 1.4 - 4	0.16 - 0.19 0.14 - 0.17 0.19 - 0.21	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 1.0 - 2.0 0 - 1.0	.49 .49 .37	.49 .49 .37	5	5	56	8.0 - 12 5.0 - 10 4.0 - 8.0	6.6 - 7.8 6.6 - 7.8 7.9 - 9.0	0 0 1-15	0 0 0 - 4.0	nm	nm	>60	roots	163	B	--
175	Tonasket silt loam, 8 to 15 percent slopes	0 - 8 8 - 28 28 - 60	10 - 15 10 - 15 10 - 15	1.10 - 1.35 1.30 - 1.45 1.40 - 1.65	4 - 14 4 - 14 1.4 - 4	0.16 - 0.19 0.14 - 0.17 0.19 - 0.21	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 1.0 - 2.0 0 - 1.0	.49 .49 .37	.49 .49 .37	5	5	56	8.0 - 12 5.0 - 10 4.0 - 8.0	6.6 - 7.8 6.6 - 7.8 7.9 - 9.0	0 0 1-15	0 0 0 - 4.0	nm	nm	>60	roots	163	B	--
177	Tonasket silt loam, 25 to 45 percent slopes	0 - 8 8 - 28 28 - 60	10 - 15 10 - 15 10 - 15	1.10 - 1.35 1.30 - 1.45 1.40 - 1.65	4 - 14 4 - 14 1.4 - 4	0.16 - 0.19 0.14 - 0.17 0.19 - 0.21	0 - 2.9 0 - 2.9 0 - 2.9	1.0 - 2.0 1.0 - 2.0 0 - 1.0	.49 .49 .37	.49 .49 .37	5	5	56	8.0 - 12 5.0 - 10 4.0 - 8.0	6.6 - 7.8 6.6 - 7.8 7.9 - 9.0	0 0 1-15	0 0 0 - 4.0	nm	nm	>60	roots	163	B	--

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