

Nakarna Silt Loam 82-ID-0557 (82ID-009-1)

Classification: medial over loamy, mixed, frigid Entic Dystrandept.

General Site Characteristics

Location: Benewah County, Idaho; approximately 4 miles southwest of Emerald Creek, 1200 feet E. & 2425 feet N. of SW corner of sec. 3, T. 43N., R. 1E.

Forest:

Area: St. Joe SSA

Described By/Date: Soil Conservation personnel on June 24, 1982

Parent Rock/Material: ash and loess over granite schist

Habitat Type: TSHE/CLUN/VANE; western hemlock, western red cedar, grand fir, western white pine, Douglass fir, lodgepole pine, COCA, TROY, PAMY, RUPA, VANE, VIOR, ANP1, SMST, CHUM, PTAQ, CLUN, SPBE, VETCH, ROSA.

Topography: very steep

Landform: mountain slope

Weathering:

Formation Name:

Slope: 55 percent

Aspect: east southeast

Elevation: 2880 feet

Soil Depth:

Eff. Rooting Depth:

Litter Type:

Surface Rock:

Climate:

Precipitation:

Erosion:

Infiltration:

Permeability: moderate

Storage:

Drainage: well

Air Temp:

Soil Temp at 20 inches:

Salt/Alkal:

Remarks:

Pedon Description

O1 5-3 cm. Slightly decomposed needles, leaves and twigs.

O2 3-0 cm. Well decomposed organic matter. Two centimeters of St. Helen's ash in top part of the O2 horizon.

A1 0-13 cm. Yellowish brown (10YR 5/4) silt loam, dark yellowish brown (10YR 3/4) moist; weak very fine and fine granular structure; loose, very friable, nonsticky and slightly plastic; moderately acid pH 5.7; common very fine and fine, few medium and coarse roots; many very fine and fine tubular pores; no gravels; few very fine mica flakes; clear wavy boundary.

Bs1 13-36 cm. Yellowish brown (10YR 5/4) silt loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium subangular blocky structure; loose, very friable, nonsticky and slightly plastic; moderately acid pH 5.9; common very fine and fine, few medium and coarse roots; many very fine and fine tubular pores; no gravels; clear wavy boundary.

Bs2 36-56 cm. Light yellowish brown (10YR 6/4) loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; loose, very friable, nonsticky and slightly plastic; slightly acid pH 6.1; common very fine, few fine and medium roots; many very fine and fine tubular pores; no gravels; pocket of sandy loam Ci material 12 cm in diameter; clear wavy boundary.

Bw 56-79 cm. Pale brown (10YR 6/3) very fine sandy loam, brown to dark brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; moderately acid pH 5.9; common very fine, few fine and medium roots; many very fine and fine interstitial pores; 20 percent gravels by weight; many very fine mica flakes; gradual wavy boundary.

C1 79-107 cm. Pale yellow (2.5Y 7/4) loamy sand, light olive brown (2.5Y 5/4) moist; massive structure; loose, friable, nonsticky and nonplastic; moderately acid pH 6.0; weak very fine, fine, and medium roots; many very fine, few fine interstitial pores; no gravels; 40 percent total rock fragments, 80 percent is soft 20 percent hard; many very fine mica flakes; common fine iron stains, yellowish brown (10YR 5/6); gradual wavy boundary.

C2 107-140 cm. Pale yellow (2.5Y 7/4) loamy sand, light olive brown (2.5Y 5/4) moist; massive structure; slightly hard, firm, nonsticky and nonplastic; moderately acid pH 5.7; few very fine and fine roots; many very fine, few fine interstitial pores; no gravels; 100 percent soft rock fragments; clear wavy boundary.

Cr 140+ cm. Highly weathered granite schist.

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Date: June 1984

Sample No.	Horizon	Depth cm	pH paste	EC _{1:10} ³ mhos/cm	Z Water at Saturation	Available P ppm	Sesquioxides				Spodic	
							Di-Citrate Fe	Extract Al	Pyrophosphate Fe	Extract Al		
1	O1	5- 3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	O2	3- 0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	A1	0- 13	5.7	0.50	62	10.2	0.73	0.37	0.17	0.30	no	
2	Bs1	13- 36	5.9	0.39	58	2.4	0.72	0.34	0.12	0.23	no	
3	Bs2	36- 56	6.1	0.34	52	9.0	0.69	0.26	0.05	0.14	no	
4	Bw	56- 79	5.9	0.31	40	1.8	0.51	0.07	0.02	0.05	no	
5	C1	79-107	6.0	0.21	40	2.0	0.28	0.04	0.01	0.04	no	
6	C2	107-140	5.7	0.14	40	1.5	nd	nd	0.01	0.05	--	

Sample No.	Exchangeable Ions				Ext. Acidity	CEC	Base	OM	OC	N	C:N	Soil	Nat pH
	Ca	Mg	Na	K	H	Saturation					Fraction		
	meq/100 gms						Z		Z		ratio		
	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1	6.1	0.8	0.6	0.7	14.4	16.4	36	3.38	1.96	0.173	11	1.00	10.2
2	3.9	0.5	0.6	0.7	13.0	13.0	31	3.07	1.78	0.118	15	1.00	10.2
3	3.6	0.3	0.7	0.8	9.9	10.8	35	1.13	0.65	0.066	10	1.00	10.2
4	4.1	0.5	0.6	0.3	3.9	7.2	59	0.38	0.22	0.028	6	0.00	8.9
5	3.9	0.5	0.5	0.2	1.0	4.4	81	0.22	0.13	0.009	14	1.00	8.2
6	5.2	0.3	0.6	0.1	1.2	4.2	84	0.12	0.07	0.005	14	1.00	8.1

Remarks: CEC's were leached with 10% acidified NaCl.
 CEC's and nitrogens were run by steam distillation.
 Extractable cations were run on the Jarrell Ash atomic absorption.
 nd - not determined
 NS - no sample

Analysis by: Debbie Eisinger

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Date: May 1984

Depth	Particle Size Distribution (mm)								Gravel & Stone		Textural Classes
	VCS	CS	MS	FS	VFS	TS	TSi	TC	>2 mm		
	2-1.0	1-0.5	0.5-0.25	0.25-0.1	0.1-0.05	2-0.05	0.05-0.002	<0.002	wt. vol.		
cm	%								%		
5- 3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
3- 0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
0- 13	0.67	1.10	1.58	14.54	22.29	40.18	51.52	8.30	none		Silt loam
13- 36	0.49	1.09	1.54	14.97	23.06	41.16	50.62	8.23	none		Silt loam
36- 56	0.57	1.00	1.56	16.02	23.48	42.65	49.90	7.46	none		Loam
56- 79	0.70	1.10	1.68	20.34	28.47	52.29	42.05	5.66	20		Very fine sandy loam
79-107	1.03	0.79	1.53	28.10	42.38	73.83	23.12	3.04	none		Loamy sand
107-140	0.18	0.55	1.02	26.17	48.44	76.34	20.92	2.74	none		Loamy sand

Depth	Silt Size Distribution (mm)			Water Content		Liquid	Plastic	Plastic	
	CoSi	Msi	Fsi	Bulk Density	1/3	15	Limit	Limit	Index
	0.05-0.02	0.02-0.005	0.005-0.002	Clod	Core	Bar	Bar		
cm	%			g/cc		%		%	
5- 3					NS	NS			
3- 0					NS	NS			
0- 13					30.6	21.3			
13- 36					30.8	19.2			
36- 56					30.7	18.9			
56- 79					22.4	13.3			
79-107					11.0	6.7			
107-140					9.6	5.6			

Remarks: Samples were run by the centrifuge method, 5% sodium hexametaphosphate added, sonified, and no carbonates removed.
NS - no sample

Analysis by: Anita L. Falen