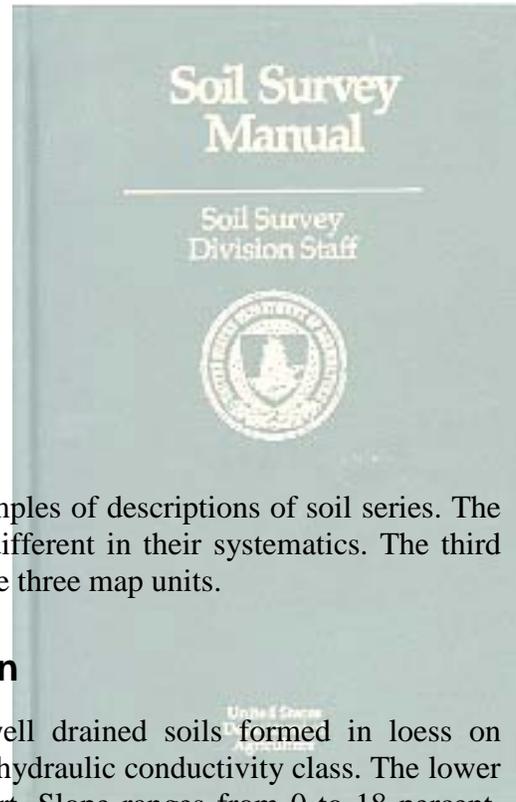


## APPENDIX

# 1

## Series Data



**T**hree appendices are included. The first gives examples of descriptions of soil series. The second describes three map units that are quite different in their systematics. The third appendix contains point information for soils of the three map units.

### Sharpsburg Official Soil Series Description

The Sharpsburg series consists of deep, moderately well drained soils formed in loess on uplands. Permeability is in the moderately high saturated hydraulic conductivity class. The lower part of the subsoil is more permeable than the upper part. Slope ranges from 0 to 18 percent. Mean annual temperature is about 11 °C, and mean annual precipitation is about 750 mm.

Taxonomic Class: Fine, montmorillonitic, mesic Typic Argiudolls

Representative Pedon: Sharpsburg silty clay loam with a convex slope of 8 percent-cultivated. Colors are for moist soil unless otherwise stated.

Ap—0 to 20 cm; black (10YR 2/1) silty clay loam, dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure; friable; few fine roots; slightly acid; abrupt smooth boundary.

A1—20 to 28 cm; very dark brown (10YR 2/2) silty clay loam, dark grayish brown (10YR 4/2) dry; moderate very fine subangular blocky structure; friable; slightly acid; clear smooth boundary.

A2—28 to 43 cm; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; some brown (10YR 4/3) peds; moderate very fine subangular blocky structure; friable; moderately acid; gradual smooth boundary. Combined thickness of the A horizons is 25 to 60 cm.

Bt1—43 to 61 cm; brown (10YR 4/3) silty clay loam; very dark gray (10YR 3/1) coatings on faces of peds; moderate fine subangular blocky structure parting to weak fine subangular blocky; firm; common distinct very dark grayish brown (10YR 3/2) clay films; very few fine roots; moderately acid; gradual smooth boundary.

Bt2—61 to 79 cm; brown (10YR 4/3) and yellowish brown (10YR 5/4) silty clay loam; few fine prominent light brownish gray (2.5Y 6/2) mottles; weak medium prismatic structure parting to moderate fine subangular blocky; firm; many distinct dark grayish brown (10YR 4/2) clay

films; very few fine and medium roots; few fine dark concretions (iron and manganese oxides); moderately acid; gradual smooth boundary.

Bt3—79 to 97 cm; brown (10YR 5/3) silty clay loam; common medium distinct light brownish gray (2.5Y 6/2) and strong brown (7.5YR 5/6) mottles; weak medium prismatic structure parting to weak medium subangular blocky; friable; many prominent grayish brown (10YR 5/2) clay films; few fine dark concretions (iron and manganese oxides); moderately acid; gradual smooth boundary. Combined thickness of the Bt horizons is 53 to 97 cm.

BC—97 to 117 cm; yellowish brown (10YR 5/4) silty clay loam; many fine and medium distinct grayish brown (2.5Y 5/2) and common medium prominent strong brown (7.5YR 5/8) mottles; weak medium prismatic structure; firm; common distinct grayish brown (10YR 5/2) clay films; few fine dark concretions (iron and manganese oxides); moderately acid; gradual smooth boundary. (10 to 25 cm thick)

C—117 to 152 cm; mottled grayish brown (2.5Y 5/2), yellowish brown (10YR 5/4), strong brown (7.5YR 4/4) silty clay loam; massive; firm; very few fine roots; common fine dark concretions (iron and manganese oxides); slightly acid.

Type Location: Taylor County, Iowa; about 13 km north and 8 km east of Bedford; 570 m east and 165 m south of the northwest corner, sec. 10, T. 69 N., R. 33 W.

Range in Characteristics: Solum thickness typically is 90 to 180 cm thick. Thickness of the A horizon, depth to clay maximum, maximum percent clay, thickness of the Bt horizon, depth to grayish mottles, and solum thickness decrease as gradient increases on convex slopes. The solum is moderately acid or strongly acid in the most acid part.

The Ap horizon has value of 2 or 3 and chroma of 1 or 2. The A1 and A2 horizons have value and chroma of 2 or 3. The A horizon ranges from 25 to 34 percent clay.

The upper part of the Bt horizon has value of 4 or 5, and chroma of 3 or 4 and contains 36 to 42 percent clay. Pedons having colors in the matrix of 5 or 6 value and 2 chroma at depths of less than 80 cm are outside the range.

The lower part of the Bt horizon, the BC horizon, and the C horizon have hue of 7.5YR to 5Y, value of 4 through 6, and chroma of 2 through 6. The C horizon is silty clay loam or silt loam.

Competing Series: These are the Gymer, Oska, and Polo series. Similar soils are the Grundy, Macksburg, and Wymore soils. Gymer and Oska soils have 7.5YR or 5YR hue in the Bt horizon. In addition, Oska soils have a lithic contact within depths of 100 cm. Polo soils have 7.5YR and 5YR hue in the lower part of the B horizon. Grundy and Macksburg soils have lower chroma, mottles, or both in the upper part of the B horizon. Also, Grundy soils have 42 to 48 percent clay in the upper 50 cm of the argillic horizon. Wymore soils have 2.5Y or yellower hue, dominant chroma of 2 in the B horizon, and contain more clay.

**Geographic Setting:** Sharpsburg soils are on convex ridgetops, and convex side slopes, and on high benches. Typically, they are on narrow ridgetops having slopes of 2 to 9 percent gradient. The full range of slope is from 0 to 18 percent. Sharpsburg soils formed in 2 to 5 meters of loess that contains less than 5 percent sand. Mean annual temperature ranges from about 8 to 14 °C and mean annual precipitation ranges from about 700 to 800 mm.

**Geographically Associated Soils:** The somewhat poorly drained Macksburg soils and the poorly drained Winterset soils form a drainage sequence with the Sharpsburg soils and commonly are on the more nearly level parts of the landscape. Adair, Clarinda, Lamoni, Pawnee, and Shelby soils are on adjoining lower parts of the landscape. They formed in till or in paleosols formed in till. Judson, soils are on foot slopes downslope and formed in local colluvium. Clearfield, and Nira, soils are nearby at about the same elevations and have a grayish B horizon.

**Drainage and Permeability:** Moderately well drained. Surface runoff is medium to rapid (Soil Survey Staff, 1951). Permeability (saturated hydraulic conductivity) is in the lower half of moderately high in the upper part of the subsoil and in the upper half of moderately high in the lower part and in the substratum.

**Use and Vegetation:** Commonly used for growing cultivated crops. Corn (*Zea mays* L.), soybeans (*Glycine max* (L.) Merr), small grains, and hay are grown. Native vegetation was tall prairie grasses.

**Distribution and Extent:** Southwestern Iowa, northwestern Missouri, northeastern Kansas, and southeastern Nebraska. The soils are extensive.

**Series Established:** Lancaster County, Nebraska, 1944.

**Remarks:** Diagnostic horizons and features recognized in this pedon are: mollic epipedon—the zone from the surface to a depth of 43 cm (Ap, A1, and A2 horizons); argillic horizon—the zone from 43 cm to a depth of 97 cm (Bt1, Bt2, and Bt3 horizons); udic moisture regime.

IA0033

SOIL INTERPRETATIONS RECORD

SHARPSBURG SERIES

MLRA(S): 106, 107, 108, 109

REV. LD. 10-90

TYPIC ARGILLLOLLS, FINE, MONTMORILLONITIC, MESIC

THE SHARPSBURG SERIES CONSISTS OF MODERATELY WELL DRAINED SOILS FORMED IN LOESS UNDER PRAIRIE VEGETATION ON UPLAND DIVIDES AND STREAM BENCHES. THE SURFACE SOIL IS BLACK VERY DARK BROWN AND VERY DARK GREYISH BROWN SILTY CLAY LOAM 17 INCHES THICK. THE SUBSOIL IS BROWN SILTY CLAY LOAM IN UPPER 7 INCHES AND BROWN AND YELLOWISH BROWN MOTTLED SILTY CLAY LOAM IN LOWER 22 INCHES. THE SUBSTRATUM IS MOTTLED GRAYISH BROWN, YELLOWISH BROWN AND STRONG BROWN SILTY CLAY LOAM. SLOPES RANGE FROM 0 TO 18 PERCENT. MOST AREAS ARE USED FOR CROPLAND.

LANDSCAPE AND CLIMATE PROPERTIES					
ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
50-57	160-170	28-38	1000-1300	MW	0-18

ESTIMATED SOIL PROPERTIES										
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT >10 IN (PCT)	FRACT 3-10 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				CLAY (PCT)
						4	10	40	2000	
0-17	SICL	CL, CH	A-7, A-6	0	0	100	100	100	95-100	27-36
0-17	SIL	CL	A-6	0	0	100	100	100	95-100	25-27
17-31	SICL, SIC	CH, CL	A-7	0	0	100	100	100	95-100	36-42
31-46	SICL	CL	A-7, A-6	0	0	100	100	100	95-100	30-38
46-60	SICL, SIL	CL	A-7, A-6	0	0	100	100	100	95-100	25-32

DEPTH (IN.)	LIQUID LIMIT	PLAS-TICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEA-BILITY (IN/HR)	AVAILABILITY WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CAC03 (PCT)	GYPSUM (PCT)
0-17	35-55	18-32	1.30-1.35	0.6-2.0	0.21-0.23	5.1-7.3	-	-	25-30	-	-
0-17	25-40	10-20	1.30-1.35	0.6-2.0	0.21-0.23	5.1-7.3	-	-	25-30	-	-
17-31	40-60	20-35	1.35-1.40	0.2-0.6	0.18-0.20	5.1-6.0	-	-	25-30	-	-
31-46	35-50	20-30	1.40-1.45	0.6-2.0	0.18-0.20	5.1-6.5	-	-	25-30	-	-
46-60	35-50	20-30	1.40-1.45	0.6-2.0	0.18-0.20	6.1-6.5	-	-	25-30	-	-

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS		WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY	
			K	T			STEEL	CONCRETE
0-17	3-4	MODERATE	.32	5	7	38	MODERATE	MODERATE
0-17	3-4	MODERATE	.32	5	6	48		
17-31	1-2	MODERATE	.43					
31-46	.5-1	MODERATE	.43					
46-60	0-1	MODERATE	.43					

FLOODING			HIGH WATER TABLE			CEMENTED PAN		BEDROCK		SUBSIDENCE		HYD GRP	POTENTIAL FROST ACTION
FREQUENCY	DURATION	MONTHS	DEPTH (FT)	KIND	MONTHS	DEPTH (IN)	HARDNESS (IN)	DEPTH (IN)	HARDNESS (IN)	INIT. (IN)	TOTAL (IN)		
NONE			>6.0			-		>60				B	HIGH

SANITARY FACILITIES		CONSTRUCTION MATERIAL	
SEPTIC TANK ABSORPTION FIELDS	0-15%: SEVERE-PERCS SLOWLY 15+%: SEVERE-PERCS SLOWLY, SLOPE	ROADFILL	POOR-LOW STRENGTH
SEWAGE LAGOON AREAS	0-2%: MODERATE-SEEPAGE 2-7%: MODERATE-SEEPAGE, SLOPE 7+%: SEVERE-SLOPE	SAND	IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (TRENCH)	0-8%: MODERATE-TOO CLAYEY 8-15%: MODERATE-SLOPE, TOO CLAYEY 15+%: SEVERE-SLOPE	GRAVEL	IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (AREA)	0-8: SLIGHT 8-15%: MODERATE-SLOPE 15+%: SEVERE-SLOPE	TOPSOIL	0-15%: POOR THIN LAYER 15+%: POOR THIN LAYER, SLOPE

DAILY COVER FOR LANDFILL		WATER MANAGEMENT	
0-8: FAIR-TOO CLAYEY 8-15%: FAIR-TOO CLAYEY, SLOPE 15+%: POOR-SLOPE		POND RESERVOIR AREA	0-3%: MODERATE-SEEPAGE 3-8%: MODERATE-SEEPAGE, SLOPE 8+%: SEVERE-SLOPE

BUILDING SITE DEVELOPMENT			
SHALLOW EXCAVATIONS	0-8%: MODERATE-TOO CLAYEY 8-15%: MODERATE-TOO CLAYEY, SLOPE 15+%: SEVERE-SLOPE	EMBANKMENTS DIKES AND SLEAVES	SLIGHT
DWELLINGS WITHOUT BASEMENTS	0-8%: MODERATE-SHRINK-SWELL 8-15%: MODERATE-SHRINK-SWELL, SLOPE 15+%: SEVERE-SLOPE	EXCAVATED PONDS AQUIFER FED	SEVERE-NO-WATER
DWELLINGS WITH BASEMENTS	0-8%: MODERATE-SHRINK-SWELL 8-15%: MODERATE-SLOPE, SHRINK-SWELL 15+%: SEVERE-SLOPE	DRAINAGE	DEEP TO WATER
SMALL COMMERCIAL BUILDINGS	0-4%: MODERATE-SHRINK-SWELL 4-8%: MODERATE-SHRINK-SWELL, SLOPE 8+%: SEVERE-SLOPE	IRRIGATION	0-3%: FAVORABLE 3+% SLOPE
LOCAL ROADS AND STREETS	0-15 SEVERE-LOW STRENGTH, FROST ACTION 15+%: SEVERE-LOW STRENGTH, SLOPE, FROST ACTION	TERRACES AND DIVERSIONS	0-8%: ERODES EASILY 8+%: SLOPE, ERODES EASILY
LAWNS LANDSCAPING AND GOLF FAIRWAYS	0-8%: SLIGHT 8-15%: MODERATE-SLOPE 15+%: SEVERE-SLOPE	GRASSED WATERWAYS	0-8%: ERODES EASILY 8+%: SLOPE, ERODES EASILY

SHARPSBURG SERIES

IA0033

RECREATIONAL DEVELOPMENT

CAMP AREAS	0-8%: MODERATE-PERCS, SLOWLY 8-15%: MODERATE-SLOPE PERC SLOWLY 15+%: SEVERE-SLOPE	PLAYGROUNDS	0-2%: MODERATE-PERCS, SLOWLY 2-6%: MODERATE-SLOPE, PERCS SLOWLY 6+%: SEVERE-SLOPE
PICNIC AREAS	0-8%: MODERATE-PERCS, SLOWLY 8-15%: MODERATE-SLOPE PERC SLOWLY 15+%: SEVERE-SLOPE	PATHS AND TRAILS	0-15%: SLIGHT 15-18%: MODERATE-SLOPE

REGIONAL INTERPRETATIONS

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CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)

CLASS-DETERMINING PHASE	CAPABILITY		CORN (BU)		SOYBEANS (BU)		OATS (BU)		BROMEGRASS ALFALFA HAY (TONS)		KENTUCKY BLUEGRASS (AUM)		SMOOTH BRUMEGRASS (AUM)		BRUMEGRASS ALFALFA (AUM)	
	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR
0-2%	1		156		52		78		6.6		3.8		6.4		10.9	
2-5%	2E		153		51		77		6.4		3.8		6.3		10.7	
5-9%	3E		148		50		74		6.2		3.6		6.1		10.4	
9-14%	3E		139		47		70		5.8		3.4		5.7		9.8	
14-18%	4E		122		41		61		5.1		3.0		5.0		8.6	

WOODLAND SUITABILITY

CLASS-DETERMINING PHASE	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT							
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORTY	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS								

WINDBREAKS (A)

CLASS-DETERMINING PHASE	SPECIES	H1	SPECIES	H1	SPECIES	H1	SPECIES	H1
HIGH PPT	SILKY DOGWOOD	8	AMUR HONEYSUCKLE	12	AMER CRANBERRYBUSH	10	AMUR PRIVET	15
	EASTERN WHITE PINE	41	PIN OAK	36	AUSTRIAN PINE	28	NORWAY SPRUCE	32
LOW PPT	WHITE FIR	23	BLUE SPRUCE	22	NORTHERN WHITECEDAR	22	WASHINGTON HAWTHORN	18
	AMUR MAPLE	12	GREEN ASH	25	HACKBERRY	24	AMUR HONEYSUCKLE	8
	LILAC	8	AUSTRIAN PINE	26	BUR OAK	24	EASTERN REDCEDAR	22
	AUTUMN OLIVE	12	EASTERN WHITE PINE	27	RUSSIAN OLIVE	22	HONEYLOCUST	26

WILDLIFE HABITAT SUITABILITY

CLASS-DETERMINING PHASE	POTENTIAL FOR HABITAT ELEMENTS							POTENTIAL AS HABITAT FOR:				
	GRAIN & SEED	GRASS & LEGUME	WILD HERB.	HARDWD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPENLD WILDLF	WOODLD WILDLF	WETLAND WILDLF	RANGELD WILDLF
0-5%	GOOD	GOOD	GOOD	GOOD	GOOD	-	POOR	POOR	GOOD	GOOD	POOR	
5-15%	FAIR	GOOD	GOOD	GOOD	GOOD	-	POOR	POOR	GOOD	GOOD	POOR	
15+%	POOR	FAIR	GOOD	FAIR	FAIR	-	POOR	POOR	FAIR	FAIR	POOR	

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION) (B)

COMMON PLANT NAME	PLANT SYMBOL (NLSFN)	PERCENTAGE COMPOSITION (DRY WEIGHT) BY CLASS DETERMINING PHASE				
		ALL				
BIG BLUESTEM	ANGE	30				
LITTLE BLUESTEM	SCSC	15				
SIDEOATS GRAMA	BOCU	5				
INDIANGRASS	SONU2	5				
SWITCHGRASS	PAV2	10				
TALL DROPSEED	SPAS	5				
SEDGE	CAREX	5				
LEADPLANT	AMCA6	5				
KENTUCKY BLUEGRASS	POPR	5				
OTHER PERENNIAL GRASSES	PPGG	5				
OTHER PERENNIAL FORBS	PPFF	5				
OTHER SHRUBS	SSSS	5				
POTENTIAL PRODUCTION (LBS./AC DRY WT)						
FAVORABLE YEARS		4800				
NORMAL YEARS		4400				
UNFAVORABLE YEARS		4000				

FOOTNOTES

A WINDBREAK GROUP 3, HIGH PPT, LRA 108, 109, LOW PPT, 106, 107  
B SILTY RANGE SITE, NEBRASKA.

## Bakeoven Official Soil Series Description

The Bakeoven series consists of very shallow, well drained soils that formed in mixed alluvium, loess, and residuum weathered from basalt. Bakeoven soils are on uplands and have slopes of 0 to 90 percent. The mean annual precipitation is about 330 mm and the mean annual temperature is about 9 °C.

Taxonomic Class: Loamy-skeletal, mixed, mesic Lithic Haploxerolls

Representative Pedon: Bakeoven very cobbly loam-rangeland. Colors are for dry soil unless otherwise noted.

A—0 to 5 cm; brown (7.5YR 5/3) very cobbly loam, dark brown (7.5YR 3/2) moist; weak thin platy and weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine irregular pores; about 40 percent by volume of rock fragments; slightly acid (pH 6.5); abrupt smooth boundary. (0 to 10 cm thick)

Bw1—5 to 10 cm; brown (7.5YR 5/3) very gravelly heavy loam, dark brown (7.5YR 3/3) moist; weak thin platy and weak fine and medium granular structure; slightly hard, friable, sticky and plastic; common very fine roots; common very fine irregular pores; about 60 percent by volume of rock fragments; neutral (pH 6.8); abrupt smooth boundary. (5 to 15 cm thick)

Bw2—10 to 18 cm; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; hard, friable, sticky and plastic; common very fine roots; common very fine tubular pores; about 60 percent by volume of rock fragments; neutral (pH 6.9); abrupt wavy boundary. (2 to 10 cm thick)

2R—18 cm; basalt.

Type Location: Wasco County, Oregon; 360 m south and 30 m east of center of sec. 7; NW1/4, SE1/4 sec. 7. T. 8 S., R. 15 E.

Range in Characteristics: The soil is dry throughout above the lithic contact for more than half the time (cumulative) that the soil temperature is above 5 °C. The mean annual soil temperature ranges from 8 to 12 °C. Thickness of solum and depth to bedrock range from about 10 to 25 cm. Rock fragments commonly range from 50 to 90 percent, but the upper 5 to 10 cm of the deeper sola have as little as 35 percent. Organic matter ranges from 1 to 2 percent. The deeper part of some sola have coatings of carbonates on the underside of rock fragments and these coatings extend in cracks into the underlying rock. The sola have 10YR, 7.5YR, or 5YR hue.

The A horizon has value of 4 or 5 dry, 2 or 3 moist and chroma of 2 or 3 moist and 2 through 4 dry. It is slightly acid to mildly alkaline.

The B horizon has the same color value as that of the A horizon and chroma is 2 or 3 in the upper part and 3 or 4 below depths of 15 or 18 cm in sola thicker than 18 cm. It is loam, clay

loam or silt loam and averages more than 18 percent clay and has more than 35 percent rock fragments. This horizon has moderate fine subangular blocky through weak medium subangular blocky structure. It is slightly acid to mildly alkaline.

Clay films are present on some rock fragments in deeper sola or in the fractures in the underlying bedrock.

**Competing Series:** These are the Aldax, Bodell, Couleedam, Johntom, Licksillet, Limekiln, Plaskett, and Venator series. All of these soils are deeper than 25 cm to bedrock. Aldax and Plaskett soils have less than 18 percent clay in the particle-size control section. Limekiln soils have a calcic horizon. Plaskett soils have mean annual soil temperature of 13 to 15 °C.

**Geographic Setting:** The Bakeoven soils are on ridge tops, hillslopes and benches at elevations of 180 to 1600 meters. Slopes of 2 to 20 percent are most common and the full range is from about 0 to 90 percent. The soils formed in loess and residuum weathered from basalt. The climate is semiarid. The mean annual precipitation ranges from 25 to 40 cm, the mean annual temperature is from 7 to 11 °C, the mean winter temperature is from 7 to 11 °C, and the mean summer temperature is from 17 to 19 °C. The frost-free period is 100 to 165 days.

**Geographically Associated Soils:** These are the competing Licksillet soils and the Anderly, Agency, Cantala, Condon, Gem, Maupin, Morrow, Reywat, Ritzville, Ruckles, Starbuck, Walla Walla, Wapinitia, Watama and Wrentham soils. Agency soils are moderately deep to bedrock and have less than 35 percent rock fragments. Anderly and Condon soils are moderately deep and formed in loess over bedrock and in many places are "biscuits" associated with Bakeoven soils. Cantala soils are fine-silty and deeper than 1 m to bedrock. Gem and Morrow soil have an argillic horizon and are moderately deep to bedrock. Maupin soils have a duripan and are fine-loamy. Reywat soils are shallow and have a skeletal argillic horizon. Ritzville and Walla Walla soils are deep or very deep, formed in loess, and are free of rock fragments. Ruckles soils have a very stony argillic horizon. Starbuck soils are on steep south-facing slopes, lack a mollic epipedon, formed mostly in loess, and contain less than 35 percent rock fragments. Wapinitia soils are deep and have an argillic horizon. Watama soils are moderately deep and are fine-loamy. Wrentham soils are on steep north-facing slopes and are deeper than 50 cm to bedrock.

**Drainage and Permeability:** Well drained; medium runoff (Soil Survey Staff, 1951); moderately slow permeability and in the moderately high saturated hydraulic conductivity class. In a few places, the soil is ponded for short periods.

**Use and Vegetation:** Most of the soil is used for range. Native vegetation is bunchgrasses, forbs, and shrubs.

**Distribution and Extent:** North-central Oregon, eastern Washington, and southwestern Idaho. This series is extensive.

**Series Established:** Sherman County, Oregon; 1962.

OR0011 SOIL INTERPRETATIONS RECORD BAKEOVEN SERIES

MLRA(S): 8, 10  
 REV. GLG, MD, 6-90  
 LITHIC HAPLEXEROLLS, LOAMY-SKELETAL, MIXED, MESIC

THE BAKEOVEN SERIES CONSISTS OF WELL DRAINED SOILS FORMED IN LOESS MIXED WITH COLLUVIUM ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY COBBLY LOAM ABOUT 8 INCHES THICK. THE SUBSOIL IS VERY GRAVELLY LOAM AND CLAY LOAM ABOUT 5 INCHES THICK OVER BASALT.

LANDSCAPE AND CLIMATE PROPERTIES					
ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
45-52	100-165	10-16	540-4300	W	0-90

ESTIMATED SOIL PROPERTIES										
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT. >10 IN (PCT)	FRACT. 3-10 IN PCT	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				CLAY (PCT)
						4	10	40	2000	
0-2	STV-L STV-SIL	GM, SM	A-4	15-25	10-20	65-80	60-75	50-70	35-50	15-25
0-2	CBV-L CBV-SIL	GM	A-2, A-4	10-20	25-40	50-70	40-65	35-50	30-50	15-25
0-2	STX-SIL, STX-L	GM, SM	A-4	25-40	20-30	65-80	60-75	50-70	35-50	15-25
2-7	GRV-CL, CBV-L, GRV-L	GM, GC	A-4, A-6	5-15	15-40	50-65	45-60	45-55	35-50	18-33
7	UWB									

DEPTH (IN.)	LIQUID LIMIT	PLAS-TICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERME-ABILITY (IN/HR)	AVAILABILITY WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CAC03 (PCT)	GYPSUM (PCT)
0-2	25-35	NP-10	1.25-1.35	0.2-0.6	0.06-0.14	6.1-7.8	-	-	10-25	-	-
0-2	25-35	NP-10	1.25-1.35	0.2-0.6	0.06-0.09	6.1-7.8	-	-	10-25	-	-
0-2	25-35	NP-10	1.25-1.35	0.2-0.6	0.06-0.09	6.1-7.8	-	-	10-25	-	-
2-7	30-40	NP-10	1.30-1.40	0.2-0.6	0.05-0.14	6.6-7.8	-	-	10-30	-	-
7											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS		WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY	
			K	T			STEEL	CONCRETE
0-2	1-3	LOW	.15	1	8	-	MODERATE	LOW
0-2	1-3	LOW	.15	1	8	-		
0-2	1-3	LOW	.10	1	8	-		
2-7	.5-2	LOW	.20					
7								

FLOODING			HIGH WATER TABLE			CEMENTED PAN		BEDROCK		SUBSIDENCE		HYD GRP	POTENT'L FROST ACTION
FREQUENCY	DURATION	MONTHS	DEPTH FT	KIND	MONTHS	DEPH (IN)	HARDNESS	DEPH (IN)	HARDNESS	INIT. (IN)	TOTAL (IN)		
NONE			>6.0			-		4-12	HARD	-		D	MODERATE

SANITARY FACILITIES CONSTRUCTION MATERIAL

SEPTIC TANK ABSORPTION FIELDS	0-15%: SEVERE-DEPTH TO ROCK 15+%: SEVERE-DEPTH TO ROCK, SLOPE	ROADFILL	0-25%: POOR-DEPTH TO ROCK 25+%: POOR-DEPTH TO ROCK, SLOPE
SEWAGE LAGOON AREAS	0-7% STV: SEVERE-DEPTH TO ROCK 7% STV: SEVERE-DEPTH TO ROCK, SLOPE 0-7% CBV, STX: SEVERE-DEPTH TO ROCK, LARGE STONES 7+% CBV, STX: SEVERE-DEPTH TO ROCK, SLOPE	SAND	IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (TRENCH)	0-15% STV: SEVERE-DEPTH TO ROCK 15+% STV: SEVERE-DEPTH TO ROCK, SLOPE 0-15% CBV, STX: SEVERE-DEPTH TO ROCK, LARGE STONES 15+% CBV, STX: SEVERE-DEPTH TO ROCK, SLOPE	GRAVEL	IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (AREA)	0-15%: SEVERE-DEPTH TO ROCK 15+%: SEVERE-DEPTH TO ROCK, SLOPE	TOPSOIL	0-15%: SEVERE-DEPTH TO ROCK SMALL STONES 15+%: POOR-DEPTH TO ROCK, SMALL STONES, SLOPE
DAILY COVER FOR LANDFILL	0-15%: POOR-DEPTH TO ROCK 15+%: POOR-DEPTH TO ROCK, SLOPE	WATER MANAGEMENT	

BUILDING SITE DEVELOPMENT			
SHALLOW EXCAVATIONS	0-15%: SEVERE-DEPTH TO ROCK 15+%: SEVERE-DEPTH TO ROCK, SLOPE	EMBANKMENTS DIKES AND LEVEES	STV, MODERATE-LARGE STONES CBV, STX: SEVERE-LARGE STONES
DWELLINGS WITHOUT BASEMENTS	0-15%: SEVERE-DEPTH TO ROCK 15+%: SEVERE-DEPTH TO ROCK, SLOPE	EXCAVATED PONDS AQUIFER FED	SEVERE-NO-WATER
DWELLINGS WITHOUT BASEMENTS	0-15%: SEVERE-DEPTH TO ROCK 15+%: SEVERE-DEPTH TO ROCK, SLOPE	DRAINAGE	DEEP TO WATER
SMALL COMMERCIAL BUILDINGS	0-8%: SEVERE-DEPTH TO ROCK 8+%: SEVERE-SLOPE, DEPTH TO ROCK	IRRIGATION	0-3%: LARGE STONES, DROUGHTY 3+%: SLOPE, LARGE STONES, DROUGHTY
LOCAL ROADS AND STREETS	0-15%: SEVERE-DEPTH TO ROCK 15+%: SEVERE-SLOPE, DEPTH TO ROCK,	TERRACES AND DIVERSIONS	0-8%: LARGE STONES, DEPTH TO ROCK 8+%: SLOPE, LARGE STONES, DEPTH TO ROCK
LAWNS LANDSCAPING AND GOLF FAIRWAYS	STV, STX: SEVERE-DEPTH TO ROCK CBV: SEVERE - SMALL STONES, LARGE STONES, DEPTH TO ROCK	GRASSY WATERWAYS	0-8%: LARGE STONES, DROUGHTY 8+%: LARGE STONES, SLOPE, DROUGHTY

BAKEOVEN SERIES		RECREATIONAL DEVELOPMENT		0R0011
CAMP AREAS	0-15% STV. SEVERE-DEPTH TO ROCK 15+% STV. SEVERE-SLOPE, DEPTH TO ROCK 0-15% CBV, STX. SEVERE-LARGE STONES, DEPTH TO ROCK, 15+% CBV, STX. SEVERE-SLOPE, LARGE STONES	PLAYGROUNDS	0-6% SEVERE-LARGE STONES, SMALL STONES 6+% SEVERE-LARGE STONES, SLOPE, SMALL STONES	
PICNIC AREAS	0-15% STV. SEVERE-DEPTH TO ROCK 15+% STV. SEVERE-SLOPE, DEPTH TO ROCK 0-15% CBV, STX. SEVERE-LARGE STONES, DEPTH TO ROCK 15+% CBV, STX. SEVERE-SLOPE, LARGE STONES	PATHS AND TRAILS	0-15% STV. MODERATE DUSTY 15-25% STV. MODERATE-SLOPE, DUSTY 0-15% CBV, STX. MODERATE-LARGE STONES, DUSTY 15-25% CBV, STX. MODERATE-LARGE STONES, SLOPE 25+% SEVERE-SLOPE	

REGIONAL INTERPRETATIONS

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CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)

CLASS-DETERMINING PHASE	CAPABILITY													
	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR
ALL	7S													

WOODLAND SUITABILITY

CLASS-DETERMINING PHASE	ORD SYM	MANAGEMENT PROBLEMS				POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORTY	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	
							NONE		

WINDBREAKS (A)

CLASS-DETERMINING PHASE	SPECIES	H1	SPECIES	H1	SPECIES	H1	SPECIES	H1
	NONE							

WILDLIFE HABITAT SUITABILITY

CLASS-DETERMINING PHASE	POTENTIAL FOR HABITAT ELEMENTS							POTENTIAL AS HABITAT FOR:				
	GRAIN & SEED	GRASS & LEGUME	WILD HERB	HARDWD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPENLD WILDLF	WOODLD WILDLF	WETLAND WILDLF	RANGELD WILDLF
ALL	V. POOR	V. POOR	FAIR	-	-	FAIR	V. POOR	V. POOR	V. POOR	-	V. POOR	FAIR

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION) (A)

COMMON PLANT NAME	PLANT SYMBOL (NLSPI#)	PERCENTAGE COMPOSITION (DRY WEIGHT) BY CLASS DETERMINING PHASE											
		0-90%		DRY									
SANDBERG BLUEGRASS	POSE	50		35									
STIFF SAGEBRUSH	ARRI2	10		35									
OTHER PERENNIAL GRASSES	PPGG	5		-									
BUCKWHEAT	ERIOG	2		10									
BLUEBUNCH WHEATGRASS	AGSP	5		5									
PHLOX	PHLOX	2		5									
OTHER PERENNIAL FORBS	PPFF	-		10									
POTENTIAL PRODUCTION (LBS./AC.DRY WT.):													
FAVORABLE YEARS		350		200									
NORMAL YEARS		300		125									
UNFAVORABLE YEARS		200		75									

FOOTNOTES  
A 0-90% VERY SHALLOW 9-15PZ; DRY 010XY0021.

## Condon Official Soil Series Description

The Condon series consists of moderately deep, well drained soils that formed in loess overlying basalt. Condon soils are on uplands and have slopes of 0 to 40 percent. Mean annual precipitation is about 300 mm and the mean annual temperature is about 9 °C.

Taxonomic Class: Fine-silty, mixed, mesic Typic Haploxerolls

Representative Pedon: Condon silt loam-cultivated. Colors are for dry soil unless otherwise noted.

Ap—0 to 18 cm; grayish brown (10YR 5/2) silt loam, very dark brown (10YR 2/2) moist; weak medium platy and weak medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common fine irregular pores; neutral (pH 6.6); abrupt smooth boundary. (15 to 25 cm thick)

Bw1—18 to 36 cm; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium to coarse prismatic and weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; neutral (pH 6.7); clear smooth boundary. (10 to 30 cm thick)

Bw2—36 to 50 cm; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak medium to coarse prismatic and weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; neutral (pH 6.8); clear wavy boundary. (10 to 30 cm thick)

BC—50 to 70 cm; pale brown (10YR 6/3) silt loam, dark brown (10YR 4/3) moist; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; neutral (pH 7.0); abrupt wavy boundary. (0 to 50 cm thick)

2R—70 cm; basalt.

Type Location: Gilliam County, Oregon; 1.3 km west of Condon city limits; 53 m west of fence, 45 m north of Condon-Moro road in the SE1/4, SW1/4, NW1/4 sec. 9. T. 4 S., R. 21 E.

Range in Characteristics: The soils are usually moist but are dry for 80 to 90 consecutive days between depths of 10 and 30 cm following the summer solstice. The mean annual soil temperature ranges from 8 to 12 °C. Thickness of the solum and depth to bedrock range from 50 to 100 cm. Organic matter decreases to less than 1 percent at depths of less than 50 cm and commonly between 25 and 38 cm.

The A horizon has value of 4 or 5 dry, 2 or 3 moist and chroma of 2 or 3 moist and dry. It is slightly acid or neutral.

The B horizon has value of 3 or 4 moist, 5 or 6 dry, but 3 moist and 5 dry above 25 cm and chroma of 2 thru 4 moist and dry. It is silt loam and averages 18 to 27 percent clay and less than 15 percent coarser than very fine sand. This horizon has weak to moderate structure. It is slightly acid through slightly alkaline.

**Competing Series:** These are the Cantala and Couse series. Cantala and Couse soils are deeper than 100 cm to bedrock.

**Geographic Setting:** Condon soils are on uplands at elevations of 330 to 1200 meters. Slopes are 0 to 40 percent. These soils formed in a loess mantle with an appreciable component of volcanic ash overlying basalt. Summers are warm and dry and winters are cool and moist. Mean summer temperature is 16 to 18 °C, and mean winter temperature is 0 to 1 °C. Mean annual temperature is 7 to 9 °C. Precipitation ranges from 250 to 380 mm. The frost-free period is 100 to 165 days.

**Geographically Associated Soils:** These are the Bakeoven, Lickskillet, Valby , and Wrentham soils and the competing Cantala soils. All of these except Valby and Cantala soils contain more than 35 percent rock fragments. Also, Bakeoven and Lickskillet soils are less than 50 cm deep to bedrock. Valby soils are calcareous at depths of 38 to 76 cm.

**Drainage and Permeability:** Well drained; slow to rapid runoff; moderate permeability.

**Use and Vegetation:** Principal use is for growing grain crops. Other uses are production of hay, pasture, and native range. Native plants are bluebunch wheatgrass (*Agropyron spicatum* (Scrib and J.G. Smith) A. Heller), Idaho fescue (*Festuca idahonsis* Elmer), Sandberg bluegrass (*Poa secunda* J. Presl.), and forbs such as yarrow (*Achillea* L.), phlox (*Phlox* L.), and buckwheat (*Eriogonum Michx.*).

**Distribution and Extent:** North-central Oregon and south-central Washington. The series is extensive.

**Series Established:** Rock Creek Project, Gilliam County, Oregon, 1939.

**Additional Data:** Characterization data on 3 profiles (S57-OR-065-19, S89OR-065-001, S89OR-065-002).

**Series Revision Date:** 1/90

OR0021

SOIL INTERPRETATIONS RECORD

CONDON SERIES

MLRA(S): 8

REV. G.L.G. MSA. 12-89

TYPIC HAPLOXEROLLS, FINE-SILTY, MIXED, MESIC

THE CONDON SERIES CONSISTS OF MODERATELY DEEP SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND HILLSLOPES. TYPICALLY, THE SURFACE LAYERS IS SILT LOAM ABOUT 7 INCHES THICK. THE SUBSOILS IS SILT LOAM ABOUT 24 INCHES THICK OVER BEDROCK.

LANDSCAPE AND CLIMATE PROPERTIES													
ANNUAL AIR TEMPERATURE		FROST FREE DAYS		ANNUAL PRECIPITATION		ELEVATION (FT)		DRAINAGE CLASS		SLOPE (PCT)			
45-52		100-165		10-15		1100-4000		W		0-40			
ESTIMATED SOIL PROPERTIES													
DEPTH (IN.)	USDA TEXTURE		UNIFIED		AASHTO		FRACT. >10 IN (PCT)	FRACT. 3-10 IN PCT	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				CLAY (PCT)
									4	10	40	200	
0-7 7-31 31	SIL SIL LWB		ML, CL-ML CL, CL-ML		A-4 A-4, A-6		0 0	0 0	100 100	95-100 100	95-100 95-100	80-90 80-90	15-25 18-27
DEPTH (IN.)	LIQUID LIMIT	PLAS-TICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERME-ABILITY (IN/HR)	AVAILABILITY WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CAC03 (PCT)	GYPSUM (PCT)		
0-7 7-31 31	25-33 25-33	5-10 5-15	1.25-1.35 1.30-1.40	0.6-2.0 0.6-2.0	0.20-0.25 0.19-0.21	6.1-7.3 6.1-7.8	- -	- -	10-20 10-20	- -	- -		
DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS		WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY						
			K	T			STEEL	CONCRETE					
0-7 7-31 31	2-3 .5-2	LOW LOW	43 43	2	5	56	MODERATE	LOW					
FLOODING			HIGH WATER TABLE			CEMENTED PAN		BEDROCK		SUBSIDENCE		HYD GRP	POTENT'L FROST ACTION
FREQUENCY	DURATION	MONTHS	DEPTH FT	KIND	MONTHS	DEPH (IN)	HARDNESS	DEPH (IN)	HARDNESS	INIT. (IN)	TOTAL (IN)		
NONE			>6.0			-		20-40	HARD	-	-	C	HIGH
SANITARY FACILITIES				CONSTRUCTION MATERIAL									
SEPTIC TANK ABSORPTION FIELDS	0-15%: SEVERE-DEPTH TO ROCK 15+%: SEVERE-DEPTH TO ROCK, SLOPE			ROADFILL		0-25%: POOR-DEPTH TO ROCK 25+%: POOR-DEPTH TO ROCK, SLOPE							
SEWAGE LAGOON AREAS	0-7%: SEVERE-DEPTH TO ROCK 7%: SEVERE-DEPTH TO ROCK, SLOPE			SAND		IMPROBABLE-EXCESS FINES							
SANITARY LANDFILL (TRENCH)	0-15% STV: SEVERE-DEPTH TO ROCK 15+% STV: SEVERE-DEPTH TO ROCK, SLOPE			GRAVEL		IMPROBABLE-EXCESS FINES							
SANITARY LANDFILL (AREA)	0-15%: SEVERE-DEPTH TO ROCK 15+%: SEVERE-DEPTH TO ROCK, SLOPE			TOPSOIL		0-8%: FAIR-DEPTH TO ROCK, THIN LAYER 8-15%: FAIR-DEPTH TO ROCK, THIN LAYER, SLOPE 15+%: POOR-SLOPE							
DAILY COVER FOR LANDFILL	0-15%: POOR-DEPTH TO ROCK 15+%: POOR-DEPTH TO ROCK, SLOPE			WATER MANAGEMENT									
				POND RESERVOIR AREA		0-3%: SEVERE-DEPTH TO ROCK 3-8%: SEVERE-DEPTH TO ROCK, SLOPE 8+%: SEVERE-SLOPE							
BUILDING SITE DEVELOPMENT													
SHALLOW EXCAVATIONS	0-15%: SEVERE-DEPTH TO ROCK 15+%: SEVERE-DEPTH TO ROCK, SLOPE			EMBANKMENTS DIKES AND LEVEES		SEVERE-PIPING							
DWELLINGS WITHOUT BASEMENTS	0-8%: MODERATE-DEPTH TO ROCK 8-15%: MODERATE-DEPTH TO ROCK, DEPTH TO ROCK 15+%: SEVERE-SLOPE			EXCAVATED PONDS AQUIFER FED		SEVERE-NO WATER							
DWELLINGS WITHOUT BASEMENTS	0-15%: SEVERE-DEPTH TO ROCK 15+%: SEVERE-DEPTH TO ROCK, SLOPE			DRAINAGE		DEEP TO WATER							
SMALL COMMERCIAL BUILDINGS	0-4%: MODERATE-DEPTH TO ROCK 4-8%: MODERATE-SLOPE, DEPTH TO ROCK 8+%: SEVERE-SLOPE			IRRIGATION		0-3%: DEPTH TO ROCK, ERODES EASILY 3+%: SLOPE, DEPTH TO ROCK, ERODES EASILY							
LOCAL ROADS AND STREETS	0-15%: SEVERE-FROST ACTION 15+%: SEVERE-SLOPE, FROST ACTION			TERRACES AND DIVERSIONS		0-8%: DEPTH TO ROCK, ERODES EASILY 8+%: SLOPE, DEPTH TO ROCK, ERODES EASILY							
LAWNS LANDSCAPING AND GOLF FAIRWAYS	0-8%: MODERATE-DEPTH TO ROCK 8-15%: MODERATE-SLOPE, DEPTH TO ROCK 15+%: SEVERE-SLOPE			GRASSED WATERWAYS		0-8%: ERODES EASILY, DEPTH TO ROCK 8+%: SLOPE, ERODES EASILY, DEPTH TO ROCK							

CONDON SERIES		RECREATIONAL DEVELOPMENT										OR0021		
CAMP AREAS		0-8%: MODERATE-DUSTY 8-15%: MODERATE-SLOPE, DUSTY 15+%: SEVERE-SLOPE					PLAYGROUNDS					0-2%: MODERATE-DUSTY 2-6%: MODERATE-SLOPE, DEPTH TO ROCK, DUSTY 6+%: SEVERE-SLOPE		
PICNIC AREAS		0-8%: MODERATE-DUSTY 8-15%: MODERATE-SLOPE, DUSTY 15+%: SEVERE-SLOPE					PATHS AND TRAILS					0-25%: SEVERE-ERODES EASILY 25+%: SEVERE-SLOPE, ERODES EASILY		
REGIONAL INTERPRETATIONS														
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)														
CLASS-DETERMINING PHASE		CAPABILITY												
		NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	
0-7%		3S	3E	30		0.75		3		35				
7-12% NORTH		3E	3E	30		0.75		3		35				
12-20% NORTH		3E		30		0.75		3		35				
7-35% SOUTH		4E		15				2		30				
20-35% NORTH		4E		30		0.75		3		35				
WOODLAND SUITABILITY														
CLASS-DETERMINING PHASE		ORD SYM	MANAGEMENT PROBLEMS				POTENTIAL PRODUCTIVITY			TREES TO PLANT				
			EROSION HAZARD	EQUIP LIMIT	SEEDL MORTY	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX		PROD CLAS			
								NONE						
WINDBREAKS (A)														
CLASS-DETERMINING PHASE		SPECIES		H1	SPECIES		H1	SPECIES		H1	SPECIES		H1	
IRR		PEKING COTONEASTER	8	8	SKUNK BUSH SUMAC	15	15	AUSTRIAN PINE	35	35	SIBERIAN ELM	35	35	
		REDSIER DOGWOOD	8	8	ROCKY MT. JUNIPER	25	25	SCOTCH PINE	35	35	HONEYSUCKLE	15	15	
		SIBERIAN PEASHRUB	15	15	BLUE SPRUCE	25	25	NORWAY SPRUCE	35	35	PONDEROSA PINE	35	35	
		LILAC	15	15	EASTERN REDCEDAR	25	25	GREEN ASH	35	35	BLACK LOCUST	35	35	
		NANKING CHERRY	15	15										
WILDLIFE HABITAT SUITABILITY														
CLASS-DETERMINING PHASE		POTENTIAL FOR HABITAT ELEMENTS							POTENTIAL AS HABITAT FOR:					
		GRAIN & SEED	GRASS & LEGUME	WILD HERB	HARDWD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPENLD WILDLF	WOODLD WILDLF	WETLAND WILDLF	RANGELD WILDLF	
ALL		FAIR	GOOD	GOOD	-	-	V. POOR	V. POOR	V. POOR	FAIR	-	V. POOR	V. POOR	
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION) (A)														
COMMON PLANT NAME		PLANT SYMBOL (NLSPI)	PERCENTAGE COMPOSITION (DRY WEIGHT) BY CLASS DETERMINING PHASE											
			0-12%	NORTH			SOUTH							
BLUEBUNCH WHEATGRASS		AGSP	50	15			70							
IDAHO FESCUE		FEID	30	70			5							
SANDBERG BLUEGRASS		POSE	10	3			10							
POTENTIAL PRODUCTION (LBS./AC DRY WT):														
FAVORABLE YEARS			1400	1400			1200							
NORMAL YEARS			1100	1100			1000							
UNFAVORABLE YEARS			600	700			400							
FOOTNOTES														
A ESTIMATES OF ENGINEERING PROPERTIES BASED ON TEST DATA OF TWO PEDONS FROM WASCO COUNTY														
B 0-12%: LOAMY 12-14PZ; NORTH, NORTH 12-14PZ; SOUTH, SOUTH 11-17PZ.														