S O I L I N T E R P R E T A T I O N S R E C O R D

528 HAZELAIR SILTY CLAY LOAM, 2 TO 7 PERCENT SLOPES

THE HAZELAIR SERIES CONSISTS OF MODERATELY WELL TO SOMEWHAT POORLY-DRAINED SOILS FORMED IN SILTY OVER CLAYEY MATERIALS ON THE LOW FOOTHILLS. TYPICALLY, THE SURFACE LAYER IS DARK BROWN SILTY CLAY LOAM, ABOUT 11 INCHES THICK. THE SUBSOIL IS DARK BROWN SILTY CLAY, ABOUT 7 INCHES THICK. THE SUBSTRATUM IS LIGHT OLIVE BROWN CLAY, ABOUT 12 INCHES THICK, OVER SILTSTONE OR SANDSTONE. ELEVATIONS ARE FROM 250 TO 2500 FEET. MEAN ANNUAL PRECIP. IS 30 TO 60 INCHES. MEAN ANNUAL AIR TEMP. IS 49 TO 54 F. FROST FREE PERIOD IS 165 TO 210 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	165-210		250-2500	MW, SP	2-7

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. 4	10	40	200	CLAY (PCT)
0-11	SICL	CL	A-6	0	0	85-100	80-95	65-95	60-90	27-40
11-15	SIC, SICL	CL	A-7	0	0	85-100	80-95	65-95	60-95	35-60
15-36	C	CH	A-7	0	0	85-100	85-95	75-90	70-90	60-70
36-40	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-11	30-40	10-20	1.20-1.40	0.6-2.0	0.16-0.18	5.6-6.5	-				
11-15	40-50	20-25	1.08-1.20	0.2-0.6	0.13-0.15	5.1-6.5	-				
15-36	60-80	40-50	1.00-1.20	<0.06	0.08-0.12	5.1-6.5	-				
36-40											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	EROSION FACTORS T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CORROSIVITY CONCRETE
0-11	2-4	MODERATE	.32	2	7	38	MODERATE	MODERATE
11-15		HIGH	.28					
15-36		HIGH	.24					
36-40								

FLOODING FREQUENCY	FLOODING DURATION	FLOODING MONTHS	HIGH WATER TABLE DEPTH (FT)	HIGH WATER TABLE KIND	HIGH WATER TABLE MONTHS	CEMENTED PAN DEPTH (IN)	CEMENTED PAN HARDNESS	BEDROCK DEPTH (IN)	BEDROCK HARDNESS	SUBSIDENCE INIT. (IN)	SUBSIDENCE TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			1.0-2.0	PERCHED	DEC-APR	-		20-40	SOFT	-		D	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,WETNESS,PERCS SLOWLY
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,WETNESS
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,WETNESS
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK,WETNESS
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,SHRINK-SWELL,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-TOO CLAYEY

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-WETNESS
DWELLINGS WITHOUT BASEMENTS	SEVERE-WETNESS,SHRINK-SWELL
DWELLINGS WITH BASEMENTS	SEVERE-WETNESS,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-WETNESS,SHRINK-SWELL
LOCAL ROADS AND STREETS	SEVERE-SHRINK-SWELL,LOW STRENGTH
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-WETNESS,DEPTH TO ROCK

WATER MANAGEMENT

POND RESERVOIR AREA	MODERATE-DEPTH TO ROCK,SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	PERCS SLOWLY,DEPTH TO ROCK,SLOPE
IRRIGATION	SLOPE,WETNESS,PERCS SLOWLY
TERRACES AND DIVERSIONS	DEPTH TO ROCK,WETNESS
GRASSED WATERWAYS	WETNESS,DEPTH TO ROCK

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-WETNESS	PLAYGROUNDS	SEVERE-WETNESS
PICNIC AREAS	MODERATE-WETNESS,PERCS SLOWLY	PATHS AND TRAILS	MODERATE-WETNESS

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

	CAPABILITY		WHEAT, WINTER (BU)		BARLEY (BU)		BLACKBERRIES (TONS)		GRASS HAY (TONS)		PASTURE (AUM)					
	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR
	3E		40		80		4		3		7	16				

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS	
							NONE			

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

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
FAIR	GOOD	GOOD	GOOD	FAIR	GOOD	POOR	V. POOR	GOOD	GOOD	V. POOR	-

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPM)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
COMMON SNOWBERRY	SYAL					
RUSH	JUNCU					
OTHER ANNUAL GRASSES	AAGG					
OTHER ANNUAL FORBS	AAFF					
ROSE	ROSA+					
POTENTIAL PRODUCTION (LBS./AC. DRY WT):						
FAVORABLE YEARS						
NORMAL YEARS						
UNFAVORABLE YEARS						

FOOTNOTES

SOIL INTERPRETATIONS RECORD

62D HAZELAIR SILTY CLAY LOAM, 7 TO 20 PERCENT SLOPES

THE HAZELAIR SERIES CONSISTS OF MODERATELY WELL TO SOMEWHAT POORLY-DRAINED SOILS FORMED IN SILTY OVER CLAYEY MATERIALS ON THE LOW FOOTHILLS. TYPICALLY, THE SURFACE LAYER IS DARK BROWN SILTY CLAY LOAM, ABOUT 11 INCHES THICK. THE SUBSOIL IS DARK BROWN SILTY CLAY, ABOUT 7 INCHES THICK. THE SUBSTRATUM IS LIGHT OLIVE BROWN CLAY, ABOUT 12 INCHES THICK, OVER SILTSTONE OR SANDSTONE. ELEVATIONS ARE FROM 250 TO 2900 FEET. MEAN ANNUAL PRECIP. IS 30 TO 60 INCHES. MEAN ANNUAL AIR TEMP. IS 49 TO 54 F. FROST FREE PERIOD IS 165 TO 210 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	165-210		250-2500	MW, SP	7-20

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. 4	10	40	200	CLAY (PCT)
0-11	SICL	CL	A-6	0	0	95-100	80-95	65-85	60-80	27-40
11-15	SIC, SICL	CL	A-7	0	0	95-100	90-95	65-85	60-85	35-50
15-36	C	CH	A-7	0	0	95-100	85-95	75-90	70-90	60-70
36-40	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-11	30-40	10-20	1.20-1.40	0.8-2.0	0.16-0.18	5.6-6.5	-				
11-15	40-50	20-25	1.05-1.20	0.2-0.6	0.13-0.15	5.1-6.5	-				
15-36	50-80	40-50	1.00-1.20	<0.06	0.08-0.12	5.1-6.5	-				
36-40											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	EROSION FACTORS T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CORROSIVITY CONCRETE
0-11	2-4	MODERATE	.32	2	7	38	MODERATE	MODERATE
11-15		HIGH	.28					
15-36		HIGH	.24					
36-40								

FLOODING FREQUENCY	FLOODING DURATION	FLOODING MONTHS	HIGH WATER TABLE DEPTH (FT)	HIGH WATER TABLE KIND	HIGH WATER TABLE MONTHS	CEMENTED PAN DEPTH (IN)	CEMENTED PAN HARDNESS	BEDROCK DEPTH (IN)	BEDROCK HARDNESS	SUBSIDENCE INIT. (IN)	SUBSIDENCE TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			1.0-2.0	PERCHED	DEC-APR	-		20-40	SOFT	-		D	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,WETNESS,PERCS SLOWLY
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE,WETNESS
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,WETNESS
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK,WETNESS
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-WETNESS
DWELLINGS WITHOUT BASEMENTS	SEVERE-WETNESS,SHRINK-SWELL
DWELLINGS WITH BASEMENTS	SEVERE-WETNESS,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-WETNESS,SHRINK-SWELL,SLOPE
LOCAL ROADS AND STREETS	SEVERE-SHRINK-SWELL,LOW STRENGTH
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-WETNESS,SLOPE,DEPTH TO ROCK

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,SHRINK-SWELL,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-TOO CLAYEY

WATER MANAGEMENT

POND RESERVOIR AREA	SEVERE-SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	PERCS SLOWLY,DEPTH TO ROCK,SLOPE
IRRIGATION	SLOPE,WETNESS,PERCS SLOWLY
TERRACES AND DIVERSIONS	SLOPE,DEPTH TO ROCK,WETNESS
GRASSED WATERWAYS	WETNESS,SLOPE,DEPTH TO ROCK

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-WETNESS	PLAYGROUNDS	SEVERE-SLOPE,WETNESS
PICNIC AREAS	MODERATE-SLOPE,WETNESS,PERCS SLOWLY	PATHS AND TRAILS	MODERATE-WETNESS

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

	CAPABILITY		WHEAT, WINTER (BU)		BARLEY (BU)		BLACKBERRIES (TONS)		GRASS HAY (TONS)		PASTURE (AUM)					
	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
	4E		40		50		4		3		7	15				

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS	
							NONE			

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

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

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
COMMON SNOWBERRY	SYAL					
RUSH	JUNCU					
OTHER ANNUAL GRASSES	AAGG					
OTHER ANNUAL FORBS	AAFF					
ROSE	ROSA+					
POTENTIAL PRODUCTION (LBS./AC. DRY WT):						
FAVORABLE YEARS						
NORMAL YEARS						
UNFAVORABLE YEARS						

FOOTNOTES

SOIL INTERPRETATIONS RECORD

108C PHILOMATH COBBLY SILTY CLAY, 3 TO 12 PERCENT SLOPES

THE PHILOMATH SERIES CONSISTS OF WELL DRAINED SOILS FORMED IN FINE TEXTURED COLLUVIAL AND RESIDUAL MATERIALS FROM BASALT. THEY OCCUR IN THE FOOTHILLS. TYPICALLY THE SURFACE LAYER IS VERY DARK BROWN SILTY CLAY OR CLAY ABOUT 9 INCHES THICK. THE SUBSOIL IS VERY DARK BROWN CLAY. ABOUT 9 INCHES THICK. THE SUBSTRATUM IS PARTIALLY WEATHERED BASALT BEDROCK. ELEVATION IS 350 TO 2000 FEET. MEAN ANNUAL PRECIP. IS 30 TO 60 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 54 DEGREES. FROST FREE PERIOD IS 165 TO 235 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	165-235		350-2000	W	3-12

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT. >10 IN (PCT)	FRACT. > 3 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-6	CB-SIC	CH	A-7		15-30	85-100	75-90	70-85	60-80	40-55
6-14	C, CB-SIC, CB-C	CH	A-7		0-30	90-100	70-85	60-80	60-85	40-60
14-18	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-6	50-80	35-45	1.30-1.40	0.6-2.0	0.14-0.17	5.6-6.5	-				
6-14	60-80	40-50	1.30-1.40	0.06-0.2	0.14-0.18	5.6-7.3	-				
14-18											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	EROSION FACTORS T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CORROSIVITY CONCRETE
0-6	2-4	HIGH	.28	1	4	86	MODERATE	MODERATE
6-14		HIGH	.24					
14-18								

FLOODING FREQUENCY	FLOODING DURATION	FLOODING MONTHS	HIGH WATER TABLE DEPTH (FT)	HIGH WATER TABLE KIND	HIGH WATER TABLE MONTHS	CEMENTED PAN DEPTH (IN)	CEMENTED PAN HARDNESS	BEDROCK DEPTH (IN)	BEDROCK HARDNESS	SUBSIDENCE INIT (IN)	SUBSIDENCE TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			>6.0			-		12-20	SOFT	-		D	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,TOO CLAYEY
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-DEPTH TO ROCK
DWELLINGS WITHOUT BASEMENTS	SEVERE-SHRINK-SWELL
DWELLINGS WITH BASEMENTS	SEVERE-DEPTH TO ROCK,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-SHRINK-SWELL
LOCAL ROADS AND STREETS	SEVERE-LOW STRENGTH,SHRINK-SWELL
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-DEPTH TO ROCK,TOO CLAYEY

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-DEPTH TO ROCK,TOO CLAYEY,LARGE STONES

WATER MANAGEMENT

POND RESERVOIR AREA	SEVERE-DEPTH TO ROCK
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	LARGE STONES,SLOW INTAKE,PERCS SLOWLY
TERRACES AND DIVERSIONS	LARGE STONES,DEPTH TO ROCK
GRASSED WATERWAYS	LARGE STONES,DEPTH TO ROCK

108C PHILOMATH COBBLY SILTY CLAY, 3 TO 12 PERCENT SLOPES

USDA-SCS
12-86

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-DEPTH TO ROCK	PLAYGROUNDS	SEVERE-LARGE STONES, SLOPE, DEPTH TO ROCK
PICNIC AREAS	SEVERE-DEPTH TO ROCK	PATHS AND TRAILS	MODERATE-LARGE STONES, TOO CLAYEY

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

	CAPABILITY		PASTURE (AUM)													
	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
	6S															

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS	
							NONE			

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

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
V. POOR	POOR	FAIR	FAIR	POOR	FAIR	V. POOR	V. POOR	POOR	POOR	V. POOR	

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
PACIFIC POISON OAK	TOD1					
OREGON WHITE OAK	QUGA4					
ROSE	ROSA+					
COMMON SNOWBERRY	SYAL					
POTENTIAL PRODUCTION (LBS./AC. DRY WT)						
FAVORABLE YEARS						
NORMAL YEARS						
UNFAVORABLE YEARS						

FOOTNOTES

SOIL INTERPRETATIONS RECORD

108F PHILOMATH COBBLY SILTY CLAY, 12 TO 45 PERCENT SLOPES

THE PHILOMATH SERIES CONSISTS OF WELL DRAINED SOILS FORMED IN FINE TEXTURED COLLUVIAL AND RESIDUAL MATERIALS FROM BASALT. THEY OCCUR IN THE FOOTHILLS. TYPICALLY THE SURFACE LAYER IS VERY DARK BROWN SILTY CLAY OR CLAY ABOUT 8 INCHES THICK. THE SUBSOIL IS VERY DARK BROWN CLAY. ABOUT 9 INCHES THICK. THE SUBSTRATUM IS PARTIALLY WEATHERED BASALT BEDROCK. ELEVATION IS 350 TO 2000 FEET. MEAN ANNUAL PRECIP. IS 30 TO 60 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 54 DEGREES. FROST FREE PERIOD IS 165 TO 235 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	165-235		350-2000	W	12-45

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT. >10 IN (PCT)	FRACT. > 3 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-6	CB-SIC	CH	A-7		15-30	85-100	75-90	70-85	60-80	40-55
6-14	C, CB-SIC, CB-C	CH	A-7		0-30	90-100	70-95	60-90	60-85	40-60
14-18	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-6	50-80	35-45	1.30-1.40	0.6-2.0	0.14-0.17	5.6-6.5	-				
6-14	60-80	40-50	1.30-1.40	0.06-0.2	0.14-0.16	5.6-7.3	-				
14-18											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	EROSION FACTORS T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CORROSIVITY CONCRETE
0-6	2-4	HIGH	.28	1	4	86	MODERATE	MODERATE
6-14		HIGH	.24					
14-18								

FLOODING FREQUENCY	FLOODING DURATION	FLOODING MONTHS	HIGH WATER TABLE DEPTH (FT)	HIGH WATER TABLE KIND	HIGH WATER TABLE MONTHS	CEMENTED PAN DEPTH (IN)	CEMENTED PAN HARDNESS	BEDROCK DEPTH (IN)	BEDROCK HARDNESS	SUBSIDENCE INIT (IN)	SUBSIDENCE TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			>6.0			-		12-20	SOFT	-	-	D	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,SLOPE
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,SLOPE,TOO CLAYEY
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK,SLOPE
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,LOW STRENGTH,SLOPE
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-DEPTH TO ROCK,TOO CLAYEY,LARGE STONES

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-DEPTH TO ROCK,SLOPE
DWELLINGS WITHOUT BASEMENTS	SEVERE-SHRINK-SWELL,SLOPE
DWELLINGS WITH BASEMENTS	SEVERE-DEPTH TO ROCK,SLOPE,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-SHRINK-SWELL,SLOPE
LOCAL ROADS AND STREETS	SEVERE-LOW STRENGTH,SLOPE,SHRINK-SWELL
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE,DEPTH TO ROCK,TOO CLAYEY

WATER MANAGEMENT

POND RESERVOIR AREA	SEVERE-DEPTH TO ROCK,SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	LARGE STONES,SLOW INTAKE,PERCS SLOWLY
TERRACES AND DIVERSIONS	SLOPE,LARGE STONES,DEPTH TO ROCK
GRASSED WATERWAYS	LARGE STONES,SLOPE,DEPTH TO ROCK

108F PHILOMATH COBBLY SILTY CLAY, 12 TO 45 PERCENT SLOPES

USDA-SCS
12-86

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-SLOPE,DEPTH TO ROCK	PLAYGROUNDS	SEVERE-LARGE STONES,SLOPE,DEPTH TO ROCK
PICNIC AREAS	SEVERE-SLOPE,DEPTH TO ROCK	PATHS AND TRAILS	SEVERE-SLOPE

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

	CAPABILITY		PASTURE (AUM)													
	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
	6S															

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS	
							NONE			

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

	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
	V. POOR	POOR	FAIR	FAIR	POOR	FAIR	V. POOR	V. POOR	POOR	POOR	V. POOR	-

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
PACIFIC POISON OAK	TODI					
OREGON WHITE OAK	QUGA4					
ROSE	ROSA+					
COMMON SNOWBERRY	SYAL					
POTENTIAL PRODUCTION (LBS./AC. DRY WT): FAVORABLE YEARS						
NORMAL YEARS						
UNFAVORABLE YEARS						

FOOTNOTES

SOIL INTERPRETATIONS RECORD

43C DIXONVILLE-PHILOMATH-HAZELAIR COMPLEX, 3 TO 12 PERCENT SLOPES
DIXONVILLE PART

THE DIXONVILLE SERIES CONSISTS OF WELL DRAINED SOILS FORMED IN FINE TEXTURED COLLUVIAL AND RESIDUAL MATERIALS FROM BASIC IGNEOUS ROCK IN THE FOOTHILLS. TYPICALLY, THE SURFACE LAYER IS VERY DARK BROWN SILTY CLAY LOAM ABOUT 12 INCHES THICK. THE SUBSOIL IS DARK REDDISH-BROWN CLAY ABOUT 22 INCHES THICK. THE SUBSTRATUM IS WEATHERED BASIC ROCK. ELEVATIONS ARE 350 TO 2000 FEET. MEAN ANNUAL PRECIP IS 30 TO 60 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 54 DEGREES. FROST FREE PERIOD IS 160 TO 235 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	160-235	30-60	350-2000	W	3-12

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT. >10 IN (PCT)	FRACT. >3 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-14	SICL	CL	A-6		0-10	90-100	90-100	85-100	75-95	27-40
14-26	C, CB-C, SIC	CH	A-7		0-30	75-100	70-100	65-100	50-95	40-60
26-30	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-14	35-40	15-20	1.30-1.50	0.6-2.0	0.18-0.21	5.6-6.5	-				
14-26	50-60	30-50	1.30-1.80	0.06-0.2	0.12-0.17	5.6-6.5	-				
26-30											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CONCRETE
0-14	3-6	MODERATE HIGH	.32	2	7	38	MODERATE	MODERATE
14-26			24					
26-30								

FLOODING FREQUENCY	DURATION	MONTHS	HIGH WATER TABLE DEPTH (FT)	KIND	MONTHS	CEMENTED PAN DEPTH (IN)	HARDNESS	BEDROCK DEPTH (IN)	HARDNESS	SUBSIDENCE INIT (IN)	TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			>6.0			-		20-40	SOFT	-	-	C	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,PERCS SLOWLY
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,TOO CLAYEY
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	MODERATE-DEPTH TO ROCK,TOO CLAYEY
DWELLINGS WITHOUT BASEMENTS	SEVERE-SHRINK-SWELL
DWELLINGS WITH BASEMENTS	SEVERE-SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-SHRINK-SWELL
LOCAL ROADS AND STREETS	SEVERE-LOW STRENGTH,SHRINK-SWELL
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-LARGE STONES,DEPTH TO ROCK

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-LARGE STONES

WATER MANAGEMENT

POND RESERVOIR AREA	MODERATE-DEPTH TO ROCK,SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	LARGE STONES,PERCS SLOWLY,DEPTH TO ROCK
TERRACES AND DIVERSIONS	LARGE STONES,DEPTH TO ROCK
GRASSED WATERWAYS	LARGE STONES,DEPTH TO ROCK

43C OIXONVILLE-PHILOMATH-HAZELAIR COMPLEX, 3 TO 12 PERCENT SLOPES
OIXONVILLE PART

RECREATIONAL DEVELOPMENT

CAMP AREAS	SLIGHT	PLAYGROUNDS	SEVERE-SLOPE
PICNIC AREAS	SLIGHT	PATHS AND TRAILS	SLIGHT

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

	CAPABILITY		FILBERTS (TONS)		PASTURE (AUM)		CHERRIES (TONS)		BARLEY (BU)		WHEAT, WINTER (BU)		CORN, SWEET (TONS)			
	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR
	3E		0.5		8		3		30		50			6		

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS	
	6C	SLIGHT	MODER.	MODER.	SLIGHT	SEVERE	DOUGLAS FIR PACIFIC MADRONE OREGON WHITE OAK GRAND FIR	97	8	DOUGLAS FIR PONDEROSA PINE

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

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
FAIR	GOOD	FAIR	GOOD	GOOD	GOOD	V. POOR	V. POOR	FAIR	GOOD	V. POOR	-

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
POTENTIAL PRODUCTION (LBS./AC. DRY WT): FAVORABLE YEARS NORMAL YEARS UNFAVORABLE YEARS						

FOOTNOTES

SOIL INTERPRETATIONS RECORD

43C DIXONVILLE-PHILOMATH-HAZELAIR COMPLEX, 3 TO 12 PERCENT SLOPES
PHILOMATH PART

THE PHILOMATH SERIES CONSISTS OF WELL DRAINED SOILS FORMED IN FINE TEXTURED COLLUVIAL AND RESIDUAL MATERIALS FROM BASALT. THEY OCCUR IN THE FOOTHILLS. TYPICALLY THE SURFACE LAYER IS VERY DARK BROWN SILTY CLAY OR CLAY ABOUT 9 INCHES THICK. THE SUBSOIL IS VERY DARK BROWN CLAY. ABOUT 9 INCHES THICK. THE SUBSTRATUM IS PARTIALLY WEATHERED BASALT BEDROCK. ELEVATION IS 350 TO 2000 FEET. MEAN ANNUAL PRECIP. IS 30 TO 60 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 54 DEGREES. FROST FREE PERIOD IS 165 TO 235 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	165-235		350-2000	W	3-12

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT. >10 IN (PCT)	FRACT. > 3 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-6	CB-SIC	CH	A-7		15-30	85-100	75-90	70-85	60-80	40-55
6-14	C, CB-SIC, CB-C	CH	A-7		0-30	90-100	70-95	80-90	60-85	40-60
14-18	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-6	50-80	35-45	1.30-1.40	0.8-2.0	0.14-0.17	5.6-6.5	-				
6-14	60-80	40-50	1.30-1.40	0.06-0.2	0.14-0.16	5.6-7.3	-				
14-18											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	T	WIND EROD. GROUP	WIND ERODE. INDEX	CORROSIVITY STEEL	CONCRETE
0-6	2-4	HIGH	.28	1	4	86	MODERATE	MODERATE
6-14		HIGH	.24					
14-18								

FLOODING FREQUENCY	DURATION	MONTHS	HIGH WATER TABLE DEPTH (FT)	KIND	MONTHS	CEMENTED PAN DEPTH (IN)	HARDNESS	BEDROCK DEPTH (IN)	HARDNESS	SUBSIDENCE INIT. (IN)	TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			>6.0			-		12-20	SOFT	-		D	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,TOO CLAYEY
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-DEPTH TO ROCK,TOO CLAYEY,LARGE STONES

WATER MANAGEMENT

POND RESERVOIR AREA	SEVERE-DEPTH TO ROCK
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	LARGE STONES,SLOW INTAKE,PERCS SLOWLY
TERRACES AND DIVERSIONS	LARGE STONES,DEPTH TO ROCK
GRASSED WATERWAYS	LARGE STONES,DEPTH TO ROCK

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-DEPTH TO ROCK
DWELLINGS WITHOUT BASEMENTS	SEVERE-SHRINK-SWELL
DWELLINGS WITH BASEMENTS	SEVERE-DEPTH TO ROCK,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-SHRINK-SWELL
LOCAL ROADS AND STREETS	SEVERE-LOW STRENGTH,SHRINK-SWELL
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-DEPTH TO ROCK,TOO CLAYEY

43C DIXONVILLE-PHILOMATH-HAZELAIR COMPLEX, 3 TO 12 PERCENT SLOPES
PHILOMATH PART

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-DEPTH TO ROCK	PLAYGROUNDS	SEVERE-LARGE STONES, SLOPE, DEPTH TO ROCK
PICNIC AREAS	SEVERE-DEPTH TO ROCK	PATHS AND TRAILS	MODERATE-LARGE STONES, TOO CLAYEY

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

	CAPABILITY		PASTURE (AUM)													
	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
	6S															

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP LIMIT	SEEDL MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS	
							NONE			

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

	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
	V. POOR	POOR	FAIR	FAIR	POOR	FAIR	V. POOR	V. POOR	POOR	POOR	V. POOR	-

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
PACIFIC POISON OAK	TODI					
OREGON WHITE OAK	QUGA4					
ROSE	ROSA+					
COMMON SNOWBERRY	SYAL					
POTENTIAL PRODUCTION (LBS./AC. DRY WT):						
FAVORABLE YEARS						
NORMAL YEARS						
UNFAVORABLE YEARS						

FOOTNOTES

SOIL INTERPRETATIONS RECORD

43C DIXONVILLE-PHILOMATH-HAZELAIR COMPLEX, 3 TO 12 PERCENT SLOPES
HAZELAIR PART

THE HAZELAIR SERIES CONSISTS OF MODERATELY WELL TO SOMEWHAT POORLY-DRAINED SOILS FORMED IN SILTY OVER CLAYEY MATERIALS ON THE LOW FOOTHILLS. TYPICALLY, THE SURFACE LAYER IS DARK BROWN SILTY CLAY LOAM, ABOUT 11 INCHES THICK. THE SUBSOIL IS DARK BROWN SILTY CLAY, ABOUT 7 INCHES THICK. THE SUBSTRATUM IS LIGHT OLIVE BROWN CLAY, ABOUT 12 INCHES THICK, OVER SILTSTONE OR SANDSTONE. ELEVATIONS ARE FROM 250 TO 2500 FEET. MEAN ANNUAL PRECIP. IS 30 TO 60 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 54 F. FROST FREE PERIOD IS 165 TO 210 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	165-210		250-2500	MW, SP	3-12

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. 4	10	40	200	CLAY (PCT)
0-11	SICL	CL	A-6	0	0	85-100	80-95	65-95	60-90	27-40
11-15	SIC, SICL	CL	A-7	0	0	85-100	80-95	65-95	60-95	35-50
15-36	C	CH	A-7	0	0	95-100	85-95	75-90	70-90	60-70
36-40	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-11	30-40	10-20	1.20-1.40	0.6-2.0	0.16-0.18	5.6-6.5	-				
11-15	40-60	20-25	1.05-1.20	0.2-0.6	0.13-0.18	5.1-6.5	-				
15-36	60-80	40-50	1.00-1.20	<0.06	0.09-0.12	5.1-6.5	-				
36-40											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	EROSION FACTORS T	WIND EROD. GROUP	WIND ERODE INDEX	CORROSIVITY STEEL	CORROSIVITY CONCRETE
0-11	2-4	MODERATE	.32	2	7	38	MODERATE	MODERATE
11-15		HIGH	.28					
15-36		HIGH	.24					
36-40								

FLOODING FREQUENCY	FLOODING DURATION	FLOODING MONTHS	HIGH WATER TABLE DEPTH (FT)	HIGH WATER TABLE KIND	HIGH WATER TABLE MONTHS	CEMENTED PAN DEPTH (IN)	CEMENTED PAN HARDNESS	BEDROCK DEPTH (IN)	BEDROCK HARDNESS	SUBSIDENCE INIT. (IN)	SUBSIDENCE TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			1.0-2.0	PERCHED	DEC-APR	-		20-40	SOFT	-		D	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,WETNESS,PERCS SLOWLY
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE,WETNESS
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,WETNESS
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK,WETNESS
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,SHRINK-SWELL,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-TOO CLAYEY

WATER MANAGEMENT

POND RESERVOIR AREA	MODERATE-DEPTH TO ROCK,SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	PERCS SLOWLY,DEPTH TO ROCK,SLOPE
IRRIGATION	SLOPE,WETNESS,PERCS SLOWLY
TERRACES AND DIVERSIONS	DEPTH TO ROCK,WETNESS
GRASSED WATERWAYS	WETNESS,DEPTH TO ROCK

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-WETNESS
DWELLINGS WITHOUT BASEMENTS	SEVERE-WETNESS,SHRINK-SWELL
DWELLINGS WITH BASEMENTS	SEVERE-WETNESS,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-WETNESS,SHRINK-SWELL
LOCAL ROADS AND STREETS	SEVERE-SHRINK-SWELL,LOW STRENGTH
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-WETNESS,DEPTH TO ROCK

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-WETNESS	PLAYGROUNDS	SEVERE-SLOPE,WETNESS
PICNIC AREAS	MODERATE-WETNESS,PERCS SLOWLY	PATHS AND TRAILS	MODERATE-WETNESS

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

	CAPABILITY		WHEAT, WINTER (BU)		BARLEY (BU)		BLACKBERRIES (TONS)		GRASS HAY (TONS)		PASTURE (AUM)					
	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
	4E		40		50		4		3		7	15				

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS	
							NONE			

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

	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
	FAIR	GOOD	GOOD	GOOD	FAIR	GOOD	V. POOR	V. POOR	GOOD	GOOD	V. POOR	-

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
COMMON SNOWBERRY	SYAL					
RUSH	JUNCU					
OTHER ANNUAL GRASSES	AAGG					
OTHER ANNUAL FORBS	AAFF					
ROSE	ROSA+					
POTENTIAL PRODUCTION (LBS./AC. DRY WT):						
FAVORABLE YEARS						
NORMAL YEARS						
UNFAVORABLE YEARS						

FOOTNOTES

SOIL INTERPRETATIONS RECORD

43E DIXONVILLE-PHILOMATH-HAZELAIR COMPLEX, 12 TO 35 PERCENT SLOPES
DIXONVILLE PART

THE DIXONVILLE SERIES CONSISTS OF WELL DRAINED SOILS FORMED IN FINE TEXTURED COLLUVIAL AND RESIDUAL MATERIALS FROM BASIC IGNEOUS ROCK IN THE FOOTHILLS. TYPICALLY, THE SURFACE LAYER IS VERY DARK BROWN SILTY CLAY LOAM ABOUT 12 INCHES THICK. THE SUBSOIL IS DARK REDDISH-BROWN CLAY ABOUT 22 INCHES THICK. THE SUBSTRATUM IS WEATHERED BASIC ROCK. ELEVATIONS ARE 350 TO 2000 FEET. MEAN ANNUAL PRECIP IS 30 TO 60 INCHES. MEAN ANNUAL AIR TEMP IS 48 TO 54 DEGREES. FROST FREE PERIOD IS 160 TO 235 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	160-235	30-60	350-2000	W	12-35

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT. >10 IN (PCT)	FRACT. >3 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-14	SICL	CL	A-6		0-10	80-100	80-100	85-100	75-95	27-40
14-26	C, CB-C, SIC	CH	A-7		0-30	75-100	70-100	65-100	50-95	40-60
26-30	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-14	35-40	15-20	1.30-1.50	0.6-2.0	0.18-0.21	5.6-6.5	-				
14-26	50-80	30-50	1.30-1.60	0.06-0.2	0.12-0.17	5.6-6.5	-				
26-30											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CONCRETE
0-14	3-6	MODERATE	.32	2	7	38	MODERATE	MODERATE
14-26		HIGH	.24					
26-30								

FLOODING FREQUENCY	DURATION	MONTHS	HIGH WATER TABLE DEPTH (FT)	KIND	MONTHS	CEMENTED PAN DEPTH (IN)	HARDNESS	BEDROCK DEPTH (IN)	HARDNESS	SUBSIDENCE INIT (IN)	TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			>6.0			-		20-40	SOFT	-		C	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,PERCS SLOWLY,SLOPE
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,SLOPE,TOO CLAYEY
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK,SLOPE
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-LARGE STONES,SLOPE

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-SLOPE
DWELLINGS WITHOUT BASEMENTS	SEVERE-SHRINK-SWELL,SLOPE
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-SHRINK-SWELL,SLOPE
LOCAL ROADS AND STREETS	SEVERE-LOW STRENGTH,SLOPE,SHRINK-SWELL
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE

WATER MANAGEMENT

POND RESERVOIR AREA	SEVERE-SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	LARGE STONES,PERCS SLOWLY,DEPTH TO ROCK
TERRACES AND DIVERSIONS	SLOPE,LARGE STONES,DEPTH TO ROCK
GRASSED WATERWAYS	LARGE STONES,SLOPE,DEPTH TO ROCK

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-SLOPE	PLAYGROUNDS	SEVERE-SLOPE
PICNIC AREAS	SEVERE-SLOPE	PATHS AND TRAILS	MODERATE-SLOPE

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

	CAPA-BILITY	FILBERTS (TONS)		PASTURE (AUM)		CHERRIES (TONS)		BARLEY (BU)		WHEAT, WINTER (BU)		CORN, SWEET (TONS)			
	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
	4E		0.6		8		3		30		40					

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS	
	8C	SLIGHT	MODER.	MODER.	SLIGHT	SEVERE	DOUGLAS FIR PACIFIC MADRONE OREGON WHITE OAK GRAND FIR	87	6	DOUGLAS FIR PONDEROSA PINE

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

	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
	POOR	FAIR	FAIR	GOOD	GOOD	GOOD	V. POOR	V. POOR	FAIR	GOOD	V. POOR	-

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
POTENTIAL PRODUCTION (LBS./AC. DRY WT): FAVORABLE YEARS NORMAL YEARS UNFAVORABLE YEARS						

FOOTNOTES

SOIL INTERPRETATIONS RECORD

43E DIXONVILLE-PHILOMATH-HAZELAIR COMPLEX, 12 TO 35 PERCENT SLOPES
PHILOMATH PART

THE PHILOMATH SERIES CONSISTS OF WELL DRAINED SOILS FORMED IN FINE TEXTURED COLLUVIAL AND RESIDUAL MATERIALS FROM BASALT. THEY OCCUR IN THE FOOTHILLS. TYPICALLY THE SURFACE LAYER IS VERY DARK BROWN SILTY CLAY OR CLAY ABOUT 9 INCHES THICK. THE SUBSOIL IS VERY DARK BROWN CLAY, ABOUT 9 INCHES THICK. THE SUBSTRATUM IS PARTIALLY WEATHERED BASALT BEDROCK. ELEVATION IS 350 TO 2000 FEET. MEAN ANNUAL PRECIP. IS 30 TO 80 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 54 DEGREES. FROST FREE PERIOD IS 185 TO 235 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	185-235		350-2000	W	12-35

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT. >10 IN (PCT)	FRACT. > 3 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-6	CB-SIC	CH	A-7		15-30	85-100	75-90	70-85	60-80	40-55
6-14	C, CB-SIC, CB-C	CH	A-7		0-30	90-100	70-95	60-90	60-85	40-60
14-18	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-6	50-60	35-45	1.30-1.40	0.8-2.0	0.14-0.17	5.6-6.5	-				
6-14	60-80	40-60	1.30-1.40	0.06-0.2	0.14-0.18	5.8-7.3	-				
14-18											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CONCRETE
0-6	2-4	HIGH	.28	1	4	86	MODERATE	MODERATE
6-14		HIGH	.24					
14-18								

FLOODING FREQUENCY	DURATION	MONTHS	HIGH WATER TABLE DEPTH (FT)	KIND	MONTHS	CEMENTED PAN DEPTH (IN)	HARDNESS	BEDROCK DEPTH (IN)	HARDNESS	SUBSIDENCE INIT. (IN)	TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			>6.0			-		12-20	SOFT	-		D	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,SLOPE
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,SLOPE,TOO CLAYEY
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK,SLOPE
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-DEPTH TO ROCK,TOO CLAYEY,LARGE STONES

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-DEPTH TO ROCK,SLOPE
DWELLINGS WITHOUT BASEMENTS	SEVERE-SHRINK-SWELL,SLOPE
DWELLINGS WITH BASEMENTS	SEVERE-DEPTH TO ROCK,SLOPE,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-SHRINK-SWELL,SLOPE
LOCAL ROADS AND STREETS	SEVERE-LOW STRENGTH,SLOPE,SHRINK-SWELL
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE,DEPTH TO ROCK,TOO CLAYEY

WATER MANAGEMENT

POND RESERVOIR AREA	SEVERE-DEPTH TO ROCK,SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	LARGE STONES,SLOW INTAKE,PERCS SLOWLY
TERRACES AND DIVERSIONS	SLOPE,LARGE STONES,DEPTH TO ROCK
GRASSED WATERWAYS	LARGE STONES,SLOPE,DEPTH TO ROCK

43E DIXONVILLE-PHILOMATH-HAZELAIR COMPLEX, 12 TO 35 PERCENT SLOPES
PHILOMATH PART

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-SLOPE,DEPTH TO ROCK	PLAYGROUNDS	SEVERE-LARGE STONES,SLOPE,DEPTH TO ROCK
PICNIC AREAS	SEVERE-SLOPE,DEPTH TO ROCK	PATHS AND TRAILS	MODERATE-LARGE STONES,TOO CLAYEY

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

	CAPABILITY		PASTURE (AUM)													
	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
	6S															

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS	
							NONE			

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

	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
	V. POOR	POOR	FAIR	FAIR	POOR	FAIR	V. POOR	V. POOR	POOR	POOR	V. POOR	-

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
PACIFIC POISON OAK	TODI					
OREGON WHITE OAK	QUGA4					
ROSE	ROSA+					
COMMON SNOWBERRY	SYAL					
POTENTIAL PRODUCTION (LBS./AC. DRY WT):						
FAVORABLE YEARS						
NORMAL YEARS						
UNFAVORABLE YEARS						

FOOTNOTES

SOIL INTERPRETATIONS RECORD

43E DIXONVILLE-PHILOMATH-HAZELAIR COMPLEX, 12 TO 35 PERCENT SLOPES
HAZELAIR PART

THE HAZELAIR SERIES CONSISTS OF MODERATELY WELL TO SOMEWHAT POORLY-DRAINED SOILS FORMED IN SILTY OVER CLAYEY MATERIALS ON THE LOW FOOTHILLS. TYPICALLY, THE SURFACE LAYER IS DARK BROWN SILTY CLAY LOAM, ABOUT 11 INCHES THICK. THE SUBSOIL IS DARK BROWN SILTY CLAY, ABOUT 7 INCHES THICK. THE SUBSTRATUM IS LIGHT OLIVE BROWN CLAY, ABOUT 12 INCHES THICK, OVER SILTSTONE OR SANDSTONE. ELEVATIONS ARE FROM 250 TO 2500 FEET. MEAN ANNUAL PRECIP. IS 30 TO 60 INCHES. MEAN ANNUAL AIR TEMP. IS 49 TO 54 F. FROST FREE PERIOD IS 165 TO 210 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	165-210		250-2500	MW, SP	12-35

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. 4	10	40	200	CLAY (PCT)
0-11	SICL	CL	A-6	0	0	95-100	90-95	85-95	80-90	27-40
11-15	SIC, SICL	CL	A-7	0	0	95-100	90-95	85-95	80-95	35-50
15-36	C	CH	A-7	0	0	95-100	85-95	75-90	70-90	60-70
36-40	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-11	30-40	10-20	1.20-1.40	0.6-2.0	0.18-0.18	5.6-6.5	-				
11-15	40-50	20-25	1.05-1.20	0.2-0.6	0.13-0.18	5.1-6.5	-				
15-36	60-80	40-50	1.00-1.20	<0.06	0.09-0.12	5.1-6.5	-				
36-40											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CONCRETE
0-11	2-4	MODERATE	.32	2	7	38	MODERATE	MODERATE
11-15		HIGH	.28					
15-36		HIGH	.24					
36-40								

FLOODING FREQUENCY	DURATION	MONTHS	HIGH WATER TABLE DEPTH (FT)	KIND	MONTHS	CEMENTED PAN DEPTH (IN)	HARDNESS	BEDROCK DEPTH (IN)	HARDNESS	SUBSIDENCE INIT. (IN)	TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			1.0-2.0	PERCHED	DEC-APR	-		20-40	SOFT	-		D	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,WETNESS,PERCS SLOWLY
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE,WETNESS
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,WETNESS,SLOPE
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK,WETNESS,SLOPE
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,SHRINK-SWELL,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-TOO CLAYEY,SLOPE

WATER MANAGEMENT

POND RESERVOIR AREA	SEVERE-SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	PERCS SLOWLY,DEPTH TO ROCK,SLOPE
IRRIGATION	SLOPE,WETNESS,PERCS SLOWLY
TERRACES AND DIVERSIONS	SLOPE,DEPTH TO ROCK,WETNESS
GRASSED WATERWAYS	WETNESS,SLOPE,DEPTH TO ROCK

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-WETNESS,SLOPE
DWELLINGS WITHOUT BASEMENTS	SEVERE-WETNESS,SHRINK-SWELL,SLOPE
DWELLINGS WITH BASEMENTS	SEVERE-WETNESS,SLOPE,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-WETNESS,SHRINK-SWELL,SLOPE
LOCAL ROADS AND STREETS	SEVERE-SHRINK-SWELL,LOW STRENGTH,SLOPE
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-SLOPE,WETNESS	PLAYGROUNDS	SEVERE-SLOPE,WETNESS
PICNIC AREAS	SEVERE-SLOPE	PATHS AND TRAILS	MODERATE-WETNESS,SLOPE

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

	CAPABILITY		WHEAT, WINTER (BU)		BARLEY (BU)		BLACKBERRIES (TONS)		GRASS HAY (TONS)		PASTURE (AUM)					
	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
	4E															

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS	
							NONE			

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

	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
	POOR	FAIR	GOOD	GOOD	FAIR	GOOD	V. POOR	V. POOR	FAIR	GOOD	V. POOR	-

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
COMMON SNOWBERRY	SYAL					
RUSH	JUNCU					
OTHER ANNUAL GRASSES	AAGG					
OTHER ANNUAL FORBS	AAFF					
ROSE	ROSA+					
POTENTIAL PRODUCTION (LBS./AC. DRY WT):						
FAVORABLE YEARS						
NORMAL YEARS						
UNFAVORABLE YEARS						

FOOTNOTES

STEVE CORNACCHIA
scornacchia@hershnerhunter.com

December 6, 2005

HAND DELIVERED

Lane County Planning Commission
ATTN: Thom Lanfear
125 E. 8th Avenue
Eugene, OR 97401

Re: Re: PA 04-6308 (Sutton)
Our File No. 30607.30002

Dear Commissioners:

We represent Carol (Sutton) Dennis regarding the above-mentioned plan amendment. On behalf of our client we submit the following information as a response to the letter of Goal One Coalition, dated November 29, 2005.

Our general response to the arguments of Goal One Coalition contained in the subject letter is that Goal One Coalition has not submitted any factual material or legal foundation to support its position that the plan amendment should not be approved. Its position is not supported by substantial evidence or any established legal foundation.

We respond to the arguments asserted in the letter in the order that they appear.

II. "Legal lot" and property line adjustment issues regarding TL 106. Within this argument Goal One Coalition asserts several arguments which we respond to as follows:

1. Goal One Coalition argues that the Lane County letter provided as Exhibit "C" to the Application is "not a final determination of legal lot status." Goal One Coalition does not explain why official correspondence from Lane County informing the recipient that it has determined that TL 106 is a legal lot is inadequate to describe and establish Lane County's determination of legal lot status of the property. Goal One Coalition also has not explained how a county decision, made in 1994 without appeal, is a proper subject of collateral attack after the fact.

2. Goal One Coalition also argues that "a property line adjustment cannot create or change the legal lot status of a lot or parcel" but provides no legal basis for that assertion other that a listing of ORS 92.010(7)(b). That statute merely provides the definition of "partition" and that partitioning of land does not include property line adjustments that do not create additional parcels and that result in parcels that comply with applicable zoning ordinances. It does not state, as Goal One Coalition argues, that an adjustment cannot change the legal lot status of a parcel. In this case the adjustment was the result of a court action that removed TL 100 from Sutton ownership and left Sutton with TL 106. No additional lots were created and the parcels complied with the respective zoning designations of each.
3. Goal One Coalition also continues an argument that it has raised in many land use applications: that ORS 92.190(3) requires that counties regulate property line adjustments. Goal One Coalition's argument is without any merit. The statute simply does not state that. It merely provides that a county may use procedures other than replatting procedures to adjust property lines. It does not establish any requirement that counties must regulate property line adjustments. Furthermore, it does not provide that property line adjustments are not "completed" and have "no legal effect" (as Goal One Coalition argues) unless an application for county approval of the adjustment has been submitted to the county and the county has issued its approval thereof. The statute simply does not state what Goal One Coalition argues.
4. Finally, Goal One Coalition argues that, based upon all of its preceding arguments, the "legal boundaries" of the subject parcel have not been identified, and consequently, the area for determining the income and productivity tests under ORS 197.247 (1991 ed.) has not been identified to allow the tests to be conducted. Even if Goal One Coalition's arguments had any merit, which they do not, the applicant has included TL 100 along with the subject TL 106 in all of the calculations regarding the income and productivity tests. (See applicant's correspondence to Lane County, dated June 6, 2005) TL 100 and TL 106 were the only parcels involved in the subject property line adjustment. Both parcels are included in the applicant's calculations of income and productivity tests. Accordingly, Goal One Coalition's final and essential argument, along with having no legal or evidentiary foundation, makes no sense.

III. 1. The parcelization test of ORS 197.247(1)(b)(A) is not met. Goal One Coalition attempts to either re-write or re-interpret the parcelization test or is confusing it with the parcelization test of 197.247(1)(b)(B). The language of ORS 197.247(1)(b)(A) is not ambiguous and does not state the test as Goal One Coalition argues. Lane County has never applied the parcelization test in the manner in which Goal One Coalition argues. Goal One

Coalition's argument is without legal or evidentiary foundation and, consequently, is without merit.

III. 2. The forest productivity test of ORS 197.247(1)(b)(C) is not met. Within this argument Goal One Coalition asserts three arguments, all regarding the report of the applicant's forester, Marc Setchko. We respond to them as follows:

a. The productivity rating for the Dixonville/Philomath/Hazelair complex, soils units 43C and E, are incorrect because they assume zero productivity for the Hazelair and Philomath units.

In this argument Goal One Coalition is arguing that Lane County's productivity ratings in the Lane County Ratings for Forestry & Agriculture (August 1997) (LC Ratings) are incorrect. Goal One Coalition's argument is without merit as it attempts to insert its own methodology for determining productivity of soil map units in terms of cubic feet per acre per year. Goal One Coalition is arguing that Lane County's official soil ratings, published with technical assistance from Lane Council of Governments and with review of data and methodology by the Natural Resources Conservation Service (NRCS), are wrong. (See the front page of the 1997 LC Ratings (Exhibit K to the application) regarding NRCS)

Mr. Just attempted essentially the same type of argument regarding the soil complexes of Units 43C and 43E in *Just v. Lane County* (Carver) LUBA No. 2005-029. In that case he argued that the soil complexes should be classified by individual soil rather than as composite of the component soils and that the "predominant" soil component of the three-soil complex should be used to determine productivity rather than the classification as established by NRCS. LUBA rejected his argument and stated:

> "The documents cited to us in the record do not establish that the NRCS has in fact changed the way it reports or classifies complex soils. * * * Therefore, the county did not err in relying on that composite rating in the 1987 soil survey to conclude that the predominant soils on the subject property are Class VIe, for the purposes of ORS 197.247(1)(b)(C)."

Goal One Coalition has provided no evidence that NRCS has changed the way its reports productivity, in terms of cubic feet per acre per year. Goal One Coalition has provided no evidence that the NRCS has concluded and published that the 1997 LC Ratings, which it reviewed for data and methodology, are now incorrect and should be used in the manner argued by Goal One Coalition. Accordingly, the argument should be rejected again as without merit.

b. Analysis of potential forest productivity must consider Ponderosa pine.

In this argument Goal One Coalition continues the argument for splitting the 43C and 43E soil complexes into separate components and calculating the productivity of each component soil. The argument is applied to Ponderosa Pine along with information from various internet publications. In Exhibit "L" of the subject application, Mr. Setchko explains how Goal One Coalition has misapplied and misused that information to conclude that Ponderosa Pine has a much higher productivity potential on Western Oregon soils than is accurate or scientifically verified. Mr. Setchko has opined, based upon his credentialed experience, that all other potentially merchantable tree species would either not grow on the soils of the subject property or would not produce a volume in cubic feet that would equal the growth rate, and subsequent volume, of Douglas-fir.

c. Potential productivity for other tree species has not been considered.

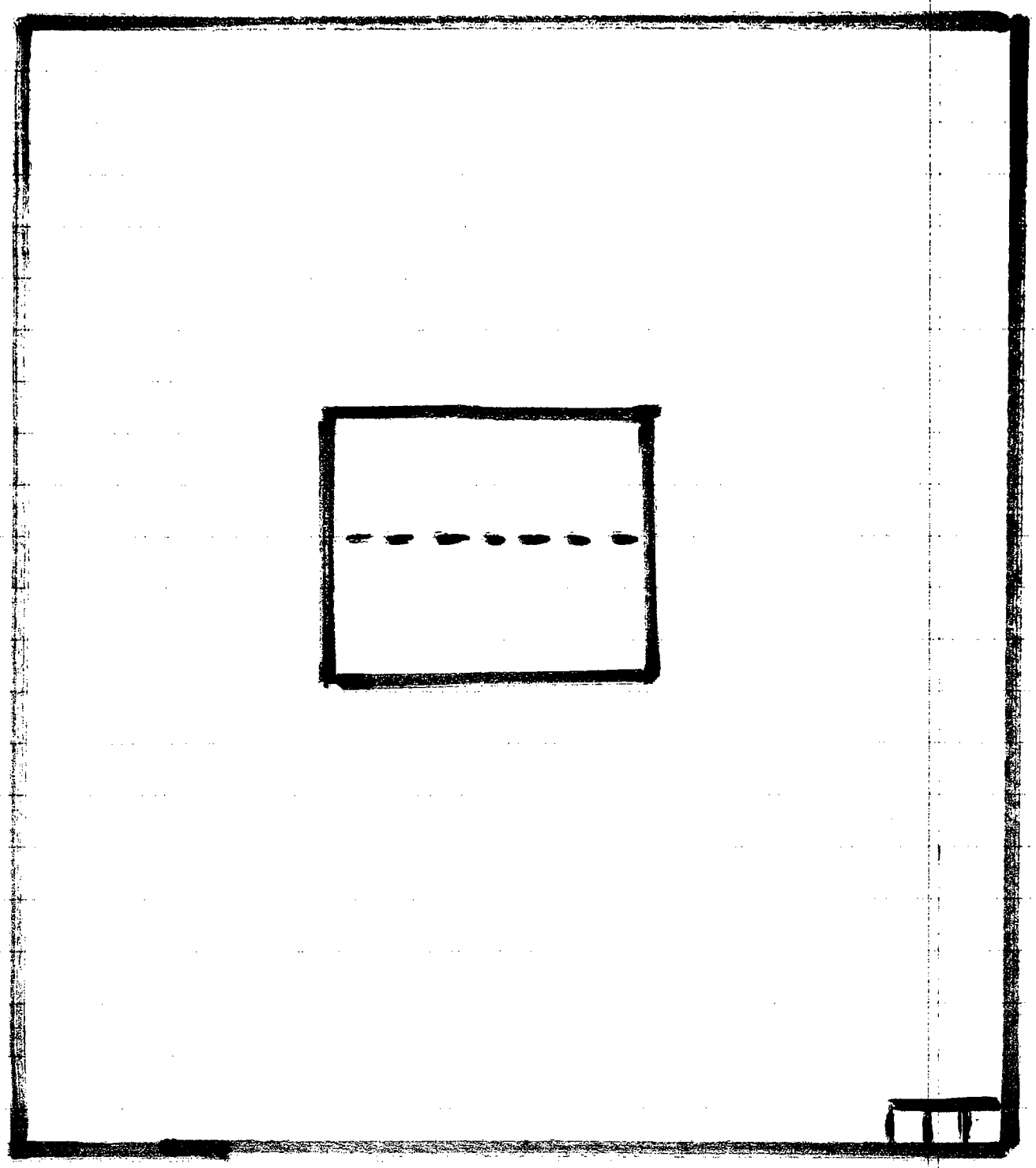
In this argument Goal One Coalition argues that Ponderosa Pine, Grand Fir and Bigleaf Maple could "possibly" produce more than 85 cubic feet per acre per year on the subject property. Mr. Setchko, in both Exhibits G and L, provides an analysis and opinion regarding the productivity of all three species. Again, Mr. Setchko has provided expert testimony and evidence that those species, for a variety of reasons, would not be as productive as Douglas-fir in terms of volume in cubic feet. Goal One Coalition has provided no evidentiary foundation for its argument or for a refutation of Mr. Setchko expert testimony. Goal One Coalition's argument should be rejected as without merit.

Respectfully submitted,

STEVE CORNACCHIA
Of Attorneys for Applicant

PSC:ss
Cc: Client

Parcelization Test example –
(197.247(1)(b)



6 Dec. 2006

Dennis oral testimony, "legal lot" and "property line adjustment" issues.

In order to address the "income," "productivity," or "parcelization" tests of ORS 197.247, it's first necessary to establish the boundaries of the area proposed as marginal lands.

The applicant asserts that a 1994 property line adjustment established the legal lot status for Taxlot 106. By statute, a property line adjustment cannot create a lot or parcel and cannot serve to have legally created tax lot 106.

Also, state law requires that property line adjustments be accomplished using either replat procedures or local procedures providing for, at a minimum, the recording of a deed or deeds showing the property line adjustment. Neither of these procedures were followed. Legally, no property line adjustment was ever done.

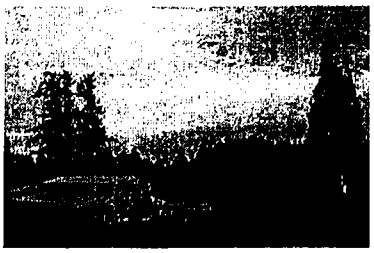
No information concerning any property line adjustment is in the record, so it's not possible to tell what the configuration of tax lot 106 was before the property line adjustment. Since no lawful property line adjustment was done, the original configuration is the one that must be considered here.

To add to the confusion, no partition was ever approved. It looks like tax lots 100 and 106 are really one parcel.

So, in looking at the "marginal lands" tests, you have to look at the legal boundaries of the legal parcel. That means you have to look at tax lots 100 and 106 together. We don't know exactly what the property line adjustment did, but we have to look at tax lots 100 and 106, prior to any property line adjustments.

That hasn't been done. There's simply not the evidence or analysis in the record upon which to base your determination. It's the applicant's responsibility to establish that the criteria are met. As he hasn't done that, you should deny the application.

Nena Jovinge
40093 Little Fall Creek Rd.
Fall Creek 97438



High Meadow Farm

Polled Hereford Cattle

Jonny Watson Martha DeWees, DVM

December 3, 2005

Lane County Planning Commission
125 East 8th Avenue
Eugene, OR 97401

RE: PA04-6308, Dennis

Dear Members of the Commission,

This testimony is presented by Jonny Watson and Martha DeWees. We are resident owners, since 1972, of a 166-acre parcel that is west of and adjacent to our 199.35 acre timberland parcel zoned F-1 (18-01-28TL 101) that is located directly to the north of the applicant's property.

We have read the application prepared and submitted for Carol (Sutton) Dennis requesting approval of an amendment of the Lane County Rural Comprehensive Plan to re-designate the subject property from forestry to marginal lands.

We have also read the 10-page testimony of Jim Just, Executive Director of Goal One that has been submitted to the Commission. We agree with Mr. Just that the applicant has fundamentally misconstrued what the parcelization test of ORS 197.247 (1) (b) (A) requires. In 1983, the applicants' parcel was itself part of a parcel well over 200 acres in size; the parcel to the west was approximately 100 acres; and the parcel to the north was over 230 acres. Some of the smaller parcels to the south, along Jasper-Lowell Road, were contained within the larger parcel of which the applicant's property was a portion.

Clearly a small percentage of the land around the applicant's property was in pieces 20 acres or less in size. The "parcelization" test has not been met – it's not even close.

With regard to the productivity test for timber production, the consulting forester working for the applicant, Mark E. Setchko, makes passing reference, in Exhibit G, to logging activities several years ago. He makes an unsubstantiated claim that "There was not much timber growing on the parcel at that time". The Department of Forestry has records of harvest applications in 1996 and 1997 but keeps no records of harvest volumes. The Department of Revenue, which would have such records in their severance tax program, will not release them to the public. While the consulting forester has calculated and estimated timber volume productivity rates, we feel the public and Planning Commission would be better served by the actual records of the logging activities carried out by the applicant less than 10 years ago. There remains substantial timber on the applicant's property.

38533 Jasper-Lowell Road Fall Creek, OR 97438 541-746-8329

Our land, directly to the north of the applicant's property, was logged in 1995 by the previous owner, Weyerhaeuser Company. We had our cutover land professionally replanted in 1996 as required by law. When drought that year killed off some of the seedlings, we had another 14,000 trees planted. On our side of the property line, healthy re-production timber stands in stark contrast to the slash-strewn, unplanted, cutover land of the applicant. The consulting forester says in his report "The owners have planted new conifer seedlings more than once to establish new stands of trees; their efforts have been thwarted by extremely high mortality rates". We have seen no evidence that the applicant has made serious effort to replant as legally required after harvest. The applicant should supply the facts to back up such a statement that they are using to claim their land won't grow timber. Lack of attention to necessary and adequate management practices will of course lead to poor results. No honest effort has been made to reestablish harvestable timber – much of this land was stripped of value without regard to the future.

We urge the Commission to reject the applicant's planting claims as support for their application. We request that the Planning Commission reject the application for marginal lands re-designation or at the very least require documentation regarding the harvest volume and reforestation efforts.

Respectfully,

Jonny Watson

Martha DeWees

GOAL ONE COALITION

39625 Almen Drive
Lebanon, Oregon 97355
Phone: 541-258-6074
Fax: 541-258-6810
goal1@pacifier.com

November 29, 2005

Lane County Planning Commission
125 East 8th Avenue
Eugene, OR 97401

RE: PA 04-6308, Dennis

Dear Members of the Commission:

The Goal One Coalition (Goal One) is a nonprofit organization whose mission is to provide assistance and support to Oregonians in matters affecting their communities. Goal One is appearing in these proceedings at the request of and on behalf of its membership residing in Lane County. This testimony is presented on behalf of LandWatch Lane County and its membership in Lane County, 1192 Lawrence, Eugene OR 97401; Robert Emmons and Nena Lovinger, 40093 Little Fall Creek Road, Fall Creek, OR 97438; the Goal One Coalition; and Jim Just as an individual.

I. Introduction

The applicant is requesting approval of an amendment of the Lane County Rural Comprehensive Plan (RCP) to redesignate and rezone a 102.61-acre property from "Forest" and "Impacted Forest Land" (F-2) to "Marginal Land" and "Marginal Lands" (ML). The subject property is identified as 18-01-33 TL 106, and is located north of Jasper-Lowell Road immediately north of the unincorporated community of Fall Creek.

The subject property contains open meadows, and rock outcroppings, and contains forested areas including copses and scattered trees. Tree species present include Douglas-fir, Incense cedar and Ponderosa pine. The property slopes northwesterly from its northern boundary.

The property adjacent to the subject property along its western boundary is zoned ML. Along the subject property's southern boundary are small parcels zoned for non-resource use, many of which are within the unincorporated community boundary of Fall Creek. To the north is 18-01-28 TL 101, a 199.35 acre parcel zoned F-1. To the east are lands zoned F-2.

II. "Legal lot" and property line adjustment issues regarding TL 106

There is not information in the record adequate to determine that TL 106 is a legal lot. While "legal lot" status is not in itself an approval criterion for a marginal lands determination, it is

necessary to first establish the actual boundaries of the legal unit of land and of the ownership in order to adequately address the marginal lands criteria of ORS 197 247(1) (1991 ed.), as it is the income, agricultural and forest capabilities of the subject parcel and any larger ownership of which the subject parcel was a part that are the subjects of the "marginal lands" tests.

A letter dated October 6, 1994 from John S. Petsch to Deloy Dennis is cited by the applicant as establishing the legal lot status of TL 106. This letter does not evidence any land use decision, and is not a final determination of legal lot status. A letter dated June 22, 1994 from Harvey Hoglund, Associate Planner, to Mr. Deloy Dennis documents that neither TL 100 nor TL 106 constitute lawfully created parcels. See Exhibit 6. A copy of the deed "creating" TL 106 is attached. See Exhibit 7.

The October 6, 1994 letter states: "Property line adjustments recently completed by Mr. and Mrs. Morrisey have changed the legal lot status for Taxlot 106." A property line adjustment cannot create or change the legal lot status of a lot or parcel. ORS 92.010(7)(b).

Furthermore, no property line adjustments have been applied for or approved for the subject property. Consequently, any property line adjustments "completed" by the Morriseys are of no legal effect.

Property line adjustments are governed by ORS 92.190(3), which provides:

> "The governing body of a city or county may use procedures other than replatting procedures in ORS 92.180 and 92.185 to adjust property lines as described in ORS 92.010 (11), as long as those procedures include the recording, with the county clerk, of conveyances conforming to the approved property line adjustment as surveyed in accordance with ORS 92.060 (7)."

As Lane County has not adopted property line adjustment procedures meeting the minimum requirements of ORS 92.190(3), the replatting procedures of LC 13.400 and ORS 92.180 and 92.185. No application for a replat or amendment to a partition plat has been submitted or approved. No "property line adjustment" has been "completed" involving TL 106. No conveyances conforming to any surveyed and approved property line adjustment have been recorded with the county clerk.

Partitions in farm and forest zones are governed by ORS 215.010:

> "(1) The terms defined in ORS 92.010 shall have the meanings given therein, except that "parcel":
> "(a) Includes a unit of land created:
> "(A) By partitioning land as defined in ORS 92.010;
> "(B) In compliance with all applicable planning, zoning and partitioning ordinances and regulations; or
> "(C) By deed or land sales contract, if there were no applicable planning, zoning or partitioning ordinances or regulations.

"(b) Does not include a unit of land created solely to establish a separate tax account."

The Petsch letter of October 6, 1994 states that TL 106 was created without partition approval in 1987, and that in 1994 it was considered by the county to be part of a larger parcel including TL 100, 2.35 acres. The Petsch letter relied on by the applicant asserts that TL 106 was created by property line adjustments which changed its legal status. It does not appear that TL 106 was created by partitioning land in compliance with all applicable planning, zoning and partitioning ordinances and regulations. As it was apparently "created" in 1987, long after planning, zoning and partitioning ordinances and regulations were in effect, it cannot be argued that TL 106 was created by deed or land sales contract. It is not explained in the record how a property line adjustment in 1994 could serve to partition land so as to "create" TL 106 or to legalize its status as a lawful parcel created pursuant to ORS 215.010.

The legal boundaries of TL 106 or of the parcel of which TL 106 is a part have not been identified. Consequently, the marginal lands criteria cannot be properly or adequately addressed.

III. Marginal Lands criteria

ORS 197.247 (1991 edition) provides, in relevant part:

"(1) In accordance with ORS 197.240 and 197.245, the commission shall amend the goals to authorize counties to designate land as marginal land if the land meets the following criteria and the criteria set out in subsections (2) to (4) of this section:

"(a) The proposed marginal land was not managed, during three of the five calendar years preceding January 1, 1983, as part of a farm operation that produced $20,000 or more in annual gross income or a forest operation capable of producing an average, over the growth cycle, of $10,000 in annual gross income.

"(b) The proposed marginal land also meets at least one of the following tests:

"(A) At least 50 percent of the proposed marginal land plus the lots or parcels at least partially located within one-quarter mile of the perimeter of the proposed marginal land consists of lots or parcels 20 acres or less in size on July 1, 1983.

"* * *

"(C) The proposed marginal land is composed predominantly of soils in capability classes V through VIII in the Agricultural Capability Classification System in use by the United States Department of Agriculture Soil Conservation Service on October 15, 1983, and is not capable of producing fifty cubic feet of merchantable timber per acre per year in those counties east of the summit of the Cascade Range and eighty-five cubic feet of merchantable timber per acre per year in those counties west of the summit of the Cascade Range, as that term is defined in ORS 477.001(21)."

The applicant argues that the "income" tests of ORS 197.247(1)(a) are met, and that the "parcelization" test of ORS 197.247(1)(b)(A) and the "capability" test of ORS 197.247(1)(b)(C) are both met. This letter will address the tests established by ORS 192.247(1)(b) first, as those tests are dispositive of this matter.

1. The parcelization test of ORS 197.247(1)(b)(A) is not met.

ORS 197.247(1)(b)(B) requires that "[a]t least 50 percent of the proposed marginal land plus the lots or parcels at least partially located within one-quarter mile of the perimeter of the proposed marginal land consists of lots or parcels 20 acres or less in size on July 1, 1983."

The applicant has fundamentally misconstrued what this test requires: that "at least 50 percent of the [land] consist of lots or parcels 20 acres or less in size[.]" The applicant's analysis concludes only that more than 50% of the *parcels* within the test area are 20 acres or less in size.

What this test requires is that a line be drawn ¼ mile from the perimeter of the subject property; that all lots or parcels within or partially within the test area be identified and the size of the lot or parcel determined; that the total area of all of the lots and parcels within or partially within the test area be determined; and that the total area of all lots or parcels 20 acres in size or less be determined. If the total area of all lots and parcels ≤20 acres is ≥50% of the total acreage of the test area, the subject property may be designated marginal land.

The applicant has failed to undertake the required analysis. A finding that 50% of the *lots or parcels* are ≤20 acres does not address the required inquiry: whether 50% of the *land* within the study area consists of lots or parcels ≤20 acres.

A cursory look at applicant's Exhibit I reveals that a great majority of the lands within the test area consists of lots or parcels >20 acres. A computation using data provided by the applicant in Exhibit H of the application confirms this impression. The applicant determined that 38 parcels fell within or partly within a line drawn ¼ mile from the perimeter of the property. The total acreage of those 38 parcels is 791.26. The total acreage of parcels >20 acres is 704.67. The total acreage of parcels ≤20 is 86.59. Lots or parcels ≤20 constitute only 11% of the land within the study area.

50 percent of the proposed marginal land plus the lots or parcels at least partially located within one-quarter mile of the perimeter of the proposed marginal land did not consist of lots or parcels 20 acres or less in size on July 1, 1983. The "parcelization" criterion of ORS 197.247(1)(b)(A) is not met

2. The forest productivity test of ORS 197.247(1)(b)(C) is not met.

ORS 197.247(1)(b)(C) requires that "[t]he proposed marginal land * * * is not capable of producing * * * eighty-five cubic feet of merchantable timber per acre per year in those counties west of the summit of the Cascade Range[.]"

As discussed above in Section II, the boundaries of the subject property cannot be determined from information in the record. Consequently, any precise determination of the soils on the

subject property cannot be made, nor can the potential productivity of those soils be determined.

The applicant has submitted a Forest Productivity Analysis, prepared by Consulting Forester Marc Setchko, which lists the soils present on the 102.61 acre TL 106 as it is currently delineated. Setchko's analysis concludes that the subject property is capable of producing 78.175 cf/ac/yr of merchantable timber.

There are three flaws in Setchko's analysis. The first incorporates an error found in the *Lane County Ratings for Ratings for Forestry & Agriculture (August, 1997) (LC Ratings)* in assigning a productivity for the Dixonville/Hazelair/Philomath complex.

The second error is restricting the inquiry to Douglas-fir. ORS 197.247(1)(b)(B) specifically uses the language "merchantable timber": the statute expressly does not restrict the inquiry to Douglas-fir or the highest-value timber species.

Webster defines "timber" to include "trees collectively" as well as "wood suitable for building." The statute intends the more inclusive meaning, as it is well established that merchantable forest products include wood for plywood, other composites, pulp and even pellets and firewood in addition to lumber. Webster defines "merchantable" to mean "marketable; that can be or usually is marketable." OAR 629-610-0050 addresses species suitable for reforestation. OAR 629-610-0050(1)(c) requires only that "[t]he species must be marketable in the foreseeable future."

For forest tree species that may have growth cycles measured in many decades, the foreseeable future could be as long as fifty or a hundred years, or even longer. Markets fluctuate; while the market for a particular species may be momentarily weak or nonexistent, conditions change over time. As demand for pulp rises and falls, paper manufacturers may be able to rely on their own plantations, or may begin to purchase chip logs on the open market. For forest tree species, markets are a function of availability. For example, if no pine species are available in a particular area, it is not feasible for mills to set up to utilize such species. As plantations mature and logs become available, it becomes feasible for mills to begin to utilize the resource. Logs that are not suitable for milling into lumber may still be merchantable as firewood, chips, pellets, etc.

The Setchko *Forest Productivity Analysis* states at p. 2 that "Douglas-fir was used because it is the highest value merchantable tree species." Available evidence demonstrates that Ponderosa pine is far better suited for several of the soils found on the subject site. Any decision made in reliance on Setchko's conclusions limited to productivity data for Douglas-fir would misconstrue and violate ORS 197.247(1)(b)(B).

a. The productivity ratings for the Dixonville/Philomath/Hazelair complex, soils units 43C and E, are incorrect because they assume zero productivity for the Hazelair and Philomath units.

Two soil units of the Dixonville/Philomath/Hazelair complex are found on the subject property: 43C, 3 to 12 percent slopes; and 43E, 12 to 35 percent slopes. The *LC Ratings* gives

a cf/ac/yr rating of 54 for the 43C unit and 63 for the 43E unit. Entrees for the Dixonvill/Philomath/Hazelair units are noted with three asterisks. A footnote at p. 6 of that document notes:

> "*** Indicates soil complexes with multiple site indices, refer to the CuFt/Acre/Year column for a composite volume rating for the complex."

The *Soil Survey of Lane County Area, Oregon (Soil Survey)* was published in 1987. The fieldwork for that publication was completed in 1980 and on soil names and descriptions approved in 1981. This information is found in the "green sheets" that were available and in use in 1983.[1] Neither the green sheets nor current NRCS data indicate forest productivity for the 43C or the 43E complexes; rather, productivity is given for the individual soil units which comprise the complexes. Productivity data is available only for the Dixonville component. See Exhibit 1, Appendix 1-1 – 1-11; and Exhibit 5, Appendix 5-1. Since no site indices were available for the Philomath and Hazelair units, site indeces for those soils could not have been included in any calculation of a composite rating for the complex.

The *Soil Survey* states that the 43C unit is "30 percent Dixonville silty clay loam, 30 percent Philomath cobbly silty clay, and 25 percent Hazelair silty clay loam. The components of this unit are so intricately intermingled that it was not practical to map them separately at the scale used. Included in this unit are small areas of Panther, Ritner, and Witzel soils and Rock outcrop. Included areas make up about 15 percent of the total acreage."[2]

The Dixonville soil is given a cf/ac/yr rating of 152 in both the *Soil Survey* and the *LC Ratings*. The Ritner soil unit is listed in the *LC Ratings* as having a cf/ac/yr capability of 149. How was the *LC Ratings* productivity for the 43C complex derived? The *LC Ratings* does not explain. However, the following calculation gives a result which is very close to the results found in the *LC Ratings*, and which probably approximates the methodology used.

The productivity of the complex can be approximated by calculating the productivity of the area for the individual components of the complex and then adding them together to arrive at a total for the complex: multiply 0.3 (area) x 152 (productivity) = 46 cf/ac/yr for the Dixonville soils within the complex; 0.0375 (0.15/4 = 0.0375) x 149 = 6 cf/ac/yr for the Ritner component. Adding the two together gives 46 + 6 = 52 cf/ac/yr, which gives a composite productivity for the complex which is very nearly the same as the 54 cf/ac/yr found in the *LC Ratings*. The small discrepancy could possibly be explained by a difference in the way the inclusions were allocated.

A similar calculation can be done for the 43E unit. The *Soil Survey* states: "This unit is 35 percent Dixonville silty clay loam, 30 percent Philomath cobbly silty clay, and 20 percent Hazelair silty clay loam. * * * Included in this unit are small areas of Ritner and Witzel soils and Rock outcrop. Included areas make up about 15 percent of the total acreage."[3] 0.35 x 152

---

[1] *Soil Survey*, p. ii.
[2] *Soil Survey* p. 62.
[3] *Soil Survey* p. 63.

= 53.2; 0.05 x 149 = 7.45; 53.2 + 7.45 = 61, which again is very close to the 64 site index reported in the *LC Ratings*.

As illustrated above, the *LC Ratings* results for the Dixonville/Philomath/Hazelair complexes can only be achieved by assuming zero productivity for the nonrated soils in the complex.

OAR 660-006-0010 provides, in relevant part:

> "Governing bodies shall include an inventory of 'forest lands' as defined by Goal 4[.] * * * If site information is not available then an equivalent method of determining forest site suitability must be used."

As LUBA explained in *Wetherell v. Douglas County,* __ Or LUBA __ (2005-045, September 8, 2005), OAR 660-006-0010 requires that any inventory of forest land requires objective measures of productivity:

> "Goal 4 and the Goal 4 rule strongly suggest that determinations of suitability for commercial forestry must be made based on published productivity data or, in the absence of such data, on an 'equivalent method of determining forest land suitability.' OAR 660-006-0010. An expert opinion that is not based on published productivity data or equivalent data, but instead relies heavily on the absence of such data, is not a sufficient basis for concluding that land is not subject to Goal 4." Slip op 31.[4]

LUBA concluded that OAR 660-006-0010 requires that Goal 4 inventory decisions be based on objective measures of productivity and that OAR 660-066-0010 applies when making inventory decisions regarding forest lands. *Wetherell v. Douglas County,* __ Or LUBA __ (LUBA No. 2005-075, September 30, 2005), slip op 10-12.

LUBA has rejected the argument that soils lacking a NRCS productivity rating will produce zero cf/ac/yr. *Wetherell* (2005-045), slip op 31-34; *Wetherell* (2005-075), slip op 12.

CONCLUSION: The *LC Ratings* and the Setchko *Forest Productivity Analysis* insofar as it relies on the *LC Ratings* does not provide substantial evidence as to the productivity of unrated soils included in the Dixonville/Philomath/Hazelair complexes. Both analyses assume that unrated soils within the Dixonville-Hazelair-Philomath complex have a productivity of zero cf/ac/yr. There is not substantial evidence in the record upon which to base a finding that the forest productivity test of ORS 197.247(1)(b)(C) is met.

b. Analysis of potential forest productivity must consider Ponderosa pine.

[4] While *Wetherell* was a "nonresource" case, the same reasoning applies in the context of a "marginal lands," which likewise requires a forest inventory as a basis for any decision.

Soils in the 43C and 43E complexes that do not have NRCS ratings for forestry have been rated for forestry production. The Hazelair unit has a 50-year site index of 92, the Philomath unit 104, and the Witzel unit 59 for Ponderosa pine.[5]

Conversion tables from a 100-year site index to cf/ac/yr are available. See Appendix 3. As the table published in *Establishing and Managing Ponderosa Pine in the Willamette Valley* provides data for tree height and age, it is possible, using a 100-year Ponderosa pine site index table, to calculate a 100-year site index. See Exhibit 4, Appendix 4-1. Then the 100-year Culmination of Mean Annual Increment table can be used to determine productivity measured in cf/ac/yr. See Exhibit 3, Appendix 3-1.

Productivity of the subject property, considering productivity for Ponderosa pine where appropriate, is shown in the table below.

Unit	Soil Name	Acres	Species	Site Index	Cf/ac/yr	Total productivity cf/ac/yr
41C	Dixonville	3.30	DF	109	152	501.6
41E	Dixonville	18.63	DF	109	152	2,831.8
43C	Dixonville/Philomath/ Hazelair Complex	14.40				
	Dixonville (0.30)	4.32	DF	109	152	656.7
	Philomath (0.30)	4.32	PP	134	175	756.0
	Hazelair (0.25)	3.60	PP	127	159	572.4
	Inclusion -Panther (0.0375)	0.54	na			
	Inclusion.-Ritner (0.0375)	0.54	PP	134	175	94.5
	Inclusion-Witzel (0.0375)	0.54	PP	91	87	47.0
	Inclusion-Rock (0.0375)	0.54	-			
43E	Dixonville/Philomath/ Hazelair Complex	10.85				
	Dixonville (0.35)	3.80	DF	109	152	577.6
	Philomath (0.30)	3.26	PP	134	175	570.5
	Hazelair (0.20)	2.17	PP	127	159	345.0
	Inclusion.-Ritner (0.05)	0.54	DF	134	175	94.5
	Inclusion-Witzel (0.05)	0.54	PP	91	87	47.0
	Inclusion-Rock (0.05)	0.54	-			
107C	Philomath	13.77	PP	134	175	2,409.8
113G	Ritner	5.34	DF	134	175	795.7
116G	Rock outcrop/Witner comp.	14.90	DF	na	21	313.0
138E	Witzel	21.42	PP	91	87	1863.5
	TOTALS	102.61				12,476.6

Average Productivity = 12,477 cubic feet ÷ 102.61 acres = 121.6 cf/ac/yr

[5] *Establishing and Managing Ponderosa Pine in the Willamette Valley,* Oregon State University Extension Service, EM 8805, May 2003. See Appendix 2.

CONCLUSION: The subject property is capable of producing well in excess of 85 cf/ac/yr of merchantable timber for a combination of Douglas-fir and Ponderosa pine when grown in the appropriate soils. The forest productivity test of ORS 197.247(1)(b)(C) is not met.

c. Potential productivity for other tree species has not been considered.

Soils on the subject property are suited for the production of merchantable tree species in addition to Douglas-fir and Ponderosa pine.

NRCS forest productivity tables indicate that the 41C and 41E Dixonville units support Grand fir and Ponderosa pine in addition to Douglas-fir. Productivity of the subject property for Grand fir and Ponderosa pine has not been addressed.

NRCS forest productivity tables indicate that the 43C and 43E Dixonville/Philomath/Hazelair units support Grand fir in addition to Douglas-fir and Ponderosa pine. Productivity of the subject property for Grand fir has not been addressed.

NRCS forest productivity tables indicate that the 113G Ritner unit supports Bigleaf maple and Ponderosa pine in addition to Douglas-fir. The productivity of the subject property for Bigleaf maple and Ponderosa pine has not been addressed.

CONCLUSION: Unless and until it is established that the subject property is not capable of producing 85 cf/ac/yr considering the possibility of growing Ponderosa pine, Grand fir, and Bigleaf maple on suitable soil units, a finding cannot be made that the subject property has met the forest productivity criterion of ORS 197.247(1)(b)(C).

IV. CONCLUSION

As the legal boundaries of the subject property cannot be determined because TL 106 does not meet the ORS 215.210 definition of "parcel," and because adjustments to property lines have not complied with the requirements of ORS Chapter 92 or Lane Code Chapter 13, it is not possible to determine with any accuracy the area, distribution and productivity of soils on the property. Consequently, adequate findings of compliance with ORS 197.247(1) cannot be made.

Approval of the request requires findings of compliance with one or more of the tests established by ORS 197.247(1)(b). The applicant argues that the proposal complies with ORS 197.247(1)(b)(A) and (C).

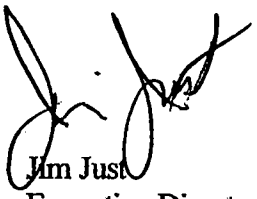
50 percent of the proposed marginal land plus the lots or parcels at least partially located within one-quarter mile of the perimeter of the proposed marginal land did not consist of lots or parcels 20 acres or less in size on July 1, 1983. The "parcelization" test of ORS 197.247(1)(b)(A) is not met

The subject property is capable of producing 122 cf/ac/yr of Douglas-fir and Ponderosa pine. This level of productivity is well in excess of 85 cf/ac/yr standard established by forest productivity test of ORS 197.247(1)(b)(C). The "forest productivity" test is not met.

As this "marginal lands" request fails to meet at least one of the tests established by ORS 197.247(1)(b), the request must be denied.

Goal One, Mr. Just, LandWatch Lane County, and Mr. Emmons and Ms. Lovinger request notice of and a copy of any decision and findings regarding this matter.

Respectfully submitted,



Jim Just
Executive Director

EXHIBIT 1

LANE COUNTY AREA, OREGON

USDA-SCS
6-87

SOIL INTERPRETATIONS RECORD

93C SISKIVILLE-PHILOMATH-MAIZELAIR COMPLEX, 3 TO 12 PERCENT SLOPES
SISKIVILLE PART

THE SISKIVILLE SERIES CONSISTS OF WELL DRAINED SOILS FORMED IN FINE TEXTURED COLLUVIAL AND RESIDUAL MATERIALS FROM BASIC IGNEOUS ROCK IN THE FOOTHILLS. TYPICALLY, THE SURFACE LAYER IS VERY DARK BROWN SILTY CLAY LOAM ABOUT 12 INCHES THICK. THE SUBSOIL IS DARK REDDISH-BROWN CLAY ABOUT 32 INCHES THICK. THE SUBSTRATUM IS WEATHERED BASIC ROCK. ELEVATIONS ARE 350 TO 2000 FEET. MEAN ANNUAL PRECIP IS 30 TO 80 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 54 DEGREES. FROST FREE PERIOD IS 180 TO 230 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	180-230	30-80	350-2000	W	3-12

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT. >10 IN (PCT)	FRACT. >3 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-14	SICL	CL	A-6		0-10	90-100	90-100	85-100	75-85	27-40
14-28	C, CB-C, SIC	CH	A-7		0-30	75-100	70-100	65-100	50-95	40-60
28-30	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-14	35-40	15-20	1.30-1.50	0.6-2.0	0.18-0.21	5.6-6.5	-				
14-28	50-80	30-50	1.30-1.50	0.06-0.2	0.12-0.17	5.6-6.5	-				
28-30											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	EROSION FACTORS T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CORROSIVITY CONCRETE
0-14	3-6	MODERATE HIGH	.32	2	7	38	MODERATE	MODERATE
14-28			.24					
28-30								

FLOODING FREQUENCY	FLOODING DURATION	FLOODING MONTHS	HIGH WATER TABLE DEPTH (FT)	HIGH WATER TABLE KIND	HIGH WATER TABLE MONTHS	CEMENTED PAN DEPTH (IN)	CEMENTED PAN HARDNESS	BEDROCK DEPTH (IN)	BEDROCK HARDNESS	SUBSIDENCE INIT. (IN)	SUBSIDENCE TOTAL (IN)	WTD GRP	POTENT'L FROST ACTION
NONE			>6.0			-		10-40	SOFT	-	-	C	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,PERCS SLOWLY
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,TOO CLAYEY
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	MODERATE-DEPTH TO ROCK,TOO CLAYEY
DWELLINGS WITHOUT BASEMENTS	SEVERE-SHRINK-SWELL
DWELLINGS WITH BASEMENTS	SEVERE-SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-SHRINK-SWELL
LOCAL ROADS AND STREETS	SEVERE-LOW STRENGTH,SHRINK-SWELL
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-LARGE STONES,DEPTH TO ROCK

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-LARGE STONES

WATER MANAGEMENT

POND RESERVOIR AREA	MODERATE-DEPTH TO ROCK,SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	LARGE STONES,PERCS SLOWLY,DEPTH TO ROCK
TERRACES AND DIVERSIONS	LARGE STONES,DEPTH TO ROCK
GRASSED WATERWAYS	LARGE STONES,DEPTH TO ROCK

159

( )

43C BINGNVILLE-PHILOMATH-HAZELAIR COMPLEX, 3 TO 12 PERCENT SLOPES
BINGNVILLE PART

USDA-SCS
6-87

RECREATIONAL DEVELOPMENT

CAMP AREAS	SLIGHT	PLAYGROUNDS	SEVERE-SLOPE
PICNIC AREAS	SLIGHT	PATHS AND TRAILS	SLIGHT

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

	CAPABILITY	FILBERTS (TONS)		PASTURE (AUM)		CHERRIES (TONS)		BARLEY (BU)		WHEAT, WINTER (BU)		CORN, SWEET (TONS)			
		NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR	NIRR	IRR
	3E		0.5		6		3		30		50		6		

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDEX	POOD CLAS	
	3C	SLIGHT	MODER.	MODER.	SLIGHT	SEVERE	DOUGLAS FIR PACIFIC MADRONE OREGON WHITE OAK GRAND FIR	97	8	DOUGLAS FIR PONDEROSA PINE

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

	POTENTIAL FOR HABITAT ELEMENTS								POTENTIAL AS HABITAT FOR:			
	GRAIN & SEED	GRASS & LEGUMES	WILD HERB.	HARDWD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPENLD WILDLF	WOODLD WILDLF	WETLAND WILDLF	RANGELD WILDLF
	FAIR	GOOD	FAIR	GOOD	GOOD	GOOD	V. POOR	V. POOR	FAIR	GOOD	V. POOR	

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NRCS PM)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
POTENTIAL PRODUCTION (LBS./AC. DRY WT) FAVORABLE YEARS NORMAL YEARS UNFAVORABLE YEARS						

FOOTNOTES

1-1

160

8-2

LANE COUNTY AREA, OREGON

USDA-SCS
12-80

SOIL INTERPRETATIONS RECORD

43C BRENNEVILLE-PHILOMATH-HAZELAIR COMPLEX, 3 TO 12 PERCENT SLOPES.
PHILOMATH PART

THE PHILOMATH SERIES CONSISTS OF WELL DRAINED SOILS FORMED IN FINE TEXTURED COLLUVIAL AND RESIDUAL MATERIALS FROM BASALT. THEY OCCUR IN THE FOOTHILLS. TYPICALLY THE SURFACE LAYER IS VERY DARK BROWN SILTY CLAY OR CLAY ABOUT 9 INCHES THICK. THE SUBSOIL IS VERY DARK BROWN CLAY, ABOUT 8 INCHES THICK. THE SUBSTRATUM IS PARTIALLY WEATHERED BASALT BEDROCK. ELEVATION IS 250 TO 2000 FEET. MEAN ANNUAL PRECIP. IS 30 TO 80 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 50 DEGREES. FROST FREE PERIOD IS 165 TO 220 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	165-220		250-2000	W	3-12

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PRACT. >10 IN (PCT)	PRACT. >3 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-9	CB-SIC	CH	A-7		15-30	85-100	75-80	70-85	60-80	40-55
9-14	C, CB-SIC, CB-C	CH	A-7		0-30	90-100	70-85	60-90	50-85	40-60
14-18	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (MEQ/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-9	50-80	25-55	1.30-1.40	0.6-2.0	0.14-0.17	5.5-6.5	-				
9-14	60-80	40-50	1.30-1.40	0.06-0.2	0.14-0.18	5.6-7.3	-				
14-18											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CONCRETE
0-9	3-5	HIGH	.28	1	8	86	MODERATE	MODERATE
9-14		HIGH	.24					
14-18								

FLOODING FREQUENCY	DURATION	MONTHS	HIGH WATER TABLE DEPTH (FT)	KIND	MONTHS	CEMENTED PAN DEPTH (IN)	HARDNESS	BEDROCK DEPTH (IN)	HARDNESS	SUBSIDENCE INIT. (IN)	TOTAL (IN)	HYD GRP	POTENTIAL FROST ACTION
NONE			14.0			-		12-20	SOFT	0	0	B	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,TOO CLAYEY
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-DEPTH TO ROCK,TOO CLAYEY,LARGE STONES

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-DEPTH TO ROCK
DWELLINGS WITHOUT BASEMENTS	SEVERE-SHRINK-SWELL
DWELLINGS WITH BASEMENTS	SEVERE-DEPTH TO ROCK,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-SHRINK-SWELL
LOCAL ROADS AND STREETS	SEVERE-LOW STRENGTH,SHRINK-SWELL
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-DEPTH TO ROCK,TOO CLAYEY

WATER MANAGEMENT

POND RESERVOIR AREA	SEVERE-DEPTH TO ROCK
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	LARGE STONES,SLOW INTAKE,PERCS SLOWLY
TERRACES AND DIVERSIONS	LARGE STONES,DEPTH TO ROCK
GRASSED WATERWAYS	LARGE STONES,DEPTH TO ROCK

1-2

161

8-3

43C OTISVILLE-PHILOMATH-HAZELAIR COMPLEX, 3 TO 12 PERCENT SLOPES — USDA-SCS 12-66
PHILOMATH PART

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-DEPTH TO ROCK	PLAYGROUNDS	SEVERE-LARGE STONES, SLOPE, DEPTH TO ROCK
PICNIC AREAS	SEVERE-DEPTH TO ROCK	PATHS AND TRAILS	MODERATE-LARGE STONES, TOO CLAYEY

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

	CAPABILITY	PASTURE (AUM)													
		HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
	6S														

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS: EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	POTENTIAL PRODUCTIVITY: COMMON TREES	SITE INDEX	POOR SITES	TREES TO PLANT
							NONE			

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

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

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NELSON)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
PACIFIC POISON OAK	TODI					
OREGON WHITE OAK	QUGA4					
ROSE	ROSA*					
COMMON SNOWBERRY	SYAL					
POTENTIAL PRODUCTION (LBS./AC. DRY WT): FAVORABLE YEARS						
NORMAL YEARS						
UNFAVORABLE YEARS						

FOOTNOTES

1-3

162

8-4

LANE COUNTY AREA, OREGON

USDA-SCS
2-87

SOIL INTERPRETATIONS RECORD

63C DIMORVILLE-PHILOMATH-HAZELAIR COMPLEX, 3 TO 12 PERCENT SLOPES
HAZELAIR PART

THE HAZELAIR SERIES CONSISTS OF MODERATELY WELL TO SOMEWHAT POORLY-DRAINED SOILS FORMED IN SILTY OVER CLAYEY MATERIALS ON THE LOW FOOTHILLS. TYPICALLY, THE SURFACE LAYER IS DARK BROWN SILTY CLAY LOAM, ABOUT 11 INCHES THICK. THE SUBSOIL IS DARK BROWN SILTY CLAY, ABOUT 7 INCHES THICK. THE SUBSTRATUM IS LIGHT OLIVE BROWN CLAY, ABOUT 13 INCHES THICK, OVER SILTSTONE OR SANDSTONE. ELEVATIONS ARE FROM 300 TO 2000 FEET. MEAN ANNUAL PRECIP. IS 20 TO 60 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 54 F. FROST FREE PERIOD IS 100 TO 210 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	100-210		300-2000	MW, SP	3-12

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PCT#4 (PCT)	PCT#10 (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-11	SICL	CL	A-6	0	0	95-100	85-95	65-85	60-80	27-40
11-15	SIC, SICL	CL	A-7	0	0	95-100	90-95	65-95	60-80	35-50
15-36	C	CH	A-7	0	0	95-100	85-95	75-95	70-90	60-70
36-60	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-11	30-40	10-20	1.20-1.60	0.2-2.0	0.18-0.18	5.6-6.5	-				
11-15	40-50	20-25	1.00-1.20	0.2-0.8	0.13-0.15	5.1-6.5	-				
15-36	60-86	40-60	1.40-1.20	40.00	0.08-0.12	5.1-6.5	-				
36-60											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CONCRETE
0-11	2-4	MODERATE	.32	2	7	38	MODERATE	MODERATE
11-15		HIGH	.28					
15-36		HIGH	.24					
36-60								

FLOODING FREQUENCY	DURATION	MONTHS	HIGH WATER TABLE DEPTH (FT)	KIND	MONTHS	CEMENTED PAN DEPTH (IN)	HARDNESS	BEDROCK DEPTH (IN)	HARDNESS	SUBSIDENCE INIT. (IN)	TOTAL (IN)	WTD CRP	POTENTIAL FROST ACTION
NONE			1.0-3.0	PERCHED	DEC-APR	-		20-40	SOFT	-	-	0	-

SANITARY FACILITIES

		CONSTRUCTION MATERIAL	
SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,WETNESS,PERCS SLOWLY	ROADFILL	POOR-DEPTH TO ROCK,SHRINK-SWELL,LOW STRENGTH
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE,WETNESS	SAND	IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,WETNESS	GRAVEL	IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK,WETNESS	TOPSOIL	POOR-TOO CLAYEY
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK	WATER MANAGEMENT	
		POND RESERVOIR AREA	MODERATE-DEPTH TO ROCK,SLOPE
BUILDING SITE DEVELOPMENT			
SHALLOW EXCAVATIONS	SEVERE-WETNESS	EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
DWELLINGS WITHOUT BASEMENTS	SEVERE-WETNESS,SHRINK-SWELL	EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DWELLINGS WITH BASEMENTS	SEVERE-WETNESS,SHRINK-SWELL	DRAINAGE	PERCS SLOWLY,DEPTH TO ROCK,SLOPE
SMALL COMMERCIAL BUILDINGS	SEVERE-WETNESS,SHRINK-SWELL	IRRIGATION	SLOPE,WETNESS,PERCS SLOWLY
LOCAL ROADS AND STREETS	SEVERE-SHRINK-SWELL,LOW STRENGTH	TERRACES AND DIVERSIONS	DEPTH TO ROCK,WETNESS
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-WETNESS,DEPTH TO ROCK	GRASSED WATERWAYS	WETNESS,DEPTH TO ROCK

1-4

163

8-5

63C DIXONVILLE-PHILOMATH-HAZELAIR COMPLEX, 3 TO 12 PERCENT SLOPES
HAZELAIR PART

USDA-SCS
3-87

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-WETNESS	PLAYGROUNDS	SEVERE-SLOPE,WETNESS
PICNIC AREAS	MODERATE-WETNESS,PERCS SLOWLY	PATHS AND TRAILS	MODERATE-WETNESS

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

	CAPA-BILITY	WHEAT, WINTER (BU)		BARLEY (BU)		BLACK-BERRIES (TONS)		GRASS HAY (TONS)		PASTURE (AUM)					
	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
	4E		40		90		4		3		7	12				

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS	
							NONE			

WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

WILDLIFE HABITAT SUITABILITY

	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
	FAIR	GOOD	GOOD	GOOD	FAIR	GOOD	V. POOR	V. POOR	GOOD	GOOD	V. POOR	-

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NRCS)	PERCENTAGE COMPOSITION (DRY WEIGHT)					
COMMON SNOWBERRY	SYAL						
RUSH	JUNCU						
OTHER ANNUAL GRASSES	AACE						
OTHER ANNUAL FORBS	AAFF						
MOSS	AOSA+						
POTENTIAL PRODUCTION (LBS./AC. DRY WT):							
FAVORABLE YEARS							
NORMAL YEARS							
UNFAVORABLE YEARS							

FOOTNOTES

1-5

164

8-6

LANE COUNTY AREA, OREGON

USDA-SCS
6-87

SOIL INTERPRETATIONS RECORD

438 SIRONVILLE-PHELOMATH-HAZELAIR COMPLEX, 12 TO 35 PERCENT SLOPES
SIRONVILLE PART

THE SIRONVILLE SERIES CONSISTS OF WELL DRAINED SOILS FORMED IN FINE TEXTURED COLLUVIAL AND RESIDUAL MATERIALS FROM BASIC IGNEOUS ROCK IN THE FOOTHILLS. TYPICALLY, THE SURFACE LAYER IS VERY DARK BROWN SILTY CLAY LOAM ABOUT 12 INCHES THICK. THE SUBSOIL IS DARK REDDISH-BROWN CLAY ABOUT 22 INCHES THICK. THE SUBSTRATUM IS WEATHERED BASIC ROCK. ELEVATIONS ARE 300 TO 2000 FEET. MEAN ANNUAL PRECIP IS 30 TO 80 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 54 DEGREES. FROST FREE PERIOD IS 100 TO 230 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	100-230	30-80	300-2000	W	12-35

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PCT. >10 IN (PCT)	PCT. >3 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-14	SICL	CL	A-6		0-10	80-100	80-100	65-100	36-65	27-40
14-26	C, CB-C, SIC	CH	A-7		0-30	76-100	70-100	65-100	50-85	40-60
26-30	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-14	35-40	10-20	1.30-1.60	0.6-2.0	0.18-0.21	5.6-6.5	-				
14-26	50-60	30-35	1.30-1.60	0.06-0.2	0.12-0.17	5.6-6.5	-				
26-30											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CONCRETE
0-14	3-6	MODERATE	.32	2	7	38	MODERATE	MODERATE
14-26		HIGH	.24					
26-30								

FLOODING FREQUENCY	DURATION	MONTHS	HIGH WATER TABLE DEPTH (FT)	KIND	MONTHS	CEMENTED PAN DEPTH (IN)	HARDNESS	BEDROCK DEPTH (IN)	HARDNESS	SUBSIDENCE INIT. (IN)	TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			30.0			-		20-100	SOFT	-	-	C	0

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,PERCS SLOWLY,SLOPE
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,SLOPE,TOO CLAYEY
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK,SLOPE
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-LARGE STONES,SLOPE

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-SLOPE
DWELLINGS WITHOUT BASEMENTS	SEVERE-SHRINK-SWELL,SLOPE
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-SHRINK-SWELL,SLOPE
LOCAL ROADS AND STREETS	SEVERE-LOW STRENGTH,SLOPE,SHRINK-SWELL
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE

WATER MANAGEMENT

POND RESERVOIR AREA	SEVERE-SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	LARGE STONES,PERCS SLOWLY,DEPTH TO ROCK
TERRACES AND DIVERSIONS	SLOPE,LARGE STONES,DEPTH TO ROCK
GRASSED WATERWAYS	LARGE STONES,SLOPE,DEPTH TO ROCK

1-6

165

8-7

436 DIXONVILLE-PHILOMATH-HAZELAIR COMPLEX, 12 TO 30 PERCENT SLOPES
DIXONVILLE PART

USDA-SCS
8-87

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-SLOPE	PLAYGROUNDS	SEVERE-SLOPE
PICNIC AREAS	SEVERE-SLOPE	PATHS AND TRAILS	MODERATE-SLOPE

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

	CAPA-BILITY	FILBERTS (TONS)		PASTURE (AUM)		CHERRIES (TONS)		BARLEY (BU)		WHEAT, WINTER (BU)		CORN, SWEET (TONS)			
	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
	4E		0.8		4		3		30		40					

WOODLAND SUITABILITY

	SOIL SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY		TREES TO PLANT
		EROSION HAZARD	EQUIP. LIMIT.	SEEDL. MORT.	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	CLASS
	4C	SLIGHT	MODER.	MODER.	SLIGHT	SEVERE	DOUGLAS FIR PACIFIC MADRONE OREGON WHITE OAK GRAND FIR	87	4	DOUGLAS FIR PONDEROSA PINE

WINDBREAKS

SPECIES	HT.	SPECIES	HT.	SPECIES	HT.	SPECIES	HT.
NONE							

WILDLIFE HABITAT SUITABILITY

	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
	POOR	FAIR	FAIR	GOOD	GOOD	GOOD	V. POOR	V. POOR	FAIR	GOOD	V. POOR	

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NRCS)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
POTENTIAL PRODUCTION (LBS./AC., DRY WT.):						
FAVORABLE YEARS						
NORMAL YEARS						
UNFAVORABLE YEARS						

FOOTNOTES

8-7

8-8

LANE COUNTY AREA, OREGON

USDA-SCS
12-84

SOIL INTERPRETATIONS RECORD

432 DIXONVILLE-PHILOMATH-HAZELAIR COMPLEX, 12 TO 35 PERCENT SLOPES
PHILOMATH PART

THE PHILOMATH SERIES CONSISTS OF WELL DRAINED SOILS FORMED IN FINE TEXTURED COLLUVIAL AND RESIDUAL MATERIALS FROM BASALT. THEY OCCUR IN THE FOOTHILLS. TYPICALLY THE SURFACE LAYER IS VERY DARK BROWN SILTY CLAY OR CLAY ABOUT 5 INCHES THICK. THE SUBSOIL IS VERY DARK BROWN CLAY. ABOUT 9 INCHES THICK. THE SUBSTRATUM IS PARTIALLY WEATHERED BASALT BEDROCK. ELEVATION IS 250 TO 2000 FEET. MEAN ANNUAL PRECIP. IS 30 TO 80 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 54 DEGREES. FROST FREE PERIOD IS 165 TO 225 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	165-225		250-2000	W	12-35

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PCT. >10 IN (PCT)	PCT. >3 IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO. 4	10	40	200	CLAY (PCT)
0-6	CB-SIC	CH	A-7		10-30	45-100	75-98	70-95	60-80	60-80
6-14	C, CB-SIC, CB-C	CH	A-7		0-30	80-100	70-98	80-90	60-85	60-80
14-18	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-6	50-80	25-45	1.30-1.60	0.2-2.0	0.14-0.17	6.6-8.5	-				
6-14	60-80	30-55	1.30-1.60	0.06-0.2	0.14-0.18	5.6-7.3	-				
14-18											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	EROSION FACTORS T	WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY STEEL	CORROSIVITY CONCRETE
0-6	2-4	HIGH	.28	1	4	86	MODERATE	MODERATE
6-14		HIGH	.24					
14-18								

FLOODING FREQUENCY	FLOODING DURATION	FLOODING MONTHS	HIGH WATER TABLE DEPTH (FT)	HIGH WATER TABLE KIND	HIGH WATER TABLE MONTHS	CEMENTED PAN DEPTH (IN)	CEMENTED PAN HARDNESS	BEDROCK DEPTH (IN)	BEDROCK HARDNESS	SUBSIDENCE INIT. (IN)	SUBSIDENCE TOTAL (IN)	HYD GRP	POTENT'L FROST ACTION
NONE			30.0			-		12-20	SOFT	-	-	B	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,SLOPE
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,SLOPE,TOO CLAYEY
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK,SLOPE
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-DEPTH TO ROCK,SLOPE
DWELLINGS WITHOUT BASEMENTS	SEVERE-SHRINK-SWELL,SLOPE
DWELLINGS WITH BASEMENTS	SEVERE-DEPTH TO ROCK,SLOPE,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-SHRINK-SWELL,SLOPE
LOCAL ROADS AND STREETS	SEVERE-LOW STRENGTH,SLOPE,SHRINK-SWELL
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE,DEPTH TO ROCK,TOO CLAYEY

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-DEPTH TO ROCK,TOO CLAYEY,LARGE STONES

WATER MANAGEMENT

POND RESERVOIR AREA	SEVERE-DEPTH TO ROCK,SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	DEEP TO WATER
IRRIGATION	LARGE STONES,SLOW INTAKE,PERCS SLOWLY
TERRACES AND DIVERSIONS	SLOPE,LARGE STONES,DEPTH TO ROCK
GRASSED WATERWAYS	LARGE STONES,SLOPE,DEPTH TO ROCK

1-8

167

8-9

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-SLOPE,DEPTH TO ROCK	PLAYGROUNDS	SEVERE-LARGE STONES,SLOPE,DEPTH TO ROCK
PICNIC AREAS	SEVERE-SLOPE,DEPTH TO ROCK	PATHS AND TRAILS	MODERATE-LARGE STONES,TOO CLAYEY

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

	CAPA-BILITY		PASTURE (AUM)													
	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
	US															

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS: EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	POTENTIAL PRODUCTIVITY: COMMON TREES	SITE INDX	PROD CLAS	TREES TO PLANT
							NONE			

WINDBREAKS

	SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
	NONE							

WILDLIFE HABITAT SUITABILITY

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

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
PACIFIC POISON OAK	TODI					
OREGON WHITE OAK	QUGA4					
ROSE	ROSA?					
COMMON SNOWBERRY	SYAL					
POTENTIAL PRODUCTION (LBS./AC. DRY WT): FAVORABLE YEARS						
NORMAL YEARS						
UNFAVORABLE YEARS						

FOOTNOTES

1·9

168

SOIL INTERPRETATIONS RECORD

43E DIBONVILLE-SHELDRATH-HAZELAIR COMPLEX, 12 TO 30 PERCENT SLOPES
HAZELAIR PART

THE HAZELAIR SERIES CONSISTS OF MODERATELY WELL TO SOMEWHAT POORLY-DRAINED SOILS FORMED IN SILTY OVER CLAYEY MATERIALS ON THE LOW FOOTHILLS. TYPICALLY, THE SURFACE LAYER IS DARK BROWN SILTY CLAY LOAM, ABOUT 10 INCHES THICK. THE SUBSOIL IS DARK BROWN SILTY CLAY, ABOUT 7 INCHES THICK. THE SUBSTRATUM IS LIGHT OLIVE BROWN CLAY, ABOUT 12 INCHES THICK, OVER SILTSTONE OR SANDSTONE. ELEVATIONS ARE FROM 250 TO 2500 FEET. MEAN ANNUAL PRECIP. IS 30 TO 60 INCHES, MEAN ANNUAL AIR TEMP. IS 49 TO 54 F. FROST FREE PERIOD IS 165 TO 210 DAYS.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
	165-210		250-2500	MOD. SP	12-30

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 NO. 4	NO. 10	NO. 40	NO. 200	CLAY (PCT)
0-11	SICL	CL	A-6	0	0	95-100	90-95	85-95	80-90	27-40
11-19	SIC, SICL	CL	A-7	0	0	95-100	90-95	85-95	80-90	35-50
19-36	C	CH	A-7	0	0	95-100	85-95	75-90	70-90	50-70
36-60	WB									

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYPSUM (PCT)
0-11	30-40	10-20	1.30-1.46	0.6-2.0	0.16-0.14	5.6-6.5	-				
11-19	40-50	20-35	1.00-1.20	0.2-0.6	0.13-0.10	5.1-6.5	-				
19-36	60-80	40-50	1.00-1.20	<0.06	0.08-0.12	5.1-6.5	-				
36-60											

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	EROSION FACTORS T	WIND ERODI. GROUP	WIND ERODI. INDEX	CORROSIVITY STEEL	CORROSIVITY CONCRETE
0-11	2-4	MODERATE	.32	3	7	38	MODERATE	MODERATE
11-19		HIGH	.28					
19-36		HIGH	.24					
36-60								

FLOODING FREQUENCY	FLOODING DURATION	FLOODING MONTHS	HIGH WATER TABLE DEPTH (FT)	HIGH WATER TABLE KIND	HIGH WATER TABLE MONTHS	CEMENTED PAN DEPTH (IN)	CEMENTED PAN HARDNESS	BEDROCK DEPTH (IN)	BEDROCK HARDNESS	SUBSIDENCE INIT. (IN)	SUBSIDENCE TOTAL (IN)	HYD GRP	POTENTIAL FROST ACTION
NONE			1.0-3.0	PERCHED	DEC-APR	-		20-40	SOFT	-	-	B	-

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK,WETNESS,PERCS SLOWLY
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK,SLOPE,WETNESS
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK,WETNESS,SLOPE
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK,WETNESS,SLOPE
DAILY COVER FOR LANDFILL	POOR-DEPTH TO ROCK,TOO CLAYEY,HARD TO PACK

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE-WETNESS,SLOPE
DWELLINGS WITHOUT BASEMENTS	SEVERE-WETNESS,SHRINK-SWELL,SLOPE
DWELLINGS WITH BASEMENTS	SEVERE-WETNESS,SLOPE,SHRINK-SWELL
SMALL COMMERCIAL BUILDINGS	SEVERE-WETNESS,SHRINK-SWELL,SLOPE
LOCAL ROADS AND STREETS	SEVERE-SHRINK-SWELL,LOW STRENGTH,SLOPE
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE

CONSTRUCTION MATERIAL

ROADFILL	POOR-DEPTH TO ROCK,SHRINK-SWELL,LOW STRENGTH
SAND	IMPROBABLE-EXCESS FINES
GRAVEL	IMPROBABLE-EXCESS FINES
TOPSOIL	POOR-TOO CLAYEY,SLOPE

WATER MANAGEMENT

POND RESERVOIR AREA	SEVERE-SLOPE
EMBANKMENTS DIKES AND LEVEES	SEVERE-HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DRAINAGE	PERCS SLOWLY,DEPTH TO ROCK,SLOPE
IRRIGATION	SLOPE,WETNESS,PERCS SLOWLY
TERRACES AND DIVERSIONS	SLOPE,DEPTH TO ROCK,WETNESS
GRASSED WATERWAYS	WETNESS,SLOPE,DEPTH TO ROCK

438 DIAMONDVILLE-PHILOMATH-HAZELAIR COMPLEX, 12 TO 30 PERCENT SLOPES
HAZELAIR PART

USDA-NCS
2-69

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-SLOPE,WETNESS	PLAYGROUNDS	SEVERE-SLOPE,WETNESS
PICNIC AREAS	SEVERE-SLOPE	PATHS AND TRAILS	MODERATE-WETNESS,SLOPE

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

	CAPA-BILITY	WHEAT, WINTER (BU)		BARLEY (BU)		BLACK-SCABBIS (TONS)		GRASS HAY (TONS)		PASTURE (AUM)					
	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.	NIRR	IRR.
	4e															

WOODLAND SUITABILITY

	ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY			TREES TO PLANT
		EROS'N HAZARD	EQUIP. LIMIT	SEEDL. MORT'Y	WINDTH HAZARD	PLANT COMPET	COMMON TREES	SITE INDX	PROD CLAS	
							NONE			

WOODGROWS

SPECIES	WT	SPECIES	WT	SPECIES	WT	SPECIES	WT
NONE							

WILDLIFE HABITAT SUITABILITY

	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
	POOR	FAIR	GOOD	GOOD	FAIR	GOOD	V. POOR	V. POOR	FAIR	GOOD	V. POOR	

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPM)	PERCENTAGE COMPOSITION (DRY WEIGHT)				
COMMON SNOWBERRY	SYAL					
RUSH	JUSCU					
OTHER ANNUAL GRASSES	ARCC					
OTHER ANNUAL FORBS	AAFF					
ROSE	ROSA4					
POTENTIAL PRODUCTION (LBS./AC. DRY WT):						
FAVORABLE YEARS						
NORMAL YEARS						
UNFAVORABLE YEARS						

FOOTNOTES

EXHIBIT 2

Growth of Willamette Valley Natural Stands[1]

Soil Type	Height	Age	Site Index (50)
Hazelair silty clay* loam	93	52	92
Philomath cobbly, silty clay*	87	42	104
Ritner cobbly silty clay loam	101	54	95
Witzel very cobbly loam	92	98	59

* Indicates an average of more than one site.

[1]From Fletcher et al, *Establishing and Managing Ponderosa Pine in the Willamette Valley,* OSU Extension Service, EM 8805, May 2003, p. 12.

EXHIBIT 3

Ponderosa Pine 100 yr tables

3-1

SITE INDEX	CMAI FOR PONDEROSA PINE 100 YR. TABLE (PIPO) 600-MEYER CU.FT./AC./YR.	CU.M./HA./YR.	TOTAL AGE	SCRIBNER BD.FT./AC./YR.	TOTAL AGE	INTER.1/8" BD.FT./AC./YR.	TOTAL AGE	CMAI FOR LODGEPOLE PINE 100 YR. TABLE (PICO) 520-ALEXANDER CU.FT./AC./YR.	CU.M./HA./YR.	TOTAL AGE	CMAI FOR WESTERN LARCH 50 YR. TABLE (LAOC) 265-SCHMIDT CU.FT./AC./YR.	CU.M./HA./YR.	TOTAL AGE
30											31	2.2	70
31											32	2.2	70
32											34	2.4	70
33											36	2.5	70
34											37	2.6	70
35											39	2.7	70
36											40	2.8	70
37											42	2.9	70
38											43	3.0	70
39											45	3.1	70
40	30	2.1	60	55	200	84	200				46	3.2	70
41	31	2.2	60	59	200	88	200				48	3.4	70
42	31	2.2	60	63	200	93	200				50	3.5	70
43	32	2.2	60	67	200	98	200				51	3.6	70
44	33	2.3	60	71	200	102	200				53	3.7	70
45	34	2.4	60	75	200	107	200	36	2.5	100	55	3.8	70
46	34	2.4	60	79	200	111	200	37	2.6	100	56	3.9	70
47	35	2.4	60	83	200	116	200	38	2.7	100	58	4.1	70
48	36	2.5	60	87	200	121	200	39	2.7	90	60	4.2	70
49	37	2.6	60	91	200	125	200	40	2.8	90	61	4.3	70
50	38	2.7	60	95	200	130	200	41	2.9	90	63	4.4	70
51	38	2.7	60	98	200	134	200	41	2.9	90	65	4.5	70
52	39	2.7	60	102	200	139	200	42	2.9	90	67	4.7	70
53	40	2.8	60	105	200	143	200	43	3.0	90	69	4.8	70
54	41	2.9	60	109	200	147	200	44	3.1	90	70	4.9	70
55	42	2.9	60	112	200	152	200	45	3.1	90	72	5.0	70
56	42	2.9	60	115	200	156	200	46	3.2	90	74	5.2	70
57	43	3.0	60	119	200	160	200	47	3.3	90	76	5.3	70
58	44	3.1	60	122	200	164	200	48	3.4	90	78	5.5	70
59	45	3.1	60	126	200	169	200	49	3.4	90	80	5.6	70
60	46	3.2	50	129	190	177	160	50	3.5	90	81	5.7	70
61	47	3.3	50	133	190	182	160	50	3.5	90	83	5.8	70
62	48	3.4	50	137	190	187	160	51	3.6	90	85	5.9	70
63	49	3.4	50	142	190	192	160	52	3.6	90	87	6.1	70
64	50	3.5	50	146	190	198	160	53	3.7	90	89	6.2	70
65	50	3.5	50	150	190	203	160	54	3.8	90	91	6.4	70
66	51	3.6	50	154	190	208	160	55	3.8	90	93	6.5	70
67	52	3.6	50	158	190	213	160	56	3.9	90	95	6.6	70
68	53	3.7	50	166	190	218	160	57	4.0	90	97	6.8	70
69	54	3.8	50	167	190	224	160	58	4.1	90	99	6.9	70

↑ suggest cut by 1/3 to 1/4 in order to avoid bark

Bourhill

SITE INDEX	CMAI FOR PONDEROSA PINE 100 YR. TABLE (PIPO) 600-MEYER						CMAI FOR LODGEPOLE PINE 100 YR. TABLE (PICO) 520-ALEXANDER			CMAI FOR WESTERN LARCH 50 YR. TABLE (LAOC) 265-SCHMIDT		
	CU.FT./ AC./YR.	CU.M./ HA./YR.	TOTAL AGE	SCRIBNER BD.FT./ AC./YR.	TOTAL AGE	INTER.1/8" BD.FT./ AC./YR.	TOTAL AGE	CU.FT./ AC./YR.	CU.M./ HA./YR.	TOTAL AGE	CU.FT./ AC./YR.	CU.M./ HA./YR.	TOTAL AGE
70	55	3.8	50	172	160	232	130	59	4.1	90	101	7.1	70
71	56	3.9	50	177	160	240	130	60	4.2	90	103	7.2	70
72	58	4.1	50	182	160	247	130	61	4.3	90	105	7.3	70
73	59	4.1	50	188	160	255	130	62	4.3	90	107	7.5	70
74	60	4.2	50	193	160	263	130	63	4.4	90	109	7.6	70
75	62	4.3	50	198	160	270	130	64	4.5	90	111	7.8	70
76	63	4.4	50	203	160	278	130	65	4.5	90	113	7.9	70
77	64	4.5	50	209	160	285	130	66	4.6	90	116	8.1	70
78	65	4.5	50	214	160	293	130	67	4.7	90	118	8.3	70
79	67	4.7	50	219	160	300	130	68	4.8	90	120	8.4	70
80	69	4.8	40	225	150	313	110	69	4.8	90	122	8.5	70
81	70	4.9	40	232	150	321	110	70	4.9	90			
82	72	5.0	40	238	150	330	110	71	5.0	90			
83	74	5.2	40	245	150	339	110	72	5.0	90			
84	75	5.2	40	252	150	347	110	73	5.1	90			
85	77	5.4	40	258	150	356	110	74	5.2	90			
86	78	5.5	40	265	150	365	110	75	5.2	90			
87	80	5.6	40	271	150	373	110	76	5.3	90			
88	82	5.7	40	278	150	382	110	77	5.4	90			
89	83	5.8	40	284	150	391	110	78	5.5	90			
90	85	5.9	40	292	130	403	100	79	5.5	90			
91	87	6.1	40	300	130	413	100	80	5.6	90			
92	88	6.2	40	308	130	423	100	81	5.7	90			
93	90	6.3	40	316	130	433	100	82	5.7	90			
94	92	6.4	40	324	130	443	100	83	5.8	90			
95	94	6.6	40	332	130	453	100	84	5.9	90			
96	96	6.7	40	340	130	463	100	85	5.9	90			
97	97	6.8	40	348	130	473	100	86	6.0	90			
98	99	6.9	40	356	130	483	100	87	6.1	90			
99	101	7.1	40	364	130	493	100	88	6.2	90			
100	102	7.1	40	372	120	507	90	89	6.2	90			
101	104	7.3	40	381	120	519	90	90	6.3	90			
102	106	7.4	40	390	120	530	90	91	6.4	90			
103	108	7.6	40	399	120	542	90	92	6.4	90			
104	110	7.7	40	408	120	554	90	93	6.5	90			
105	112	7.8	40	417	120	566	90	94	6.6	90			
106	114	8.0	40	426	120	578	90	95	6.6	90			
107	116	8.1	40	435	120	590	90	96	6.7	90			
108	118	8.3	40	444	120	602	90	97	6.8	90			
109	120	8.4	40	453	120	614	90	98	6.9	90			

SITE INDEX	CMAI FOR PONDEROSA PINE 100 YR. TABLE (PIPO) 600-MEYER						CMAI FOR LODGEPOLE PINE 100 YR. TABLE (PICO) 520-ALEXANDER		
	CU.FT./ AC./YR.	CU.M./ HA./YR.	TOTAL AGE	SCRIBNER BD.FT./ AC./YR.	TOTAL AGE	INTER.1/8" BD.FT./ AC./YR.	TOTAL AGE	CU.FT./ AC./YR.	CU.M./ HA./YR.	TOTAL AGE
110	122	8.5	40	462	110	626	80	99	6.9	90
111	124	8.7	40	473	110	641	80	100	7.0	90
112	126	8.8	40	484	110	657	80	101	7.1	90
113	128	9.0	40	495	110	672	80	102	7.1	90
114	130	9.1	40	506	110	687	80	103	7.2	90
115	132	9.2	40	517	110	702	80	104	7.3	90
116	134	9.4	40	528	110	717	80	105	7.3	90
117	136	9.5	40	539	110	732	80	106	7.4	90
118	137	9.6	40	550	110	747	80	107	7.5	90
119	139	9.7	40	561	110	762	80	108	7.6	90
120	141	9.9	40	572	110	776	70	109	7.6	90
121	144	10.1	40	584	110	793	70			
122	146	10.2	40	597	110	810	70			
123	149	10.4	40	610	110	827	70			
124	151	10.7	40	622	110	844	70			
125	154	10.8	40	635	110	861	70			
126	156	10.9	40	647	110	879	70			
127	159	11.1	40	660	110	896	70			
128	161	11.3	40	672	110	913	70			
129	164	11.5	40	685	110	930	70			
130	166	11.6	40	700	100	947	70			
131	168	11.7	40	714	100	964	70			
132	170	11.9	40	729	100	981	70			
133	173	12.1	40	743	100	998	70			
134	175	12.2	40	758	100	1015	70			
135	177	12.4	40	772	100	1031	70			
136	179	12.5	40	786	100	1048	70			
137	181	12.7	40	801	100	1065	70			
138	183	12.8	40	815	100	1082	70			
139	185	12.9	40	830	100	1099	70			
140	188	13.1	40	844	100	1116	70			
141	190	13.3	40	859	100	1133	70			
142	192	13.4	40	873	100	1150	70			
143	194	13.6	40	888	100	1168	70			
144	197	13.8	40	903	100	1185	70			
145	199	13.9	40	918	100	1202	70			
146	201	14.1	40	932	100	1219	70			
147	203	14.2	40	947	100	1237	70			
148	205	14.3	40	962	100	1254	70			
149	208	14.5	40	976	100	1271	70			

CMAI FOR PONDEROSA PINE

100 YR. TABLE
(PIPO)
600-MEYER

SITE INDEX	CU.FT./ AC./YR.	CU.M./ HA./YR.	TOTAL AGE	SCRIBNER BD.FT./ AC./YR.	TOTAL AGE	INTER.1/8" BD.FT./ AC./YR.	TOTAL AGE
150	210	14.7	40	991	90	1289	70
151	212	14.8	40	1006	90	1307	70
152	215	15.0	40	1022	90	1325	70
153	217	15.2	40	1037	90	1343	70
154	220	15.4	40	1052	90	1361	70
155	222	15.5	40	1068	90	1379	70
156	224	15.7	40	1083	90	1397	70
157	227	15.9	40	1098	90	1416	70
158	229	16.0	40	1114	90	1434	70
159	232	16.2	40	1129	90	1452	70
160	234	16.4	40	1134	90	1472	60

PONDEROSA PINE SITE TABLE

SITE INDEX TABLE

HT IN FEET

BH AGE	40	50	60	70	80	90	100	110	120	130	140	150
30	2.95	10.17	17.39	24.61	31.82	39.04	46.26	53.15	60.37	67.59	74.80	82.02
40	12.14	20.01	27.56	35.43	42.98	50.85	58.40	66.27	73.82	81.69	89.24	97.11
50	20.34	28.54	36.75	44.95	53.15	61.02	69.23	77.43	85.63	93.83	102.03	110.24
60	27.56	36.09	44.62	53.15	61.68	70.21	78.74	87.27	95.80	104.33	112.86	121.39
70	33.46	42.32	51.18	60.04	69.23	78.08	86.94	95.80	104.66	113.52	122.70	131.56
80	38.39	47.57	56.76	65.94	75.46	84.65	93.83	103.35	112.53	121.72	130.91	140.42
90	41.99	51.84	61.35	70.87	80.71	90.22	99.74	109.58	119.09	128.94	138.45	147.97
100	44.95	55.12	64.96	75.13	84.97	95.14	104.99	115.16	125.00	134.84	145.01	154.86
110	47.24	57.41	67.91	78.08	88.58	99.08	109.25	119.75	130.25	140.42	150.92	161.09
120	48.56	59.38	69.88	80.71	91.54	102.36	113.19	123.69	134.51	145.34	156.17	166.99
130	49.21	60.37	71.52	82.68	93.83	104.99	116.14	127.30	138.45	149.61	160.76	171.92
140	50.85	62.34	73.82	85.30	96.78	108.27	119.75	131.23	142.72	154.20	165.68	176.84
150	52.17	63.98	75.79	87.27	99.08	110.89	122.70	134.51	146.33	158.14	169.62	181.43
160	53.48	65.29	77.43	89.57	101.71	113.52	125.66	137.79	149.93	161.74	173.88	186.02
170	54.46	66.93	79.07	91.54	104.00	116.14	128.61	141.08	153.21	165.68	177.82	190.29
180	55.77	68.24	81.04	93.50	106.30	118.77	131.56	144.03	156.82	169.29	182.09	194.55
190	56.76	69.55	82.68	95.47	108.27	121.39	134.19	146.98	160.10	172.90	185.69	198.82
200	57.74	71.19	84.32	97.44	110.56	123.69	137.14	150.26	163.39	176.51	189.63	202.76
210	59.05	72.51	85.96	99.41	112.86	126.31	139.76	153.21	166.67	180.12	193.57	207.02
220	60.04	73.82	87.60	101.38	114.83	128.61	142.39	156.17	169.95	183.40	197.18	210.96
230	61.02	75.13	89.24	103.02	117.13	130.91	145.01	159.12	172.90	187.01	201.11	214.89
240	62.34	76.44	90.55	104.99	119.09	133.53	147.64	162.07	176.18	190.29	204.72	218.83
250	63.32	77.76	92.19	106.63	121.39	135.83	150.26	164.70	179.13	193.90	208.33	222.77
260	64.30	79.07	93.83	108.60	123.36	138.12	152.89	167.65	182.41	197.18	211.94	226.71
270	65.29	80.38	95.47	110.24	125.33	140.42	155.51	170.60	185.37	200.46	215.55	230.64
280	66.27	81.69	96.78	112.20	127.30	142.72	158.14	173.23	188.65	203.74	219.16	234.25
290	67.26	83.00	98.42	113.84	129.59	145.01	160.43	176.18	191.60	207.02	222.44	238.19
300	68.24	84.32	100.07	115.81	131.56	147.31	163.06	178.81	194.55	210.30	226.05	241.80

Allowable difference in site index - 30

EXHIBIT 4

4-1

EXHIBIT 5

Table E1. - Forest Productivity - Continued

Lane County Area, Oregon

Map Symbol and Soil Name	Potential Productivity			Trees to Manage
	Common Trees	Site Index	Volume of Wood Fiber	
			Cu Ft/Acre	
41F:				
Dixonville	Douglas Fir	109	152	Douglas Fir
	Grand Fir	—	—	Ponderosa Pine
	Oregon White Oak	—	—	
	Pacific Madrone	—	—	
42E:				
Dixonville	Douglas Fir	109	152	Douglas Fir
	Grand Fir	—	—	Ponderosa Pine
	Oregon White Oak	—	—	
	Pacific Madrone	—	—	
Hazelair	—	—	—	—
Urban Land	—	—	—	—
43C:				
Dixonville	Douglas Fir	109	152	Douglas Fir
	Grand Fir	—	—	Ponderosa Pine
	Oregon White Oak	—	—	
	Pacific Madrone	—	—	
Philomath	—	—	—	—
Hazelair	—	—	—	—
43E:				
Dixonville	Douglas Fir	109	152	Douglas Fir
	Grand Fir	—	—	Ponderosa Pine
	Oregon White Oak	—	—	
	Pacific Madrone	—	—	
Philomath	—	—	—	—
Hazelair	—	—	—	—
44:				
Dune Land	—	—	—	—
45C:				
Dupee	—	—	—	—
46:				
Eilertsen	Bigleaf Maple	—	—	Douglas Fir
	Douglas Fir	133	199	Western Hemlock
	Grand Fir	—	—	
	Red Alder	—	—	
	Western Hemlock	—	—	
	Western Redcedar	—	—	

EXHIBIT 6

Lane County

22 June 1994

Deloy Dennis
P.O. Box 1066
Fall Creek OR 97438

Dear Mr. Dennis:

You have asked me to explain the problem we have detected regarding tax lots 100 and 106, map 18-01-33. Quite simply, neither tax lot qualifies as a legal lot as defined by Section 16.090 Lane Code: "A lawfully created lot or parcel".

Lane Code defines a parcel as a unit of land that has been partitioned in compliance with all applicable planning, zoning and land division regulations. The definition also recognoizes units of land that were created by deed or land sales contact prior to the enactment of these regulations.

The Board of County Commissioners adopted land division regulations on 26 March 1975 (Chapter 13 Lane Code). Lane County records indicate that tax lot 100 was divided in 1987 - twelve years later - to form tax lot 106. I find no evidence that Lane County approved a partition at the time, therefore neither tax lot qualifies as a legal lot today. If tax lots 100 and 106 do not meet the test as legal lots neither is eligible for a building permit.

Normally, the remedy for this sort of problem is to apply for the land partition that should have been obtained earlier. However, both tax lots are located in the F2 zone where the minimum acreage for the creation of new parcels is 80 acres. Since tax lot 106 cannot be separated from tax lot 100, Lane County regards them as a single legal lot.

You also asked whether it would be possible to inspect the property file for this property. All of our files are part of the public record, so of course you may. If you have further questions you may call me at 687-4103.

Sincerely,

Harvey Hoglund
Associate Planner

cc: A. Keith Martin
Michael Morrissey
TRS files (tax lots 100 and 106)

EXHIBIT 7

OFFICIAL RECORD OF DESCRIPTIONS OF REAL PROPERTIES

OFFICE OF COUNTY ASSESSOR LANE COUNTY, OREGON

558047

OLD NUMBER | ACCOUNT NUMBER

TAX LOT | MAP NO. 18 01 33 | PARCEL NO. 100 | SECTION ____ | TOWNSHIP ____ S. | RANGE ____ W.M.

INDENT EACH NEW COURSE TO THIS POINT	LEGAL DESCRIPTION pg 6	DEED RECORD: DATE OF ENTRY	DEED RECORD: DEED NUMBER	ACRES REMAINING
	EXCEPT: 99.53 ac to parcel 106 per CO R1464/ 8727550 for 1989			
	cont m/l			11.17
	ACREAGE CORRECTION for 1989			
	cont m/l			10.27