

# APPENDIX A - NRCS SOILS REPORT

Parks, Trails , and Open Space Plan

#### SOIL SURVEY OF UTAH COUNTY, UTAH - CENTRAL PART



USDA Natural Resources Conservation Service

### SOIL SURVEY OF UTAH COUNTY, UTAH - CENTRAL PART

Payson Eastside MAP INFORMATION MAP LEGEND Soil Map Units Source of Map: Natural Resources Conservation Service 0 Cities Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov **Detailed Counties** Detailed States Coordinate System: UTM Zone 12 Interstate Highways Roads Soil Survey Area: Utah County, Utah - Central Part Rails Spatial Version of Data: 1 Water Soil Map Compilation Scale: 1:20000 Hydrography Oceans AVAVAV Escarpment, bedrock VAVAVAVA Escarpment, non-bedrock Gulley IIIIIIIIII Levee Slope Blowout  $\odot$  $\boxtimes$ Borrow Pit Clay Spot X ٠ Depression, closed -Eroded Spot Gravel Pit  $\geq$ Gravelly Spot Gulley Λ Lava Flow Map comprised of aerial images photographed on these dates: Ø Landfill 9/10/1993 علد Marsh or Swamp 0 Miscellaneous Water Rock Outcrop  $\overline{\mathbf{v}}$ Saline Spot Sandy Spot Slide or Slip 3)  $\diamond$ Sinkhole ø Sodic Spot The orthophoto or other base map on which the soil lines were compiled and S Spoil Area digitized probably differs from the background imagery displayed on these maps. Stony Spot ô As a result, some minor shifting of map unit boundaries may be evident. a Very Stony Spot ۲ Perennial Water ¥ Wet Spot

Web Soil Survey 1.1 National Cooperative Soil Survey

## Map Unit Legend Summary

Utah County, Utah - Central Part

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CsB	CLEVERLY GRAVELLY FINE SANDY LOAM, 1 TO 3 PERCENT SLOPES	6.3	0.5
CsC	CLEVERLY GRAVELLY FINE SANDY LOAM, 3 TO 6 PERCENT SLOPES	42.6	3.5
CsD	CLEVERLY GRAVELLY FINE SANDY LOAM, 6 TO 15 PERCENT SLOPES	93.1	7.7
DEF	DRY CREEK EXTREMELY STONY LOAM, STONY SUBSOIL VARIANT, 6 TO 30 PERCENT SLOPES	8.5	0.7
KmC	KIDMAN VERY FINE SANDY LOAM, 3 TO 6 PERCENT SLOPES	29.5	2.4
LaC	LAKEWIN GRAVELLY FINE SANDY LOAM, 1 TO 6 PERCENT SLOPES	9.3	0.8
LaD	LAKEWIN GRAVELLY FINE SANDY LOAM, 6 TO 15 PERCENT SLOPES	16.7	1.4
LcE	LAKEWIN COBBLY FINE SANDY LOAM, 15 TO 30 PERCENT SLOPES	14.5	1.2
LeD	LAYTON LOAMY FINE SAND, 6 TO 15 PERCENT SLOPES	10.3	0.9
PaB	PARLEYS LOAM, 0 TO 3 PERCENT SLOPES	71.6	5.9
PaC	PARLEYS LOAM, 3 TO 6 PERCENT SLOPES	30.3	2.5
РК	PITS AND DUMPS	7.4	0.6
SgD	STERLING GRAVELLY FINE SANDY LOAM, 6 TO 10 PERCENT SLOPES	23.1	1.9
TcC2	TAYLORSVILLE SILTY CLAY LOAM, EXTENDED SEASON, 3 TO 6 PERCENT SLOPES,ERODED	67.3	5.6
TmB	TIMPANOGOS LOAM, 0 TO 3 PERCENT SLOPES	256.7	21.2
TmC	TIMPANOGOS LOAM, 3 TO 6 PERCENT SLOPES	89.8	7.4
ToB	TIMPANOGOS LOAM, WATER TABLE, 0 TO 3 PERCENT SLOPES	163.1	13.5
VnA	VINEYARD FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	130.9	10.8

Utah County,	Utah -	Central	Part
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Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
W	WATER	11.3	0.9
WeB	WELBY SILT LOAM, EXTENDED SEASON, 1 TO 3 PERCENT SLOPES	2.3	0.2
WeC	WELBY SILT LOAM, EXTENDED SEASON, 3 TO 6 PERCENT SLOPES	0.1	0.0
WeD2	WELBY SILT LOAM, EXTENDED SEASON, 6 TO 10 PERCENT SLOPES	91.0	7.5
WhD	WELBY-HILLFIELD SILT LOAMS, 6 TO 10 PERCENT SLOPES	32.6	2.7





## Dwellings and Small Commercial Buildings

Utah County, Utah - Central Part

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CsB:							
CLEVERLY	100	Not limited		Not limited		Not limited	
CsC:							
CLEVERLY	100	Not limited		Not limited		Somewhat limited	0.40
						Slope	0.13
CsD:							
CLEVERLY	95	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1
DRY CREEK VARIANT	100	Verv limited		Verv limited		Very limited	
		Slope	1	Slope	1	Slope	1
		Large stones content	1	Large stones content	1	Large stones content	1
KmC:							
KIDMAN	95	Not limited		Not limited		Somewhat limited	
						Slope	0.13
LaC:							
LAKEWIN	90	Not limited		Not limited		Not limited	
L-D							
	100	Somewhat limited		Somewhat limited		Very limited	
	100	Slope	0.37	Slope	0.37	Slope	1
		F -					
LcE:							
LAKEWIN	95	Very limited		Very limited		Very limited	
		Slope	1	Slope	1	Slope	1
LeD:							
LAYTON	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1
PaB.							
PARLEYS	95	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.5	Shrink-swell	0.5	Shrink-swell	0.5
PaC:	07	O a second a table in the		Operation to the test of the test		Os an an that the first	
PARLEYS	95	Somewnat limited	0.5	Somewnat limited	0.5	Somewhat limited	0.5
		Ommix SWCII	0.0		0.5	Slope	0.13



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Tabular Data Version: 3 Tabular Data Version Date: 12/07/2005

This report shows only the major soils in each map unit. Others may exist.

## Dwellings and Small Commercial Buildings

Utah County, Utah - Central Part

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PK:					·		<u> </u>
PITS	100	Not rated		Not rated		Not rated	
SgD:							
STERLING	100	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1
TcC2:							
TAYLORSVILLE	100	Somewhat limited Shrink-swell	0.5	Somewhat limited Shrink-swell	0.5	Somewhat limited Shrink-swell Slope	0.5 0.13
TmB:							
TIMPANOGOS	90	Not limited		Not limited		Not limited	
TmC:							
TIMPANOGOS	90	Not limited		Not limited		Somewhat limited Slope	0.13
ТоВ:							
TIMPANOGOS	95	Not limited		Somewhat limited Depth to saturated zone	0.61	Not limited	
VnA:							
VINEYARD	90	Not limited		Somewhat limited Depth to saturated zone	0.73	Not limited	
W:							
WATER	100	Not rated		Not rated		Not rated	
WeB:							
WELBY, C3	95	Not limited		Not limited		Not limited	
WeD2:							
WELBY	90	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1
WhD:							
WELBY	60	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1
HILLFIELD	40	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1



### Dwellings and Small Commercial Buildings

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. This table shows the degree and kind of soil limitations that affect dwellings and small commercial buildings.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected, "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

"Dwellings" are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

"Small commercial buildings" are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.



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