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ESQUATZEL

SOIL
 GUIDE SHEET

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These are well-drained, deep, medium textured soils that were formed under bunchgrass vegetation in alluvium derived from loess and lake sediments. They occupy nearly level narrow, elongated bottomlands and occur sporadically throughout the area. These soils are associated with the Ritzville, Shano, and Warden soils and are found in Adams, Benton, Columbia, Franklin, Grant, Kittitas, Klickitat, Walla Walla and Yakima Counties.

Representative Description:

ESQUATZEL silt loam

		<u>Water^{1/} Holding Capacity In/in.</u>	<u>Perme- ability In/hr.</u>	<u>Shrink- Swell Potential</u>	<u>Engineering Classification Unified AASHO</u>	
1'	<u>Surface soil:</u> 0-4", dark brown silt loam, granular, soft, friable, pH 7.0	.22	0.63-2.0	low	ML	A-4
2'	<u>Subsoil:</u> 4-11", dark brown silt loam, blocky, slightly hard, friable, pH 7.1	.23	0.63-2.0	low	ML	A-4
3'	<u>Upper Substratum:</u> 11-35", dark brown silt loam, massive, soft, friable, pH 7.4	.25	0.63-2.0	low	ML	A-4
4'	<u>Lower Substratum:</u> 35-60", dark grayish-brown silt loam, massive, soft, friable, strongly calcareous, pH 8.4	.30	0.63-2.0	low	ML	A-4
5'						

Caution: All Esquatzel soils are not exactly like the one shown above. Differences in characteristics will affect suitability and limitations for various uses. See Capability Classification Table.

ABOUT THE SOIL GUIDE SHEETS: Soil Guide Sheets are written primarily to indicate suitability for irrigation farming. In addition, some engineering properties are shown. These will serve as a preliminary guide, but on-site investigation will be needed before making final decisions on non-agricultural uses. Certain terms and soil ratings may not be self explanatory. Refer to "Guide to the Use of Soil Guide Sheets."

Capability Classification^{2/}

ESQUATZEL soils	Irrigation Group	(percent slope)	
		0-2	2-5
1. Fine sandy loam.....	E	I	IIe
2. Sandy loam.....	E	I	IIe
3. Silt loam and eroded.....	F	I	IIe
4. Very fine sandy loam, and eroded.....	F	I	IIe
5. Loam.....	F	I	IIe
6. Cobbly silt loam.....	F7	IVs	IVs

Note: "E" & "F" indicate soils 40"+ deep with moderately coarse and medium surface texture and no inhibiting layers in the profile. "7" denotes a problem of very coarse fragments in the surface. Determine the depth of your soil. Depth affects use and management. Water holding capacity is less on shallower soil.

Suitability as a source of:

- Topsoil - Good
- Sand - Not suitable
- Gravel - Not suitable
- Road Fill - Fair

Soil features affecting engineering uses:

- Highway location - Subject to periodic flooding, moderate susceptibility to frost action, moderate permeability, low shrink-swell potential.
- Dikes, Levees, Embankments - Susceptible to piping and cracking, low stability, semi-pervious when compacted, low shear strength.
- Reservoir - Moderate to slow permeability.
- Septic disposal systems - Moderate permeability, high water holding capacity, well drained.

Suitability for irrigation farming:

- Water holding capacity - High
- Infiltration - Moderate
- Permeability - Moderate
- Drainage - Well drained, but subject to seepage from irrigated surrounding soils.
- Salinity and alkali hazard - Low to moderate
- Erosion hazard - Wind and water erosion, slight.

General Evaluation: Esquatzel soils produce well under irrigation with normal good management practices. Suitable for both surface and sprinkler irrigation. May be subject to frost hazard because of low positions. Esquatzel soils are well adapted for row crops, grain, and most crops under general irrigation farming.

^{1/}Adapted from "Water Holding Capacities of Columbia Basin Soils", Mel A. Hagood, D. E. Miller, and Eugene Larson, Circ. ____ (In Press), Washington State University.

^{2/}From "Guide for Placing Soils in Irrigation Groups MLRA 6-7-8-9-43-44, Eastern Washington", by Ray W. Chapin, Robert F. Mitchel, and Verle G. Kaiser, Soil Conservation Service, Washington State.

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