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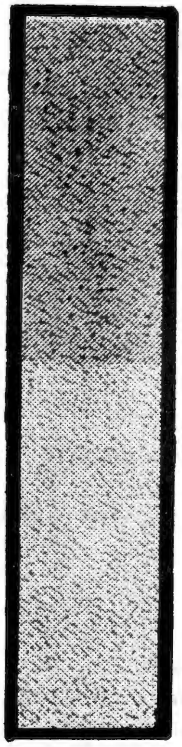
ASOTIN SOIL GUIDE SHEET

The Asotin soils consist of well-drained, medium textured soils underlain by basalt bedrock at a depth of 20 to 40 inches. The soils formed in wind-lain silts on nearly level to very steep slopes between the Tucannon Valley and the Snake River. They are found at elevations of 1200 to 2000 feet and have a frost-free season of about 150-160 days. This soil series is found in Asotin, Columbia and Garfield Counties.

Representative Description: ASOTIN silt loam	Water Holding Capacity In/in	Permeability In/hr	Shrink-Swell Potential	Engineering Classification Unified	AASHO
Surface layer: 0-13", very dark grayish brown silt loam; weak, granular, platy, slightly hard, very friable; pH 7.3	.22	0.63-2.0	low to moderate	ML-CL	A-4
Subsoil: 13-20", dark grayish brown silt loam; weak prismatic structure, hard, friable, 1 to 5% basalt fragments; pH 7.6	.23	0.63-2.0	low to moderate	ML-CL	A-4
Substratum: 28-32", light brownish gray silt loam, massive, hard, firm, 10% basalt fragments; pH 8.6	.23	0.63-2.0	low to moderate	ML-CL	A-4
Basalt and loose rock with lime in cracks, 32"+					



Caution: All Asotin soils are not exactly like the one shown above. Differences in characteristics will affect suitability and limitations for 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".

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Capability Classification

Asotin soils	(percent slope) 0-2	2-5	5-15	15-25	25-40
1. Silt loam [2]	IIs	IIe	IIIe	IVe	VIe
2. Silt loam, deep [1]	IIc	IIe	III	IVe	VIe

Determine the depth of your soil. Depth affects use and management. Total water holding capacity is less on shallower soil.

Suitability as a source of:

Topsoil - Good
Sand - Unsuitable
Gravel - Unsuitable
Road Fill - Fair

Soil features affecting engineering uses:

Highway location - Slope ranges from 0 to 65 percent; bedrock at 20-40", high susceptibility to frost action
Dikes, Levees, Embankments - Fair stability; fair compaction characteristics, moderately pervious when compacted; medium compressibility; fair resistence to piping; low shear strength
Reservoir - Slope ranges from 0 to 65 percent; moderate permeability
Septic disposal systems - Slope and depth to bedrock

Suitability for irrigation farming:

Water holding capacity - Low to moderate; depends on depth
Infiltration - Slow
Permeability - Moderate
Drainage - Well drained
Salinity and alkali hazard - Low, basalt bedrock at 20-40", may prevent good drainage in nearly level areas
Erosion hazard - Moderate wind erosion; water erosion, moderate to high, increases with slope.

General Evaluation: Asotin soils will be reasonably productive under irrigation, but certain hazards are apparent. Limitations depend on slope and depth of soil. Suitable for sprinkler irrigation only. Have your soil tested to determine fertilizer needs. Suitable for forage crops.

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[1] Deep and very deep soils (40"+) with no inhibiting layers in the profile.

[2] Moderately deep or moderately shallow soils (20-40") over hardpan, bedrock, claypan, etc.

This Soil Guide Sheet was prepared by A. I. Dow, Extension Soils Specialist, Washington State University, in cooperation with Eveard T. Harrison, Soil Scientist, Robert F. Mitchel, State Soil Scientist, Soil Conservation Service, USDA; and Mel A. Hagood, Extension Irrigation and Water Use Specialist, Washington State University