These are imperfectly drained soils on nearly level valley bottoms. They have formed in medium-textured alluvium derived mainly from loess and under the influence of a high water table. This soil is found in Walla Walla County.

**Representative Description:**

**CATHARINE silt loam**

**Surface layer:** 0-13" nearly black silt loam, granular, blocky below 8", friable; pH 6.6-7.3

- Water Holding Capacity: .22
- Permeability: 0.63-2.0
- Shrink-Swell Potential: low
- Engineering Classification: ML A-4

**Subsoil:** 13-21" dark grayish brown silt loam, massive, firm; pH 7.7-8.4

- Water Holding Capacity: .23
- Permeability: 0.63-2.0
- Shrink-Swell Potential: low
- Engineering Classification: ML A-4

**Upper Substratum:** 21-32" black silt loam, blocky to prismatic, firm; pH 7.9-8.4

- Water Holding Capacity: .23
- Permeability: 0.63-2.0
- Shrink-Swell Potential: low
- Engineering Classification: ML A-4

**Lower Substratum:** 32-44" dark grayish-brown silt loam, massive, friable; pH 8.5-9.0

- Water Holding Capacity: .23
- Permeability: 0.63-2.0
- Shrink-Swell Potential: low
- Engineering Classification: ML A-4

**Caution:** All Catherine 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".

**Cooperative Extension Service • College of Agriculture • Washington State University • Pullman**

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Cooperative Extension Service, John P. Miller, Director
Capability Classification

<table>
<thead>
<tr>
<th>Catherine soils</th>
<th>Capability Classification</th>
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<tbody>
<tr>
<td></td>
<td>(percent slope)</td>
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<td>0-2</td>
<td>2-5</td>
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1. Silt loam

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: Fair to good
- Sand: Not suitable
- Gravel: Not suitable
- Road Fill: Poor

Soil features affecting engineering uses:
- Highway location: Compaction is poor to good, close control necessary; high susceptibility to frost action
- Dikes, Levees, Embankments: Compaction is poor to good
- Reservoir: Permeability slow to moderately slow
- Septic disposal systems: Permeability slow to moderately slow, imperfectly drained

Suitability for irrigation farming:
- Water holding capacity: High
- Infiltration: Slow
- Permeability: Slow to moderately slow
- Drainage: Somewhat poorly drained
- Salinity and alkali hazard: Moderately drained, slow to moderately slow permeability, strongly alkaline in substratum, very slow runoff
- Erosion hazard: Slight

General Evaluation: Catherine soils are productive under irrigation. Additional drainage may be needed in places to lower the water table. Suitable for rill or sprinkler irrigation. Have your soil tested to determine fertilizer needs. Suitable for most field crops.

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

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.