

LOCATION CLOQUATO

WA+OR

Established Series
Rev. ARH/DRJ/RWL
07/2006

CLOQUATO SERIES

The Cloquato series consists of very deep, well drained soils formed in mixed alluvium. Cloquato soils are on flood plains at elevations of 30 to 800 feet. Slopes are 0 to 5 percent. The mean annual temperature is about 52 degrees F. and the average annual precipitation is about 50 inches.

TAXONOMIC CLASS: Coarse-silty, mixed, superactive, mesic Cumulic Ultic Haploxerolls

TYPICAL PEDON: Cloquato silt loam - cultivated. (Colors are for moist soil unless otherwise noted.)

Ap--0 to 7 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium and coarse granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many fine roots; moderately acid; abrupt smooth boundary. (4 to 9 inches thick)

A1--7 to 12 inches; very dark grayish brown (10YR 3/2) silt loam, brown (10YR 4/3) dry; moderate medium and coarse granular structure ; slightly hard, very friable, many fine roots; many fine and medium pores; slightly acid; clear smooth boundary. (4 to 12 inches thick)

A2--12 to 40 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; slightly hard, very friable; common fine roots; many fine and medium pores; neutral; abrupt smooth boundary. (0 to 32 inches thick)

2C1-- 40 to 52 inches; dark grayish brown (10YR 4/2) stratified sandy loam to silt loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; soft, very friable; few fine roots; many fine and medium tubular pores; neutral; abrupt smooth boundary. (10 to 20 inches thick)

3C2--52 to 72 inches; light brownish gray (2.5Y 6/2) stratified sand to fine sandy loam, dark grayish brown (2.5Y 4/2) dry; single grain; loose; few fine roots; neutral.

TYPE LOCATION: Clark County, Washington; 1,500 feet west of northeast corner section. 31, T. 5 N., R. 1 E.

RANGE IN CHARACTERISTICS: The mean annual soil temperature ranges from 47 to 54 F. These soils are usually moist but are dry in all parts between depths of 4 and 12 inches for 45 to 60 consecutive days. The mollic epipedon ranges from 20 to more than 40 inches thick. The

particle-size control section is dominantly silt loam and contains 5 to 18 percent clay with less than 15 percent fine sand or coarser. The soil profile has a hue of 10YR or 2.5Y.

The A horizon has value of 2 or 3 moist and 4 or 5 dry, and chroma of 2 or 3 moist or dry. It has weak or moderate granular or subangular blocky structure. This horizon is moderately acid or slightly acid in the upper part and grades to slightly acid or neutral in the lower part.

A Bw horizon, when present, has value of 3 or 4 moist, 4 to 6 clay, and chroma of 2 to 4 moist and dry. It is slightly acid to neutral. It has weak prismatic or weak to moderate subangular blocky structure.

The 2C and 3C horizons have value of 3 through 6 moist or dry, and chroma of 2 through 4 moist or dry. Texture is silt loam, loam, very fine sandy loam, sandy loam, loamy sand or sand with 2 to 15 percent clay and is commonly stratified. The sandy loam, loamy sand or sand textures do not occur above a depths of 40 inches. It has 0 to 10 percent gravel. It has weak subangular blocky structure or is massive or single grain. Reaction is neutral or slightly acid.

COMPETING SERIES: There are no other series in this family, however, similar soils include [Chapman](#), [Chehalis](#) and [McBee](#) series. All of these soils have more than 18 percent clay in the particle-size control section. In addition, McBee soils are moderately well drained. Chapman soils have more than 15 percent fine sand and coarser.

GEOGRAPHIC SETTING: These soils are on flood plains at elevations of 30 to 800 feet. Slopes are 0 to 5 percent. These soils formed in mixed alluvium. Cloquato soils occur in a climate characterized by relatively cool dry summers and cool wet winters. Average annual precipitation is 38 to 70 inches. Average January temperature is 30 to 40 degrees F., average July temperature is 65 to 67 degrees F., and mean annual temperature is 50 to 54 degrees F. The growing season (28F) ranges from 150 to 240 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the [Camas](#), [Chapman](#), [Chehalis](#), [McBee](#), [Newberg](#), [Pilchuck](#), and [Wapato](#) soils. Camas soils are sandy-skeletal. Pilchuck soils are sandy. Camas and Pilchuck soils are on bar positions. Newberg soils are coarse-loamy and have a mollic epipedon less than 20 inches thick. Wapato soils are poorly drained and are in depressions on flood plains. Chapman soils are on higher flood plains. McBee soils are in depressions on flood plains.

DRAINAGE AND PERMEABILITY: Well-drained; slow runoff; moderate permeability. These soils are subject to occasional flooding for brief periods from November to March unless protected.

USE AND VEGETATION: This soil is used for cropland, pasture and woodland. Hay, winter wheat, oats, corn for silage, potatoes, strawberries and raspberries are common crops. Native vegetation is Douglas-fir, red alder, western redcedar, and bigleaf maple with an understory of western swordfern, vine maple, western brackenfern, salal, oregongrape, trailing blackberry, salmonberry and red huckleberry.

DISTRIBUTION AND EXTENT: Western Washington and northwestern Oregon; MLRA 2.
The series is of moderate extent.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Portland, Oregon

SERIES ESTABLISHED: Grays Harbor County, Washington, 1970.

REMARKS: Diagnostic horizons and features recognized in this pedon are:

Mollic epipedon - the zone from 0 to 40 inches with an assumed irregular decrease in organic carbon with depth.

Ultic feature - base saturation (sum) of 75 percent or less in at least one horizon between 10 and 50 inches.

Particle-size control section - the zone from 10 to 40 inches.

ADDITIONAL DATA; National Soil Survey Lab soil survey sample numbers: S62OR-071-015 and S62OR-071-016.

National Cooperative Soil Survey
U.S.A.