

# Major Land Resource Area 008X

## Columbia Plateau

Accessed: 05/11/2025

---

### Ecological site keys

#### MLRA 8

---

- I. Site resides in the easternmost reaches of this MLRA, along the Snake and Clearwater Rivers.
  - A. The soil has greater than 35 percent rock fragments.
    - 1 Soil is less than 20 inches deep.
      - i. Soil is less than 10 inches deep. ... R008XY001ID – Very Shallow Stony 12-16 PZ
      - ii. Soil not as above. ... R008XY006ID – Shallow South Slope 12-16 PZ
    - 2 Soil is greater than 20 inches deep. ... R008XY005ID – South Slope Stony 12-16 PZ
  - B. The soil has less than 35 percent rock fragments.
    - 1 Slope on site is less than 30 percent. ... R008XY002ID – Loamy 12-16 PZ
    - 2 Slope on site if greater than 30 percent.
      - i. Aspect is generally a North-Northeast-East direction. ... R008XY003ID – North Slope Loamy 12-16 PZ
      - ii. Aspect is generally a South-Southwest-West direction. ... R008XY004ID – South Slope Loamy 12-16 PZ
- II. Site resides south of the Columbia River and eastward, south of the Walla Walla River.
  - A. Site exists on southern aspect side slopes of dissected uplands.
    - 1 Soils are less than 10 inches to bedrock. ... R008XY150OR – Very Shallow Loam 10-14 PZ
    - 2 Soils are 10 to 20 inches deep. ... R008XY210OR – Shallow South 10-14 PZ
    - 3 Soils are greater than 20 inches deep to bedrock (moderately deep to very deep). ... R008XY200OR – South 10-14 PZ
  - B. Site exists on northern aspect side slopes of dissected uplands.
    - 1 Soils are greater than 40 inches deep to bedrock (deep to very deep). ... R008XY220OR – North 10-14 PZ
    - 2 Soils are 10-20 inches deep to bedrock (shallow). ... R008XY230OR – Droughty North 10-14 PZ
    - 3 Soils are 20-40 inches deep to bedrock (moderately deep). Sites include: R008XY230OR - Droughty North 10-14 pz, R008XY220OR - North 10-14 pz. ... R008XY220OR – North 10-14 PZ
  - C. Site aspect is not as above.
    - 1 Soils are less than 10 inches deep to bedrock (very shallow). R008XY150OR - Very Shallow Loam 10-14 pz. ... R008XY150OR – Very Shallow Loam 10-14 PZ
    - 2 [Soils are 10 to 20 inches deep (shallow). R008XY140OR - Shallow Loam 10-14 pz. ... R008XY140OR – Shallow Loam 10-14 PZ
    - 3 Soils are greater than 20 inches deep to bedrock (moderately deep to very deep).
      - i. Soils that have an aridic soil moisture regime.
        - a. Soil surface texture is course (fine sandy loam). R008XY130OR - Sandy Loam 10-12 pz ... R008XY130OR – Sandy Loam 10-12 PZ
        - b. Soil not as above. R008XY110OR - Loamy 10-12 pz ... R008XY110OR – Loamy 10-12 PZ
      - ii. Soils that have a xeric moisture regime. R008XY120OR - Loamy 12-14 pz ... R008XY120OR – Loamy 12-14 PZ

- III. Site resides north of the Columbia River and eastward, north of the Walla Walla River or along the Snake River.
  - A. Foothills landscape position, below tree line of MLRA 6.
    - 1 Landscape has Mound-Intermound topography. ESG R008XY002WA - Mound - Intermound complex ... R008XY002WA – Mound-Intermound Complex
    - 2 Landscape is not Mount-Intermound topography.
      - i. Soils less than 10 inches deep. ESG R008XY001WA - Very Shallow ... R008XY001WA – Very shallow
      - ii. Soils greater than 10 inches deep.
        - a. Site has slope with southern aspect. ESG R008XY226WA - Stony foothills, south slope, bitterbrush ... R008XY226WA – Stony Foothills South Aspect bitterbrush
        - b. Site has slope with other aspects than southern. ESG R008XY220WA - Stony foothills, bitterbrush ... R008XY220WA – Stony Foothills bitterbrush
  - B. Upland landscape position.
    - 1 Site is in the southeast Washington portion of MLRA 8 ('sagebrush' free area).
      - i. Landscape has Mound-Intermound topography. ESG R008XY002WA - Mound - Intermound complex ... R008XY002WA – Mound-Intermound Complex
      - ii. Landscape doesn't have Mount-Intermound topography.
        - a. Soils less than 10 inches deep to restrictive horizon. ESG R008XY001WA - Very shallow ... R008XY001WA – Very shallow
        - b. Soils greater than 10 inches deep.
          - 1) Soil has greater than 35% rock fragments.
            - a) Soil is less than 20 inches deep to restrictive horizon. ESG R008XY112WA - Shallow stony, sagebrush. ... R008XY112WA – Shallow Stony sagebrush
            - b) Site has slope with a northern aspect. ESG R008XY120WA - Stony, sagebrush ... R008XY120WA – Stony sagebrush
            - c) Site has slope without northern aspect. ESG R008XY226WA - Stony, sagebrush ... R008XY120WA – Stony sagebrush
          - 2) Soil has more loamy texture and less than 35% rock fragments.
            - a) Site has slope with northern aspect. ESG R008XY650WA - Loamy, north aspect, grassland ... R008XY650WA – Loamy North Aspect grassland
            - b) Site has slopes with aspect other than northern and doesn't have accumulated salts in the surface horizons. ESG R008XY630WA - Loamy, grassland ... R008XY630WA – Loamy grassland
      - 2 Site is in the southwest portion of MLRA 8 in Goldendale prairie area of Klickitat County.
        - i. Landscape has Mound-Intermound topography. ESG R008XY002WA - Mound - Intermound complex ... R008XY002WA – Mound-Intermound Complex
        - ii. Landscape doesn't have Mound - Intermound topography.
          - a. Soils less than 10 inches deep. ESG R008XY001WA - Very shallow ... R008XY001WA – Very shallow
          - b. Soils greater than 10 inches deep.
            - 1) Location is on the south side of the Columbia hills.
              - a) Soil has greater than 35% rock fragments and is shallow to restrictive horizon. ESG R008XY516WA - Shallow stony, south aspect, Columbia Hills ... R008XY516WA – Shallow Stony South Aspect Columbia Hills
              - b) Soil has less then 35% rock fragments and isn't shallow to restrictive horizon.
                - (1) Soil has sand or loamy sand texture. ESG R008XY546WA - Sand, south aspect, Columbia Hills ... R008XY546WA – Sand South Aspect Columbia Hills
                - (2) Soil has finer texture than loamy sand. ESG R008XY536WA - Loamy, south aspect,

Columbia Hills ... R008XY536WA – Loamy South Aspect Columbia Hills

2) Site isn't on the south side of the Columbia Hills.

a) Slope has a north aspect.. Sites include: ESG R008XY455WA - Loamy, north aspect, 14-20" ppt., Goldendale Prairie ... R008XY455WA – Loamy North Aspect 14-20 PZ Goldendale Prairie

b) Site has slope with aspects other than northern aspects. ESG R008XY435WA - Loamy, 14-20" ppt., Goldendale Prairie ... R008XY435WA – Loamy 14-20 PZ Goldendale Prairie

3 Site is not located in Goldendale prairie area or the southeast Washington portion of MLRA 8.

i. Site has Mound-Intermound topography. ESG R008XY002WA - Mound - Intermound complex ... R008XY002WA – Mound-Intermound Complex

ii. Site doesn't have Mound-Intermound topography.

a. Soils less than 10 inches deep. ESG R008XY001WA - Very shallow ... R008XY001WA – Very shallow

b. Soils greater than 10 inches deep.

1) Soil has greater than 35% rock fragments in surface horizon

a) Soil is less than 20 inches deep to restrictive horizon. Site is ESG R008XY112WA - Shallow stony, sagebrush. ... R008XY112WA – Shallow Stony sagebrush

b) Site has slope with northern aspect. Sites include: ESG R008XY120WA - Stony, sagebrush ... R008XY120WA – Stony sagebrush

c) Site has slope with aspect other than northern aspect. Sites include: ESG R008XY120WA - Stony, sagebrush ... R008XY120WA – Stony sagebrush

2) Soil has texture with less than 30% clay and sandy loam or finer, and rock fragments less than 35%.

a) Site has slope with northern aspect. Site include: ESG R008XY153WA - Cool loamy, threetip sagebrush ... R008XY153WA – Cool Loamy threetip sagebrush

b) Site has aspect other than northern and no accumulated salts. ESG R008XY130WA - Loamy, sagebrush ... R008XY130WA – Loamy sagebrush

C. Bottomland or depression landscape position.

1 Soil pH is alkaline or greater.

i. Soil that is very strongly saline-sodic (SAR value is greater than 13). ESG R008XY978WA - Sodic Flat ... R008XY978WA – Sodic Flat

ii. Soil has SAR value less than 13. ESG R008XY970WA - Alkali terrace ... R008XY970WA – Alkali Terrace

2 Soil pH is lower than alkaline.

i. Soil displays redoximorphic features near soil surface

a. Soil is hydric and site is on lowest position of the landscape. In depressions or basins. ESG R008XY988WA - Wetland Complex ... R008XY988WA – Wetland Complex

b. Soil isn't hydric but has water tolerant plants. ESG R008XY980WA - Wet meadow ... R008XY980WA – Wet Meadow

ii. Soil doesn't display redoxmorphic features near soil surface.

a. Site is next to streams and bodies of water with tree vegetation. ESG R008XY720WA - Riparian Complex ... R008XY720WA – Riparian Complex

b. Site not directly next to streams and bodies of water. ESG R008XY930WA - Loamy bottom ... R008XY930WA – Loamy Bottom