

## Weld County, Colorado, Northern Part

### 10—Avar-Manzanola complex, 0 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 35yr  
*Elevation:* 4,400 to 5,600 feet  
*Mean annual precipitation:* 11 to 15 inches  
*Mean annual air temperature:* 46 to 52 degrees F  
*Frost-free period:* 130 to 180 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Avar and similar soils:* 45 percent  
*Manzanola and similar soils:* 40 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Avar

##### Setting

*Landform:* Swales  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Calcareous loamy alluvium

##### Typical profile

*H1 - 0 to 3 inches:* fine sandy loam  
*H2 - 3 to 8 inches:* clay loam  
*H3 - 8 to 60 inches:* sandy clay loam

##### Properties and qualities

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately low to moderately high (0.06 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 15 percent  
*Salinity, maximum in profile:* Slightly saline to strongly saline (4.0 to 32.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 250.0  
*Available water storage in profile:* Moderate (about 6.6 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* C

*Ecological site:* Salt Flat (R067XY033CO)  
*Hydric soil rating:* No

### **Description of Manzanola**

#### **Setting**

*Landform:* Swales  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Calcareous clayey alluvium

#### **Typical profile**

*H1 - 0 to 3 inches:* clay loam  
*H2 - 3 to 18 inches:* clay  
*H3 - 18 to 48 inches:* clay  
*H4 - 48 to 60 inches:* clay loam

#### **Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately high (0.00 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 5 percent  
*Gypsum, maximum in profile:* 3 percent  
*Salinity, maximum in profile:* Nonsaline to moderately saline (0.0 to 8.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 15.0  
*Available water storage in profile:* High (about 9.6 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* C  
*Ecological site:* Clayey Plains (R067BY042CO)  
*Hydric soil rating:* No

### **Minor Components**

#### **Heldt**

*Percent of map unit:* 8 percent  
*Hydric soil rating:* No

#### **Mollic halaquepts**

*Percent of map unit:* 7 percent  
*Landform:* Swales

*Hydric soil rating:* Yes

## **Data Source Information**

Soil Survey Area: Weld County, Colorado, Northern Part  
Survey Area Data: Version 11, Sep 22, 2016