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Available Water Storage

Available water storage or available water capacity (AWC) refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in centimeters of water per centimeter of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure, with corrections for salinity and rock fragments. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. It is not an estimate of the quantity of water actually available to plants at any given time.

The map shows an available water storage (AWS) estimate in a standard layer or standard zone, expressed in mm. The volume of plant available water that the soil can store in a designated layer based on all map unit components (weighted average). NULL values are presented where data are incomplete or not available. The standard layer or zone depths typically provided are: 0-5 cm, 5-20 cm, 20-50 cm, 50-100 cm, 100-150 cm, and 150-reported depth of observation in the soil profile.

Available water storage (AWS) is computed as AWC times the thickness of the soil. For example, if AWC is 0.15 cm/cm, the available water storage for 25 centimeters of soil would be 0.15 x 25, or 3.75 centimeters of water.

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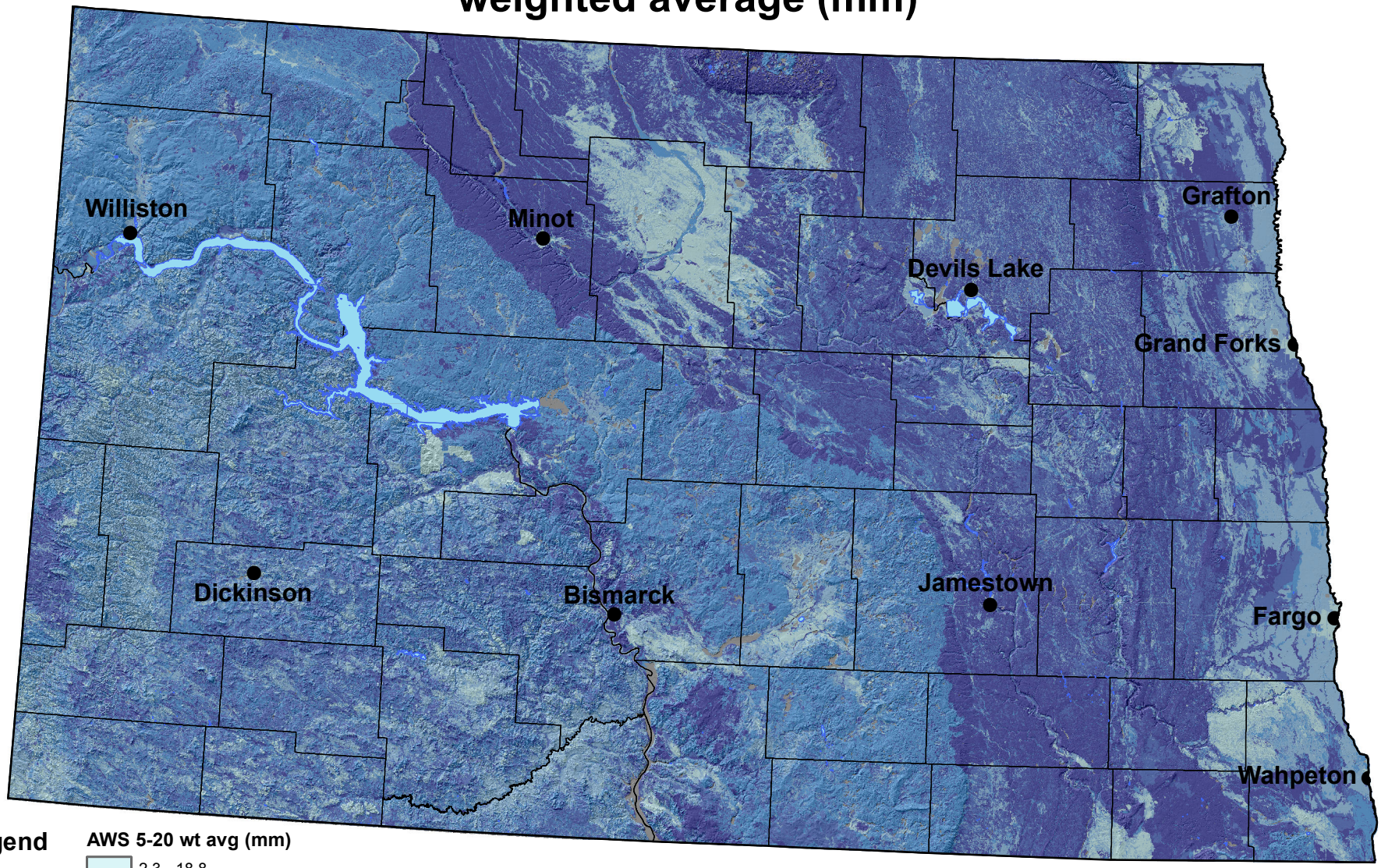
Available Water Storage 5-20 cm weighted average (mm)



Legend

- City
- County
- State
- Water

AWS 5-20 wt avg (mm)

- 2.3 - 18.8
- 18.8 - 25.1
- 25.1 - 28.5
- 28.5 - 30.6
- 30.6 - 71.2

0 20 40 80 Miles

1:2,500,000

N W E S

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Soil Survey Staff. The Gridded Soil Survey Geographic (SSURGO) Database for North Dakota. United States Department of Agriculture, Natural Resources Conservation Service. Available online at http://datagateway.nrcs.usda.gov/. January 19, 2016 (FY2016 official release).