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Sodium Adsorption Ratio (SAR)

Sodium adsorption ratio is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced saturated hydraulic conductivity (Ksat) and aeration, and a general degradation of soil structure.

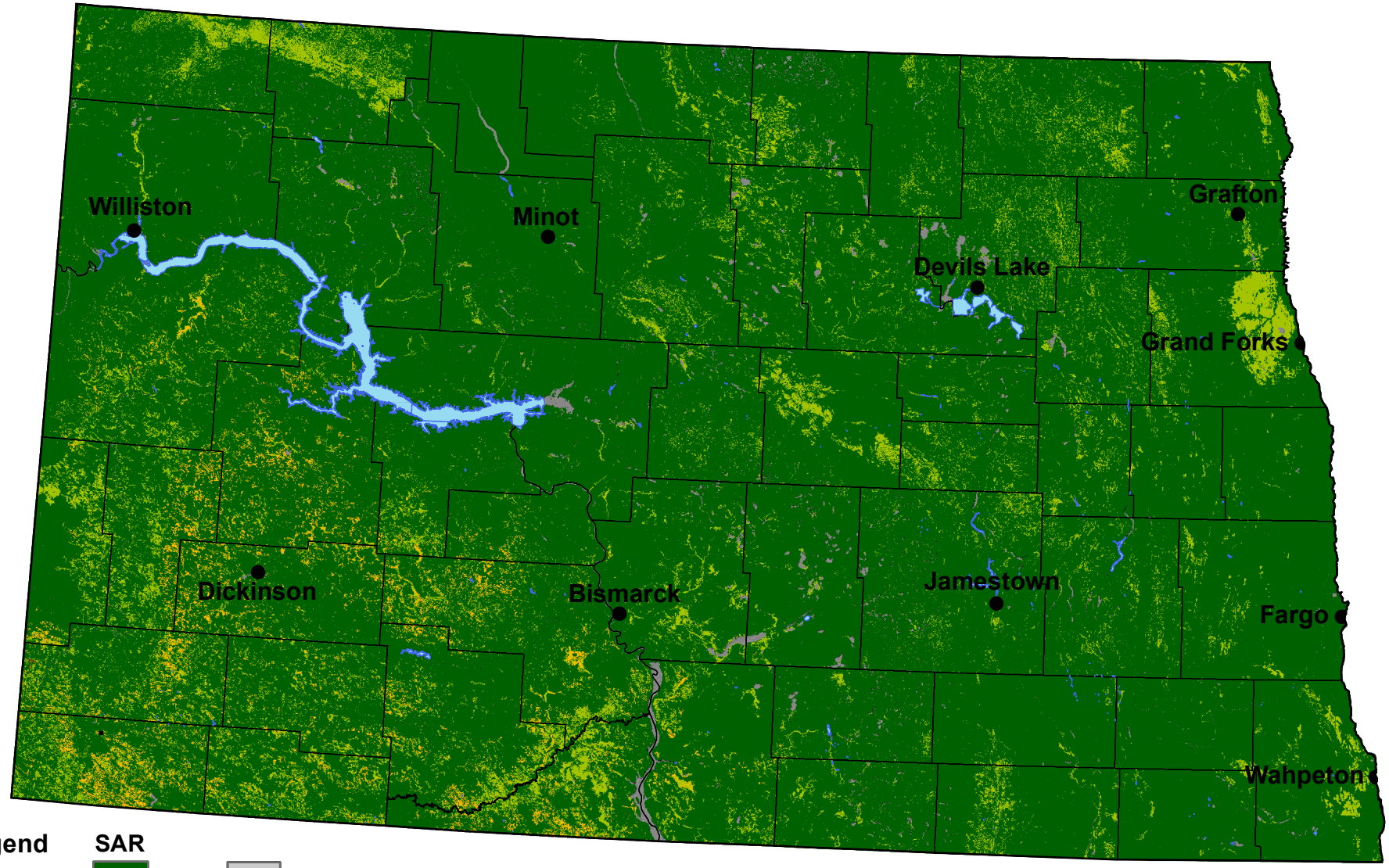
For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

An aggregated rating class is shown for each map unit. Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/ . Accessed 04/24/2017.

United States Department of Agriculture

Sodium Adsorption Ratio (SAR)
Weighted Average 0 to 150 cm



Legend

- City
- County
- State
- Water

SAR

- 0 - 5
- 5 - 13
- 13 - 20
- > 20
- Not rated

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/. February 14, 2017 (FY2017 official release).