

# Electrical Conductivity

Electrical conductivity (EC) is the electrolytic conductivity of an extract from saturated soil paste, expressed as decisiemens per meter at 25 degrees C. Electrical conductivity is a measure of the concentration of water-soluble salts in soils. It is used to indicate saline soils. High concentrations of neutral salts, such as sodium chloride and sodium sulfate, may interfere with the absorption of water by plants because the osmotic pressure in the soil solution is nearly as high as or higher than that in the plant cells.

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.

Classes.—The classes of salinity are:

| Salinity Class       | Electrical Conductivity (mmhos cm <sup>-1</sup> ) |
|----------------------|---------------------------------------------------|
| Nonsaline            | 0 to <2                                           |
| Very slightly saline | 2 to <4                                           |
| Slightly saline      | 4 to <8                                           |
| Moderately saline    | 8 to <16                                          |
| Strongly saline      | ≥16                                               |

U.S. Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2_054242) accessed (04/21/2016).

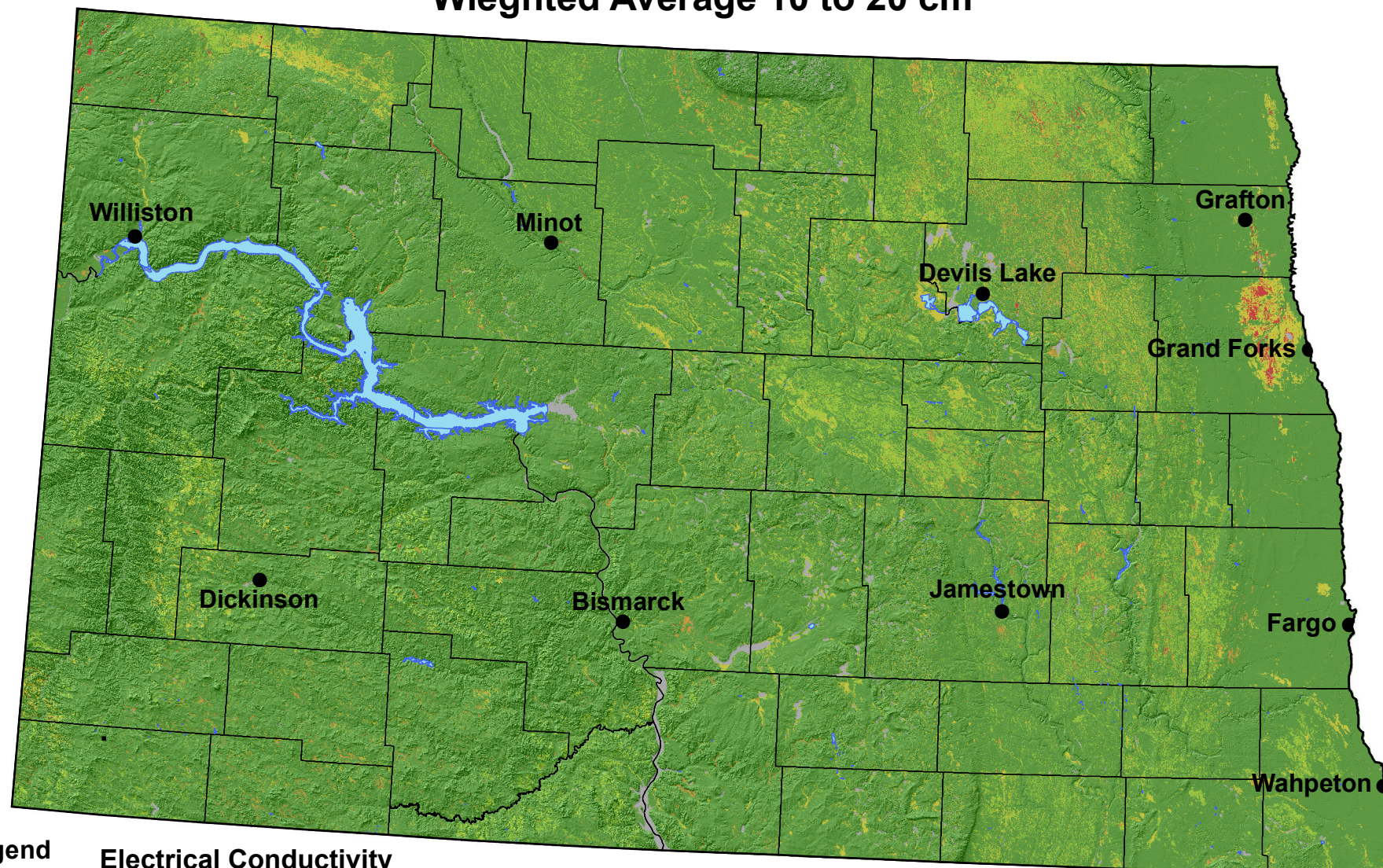
Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/> . Accessed 03/25/2016.





United States  
Department of  
Agriculture

## Electrical Conductivity Wieghted Average 10 to 20 cm



### Legend

- City
- County
- State
- Water

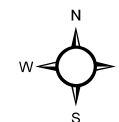
### Electrical Conductivity

- |       |           |
|-------|-----------|
| < 2   | 8 - 16    |
| 2 - 4 | > 16      |
| 4 - 8 | Not rated |



0 20 40 80 Miles

1:2,500,000



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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).