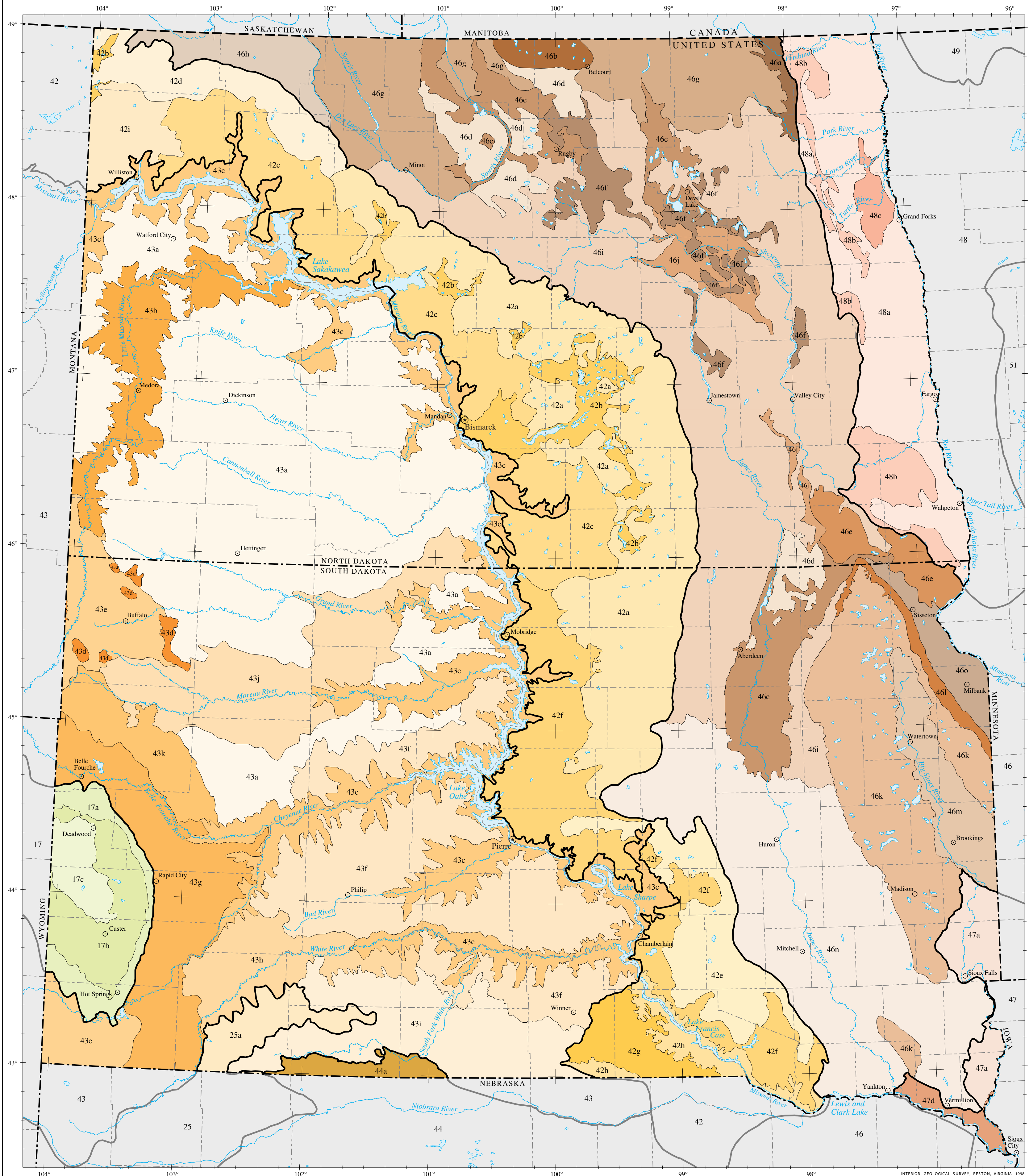


Ecoregions of North Dakota and South Dakota



Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources; they are designed to serve as a spatial framework for the research, assessment, management, and monitoring of ecosystems and ecosystem components. Ecoregions are directly applicable to the immediate needs of state agencies, including the development of biological criteria and water quality standards, and the establishment of management goals for nonpoint-source pollution. They are also relevant to integrated ecosystem management, an ultimate goal of most federal and state resource management agencies.

The approach used to compile this map is based on the premise that ecological regions can be identified through the analysis of the patterns of biotic and abiotic phenomena that reflect differences in ecosystem quality and integrity (Wiken, 1986; Omernik, 1987, 1995). These phenomena include geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology. The relative importance of each characteristic varies from one ecological region to another regardless of the hierarchical level. A Roman numeral hierarchical scheme has been adopted for different levels of ecological regions. Level I and level II divide the North American continent into 15 and 51 regions, respectively. At level III, the continental United States contains 98 regions (United States Environmental Protection Agency [USEPA], 1996). Level IV regions are more detailed ecoregions for state-level applications; and level V are the most detailed ecoregions for landscape-level or local level projects. However, depending on the objectives of a particular project, ecoregions may be aggregated within levels of the hierarchy for data analysis and interpretation. Explanations of the methods used to define the USEPA's ecoregions are given in Omernik (1995), Griffith and others (1994), Gallant and others (1989), and Bryce and Clarke (1996).

This level III and IV ecoregion map was compiled at a scale of 1:250,000; it depicts revisions and subdivisions of earlier level III ecoregions that were originally compiled at a smaller scale (USEPA, 1996; Omernik, 1987). This poster is the product of a collaborative effort primarily between the USEPA Region VIII, the USEPA National Health and Environmental Effects Research Laboratory (Corvallis, Oregon), North Dakota State Department of Health - Division of Water Quality, South Dakota State Department of Environment and Natural Resources (SDDENR), South Dakota State University (SDSU) - Department of Wildlife and Fisheries Sciences, the United States Department of Agriculture - Forest Service (USFS), the United States Department of Agriculture - Natural Resources Conservation Service (NRCS) (formerly the Soil Conservation Service), and the United States Department of the Interior - U.S. Geological Survey (USGS) - Earth Resources Observation Systems (EROS) Data Center.

This project is associated with an interagency effort to develop a common framework of ecological regions. Reaching that objective requires recognition of the differences in the conceptual approaches and mapping methodologies that have been used to develop the most commonly used existing ecoregion-type frameworks, including those developed by the USFS (Bailey and others, 1994), the USEPA (Omernik, 1987, 1995), and the NRCS (United States Department of Agriculture - Soil Conservation Service, 1981). As each of these frameworks is further developed, the differences between them lessen. Regional collaborative projects such as this one in North Dakota and South Dakota, where agreement can be reached among multiple resource management agencies, is a step in the direction of attaining commonality and consistency in ecoregion frameworks for the entire nation. Literature Cited:

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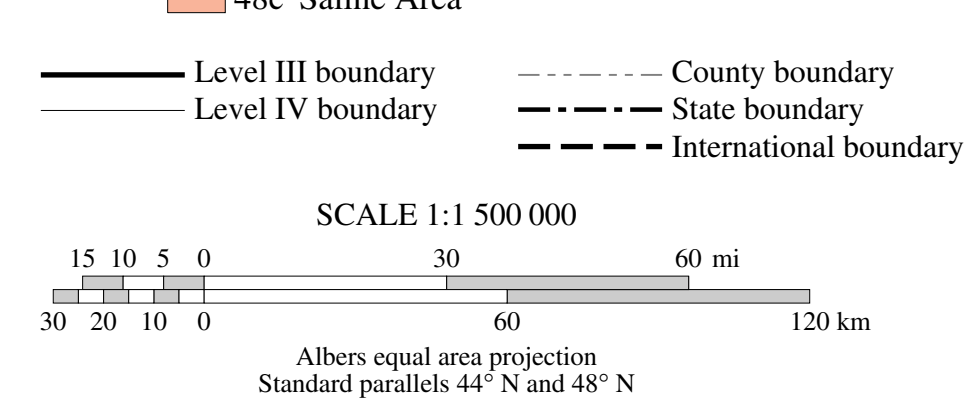
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|---|---|--|---|
| <p>17 Middle Rockies</p> <ul style="list-style-type: none"> 17a Black Hills Foothills 17b Black Hills Plateau 17c Black Hills Core Highlands <p>25 Western High Plains</p> <ul style="list-style-type: none"> 25a Pine Ridge Escarpment <p>42 Northwestern Glaciated Plains</p> <ul style="list-style-type: none"> 42a Missouri Coteau 42b Collapsed Glacial Outwash 42c Missouri Coteau Slope 42d Northern Missouri Coteau 42e Southern Missouri Coteau 42f Northern Missouri Coteau Slope 42g Ponca Plains 42h Southern River Breaks 42i Glaciated Dark Brown Prairie | <p>43 Northwestern Great Plains</p> <ul style="list-style-type: none"> 43a Missouri Plateau 43b Little Missouri Badlands 43c River Breaks 43d Forested Buttes 43e Sagebrush Steppe 43f Subhumid Pierre Shale Plains 43g Semiarid Pierre Shale Plains 43h White River Badlands 43i Keya Paha Tablelands 43j Moreau Prairie 43k Dense Clay Prairie <p>44 Nebraska Sand Hills</p> <ul style="list-style-type: none"> 44a Nebraska Sand Hills | <p>46 Northern Glaciated Plains</p> <ul style="list-style-type: none"> 46a Pembina Escarpment 46b Turtle Mountains 46c Glacial Lake Basins 46d Glacial Lake Deltas 46e Tewaoukon Dead Ice Moraine 46f End Moraine Complex 46g Northern Black Prairie 46h Northern Dark Brown Prairie 46i Drift Plains 46j Glacial Outwash 46k Prairie Coteau 46l Prairie Coteau Escarpment 46m Big Sioux Basin 46n James River Lowland 46o Minnesota River Prairie | <p>47 Western Corn Belt Plains</p> <ul style="list-style-type: none"> 47a Loess Prairies 47d Missouri Alluvial Plain <p>48 Lake Agassiz Plain</p> <ul style="list-style-type: none"> 48a Glacial Lake Agassiz Basin 48b Sand Deltas and Beach Ridges 48c Saline Area |
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