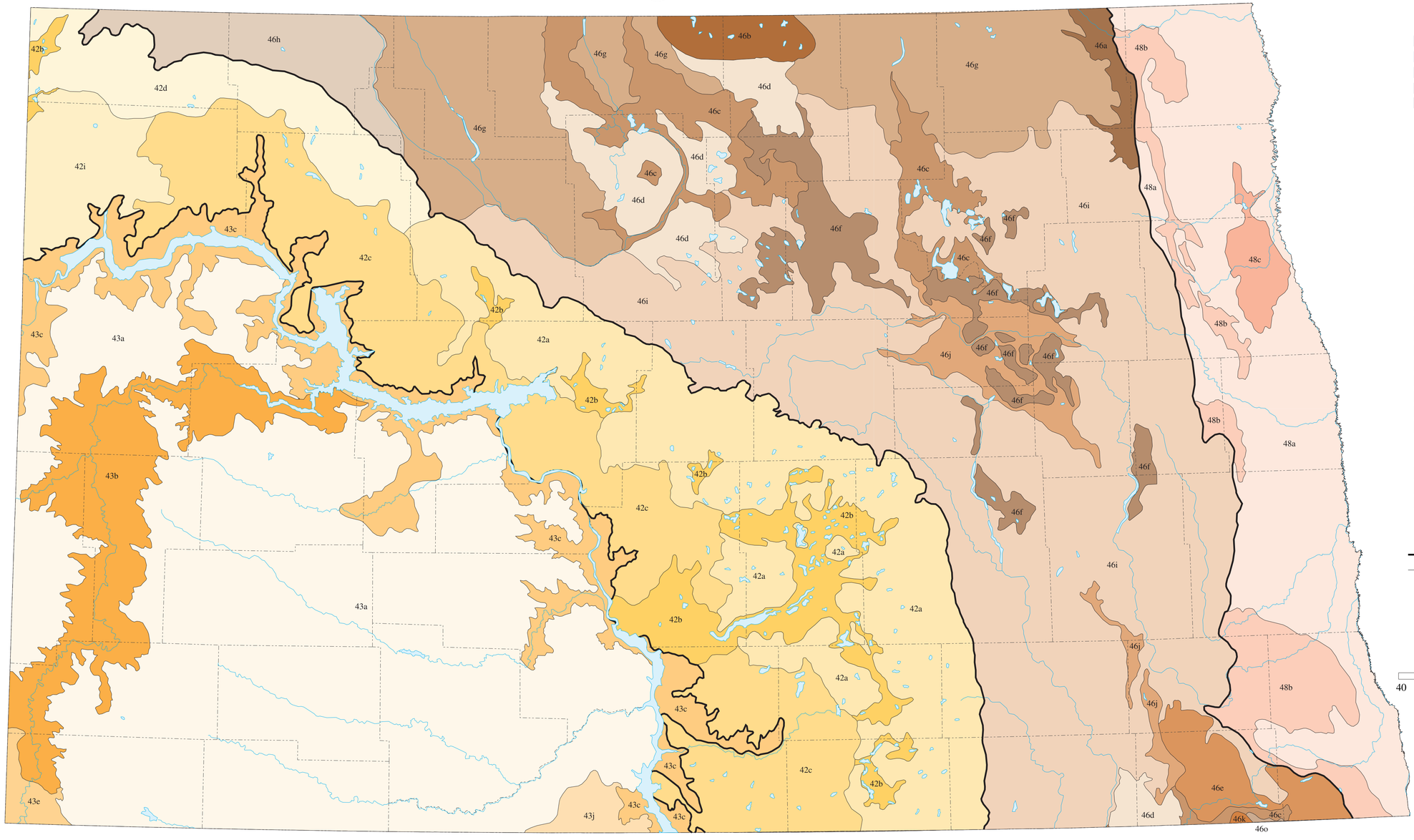
Level III and IV Ecoregions of North Dakota



42 NORTHWESTERN GLACIATED PLAINS
- 42a Missouri Coteau
- 42b Collapsed Glacial Outwash
- 42c Missouri Coteau Slope
- 42d Northern Missouri Coteau
- 42i Glaciated Dark Brown Prairie

43 NORTHWESTERN GREAT PLAINS
- 43a Missouri Plateau
- 43b Little Missouri Badlands
- 43c River Breaks
- 43e Sagebrush Steppe
- 43j Moreau Prairie

46 NORTHERN GLACIATED PLAINS
- 46a Pembina Escarpment
- 46b Turtle Mountains
- 46c Glacial Lake Basins
- 46d Glacial Lake Deltas
- 46e Tewaukon 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
- 46o Minnesota River Prairie

48 LAKE AGASSIZ PLAIN
- 48a Glacial Lake Basin
- 48b Sand Deltas and Beach Ridges
- 48c Saline Area

Level III boundary
Level IV boundary

20 0 20 Mi
40 0 40 Km

Albers Equal Area Projection

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 and the composition of biotic and abiotic phenomena that affect or 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 is the coarsest level, dividing North America into 15 ecological regions, with level II dividing the continent into 51 regions. At level III, the continental United States contains 98 regions (United States Environmental Protection Agency [US EPA], 1996). Level IV is a further subdivision of level III ecoregions. Explanations of the methods used to define the US EPA's ecoregions are given in Omernik (1995), Griffith et al. (1994), and Gallant et al. (1989).

This level III and IV ecoregion map was compiled at a 1:250,000-scale; it depicts revisions and subdivisions of earlier level III ecoregions that were originally compiled at a smaller scale (US EPA 1996; Omernik 1987). The map is part of a collaborative project primarily between the US EPA Region VIII, the US EPA National Health and Environmental Effects Research Laboratory - Corvallis, Oregon, South Dakota State Department of Environment and Natural Resources, Department of Wildlife and Fisheries Sciences - South Dakota University, 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).

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 et al. 1994), the US EPA (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 are becoming less. Regional collaborative projects such as this one in 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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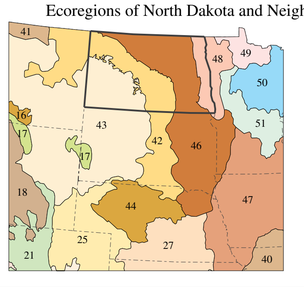
Ecoregions of North Dakota and Neighboring States



- 16 Montana Valley and Foothill Prairies
- 17 Middle Rockies
- 18 Wyoming Basin
- 20 Colorado Plateaus
- 21 Southern Rockies
- 25 Western High Plains
- 26 Southwestern Tablelands
- 27 Central Great Plains
- 40 Central Irregular Plains
- 41 Northern Montana Glaciated Plains
- 42 Northwestern Glaciated Plains
- 43 Northwestern Great Plains
- 44 Nebraska Sand Hills
- 46 Northern Glaciated Plains
- 47 Western Corn Belt Plains
- 48 Lake Agassiz Plain
- 49 Northern Minnesota Wetlands
- 50 Northern Lakes and Forests
- 51 North Central Hardwood Forests

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