

Minnesota Geographic Metadata Guidelines

Metadata Entry Template

Version 1.0.4 - July 1, 1997

A State Version of the FGDC Content Standards for Geospatial Metadata

Description of data that was created for

Minnesota Ground Water Provinces

by

DNR Waters, Ground Water and Climatology Section

Data Set Name: Minnesota Ground Water Provinces

Metadata Entered By: Jim Berg and Mike Tronrud

Date: 3/12/01

Minnesota State Element Name

Section 1		Identification Information	
Originator	Jim Berg		
Title	Minnesota Ground Water Provinces		
Minnesota Clearinghouse ID			
Abstract	The map was created using preexisting maps and professional judgement to define provinces of the state with unique combinations of bedrock and unconsolidated aquifer characteristics.		
Purpose	General reference		
Time Period of Content	1978 - 1999		
Date			
Currentness Reference			
Progress	Complete		
Maintenance and Update Frequency	None planned		
Spatial Extent of Data	State of Minnesota		
West Bounding Coordinate			
East Bounding Coordinate			
North Bounding Coordinate			
South Bounding Coordinate			
Place Keywords	Minnesota		
Theme Keywords	Bedrock aquifers, unconsolidated aquifers, and aquifer characteristics		
Theme Keyword Thesaurus			
Access Constraints	None		
Use Constraints	None		
Contact Person	Jim Berg		
Contact Organization	Minnesota Department of National Resources		
Contact Person Position	Hydrogeologist		
Contact Address	500 Lafayette Road		
Contact City	St. Paul		
Contact State or Province	Minnesota		
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Contact E-mail Address	jim.berg@dnr.state.mn.us		

Minnesota State Element Name	
Browse Graphic File Name	
Browse Graphic File Description	
Associated Data Sets	

Section 2	Data Quality Information
Attribute Accuracy	
Logical Consistency	
Completeness	Complete
Horizontal Positional Accuracy	N.A.
Vertical Positional Accuracy	N.A.

Lineage	<p>The boundaries between Provinces 1 and 4, and Provinces 2 and 5 were created, in ArcView, by combining individual Paleozoic and Precambrian sedimentary map unit polygons from the Minnesota Geological Survey (MGS) Bedrock Geology of Minnesota (Morey, G.B., 2000, Geologic Map of Minnesota, Bedrock Geology: State Map Series S-20, scale 1:1,000,000). These boundaries represent the western edge of Paleozoic and Precambrian sedimentary bedrock formations in Minnesota. This map is a compilation of some smaller maps with source scales ranging from 1:24,000 to 1:750,000.</p> <p>The boundary of Province 6 was digitized by Jim Berg from a rectified version of the MGS Minnesota Bedrock Hydrogeology map (Kanivetsky, R., 1978, Hydrogeologic Map of Minnesota, Bedrock Hydrogeology.: Minnesota Geological Survey State Map Series S-2, scale 1:500,000). These polygons are shown as a transparent stippled overlay on the original map.</p> <p>The boundary between Provinces 2 and 3 and Provinces 1 and 3 was digitized from a Minnesota Land Management Information Center (LMIC) digital version of the MGS Depth to Bedrock Map (Olsen, B.M., and Mossler, J.H., 1982, Geologic Map of Minnesota, Depth to Bedrock.: Minnesota Geological Survey State Map Series S-14, scale 1:1,000,000) using the 0-100 foot boundary. This line defines the province of southeastern Minnesota where thin unconsolidated sediments overlie Paleozoic bedrock aquifers.</p> <p>The boundary between Provinces 1 and 2 was interpreted from the MGS Scott and Dakota County Geologic Atlases (Balaban, N.H., and McSwiggen, P.L., 1982, Geologic Atlas of Scott County, Minnesota and Balaban, N.H., and Hobbs, H.C., 1990, Geologic Atlas of Dakota County, Minnesota). Both of these atlases were published at 1:100,000. Scott County geologic cross sections and a diagrammatic map of the St. Croix moraine from the Dakota County Atlas were used to delineate sandy unconsolidated sediments in Province 1 from the less sandy sediments of Province 2.</p> <p>The boundary between Provinces 4 and 5 was digitized by Jim Berg from a distinct surface elevation boundary evident on the Minnesota Digital Elevation Model (DEM). The DEM was produced by the Minnesota Department of Natural Resources at a 30 meter sampling interval using a variety of production processes.</p> <p>The Province 4/5 boundary derived from the DEM defines areas within the Alexandria and Superior moraine complexes. The drift deposited by glacial advances from the northeast are generally sandier than drift deposited from northwest advances (Des Moines and Red River lobes). In addition, outwash associated with the Pomme de Terre, Chippewa, and the western Minnesota River, (boundaries from LMIC digital version of Kanivetsky, R. 1979, Hydrogeologic Map of Minnesota, Quaternary Hydrogeology.: Minnesota Geological Survey State Map Series S-3, scale 1:500,000) were lumped with this province. The Quaternary Hydrogeology map shows that most of the extensive sand plains in the state are within the boundaries of the Alexandria and Superior moraine complexes. Most of the water table wells of the state are also in this area.</p>
Source Scale Denominator	

Section 3 Spatial Data Organization Information	
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Native Data Set Environment	ArcView
Geographic Reference for Tabular Data	UTM Coordinates
Spatial Object Type	Vector
Vendor Specific Object Types	Point, Line, Polygon
Tiling Scheme	

Section 4 Spatial Reference Information	
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Horizontal Coordinate Scheme	UTM
Ellipsoid	GRS 1980
Horizontal Datum	NAD83
Horizontal Units	N.A.
Altitude Datum	N.A.
Altitude Units	N.A.
Depth Datum	N.A.
Depth Units	N.A.
Cell Width	N.A.
Cell Height	N.A.
If UTM	
UTM Zone Number	15
Coordinate Offsets or Adjustments	none
Distance Resolution	

Section 5 Entity and Attribute Information					
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Entity and Attribute Overview					
Entity and Attribute Detailed Citation					
Table Name	Field Name	Begin Column	Definition	Valid Values	Description

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Section 6		Distribution Information	
Publisher	Minnesota Department of Natural Resources		
Publication Date	2001		
Online Linkage			
Distributor Contact Person			
Distributor Organization	Waters Division		
Distributor Position	Ground Water and Climatology Section		
Distributor Address	500 Lafayette Road		
Distributor City	St. Paul		
Distributor State or Province	MN		
Distributor Postal Code	55155		
Distributor Voice Phone	651-296-4800		
Distributor Fax Phone			
Distributor E-mail Address			
Distributor's Data Set Identifier			
Distribution Liability	<p>This map was prepared from publicly available information only. Every reasonable effort has been made to ensure the accuracy of the factual data on which this map is based. However, the Department of Natural Resources does not warrant the accuracy, completeness, or any implied uses of these data. Users may wish to verify critical information; sources include both the references here and information on file in the offices of the Minnesota Geological Survey and the Department of Natural Resources. Every effort has been made to ensure the interpretation shown conforms to sound geologic and cartographic principles. This map should not be used to establish legal title, boundaries, or locations of improvements.</p>		
Transfer Format Name	Shapefile		
Transfer Format Version Number			
Transfer Size			
Ordering Instructions			

Section 7		Metadata Reference Information	
Metadata Date	March 2001		
Metadata Contact Person	Mike Tronrud		

Metadata Contact Organization	Minnesota Department of Natural Resources
Metadata Contact Position	GIS Specialist
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Metadata Standard Name	Minnesota geographic Metadata Guidelines
Metadata Standard Version	1.0.4
Metadata Standard Online Linkage	