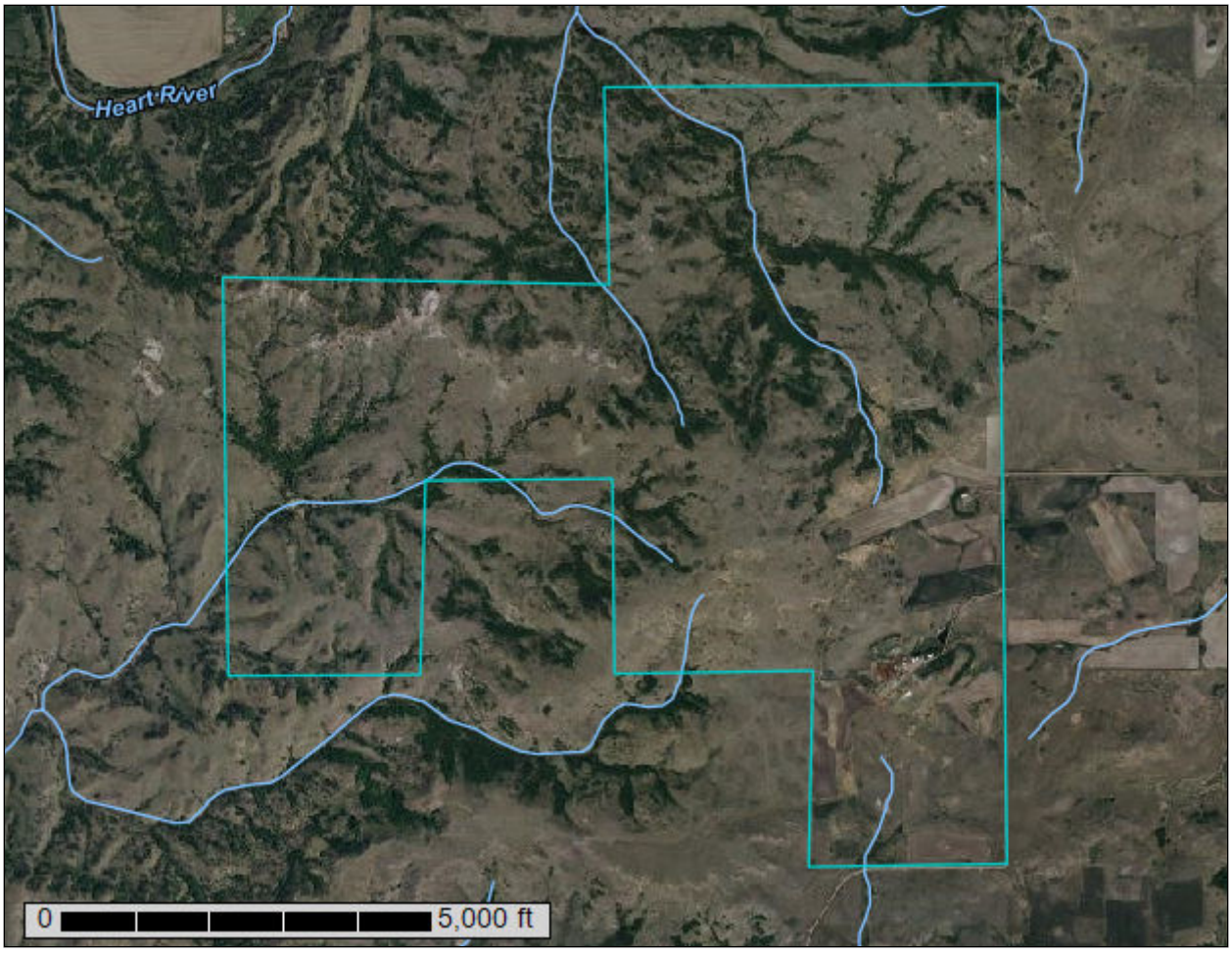
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Morton County, North Dakota



June 18, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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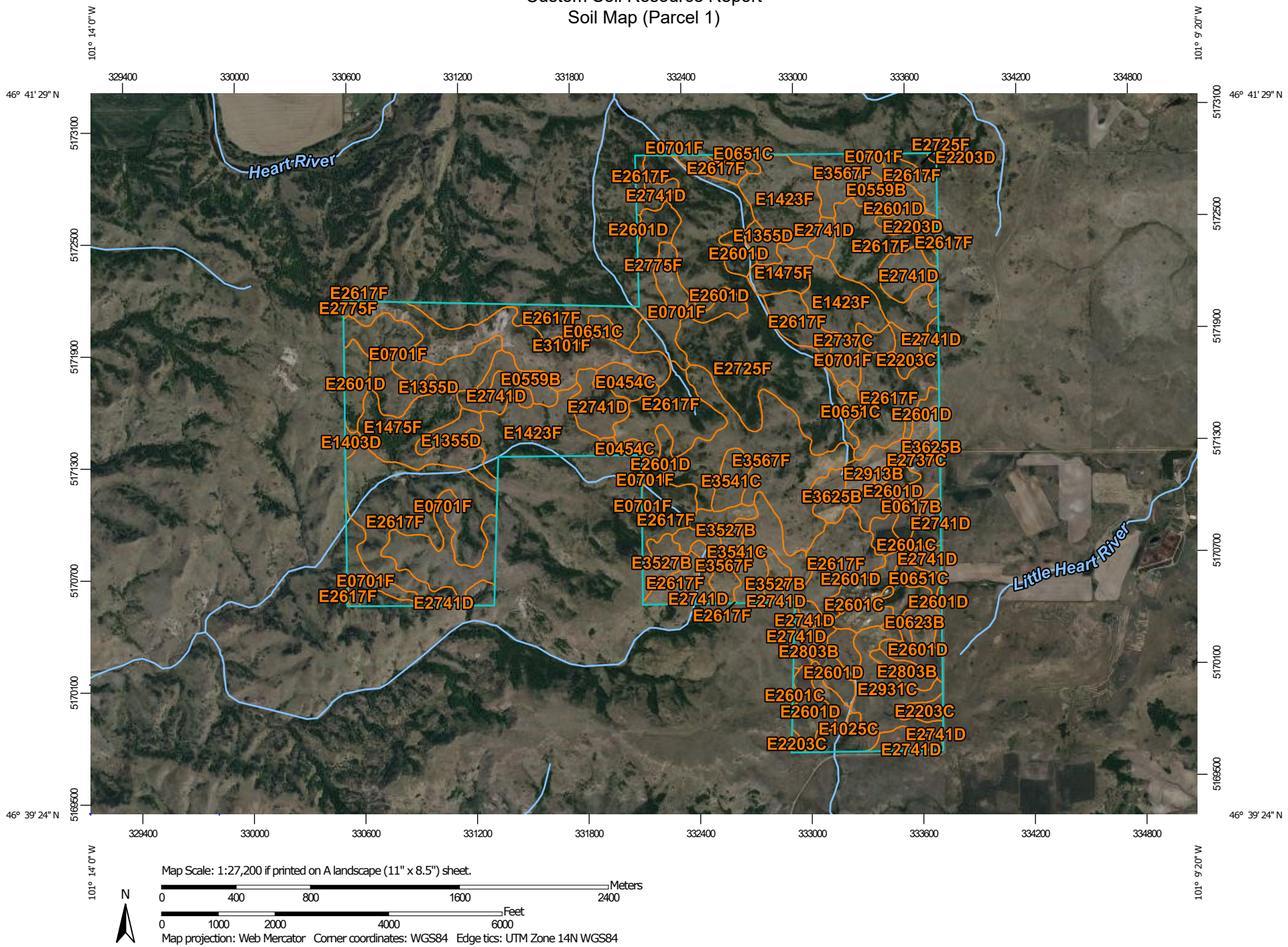
Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Parcel 1)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Morton County, North Dakota
Survey Area Data: Version 27, Sep 5, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 24, 2021—Jun 2, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Parcel 1)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
E0454C	Daglum-Rhoades complex, 6 to 9 percent slopes	16.1	1.0%
E0559B	Dogtooth-Janesburg complex, 0 to 6 percent slopes	23.9	1.5%
E0617B	Belfield-Wyola-Daglum complex, 2 to 6 percent slopes	8.0	0.5%
E0623B	Grail-Belfield clay loams, 2 to 6 percent slopes	8.5	0.5%
E0651C	Regent-Janesburg complex, 6 to 9 percent slopes	21.0	1.3%
E0701F	Dogtooth-Janesburg-Cabba complex, 6 to 35 percent slopes	123.2	7.7%
E1025C	Regent-Wyola silty clay loams, 6 to 9 percent slopes	11.1	0.7%
E1355D	Vebar-Flasher-Tally complex, 9 to 15 percent slopes	32.7	2.0%
E1403D	Beisigl-Flasher-Telfer loamy fine sands, 6 to 15 percent slopes	2.3	0.1%
E1423F	Flasher-Vebar-Parshall complex, 9 to 35 percent slopes	112.5	7.0%
E1475F	Flasher-Rock outcrop-Vebar complex, 9 to 70 percent slopes	60.6	3.8%
E2203C	Farland silt loam, 6 to 9 percent slopes	29.1	1.8%
E2203D	Farland silt loam, 9 to 15 percent slopes	9.8	0.6%
E2601C	Amor-Cabba loams, 6 to 9 percent slopes	38.9	2.4%
E2601D	Amor-Cabba loams, 9 to 15 percent slopes	120.5	7.5%
E2617F	Cabba-Chama-Shambo loams, 9 to 50 percent slopes	362.7	22.6%
E2725F	Arikara-Shambo-Cabba loams, 9 to 70 percent slopes	160.1	10.0%
E2737C	Chama-Cabba-Sen silt loams, 6 to 9 percent slopes	24.1	1.5%
E2741D	Cabba-Chama-Sen silt loams, 9 to 15 percent slopes	77.8	4.9%
E2775F	Cabba-Rock outcrop-Chama complex, 15 to 70 percent slopes	21.6	1.4%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
E2803B	Amor-Shambo loams, 3 to 6 percent slopes	15.2	1.0%
E2913B	Chama-Sen-Cabba silt loams, 3 to 6 percent slopes	11.9	0.7%
E2931C	Morton-Cabba silt loams, 6 to 9 percent slopes	35.4	2.2%
E3101F	Badland-Cabba complex, 9 to 70 percent slopes	68.6	4.3%
E3527B	Williams-Bowbells loams, 3 to 6 percent slopes	28.9	1.8%
E3541C	Williams-Zahl loams, 6 to 9 percent slopes	48.5	3.0%
E3567F	Zahl-Max loams, dissected, 15 to 45 percent slopes	114.5	7.1%
E3625B	Williams-Reeder loams, 3 to 6 percent slopes	14.1	0.9%
Totals for Area of Interest		**1,601.7**	**100.0%**

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Vegetative Productivity

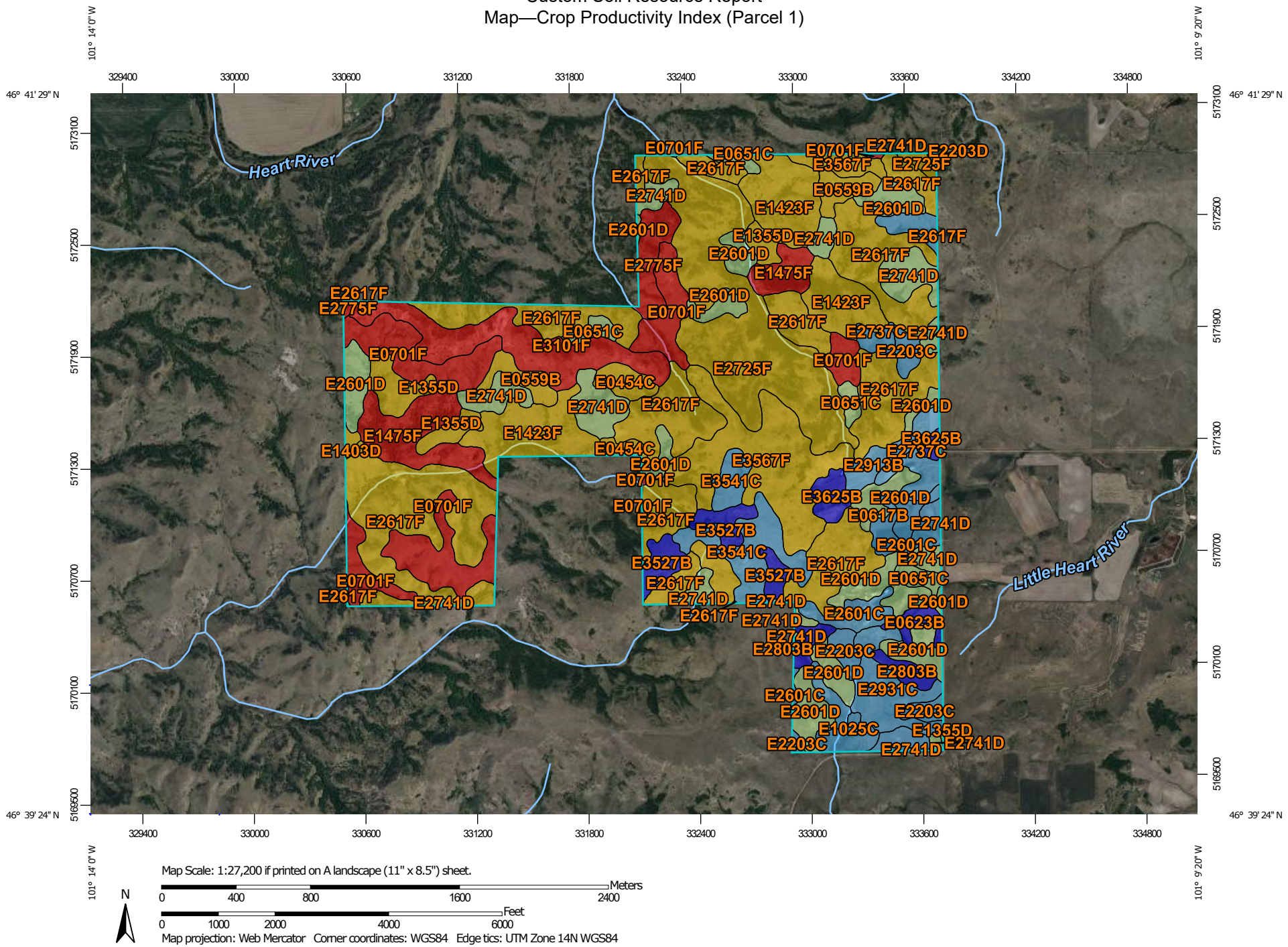
Vegetative productivity includes estimates of potential vegetative production for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture and rangeland. In the underlying database, some states maintain crop yield data by individual map unit component. Other states maintain the data at the map unit level. Attributes are included for both, although only one or the other is likely to contain data for any given geographic area. For other land uses, productivity data is shown only at the map unit component level. Examples include potential crop yields under irrigated and nonirrigated conditions, forest productivity, forest site index, and total rangeland production under of normal, favorable and unfavorable conditions.

Crop Productivity Index (Parcel 1)

Crop productivity index ratings provide a relative ranking of soils based on their potential for intensive crop production. An index can be used to rate the potential yield of one soil against that of another over a period of time. Ratings range from 0 to 100. The higher numbers indicate higher production potential. The rating is not crop specific. Minnesota inquiries must use the 'Map Unit Cropland Productivity Report (MN)' soils report from the Soil Reports tab under 'Vegetative Productivity'.

When the soils are rated, the following assumptions are made: a) adequate management, b) natural weather conditions (no irrigation), c) artificial drainage where required, d) no frequent flooding on the lower lying soils, and e) no land leveling or terracing. Even though predicted average yields will change with time, the productivity indices are expected to remain relatively constant in relation to one another over time.

Map—Crop Productivity Index (Parcel 1)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- <= 16
- > 16 and <= 32
- > 32 and <= 40
- > 40 and <= 69
- > 69 and <= 85
- Not rated or not available

Soil Rating Lines
- <= 16
- > 16 and <= 32
- > 32 and <= 40
- > 40 and <= 69
- > 69 and <= 85
- Not rated or not available

Soil Rating Points
- <= 16
- > 16 and <= 32
- > 32 and <= 40
- > 40 and <= 69
- > 69 and <= 85
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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Table—Crop Productivity Index (Parcel 1)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
E0454C	Daglum-Rhoades complex, 6 to 9 percent slopes	28	16.1	1.0%
E0559B	Dogtooth-Janesburg complex, 0 to 6 percent slopes	26	23.9	1.5%
E0617B	Belfield-Wyola-Daglum complex, 2 to 6 percent slopes	65	8.0	0.5%
E0623B	Grail-Belfield clay loams, 2 to 6 percent slopes	79	8.5	0.5%
E0651C	Regent-Janesburg complex, 6 to 9 percent slopes	40	21.0	1.3%
E0701F	Dogtooth-Janesburg-Cabba complex, 6 to 35 percent slopes	16	123.2	7.7%
E1025C	Regent-Wyola silty clay loams, 6 to 9 percent slopes	62	11.1	0.7%
E1355D	Vebar-Flasher-Tally complex, 9 to 15 percent slopes	32	32.7	2.0%
E1403D	Beisigl-Flasher-Telfer loamy fine sands, 6 to 15 percent slopes	26	2.3	0.1%
E1423F	Flasher-Vebar-Parshall complex, 9 to 35 percent slopes	22	112.5	7.0%
E1475F	Flasher-Rock outcrop-Vebar complex, 9 to 70 percent slopes	12	60.6	3.8%
E2203C	Farland silt loam, 6 to 9 percent slopes	69	29.1	1.8%
E2203D	Farland silt loam, 9 to 15 percent slopes	52	9.8	0.6%
E2601C	Amor-Cabba loams, 6 to 9 percent slopes	53	38.9	2.4%
E2601D	Amor-Cabba loams, 9 to 15 percent slopes	40	120.5	7.5%
E2617F	Cabba-Chama-Shambo loams, 9 to 50 percent slopes	27	362.7	22.6%
E2725F	Arikara-Shambo-Cabba loams, 9 to 70 percent slopes	24	160.1	10.0%
E2737C	Chama-Cabba-Sen silt loams, 6 to 9 percent slopes	53	24.1	1.5%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
E2741D	Cabba-Chama-Sen silt loams, 9 to 15 percent slopes	36	77.8	4.9%
E2775F	Cabba-Rock outcrop-Chama complex, 15 to 70 percent slopes	11	21.6	1.4%
E2803B	Amor-Shambo loams, 3 to 6 percent slopes	76	15.2	1.0%
E2913B	Chama-Sen-Cabba silt loams, 3 to 6 percent slopes	67	11.9	0.7%
E2931C	Morton-Cabba silt loams, 6 to 9 percent slopes	59	35.4	2.2%
E3101F	Badland-Cabba complex, 9 to 70 percent slopes	8	68.6	4.3%
E3527B	Williams-Bowbells loams, 3 to 6 percent slopes	84	28.9	1.8%
E3541C	Williams-Zahl loams, 6 to 9 percent slopes	60	48.5	3.0%
E3567F	Zahl-Max loams, dissected, 15 to 45 percent slopes	31	114.5	7.1%
E3625B	Williams-Reeder loams, 3 to 6 percent slopes	85	14.1	0.9%
Totals for Area of Interest			**1,601.7**	**100.0%**

Rating Options—Crop Productivity Index (Parcel 1)

Aggregation Method: Weighted Average

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: Yes