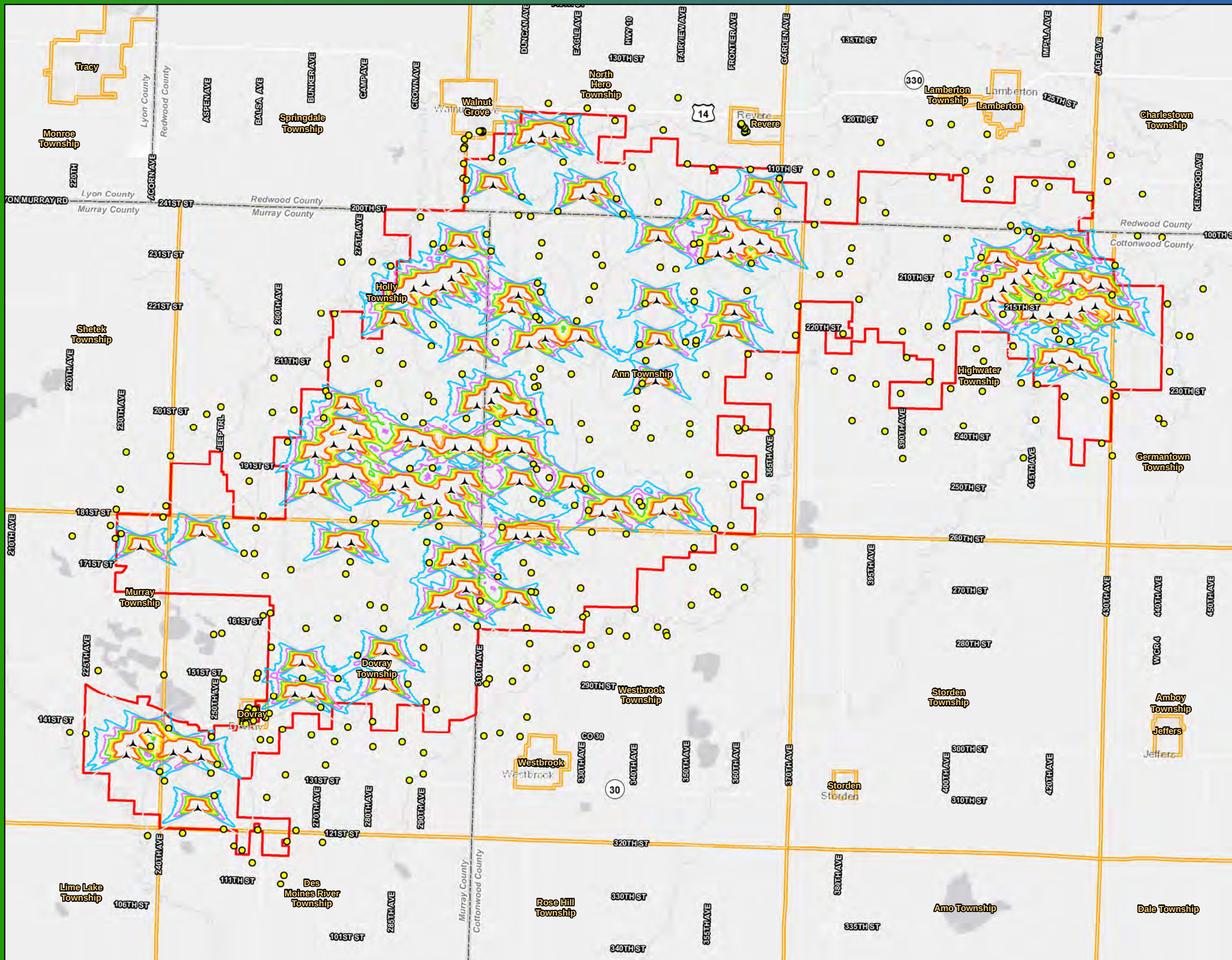


Service Layer Credits: MNGeo, FSA 2017
Data Source: Geronimo Energy, US Census

- ▲ GE 2.8-127 Proposed Turbine
 - Residential Structure (within 1 mile of Project Area)
 - ▭ Project Area Boundary
 - ▭ City/Township
 - ▭ County Boundary
- Shadow Hours Per Year
- 0
 - 10
 - 20
 - 30
 - 40
 - 50
 - 60

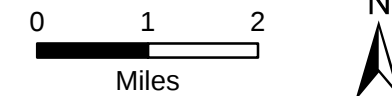
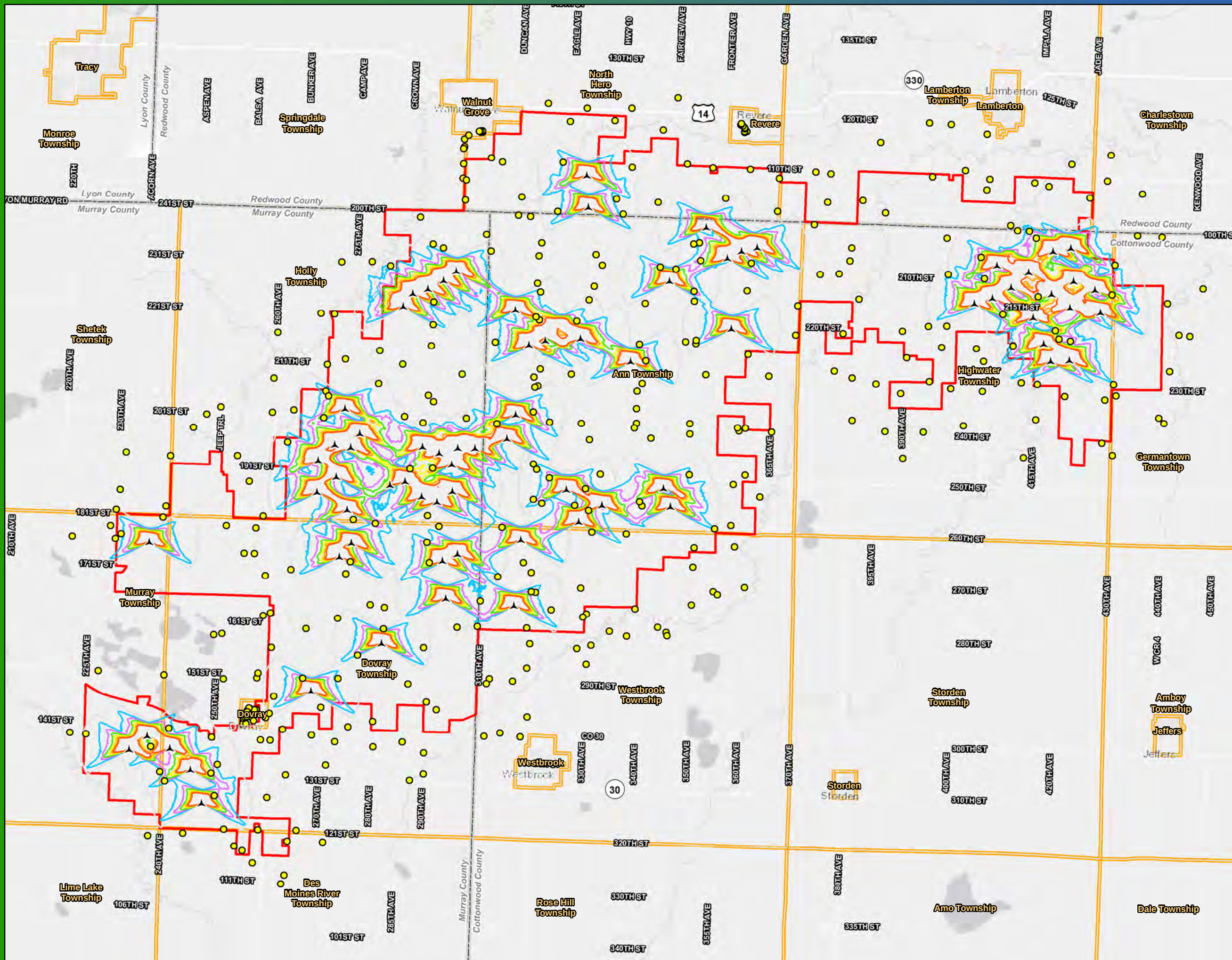
*Turbines not to scale

Figure 9a
Shadow Flicker
GE 2.8-127

Plum Creek Wind Project

Redwood, Murray, and
Cottonwood Counties, MN





Service Layer Credits: MNGeo, FSA 2017
Data Source: Geronimo Energy, US Census

- ▲ V150 Proposed Turbine
 - Residential Structure (within 1 mile of Project Area)
 - ▭ Project Area Boundary
 - ▭ City/Township
 - ▭ County Boundary
- Shadow Hours Per Year
- 0
 - 10
 - 20
 - 30
 - 40
 - 50
 - 60

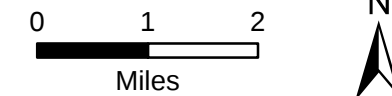
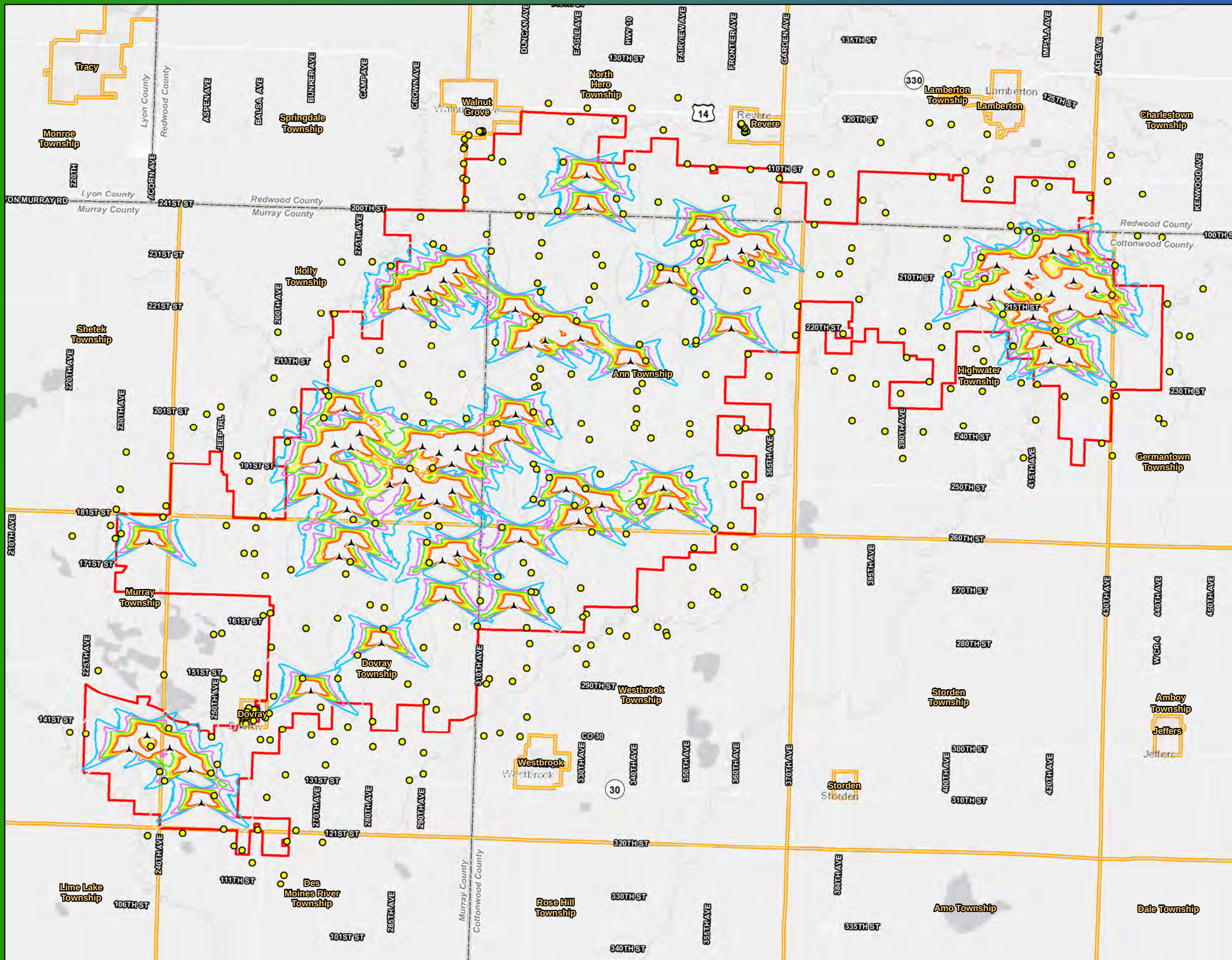
*Turbines not to scale

Figure 9b
Shadow Flicker
Vestas V150

Plum Creek Wind Project

Redwood, Murray, and
Cottonwood Counties, MN





Service Layer Credits: MNGeo, FSA 2017
Data Source: Geronimo Energy, US Census

- ▲ V162 Proposed Turbine
 - Residential Structure (within 1 mile of Project Area)
 - ▭ Project Area Boundary
 - ▭ City/Township
 - ▭ County Boundary
- Shadow Hours Per Year**
- 0
 - 10
 - 20
 - 30
 - 40
 - 50
 - 60

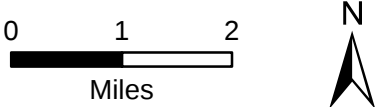
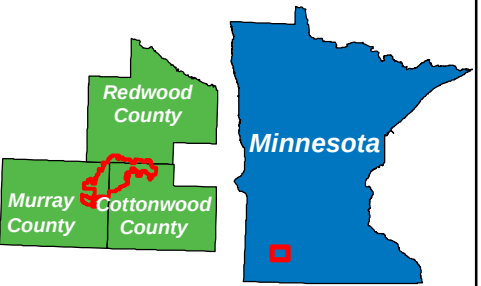
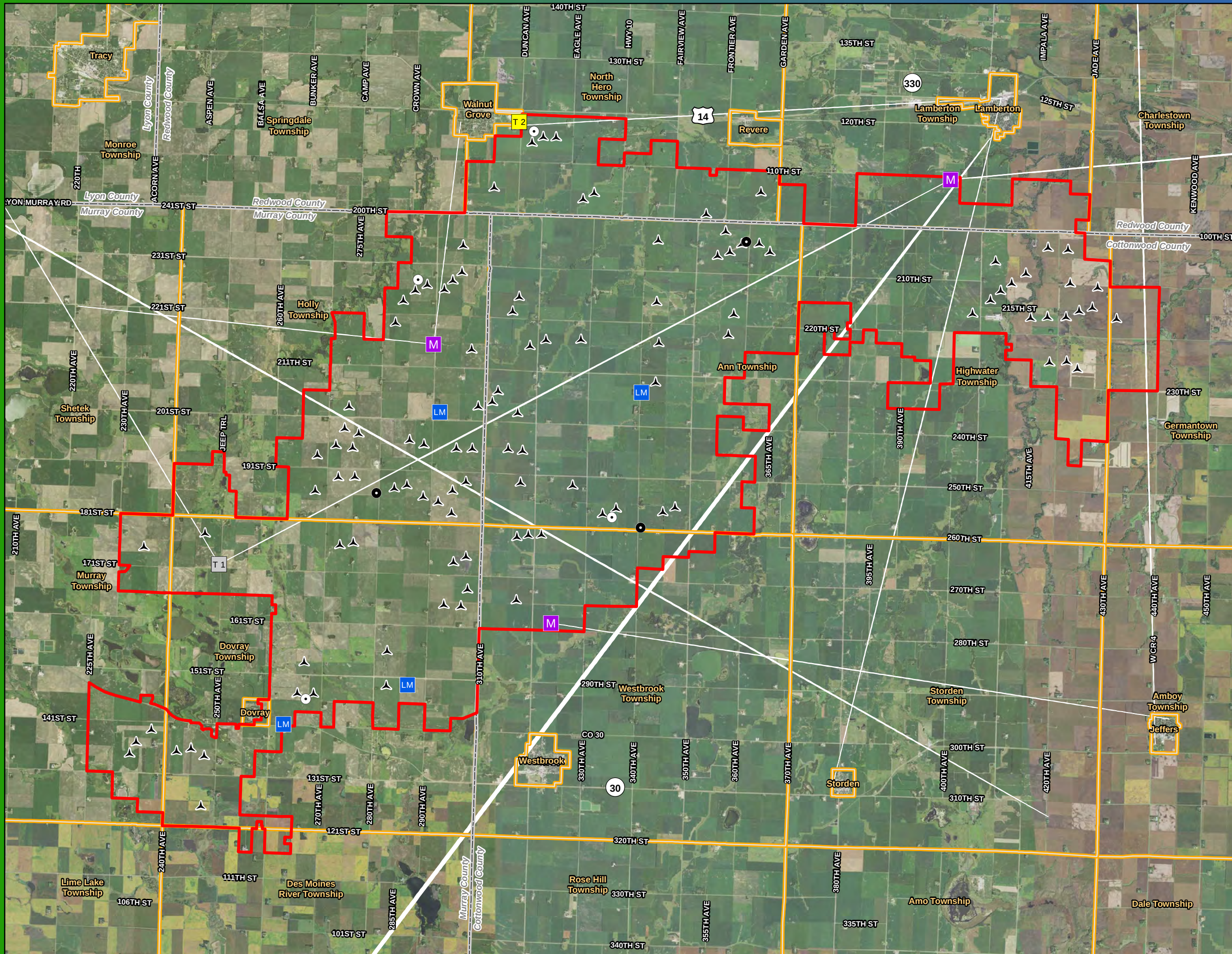
*Turbines not to scale

Figure 9c
Shadow Flicker
Vestas V162

Plum Creek Wind Project

Redwood, Murray, and
Cottonwood Counties, MN





Service Layer Credits: MNGeo, FSA 2017
Data Source: Geronimo Energy, US Census

- ▲ GE 2.8-127 Proposed Turbine
 - Permanent Met Tower
 - Temporary Met Tower
 - LM Land Mobile
 - M Microwave
- Tower**
- T 1 Microwave/Cellular
 - T 2 Microwave/Land Mobile
 - Project Area Boundary
 - Microwave Beam Path (Worst Case Freznl Zone)
 - City/Township
 - County Boundary

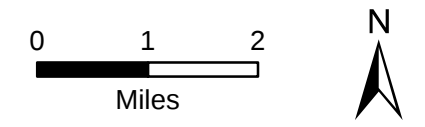
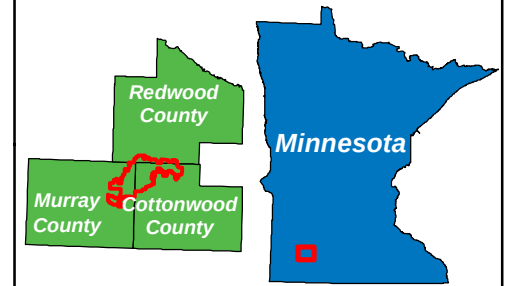
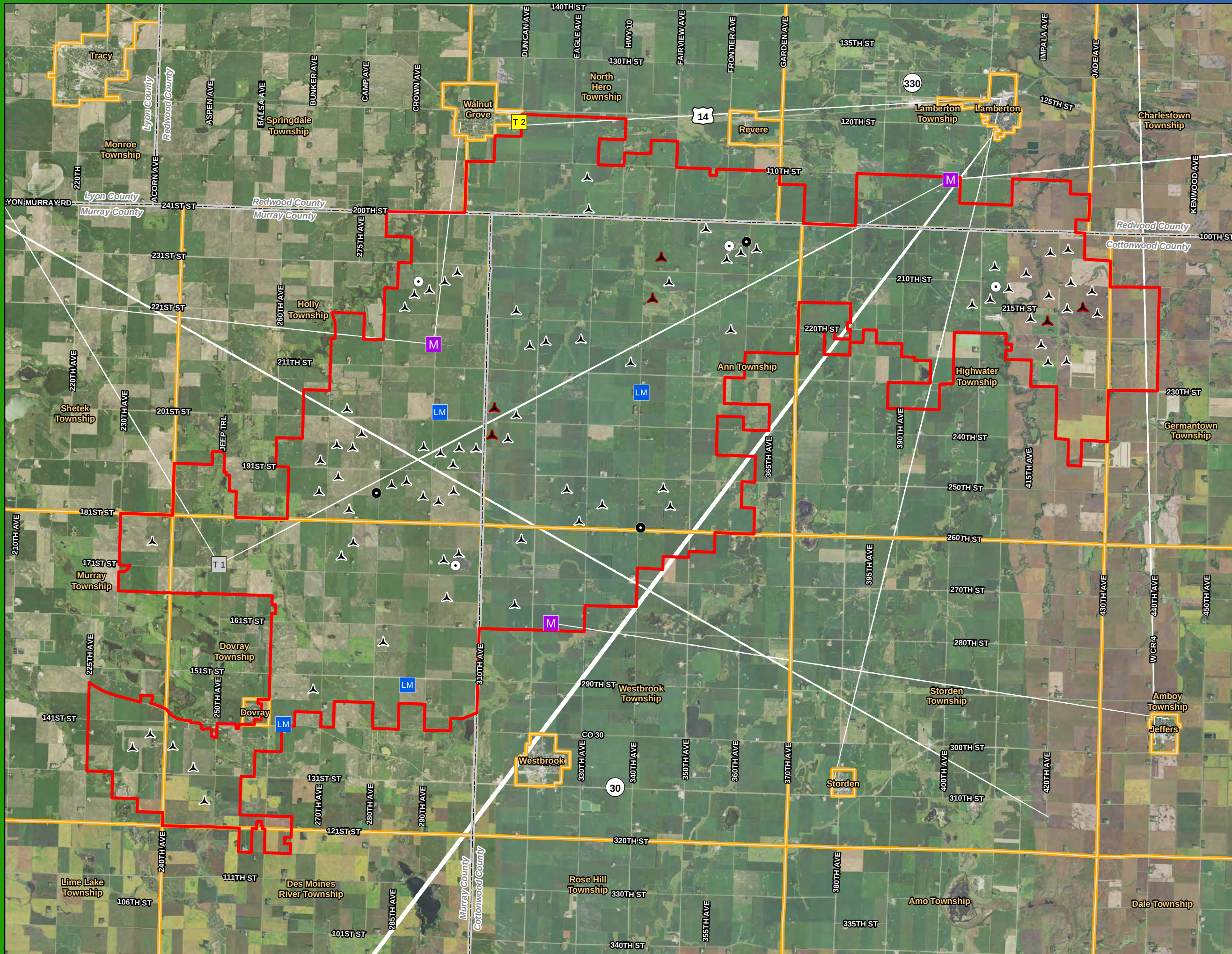
*Turbines not to scale

Figure 10a
Microwave Bream Path
GE 2.8-127

Plum Creek Wind Project

Redwood, Murray, and
Cottonwood Counties, MN





Service Layer Credits: MNGeo, FSA 2017
Data Source: Geronimo Energy, US Census

- ▲ V150/V162 Proposed Turbine (Primary)
 - ▲ V150/V162 Proposed Turbine (Alternate)
 - Permanent Met Tower
 - Temporary Met Tower
 - LM Land Mobile
 - M Microwave
- Tower**
- T 1 Microwave/Cellular
 - T 2 Microwave/Land Mobile
 - Project Area Boundary
 - Microwave Beam Path (Worst Case Freznl Zone)
 - City/Township
 - County Boundary

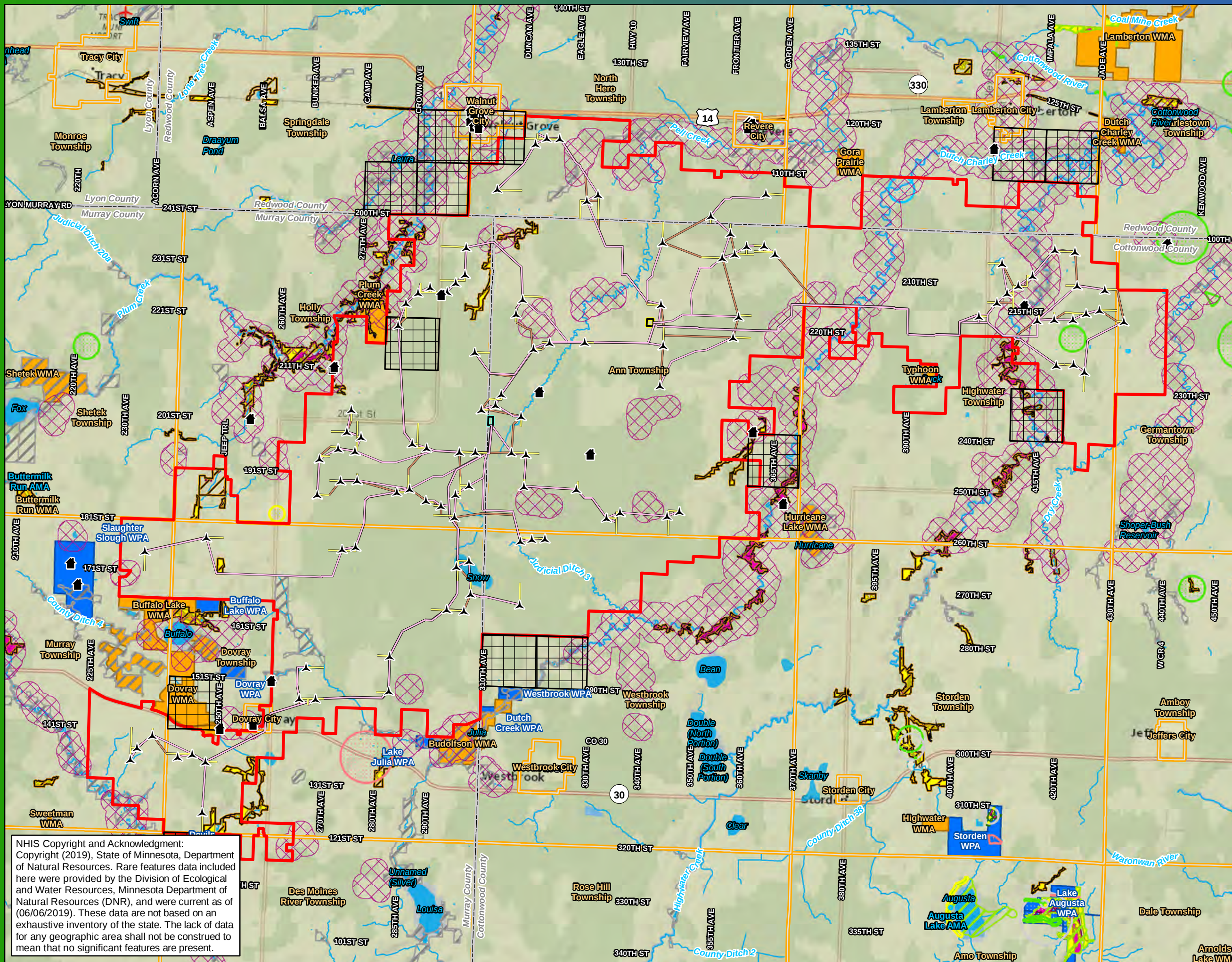
*Turbines not to scale

Figure 10b
Microwave Beam Path
Vestas V150/V162

Plum Creek Wind Project

Redwood, Murray, and
Cottonwood Counties, MN





Minnesota

Redwood County

Murray County

Cottonwood County

0 1 2

Miles

Service Layer Credits: National Geographic World Map

Data Source: Geronimo Energy, USGS, US Census, MDNR

- ▲ GE 2.8-127 Proposed Turbine
- Architectural/Historic Resource
- Access Road
- Collection Line
- Crane Path
- Collector Substation 1
- Collector Substation 2/ O&M Facility
- ▭ Project Area Boundary
- River/Stream
- Lake, Pond or Reservoir
- ▭ City/Township
- ▭ County Boundary
- ▭ Archaeological Site in Section
- ▭ NLEB Forested Areas - 1,000' Buffer
- ▭ Native Prairie
- ▭ Native Plant Community
- ▭ Wildlife Management Area (WMA)
- ▭ Waterfowl Production Area (WPA)
- ▭ Aquatic Management Area (AMA)

Sites of Biodiversity Significance

- ▭ Outstanding
- ▭ High
- ▭ Moderate
- ▭ Below

Natural Heritage Inventory System (NHIS)

- ▭ Endangered
- ▭ Threatened
- ▭ Special Concern
- ▭ Watchlist
- ▭ N/A

*Turbines not to scale

Figure 11a

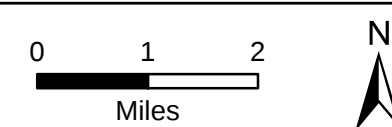
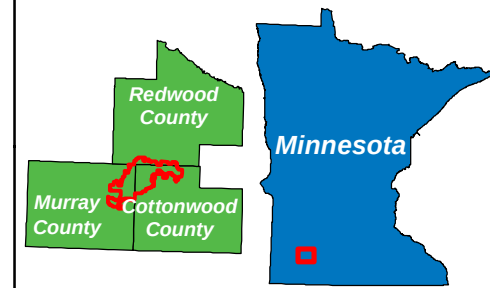
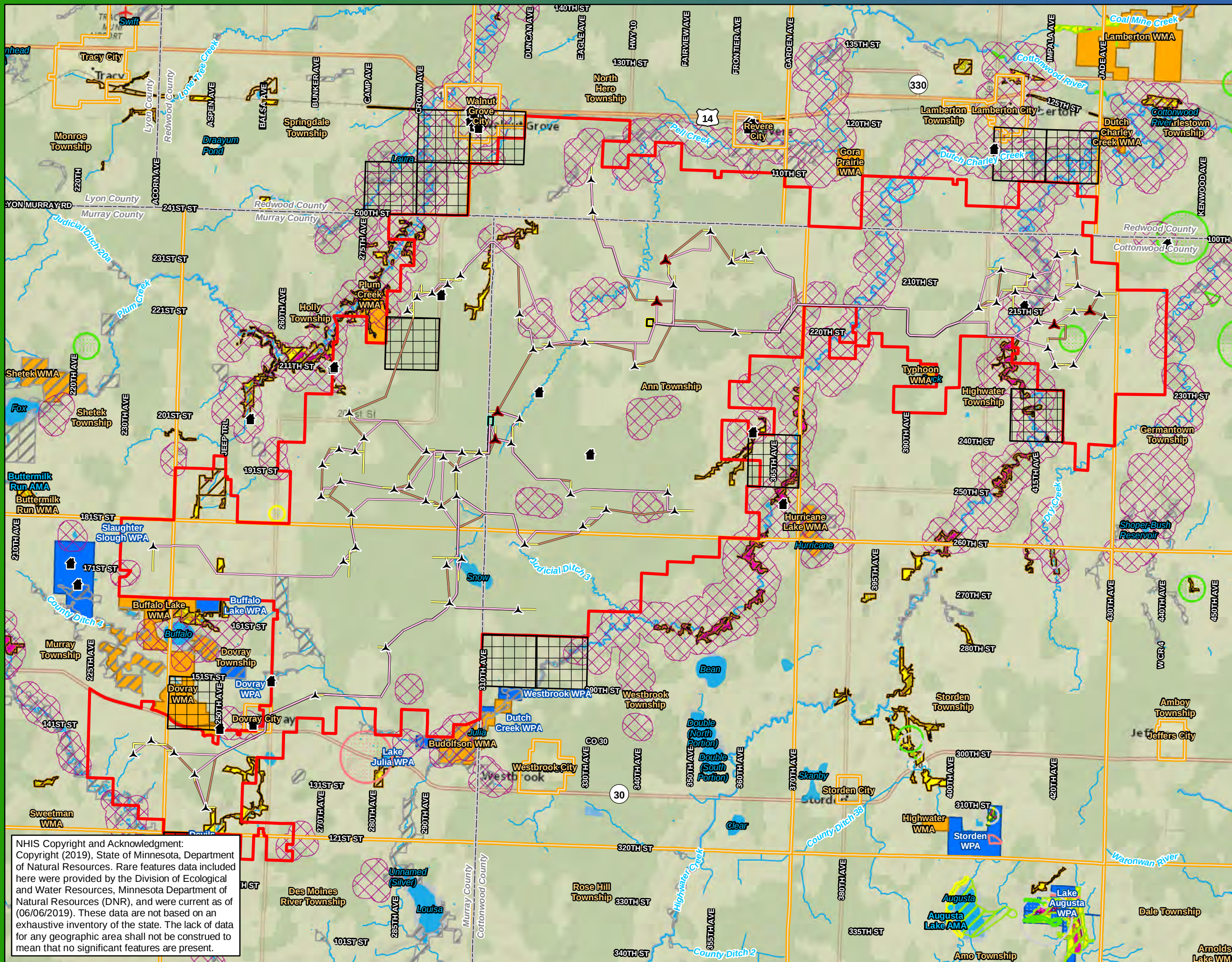
Unique Natural Features

GE 2.8-127

Plum Creek Wind Project

Redwood, Murray, and Cottonwood Counties, MN

NHIS Copyright and Acknowledgment:
Copyright (2019), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological and Water Resources, Minnesota Department of Natural Resources (DNR), and were current as of (06/06/2019). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.



Data Source: Geronimo Energy, USGS, US Census, MDNR
Service Layer Credits: National Geographic World Map

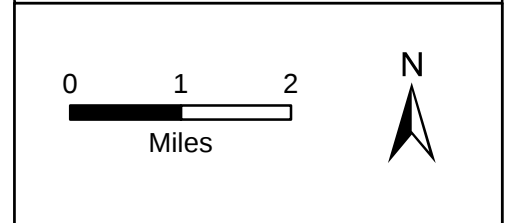
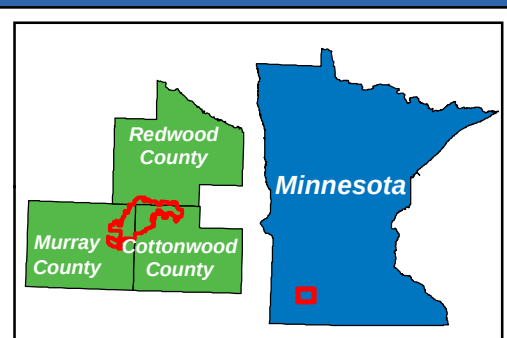
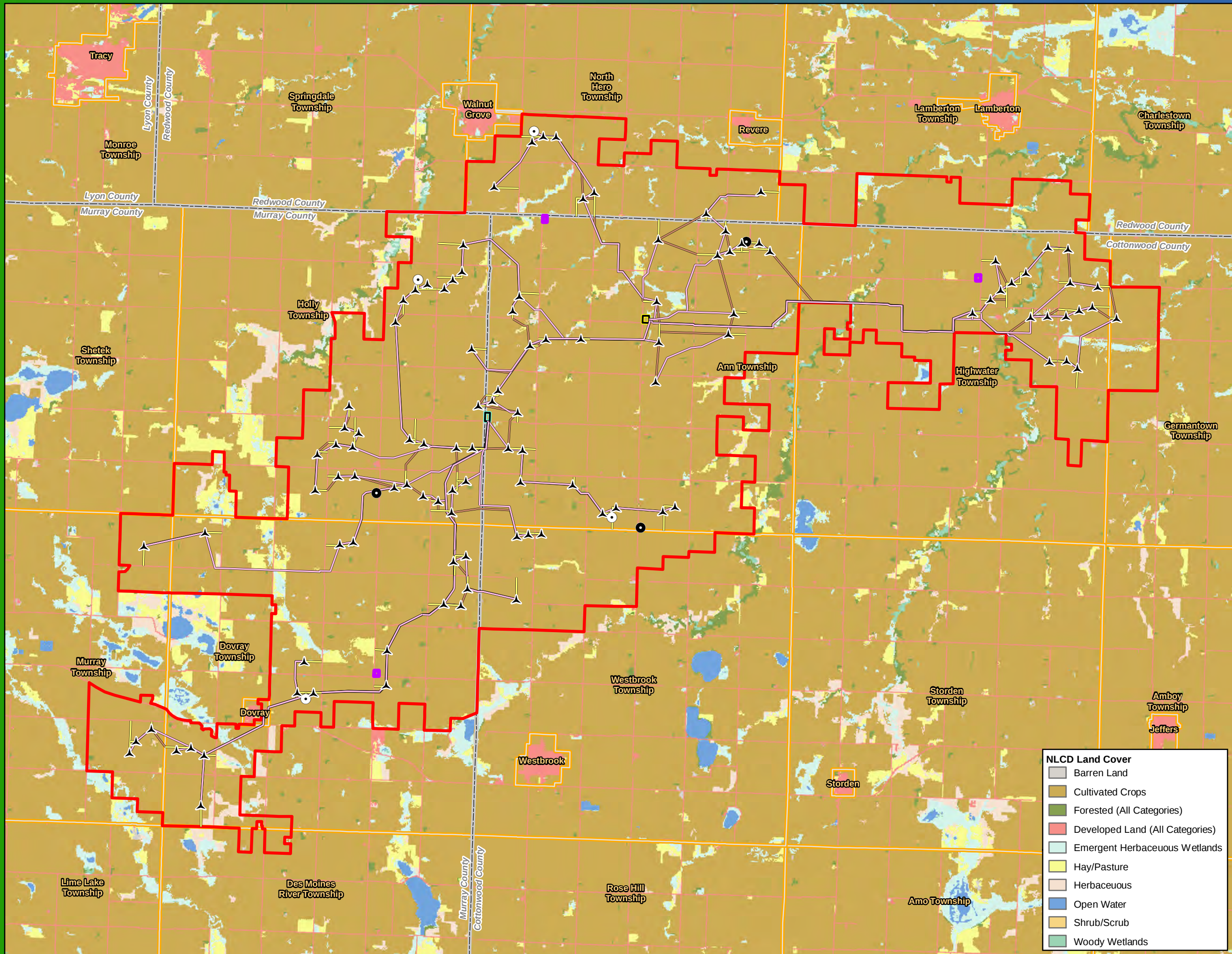
- ▲ V150/V162 Proposed Turbine (Primary)
 - ▲ V150/V162 Proposed Turbine (Alternate)
 - Architectural/Historic Resource
 - Access Road
 - Collection Line
 - Crane Path
 - Collector Substation 1
 - Collector Substation 2/O&M Facility
 - Project Area Boundary
 - River/Stream
 - Lake, Pond or Reservoir
 - City/Township
 - County Boundary
 - Archaeological Site in Section
 - NLEB Forested Areas - 1,000' Buffer
 - Native Prairie
 - Native Plant Community
 - Wildlife Management Area (WMA)
 - Waterfowl Production Area (WPA)
 - Aquatic Management Area (AMA)
 - Sites of Biodiversity Significance**
 - Outstanding
 - High
 - Moderate
 - Below
 - Natural Heritage Inventory System (NHIS)**
 - Endangered
 - Threatened
 - Special Concern
 - Watchlist
 - N/A
- *Turbines not to scale

Figure 11b
Unique Natural Features
Vestas V150/V162

Plum Creek Wind Project

Redwood, Murray, and
Cottonwood Counties, MN

NHIS Copyright and Acknowledgment:
Copyright (2019), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological and Water Resources, Minnesota Department of Natural Resources (DNR), and were current as of (06/06/2019). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.



Data Source: Geronimo Energy, US Census, NLCD

- ▲ GE 2.8-127 Proposed Turbine
- Temporary Met Tower
- Permanent Met Tower
- ▭ Project Area Boundary
- ▭ City/Township
- ▭ County Boundary
- Access Road
- Collection Line
- Crane Path
- ▭ Laydown Area
- ▭ Collector Substation 1
- ▭ Collector Substation 2/ O&M Facility

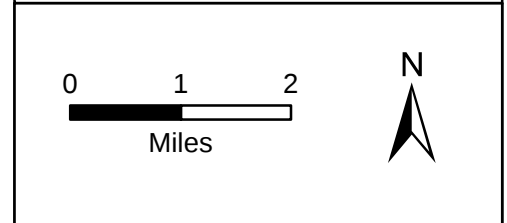
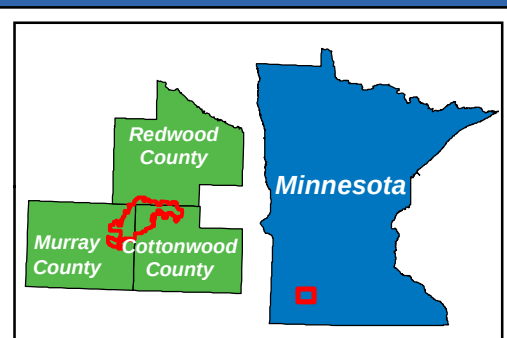
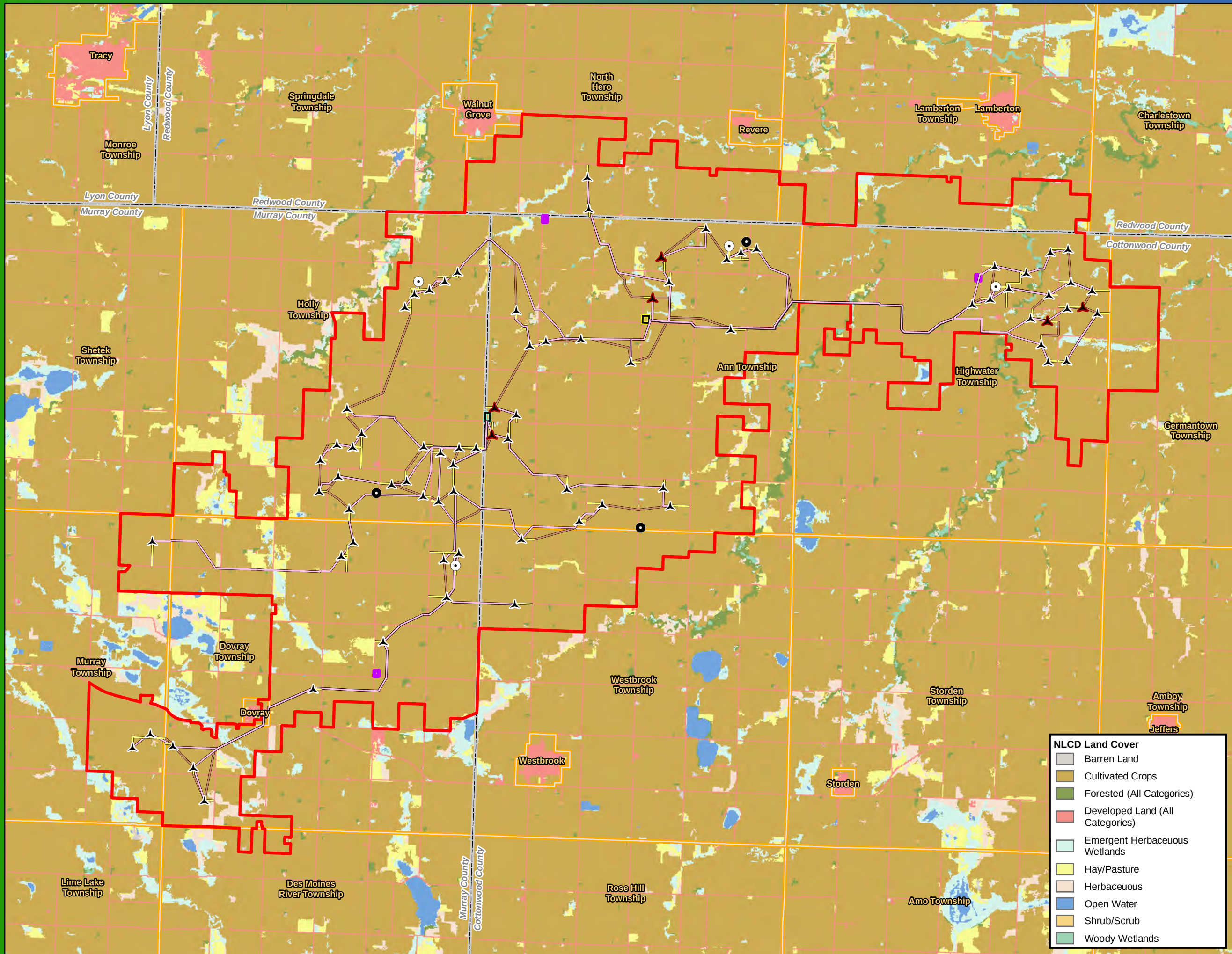
*Turbines not to scale

Figure 12a
Land Cover
GE 2.8-127

Plum Creek Wind Project
Redwood, Murray, and
Cottonwood Counties, MN



- NLCD Land Cover**
- Barren Land
 - Cultivated Crops
 - Forested (All Categories)
 - Developed Land (All Categories)
 - Emergent Herbaceous Wetlands
 - Hay/Pasture
 - Herbaceous
 - Open Water
 - Shrub/Scrub
 - Woody Wetlands



Data Source: Geronimo Energy, US Census, NLCD

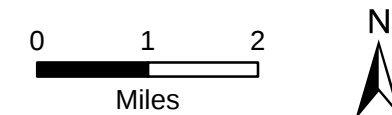
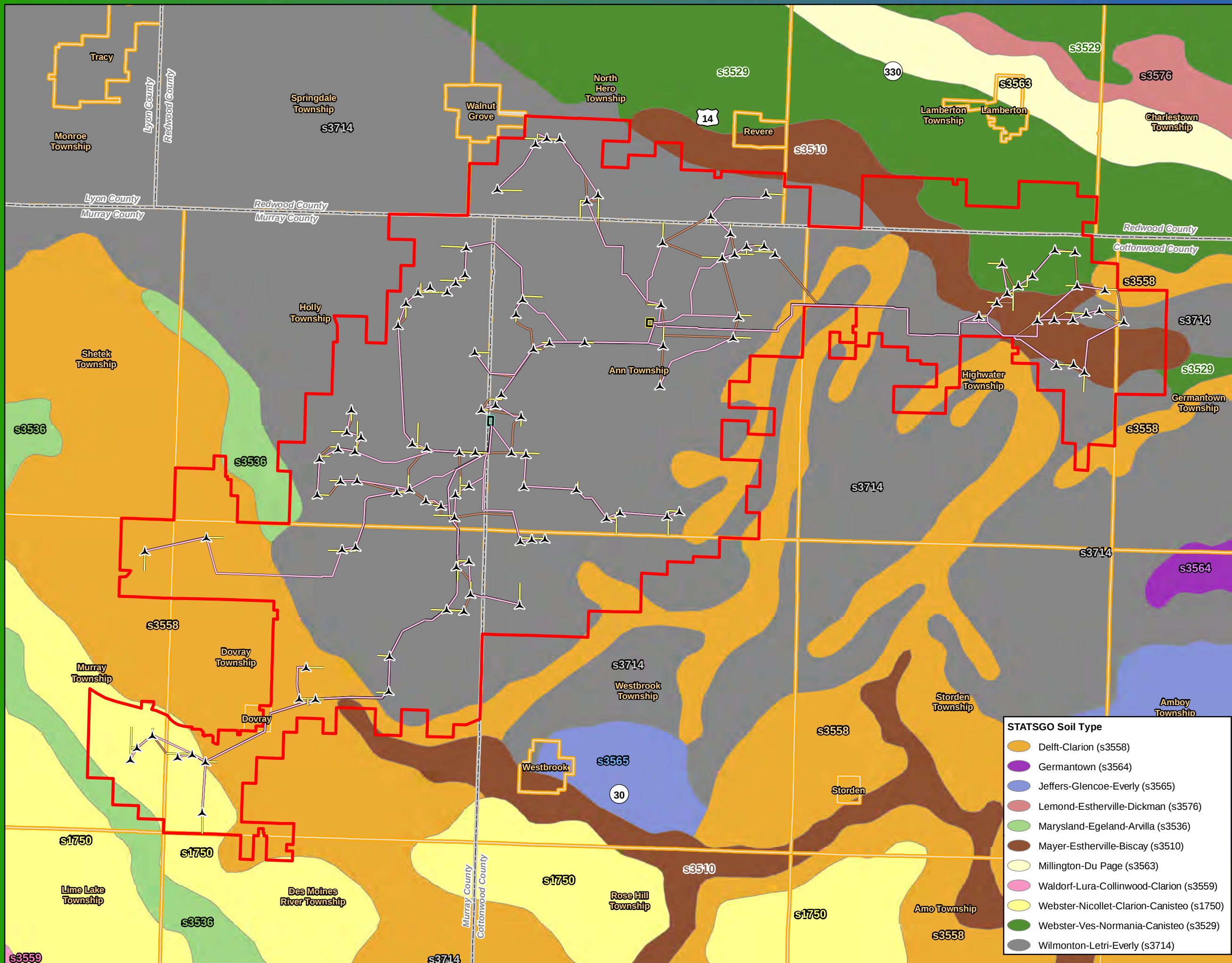
- V150/V162 Proposed Turbine (Primary)
 - V150/V162 Proposed Turbine (Alternate)
 - Temporary Met Tower
 - Permanent Met Tower
 - Project Area Boundary
 - City/Township
 - County Boundary
 - Access Road
 - Collection Line
 - Crane Path
 - Laydown Area
 - Collector Substation 1
 - Collector Substation 2/ O&M Facility
- *Turbines not to scale

Figure 12b
Land Cover
Vestas V150/V162

Plum Creek Wind Project

Redwood, Murray, and Cottonwood Counties, MN

- NLCD Land Cover**
- Barren Land
 - Cultivated Crops
 - Forested (All Categories)
 - Developed Land (All Categories)
 - Emergent Herbaceous Wetlands
 - Hay/Pasture
 - Herbaceous
 - Open Water
 - Shrub/Scrub
 - Woody Wetlands



Data Source: Geronimo Energy, US Census, STATSGO

- ▲ GE 2.8-127 Proposed Turbine
- Access Road
- Collection Line
- Crane Path
- Collector Substation 1
- Collector Substation 2/ O&M Facility
- ▭ Project Area Boundary
- ▭ City/Township
- ▭ County Boundary

*Turbings not to scale

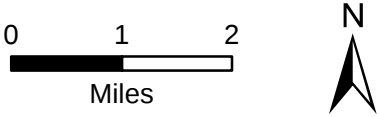
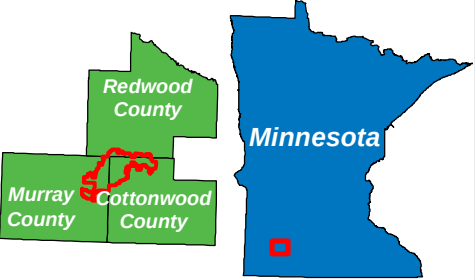
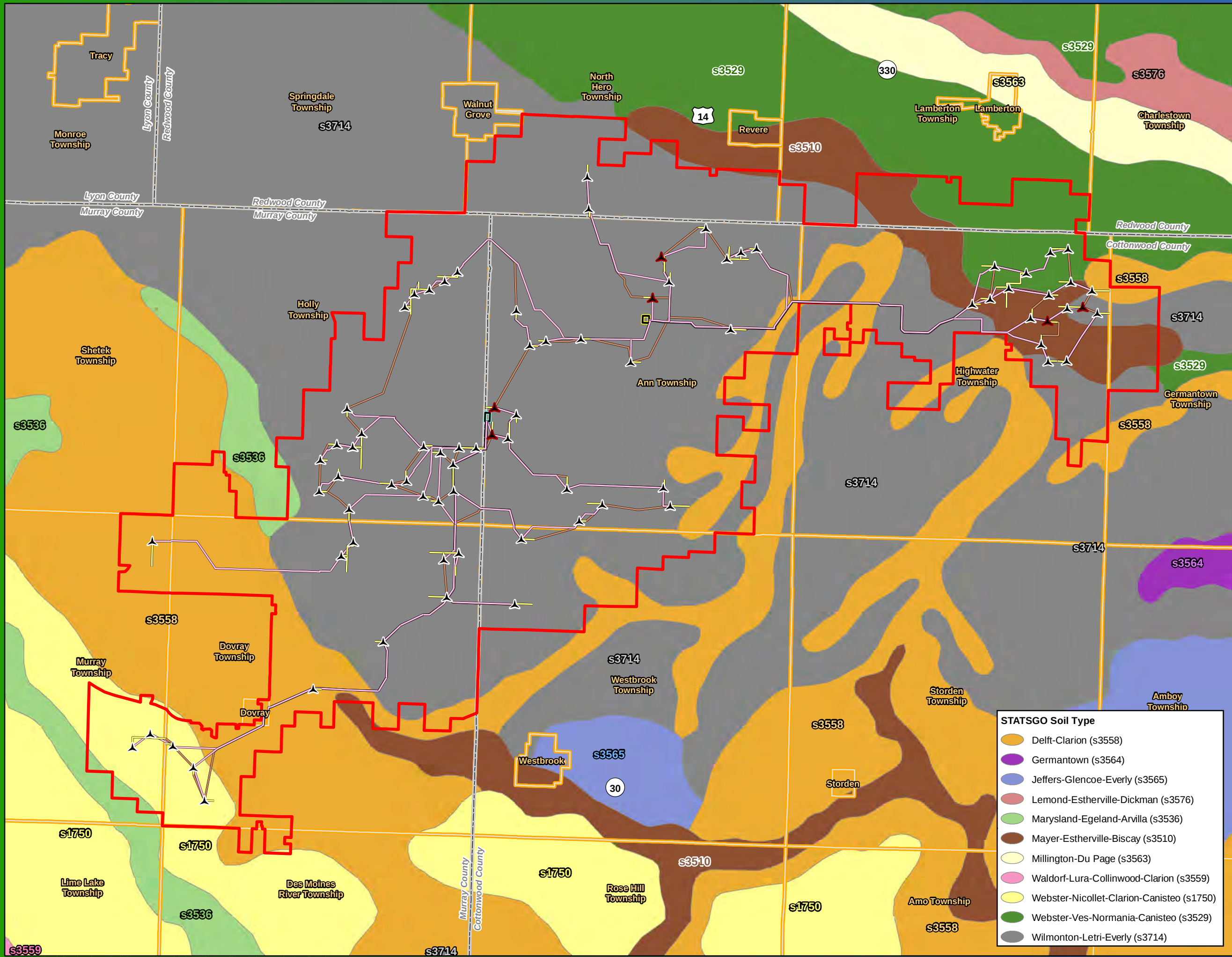
Figure 13a
Soils
GE 2.8-127

Plum Creek Wind Project

Redwood, Murray, and
Cottonwood Counties, MN



- STATSGO Soil Type**
- Delft-Clarion (s3558)
 - Germantown (s3564)
 - Jeffers-Glencoe-Everly (s3565)
 - Lemond-Estherville-Dickman (s3576)
 - Marysland-Egeland-Arvilla (s3536)
 - Mayer-Estherville-Biscay (s3510)
 - Millington-Du Page (s3563)
 - Waldorf-Lura-Collinwood-Clarion (s3559)
 - Webster-Nicollet-Clarion-Canisteo (s1750)
 - Webster-Ves-Normanica-Canisteo (s3529)
 - Wilmonton-Letri-Everly (s3714)



Data Source: Geronimo Energy, US Census, STATSGO

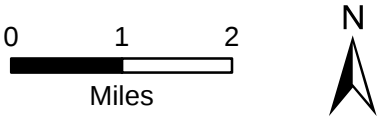
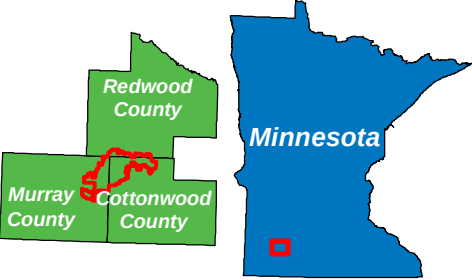
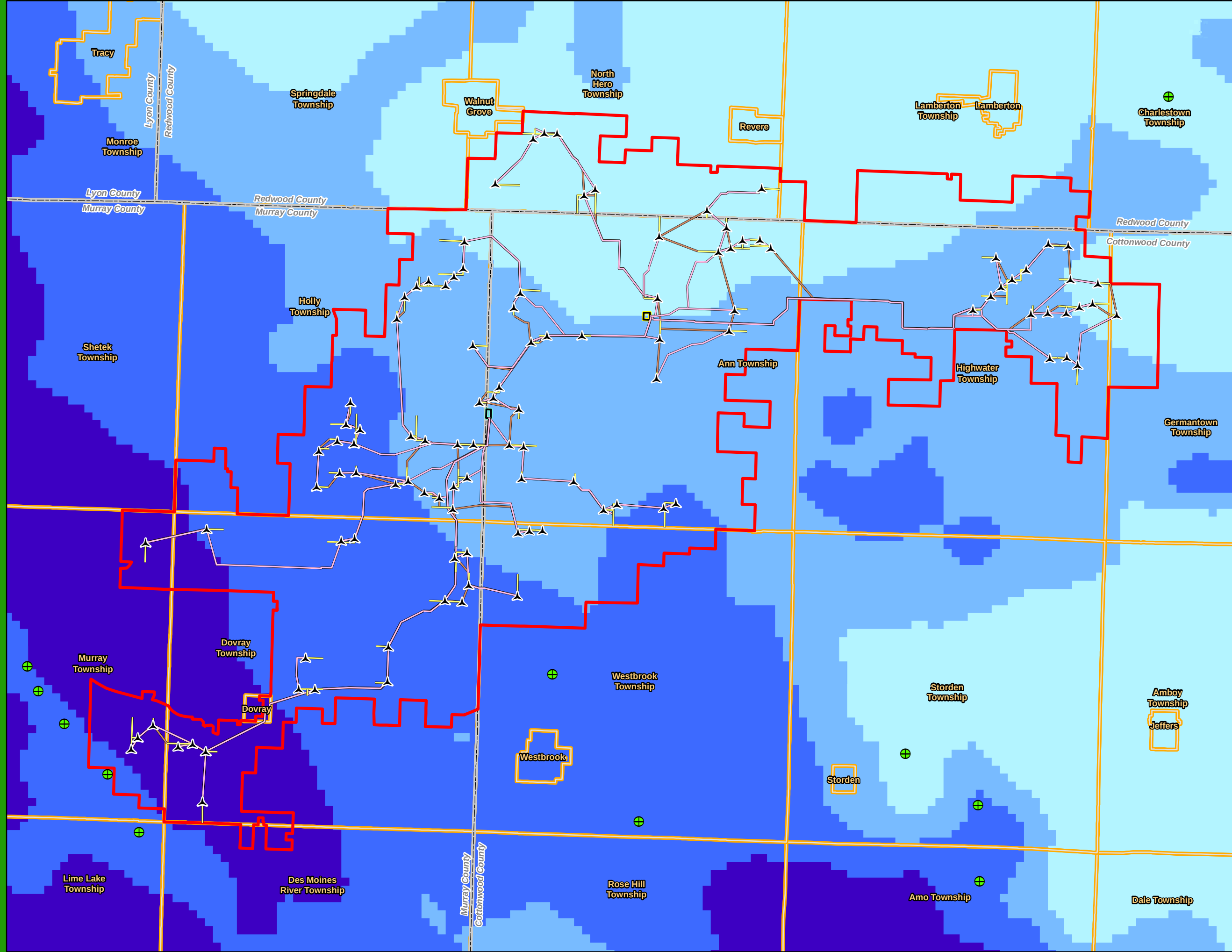
- ▲ V150/V162 Proposed Turbine (Primary)
- ▲ V150/V162 Proposed Turbine (Alternate)
- Access Road
- Collection Line
- Crane Path
- Collector Substation 1
- Collector Substation 2/ O&M Facility
- ▭ Project Area Boundary
- ▭ City/Township
- ▭ County Boundary

*Turbings not to scale

Figure 13b
Soils
Vestas V150/V162
Plum Creek Wind Project
Redwood, Murray, and
Cottonwood Counties, MN



- STATSGO Soil Type**
- Delft-Clarion (s3558)
 - Germantown (s3564)
 - Jeffers-Glencoe-Everly (s3565)
 - Lemond-Estherville-Dickman (s3576)
 - Marysland-Egeland-Arvilla (s3536)
 - Mayer-Estherville-Biscay (s3510)
 - Millington-Du Page (s3563)
 - Waldorf-Lura-Collinwood-Clarion (s3559)
 - Webster-Nicollet-Clarion-Canisteo (s1750)
 - Webster-Ves-Normanica-Canisteo (s3529)
 - Wilmonton-Letri-Everly (s3714)



Data Source: Geronimo Energy, US Census, MNGS, MNDOT

- ▲ GE 2.8-127 Proposed Turbine
- Gravel Pit (MnDOT & Verified on Imagery)
- Access Road
- Collection Line
- Crane Path
- Collector Substation 1
- Collector Substation 2/ O&M Facility
- ▭ Project Area Boundary
- ▭ City/Township
- ▭ County Boundary
- Depth to Bedrock (feet)**
 - 0 - 100
 - 100 - 200
 - 200 - 300
 - 300 - 400

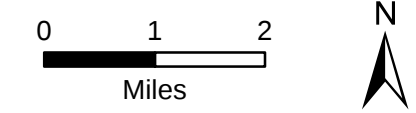
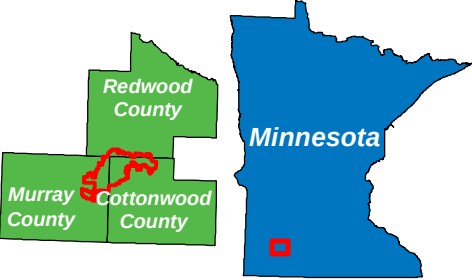
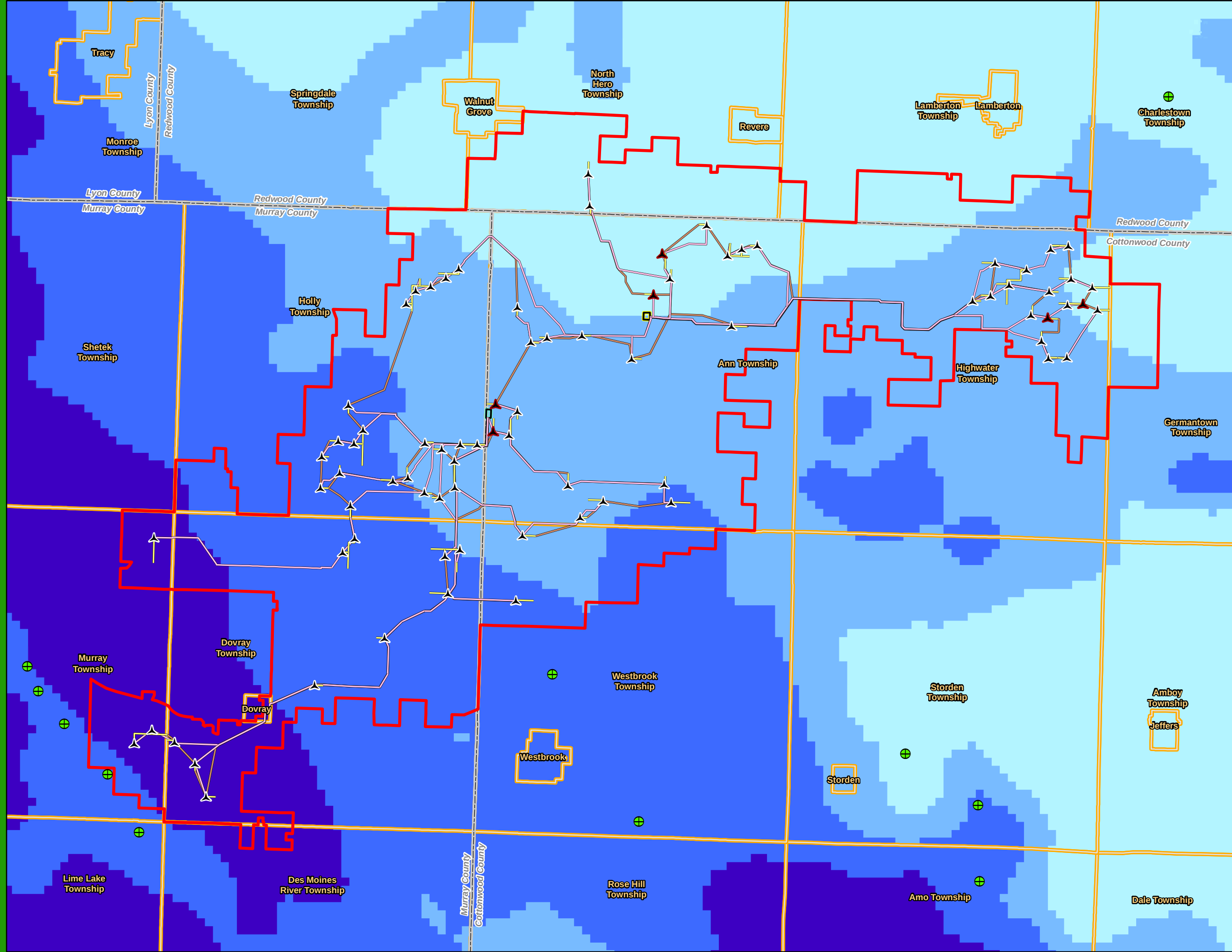
*Turbines not to scale

Figure 14a
Site Geology and
Depth to Bedrock
GE 2.8-127

Plum Creek Wind Project

Redwood, Murray, and
Cottonwood Counties, MN





Data Source: Geronimo Energy, US Census, MNGS, MNDOT

- ▲ V150/V162 Proposed Turbine (Primary)
- ▲ V150/V162 Proposed Turbine (Alternate)
- ⊕ Gravel Pit (MnDOT & Verified on Imagery)
- Access Road
- Collection Line
- Crane Path
- Collector Substation 1
- Collector Substation 2/ O&M Facility
- ▭ Project Area
- ▭ City/Township
- ▭ County Boundary
- Depth to Bedrock (feet)**
 - 0 - 100
 - 100 - 200
 - 200 - 300
 - 300 - 400

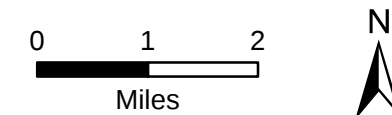
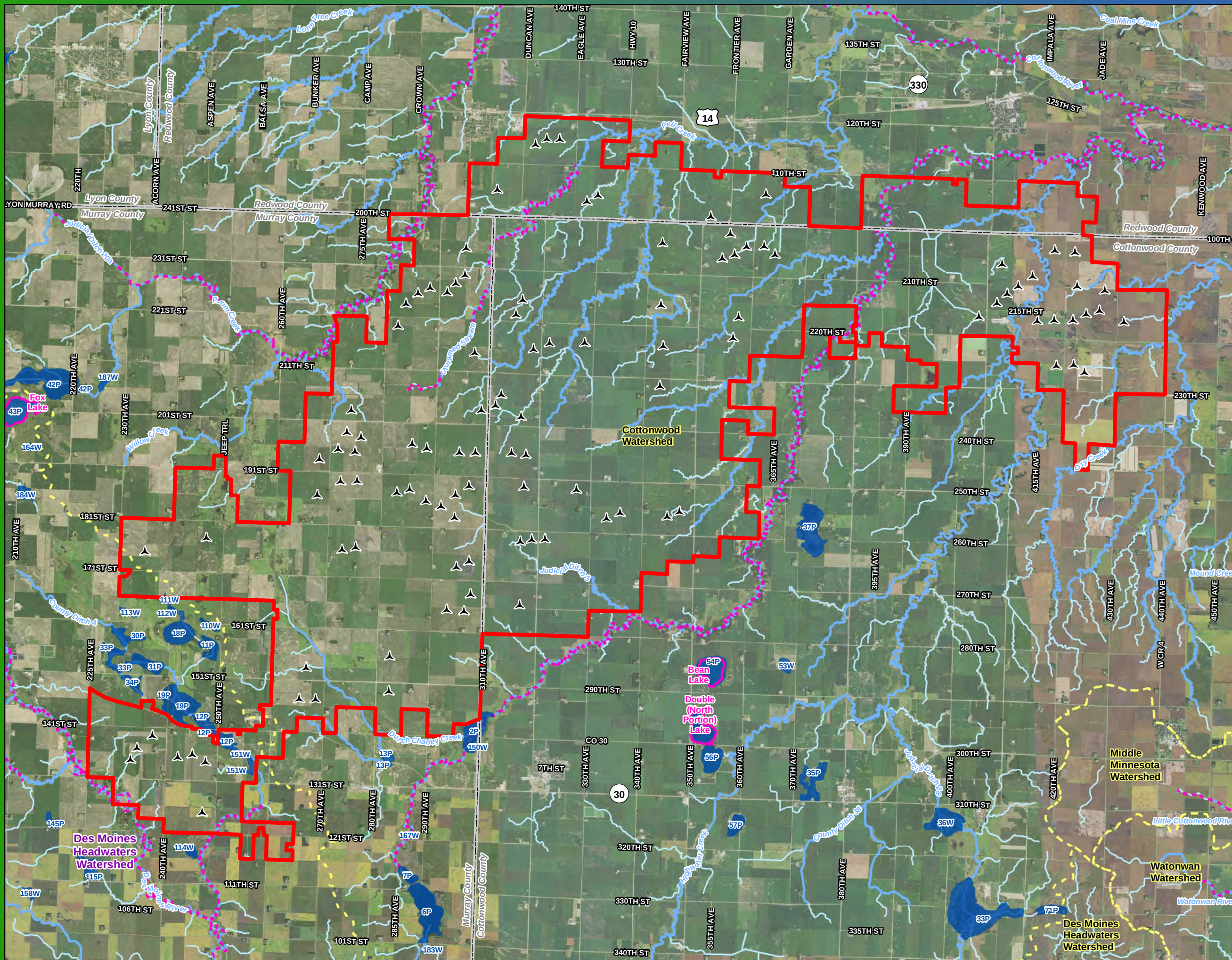
*Turbines not to scale

Figure 14b
Site Geology and
Depth to Bedrock
Vestas V150/V162

Plum Creek Wind Project

Redwood, Murray, and
Cottonwood Counties, MN

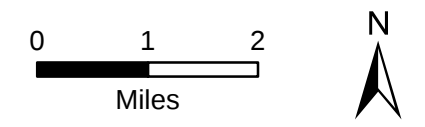
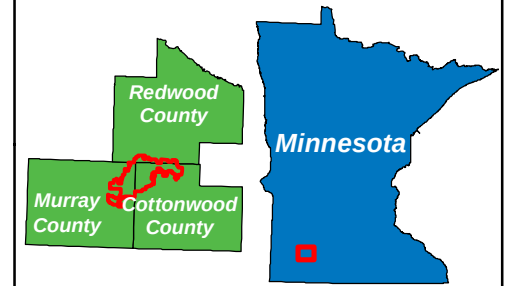
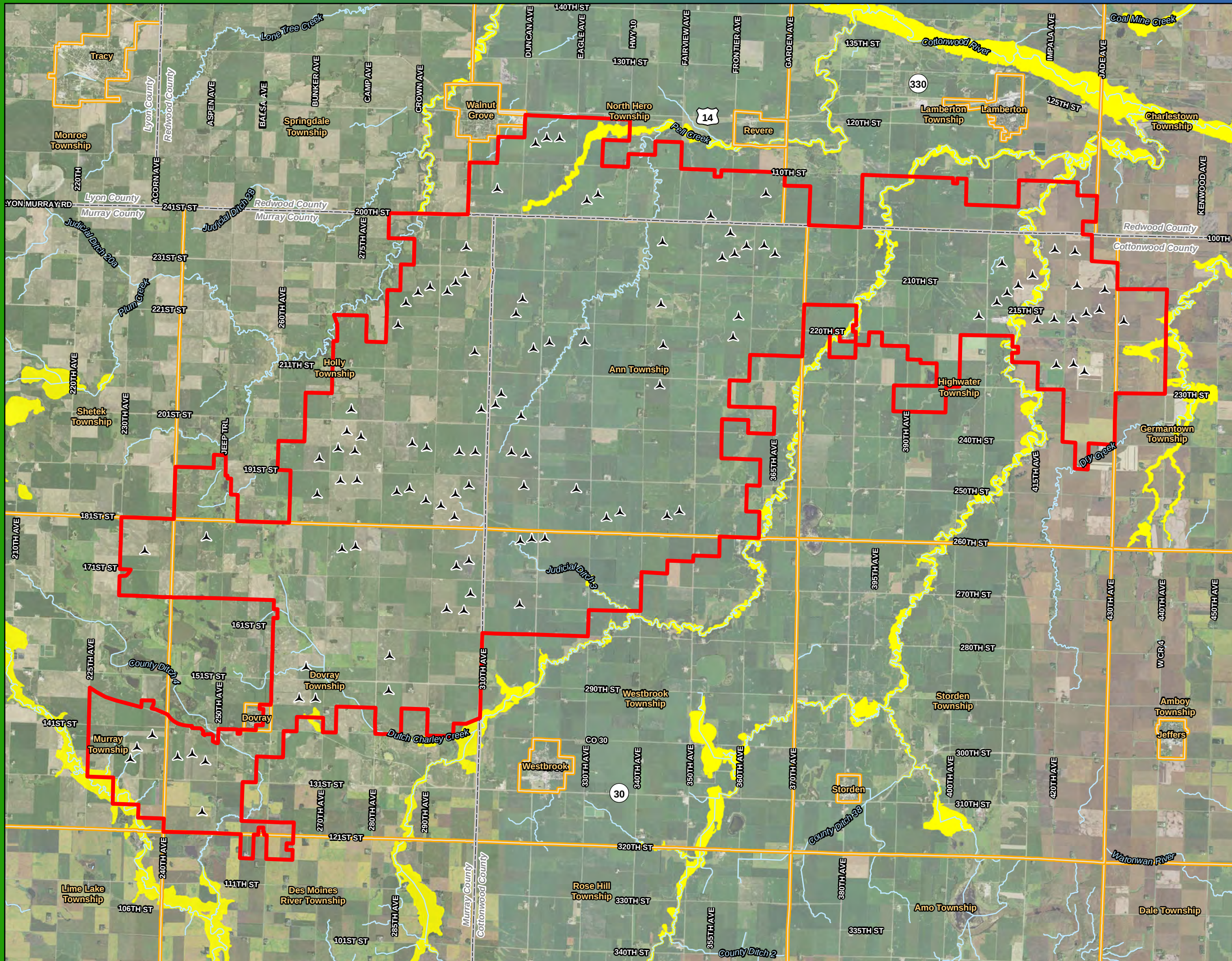




Service Layer Credits: MNGeo, FSA 2017
Data Source: Geronimo Energy, USGS, MDNR, MPCA

-  GE 2.8-127 Proposed Turbine
-  Project Area Boundary
-  County Boundary
-  Impaired Stream
-  Impaired Lake
-  24K Stream or Ditch
-  Public Water Watercourse
-  Public Water Basin/Wetland
-  HUC 8 Watershed

*Turbines not to scale



Service Layer Credits: MNGeo, FSA 2017
Data Source: Geronimo Energy, US Census, FEMA, MDNR

- ▲ GE 2.8-127 Proposed Turbine
- ▭ Project Area Boundary
- ▭ City/Township
- ▭ County Boundary
- ~ River/Stream
- 100 Year Floodplain

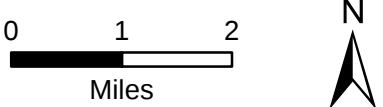
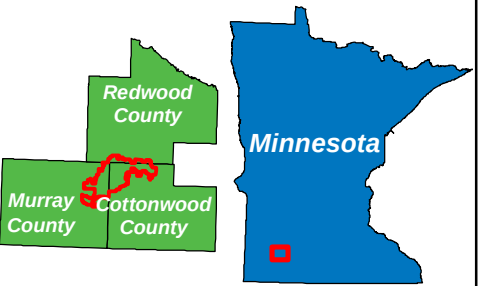
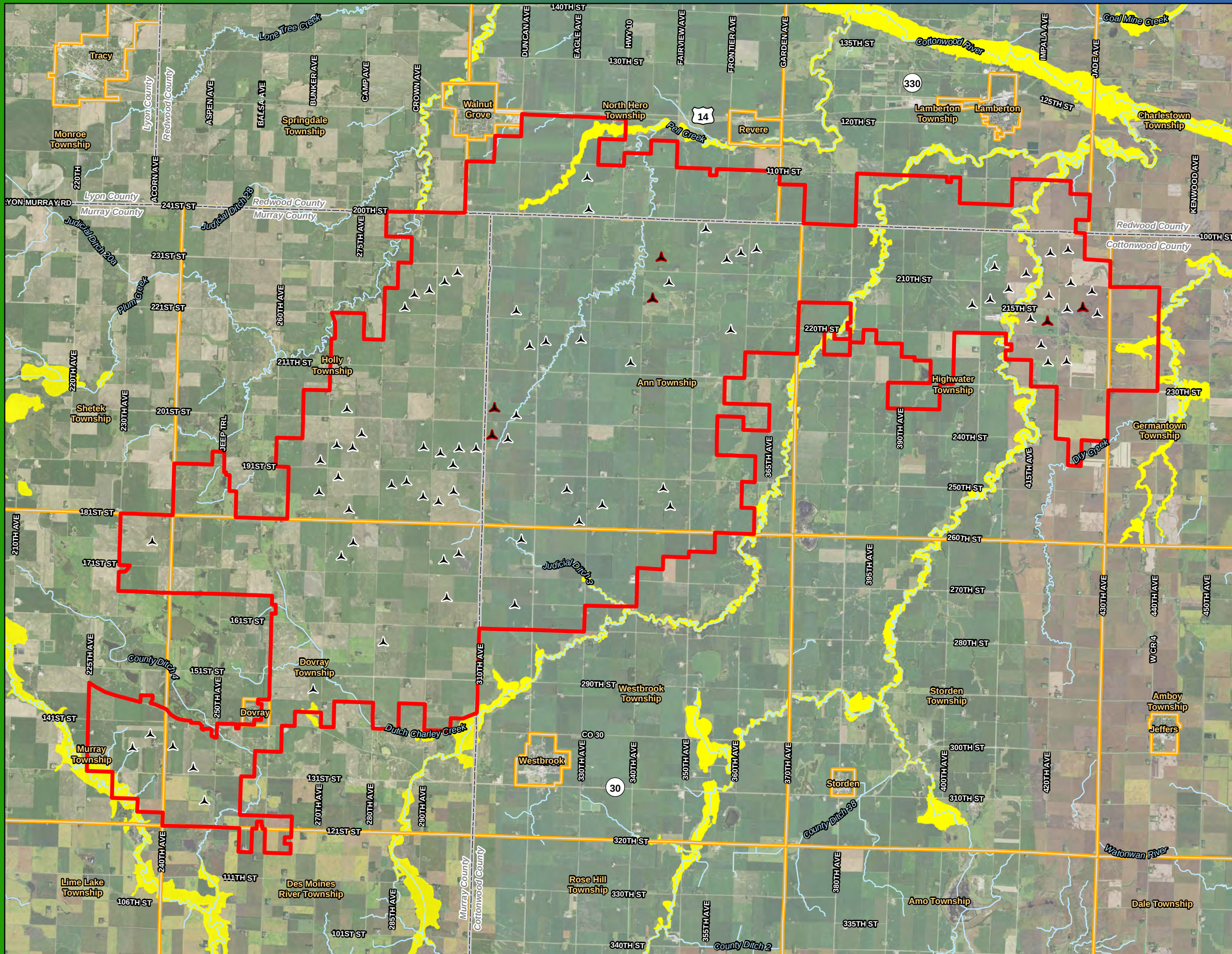
*Turbines not to scale

Figure 16a
FEMA Floodplain
GE 2.8-127

Plum Creek Wind Project

Redwood, Murray, and
Cottonwood Counties, MN





Service Layer Credits: MNGeo, FSA 2017
Data Source: Geronimo Energy, US Census, FEMA, MDNR

- ▲ V150/V162 Proposed Turbine (Primary)
- ▲ V150/V162 Proposed Turbine (Alternate)
- ▭ Project Area Boundary
- ▭ City/Township
- ▭ County Boundary
- ~ River/Stream
- 100 Year Floodplain

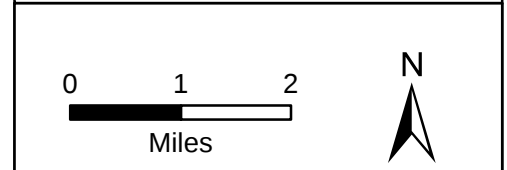
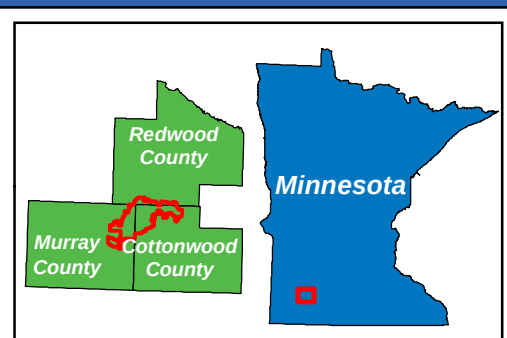
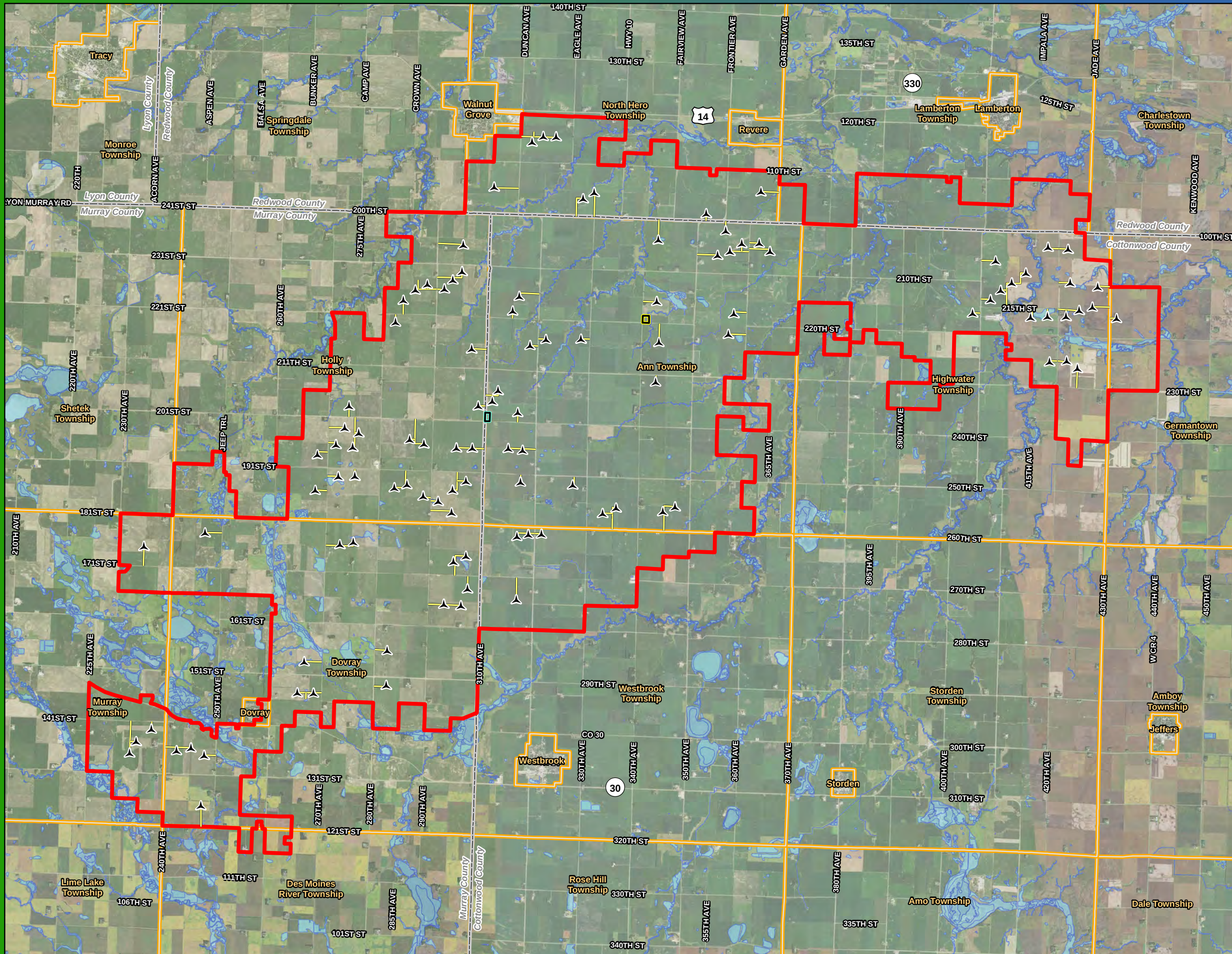
*Turbines not to scale

Figure 16b
FEMA Floodplain
Vestas V150/V162

Plum Creek Wind Project

Redwood, Murray, and
Cottonwood Counties, MN





Service Layer Credits: MNGeo, FSA 2017
Data Source: Geronimo Energy, US Census, MDNR, USFWS

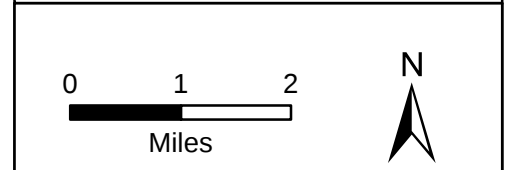
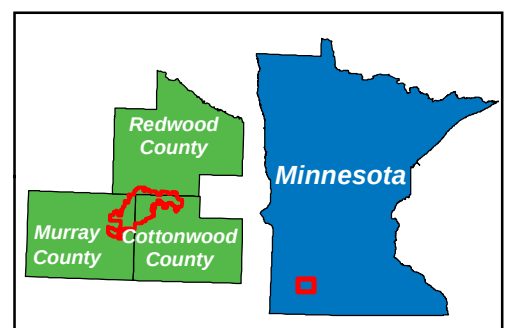
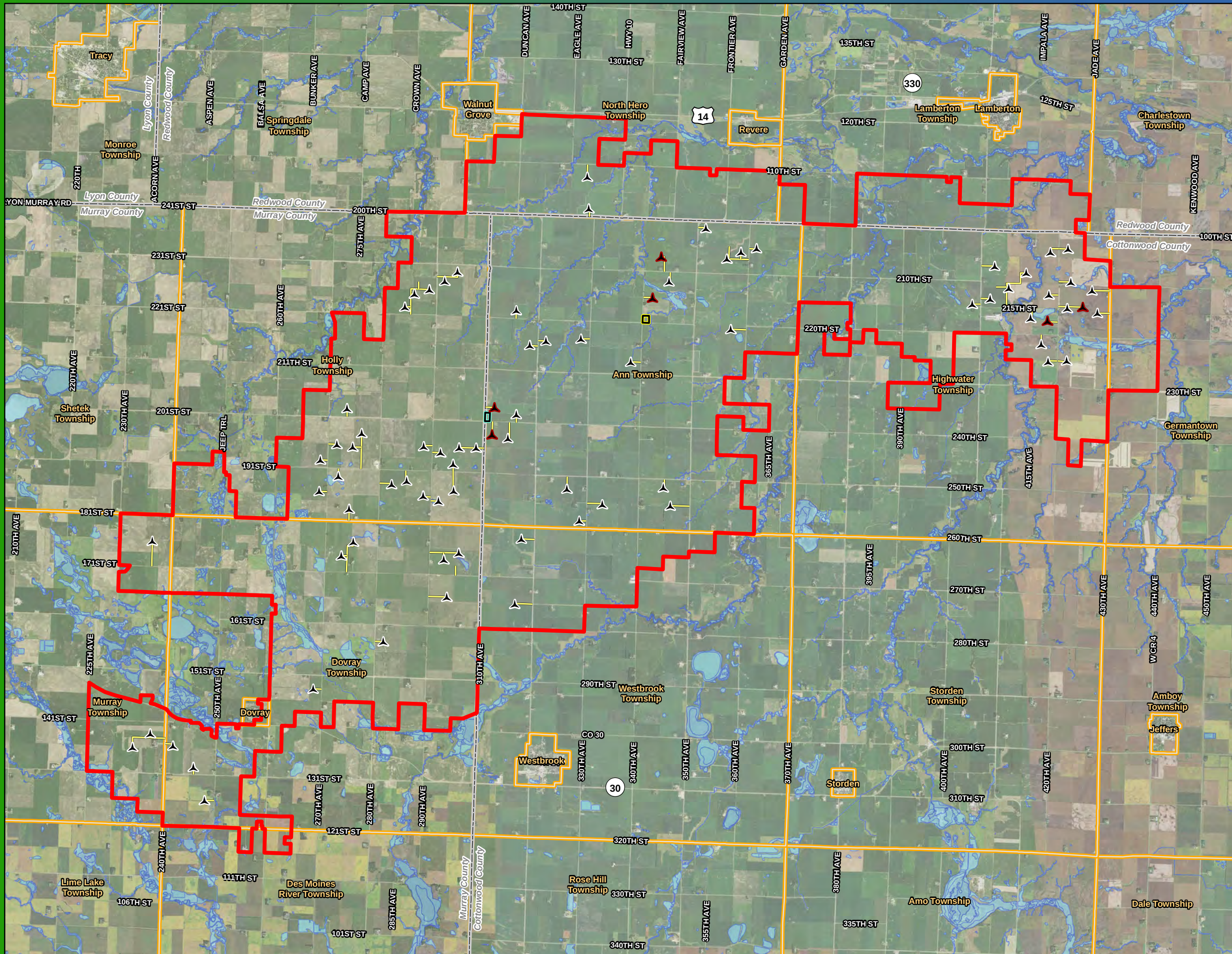
- ▲ GE 2.8-127 Proposed Turbine
- Access Road
- Collector Substation 1
- Collector Substation 2/
O&M Facility
- ▭ Project Area Boundary
- ▭ City/Township
- ▭ County Boundary
- NWI (MNDNR Update)

*Turbines not to scale

Figure 17a
Wetlands Inventory
GE 2.8-127

Plum Creek Wind Project
Redwood, Murray, and
Cottonwood Counties, MN





Service Layer Credits: MNGeo, FSA 2017
Data Source: Geronimo Energy, US Census, MDNR, USFWS

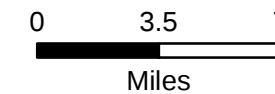
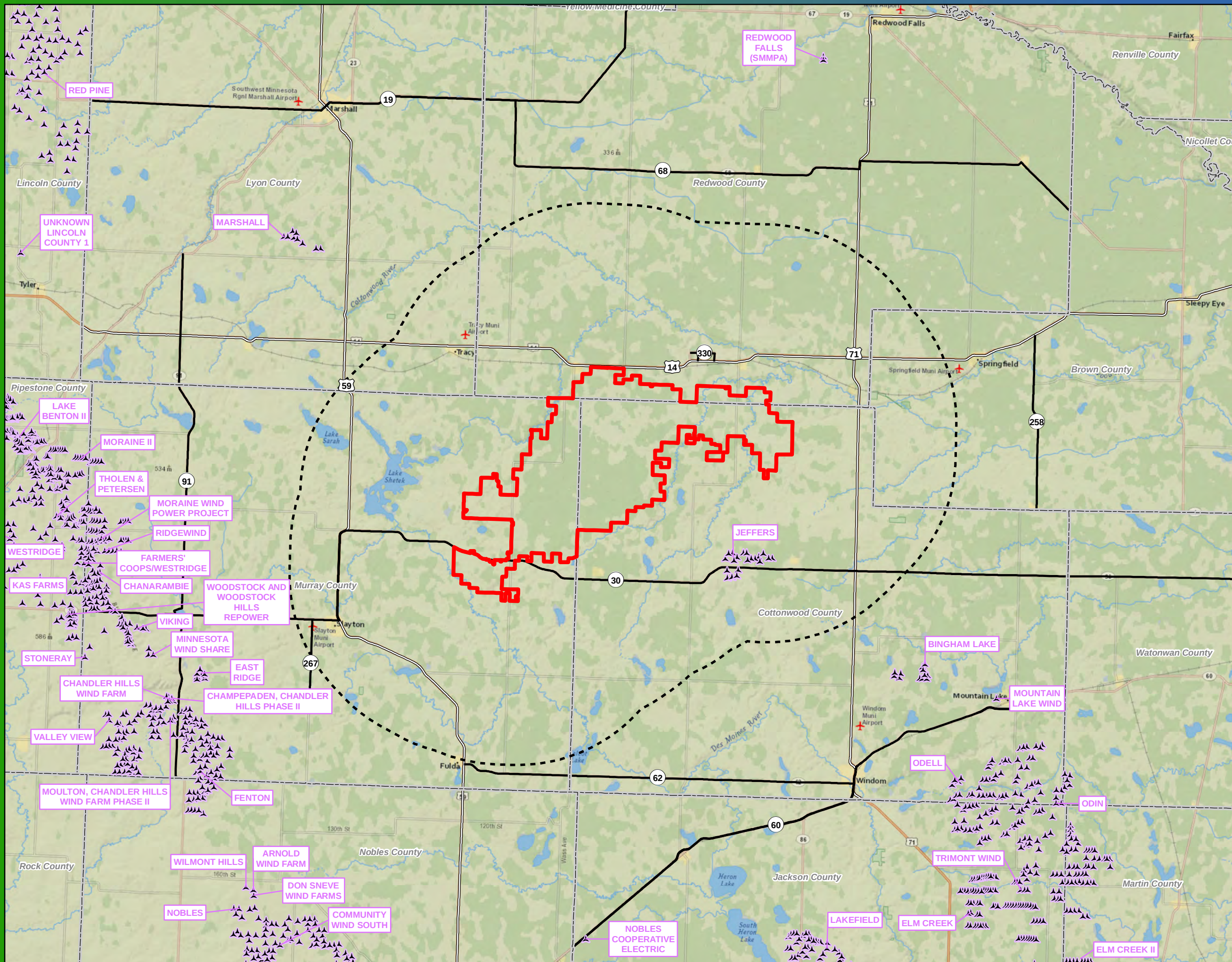
- V150/V162 Proposed Turbine (Primary)
 - V150/V162 Proposed Turbine (Alternate)
 - Access Road
 - Collector Substation 1
 - Collector Substation 2/ O&M Facility
 - Project Area Boundary
 - City/Township
 - County Boundary
 - NWI (MNDNR Update)
- *Turbines not to scale

Figure 17b
Wetlands Inventory
Vestas V150/V162

Plum Creek Wind Project

Redwood, Murray, and
Cottonwood Counties, MN





Service Layer Credits: MNGeo, FSA 2017
Data Source: Geronimo Energy, USGS, US Census

- Existing Turbine
- 10-Mile Buffer
- Project Area Boundary
- County Boundary

*Turbines not to scale

Figure 18
Existing Turbine Locations
Plum Creek Wind Project
Redwood, Murray, and
Cottonwood Counties, MN

