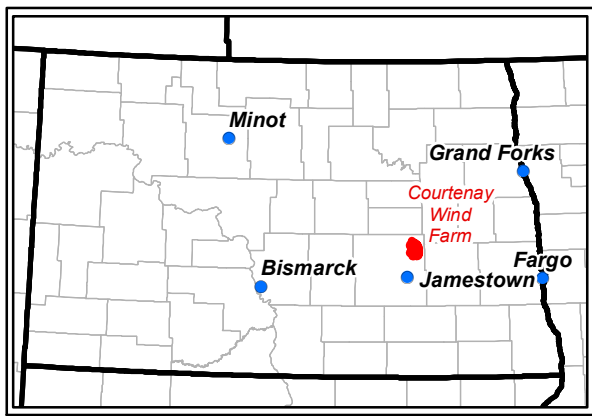
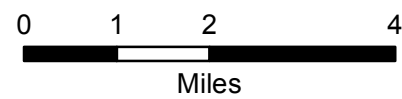


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- Study Area
- Project Area
- County



Source: NGS USA Topo (2011), Ventyx, ESRI et al: World Transportation (2012)

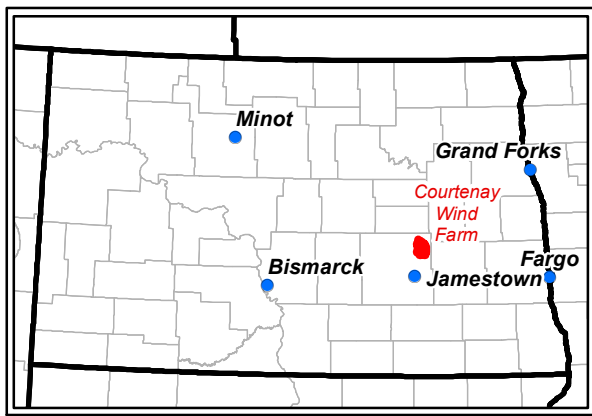
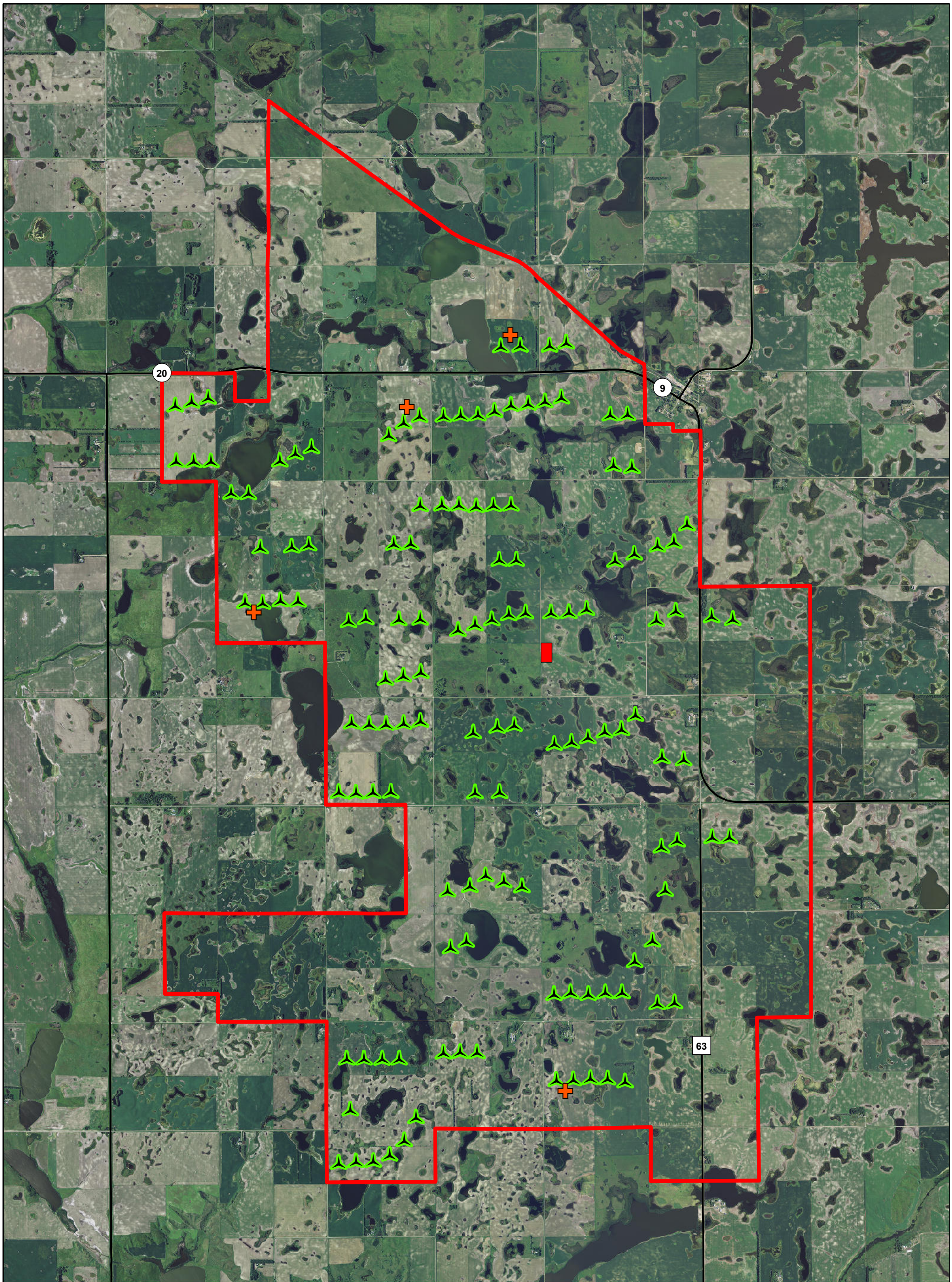


Stutsman County, ND

FIGURE 1
Project Vicinity

Courtenay Wind Farm
Stutsman County, North Dakota





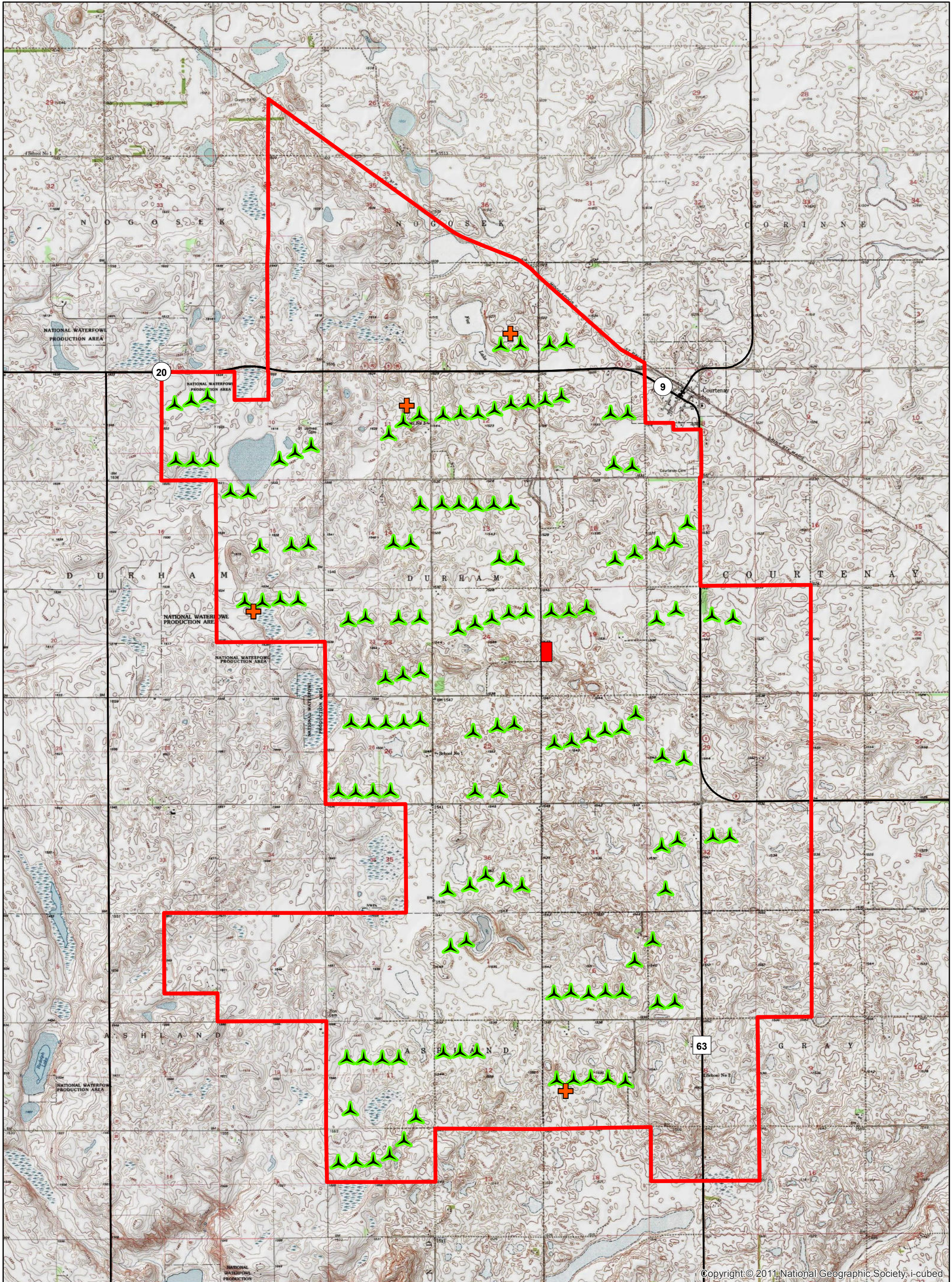
- Project Area
 - + Permanent Met Towers
 - Proposed Substation
 - ^ Preliminary Turbine Layout
- 0 0.5 1 2
Miles

Source: USDA NAIP (2010), ESRI et al:
World Transportation (2012), Vyntex

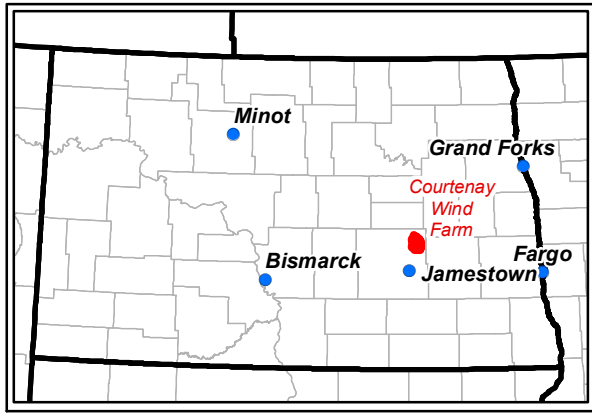


FIGURE 2
Project Location Map
(Aerial)

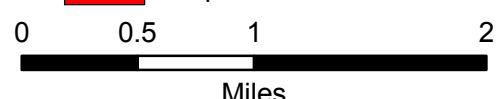
Courtenay Wind Farm
Stutsman County, North Dakota



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- Project Area
- + Permanent Met Towers
- ▲ Preliminary Turbine Layout
- Proposed Substation



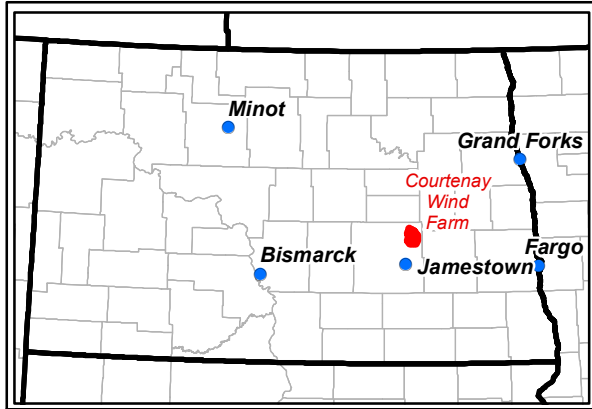
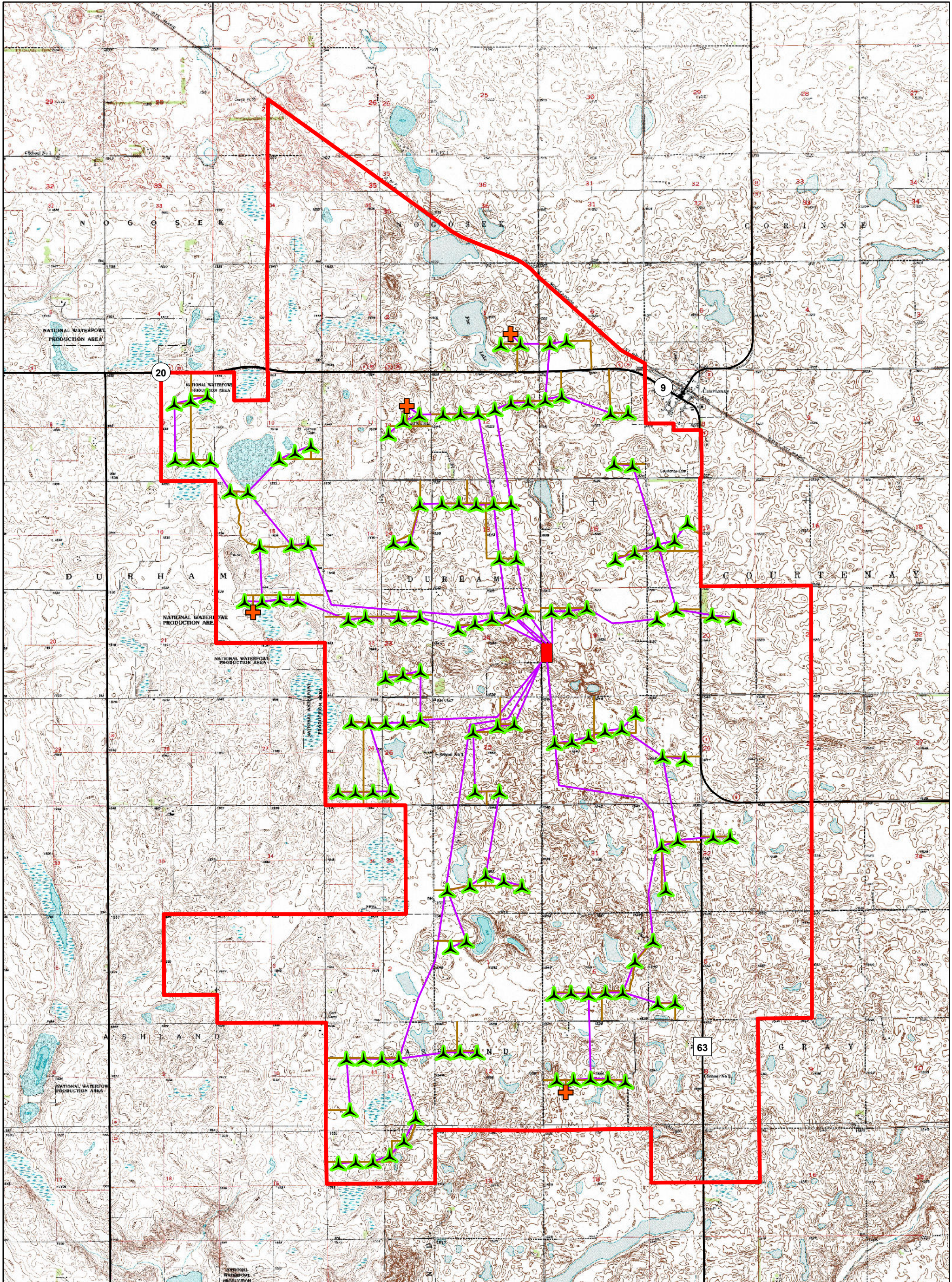
Source: NGS USA Topo (2011), Ventyx, ESRI et al: World Transportation (2012)









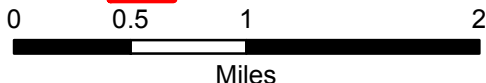
FIGURE 3
Project Location Map
(Topographic)

Courtenay Wind Farm
Stutsman County, North Dakota





-  Permanent Met Towers
-  Preliminary Turbine Layout
-  Access Roads
-  Collector Lines
-  Proposed Substation
-  Project Area



Source: NGS USA Topo (2011), Ventyx, ESRI et al: World Transportation (2012)

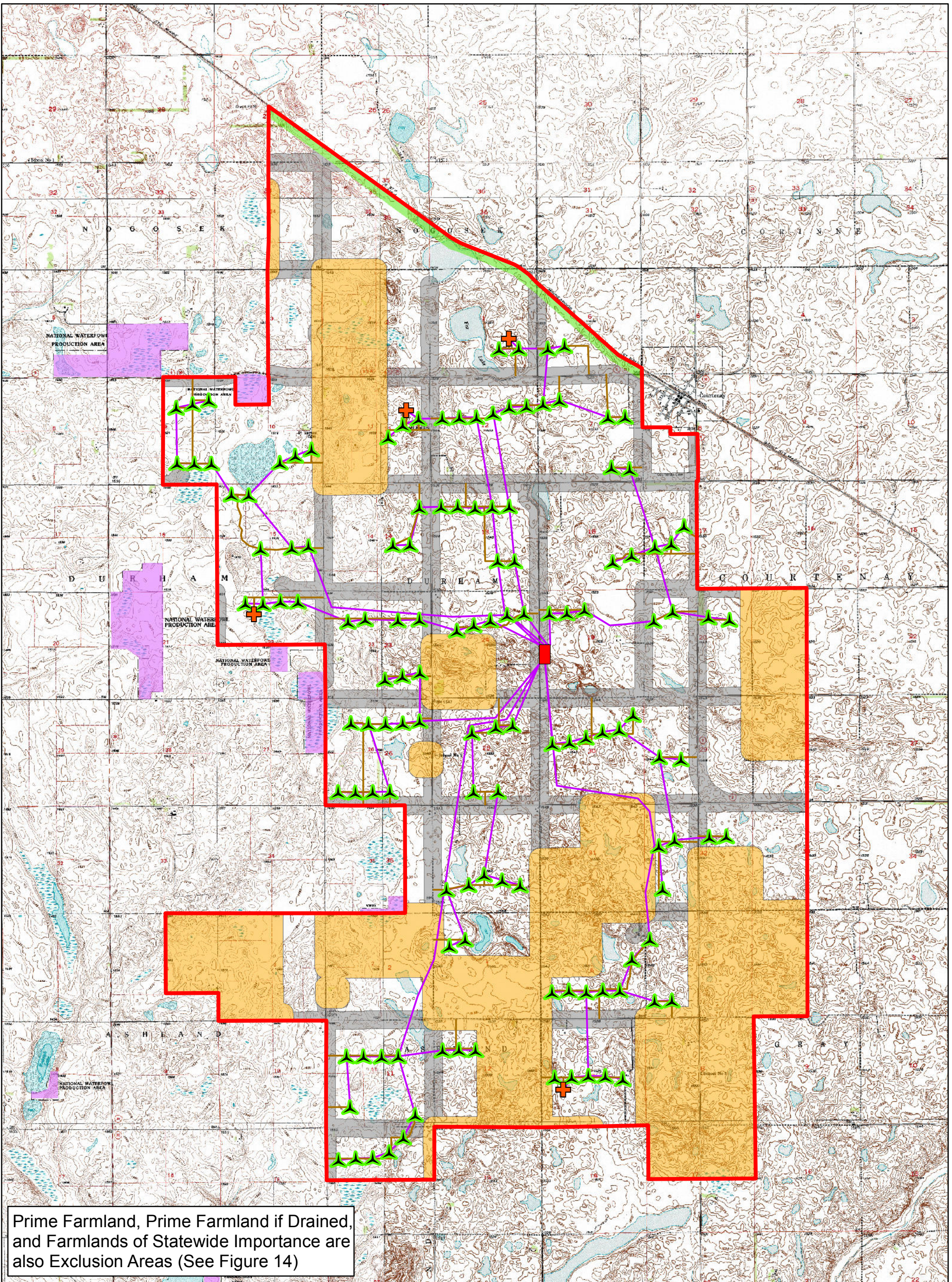



Stutsman County, ND

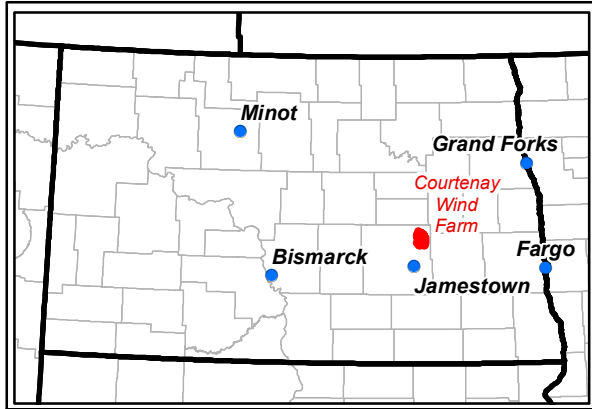
FIGURE 4
Preliminary Turbine Locations,
Access Roads, Collector Lines

Courtenay Wind Farm
 Stutsman County, North Dakota

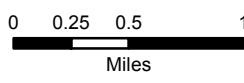




Prime Farmland, Prime Farmland if Drained, and Farmlands of Statewide Importance are also Exclusion Areas (See Figure 14)



- Project Area
- + Permanent Met Towers
- Proposed Substation
- ▲ Preliminary Turbine Layout
- Collector Lines
- Waterfowl Production Area
- Railroad Setback (438')
- Non-Participating Parcel Setback (542')
- Roads Setback (438')
- Access Roads



Source: USGS, Ventyx, Geronimo Energy

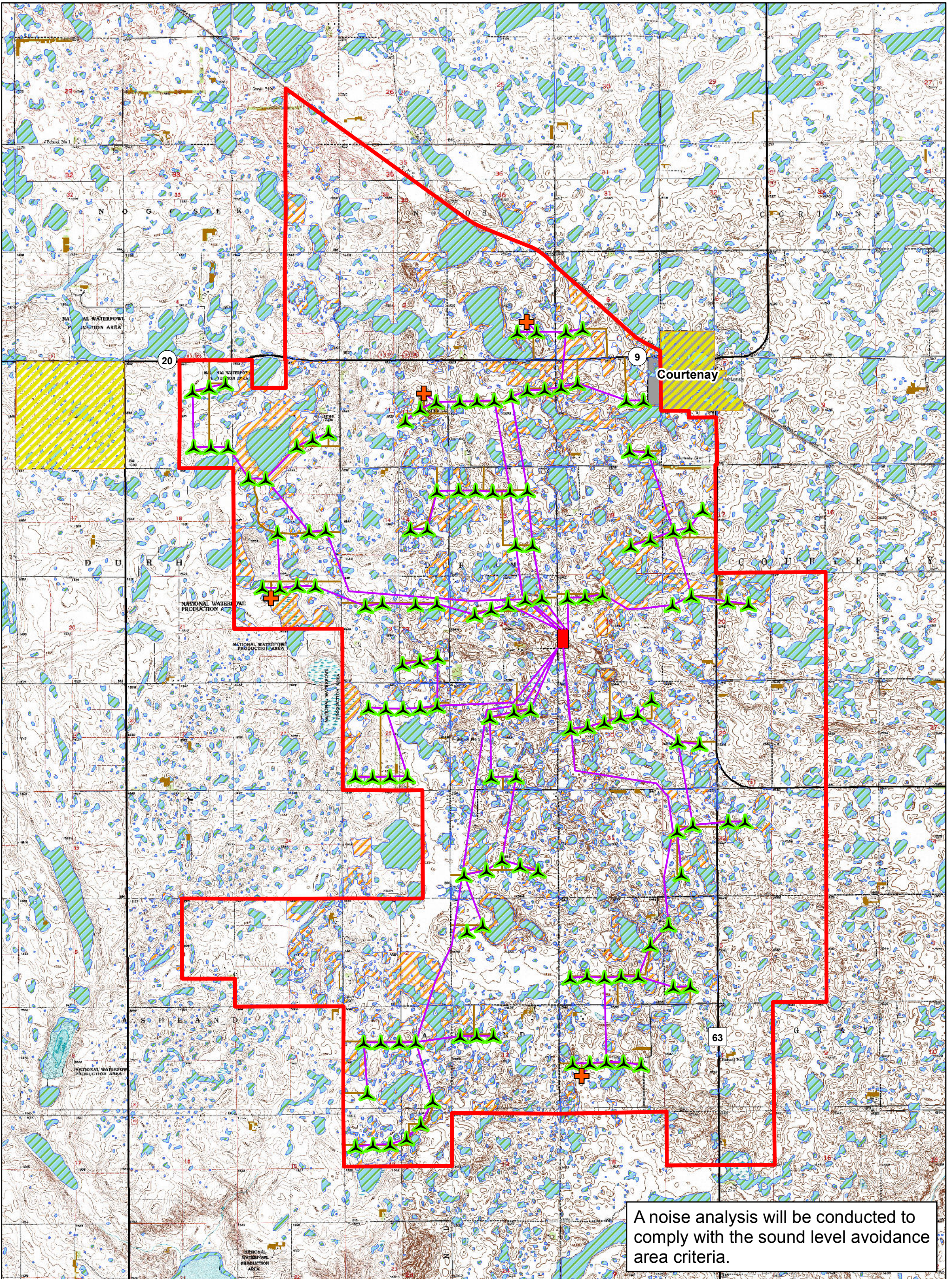


Stutsman County, ND

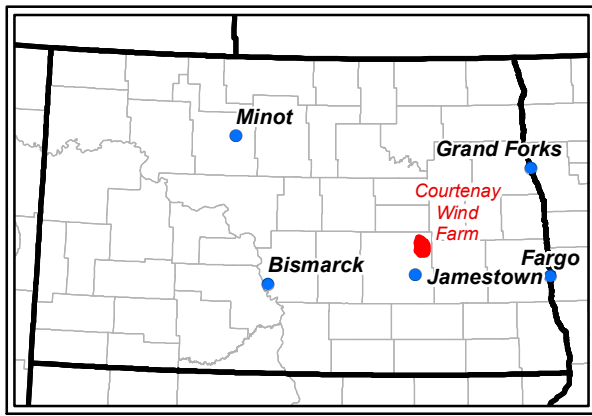
FIGURE 5
Exclusion Areas

Courtenay Wind Farm
Stutsman County, North Dakota

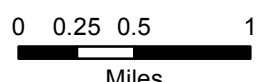




A noise analysis will be conducted to comply with the sound level avoidance area criteria.



- Permanent Met Towers
- Preliminary Project Layout
- Collector Lines
- Access Roads
- Wooded Area
- Historic Structures
- Wetland
- Delineated Wetlands
- Incorporated Cities
- Proposed Substation



Source: NGS USA Topo (2011), Ventyx, DOT, SSURGO (2012), FWS (2012), NLCD (2011), NWI (2012), Westwood



FIGURE 6
Avoidance Areas

Courtenay Wind Farm
Stutsman County, North Dakota



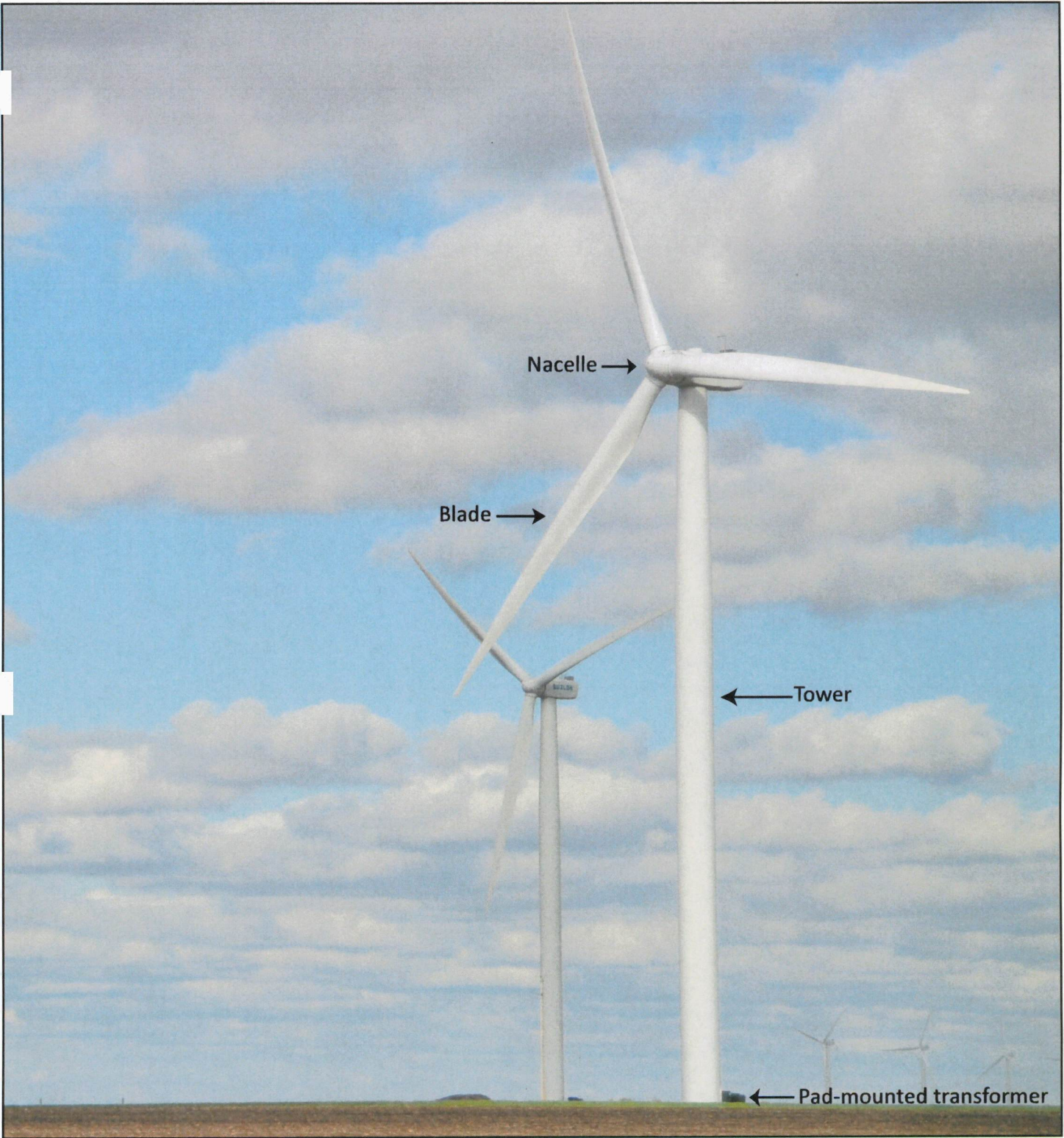


FIGURE 7
Typical Wind Turbine Design
Features

Courtenay Wind Farm
Stutsman County, North Dakota

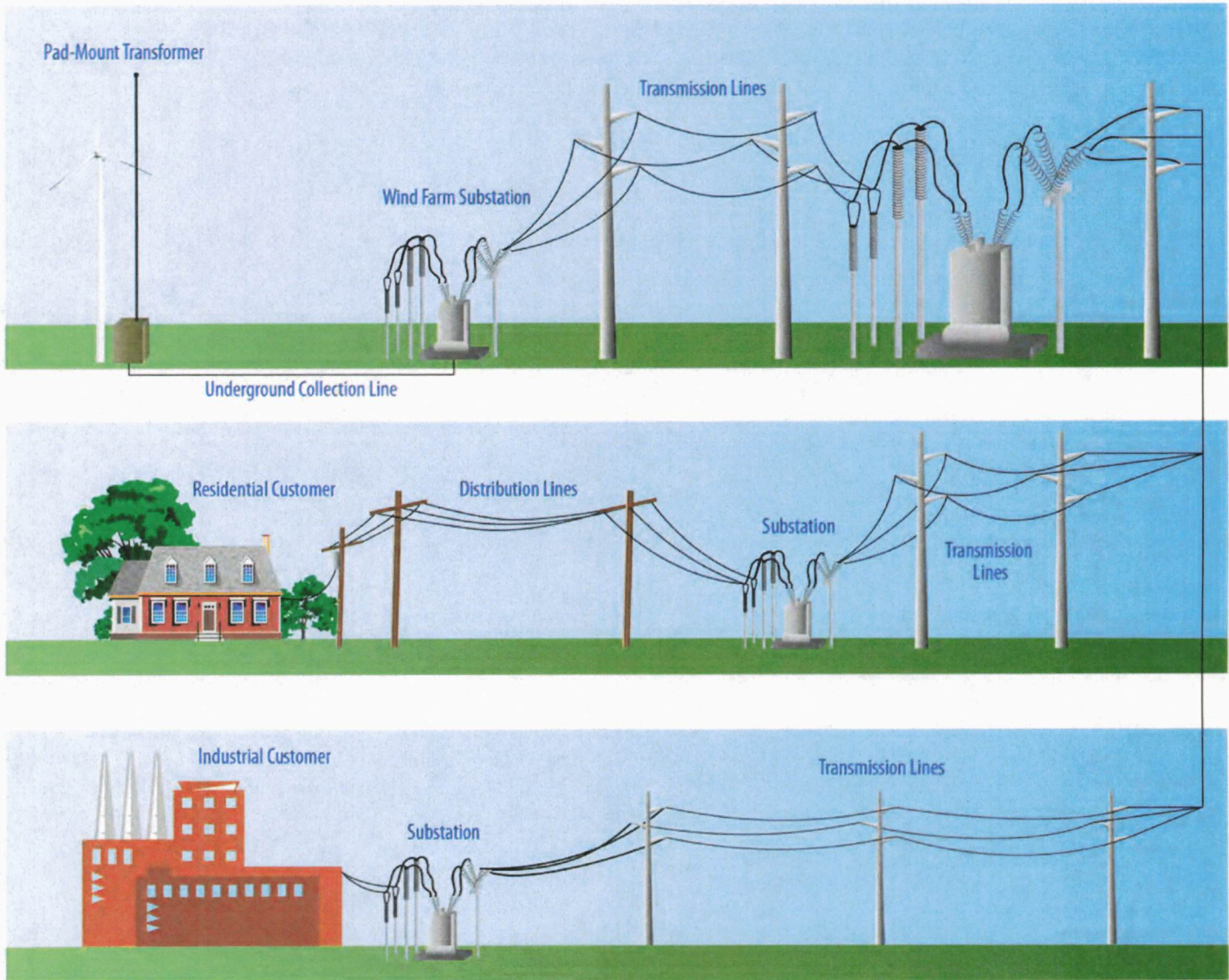
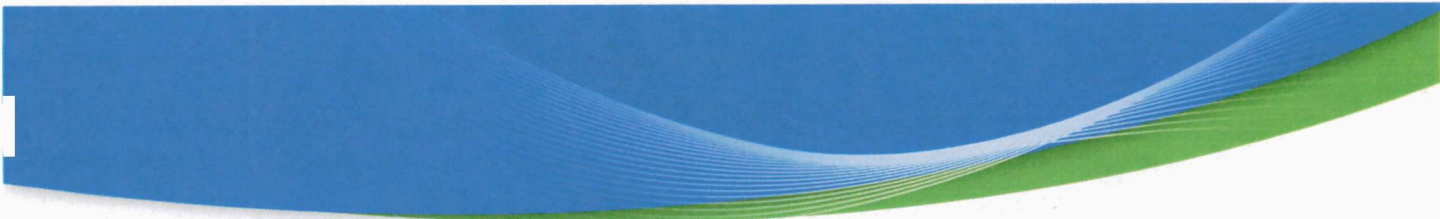


FIGURE 8
Path of Energy Diagram

Courtenay Wind Farm
Stutsman County, North Dakota

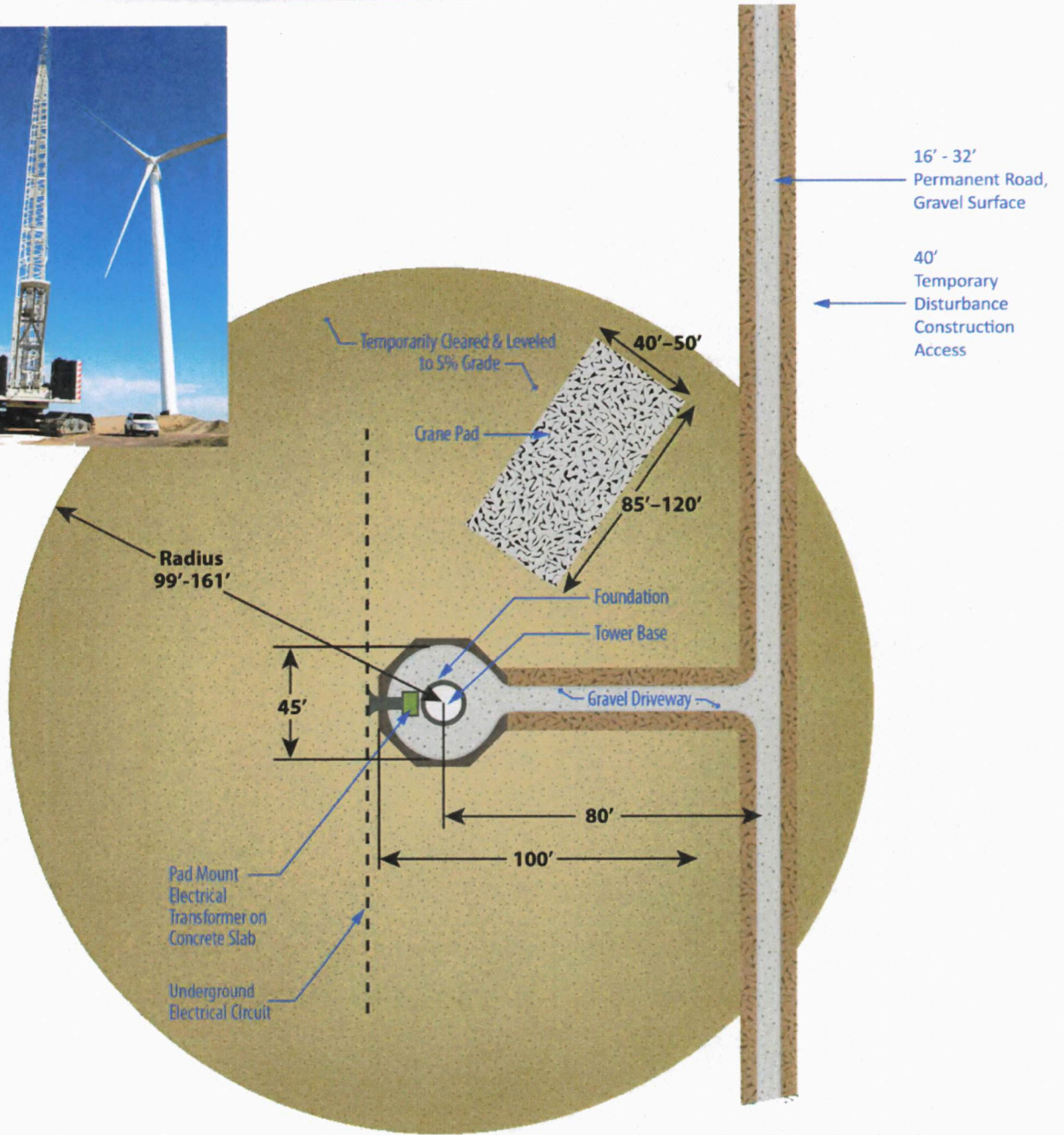
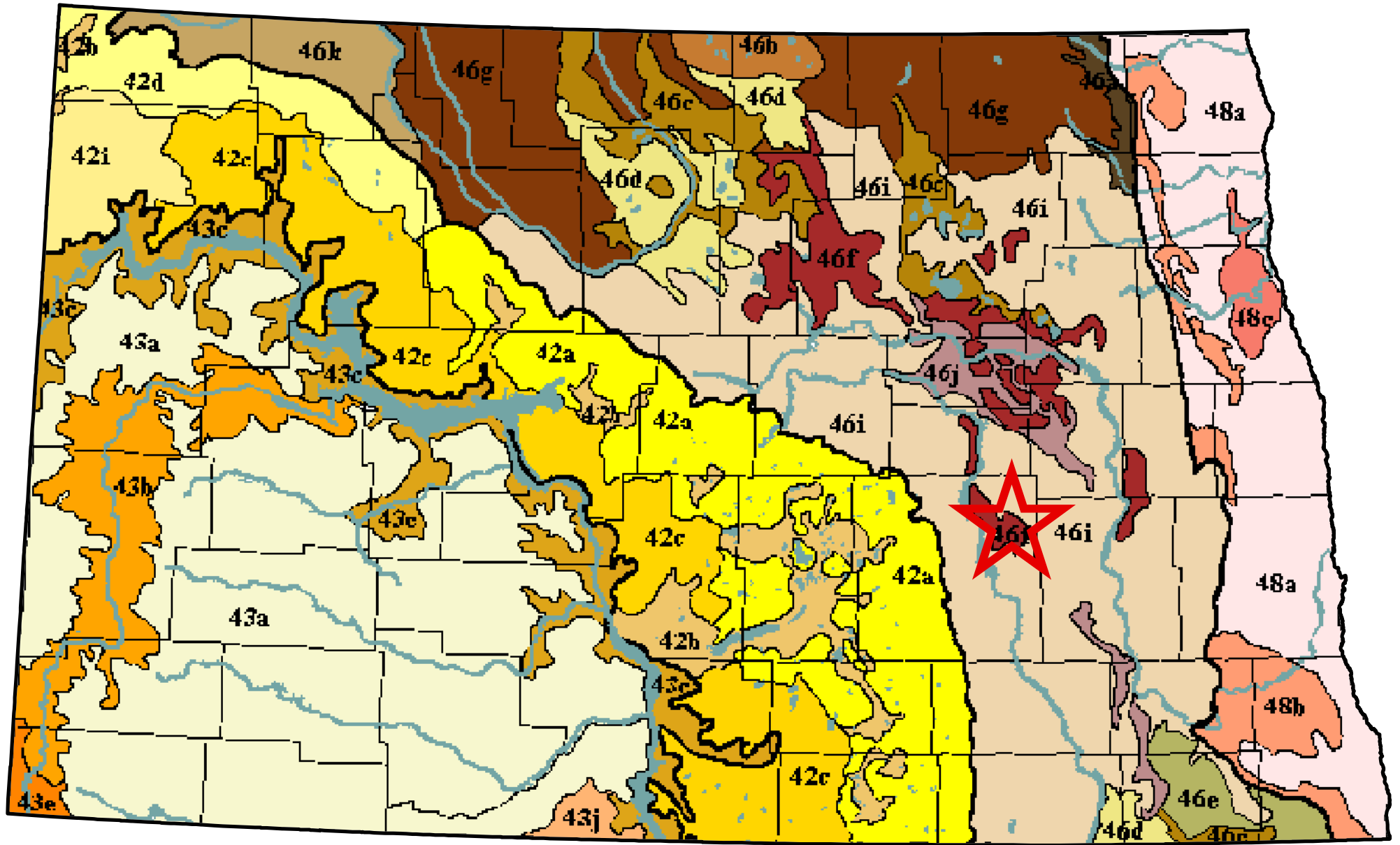
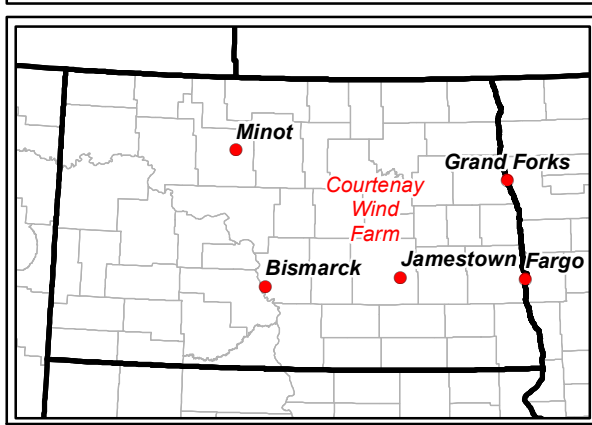


FIGURE 9
Typical Wind Turbine
Construction Site

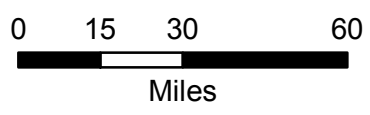
Courtenay Wind Farm
Stutsman County, North Dakota



17 Middle Rockies	44 Nebraska Sand Hills
17a Black Hills Foothills	44a Nebraska Sand Hills
17b Black Hills Plateau	46 Northern Glaciated Plains
17c Black Hills Core Highlands	46a Pembina Escarpment
25 Western High Plains	46b Turtle Mountains
25a Pine Ridge Escarpment	46c Glacial Lake Basins
42 Northwestern Glaciated Plains	46d Glacial Lake Deltas
42a Missouri Coteau	46e Tewaukon Dead Ice Moraine
42b Collapsed Glacial Outwash	46f End Moraine Complex
42c Missouri Coteau Slope	46g Northern Black Prairie
42d Northern Missouri Coteau	46h Northern Dark Brown Prairie
42e Southern Missouri Coteau	46i Drift Plains
42f Southern Missouri Coteau Slope	46j Glacial Outwash
42g Ponca Plains	46k Prairie Coteau
42h Southern River Breaks	46l Prairie Coteau Escarpment
42i Glaciated Dark Brown Prairie	46m Big Sioux Basin
43 Northwestern Great Plains	46n James River Lowland
43a Missouri Plateau	46o Minnesota River Prairie
43b Little Missouri Badlands	47 Western Corn Belt Plains
43c River Breaks	47a Loess Prairies
43d Forested Buttes	47d Missouri Alluvial Plain
43e Sagebrush Steppe	48 Lake Agassiz Plain
43f Subhumid Pierre Shale Plains	48a Glacial Lake Agassiz Basin
43g Semiarid Pierre Shale Plains	48b Sand Deltas and Beach Ridges
43h White River Badlands	48c Saline Area
43i Keya Paha Tablelands	
43j Moreau Prairie	
43k Dense Clay Prairie	



★ Courtenay Wind Farm



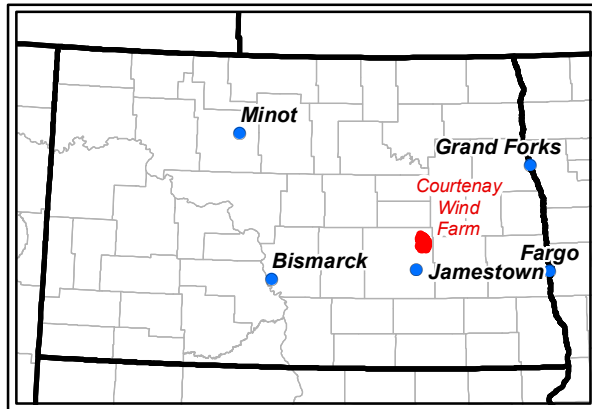
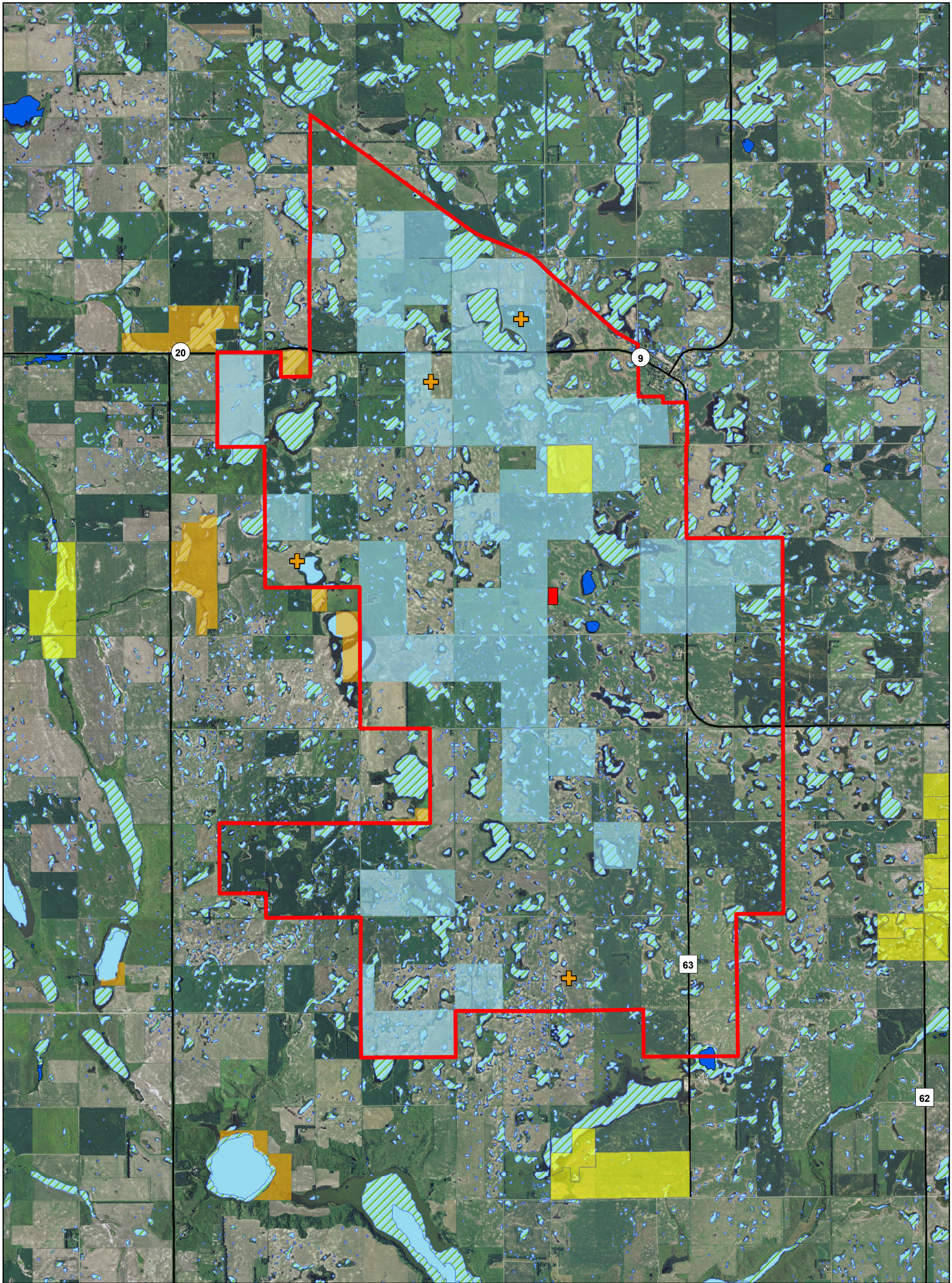
Source: USGS, Ventyx



FIGURE 10
USGS Ecoregions

Courtenay Wind Farm
Stutsman County, North Dakota





Project Area	Proposed Substation
Permanent Met Towers	National Wetland Inventory
Waterfowl Production Area	Lake
Conservation PLOTS	Wetland
Wetland Easement	Freshwater Pond

0 0.5 1 2
Miles

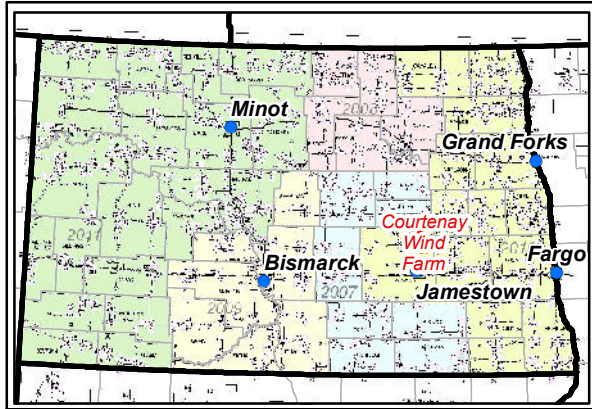
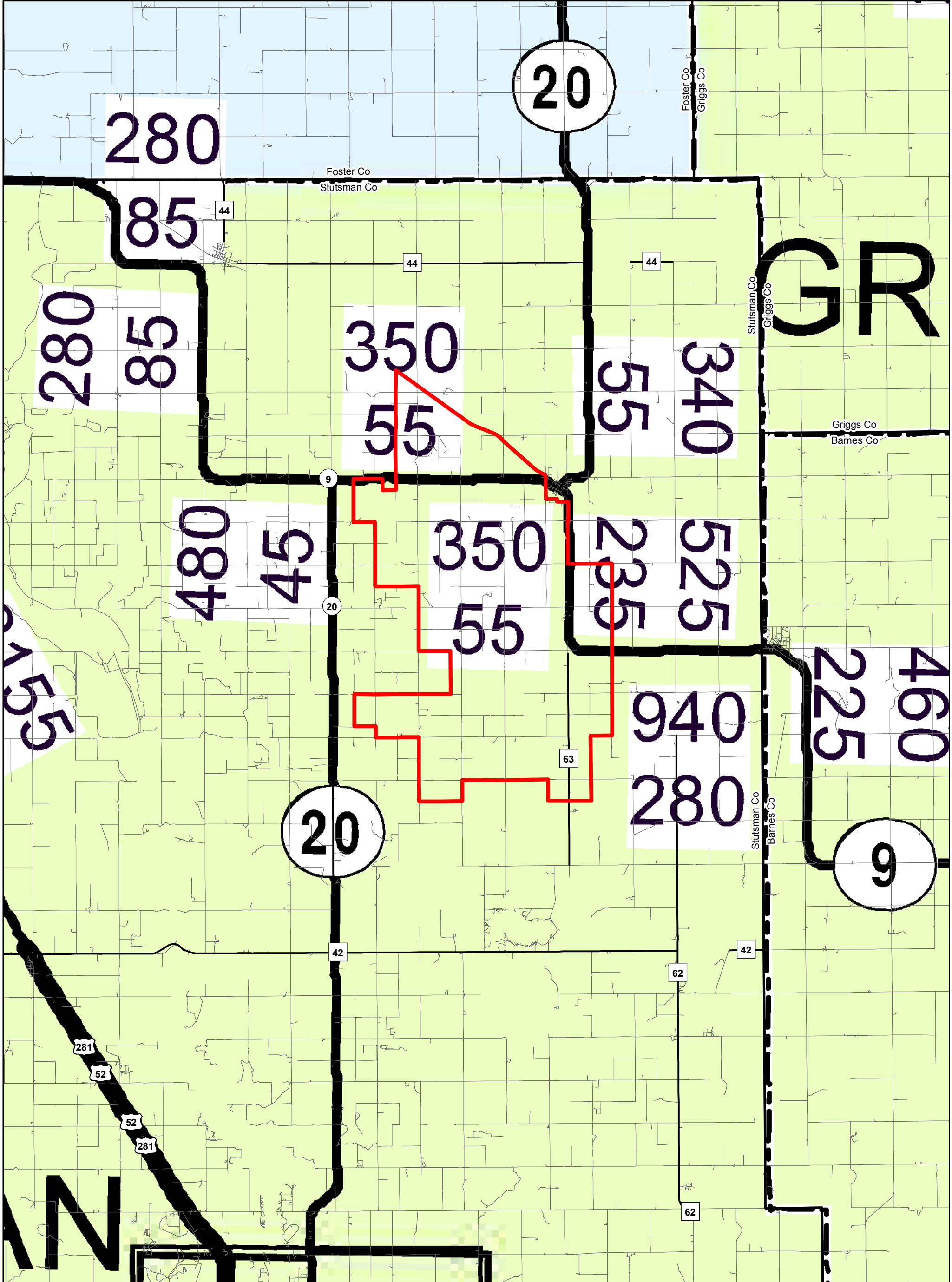
Source: NGS USA Topo (2011), Ventyx, ESRI et al: World Transportation (2012), FWS (2012)

Stutsman County, ND

FIGURE 11
Public Lands and Easements

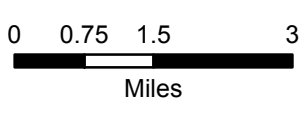
Courtenay Wind Farm
Stutsman County, North Dakota





Project Area

AADT (Average Annual Daily Traffic) / Commercial Truck Traffic



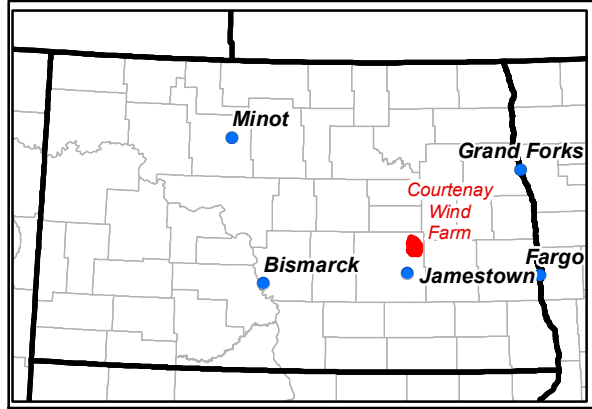
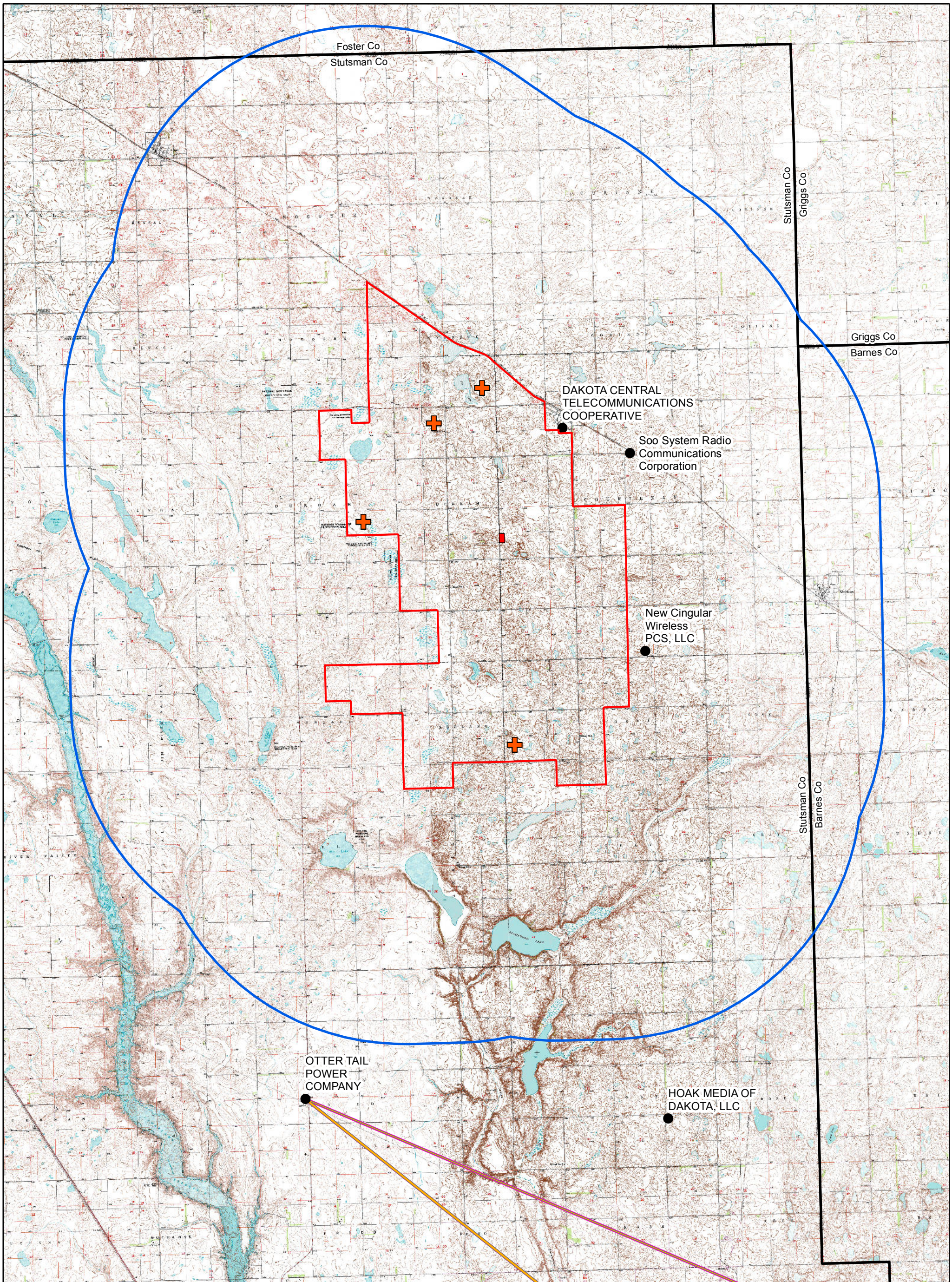
Source: ND DOT (2011), Ventyx, ESRI: et al: World Transportation (2012)



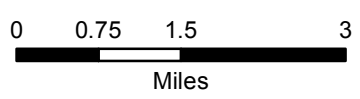
FIGURE 12
Average Annual Daily Traffic

Courtenay Wind Farm
Stutsman County, North Dakota





- Project Area
- 5 mile Project Buffer
- + Permanent Met Towers
- FCC: Antenna Registration System (ASR)
- Proposed Substation
- WCFZ
- Microwave Beam Path



Source: USGS, Ventyx, FCC



FIGURE 13
FCC

Courtenay Wind Farm
Stutsman County, North Dakota



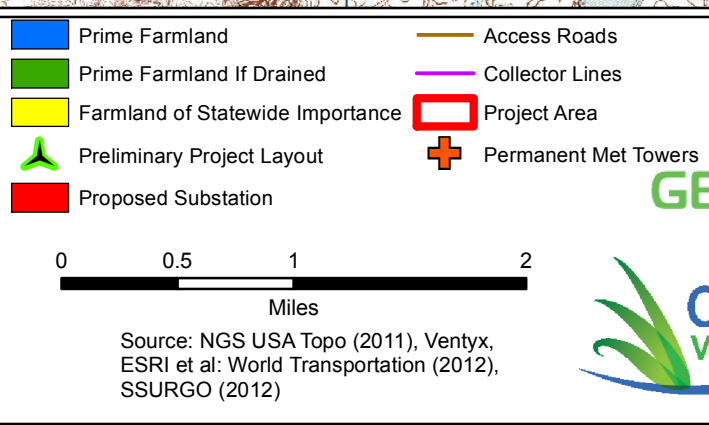
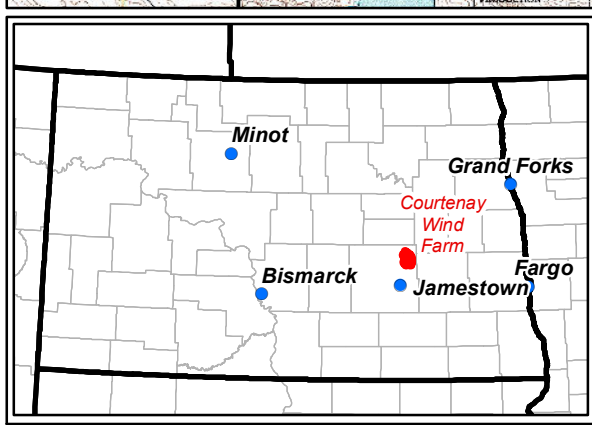
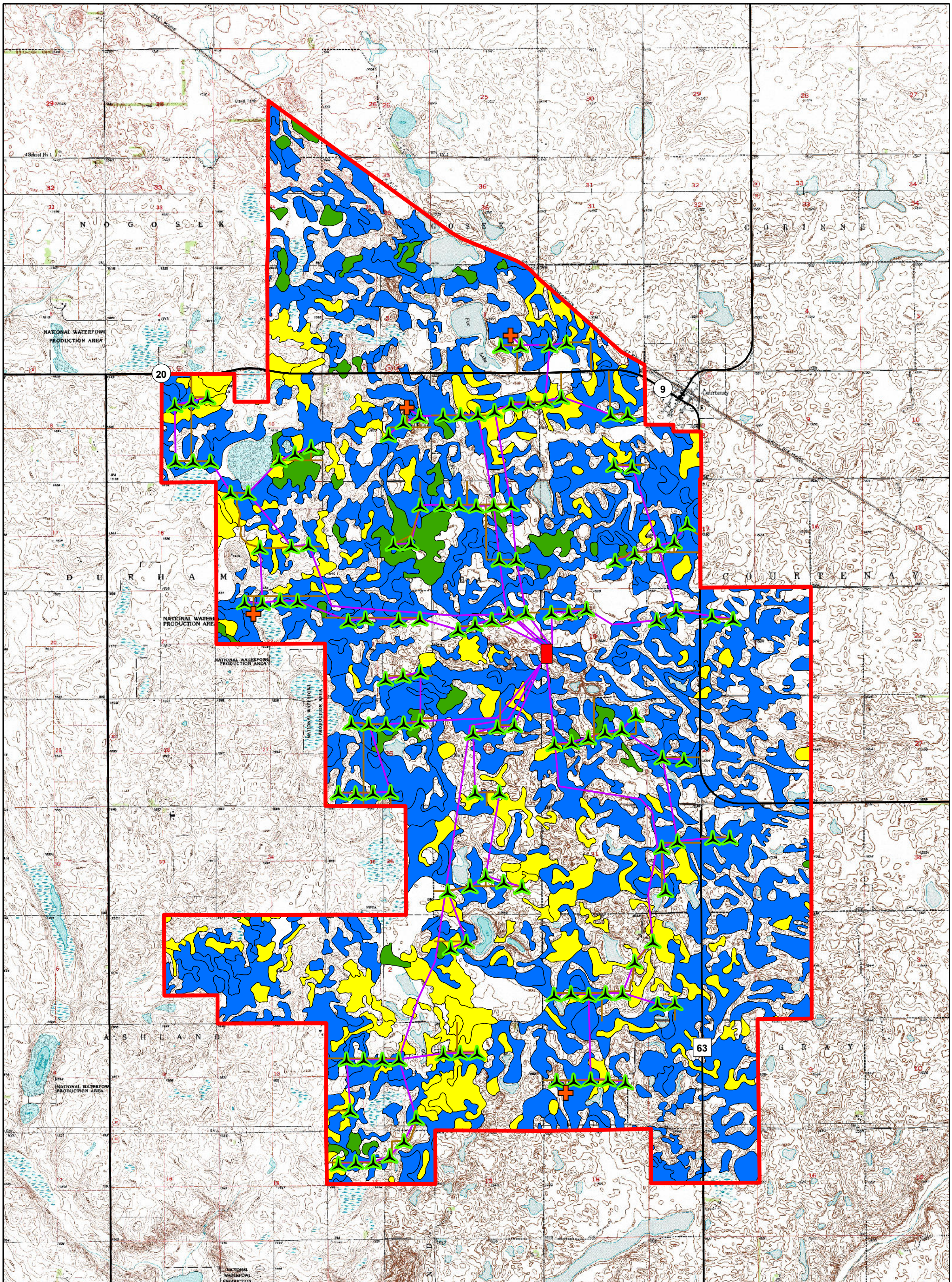
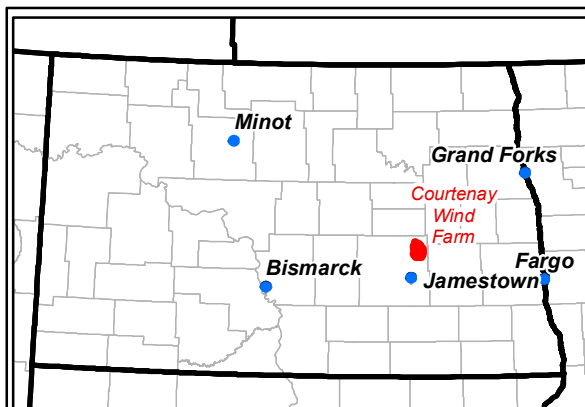
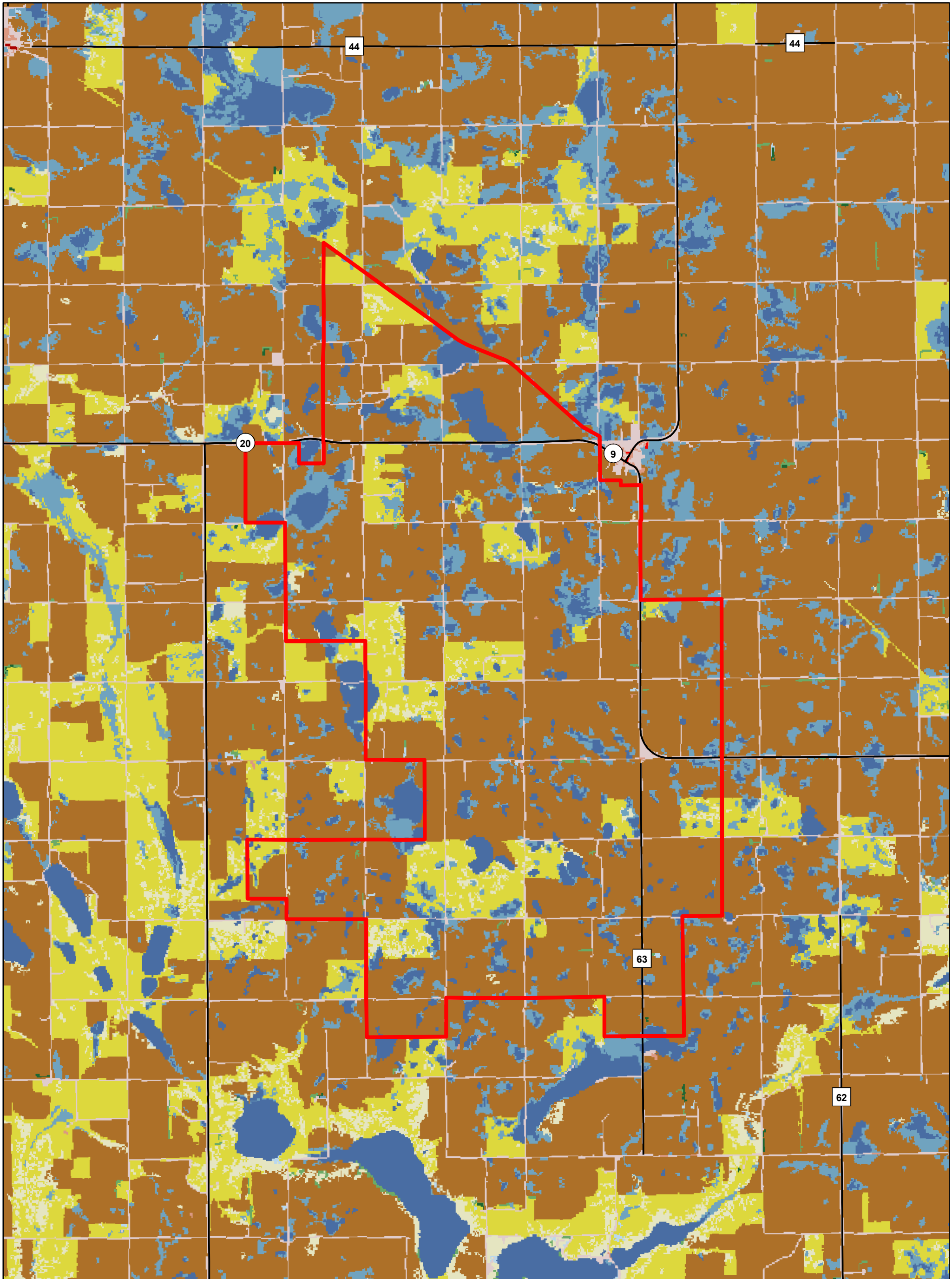


FIGURE 14
Prime Farmland &
Farmland of Statewide Importance
Soil Distribution

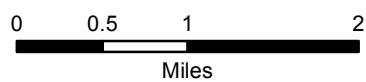
Courtenay Wind Farm
 Stutsman County, North Dakota



Stutsman County, ND



- | | |
|-----------------------------|------------------------------|
| Barren Land | Emergent Herbaceous Wetlands |
| Cultivated Crops | Evergreen Forest |
| Deciduous Forest | Hay/Pasture |
| Developed, High Intensity | Herbaceous |
| Developed, Low Intensity | Open Water |
| Developed, Medium Intensity | Woody Wetlands |
| Developed, Open Space | |



Source: NGS USA Topo (2011), Ventyx, ESRI et al: World Transportation (2012), NLCD (2011)

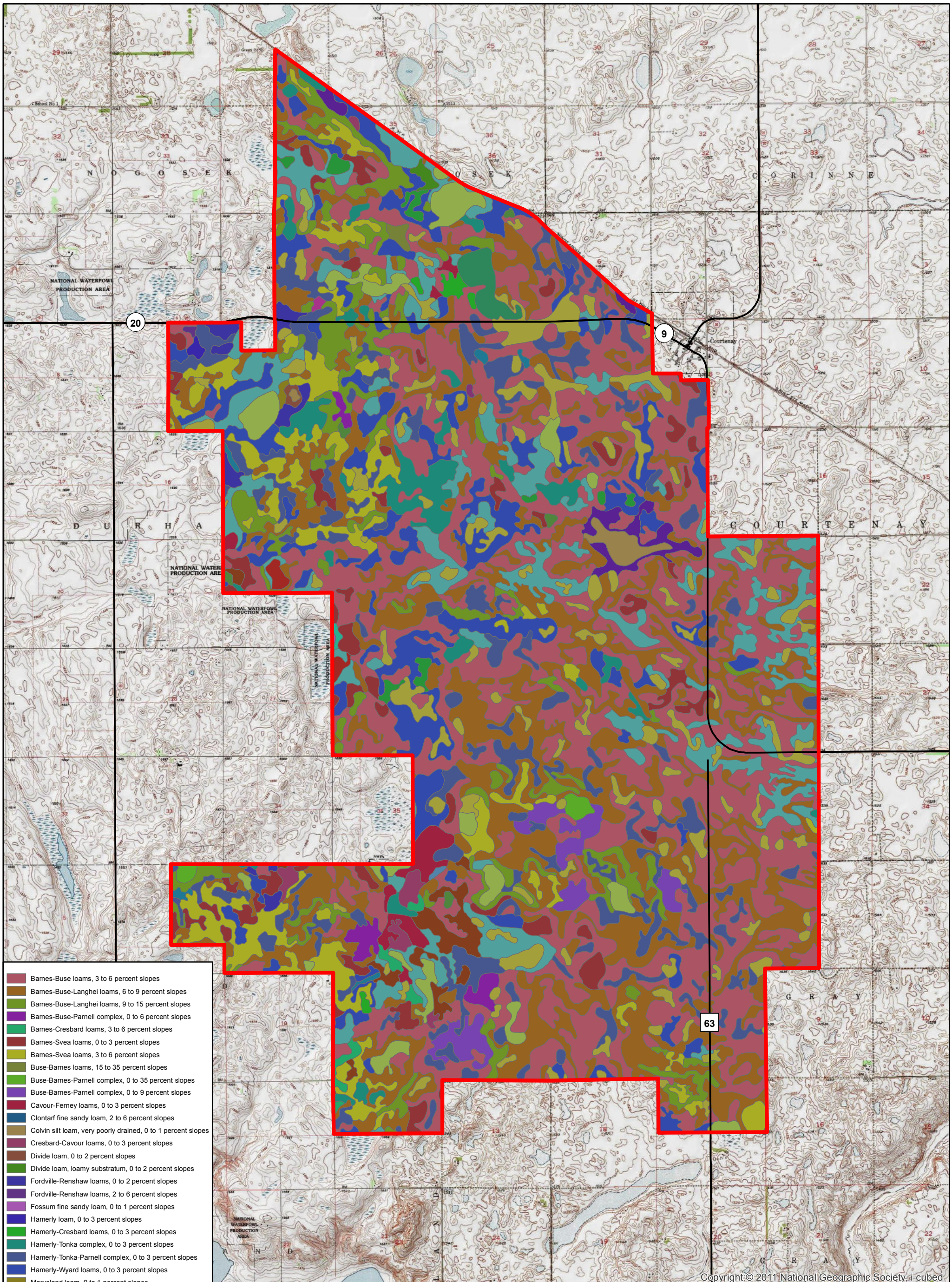


Stutsman County, ND

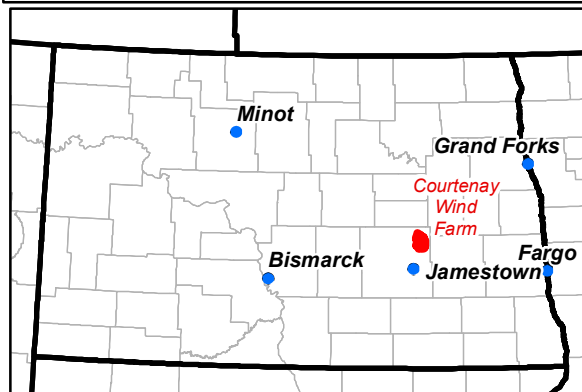
FIGURE 15
Land Cover



Courtenay Wind Farm
Stutsman County, North Dakota






- Barnes-Buse loams, 3 to 6 percent slopes
- Barnes-Buse-Langhei loams, 6 to 9 percent slopes
- Barnes-Buse-Langhei loams, 9 to 15 percent slopes
- Barnes-Buse-Parnell complex, 0 to 6 percent slopes
- Barnes-Cresbard loams, 3 to 6 percent slopes
- Barnes-Svea loams, 0 to 3 percent slopes
- Barnes-Svea loams, 3 to 6 percent slopes
- Buse-Barnes loams, 15 to 35 percent slopes
- Buse-Barnes-Parnell complex, 0 to 35 percent slopes
- Buse-Barnes-Parnell complex, 0 to 9 percent slopes
- Cavour-Ferney loams, 0 to 3 percent slopes
- Clontarf fine sandy loam, 2 to 6 percent slopes
- Colvin silt loam, very poorly drained, 0 to 1 percent slopes
- Cresbard-Cavour loams, 0 to 3 percent slopes
- Divide loam, 0 to 2 percent slopes
- Divide loam, loamy substratum, 0 to 2 percent slopes
- Fordville-Renshaw loams, 0 to 2 percent slopes
- Fordville-Renshaw loams, 2 to 6 percent slopes
- Fossum fine sandy loam, 0 to 1 percent slopes
- Hamerly loam, 0 to 3 percent slopes
- Hamerly-Cresbard loams, 0 to 3 percent slopes
- Hamerly-Tonka complex, 0 to 3 percent slopes
- Hamerly-Tonka-Parnell complex, 0 to 3 percent slopes
- Hamerly-Wyard loams, 0 to 3 percent slopes
- Marysland loam, 0 to 1 percent slopes
- Overly-Bearden silty clay loams, 0 to 2 percent slopes
- Parnell silty clay loam, 0 to 1 percent slopes
- Renshaw-Sioux complex, 2 to 6 percent slopes
- Sioux-Arvilla complex, 2 to 6 percent slopes
- Southam silty clay loam, 0 to 1 percent slopes
- Svea-Cresbard loams, 0 to 3 percent slopes
- Tonka silt loam, 0 to 1 percent slopes
- Vallers loam, 0 to 1 percent slopes
- Vallers-Hamerly loams, saline, 0 to 3 percent slopes
- Barnes-Sioux complex, 3 to 9 percent slopes
- Bearden-Colvin silt loams, saline, 0 to 2 percent slopes
- Buse-Sioux complex, 9 to 35 percent slopes
- Water
- Water, intermittent





 Stutsman County, ND

0 0.25 0.5 1
 Miles

FIGURE 16
Soils
 Courtenay Wind Farm
 Stutsman County, North Dakota



Source: NGS USA Topo (2011), Ventyx, ESRI et al: World Transportation (2012), SSURGO (2012)

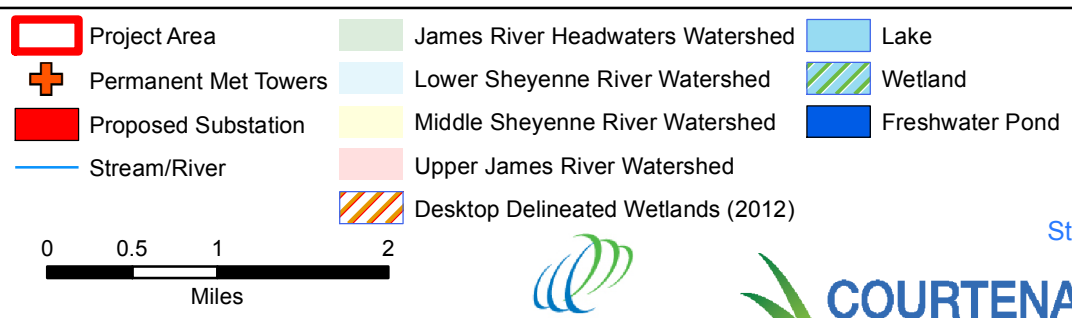
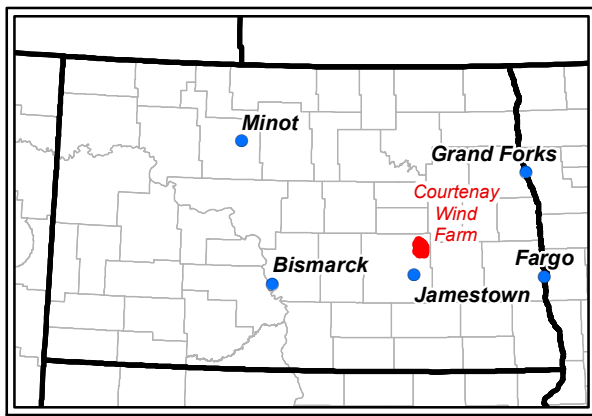
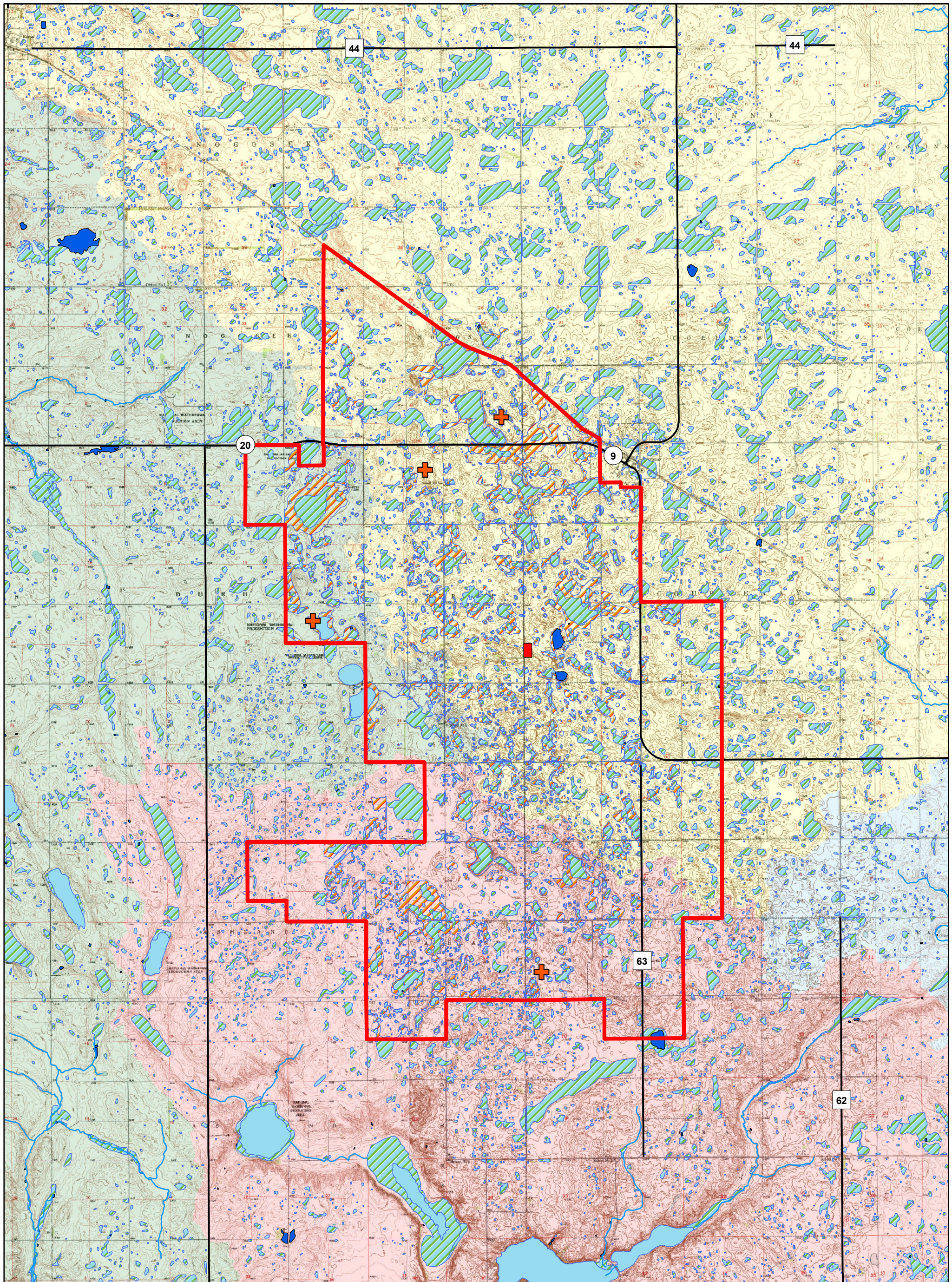
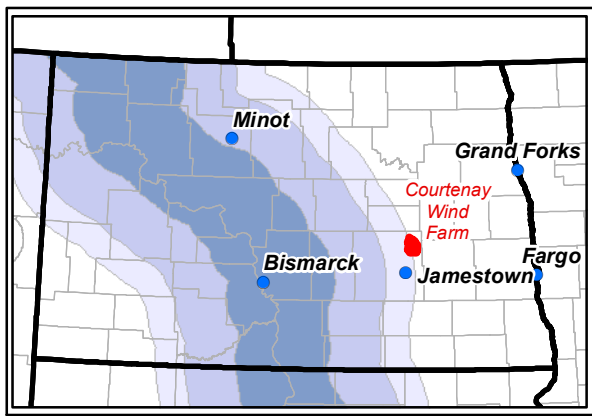
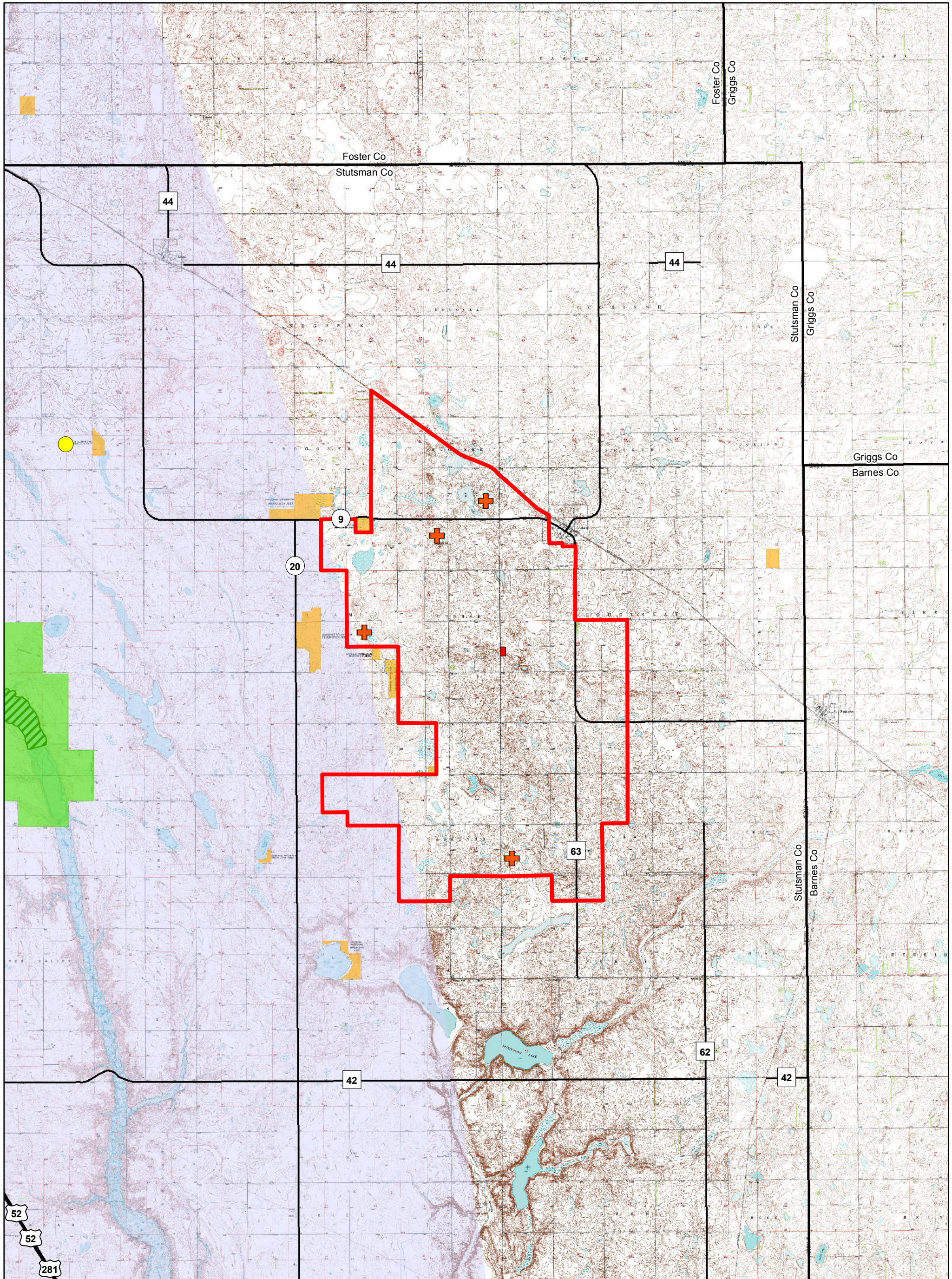


FIGURE 17
Wetlands and
Surface Waters

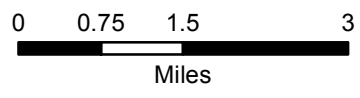
Courtenay Wind Farm
Stutsman County, North Dakota

Source: NGS USA Topo (2011), Ventyx, ESRI et al: World Transportation (2012), NWI (2012), Westwood





- Project Area
- Piping Plover Critical Habitat
- Waterfowl Production Area
- National Wildlife Refuge
- Proposed Substation
- + Permanent Met Towers
- Confirmed Whooping Crane Sightings



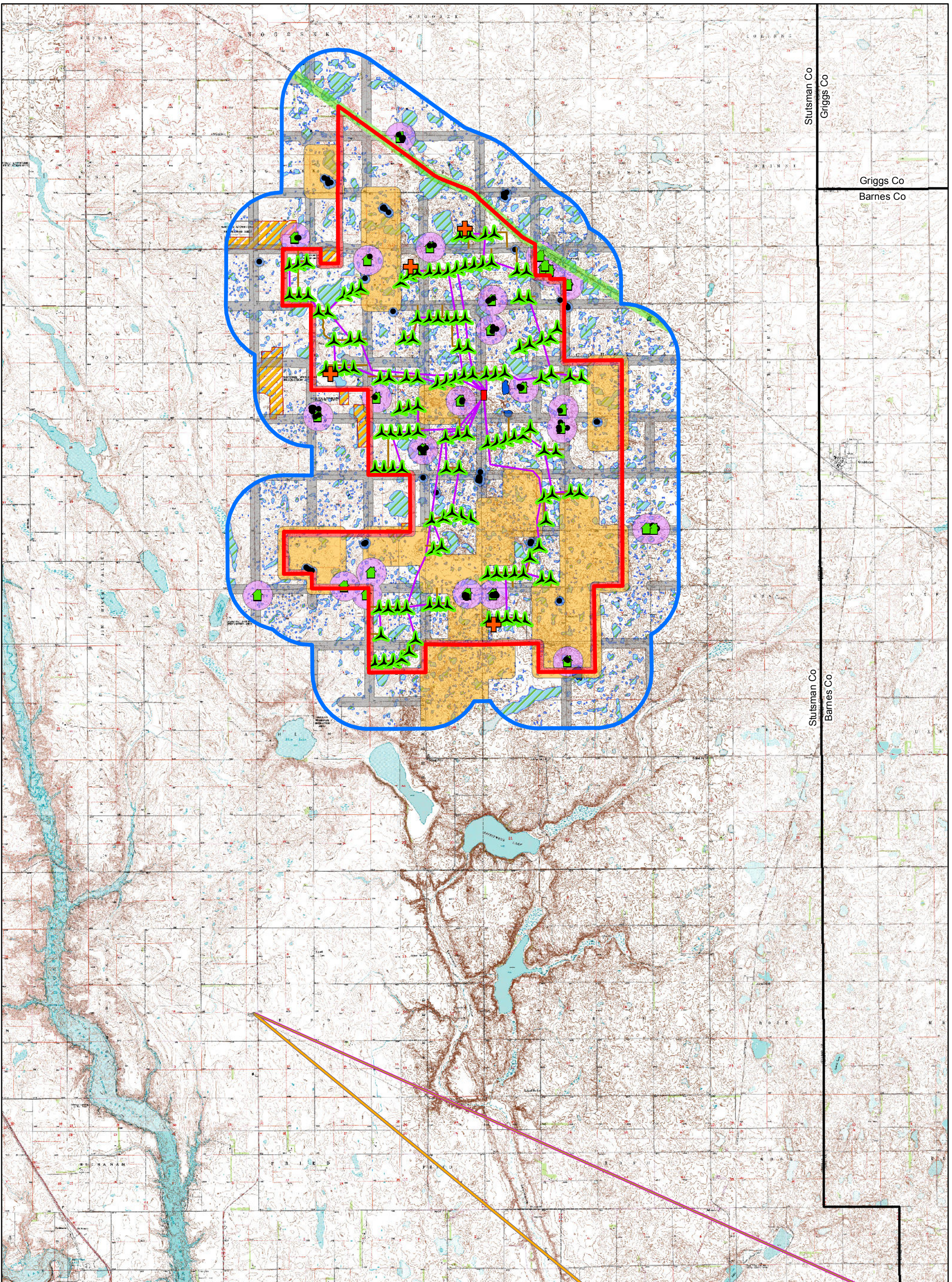
Whooping Crane Corridor Occurrence Probability

- 74.1388%
- 90.1285%
- 94.8072%



FIGURE 18
Natural Resources
 Courtenay Wind Farm
 Stutsman County, North Dakota

Source: NGS USA Topo (2011), Ventyx, ESRI et al: World Transportation (2012), USFWS Piping Plover Critical Habitat and Whooping Crane Sightings (1943 through Fall 2010)



Stutsman Co
Griggs Co

Griggs Co
Barnes Co

Stutsman Co
Barnes Co

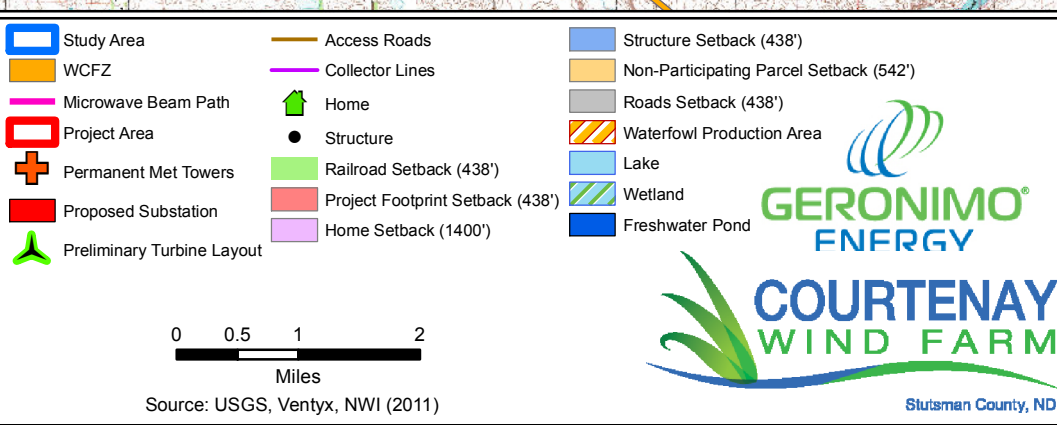
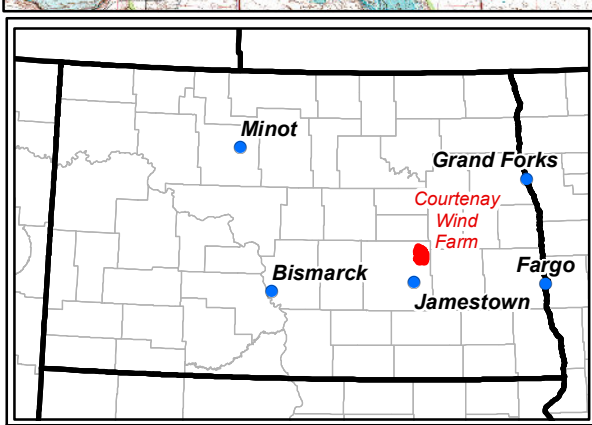
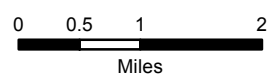
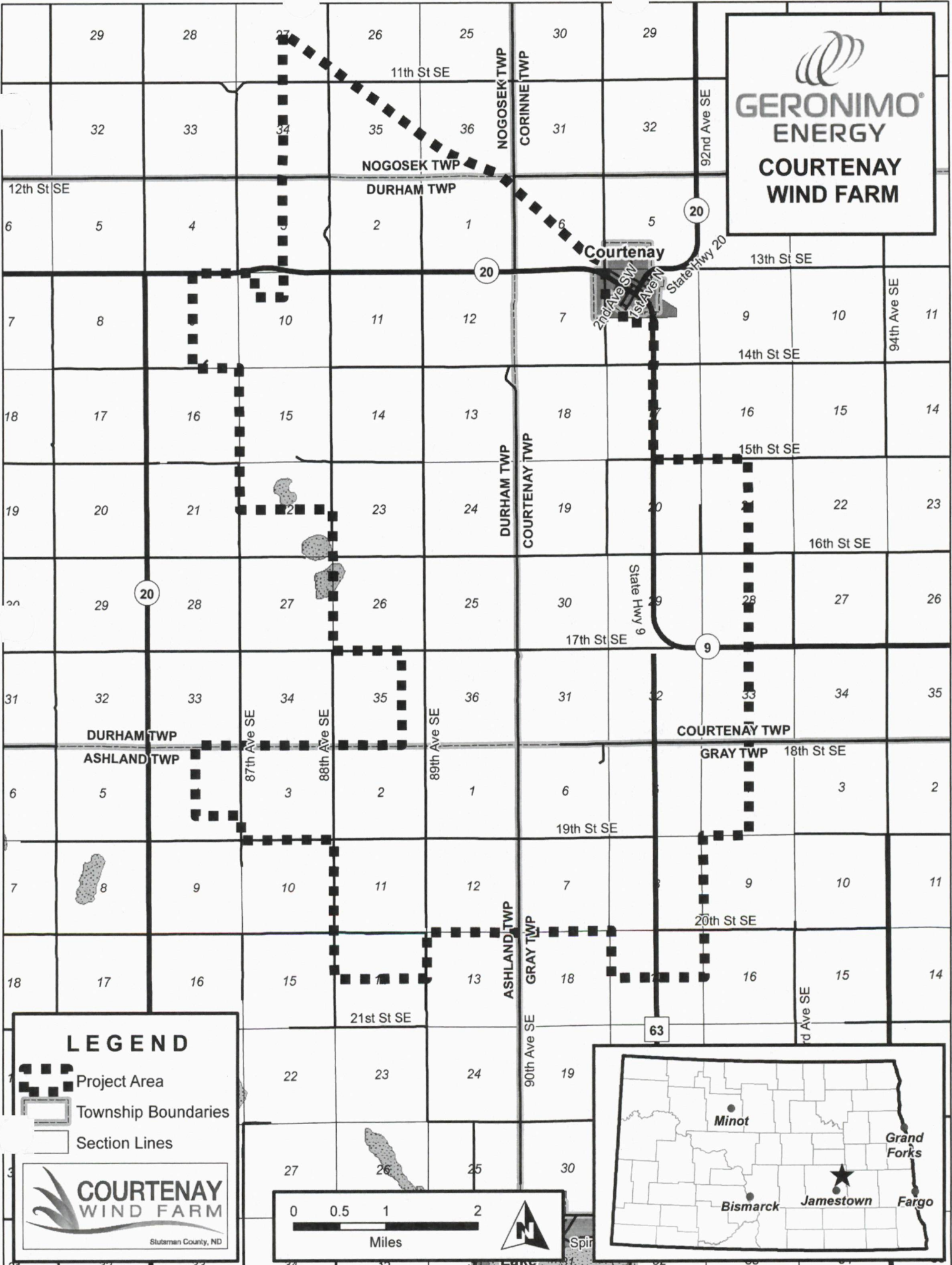


FIGURE 19
Environmental and Siting
Considerations

Courtenay Wind Farm
Stutsman County, North Dakota



Source: USGS, Ventyx, NWI (2011)



LEGEND

- Project Area
- Township Boundaries
- Section Lines

