



Typical  
Landscape  
Photo 1



Typical  
Landscape  
Photo 2



Typical  
Landscape  
Photo 3



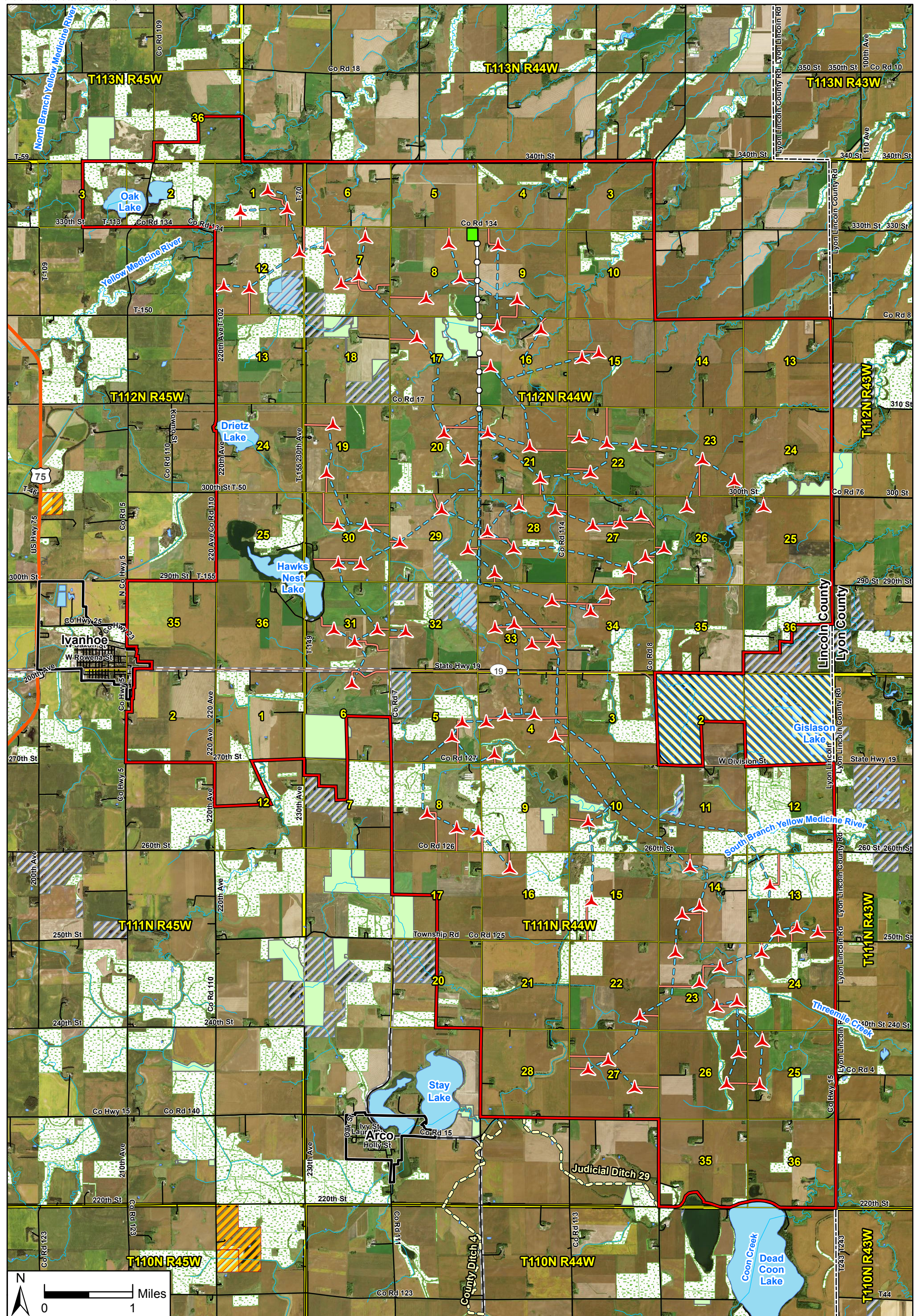
Typical  
Landscape  
Photo 4

Data Source(s): Westwood (2016).

# Red Pine Wind Project

Lincoln County, Minnesota

Typical Landscape Within Project Area



Data Source(s): Westwood (2016); Minnesota NAIP Imagery (Accessed 2016); ESRI (2012); USGS NHD Dataset (2013); MNDNR (Various Dates); BWSR (2010); Census Bureau (2015).

- |                                |                            |                  |                                    |
|--------------------------------|----------------------------|------------------|------------------------------------|
| Proposed Turbine (V100)        | Proposed Transmission Line | Highway          | Waterfowl Production Area          |
| Current Project Boundary       | Proposed Substation        | Major Road       | Wildlife Management Area           |
| Proposed Access Road (V11)     | Municipal Boundary         | Minor Road       | National Wildlife Refuge           |
| Proposed Collection Line (V11) | County Boundary            | Railroad         | State Funded Conservation Easement |
|                                | PLS Township Boundary      | Snowmobile Trail | Designated Wildlife Lake           |
|                                | PLS Section Boundary       | NHD Flowline     | Conservation Reserve Program (CRP) |
|                                |                            | NHD Waterbody    |                                    |

# Red Pine Wind Project

Lincoln County, Minnesota  
Recreation, Wildlife, and Protected Areas  
Map 5

**Red Pine Sound Analysis**  
**V100- 2.0 80 m HH**  
**Worst Case**

**Client**

Westwood

**Project Description**

Sound analysis on nearby residences from V100-2.0 80 m HH WTG's (v26) assuming 105 + 2dB at 10 m/s at HH and General ground attenuation model (0.5). Includes ambient noise (40 dB(A)).

Location: Ivanhoe, MN

Project #: 20162030







**Issue Dates**

#	Description	Date
1	Original	2016.06.30

Drawn By: JH

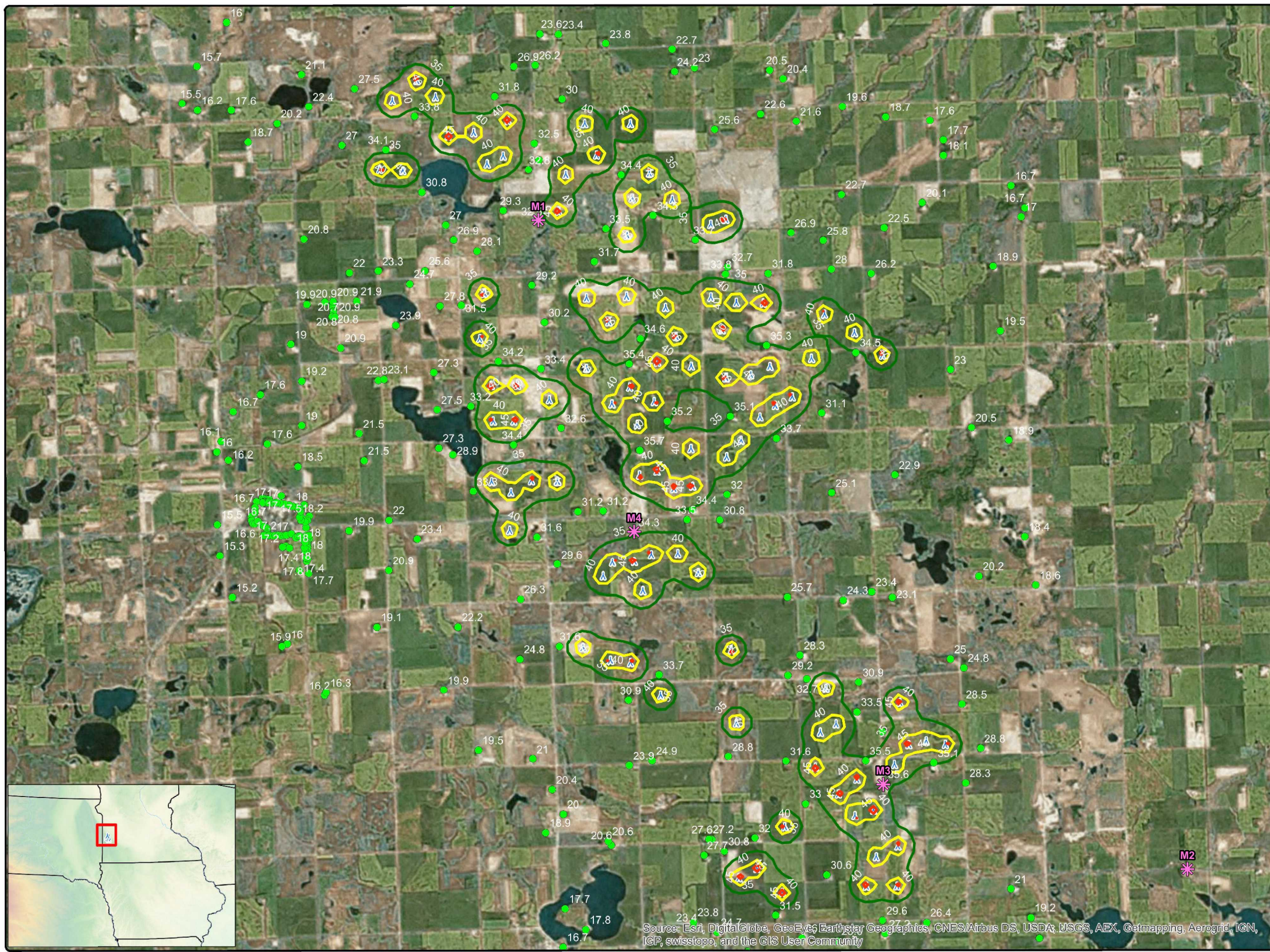
Checked By: JH

**Legend**

-  Ambient Monitoring Location
-  Occupied Residences (dB(A))
- Worst Case Sound Level (dB(A))**
-  35
-  40
-  45
-  V100\_80m HH v26

Map 6a

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**Red Pine Sound Analysis  
V117- 3.3 80 m HH  
Worst Case**

**Client**  
Westwood

**Project Description**  
Sound analysis on nearby residences from V117-3.3 80 m HH WTG's (v24) assuming 108.5 + 2dB at 10 m/s at HH and General ground attenuation model (0.5). Includes ambient noise (40 dB(A)).

**Location:** Ivanhoe, MN  
**Project #:** 20162030

**Issue Dates**

#	Description	Date
1	Original	2016.06.30

Drawn By: JH      Checked By: JH

**Legend**

- Ambient Monitoring Location
- Occupied Residences (dB(A))

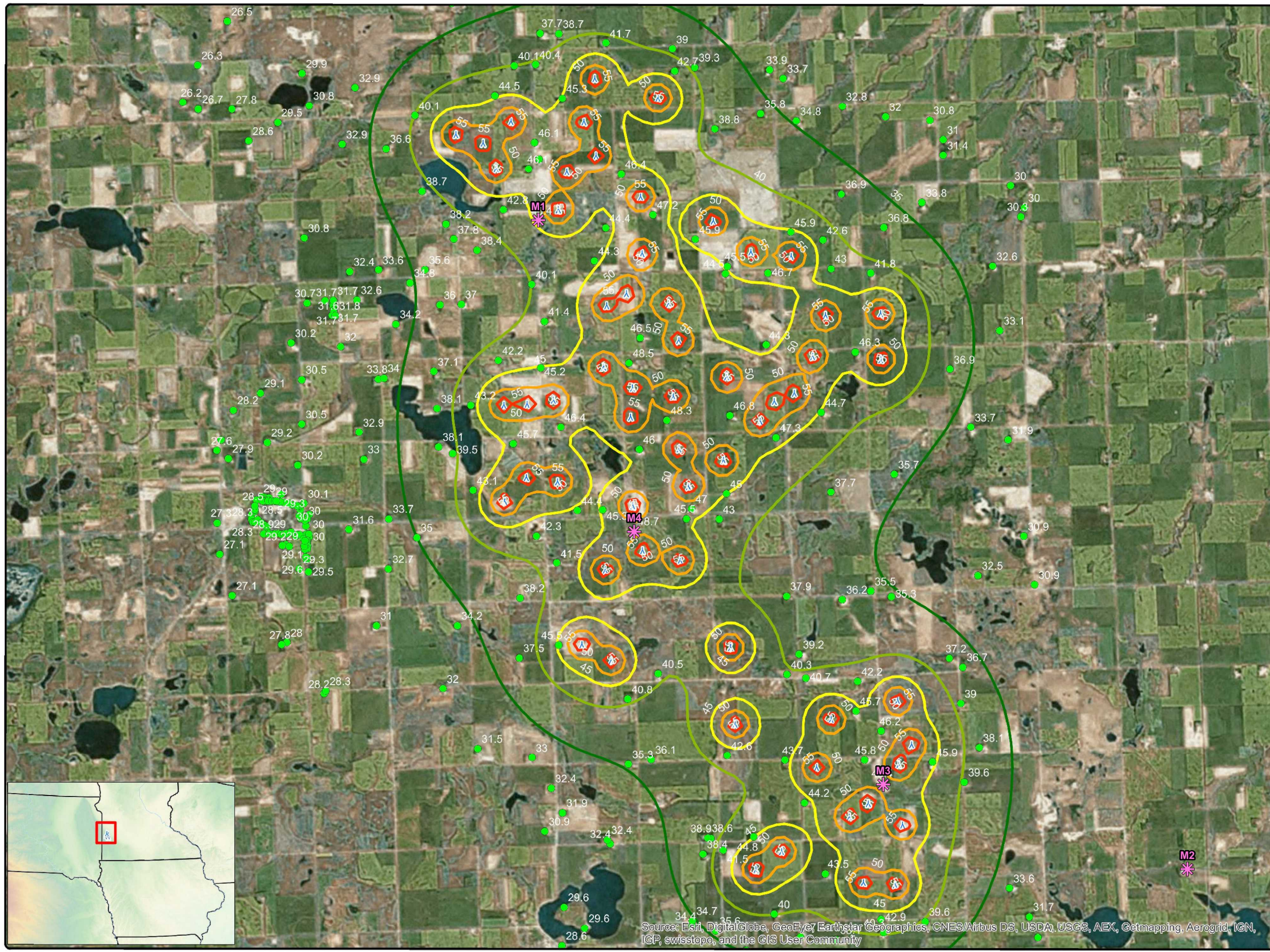
**Worst Case Sound Levels dB(A)**

- 35
- 40
- 45
- 50
- 55

V117 80m HH v24

**Map 6b**

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**Red Pine Sound Analysis**  
**V126- 3.3 87 m HH**  
**Worst Case**

**Client**  
 Westwood

**Project Description**  
 Sound analysis on nearby residences from V126-3.3 87 m HH WTG's (v25) assuming 108.5 + 2dB at 10 m/s at HH and General ground attenuation model (0.5). Includes ambient noise (40 dB(A)).



**Location:** Ivanhoe, MN  
**Project #:** 20162030

**Issue Dates**






#	Description	Date
1	Original	2016.06.30


Drawn By: JH      Checked By: JH

**Legend**

-  Ambient Monitoring Location
-  Occupied Residences (dB(A))


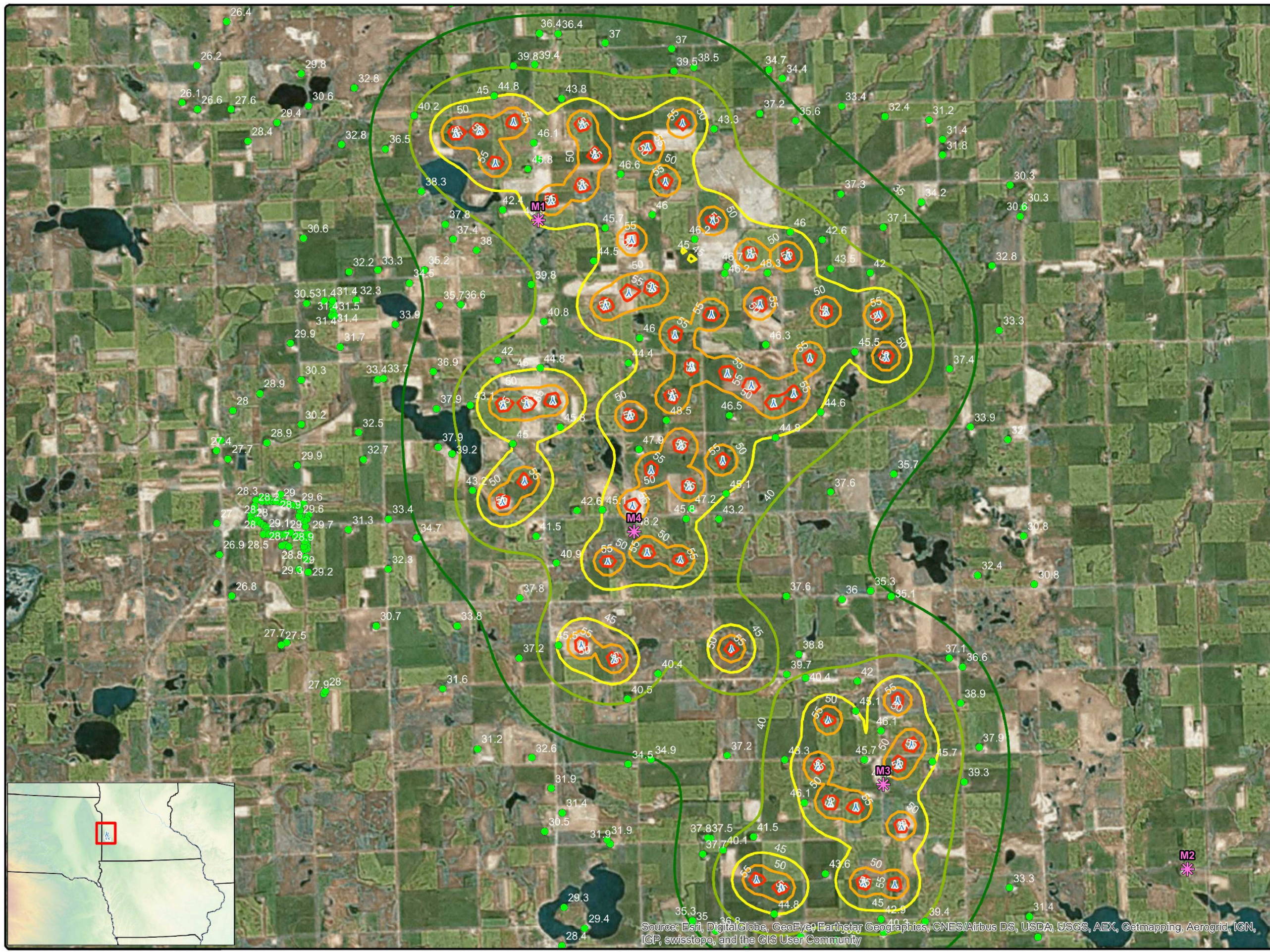
**Worst Case Sound Level (dB(A))**

-  35
-  40
-  45
-  50
-  55

 V126 87m HH v25

**Map 6c**

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**Red Pine Sound Analysis  
V100 - 2.0 80 m HH  
Realistic Case**

**Client**  
Westwood

**Project Description**  
Sound analysis on nearby residences from V100-2.0 80 m HH WTG's (v26) assuming 105 at 10 m/s at HH and General ground attenuation model (0.5). Includes ambient noise (40 dB(A)).

**Location:** Ivanhoe, MN  
**Project #:** 20162030

**Issue Dates**

1	Original	2016.06.30
#	Description	Date

Drawn By: JH      Checked By: JH

**Legend**


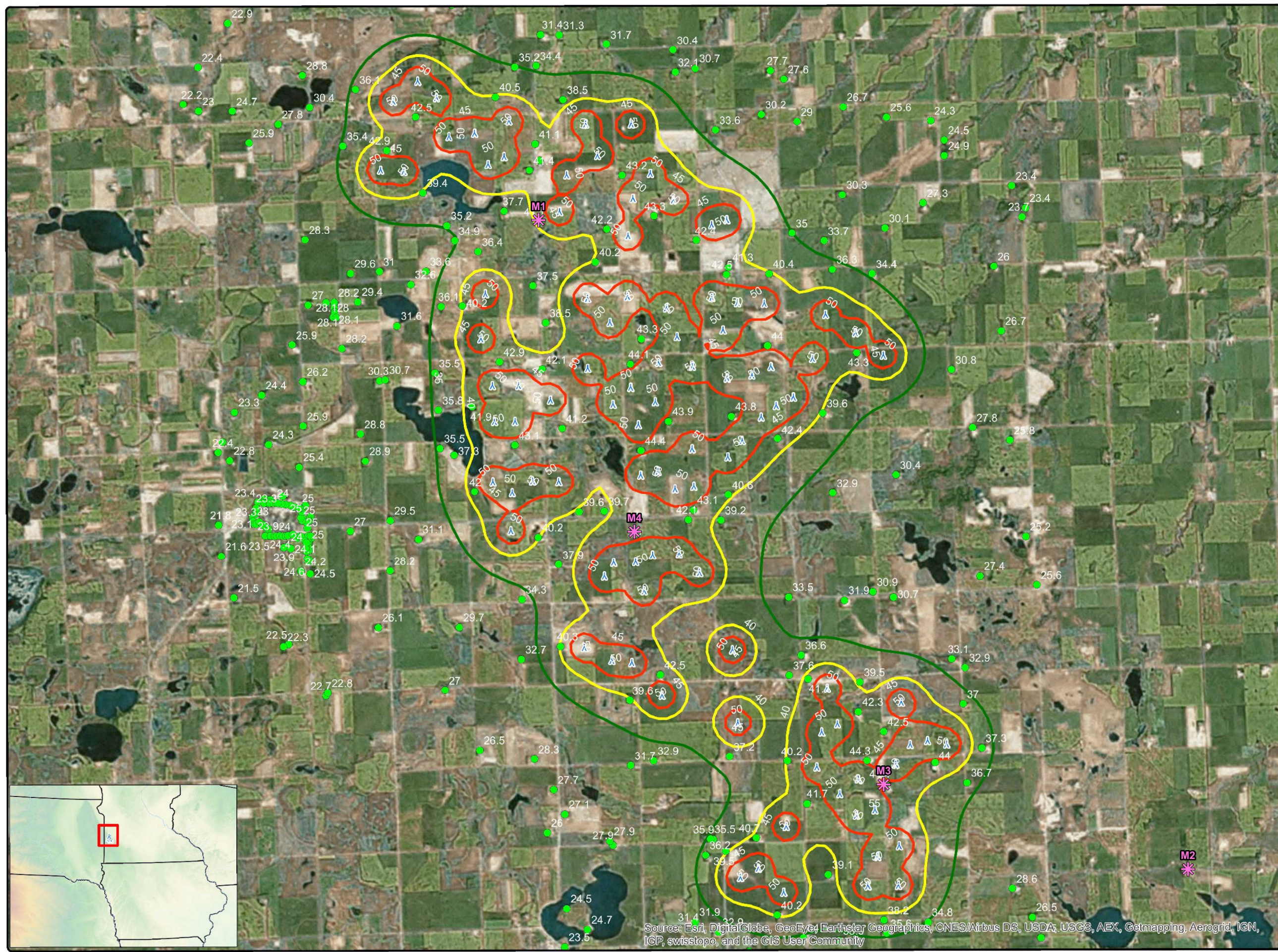
- Ambient Monitoring Location
- Occupied Residences dB(A)

**Realistic Case Sound Level (dB(A))**

- 35
- 40
- 45
- V100\_80m HH v26

**Map 6d**

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**Red Pine Sound Analysis  
V117- 3.3 80 m HH  
Realistic Case**

**Client**  
Westwood

**Project Description**  
Sound analysis on nearby residences from V117-3.3 80 m HH WTG's (v24) assuming 108.5 at 10 m/s at HH and General ground attenuation model (0.5). Includes ambient noise (40 dB(A)).



**Location:** Ivanhoe, MN  
**Project #:** 20162030

**Issue Dates**






#	Description	Date
1	Original	2016.06.30


Drawn By: JH      Checked By: JH

**Legend**

-  Ambient Monitoring Location
-  Occupied Residences (dB(A))


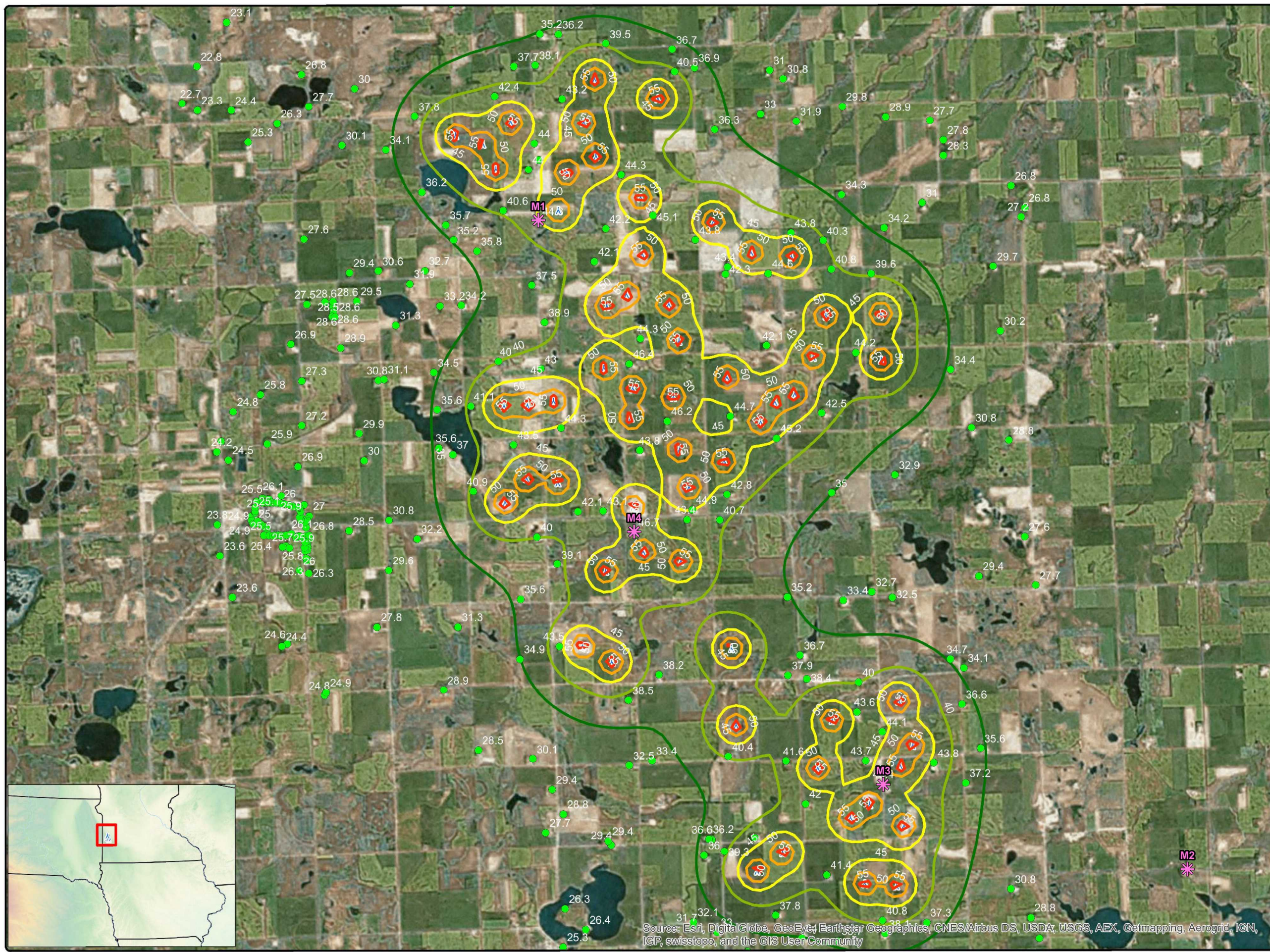
**Realistic Case Sound Levels dB(A)**

-  35
-  40
-  45
-  50
-  55

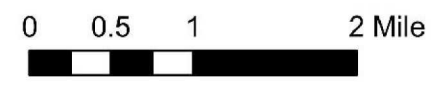
 V117 80m HH v24

**Map 6e**

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**Red Pine Sound Analysis  
V126 - 3.3 87 m HH  
Realistic Case**

**Client**  
Westwood

**Project Description**  
Sound analysis on nearby residences from V126-3.3 87 m HH WTG's (v25) assuming 108.5 at 10 m/s at HH and General ground attenuation model (0.5). Includes ambient noise (40 dB(A)).



**Location:** Ivanhoe, MN  
**Project #:** 20162030

**Issue Dates**






1	Original	2016.06.30
#	Description	Date


Drawn By: JH      Checked By: JH

**Legend**

-  Ambient Monitoring Location
-  Occupied Residences dB(A)


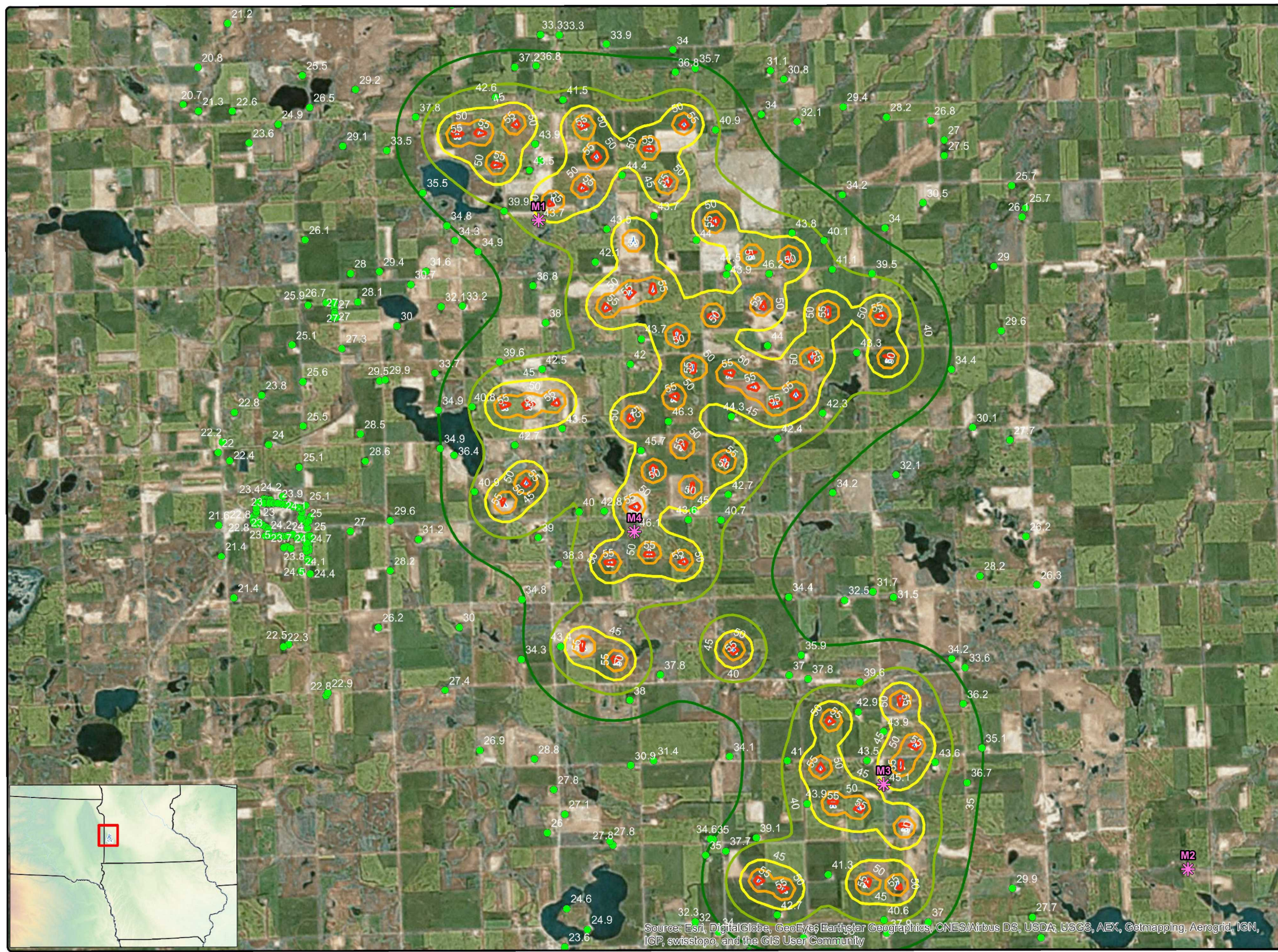
**Realistic Case Sound Level (dB(A))**

-  35
-  40
-  45
-  50
-  55

 V126 87m HH v25

**Map 6f**

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