

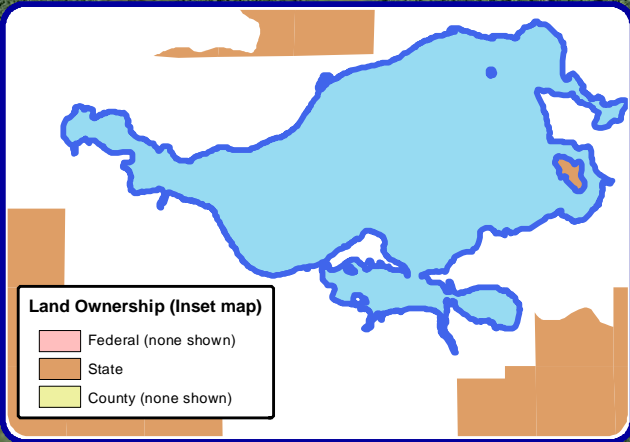
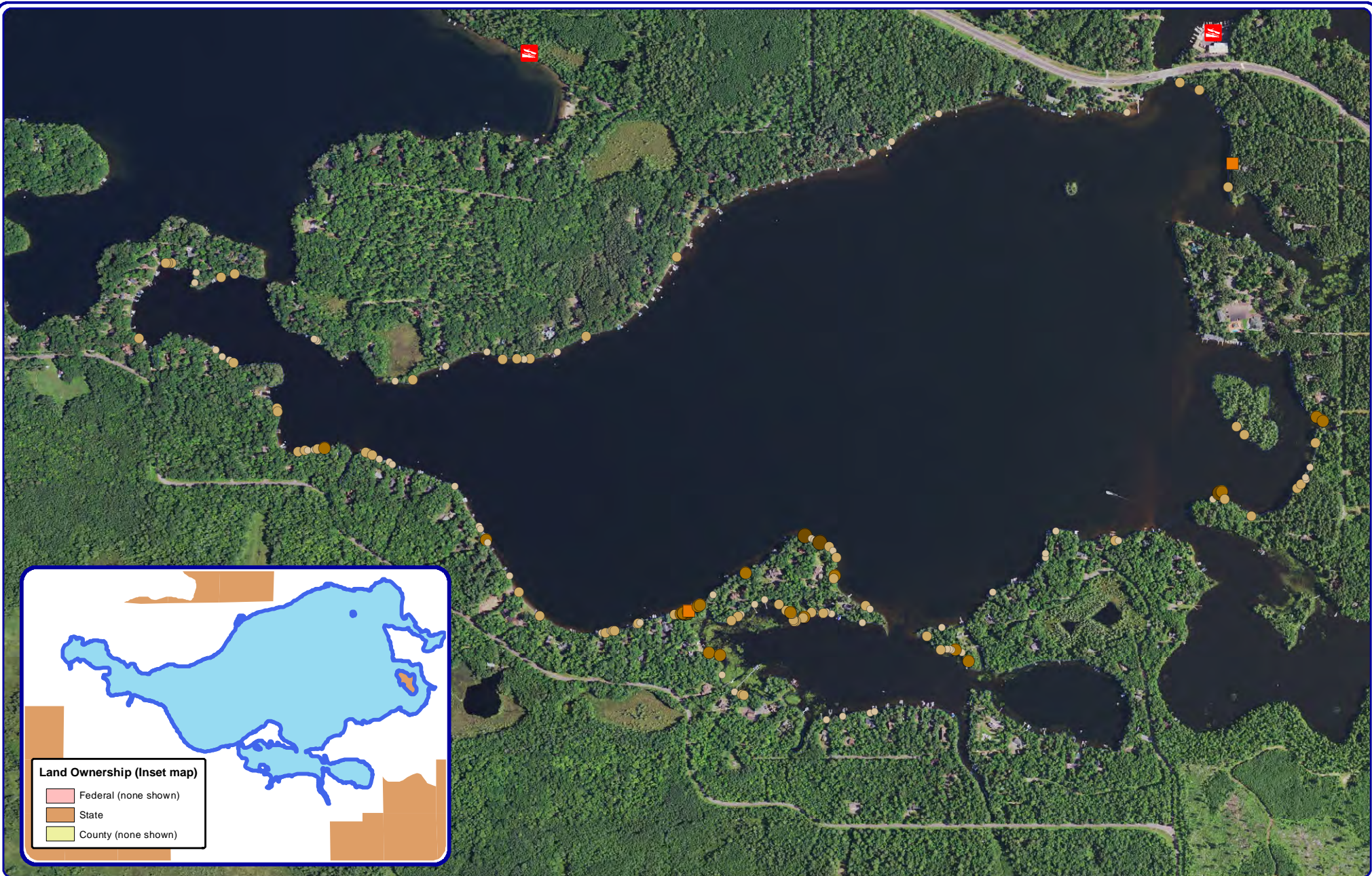
- Legend**
- Natural/Undeveloped
 - Developed-Natural
 - Developed-Semi-Natural
 - Developed-Unnatural
 - Urbanized
 - Inaccessible

- Seawall**
- Rip-Rap
- Wood/Masonry/Metal

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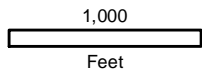
Sources:
 Hydro: WDNR
 Orthophotography: NAIP, 2015
 Shoreline Assessment: Onterra, 2016
 Map Date: December 8, 2016
 Filename: Manitowish_Map1_ShorelandCondition_2016.mxd

Map 1
 Manitowish Lake
 Vilas County, Wisconsin
**2016 Shoreland
 Condition**



Land Ownership (Inset map)

- Federal (none shown)
- State
- County (none shown)



Project Location in Wisconsin

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Sources:
 Hydro: WDNR
 Orthophotography: NAIP, 2015
 Shoreline Assessment: Onterra, 2016
 Map Date: December 9, 2016
 Filename: Manitowish_Map2_CWH_2016.mxd

Legend

2-8 Inch Pieces

- No Branches
- Minimal Branches
- Moderate Branches
- Full Canopy

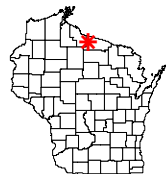
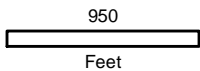
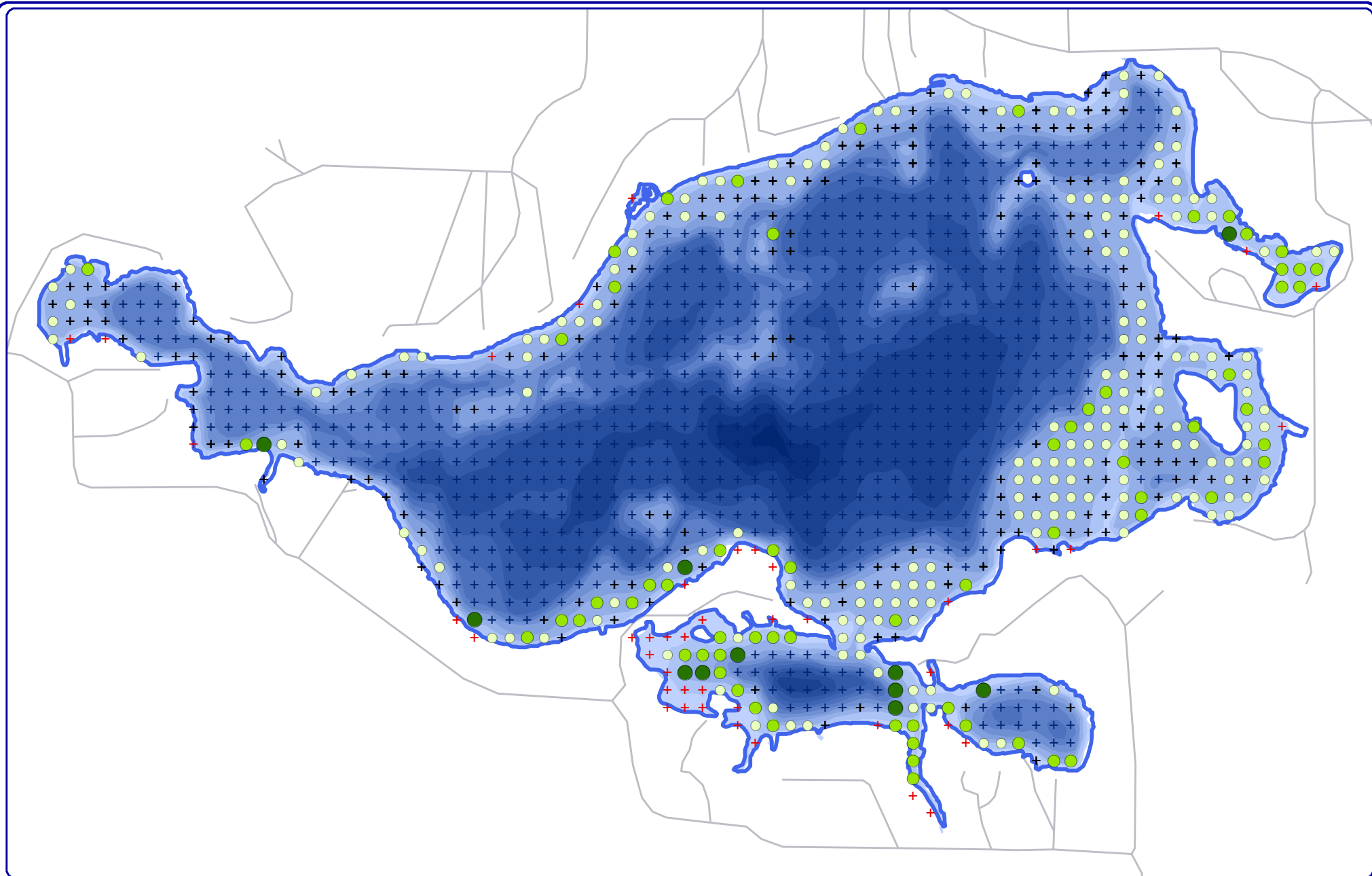
8+ Inch Pieces

- No Branches
- Minimal Branches
- Moderate Branches (none)
- Full Canopy (none)

Cluster of Pieces

- No Branches (none)
- Minimal Branches (none)
- Moderate Branches
- Full Canopy (none)

Map 2
 Manitowish Lake
 Vilas County, Wisconsin
**Coarse Woody
 Habitat**



Project Location in Wisconsin

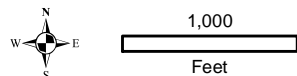
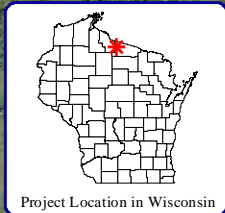
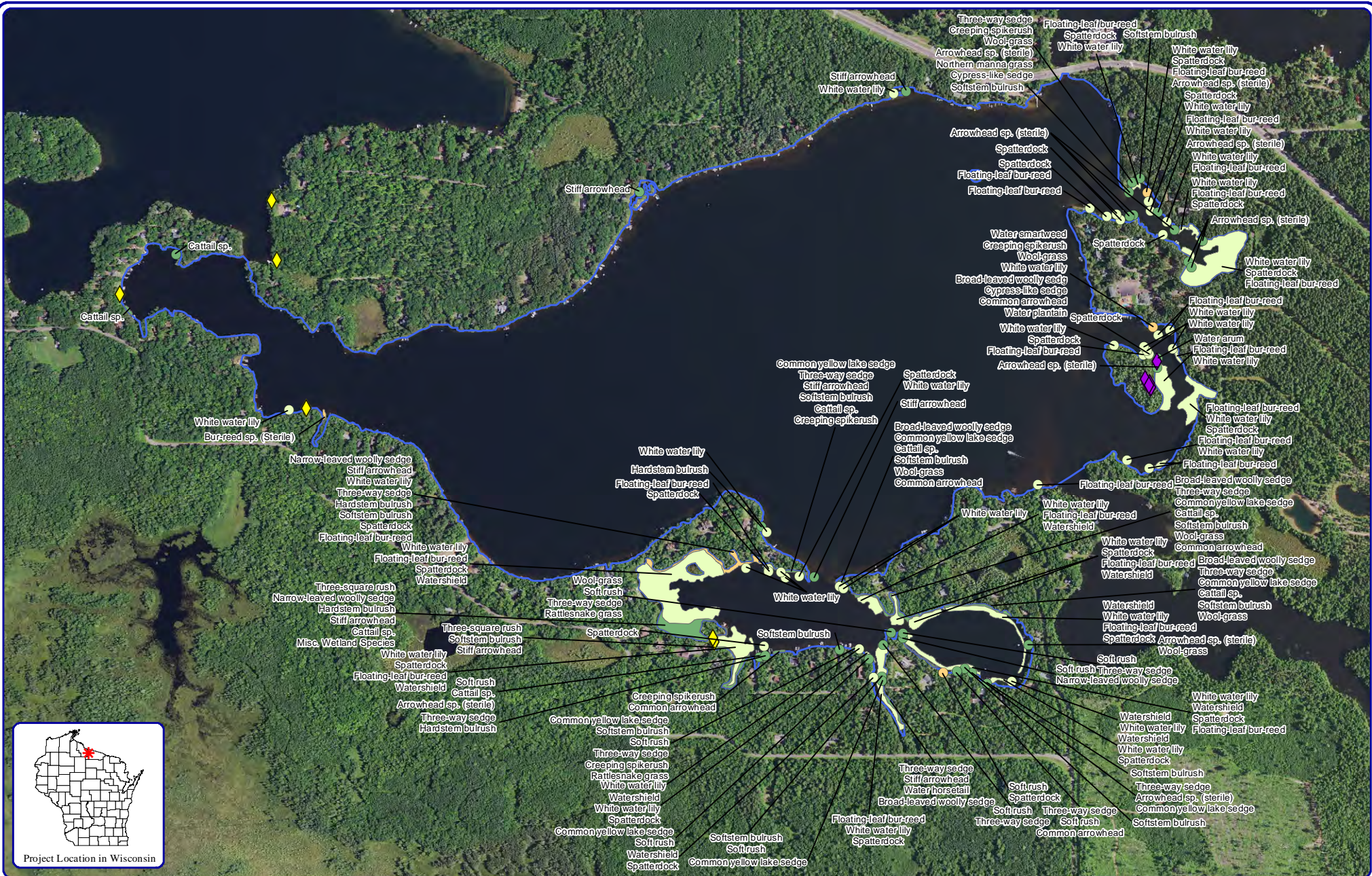
Onterra LLC
 Lake Management Planning
 815 Prosper Rd
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 920.338.8860
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Sources:
 Roads and Hydro: WDNR
 Plant Survey: Onterra, 2016
 Map Date: November 30, 2016
 Filename: Manitowish_Map3_TRFPI_2016.mxd

Legend

- Total Rake Fullness = 1
- Total Rake Fullness = 2
- Total Rake Fullness = 3
- + No Vegetation
- + Non-Navigable

Map 3
Manitowish Lake
 Vilas County, Wisconsin
2016 PI Survey:
Aquatic Vegetation
Distribution



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Sources:
 Aquatic Plants: Onterra, 2016
 Orthophotography: NAIP, 2015
 Map date: October 26, 2016
 Filename: Manitowish_Map1_Comm_2016.mxd

Small Plant Communities

- Emergent
- Floating-leaf
- Mixed Floating-leaf & Emergent

Large Plant Communities

- Emergent
- Floating-leaf
- Mixed Floating-leaf & Emergent
- Adjacent Wetland Habitat

Legend

Exotic Plant Communities

- ◆ Purple loosestrife
- ◆ Pale yellow iris

Manitowish Lake - Map 4

Manitowish Lake
 Vilas County, Wisconsin

**Emergent & Floating-leaf
 Aquatic Plant Communities**