

Onterra LLC
 Lake Management Planning
 815 Prosper Road
 De Pere, WI 54115
 920.338.8860
 www.onterra-eco.com

Sources
 Roads and Hydro: WDNR
 Water Quality Station: USEPA STORET
 Map Date: January 31, 2013
 Filename: Map1_CalManLakes_Location.mxd

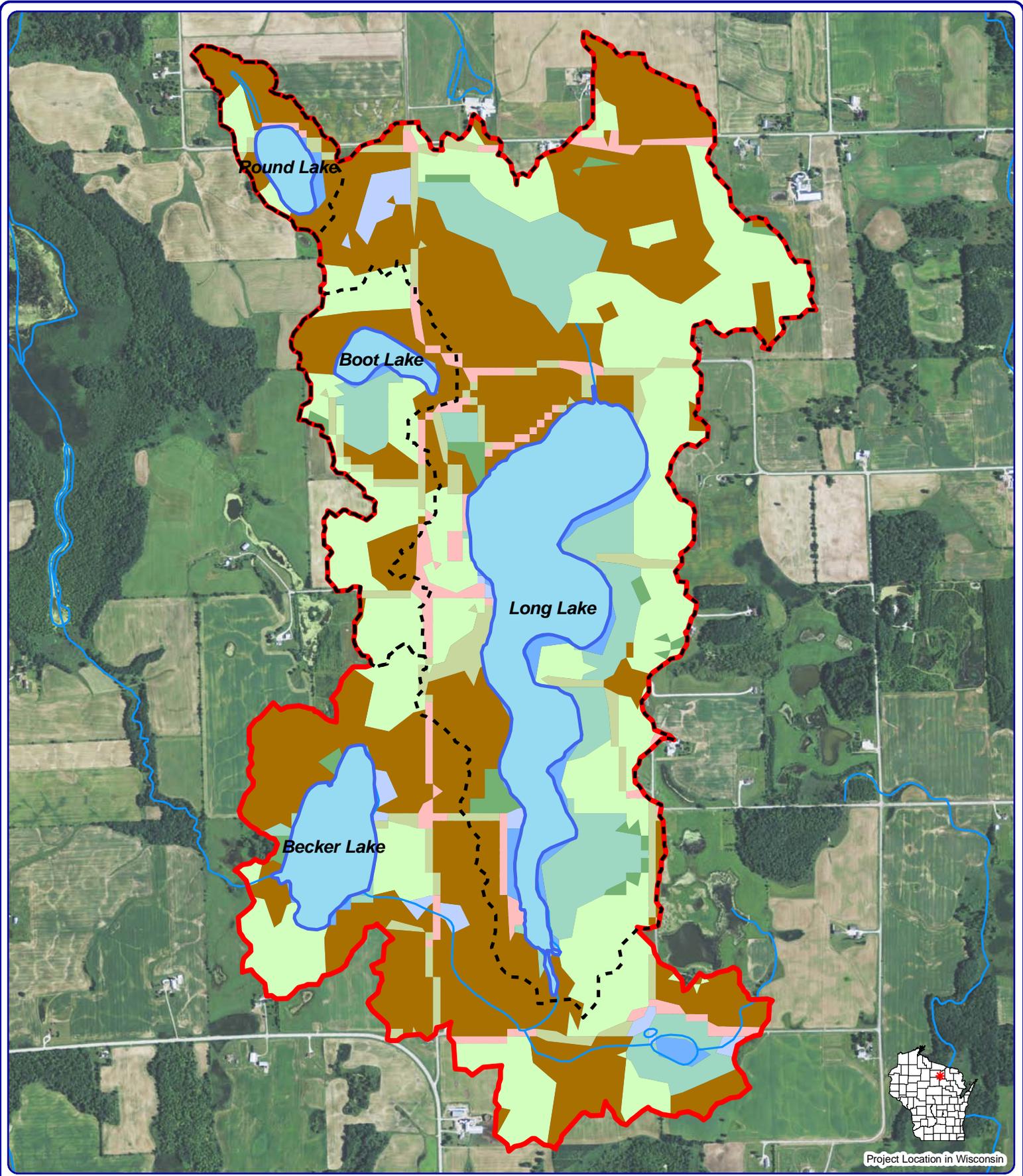


Project Location in Wisconsin

Legend

-  Project Lake
-  Watershed Boundary
-  Public Access
-  Water Quality Sampling Location

Map 1
CalMan Lakes
 Calumet & Manitowoc Counties
Project Location & Lake Boundaries



Project Location in Wisconsin



1,500
Feet

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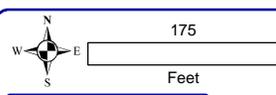
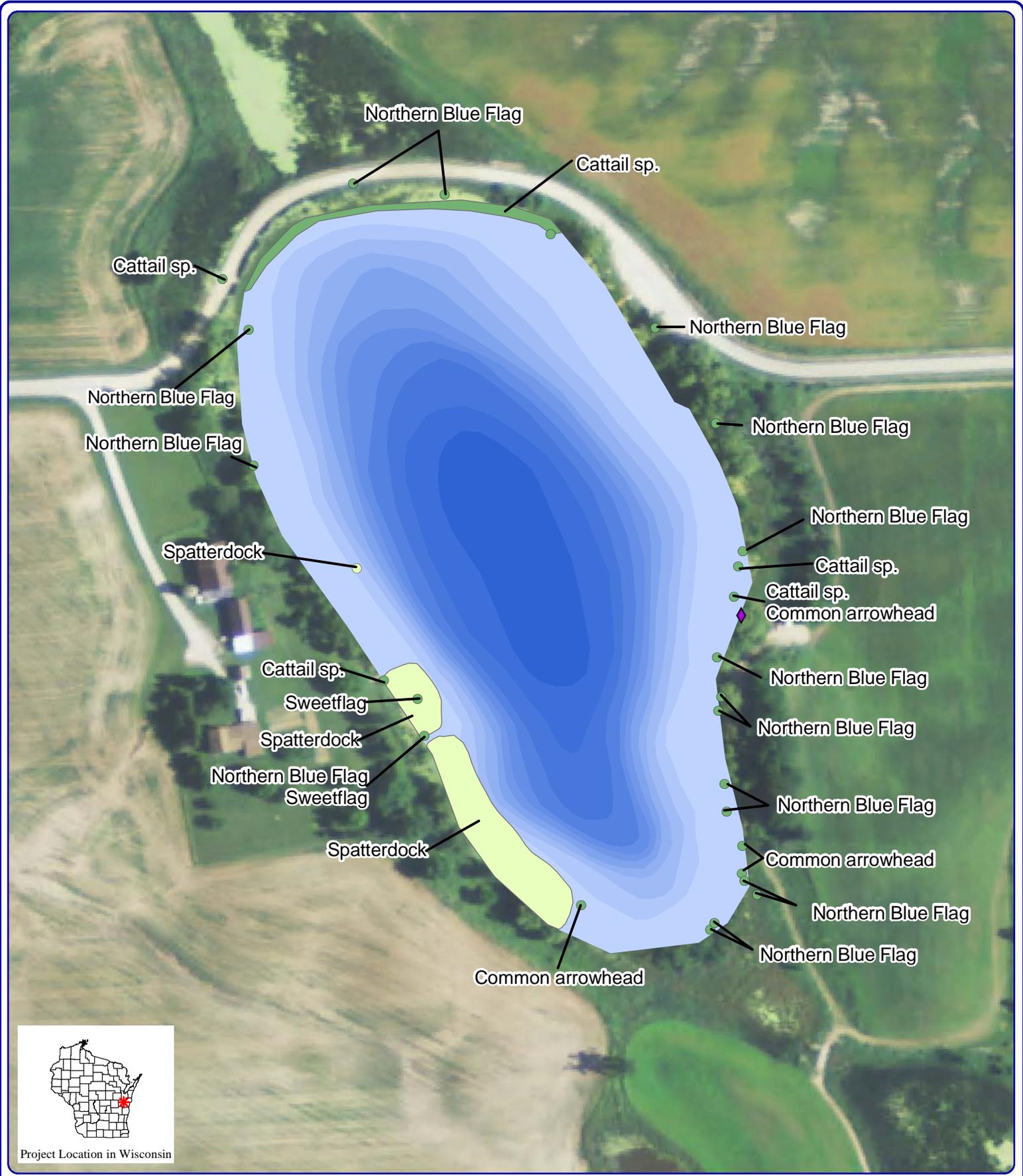
Source: Watershed: CCRCD
Landcover: NLCD 2006
Hydro: WDNR
Orthophotography: NAIP, 2013
Map Date: April 16, 2014
File Name: Map2_CalMan_WS_landuse.mxd

- Watersheds**
- Sub-watershed
 - CalMan Lakes Watershed

- Legend**
- Forest
 - Forested Wetlands
 - Pasture/Grass
 - Open Water
 - Wetland

- Land Cover Types**
- Row Crop Agriculture
 - Rural Open Space
 - Rural Residential
 - Urban - High Density
 - Urban - Medium Density

Map 2
CalMan Lakes
Calumet & Manitowoc Counties
**Watershed and
Land Cover Types**

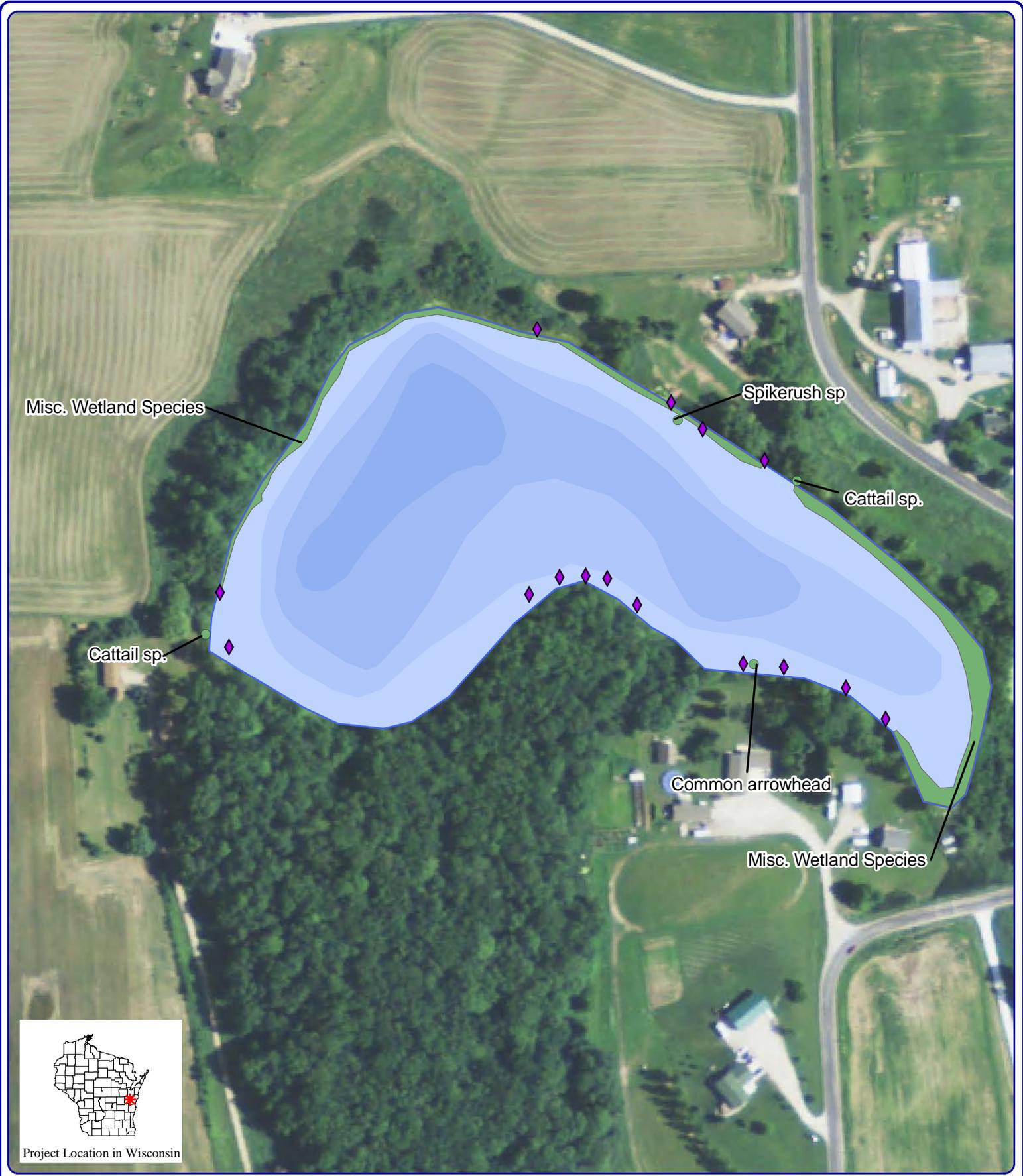


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Sources:
 Hydro: WDNR
 Aquatic Plants: Onterra, 2013
 Orthophotography: NAIP, 2010
Map date: March 21, 2014
 Filename: Round_Comm_2013.mxd

Exotic Plant Communities		Small Plant Communities		Large Plant Communities	
	Purple loosestrife		Emergent		Emergent
			Floating-leaf		Floating-leaf
			Mixed Floating-leaf & Emergent		Mixed Floating-leaf & Emergent

Map 3
Round Lake
 Calumet County, Wisconsin
Aquatic Plant Communities



Misc. Wetland Species

Spikerush sp

Cattail sp.

Cattail sp.

Common arrowhead

Misc. Wetland Species



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 Orthophotography: NAIP, 2010
Map date: March 21, 2014
 Filename: Boot_Comm_2013.mxd

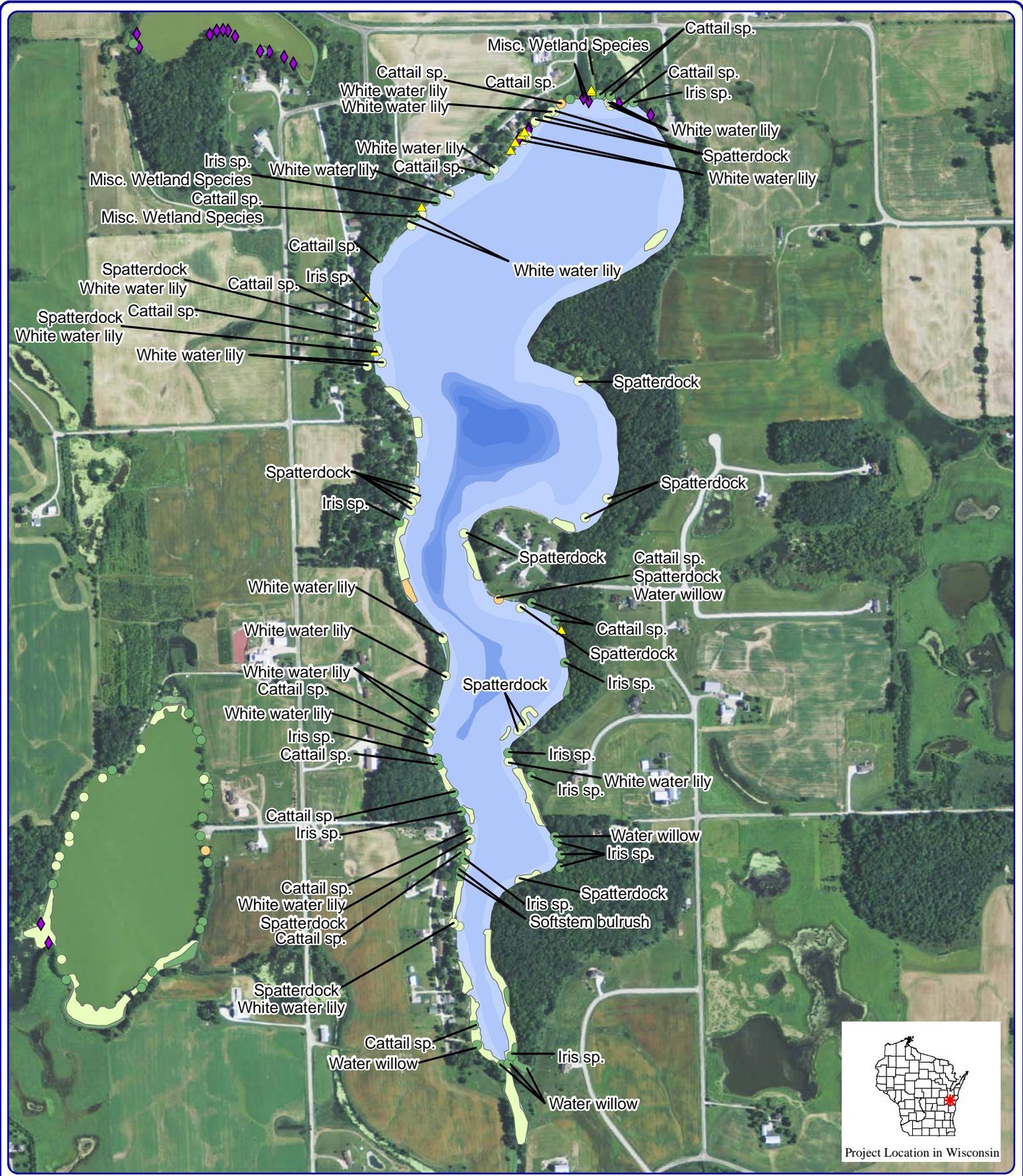
Legend

- | | | |
|--|---|---|
| Exotic Plant Communities | Small Plant Communities | Large Plant Communities |
| <ul style="list-style-type: none"> ◆ Purple loosestrife | <ul style="list-style-type: none"> ● Emergent ● Floating-leaf ● Mixed Floating-leaf & Emergent | <ul style="list-style-type: none"> ● Emergent ● Floating-leaf ● Mixed Floating-leaf & Emergent |

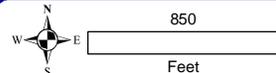
Map 4
Boot Lake

Manitowoc County, Wisconsin

Aquatic Plant Communities



Project Location in Wisconsin

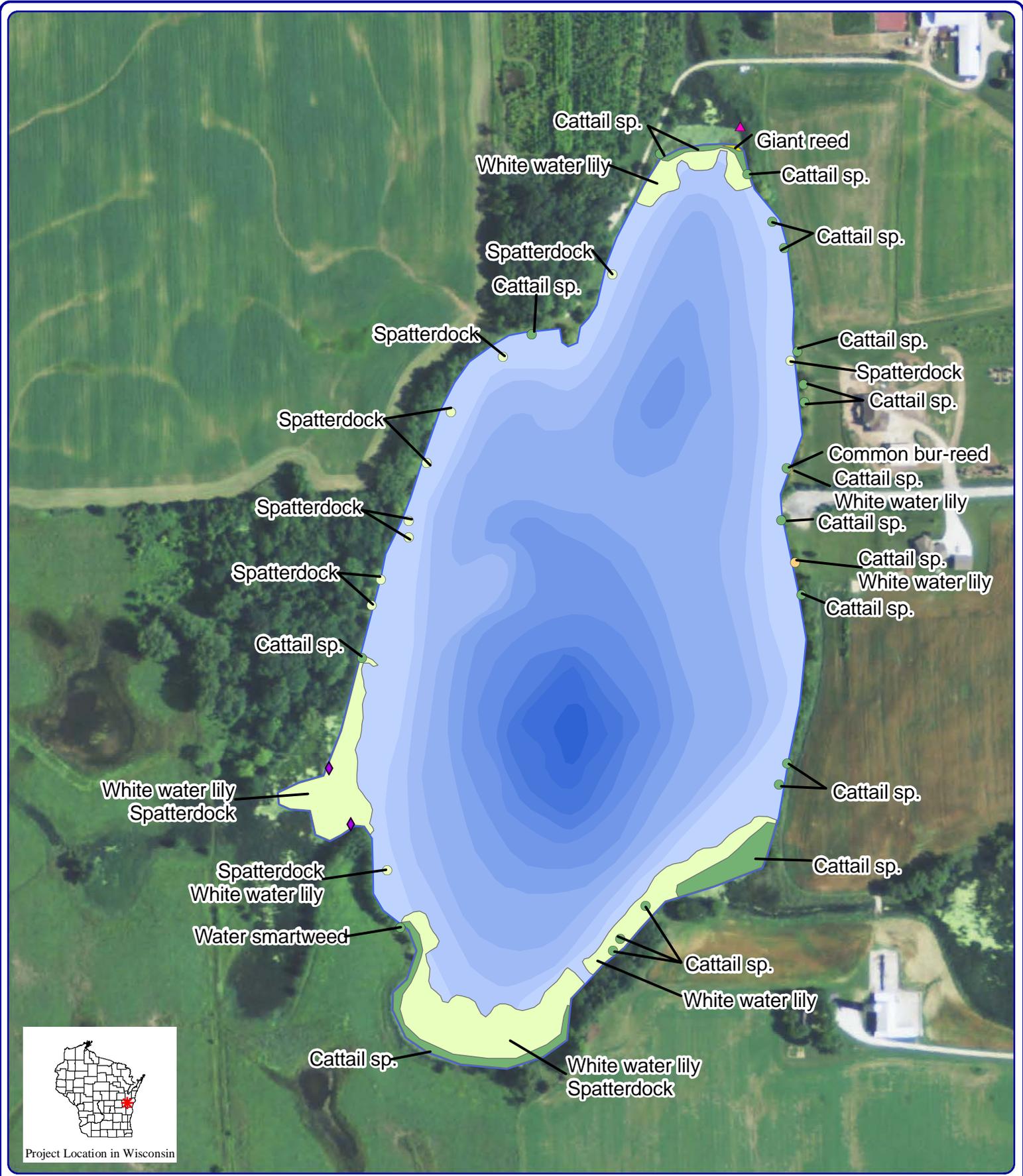


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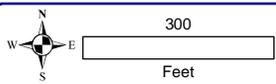
Sources:
 Hydro: WDNR
 Aquatic Plants: Onterra, 2013
 Orthophotography: NAIP, 2010
Map date: March 21, 2014
 Filename: Long_Comm_2013.mxd

Exotic Plant Communities		Small Plant Communities		Large Plant Communities	
◆	Purple loosestrife	●	Emergent	●	Emergent
▲	Pale yellow iris	●	Floating-leaf	●	Floating-leaf
		●	Mixed Floating-leaf & Emergent	●	Mixed Floating-leaf & Emergent

Map 5
Long Lake
 Manitowoc County, Wisconsin
Aquatic Plant Communities



Project Location in Wisconsin

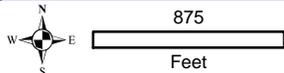
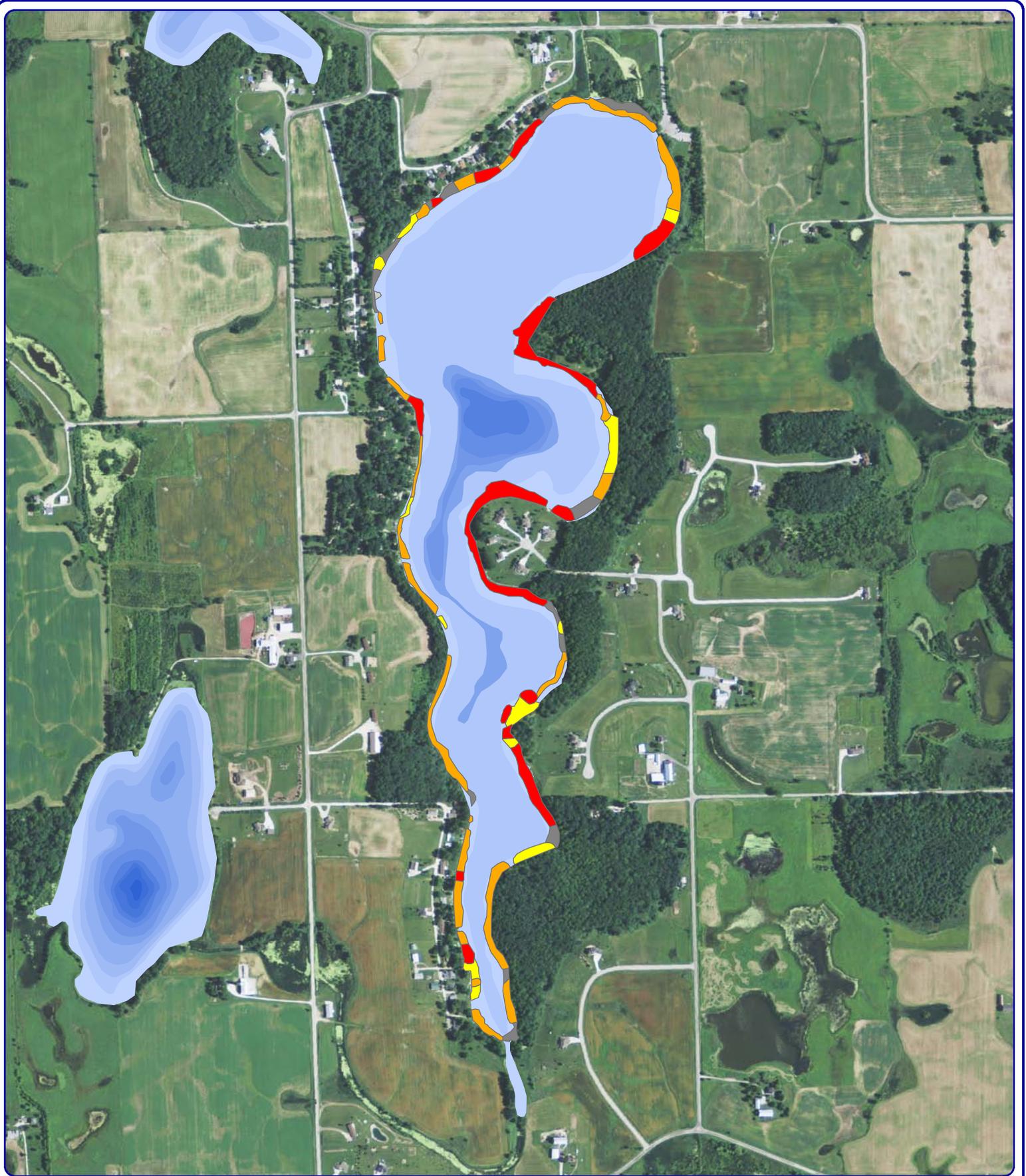


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Sources:
 Hydro: WDNR
 Aquatic Plants: Onterra, 2013
 Orthophotography: NAIP, 2010
Map date: March 21, 2014
 Filename: Becker_Comm_2013.mxd

Exotic Plant Communities		Small Plant Communities		Large Plant Communities	
	Purple loosestrife		Emergent		Emergent
	Giant reed		Floating-leaf		Floating-leaf
			Mixed Floating-leaf & Emergent		Mixed Floating-leaf & Emergent

Map 6
Becker Lake
 Calumet County, Wisconsin
Aquatic Plant Communities



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Sources:
 Data: Roads and Hydro: WDNR
 Aquatic Plant Survey: Onterra, 2013
 Map Date: October 9, 2013
 Filename: LongCalMan_EWM_PB_Aug13.mxd

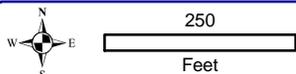
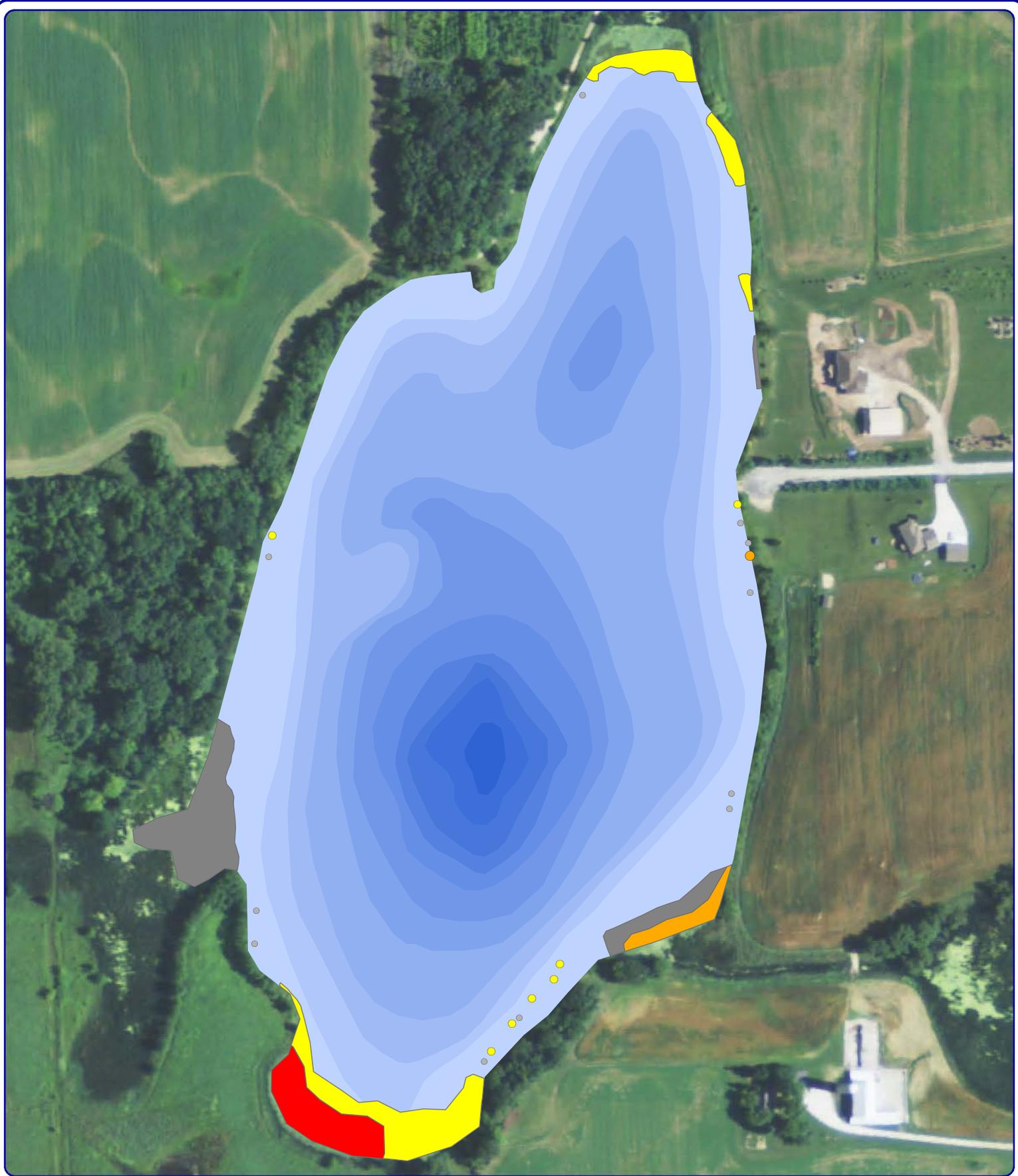


Project Location in Wisconsin

Eurasian water milfoil (August 2013)

- Highly Scattered
- Scattered (~2.2 acres)
- Dominant (~2.7 acres)
- Highly Dominant (~7.5 acres)
- Surface Matting (~7.3 acres)
- Single or Few Plants
- Clumps of Plants
- Small Plant Colony

Map 7
 Long Lake
 Manitowoc County, Wisconsin
**2013 EWM
 Survey Results**



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Map Date: October 9, 2013
 Filename: BeckerCalMan_EWM_PB_Aug13.mxd

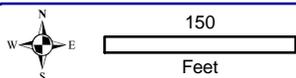
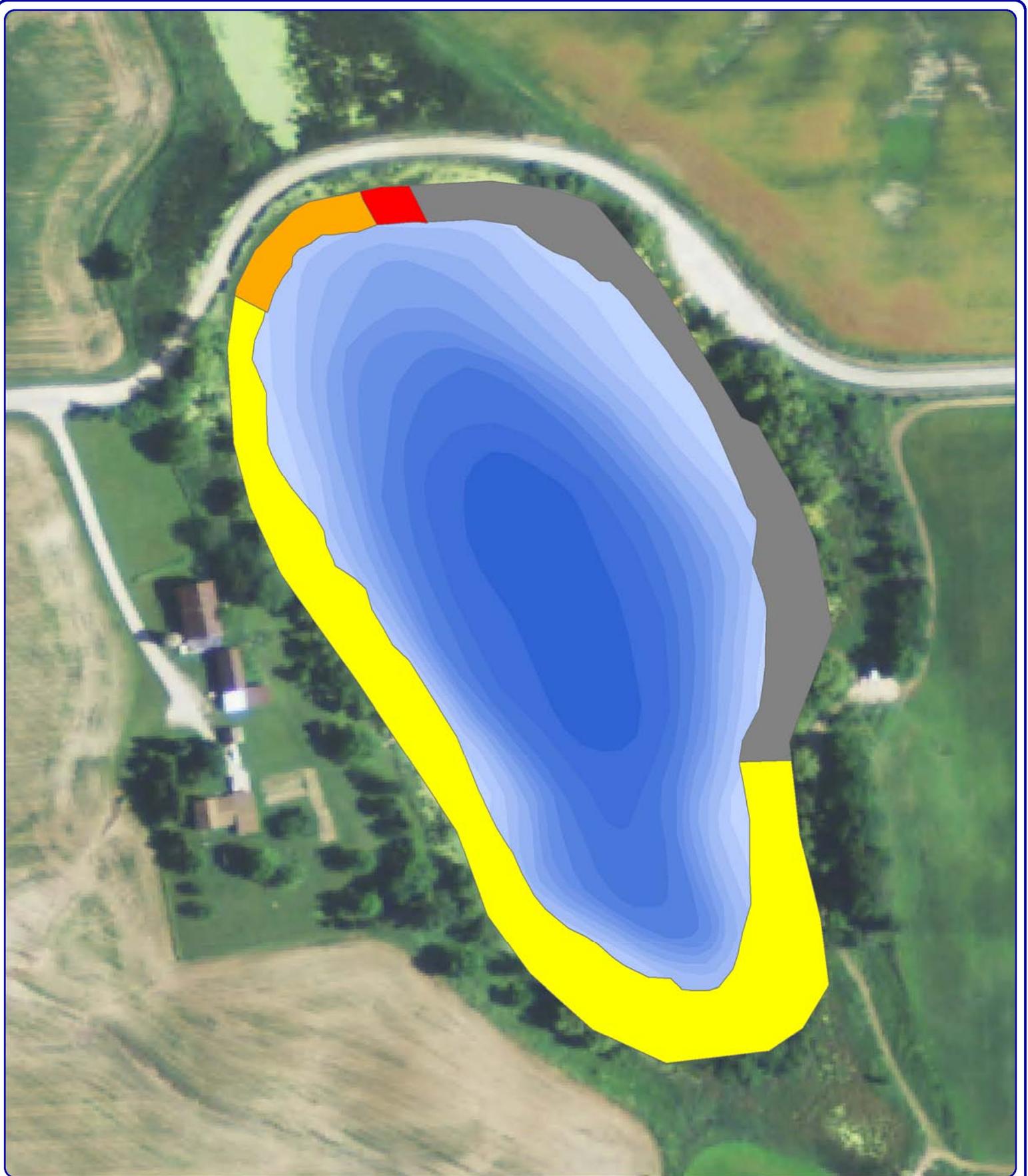


Project Location in Wisconsin

Hybrid water milfoil (August 2013)

- | | |
|------------------------------|----------------------|
| Highly Scattered | Single or Few Plants |
| Scattered (~0.9 acres) | Clumps of Plants |
| Dominant (~0.9 acres) | Small Plant Colony |
| Highly Dominant (~0.2 acres) | |
| Surface Matting (~0.5 acres) | |

Map 8
Becker Lake
 Calumet County, Wisconsin
**2013 Hybrid EWM
 Survey Results**



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Sources:
 Data: Roads and Hydro: WDNR
 Aquatic Plant Survey: Onterra, 2013
Map Date: October 9, 2013
 Filename: RoundCalMan_CLP_Jun13.mxd

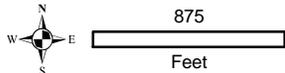
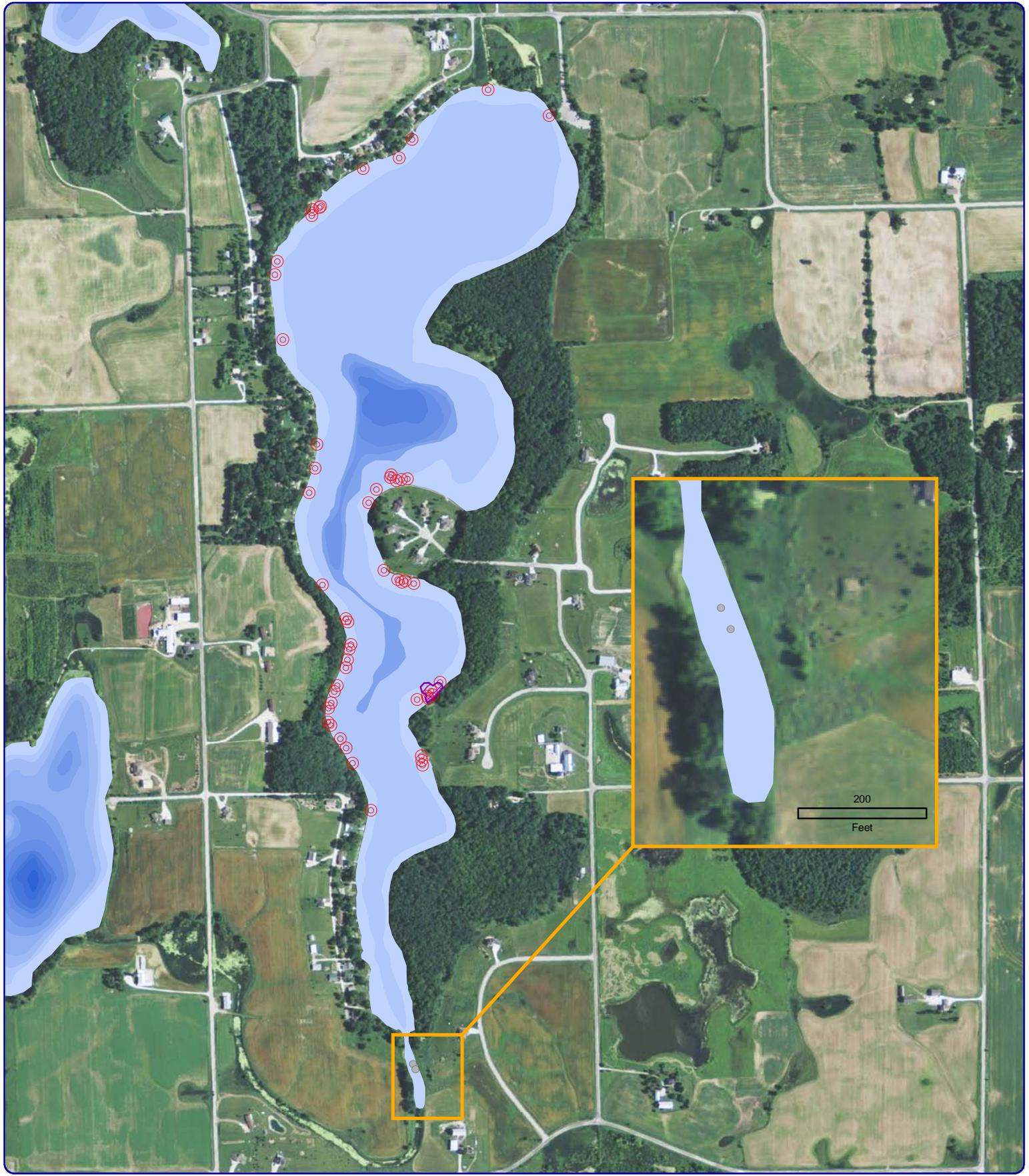


Project Location in Wisconsin

Curly-leaf Pondweed (June 2013)

- Highly Scattered
- Scattered (~1.1 acres)
- Dominant (~2.2 acres)
- Highly Dominant (~0.2 acres)
- Surface Matting (~0.1 acres)
- Single or Few Plants
- Clumps of Plants
- Small Plant Colony

Map 9
Round Lake
 Calumet County, Wisconsin
2013 CLP
Survey Results



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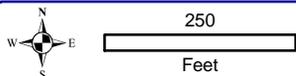
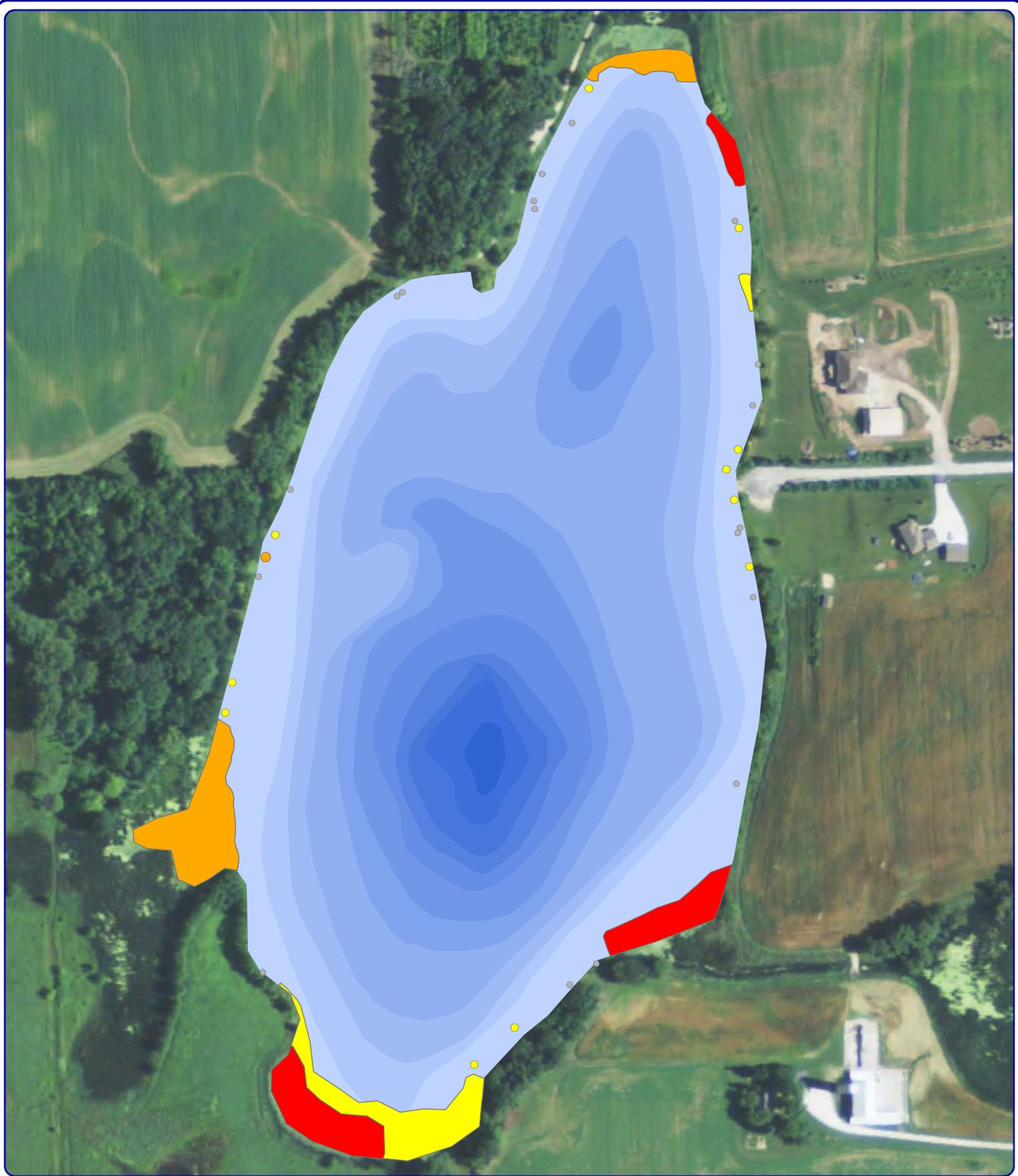
Sources:
 Data: Roads and Hydro: WDNR
 Aquatic Plant Survey: Onterra, 2013
Map Date: October 9, 2013
 Filename: LongCoMan_CLP_Jun13.mxd



Curly-leaf Pondweed (June 2013)

- | | | | |
|--|------------------|--|----------------------|
| | Highly Scattered | | Single or Few Plants |
| | Scattered | | Clumps of Plants |
| | Dominant | | Small Plant Colony |
| | Highly Dominant | | 2009 CLP Location |
| | Surface Matting | | 2009 CLP Colony |

Map 10
 Long Lake
 Manitowoc County, Wisconsin
**2013 CLP
 Survey Results**



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Map Date: October 9, 2013
 Filename: BeckerCalMan_CLP_Jun13.mxd



Project Location in Wisconsin

Curly-leaf Pondweed (June 2013)

- Highly Scattered
- Scattered
- Dominant (~0.7 acres)
- Highly Dominant (~0.9 acres)
- Surface Matting (~1.0 acres)
- Single or Few Plants
- Clumps of Plants
- Small Plant Colony

Map 11
Becker Lake
 Calumet County, Wisconsin
2013 CLP
Survey Results