

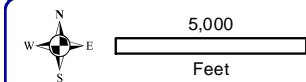
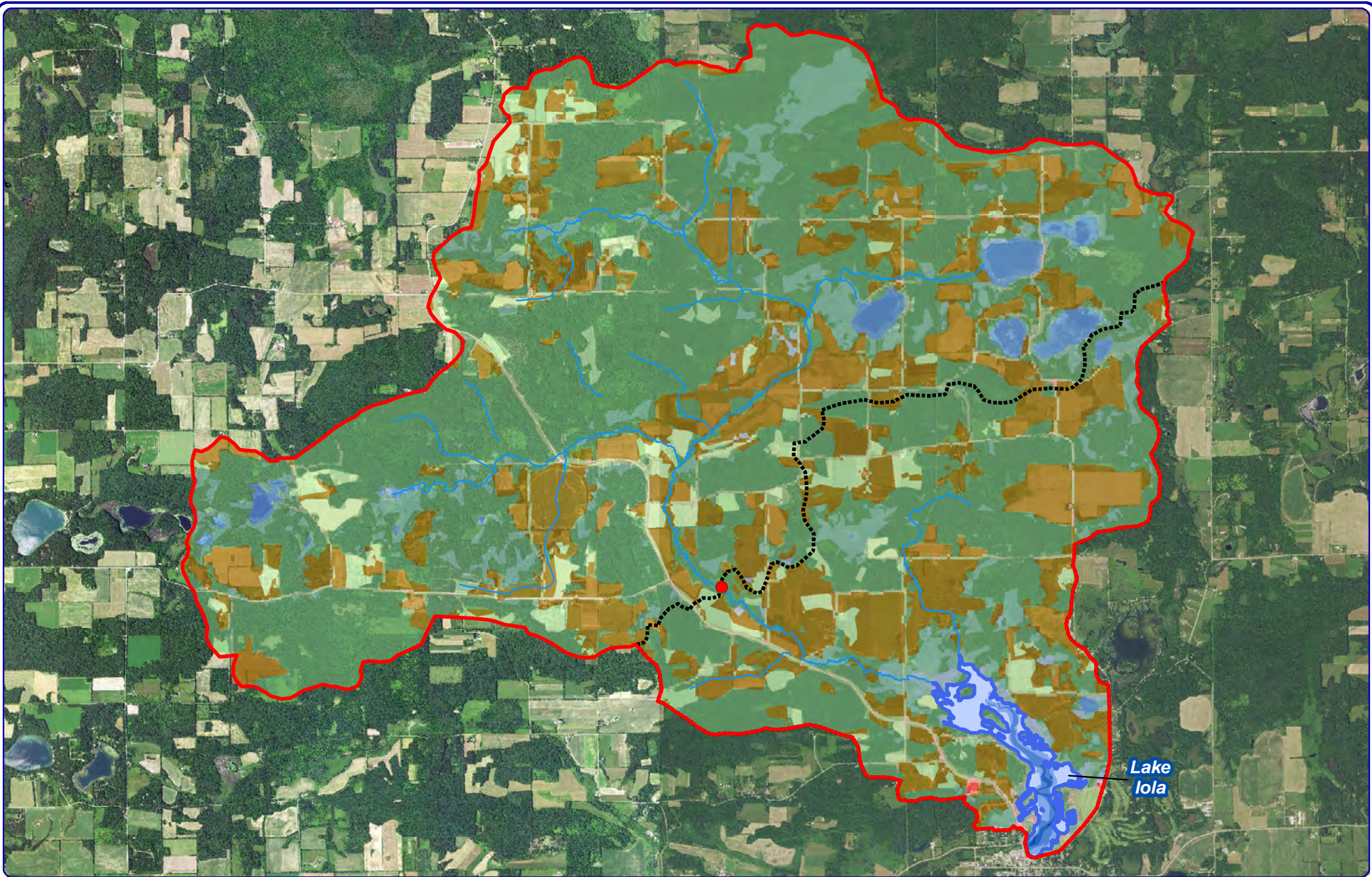
Onterra LLC
 Lake Management Planning
 815 Prosper Road
 De Pere, WI 54115
 920.338.8860
 www.onterra-eco.com

Sources:
 Roads and Hydro: WDNR
 Map Date: December 7, 2016
 Filename: Map1_Iola_Location.mxd

Legend

- Lake Iola ~ 206 acres
WDNR Definition
- Water Quality Sampling Location
- Public Access
- Carry-In Access
- Dam

Map 1
 Lake Iola
 Waupaca County, Wisconsin
**Project Location
 & Lake Boundaries**



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Sources:
 Hydro: WDNR
 Bathymetry: WDNR, digitized by Onterra
 Orthophotography: NAIP 2015
 Land Cover: NLCD 2011
 Watershed Boundaries: Onterra 2017
 Map Date: October 31, 2017
 Filename: Iola_WS.mxd



Project Location in Wisconsin

Land Cover Types

- Forest
- Pasture/Grass
- Forested Wetlands
- Row Crops
- Wetlands
- Rural Residential
- Open Water
- Rural Open Space
- Medium Density Urban
- High Density Urban

Legend

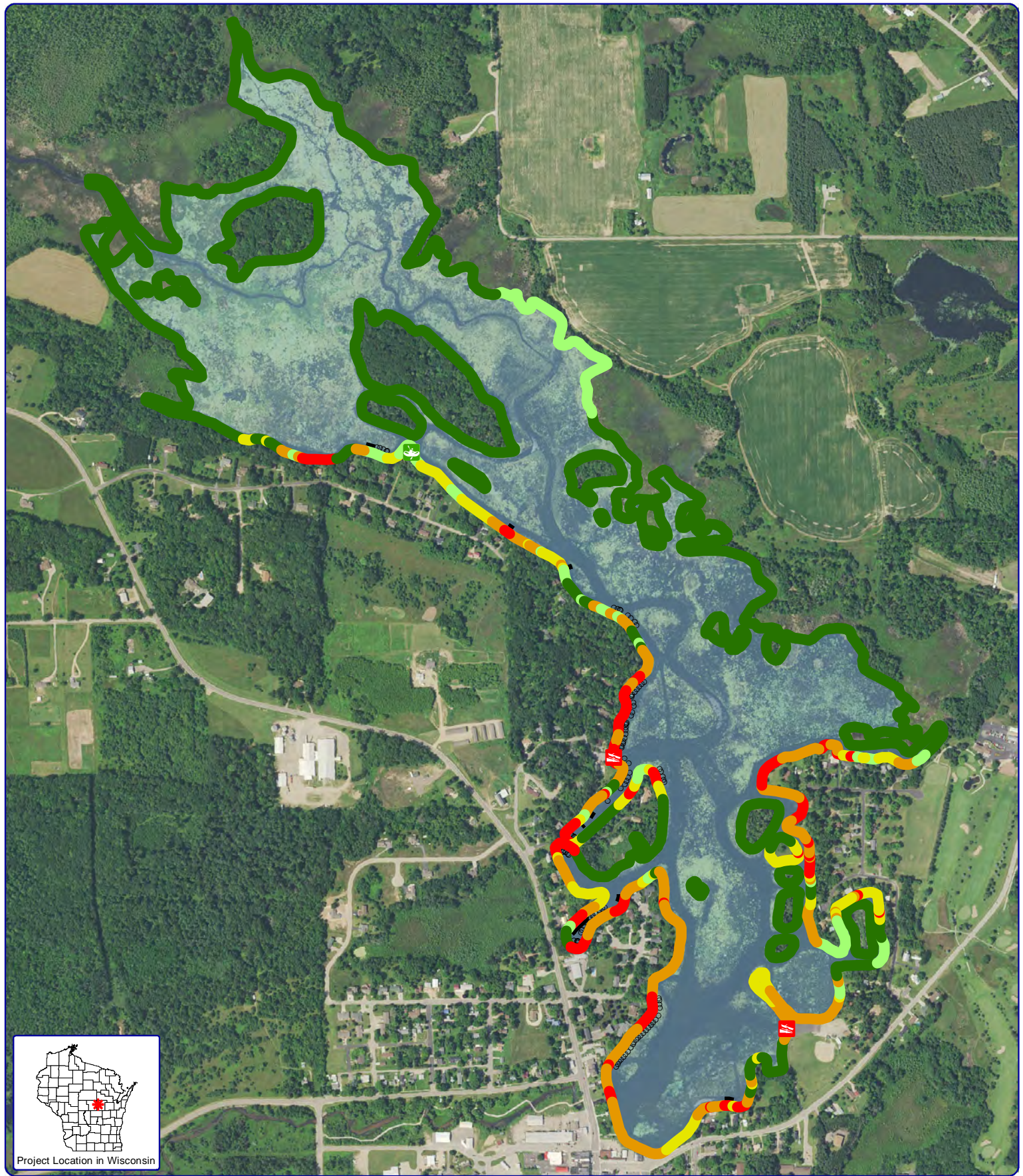
- Lake Iola Watershed Boundary
- South Branch Little Wolf River Monitoring Station Subwatershed
- Monitoring Station
- River/Stream

Map 2

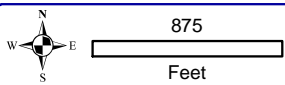
Lake Iola

Waupaca County, Wisconsin

**Watershed Boundaries
 & Land Cover Types**



Project Location in Wisconsin



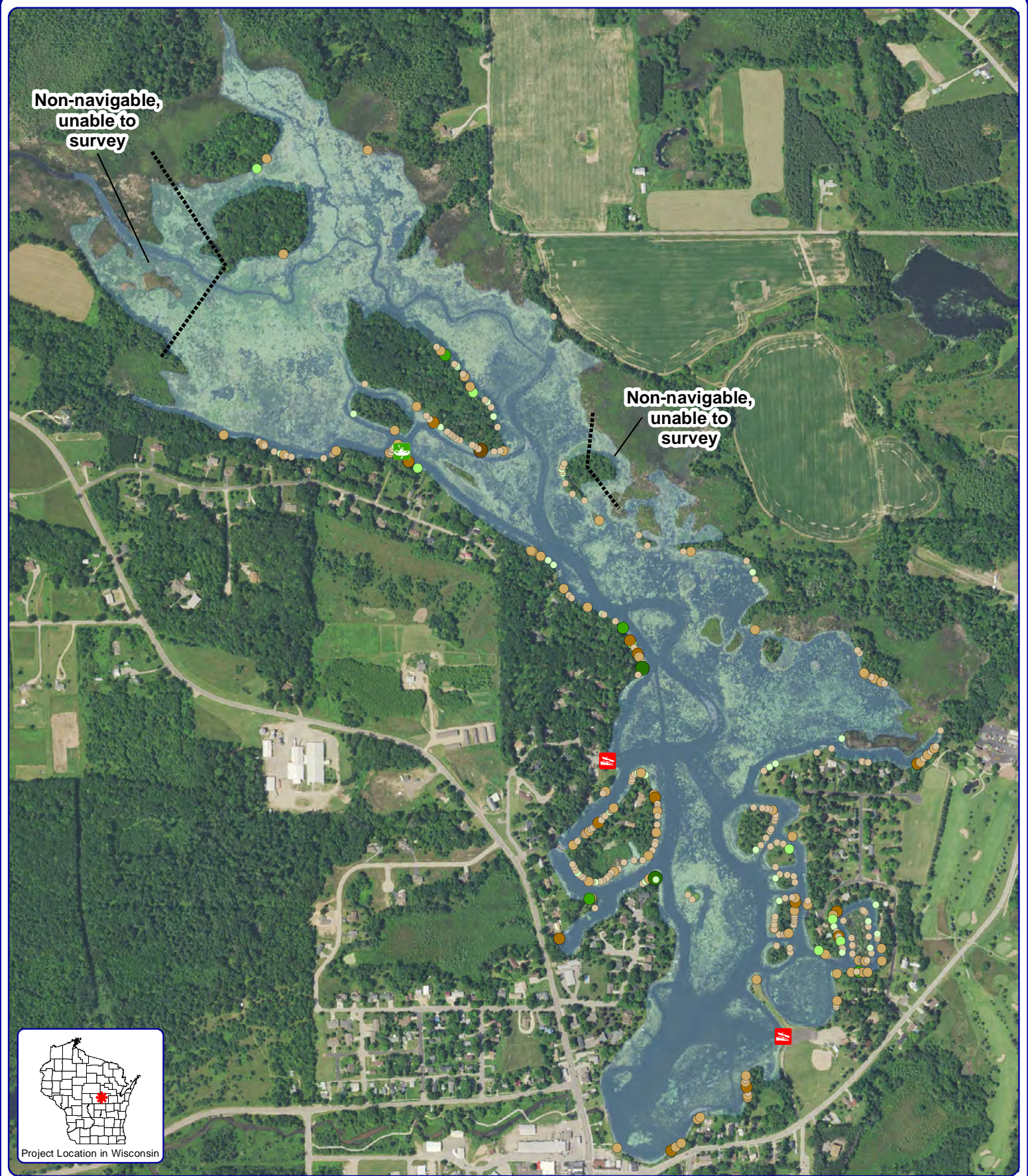
Onterra LLC
 Lake Management Planning
 815 Prosper Rd
 De Pere, WI 54115
 920.338.8860
 www.onterra-eco.com

Sources:
 Roads and Hyrd: WDNR
 Orthophotograph: NAIP, 2015
 Shoreline Assessment: Onterra, 2017
 Map Date: November 6, 2017
 Filename: Iola_ShorelandCondition_2017.mxd

Legend

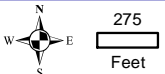
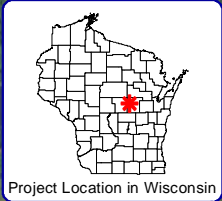
- Natural/Undeveloped
- Developed-Natural
- Developed-Semi-Natural
- Developed-Unnatural
- Urbanized
- Seawall
- Rip-Rap
- Masonry/Wood/Metal

Map 3
Lake Iola
 Waupaca County, Wisconsin
2017 Shoreline
Condition Assessment



Non-navigable,
unable to
survey

Non-navigable,
unable to
survey



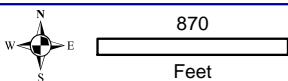
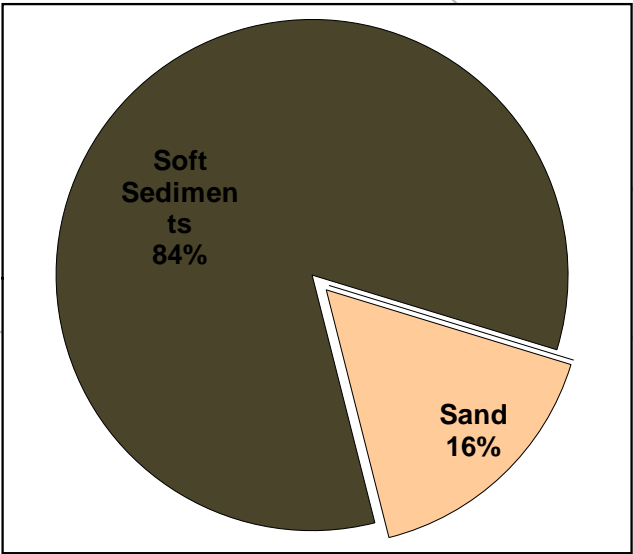
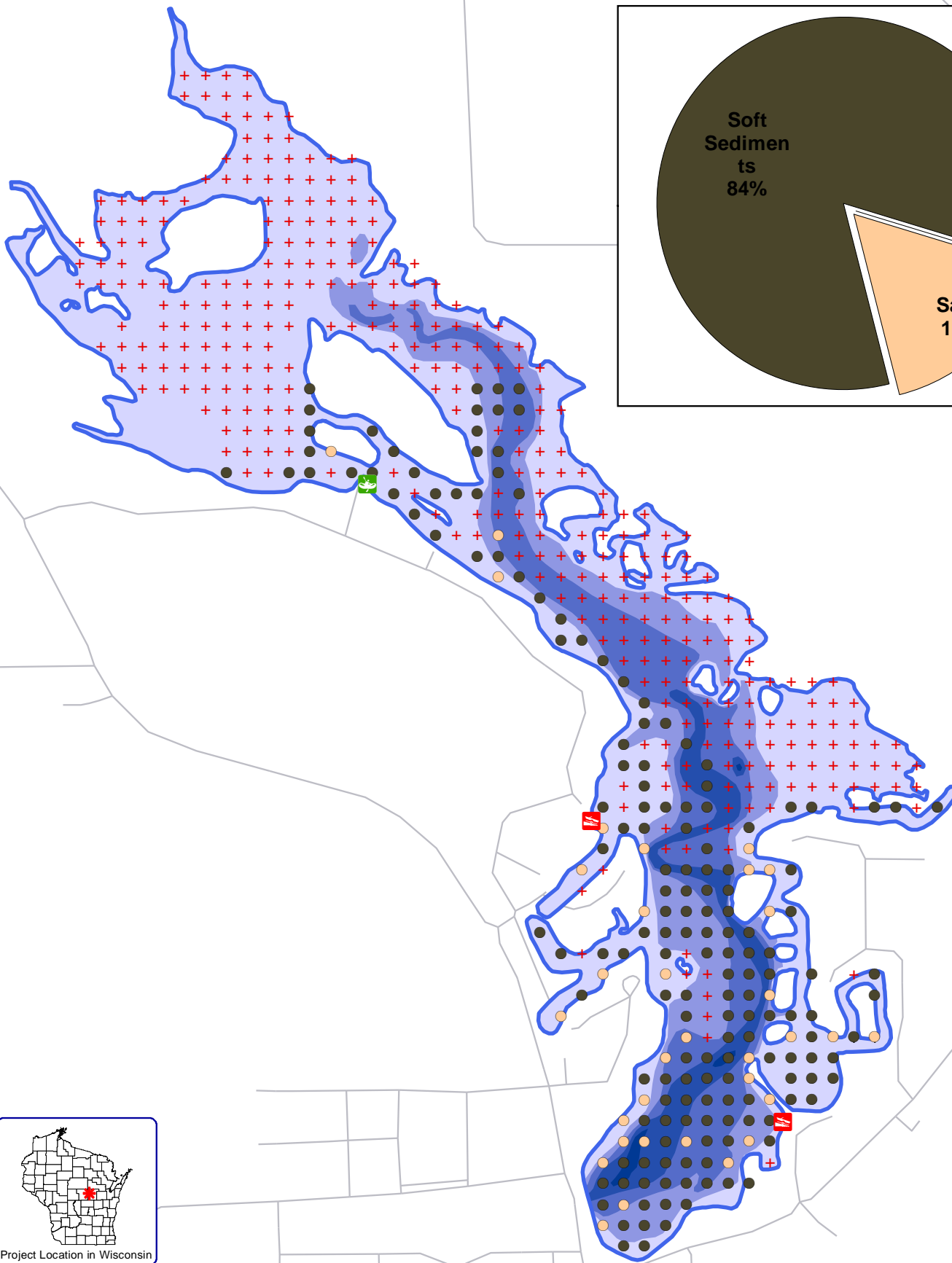
Onterra LLC
Lake Management Planning
815 Prosper Rd
De Pere, WI 54115
920.338.8860
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Sources:
Roads and Hyrd: WDNR
Orthophotograph: NAIP, 2015
CWH Survey: Onterra, 2017
Map Date: November 6, 2017
Filename: Iola_CWH_2017.mxd

Legend

- | | | |
|------------------------|-----------------------|-------------------------------------|
| 2-8 Inch Pieces | 8+ Inch Pieces | Cluster of Pieces |
| ○ No Branches | ○ No Branches | ■ No Branches (<i>None</i>) |
| ○ Minimal Branches | ○ Minimal Branches | ■ Minimal Branches (<i>None</i>) |
| ○ Moderate Branches | ○ Moderate Branches | ■ Moderate Branches (<i>None</i>) |
| ○ Full Canopy | ○ Full Canopy | ■ Full Canopy (<i>None</i>) |

Map 4
Lake Iola
Waupaca County, Wisconsin
**2017 Coarse Woody
Habitat Survey Results**



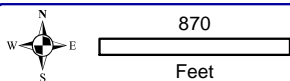
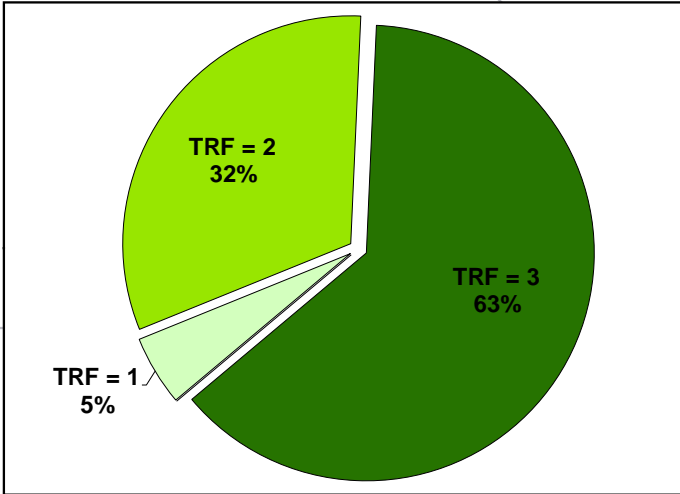
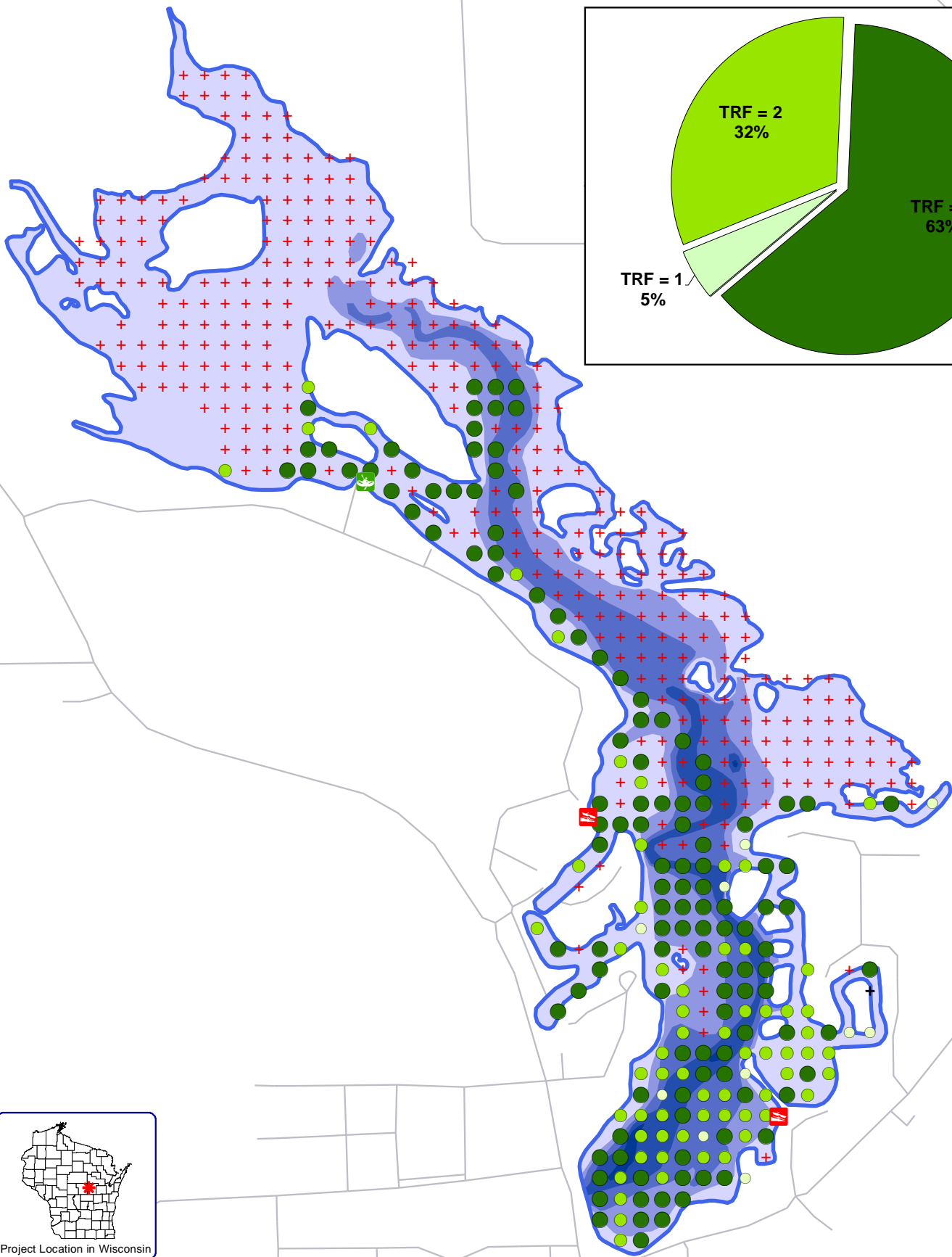
Onterra LLC
 Lake Management Planning
 815 Prosper Rd
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 920.338.8860
 www.onterra-eco.com

Sources:
 Roads and Hydo: WDNR
 Bathymetry: WDNR, digitized by Onterra
 Aquatic Plant Survey: Onterra, 2017
 Map Date: November 16, 2017
 Filename: Iola_SubstratePI_2017.mxd

Legend

- Soft/Organic Sediments
- Rock
- Sand
- + Non-navigable

Map 5
Lake Iola
 Waupaca County, Wisconsin
2017 PI Survey:
Substrate Types



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 920.338.8860
 www.onterra-eco.com

Sources:
 Roads and Hydo: WDNR
 Bathymetry: WDNR, digitized by Onterra
 Aquatic Plant Survey: Onterra, 2017
 Map Date: November 16, 2017
 Filename: Iola_TRFPI_2017.mxd

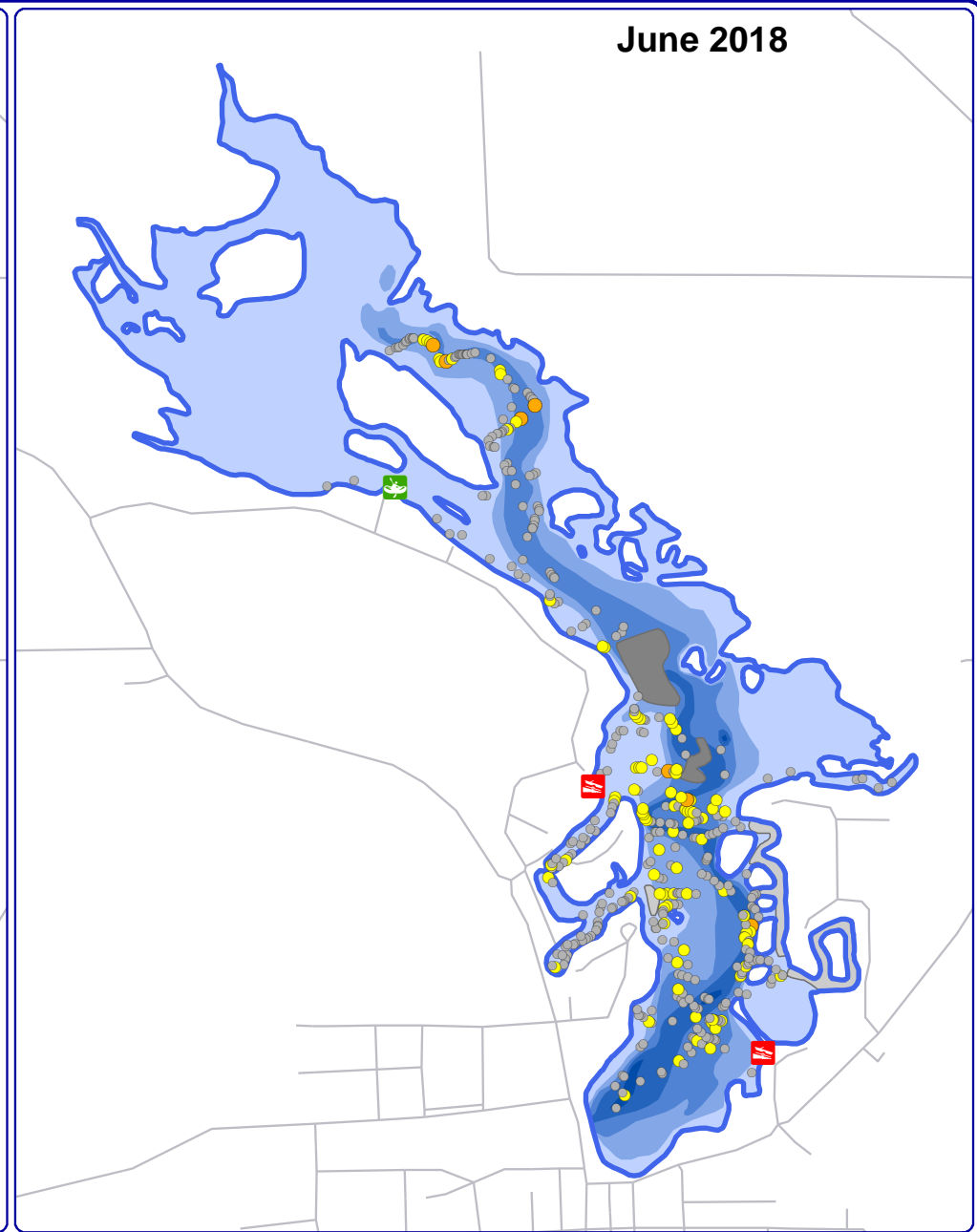
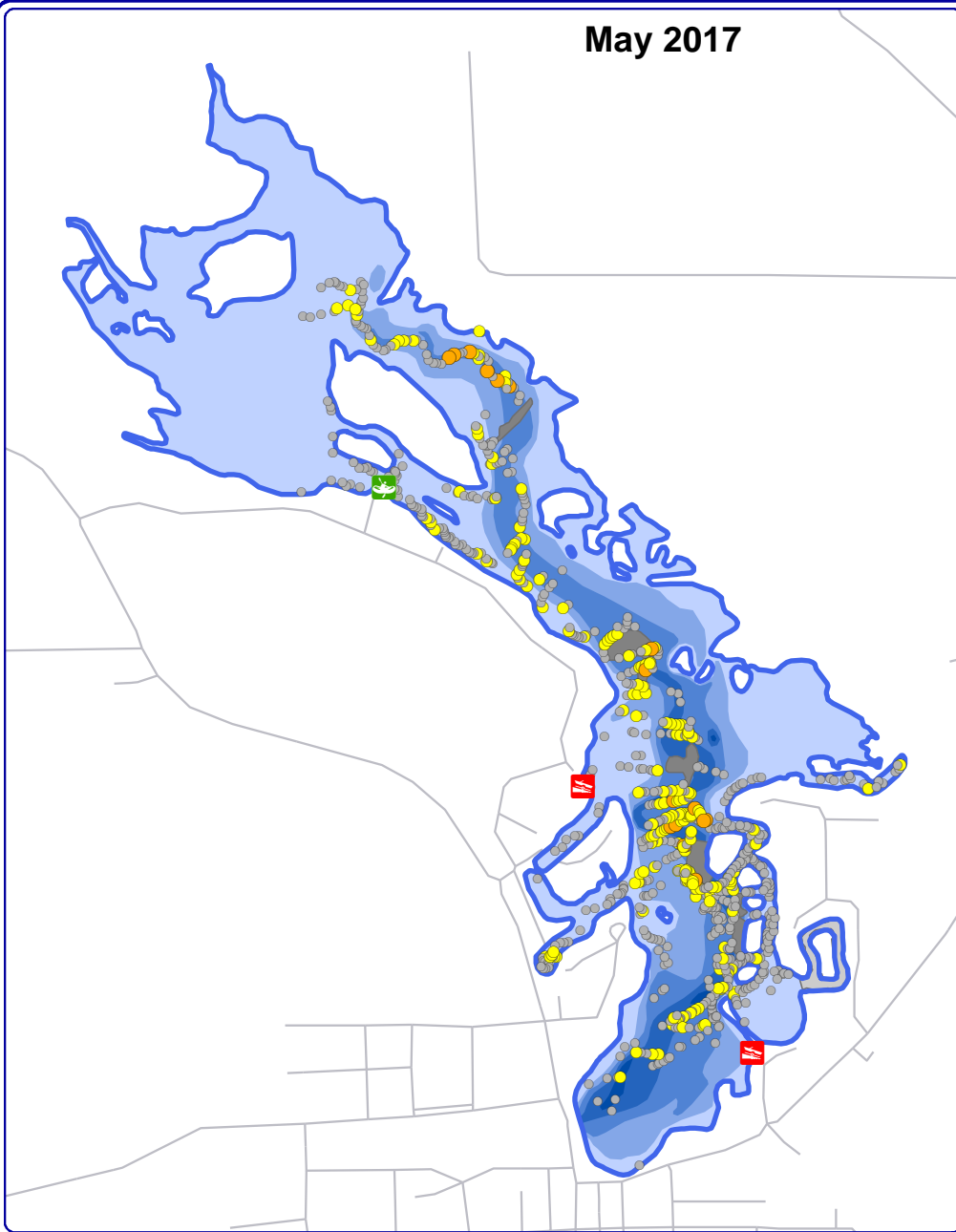
Legend

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

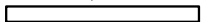
Map 6
Lake Iola
 Waupaca County, Wisconsin
2017 PI Survey:
Aquatic Vegetation
Distribution

May 2017

June 2018



1,300



Feet

Onterra LLC
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 815 Prosper Road
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 www.onterra-eco.com

Sources:
 Roads & Hydro: WDNR
 Bathymetry: WDNR, digitized by Onterra
 Aquatic Plants: Onterra, 2017 & 2018
 Map Date: September 6, 2018 JLW
 Filename: Map7_Iola_CLP_2017-2018.mxd



Project Location in Wisconsin

Legend

- Highly Scattered
- Scattered
- Dominant (none)
- Highly Dominant (none)
- Surface Matting (none)
- Single or Few Plants
- Clump of Plants
- Small Plant Colony

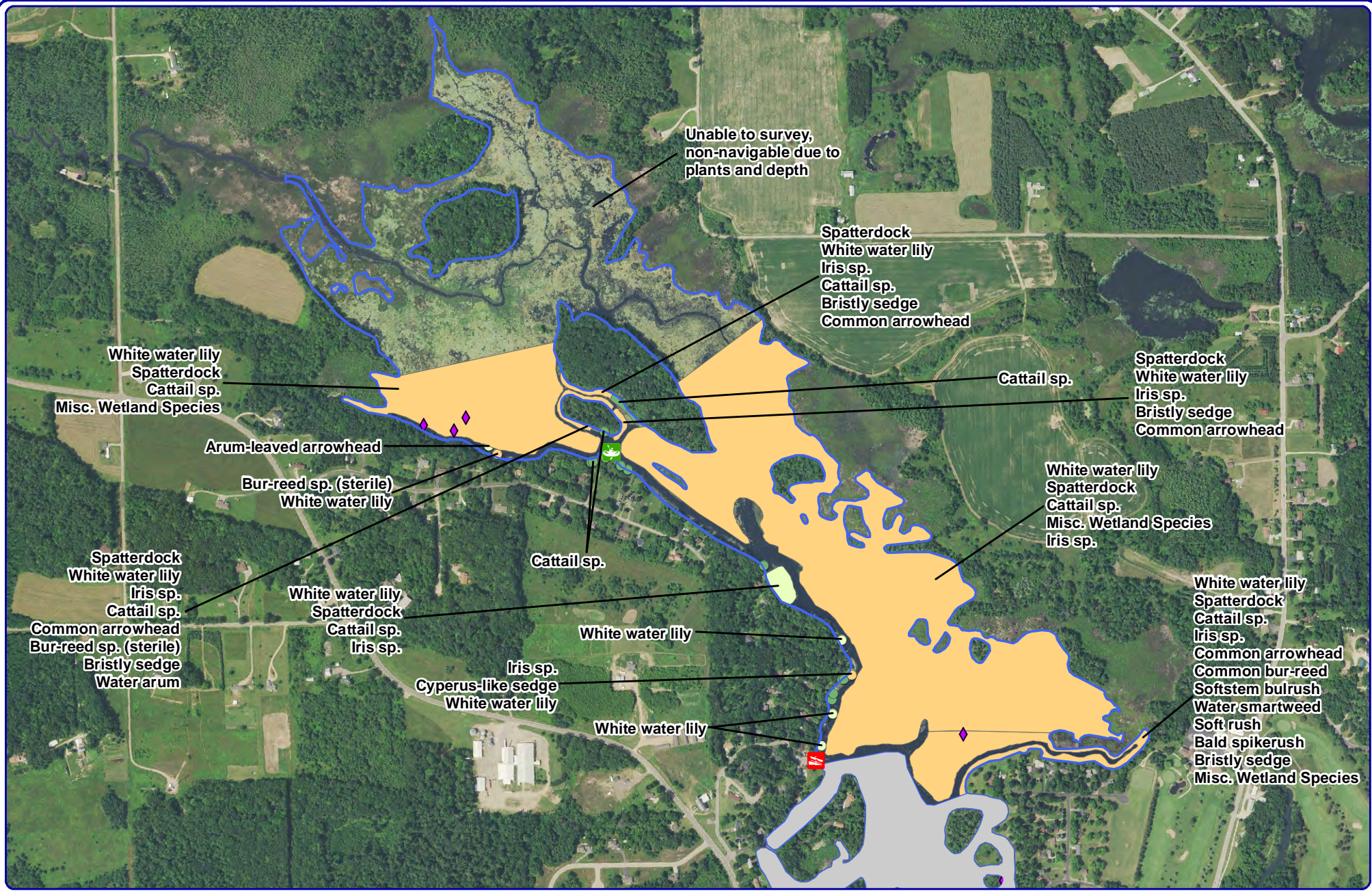
Map 7

Iola Lake

Waupaca County, Wisconsin

May 2017 & June 2018

CLP Survey Results



Unable to survey, non-navigable due to plants and depth

Spatterdock
White water lily
Iris sp.
Cattail sp.
Bristly sedge
Common arrowhead

White water lily
Spatterdock
Cattail sp.
Misc. Wetland Species

Arum-leaved arrowhead

Bur-reed sp. (sterile)
White water lily

Spatterdock
White water lily
Iris sp.
Cattail sp.
Common arrowhead
Bur-reed sp. (sterile)
Bristly sedge
Water arum

White water lily
Spatterdock
Cattail sp.
Iris sp.

Cattail sp.

White water lily

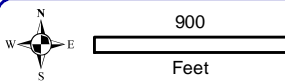
Iris sp.
Cyperus-like sedge
White water lily

White water lily

White water lily
Spatterdock
Cattail sp.
Iris sp.
Misc. Wetland Species

White water lily
Spatterdock
Cattail sp.
Iris sp.

White water lily
Spatterdock
Cattail sp.
Iris sp.
Common arrowhead
Common bur-reed
Softstem bulrush
Water smartweed
Soft rush
Bald spikerush
Bristly sedge
Misc. Wetland Species



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Sources:
Roads and Hyrdo: WDNR
Orthophotograph: NAIP, 2015
Aquatic Plants: Onterra, 2017
Map Date: August 16, 2017
Filename: Iola_Comm_2017.mxd



Large Plant Communities

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

Legend

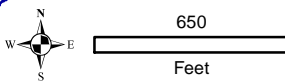
Small Plant Communities

- Emergent (Iris sp. unless otherwise noted)
- Floating-leaf
- Mixed Floating-leaf & Emergent

Exotic Plant Communities

- Purple Loosestrife

Map 8
Lake Iola - North
Waupaca County, Wisconsin
**2017 Plant Survey:
Community Mapping**



Project Location in Wisconsin

Large Plant Communities

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

Small Plant Communities

- Emergent (Iris sp. unless otherwise noted)
- Floating-leaf
- Mixed Floating-leaf & Emergent

Legend

Exotic Plant Communities

- Purple Loosestrife

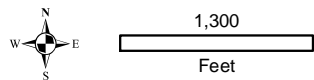
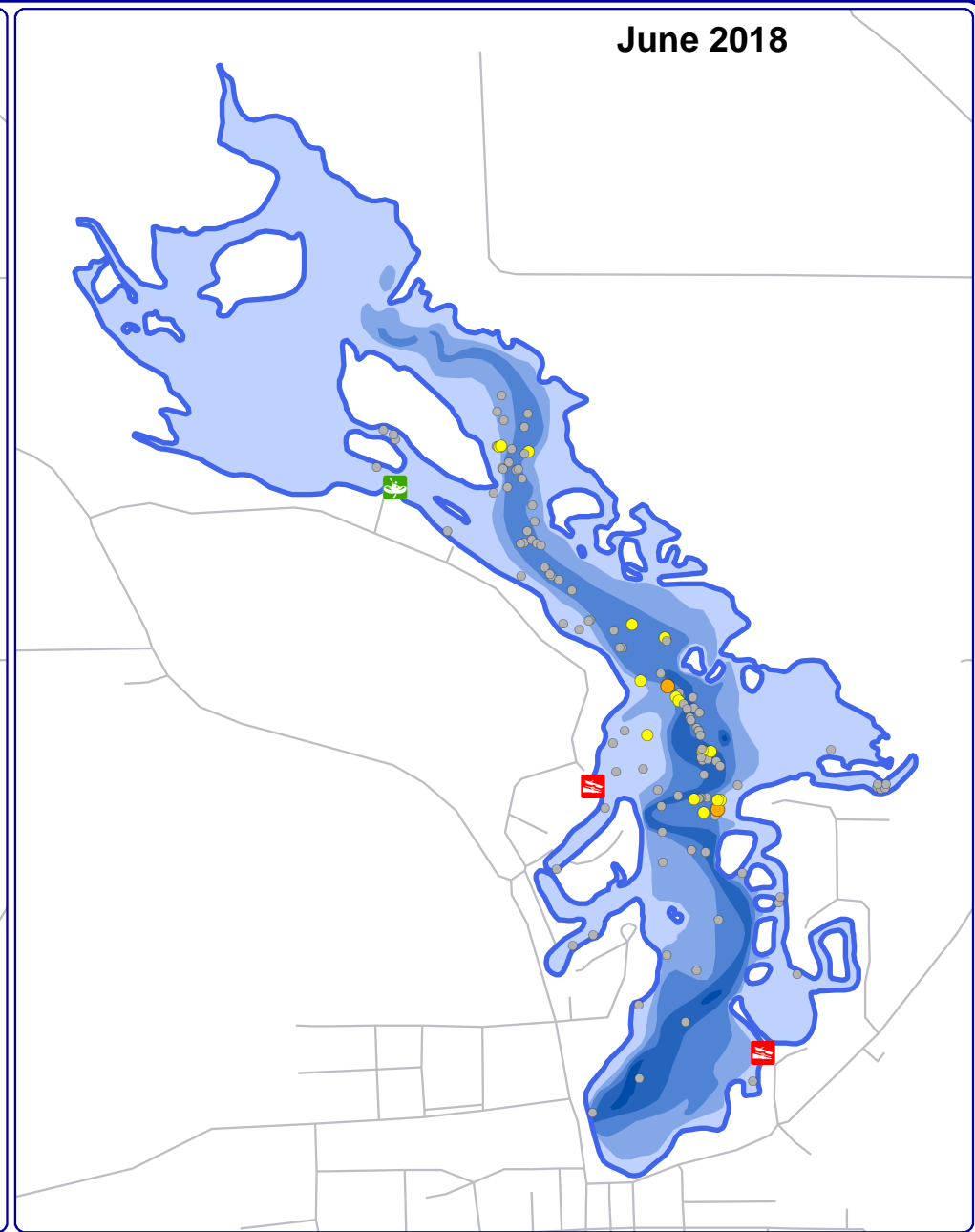
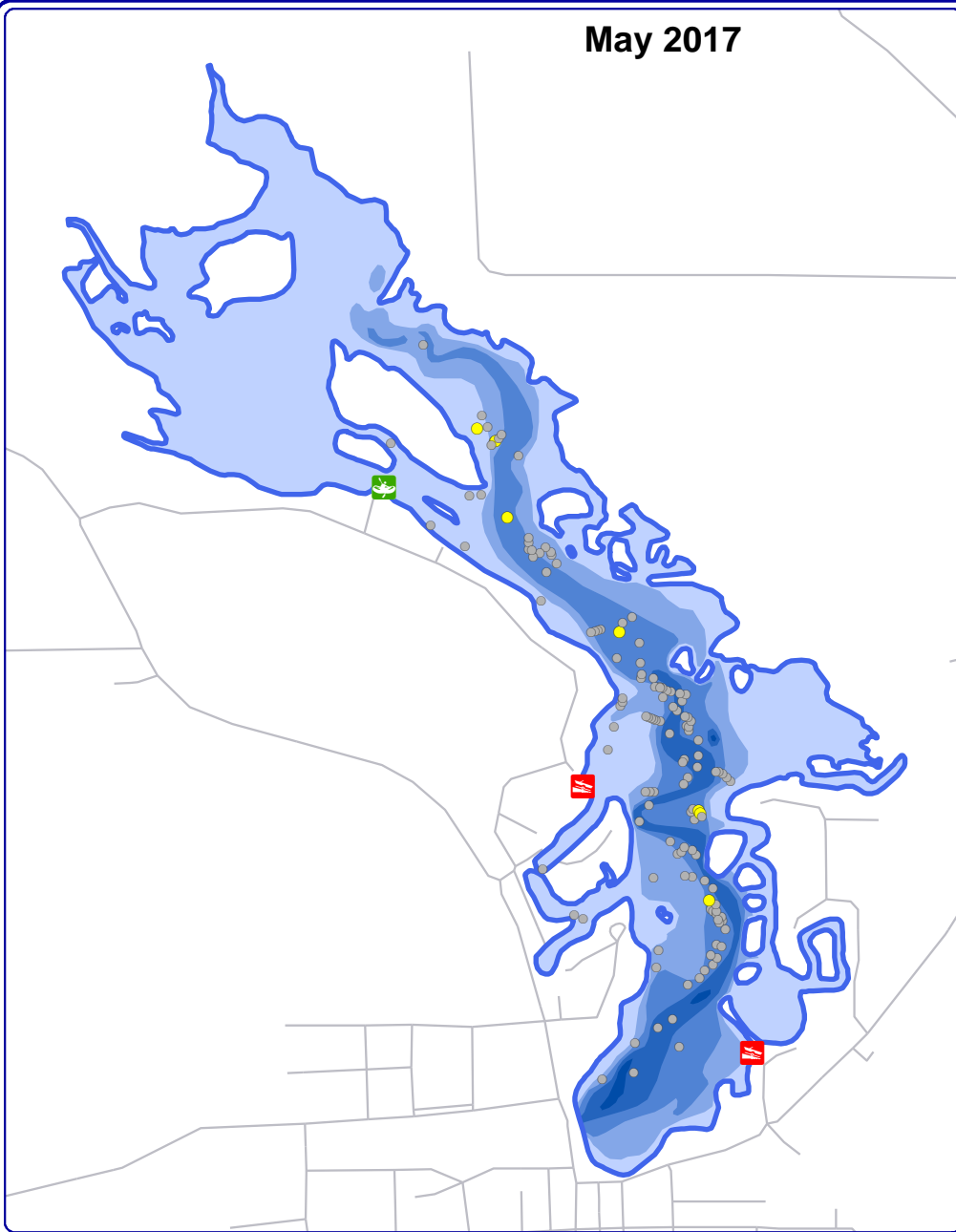
Onterra LLC
 Lake Management Planning
 815 Prosper Rd
 De Pere, WI 54115
 920.338.8860
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Sources:
 Roads and Hydro: WDNR
 Orthophotograph: NAIP, 2017
 Aquatic Plants: Onterra, 2017
 Map Date: August 16, 2017
 Filename: Iola_Comm_2017.mxd

Map 9
 Lake Iola - South
 Waupaca County, Wisconsin
2017 Plant Survey:
Community Mapping

May 2017

June 2018



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

Sources:
 Roads & Hydro: WDNR
 Bathymetry: WDNR, digitized by Onterra
 Aquatic Plants: Onterra, 2017 & 2018
 Map Date: September 6, 2018 JLW
 Filename: Map10_Iola_HWM_2017-2018.mxd



Project Location in Wisconsin

Legend

- | | | | |
|--|----------------------------------|--|----------------------|
| | Highly Scattered (<i>none</i>) | | Single or Few Plants |
| | Scattered (<i>none</i>) | | Clump of Plants |
| | Dominant (<i>none</i>) | | Small Plant Colony |
| | Highly Dominant (<i>none</i>) | | |
| | Surface Matting (<i>none</i>) | | |

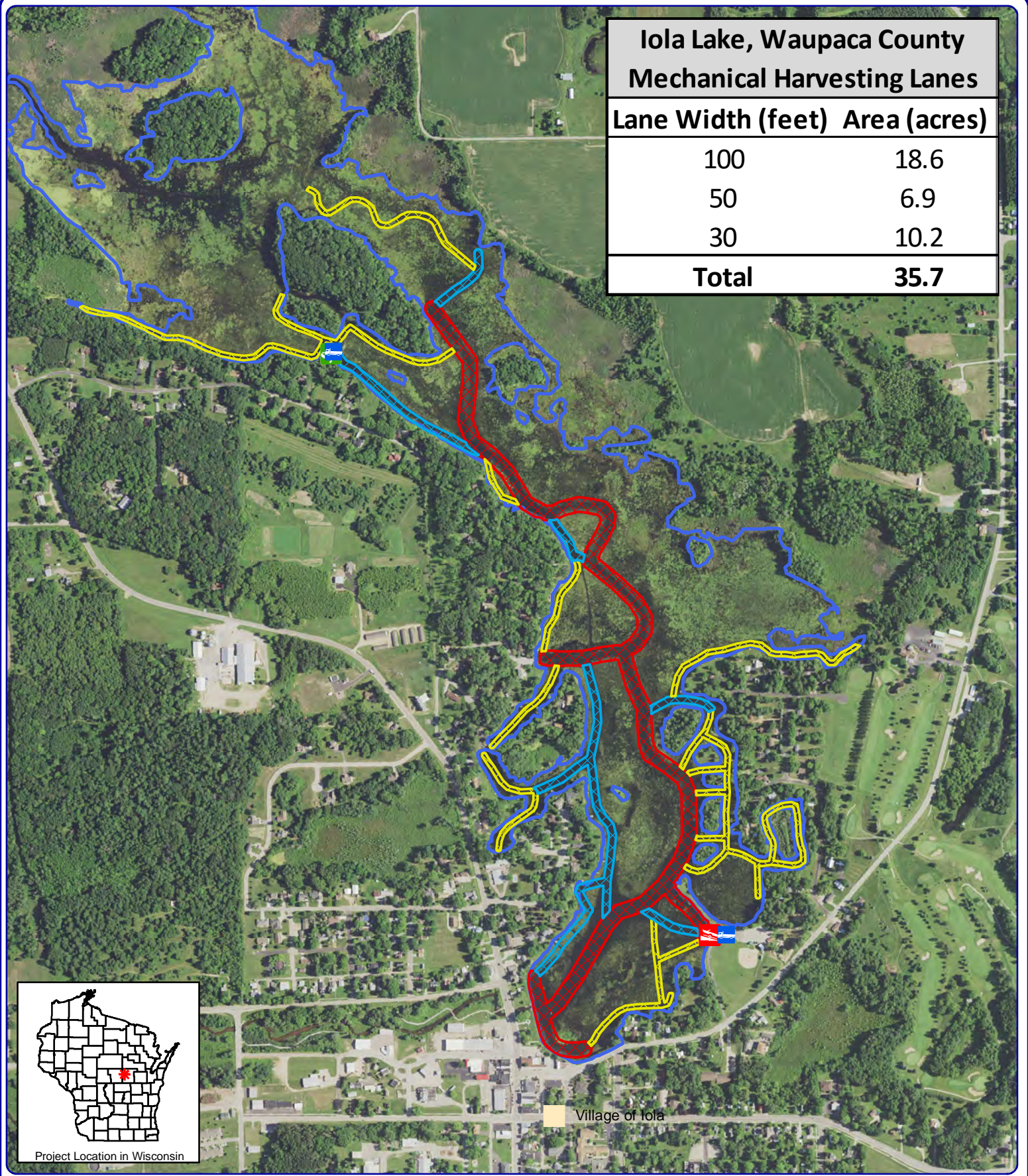
Map 10

Iola Lake

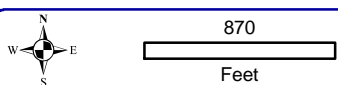
Waupaca County, Wisconsin

**May 2017 & June 2018
 HWM Survey Results**

| Iola Lake, Waupaca County Mechanical Harvesting Lanes | |
|--|--------------|
| Lane Width (feet) | Area (acres) |
| 100 | 18.6 |
| 50 | 6.9 |
| 30 | 10.2 |
| Total | 35.7 |







Village of Iola



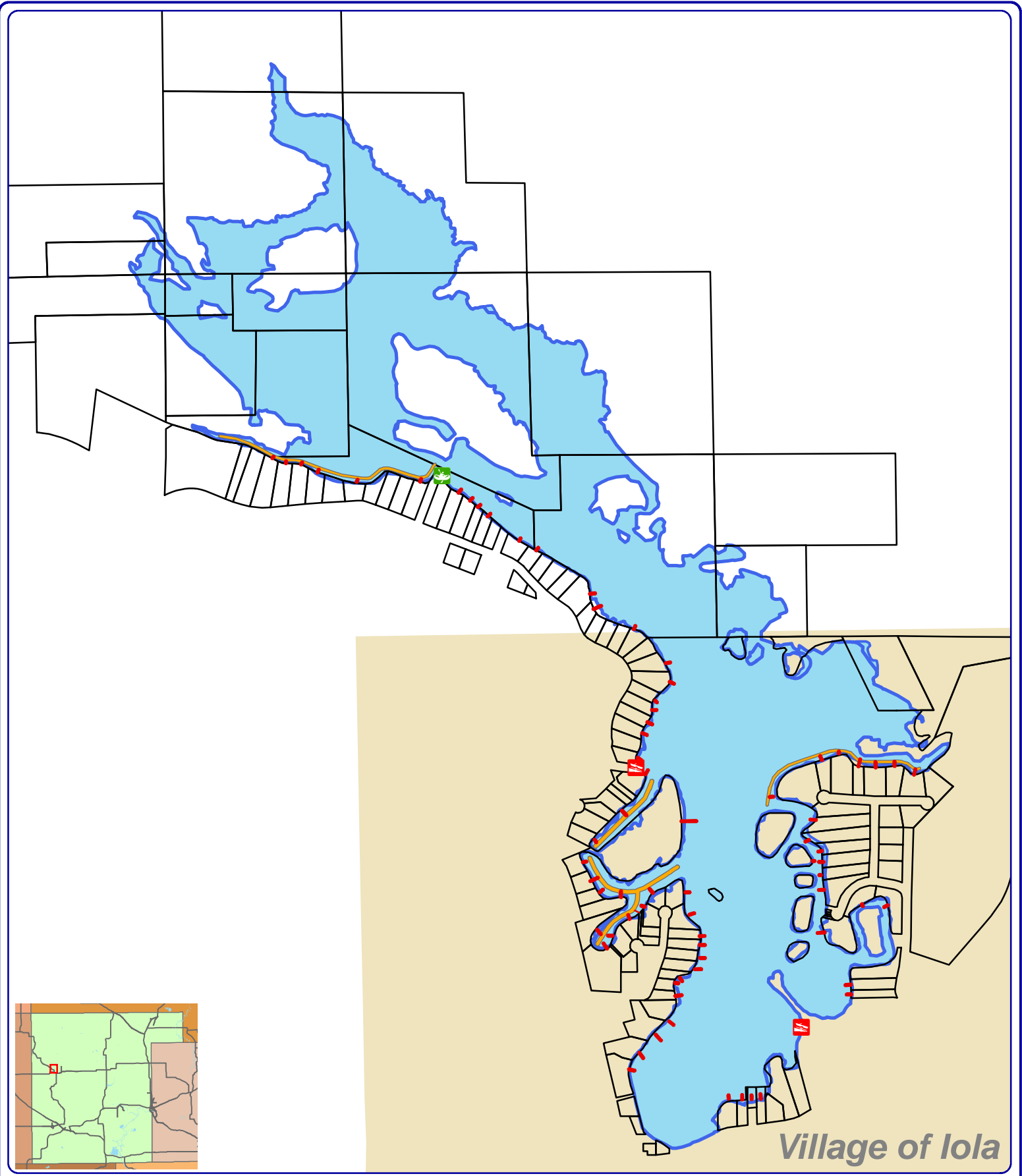
Onterra LLC
 Lake Management Planning
 815 Prosper Rd
 De Pere, WI 54115
 920.338.8860
 www.onterra-eco.com

Sources
 Roads and Hydro: WDNR
 Orthophoto: NAIP 2017
 Map Date: August 26, 2019 AMS
 Filename: Iola_HarvestPlanUpdate_Aug19.mxd

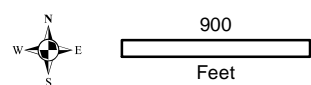
Legend

-  100' Harvesting Lane
-  50' Harvesting Lane
-  30' Harvesting Lane
-  Harvester Off-Loading Point

Map 11
 Lake Iola
 Waupaca County, Wisconsin
Lake Iola Mechanical Harvesting Plan








Village of Iola



Onterra LLC
 Lake Management Planning
 815 Prosper Rd
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Sources
 Roads and Hydro: WDNR
 Map Date: April 25, 2019 AMS
 Filename: iola_2019Harvest_Prelim.mxd

Legend

-  Common Use Lanes (2.8 acres)
-  Private Use Lanes (2.8 acres)
-  Riparian Parcel Boundaries
-  Public Access
-  Village of Iola

Map 12
 Lake Iola
 Waupaca County, Wisconsin
**Nuisance Aquatic
 Vegetation Herbicide
 Control Plan**