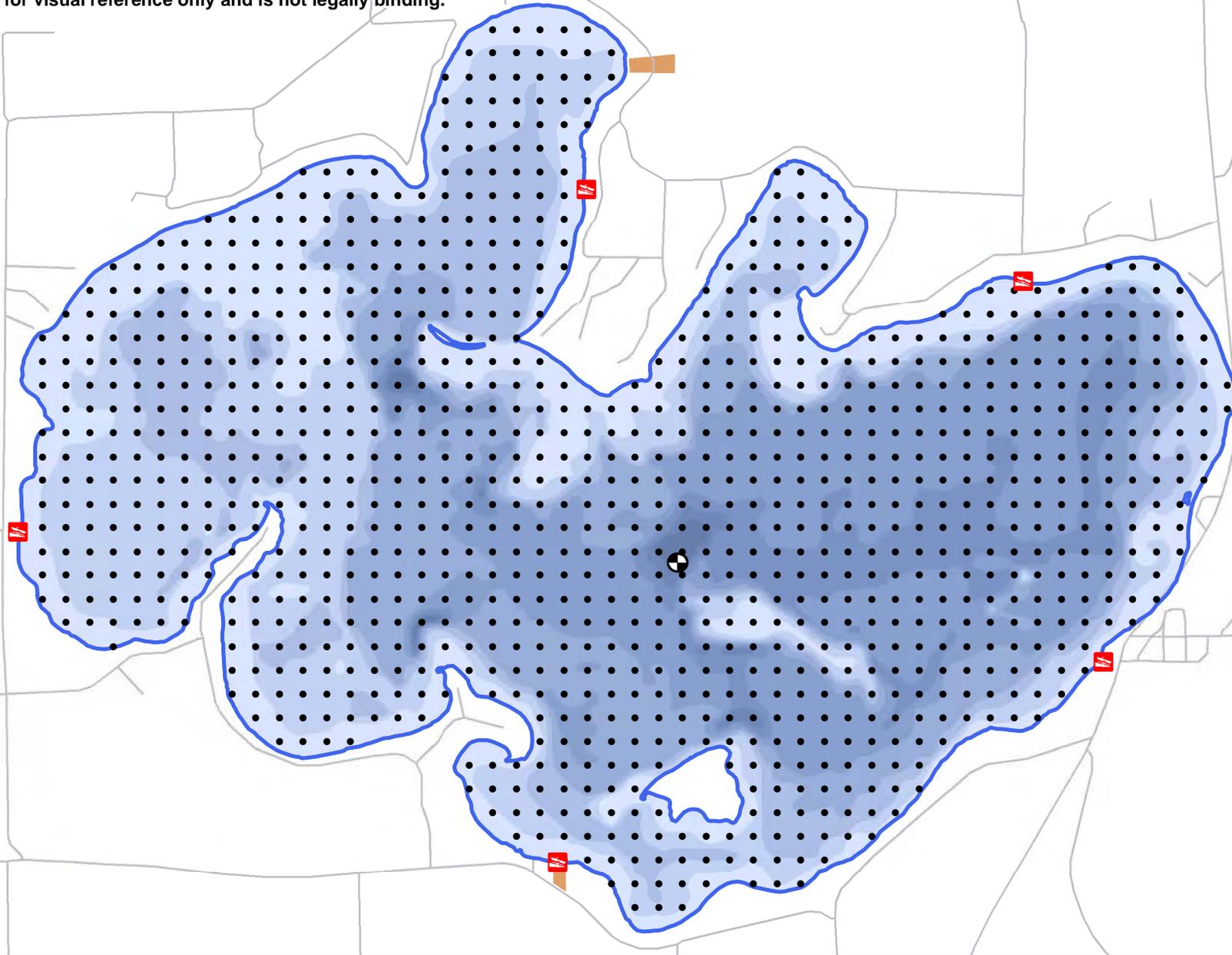


This display is for visual reference only and is not legally binding.



2,300

Feet

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920.338.8860  
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Sources:  
Roads and Hydro: WDNR  
Bathymetry: SOURCE  
Public Lands: WDNR  
Map Date: February 27, 2024 JMB  
Filename: Map1\_Pelican\_Location.mxd



Project Location in Wisconsin

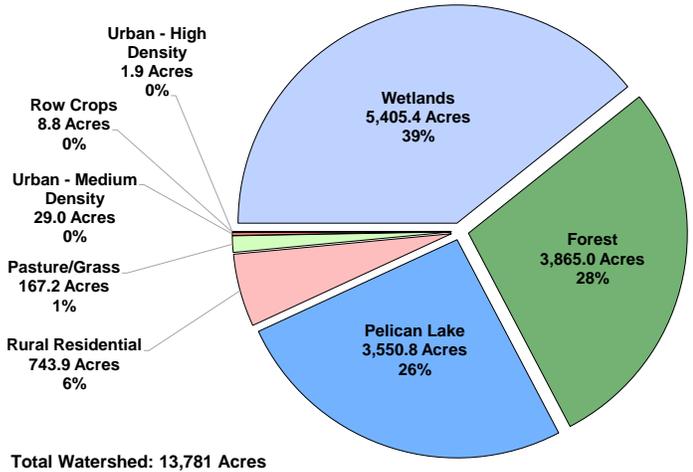
### Legend

- Pelican Lake ~ 3,551 acres  
*Onterra Definition*
- WDNR Managed Lands
- Point-intercept Sample Location  
*115-meter spacing, 1,078 meter points*

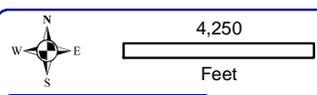
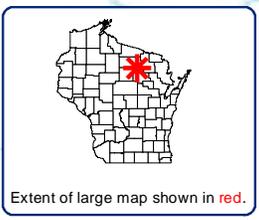
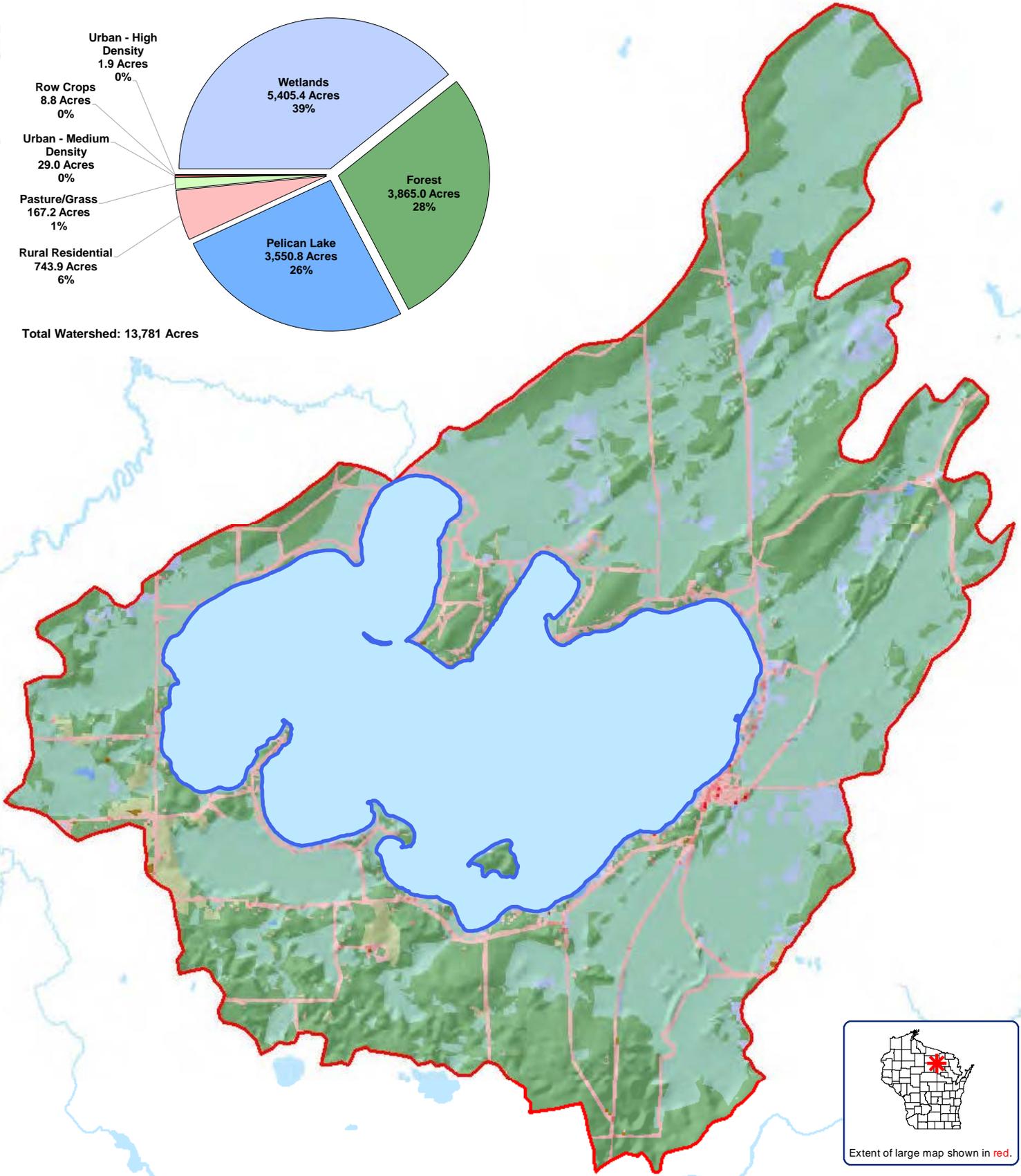
- Public Access
- Water Quality Sampling Location

### Map 1

**Pelican Lake**  
Oneida County, Wisconsin  
**Project Location &  
Lake Boundaries**



Total Watershed: 13,781 Acres



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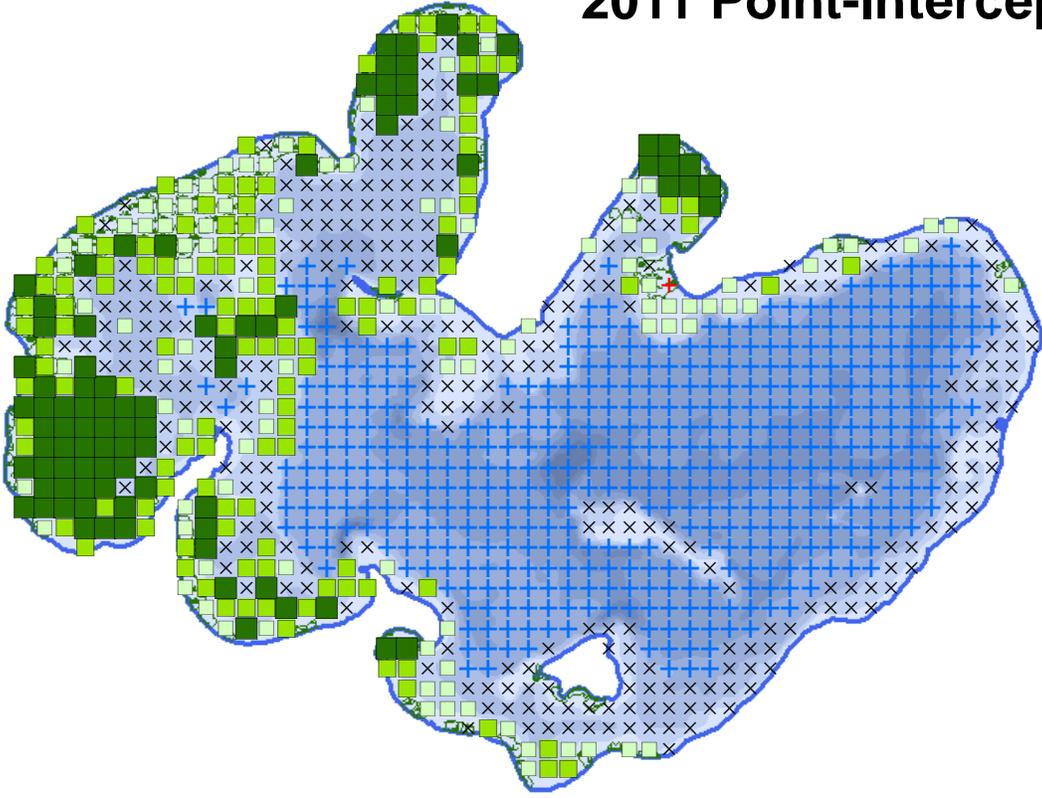
Sources:  
 Hydro: WDNR  
 Orthophotography: NAIP 2022  
 Land Cover: NLCD, 2021  
 Watershed Boundaries: Onterra, 2015  
 Map Date: April 9th, 2024 KLV  
 File Name: MapX\_Pelican\_WS\_2023.mxd

**Legend**

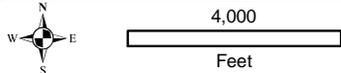
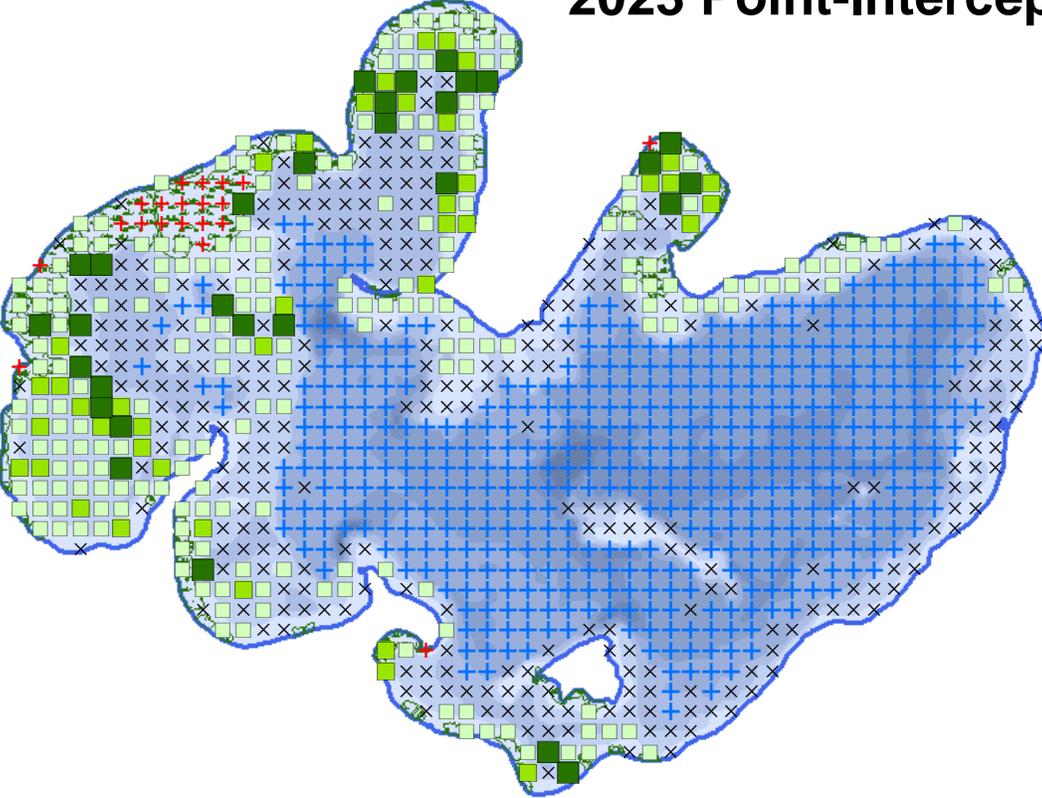
- Forest
- Forested Wetlands
- Pasture/Grass
- Open Water
- Wetland
- Row Crop Agriculture
- Rural Open Space
- Rural Residential
- Urban - High Density
- Urban - Medium Density
- Pelican Lake
- Watershed Boundary

**Map 2**  
**Pelican Lake**  
 Onieda County, Wisconsin  
**Watershed Boundaries**  
**& Land Cover Types**

# 2011 Point-Intercept Survey



# 2023 Point-Intercept Survey



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**Sources**  
 Roads and Hydro: WDNR  
 Bathymetry: Digitized by Onterra  
 Aquatic Plants: Onterra, 2023  
**Map Date:** March 11th, 2024 KLW  
**Filename:** Map4\_Shawano\_2023\_EWM.mxd

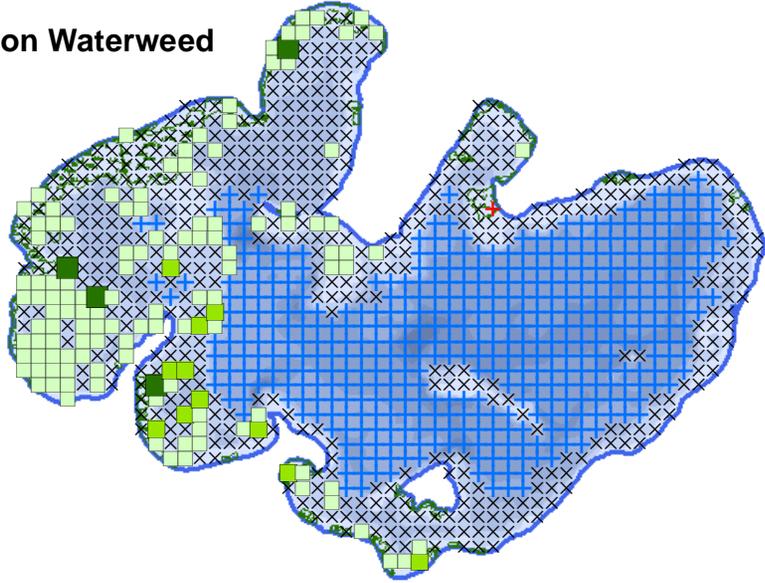


### Legend

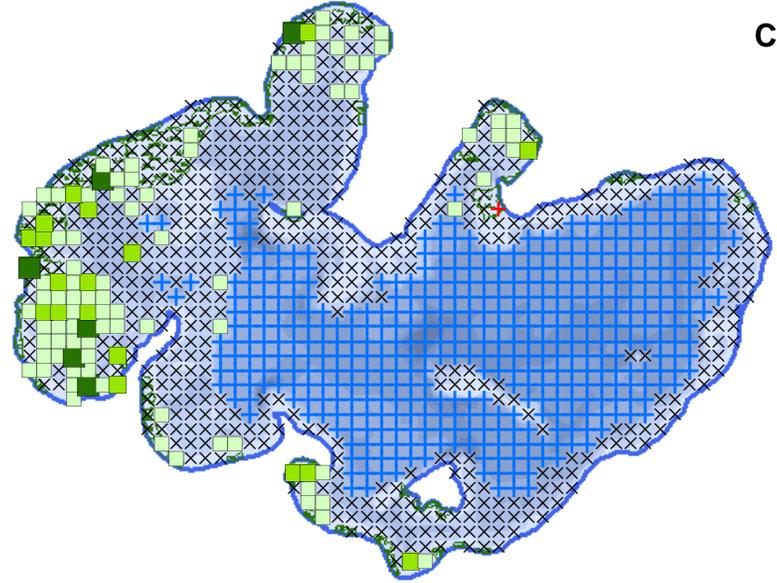
- Total Rake Fullness = 1
- Total Rake Fullness = 2
- Total Rake Fullness = 3

Map 3  
 Pelican Lake  
 Oneida County, Wisconsin  
**2011 vs 2023 PI:**  
**Total Rake Fullness**

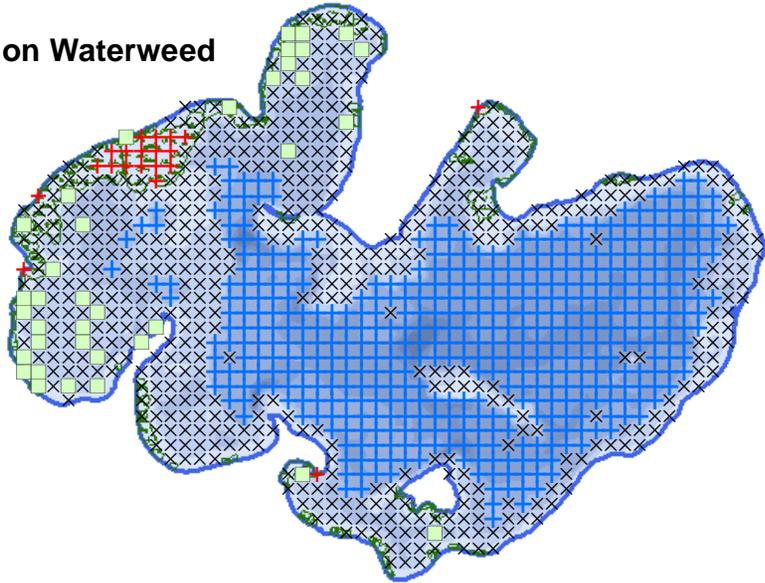
**2011  
Common Waterweed**



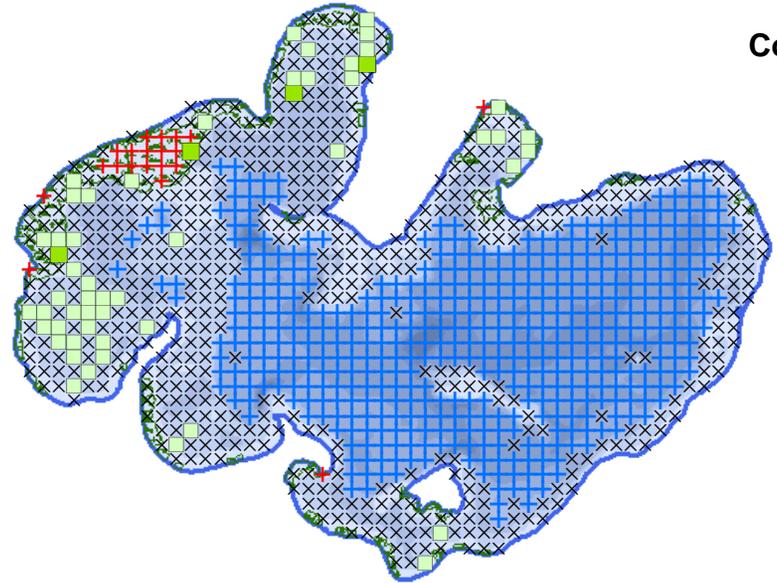
**2011  
Coontail**



**2023  
Common Waterweed**

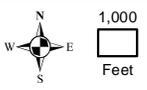


**2023  
Coontail**



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Sources:  
Roads and Hydro: WDNR  
Bathymetry: WDNR, digitized by Onterra  
Aquatic Plants: Onterra, 2014-2017  
Map Date: October 3, 2017  
Filename: STwin\_EWMPB\_2014-2017.mxd



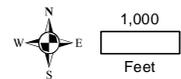
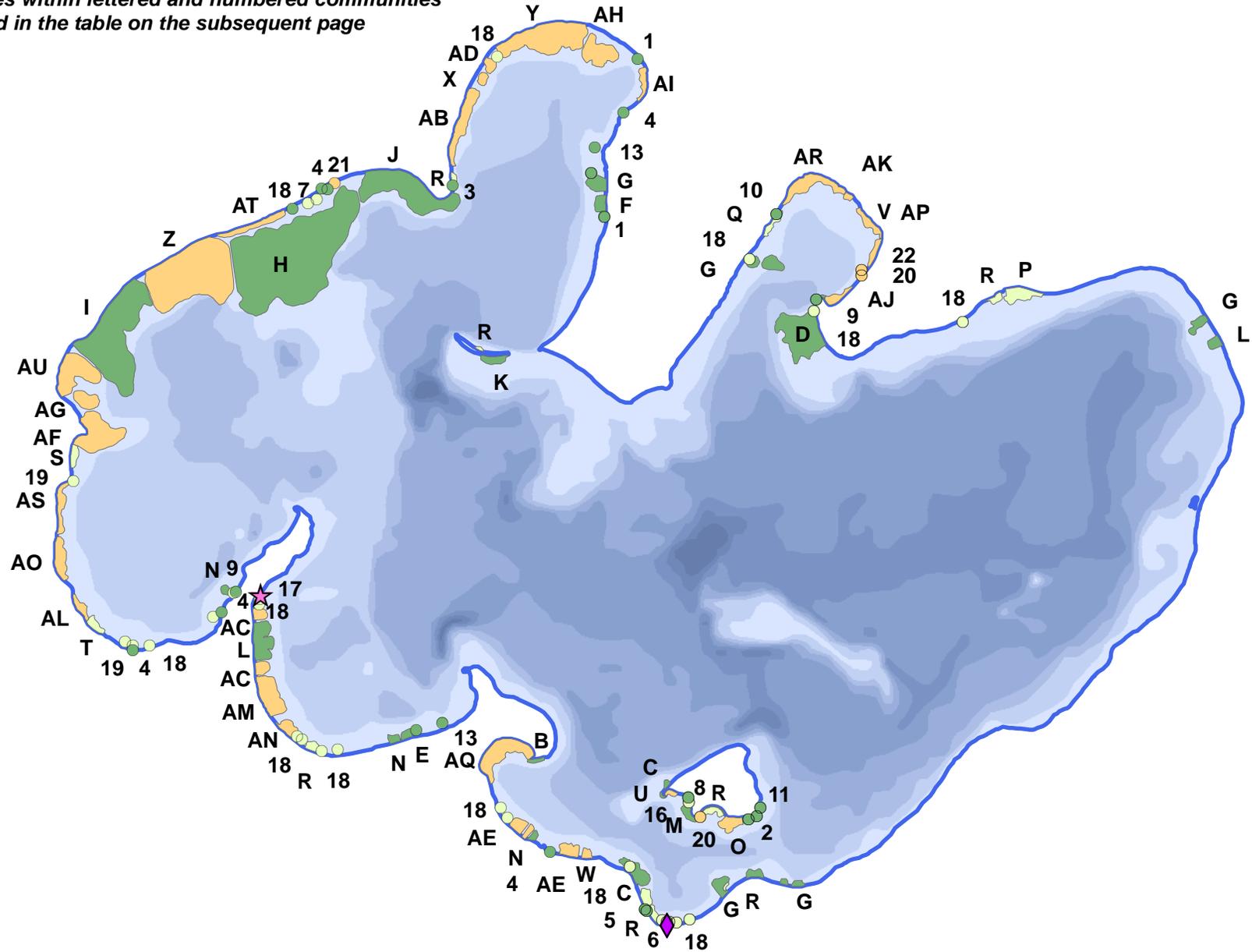
**Legend**

- Rake Fullness = 1
- Rake Fullness = 2
- Rake Fullness = 3

**Map 4**  
**Pelican Lake**  
Oneida County, Wisconsin  
**2011 vs 2023 PI: Coontail  
& Common Waterweed**



**Note: Species within lettered and numbered communities can be found in the table on the subsequent page**



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**Sources**  
 Hydro: WDNR  
 Aquatic Plants: Onterra, 2023  
**Map date:** November 9, 2023 JMB  
 Filename: Pelican\_Comm\_2023.mxd



Project Location in Wisconsin

**Legend**

**Small Plant Communities**

- Emergent
- Floating-leaf
- Mixed Floating-leaf & Emergent
- ◆ Purple Loosestrife
- ★ Pink Water-lily

**Large Plant Communities**

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

**Map 6**

**Pelican Lake**  
 Oneida Co, Wisconsin

**2023 Aquatic Plant Communities**

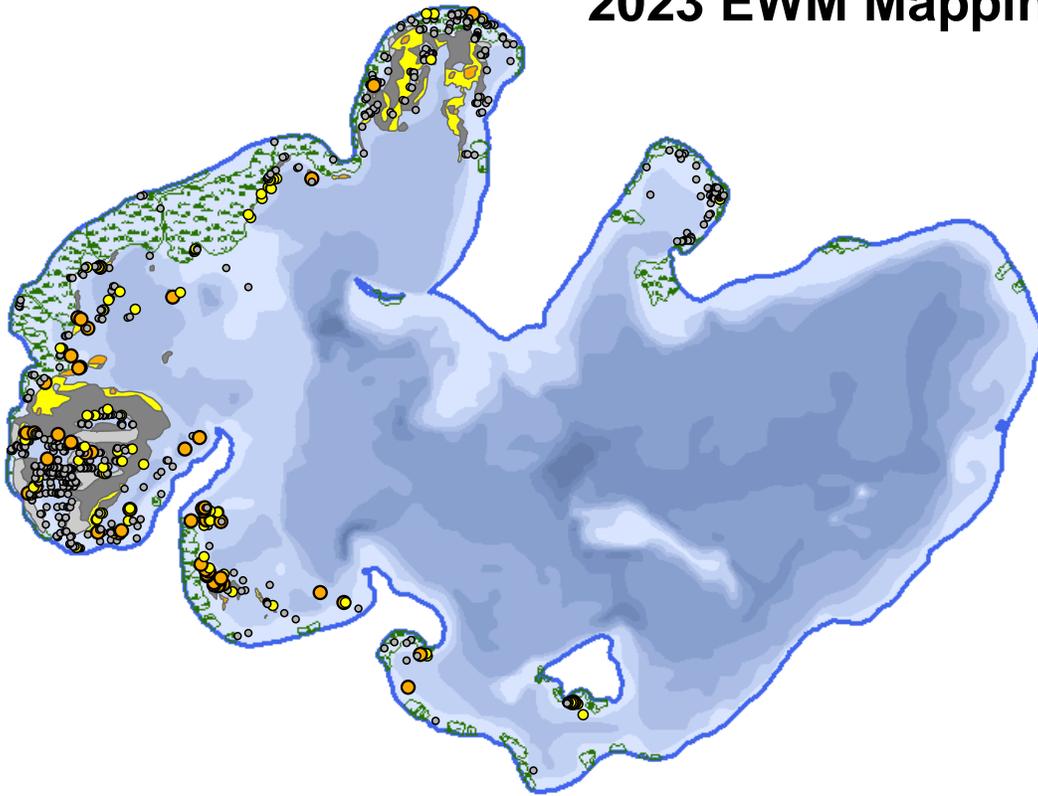
**Pelican Lake 2023 Emergent & Floating-Leaf Plant Species**  
 Corresponding Community Polygons and Points are displayed on Pelican Lake - Map 6

Large Plant Community (Polygons)								
Emergent	Species 1	Species 2	Species 3	Species 4	Species 5	Species 6	Species 7	Species 8
A	Cattail sp.							
B	Common arrowhead	Water willow			Hardstem bulrush	Cattail sp.		
C	Creeping spikerush	Hardstem bulrush						
D	Native Phrag	Hardstem bulrush	Creeping spikerush		Common bur-reed			
E	Hardstem bulrush	Creeping spikerush			Common bur-reed			
F	Hardstem bulrush	Creeping spikerush			Pickerelweed	Arrowhead sp. (sterile)		
G	Hardstem bulrush	Creeping spikerush						
H	Hardstem bulrush	Pickerelweed			Native Phrag			
I	Hardstem bulrush				Common bur-reed			
J	Hardstem bulrush				Creeping spikerush	Common bur-reed		
K	Hardstem bulrush				Creeping spikerush	Pickerelweed	Common bur-reed	
L	Hardstem bulrush				Creeping spikerush			
M	Hardstem bulrush				Water willow	Pickerelweed	Creeping spikerush	
N	Hardstem bulrush							
O	Water willow				Pickerelweed			
Floating-leaf	Species 1	Species 2	Species 3	Species 4	Species 5	Species 6	Species 7	Species 8
P	Spatterdock	Narrow-leaf bur-reed						
Q	Spatterdock	White water lily						
R	Spatterdock							
S	White water lily				Spatterdock			
T	White water lily							
Floating-leaf & Emergent	Species 1	Species 2	Species 3	Species 4	Species 5	Species 6	Species 7	Species 8
U	Common bur-reed	Hardstem bulrush	Spatterdock	Creeping spikerush	Water willow			
V	Common bur-reed	Spatterdock	Hardstem bulrush		Stiff arrowhead	White water lily	Pickerelweed	Wild rice sp.
W	Creeping spikerush	Hardstem bulrush	Spatterdock					
X	Hardstem bulrush	Common bur-reed			Spatterdock	Creeping spikerush		
Y	Hardstem bulrush	Creeping spikerush			Common bur-reed	Spatterdock	White water lily	Cattail sp.
Z	Hardstem bulrush	Pickerelweed			Spatterdock	Common bur-reed		
AA	Hardstem bulrush	Spatterdock	Short-stemmed bur-reed	Creeping spikerush	Water willow	Pickerelweed		
AB	Hardstem bulrush	Spatterdock			Cattail sp.	Creeping spikerush		
AC	Hardstem bulrush	Spatterdock			Creeping spikerush			
AD	Hardstem bulrush	Spatterdock			Pickerelweed	Cattail sp.		
AE	Hardstem bulrush	Spatterdock						
AF	Hardstem bulrush	White water lily			Creeping spikerush	Cattail sp.	Common bur-reed	
AG	Hardstem bulrush	White water lily			Watershield	Spatterdock		
AH	Hardstem bulrush				Spatterdock			
AI	Spatterdock	Broad-leaved cattail	Cattail sp.		Softstem bulrush			
AJ	Spatterdock	Cattail sp.	Common bur-reed	Hardstem bulrush	Pickerelweed	White water lily	Water arum	Common arrowhead
AK	Spatterdock	Cattail sp.	Hardstem bulrush		White water lily	Water arum		
AL	Spatterdock	Common bur-reed			White water lily			
AM	Spatterdock	Hardstem bulrush			Common bur-reed			
AN	Spatterdock	Hardstem bulrush			Grass-leaved arrowhead			
AO	Spatterdock	White water lily	Pickerelweed	Common bur-reed	Cattail sp.	Water arum		
AP	Spatterdock				Arrowhead sp. (sterile)	Bur-reed sp. (sterile)	White water lily	
AQ	Spatterdock				Water willow	Common bur-reed	Cattail sp.	
AR	Stiff arrowhead	Common reed	Hardstem bulrush	Cattail sp.	White water lily	Pickerelweed	River bulrush	Arrowhead sp. (sterile)
AS	White water lily	Common bur-reed			Cattail sp.			
AT	White water lily	Common bur-reed			Pickerelweed	Grass-leaved arrowhead		
AU	White water lily	Hardstem bulrush	Watershield		Narrow-leaf bur-reed	Cattail sp.		

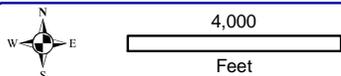
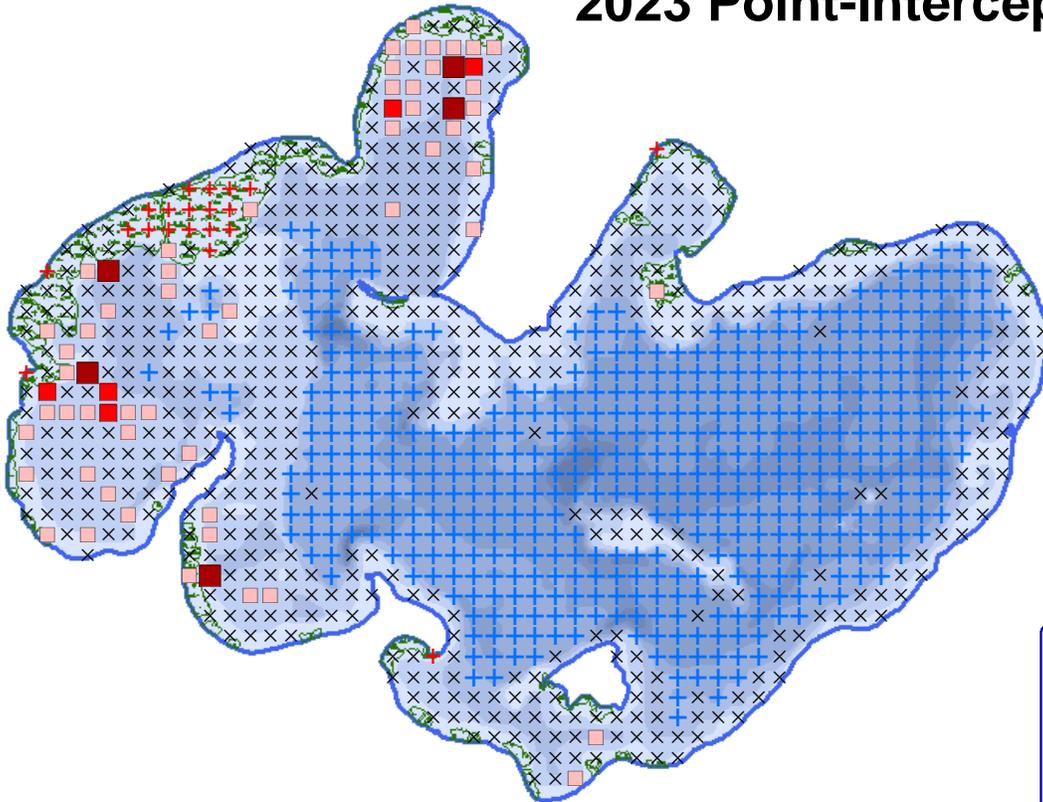
Small Plant Community (Points)							
Emergent	Species 1	Species 2	Species 3	Species 4	Species 5	Species 6	Species 7
1	Arrowhead sp. (sterile)						
2	Bur-reed sp. (Unknown 1)						
3	Cattail sp.	Common bur-reed			Pickerelweed		
4	Cattail sp.						
5	Common bur-reed	Pickerelweed	Cattail sp.		Creeping spikerush		
6	Common bur-reed	Softstem bulrush					
7	Common bur-reed				Pickerelweed		
8	Common bur-reed				Sedge sp. (sterile)	Water willow	River bulrush
9	Common bur-reed						
10	Common reed	Arrowhead sp. (sterile)					
11	Creeping spikerush	Hardstem bulrush			Bur-reed sp. (Unknown 1)		
12	Creeping spikerush	Hardstem bulrush					
13	Hardstem bulrush						
14	Pickerelweed						
Floating-leaf	Species 1	Species 2	Species 3	Species 4	Species 5	Species 6	Species 7
15	Pink water lily						
16	Spatterdock	White water lily					
17	Spatterdock				White water lily		
18	Spatterdock						
19	White water lily						
Floating-leaf & Emergent	Species 1	Species 2	Species 3	Species 4	Species 5	Species 6	Species 7
20	Common bur-reed				Spatterdock		
21	Spatterdock				Pickerelweed	Common bur-reed	
22	White water lily	Common bur-reed			Arrowhead sp. (sterile)		

Species are listed in order of dominance within the community. Scientific names can be found in the species list in Table 3.3-1

# 2023 EWM Mapping Survey



# 2023 Point-Intercept Survey



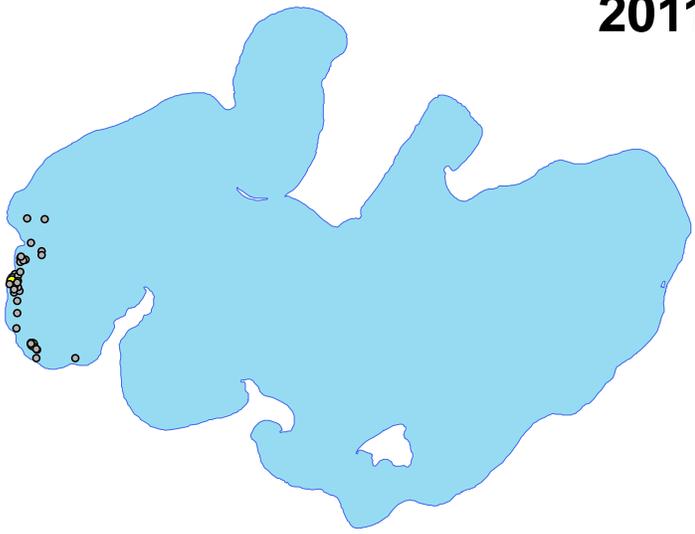
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Sources  
 Roads and Hydro: WDNR  
 Bathymetry: Digitized by Onterra  
 Aquatic Plants: Onterra, 2023  
 Map Date: March 11th, 2024 KLV  
 Filename: Map4\_Shawano\_2023\_EWM.mxd

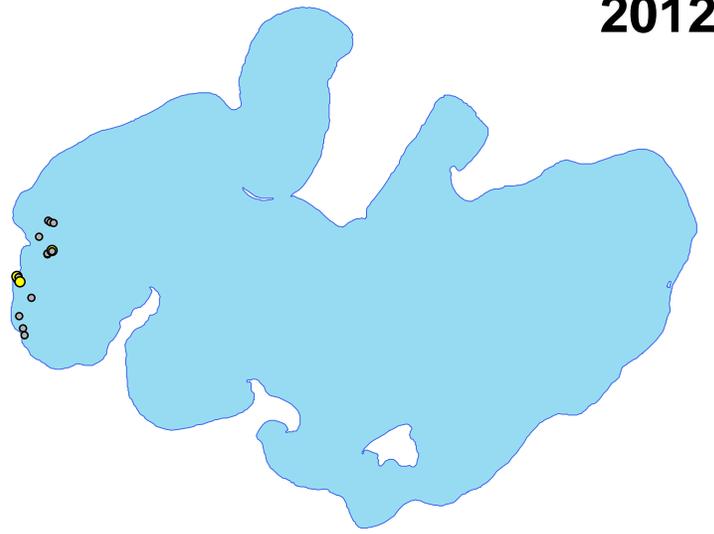
Top Frame		Legend	
	Highly Scattered		Single or Few Plants
	Scattered		Clumps of Plants
	Dominant		Small Plant Colony
	Highly Dominant		
	Surface Matting (None)		
			EWM Rake Fullness = 1
			EWM Rake Fullness = 2
			EWM Rake Fullness = 3

Map 7  
 Pelican Lake  
 Oneida County, Wisconsin  
**2023 Comparison  
 EWM Mapping  
 vs PI Survey**

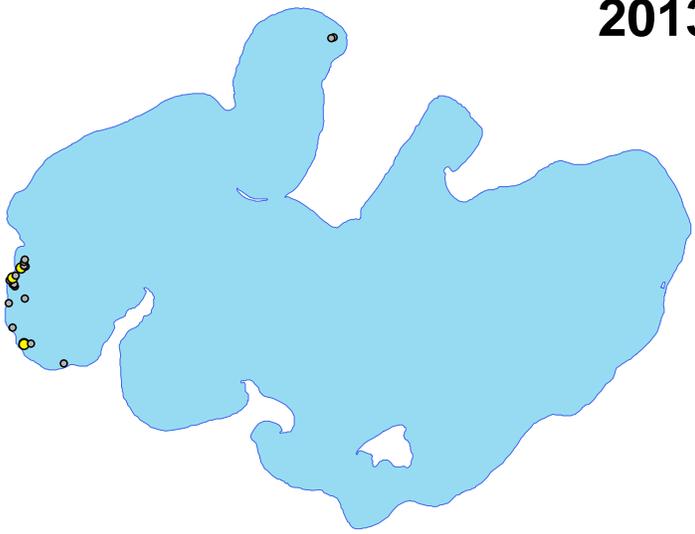
2011



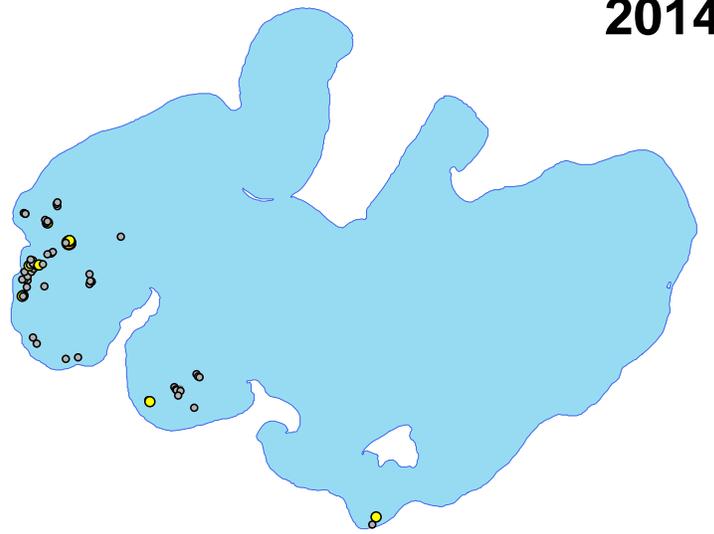
2012



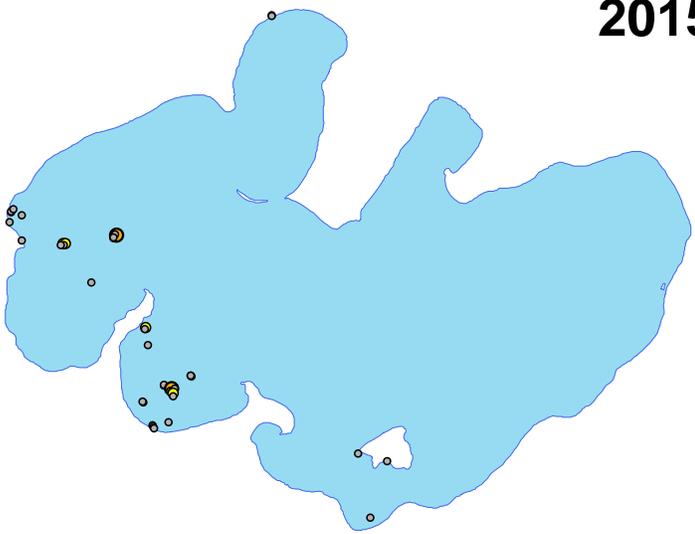
2013



2014



2015



2016



**Legend**

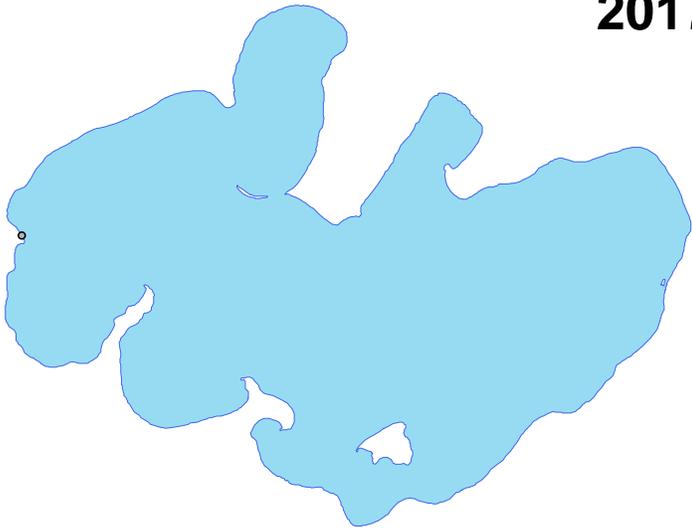
-  Highly Scattered
-  Scattered
-  Dominant
-  Highly Dominant
-  Surface Matting
-  Single or Few Plants
-  Clumps of Plants
-  Small Plant Colony

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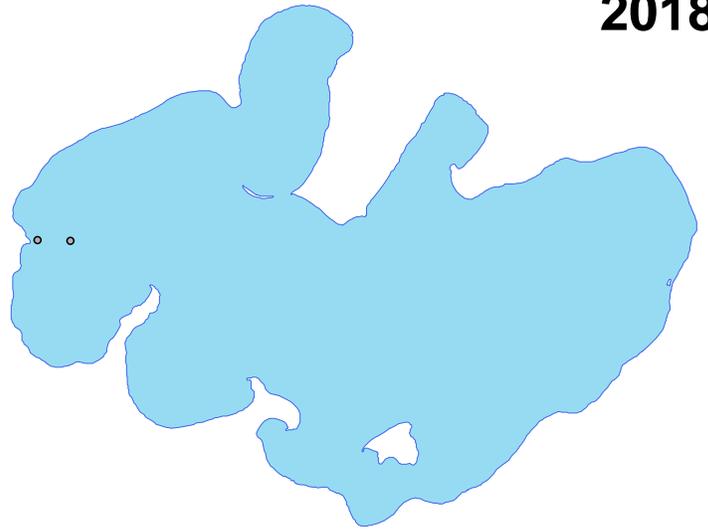
Sources  
 Roads and Hydro: WDNR  
 Bathymetry: Digitized by Onterra  
 Aquatic Plants: Onterra, 2023  
 Map Date: March 11th, 2024 KLW  
 Filename: Map4\_Shawano\_2023\_EWM.mxd

Map 8  
 Pelican Lake  
 Oneida County, Wisconsin  
**2011-2016 EWM  
 Mapping Surveys**

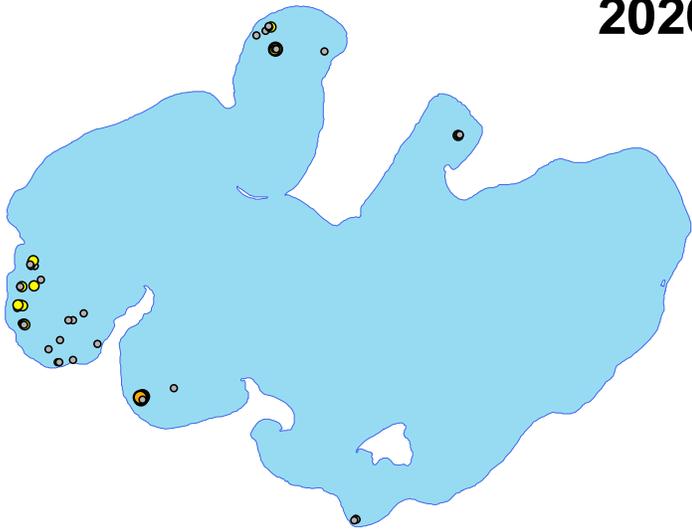
2017



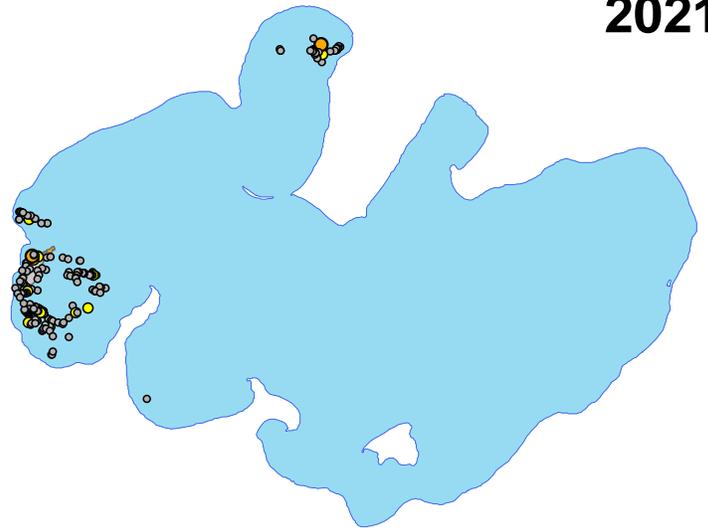
2018



2020



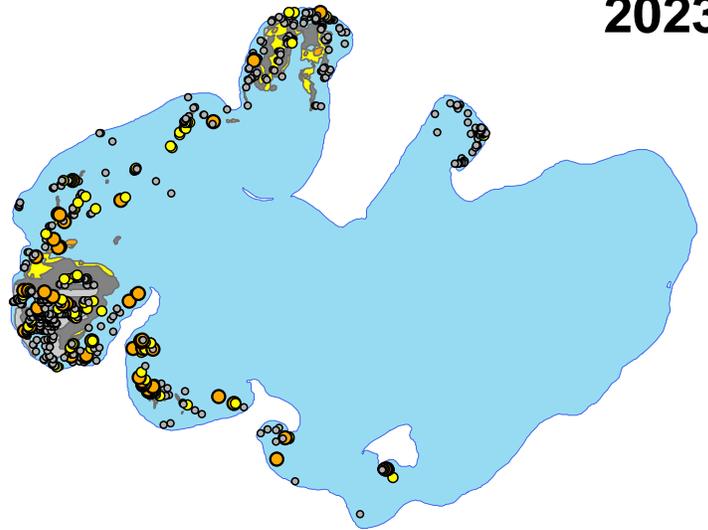
2021



2022



2023



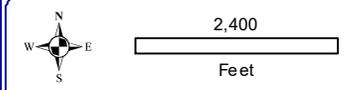
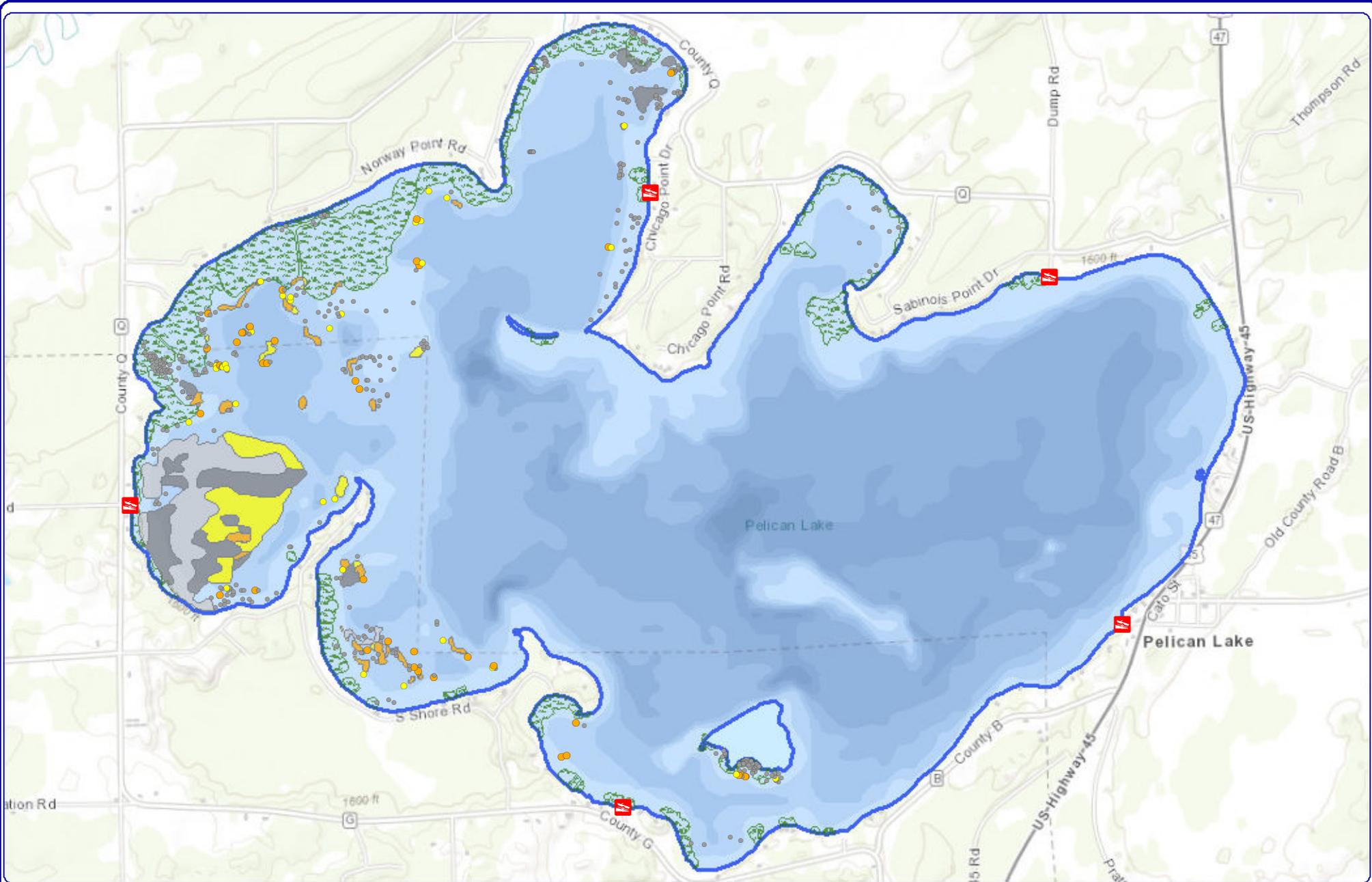
**Legend**

-  Highly Scattered
-  Scattered
-  Dominant
-  Highly Dominant
-  Surface Matting
-  Single or Few Plants
-  Clumps of Plants
-  Small Plant Colony

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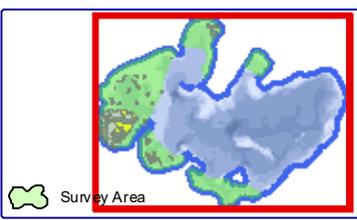
Sources  
 Roads and Hydro: WDNR  
 Bathymetry: Digitized by Onterra  
 Aquatic Plants: Onterra, 2023  
 Map Date: March 11th, 2024 KLW  
 Filename: Map4\_Shawano\_2023\_EWM.mxd

Map 9  
 Pelican Lake  
 Oneida County, Wisconsin  
**2017-2023 EWM  
 Mapping Surveys**



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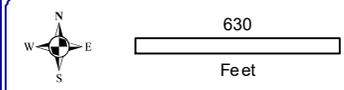
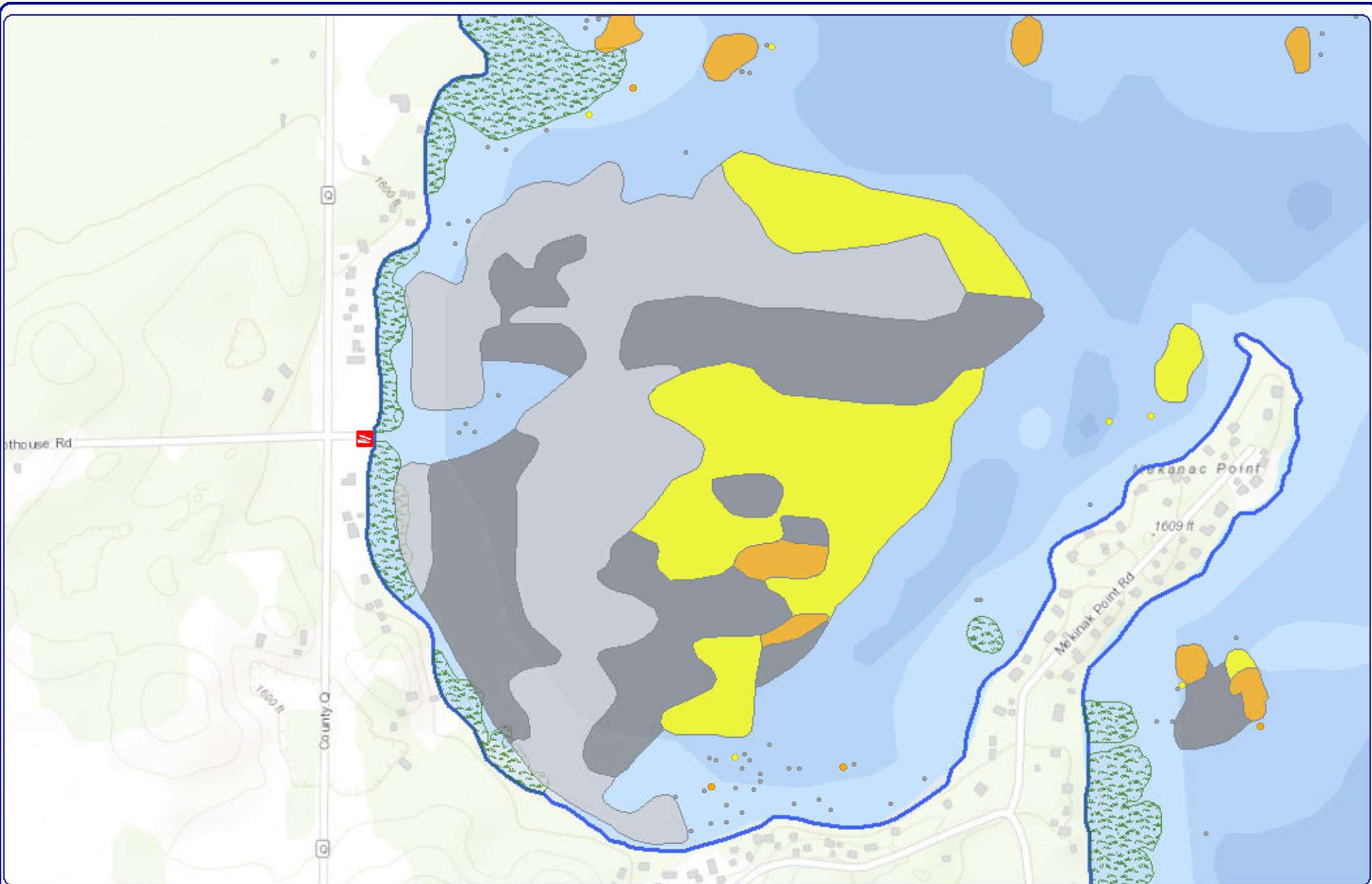
Sources:  
 Basemap: ESRI  
 Bathymetry: WDNR, digitized by Onterra  
 Aquatic Plant Survey: Onterra, 2024  
 Map Date: October 10, 2024 - RMF



**Legend**

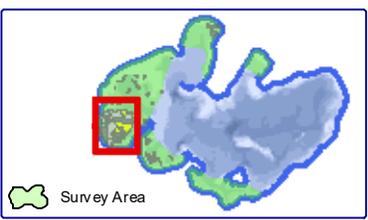
- EWM Survey Results (September 10-12, 18, 2024)*
- Highly Scattered
  - Scattered
  - Dominant
  - Highly Dominant
  - Surface Matting (None)
  - Single or Few Plants
  - Clump of Plants
  - Small Plant Colony
  - Emergent Plant Community (Mapped in 2023)

Map 10 (Overview)  
 Pelican Lake  
 Oneida County, Wisconsin  
**Late-Season 2024**  
**EWM Survey Results**



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 920.338.8860  
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Sources:  
 Basemap: ESRI  
 Bathymetry: WDNR, digitized by Onterra  
 Aquatic Plant Survey: Onterra, 2024  
 Map Date: October 10, 2024 - RMF

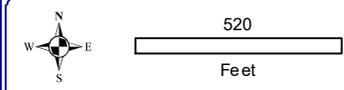
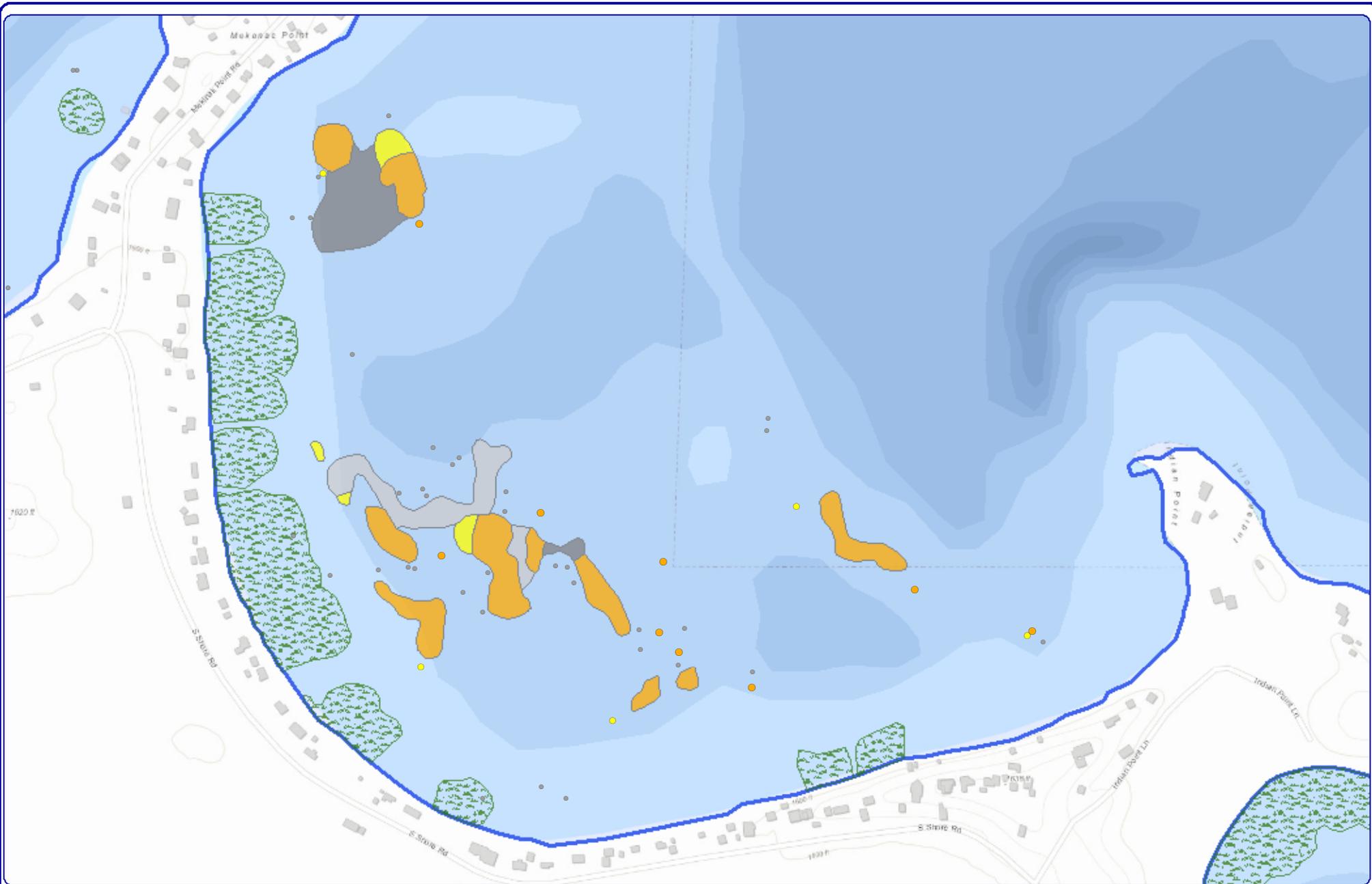


**Legend**

*EWM Survey Results (September 10-12, 18, 2024)*

	Highly Scattered		Single or Few Plants
	Scattered		Clump of Plants
	Dominant		Small Plant Colony
	Highly Dominant		Emergent Plant Community (Mapped in 2023)
	Surface Matting (None)		

Map 11 (Musky Bay South)  
 Pelican Lake  
 Oneida County, Wisconsin  
**Late-Season 2024**  
**EWM Survey Results**



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Sources:  
 Basemap: ESRI  
 Bathymetry: WDNR, digitized by Onterra  
 Aquatic Plant Survey: Onterra, 2024  
 Map Date: October 10, 2024 - RMF

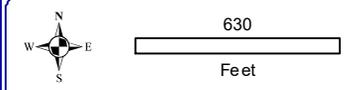
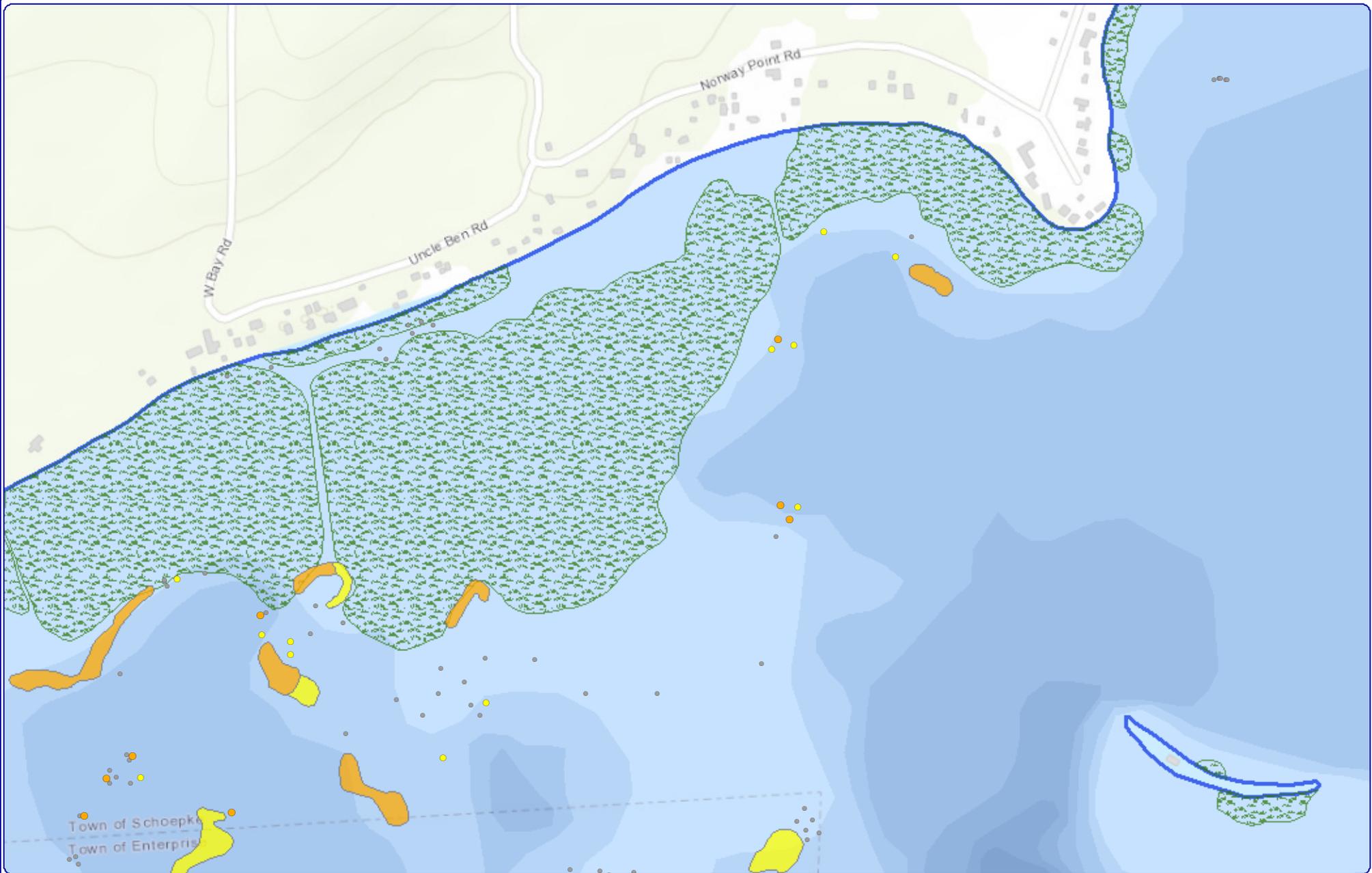


**Legend**

*EWM Survey Results (September 10-12, 18, 2024)*

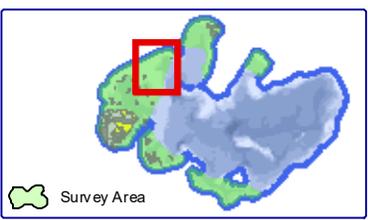
	Highly Scattered		Single or Few Plants
	Scattered		Clump of Plants
	Dominant		Small Plant Colony
	Highly Dominant		Emergent Plant Community (Mapped in 2023)
	Surface Matting (None)		

**Map 12 (Treacherous Bay)**  
 Pelican Lake  
 Oneida County, Wisconsin  
**Late-Season 2024**  
**EWM Survey Results**



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 920.338.8860  
 www.onterra-eco.com

Sources:  
 Basemap: ESRI  
 Bathymetry: WDNR, digitized by Onterra  
 Aquatic Plant Survey: Onterra, 2024  
 Map Date: October 10, 2024 - RMF

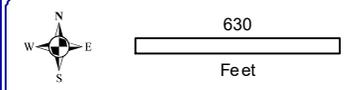
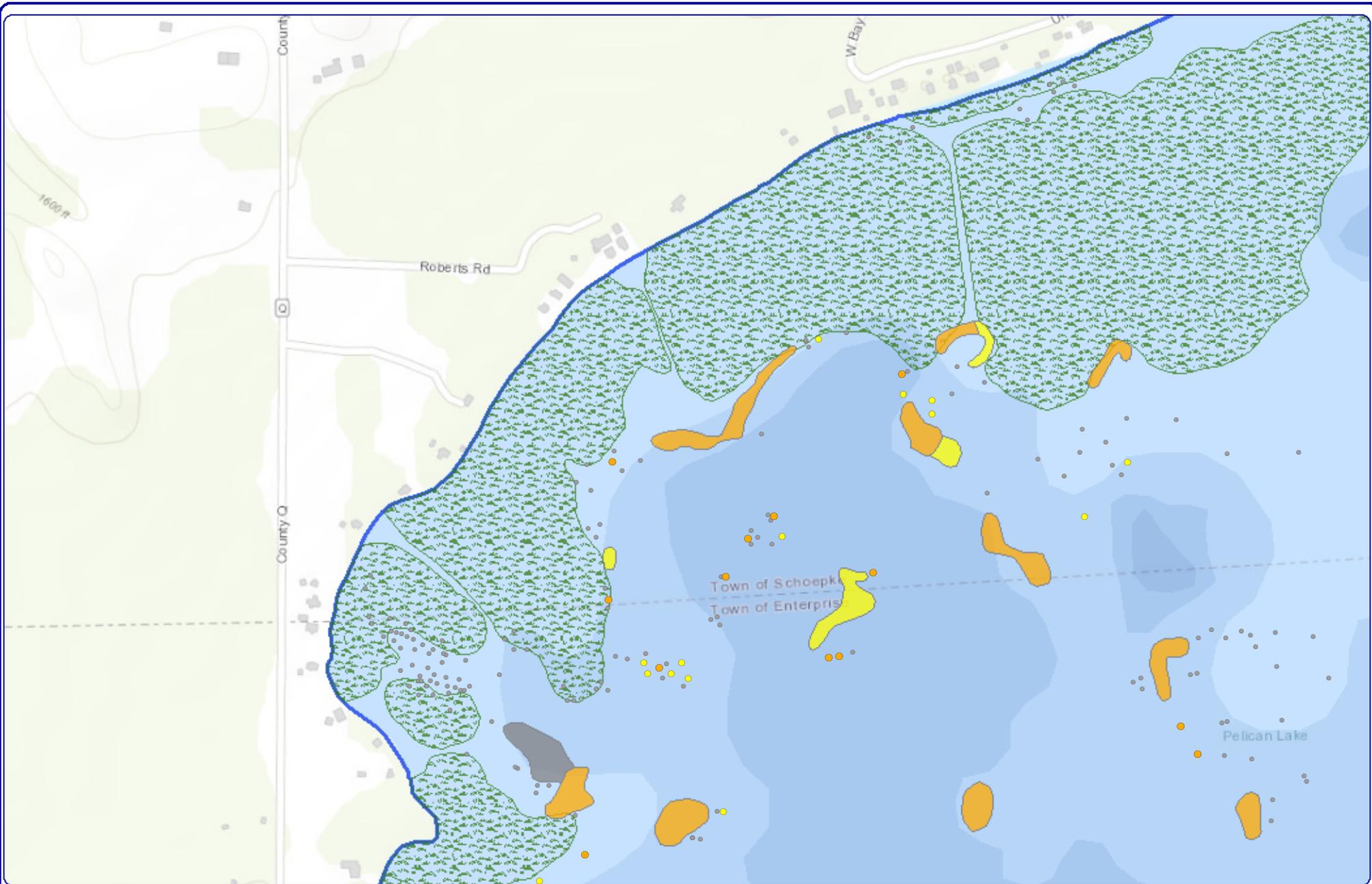


**Legend**

*EWM Survey Results (September 10-12, 18, 2024)*

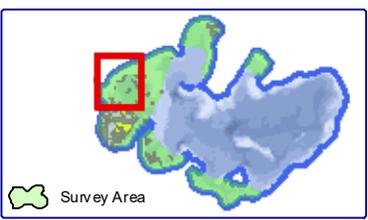
	Highly Scattered		Single or Few Plants
	Scattered		Clump of Plants
	Dominant		Small Plant Colony
	Highly Dominant		Emergent Plant Community <i>(Mapped in 2023)</i>
	Surface Matting (None)		

Map 13 (Musky Bay North)  
 Pelican Lake  
 Oneida County, Wisconsin  
**Late-Season 2024**  
**EWM Survey Results**



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 De Pere, WI 54115  
 920.338.8860  
 www.onterra-eco.com

Sources:  
 Basemap: ESRI  
 Bathymetry: WDNR, digitized by Onterra  
 Aquatic Plant Survey: Onterra, 2024  
 Map Date: October 10, 2024 - RMF

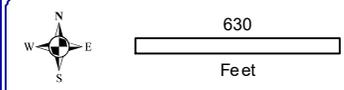
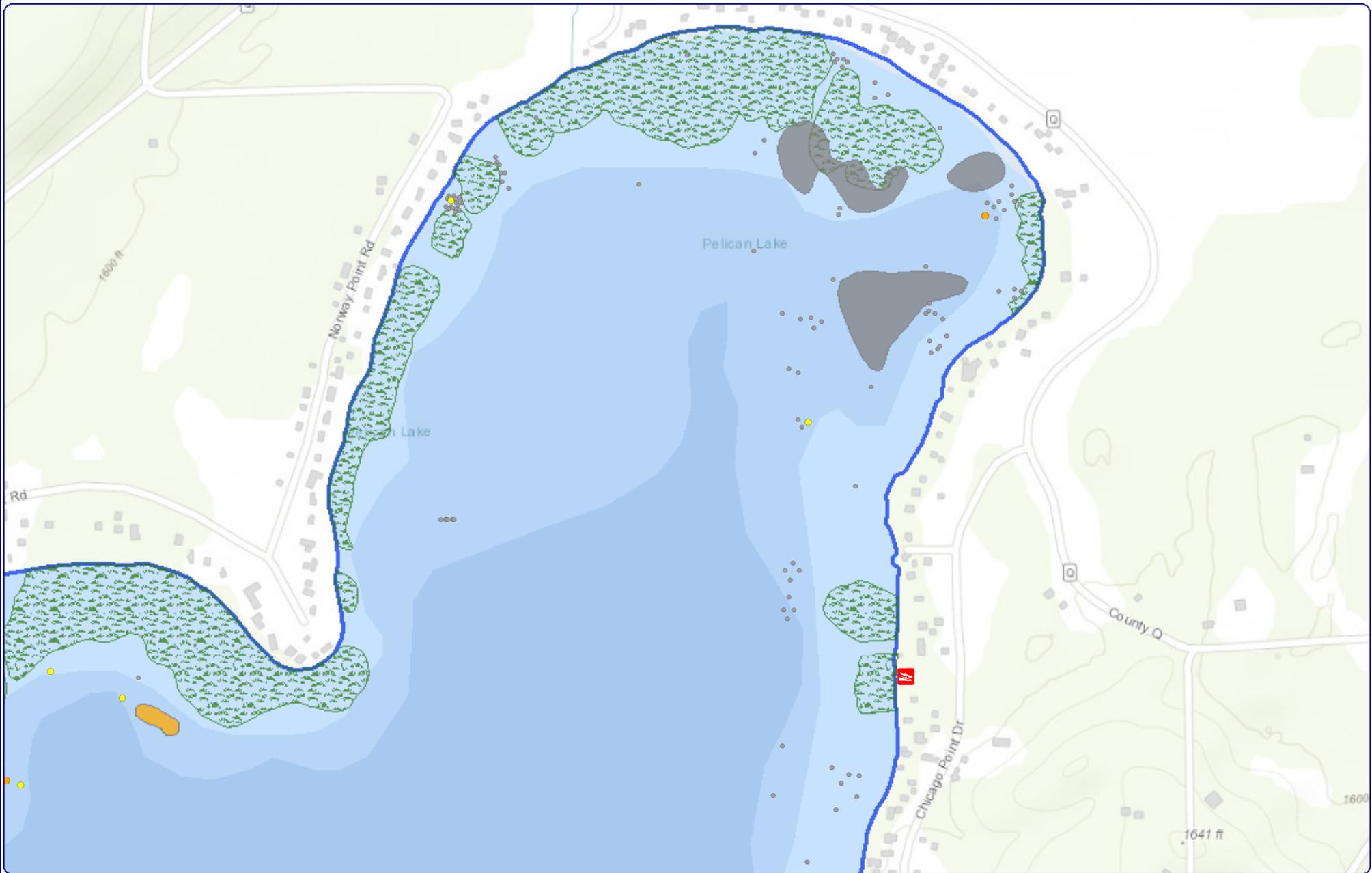


**Legend**

*EWM Survey Results (September 10-12, 18, 2024)*

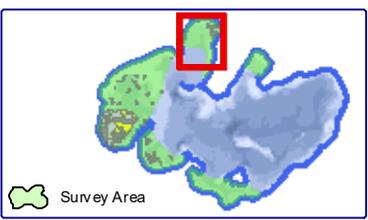
	Highly Scattered		Single or Few Plants
	Scattered		Clump of Plants
	Dominant		Small Plant Colony
	Highly Dominant		Emergent Plant Community <i>(Mapped in 2023)</i>
	Surface Matting (None)		

Map 14 (Musky Bay Mid)  
 Pelican Lake  
 Oneida County, Wisconsin  
**Late-Season 2024**  
**EWM Survey Results**



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Sources:  
 Basemap: ESRI  
 Bathymetry: WDNR, digitized by Onterra  
 Aquatic Plant Survey: Onterra, 2024  
 Map Date: October 10, 2024 - RMF

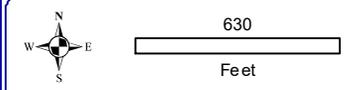
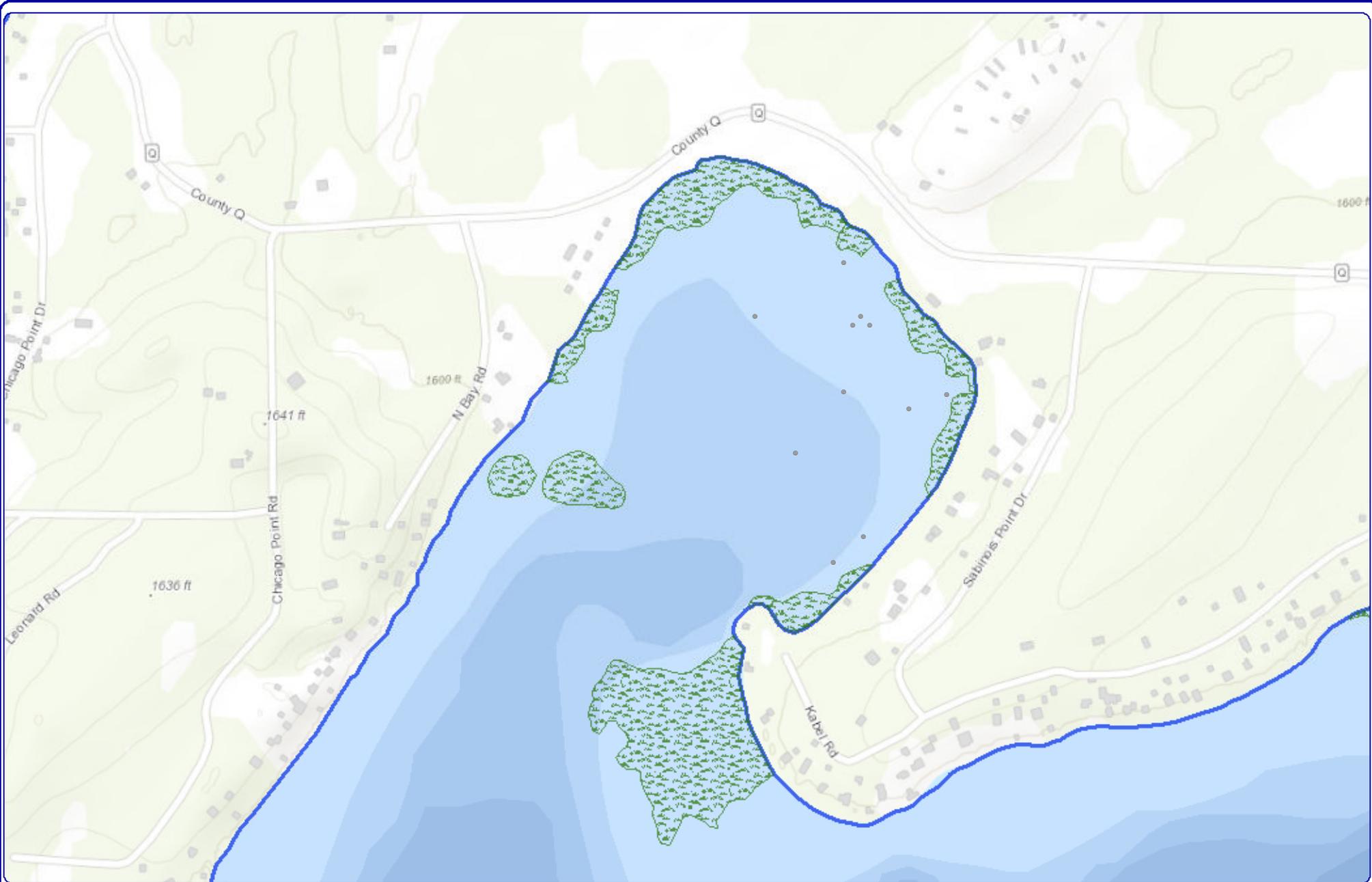


**Legend**

*EWM Survey Results (September 10-12, 18, 2024)*

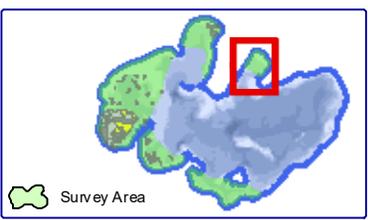
Highly Scattered	Single or Few Plants
Scattered	Clump of Plants
Dominant	Small Plant Colony
Highly Dominant	Emergent Plant Community (Mapped in 2023)
Surface Matting (None)	

Map 15 (Outlet Bay)  
 Pelican Lake  
 Oneida County, Wisconsin  
**Late-Season 2024**  
**EWM Survey Results**



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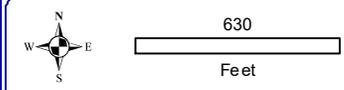
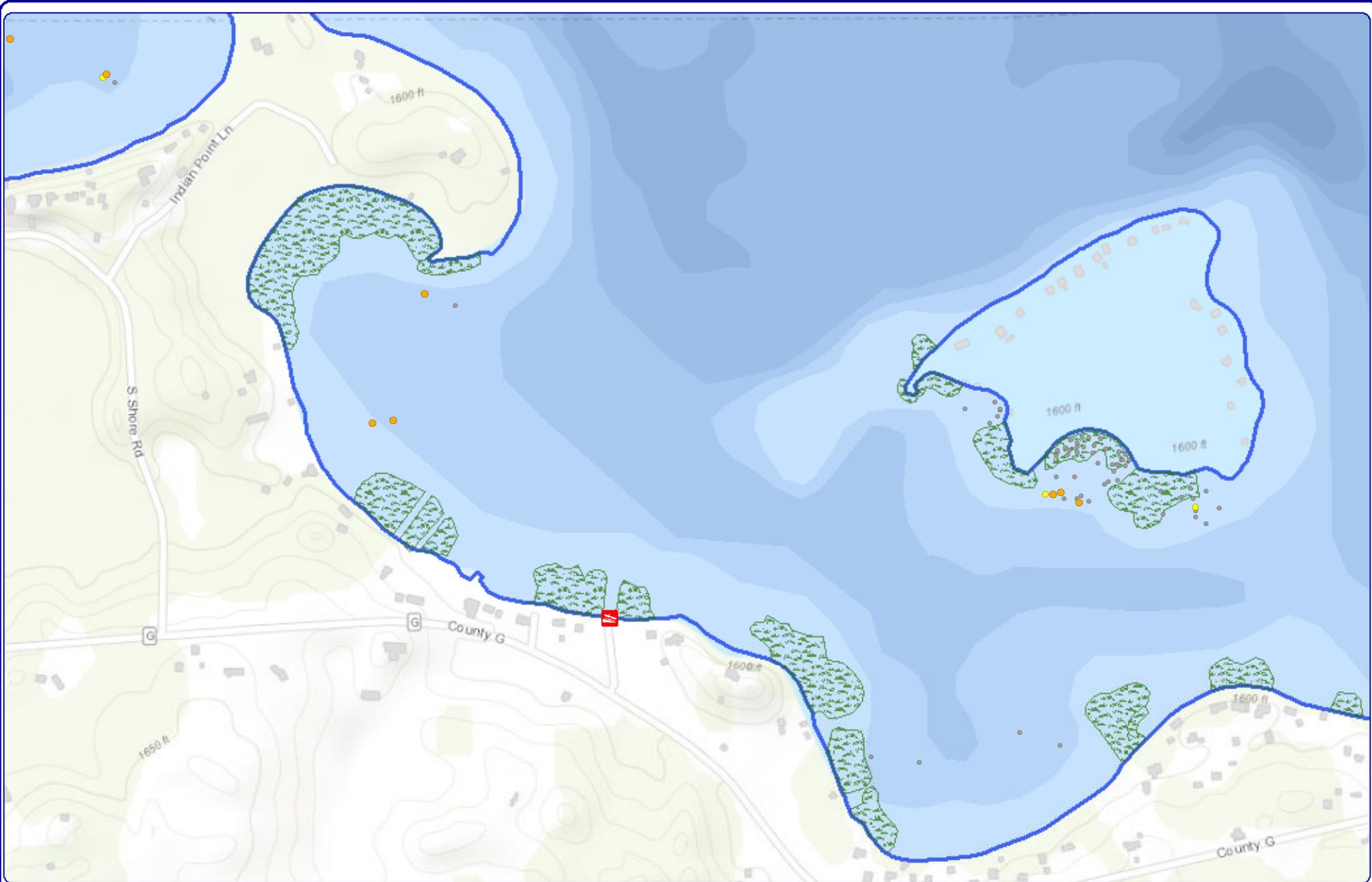
Sources:  
 Basemap: ESRI  
 Bathymetry: WDNR, digitized by Onterra  
 Aquatic Plant Survey: Onterra, 2024  
 Map Date: October 10, 2024 - RMF



**Legend**

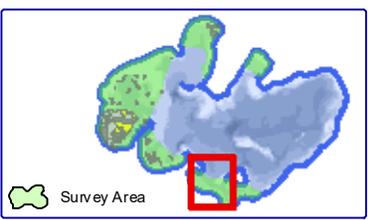
- EWM Survey Results (September 10-12, 18, 2024)*
- Single or Few Plants
  - Clump of Plants
  - Small Plant Colony
  - Emergent Plant Community (Mapped in 2023)
  - Highly Scattered
  - Scattered
  - Dominant
  - Highly Dominant
  - Surface Matting (None)

Map 16 (Mud Bay)  
 Pelican Lake  
 Oneida County, Wisconsin  
**Late-Season 2024**  
**EWM Survey Results**



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Sources:  
 Basemap: ESRI  
 Bathymetry: WDNR, digitized by Onterra  
 Aquatic Plant Survey: Onterra, 2024  
 Map Date: October 10, 2024 - RMF



**Legend**

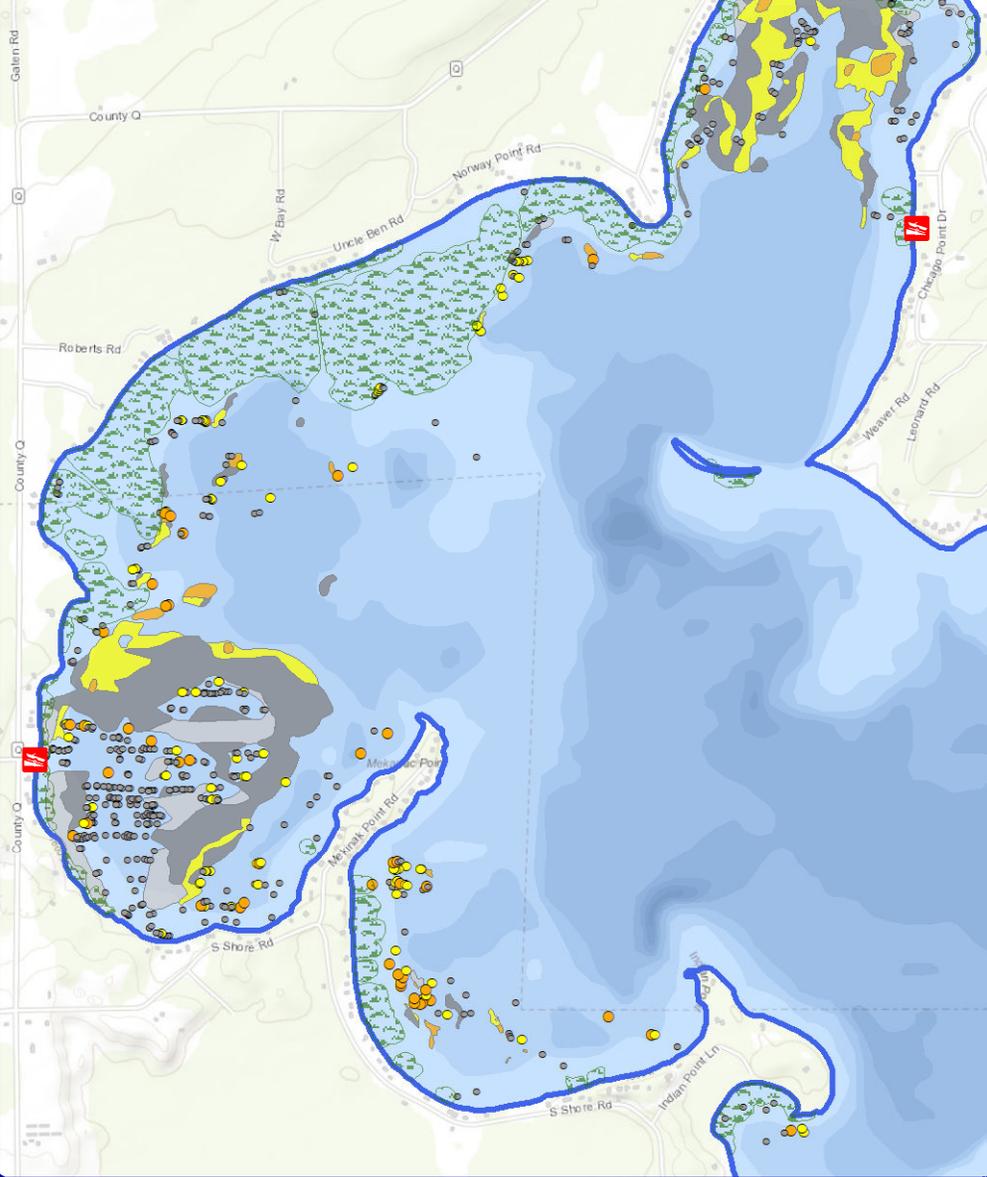
*EWM Survey Results (September 10-12, 18, 2024)*

	Highly Scattered		Single or Few Plants
	Scattered		Clump of Plants
	Dominant		Small Plant Colony
	Highly Dominant		Emergent Plant Community (Mapped in 2023)
	Surface Matting (None)		

**Map 17 (Guths Bay)**  
 Pelican Lake  
 Oneida County, Wisconsin  
**Late-Season 2024**  
**EWM Survey Results**

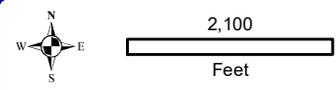
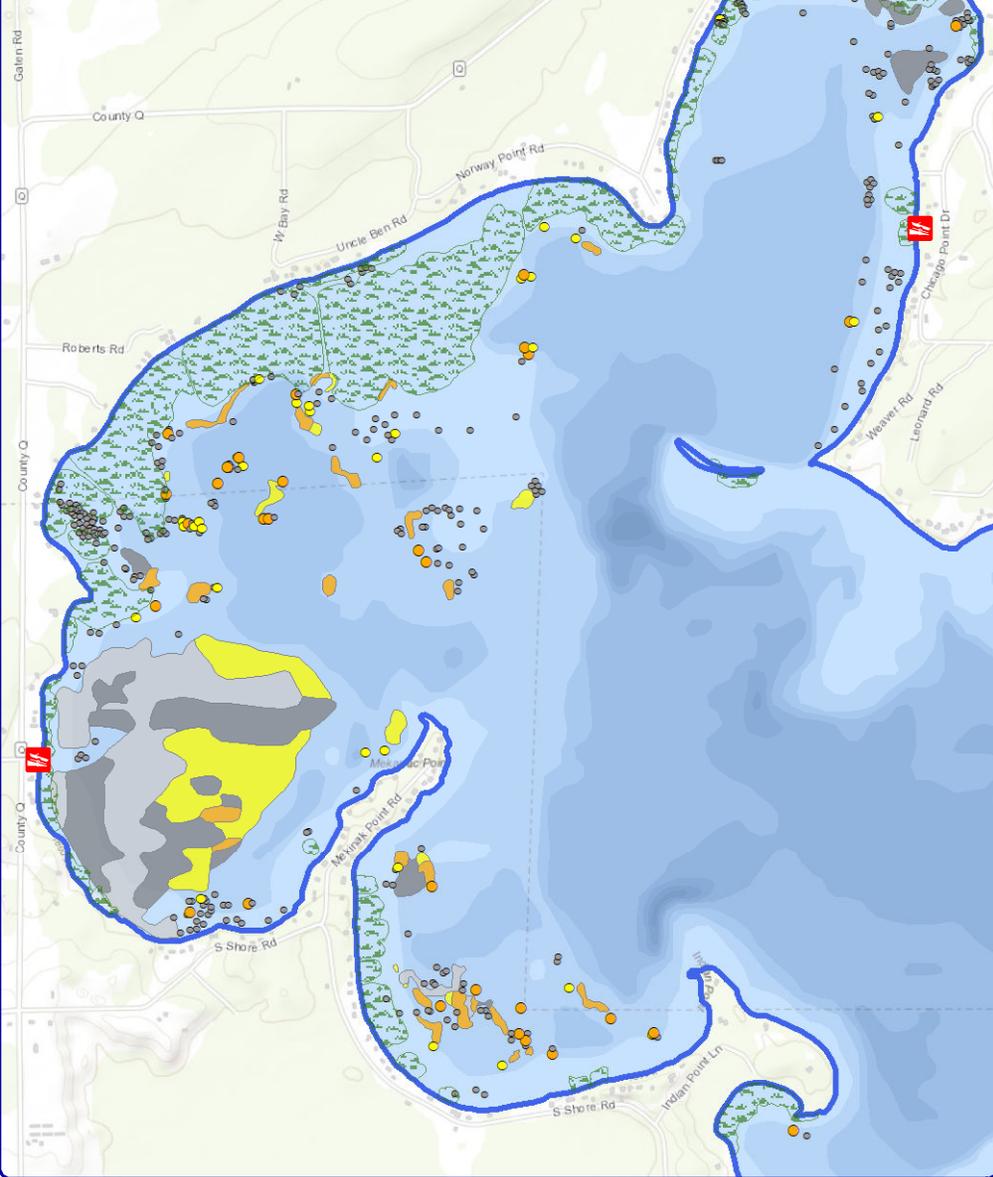
# Late-Season 2023

(August 28-31, 2023)



# Late-Season 2024

(September 10-12, 18, 2024)



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Sources:  
 Basemap: ESRI AGOL  
 Bathymetry: WDNR, digitized by Onterra  
 Aquatic Plant Survey: Onterra, 2024  
 Map Date: October 10, 2024 - RMF



## Legend

### Eurasian Watermilfoil Survey Results

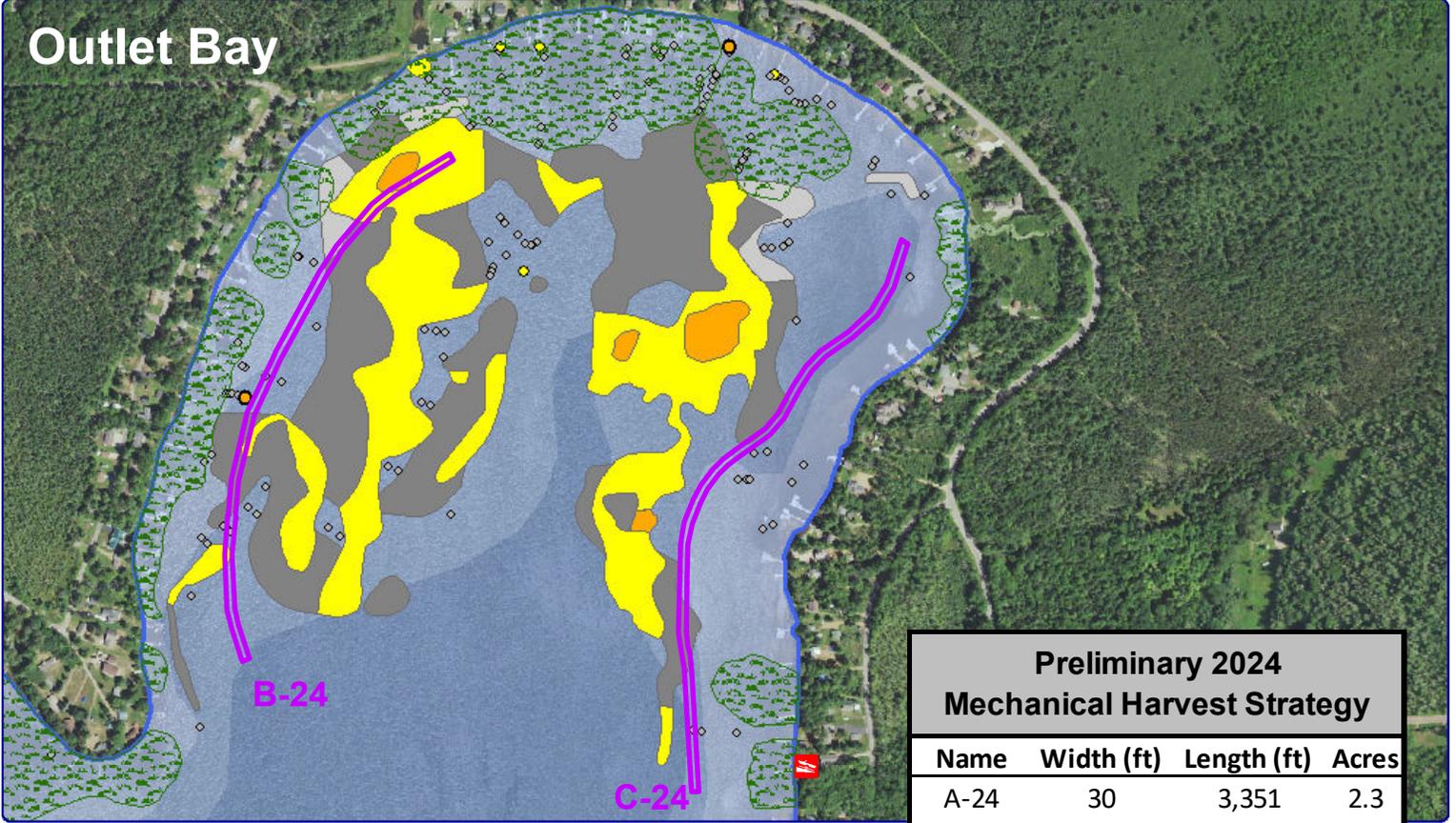
- Highly Scattered
- Scattered
- Dominant
- Highly Dominant
- Surface Matting (None)
- Single or Few Plants
- Clump of Plants
- Small Plant Colony
- Emergent Plant Community (Mapped in 2023)

## Map 18

Pelican Lake  
 Oneida County, Wisconsin

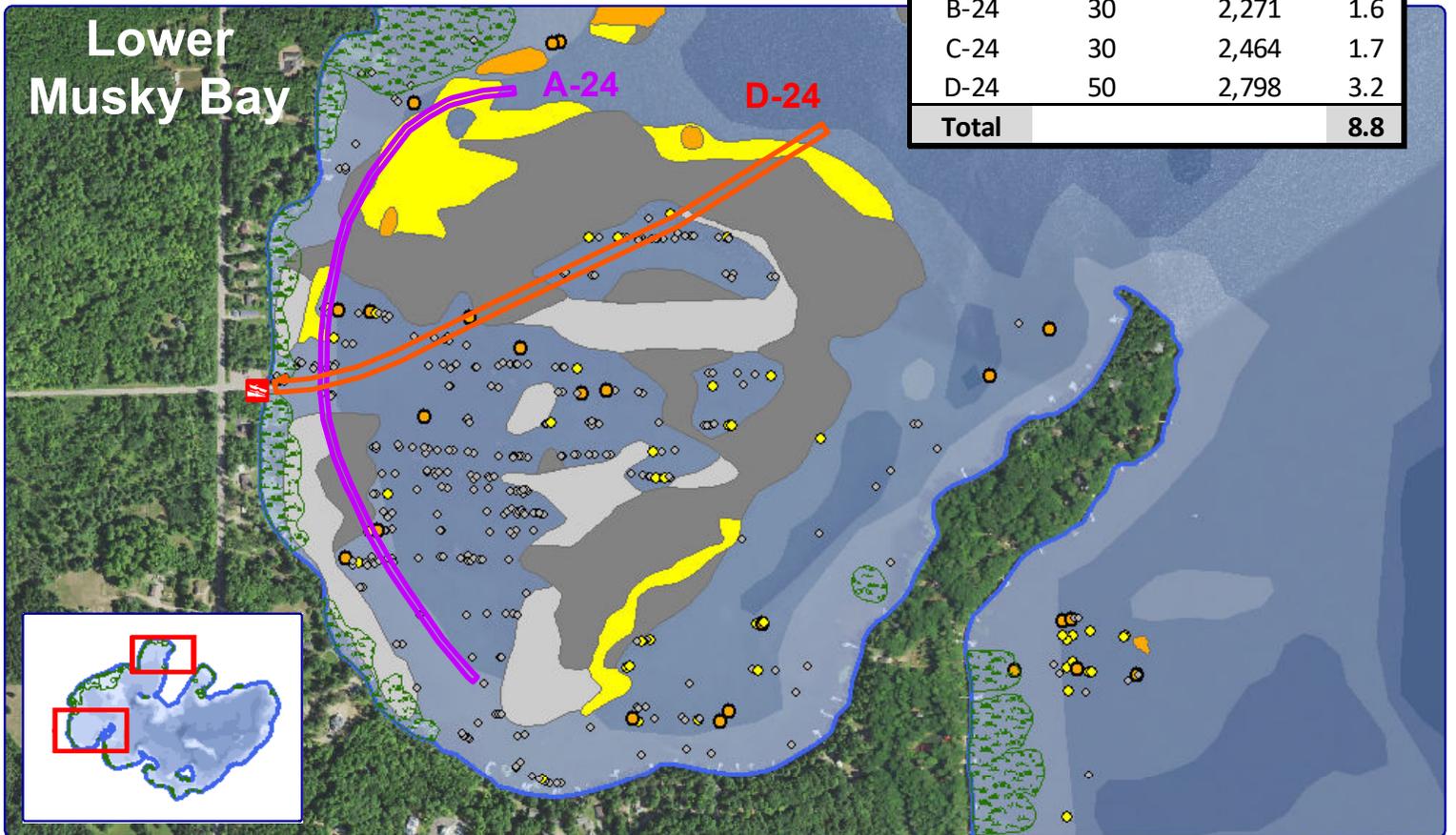
**Late-Season  
 2023 vs 2024  
 EWM Survey Results**

# Outlet Bay



Preliminary 2024 Mechanical Harvest Strategy			
Name	Width (ft)	Length (ft)	Acres
A-24	30	3,351	2.3
B-24	30	2,271	1.6
C-24	30	2,464	1.7
D-24	50	2,798	3.2
<b>Total</b>			<b>8.8</b>

# Lower Musky Bay



## Legend

### EWM Survey Results (August 28-31, 2023)

- Highly Scattered
- Scattered
- Dominant
- Highly Dominant
- Surface Matting (None)
- Single or Few Plants
- Clump of Plants
- Small Plant Colony
- Emergent Plant Community (Mapped in 2023)
- Mechanical Harvest Lane (30 ft wide)
- Mechanical Harvest Lane (50 ft wide)

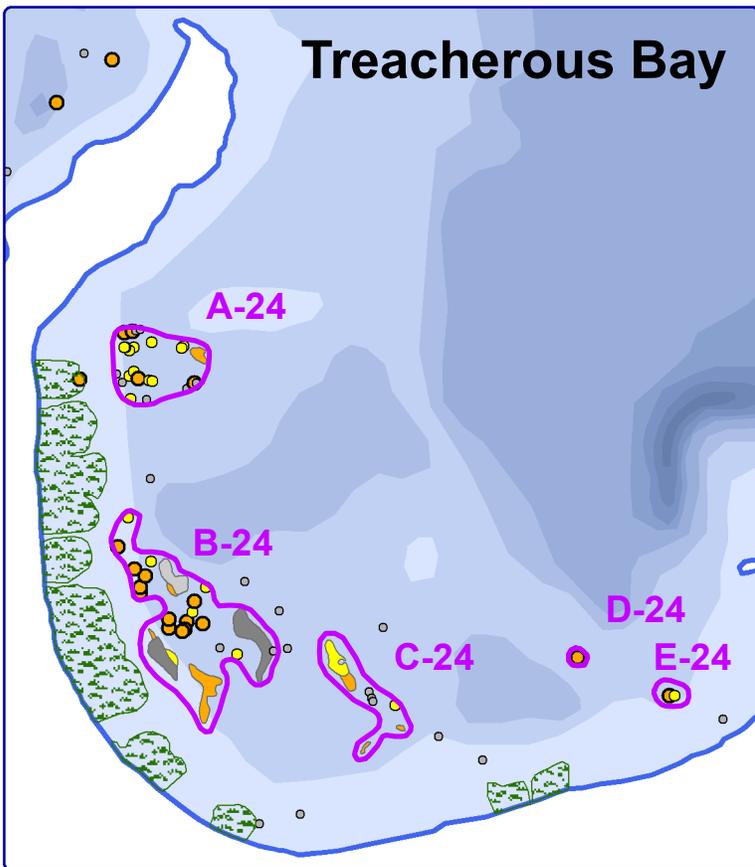


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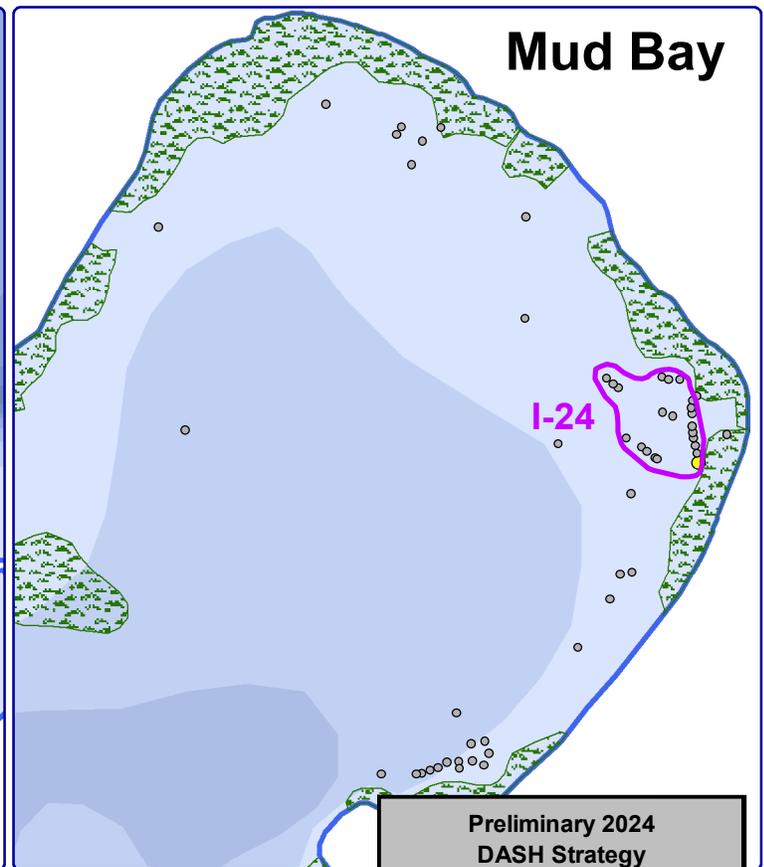
Sources  
 Roads and Hydro: WDNR  
 Bathymetry: Digitized by Onterra  
 Aquatic Plants: Onterra, 2023  
 Map Date: April 19, 2024 - RMF

Map 19  
 Pelican Lake  
 Oneida County, Wisconsin  
**Prelim 2024  
 Mechanical Harvest  
 Strategy V2**

# Treacherous Bay



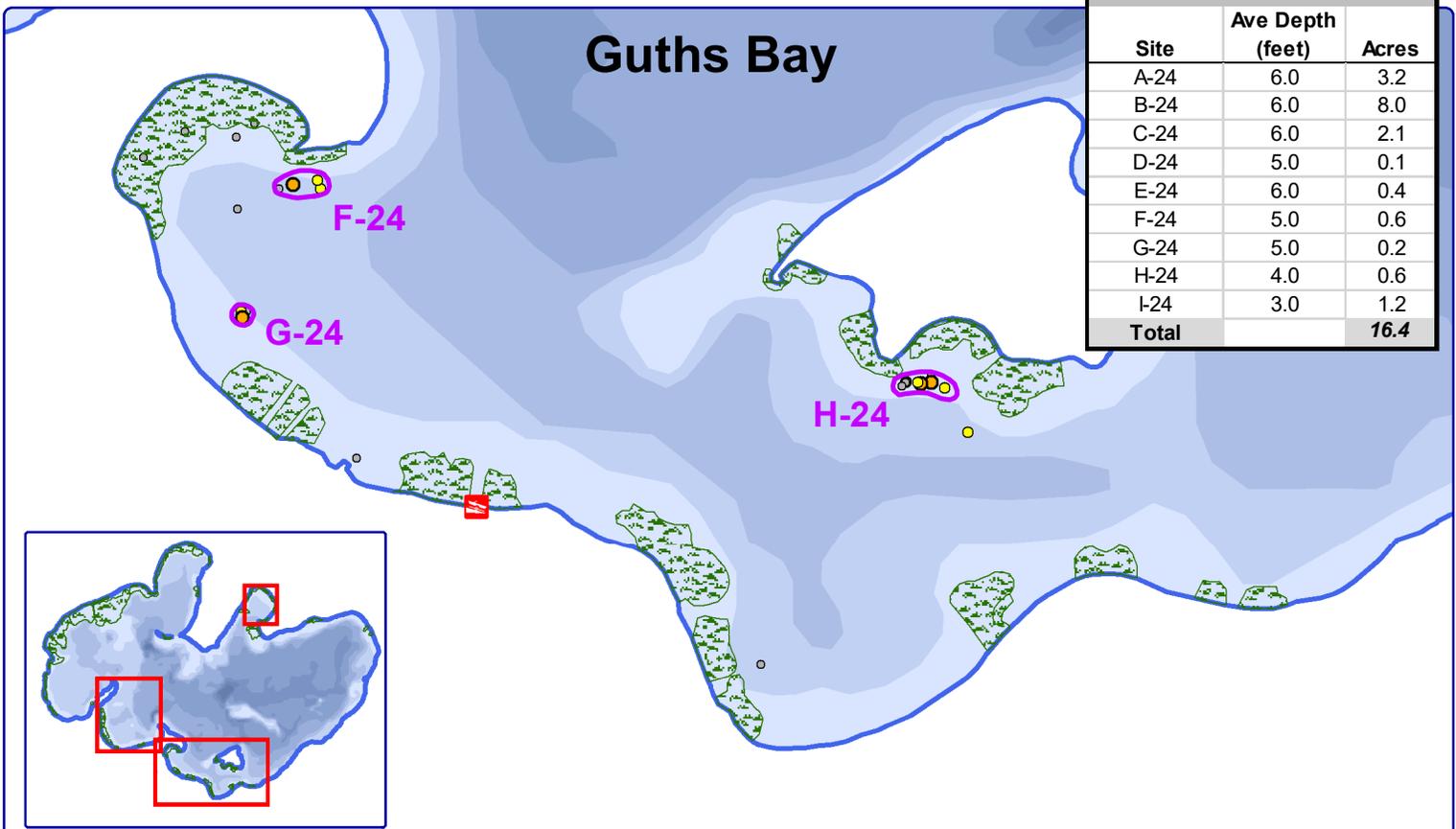
# Mud Bay



### Preliminary 2024 DASH Strategy

Site	Ave Depth (feet)	Acres
A-24	6.0	3.2
B-24	6.0	8.0
C-24	6.0	2.1
D-24	5.0	0.1
E-24	6.0	0.4
F-24	5.0	0.6
G-24	5.0	0.2
H-24	4.0	0.6
I-24	3.0	1.2
<b>Total</b>		<b>16.4</b>

# Guths Bay



## Legend

### EWM Survey Results (August 28-31, 2023)

- Highly Scattered
- Single or Few Plants
- Emergent Plant Community (Mapped in 2023)
- Scattered
- Clump of Plants
- Hand Harvest Areas
- Dominant
- Small Plant Colony
- Highly Dominant
- Surface Matting (None)



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Sources  
 Roads and Hydro: WDNR  
 Bathymetry: Digitized by Onterra  
 Aquatic Plants: Onterra, 2023  
 Map Date: April 22, 2024 - RMF

Map 20  
 Pelican Lake  
 Oneida County, Wisconsin

**Preliminary 2024  
 DASH Strategy V2**