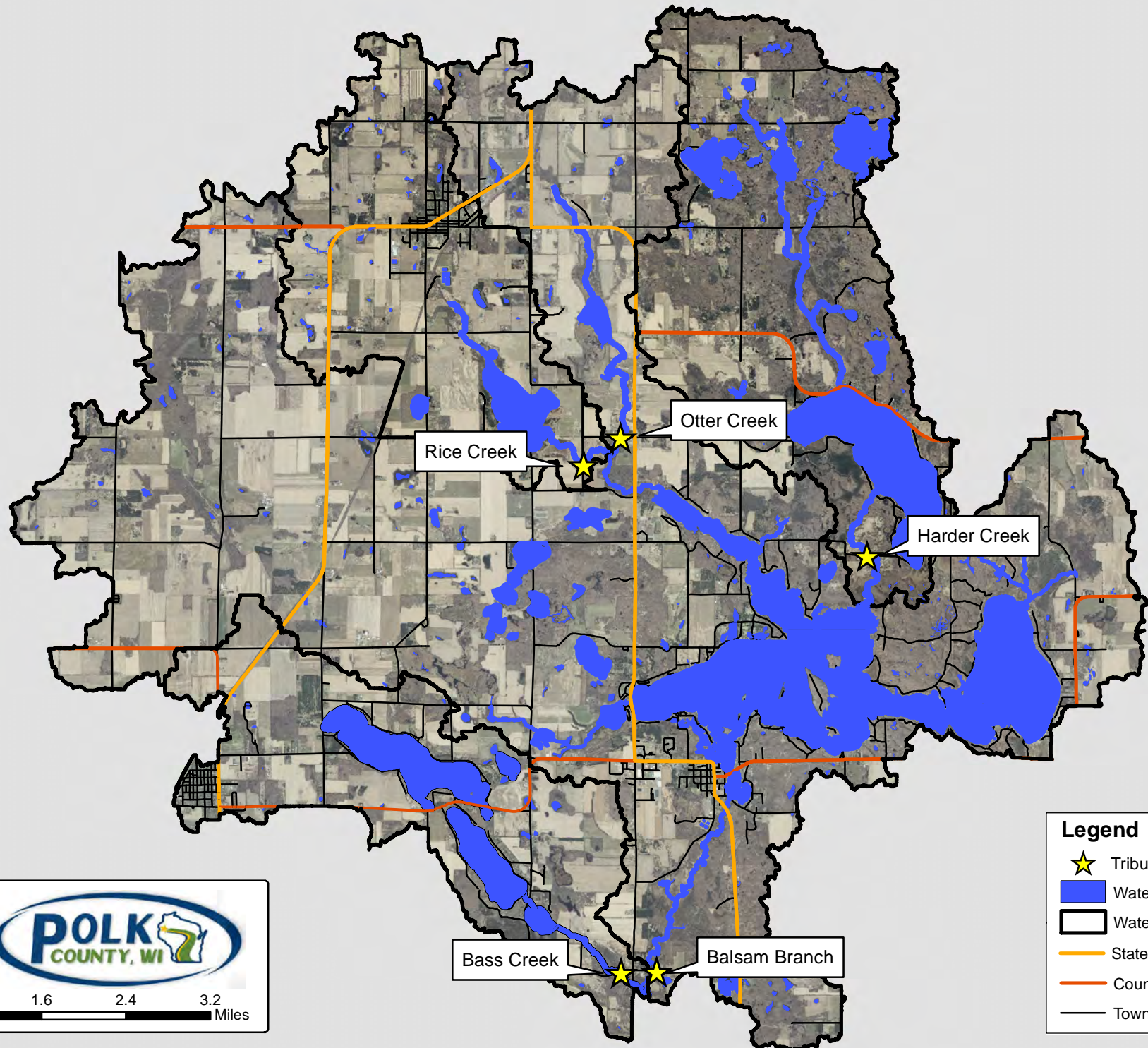


# Balsam Lake Watershed Tributary Sample Sites

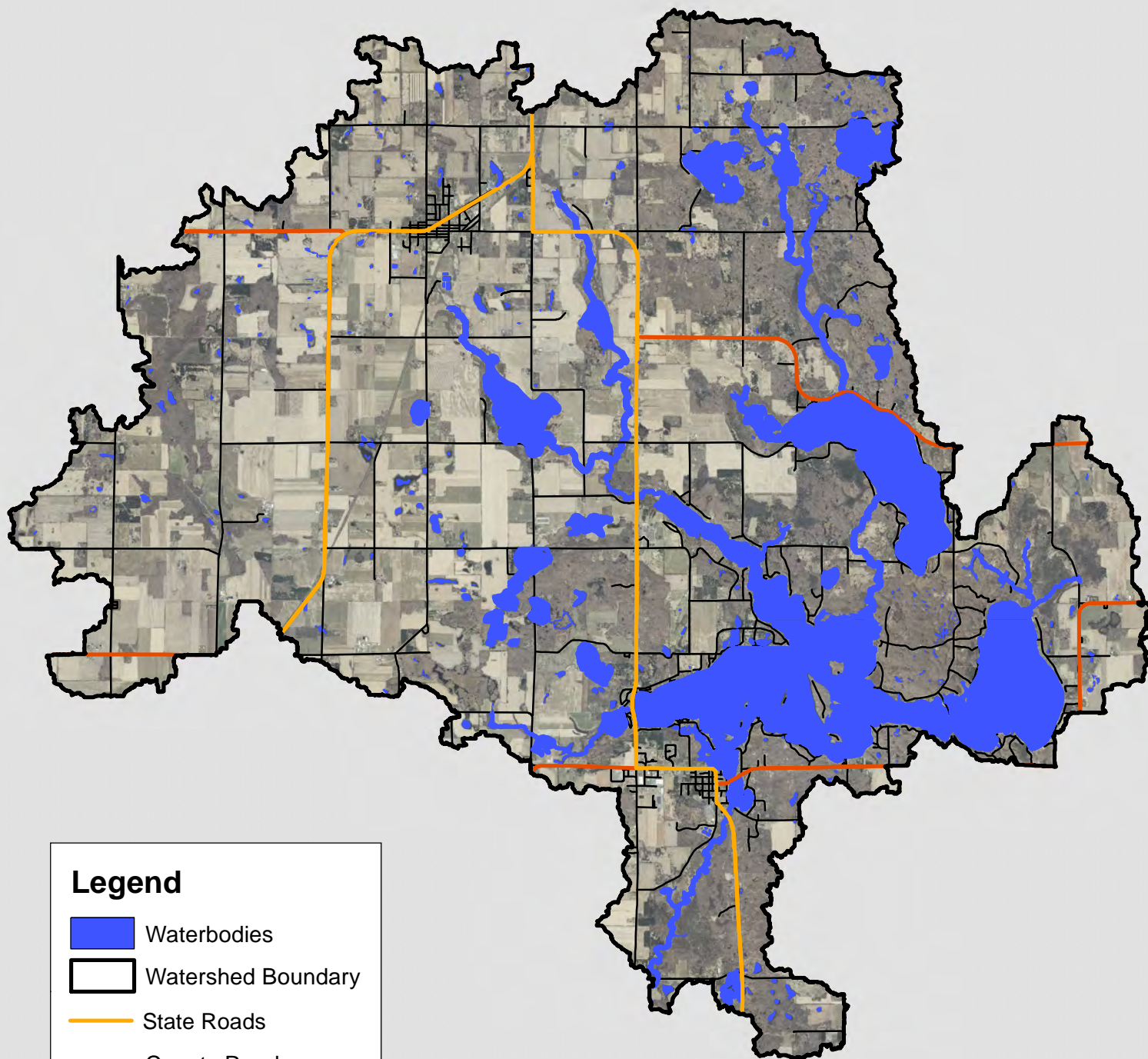


## Legend






- ★ Tributary Sample Sites
- Waterbodies
- Watershed Boundary
- State Roads
- County Roads
- Town Roads





# Balsam Branch Subwatershed




**Legend**

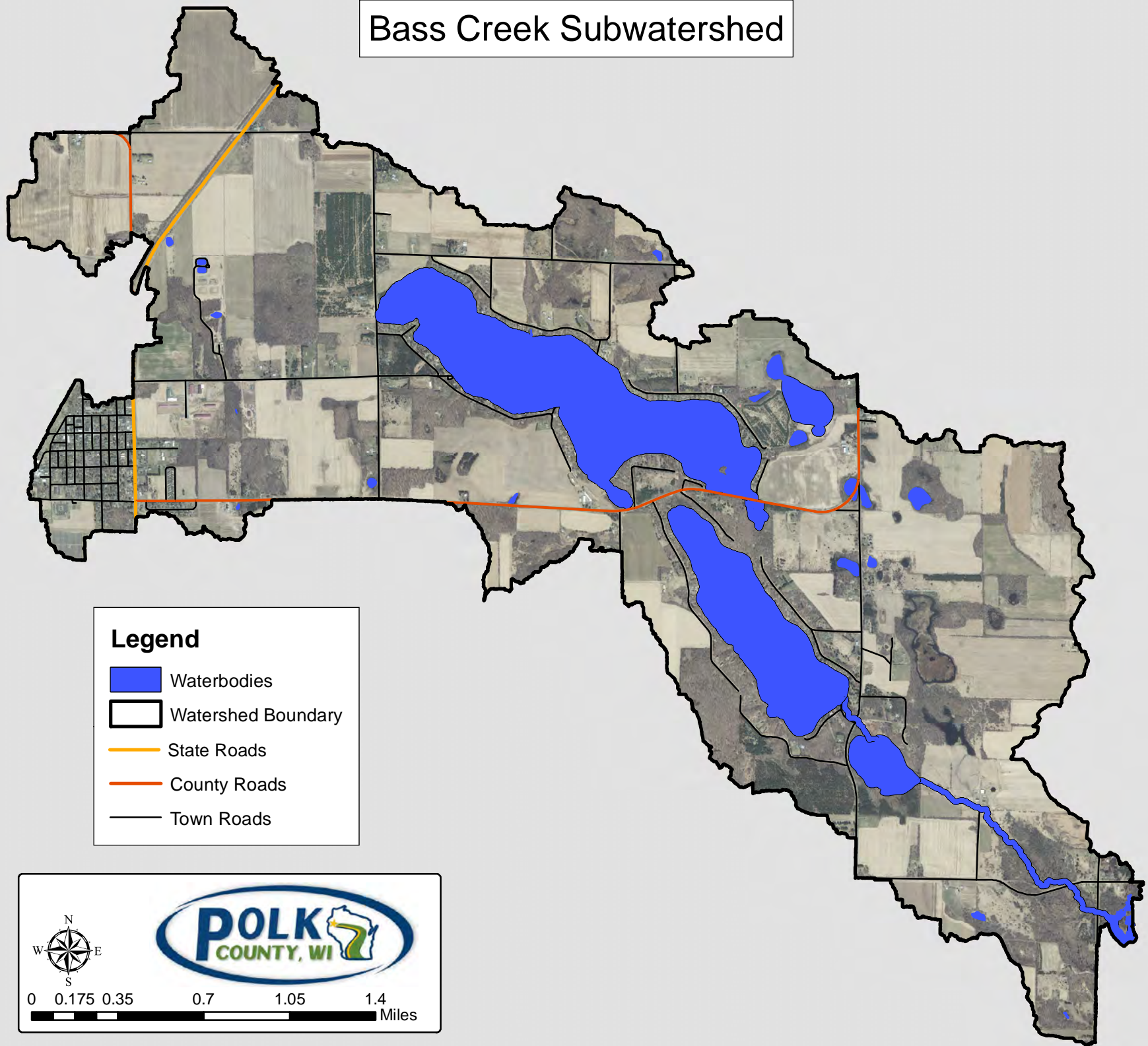
-  Waterbodies
-  Watershed Boundary
-  State Roads
-  County Roads
-  Town Roads



0 0.425 0.85 1.7 2.55 3.4 Miles

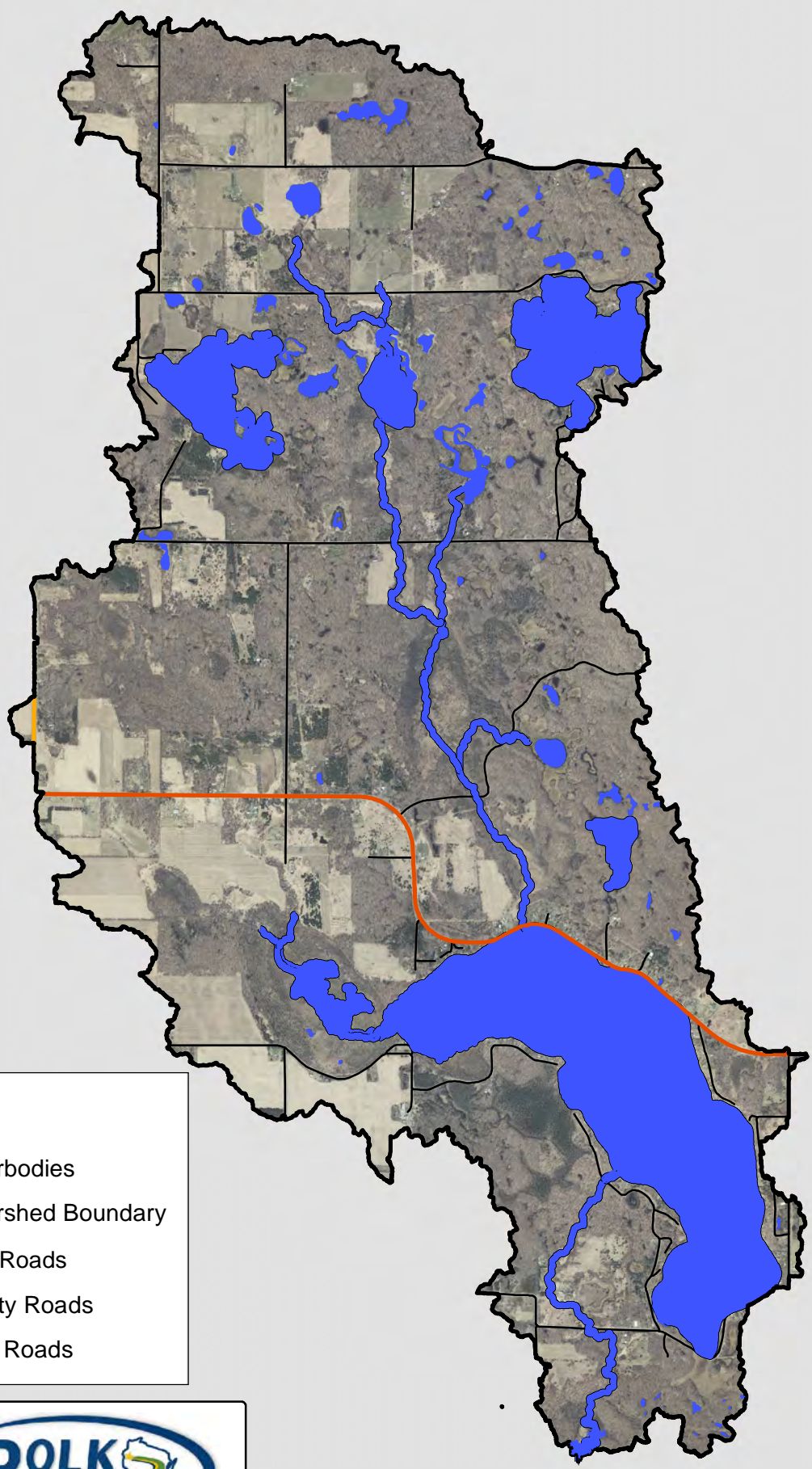


# Bass Creek Subwatershed










# Harder Creek Subwatershed



**Legend**

-  Waterbodies
-  Watershed Boundary
-  State Roads
-  County Roads
-  Town Roads

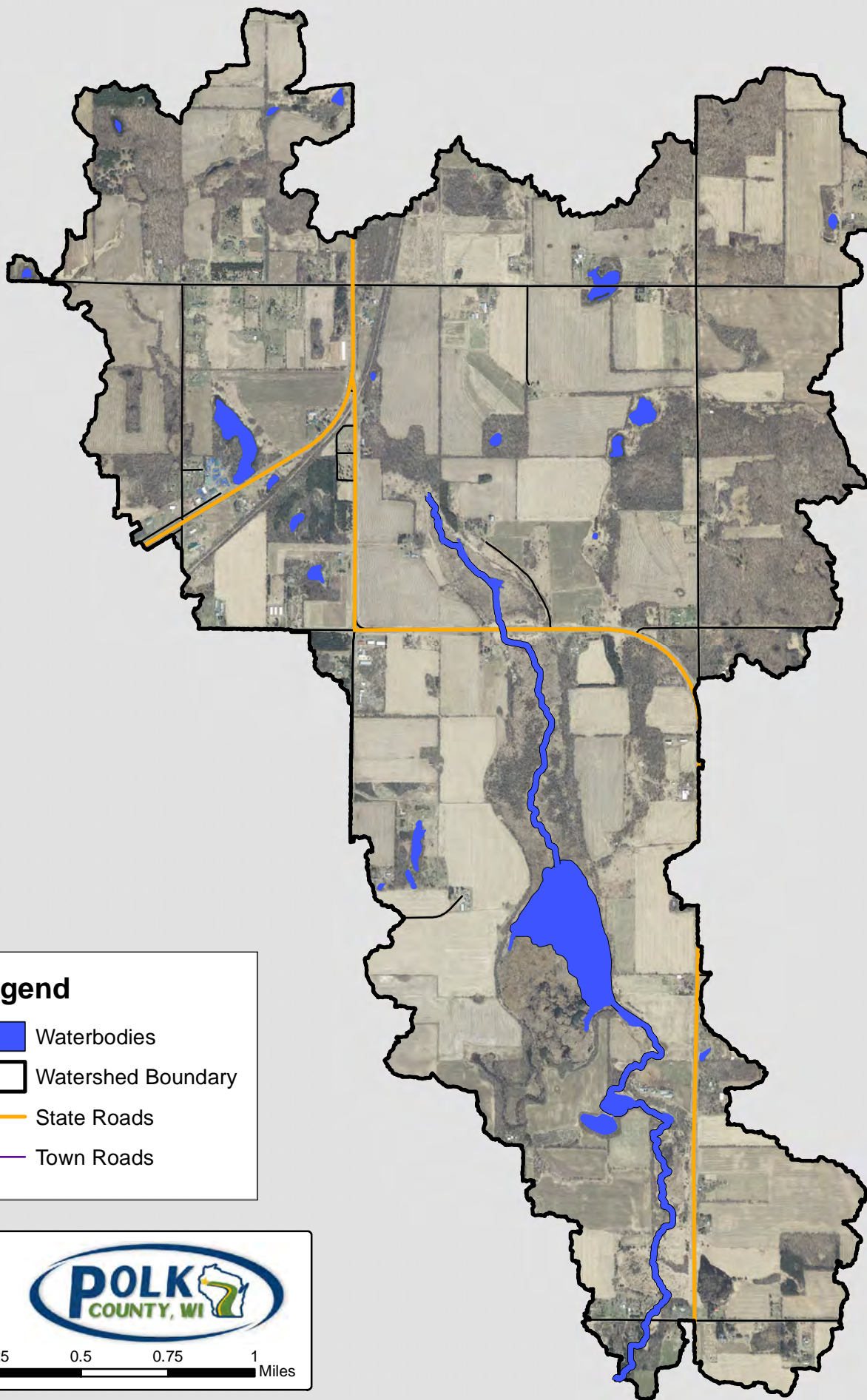


0 0.175 0.35 0.7 1.05 1.4 Miles











# Otter Creek Subwatershed



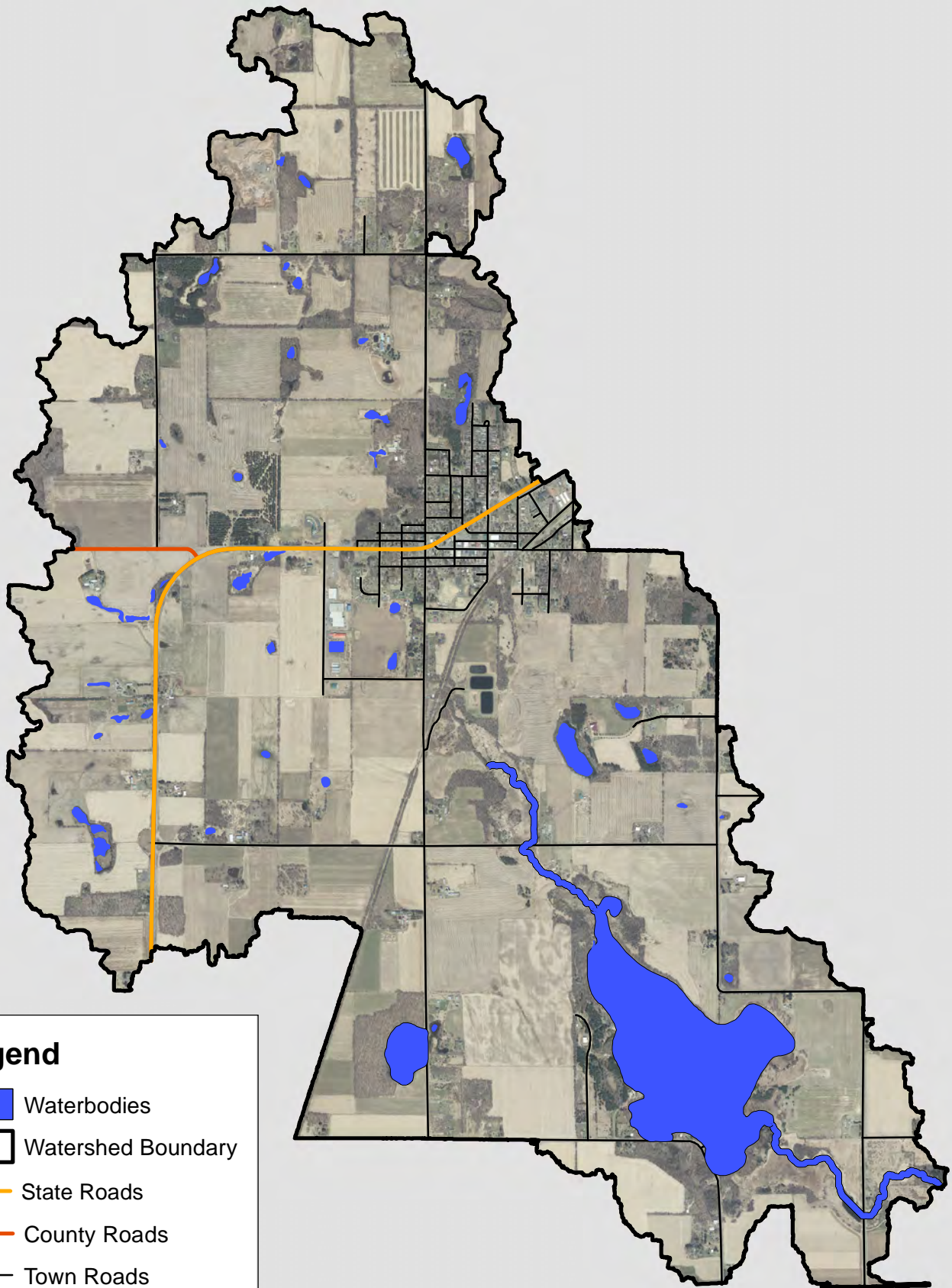
**Legend**

-  Waterbodies
-  Watershed Boundary
-  State Roads
-  Town Roads










0 0.125 0.25 0.5 0.75 1 Miles

# Rice Creek Subwatershed



**Legend**

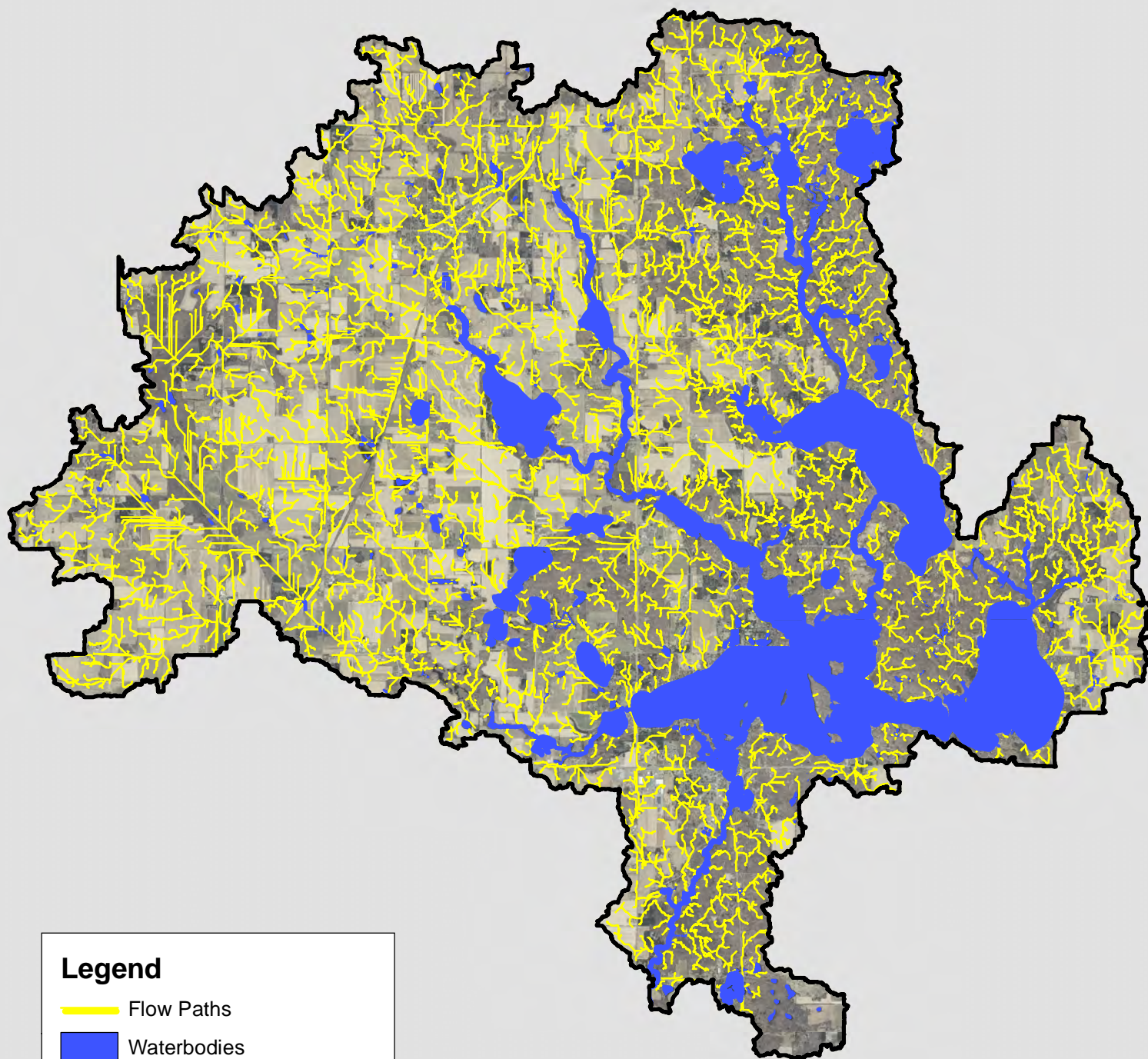
-  Waterbodies
-  Watershed Boundary
-  State Roads
-  County Roads
-  Town Roads






0 0.15 0.3 0.6 0.9 1.2 Miles



# Balsam Branch Subwatershed Flow Paths



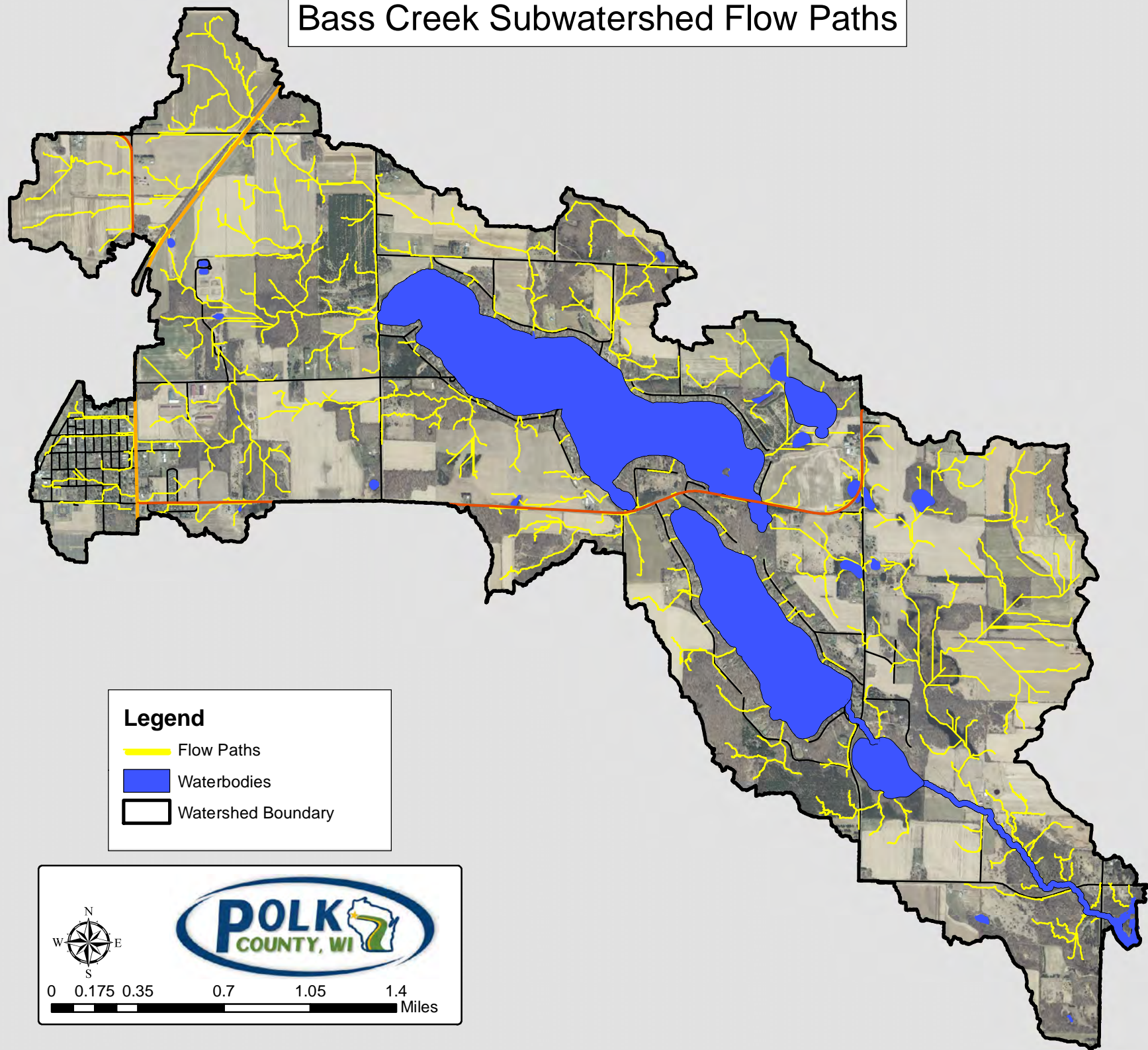
**Legend**

-  Flow Paths
-  Waterbodies
-  Watershed Boundary



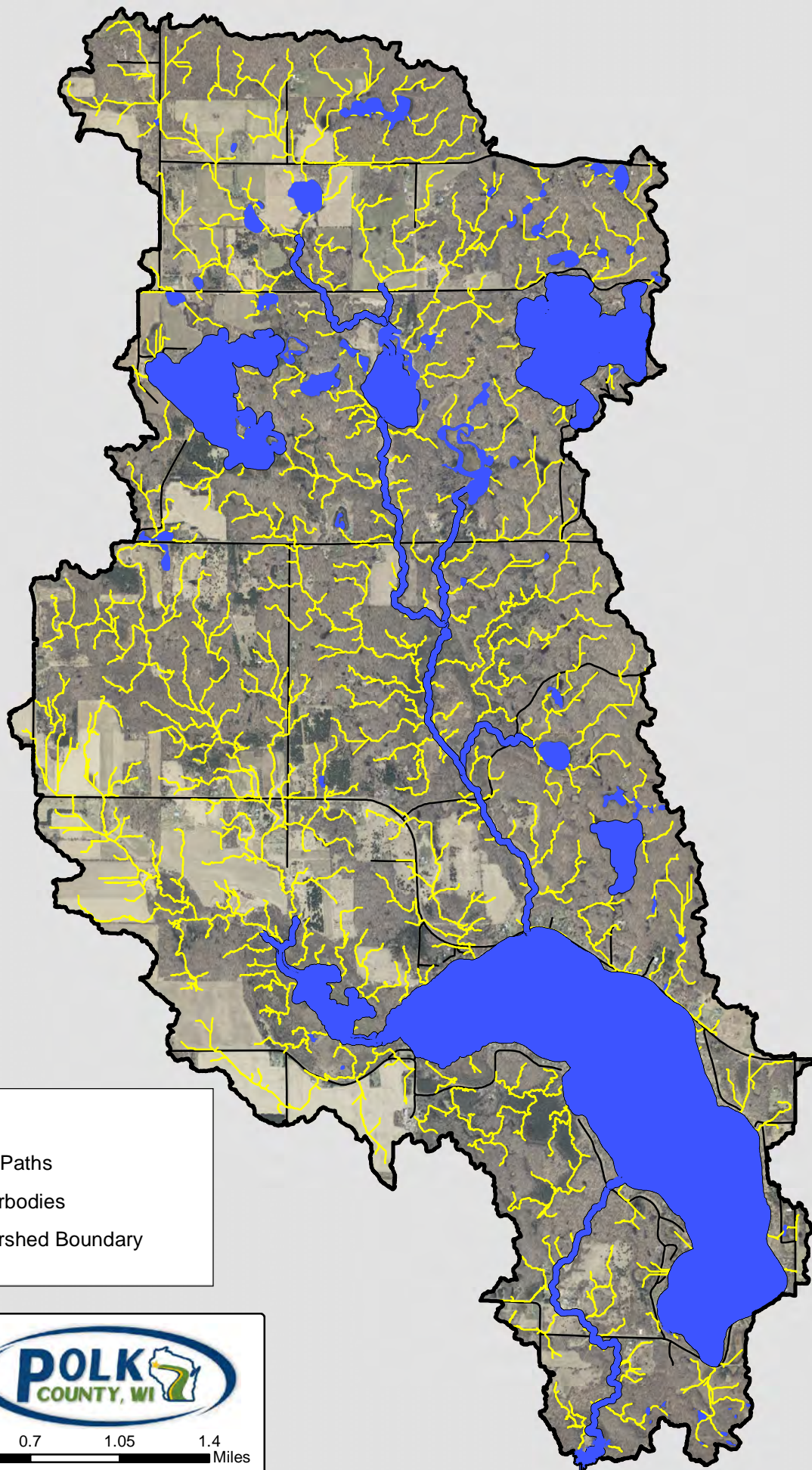
0 0.425 0.85 1.7 2.55 3.4 Miles

# Bass Creek Subwatershed Flow Paths





# Harder Creek Subwatershed Flow Paths



## Legend

- Flow Paths
- Waterbodies
- Watershed Boundary

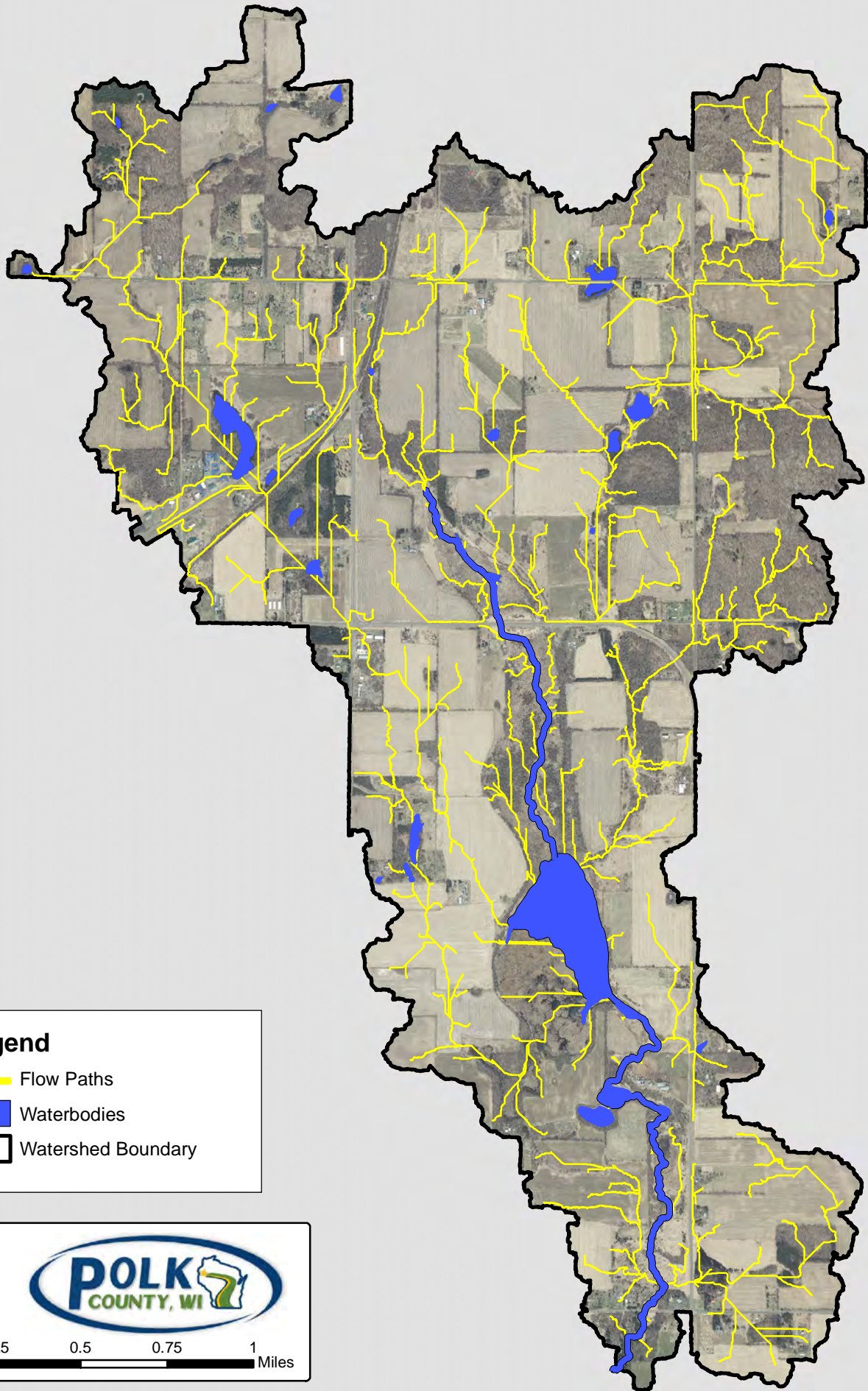


0 0.175 0.35 0.7 1.05 1.4 Miles








# Otter Creek Subwatershed Flow Paths



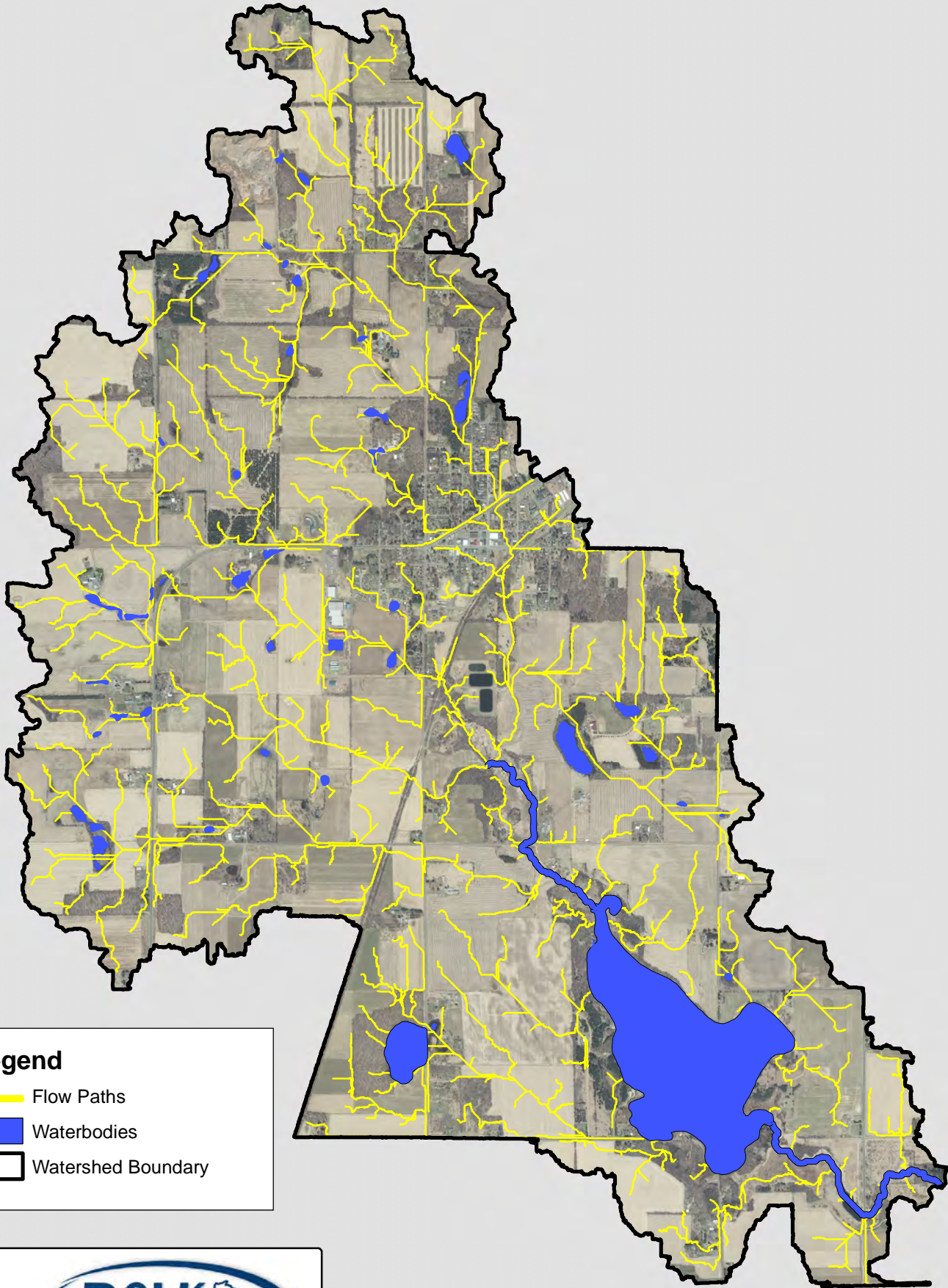
## Legend

-  Flow Paths
-  Waterbodies
-  Watershed Boundary







# Rice Creek Subwatershed Flow Paths



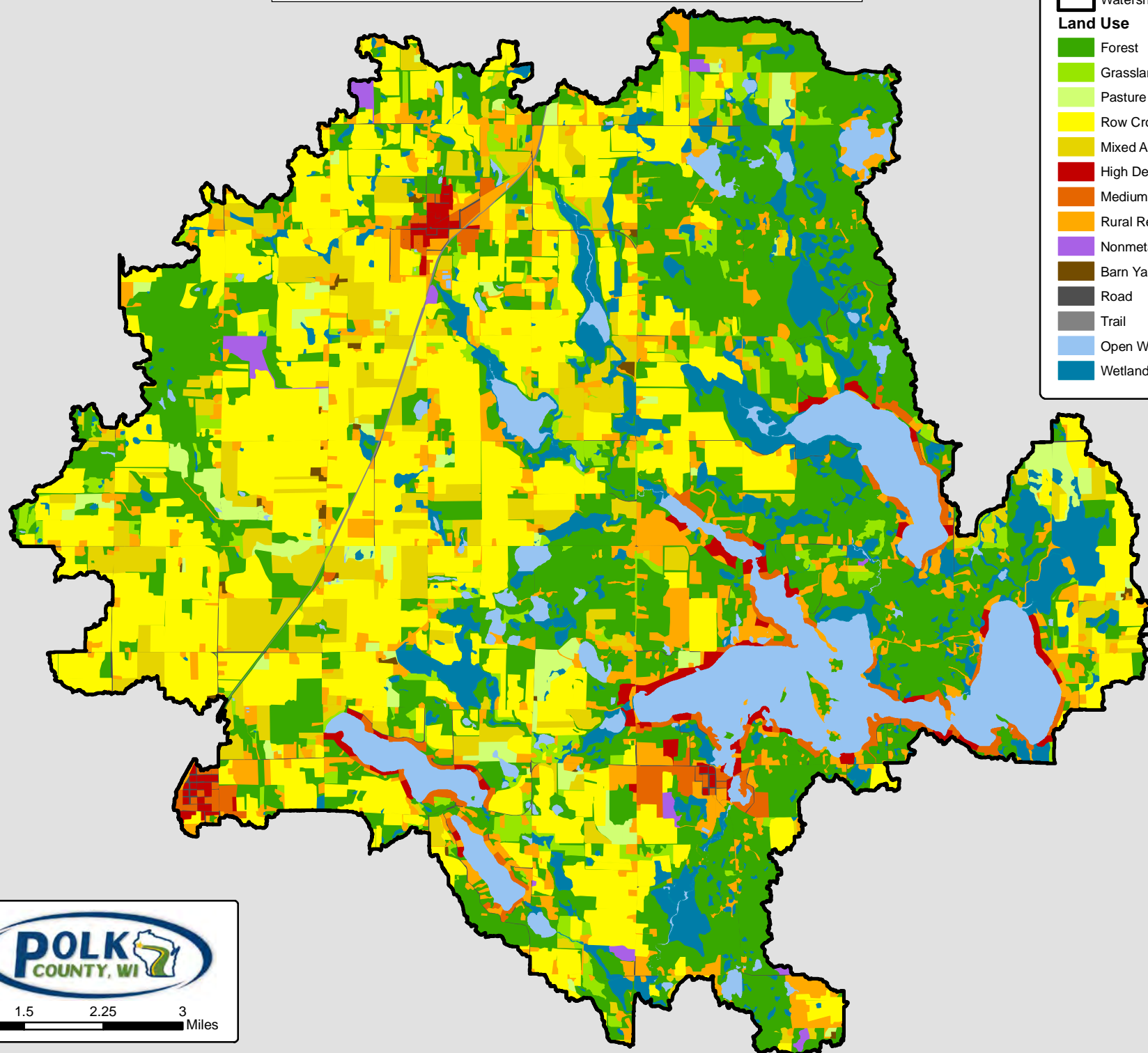
**Legend**

- Flow Paths
- Waterbodies
- Watershed Boundary



0 0.125 0.25 0.5 0.75 1 Miles

# Balsam Lake Watershed Land Use





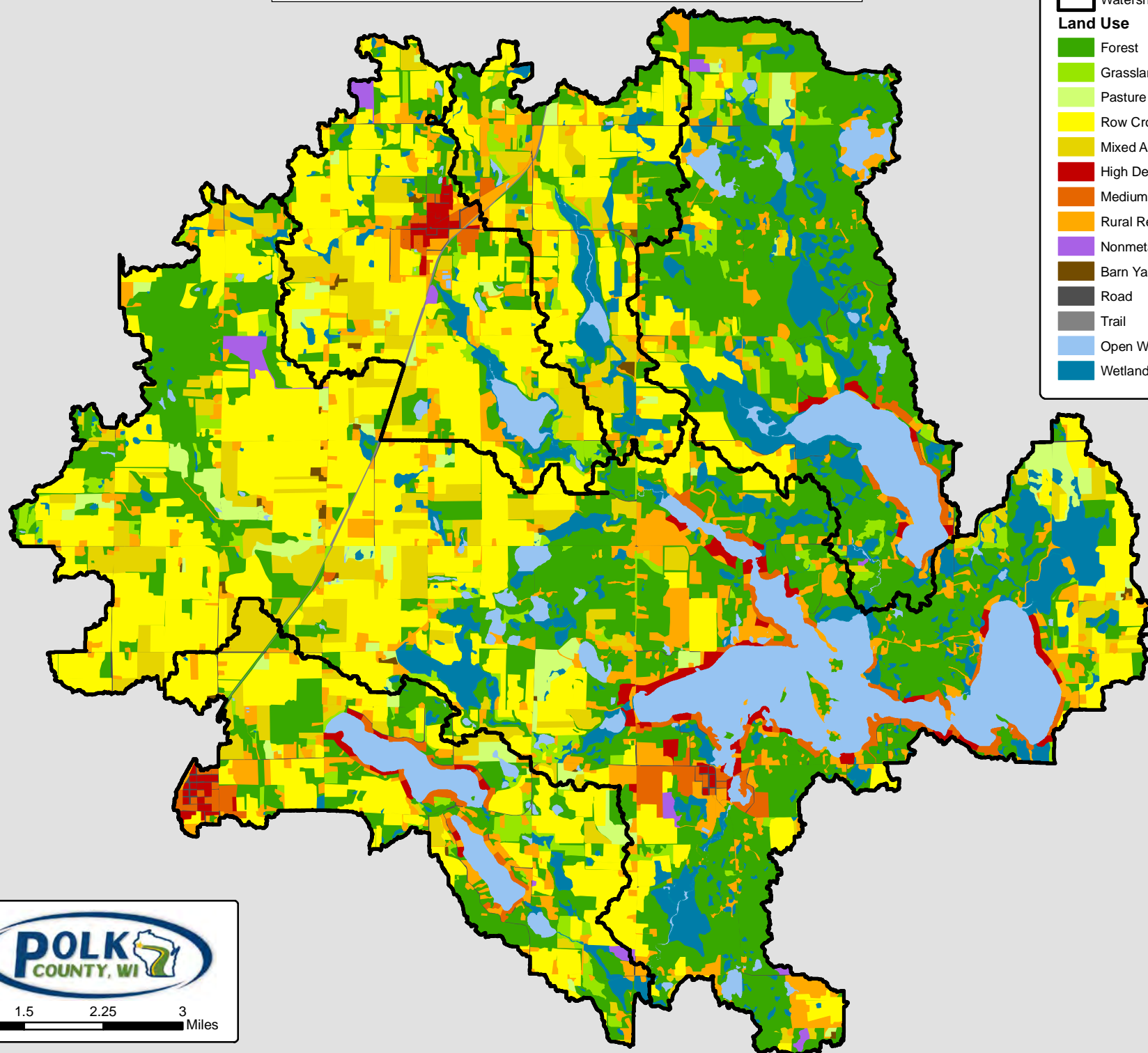
# Balsam Lake Watershed Land Use

## Legend

Watershed Boundary

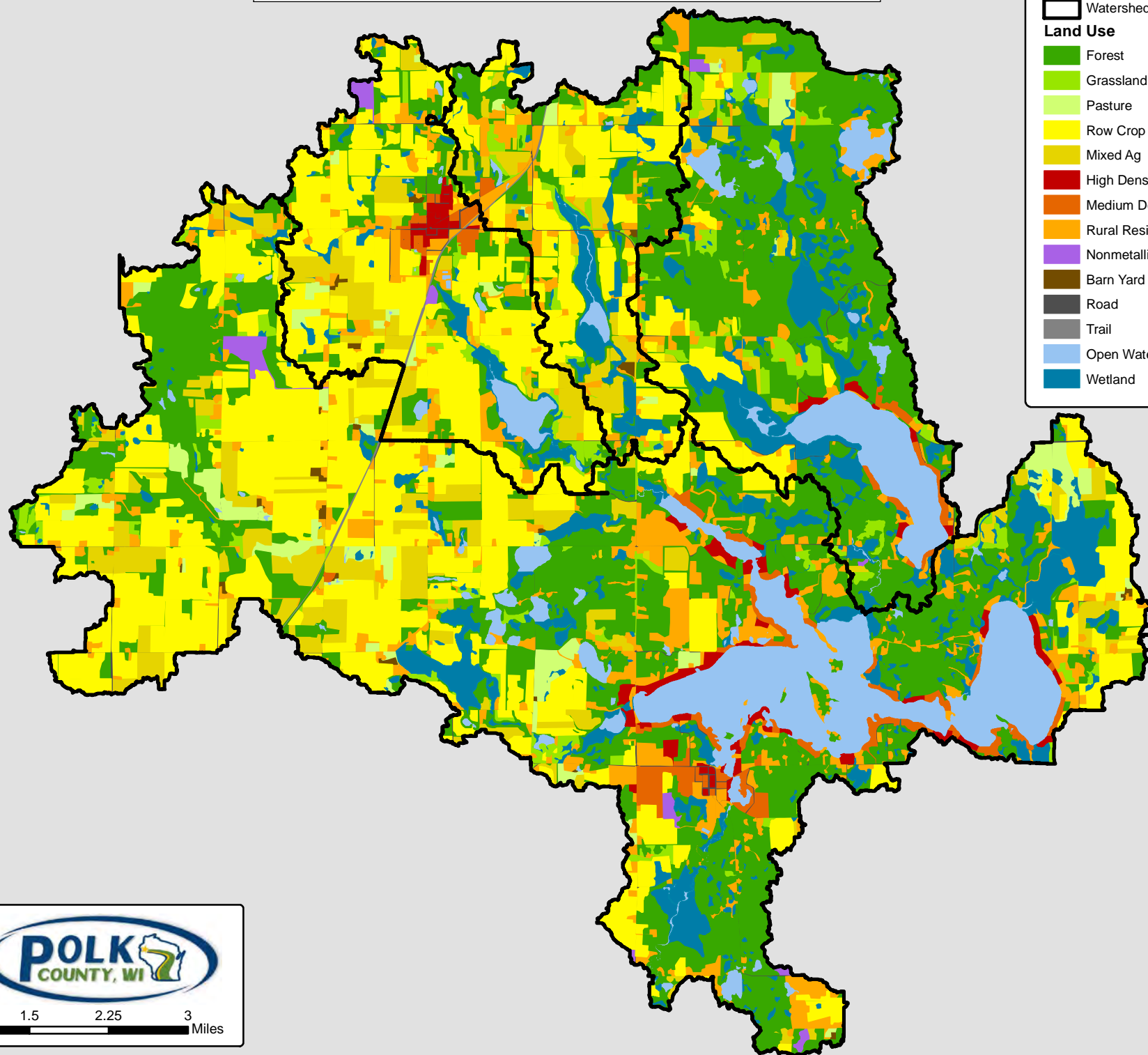
## Land Use

- Forest
- Grassland
- Pasture
- Row Crop
- Mixed Ag
- High Density Residential
- Medium Density Residential
- Rural Residential
- Nonmetallic Mine
- Barn Yard
- Road
- Trail
- Open Water
- Wetland



0 0.375 0.75 1.5 2.25 3 Miles

# Balsam Branch Watershed Land Use




0 0.375 0.75 1.5 2.25 3 Miles





# Bass Creek Watershed Land Use


**Legend**


 Watershed Boundary


**Land Use**


 Forest


 Grassland


 Pasture


 Row Crop


 Mixed Ag


 High Density Residential


 Medium Density Residential


 Rural Residential


 Nonmetallic Mine

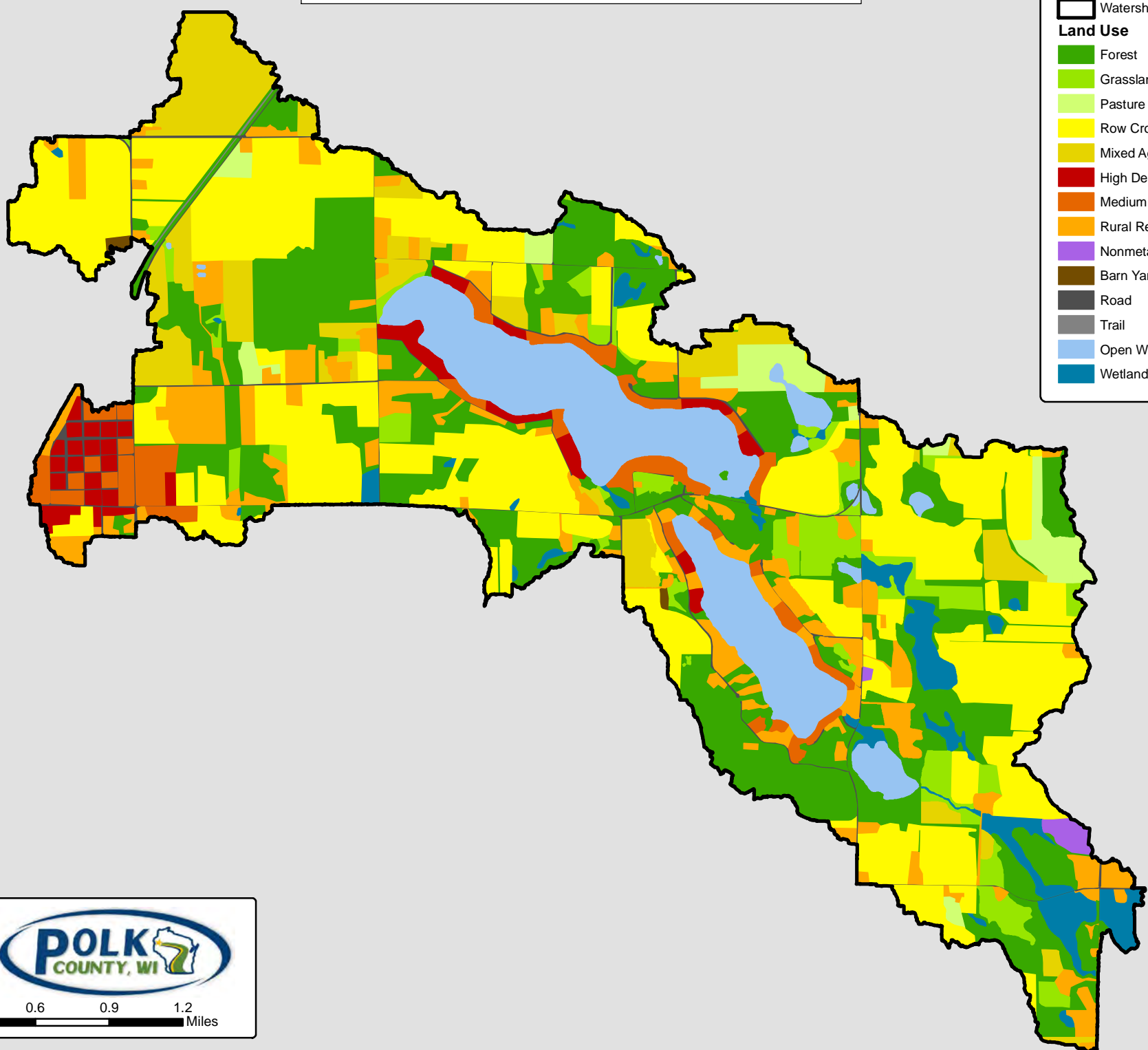
 Barn Yard

 Road

 Trail

 Open Water

 Wetland

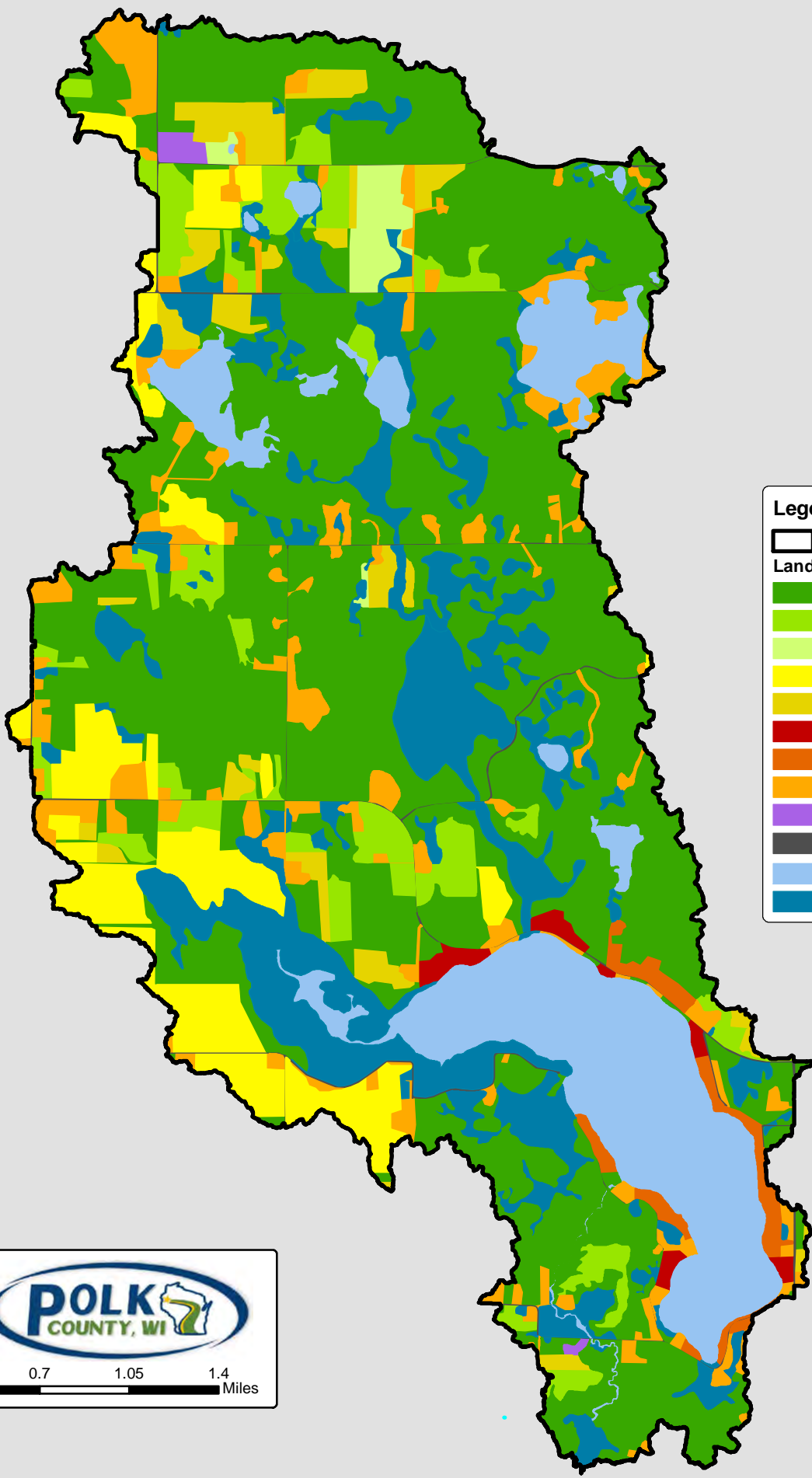




00.150.30.60.91.2

Miles

# Harder Creek Watershed Land Use



**Legend**

Watershed Boundary

**Land Use**

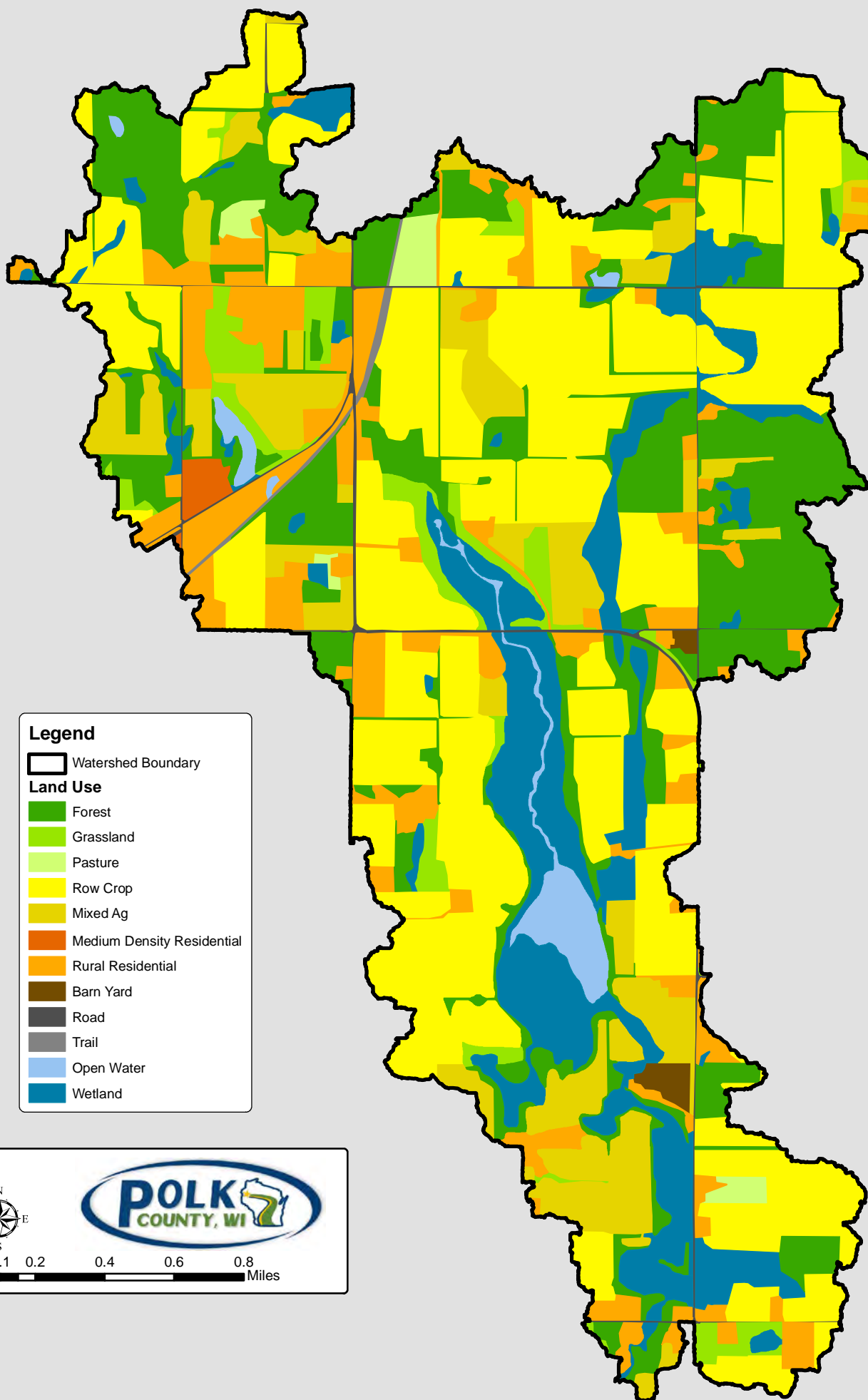
- Forest
- Grassland
- Pasture
- Row Crop
- Mixed Ag
- High Density Residential
- Medium Density Residential
- Rural Residential
- Nonmetallic Mine
- Road
- Open Water
- Wetland

0 0.175 0.35 0.7 1.05 1.4 Miles

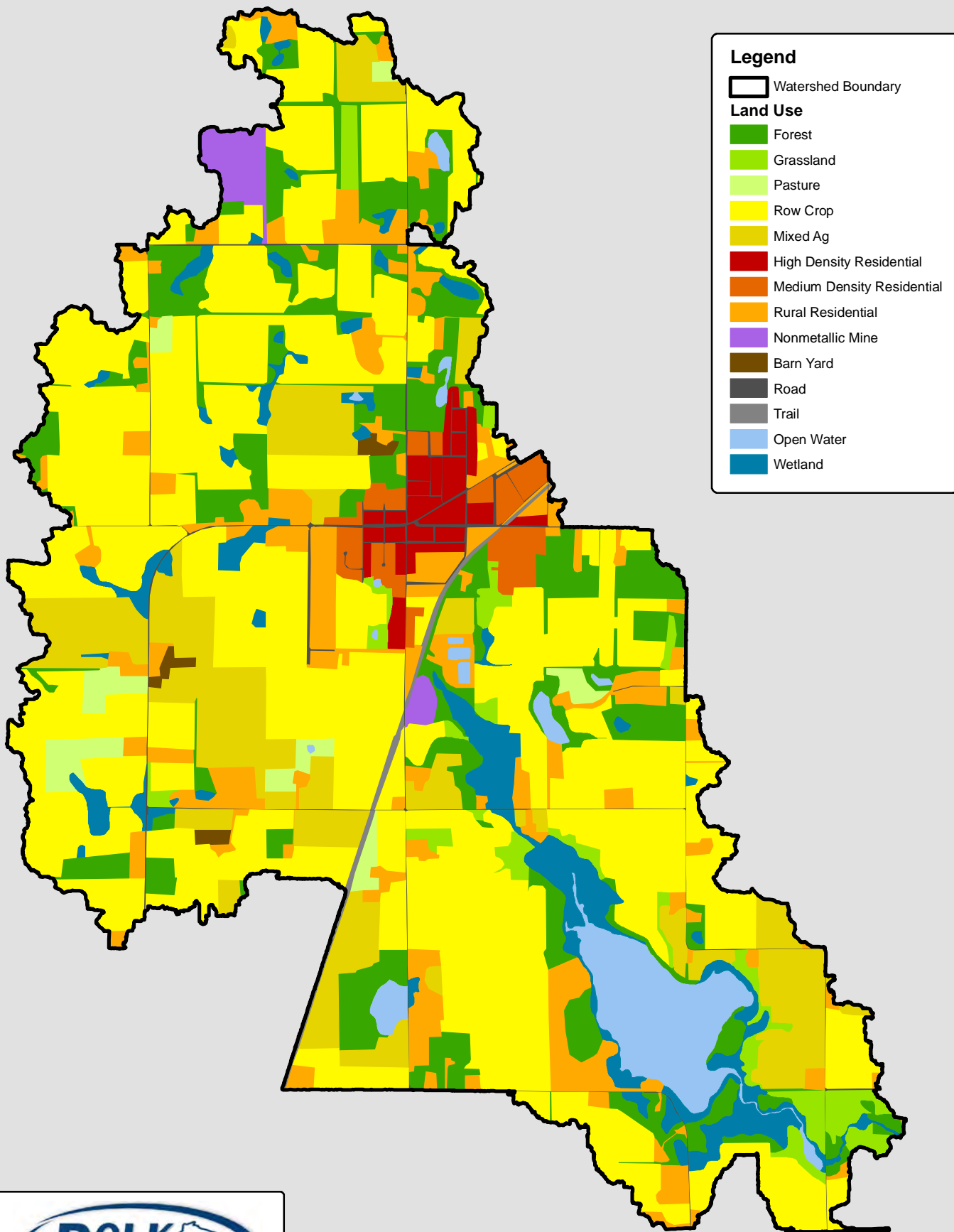
**POLK**  
COUNTY, WI



# Otter Creek Watershed Land Use



# Rice Creek Watershed Land Use





0 0.125 0.25 0.5 0.75 1 Miles




# Balsam Lake Watershed Land Use Excluding Internally Drained Areas


**Legend**


 Watershed Boundary


 Internally Drained Areas


**Land Use**


 Forest


 Grassland


 Pasture


 Mixed Agriculture


 Row Crop


 High Density Residential


 Medium Density Residential


 Rural Residential


 Non-Metallic Mine

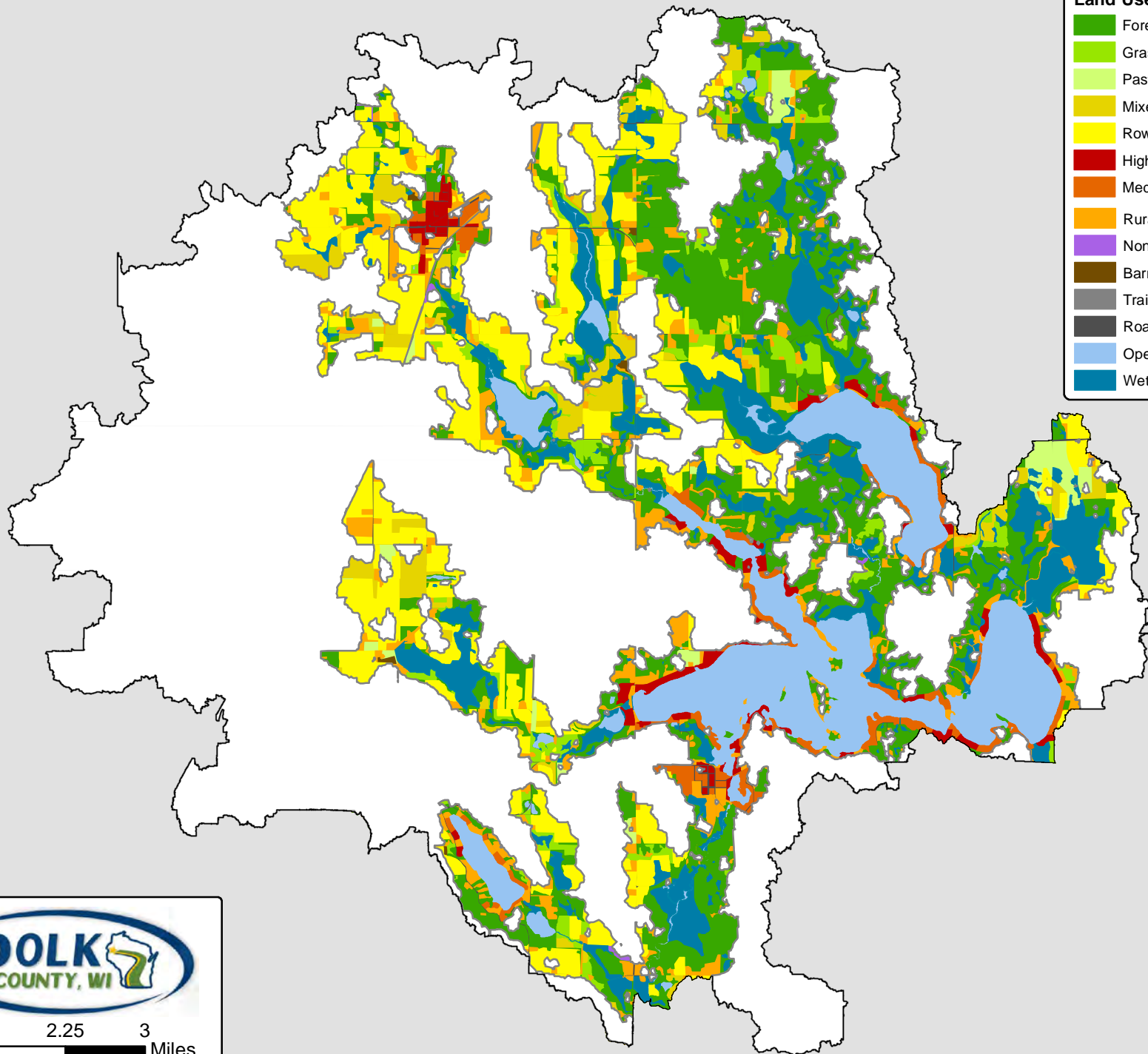
 Barn Yard



 Trail

 Road

 Open Water

 Wetland

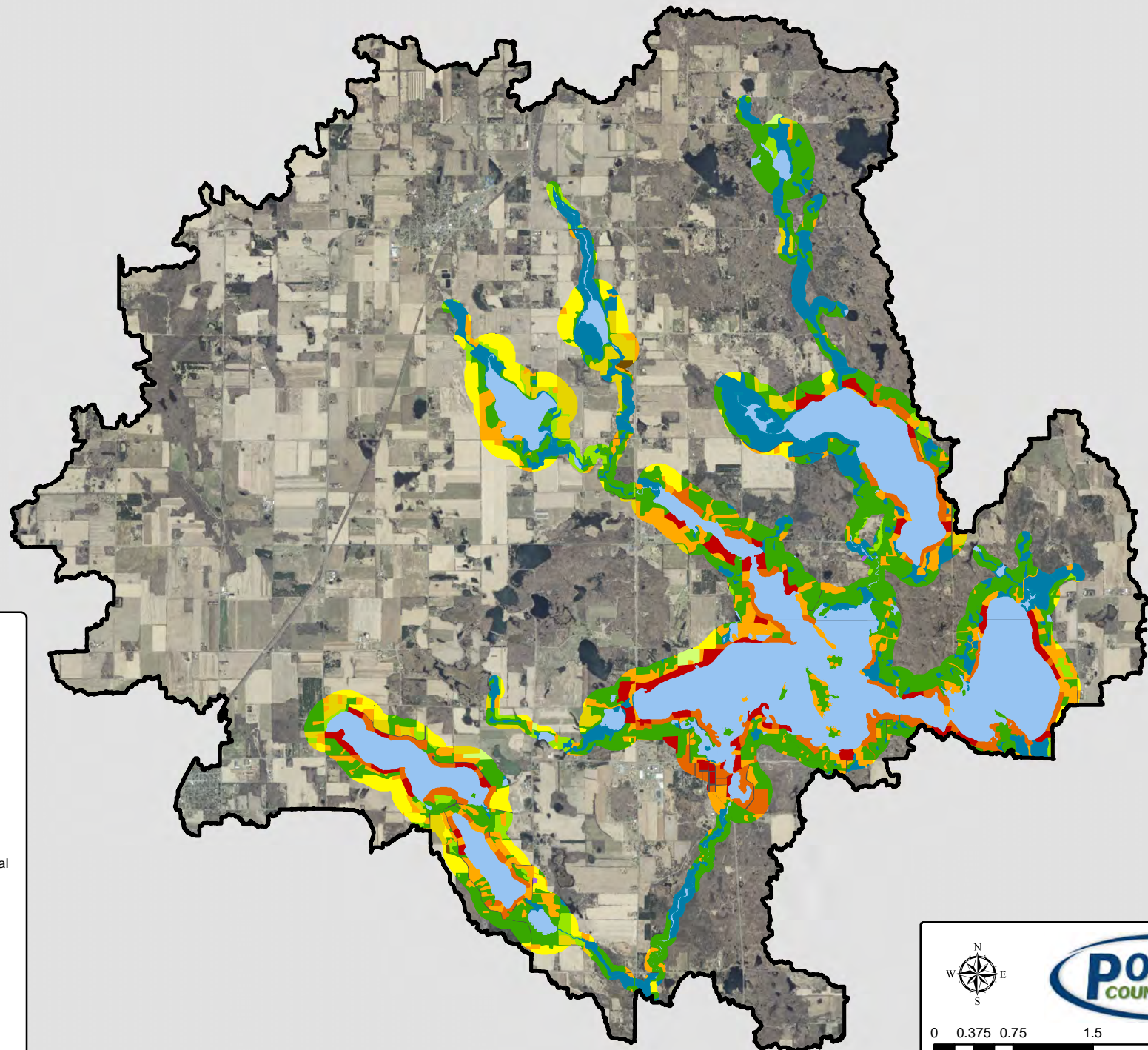




0 0.375 0.75 1.5 2.25 3

Miles

# Water Quality Management Area - Land Use Balsam Lake Watershed



## Legend

Watershed Boundary

### Land Use

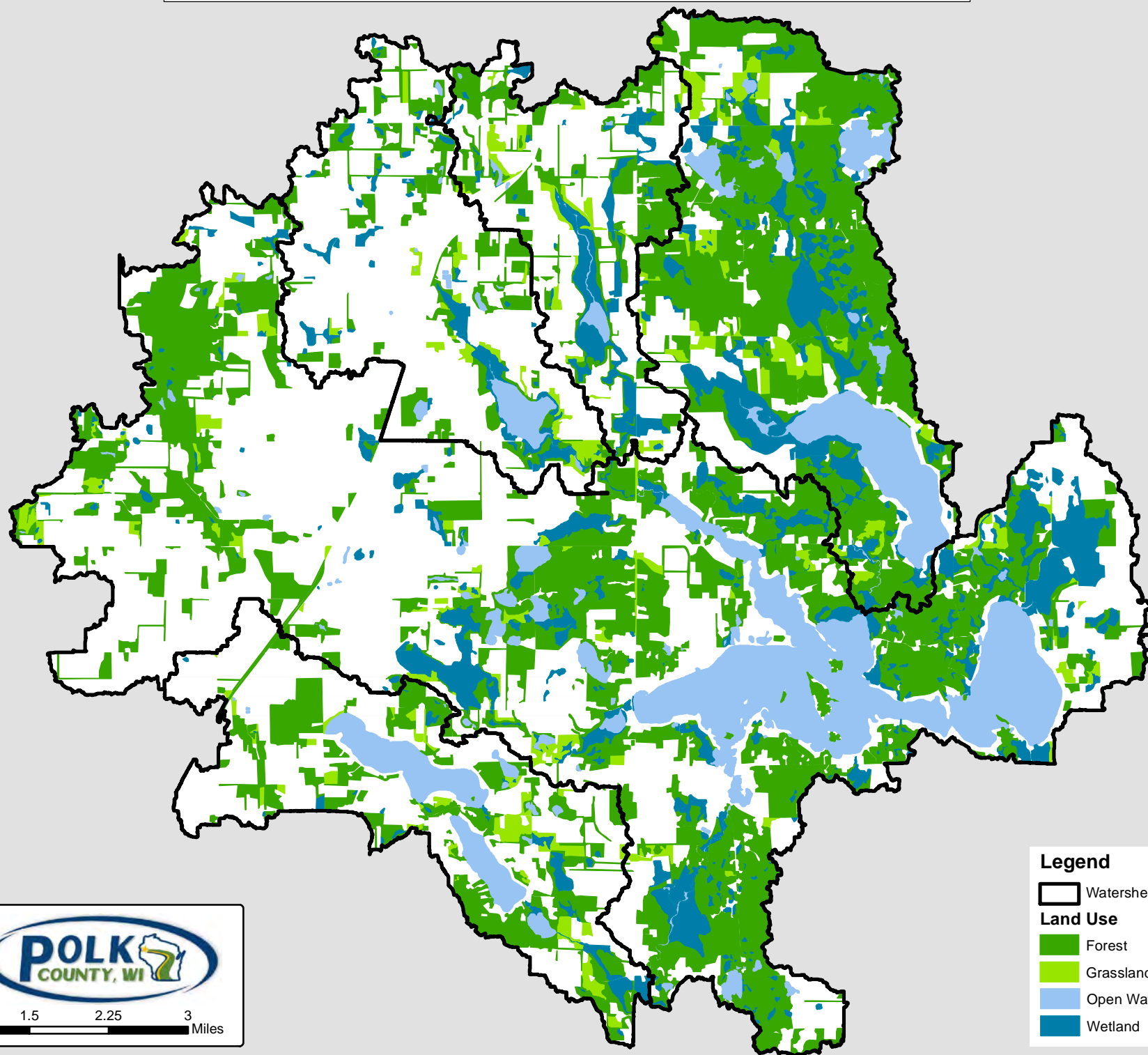
- Forest
- Grassland
- Pasture
- Row Crop
- Mixed Ag
- High Density Residential
- Medium Density Residential
- Rural Residential
- Nonmetallic Mine
- Barn Yard
- Road
- Trail
- Open Water
- Wetland



0 0.375 0.75 1.5 2.25 3 Miles



# Balsam Lake Watershed Priorities for Protection



## Legend

Watershed Boundary

## Land Use

Forest

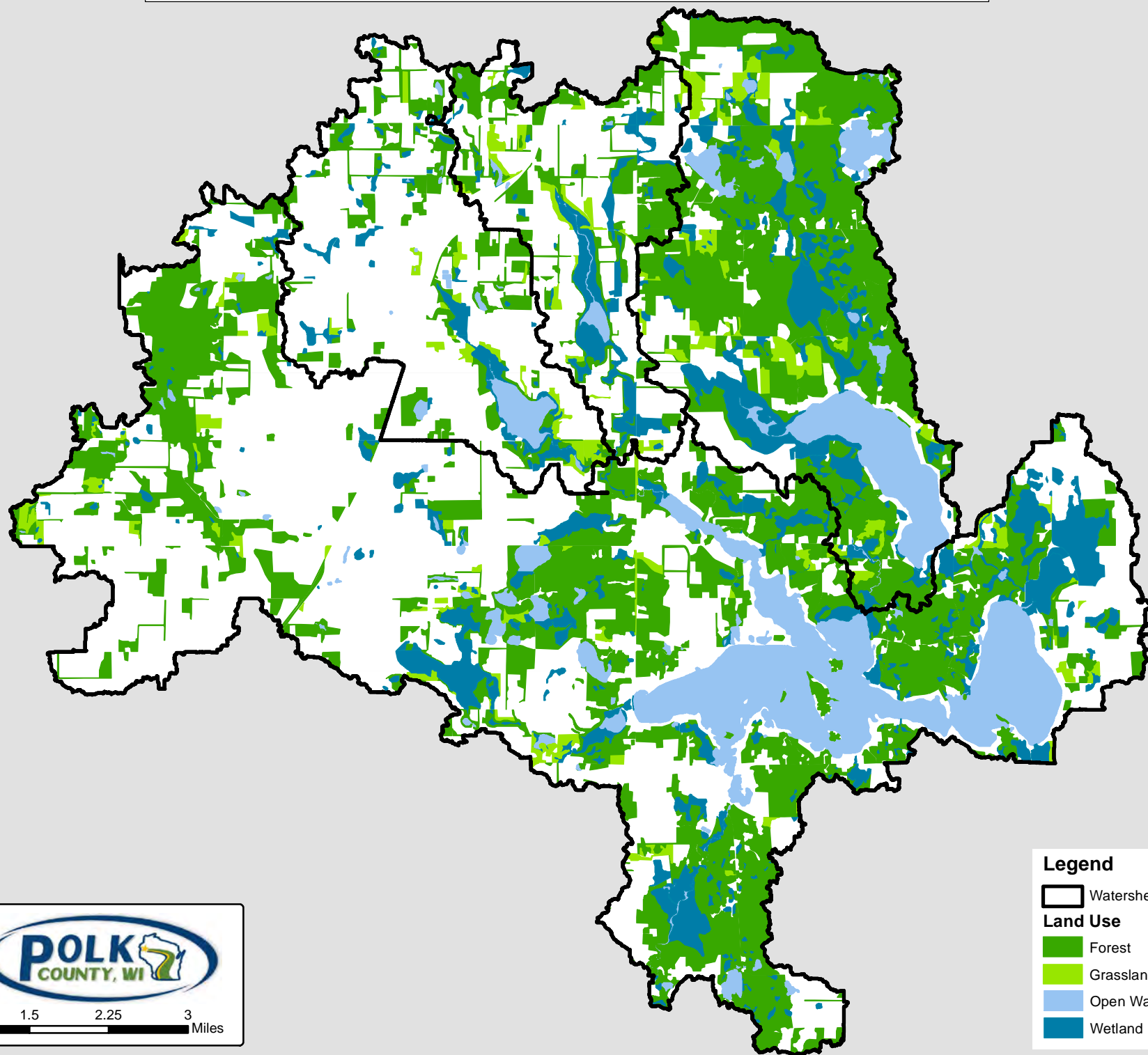
Grassland

Open Water


Wetland



# Balsam Branch Watershed Priorities for Protection



## Legend

 Watershed Boundary

### Land Use

 Forest

 Grassland

 Open Water

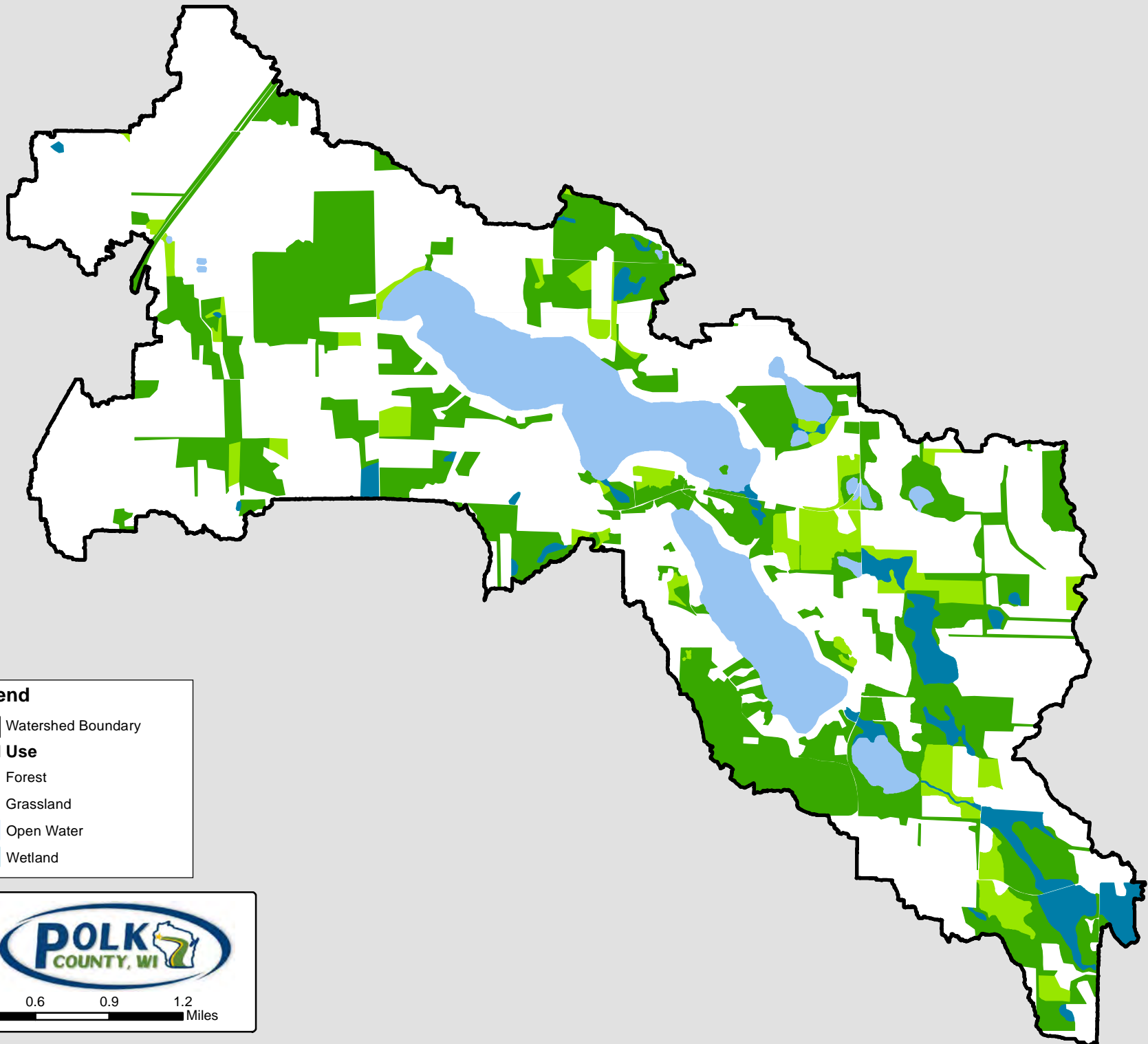
 Wetland



0 0.375 0.75 1.5 2.25 3 Miles



# Bass Creek Watershed Priorities for Protection



**Legend**

Watershed Boundary

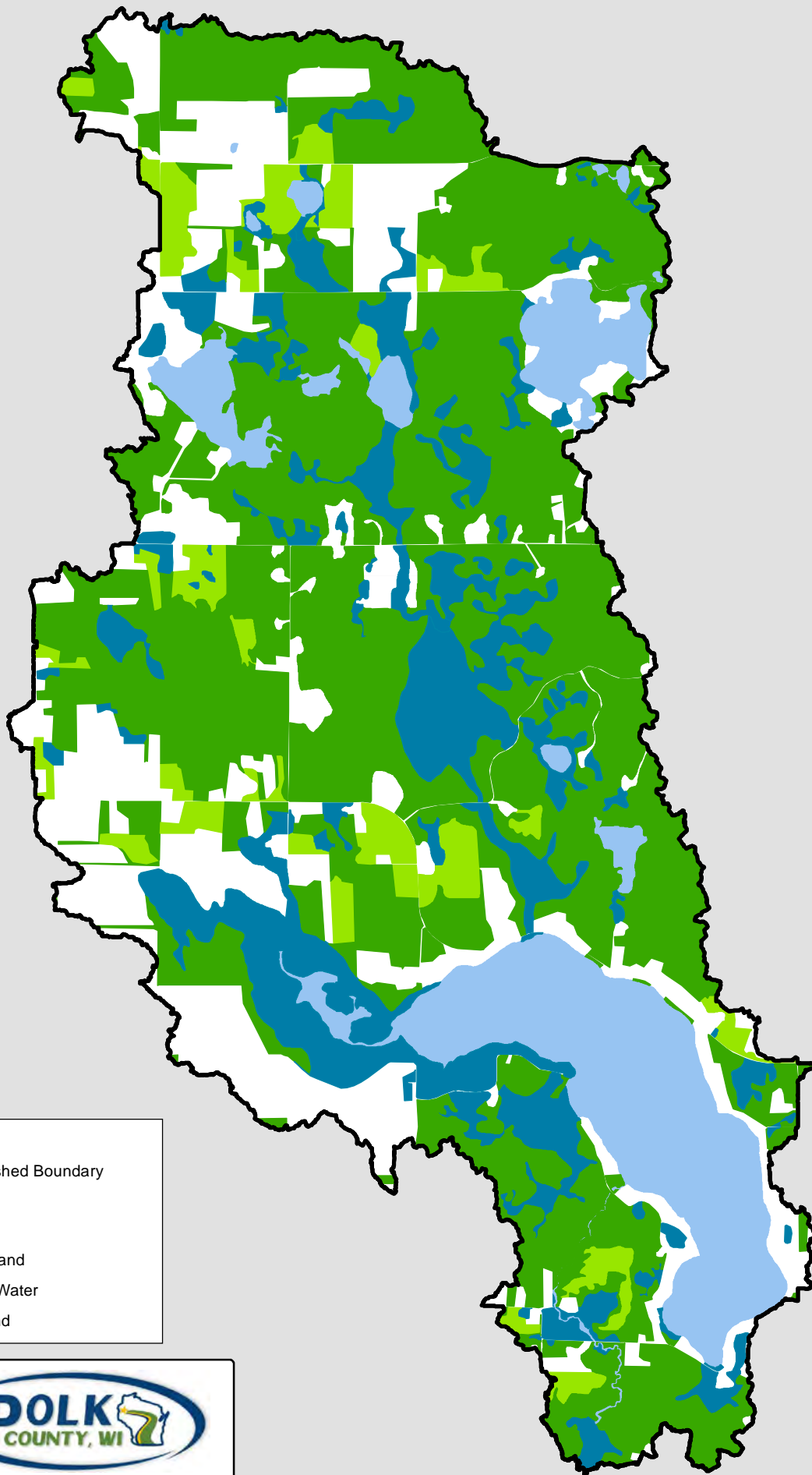
**Land Use**

- Forest
- Grassland
- Open Water
- Wetland

0 0.15 0.3 0.6 0.9 1.2 Miles

**POLK**  
COUNTY, WI

# Harder Creek Watershed Priorities for Protection



**Legend**

Watershed Boundary

**Land Use**

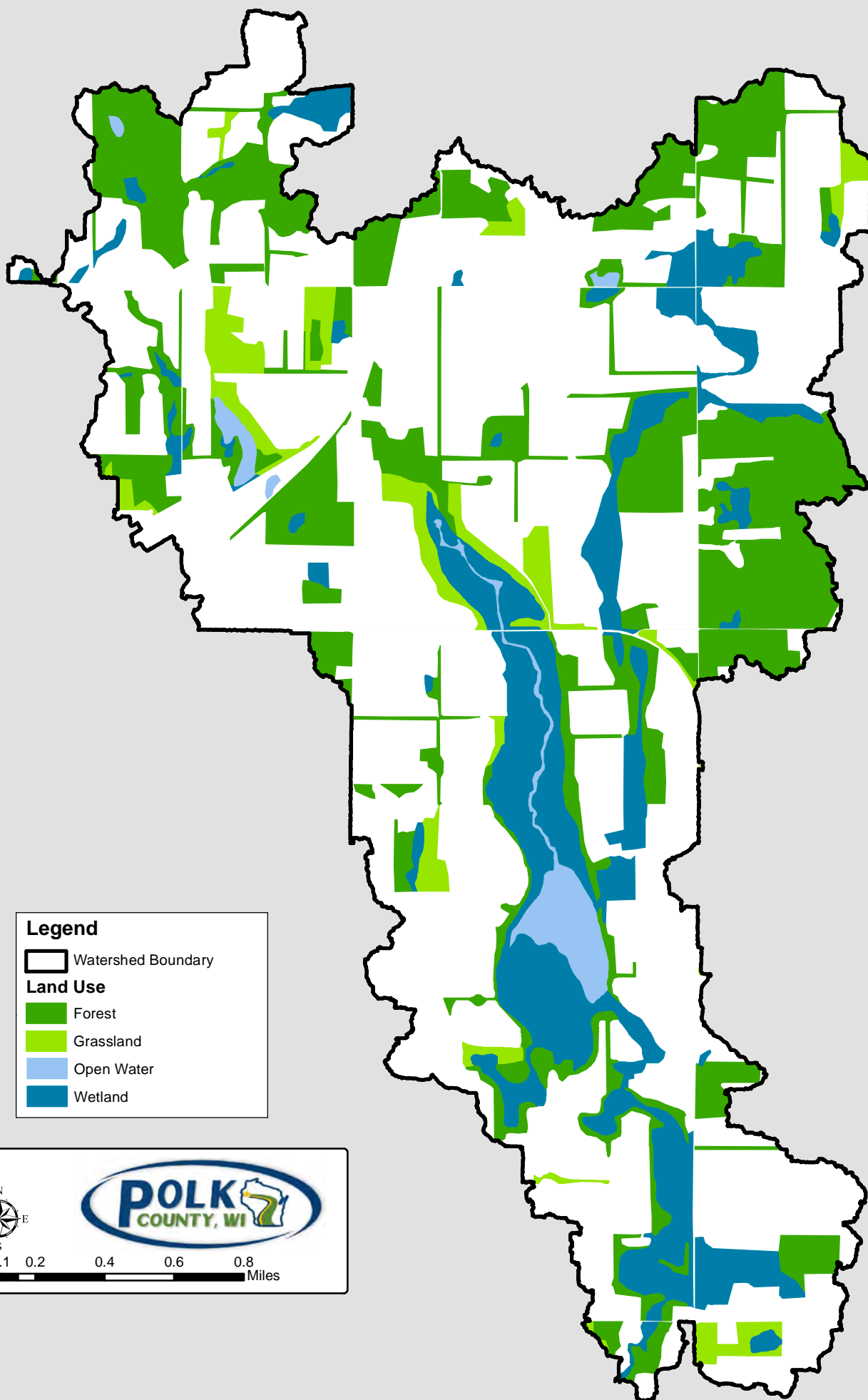
- Forest
- Grassland
- Open Water
- Wetland

0 0.175 0.35 0.7 1.05 1.4 Miles


**POLK**  
COUNTY, WI



# Otter Creek Watershed Priorities for Protection




## Legend

 Watershed Boundary

### Land Use

 Forest

 Grassland

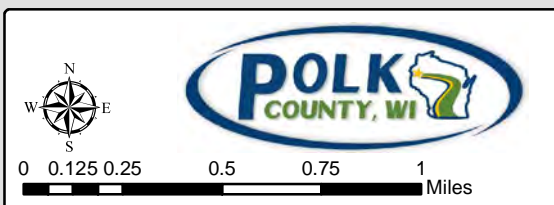
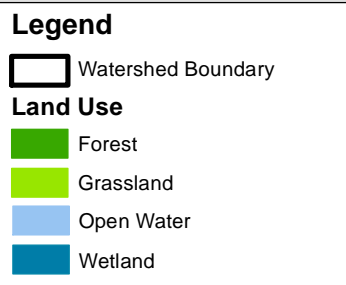
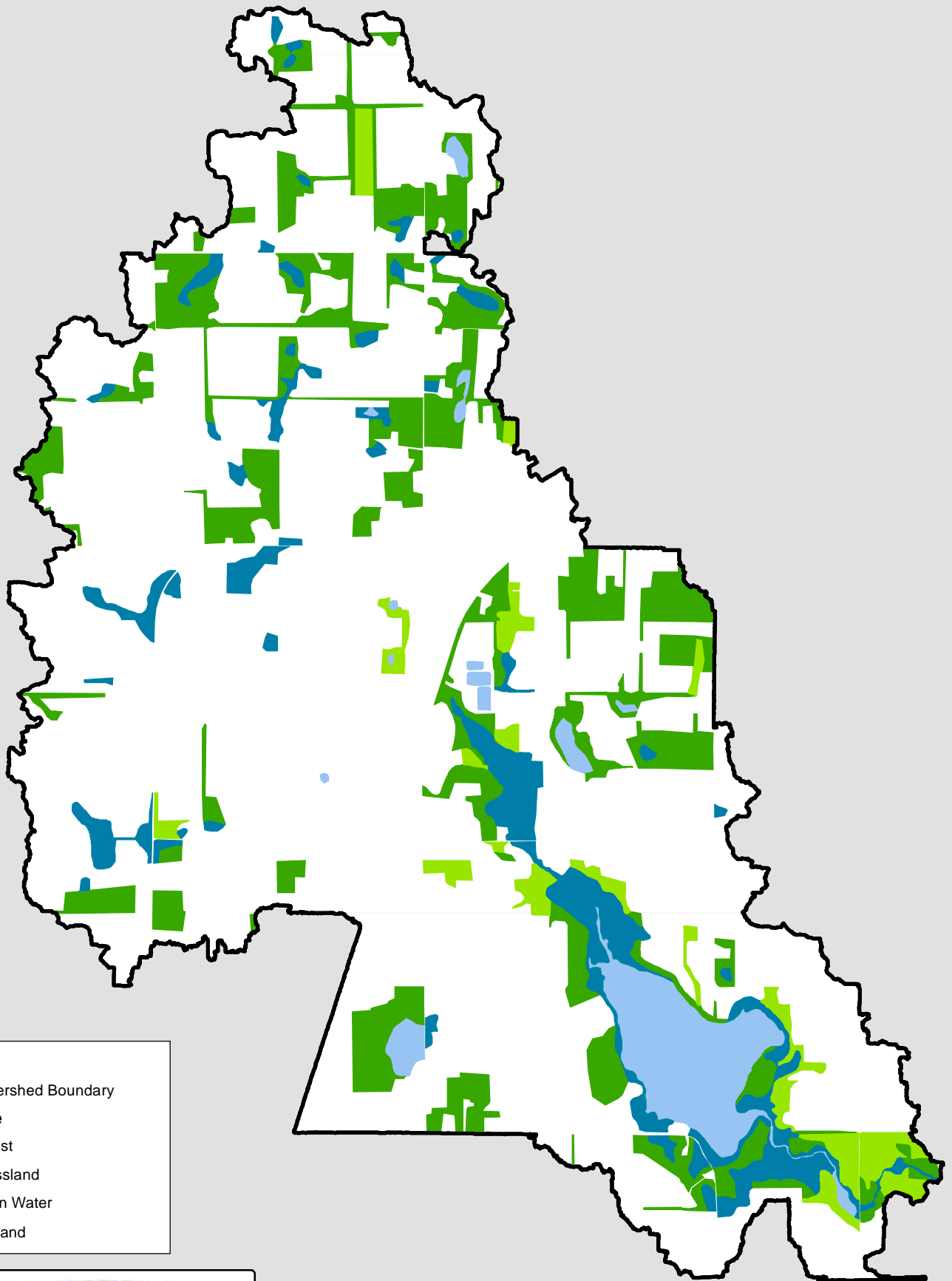
 Open Water

 Wetland



0 0.1 0.2 0.4 0.6 0.8 Miles

# Rice Creek Watershed Priorities for Protection













# Balsam Lake Watershed K - Factor for Agricultural Fields

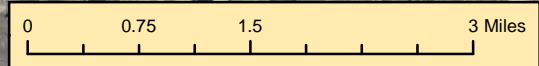
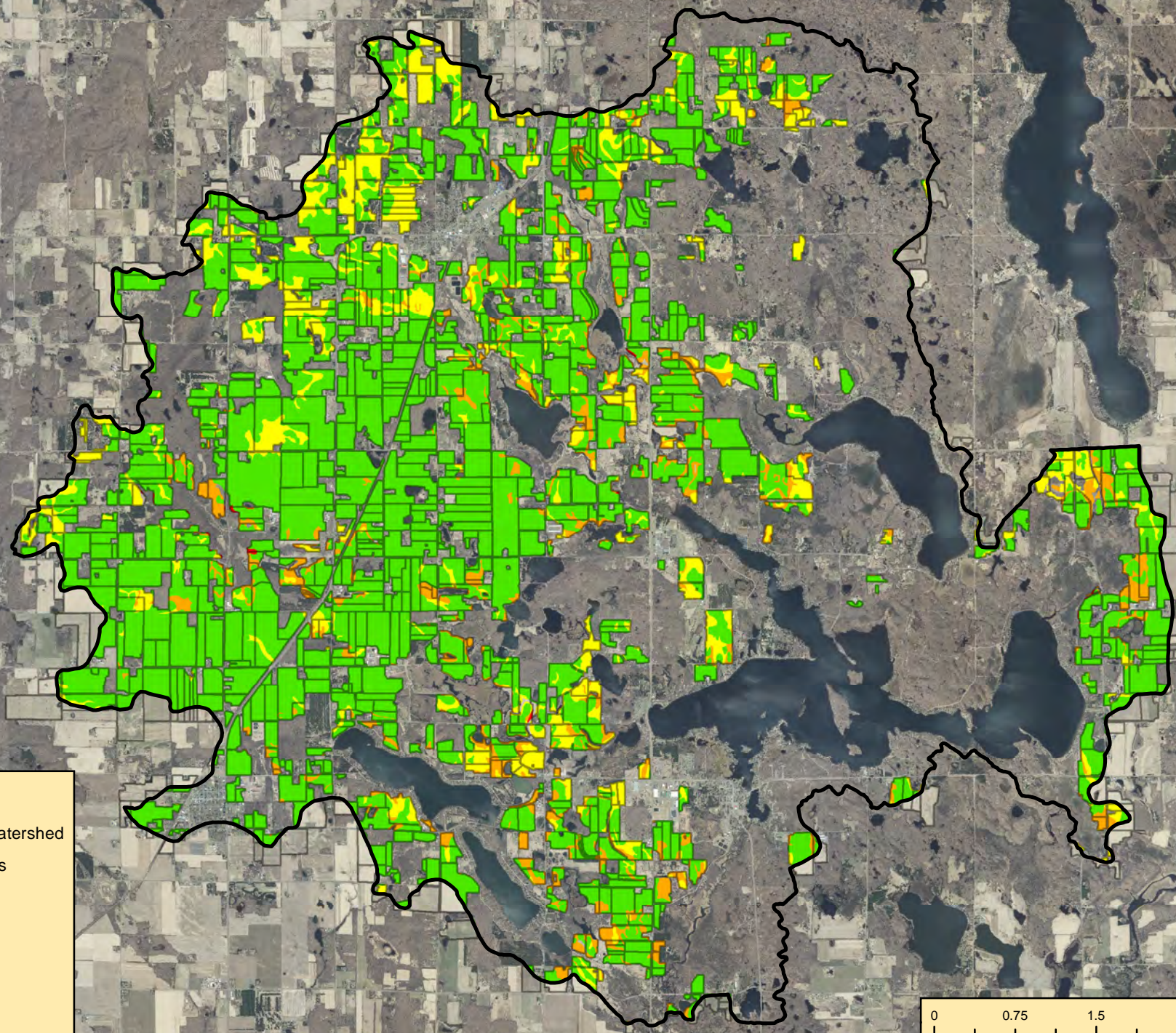
**Legend**

 Balsam Lake Watershed

 Field Boundaries

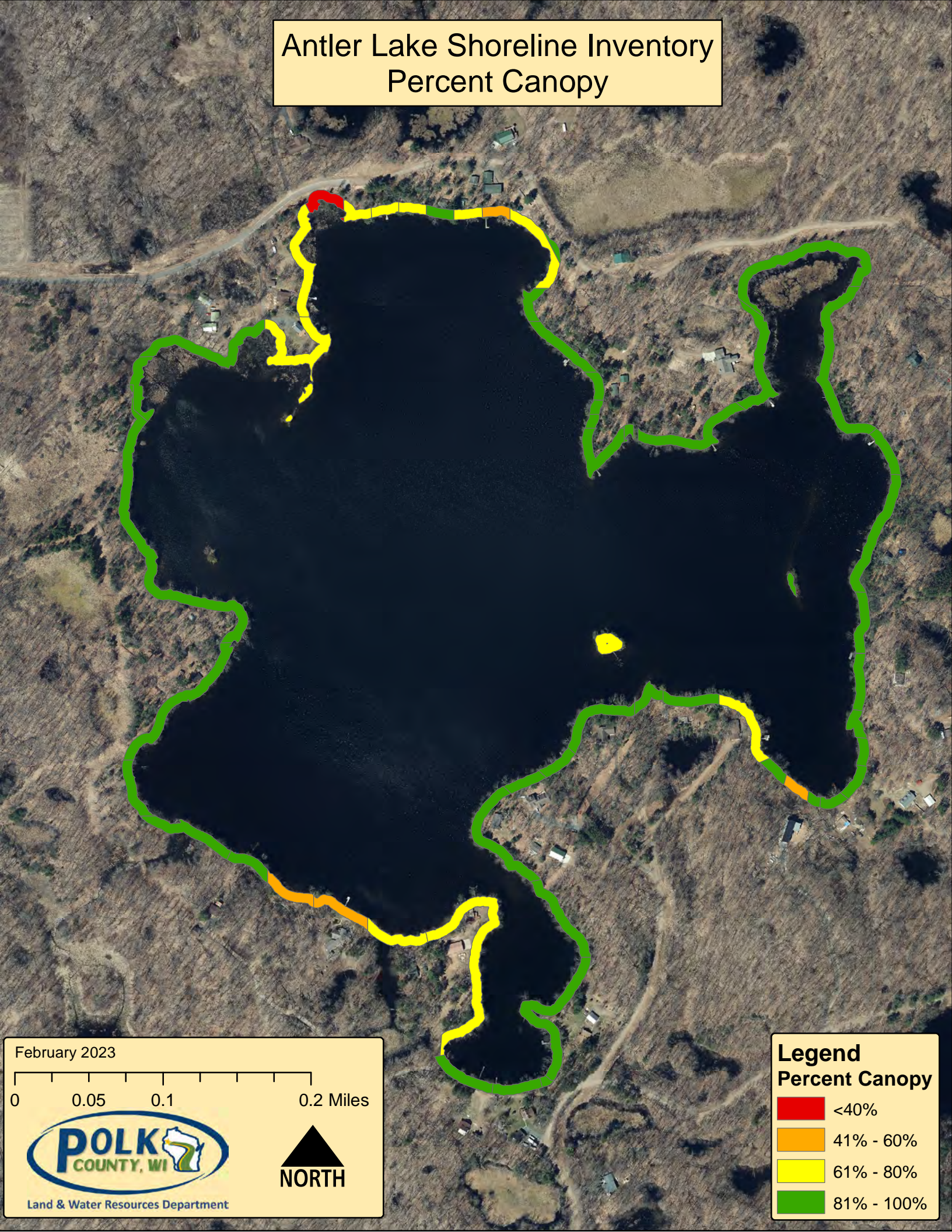
**K Value**

	0.020 - 0.100
	0.101 - 0.200
	0.201 - 0.320
	0.321 - 0.490

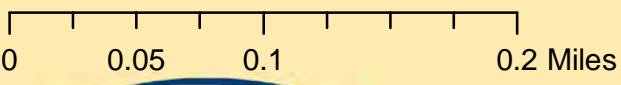




# Antler Lake Shoreline Inventory Percent Canopy



February 2023



Land & Water Resources Department

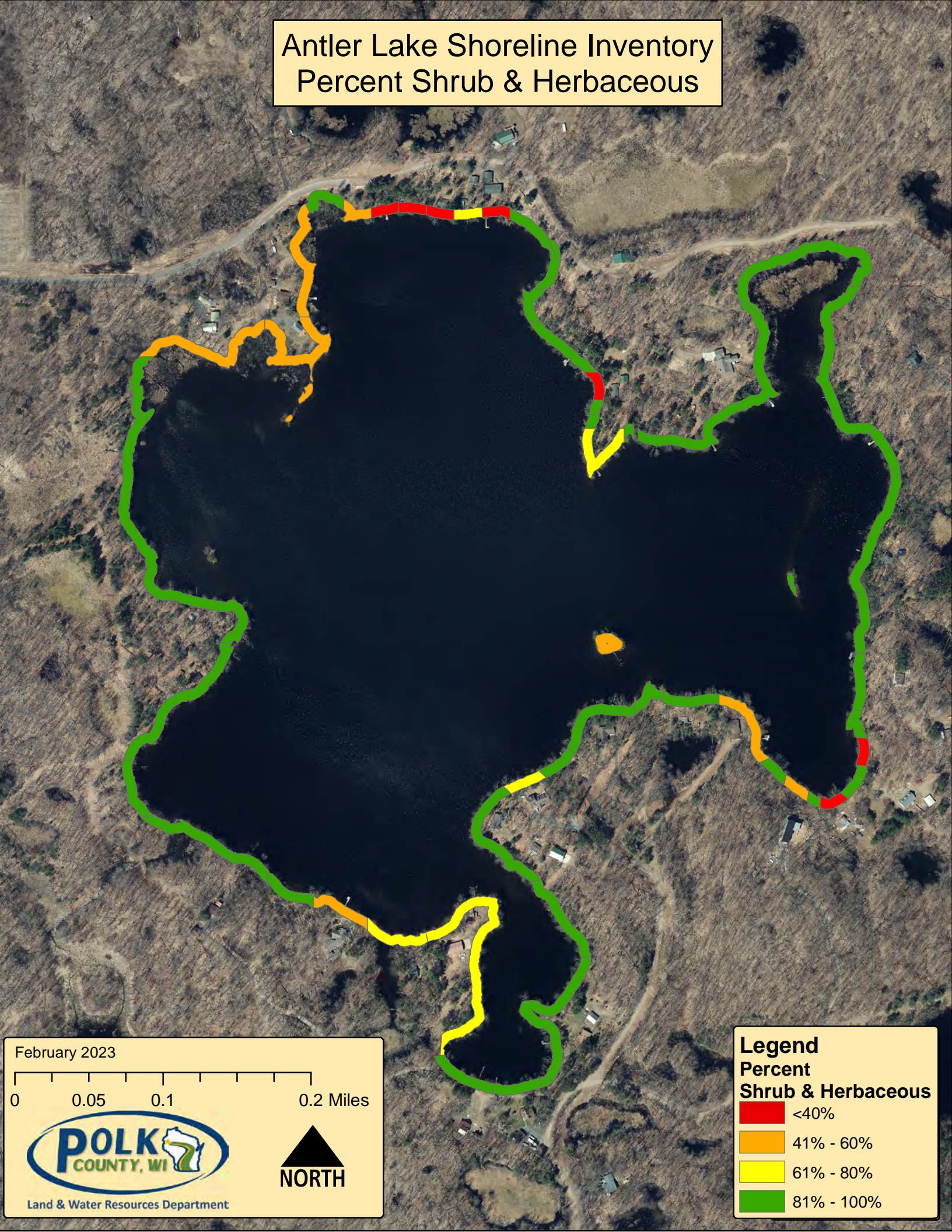


**Legend**  
**Percent Canopy**

	<40%
	41% - 60%
	61% - 80%
	81% - 100%



# Antler Lake Shoreline Inventory Percent Shrub & Herbaceous



February 2023

0 0.05 0.1 0.2 Miles



Land & Water Resources Department

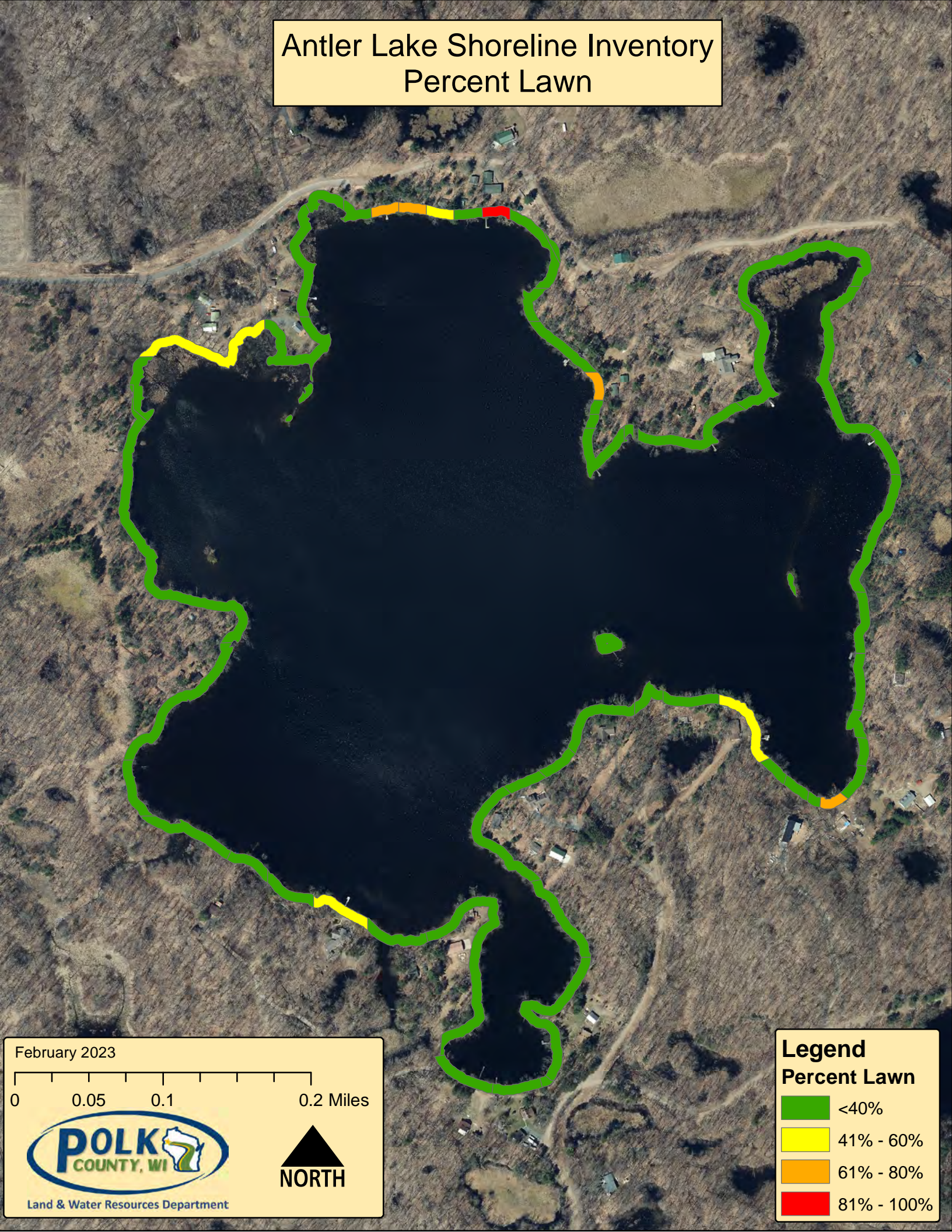


**Legend**  
**Percent**  
**Shrub & Herbaceous**

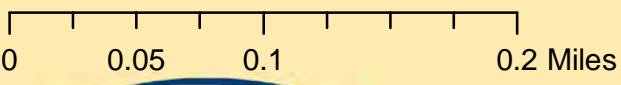
	<40%
	41% - 60%
	61% - 80%
	81% - 100%



# Antler Lake Shoreline Inventory Percent Lawn



February 2023



Land & Water Resources Department



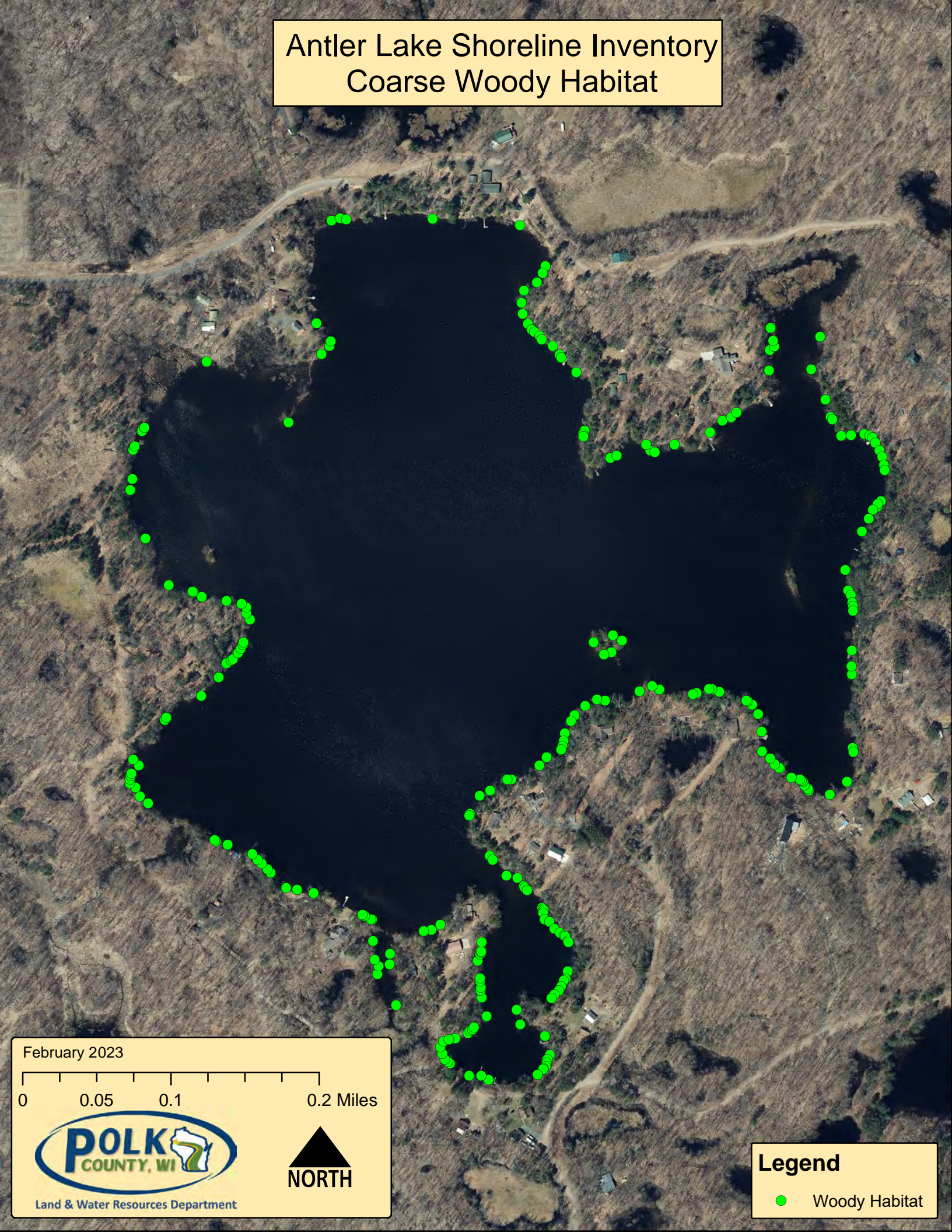
**Legend**  
**Percent Lawn**

	<40%
	41% - 60%
	61% - 80%
	81% - 100%



# Antler Lake Shoreline Inventory

## Coarse Woody Habitat



February 2023

0 0.05 0.1 0.2 Miles



Land & Water Resources Department

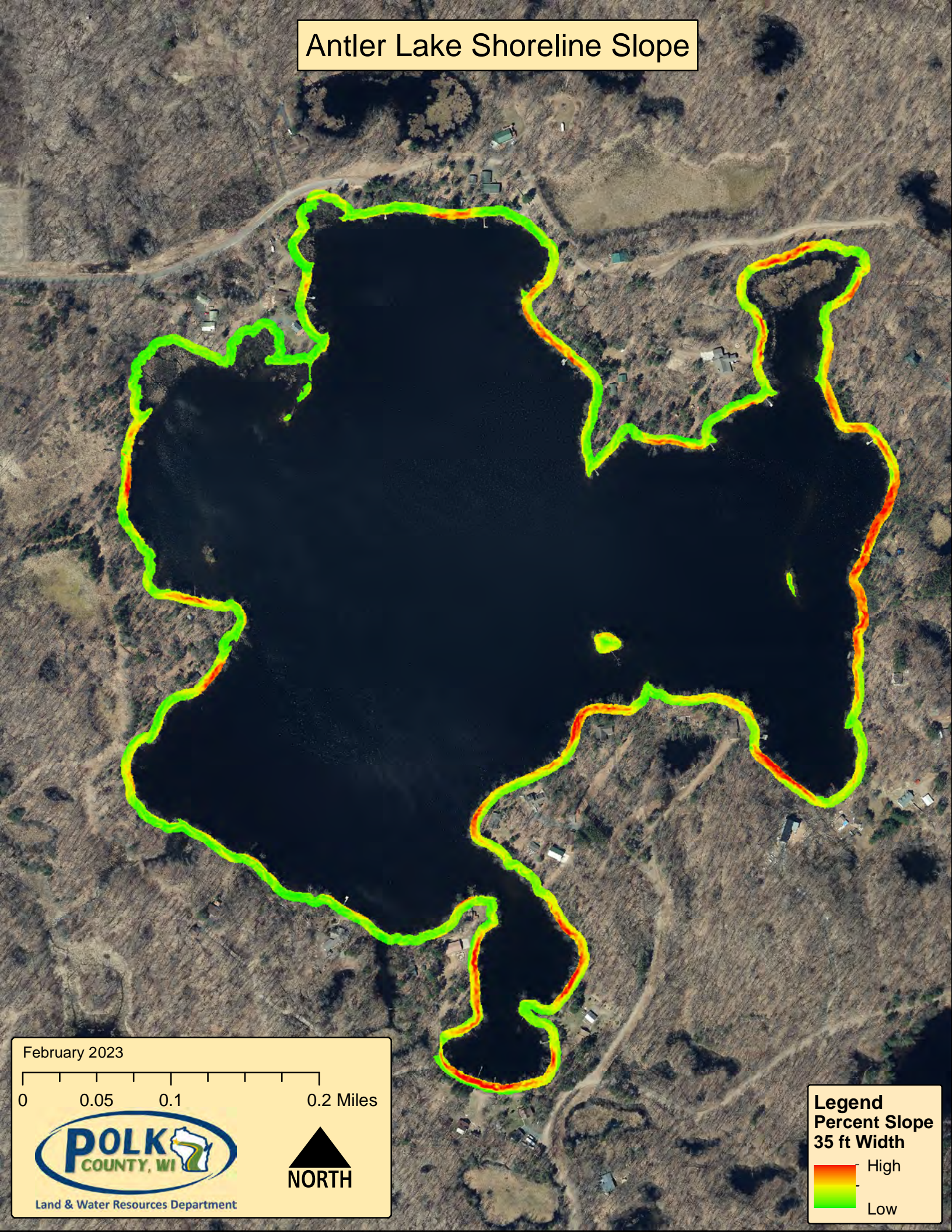


### Legend

● Woody Habitat




# Antler Lake Shoreline Slope




February 2023

0 0.05 0.1 0.2 Miles




**POLK**  
COUNTY, WI

Land & Water Resources Department



**NORTH**

**Legend**  
Percent Slope  
35 ft Width

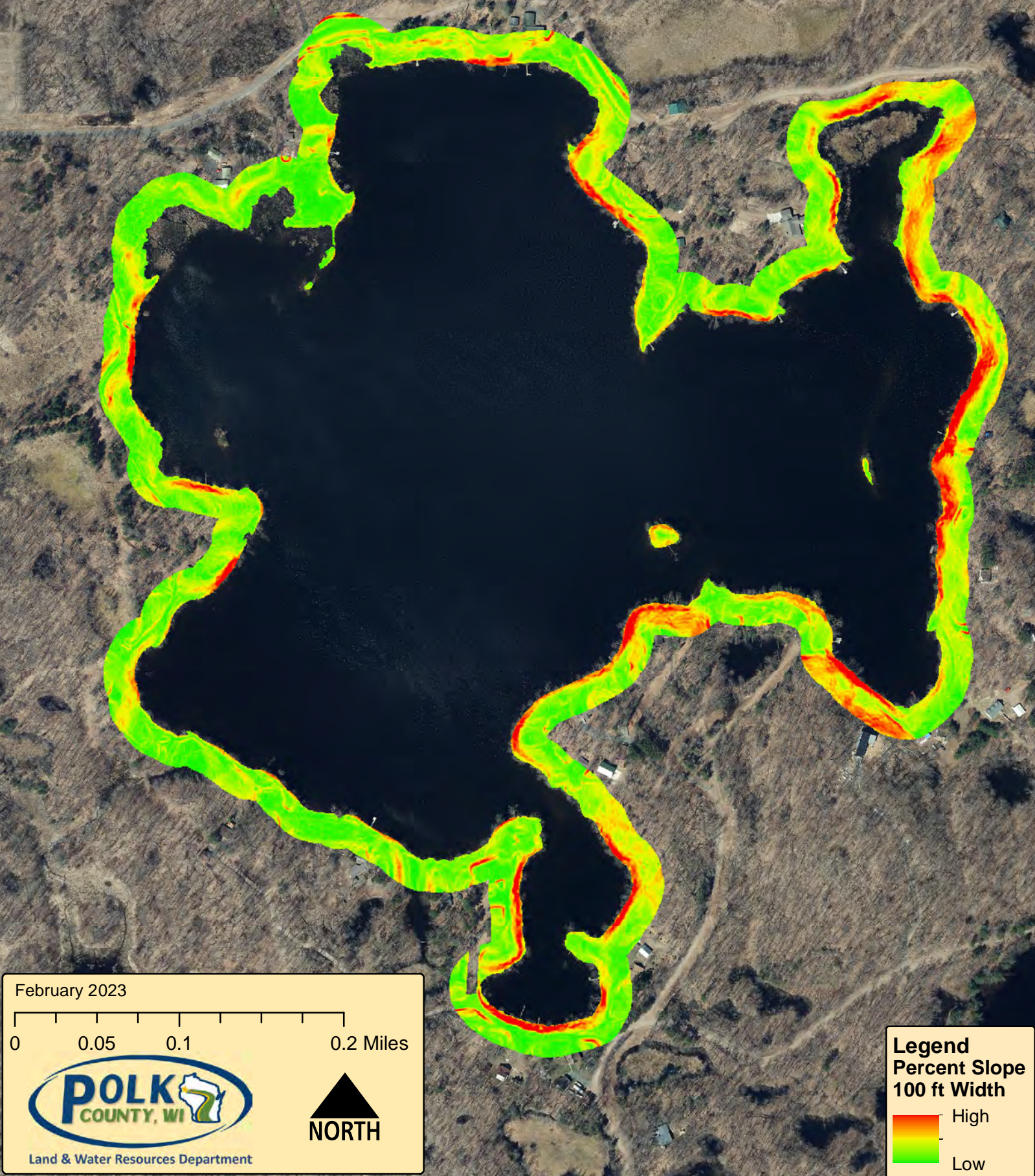


High

Low



# Antler Lake Shoreline Slope



February 2023

0 0.05 0.1 0.2 Miles



Land & Water Resources Department



NORTH

**Legend**  
Percent Slope  
100 ft Width

High  
Low



# Antler Lake Shoreline Areas to Prioritize for Protection



February 2023

0 0.05 0.1 0.2 Miles




Land & Water Resources Department



## Legend

**Criteria for Prioritization:**  
Shoreline Length > 300 Feet  
With Minimal Disturbance  
(Single Parcels)

 Low Priority

 High Priority



# Antler Lake Shoreline Areas to Prioritize for Protection



February 2023

0 0.05 0.1 0.2 Miles




Land & Water Resources Department



## Legend

**Criteria for Prioritization:**  
Shoreline Length > 300 Feet  
With Minimal Disturbance  
(Includes Multiple Parcels)

 Low Priority


 High Priority



# Antler Lake Shoreline Inventory Priority For Shoreline Restoration


February 2023

0 0.05 0.1 0.2 Miles




**POLK**  
COUNTY, WI


Land & Water Resources Department

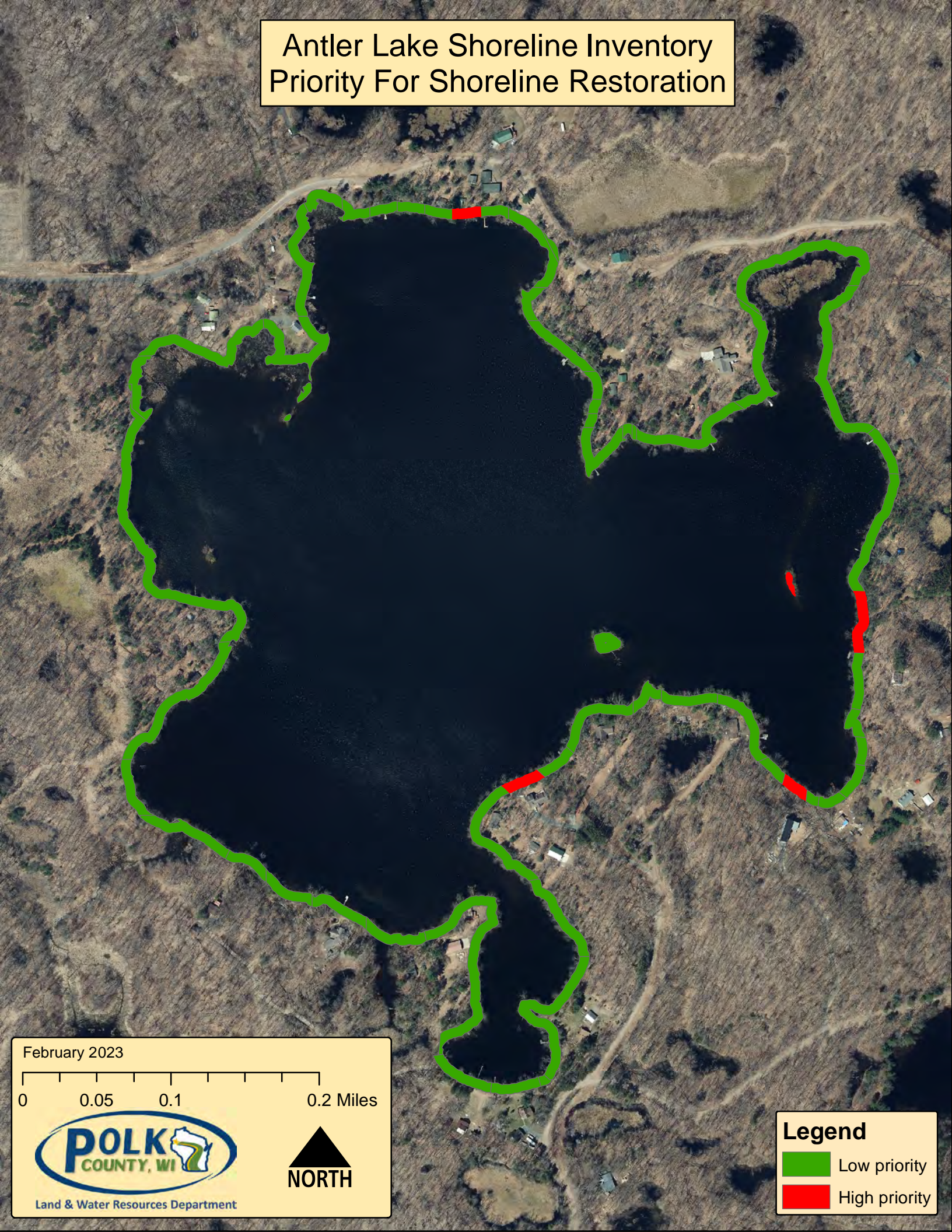


**NORTH**

**Legend**

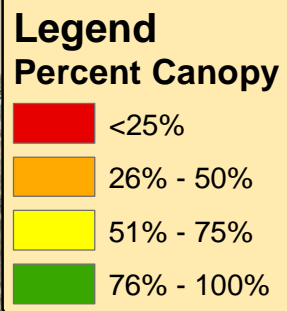
 Low priority

 High priority

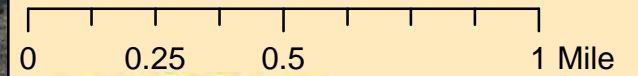




# Balsam Lake Shoreline Inventory Percent Canopy



March 2023

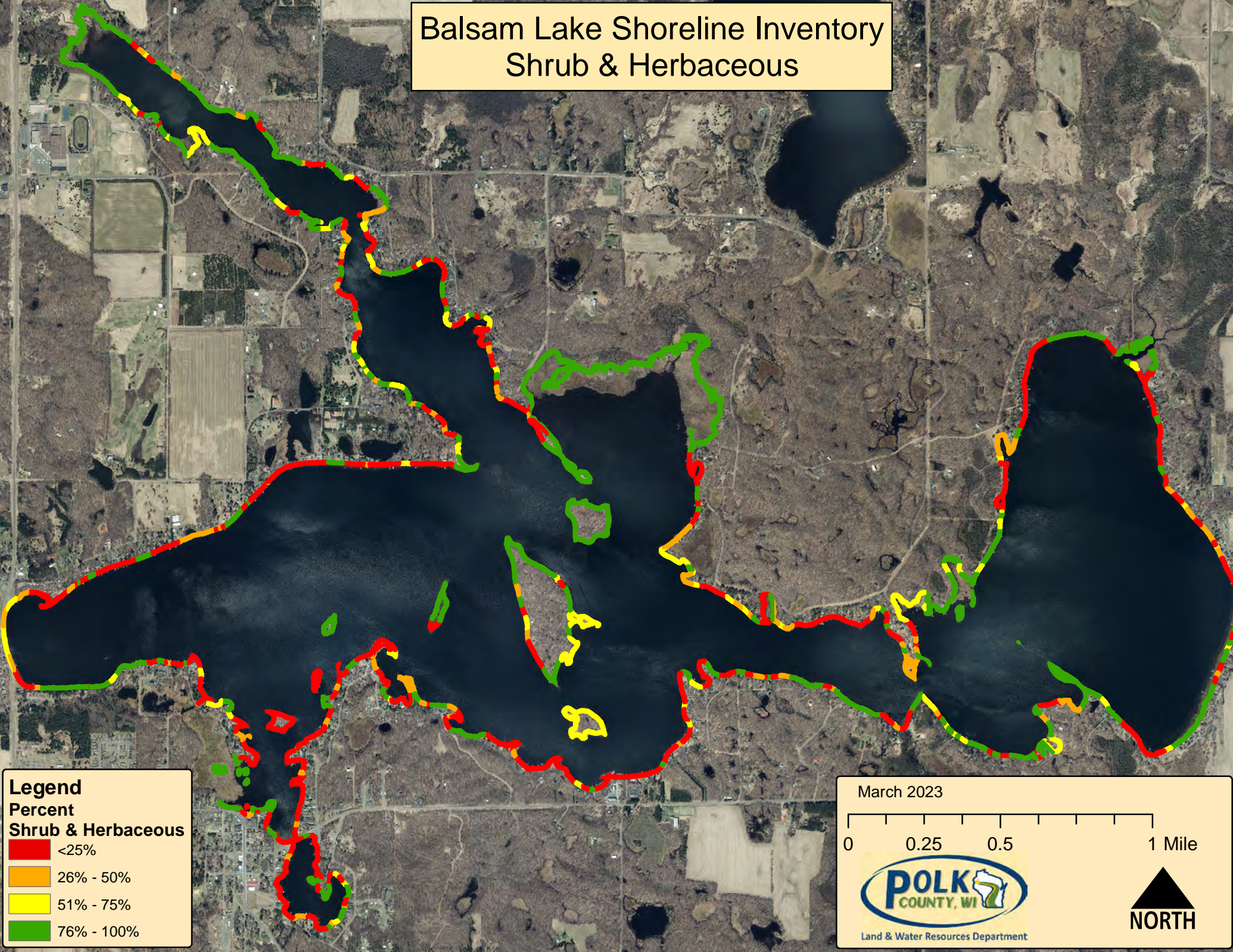


Land & Water Resources Department









# Balsam Lake Shoreline Inventory Shrub & Herbaceous





**Legend**  
**Percent**  
**Shrub & Herbaceous**

	<25%
	26% - 50%
	51% - 75%
	76% - 100%

March 2023

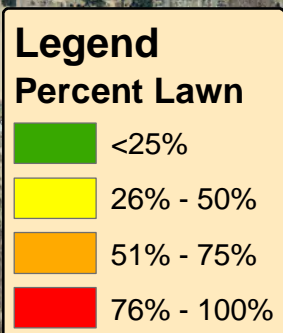
0 0.25 0.5 1 Mile

  
Land & Water Resources Department

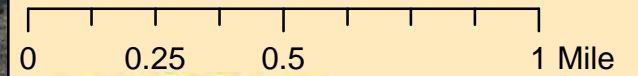
  
NORTH



# Balsam Lake Shoreline Inventory Percent Lawn



March 2023








Land & Water Resources Department






# Balsam Lake Shoreline Inventory Percent Rip Rap

**Legend**  
**Percent Rip Rap**


	Absent
	1% - 25%
	26% - 50%
	51% - 75%
	76% - 100%

March 2023

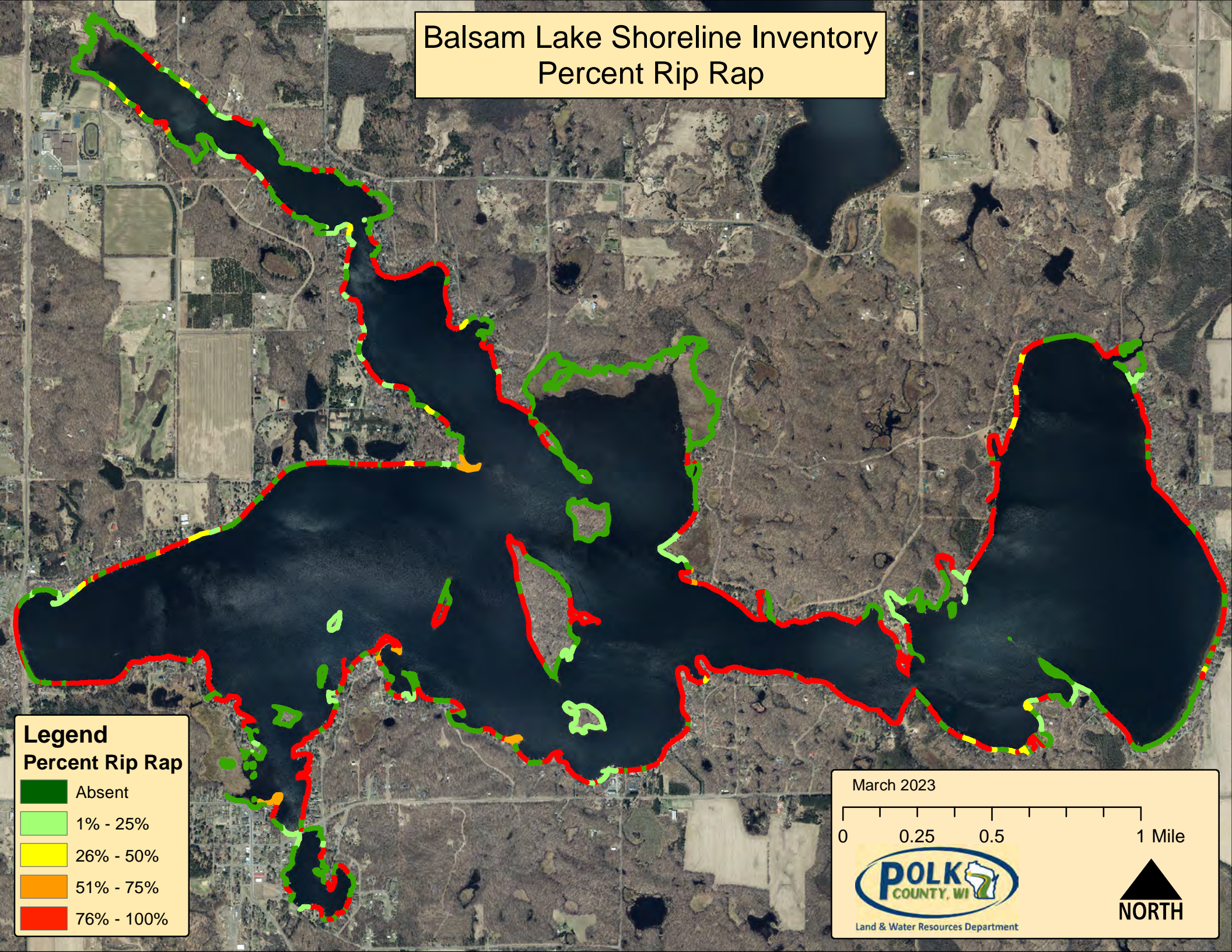
0 0.25 0.5 1 Mile



Land & Water Resources Department



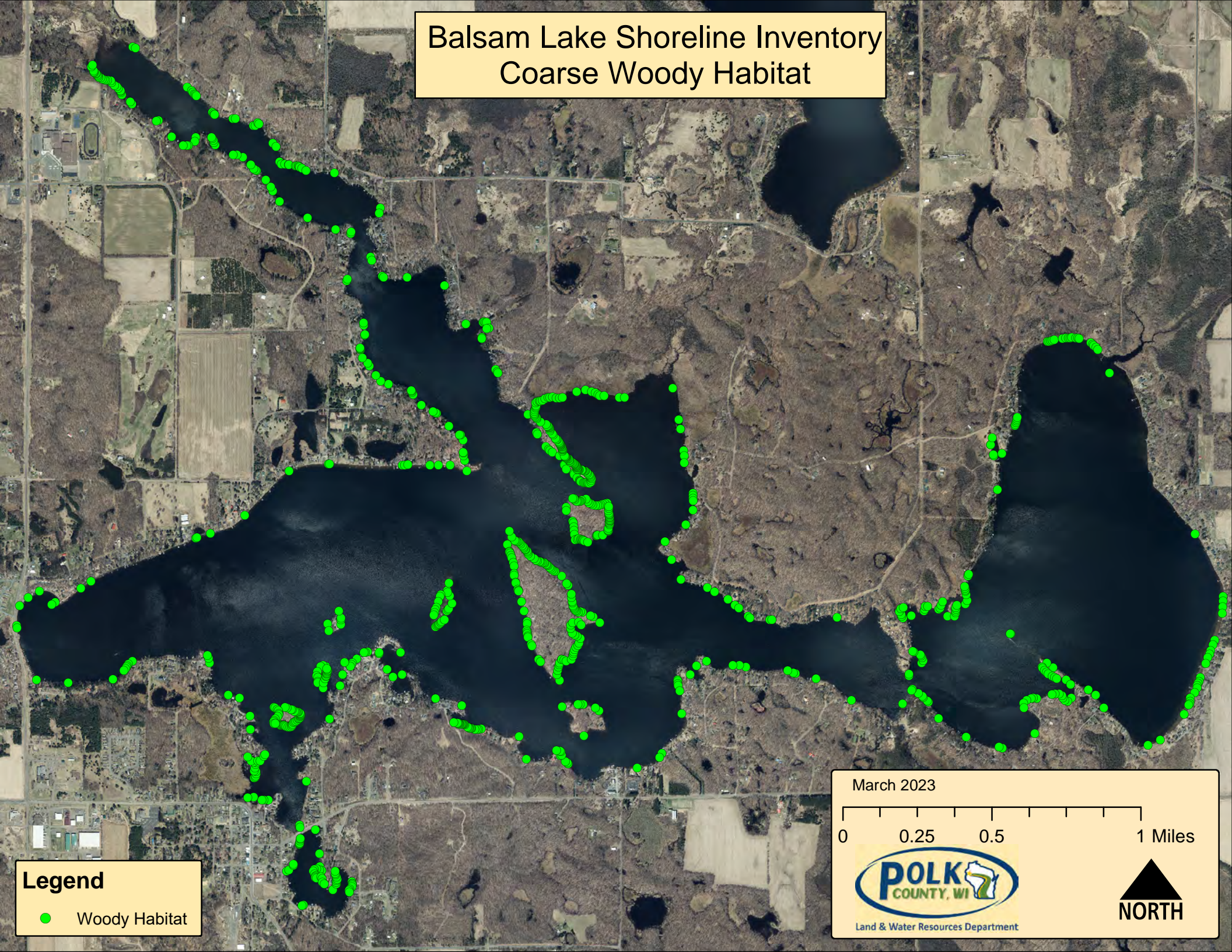
NORTH





# Balsam Lake Shoreline Inventory

## Coarse Woody Habitat



**Legend**


● Woody Habitat

March 2023

0 0.25 0.5 1 Miles

**POLK**  
COUNTY, WI


Land & Water Resources Department

  
**NORTH**



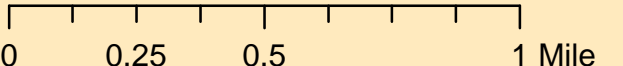
# Balsam Lake Shoreline Slope

**Legend**  
Percent Slope  
35 ft Width




High  
Low

March 2023




0 0.25 0.5 1 Mile



**POLK**  
COUNTY, WI

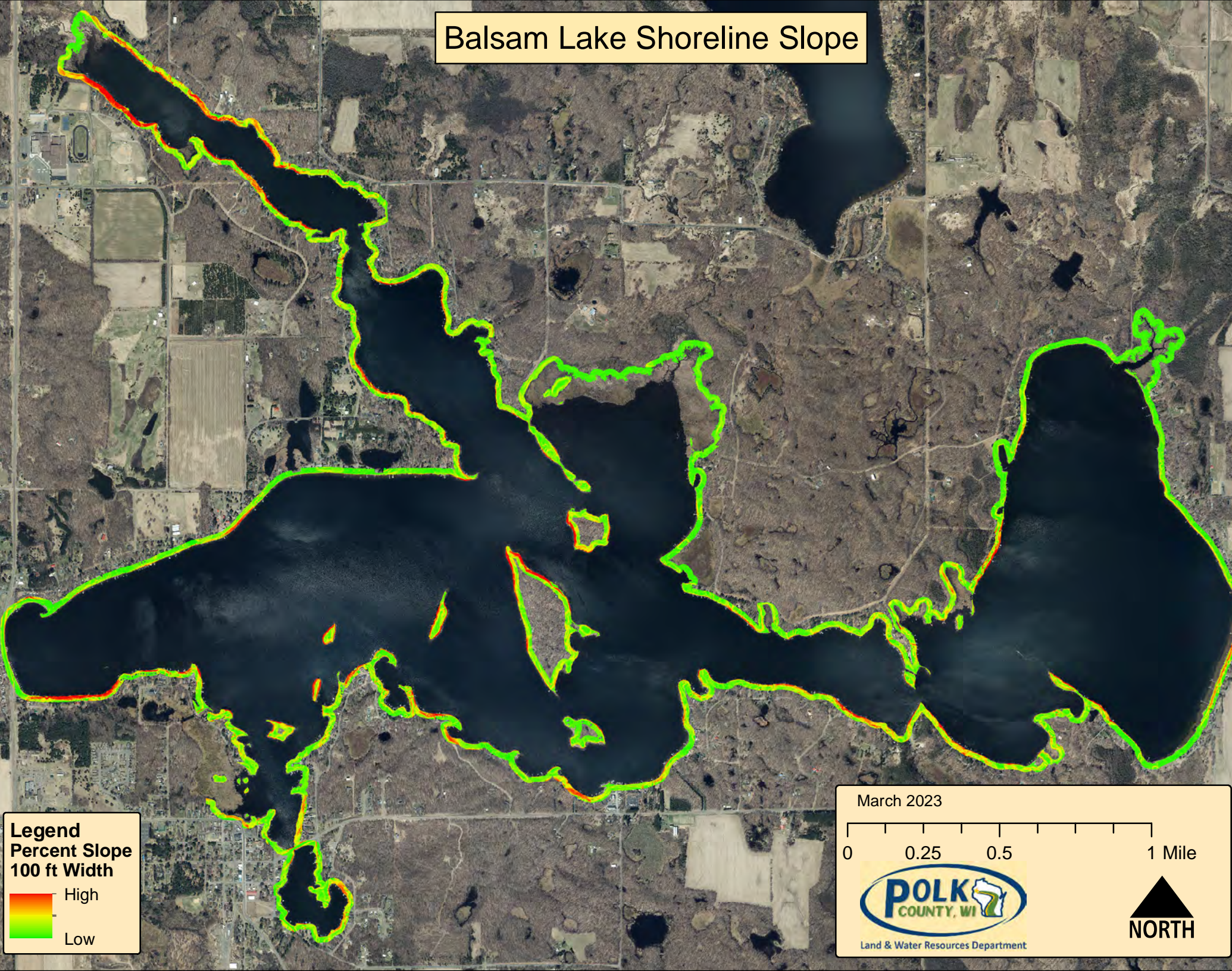
Land & Water Resources Department



**NORTH**



# Balsam Lake Shoreline Slope



**Legend**  
Percent Slope  
100 ft Width

High

Low

March 2023

0 0.25 0.5 1 Mile

**POLK**  
COUNTY, WI



Land & Water Resources Department

**NORTH**




# Balsam Lake Shoreline Areas to Prioritize for Protection

**Legend**  
**Criteria for Prioritization:**  
Shoreline Length > 300 Feet  
With Minimal Disturbance  
(Single Parcels)


	Low Priority
	High Priority

March 2023

0 0.25 0.5 1 Mile



Land & Water Resources Department





NORTH



# Balsam Lake Shoreline Areas to Prioritize for Protection


**Legend**  
**Criteria for Prioritization:**  
Shoreline Length > 300 Feet  
With Minimal Disturbance  
(Includes Multiple Parcels)


 Low Priority

 High Priority

March 2023

0 0.25 0.5 1 Mile

  
Land & Water Resources Department

  
NORTH



# Balsam Lake Shoreline Inventory Priority for Shoreline Restoration

**Legend**

- Low priority
- High priority

March 2023

0 0.25 0.5 1 Mile

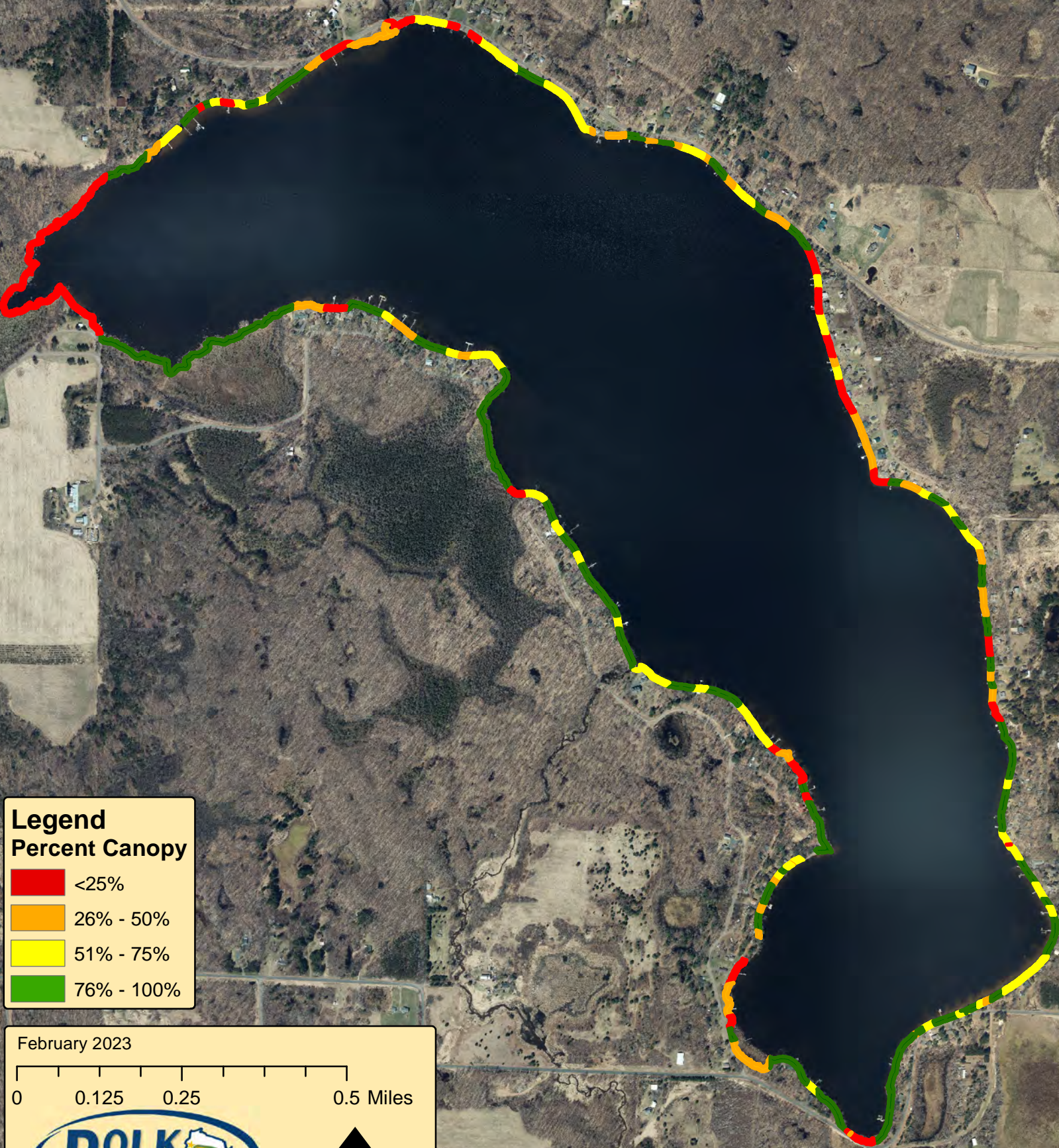
**POLK**  
COUNTY, WI

Land & Water Resources Department

**NORTH**



# Half Moon Lake Shoreline Inventory Percent Canopy



**Legend**  
**Percent Canopy**

Red	<25%
Orange	26% - 50%
Yellow	51% - 75%
Green	76% - 100%

February 2023

0 0.125 0.25 0.5 Miles

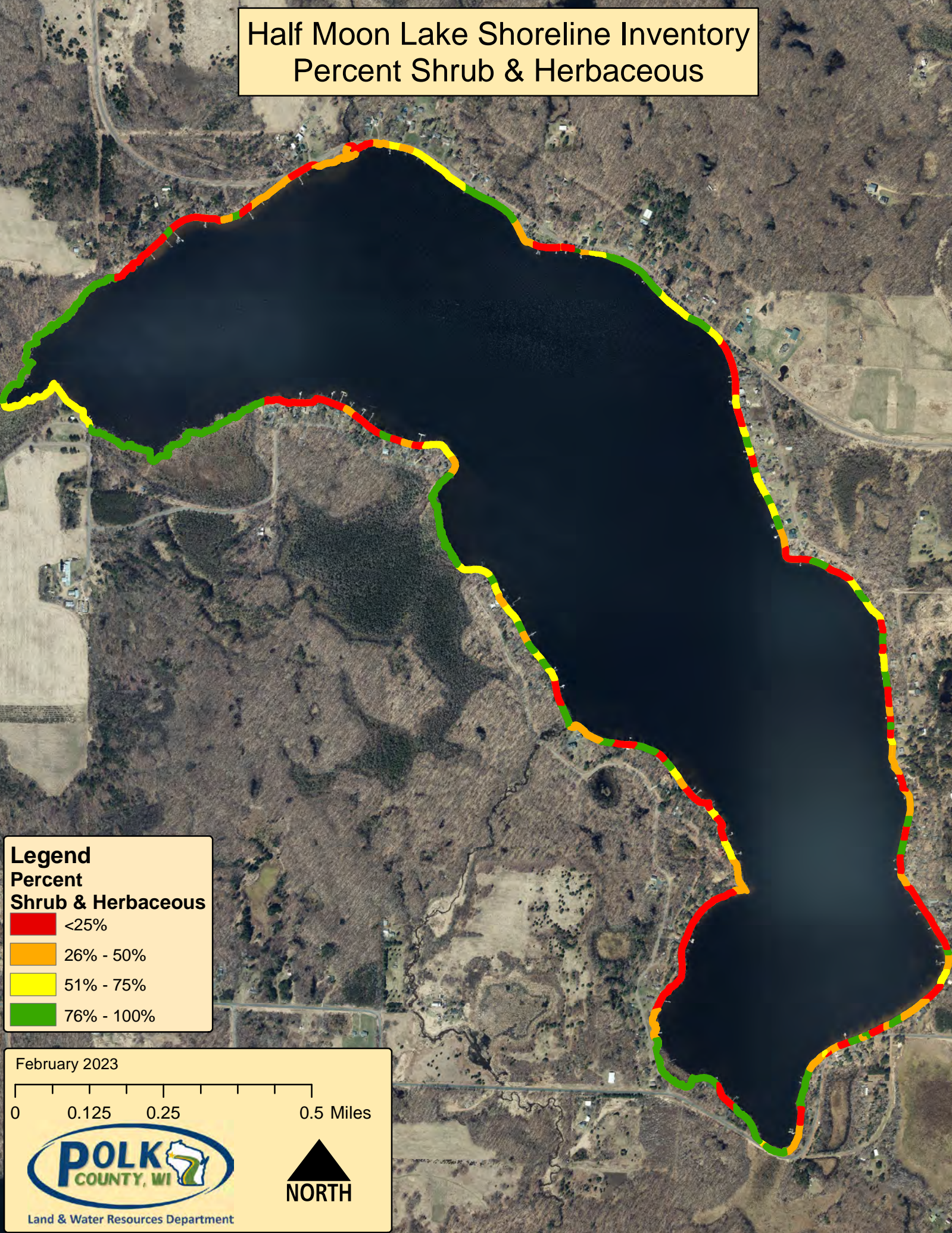
**POLK**  
COUNTY, WI

Land & Water Resources Department





**NORTH**



# Half Moon Lake Shoreline Inventory Percent Shrub & Herbaceous




**Legend**  
**Percent**  
**Shrub & Herbaceous**


	<25%
	26% - 50%
	51% - 75%
	76% - 100%

February 2023

0 0.125 0.25 0.5 Miles



**POLK**  
COUNTY, WI

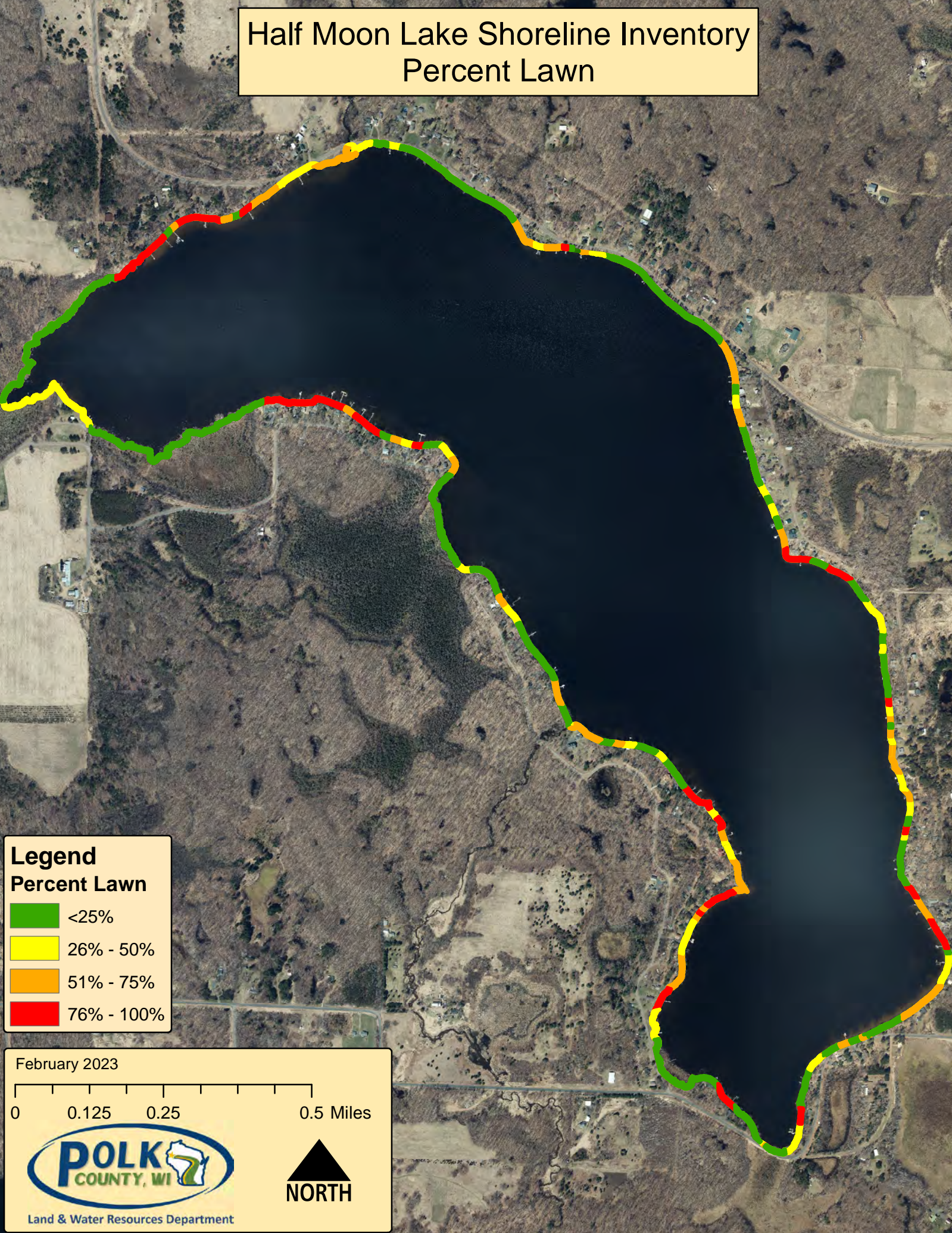


**NORTH**

Land & Water Resources Department



# Half Moon Lake Shoreline Inventory Percent Lawn




**Legend**  
**Percent Lawn**


Green	<25%
Yellow	26% - 50%
Orange	51% - 75%
Red	76% - 100%

February 2023

0 0.125 0.25 0.5 Miles



**POLK**  
COUNTY, WI

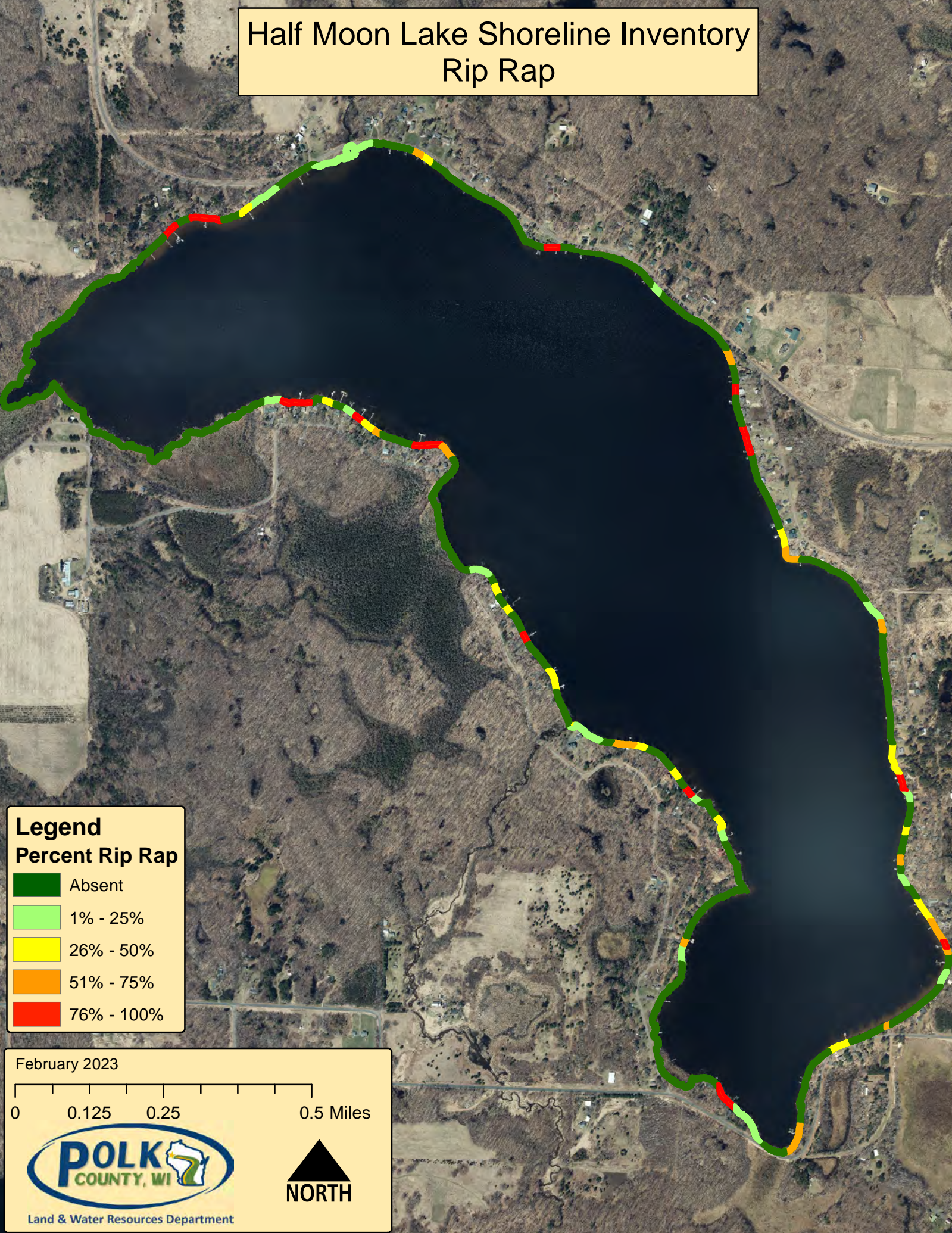


**NORTH**

Land & Water Resources Department



# Half Moon Lake Shoreline Inventory Rip Rap




**Legend**  
**Percent Rip Rap**


Dark Green	Absent
Light Green	1% - 25%
Yellow	26% - 50%
Orange	51% - 75%
Red	76% - 100%

February 2023

0 0.125 0.25 0.5 Miles



**POLK**  
COUNTY, WI



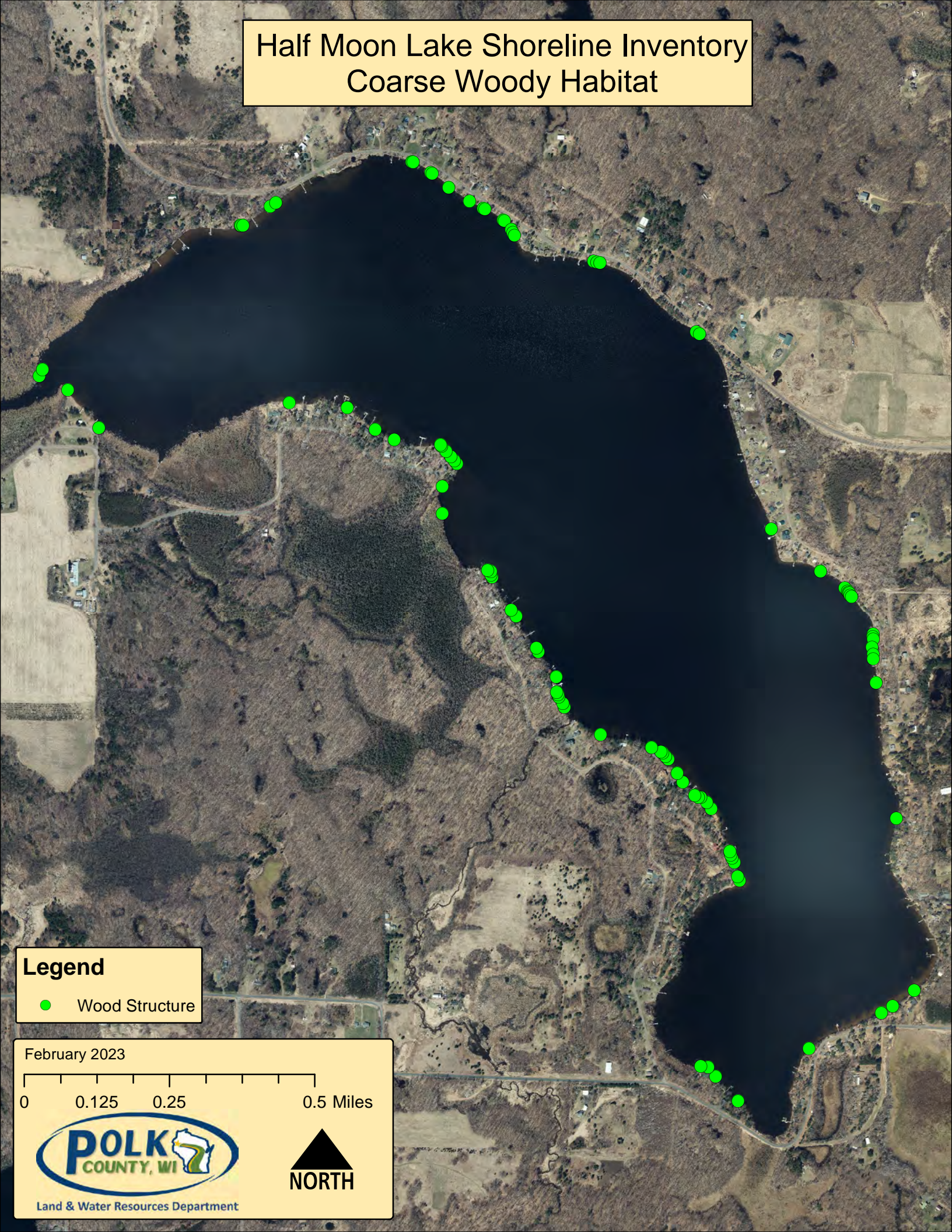
**NORTH**

Land & Water Resources Department



# Half Moon Lake Shoreline Inventory

## Coarse Woody Habitat



**Legend**

● Wood Structure

February 2023

0 0.125 0.25 0.5 Miles

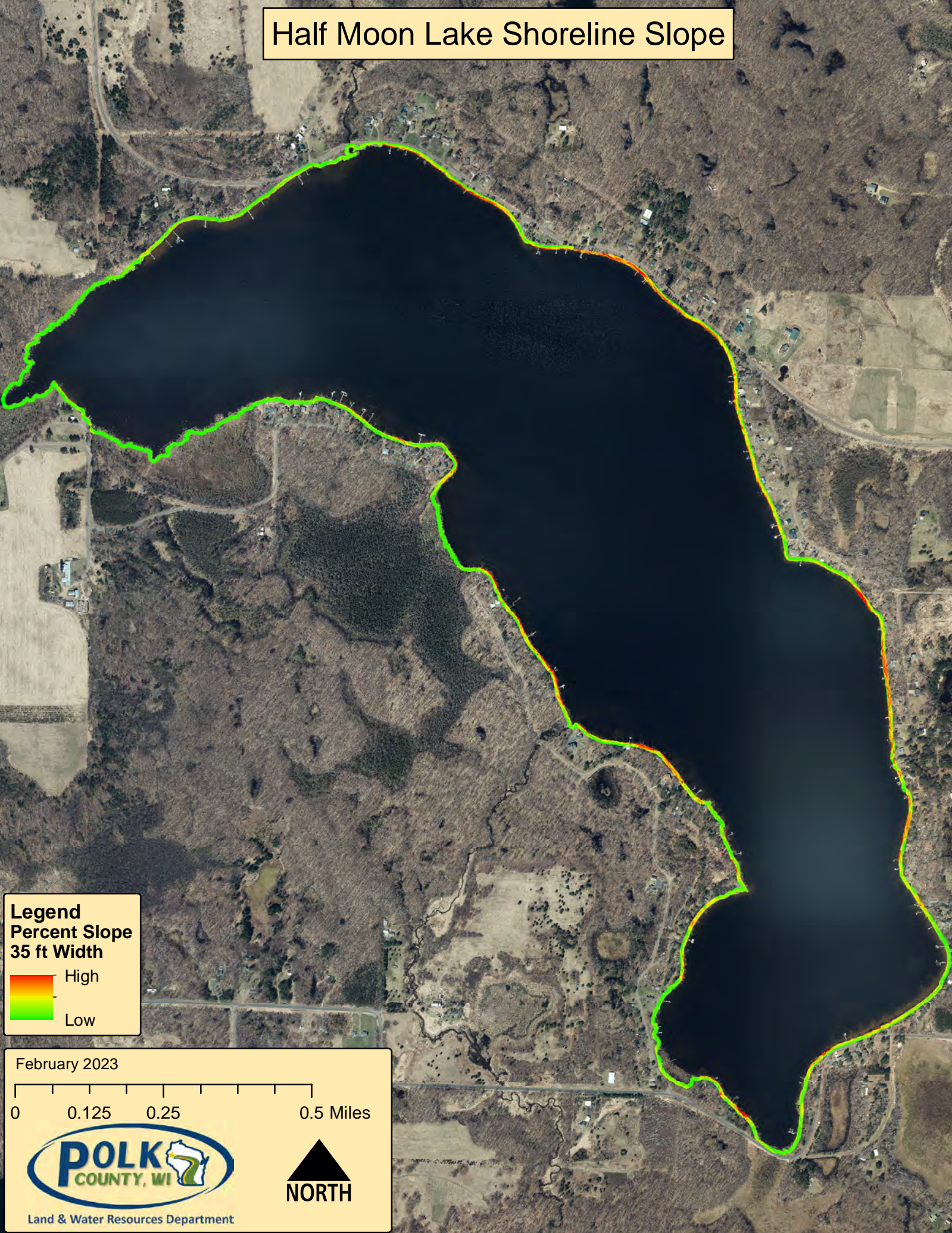
**POLK**  
COUNTY, WI

Land & Water Resources Department

**NORTH**



# Half Moon Lake Shoreline Slope



**Legend**  
**Percent Slope**  
**35 ft Width**

High

Low

February 2023

0 0.125 0.25 0.5 Miles

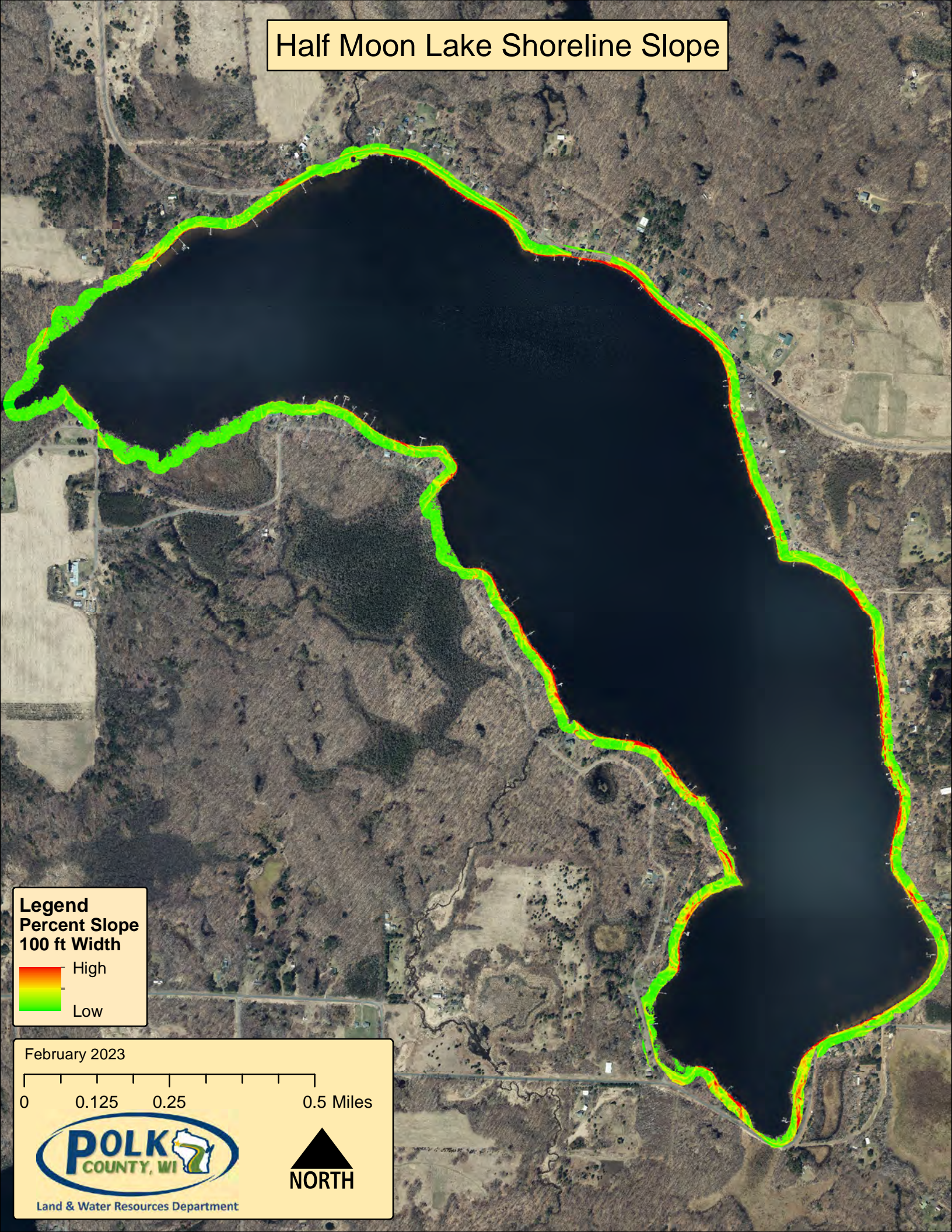
**POLK**  
COUNTY, WI

Land & Water Resources Department

**NORTH**



# Half Moon Lake Shoreline Slope



**Legend**  
**Percent Slope**  
**100 ft Width**

High

Low

February 2023

0 0.125 0.25 0.5 Miles

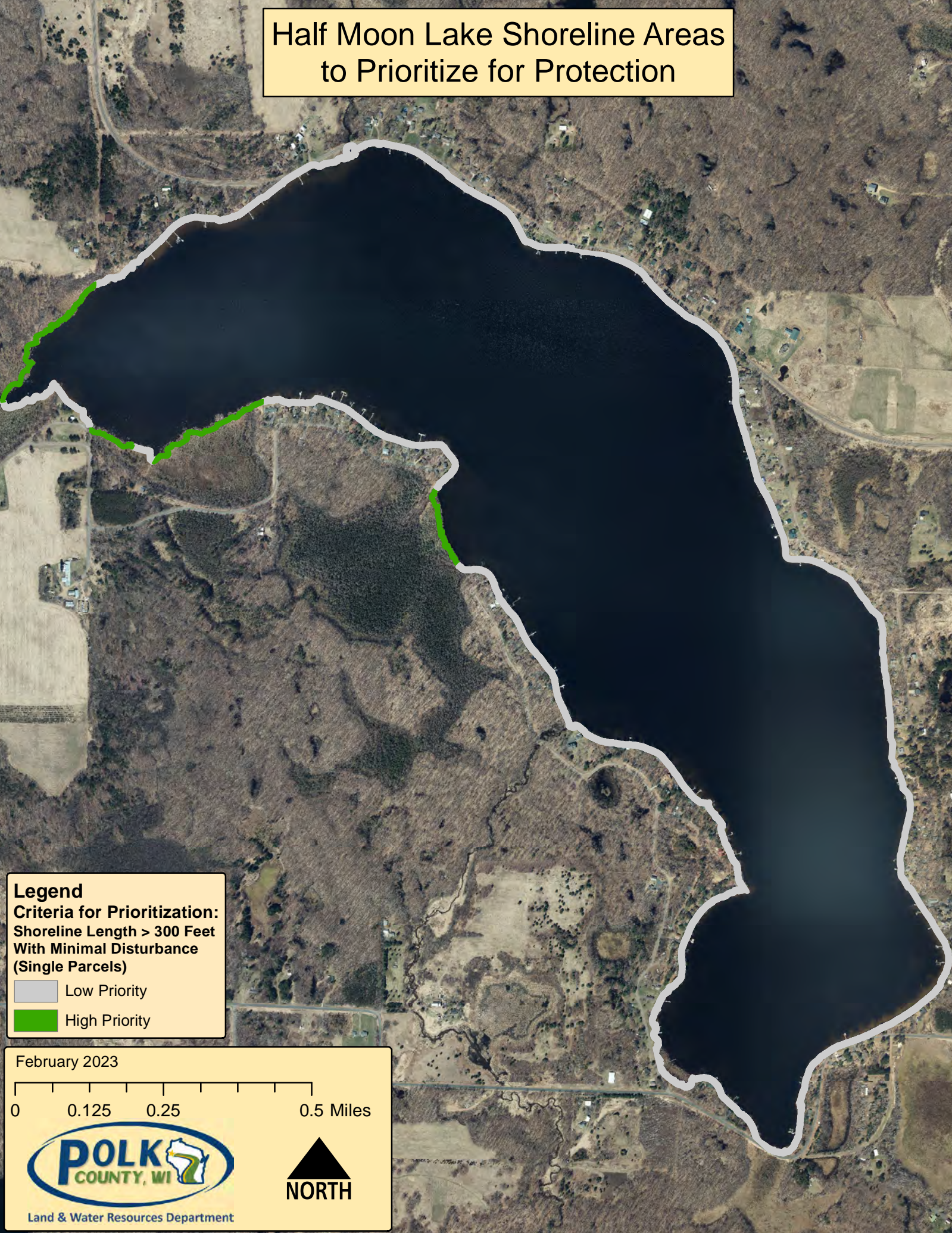
**POLK**  
COUNTY, WI

Land & Water Resources Department



**NORTH**



# Half Moon Lake Shoreline Areas to Prioritize for Protection





**Legend**  
**Criteria for Prioritization:**  
Shoreline Length > 300 Feet  
With Minimal Disturbance  
(Single Parcels)

	Low Priority
	High Priority

February 2023

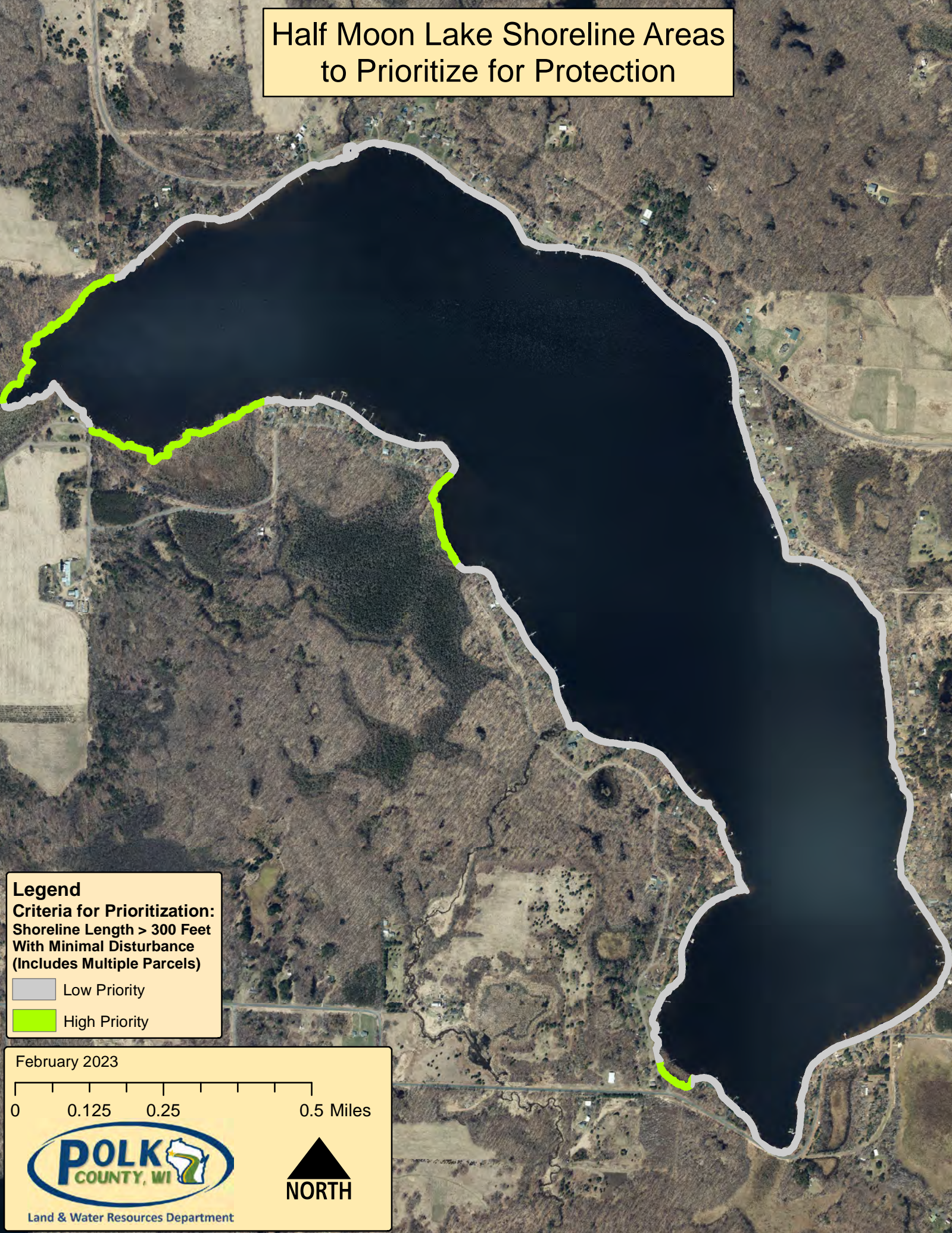
0 0.125 0.25 0.5 Miles




Land & Water Resources Department




# Half Moon Lake Shoreline Areas to Prioritize for Protection




**Legend**  
**Criteria for Prioritization:**  
Shoreline Length > 300 Feet  
With Minimal Disturbance  
(Includes Multiple Parcels)


 Low Priority

 High Priority

February 2023

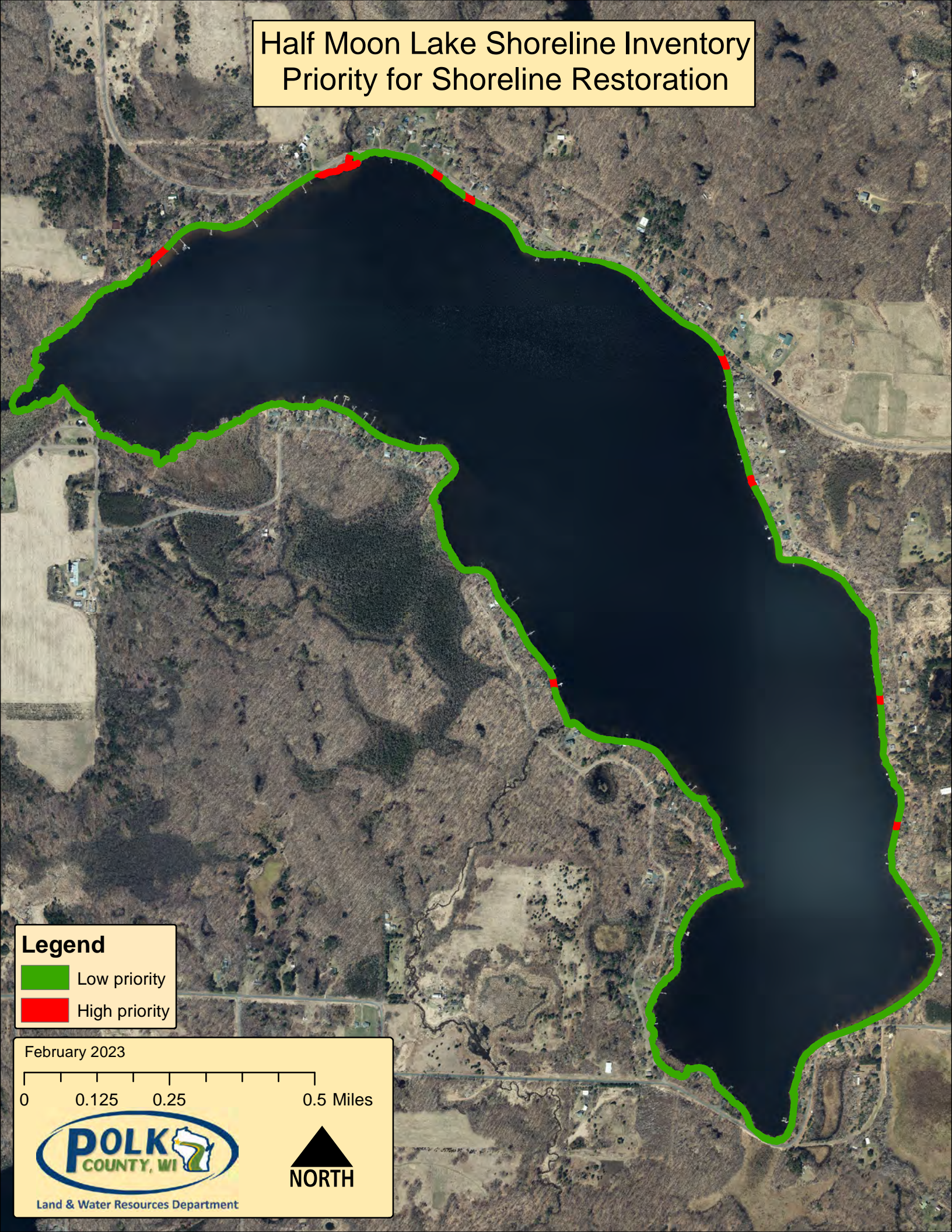
0 0.125 0.25 0.5 Miles

  
Land & Water Resources Department

  
NORTH



# Half Moon Lake Shoreline Inventory Priority for Shoreline Restoration




**Legend**

 Low priority


 High priority

February 2023

0 0.125 0.25 0.5 Miles

 **POLK**  
COUNTY, WI

Land & Water Resources Department

 **NORTH**




# Little Bass Lake Shoreline Inventory Percent Canopy




February 2023

0 0.025 0.05 0.1 Miles







**POLK**  
COUNTY, WI

Land & Water Resources Department



**NORTH**

**Legend**  
**Percent Canopy**

	<50%
	51% - 60%
	61% - 80%
	81% - 100%




# Little Bass Lake Shoreline Inventory

## Percent Shrub & Herbaceous




February 2023

0 0.025 0.05 0.1 Miles







Land & Water Resources Department



NORTH

**Legend**

**Percent Shrub & Herbaceous**

	<40%
	41% - 60%
	61% - 80%
	81% - 100%




# Little Bass Lake Shoreline Inventory Percent Lawn




February 2023

0 0.025 0.05 0.1 Miles





**POLK**  
COUNTY, WI

Land & Water Resources Department



**NORTH**

**Legend**  
**Percent Lawn**

	<50%
	51% - 60%




# Little Bass Lake Shoreline Areas Coarse Woody Habitat




February 2023

0 0.025 0.05 0.1 Miles



Land & Water Resources Department



NORTH

**Legend**

● Woody Habitat



# Little Bass Lake Shoreline Slope



February 2023

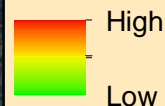
0 0.025 0.05 0.1 Miles



Land & Water Resources Department

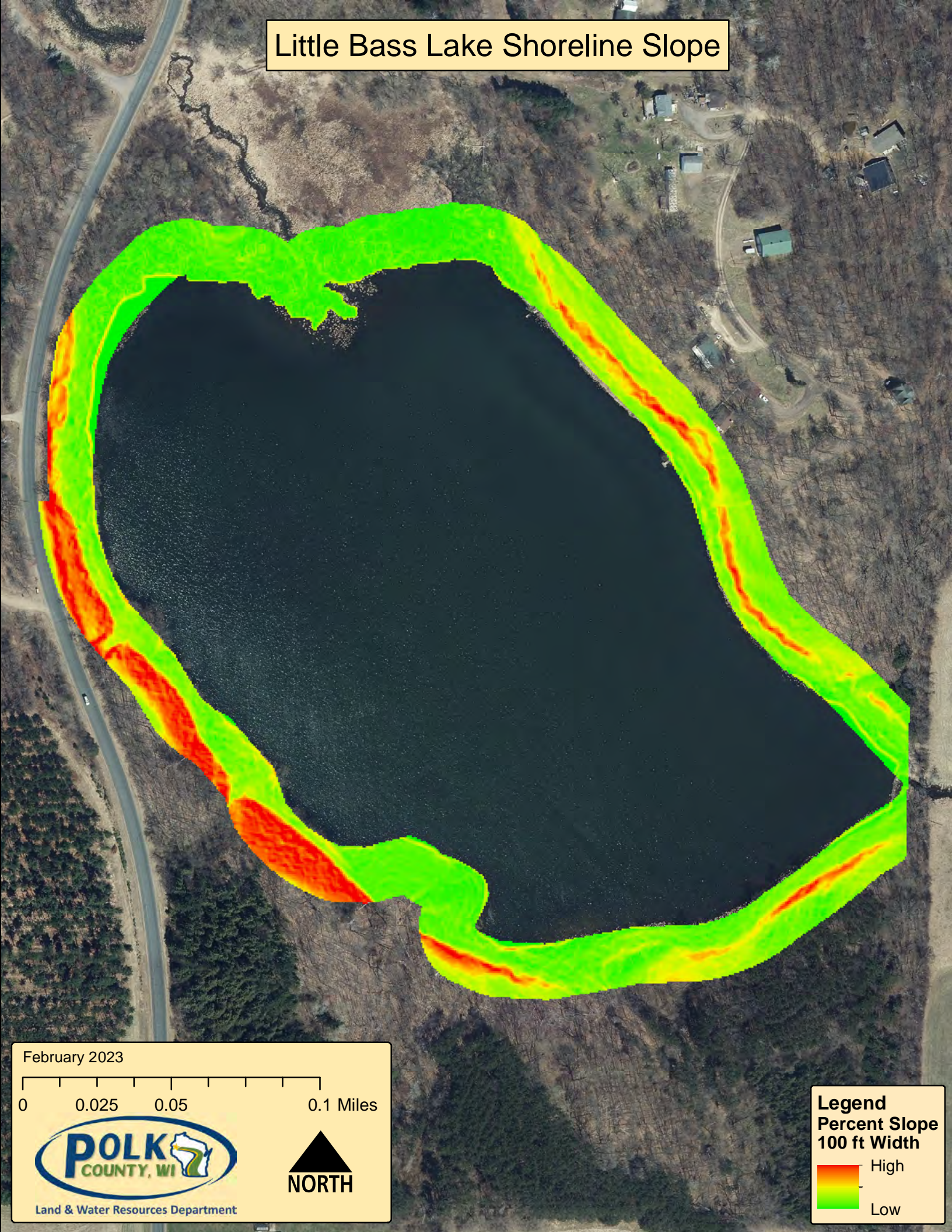


**Legend**  
Percent Slope  
35 ft Width





# Little Bass Lake Shoreline Slope



February 2023

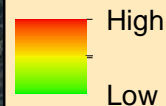
0 0.025 0.05 0.1 Miles



Land & Water Resources Department





**Legend**  
Percent Slope  
100 ft Width







# Little Bass Lake Shoreline Areas to Prioritize for Protection

**Legend**  
**Criteria for Prioritization:**  
Shoreline Length > 300 Feet  
With Minimal Disturbance  
(Single Parcels)

	Low Priority
	High Priority

February 2023

0 0.025 0.05 0.1 Miles





Land & Water Resources Department





# Little Bass Lake Shoreline Areas to Prioritize for Protection

**Legend**  
**Criteria for Prioritization:**  
Shoreline Length > 300 Feet  
With Minimal Disturbance  
(Includes Multiple Parcels)

	Low Priority
	High Priority

February 2023

0 0.025 0.05 0.1 Miles



Land & Water Resources Department





# Little Bass Lake Shoreline Inventory

## Priority for Shoreline Restoration



February 2023

0 0.025 0.05 0.1 Miles



Land & Water Resources Department







### Legend

- Low priority
- High priority





# Long Lake Shoreline Inventory Percent Natural

**Legend**  
**Percent Natural**

	< 25%
	26% - 50%
	51% - 75%
	76% - 100%

Data Collected 2012 – Mapped December 2023

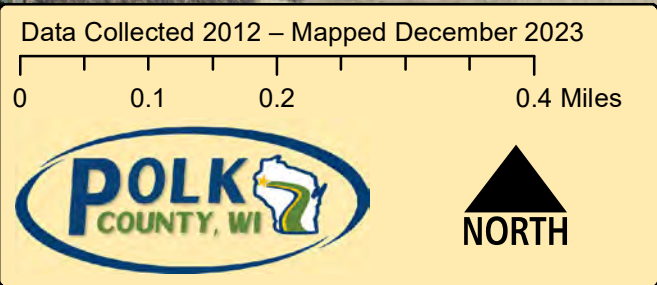
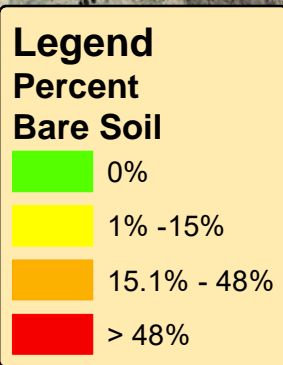
0 0.1 0.2 0.4 Miles



NORTH

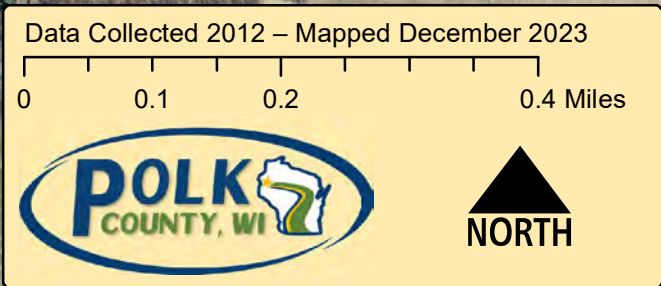
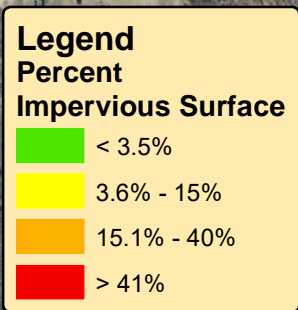


# Long Lake Shoreline Inventory Percent Bare Soil



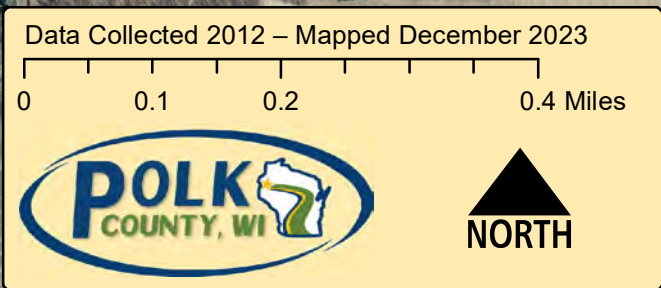
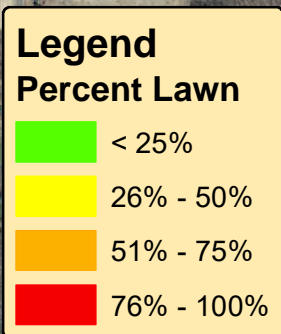


# Long Lake Shoreline Inventory Percent Impervious Surface



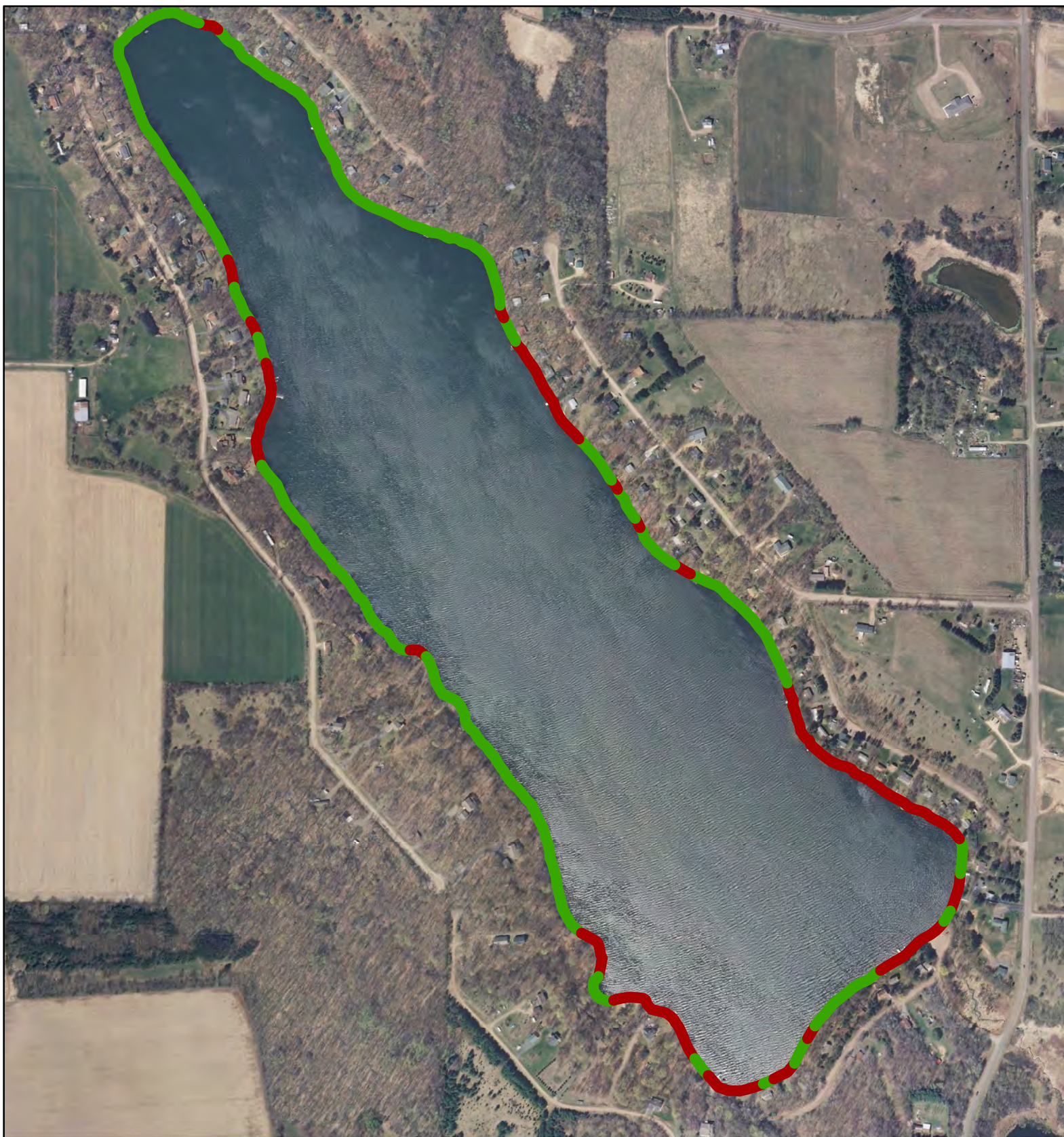


# Long Lake Shoreline Inventory Percent Lawn





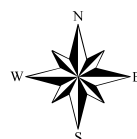
# 2015 Loveless Lake General Shoreline Condition Within 35 Feet



## General Shoreline Condition

- Disturbed
- Undisturbed

0 0.05 0.1 0.2 0.3 0.4 Miles





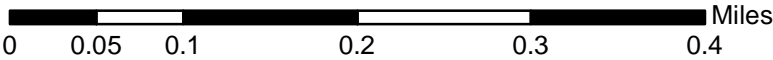
# 2015 Loveless Lake Tall Shoreland Vegetation



## Tall Shoreland Vegetation

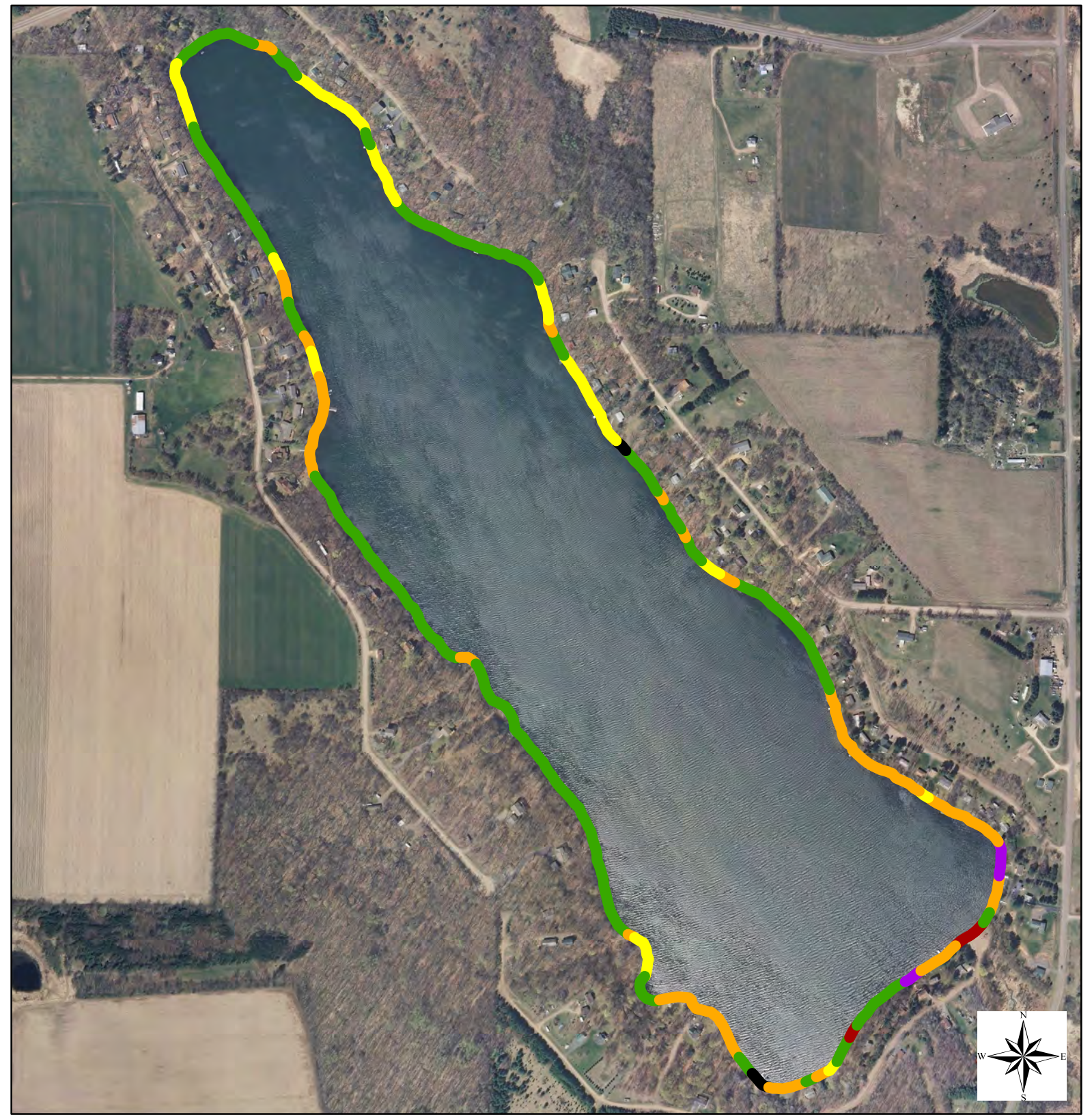
 Absent

 Present

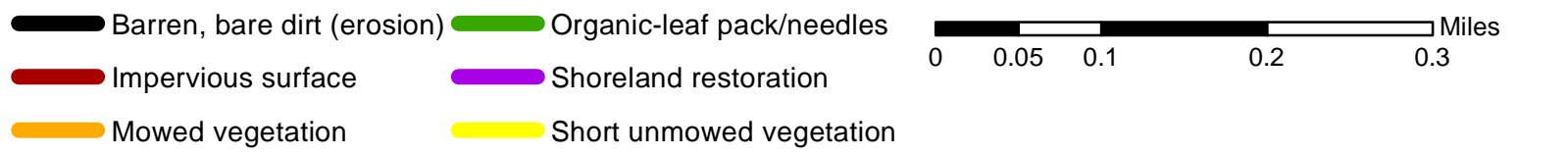




# 2015 Loveless Lake Dominant Shoreland Vegetation and Ground Cover

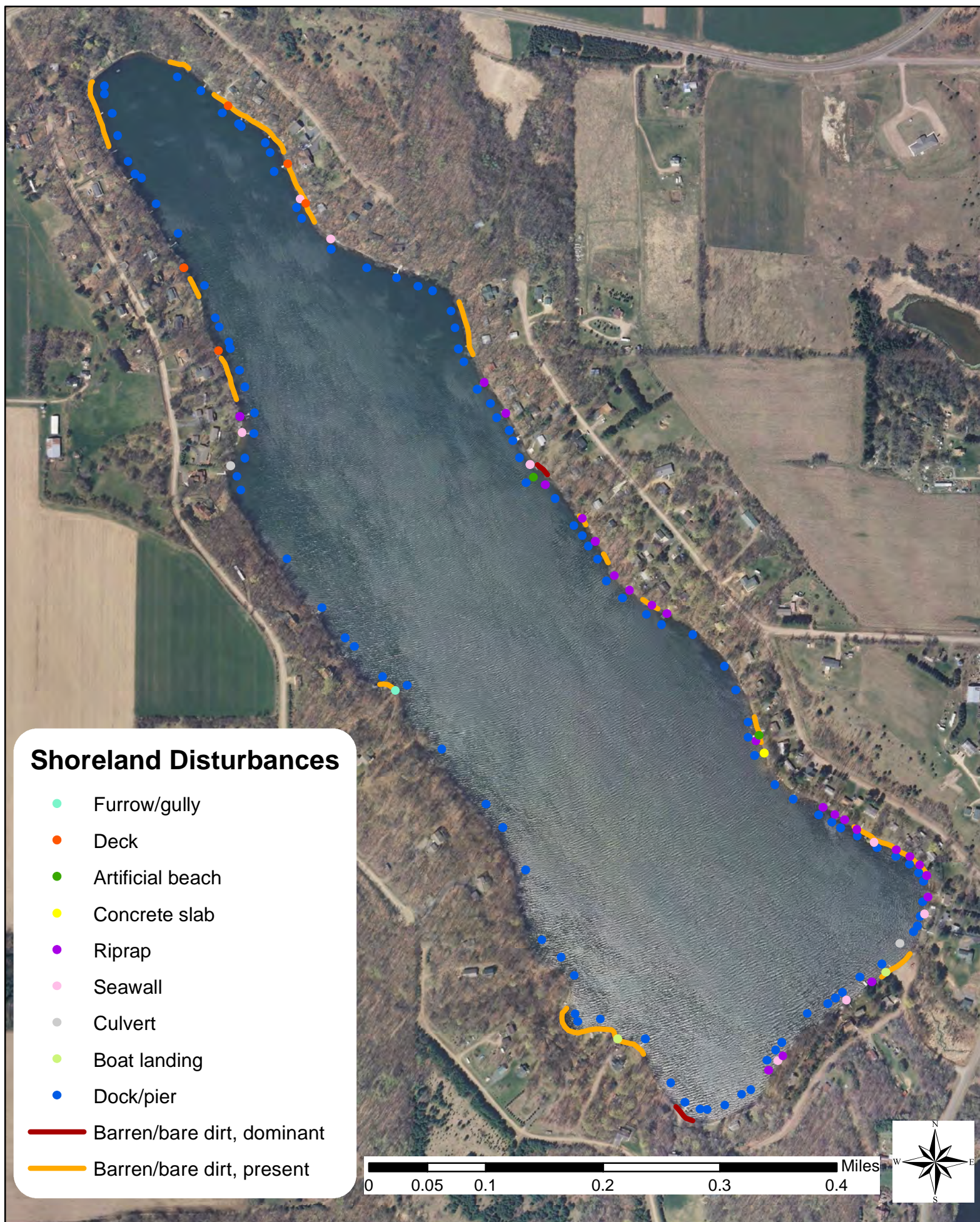


## Dominant Vegetation and Ground Condition



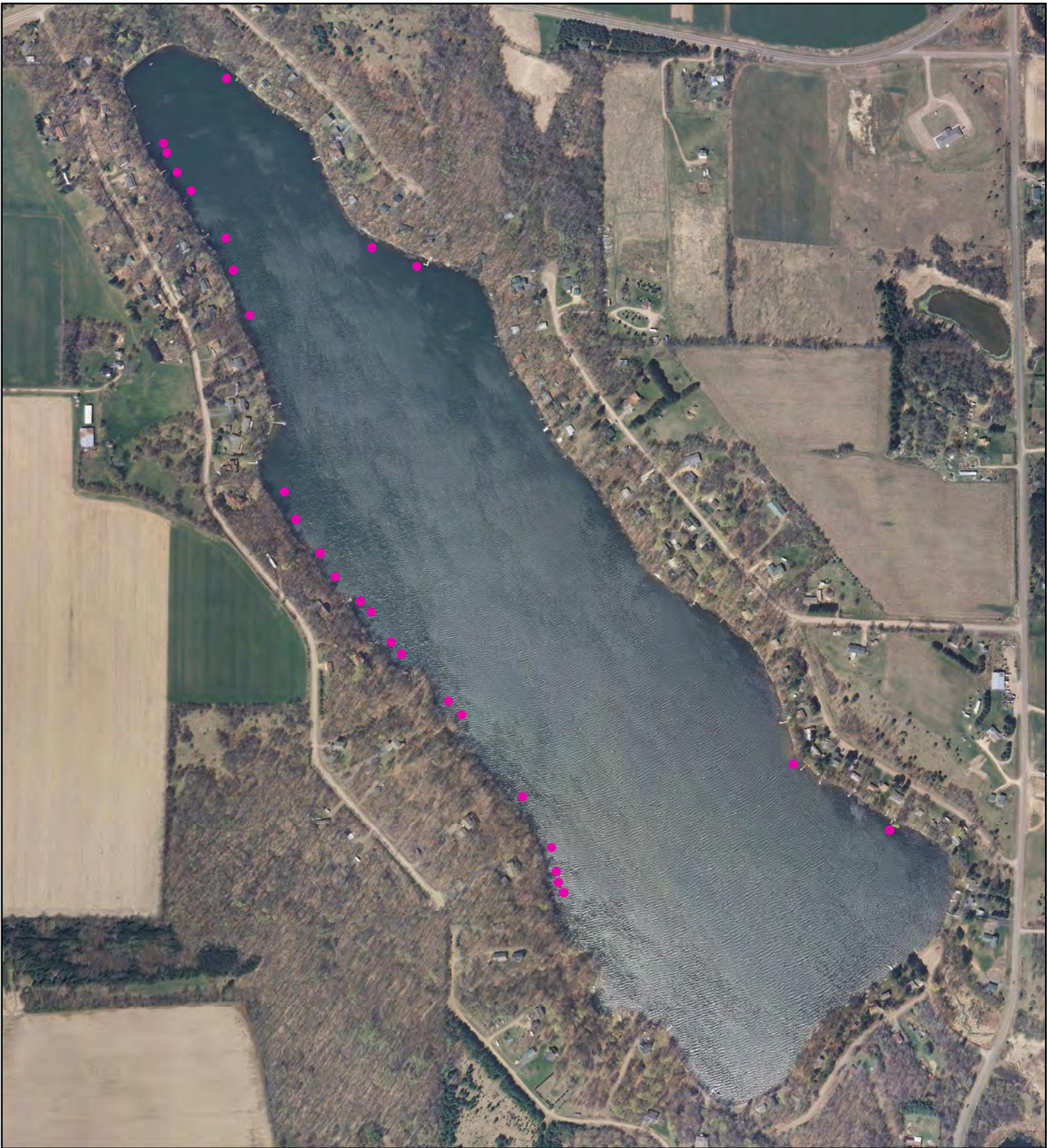


# 2015 Loveless Lake Shoreland Disturbances



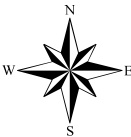
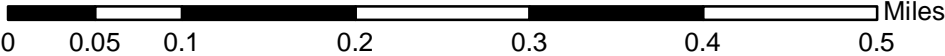


# 2015 Loveless Lake Woody Structure



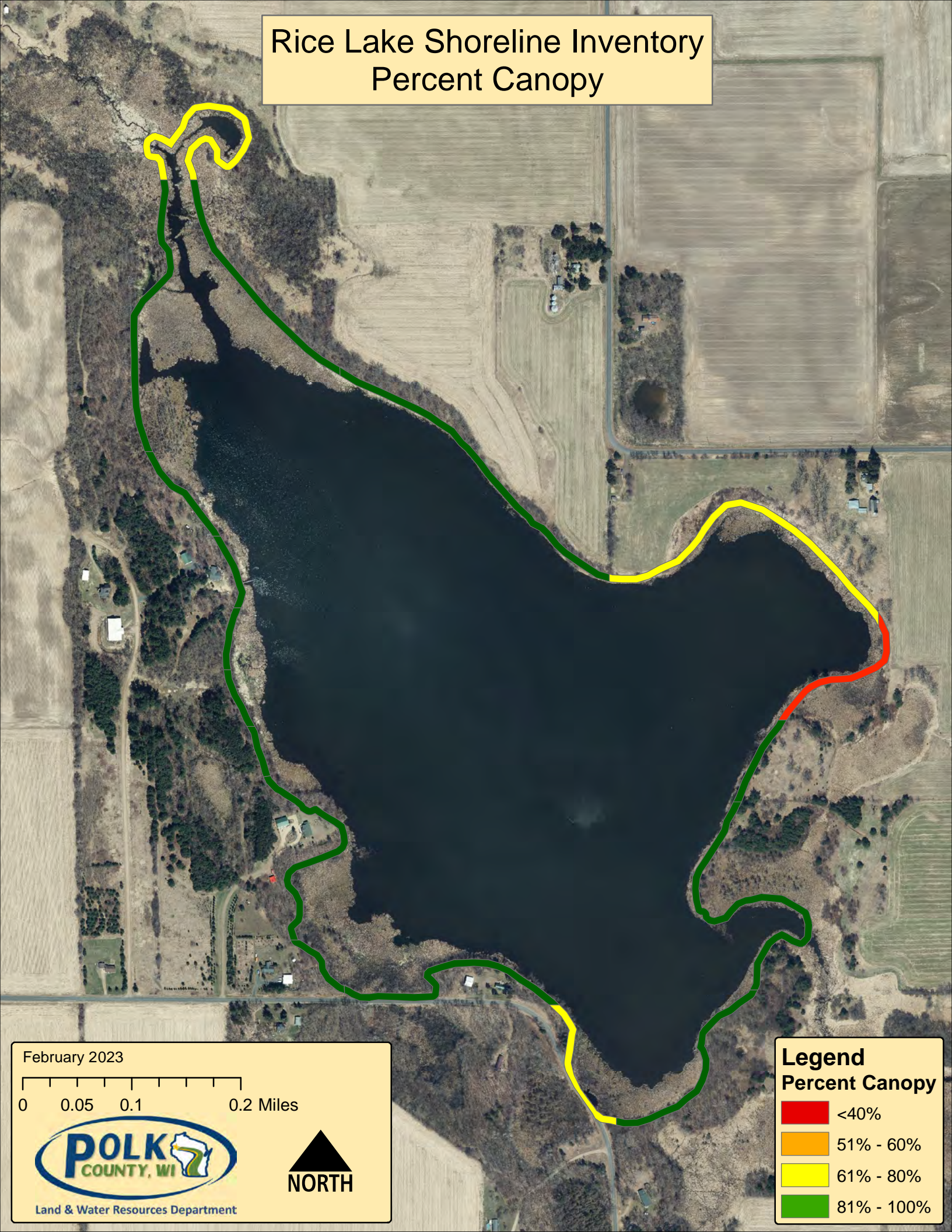
## Woody Structure

● Woody structure





# Rice Lake Shoreline Inventory Percent Canopy



February 2023

0 0.05 0.1 0.2 Miles



Land & Water Resources Department



## Legend Percent Canopy

- <40%
- 51% - 60%
- 61% - 80%
- 81% - 100%



# Rice Lake Shoreline Inventory Percent Shrub & Herbaceous




February 2023

0 0.05 0.1 0.2 Miles



Land & Water Resources Department



**Legend**  
**Percent**  
**Shrub & Herbaceous**  
 >90%



# Rice Lake Shoreline Inventory Percent Lawn



February 2023

0 0.05 0.1 0.2 Miles



Land & Water Resources Department

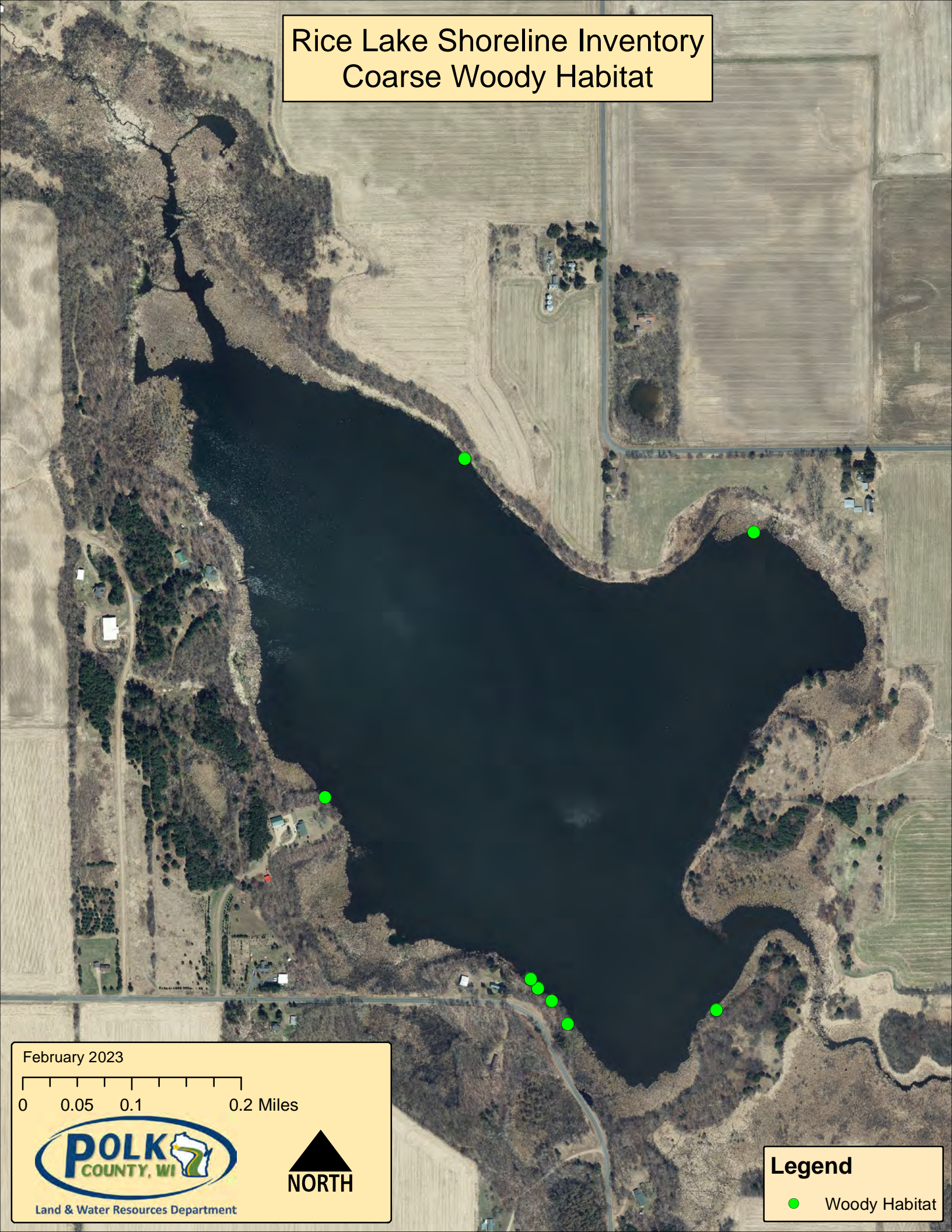


**Legend**  
**Percent Lawn**

	0%
	5%



# Rice Lake Shoreline Inventory Coarse Woody Habitat



February 2023

0 0.05 0.1 0.2 Miles

**POLK**  
COUNTY, WI

Land & Water Resources Department

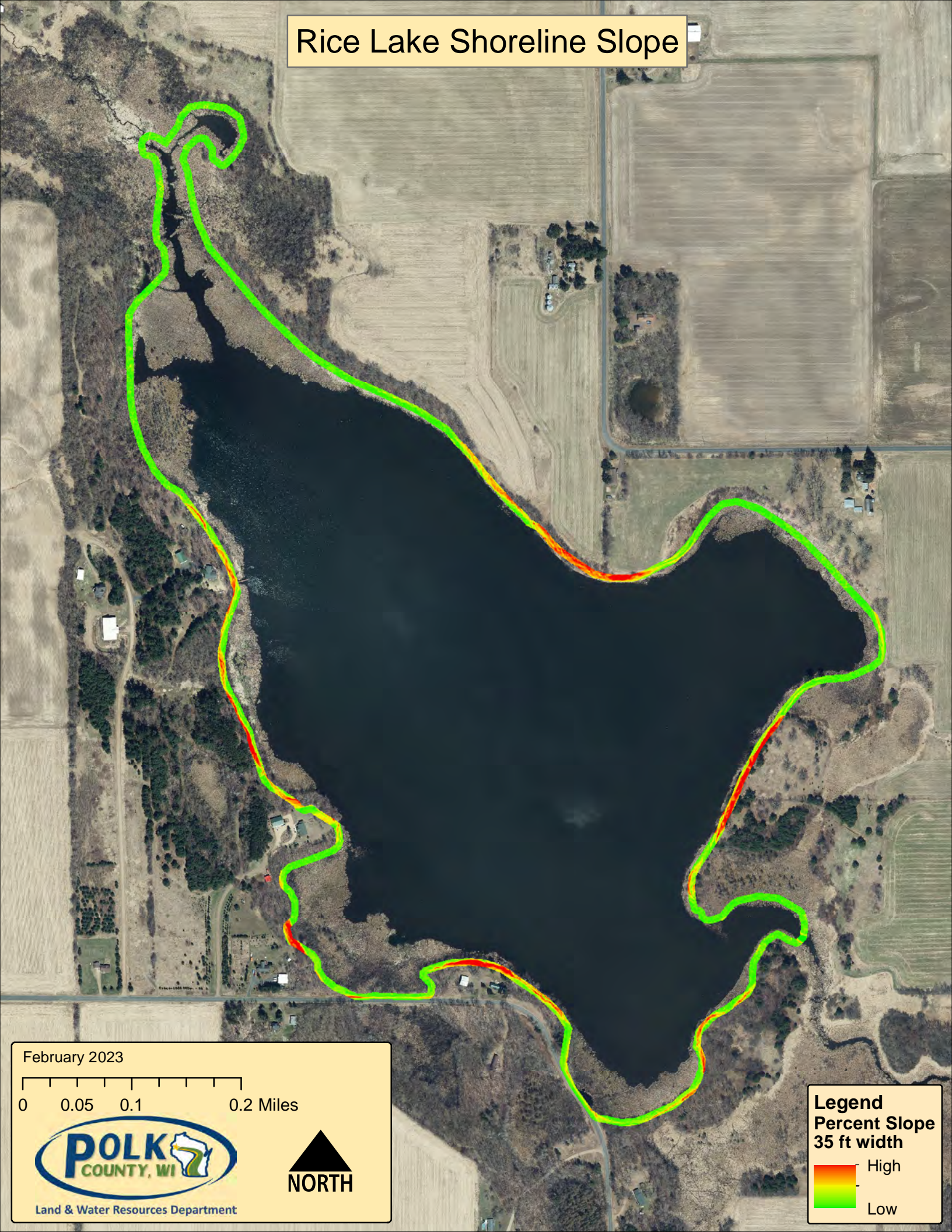
**NORTH**

**Legend**

● Woody Habitat



# Rice Lake Shoreline Slope



February 2023

0 0.05 0.1 0.2 Miles



Land & Water Resources Department

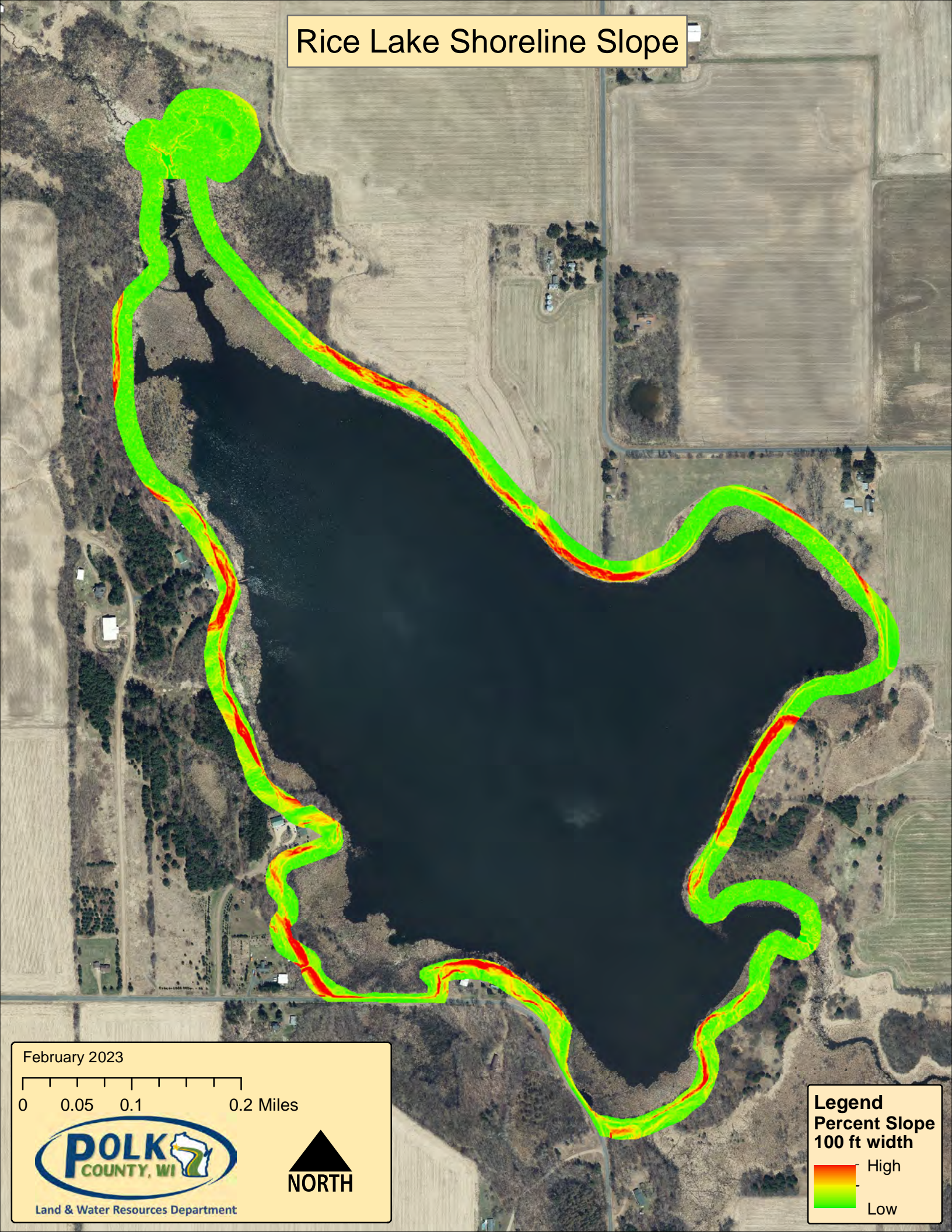


**Legend**  
Percent Slope  
35 ft width





# Rice Lake Shoreline Slope



February 2023

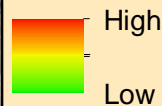
0 0.05 0.1 0.2 Miles



Land & Water Resources Department



**Legend**  
Percent Slope  
100 ft width





# Rice Lake Shoreline Areas to Prioritize for Protection



February 2023

0 0.05 0.1 0.2 Miles




Land & Water Resources Department



## Legend

**Criteria for Prioritization:**  
Shoreline Length > 300 Feet  
With Minimal Disturbance  
(Single Parcels)

 Low Priority

 High Priority




# Rice Lake Shoreline Inventory Priority for Shoreline Restoration




February 2023

0 0.05 0.1 0.2 Miles




Land & Water Resources Department



NORTH

**Legend**

 Low priority

 High priority