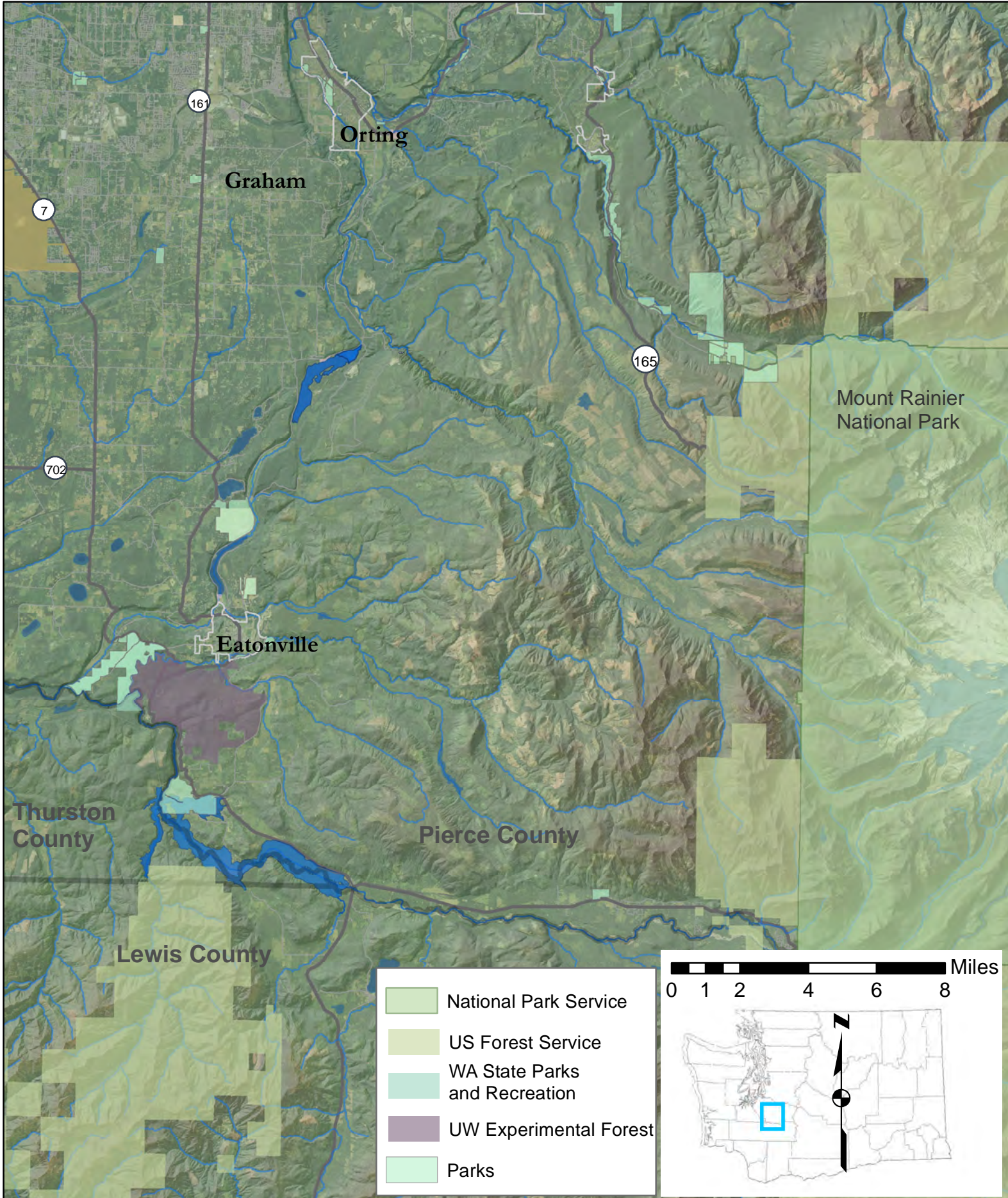


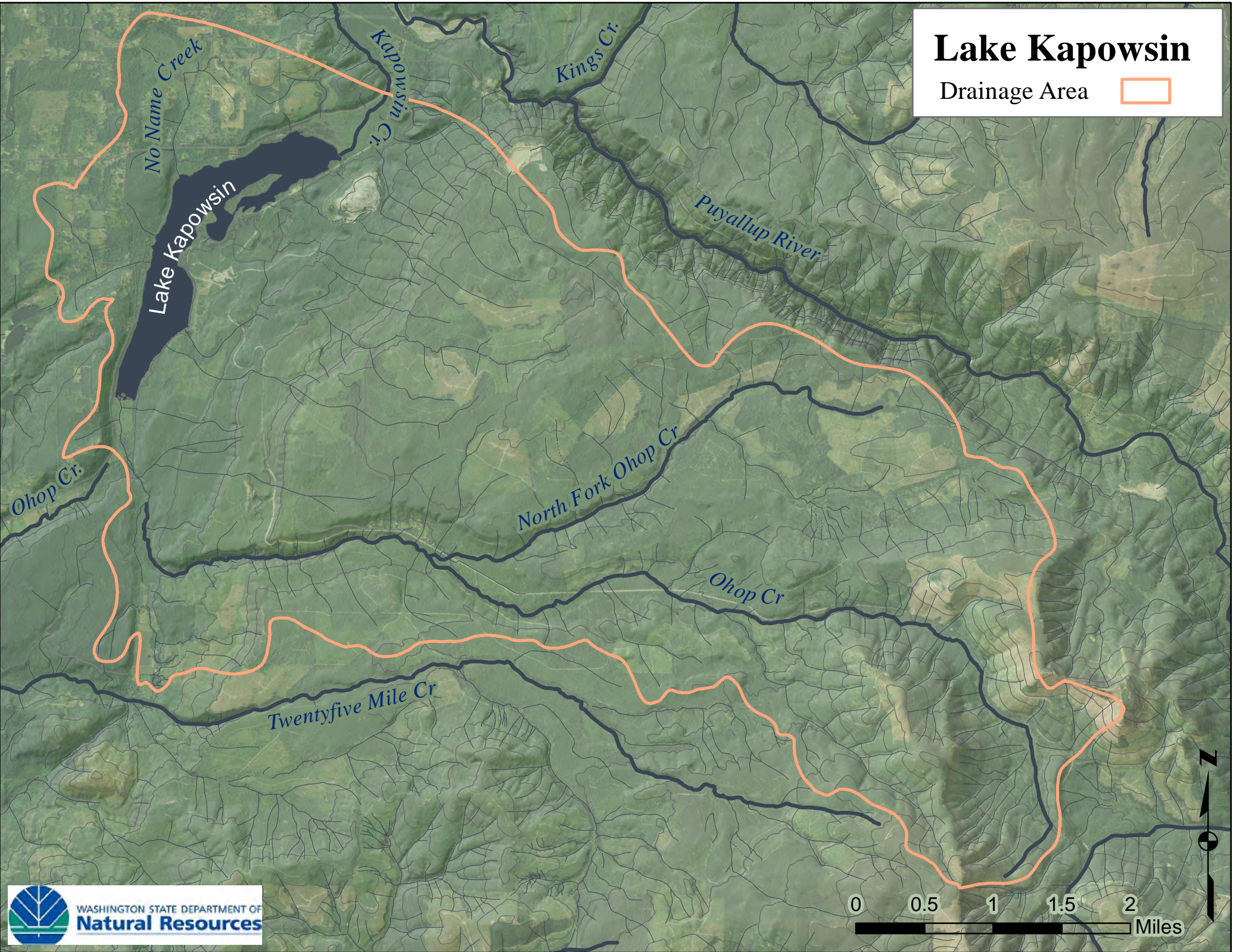
# Lake Kapowsin

## Pierce County, Washington



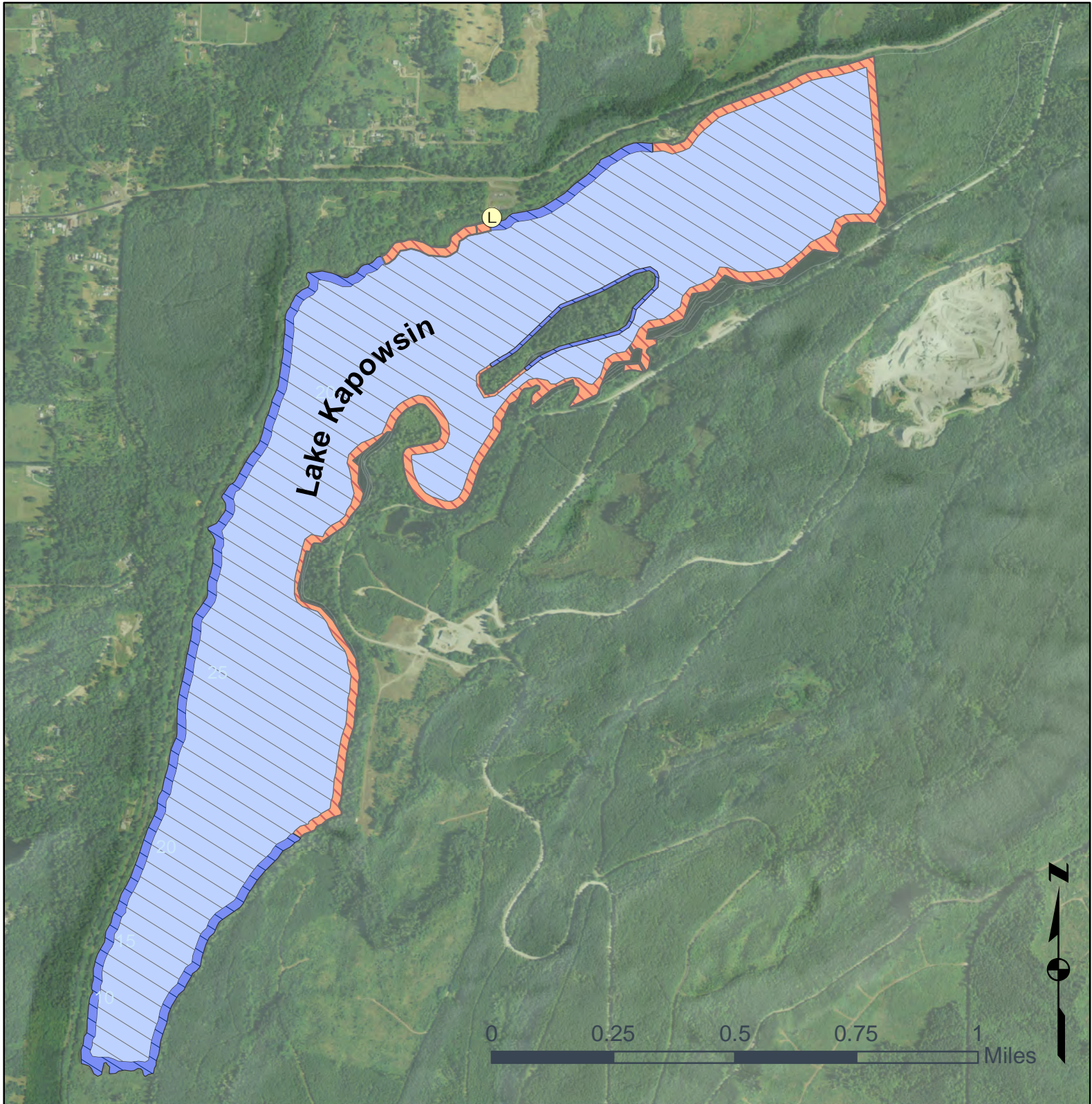
# Lake Kapowsin

Drainage Area 







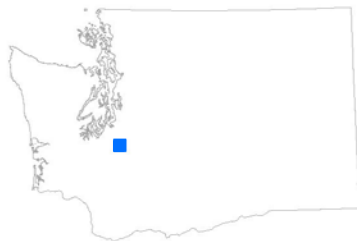
# Lake Kapowsin

## Pierce County, Washington



### Assumed Aquatic Lands Ownership

-  Privately owned aquatic shorelands
-  State-owned aquatic shorelands
-  State-owned aquatic bedlands
-  Boat Launch



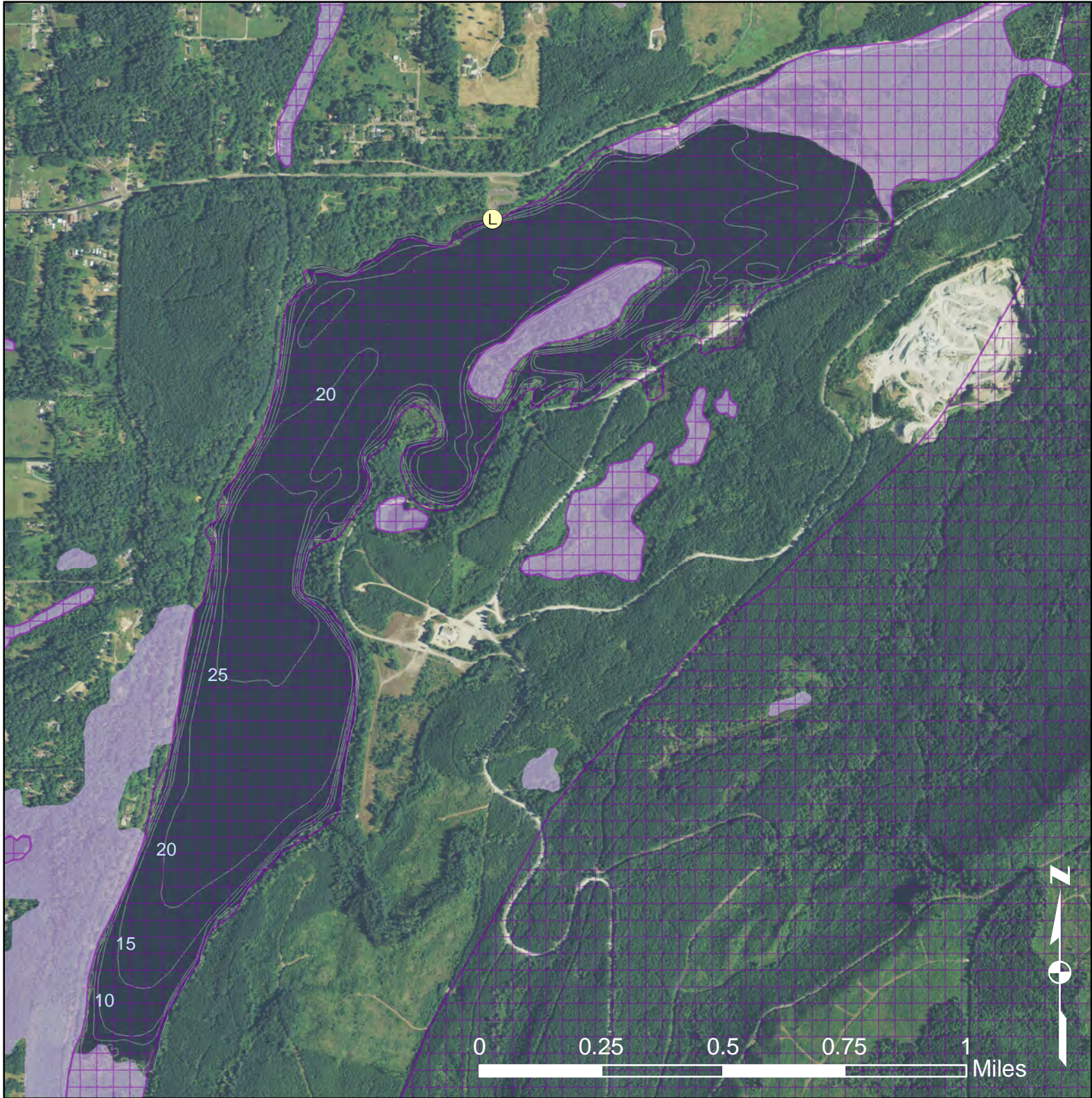
Assumed Aquatic Lands Ownership Data Source: DNR  
Upland Ownership Data Source: 2012 State Parcels

State-owned aquatic land, is derived from DNR ownership index plates and does not represent actual spatial extent of tidelands, and shorelands.



Extreme care was used during the compilation of this map to ensure accuracy. However, due to changes in data and the need to rely on outside sources of information, DNR cannot accept responsibility for errors or omissions, and therefore, there are no warranties which accompany this material.



# Lake Kapowsin

## WDFW Priority Habitats and Species



### Priority Habitats and Species Areas

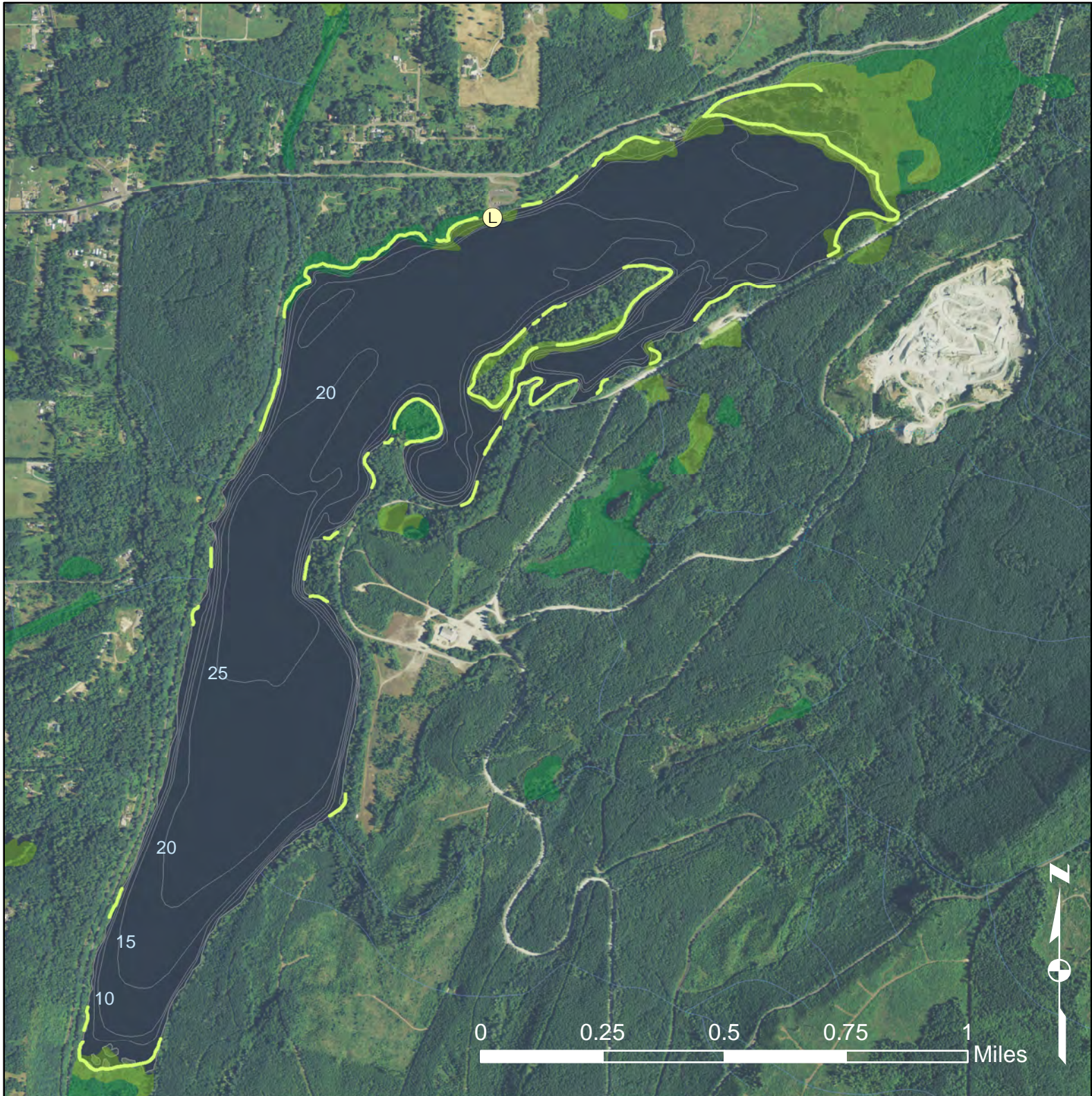
-  WDFW - Priority Habitat
-  WDFW - Priority Species

-  5 ft. bathymetric contours
-  Boat Launch

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# Lake Kapowsin

## Wetland Habitat Distribution



### Wetland Habitat

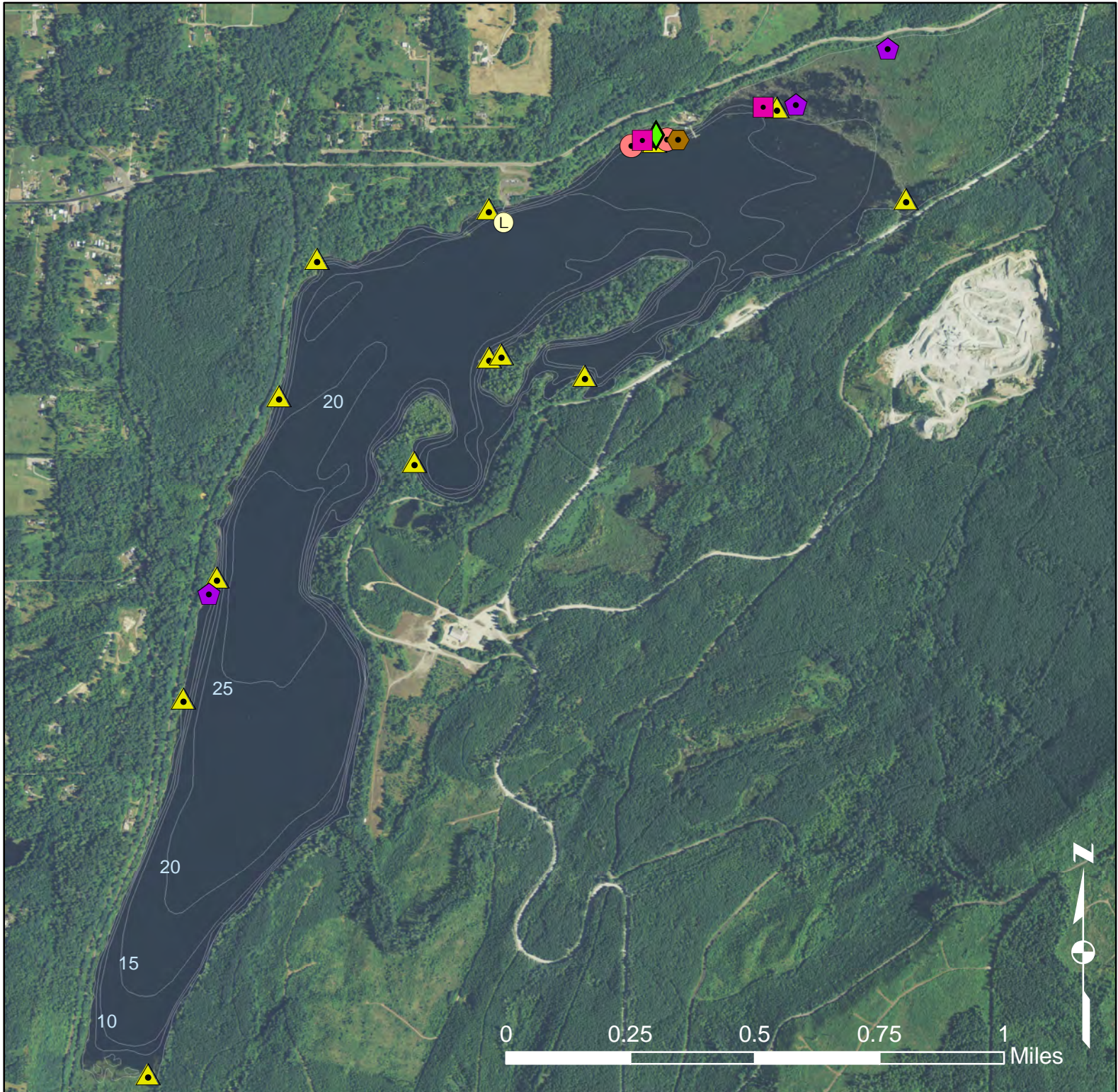
-  Wetland linear shoreline extent
-  Forested/Shrub Wetland
-  Emergent Wetland
-  5 ft. bathymetric contours
-  Boat Launch







Data Source:  
Wetlands Inventory USFWS  
<http://www.fws.gov/wetlands/Data/Mapper.html>  
Wetland linear shoreline extent: Hamer Environmental 2015



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# Lake Kapowsin

## Non-Native Plant Distribution



-  Canada thistle (2 occurrences)
-  Common St. Johnswort (1 occurrence)
-  Evergreen blackberry (2 occurrences)
-  Himalayan blackberry (3 occurrences)
-  Reed canarygrass (1 occurrence)
-  Yellow flag iris (12 occurrences)

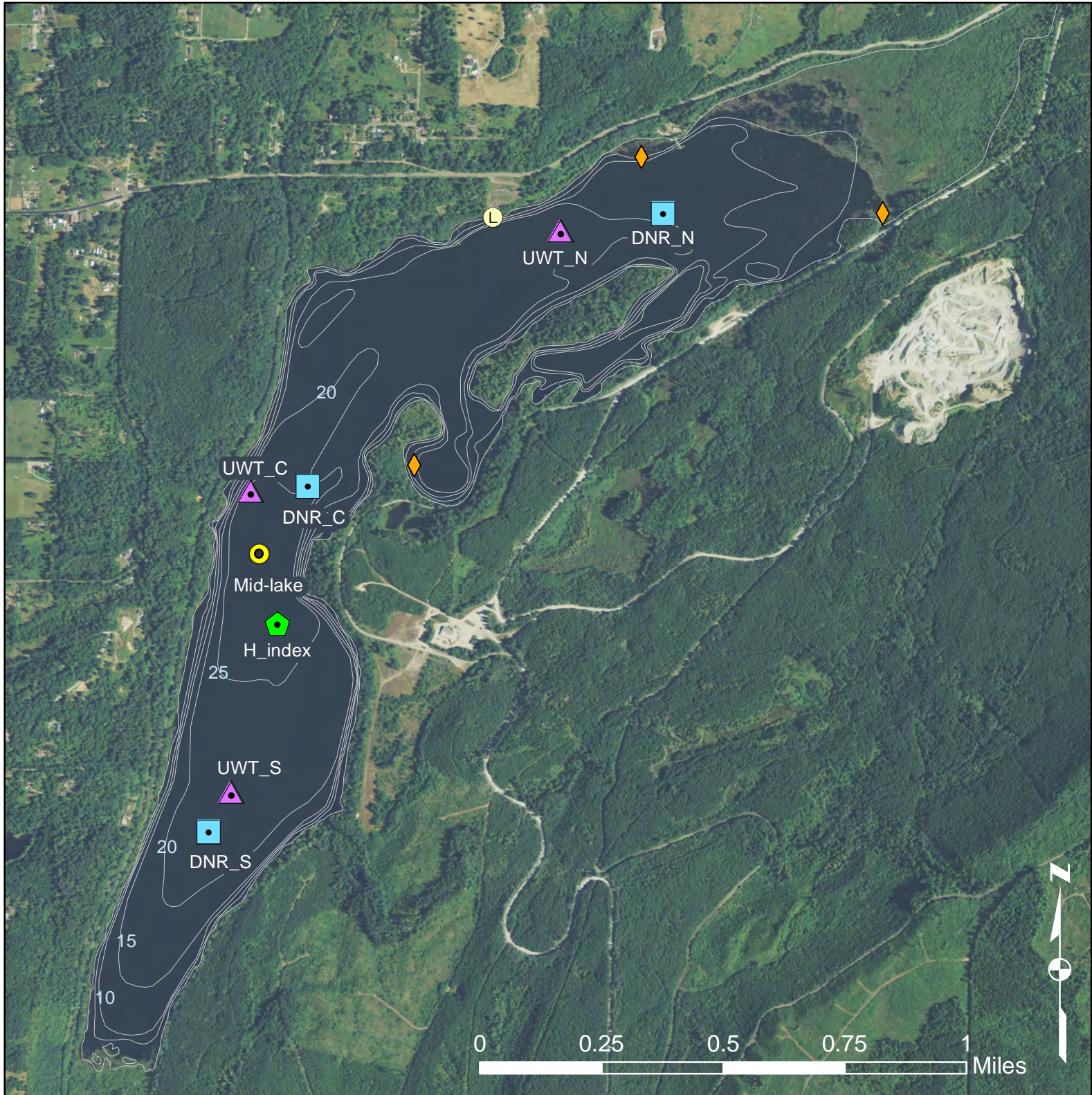
-  5 ft. bathymetric contours
-  Boat Launch

Data Source:  
Hamer Environmental 2015  
Non-native plants identified during  
wetland & aquatic plant surveys,  
June 2015.





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# Lake Kapowsin

## Water Quality and Chemistry Sample Sites



### Sample Sites

-  Hamer Env. (Index Site)
-  UW-Tacoma (North, South & Central Sites)
-  DNR (North, South & Central Sites)
-  Approximate sample location Bortleson et. al. 1976 & Jackson and Caromile 2000

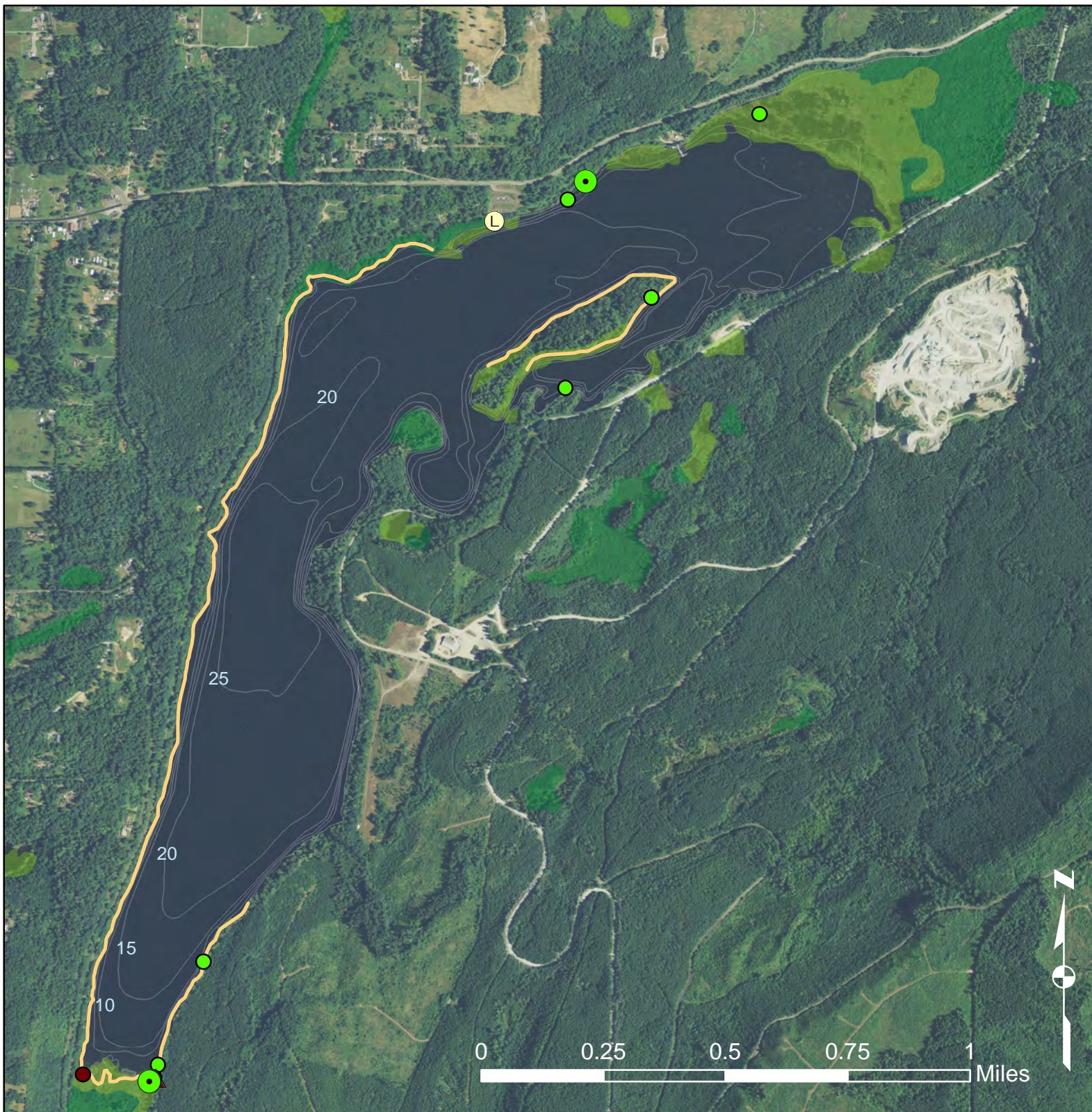
-  Algal Bloom (observed June 2015 by Hamer Env.)
-  5 ft. bathymetric contours
-  Boat Launch

University of Washington - Tacoma: Gawel 2014  
DNR Puget SoundCorps 2014-2015  
Algal Bloom Observations: Hamer Env. 2015



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# Lake Kapowsin



## Pacific Tree Frog & Northern Red-Legged Frog Occurrence




### Pacific Tree Frog

-  Egg Mass (6 observations)
-  Adult (3 observations)

### Northern Red-legged Frog

-  Egg Mass (2 observations)
-  Juvenile (1 observation)

 Shoreline surveyed monthly (Mar. - Aug. 2015)

 Forested/Shrub Wetland

 Emergent Wetland

 5 ft. bathymetric contours

 Boat Launch

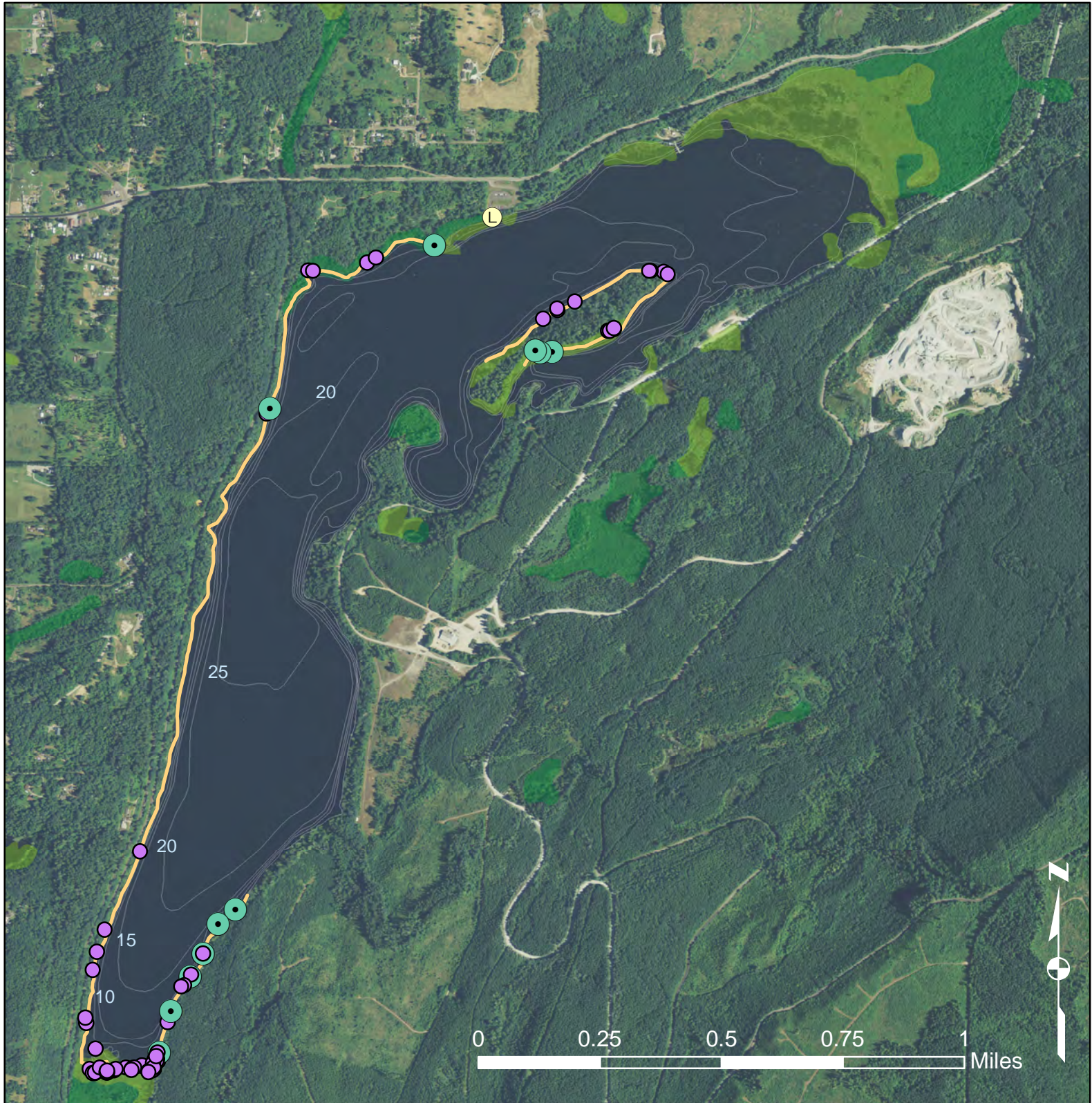
Amphibian Occurrence: DNR Puget Sound Corps  
Monthly Amphibian Surveys 3/2015 - 9/2015  
Hamer Environmental (April 2015)  
Habitat type: Wetlands Inventory USFWS  
Bathymetry: Dept. of Ecology

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# Lake Kapowsin

## Northwest Salamander & Rough-Skinned Newt Occurrence



### Species and Life Stage (# Observations)

- Northwest Salamander Egg Mass (60 observations)
- Rough Skinned Newt, Adult (11 observations)

- Shoreline surveyed monthly (Mar. - Aug. 2015)
- Forested/Shrub Wetland
- Emergent Wetland
- 5 ft. bathymetric contours
- L Boat Launch

Amphibian Occurrence: DNR Puget Sound Corps  
 Monthly Amphibian Surveys 3/2015 - 9/2015  
 Habitat type: Wetlands Inventory USFWS  
 Bathymetry: Dept. of Ecology

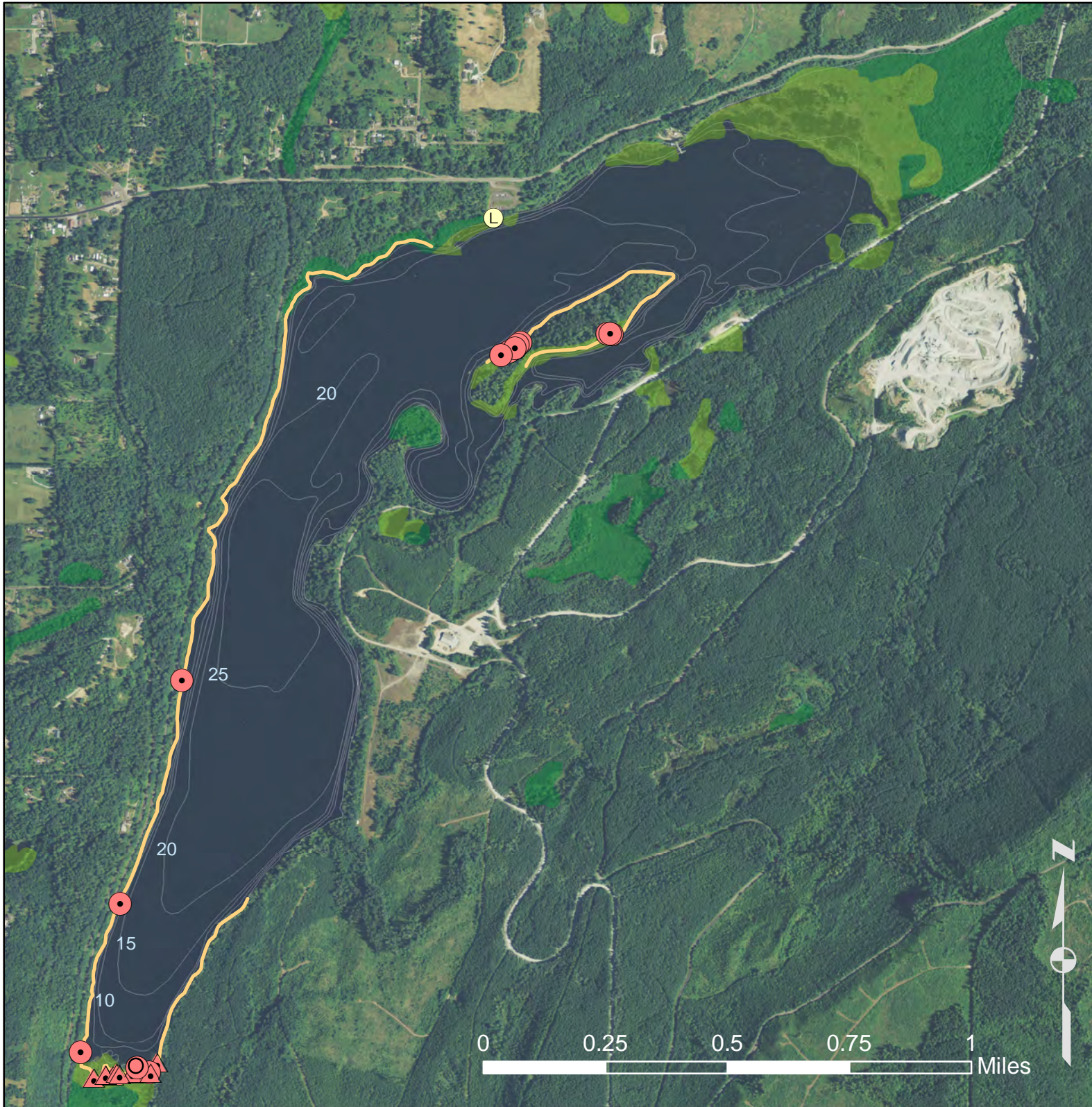
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# Lake Kapowsin

## Non-Native American Bullfrog Occurrence



WASHINGTON STATE DEPARTMENT OF  
**Natural Resources**



### Bullfrog Life Stage

(# Observations)

- Egg Mass (1)
- ▲ Juvenile (11)
- Adult (15)

- Shoreline surveyed monthly (Mar. - Aug. 2015)
- Forested/Shrub Wetland
- Emergent Wetland
- 5 ft. bathymetric contours
- L Boat Launch

Amphibian Occurrence: DNR Puget Sound Corps  
Monthly Amphibian Surveys 3/2015 - 9/2015  
Habitat type: Wetlands Inventory USFWS  
Bathymetry: Dept. of Ecology

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