



# Invasive species ► treatment plan

POW LLA Spring meeting

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Botanist

2023

# Laws and guidance

- ▶ Executive Order 13112 (1999)
- ▶ Forest Plan Standards and Guides
  - ▶ Invasive Species Prevention
  - ▶ Invasive Species Early Detection and Rapid Response (EDRR)
  - ▶ Invasive Species Control and Management

There are relatively few infestations in AK,  
but they can spread rapidly



Canada thistle infestation along I-90

Canada thistle infestation in  
Washington



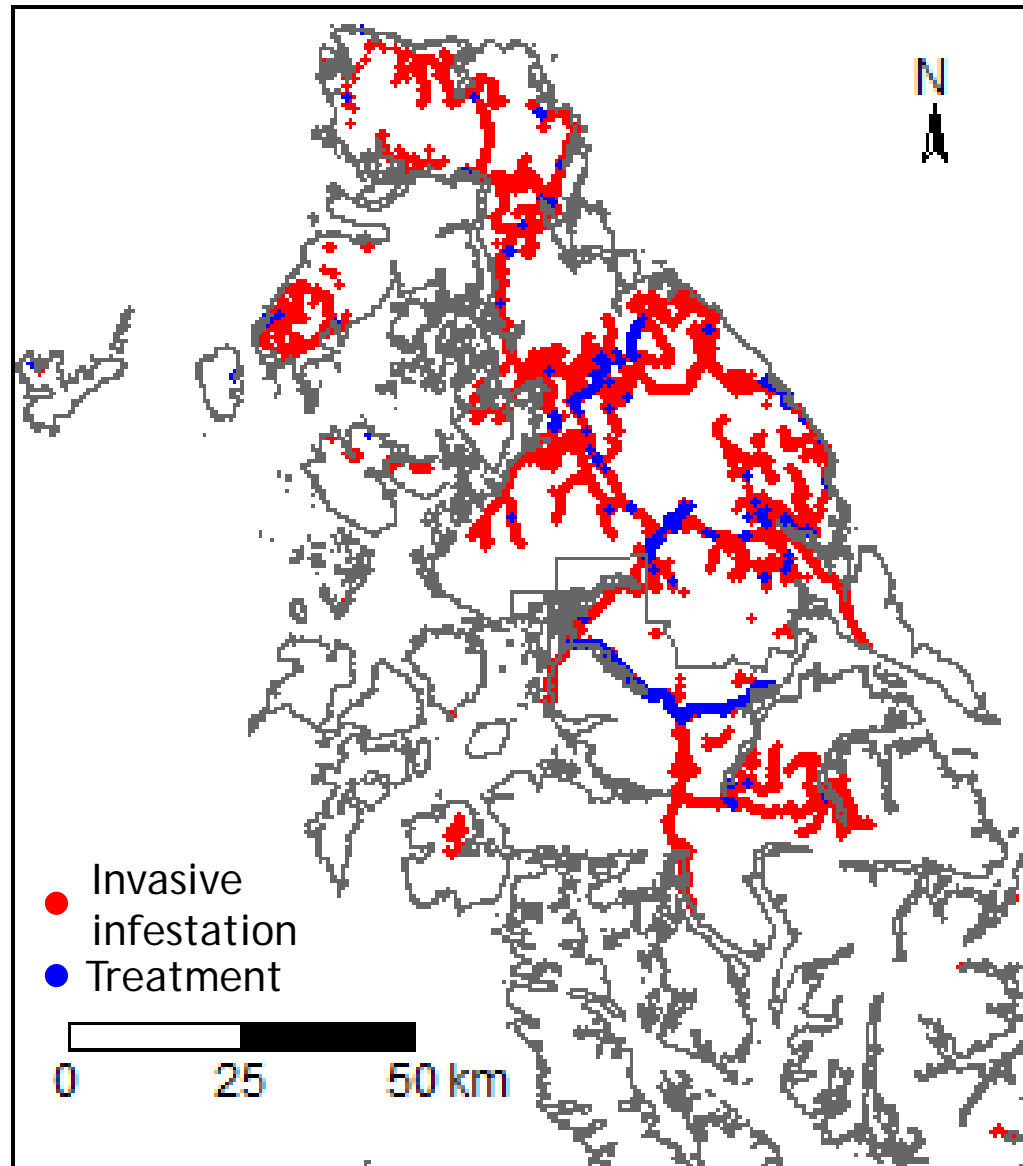
Oxeye Daisy in BC

# Ecosystem impacts

- ▶ Crowd out native plant species
- ▶ Decrease wildlife forage
- ▶ Alter nutrient cycling
- ▶ Change stream temperatures
- ▶ Increase siltation
- ▶ Increase erosion
- ▶ Harmful to fish habitat



# Where are they on POW?



# Priority species on POW

- ▶ Canada thistle
- ▶ Bull thistle
- ▶ Japanese knotweed
- ▶ Spotted knapweed
- ▶ Perennial sowthistle
- ▶ Reed canary grass



# How do they spread?

**Vectors** – gravel, vehicles, people, water, wind

**Vulnerable habitat** – disturbed soil or vegetation, riparian/wetlands, alpine areas

# Management targets

- ▶ Prevention
- ▶ Early detection/rapid response
- ▶ Eradicate if  $<1$  acre
- ▶ Control/contain if  $> 1$  acre
- ▶ Tolerate

# Management practices

- ▶ Manual - hand pulling or tarping
- ▶ Herbicides -cleared to use herbicides under POW LLA

# Herbicide treatments

- ▶ How are we mitigating risks?
  1. apply the lowest effective dose
  2. apply in weather conditions that minimize off target drift (low winds) and maximize effectiveness (sunny, dry)
  3. Herbicide treated areas will be posted at all possible entry points
  4. Herbicide treatments contain a dye so you can see where application has occurred
  5. Restrictions on applying near water sources/food sources/bees



Proper Calibration and Operation of Backpack and Hand Can Sprayers | Ohioline (osu.edu)


# Priority treatments

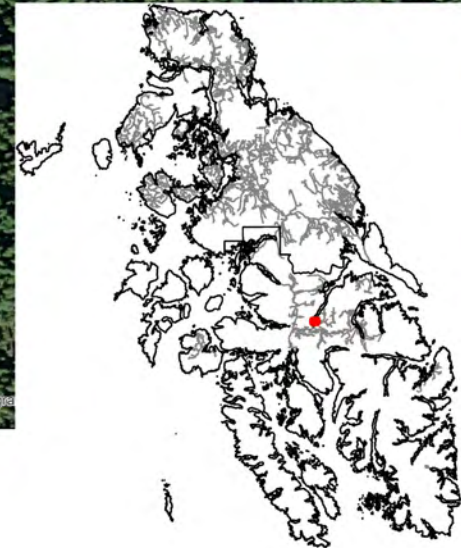


# Japanese knotweed and purple foxglove at Twelve Mile arm

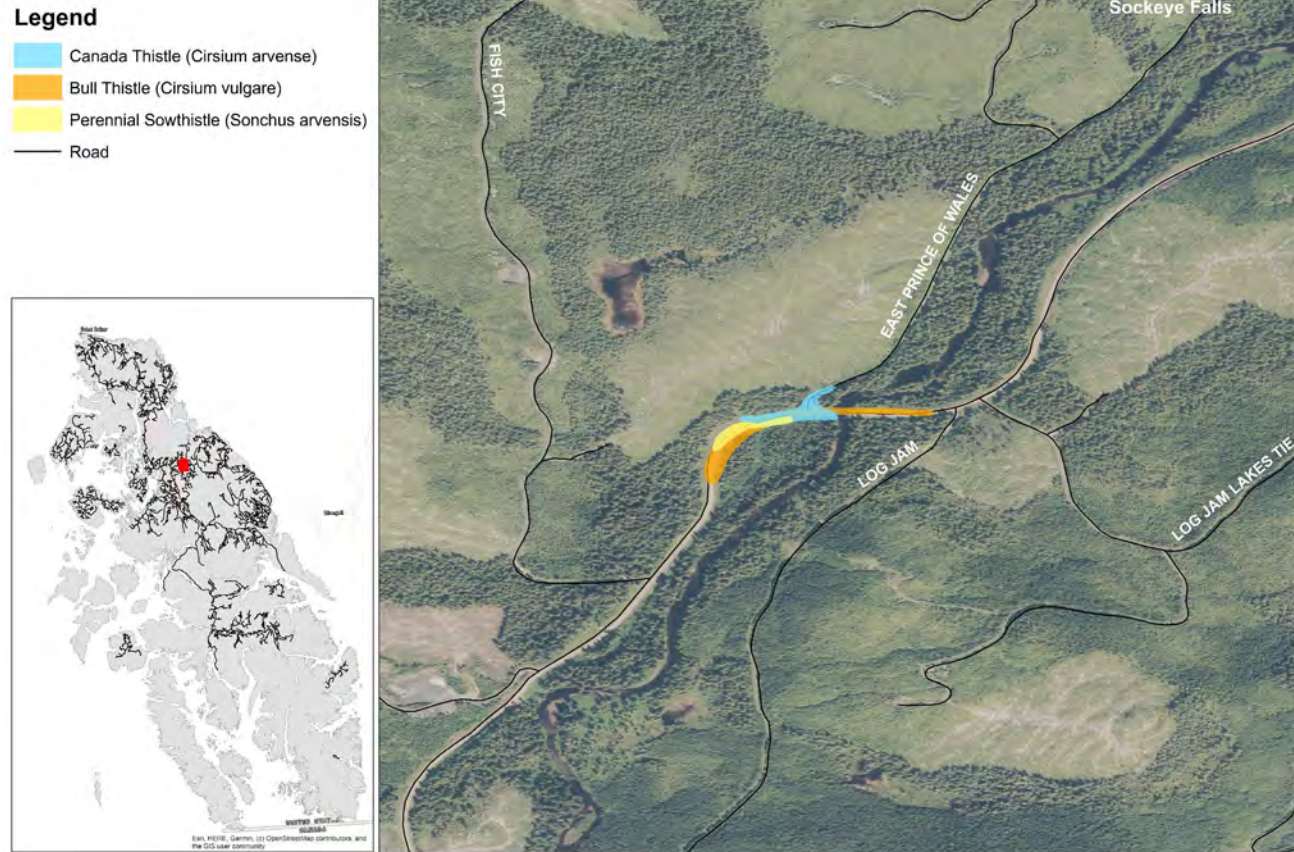


## Legend

 Polygonum cuspidatum



# Proposed Bull Thistle, Canada Thistle, and Perennial Sowthistle Treatment along East Prince of Wales Road



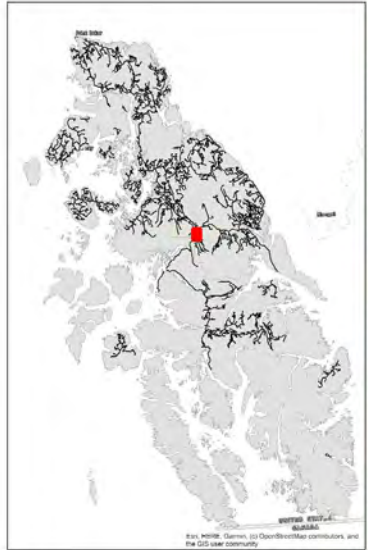
Manual treatment of 3.0 acres of total 4.85 acres in 2021 (map on the right)



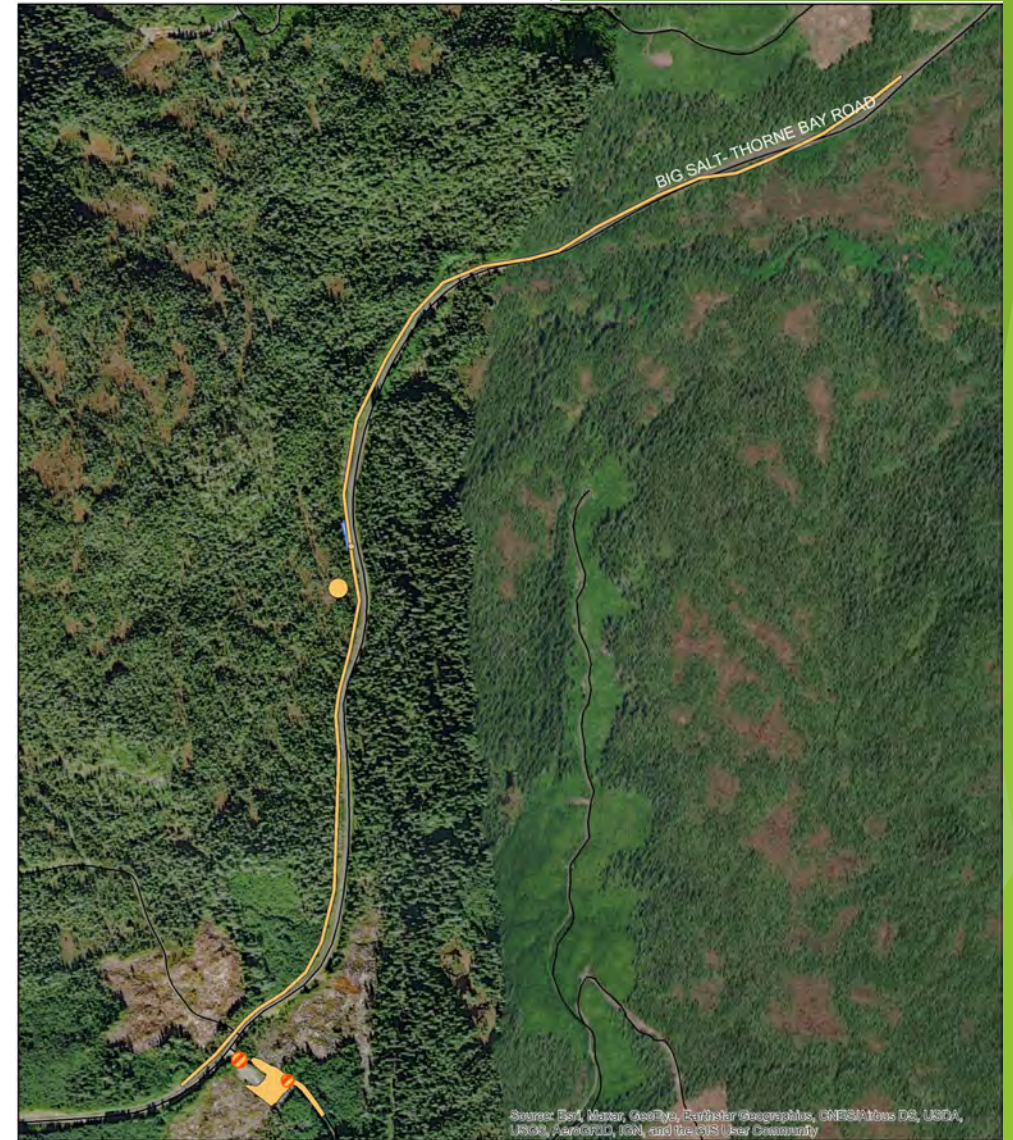
## Proposed Bull Thistle and Canada Thistle along Big Salt - Thorne Bay Road and NFS Road 203000W

### Legend

- Canada Thistle (*Cirsium arvense*)
- Bull Thistle (*Cirsium vulgare*)
- Road



Treatment of 0.5 acres of 11.85 total acres treated in 2021.  
No treatment in 2022. Treatment planned for 2023.

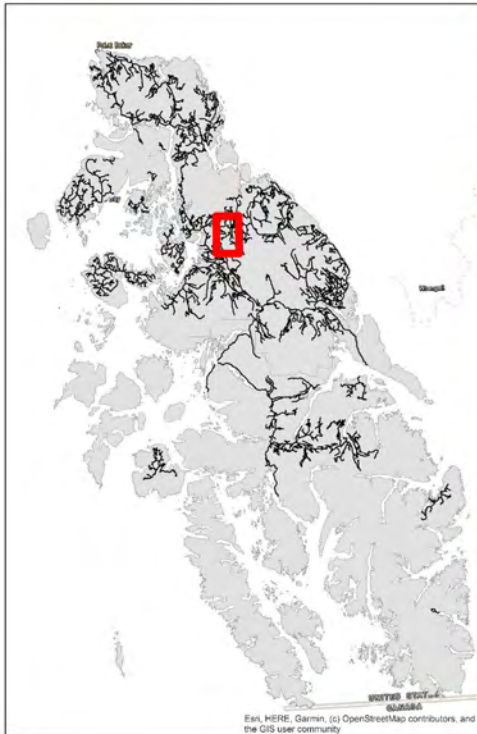


▨ Invasive Plant Treatments ■ *Cirsium arvense* ■ *Cirsium vulgare*

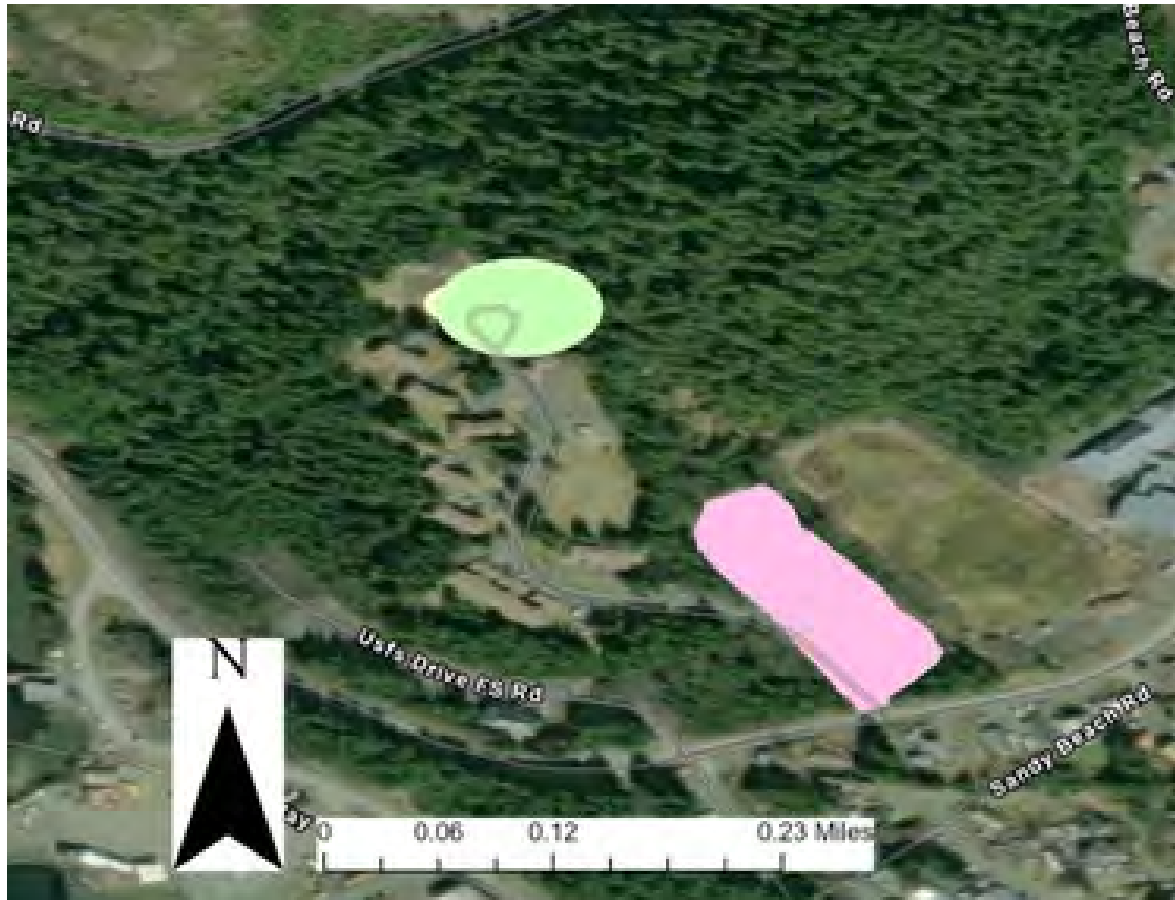
# Canada Thistle and Perennial sowthistle along NFS 2340000, manually treated in 2021

## Legend

- Perennial sowthistle (*Sonchus arvensis*)
- Canada thistle (*Cirsium arvense*)
- Road



Bull Thistle, orange hawkweed, reed canary grass and oxeye daisy at Federal Way

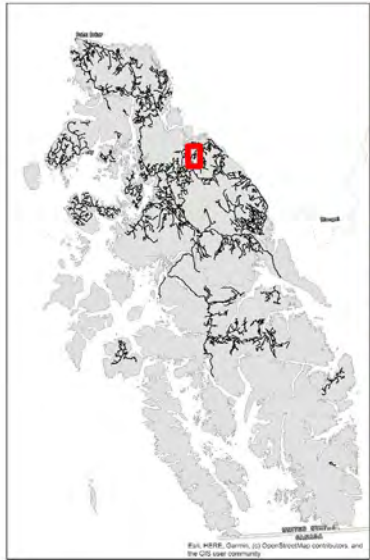


Manual treatment of 1 acre of bull thistle

## Proposed Bull Thistle along Coffman Cove Road

### Legend

- Bull Thistle (*Cirsium vulgare*)
- Road



Manual treatment of 4.7 acres of 23.4 acres in 2021;  
No treatment in 2022; planned treatment in 2023



### Legend

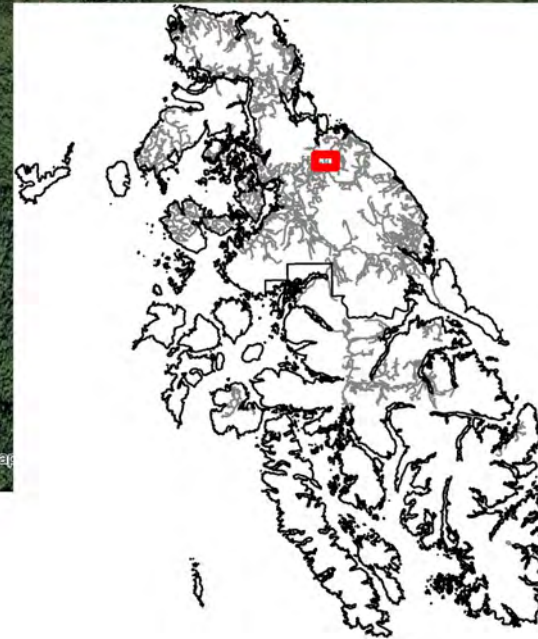
- Invasive Plant Treatments
- Cirsium vulgare*

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

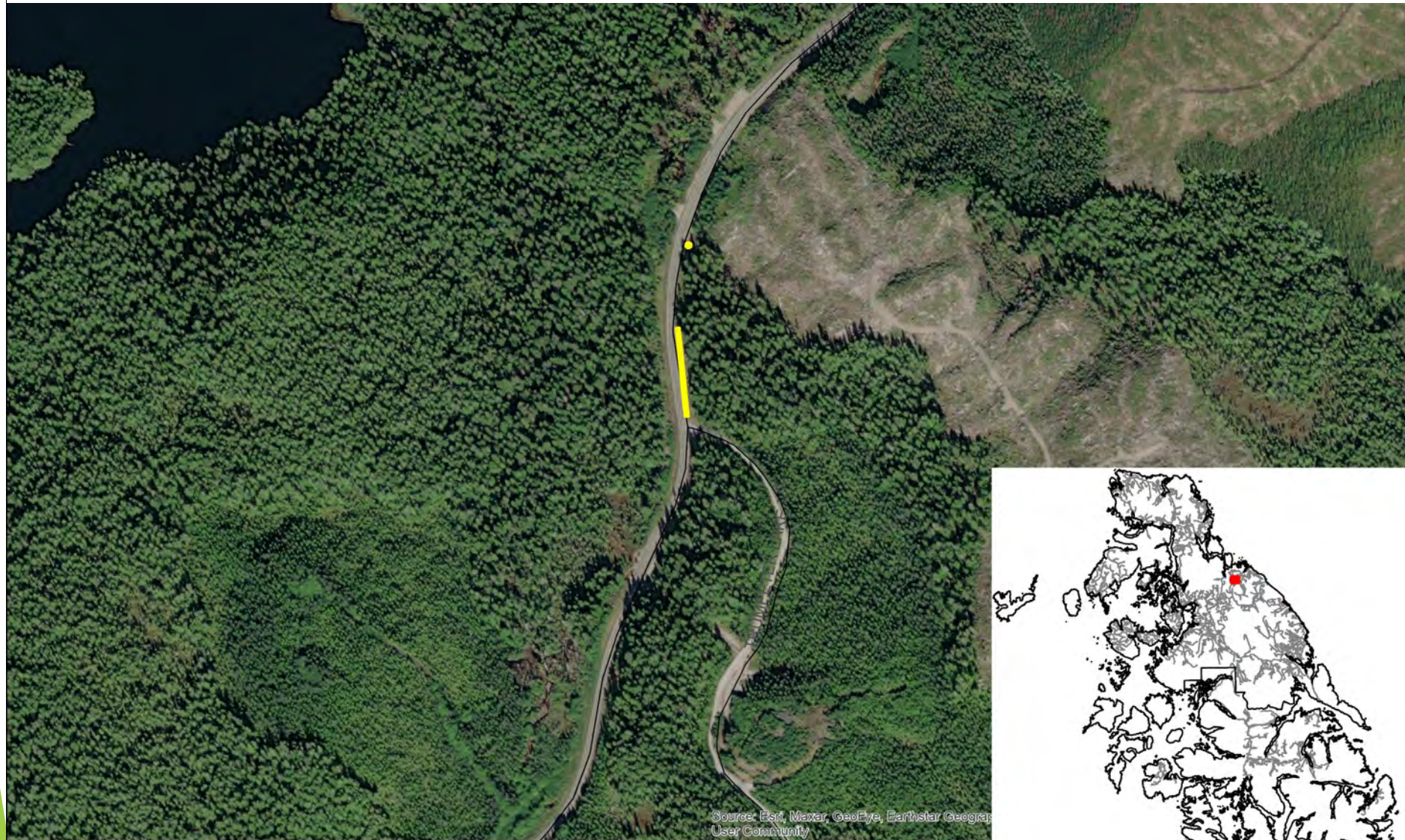
The main map is an aerial photograph showing a dense forested area. A road, labeled 'SWEET COVE SPUR ONE', runs vertically through the center. A yellow highlight is placed on this road. To the left of the road, there are two labels: 'SWEET COVE 855' and 'SWEET COVE SPUR TWO'. The terrain is rugged with various shades of green and brown, indicating different vegetation and possibly water bodies or cleared areas. In the bottom right corner, there is a small inset map showing a larger geographical area with a red box indicating the location of the main map.

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNR/Airphoto, IGN, DAAC, Swire

 Sweetclover  
 Road



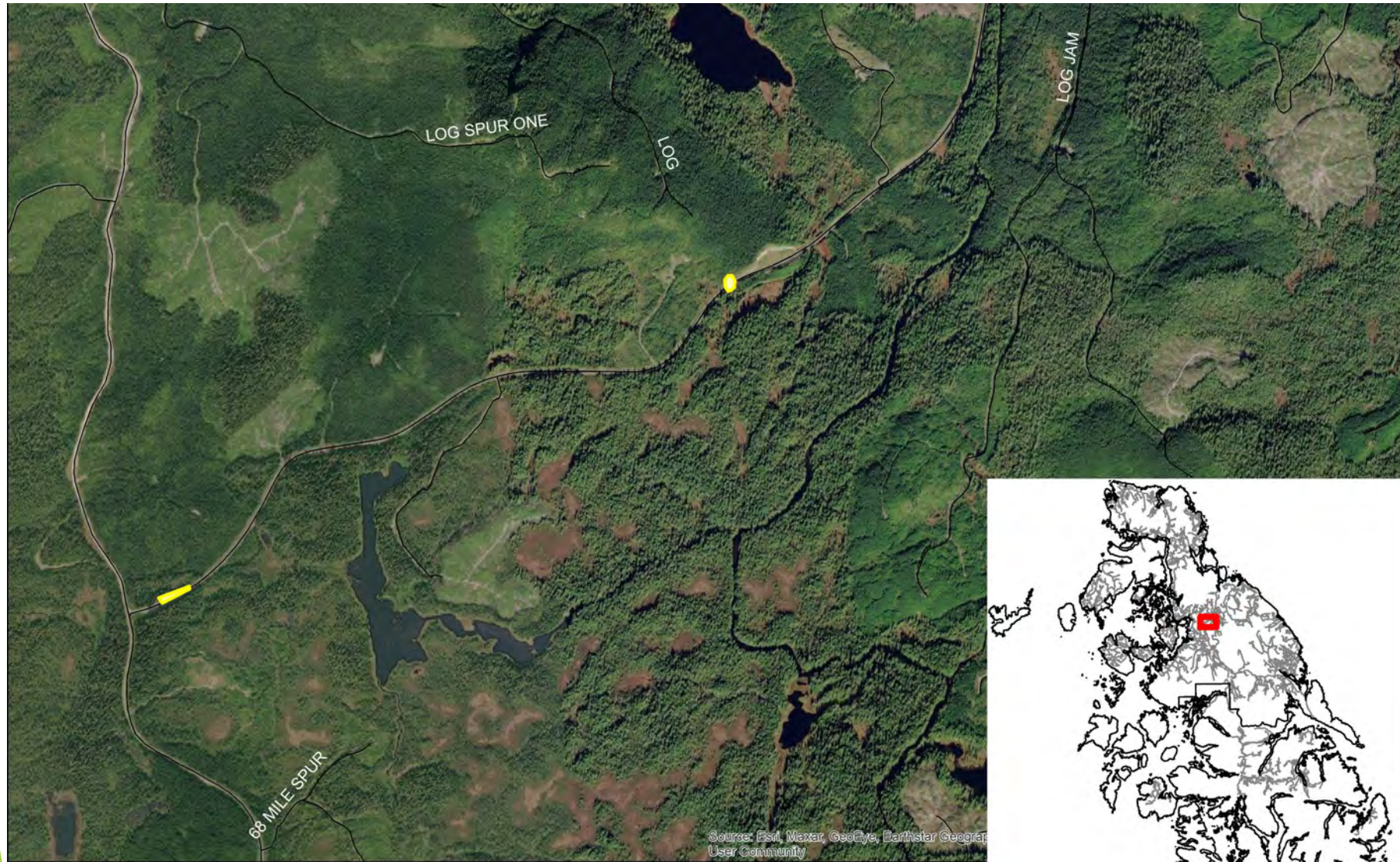
# Proposed Treatment of Sweetclover Along Coffman Cove Road



## Legend

-  Sweetclover
-  Road

# Proposed Treatment of Sweetclover Along Coffman Cove Road









## Legend

-  Sweetclover
-  Road



# Proposed Spotted Knapweed Treatments Near Long Lake Road







## Legend

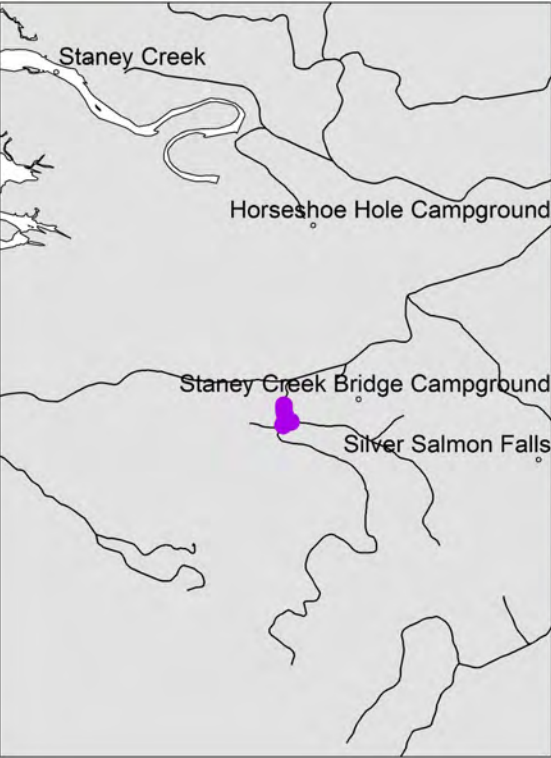
-  *Centaurea stoebe* ssp. *micranthos*
-  *Cirsium arvense*
-  *Cirsium vulgare*
-  *Melilotus officinalis*
-  *Polygonum cuspidatum*
-  *Sonchus arvensis*



# Proposed Treatment of Spotted Knapweed along North Twin Road

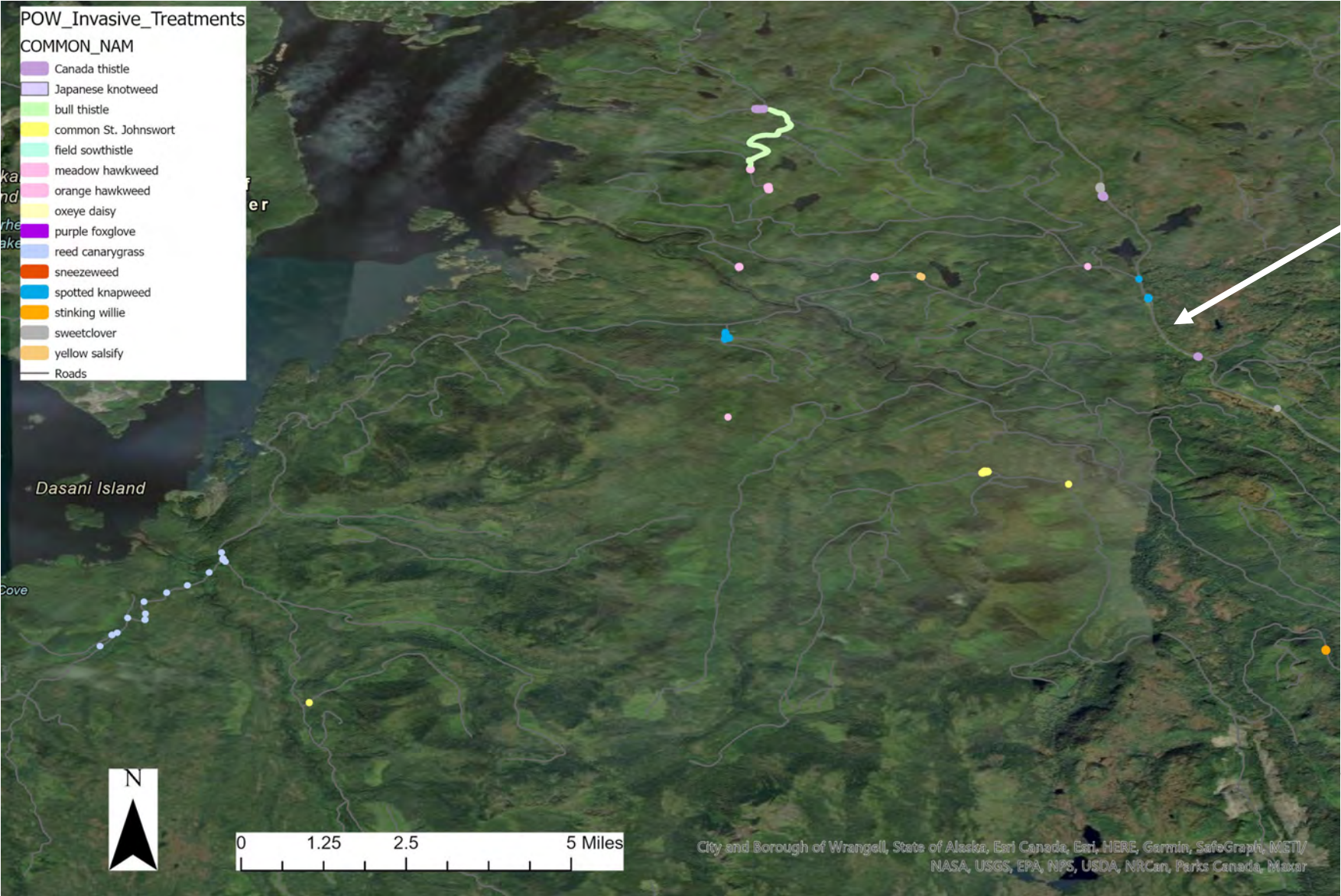
## Legend

-  *Centaurea stoebe* ssp. *micranthos*
-  *Cirsium arvense*
-  *Cirsium vulgare*
-  *Melilotus officinalis*
-  *Polygonum cuspidatum*
-  *Sonchus arvensis*



# Additional Treatments

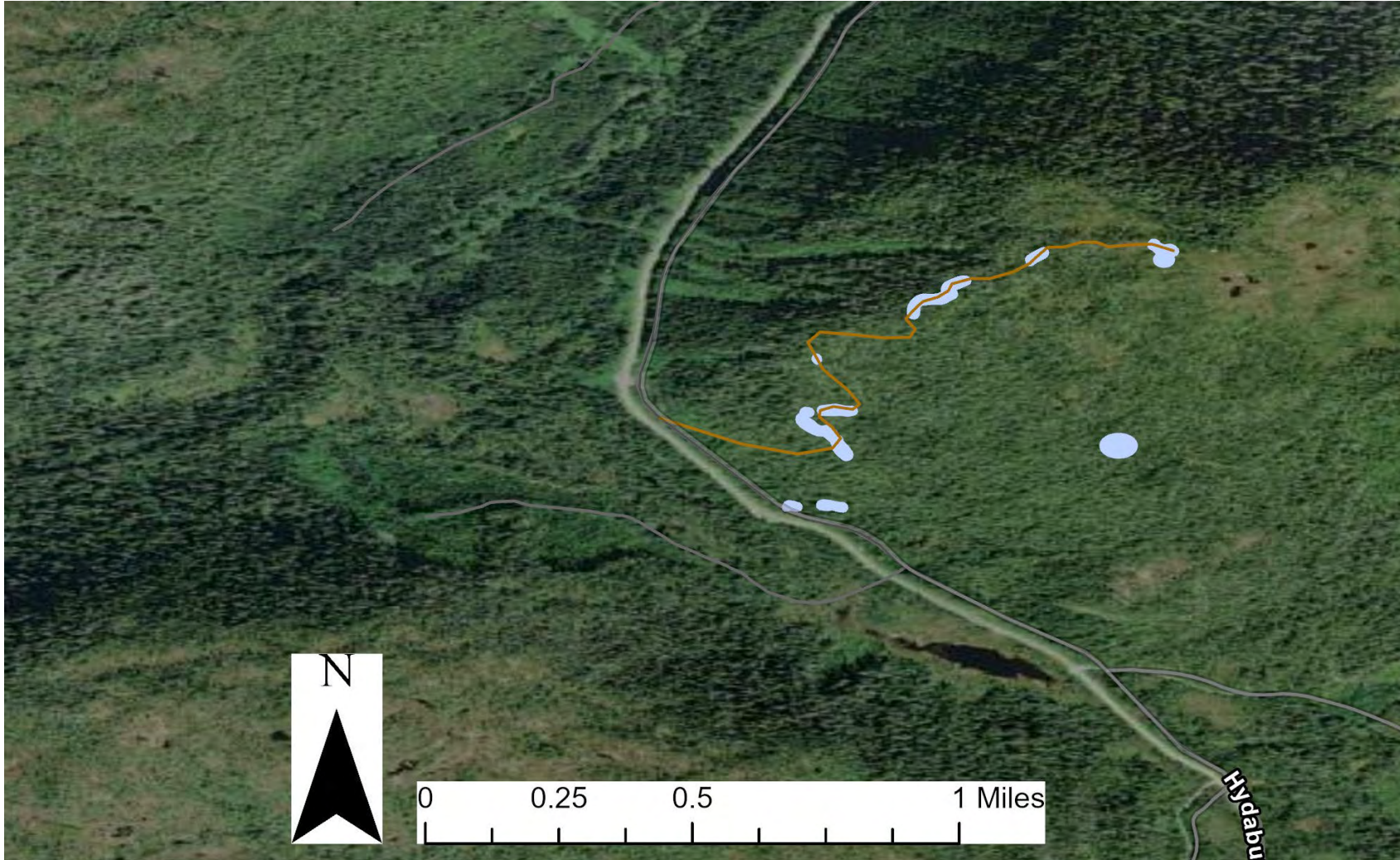
# Road system in Staney/Shaheen areas



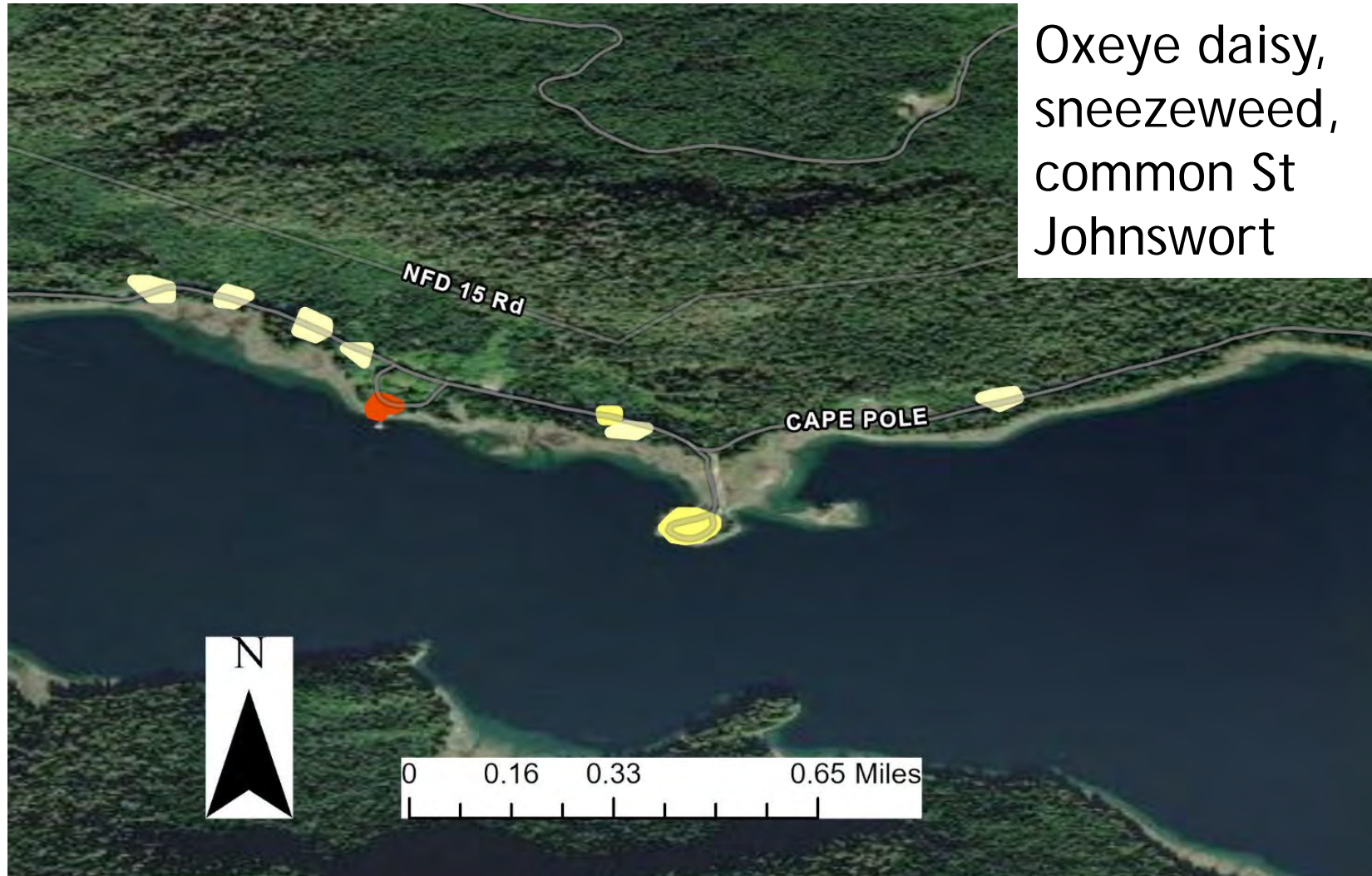
North Prince of Wales Road

Bull thistle, orange hawkweed, spotted knapweed, bull thistle, Canada thistle, reed canarygrass, stinking willie, yellow salsify, common St Johnswort, sweet clover

# One Duck trail reed canarygrass



# El Cap recreation area



# Kosciusko reed canary grass, bull thistle, and Canada Thistle



# Questions or comments?

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