

Invasive Plant Species Treatment on Prince of Wales

Prince of Wales Ranger District

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What is an invasive species?

Per Executive Order 13112: an invasive species is defined as a species that is

1. Non-native (or alien) to the ecosystem under consideration and
2. Whose introduction causes or is likely to cause economic or environmental harm or harm to human health

Invasive species can be plants, animals, or other organisms (e.g. microbes).

How do they spread?

- ▶ Humans
- ▶ Wind
- ▶ Water
- ▶ Animals

Laws and Regulations

- ▶ Executive Order 13112 (1999) directs federal agencies to (i) prevent the introduction of invasives species; (ii) detect and respond rapidly and control populations of such species in an effective and environmentally sound manner.
- ▶ Forest Plan Standards and Guides
 - ▶ Invasive Species Prevention: for all proposed projects or activities, the responsible line officer will determine the risk of invasive species (flora and fauna) introduction or spread and the need to implement appropriate mitigation measures.
 - ▶ Invasive Species Early Detection and Rapid Response (EDRR): treat priority species infestations as practicably as possible using an integrated pest management approach
 - ▶ Invasive Species Control and Management: reduce population sizes and/or limit the spread of Priority Invasive Species on the Tongass National Forest through the use of an integrated pest management approach.

Impacts on Wildlife

- ▶ Loss of food and forage
- ▶ Loss of suitable nesting habitat
- ▶ Increased predation
- ▶ Barrier to fish migration
- ▶ Reduction to spawning area
- ▶ Decreases wildlife diversity
- ▶ Competition for pollinators
- ▶ Changes in waterflow and availability
- ▶ Decrease in nutrition

Common invasive plant treatment options

- ▶ Manual pulling
- ▶ Mechanical
- ▶ Cultural controls
- ▶ Tarping
- ▶ Solarization
- ▶ Chemical/Herbicide

Priority invasive plant species on POW

- ▶ Bull thistle
- ▶ Canada thistle
- ▶ Japanese knotweed
- ▶ Spotted knapweed
- ▶ Sweetclover

Thistles

- ▶ Bull thistle (*Cirsium vulgare*)
 - ▶ AKEPIC rank: 76
 - ▶ Biennial from fleshy taproot
 - ▶ Larger flowers than Canada thistle
 - ▶ Very spiny leaves and stem
 - ▶ Manual, mechanical, and chemical treatments
- ▶ Canada thistle (*Cirsium arvense*)
 - ▶ AKEPIC rank: 61
 - ▶ Perennial
 - ▶ Curly leaves with light purple flowers
 - ▶ Forms colonies via extensive root systems
 - ▶ Manual, mechanical, and chemical treatments





Japanese Knotweed

- ▶ *Polygonum cuspidatum*
- ▶ AKEPIC rank: 87
- ▶ Perennial with rhizomes
- ▶ Stems up to 10 ft tall, broadly triangular-ovate leaves with satiny texture
- ▶ Resembles bamboo, but has leaves
- ▶ Produces branches of white flowers
- ▶ Proposed treatment: Chemical



Spotted knotweed

- ▶ *Centaurea stoebe* ssp. *micranthos*
- ▶ AKEPIC rank: 86
- ▶ Biennial to short lived perennial
- ▶ Branched stems with rosette of leaves
- ▶ Stem leaves are alternate and narrowly divided below and undivided above
- ▶ Purple flowers
- ▶ Forms dense stands when uncontrolled
- ▶ Manual, mechanical, and chemical treatments

A photograph of a sweetclover plant (Melilotus officinalis) with several upright stems bearing long, raceme-like clusters of small yellow flowers. The background is a blurred green field. The image is partially obscured by a dark blue and green geometric overlay on the right side of the slide.

Sweetclover

- ▶ *Melilotus officinalis*
- ▶ winter annual, biennial, or perennial legume
- ▶ Trifoliate leaves
- ▶ Yellow flowers growing on a stem
- ▶ Ovate pods containing 1 - 2 seeds
- ▶ Manual or chemical treatment planned for 2022

Perennial Sowthistle

- ▶ *Sonchus arvensis*
- ▶ Perennial from rhizomes
- ▶ Plant exudes white milk when stem is broken
- ▶ Basal rosette of dandelion-like leaves with clasping base
- ▶ Stems branched only at the top
- ▶ Yellow flowerheads
- ▶ Manual, mechanical, and chemical treatments



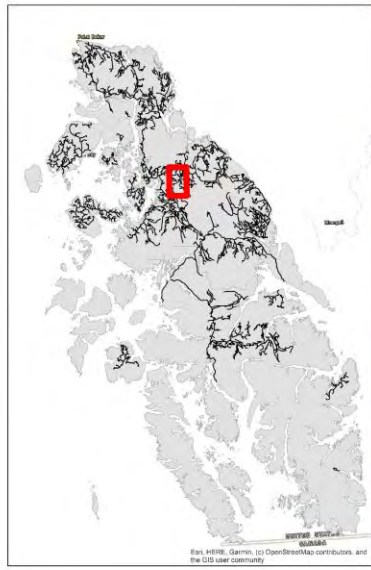
Join the invasive plants breakout room to learn more about treatments

- ▶ 2021 treatments
 - ▶ East Prince of Wales Road - 3 acres of bull thistle, Canada thistle, and perennial sowthistle
 - ▶ Big Salt - Thorne Bay Road - 0.5 acres of Canada thistle and bull thistle
 - ▶ Federal Way - 1 acre of bull thistle
 - ▶ Coffman Cove Road - 4.7 acres of bull thistle
 - ▶ Twelvemile Arm knotweed
 - ▶ NFS 2340000 Road - 3.5 acres of bull thistle and Canada thistle
- ▶ 2022
 - ▶ Sweetclover along Coffman Cove Road and Big Salt - Thorne Bay Road

2021 Proposed Canada Thistle and Perennial Sowthistle Treatment along NFS 2340000 Road

Legend

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



Manual treatment of 3.5 acres of total 3.5 acres;
treatment to continue into 2022

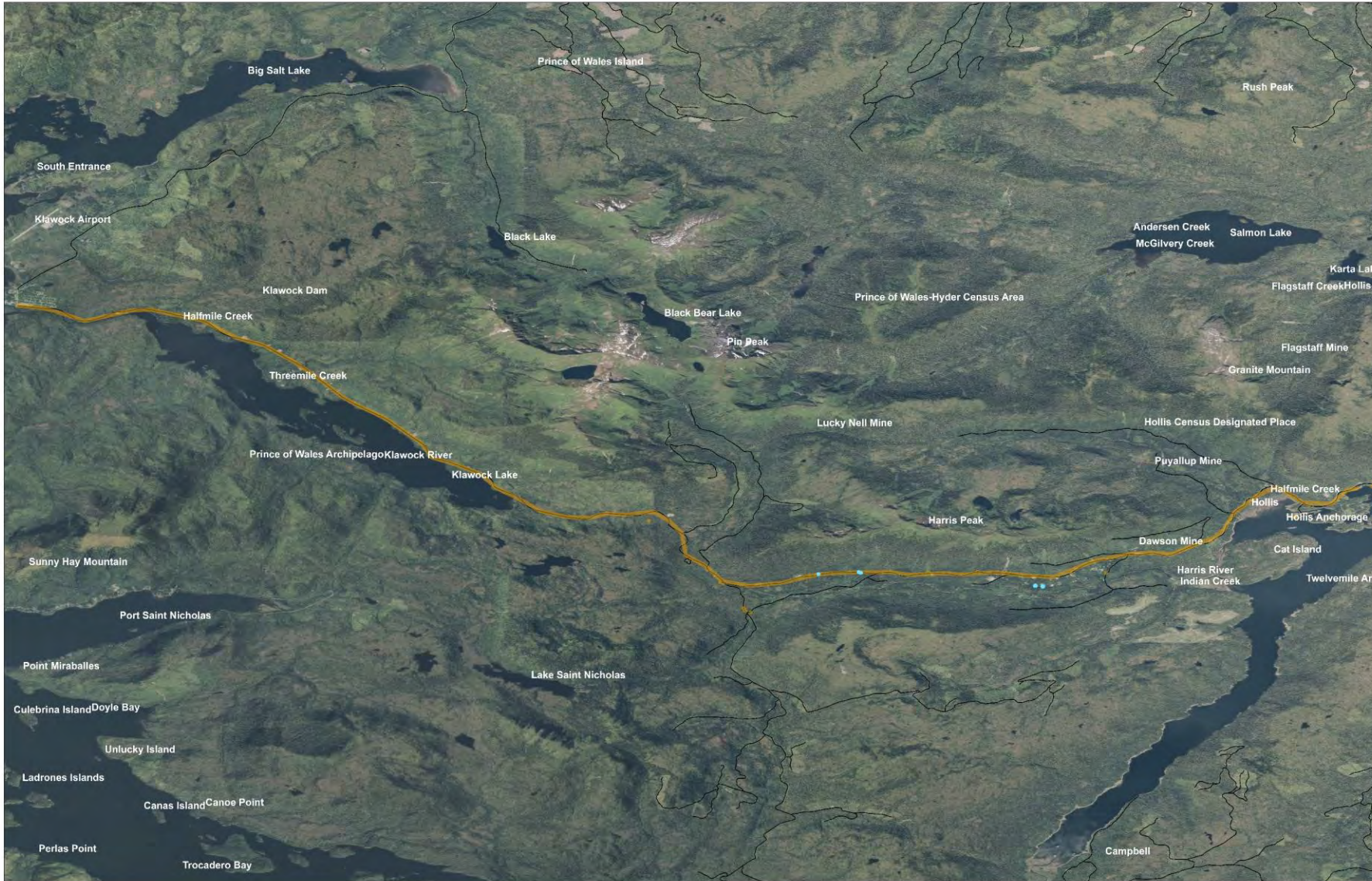


Legend

- Invasive Plant Treatments
- Perennial sowthistle (*Sonchus arvensis*)
- Canada thistle (*Cirsium arvense*)




Source: Paul Walker, GeoPye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

2021 Proposed Thistle Treatment Along Craig - Klawock - Harris Road



No treatment updates

Legend

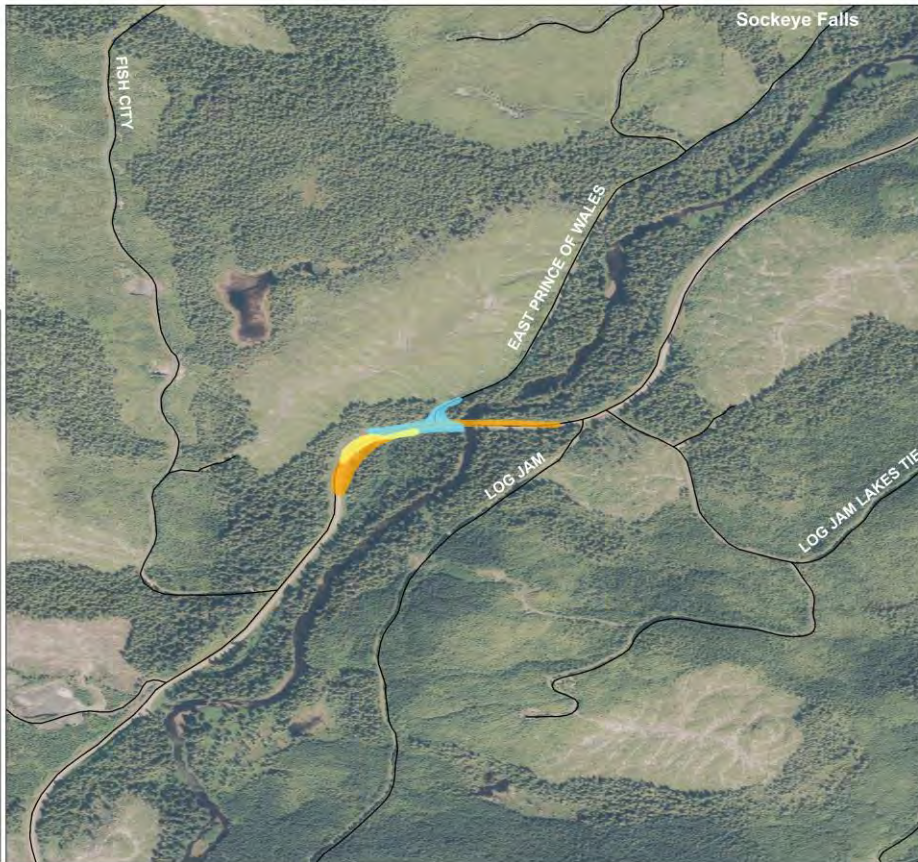
-  Canada Thistle (*Cirsium arvense*)
-  Bull Thistle (*Cirsium vulgare*)
-  Road



2021 Proposed Canada Thistle, Bull Thistle, and Perennial Sowthistle Treatments along East Prince of Wales Road

Legend

- Canada Thistle (*Cirsium arvense*)
- Bull Thistle (*Cirsium vulgare*)
- Perennial Sowthistle (*Sonchus arvensis*)
- Road



Manual treatment of 3.0 acres of total 4.85 acres
Treatment to continue into 2022



Legend

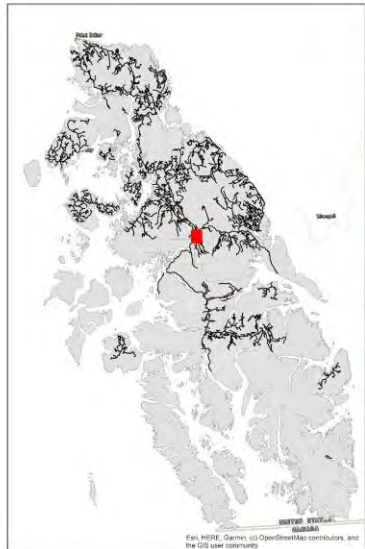
- Invasive Plant Treatments
- Canada Thistle (*Cirsium arvense*)
- Bull Thistle (*Cirsium vulgare*)
- Perennial sowthistle (*Sonchus arvensis*)

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

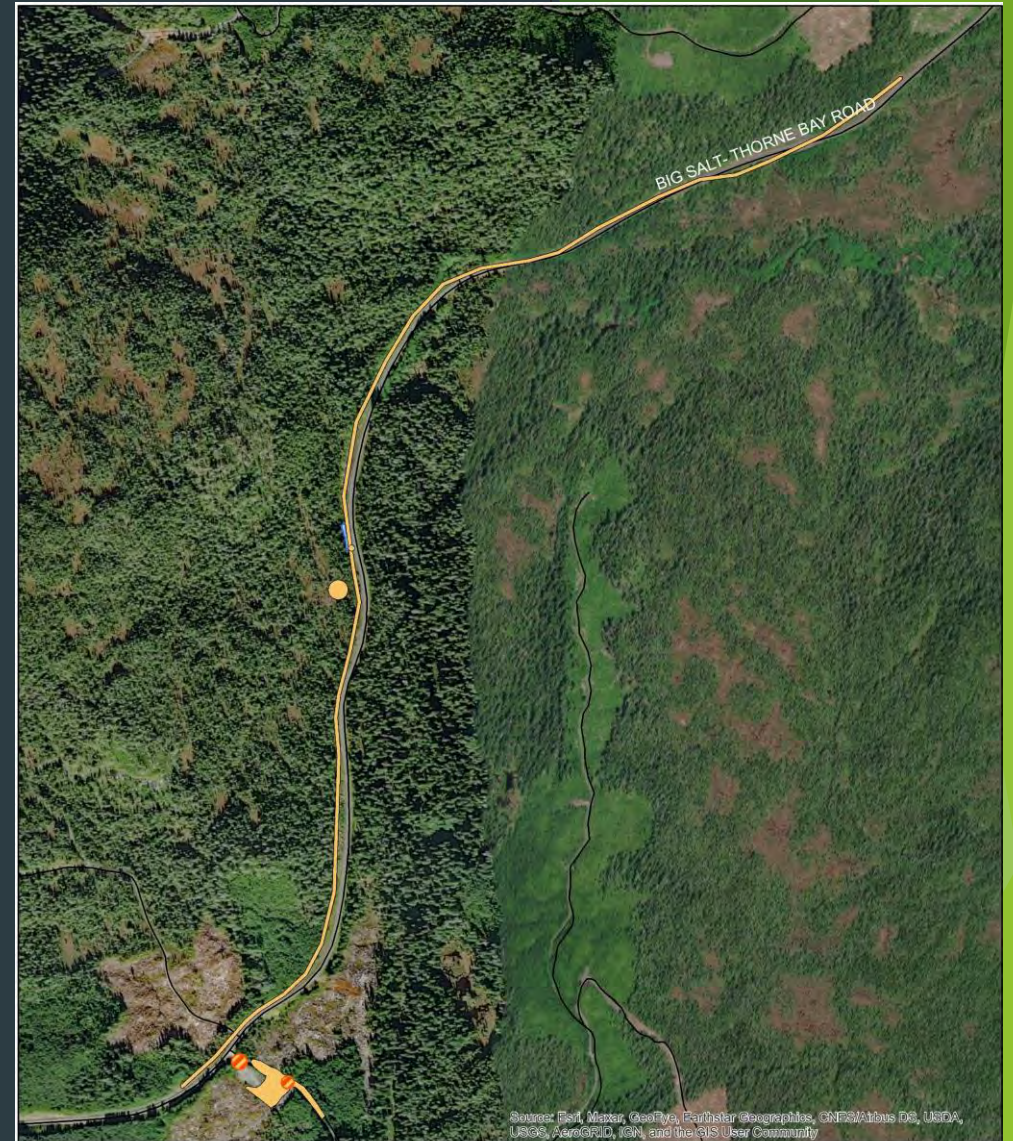
2021 Proposed Bull Thistle and Canada Thistle along Big Salt - Thorne Bay Road and NFS Road 203000W

Legend

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





Treatment of 0.5 acres of 11.85 total acres
Treatment to be continued into 2022

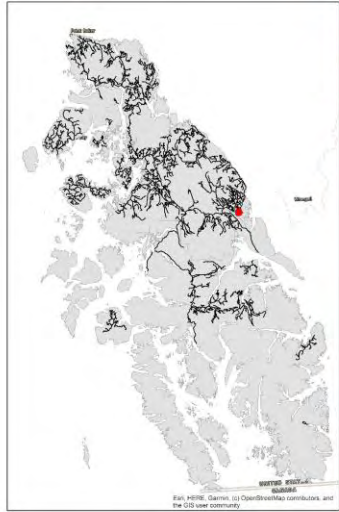


- Invasive Plant Treatments
- Cirsium arvense*
- Cirsium vulgare*



2021 Proposed Bull Thistle Treatment at Federal Cave Road

Legend

-  Bull Thistle (*Cirsium vulgare*)
-  Road



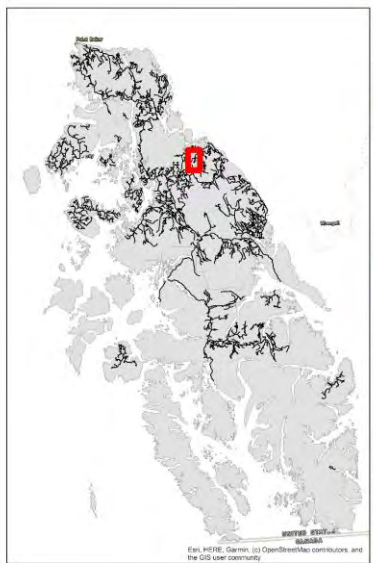
Legend

-  Invasive Plant Treatments
-  *Cirsium vulgare*

Manual treatment of 1 acre
Treatment to continue in 2022



2021 Proposed Bull Thistle along Coffman Cove Road

- Legend**
-  Bull Thistle (*Cirsium vulgare*)
 -  Road



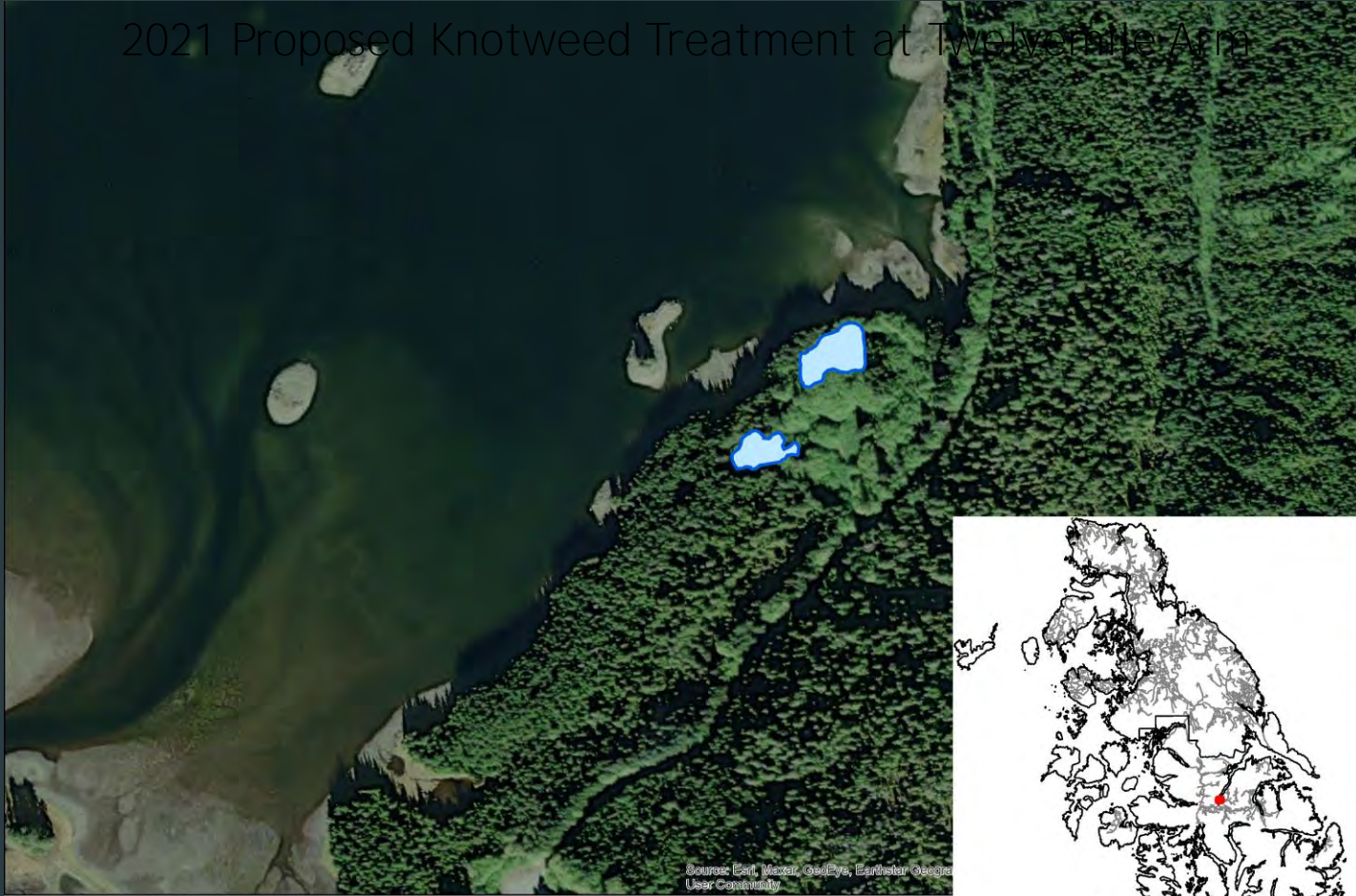
Manual treatment of 4.7 acres of 23.4 acres
Treatment to continue into 2022




- Legend**
-  Invasive Plant Treatments
 -  *Cirsium vulgare*

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

2021 Proposed Knotweed Treatment at Twelvemile Arm




Legend

 Polygonum cuspidatum

2021 Knotweed Treatment at Twelvemile Arm



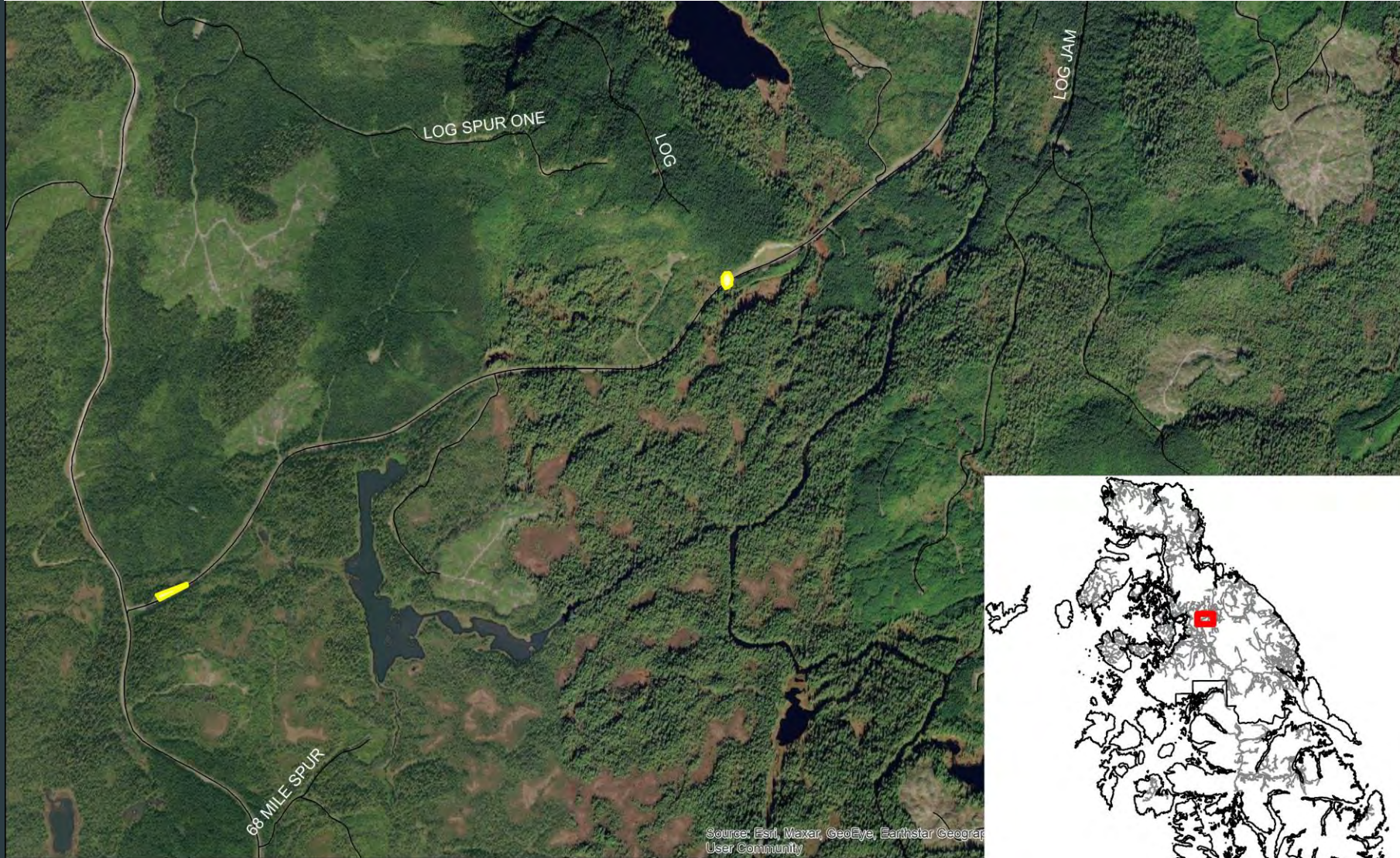
Legend

 Polygonum cuspidatum

 Invasive Plant Treatments

Treatment to be continued in 2022

Proposed FY22 Treatment of Sweetclover Along Coffman Cove Road



Legend

-  Sweetclover
-  Road

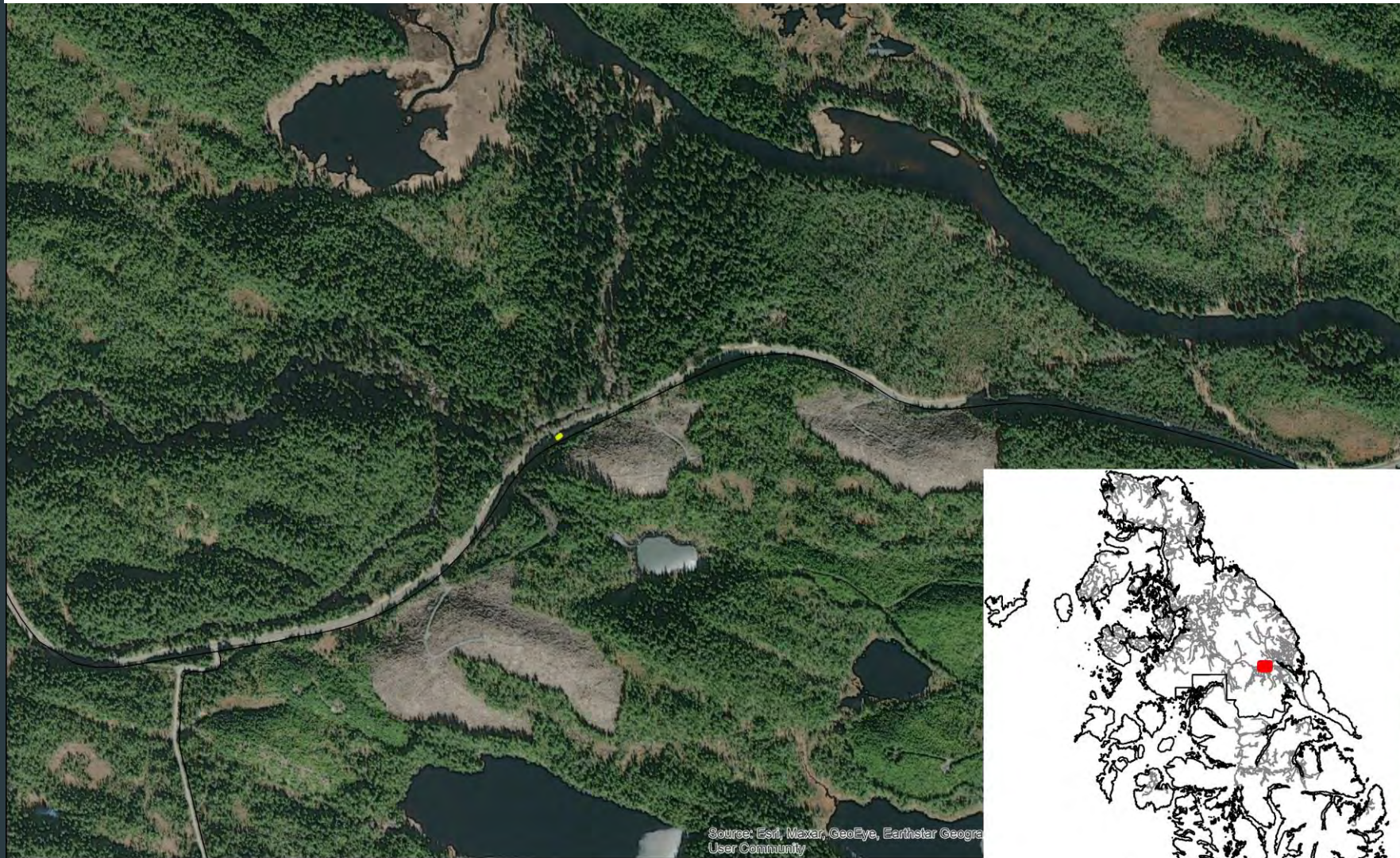
Proposed FY 22 Treatment of Sweetclover along Big Salt - Thorne Bay Road



Legend

- Road
- Sweetclover

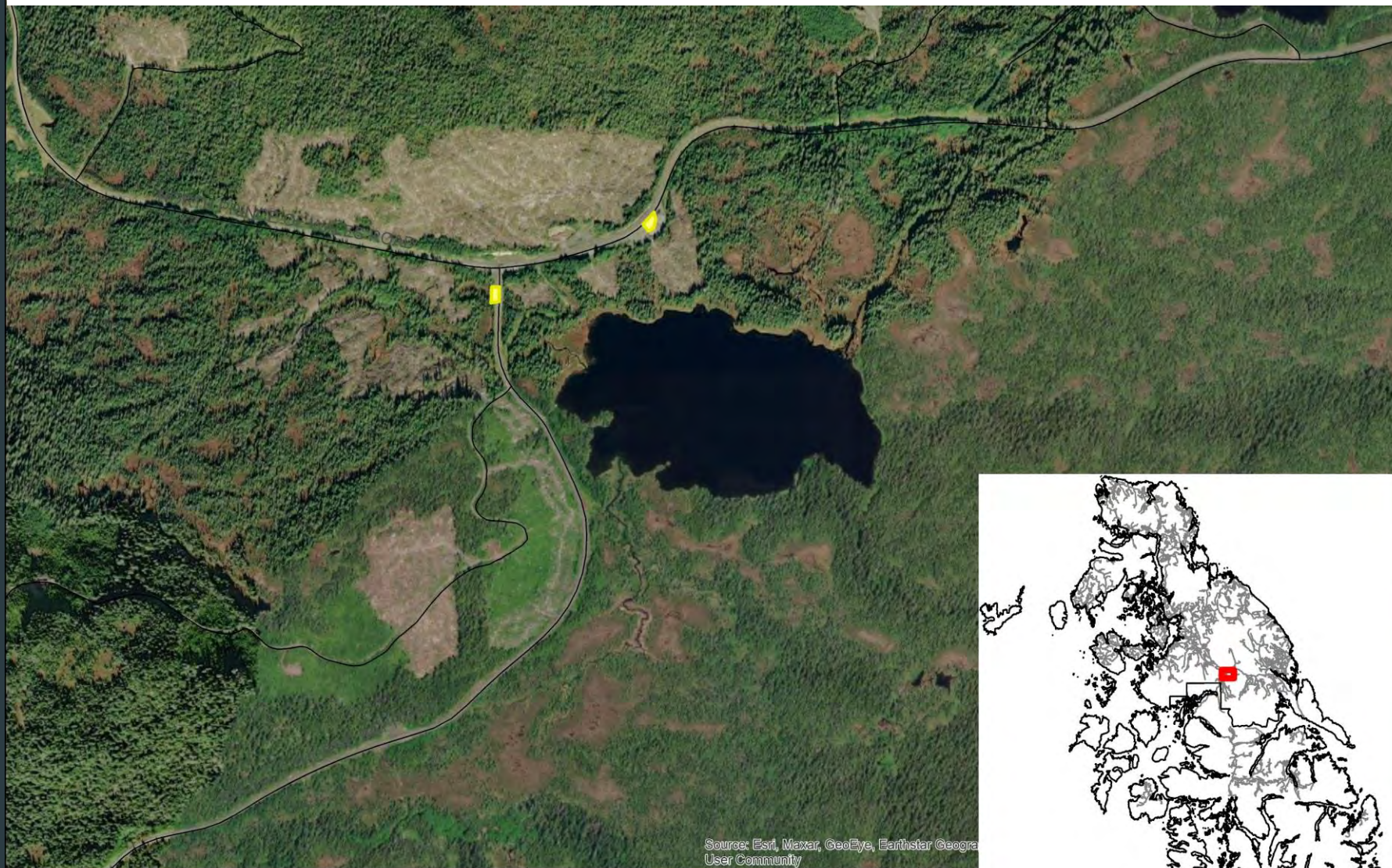
Proposed FY 22 Treatment of Sweetclover along Big Salt - Thorne Bay Road



Legend

- Road
- Sweetclover

Proposed FY 22 Treatment of Sweetclover along Big Salt - Thorne Bay Road



Legend

- Road
- Sweetclover