



# Rusty Crayfish Control in Lake County



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Lake County SWCD

# Crayfish Control Efforts



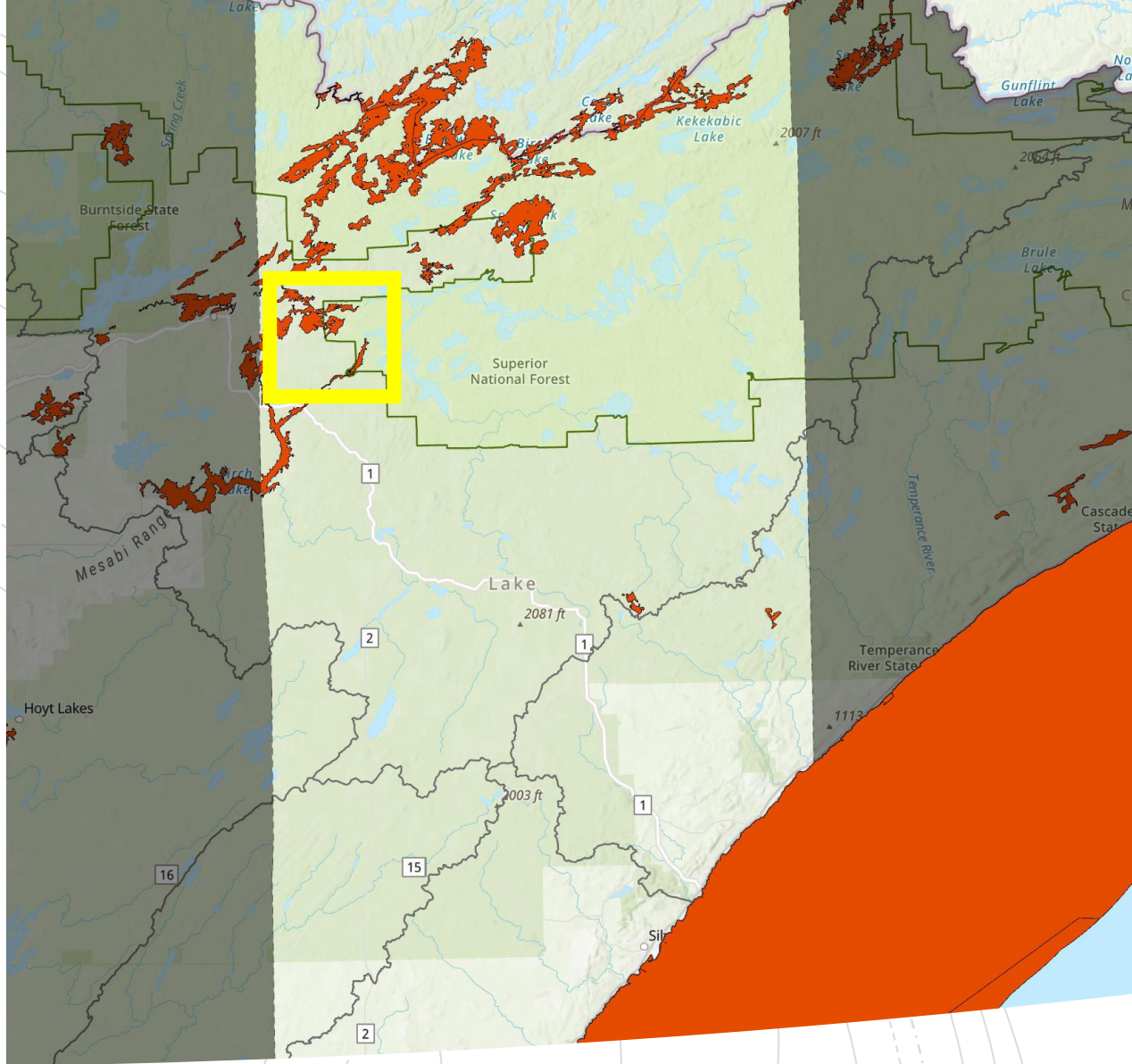
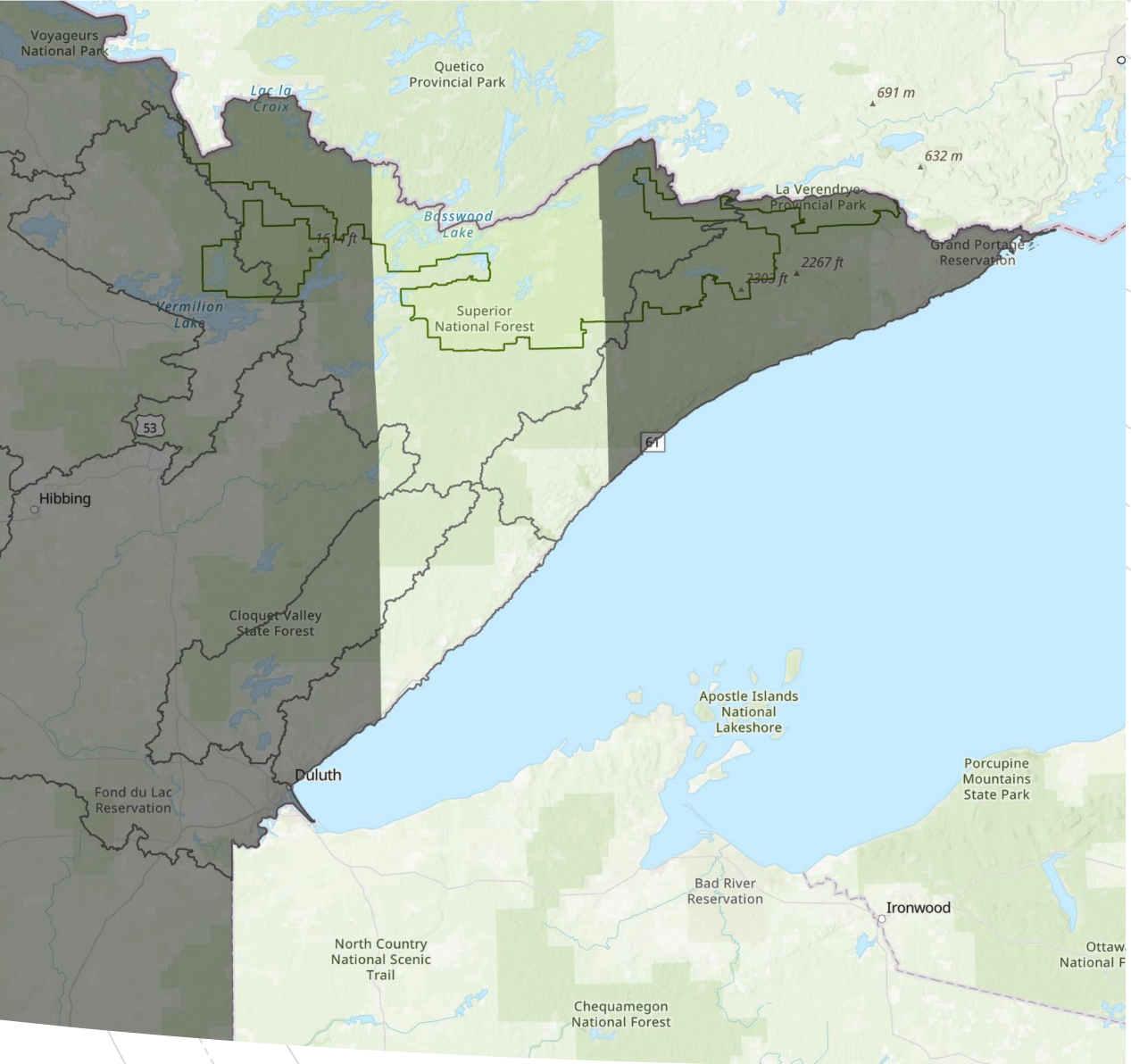
Intensive Trapping on North & South Kawishiwi Rivers



Lake Association Trapping



Intensive Trapping on Burntside River

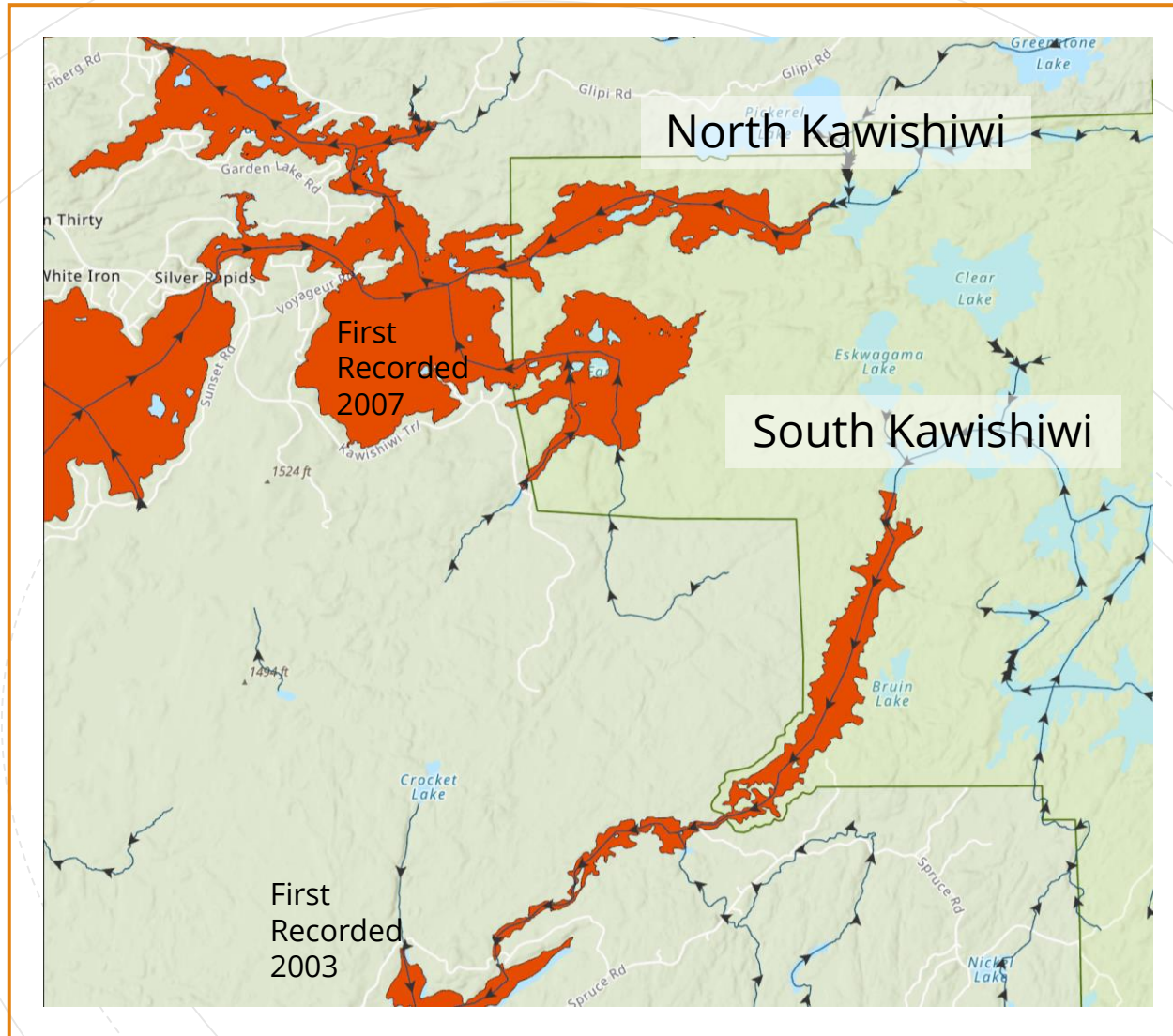


The status of invasive crayfish in Lake County

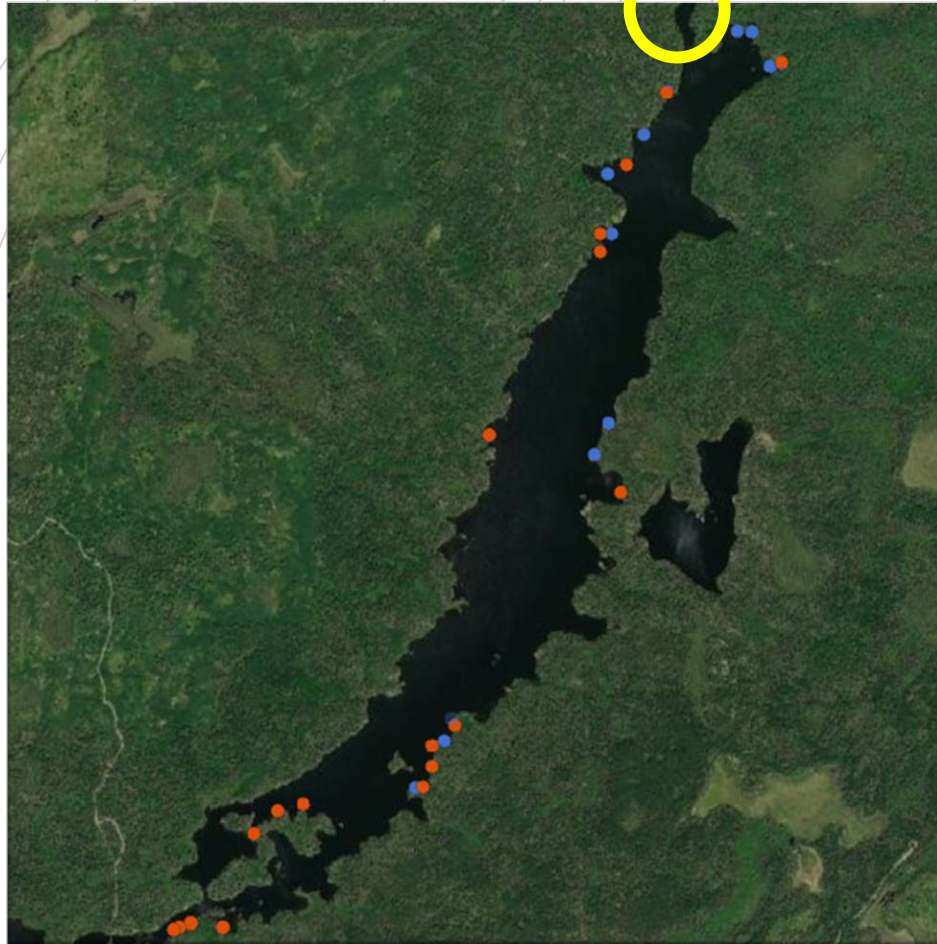
# Intensive Trapping on North & South Kawishiwi River

## Goals:

- Halt or at least deter the spread of rusty crayfish into the Boundary Waters Canoe Area Wilderness.
- Elevate the awareness of lake users to AIS impacts, infestation locations and vectors for transmission.
- Restore littoral vegetation.



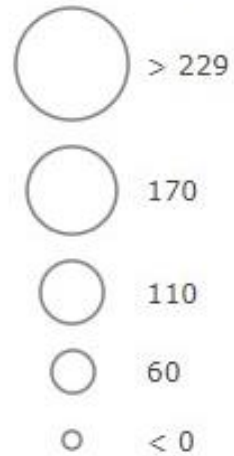
## South Kawishiwi 2015



### Predominant category

- Rusty Crayfish Trapline Total
- Native Crayfish Trapline Total

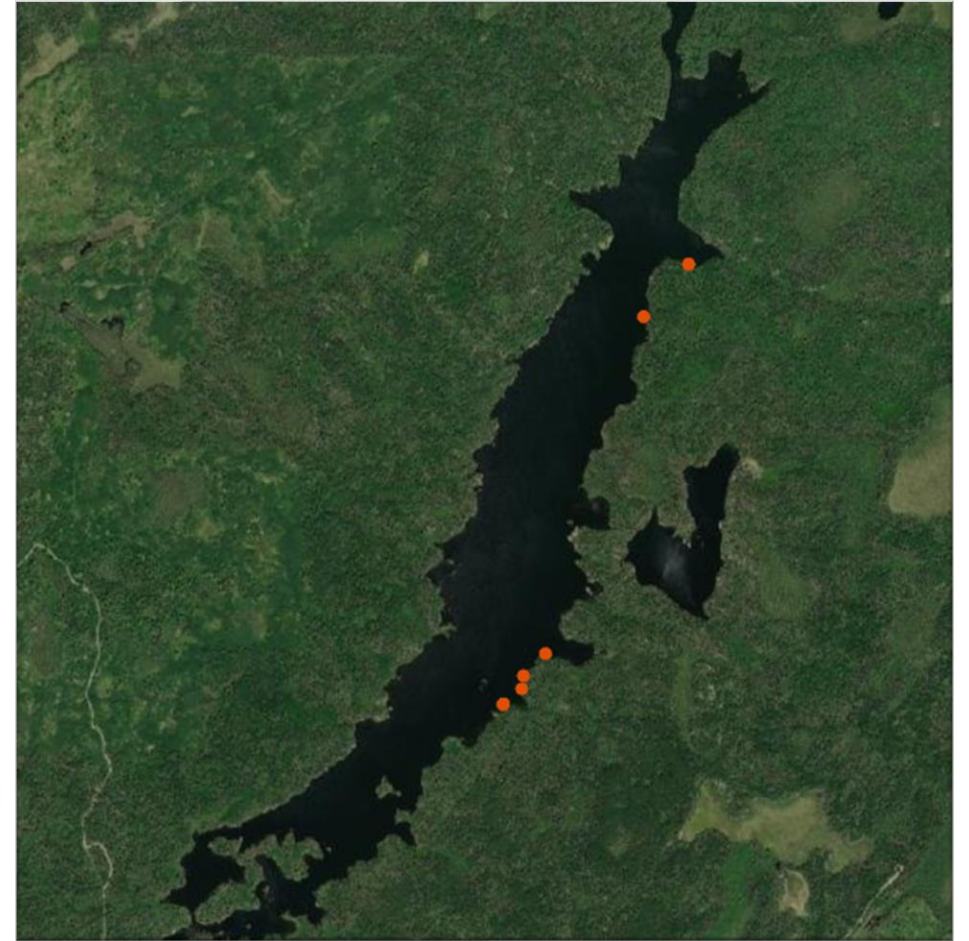
### Sum of categories



### Strength of predominance



## South Kawishiwi 2016



- 2015 trapping showed that native crayfish populations were still hanging on.
- Trapline rusty totals ranged from 0 to 6 per week.

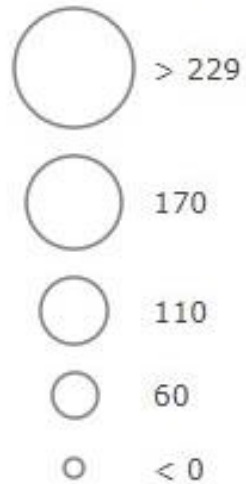
## North Kawishiwi 2015



Predominant category

- Rusty Crayfish Trapline Total
- Native Crayfish Trapline Total

Sum of categories

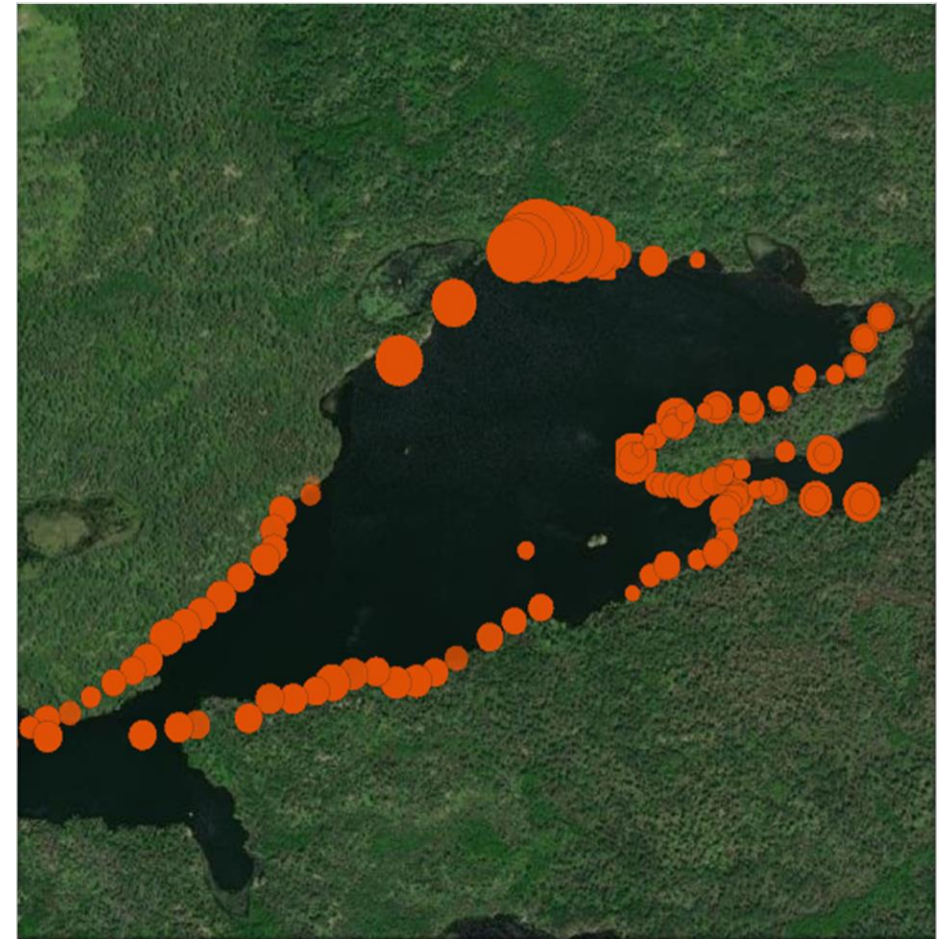


Strength of predominance



Small numbers of native crayfish caught in 2015

## North Kawishiwi 2016



Rusty crayfish completely dominated counts in 2016

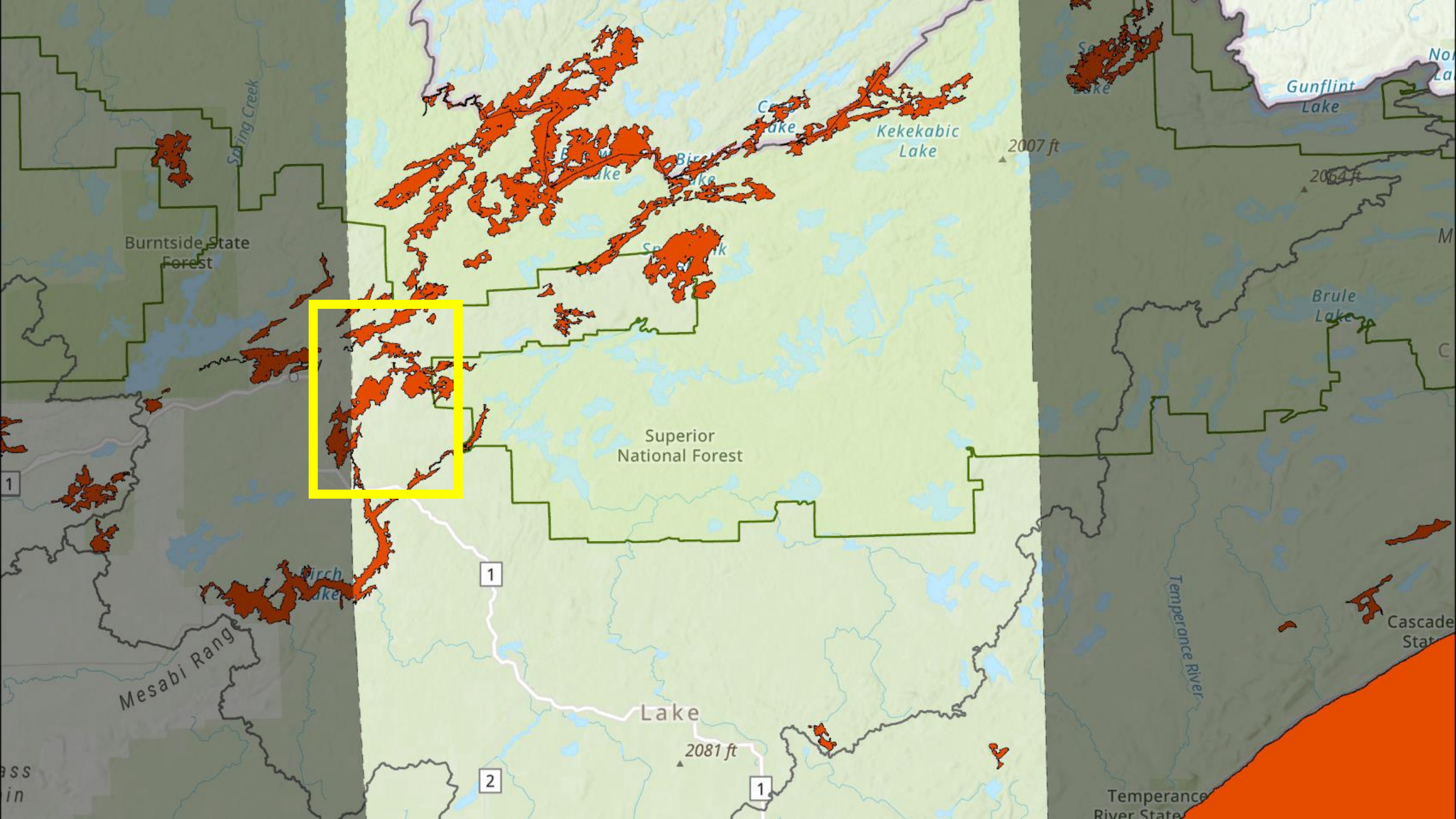
- Trapline rusty totals ranged from 0 to 229 per week.



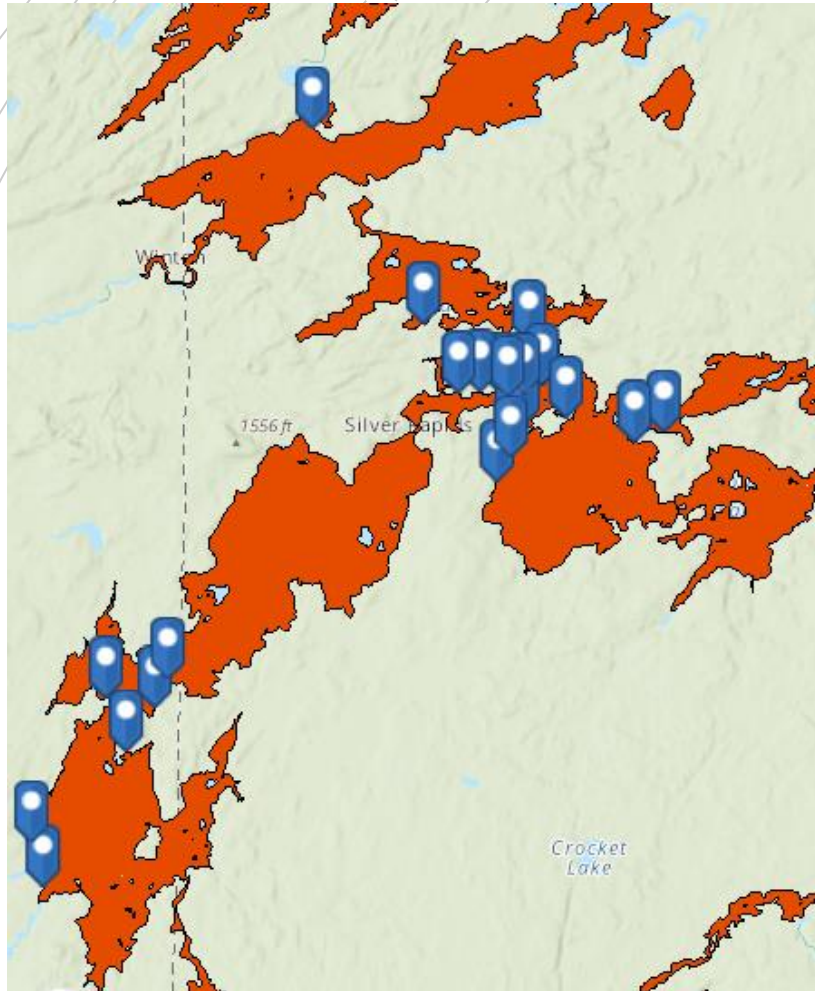
# Outcomes

- Rusty crayfish have not been identified on any new reaches of the Kawishiwi River. Was this the result of trapping efforts? Or due to factors such as river morphology or predation (particularly on the South Kawishiwi)?
- Awareness in the area increased through collaboration with the local lake association and through events such as outreach booths at farmer's markets and festivals.
- Baseline vegetation sampling was not conducted, so restoration of vegetation was inconclusive.
- Challenges/limiting factors to this project: work in a wilderness area required "minimal impact" and the infestation extended for about a mile within the wilderness boundary. We could not adequately trap the entire extent of the infestation with enough frequency.
- Challenges/limiting factors to scaling this strategy: funding, finding workers, sustainability (e.g. can the effort be maintained if necessary), time and expertise needed to assess baseline conditions and results.





# White Iron Chain of Lakes Association (WICOLA) Trapping Efforts



Locations of WICOLA member trappers



On Fall Lake, Dan reported catching 5,579 rusty crayfish in 2020 and 2,343 in 2021.

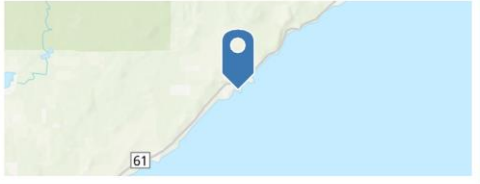
16:19

Crayfish Trapping Record

Submit one record form per trapping effort.

Trap Location \*

47°1'N 91°40'W ± 3.8 m



Waterbody Name \*

Trapper Name \*

Email address \*

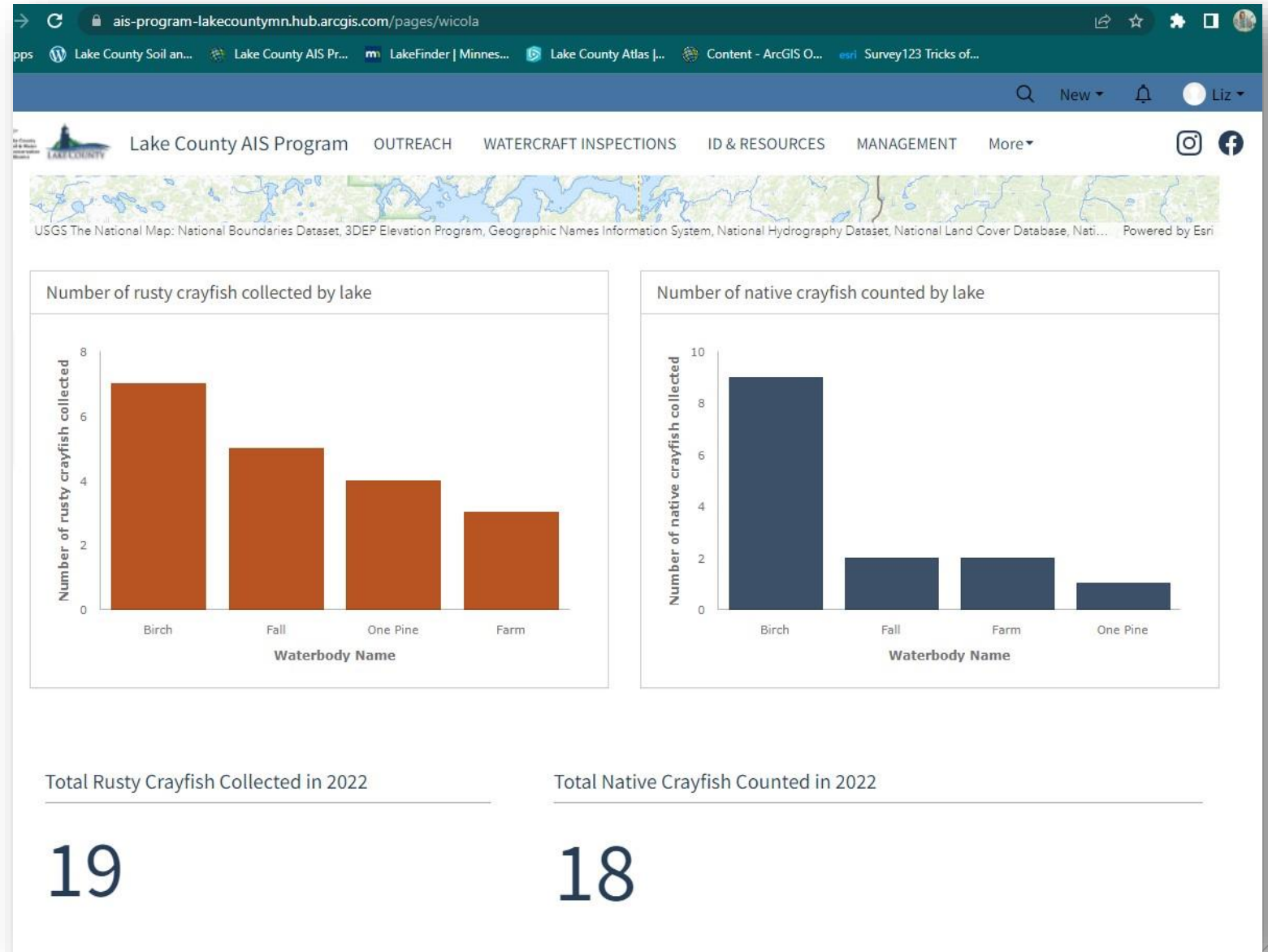
Date and time of trap removal \*

Wednesday, May 18, 2022

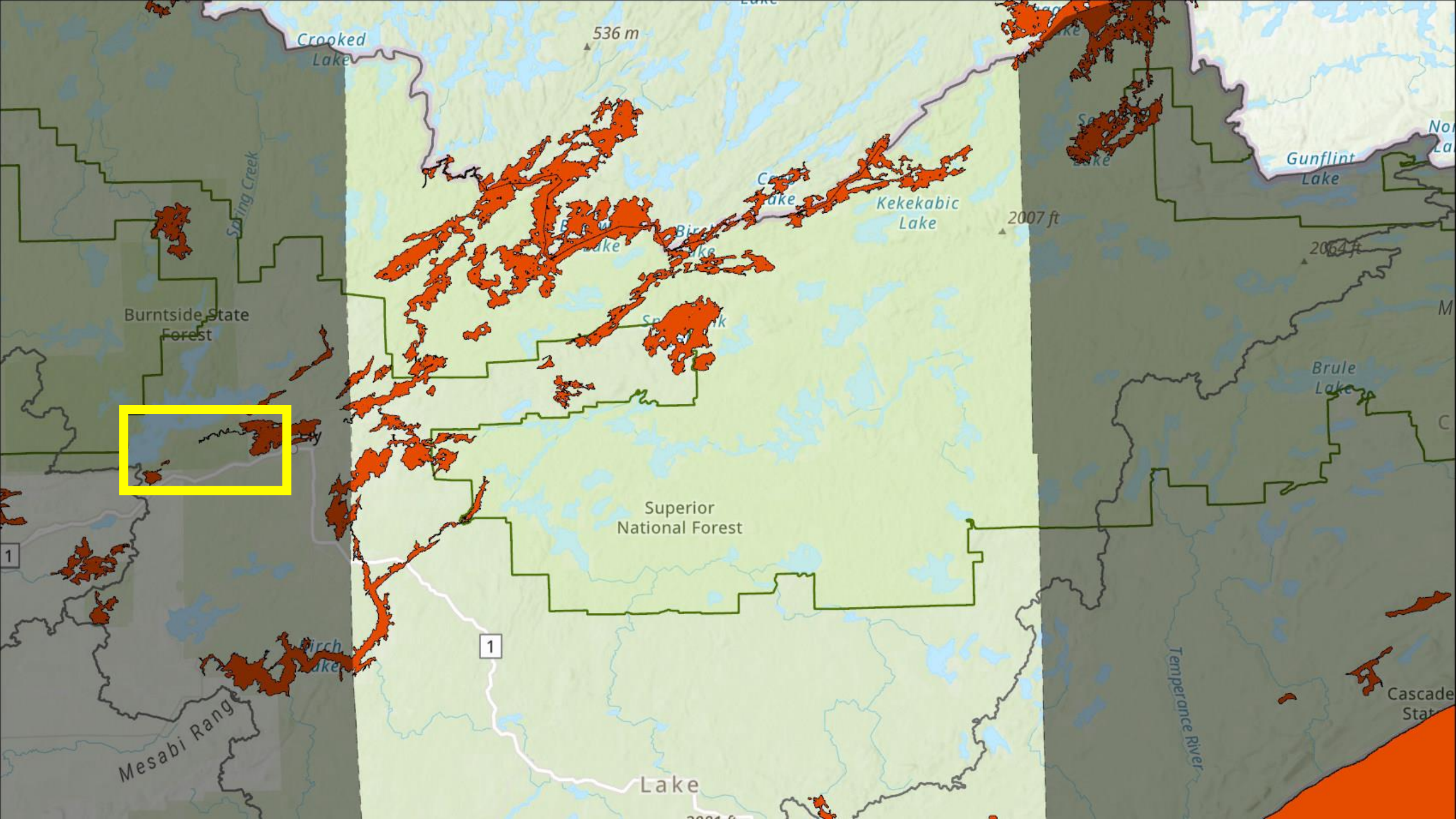
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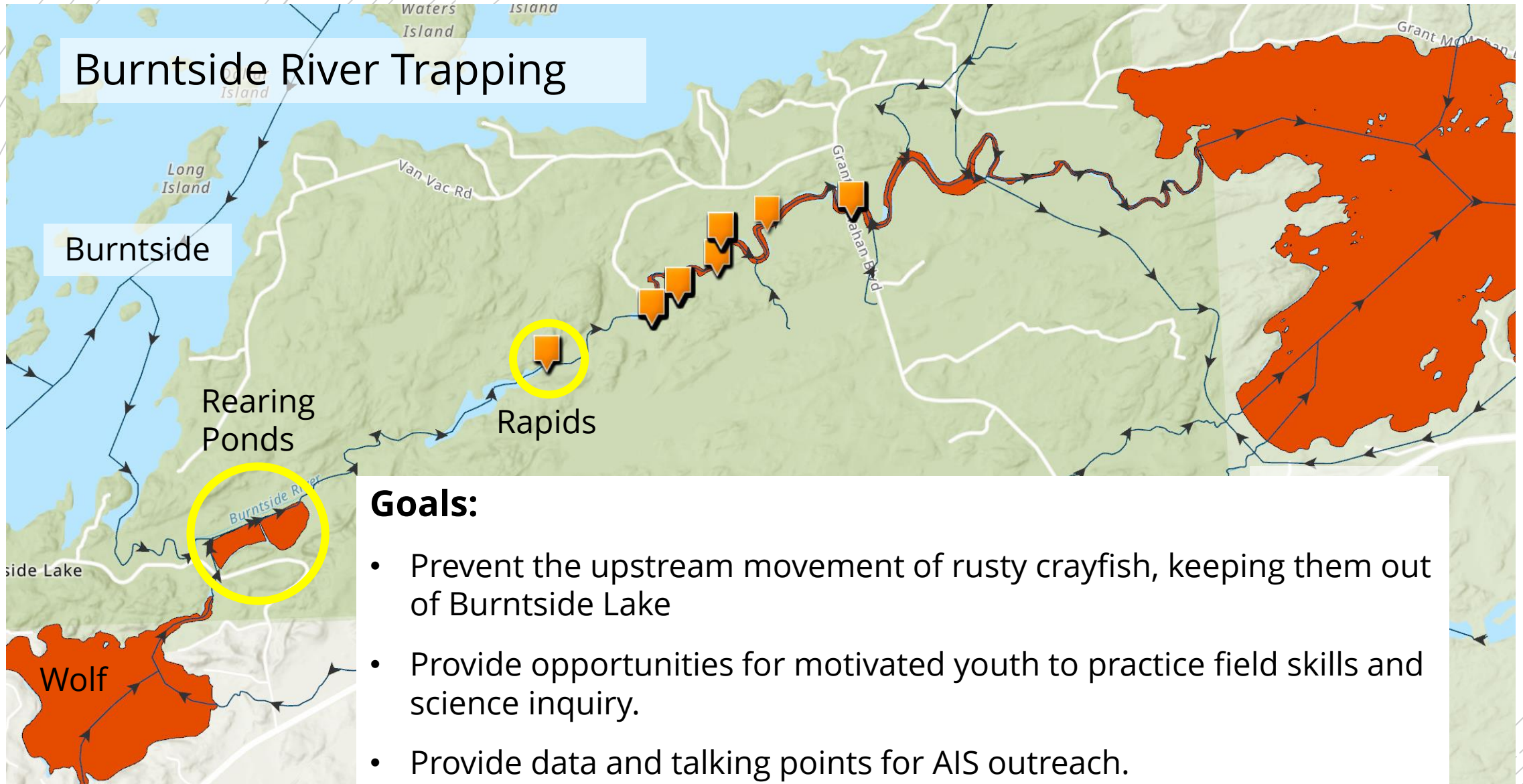
Survey123 Form



Webpage for WICOLA trapping results

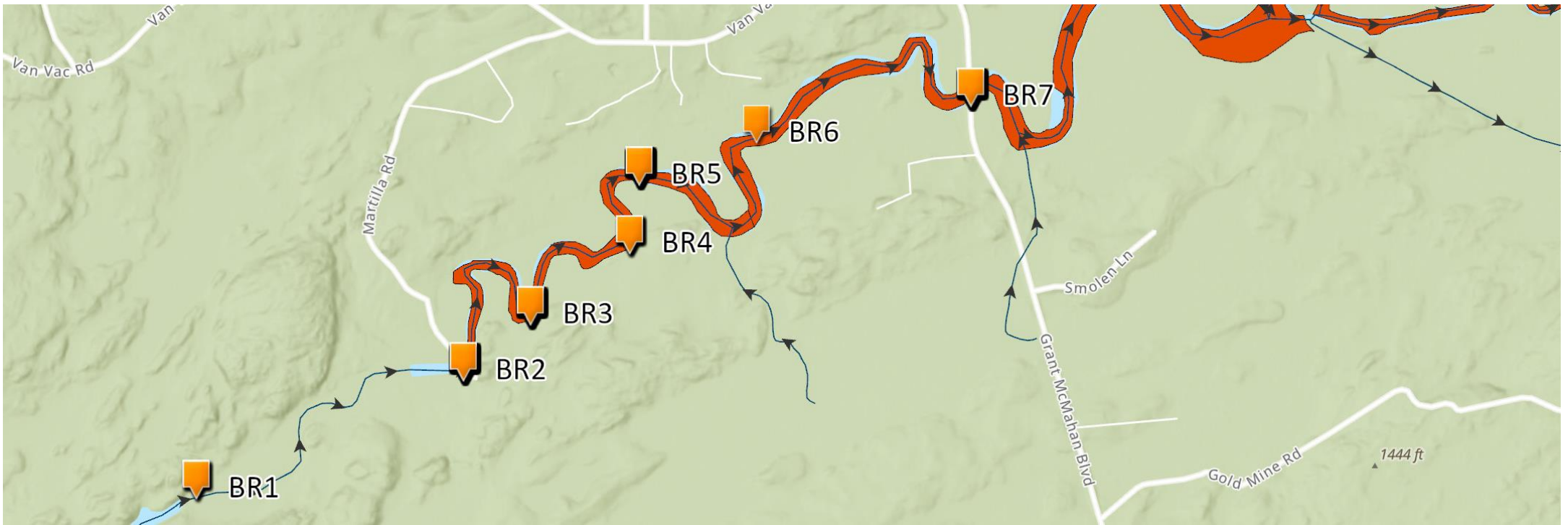


# Burntside River Trapping

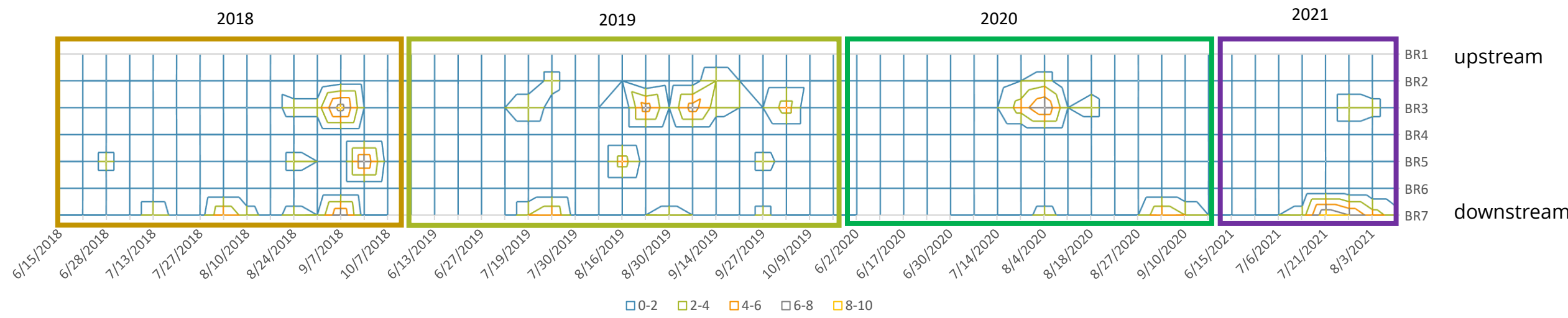


## Goals:

- Prevent the upstream movement of rusty crayfish, keeping them out of Burntside Lake
- Provide opportunities for motivated youth to practice field skills and science inquiry.
- Provide data and talking points for AIS outreach.



Burntside River Rusty Crayfish Trapping Numbers



### Ely student summer research focuses on aquatic invasive species

by Abbie Reibien, rising junior at EHS

The Water Project began in 2016. Over the years, there have been on Ely students and three VCC interns who have helped trap crayfish in the Burnside River and collect spray waterflea data on Burnside Lake. This Spring, Jill Swanson, who presides over the Water Project at ECR, emailed me to schedule when I would be available to go crayfish trapping. We met at Burnside River in early June. We have been canoeing there for nearly every week over the summer.

The reason rusty crayfish are being trapped is because they have made an unwelcome appearance in the Burnside River. The Burnside River runs from Burnside Lake to Slagawa Lake. Slagawa has rusty crayfish and they are slowly working their way upstream. We want to prevent the rusty crayfish from moving into Burnside Lake. Their aggressive behavior causes harm to the ecosystem because they eat native fish eggs, destroy vegetation beds, and compete with native crayfish for resources. Rusty crayfish are being trapped to see if they are being supported in their tanks by the invasive bunter hoppers of the local lakes thanks to Liz.

It is important to know if invasive plants are being introduced to lakes. That way, Minnesotans can be informed on properly cleaning, draining, and drying their watercraft so as not to bring

Crayfish are aquatic invertebrates residing in Minnesota's lakes, ponds, and streams. When one hears the word "crayfish" you might think about eating a platter of them. Or perhaps watching crayfish filter in the shallow waters of a swimming beach. When I think of crayfish, invasive rusties "rusty" crayfish week-long hoppers in aquatic ecosystems flashes in my mind. Rusty crayfish are native to the Ohio River Basin. They are an invasive species in Minnesota.

I was introduced to trapping rusty crayfish at the beginning of summer. Prior to the Covid-19 pandemic, I was an avid member of the Science Club at Ely Memorial High School during the 2019/20 school year.

Bo DeRenne, my biology teacher and Science Club advisor, asked me if I was interested in participating in the Water Project with Jill Swanson from Ely Community Resource.

I asked him, "What's the Water Project?" He explained that the project involved canoeing and research on invertebrates. I was hooked.

During this monitoring, we identify and record the vegetation seen in the lake as well as check for spray waterfleas (nose so far) and measure the transparency or clarity of the water with a Secchi disc. It is important to know if invasive plants are being introduced to lakes. That way, Minnesotans can be informed on properly cleaning, draining, and drying their watercraft so as not to bring

watch cat videos and call their buddies in distant lands. Liz Anderson, AIS Program Coordinator and Water Resources Technician with Lake County Soil and Water Conservation District, has taken us out on South Farm, Garden, Cedar, and White Iron Lakes to perform AIS early detection and baseline monitoring.

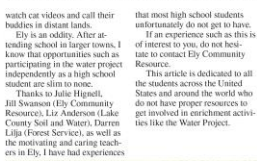
Thanks to Julie Higdon, Jill Swanson (Ely Community Resource), Liz Anderson (Lake County Soil and Water), Darren Lijja (Forest Service), as well as the motivating and caring teachers in Ely, I have had experiences

that most high school students unfortunately do not get to have. If an experience such as this is of interest to you, do not hesitate to contact Ely Community Resource. This article is dedicated to all the students across the United States and around the world who do not have proper resources to get involved in enrichment activities like the Water Project.

It is important to know if invasive plants are being introduced to lakes. That way, Minnesotans can be informed on properly cleaning, draining, and drying their watercraft so as not to bring



Abbie Reibien with a spray waterfleas plankton net in Garden Lake



## Overall Take-aways

- Intensive trapping can have an impact when the scale is manageable and sustainable.
- Trapping can be effective at pinch points in narrow waterways and at discrete locations, such as lengths of shoreline.
- Partnerships with community organizations are crucial to having the manpower, maintaining momentum and promoting awareness.

# Thank you

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