

Aquatic Invasive Plant Management Across Idaho

Jeremey Varley- Noxious Weeds



Idaho's Aquatic Noxious Weeds

- Brazilian Elodea
- Common European Frogbit
- Fanwort
- Feathered Mosquito Fern
- Giant Salvinia
- Hydrilla*
- Starry Stonewort
- Variable-Leaf Milfoil
- Water Chestnut
- Water Hyacinth
- Yellow Floating Heart
- Common Reed*
- Eurasian watermilfoil*
- Parrotfeather milfoil*
- Flowering Rush*
- Yellow Flag Iris*
- Curlyleaf Pondweed*

*Active Population in Idaho

EDRR List

Control List

Contain List

Idaho's Aquatic Noxious Weeds

02. Statewide EDRR Noxious Weed List. If any of the listed plants (Subsection 220.02) are found to occur in Idaho, they shall be reported to the Department within ten (10) days following positive identification by the University of Idaho or other qualified authority as approved by the Director. These weeds shall be eradicated during the same growing season as identified.

03. Statewide Control Noxious Weed List. Weeds listed in the control list are known to exist in varying populations throughout the state. The concentration of these weeds is at a level where control or eradication, or both, may be possible. A written plan for weeds on the Statewide Control Noxious Weed List shall be developed by the control authority that specifies active control methods to reduce known populations in not more than five (5) years. The plan shall be available to the Department upon request.

04. Statewide Containment Noxious Weed List. Weeds listed in the containment noxious weeds list are known to exist in various populations throughout the state. Weed control efforts may be directed at reducing or eliminating new or expanding weed populations while known and established weed populations, as determined by the weed control authority, may be managed by any approved weed control methodology, as determined by the weed control authority.

Survey

- Based on:
 - 1) Priority
 - 2) Phenological timing

Treatment

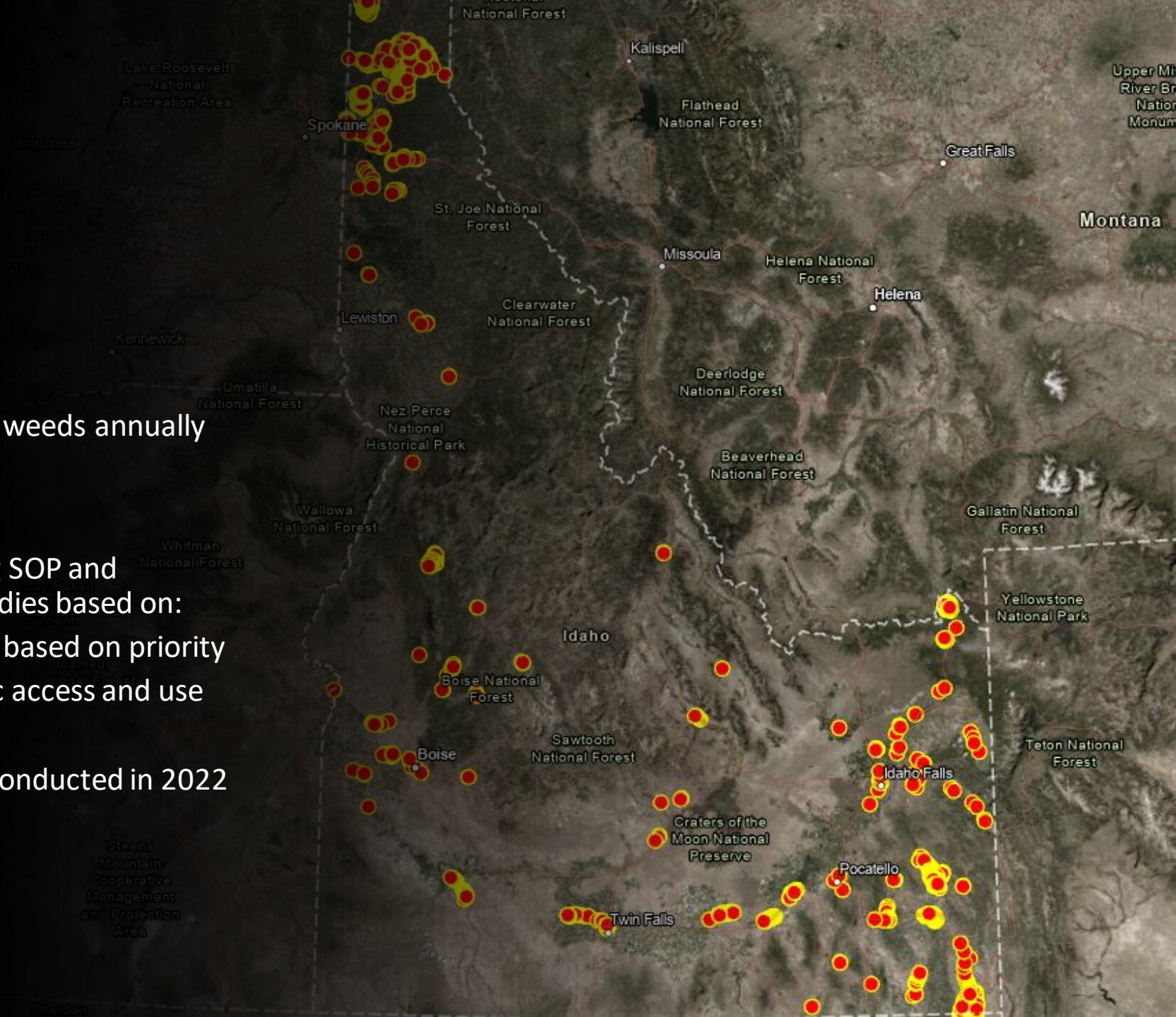
- Mechanical, Chemical

Monitoring

- Post treatment evaluations

Survey

- Actively surveying for all aquatic noxious weeds annually
 - Pre-treatment surveys
 - Presence absence surveys
- Survey methods are conducted following SOP and following prioritization of Idaho waterbodies based on:
 - Presence of Aquatic noxious weeds based on priority
 - Risk of introduction based on public access and use (High, Medium, Low)
- A total of 20,051 Aquatic surveys were conducted in 2022



Filter Options

All filter criteria will be applied if more than one filter is used.

Filter by Date
All Dates

Filter by Waterbody
All Waterbodies

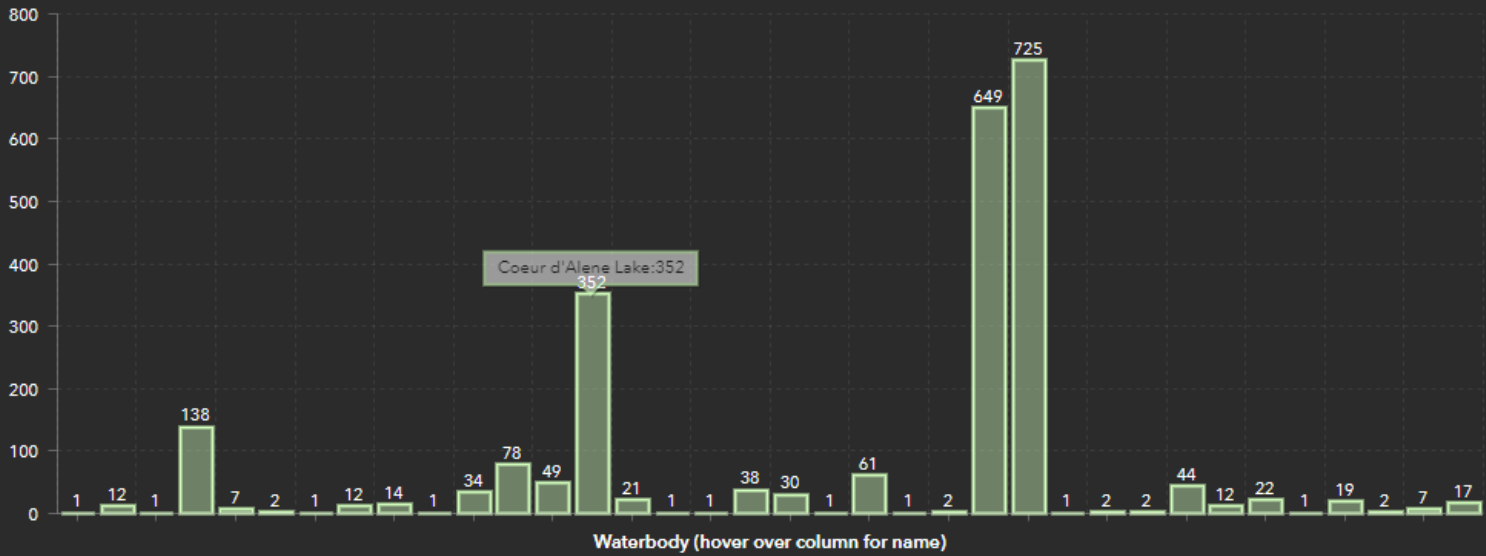
Filter by Target Species Density
All Target Species Densities

Filter by Target Species
All Target Species

Filter by Additional Species Found
All Additional Listed Species Found



Surveys by Waterbody



Aquatic Surveys Conducted

2,361

Surveys with Positive Detections

848

Idaho Aquatic Noxious Weed Target Species Only

Surveys where Additional Species Found

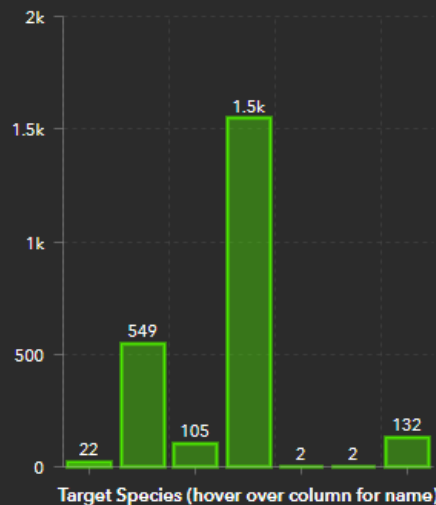
10

surveys where additional listed, non-target species found

Average Depth of Survey (in meters)

1.072

Surveys by Target Species



Individual Surveys

Name of Waterbody = New Waterbody
Date and Time = Tue Jun 06 2023 15:29:00 GMT-0600 (Mountain Daylight Time)
Target Species = Yellow Flag Iris
Density = 1 - Target Species 1% - 25%
Depth of Survey (in meters) = 1.00
Additional Species Found =

Name of Waterbody = Jensens Grove
Date and Time = Tue Jun 06 2023 15:27:00 GMT-0600 (Mountain Daylight Time)
Target Species = Flowering Rush
Density = 0 - Target Species 0%
Depth of Survey (in meters) = 0.50
Additional Species Found =

Name of Waterbody = New Waterbody
Date and Time = Tue Jun 06 2023 15:27:00 GMT-0600 (Mountain Daylight Time)
Target Species = Yellow Flag Iris
Density = 1 - Target Species 1% - 25%
Depth of Survey (in meters) = 2.00
Additional Species Found =

Name of Waterbody = Jensens Grove
Date and Time = Tue Jun 06 2023 15:27:00 GMT-0600 (Mountain Daylight Time)
Target Species = Flowering Rush
Density = 0 - Target Species 0%
Depth of Survey (in meters) = 1.00
Additional Species Found =

Name of Waterbody = Jensens Grove
Date and Time = Tue Jun 06 2023 15:26:00 GMT-0600 (Mountain Daylight Time)
Target Species = Flowering Rush
Density = 0 - Target Species 0%
Depth of Survey (in meters) = 1.00
Additional Species Found =

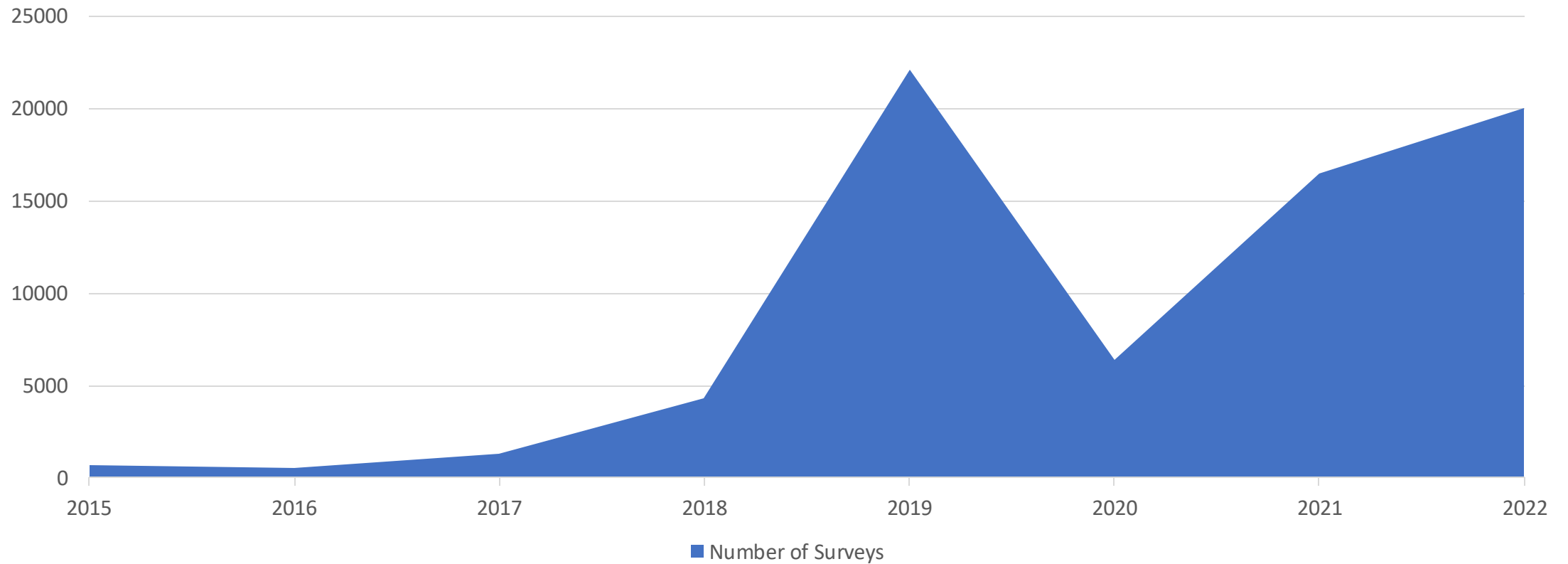
Name of Waterbody = Jensens Grove
Date and Time = Tue Jun 06 2023 15:26:00 GMT-0600 (Mountain Daylight Time)
Target Species = Flowering Rush
Density = 0 - Target Species 0%
Depth of Survey (in meters) = 1.00
Additional Species Found =

Name of Waterbody = Jensens Grove
Date and Time = Tue Jun 06 2023 15:25:00

Surveys over time



Number of Surveys



Treatments

- Chemical treatments
- Mechanical treatments
 - Hand pull
 - DASH





ISDA NOXIOUS WEEDS CONTROL PROJECTS

EURASIAN WATERMILFOIL

Herbicide Application 2022

- Hayden Lake 142.21 acres
- Pend Oreille Lake & River 42.12 acres
- Bear Lake 20.17 acres
- Priest Lake 4.92 acres



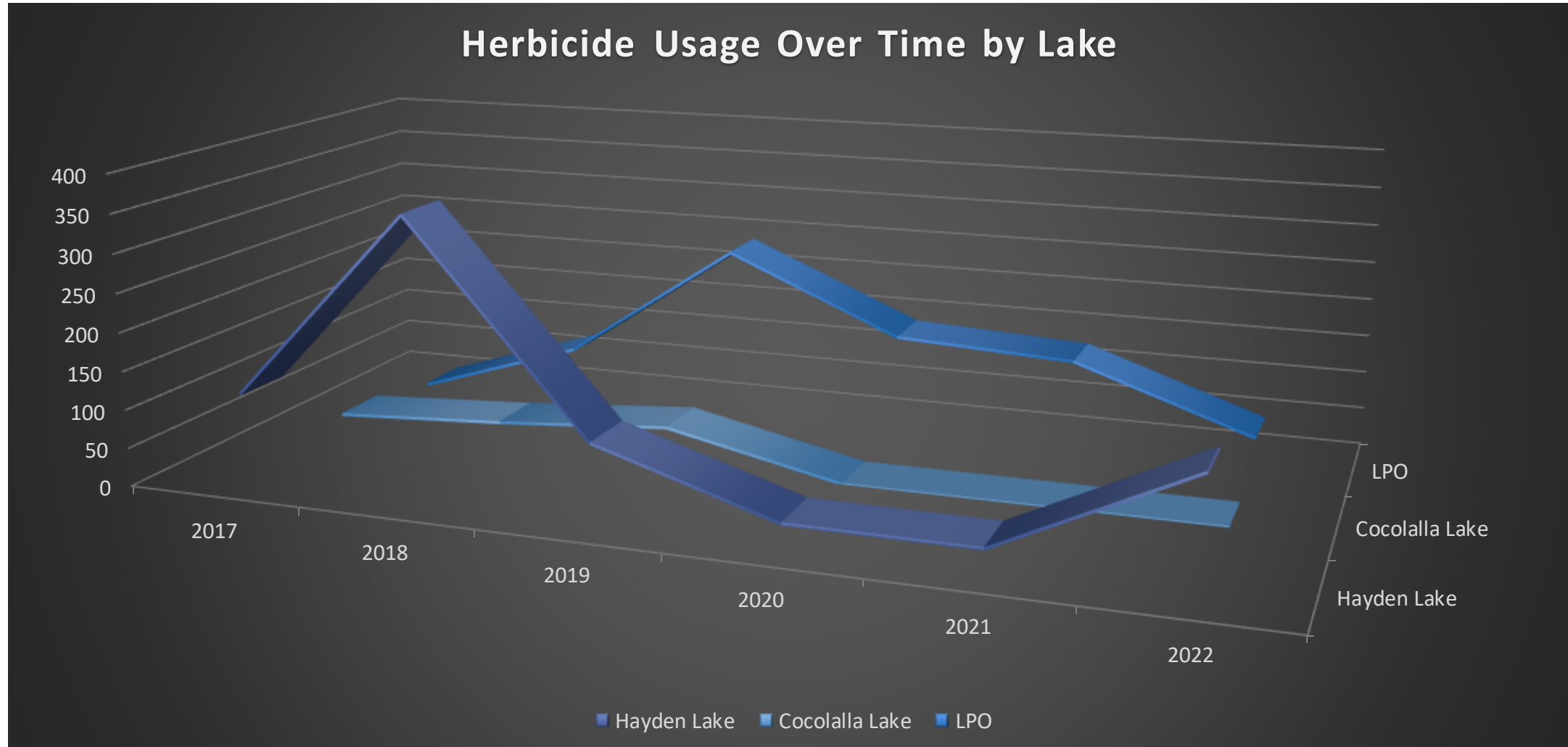
Mechanical Removal 2022

- Blue Heart*
- Cocolalla Lake.
- Clear Lake*
- Hayden Lake
- Payette Lake
- Priest Lake

*ISDA Staff

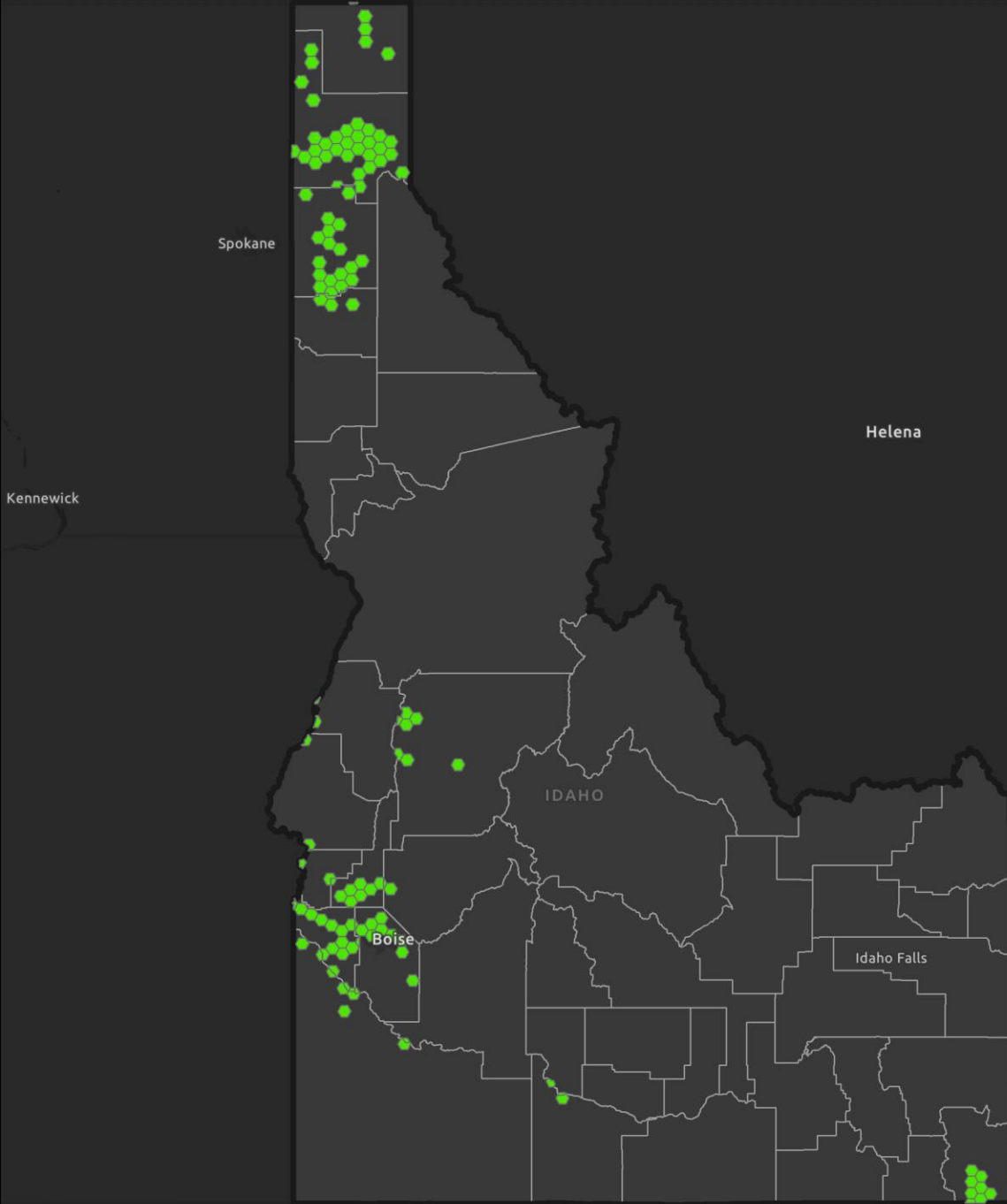


EURASIAN WATERMILFOIL HERBICIDE TREATMENTS OVER TIME



Eurasian Watermilfoil

Myriophyllum spicatum



PARROT FEATHER MILFOIL

Herbicide Application

- Emmett Area infestation- 20 acres



Mechanical Removal

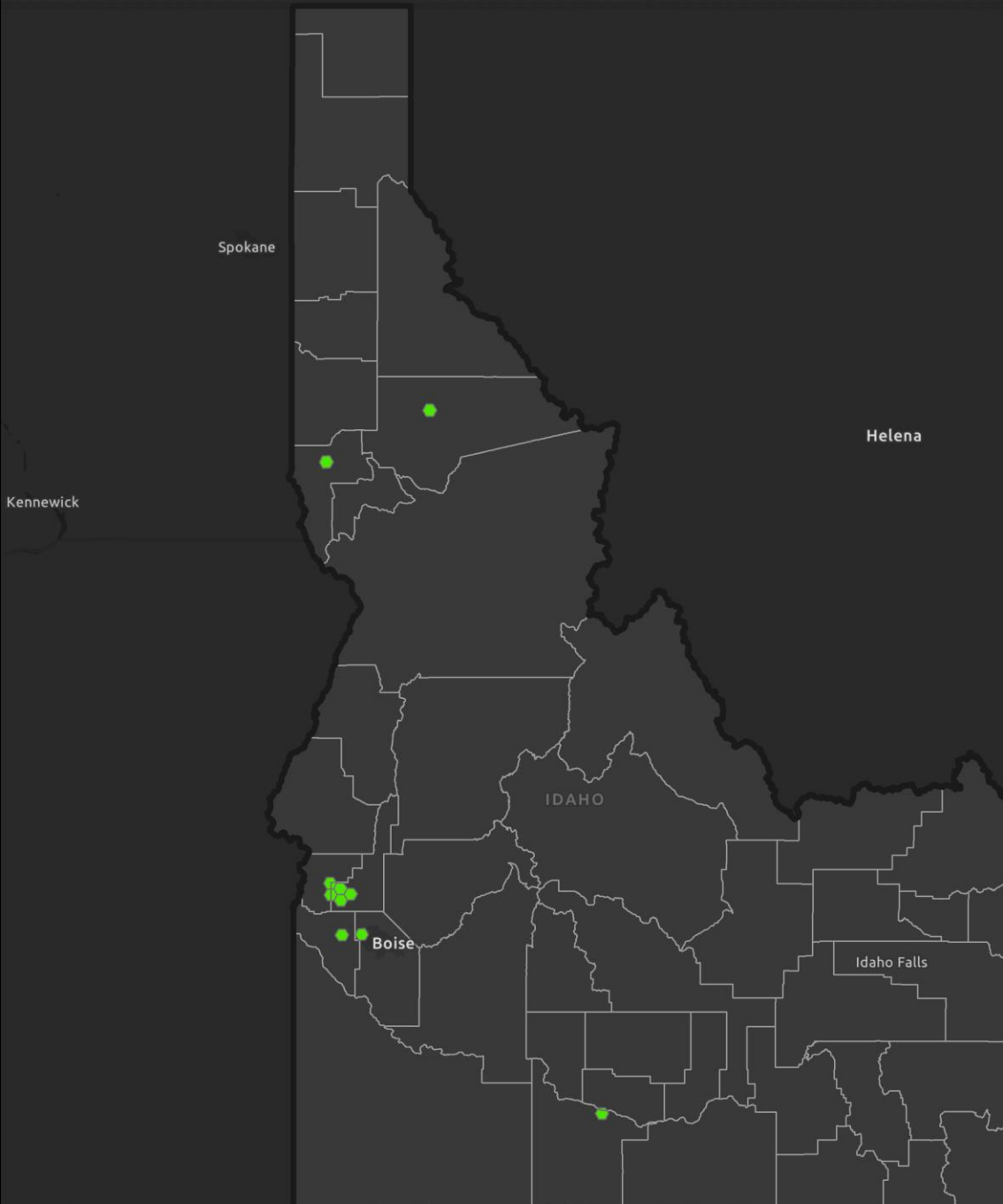
- Ada County areas*
- Blue Lakes*
- Emmet Area infestations*

*ISDA Staff



Parrot Feather milfoil

Myriophyllum aquaticum



FLOWERING RUSH

Herbicide Application 2022

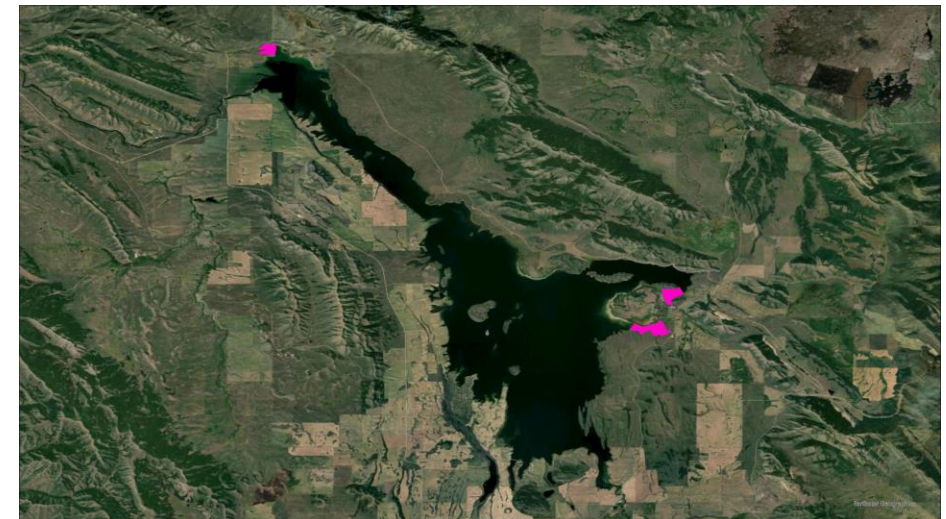
- No herbicide applications made in 2022



Mechanical Removal 2022

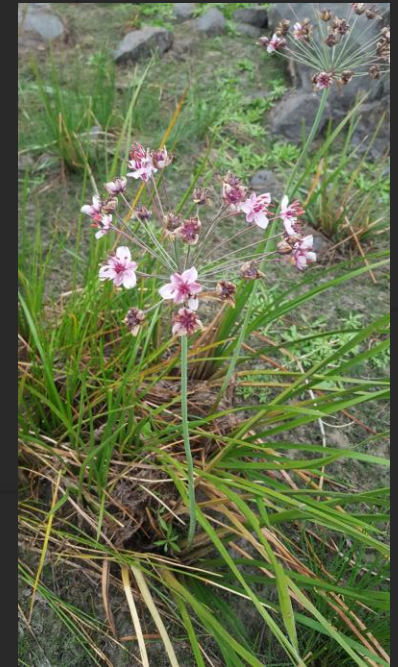
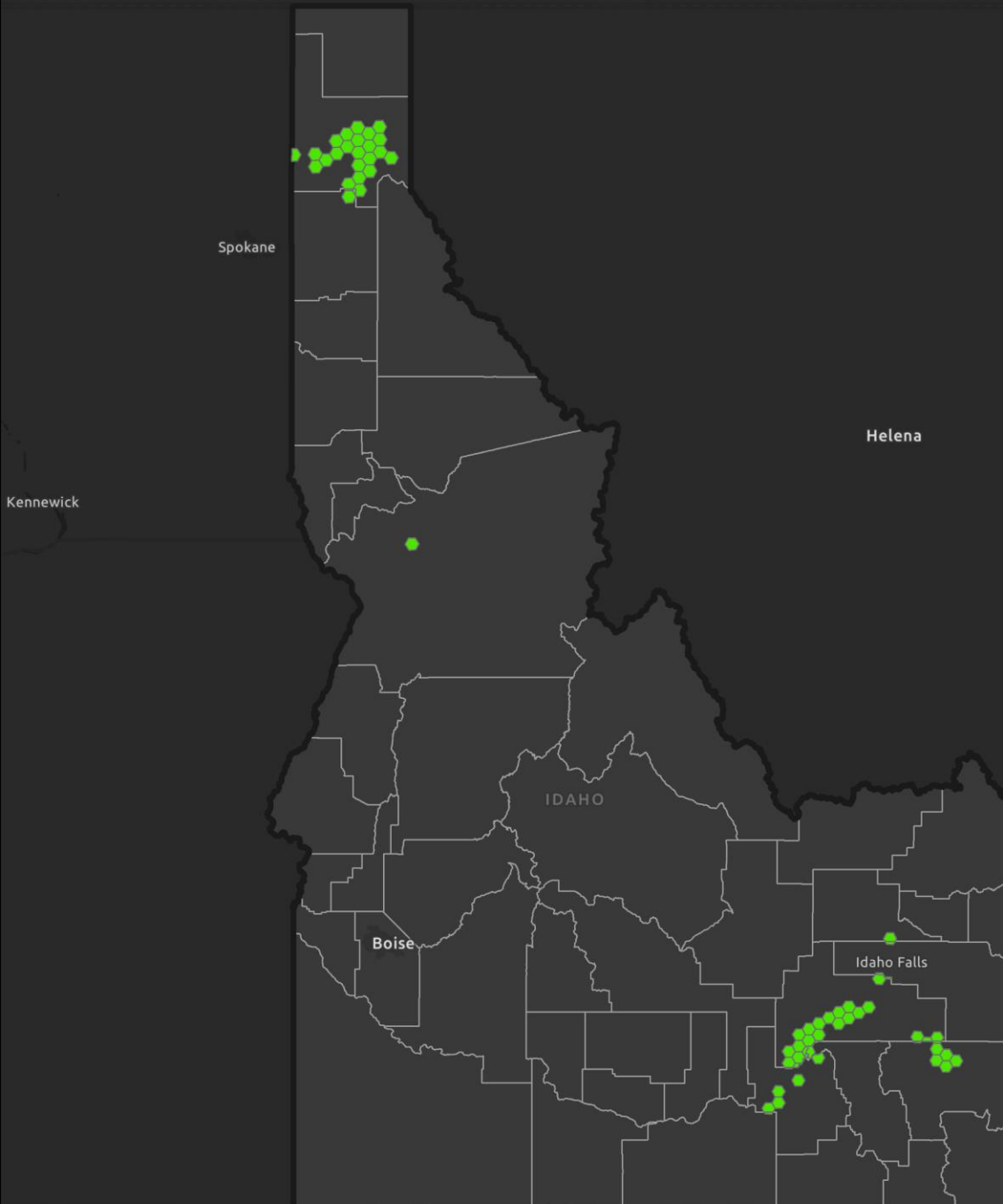
- Blackfoot Reservoir
- Lake Pend Oreille
 - Sandpoint
 - Farragut State Park*

*ISDA Staff



Flowering Rush

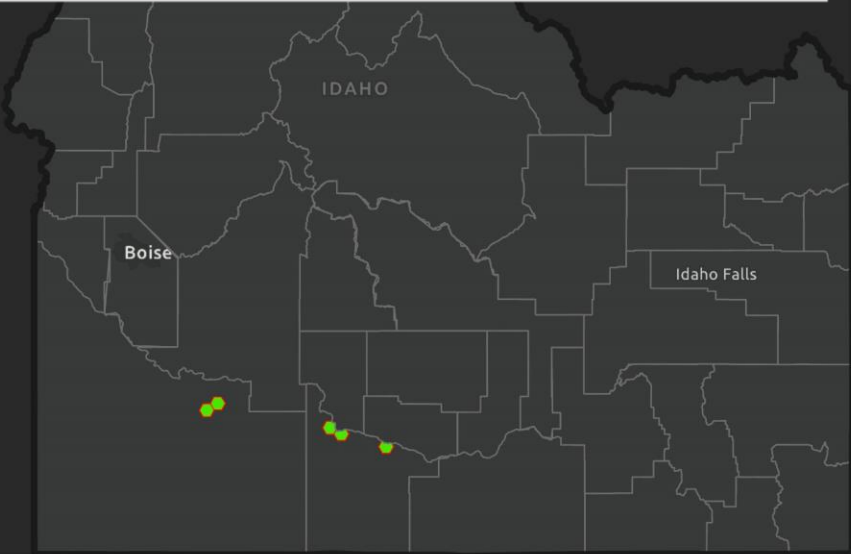
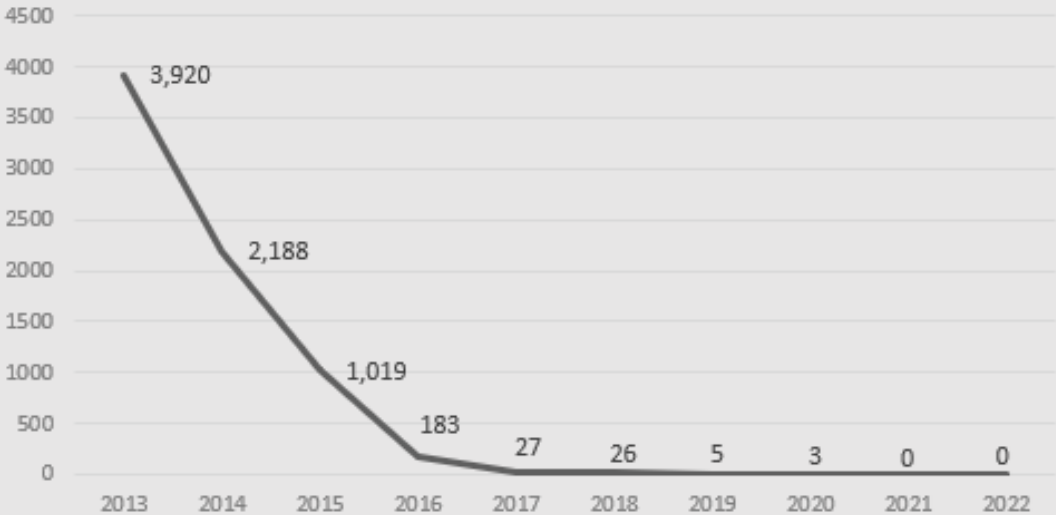
Butomus umbellatus



HYDRILLA

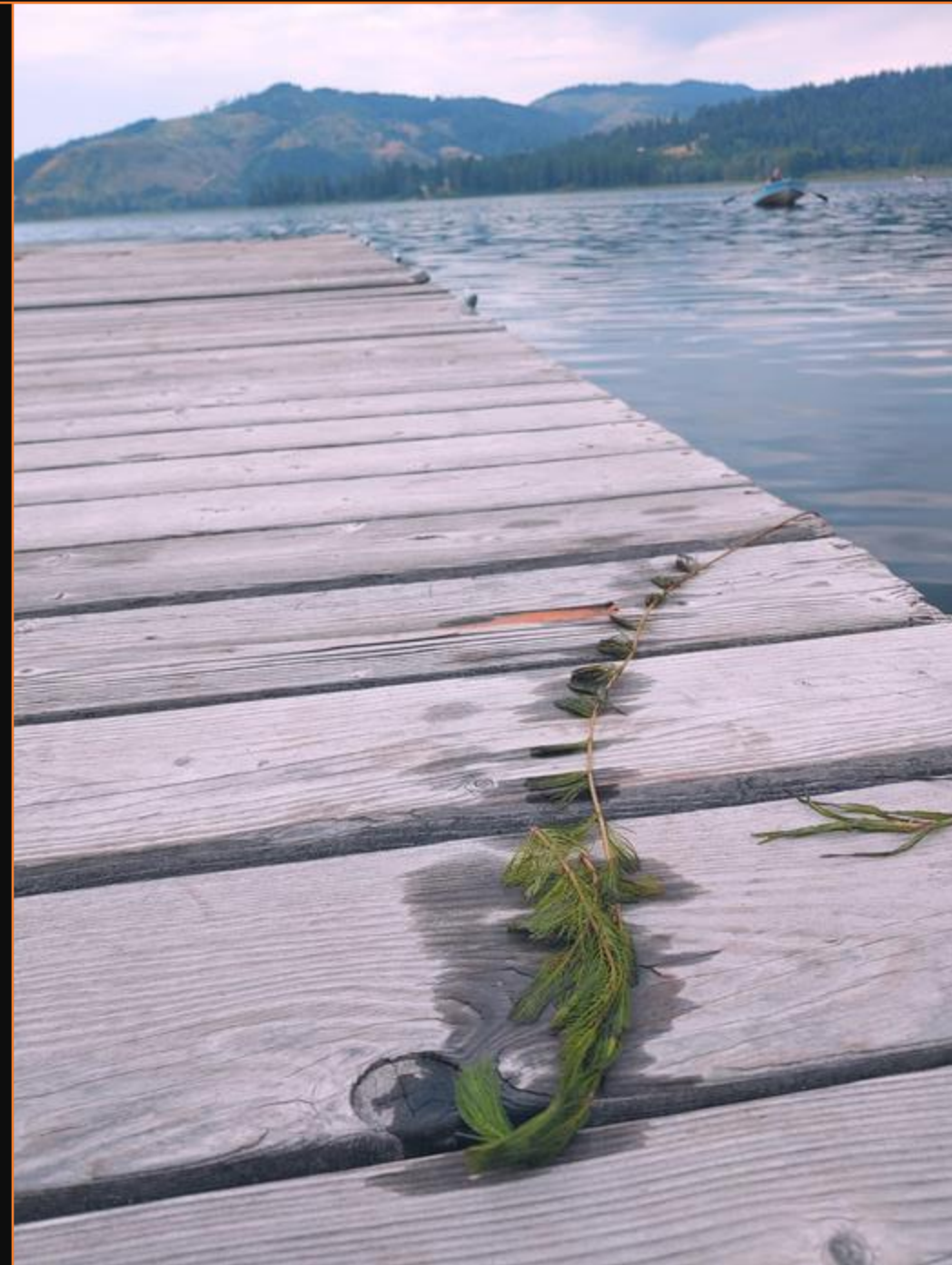
HYDRILLA VERTICILLATA

Hydrilla Found in the Bruneau River 2013 to 2022



Monitoring

Answering the constant question of “is this really working”



CURLY LEAF PONDWEED

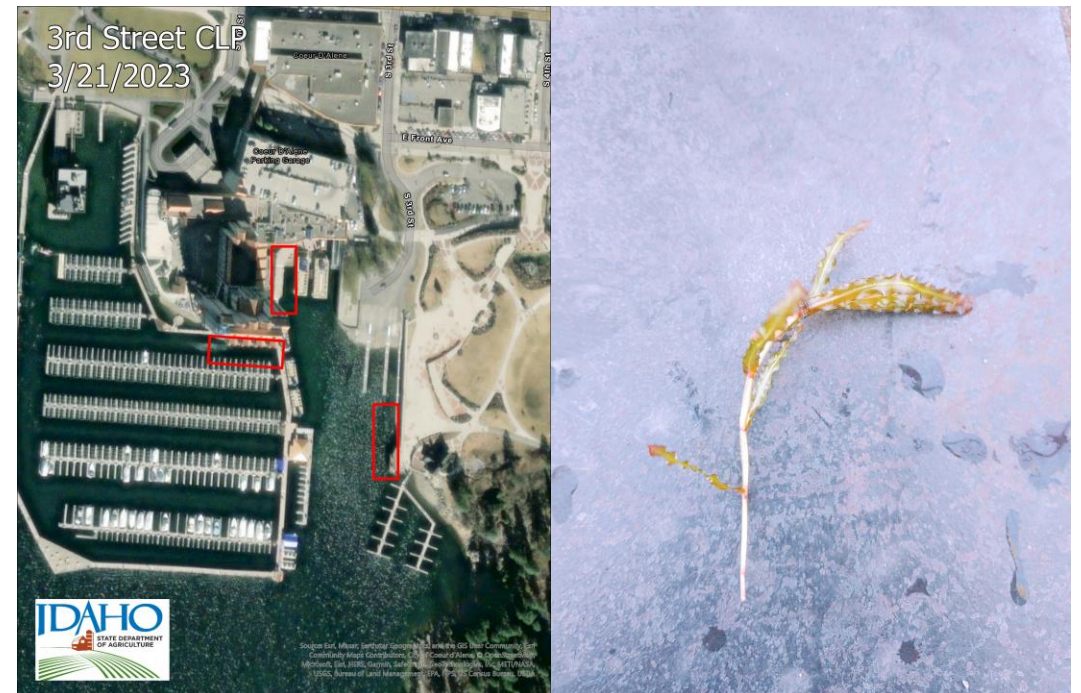
Herbicide Application 2022

- Coeur d'Alene Lake- 0.4 acres



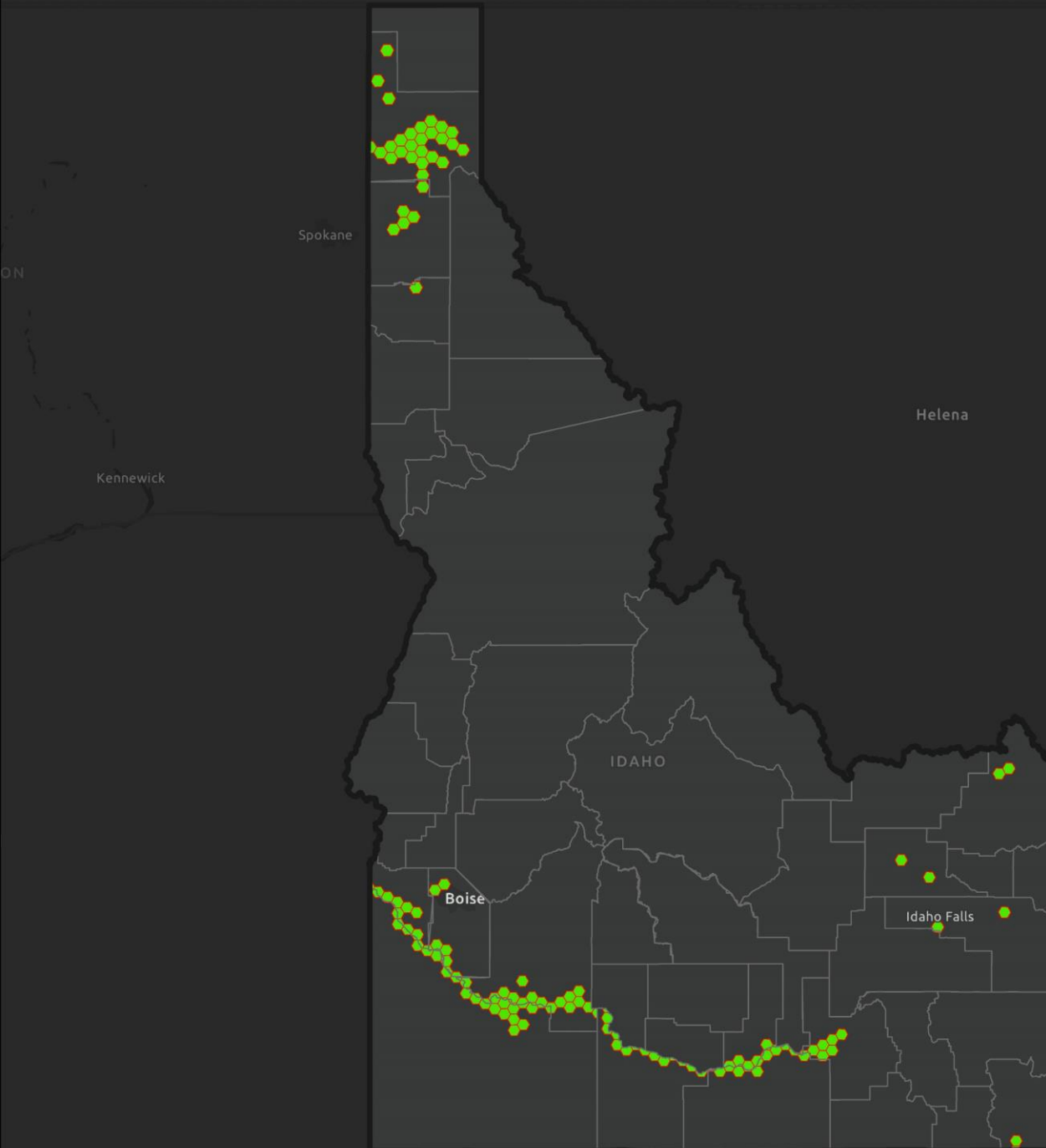
Mechanical Removal 2023

- Coeur d'Alene Lake



Curly-Leaf Pondweed

Potamogeton crispus



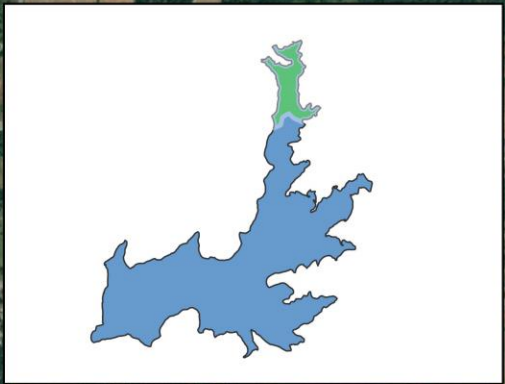
Esri, HERE, Garmin, FAO, NOAA, USGS, EPA

Hayden Lake

2020 Spring Treatment
Curlyleaf pondweed

Legend:

- Hayden Treatment Area
- Notification Zone



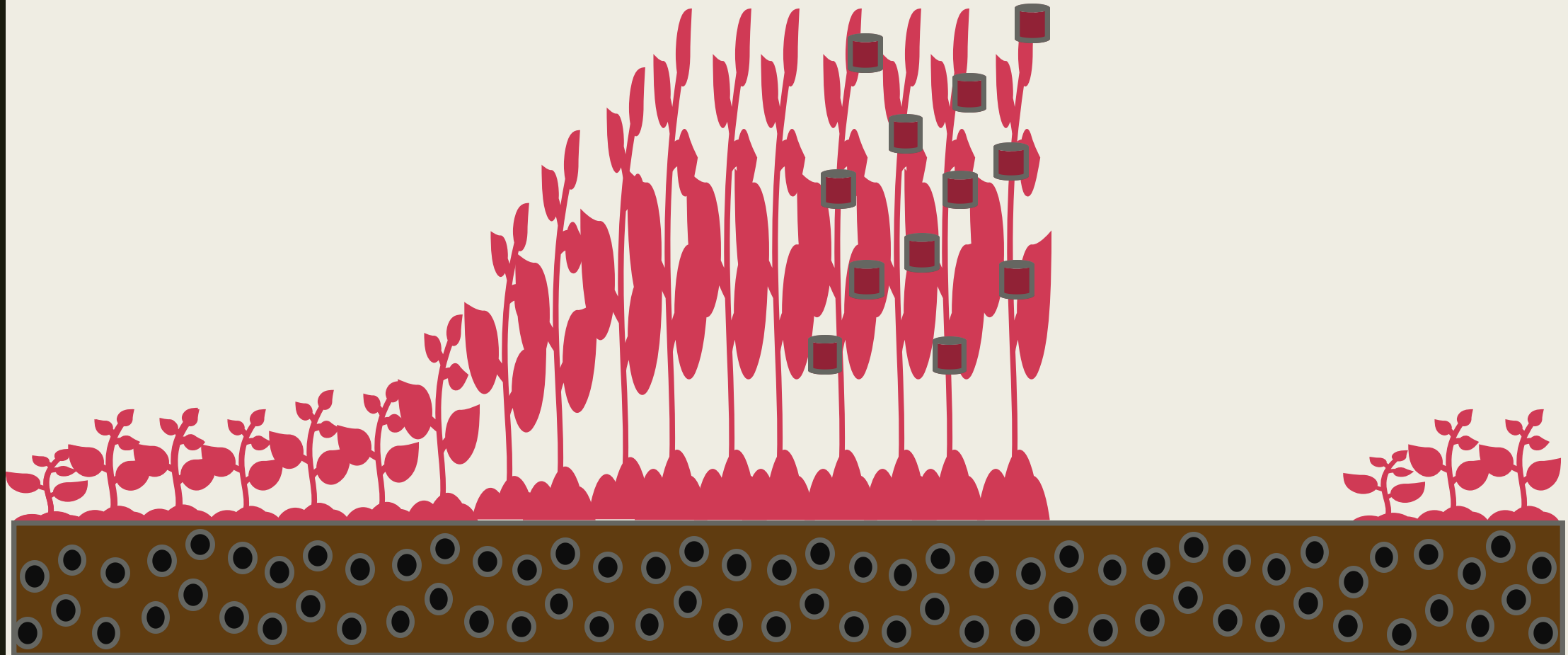
Methodology behind treatment plans

Fall
Fall

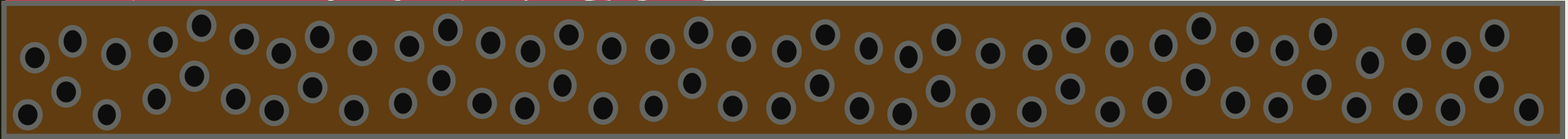
Winter

Spring

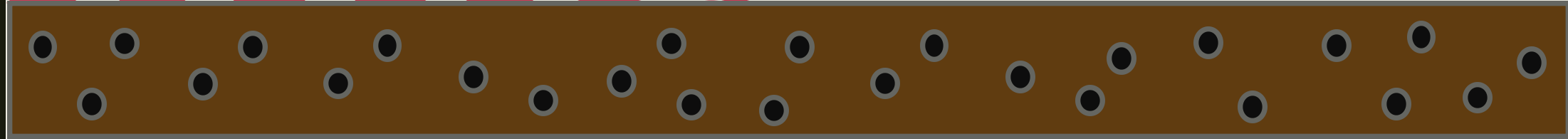
Summer



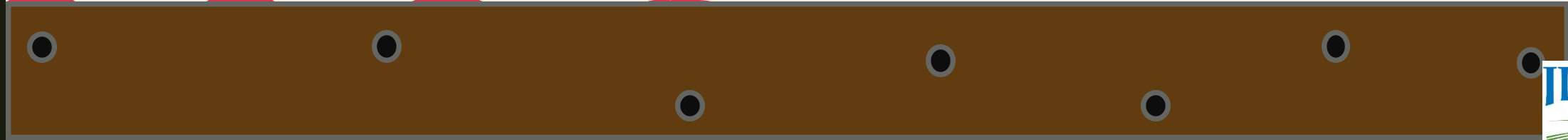
Year
1



Year
2



Year
3



CLP Hayden Lake treatment area study

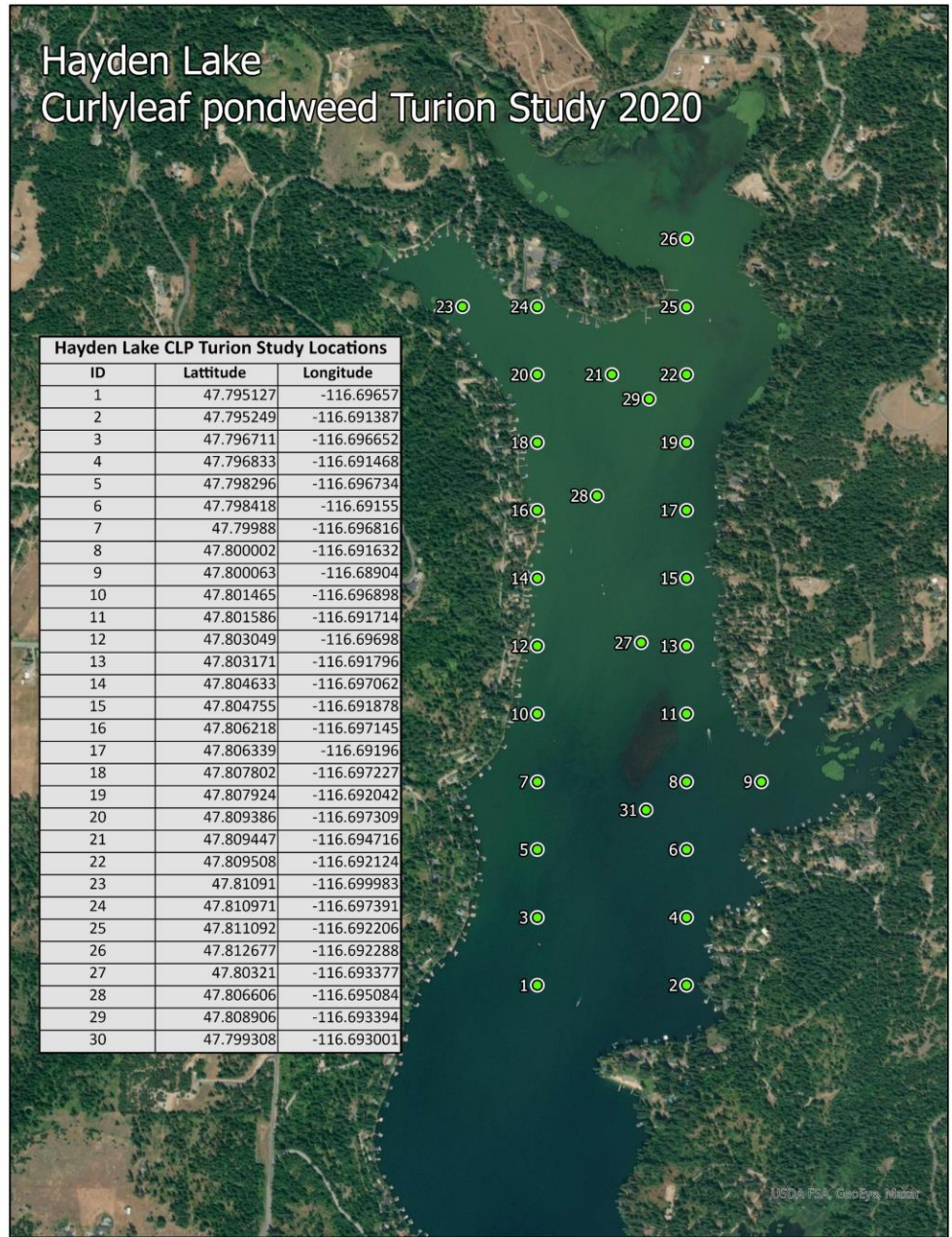
- Study was designed to monitor the presence of Curly Leaf Pondweed (CLP) in the north arm of Hayden lake, and to evaluate the effectiveness of herbicide treatments on the CLP present.
- Study targets the fall between summer senescence and winter annual growth (October), and measurements are taken via soil grabs with a Ponor dredge and counting viable CLP turions
- Study started in 2019 after first large scale treatment of CLP in the spring.





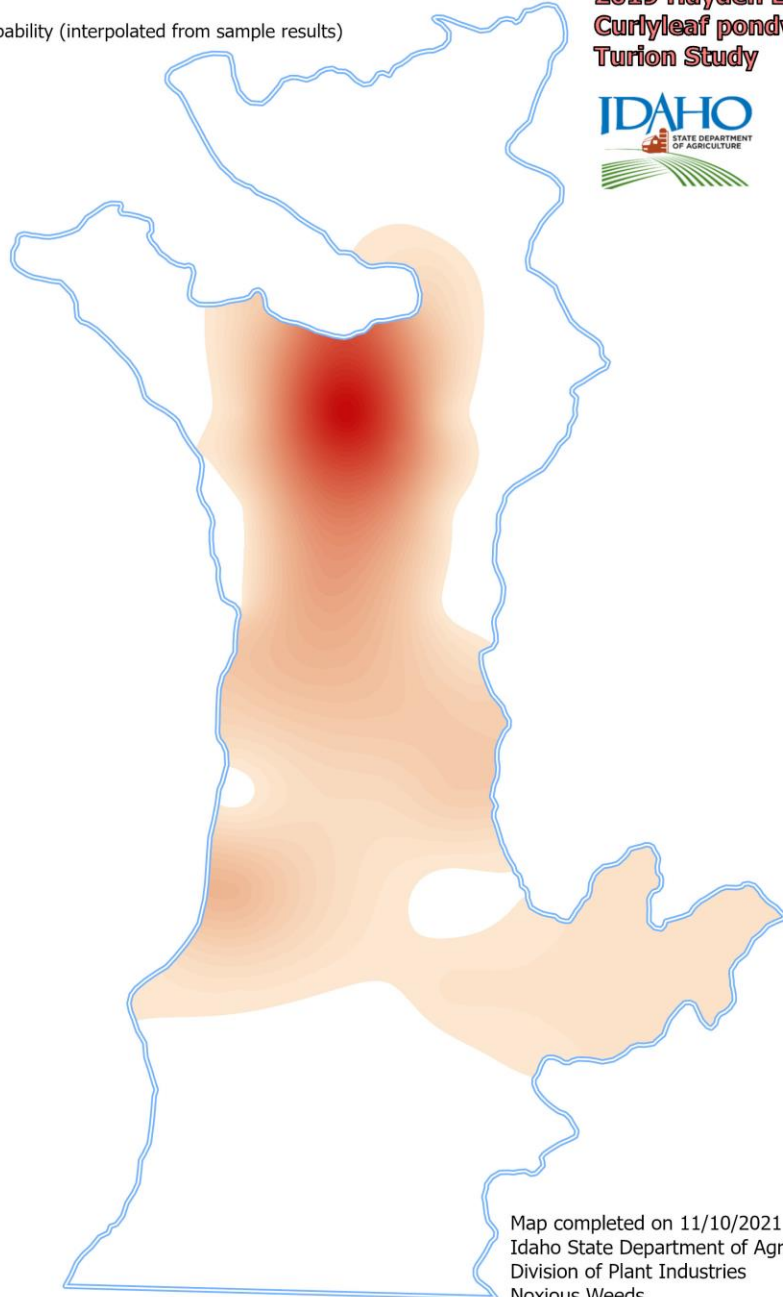
Hayden Lake Curlyleaf pondweed Turion Study 2020

Hayden Lake CLP Turion Study Locations		
ID	Latitude	Longitude
1	47.795127	-116.69657
2	47.795249	-116.691387
3	47.796711	-116.696652
4	47.796833	-116.691468
5	47.798296	-116.696734
6	47.798418	-116.69155
7	47.79988	-116.696816
8	47.800002	-116.691632
9	47.800063	-116.68904
10	47.801465	-116.696898
11	47.801586	-116.691714
12	47.803049	-116.69698
13	47.803171	-116.691796
14	47.804633	-116.697062
15	47.804755	-116.691878
16	47.806218	-116.697145
17	47.806339	-116.69196
18	47.807802	-116.697227
19	47.807924	-116.692042
20	47.809386	-116.697309
21	47.809447	-116.694716
22	47.809508	-116.692124
23	47.81091	-116.699983
24	47.810971	-116.697391
25	47.811092	-116.692206
26	47.812677	-116.692288
27	47.80321	-116.693377
28	47.806606	-116.695084
29	47.808906	-116.693394
30	47.799308	-116.693001



Turion density probability (interpolated from sample results)

**2019 Hayden Lake
Curlyleaf pondweed
Turion Study**



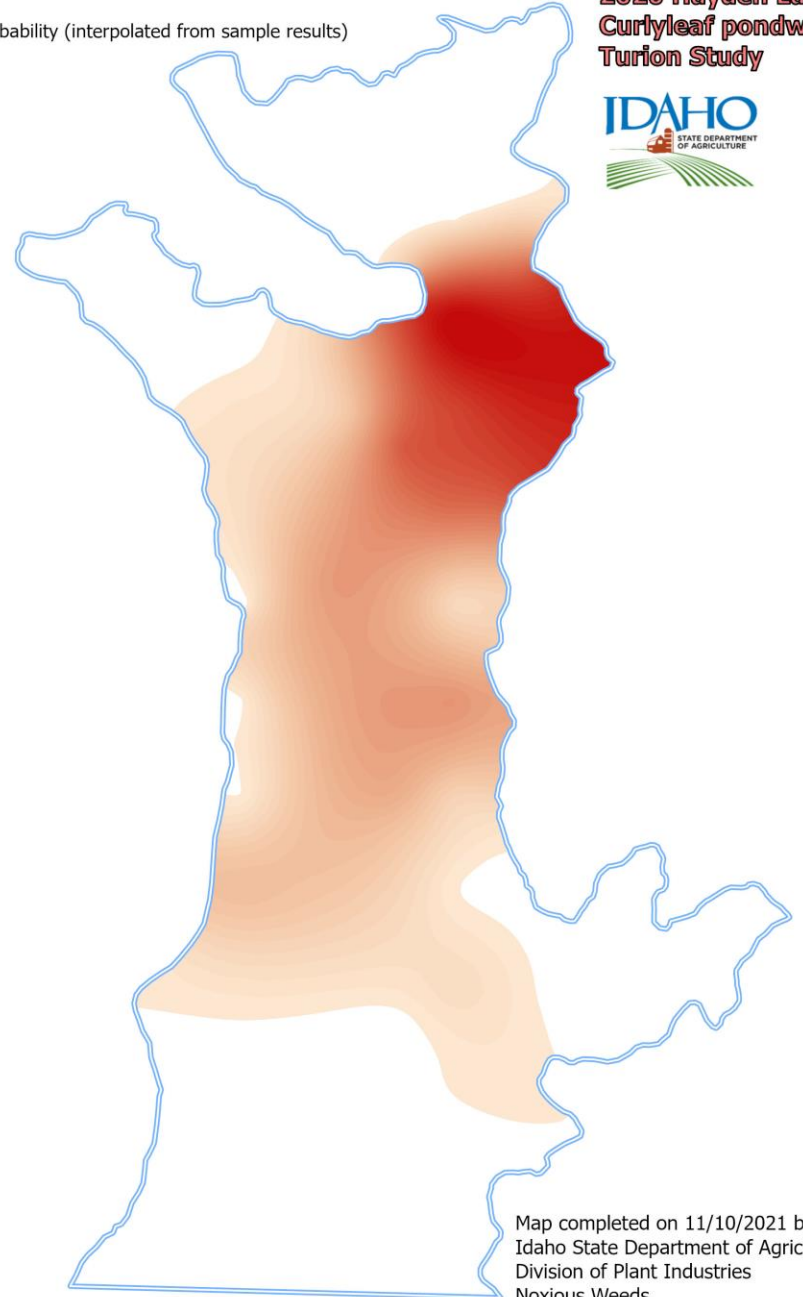
0.1

Miles

Map completed on 11/10/2021 by:
Idaho State Department of Agriculture
Division of Plant Industries
Noxious Weeds

Turion density probability (interpolated from sample results)

**2020 Hayden Lake
Curlyleaf pondweed
Turion Study**



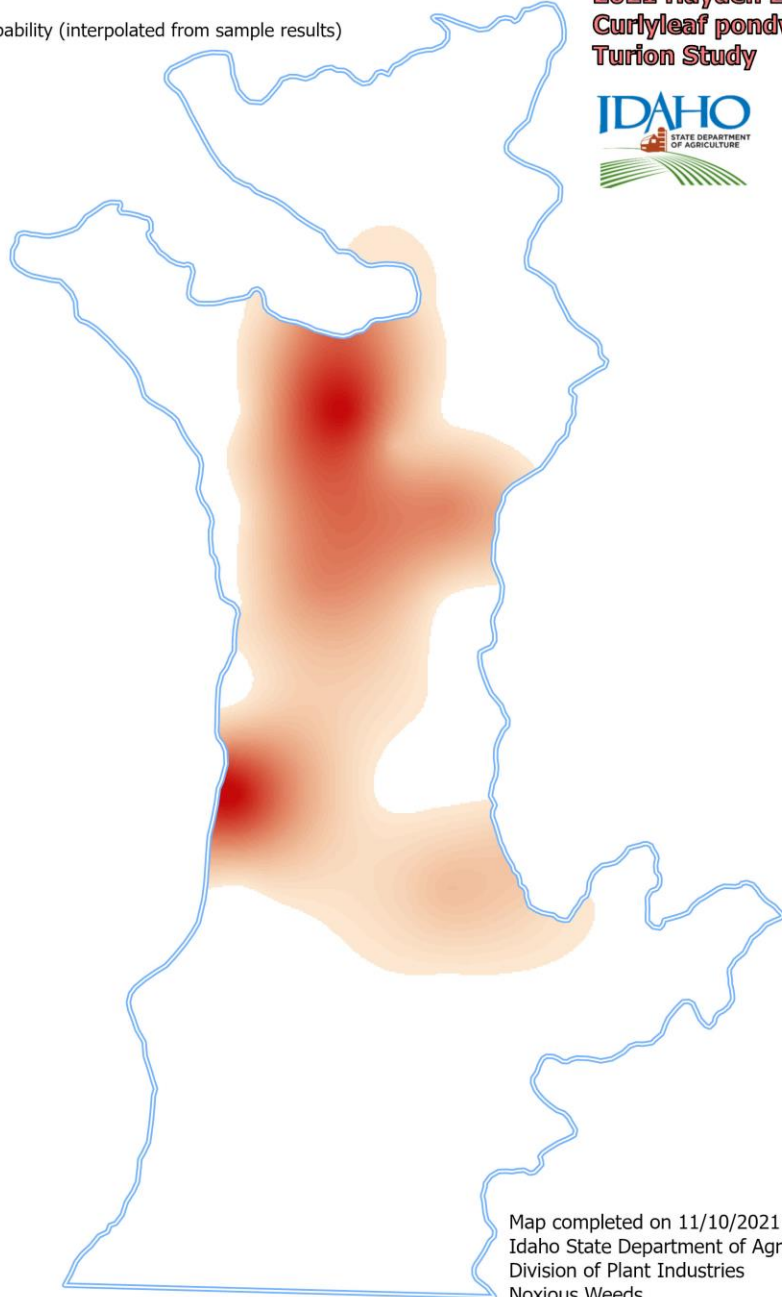
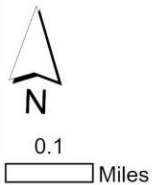
0.1

Miles

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Idaho State Department of Agriculture
Division of Plant Industries
Noxious Weeds

Turion density probability (interpolated from sample results)

**2021 Hayden Lake
Curlyleaf pondweed
Turion Study**



Map completed on 11/10/2021 by:
Idaho State Department of Agriculture
Division of Plant Industries
Noxious Weeds






THANK YOU

www.invasivespecies.idaho.gov

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