

A scenic landscape of a river valley with mountains and a boat on the water. The scene is captured in a cool, blue-toned light, possibly during dawn or dusk. In the foreground, a small wooden boat with two oars is beached on a dark, pebbly shore. The river flows through the center of the valley, reflecting the sky. The mountains in the background are rugged and partially covered in green vegetation. The overall mood is serene and natural.

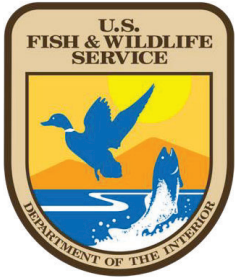
Protecting Kenai River Salmon: Eradicating Elodea from Crescent Lake

Kenai Peninsula Borough Assembly Meeting

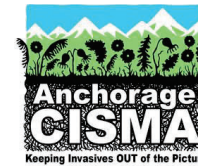
April 7, 2026



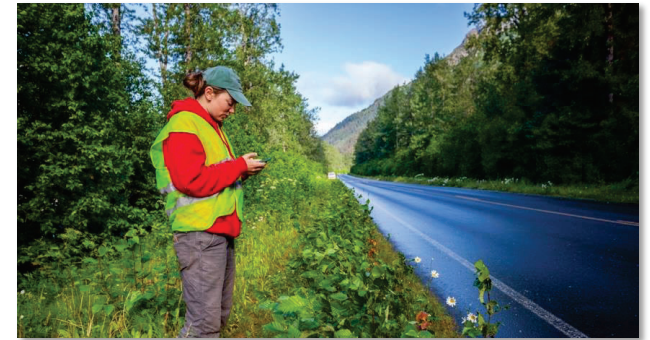
KENAI PENINSULA COOPERATIVE
**INVASIVE SPECIES
MANAGEMENT AREA**



Kenai Watershed Forum



SELDOVIA VILLAGE TRIBE
Tradition Integrated with Technology



What is Elodea?

- Waterweed native to parts of North America
- First and only aquatic invasive plant known to be present in Alaska
- Reproduces from small fragments that can root and grow into dense mats
- Crowds out native vegetation, reduces biodiversity
- Dense infestations obstruct water flow, deplete dissolved oxygen
- Destroys salmon spawning beds, alters availability of suitable prey for juvenile salmon
- Decreases property values, impedes boat travel, floatplane hazard



Photo: Kristine Dunker/ADF&G



Photo: Matt Bowser/USFWS



Photo: USFWS

History of Elodea on the Kenai Peninsula



Colin Canterbury applies fluridone to Sandpiper Lake (Matt Bowser/USFWS)

- First discovered on the Kenai Peninsula in 2012
- By 2019, had been identified in six lakes (Daniels, Stormy, Beck, Sports, Sandpiper, and Hilda-Seppu) on the northwestern Peninsula
- A collation of KP-CISMA partners collaborated to treat these infestations beginning in 2013.
 - Funding primarily from KPB and the National Fish & Wildlife Foundation
- After 9 years of treatment and monitoring, in 2022, all known infestations of Elodea on the Peninsula had been eradicated!

Elodea in Crescent Lake

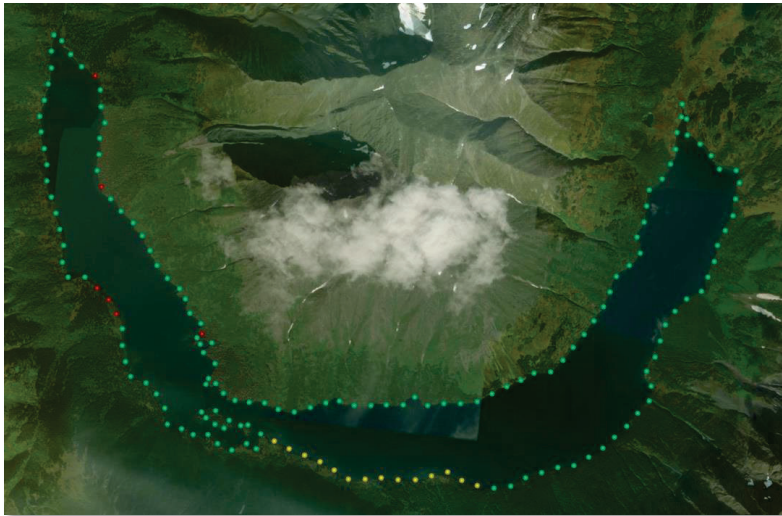
- U.S. Forest Service staff found Elodea in Crescent Lake in September 2023 during a scheduled survey.



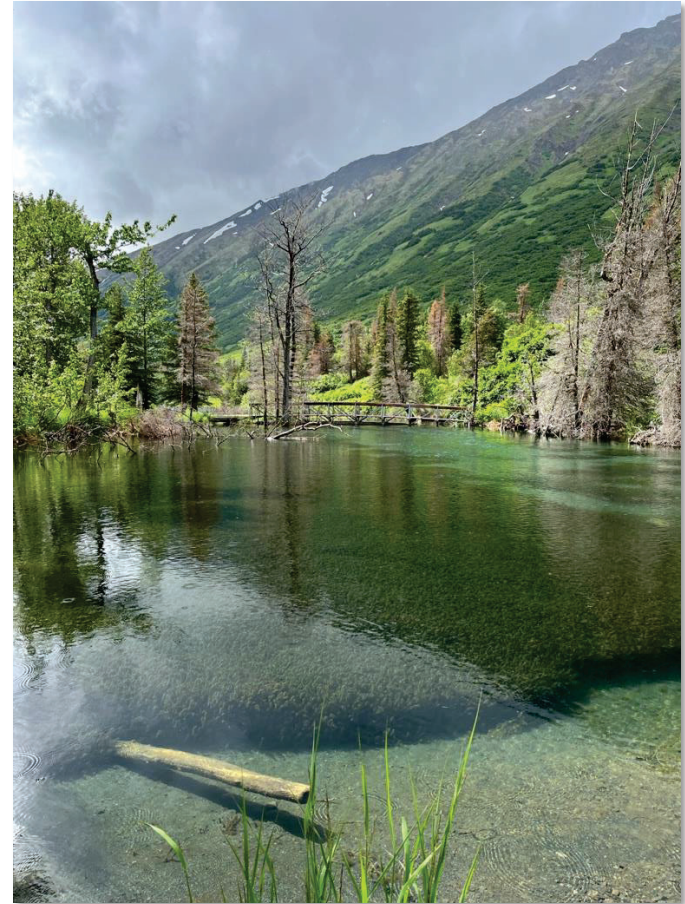
Caitlin Luby with a rake full of Elodea at Crescent lake (Katie Baker/USFS)

Elodea in Crescent Lake

- Follow up surveys identified four infested areas in the western half of the lake, including at the outlet, and covering a total of roughly **11 surface acres**.



Mapped locations of the Crescent Lake Elodea infestations (USFS)



Elodea in the Crescent Lake outlet (USFS)

Crescent Lake

- Large, remote alpine lake located on the Chugach National Forest
- 1,345 acres
- Maximum depths approximately 91 meters (300 feet)
- Six-mile hike from the Cooper Landing side
- Popular destination for hikers and cabin-goers, supports recreational grayling fishery
- Local floatplane school uses for landing and takeoff practice






Main concern: Potential for Elodea to spread downstream, including to the Kenai River

- Could devastate salmon habitat, with cascading consequences
 - Overall ecological health
 - Fisheries
 - Subsistence resources
 - Economy and livelihoods dependent on healthy salmon populations, the river, and tourism

Crescent Lake Elodea Working Group



Forest Service
U.S. DEPARTMENT OF AGRICULTURE

ELODEA IDENTIFIED IN CRESCENT LAKE!

Elodea

ELODEA IS A FAST GROWING AQUATIC INVASIVE PLANT SPECIES. IT GROWS IN DENSE MATS THAT CHOKER WATERWAYS AND LAKES. THREATEN FISHERIES AND RECREATION OPPORTUNITIES AND CREATE HAZARDOUS CONDITIONS FOR FLOAT PLANE PILOTS.

ELODEA SPREADS FROM TINY FRAGMENTS INTRODUCED BY FLOAT PLANES, BOATS, TRAILERS, FISHING EQUIPMENT AND HOME/SCHOOL AQUARIUMS.


CLEAN, DRY, DRAIN EVERY WATERBODY, EVERY TIME

- CLEAN AND INSPECT YOUR AIRCRAFT BEFORE EVERY FLIGHT
- REMOVE VISIBLE PLANTS AND PUMP WATER FROM FLOATS.
- DON'T TAXI THROUGH HEAVY PLANT GROWTH
- RAISE/LOWER RUDDERS TO FREE PLANT FRAGMENTS OVER DRY LAND OR THE WATERS YOU JUST LEFT

CALL 1-877-INVASIV TO REPORT SIGHTINGS
NOTE LOCATION AND WATER CLARITY/DEPTH
TAKE A PHOTO

WE NEED YOUR HELP TO PREVENT THE SPREAD OF ELODEA!

INVASIVE AQUATIC SPECIES PRESENT AN ONGOING THREAT TO NATIVE SPECIES, OUR ECONOMY, RECREATION AND HUMAN HEALTH AND SAFETY.



Core Partners

- Homer Soil & Water Conservation District
- Alaska Department of Natural Resources
- U.S. Fish and Wildlife Service & Kenai National Wildlife Refuge
- U.S. Forest Service
- Cook Inlet Aquaculture Association
- Alaska Department of Fish and Game

Guidance

- KP-CISMA Integrated Pest Management Plan for Eradicating Elodea from the Kenai Peninsula
- Partner experience and expertise

Funding

- Alaska Sustainable Salmon Fund Grant, awarded March 2025

Rapid Response Plan

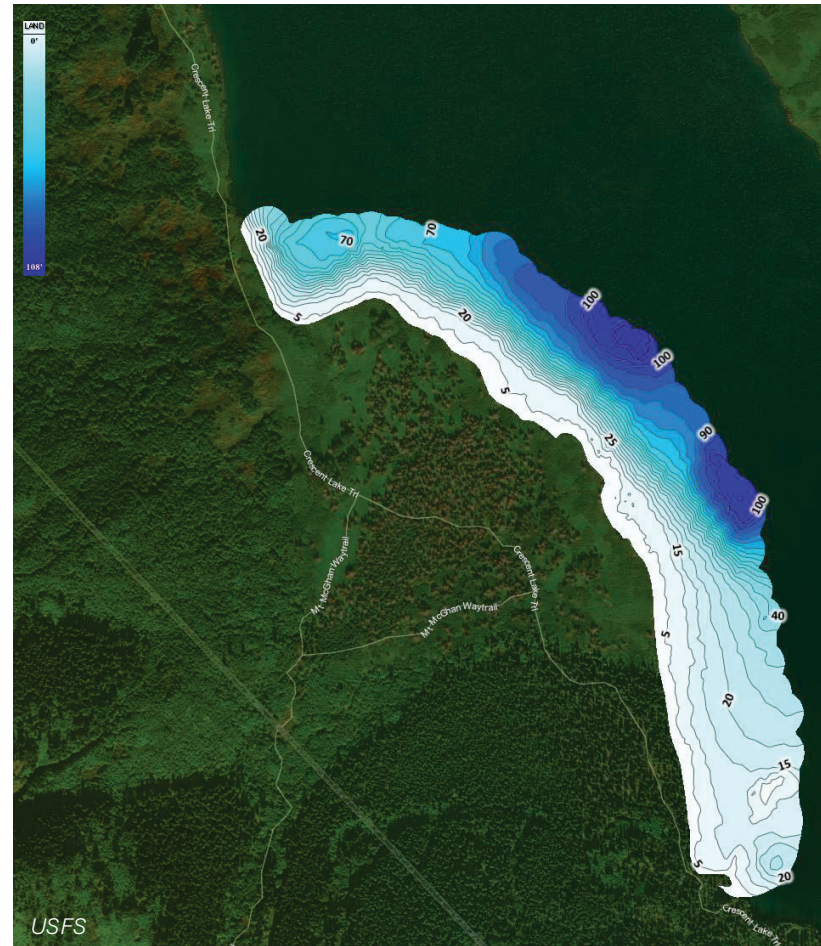
- Herbicide treatment
- Manual removal
- Outreach

Developing a Treatment Plan

Data Collection: Bathymetry



Photo: USFS

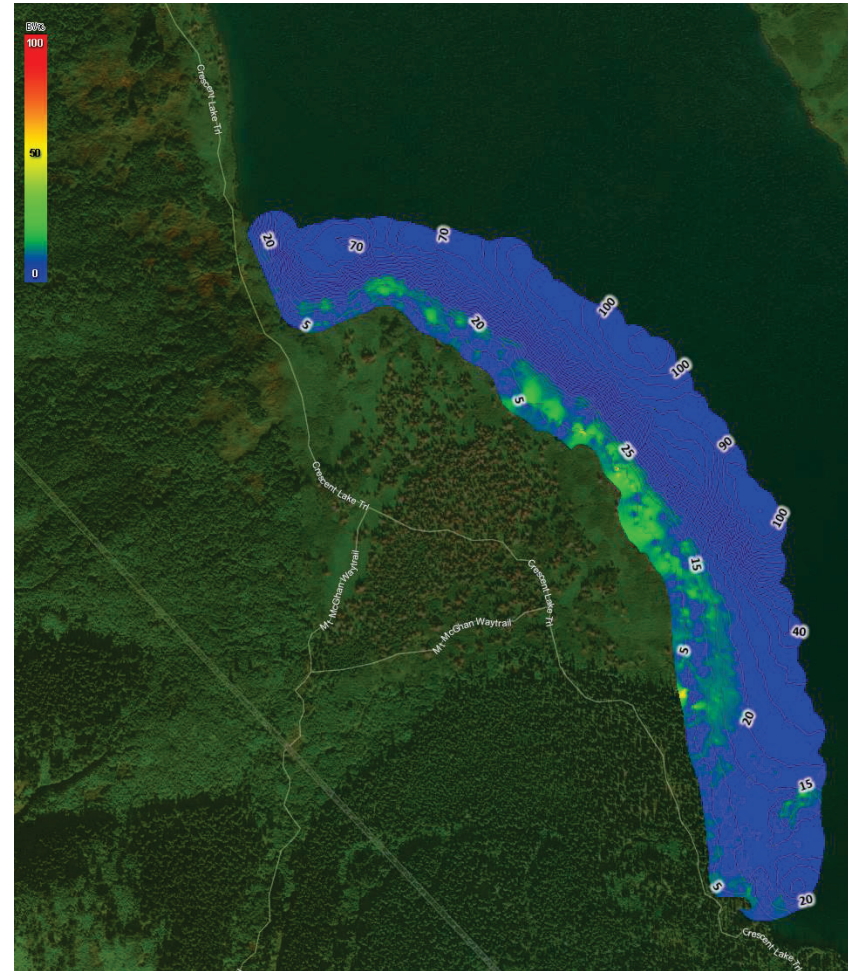


Developing a Treatment Plan

Data Collection: Vegetation Density



Photo: USFS

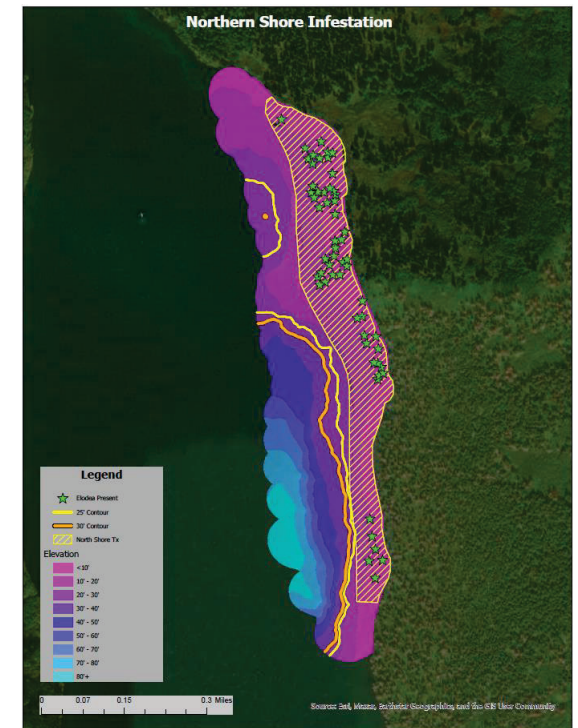
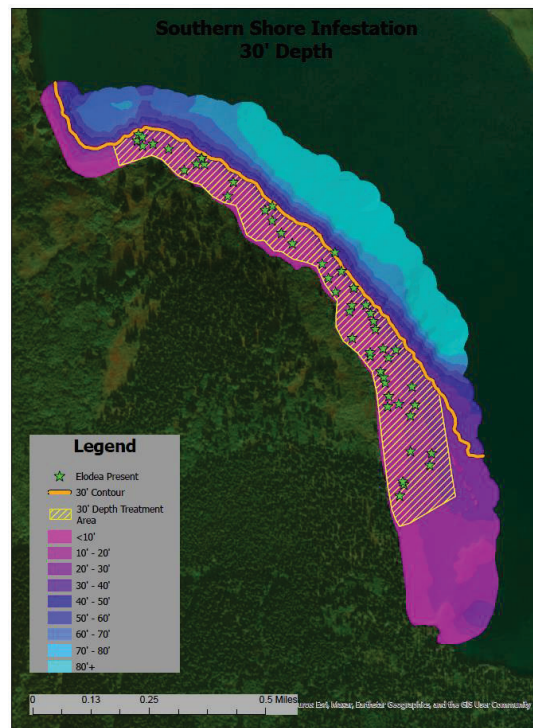


Developing a Treatment Plan

Data Collection: Elodea Density



Chris Haberbusch holds a rake of Elodea at Crescent Lake (USFS)



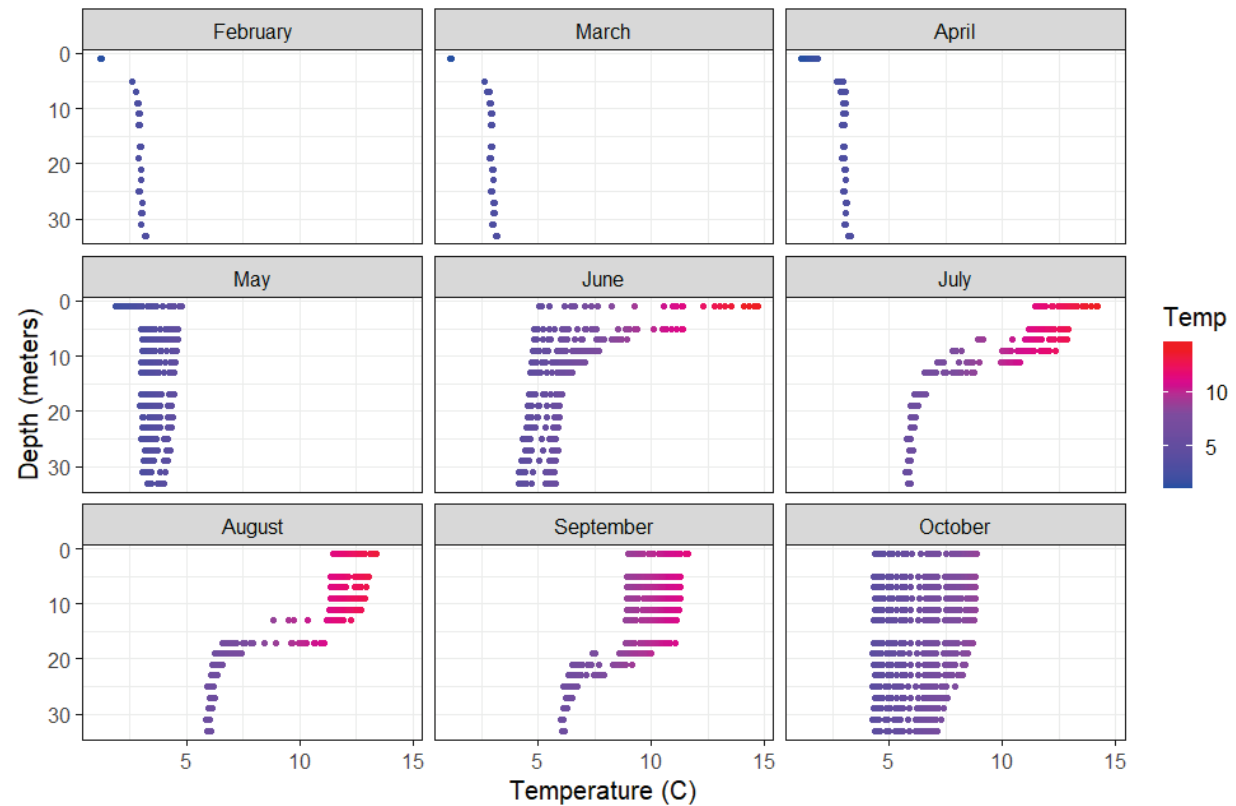
Developing a Treatment Plan

Data Collection: Temperature Stratification



Photo: USFS

Monthly Temperature Profiles - Crescent Lake, Alaska
February to October 2024

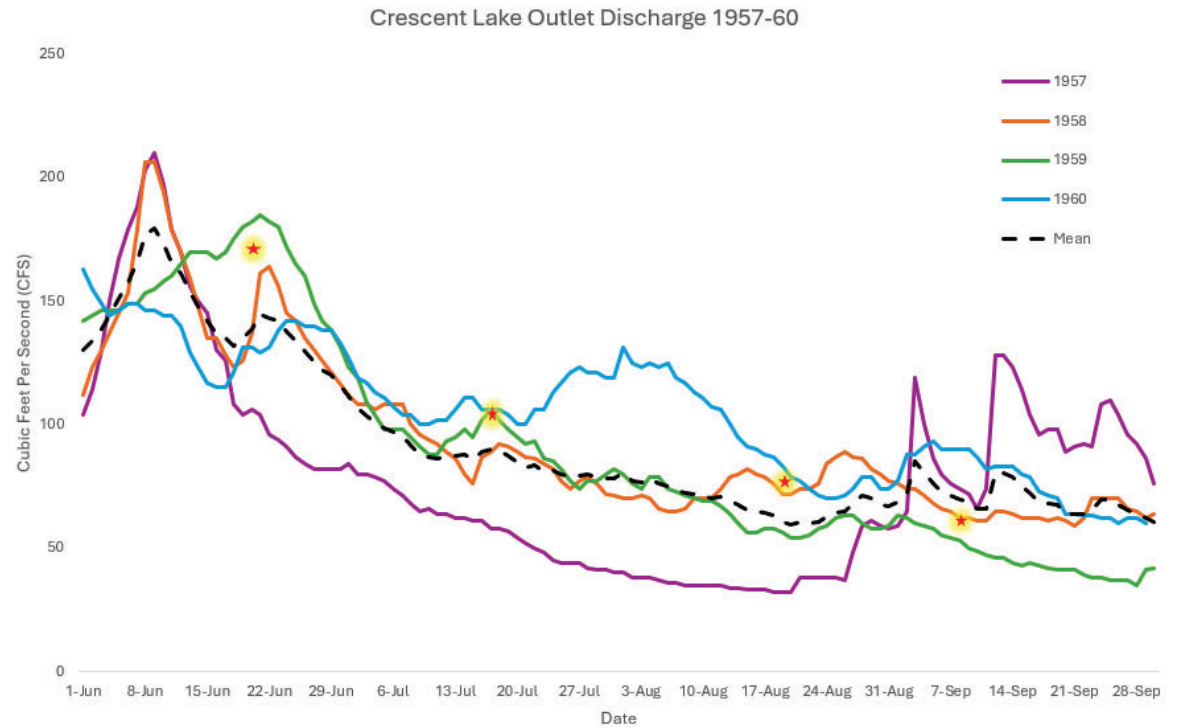


Developing a Treatment Plan

Data Collection: Lake Discharge



Photo: USFS



Outreach



Kenai Peninsula Cooperative Invasive Species Management Area - KP CISMA
May 19 · 🌐

Did you miss the Crescent Lake Elodea Eradication Project info session last week? Fret not, you can now view it on our YouTube Channel! 📺

In anticipation of work set to begin this summer, KP-CISMA partners sat down with Cooper Landing community members to talk about the project and answer questions.



youtube.com

Crescent Lake Elodea Eradication Project Informa...

📩 Send message

USDA Forest Service
U.S. DEPARTMENT OF AGRICULTURE

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Please join us!

CRESCENT LAKE ELODEA ERADICATION PROJECT
INFORMATIONAL SESSION

Wednesday, May 14
5:30-6:30 p.m.
Cooper Landing Community Hall

Tune in virtually
<https://bit.ly/4LY5W17>

Learn about this project to rid Crescent Lake of invasive Elodea and how it helps protect Kenai River salmon!

Join members of the Kenai Peninsula Cooperative Invasive Species Management Area (KP-CISMA) for a short presentation, followed by time for questions and answers.

Elodea, a highly invasive non-native aquatic plant, causes significant harm to fish habitat in Alaska.

More Information:
Email jen@homerswcd.org

The project is sponsored by the Department of Commerce and the Alaska Department of Fish and Game under NA24NMF438G0056.
kenaiinvasives.org



2025 Elodea Treatment on Crescent Lake

Photos: Matt Bowser/USFWS

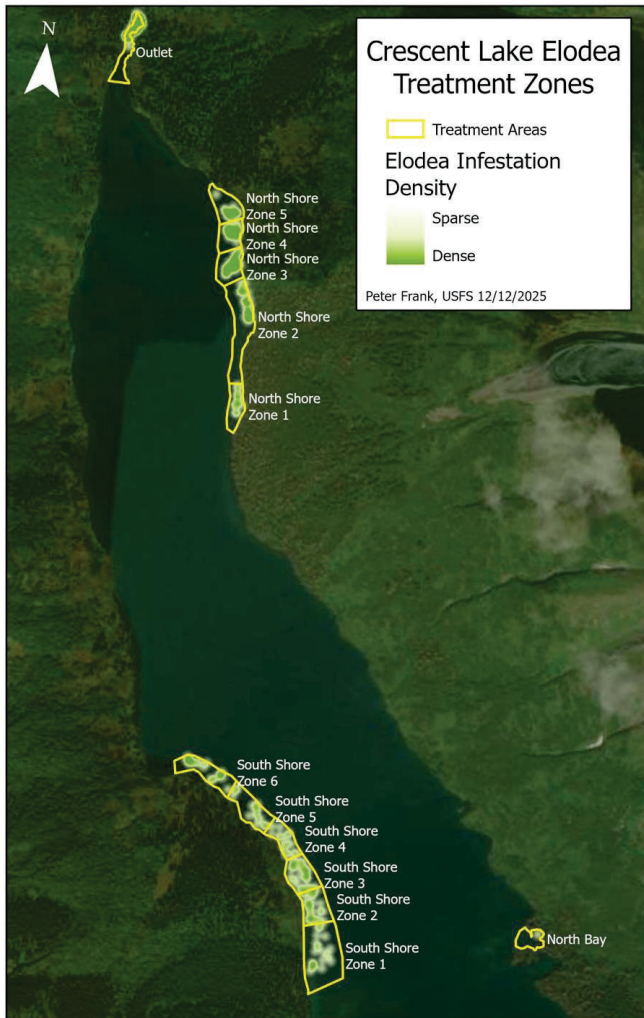
Herbicide Application on Crescent Lake

2025 Treatments

- Total Treatment Area = 41.1 Surface Acres
 - Southern Shore = 24.4
 - Northern Shore = 15.6
 - Northern Bay = 1.1
- Three treatments separated by 3 weeks:
 - Treatment 1: July 7th
 - Diaquat + Fluridone (Sonar One-90 ppb)
 - Treatment 2: July 28th
 - Fluridone (Sonar One-30 ppb)
 - Treatment 3: August 22nd
 - Fluridone (Sonar One-30 ppb)



Photos: USFS & Matt Bowser/USFWS



Treat ment Zone	Treat ment 1	Treat ment 2	Treat ment 3
South Shore			
Zone 1	420	140	140
Zone 2	420	140	140
Zone 3	420	140	140
Zone 4	420	140	140
Zone 5	420	140	140
Zone 6	570	190	190
TOTAL	2670	890	890
North Shore			
Zone 1	105	35	35
Zone 2	411	134	134
Zone 3	243	81	81
Zone 4	243	81	81
Zone 5	147	49	49
TOTAL	1150	380	380
North Bay			
	23	8	8

Pounds of Sonar One applied in each zone

Herbicide Application on Crescent Lake Outlet

2025 Treatments

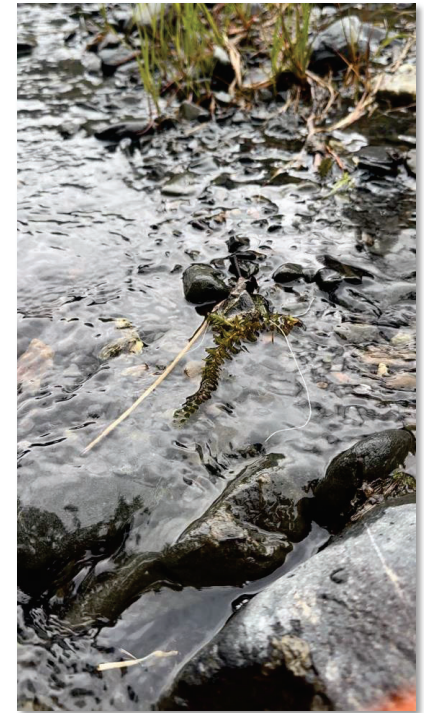
- Total Treatment Area = 1.9 Surface Acres
- Average Flow in Outlet = 75 CFS
- Dosed application of Sonar AS (fluridone) at the lake's outlet
 - 12 ppb application rate
 - 1.2 gallons per day



Photos: Matt Bowser/USFWS

Crescent Creek Surveys and Manual Removal

- Hand pulled rooted Elodea and collected fragments in Crescent Creek
- During first treatment, Anchorage SWCD collected equivalent of a gallon Ziplock bag
- Final treatment, no Elodea found!



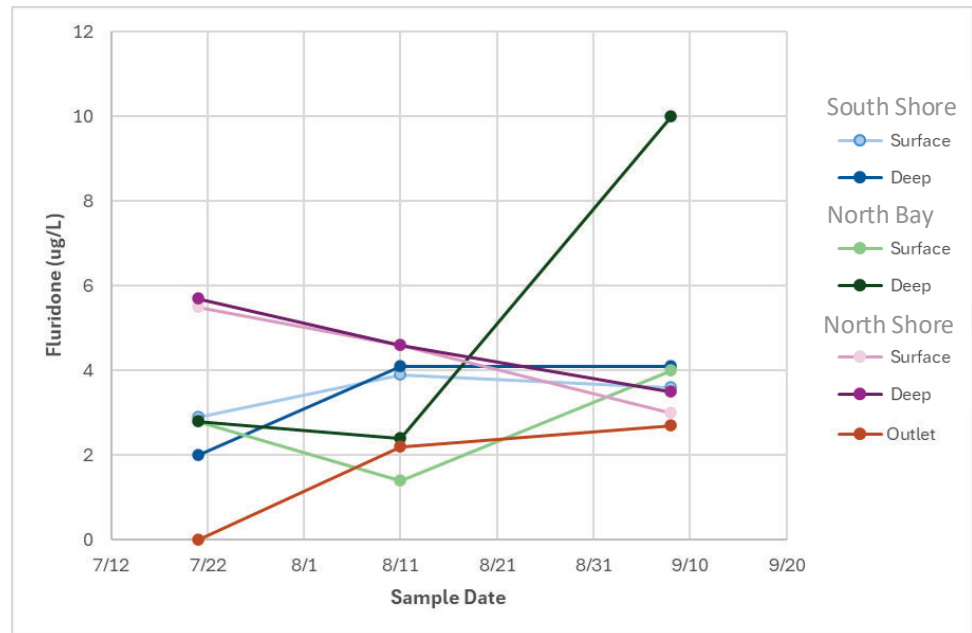
*Elodea fragments collected from Crescent Creek, July 2025
(Hannah Thompson/ASWCD)*



Chris Haberbush collects a water sample from Crescent Lake (USFS)

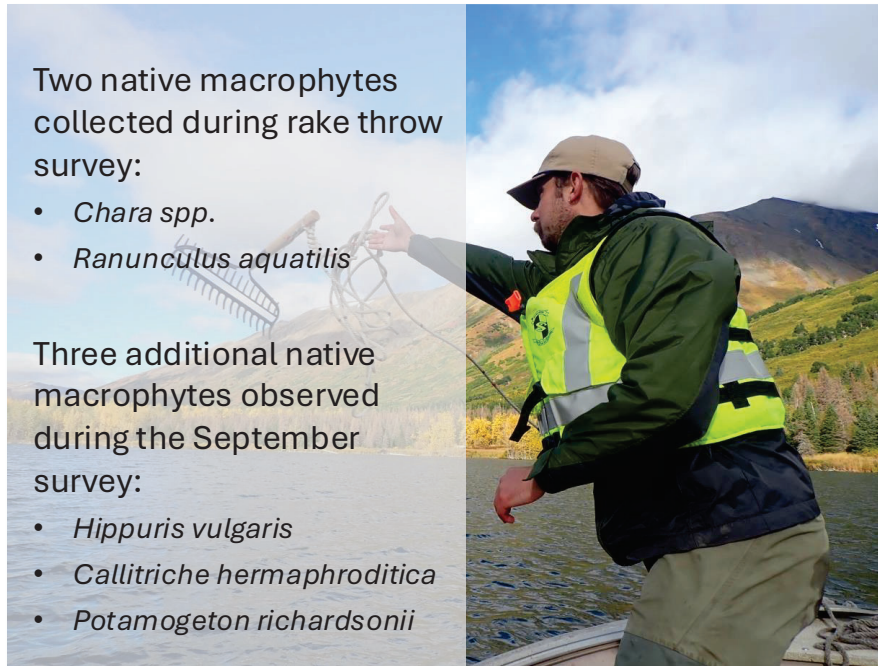
Monitoring

- FastEST sampling following each treatment to monitor concentration of herbicide in the water



Monitoring

- Pre and Post Treatment Macrophyte Monitoring



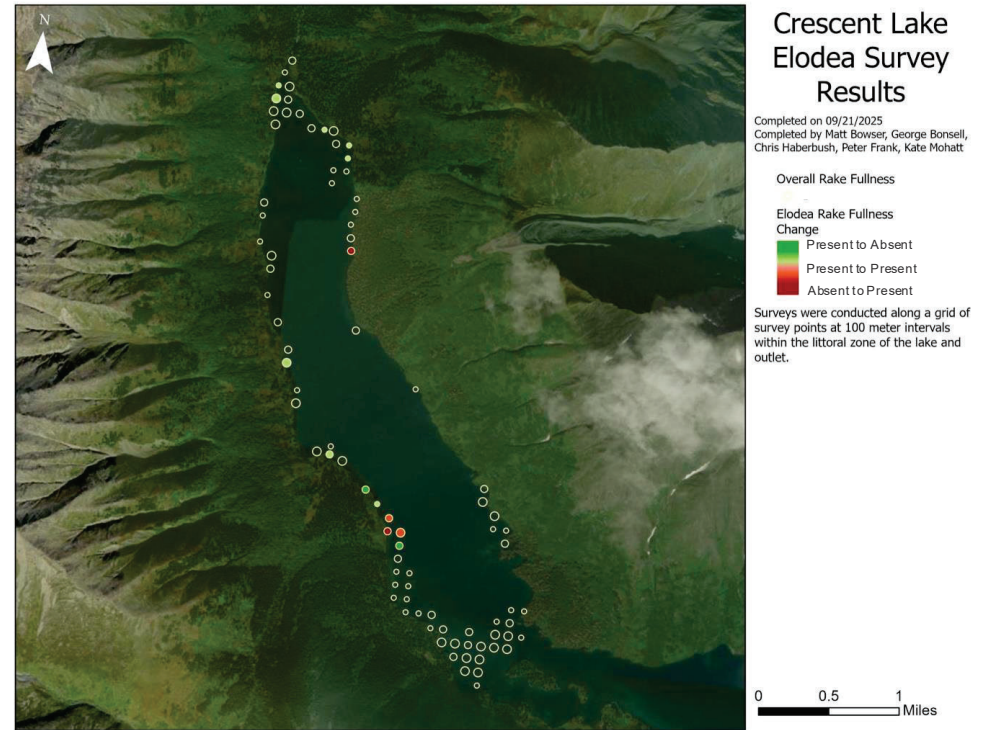
Two native macrophytes collected during rake throw survey:

- *Chara spp.*
- *Ranunculus aquatilis*

Three additional native macrophytes observed during the September survey:

- *Hippuris vulgaris*
- *Callitriche hermaphrodita*
- *Potamogeton richardsonii*

Chris Haberbush throws a rake during a vegetation survey in Crescent Lake (USFS)



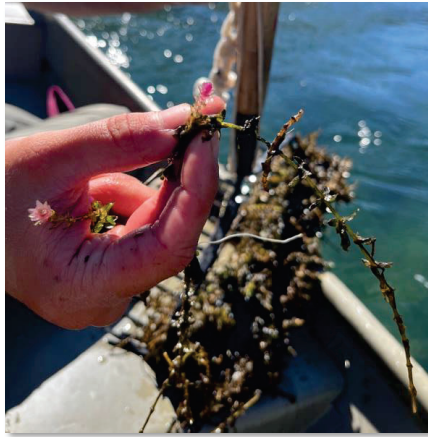
Fall Survey

Elodea Presence		Fall Survey	
		Present	Absent
Spring Survey	Present	1	10
	Absent	3	144

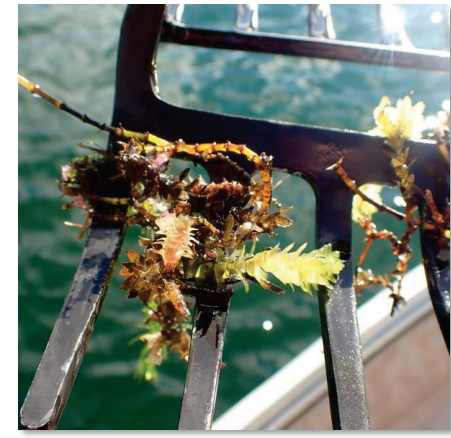
Following Treatment #1



Following Treatment #2



Following Treatment #3



Photos: USFS

September 2023
Elodea detected
in Crescent Lake

December 2024
\$907,840 in grant
funding secured
through the
Alaska
Sustainable
Salmon Fund

Summer 2026
Second year of
treatments to
begin in July

Late 2023-2024
KP-CISMA
initiates rapid
response,
community
outreach
campaign, and
begins to develop
3-year
eradication plan

Summer 2025
Eradication
efforts
implemented,
treatments
completed July-
August

2027 ???
Funding needed
for third year of
treatments

Looking ahead...

KP-CISMA is actively seeking funding for 2027, the third (and hopefully final) year of treatments

- Approximately **\$500,000 needed** for herbicide and boots-on-the-ground response
- Non-federal match is a significant hurdle!

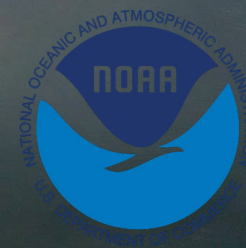


Photo: Matt Bowser/USFWS

7/10/2025

Matt Bowser and George Benson from USFW
Kenai National Wildlife Refuge, Maria Hoffman from
Homer Soil and Water Conservation District, and Travis
Fuller from SLPRO stayed from 7/7 to 7/10. We
treated Crescent Lake with Littora (diquat) on 7/8 and
with Sonar One (fluridone) on 7/9. On 7/10 we started
a drip station applying Sonar A5 (fluridone) at the outlet.
All of this is the start of an effort to eradicate invasive
elodea from Crescent Lake, Crescent Creek, and the
Kenai Peninsula to protect salmon habitat. We appreciated
and enjoyed the trip.

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Contact Info

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This project is sponsored by the Department of Commerce and the Alaska Department of Fish and Game under NA24NMF438G0056.