

Agency: Commerce, Community and Economic Development**Grants to Municipalities (AS 37.05.315)****Grant Recipient: Anchorage****Federal Tax ID: 92-6001185****Project Title:****Project Type: Planning and Research**

Anchorage - Study, Survey and Treatment of Elodea

State Funding Requested: \$75,000
One-Time Need**House District: Anchorage Areawide (16-32)****Brief Project Description:**

Research, survey, sampling and identification, and treatment of potentially invasive vegetation within the waterways of the Municipality of Anchorage.

Funding Plan:

Total Project Cost:	\$75,000
Funding Already Secured:	(\$0)
FY2013 State Funding Request:	<u>(\$75,000)</u>
Project Deficit:	\$0

*Funding Details:**FY 2013 | \$75, 000 | First time funding to address this issue.***Detailed Project Description and Justification:**

This funding will allow the ASWCD to research, survey, collect and analyze data, and perform treatment regarding potentially invasive and harmful plants within the Municipality of Anchorage, specifically Elodea.

The Fairbanks area has identified Elodea growing in their lakes, ponds and other slow-moving waterbodies. This has triggered statewide concern regarding potential impacts to fish and wildlife habitat, impact to recreational uses (float planes and boats specifically), and potential increase in sedimentation and degradation of water quality.

Elodea has also been identified within the Municipality of Anchorage. This funding is necessary to a proactive approach in the containment of potential impacts from Elodea's presence. The ASWCD will complete a Municipality-wide survey for Elodea, collect research and data, collect samples and complete identification, analyze collected data, analyze treatment options, and perform treatment(s) to ascertain effectiveness and/or containment in selected waterbodies.

Project Timeline:

Work to begin July 1, 2012 with completion by July 1, 2015.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

Anchorage Soil and Water Conservation District

Grant Recipient Contact Information:

Name:	Ryan Stencil Operations Manager
Title:	Anchorage Soil & Water Conservation District
Address:	PO Box 110309 Anchorage , Alaska 99511
Phone Number:	(907)677-7645
Email:	aswcd@aswcd.org

Has this project been through a public review process at the local level and is it a community priority? Yes No

For use by Co-chair Staff Only:

Elodea: **protecting Alaska from this invader**

Katrina Mueller and Cecil Rich
U.S. Fish and Wildlife Service
Anchorage, Alaska



Meet *Elodea*: Alaska's first known invasive submerged aquatic plant!

- *A genus of rooted aquatic macrophyte*
- *Popular aquarium plant (“oxygen weed”)*
- *Not native to Alaska*
- *Cold tolerant, survives freezing*
- *Fragments survive and grow*



Vectors

- Aquarium community
- Float planes
- boat trailers and boats



← *Sand Lake, Anchorage*



FIG. 1. An extreme example of the entanglement of aquatic macrophytes on recreational boats and trailers. The photograph was taken at the boat launch area of the Ensign Public Access Site, Lake St. Clair, Michigan, USA, in the summer of 1993.

In Johnson et al. 2001. Overland dispersal of aquatic invasive species: a risk assessment of transient recreational boating. *Ecological Applications* 11(6): 1789-1799.

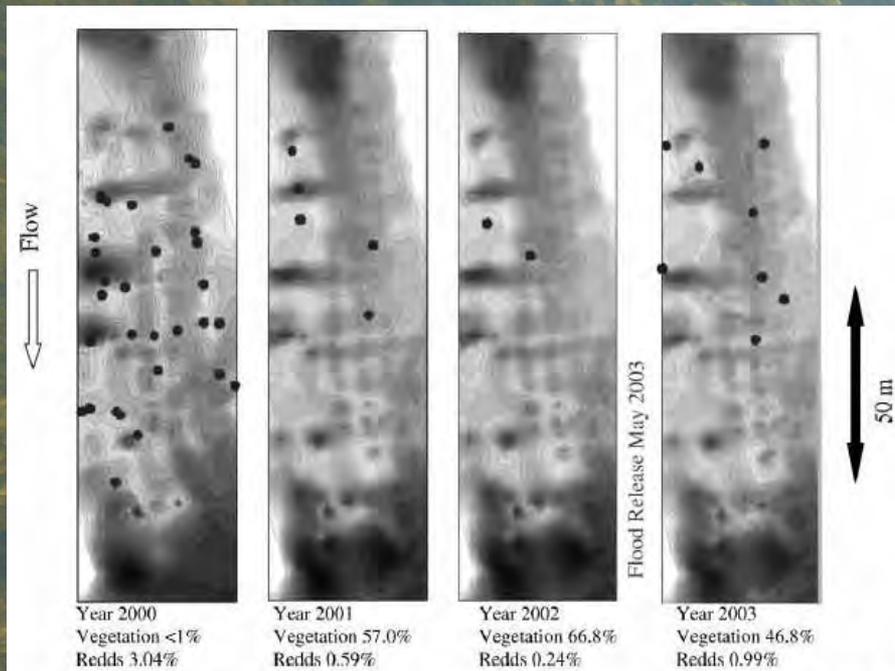
Impacts to come/already here

- **Safety:** *fouls float plane rudders/boat propellers*
- **Nuisance:** *impedes launching, navigation, and fishing*
- **Economic:** *reduces property values*
- **Ecological**
 - *decreases stream velocity*
 - *increases rates of sedimentation*
 - *simplifies aquatic habitat structure*
 - *alters nutrient availability*
 - *overgrows native aquatic submerged plants*
 - *has been shown to degrade salmon spawning habitat*

Elodea carpet on Lake Harkort, Germany



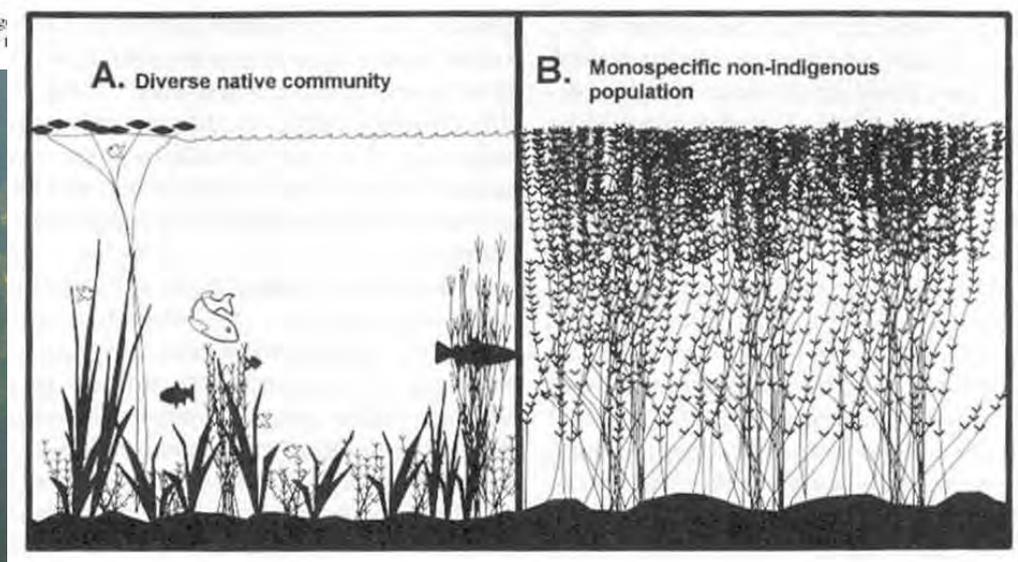
Documented impacts to Chinook habitat (CA)



Merz et al. 2008. Aquatic Macrophyte Encroachment in Chinook Salmon Spawning Beds: Lessons Learned from Gravel Enhancement Monitoring in the Lower Mokelumne River, California. *North American journal of Fisheries Management* 28: 1568-1577.

Simplifies aquatic habitat & community

FIGURE 4.—Chinook salmon redds constructed at site 2 over four spawning seasons. The term “veg” percentage of the substrate covered by rooted vegetation, the term “redds” to the proportion of the redds in 1 that were constructed at site 2.



Known/Confirmed Locations

- **Anchorage:**
 - *Little Campbell Lake*
 - *DeLong Lake*
 - *Sand Lake*



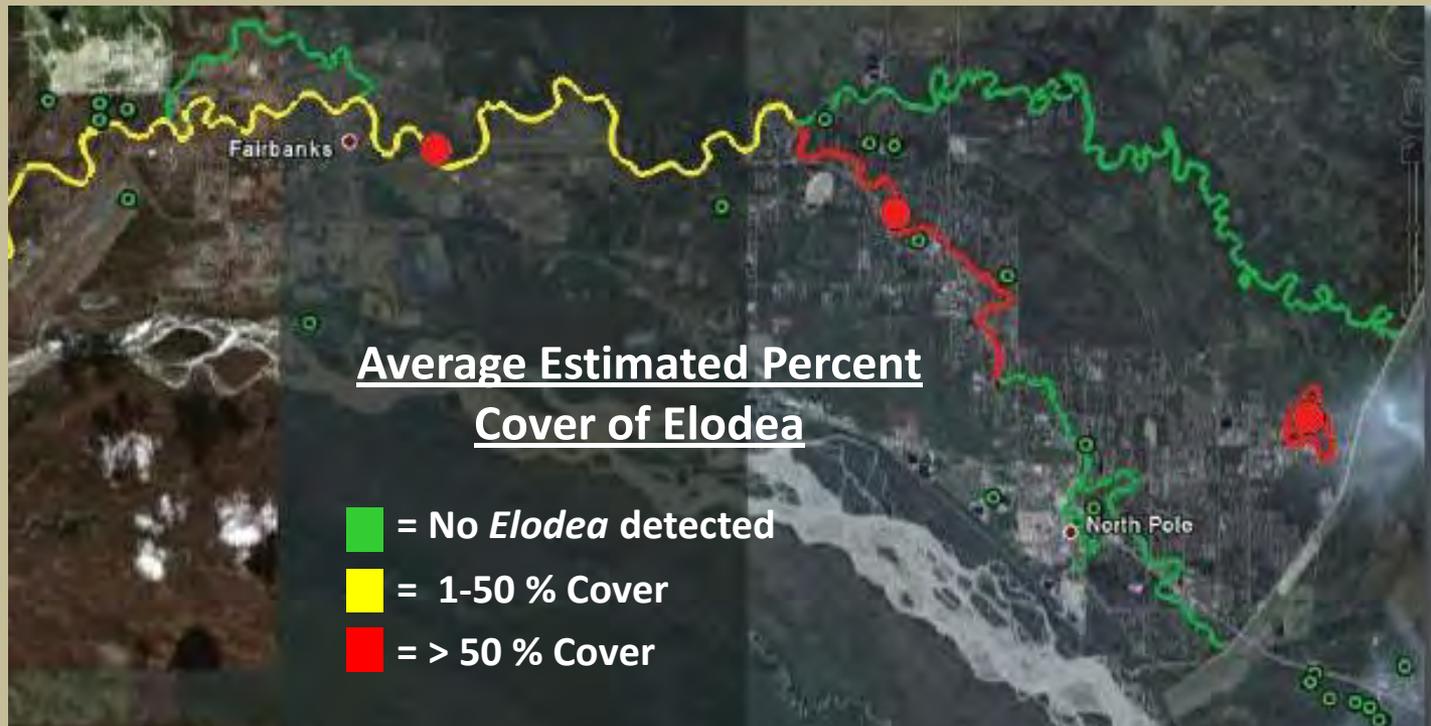
Known/Confirmed Locations

- **Fairbanks:**

- *Chena Lake*
- *Chena River*
- *Chena Slough*



Chena Lake



Known/Confirmed Locations

- **Cordova Area:**
 - *Eyak Lake*
 - *McKinley Lake*
 - *Martin Lake*
 - *Alaganik Slough*



Efforts to date

- Physical surveys in known areas of infestation
- Feasibility trials of mechanical control efforts
 - *Fairbanks working group to ID and test control methods (manual hand cutting and suction dredging trials)*
- Localized public outreach
- Statewide coordination teleconferences/info sharing
- Elodea session: 2011 AK Invasive Sp. Working Group Conference
- Formation of statewide communication plan working group
 - *development of outreach materials is underway*
- Development of BMPs for culvert replacement projects where Elodea is present

What needs to be done?

- Vigilance: detection of additional infestations
- Education to prevent spread/new introductions
- Total eradication where feasible (herbicides)
- Control to prevent spread where eradication isn't possible



Coordination!

Eradication

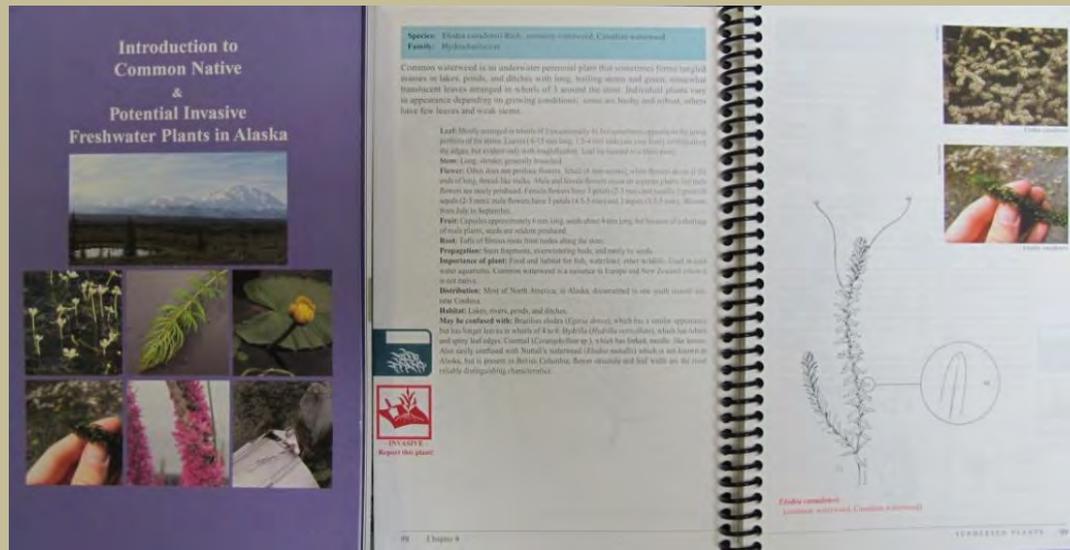
- **Top priority:** *Sand Lake due to proximity to Lake Hood (both are float plane lakes with traffic between) and relatively small/contained lake*
- **Most likely fix:** *whole-lake application of herbicide*
- **Total estimated cost of 1-time fix: \$210,000**
 - *Incl. planning and 3-year treatment/evaluation*
- **Alternatives & outcomes:**
 - *Do nothing - likely spread to Lake Hood and then lakes throughout South Central and Southwest Alaska*
 - *Mechanical - total eradication unlikely + fragments*
 - *Education – will help slow spread but eventual spread to Lake Hood likely*

Next Steps

- Develop Statewide Elodea Response Group
 - *Response plan*
 - *Coordinate implementation of plan*
 - *Secure funding for eradication(s)*
- Determine which organization will take lead
 - *many partners want to help*
- Broaden scope of physical surveys
- Communication group will
 - *generate support and capacity for response*
 - *create educational materials about preventing further spread and new introductions*

How you can help

- Recognize and report Elodea (and other invasives)
 - Float plane operator, field crews, boaters, anglers, guides...
 - Introduction to Common Native and Potential Invasive Freshwater Plants in Alaska. Copies? tammy.davis@alaska.gov or 465-6183. Also available online.
- Report sightings : 1-877-INVASIV



How you can help

- Support prevention, control, and eradication efforts
- Assist statewide communication efforts:
 - katrina_mueller@fws.gov or 786-3637
- Don't dump aquarium life in waterbodies or move aquatic life between waterbodies
- Clean your plane/boat /trailer before entering/leaving a waterbody: <http://www.protectyourwaters.net/>



Protect Your Waters

STOP AQUATIC HITCHHIKERS!

Home / Hitchhikers / Impacts / Prevention / Resources / News / Activities / About US / Contact Us / FAQ

Protect Your Waters and Stop Aquatic Hitchhikers!

Welcome to a site for recreational users who want to help stop aquatic nuisance species. As Americans, we love to spend time on the water. Protecting these resources is an important part of our overall enjoyment. A concern we must all address is the spreading of harmful plants, animals and other organisms. These aquatic nuisance species can hitch a ride on our clothing, boats, and items used in the water. When we go to another lake or stream, the nuisance species can be released. And, if the conditions are right, these introduced species can become established and create drastic results.

So what can we do? By following a simple procedure each time we leave the water, we can stop aquatic hitchhikers. Knowing which waters contain nuisance hitchhikers is not as important — as doing the procedure every time we leave any lake, stream or coastal area. (Click on the links for details on what to do.)

Simple Procedure

- **Remove any visible mud, plants, fish or animals before transporting equipment.**
- **Eliminate water from equipment before transporting.**
- **Clean and dry anything that came in contact with water (Boats, trailers, equipment, clothing, dogs, etc.).**
- **Never release plants, fish or animals into a body of water unless they came out of that body of water.**

Take home messages

- Alaska's lakes and slow moving rivers are at risk – GET INVOLVED. *Elodea* will impact the value of Alaskan freshwater ecosystems, aesthetics, recreational, subsistence, and commercial opportunities.
- We have a short window of opportunity to eradicate *Elodea* in some locations and stop spread/introductions into others. Without human intervention *Elodea* will spread
- We need to act fast: a coordinated effort between agencies, NGOs, recreationalists, pilots, field crews etc.
- There are safe and effective ways to eradicate *Elodea*. Support those efforts
- Spread the word, not the weed!

Acknowledgements

Elodea Statewide Communication Plan working group and others interested/involved with initial Elodea efforts.



Prevention is the best option

Aquatic Solutions UK



Divers for Universal Water Solutions in Rochester, N.Y. remove sacks filled with invasive Brazilian elodea and other aggressive foreign plants at Waccabuc Lake. / Ricky Flores/The Journal News



Mowing boat on Lake Henstay

Thanks! Questions?