

Elodea



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

- *A genus of submerged aquatic plant*
- *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.

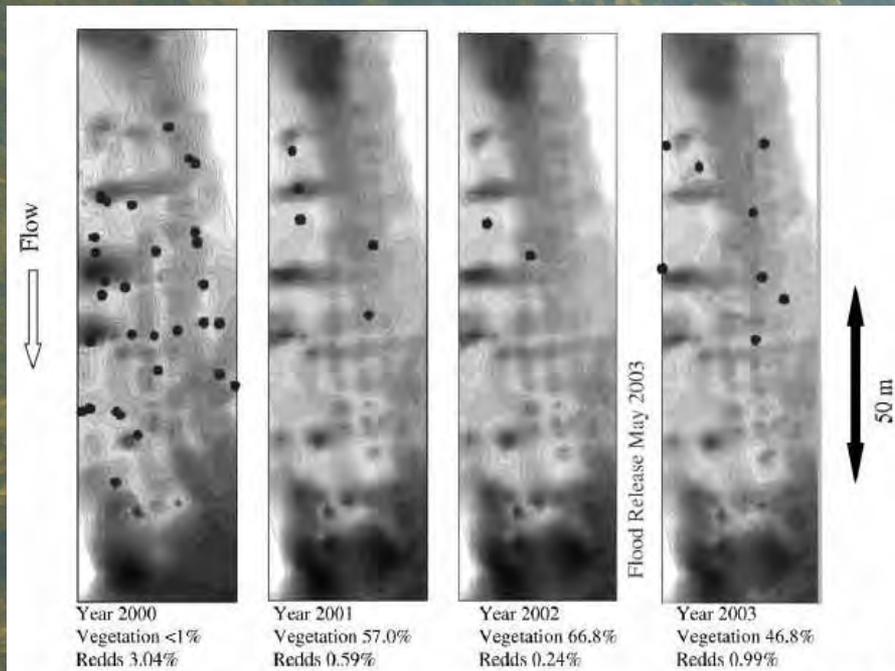
In Johnson et al. 2001. Overland dispersal of aquatic invasive species: a risk assessment of transient recreational boating. *Ecological Applications* 11(6): 1789-1799.



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*

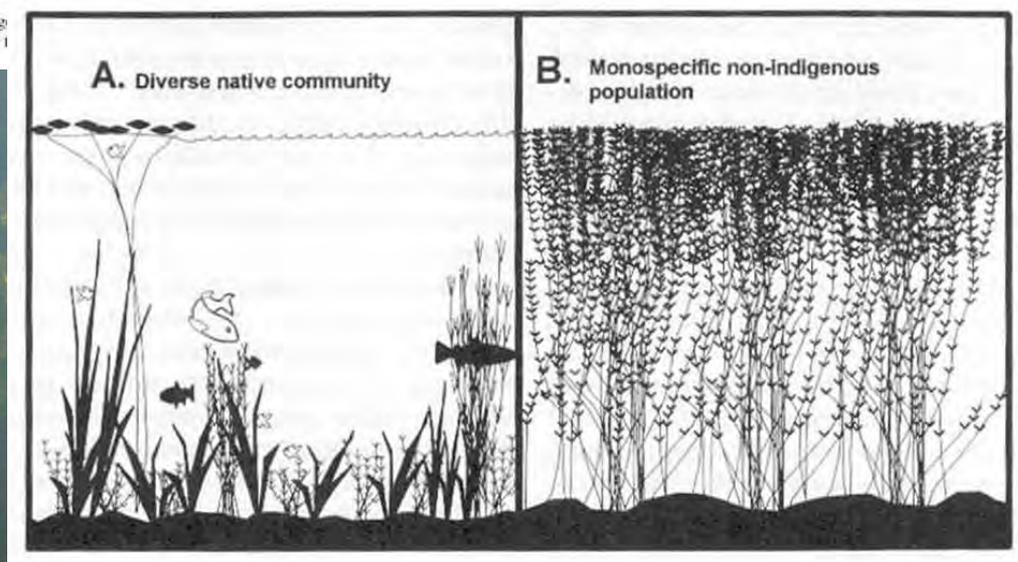
Documented impacts to Chinook habitat (CA)



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*



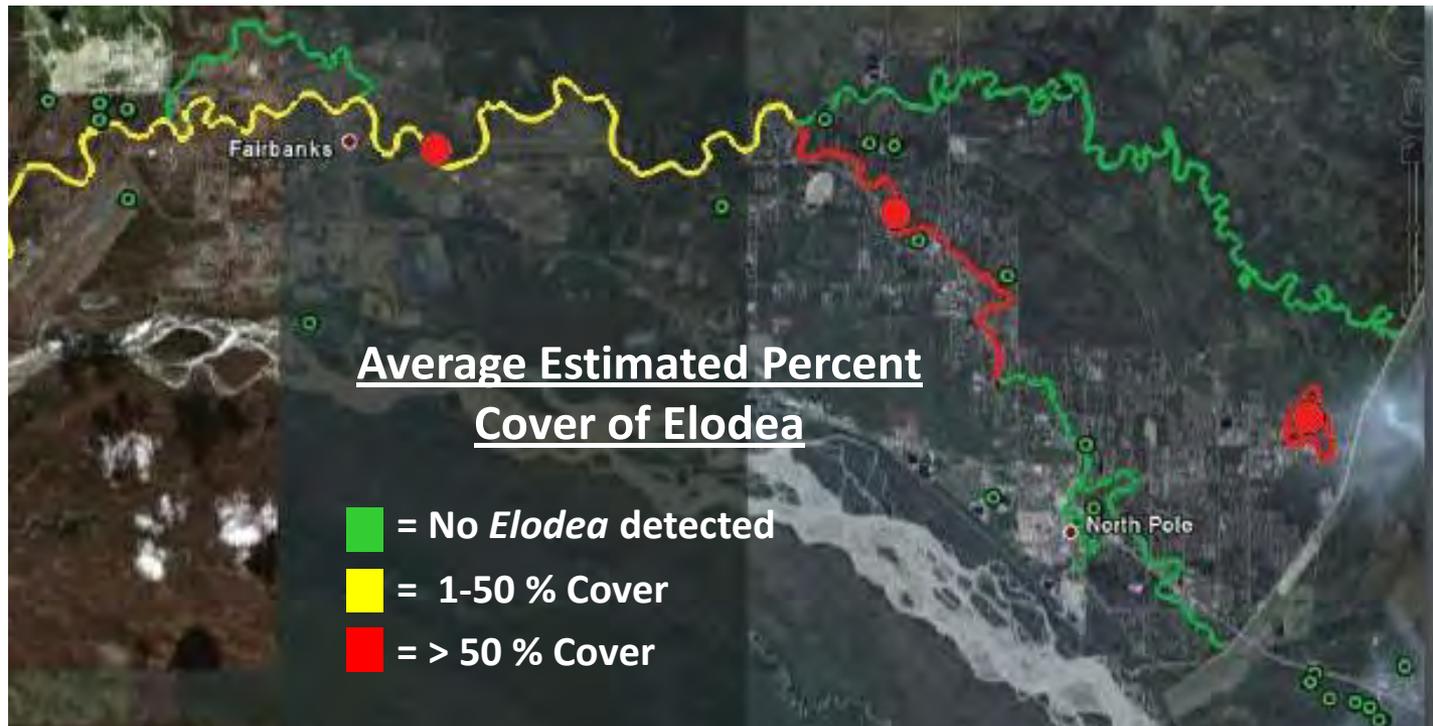
Known/Confirmed Locations

- **Fairbanks:**

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



Chena Lake



Known/Confirmed Locations

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









