

The image shows several stems of a green aquatic plant, likely Elodea, resting on a grey, fibrous mat. The stems are thin and yellowish-green, with small, rounded, green leaves attached in opposite pairs. The mat has a dense, woven texture. The text is overlaid on the right side of the image.

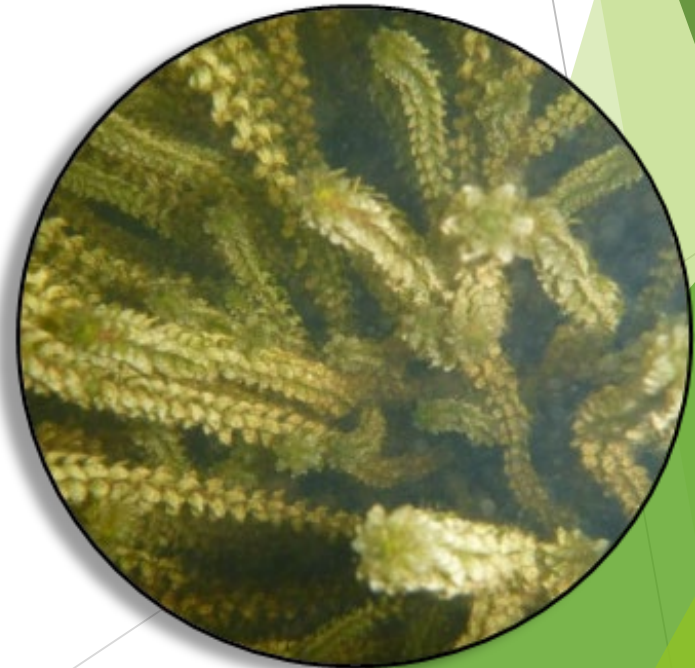
# Aquatic Infestation in the Mat-Su

## An Elodea Update



# Background

- ▶ **Scientific Name:** *Elodea canadensis* and *Elodea nuttallii*
- ▶ **Family:** Hydrocharitaceae, Tape-grass family
- ▶ **Order:** Hydrocharitales
- ▶ Elodea is Alaska's first aquatic invasive plant species
- ▶ It was originally found in Eyak Lake in the late 1980's
- ▶ Over *300 waterbodies* surveyed statewide since 2013



# Identification

- ▶ Leaves in whorls of 3 or 4
- ▶ Leaves are 1/4-1/2 inch long
- ▶ Stems are lighter green than the leaves
- ▶ Grows in a tangled masses
- ▶ Reproduces primarily through fragmentation
- ▶ Fully submerged plant





# Habitat



- ▶ Fresh water
- ▶ Shallow <30'
- ▶ Slow flowing
- ▶ Sloughs
- ▶ Flourishes under ice





# Potential Impacts

- Out-competes native vegetation
- Alters natural flow
- Increases sedimentation
- Affects native fish habitat
- Creates hazards for navigation
- Lowers property values





# Vectors



# Statewide Quarantine

- ▶ March 5, 2014
- ▶ Issued by DNR
  - ▶ *Elodea canadensis* & *nuttallii*
  - ▶ *Egeria densa*
  - ▶ *Hydrilla verticillate*
  - ▶ *Myriophyllum spicatum*
- ▶ These aquatic plants can no longer be shipped, sold, or transported in Alaska
- ▶ Big step in preventing introduction to additional waterbodies





# Elodea in the Mat-Su



- ▶ Alexander Lake
- ▶ Sucker Lake Complex
  
- ▶ Remote dynamic systems
  
- ▶ Eradication challenging



# Alexander Lake

- ▶ 2014 - 10 acre infestation
- ▶ 2016 - 500 acres
- ▶ 2 full lake herbicide treatments and one partial lake treatment
  - ▶ Ineffective
    - ▶ Misunderstanding of lake hydrology
- ▶ Dynamic System
  - ▶ 4 inlets
  - ▶ 1 outlet











# Sucker Lake Complex

- ▶ Elodea first identified in 2016
- ▶ Dynamic System
  - ▶ 3 lakes connected by channels
  - ▶ 3 inlets
  - ▶ 1 outlet







# Tour de Elodea - Site Visit

September 28, 2018

Spotlight on Elodea

- ▶ ADNR, ADFG, USFWS, CIAA, TTCD, Private Land Owners, Mat-Su SHP, and others
- ▶ Trail, Sucker, Alexander Lakes
- ▶ Inform, educate, advance
- ▶ Advancements were made
  - ▶ Mat-Su elodea task force formed



# Mat-Su Elodea Task Force

## We need your help!

### Environmental Assessment

- Revision/Amendment
  - Entire Alexander Watershed
  - To include Diquat

### Apply for DEC Pesticide Use Permits

- Alexander Watershed
  - Liquid and pelleted fluridone
  - Diquat

### Gather funds

- Supporting eradication
- Herbicide Product





# Plans for 2019

- ▶ Critical decisions lay ahead
  - ▶ Multiple sites to treat
  - ▶ Limited funding/resources
  - ▶ How do we proceed
    - ▶ Tough conversations to come
- ▶ Alexander Lake dye study
  - ▶ Better understand hydrology
  - ▶ Refine and finalize herbicide application plan
- ▶ Alexander Lake diquat treatment
  - ▶ Knock down biomass
  - ▶ Reduce risk of spread
- ▶ Sucker Lake fluridone treatment



# Final Thoughts

- ▶ Elodea in the Mat-Su is not here to stay
- ▶ We've got plans of attack
- ▶ We've got partners
- ▶ High level decision makers informed
- ▶ We need to stay persistent and consistent
- ▶ We need to educate
- ▶ We need to eradicate





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