Elodea: A New Threat to Alaskan Waters

An overview of 2011 management activities in Interior Alaska

BACKGROUND:

Elodea nuttallii **is an invasive aquatic plant that was recently found growing in the Chena Slough in Fairbanks, Alaska. This plant has the potential to impact fish rearing and spawning habitat. It was likely an accidental introduction into the slough, possibly by the dumping of an aquarium. The Elodea Steering Committee, a group of concerned citizens and agencies, began meeting over the winter to prioritize projects for 2011. Establishing the distribution of *Elodea* and conducting initial control trials were identified as the main goals of the year. A mapping project was also completed to evaluate grayling spawning and rearing habitat, as well as document precise *Elodea* infestation levels within the slough.**

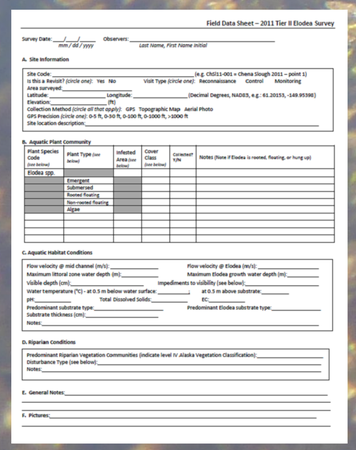
Left: *Elodea caught on a canoe paddle*

Below: *Spring ice covered in Elodea*

Survey Results

Location Type	Number of Sites	Sites with Elodea
Float Pond	5	0
Boat Launch	20	2
Road Crossing	94	22
Gravel Pit	23	0

Data was collected at point locations on 29 water bodies. These locations were selected because they are high use. If found in some areas, such as float ponds, there would be a high probability of spreading *Elodea* to new locations.



Field Data Sheet – 2011 Tier II Elodea Survey

Survey Date: ___/___/___ (mm / dd / yyyy) Observers: _____ (Last Name, First Name Initial)

A. Site Information

Site Code: _____ (e.g. CHS11-001 = Chena Slough 2011 – point 1)
Is this a Revisit? (circle one): Yes No Visit Type (circle one): Reconnaissance Control Monitoring
Area surveyed: _____
Latitude: _____ Longitude: _____ (Decimal Degrees, NAD83, e.g.: 61.20153, -149.95398)
Elevation: _____ (ft)
Collection Method (circle all that apply): GPS Topographic Map Aerial Photo
GPS Precision (circle one): 0-5 ft, 0-30 ft, 0-100 ft, 0-1000 ft, >1000 ft
Site location description: _____

B. Aquatic Plant Community

Plant Species Code (see below)	Plant Type (see below)	Infested Area (see below)	Cover Class (see below)	Canada/ Lite	Notes (Note if Elodea is rooted, floating, or hung up)
Elodea spp.					
	Emergent				
	Submersed				
	Rooted floating				
	Non-rooted floating				
	Algae				

C. Aquatic Habitat Conditions

Flow velocity @ mid channel (m/s): _____ Flow velocity @ Elodea (m/s): _____
Maximum littoral zone water depth (m): _____ Maximum Elodea growth water depth (m): _____
Visible depth (cm): _____ Impediments to visibility (see below): _____
Water temperature (°C) - at 0.5 m below water surface: _____ at 0.5 m above substrate: _____
pH: _____ Total Dissolved Solids: _____ EC: _____
Predominant substrate type: _____ Predominant Elodea substrate type: _____
Substrate thickness (cm): _____
Notes: _____

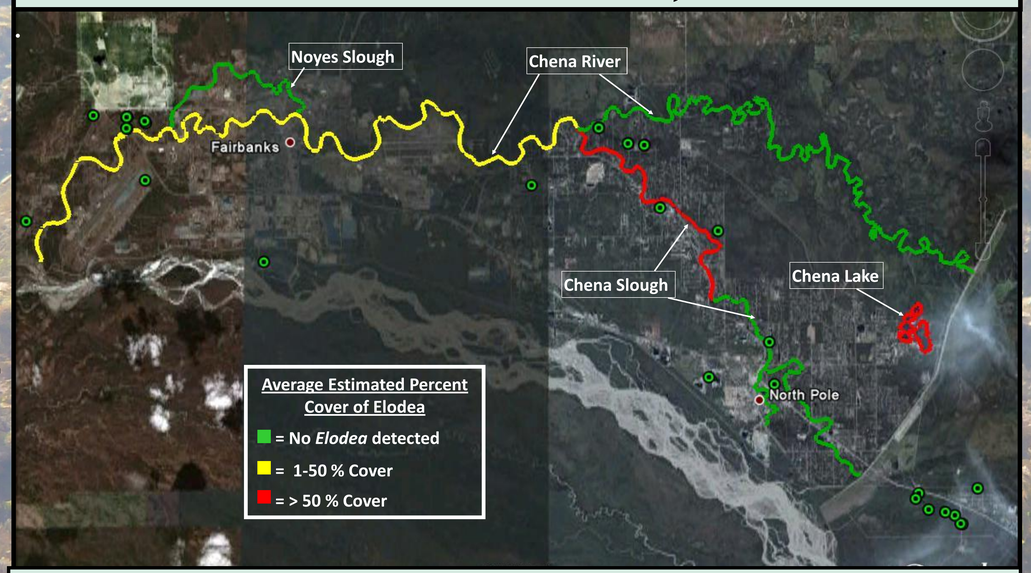
D. Riparian Conditions

Predominant Riparian Vegetation Communities (indicate level IV Alaska Vegetation Classification): _____
Disturbance Type (see below): _____
Notes: _____

E. General Notes: _____

F. Pictures: _____

Elodea nuttallii infestations in Fairbanks, AK



Survey locations not pictured: *Harding Lake, Birch Lake, Quartz Lake, Clearwater River, Tanana River, Birch Creek, Chatanika River (no* Elodea *found at any of these sites)*

The crew worked from July to September collecting data at sites in Interior Alaska. Not only was information collected on *Elodea* density, but also on stream characteristics and other plant life.

Control Trials at Chena Lake

Over the summer, a control trial was set up by a team of SCUBA divers. Techniques included hand pulling, clipping, and installation of landscape fabric. This project will continue through the winter and will give valuable information on effectiveness and feasibility.

Chena Slough Mapping Project

Utilizing tablet computers, the percent cover of *Elodea* in the slough was mapped to help with future control efforts. Information was also collected following a 1997 study documenting grayling spawning and rearing habitat.

Thank you to all our partners!