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**Reporting Period:** January 1 - December 31, 2023

**Project Title:** Maintaining Capacity for Aquatic Early Detection and Rapid Response

### **Aquatic Survey Efforts**

#### **Aquatic Invasive Plant Surveys**

During 2023 the calendar year, the Kenai Watershed Forum (KWF) surveyed the eight lakes (see table below) below for invasive aquatic plants including (e.g. *Elodea*), in accordance with the draft survey protocol published by the Alaska Center for Conservation Science (ACCS). These survey efforts resulted in 310 absence records for submission to AKEPIC; no *Elodea* was detected.

| <b>Lake Name</b> | <b>Acreage</b> | <b>Latitude</b> | <b>Longitude</b> |
|------------------|----------------|-----------------|------------------|
| Beck Lake        | 190.5          | 60.73053        | -151.13362       |
| Stormy Lake      | 393.3          | 60.78440        | -151.03853       |
| Parsons Lake     | 110.7          | 60.69689        | -151.26243       |
| Birch Lake       | 180.7          | 60.72286        | -150.52785       |
| Johnson Lake     | 82.2           | 60.29058        | -151.26541       |
| Encelewski Lake  | 96.4           | 60.25770        | -151.30772       |
| Kolomin Lake     | 62.9           | 60.12190        | -151.03048       |
| Twin Lakes       | 256.2          | 60.27918        | -150.15932       |

Organizational capacity for completing lake surveys was somewhat hindered by the mid-season departure and replacement of the KWF Invasives Coordinator. However, even at full staff capacity, conducting rake throw surveys according to the standardized statewide protocol takes a full day of field effort for the smallest of lakes, and 2+ days of effort for larger lakes. As such, surveying 20 lakes in a single field season is not possible with the current time, personnel, and financial resources. In 2023, we chose to prioritize quality over quantity of surveys, so that we could be maximally confident that our non-detection surveys represent true absences.

Moving forward, KWF will continue to prioritize quality over quantity of aquatic invasive species (AIS) survey efforts. The Invasives Coordinator has also applied for additional funding to help increase the number of AIS surveys that can occur while still maintaining adherence to the statewide standardized survey protocol.

### **Other Aquatic Invasive Organism Survey Efforts**

In Q1 and Q2 of 2023, the KWF Invasives Coordinator worked with a number of state and federal partners to facilitate eDNA sampling for northern pike during the 2023 field season. Unfortunately, these sampling efforts did not take place during 2023 for a number of reasons, including the absence of in-state capacity for eDNA sample processing; budgetary constraints associated with out-of-state processing; and the mid-season departure of the Invasives Coordinator.

The replacement Coordinator was able to facilitate habitat suitability sampling for non-native Dressenid mussels (i.e., water quality testing) at one lake, Beck Lake, in collaboration with researchers at the University of Alaska, Fairbanks (UAF). According to their lab analysis, “Beck Lake's Ca [calcium] concentration is significantly lower than the Ca threshold of 20 ppm, indicating minimal risk for mussel invasion.”

### **AIS Outreach Efforts**

In 2023, the KWF Invasives Coordinator participated in three high-impact outreach events that targeted recreationists, commercial fishing guides, and school-aged children.

In January 2023, the KWF Invasives Coordinator developed curriculum for and presented at both sessions of the Kenai River Guide Academy. Presentation material discussed the following:

- the definition of invasive species and associated concepts
- ecological and economic impacts of invasive species
- specific introduction pathways for invasive species
- the state of invasive species on the Kenai Peninsula
- what Kenai River Guides can do about invasive species

In May 2023, the KWF Invasives Coordinator presented information about aquatic invasive species at both Salmon Celebration and at the Kenai Peninsula Sport Rec & Trade Show. The former event engages school-aged children in education and interpretive activities related to the natural history of Alaska's salmon species, including habitat health and invasive species threats. At this event, KWF staff taught ~400 children about the threats that *Elodea* and reed canarygrass pose to salmon habitat health. The latter is a three-day weekend event that brings in hundreds of local hunters, anglers, boaters, OHVers and other outdoor recreation enthusiasts. At this event KWF staff and KP-CISMA partners specifically promoted awareness of *Elodea* and northern pike, and made approximately 450 individual contacts.