

Alaska eDNA Workshop

Monday, April 1, 2019 9:00am – 5:00pm

Juneau – NOAA Conference Room 131: 1st Floor [Ted Stevens Marine Research Institute](#), 17109 Point
Lena Loop Road

Anchorage – ADFG Aerie Conference Room: 333 Raspberry Road

Teleconference/webinar details:

Audio call in number :1-866-711-8225; Participant password: 32263821

To see presentation materials on your computer please join the Instant Net Conference at:<http://www.mymeetings.com/nc/join.php?sigKey=mymeetings&i=444616512&p=25443079&t=c>; Enter the required fields; Indicate that you have read the Privacy Policy; Click on Proceed. *Note for new users please plan to log in a little early to allow time for you to register and connect to the hosting system.

Meeting Overview

This one-day meeting is intended to bring together state and federal agencies, university researchers, Tribes, and NGOs for a regional discussion about the state of eDNA research and existing and future applications across Alaska. Introductory presentations followed by in depth discussion with meeting participants will touch on topics of interest garnered in early outreach efforts, these include:

- desire for a primer on the science of eDNA sampling, including methodology issues related to
 - single and multiple species sampling
 - laboratory practices and locations in Alaska and Pacific Northwest
 - field sample collection protocols - freshwater/marine/terrestrial sampling considerations
 - abundance vs presence/absence methods
 - invasive species
 - assessing overall biodiversity using metabarcoding approaches
- interest in using eDNA for habitat mapping
 - endangered species
 - invasive species
 - anadromous species and relevance to nominations to the Anadromous Waters Catalog
- overview of existing sampling efforts taking place across Alaska (freshwater/marine/terrestrial)
- recommendations for developing sampling protocols/cost considerations

Meeting Goals

- Bring together diverse stakeholders with expertise and interest in eDNA sampling activities taking place in Alaska and develop an associated contact directory
- Share a brief overview of the state of eDNA science and considerations for existing and future research activities taking place across the state of Alaska and the Pacific Northwest
- Provide examples of existing research applications utilizing eDNA sampling methods for single and multiple species work
- Make technical resources for eDNA work taking place in Alaska accessible to meeting participants (web page initiated to collect resources: <http://www.seakfhp.org/edna-in-alaska-1-day-workshop-april-1-2019/>; research inventory tracking application https://southeastakwatershedcoalition.shinyapps.io/edna_research_inventory2/)

Alaska eDNA Workshop
Monday, April 1, 2019 9:00am – 5:00pm
DRAFT Agenda

9:00am Coffee and Set-up

9:30am Welcome and Meeting Background – Rebecca Bellmore, SE Alaska Watershed Coalition

Introductions and Meeting Outline – Deborah Hart, SE Alaska Fish Habitat Partnership

9:45 – 11:30am Session 1. Primer on science status of eDNA, considerations for Alaska: Ora Russ (USWFS Genetic Lab), Brooke Penaluna (USFS, PNWRS), Chris Kondzela (NOAA Genetics Lab), J Johnson (ADFG AWC), Chris Habicht (ADFG Genetics Lab)

- General overview of eDNA sampling methods (single/multiple species, presence/absence, abundance, invasive species, biodiversity, etc...), terminology (what is the lingo around eDNA work) and comparisons to other methods (e.g. concerns with false negatives/false positives):
- Laboratories doing eDNA work in or for Alaska (who does eDNA lab work in Alaska and the Pacific Northwest, what sort of projects do they work on); laboratory protocols (why these might vary and considerations for field sampling methods)
- Alaska's Anadromous Waters Catalog (AWC) ADFG position on utilization of eDNA sampling
- Q/A; general discussion

11:30am – 3:30pm Session 2. Field applications utilizing eDNA sampling

Session 2a. Field applications utilizing eDNA sampling to target single species

- Abundance: Dave Tallmon (UAS), Meredith Pochardt (Takshanuk)

(Lunch Break ~12:15 – 1pm)

- Presence/absence/habitat mapping: Brooke Penaluna (USFS PNWRS), Jeff Falke (UAF)
- Invasive species: Ora Russ (USFWS)
- Q/A, general discussion

Session 2b. Field applications utilizing eDNA sampling to target multiple species

- Multispecies/metabarcoding with eDNA: Damian Menning (USGS)/Trey Simmons (NPS)
- Invasive species: Trey Simmons (NPS)
- Q/A, general discussion

3:30 – 4:30pm Session 3. Open discussion/Future applications

- Freshwater/marine/terrestrial sampling considerations
- Benefits/costs
- General recommendations for establishing sampling protocols
- Q/A, general discussion

4:30 – 5:00pm NMFS Genetics Laboratory tour