

Department of Fish and Game Invasive Species Program Overview

House Fisheries Committee

Tammy Davis, Coordinator, Invasive Species Program

March 19, 2026



Statutory & Regulatory Authorities



Alaska Statutes

AS 16.35.210 Nonindigenous Fish

Prohibits intentional release, transport, possession, import for the purpose of release into waters or lands of the state, any live nonindigenous fish or live fertilized eggs of nonindigenous fish, without a permit. Violations are a Class A misdemeanor, and a person may be subject to potential fines in restitution for eradication and damage to native fisheries.

Regulations

5 AAC 41.070 Prohibitions on importation and release of live fish

- (a) No person may import any live fish for the purposes of stocking or rearing in waters of the state.
- (c) Ornamental fish may be imported provided they are not raised for consumption or sport fishing purposes and may not be released into waters of the state.
- (e) Species listed under 50 C.F.R. 16.13 and 50 C.F.R.16.14 (Lacey Act) listed as injurious species may not be imported, possessed, propagated, transported, sold or released into waters of the state.

5 AAC 41.075 Banned invasive species

- Authorizes the Board of Fish to classify nonnative species as banned invasive species based on their potential to have detrimental and degrading impacts in the state. Prohibits possession, import, propagation, transport, release, purchase and sale of listed species.
- ➔ Class A banned invasive species may not be possessed at any life stage or any parts, including genetic material; except for the purpose of transporting for the purpose reporting or identification; or under an Aquatic Resources Permit from the department.
 - ➔ Class B banned invasive species may not be possessed alive at any life stage.

Guidance Documents



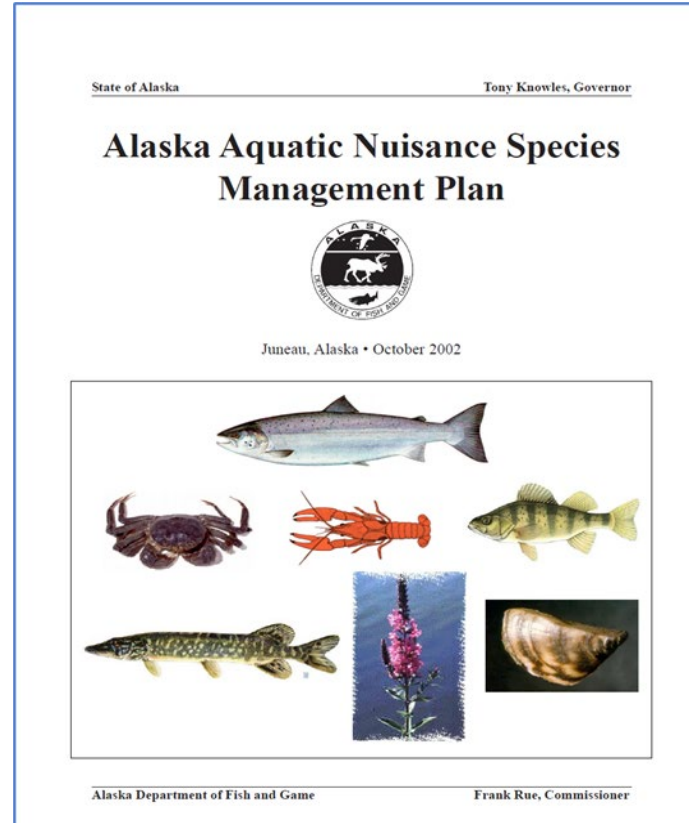
Division of Sport Fish Strategic Plan

Objective 3. *Minimize impact of invasive species on sport fish stocks and habitat*

- Policies and protocols to prevent spread
- Survey and monitor for early detection and response
- Eradicate and suppress prioritized species
- Collaborate and share data to build capacity and response

Aquatic Nuisance Species Management Plan

- Coordination statewide
- Collaboration with partners
- Prevention with policies and guidance
- Raise Awareness
- Early detection and rapid response
- Policy and Research



Activity	Measure or Deliverable	Purpose
Objective 3: Minimize impacts of aquatic invasive species on sport fish stocks and habitat.		
A. Prevent the introduction and spread of aquatic invasive species.	<ol style="list-style-type: none"> 1. Develop new and maintain existing policies and protocols to prevent aquatic invasive species introductions. 2. Coordinate with entities in-state and out-of-state for preparedness and enforcement to prevent aquatic invasive species introductions. 	Establish and communicate guidance for prevention and management of aquatic invasive species.
B. Survey and monitor for aquatic invasive species.	<ol style="list-style-type: none"> 1. Develop and/or implement field detection survey or monitoring protocols for aquatic invasive species. 2. Annually provide support and/or training to community-based aquatic invasive species monitors. 	Foster collaboration to effectively detect aquatic invasive species presence
C. Suppress and/or eradicate prioritized aquatic invasive species detrimental to sport fisheries.	<ol style="list-style-type: none"> 1. Annually suppress at least one aquatic invasive species population. 2. Eradicate at least one aquatic invasive species population every 3 years. 	Eliminate or minimize negative impacts of aquatic invasive species.
D. Collaborate with other agencies and organizations to execute prioritized aquatic invasive species management goals and objectives.	<ol style="list-style-type: none"> 1. Annually meet with governmental agencies and local entities to identify and prioritize aquatic invasive species goals and objectives. 2. Biennially conduct and/or contribute to at least one technical workshop for agencies and/or the public related to aquatic invasive species. 3. Maintain a banned aquatic invasive species list. 	Foster partnerships and improve knowledge to prevent, detect, and control aquatic invasive.

Collaboration with Partners



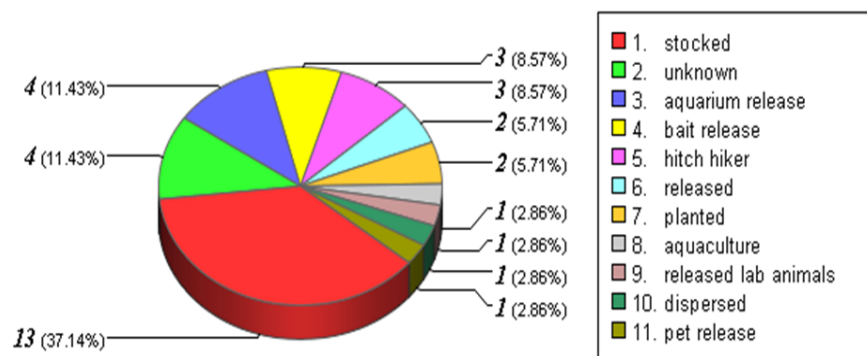
- ➔ The Alaska Invasive Species Partnership (AKISP) is an ad hoc partnership of federal, state, tribal, and local governmental agencies, Soil and Water Conservation Districts, local organizations, and industry
- ➔ **Mission:** Provide leadership to prevent, detect, and manage invasive species by collaboratively facilitating and fostering awareness, knowledge, and information sharing among partners and stakeholders
- ➔ **Standing Committees:** Species specific action-oriented engagement on Elodea, European green crab, Government Relations, Northern Pike, Terrestrial plants, and Outreach and Education
- ➔ Monthly partnership and committee meetings
- ➔ Board of Directors provide leadership, serving 2-year terms
- ➔ Formed under the National Invasive Species Act of 1996 with public and private sector partners from the U.S and Canada
- ➔ Objective to reduce spread of aquatic nuisance (invasive) species into western North America to protect water resources in the region
- ➔ Advisory body to the Aquatic Nuisance Species Task Force
- ➔ National management plans for dreissenid mussels, European green crab, New Zealand mudsnails, etc.
- ➔ Pioneered Building Consensus in the West to establish a science-based legal framework for watercraft inspection and decontamination
 - *Western Invasive Species Coordinating Effort is a subcommittee composed of western state and provincial coordinators*



Pathways for Introduction and Spread



Introduction Pathways for Alaska



(graph created: 2/1/2024 10:03:23 AM by the United States Geological Survey)

Live food trade dumping

- ➔ Potential European green crab, seaweeds, invertebrates

Dumping unused bait

Illegal release

- ➔ Northern pike (Southcentral)
- ➔ Signal Crayfish (Kodiak)
- ➔ Goldfish (Statewide)
 - Smallmouth bass (Southcentral)
 - Fathead minnows (Southcentral)
 - Yellow perch (Southcentral)
- ➔ Sundry unwanted pets (Southcentral & Southeast)
 - Eels, stingrays, cichlids (Southcentral & Southeast)
 - Rats, turtles, frogs, ducks, birds (Statewide)

Hitchhikers on boats, floatplanes, trailers, infrastructure

- ➔ Aquatic plants – Elodea
- ➔ Zebra and Quagga mussels
- ➔ Potential New Zealand mudsnails

Aquatic farming & mariculture

- ➔ Colonial tunicates – *D. vexillum*

Ballast water release

- ➔ Potential European green crab, invertebrates



Raising Awareness for Prevention

Clean, Drain, Dry

BOATERS: Help protect our waters from aquatic invasive species.

Invasive species (like elodea, zebra and quagga mussels, and New Zealand mudsnails) spread between water bodies when they attach to watercraft or trailers.

CLEAN-DRAIN-DRY EVERY TIME!

Halt the spread of invasive species! Always clean debris from your boat and trailer; pull the plug, and dump water from equipment before you leave the boat launch.

REPORT INVASIVE SPECIES: 1-877-468-2748 www.adfg.alaska.gov/

AQUATIC INVASIVE SPECIES PRESENT IN THIS WATER BODY

ATTENTION PROTECT ALASKA WATERS FROM INVASIVE SPECIES

CLEAN, DRAIN, DRY

- CLEAN** — Rinse and remove any mud, sediment, and/or plant debris from all gear.
- DRAIN** — Empty water from everything: coolers, buckets, boat compartments, etc. and wring out gear before leaving the boat launch or fishing area.
- DRY** — Allow all gear and equipment to dry between water bodies or trips.

Drain & check these common spots for invasive species!

Never dump aquarium contents into Alaska waters!

REPORT INVASIVE SPECIES: 1-877-INVASIV

Zebra and Quagga Mussels



CAUTION

The Federal Lacey Act lists Zebra Mussels as injurious wildlife and prohibits their importation and transportation across state lines.

- Follow these simple steps:**
- Remove any visible mud, plants, fish or other animals before transporting equipment
 - Eliminate all water from your boat and equipment before transporting anywhere
 - Clean and dry everything that came in contact with water (including boats, trailers, equipment, clothing, dogs, etc.)
 - Never release plants, fish or other animals into a body of water unless they came from that same body of water



European green crab

YOU CAN HELP PROTECT ALASKA COASTAL ECOSYSTEMS! Look For European Green Crab

European green crab are established in Alaska. We need your help to find and report these notoriously invasive crabs that threaten healthy marine habitats and native species.

How do I identify a European green crab?

Look for the 5 signs below the crab:

- FIND IT** — If you find a green crab with the signs (see graphic), follow the steps below.
- CONTAIN IT** — Keep it in a container with the crab and location you found it.
- PHOTOGRAPH IT** — Photos help with identification. Take a picture of the top of the crab (circle in red) and the crab's legs (see below the photo to ADFG).
- FREEZE IT** — Freeze it or preserve it with rubbing alcohol.
- REPORT IT!** — Call toll-free 1-877-INVASIV. We need the color photo to confirm identification.

Common crabs native to Alaska:

- Emmett's crab
- Reddish crab
- Green shore crab
- Red rock crab
- Green shore crab
- Red rock crab

FOUND IN SOUTHEAST ALASKA INVASIVE EUROPEAN GREEN CRAB

How to Identify a European Green Crab

- Five distinct spines on each side of the shell, located behind the eyes.
- Three rounded bumps between the legs.
- European green crabs are not always green. They may be various shades of green, brown, red, or yellowish.
- Dead crabs and shed crab shells can be found on beaches within or adjacent to the water. Look for brown or light reddish shells with the spines and three bumps.

Spotted a European Green Crab? Now what do you do?

- Leave the crab where you found it. Do not transport it dead or alive. Do not collect the crab.
- Note the number of crabs you saw, the location (GPS coordinates can be found by sending location services on a smartphone), and the type of habitat where you found them.
- Take multiple photos of the crab, including close ups, and a photo of the habitat in which you found it.
- Report immediately to the ADFG Invasive Species Hotline. See contact info listed below.

Native crabs that look similar to European green crabs:

- Green Shore Crab** — These crabs are small and are found in the same habitats as European green crabs.
- Red Rock Crab** — These crabs are larger and are found in the same habitats as European green crabs.

It is illegal to release nonnative organisms and invasive species into Alaska waters or lands.

Scan the QR Code or call the Invasive Species Hotline at 1-877-INVASIV to report observations of any invasive, nonnative species, or unusual plants or animals.

Northern Pike

Arc Lake Reclaimed

Success! Anglers, agencies remove unwanted menace, reclaim local favorite fishing lake...

Invader destroys fishery — By 2000, all of a popular coho salmon fishery was... that was left of a popular coho salmon fishery was... invasive northern pike. This illegally introduced ambush predator is not native to Southcentral Alaska.

Community takes action — In 2008, Arc Lake was treated with a naturally occurring plant-based compound called rotenone. Originally used by indigenous people to kill fish for food in the tropics, rotenone is now used worldwide as a fisheries management tool. It ceases naturally and, when used in low concentrations, does not harm mammals, birds, or plants.

Fishery brought back to life — In 2009, Arc Lake was once again teeming with aquatic bugs and free of northern pike! ADFG was able to restock the lake with coho salmon and Arctic grayling. Thanks to ADFG, concerned anglers, City of Soldotna, Kenai Peninsula Borough, and U.S. Fish and Wildlife Service, Arc Lake has reclaimed its sport fishery. Please help keep Arc Lake and other waters special places for generations to come. **Don't illegally transport or dump ANY fish, plants, or other aquatic life into Alaska's waters.**

Elodea

ATTENTION ELODEA PRESENT

Raise and lower your rudders.

It only takes a fragment to start a new infestation!

STOP Aquatic Hitchhikers

ELODEA IS A HIGHLY INVASIVE AQUATIC PLANT. STOP THE SPREAD OF ELODEA

BE AWARE- THE INVASIVE PLANT ELODEA IS IN JEWEL LAKE!

MAKE SURE TO CLEAN YOUR GEAR BEFORE FISHING ANOTHER LAKE, AND LEAVE ANY ELODEA ON THE ICE!

Reporting and Information Sharing



Invasive Species Online Reporting

Overview Methods of Introduction Prevention Legal Requirements Report an Invasive Species FAQ

Invasive Species Reporter

Welcome to the State of Alaska invasive species reporter. If you are interested in reporting what you believe to be an invasive plant or animal, click on one of the buttons below to submit a report online. Your report is important to us! Please include as much complete and detailed information as you're able. Pictures help us identify what you saw. A close up photograph of the organism and a photo of the organism in the setting in which you saw it can potentially help us identify the organism you're reporting. Please submit photos to tammy.davis@alaska.gov and include your contact information. All reports go to ADF&G and ADNR invasive species coordinators.

What type of species are you reporting?

Select one of the species categories below to submit a report. If you are not sure which category to select, you may choose "Other"



ADF&G Hosts Reporting for Invasive Species

- ➔ The Alaska Invasive Species Hotline: 1-877-INVASIV
 - 75 – 100 reports annually
- ➔ The Invasive Species Reporter ADF&G website
 - Approximately 100 reports annually
- ➔ Reports of species not managed by ADF&G are shared with partners



Species of Concern



Northern Pike in Southcentral

- Illegal introduction leads to spread in > 150 waterbodies in the region
- Apex predator that targets salmon
- Eliminated salmon from 27% of Mat-Su lakes, 13% severely impacted
- Hundreds of miles of salmon streams with drastic reduction of salmon

European Green Crab in Southeast

- First detected Annette Islands Reserve in 2022, carapace from Etolin Island, 2025
- Compete with juvenile salmon for food: small crustaceans, shellfish, invertebrates
- Destructive foraging in eelgrass, essential nursery habitat for salmon
- Potential economic impacts on shellfish industry



Dreissenid Mussels: Zebra and Quagga

- Not known to occur in Alaska, detected on watercraft entering the state
- Filter feeding mollusks remove plankton from lakes and streams
- Clog water intakes for municipal water transport, in-water infrastructure, hydropower
- Litter shorelines, spoiling beach habitat, reduce waterfront property values

Southcentral Invasive Northern Pike

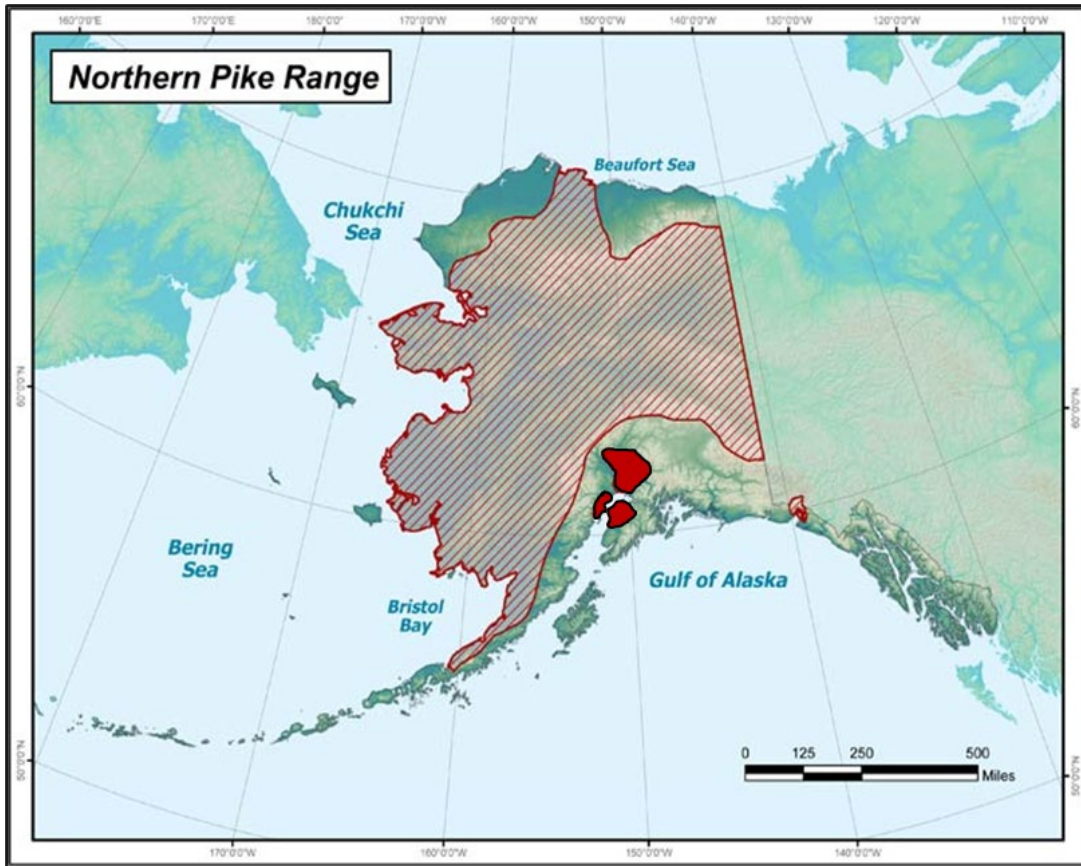


Figure 1. Area where pike are endemic in Alaska

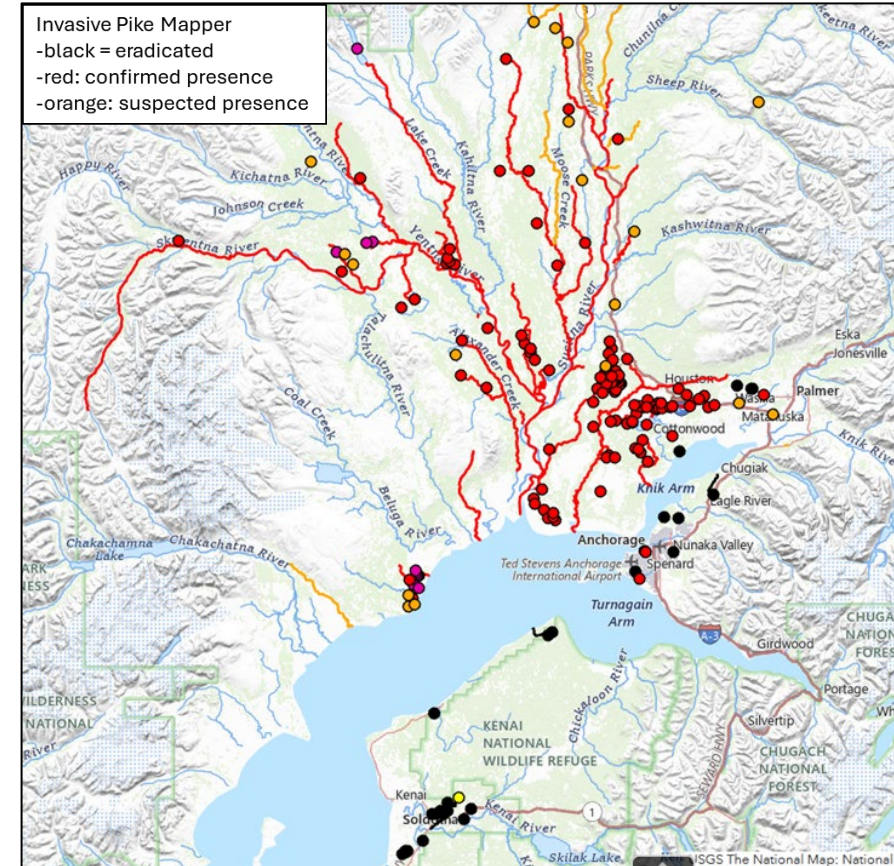


Figure 2. Invasive pike locations in the Mat-Su



Southcentral Invasive Northern Pike



Eradication



Stomach analysis



Salinity trials



Suppression netting

Suppression projects

- Alexander Cr. – 33,000 pike removed since 2011
- Nancy Lake – 3,760 pike removed since 2020
- Deshka River – 2,054 pike removed since 2012

Eradication projects

- All known pike on Kenai Peninsula removed (23 waterbodies)
- 5 waterbodies in the Mat-Su
- 5 waterbodies in Anchorage

Monitoring/Surveying

- Follow up on reports
- Collect data on known populations
- Helps prioritize future suppression and eradication projects
- Rapidly respond to new populations

Research

- Salinity trials
- Stomach analysis
- Otolith microchemistry
- Population estimates

Southcentral Invasive Northern Pike



- New tools may make eradication possible in open and complex systems
- In some places, pike eradication is the cheapest way to restore salmon
- With partners (Cook Inlet Aquaculture and Tyonek Tribal Conservation District), over 75,000 pike have been removed since 2011
- Significant progress in removal techniques and efficiency
- Northern pike have been eradicated from the Kenai Peninsula



European Green Crab in Southeast

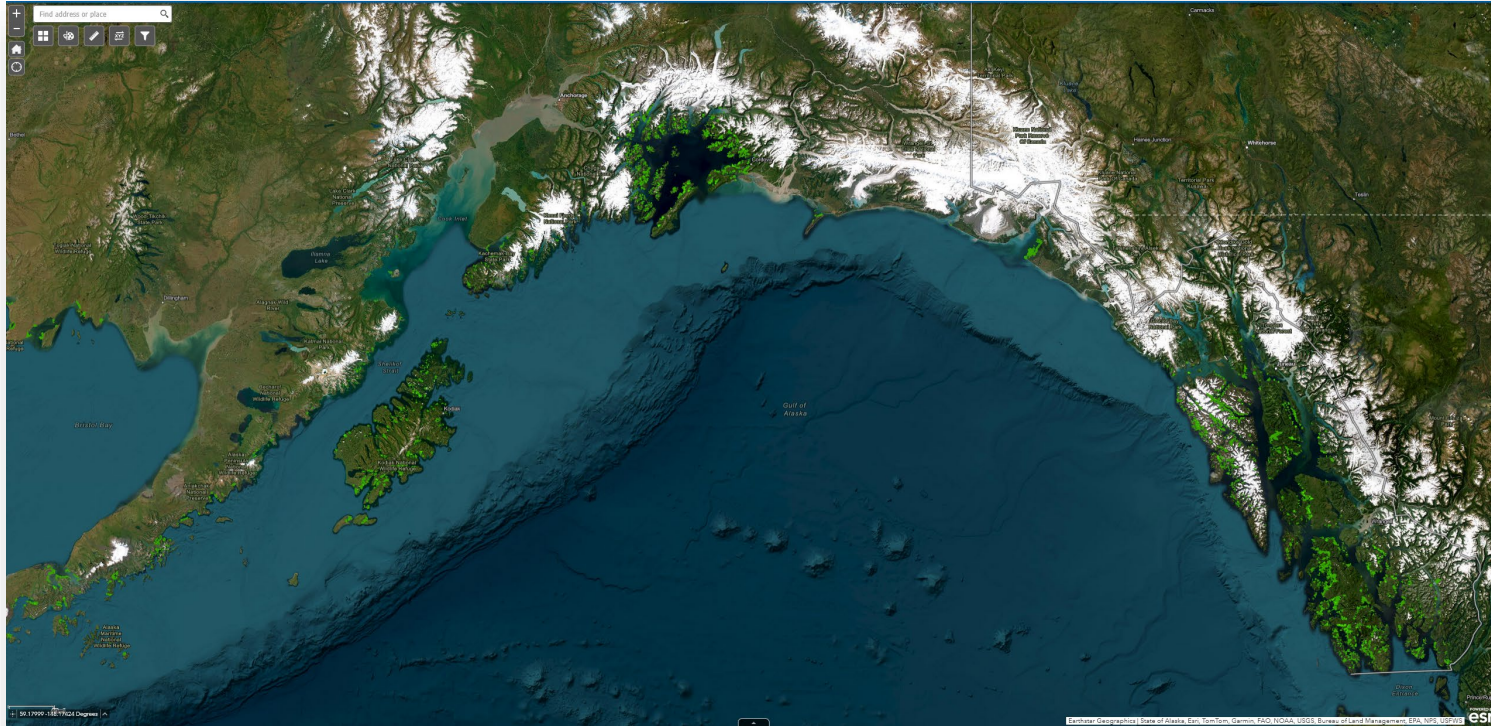


- Introduced from east coast of North America CA (1989) expansion to Haida Gwaii 2020, Annette Islands Reserve 2022
- Color variable, carapace distinct with 5 spines or marginal teeth on each side behind the eyes
- Expected destruction of keystone essential eelgrass habitat important for juvenile salmon and shellfish
- Changes in nearshore food webs with reductions in shore crab, shellfish, amphipods, and benthic worms
- Anticipated long-term economic impacts to commercial, personal use and subsistence shellfish and other fisheries



European Green Crab in Southeast

Habitat Suitability



Bright green areas indicate highly suitable habitat for European green crab from Southeast to the Alaska Peninsula

European green crab prefer four critical habitat attributes:

- Protected or semi protected wave exposure
- Sand and mud flats
- Eelgrass in the intertidal and shallow subtidal
- Salt marsh vegetation in supratidal

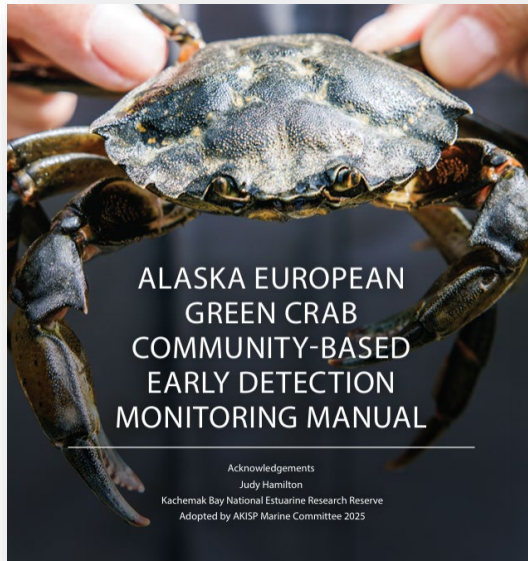
Southeast estuaries provide environmental conditions for green crab establishment

Found to be associated with freshwater channels in large estuaries where logs, boulders and other structure provides protection



European Green Crab in Southeast

Early Detection



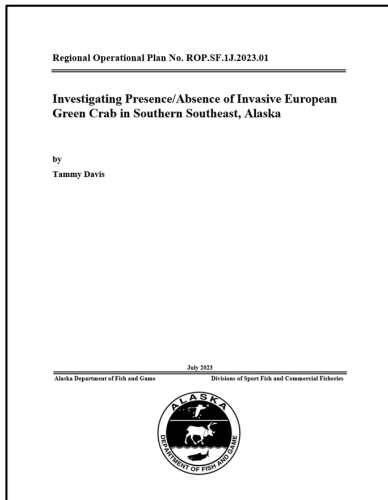
- AKISP Community-based early detection monitoring network established in 2006
- Citizen scientist engaged from 11 communities from Ketchikan to Dutch Harbor in 2025
- Training opportunities in Homer, Ketchikan, and Kasaan, 2024– 2025
- Detection of live green crab and molts



European Green Crab in Southeast

Rapid Response

- ➔ 2022 - 2023: surveys at roadside beaches and remote locations
- ➔ 2024: with partners, rapid assessment of Bostwick Inlet to understand density of green crab population



Date	Total Daily Catch
8/1/2024	6
8/2/2024	8
8/29/2024	12
8/30/2024	8
9/4/2024	4
Total	38

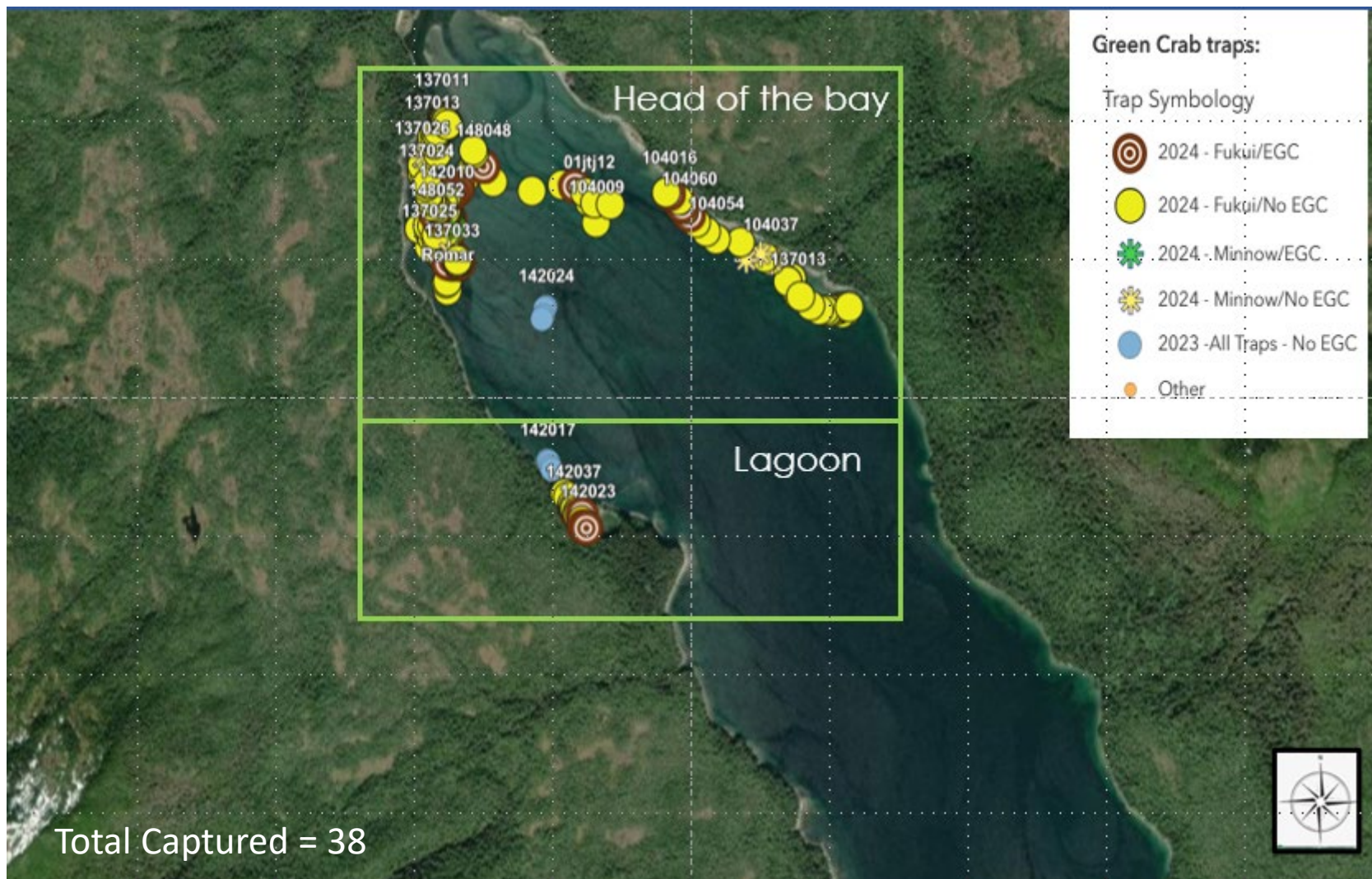
- ➔ 2025: worked with U.S. Forest Service and Prince of Wales tribal partners to assess presence in Kasaan

Date	Total Daily Catch
9/3/2025	24
9/4/2025	9
Total	33



European Green Crab in Southeast

Bostwick Inlet Rapid Assessment, 2024





European Green Crab in Southeast

Kasaan Trapping Assessment, 2025

Total Captured = 33
Males: 20
Females: 13

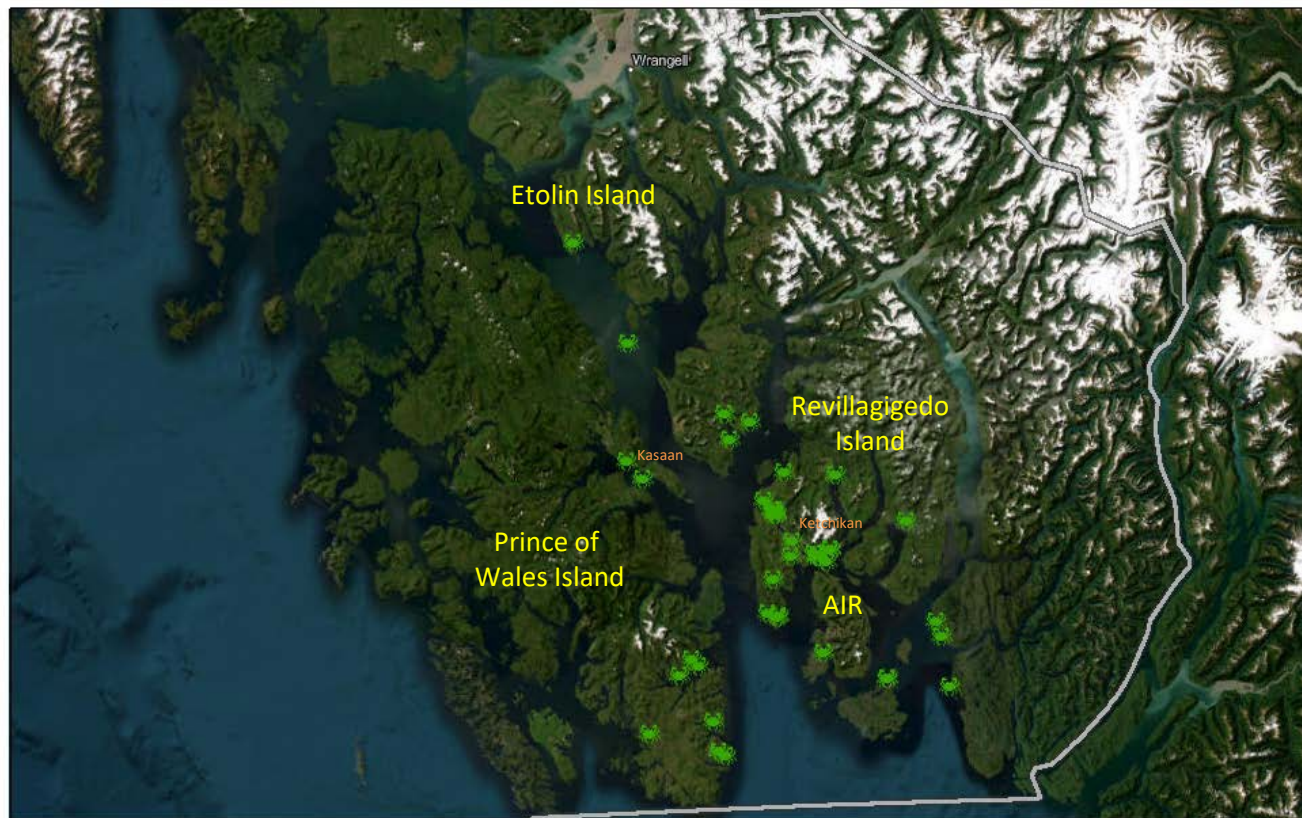




European Green Crab in Southeast

Known Distribution: Surveys & Reports

Verified Reports of European Green Crab Observations in Southeast, Alaska 2022-2026

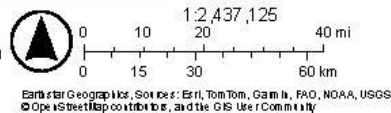


1/30/2026

- EGC Reports:
- World Imagery
- Low Resolution 15m Imagery

- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations

150m Resolution Metadata



Dreissenid Mussels Statewide



Zebra mussel

Quagga mussel



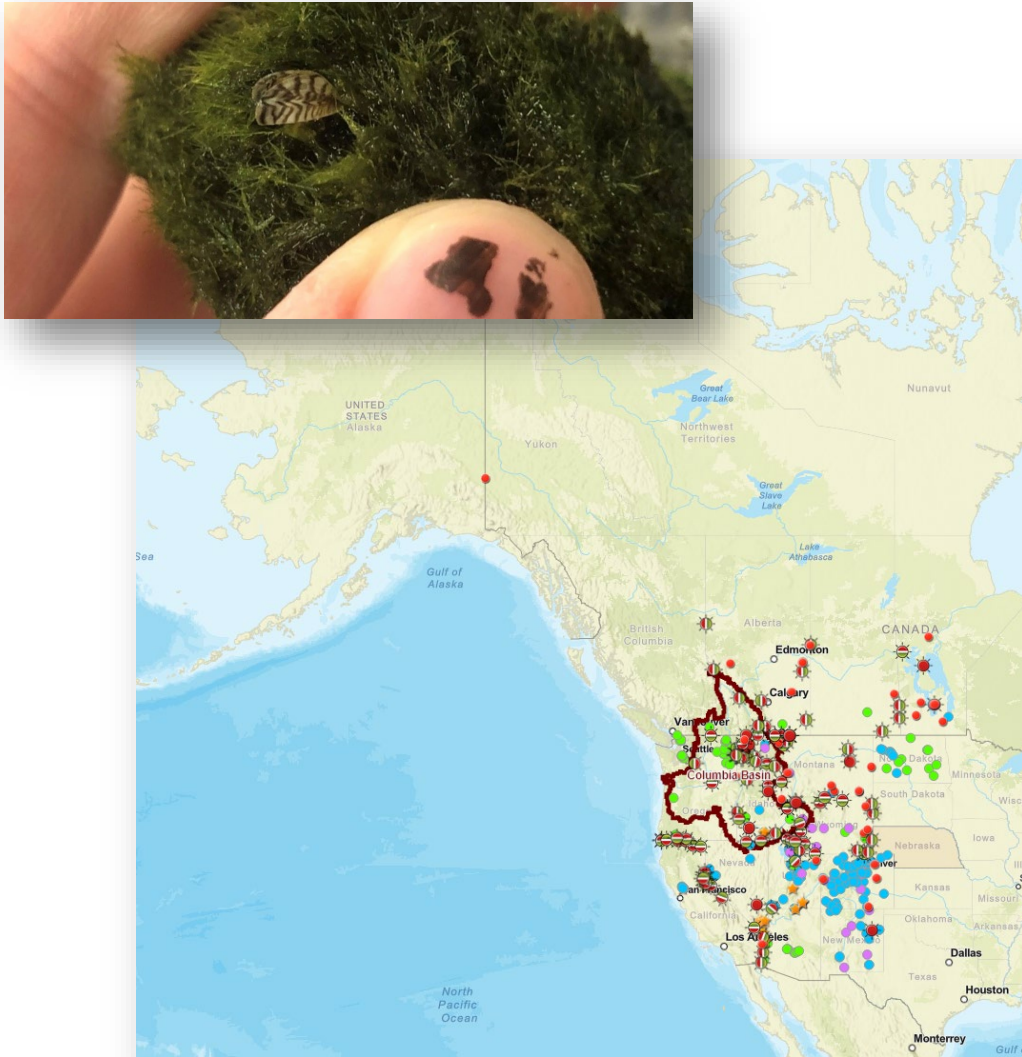
- ➔ Adults range from 1/8 inch to 2 inches in length the approximate size of an adult fingernail
- ➔ Quagga mussels larger than zebra mussels
- ➔ D-shaped shell with brown or black stripes
- ➔ Zebra mussels have a flat surface at hinge and are more triangular with variable coloration
- ➔ Quagga mussels are rounder in shape, paler at the hinge, dark concentric circles on shell
- ➔ Byssal thread at hinge are not found on any of the native freshwater mussels

- ➔ Introduced into the Great Lakes in 1988 in ballast water
- ➔ Filter-feeding mollusks, native to Eurasia, can process up to ¼ of a gallon of water each day
- ➔ Threaten ecosystems by massive consumption of plankton, diminishing base food chain for native fish and competing with native organisms for habitat space
- ➔ Form dense, sharp beds and clog water intakes, pipes, and in-water infrastructure used for hydropower and water distribution
- ➔ Attach to boat hulls, propellers and trailers



Dreissenid Mussels Statewide

Prevention

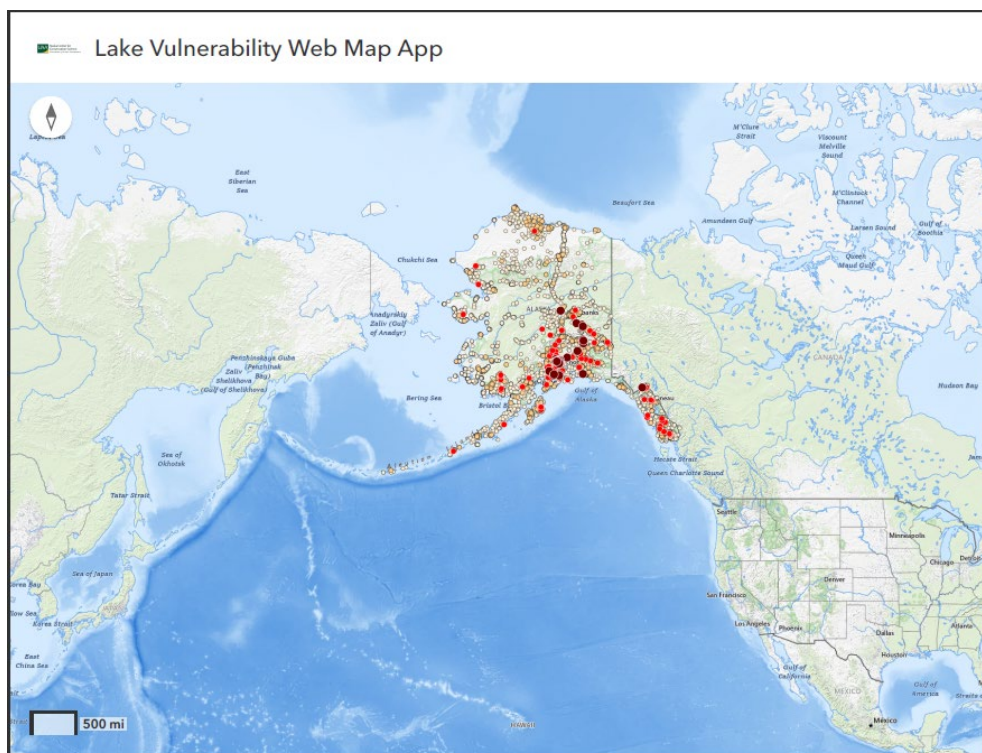


- ➔ Banned invasive species list and quarantined by the Department of Natural Resources
- ➔ Outreach to target audiences, providing “clean, drain, dry” best practices guidance for boaters and floatplane pilots
- ➔ When necessary, watercraft traveling through western states and provinces are inspected and decontaminated
- ➔ Watercraft entering Alaska at Alcan Port of Entry are inspected and decontaminated by U.S. Fish and Wildlife Service or partners
- ➔ Department of Transportation and Public Facilities prompts commercial watercraft haulers to “Call before you haul” to coordinate inspections at the destination state



Dreissenid Mussels Statewide

Habitat Suitability



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information. Data refreshed October 27, 2025.

Lake Vulnerability - 2025
Dreissenid Vulnerability - 2025

Dreissenid Vulnerability (0-100)

● Very High, 56 - 75 ● High, 31 - 55 ● Medium, 21 - 30 ○ Low, 12 - 20

ADF&G, University of Alaska Anchorage, U.S. Fish and Wildlife Service collaboration to map waters vulnerable to dreissenid mussels

- ➔ **Water quality**
 - Dissolved calcium
 - > 25 mg/l high risk
 - 15 - 25 mg/l moderate risk
 - 12 – 15 mg/l low risk
 - <12 mg/l very low risk
 - pH
 - Specific conductance (salinity)
- ➔ **Developed boat ramps**
- ➔ **Angler use**
- ➔ **Floatplane base, use**
- ➔ **Prior aquatic invasive species establishment**
- ➔ **Proximity to roadways**
- ➔ **Water infrastructure: hydropower, drinking water**



Dreissenid Mussels Statewide

Early Detection

Training: All Hands on Deck for Early Detection of Aquatic Invasive Species

- Big Lake 2024, Hidden Lake 2026
- Field based protocol implementation
 - Visual and tactile surveys, shoreline and in-water infrastructure
 - Rake throws and plant shakedown: Elodea and dreissenid mussels
 - Passive collective samplers
 - Ponar grabs
 - Plankton net tows: juvenile dreissenid mussels



ADF&G Invasive Species and Pike Programs



2026 Actions

- ➔ Collaborate on trainings for green crabs and dreissenid mussels
- ➔ Expand engagement and provide support to community-based early detection
- ➔ Increase outreach to boaters, anglers, and hunters about dreissenid mussels
- ➔ Continue engagement with AKISP, Western Regional Panel and other partnerships
- ➔ Engage in surveys for green crabs and dreissenid mussels
- ➔ Establish communication plan for use of eDNA for early detection of aquatic invasive species
- ➔ Collaborate on development of a dreissenid mussel early detection and rapid response plan
- ➔ Work with partners to host and implement a rapid response drill for northern pike

Department Contacts



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Magy Elliott, Legislative Liaison
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Thank you for your interest!
[Invasive Species Reporter, Alaska Department of Fish and Game](#)