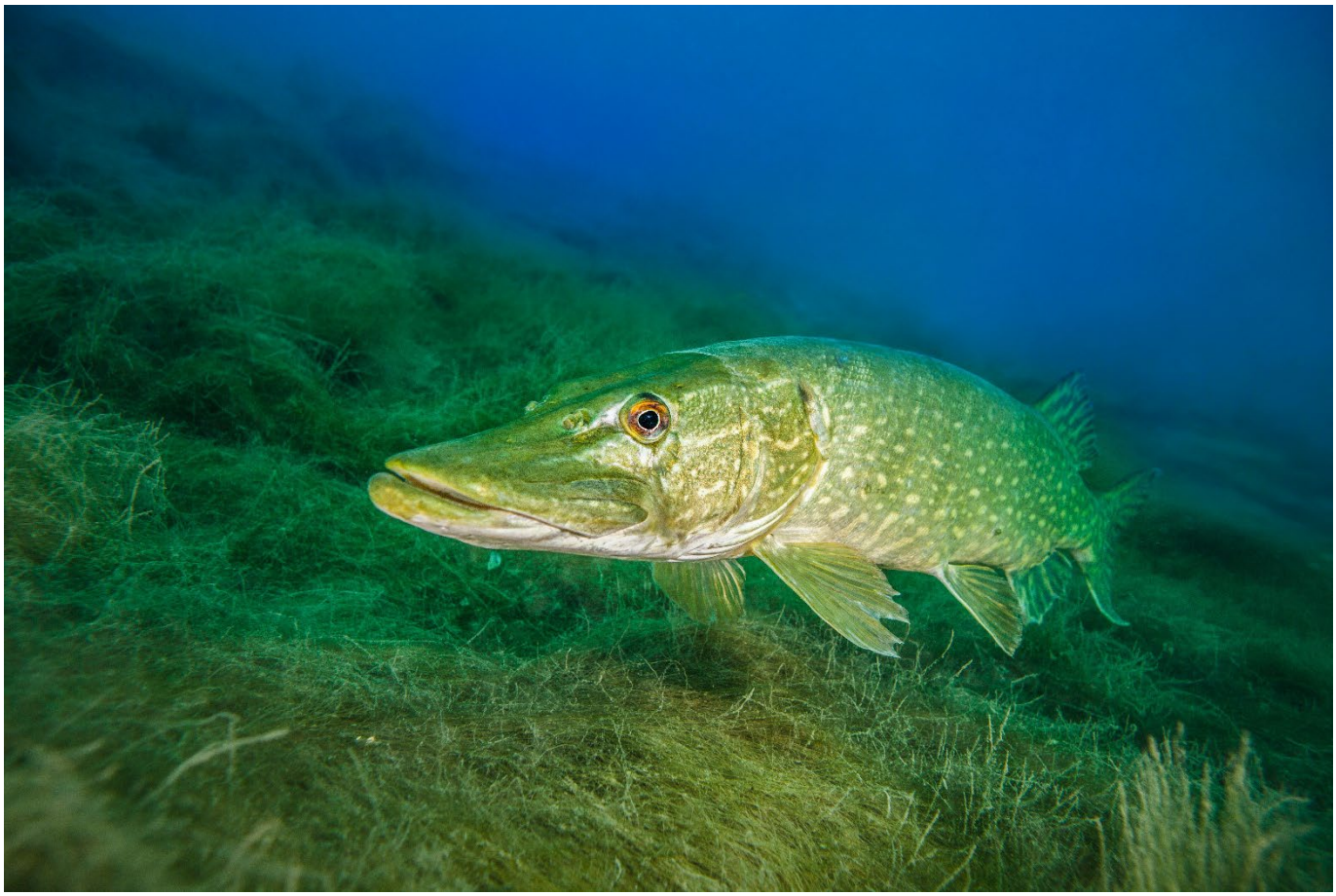
SUMMARY REPORT: 2026 NORTHERN PIKE RAPID RESPONSE EXERCISE

Soldotna, Alaska | August 2026



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INTRODUCTION



On August 24-26, 2026, Alaska and Washington based Tribal, federal, and state agencies, and other managing organizations gathered in Soldotna, Alaska to implement a rapid response exercise to test the capabilities of existing Northern Pike rapid response plans. The goal of the exercise was to examine operational and strategic response associated with jurisdictions, roles and responsibilities, capabilities, triggers, notifications, resources, and potential actions in response to a realistic detection of Northern Pike.

Day 1 of the exercise was focused on strategic alignment and community building, including discussions on lessons learned, creating site-specific rapid response plans based on statewide plans, standards for detection validation, regulatory and permitting pathways, and resource identification. **Day 2 of the exercise** focused on operational simulation and stress testing, including exchanging skills and knowledge, documenting treatment success, engaging in scenario-based discussions, and potential ways to expand resource capacity by engaging the Interjurisdictional Invasive Species Rapid Response Team (IINSERT). **Day 3 of the exercise** focused on exercise to action, including defining the components of a rapid response plan, refining regulatory requirements, stress testing draft scenario-based plans with group input, creation of early detection action lists, understanding how other invasive species taxa rapid response actions have similarities to Northern Pike plan components, and key next steps individuals will take to advance Northern Pike rapid response in their respective geographic areas.

Key next steps for preparedness

- Explore inter-governmental agreement that could identify and agree upon various actions in advance of a detection. Identify specific waterbodies where barriers installation would be acceptable and by-catch levels that can be agreed to in advance.
- Explore development of a Programmatic EA for the Kenai National Wildlife Refuge.
- Participate in ICS training and Dunker training and certification.
- Obtain pesticide applicator certification.
- Identify and create lab network that can provide expedited results.
- Develop watershed-specific and Tribal rapid response plans, and update existing plans.
- Explore the potential for expedited certified applicator training and deployment of federal pilots.

- Secure funding for and create a cache for equipment.
- Conduct additional applied research on pike.
- Explore the potential to expanded rotenone use.

Other suggestions that were not agency specific:

- Host a fish barrier "show and tell" including Alaska DFG staff and Confederated Tribes of the Colville Reservation staff.
- Consider sharing the Washington-U.S. Army Corps of Engineers Memorandum of Understanding re: ICS command.

Participation

Entities with jurisdictional authority for response, as well as those affected by Northern Pike management response, were the focus of participation for the exercise. Multiple agencies and organizations were identified for participation; see Appendix A for a full participant roster.

- Alaska Department of Fish and Game (ADFG)
- Confederated Tribes of the Coleville Reservation (Coleville Tribes)
- Cook Inlet Aquaculture Association
- Kenia Watershed Forum
- Muckleshoot Indian Tribe
- Pacific States Marine Fisheries Commission
- Tyonek Tribal Conservation District (TTCD)
- U.S. Air Force
- U.S. Bureau of Reclamation
- U.S. Fish and Wildlife Service (USFWS) – Kenai National Wildlife Refuge (NWR)
- U.S. Fish and Wildlife Service – Alaska Region; Pacific Region; National Wildlife Refuge System
- U.S. Forest Service
- Upper Columbia United Tribes
- Washington Department of Fish and Wildlife (WDFW)



Figure 1. Participants of the Northern Pike Rapid Response Exercise in Soldotna, Alaska, August 2026.

MANAGEMENT OF NORTHERN PIKE

Alaska

Northern Pike (*Esox lucius*) are apex predatory freshwater fish that preferentially prey on juvenile salmonids. Outside their native range, Northern Pike can interfere with ecosystem function and devastate economically important fisheries. Northern Pike are native in northern and western Alaska, but not native south or east of the Alaska Mountain range, except for a small, isolated remnant population near Yakutat. Northern Pike do not naturally occur and are an invasive species in Southcentral Alaska. Invasive Northern Pike have been found in more than 150 lakes and rivers in Southcentral Alaska.

The Alaska Invasive Species Partnership Invasive Northern Pike Committee produced the Technical Guidance and Management Plan for Invasive Northern Pike in Southcentral Alaska: 2022-2030[1]. The objectives of the plan are to:

- Minimize future intentional invasive Northern Pike introductions and reintroductions as well as spread to new waters.
- Increase public awareness of the invasive Northern Pike issue and support management efforts.
- Implement scientifically sound management tools to detect, eradicate, contain, or suppress invasive Northern Pike populations.
- Restore fish populations that have been impacted by invasive Northern Pike introductions.
- Conduct research to fill knowledge gaps that currently impede management of invasive Northern Pike.

The plan identifies specific actions for accomplishing the objectives, including protocols, decision matrices, and standard operating procedures intended to prevent and respond to new introductions, and eradicate Northern Pike populations.

Washington

Northern Pike is a non-native fish species classified as an aquatic invasive species in the state of Washington that has invaded multiple habitats within the state. Illegal stocking in the 1950s in Montana rivers and the 1970s in the Coeur d'Alene River system outside its native range led to establishment of Northern Pike in the upper Columbia River Basin. Northern Pike have steadily expanded their distribution downstream to include the Pend Oreille River, Spokane River, and the Columbia River upstream of Grand Coulee Dam. Northern Pike have also been introduced in Lake Washington; the first confirmed capture of a Northern Pike specimen occurred in 2017.

The State of Washington Interagency Northern Pike Rapid Response Plan (2023)[2] serves as a coordination document and technical resource to enhance the efficiency and effectiveness of Northern Pike prevention efforts, detection, early response, and long-term management activities to minimize the environmental, economic, and cultural resource impacts of Northern Pike where they are established while preventing further invasion of Washington State water bodies.

[1] Dunker, K. J., P. Bradley, C. Brandt, T. Cubbage, T. Davis, J. Erickson, J. Jablonski, C. Jacobson, D. Kornblut, A. Martin, M. Massengill, T. McKinley, S. Oslund, O. Russ, D. Rutz, A. Sepulveda, N. Swenson, P. Westley, B. Wishnek, A. Wizik, M. Wooller. 2022. Technical Guidance and Management Plan for Invasive Northern Pike in Southcentral Alaska: 2022-2030. Alaska Invasive Species Partnership, Anchorage, AK, USA. 233p.

[2] Four Peaks Environmental. 2023. State of Washington Interagency Northern Pike Rapid Response Plan. 118pp.

Jurisdictions in Alaska and Washington have both responded to new invasive northern Pike populations multiple times in various habitats. In many instances, the response has been an eradication attempt of these populations, however suppression activities are ongoing in many waterbodies. To date, over 25 population eradication attempts have been conducted in Alaska. In Washington, five population eradication attempts have been conducted. With unique experiences and a breadth of knowledge to exchange, this exercise provided an opportunity for managers to learn and share with each other to improve response outcomes when Northern Pike are detected.

EXPERIENCE AND READINESS EXCHANGE

LESSONS LEARNED AND FIRST 72-HOUR REALITY CHECK

Participants shared lessons learned from previous efforts to control and eradicate Northern Pike in their respective geographies, sharing what worked, what failed, and identifying any gaps in response. Discussion centered on what would occur today if Northern Pike were detected, identifying where staff were least prepared during past response efforts, and sharing decisions that staff might continue to struggle during future response efforts. All exercise participants then self-selected into two groups comprising both experienced and inexperienced Northern Pike responders to describe a challenging scenario and identify: (a) what they would do immediately upon receipt of a report of a new introduction of Northern Pike; (b) what they would not know how to do; and (c) where they would get "stuck."

- One group described a scenario in which there was a detection on a lake in the Kenai Peninsula.
    - They noted that verification of the detection, determining who is in charge and activation of the Incident Command System (ICS), and identification of resources and funding were key first steps. Decisions about ability to place barriers and the amount of netting needed could quickly become complex issues to navigate.
    - The scenario lake selected is highly productive for salmon, thus there would be critical timing windows, fisheries dynamics, and multiple agency priorities to consider.
    - A potential written agreement between partners on actions and priorities in advance could streamline efforts. As an example, an interagency fire plan is an analogous situation in which players agree on response options and decision space.
    - Acknowledging differences between partners is needed. The private land versus public land nuance can help set specific roles depending on the specific scenario.

    - Funding and budget could be limiting factors to responding effectively.
    - It will be important to identify how to re-allocate personnel when assigned to different responsibilities, particularly after the first 24 hours.
- A second group described a scenario on the Columbia River below Grand Coulee Dam in salmon spawning habitat.
    - They noted that identifying fish-specific information using environmental DNA (eDNA), snorkel surveys, and electroshocking to identify the range of the invasion would be an immediate priority. Processing eDNA samples in an expedited fashion may also pose challenges.
    - Identifying all of the agencies as well as the lead.
    - Identify potential habitat hotspots for treatment, and appropriate permits given Endangered Species Act (ESA)-listed species that are present, ESA species will limit the gear types that can be used, and after the initial response, resources may be lacking for long-term efforts.
    - Suppression protocols, and adequate numbers of chemical applicators may pose challenges.
    - This group also emphasized the need for succession planning as staff rotate out of positions.

STATEWIDE PLANS TO SITE-SPECIFIC ACTIONS: CRITERIA FOR CREDIBLE SITE-SPECIFIC RAPID RESPONSE PLANS

WDFW, USFWS, and TTCD gave short presentations based on previous plan creation and implementation experiences. Washington focused on statewide to site-specific planning, USFWS Kenai NWR focused on watershed-level planning, and TTCD staff discussed partner coordination gaps in the West Cook Inlet. All presentations shared elements that are important to include in rapid response plans. The core components of a credible plan were generated during participant discussion:

- A decision tree for action and effort that recognized intergovernmental agreement for flexibility
- Communications plan
- Leadership approval
- Balanced between flexible/general with specific details
- General understanding of non-response
- General definitions
- Identification of land jurisdictions and staff in the relevant positions
- Resource list of materials and staff of what is available and what is needed
- Living documents that can be updated, refined and a responsible entity that will make updates to the document
- Identified budget elements with or without designated funding
- Potential funding sources

- Identified permitting needs
- Acknowledged goal for site specific plan
- Standard operating procedures
- Timelines for actions, communications and permits
- Gathering all available data for specific sites
- Reference other existing robust plans
- Situation Assessments (accessibility, complexity, feasibility of eradication, cost)
- Public outreach – getting the word out to affected entities
- Identifying other AIS in the region
- Species of concern and Threatened & Endangered Species
- After action reports that identify strengths and weaknesses of actions
- Ongoing monitoring
- Define activation of ICS methods based on site specific versus interjurisdictional; scenario-based triggers
- Triage versus Incident Command System (ICS) application – rubric for what triggers rapid response and what does not; may be species related
- Develop partnerships at local level to improve response
- Defined lead agency and associated partner roles
- Identify other supplementary long-term plans to append
- Include relevant Hazard Analysis Critical Control Point (HACCP) plans
- Engaging law enforcement
- Partner roles identified for updating and implementation

DETECTION AND VALIDATION STANDARDS

There are existing definitions that are used as terminology in AIS management and rapid response situations. In some cases, definitions are identified in existing plans, but their use may currently be inconsistent among managing entities. It is important to utilize consistent terminology to ensure that all managing partners and the public have a clear understanding of the situation.

Definitions from *Technical Guidance and Management Plan for Invasive Northern Pike in Southcentral Alaska*

- **Introduction** – the presence of one or more individuals physically confirmed by a plan partner in a waterbody from which were not previously known to occur.
- **Confirmed populations** (new) – a new waterbody from which there is evidence of natural reproduction through direct observations by plan partners of fish in spawning conditions or multiple age classes.
- **Suspected but unconfirmed** (new) – genetic evidence of their presence (i.e., eDNA) or a credible report with photographic or other evidence reported.
- **Eradication** – the complete removal of all individuals in a population.

Water Body Classifications[3] from the Washington Interagency Northern Pike Rapid Response Plan

- **Status Unknown** – Waterbody has not been monitored.
- **Undetected/Negative** – Waterbody sampling/testing is ongoing and nothing has been detected, or nothing has been detected within the timeframes for de-listing.
- **Inconclusive** (temporary status) –Waterbody has not met the minimum criteria for verified suspect detection and no physical specimen collected. Verification Sampling is initiated
- **Suspect** – Waterbody that has met the minimum criteria for likely detection of Northern Pike by a single verified detection (e.g., at least two independent positive confirmations of a single eDNA sample, or conclusive photographic or video evidence), but no physical Northern Pike specimen has been captured. Verification Sampling is continued; Rapid Response may be considered but is not recommended without a physical specimen.
- **Positive** – Multiple (2 or more) verified detections from subsequent sampling events meeting Suspect classification plus at least one Northern Pike specimen is verified using scientifically accepted techniques (e.g., DNA analysis, taxonomic identification). Rapid Response is initiated.
- **Infested** – A waterbody has an established population of Northern Pike based on evidence of a reproducing population such as multiple age classes.

An existing declassification for waterbodies also exists. However, Northern Pike eradication efforts conformity to that declassification may be subjective and dependent on eradication removal method. At this time, ADFG utilizes a criteria of a lack of detection post-eradication every 3 years for 9 years. This criteria for eradication success is typical, but not standard. In other cases, Northern Pike may be assumed absent until confirmed present.

During the detection and validation discussion, a constraint that was identified was having enough eDNA kit materials. Understanding who might have more kit materials and how to quickly source kit materials could be identified in advance. Additionally, identifying who has other Smith Root eDNA backpack units that use the same kits that could be contacted for exchanging kits when needed. A central list of other laboratories that could be available to process samples rapidly could compiled as a resource during the validation process.

[3] Waterbody Classifications were developed by the Building Consensus in the West, Western Regional Panel on ANS (2019).

REGULATORY AND PERMITTING PATHWAYS

The identification of the necessary permits needed for suppression or eradication is critical for advancing specific actions. Additionally, the identification of potential bottlenecks and solutions for various scenarios allows entities to respond swiftly. The permits required will vary if in Alaska or Washington on state, Tribal or federal lands.

State of Alaska

- ✓ **Alaska Department of Environmental Conservation (DEC) Permitting Options**
  - **DEC Aquatic Pesticide Use Permit (PUP):** Requires detailed application re: product, application methods, detox plans, and presence of certified applicators. 30-day public comment period.
  - **General Permit:** Requires that the project be administered by ADF&G (ADF&G staff do not have to be the applicators or be on site but must be responsible for the project). Requires a classified posting in a newspaper for 2 consecutive days, then a 15-day wait period, then treatment can begin. https://dec.alaska.gov/media/s3elcvyg/24-gp-fish.pdf
  - **Certified Pesticide Applicator:** Required to purchase, handle or apply rotenone if not under General Permit
- ✓ **ADEC wastewater discharge permit:** Require that discharge meet state water quality standards and pollutant is controlled to protect aquatic life and human health
- ✓ **ADF&G Aquatic Resource Permit (ARP):** Not needed if ADF&G staff is performing the netting; no permit is required unless a landowner access permit is needed. If any other entity is doing gill netting, they need an ARP from ADF&G.
- ✓ **ADF&G Fish Habitat Permit:** If plan involves installing temporary physical structures, e.g., fish barriers, or lake hydrology will be physically altered, a Title 16 Fish Habitat Permit is required. Containment activities require this permit.
- ✓ **Alaska Pollutant Discharge Elimination System (APDES) permit:** This permit is more of a formality, with no stipulations that it must be in place.
- ✓ **Alaska Board of Fisheries (BOF) Consent:** ABOF must approve rotenone deployment for fisheries management, except for rapid response treatments, which do not require consent.
- ✓ **Landowner Access Permit:** Required to obtain access if treating on native corporation land.
- ✓ **Burrow Land Permit:** Issued by the Alaska Division of Mining, Land, and Water (DMLW) that allows certain activities on state-owned land that are not otherwise generally allowed under Alaska Administrative Code §96.020. These permits are typically used for low-impact, de minimis uses that still require state approval to ensure they meet environmental, safety, and land-use standards.

Federal

- ✓ **NEPA Compliance:** If project uses federal funding or occurs on federal land. Environmental Assessments (EA) are almost always required in SE Alaska to evaluate alternatives and assess impacts.
    - ✓ **NEPA Categorical Exclusion:** Action has determined does not individually or cumulatively have a significant effect on the human environment and EA or EIS is not required
- ✓ **US ACE Clean Water Act Section 404**: If project uses placement of structures requires the discharge of fill into waters of the US, a permit is required
- ✓ **Tribal and ANCSA Consultation:** If federal nexus exists, lead federal agency must conduct govt-to-govt consultation with locally federally recognized Tribes and Alaska Native Regional and Village Corporations, e.g., Sealaska to ensure protection of subsistence resources and cultural sites.
- ✓ **National Historic Preservation Act:** Federal agencies are required to consult with Tribes and to consider the effect of actions on the historic properties.
- ✓ **Endangered Species Act Section 7:** Consultations are required when actions are on federal land, a federal permit or license is required, federal funds will be utilized, and actions will be implemented by federal agencies.
- ✓ **Minimum Requirements Analysis (MRA) (in Wilderness Areas only):** Process to determine if a proposed action in a wilderness area is necessary and how to minimize impacts on wilderness character.
- ✓ **Federal Aquatic Use Pesticide Permit (PUP):** Issued by the federal land management agency overseeing the property where the application will occur.
- ✓ **Dunker Certification:** If flying in a federal airplane to conduct activities this certification is required for state and federal employees. The certification is a specialized aviation safety training that qualifies personnel to perform underwater egress from submerged aircraft, ensuring compliance with AR 95-1 and other aviation safety standards.
- ✓ **Special Use Permit:** Issued by local National Wildlife Refuge Managers and required for USFWS to land aircraft on refuge lakes that are generally closed to aircraft.

Washington

- ✓ **SEPA Compliance:** If project uses federal funding or occurs on federal land, NEPA is required, but WA mandates its own review under State Environmental Policy Act (SEPA). WDFW issues a SEPA checklist and determination of non-significance (DNS), with public comment.
- ✓ **Ecology Water Quality Permits (NPDES):** The **Washington State Department of Ecology** handles the water quality permitting. WDFW must obtain coverage under a National Pollutant Discharge Elimination System (NPDES) permit—specifically the Fisheries Resource Management

General Permit, or a Short-Term Modification of water quality standards to allow the lethal application of rotenone.

- ✓ **Tribal Co-Management (The Boldt Decision):** In Washington, treaty tribes are legal co-managers of the state's fishery resources, not just consulting parties. An eradication effort in a tribe's "Usual and Accustomed" (U&A) fishing area cannot proceed without direct coordination, agreement, and often active operational partnership with the affected Tribe.
- ✓ **Endangered Species Act (ESA) Consultation:** While ESA compliance exists in Alaska, Washington's waters are heavily populated with ESA-listed salmon and steelhead runs. WDFW must hold an ESA Section 10 permit from the USFWS (or NOAA Fisheries) to authorize the incidental take of listed species during netting, electrofishing, or chemical treatments, requiring strict mitigation measures to avoid bycatch.
- ✓ **Hydraulic Project Approval (HPA):** If the Washington eradication requires any physical modification to the waterbody's bed or flow, WDFW must issue an HPA to ensure the protection of fish life during the structural phases of the project.

Bottlenecks and Solutions

It was estimated that the anticipated timeline and approvals needed to implement a response in Alaska ranges from two weeks to 18 months; in Washington – two months to 18 months.
A variety of constraints and possible ways to address those were identified and discussed including:

- Landowner access permits can differ among Tribes, where fees, required documentation and timing vary. Advance agreements for access permits among Tribes could be a way to expedite the process. Specific contacts could be built into site specific plans.
- Pursuing a Categorical Exclusion for rotenone application could streamline NEPA process and open up funding.
- Specific products must be registered with the relevant state regulatory authority for use (e.g. ADEC).
- A limited number of certified pesticide applicators exist.
- Product (i.e. rotenone) availability and shipping time to treatment site can affect timing of actions.
- ESA Consultation can be complex. There are anticipated to be potential changes to the process after September 6, 2026. There may be reinterpretations for ESA Sections 4c and d.
- Programmatic EA would be beneficial to streamline NEPA process.
- National Wildlife Refuge Conservation plans could be amended to include language that addresses pike response actions.
- Exploration of a categorical exclusion for actions not including rotenone.

OPERATIONAL SIMULATION AND STRESS TESTING

BUILDING FIELD CAPABILITY SKILLS AND KNOWLEDGE

Participants gathered at ADFG facilities to dissect and age Northern Pike. Demonstration dissections of the otolith and cleithra were used for aging individual fish and examining the stomach contents were used to understand waterbody characteristics/food availability. A discussion on netting types and their applications, as well as eDNA sampling devices were discussed. Colville Tribes also shared information on their Northern Pike reward program, particularly focused on lessons learned during the multi-year implementation of the program. The final discussion was focused on rotenone chemical treatments where ADFG and WDFW shared insights on when treatment options are appropriate, operational and lessons learned.



Figure 1. Stomach contents and cleithra post-dissection from Northern Pike.

CHARACTERIZING TREATMENT SUCCESS

There are various ways that a successful treatment (response action) can be determined a success. Various factors will influence the type of success that was achieved. There are biological benchmarks but also political ones. Based on previous experiences, the participants provided a full suite of success models that have been applied to specific treatment events.

Specific indicators in Washington have been used such as

- A catch per unit effort of less than 1 fish / 100 nets is the target in Lake Roosevelt which keeps Northern Pike population in the “crash” state.

- A target 87% decrease in current population based on previous population estimate was used in the Pend Oreille River system.

Additional indicators of success included

- Ecosystem is restored, where specifically valued species return such as salmonids.
- Pike population is not expanding in distribution.
- Not seeing multiple year classes /age distribution especially in suppression management.
- Fishing opportunities are opened back up for salmonids.
- Stomach content analysis can be a minute indicator of changes in food availability.
- Positive responses from the community who provide support for project actions.
- Increased social acceptability of treatment events.

DETECTION AND DECISION – SITE RAPID ASSESSMENT AND TRIGGERS

Breakout groups discussed specific scenarios and determined how to interpret the information provided and if a response was warranted. There are existing resources within the Technical Guidance and Management Plan for Invasive Northern Pike in Southcentral Alaska such as situation assessment, management strategy guidance and multiple mapping tools.

Scenario 1: Validated detection of Northern Pike in Moose River. Public report in Spring by angler with photo sent to ADF&G. Teams determined: how to delineate the problem and identify the triggers to initiate a response.





Scenario 2: Confirmed multi-age population in Swanson River by ADF&G in the fall. Teams determined: the pre-winter urgency, discussed multi-jurisdictional complexity, and created an outline of response strategy that considered field constraints, resource availability and specific methods that would be used.

ACTIVATING AND DEPLOYING FEDERAL RESPONSE CAPACITY: IINSRRT

The U.S. Fish and Wildlife Service presented on the Interjurisdictional Invasive Species Rapid Response Team (IInSRRT). This program is in development and is meant to increase the available human resources to support rapid response actions associated with nationally significant invasive species. This program may be able to offer expertise and skilled people during a response to managing entities that request the assistance of IInSRRT. There is a multi-step process that can help identify if activation of IInSRRT is suited to the response. Application updates and information can be found on the IInSRRT website.

FROM EXERCISE TO ACTION

BUILDING RAPID RESPONSE PLANS

Exercise participants convened to develop core operational site-specific rapid response plans grounded in reality. Three groups of participants selected their own scenarios to base their plans: Banks Lake, Washington, Kenai Peninsula, and Jim Creek, Alaska. Each team identified 72-hour actions, outlined detection triggers, identified lead authorities and roles across agencies and entities, identified primary communication needs and methods, and outlined a response strategy. The groups then shared their results with all exercise participants for feedback and discussion.

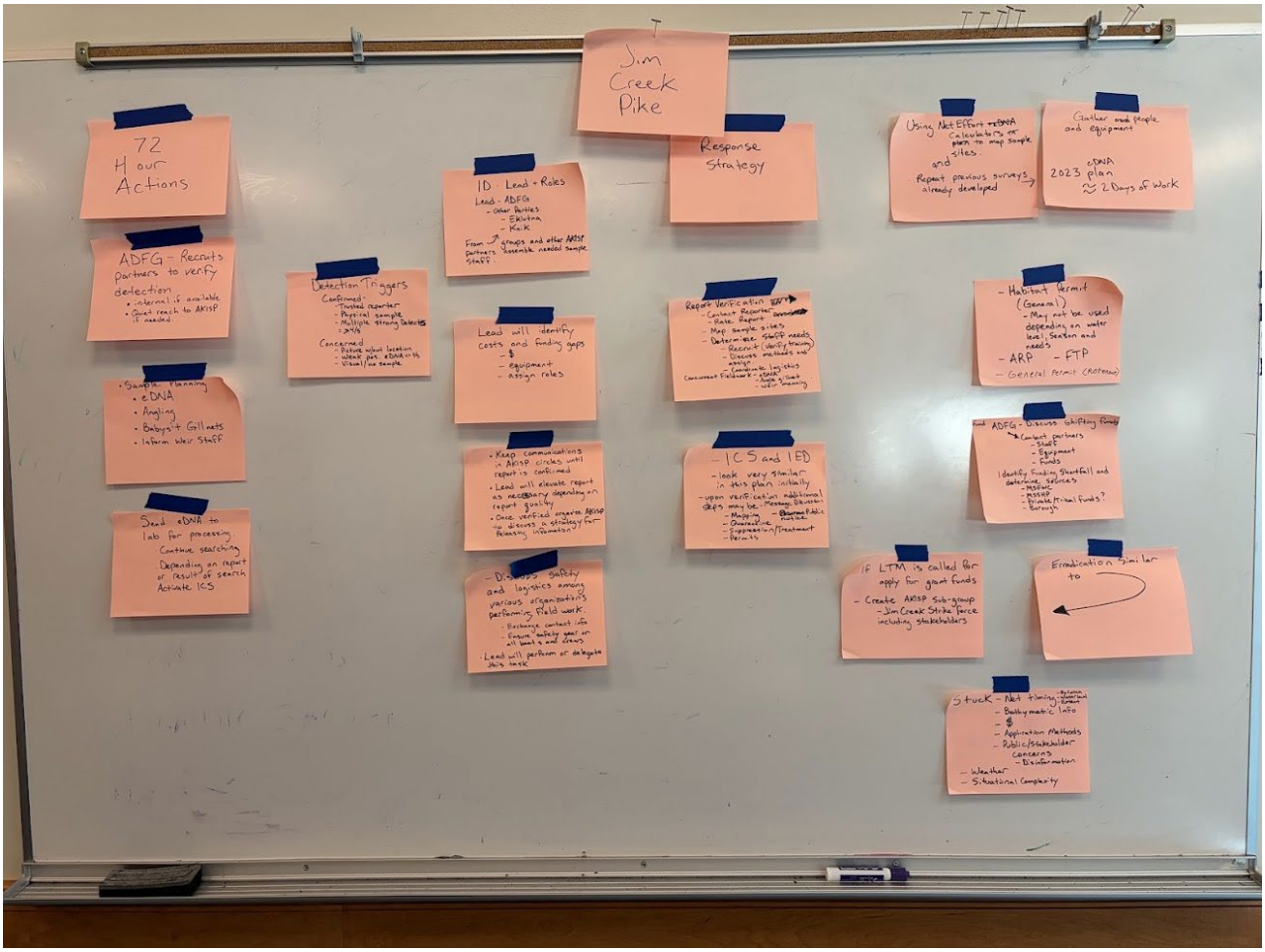


Figure 2. Jim Creek, Alaska plan elements determined during the exercise.

TECHNICAL AND REGULATORY REFINEMENT

Exercise participants again convened in the same groups to further build their response plan, focusing on strengthening their plans using real constraints. Participants refined their plans using netting and eDNA realism, permitting pathways, and funding strategies. Other groups reviewed their results and provided commentary on whether the plan was feasible.

CROSS-GROUP REVIEW AND PEER STRESS TEST

Exercise participants reviewed the results of each plan and provided external critique and input associated with plan realism, role definitions, addressed constraints, and an evaluation of whether or not the plan would work under pressure.

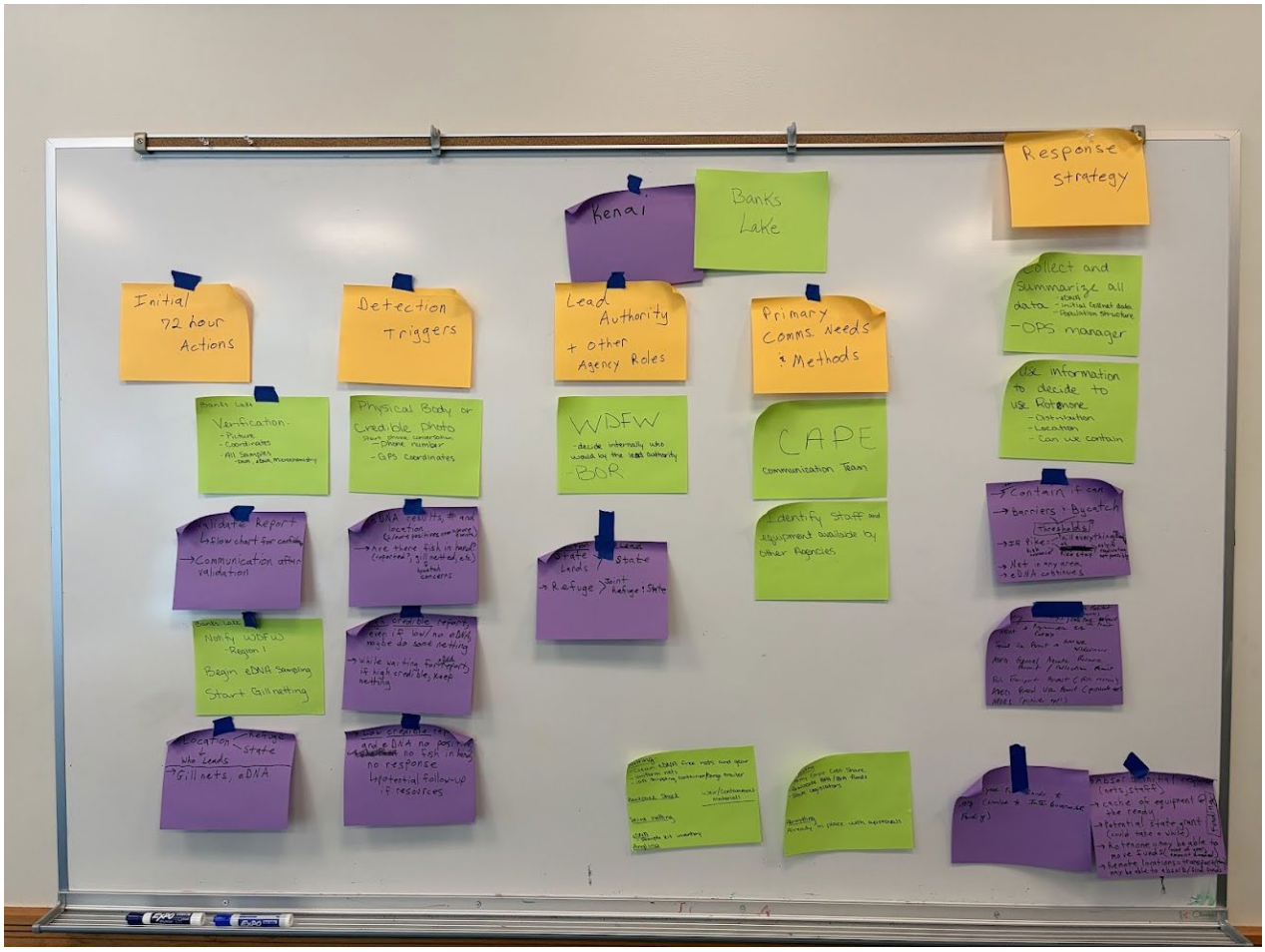


Figure 3. Kenai National Wildlife Refuge (purple) and Banks Lake, WA (green) plan elements determined during the exercise.

CROSS-TAXA TRANSFER

Throughout the workshop, exercise participants kept a running list on aquatic invasive species in which participants had rapid response experience. The group discussed what elements transfer directly to dreissenid or any other AIS response of interest. The following cross-taxa transfer list was generated:

- Partnerships
- Advance agreements
- Finances for response
- Defining extent
- Public education
- Leverage funding e.g., additional eDNA samples to labs for analysis
- Permitting
- Difficulty / challenges
- Contact with legislators
- Pathway management
- Decontamination / biosecurity
- HACCP
- Response structure
- Propagule pressure - likelihood of introduction
- Ecosystem management
- Reporting systems
- Sharing data in national databases

Exercise participants were asked what must change if other species are considered, and responded as follows:

- Identification of authority to close waterbody if dreissenids/invasive mussels
- Quarantine authority for ADFG
- Reclassification of species, template protocol for change in reclassification
- Pesticide listings
- Trainings on monitoring surveys for other taxa
- Subject matter experts and some stakeholders will vary

EARLY DETECTION ACTION LIST

Exercise participants were asked to identify activities prior to a detection that will make a response effective. This included:

- MOU – Declaration of Cooperation – Inter governmental Agreement
    - Look to signatories on AKISP strategic plan
- Pre-authorizations to do specific motorized activities: motor, snow machine, landing float planes such as Special Use Permits and Wilderness Permissions
- Internal discussions to identify roles within agencies
- Database of gear, staff, certified applicators (identified as an AKISP task)
- Develop rapid response kits
- Get more people certified as applicators, Dunker certification, intro ICS training
- Develop specific plans for complex locations
- Develop Programmatic EA
- Align messaging across partners
- Append regional – waterbody specific plans
- Collect and compile basic water information
- An inter-governmental agreement could address
    - Barriers use under identified criteria
    - Identify by-catch thresholds
    - Identification of lakes where barriers could be installed
    - Motorized access
    - Integrated decision tree that addresses protocols
- Understand transferability of DOI pilots to ADFG projects
- Alignment and agreement on definitions
- Characterizing eDNA interpretations and triggers
- Identification of labs for expedited eDNA processing; identification of shared eDNA kits
- Review current plans (AK and WA) for revisions based on workshop

NEXT STEPS

Exercise participants were asked to describe at least one key next step they would take to advance Northern Pike rapid response efforts in their respective jurisdictions:

Alaska Department of Fish and Game

- Dunker training, bathymetry data and specific plan (Thomas)
- ICS training, develop Jim Creek-specific plan, resource database, AKISP fall meeting to share info (Brennan)
- ICS training, explore how to structure an MOU / RR plan with refuge and how would that work together (Parker)
- ICS training (Tammy)
- Serve as a conduit to communication needs to leadership (Krissy)
- Dunker training; take high risk systems and identify areas for information collection to be ready (Eric)

U.S. Fish and Wildlife Service

- Aquatic pesticide license, funding to revitalize outreach (Maura)
- Assist with programmatic EA development (Matt)
- Assist with programmatic EA, pursue aquatic applicator license (Josiah)
- Explore with Stacy if the USFWS could request DEC for compounded training to expedite people to be certified applicators'; identification of deployment positions like pilots (McKayla)
- Initiate programmatic EA development (Ben)
- Secure funding for and create cache equipment (Ashley)

Tyonek Tribal Conservation District

- Obtain a pesticide applicators license (Andy)
- Populate database; district wide regional management plan (Nicole)

Muckleshoot Indian Tribe

- Meet with director and begin a specific plan for the Tribe (Tiffany)

Kenai Watershed Forum

- More research on pike, initiate visual surveys and water data collection (Haley)

Confederated Tribes of the Colville Reservation

- ICS training, explore rotenone, set RR net supply aside (Kyle)
- Research more, ICS, explore rotenone, design where to store things to avoid contamination (Shay)
- ICS training, plan for reservation lakes managed by the tribe for mussels and pike (Holly)

Washington Department of Fish and Wildlife

- Internal agency discussions in region, share how we could improve, and discuss preparedness with what ifs when issues arise (Chuck)
- Update WA rapid response plan; add barriers and containment information, create cache kit (Jesse)

Other suggestions that were not agency specific:

- Host a fish barrier "show and tell" including Alaska DFG staff and Confederated Tribes of the Colville Reservation staff.
- Consider sharing the Washington-U.S. Army Corps of Engineers Memorandum of Understanding re: ICS command.

APPENDIX A. EXERCISE PARTICIPANTS

Participants		
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APPENDIX B. EXERCISE AGENDA

Northern Pike Working Rapid Response Exercise

Soldotna, Alaska Final Agenda

August 24-26, 2026

USFWS Kenai National Wildlife Refuge Headquarters, 33398 Ski Hill Rd., Soldotna, AK 99669

Goal: Conduct an event for Alaska, Washington State, and Tribal participants to examine operational and strategic deliverables associated with jurisdictions, roles and responsibilities, capabilities, triggers, notifications, resources, and potential actions in response to a realistic scenario of Northern Pike discovery in southcentral Alaska or the State of Washington.

Logistics: 3-day exercise hosted in Soldotna, Alaska using the USFWS Kenai National Wildlife Refuge facility and incorporating field exercise elements.

Core Capabilities: An exploration of skills, equipment, resources, authorities, and accessibility of local capabilities. Focus on the use and execution of whole community interactions during the exercise.

Agenda – Day 1: Strategic Alignment + Community Building

Time	Topic	Presenters
9:00am–9:30am	Welcome from USFWS and Participant introductions **<u>Introduction to Exercise</u>** • Purpose, urgency, and outcomes • Review goals and deliverables • Expectation – every session produces a tangible output	Ben Wishnek, Facilitators
9:30am–10:15am	**<u>Experience + Readiness Exchange: Lessons Learned & First 72-Hour Reality Check</u>** **<u>Objectives:</u>** Extract lessons from relevant invasive species or RR exercises, understand preparedness gaps from those without pike RR experience, and build early on cross-region learning and relationships **Part 1: Framed Inputs** Direct Northern Pike Response Experience in Alaska and Washington • What worked? • What failed? • Where are the identified gaps in response? No Pike Response Experience • What would you do today if Northern Pike were detected? • Where are you least prepared? • What decisions would you struggle to make?	Jesse Schultz and Chuck Lee (WA Dept Fish & Wildlife), Holly McLellan, Shay Jasper (Colville Tribes), (Parker Bradley/Eric Wood) (Alaska Dept. Fish and Game)
10:15am–10:30am	**Break**	
10:30am–11:15am	**Part 2: Table Exercise: 45 minutes**	

	Create groups of experienced and inexperienced pike responders and address three questions: • What would we do immediately? • What do we not know how to do? • Where would we get stuck? Each group shares key discussion points.	
11:15am–NOON	**<u>Statewide Plans to Site-Specific Actions: Criteria for Credible Site-Specific RR Plans</u>** **<u>Objective:</u>** Define what makes a plan credible and implementable at the watershed/site scale (5-7 minutes per entity, followed by discussion) • Washington: statewide to site-specific • Kenai NWR: watershed-level planning • West Cook Inlet: partner coordination gaps *Output: Criteria for credible implementation ready site-specific RR plans*	Chuck Lee (WA Dept Fish & Wildlife), Matt Bowser (Kenai NWR), (Nicole Swensen/Andy Wizik – Tyonek Tribal Conservation District)
12:00pm–1:00pm	**Lunch**	
1:00pm–2:00pm	**<u>Detection and Validation Standards</u>** **<u>Objective:</u>** Obtain alignment on detection and validation standards • Process • Techniques (eDNA, netting, etc.) • Confidence in effort of detection *Output: Framework standards for detection*	
2:00pm–2:45pm	**<u>Regulatory and Permitting Pathways</u>** **<u>Objective:</u>** Clarify necessary permits needed before specific actions (e.g., NEPA, Alaska DEC, Tribal authority, WA comparison). Detection occurs today – what approvals are required to move forward with response action? • Permitting checklist • Bottlenecks and solutions • Anticipating timelines and approvals *Output: List of permits likely needed in the event of a northern pike response*	
2:45pm–3:15pm	**Break**	
3:15pm–4:50pm	**<u>Resources Needed for A Response</u>** **<u>Objective:</u>** Identify real-world response capacity (for several different scenarios) to produce a cross-jurisdictional response effort and coordination structure • Activation of regional and local coordination • Staff and equipment • Timing & implementation of sample processing (including eDNA lab capacity) • Funding/resource support access *Output: Cross-jurisdictional resource lists*	
4:50pm–5:00pm	**<u>Summarize today's activities and set the stage for Day 2</u>**	
5:00 pm	**Adjourn**	

Agenda – Day 2: Operational Simulation + Stress Testing

Time	Topic	Presenters
8:00am–11:30am	**Meet at ADFG Office – 43961 Kalifornsky Beach Rd, Soldotna** **Building Field Capability Skills and Knowledge** **Discussion 1: Characterizing Pike Population – Discussion lead: Alaska DFG (Parker Bradley)** • Hands-on dissection of pike • Using information from dissection (stomach contents, otoliths) **Discussion 2: Techniques for Removal Operations – Discussion lead: Alaska DFG (Parker Bradley/Eric Wood), Colville Tribes (Holly McLellan)** • eDNA and gillnetting nuances (mesh size, gillnetting under ice, etc.) - Techniques, gear and deployment • Pros and cons of gear types and seasonal considerations • Effort required for eradication confidence • Crew/logistics constraints • Catch-per-unit-effort assumptions for benchmarks (assume success at a certain level) • Reward program (challenges, costs) and public removal options **Discussion 3: Chemical Approaches – Discussion lead: Alaska (Parker Bradley), WDFW (Jesse Schultz/Chuck Lee),** • Basics on chemical treatments • When treatment is appropriate • Operational and permitting constraints • Lessons learned (Remote deployment challenges, treatment planning steps) *Output: Decision matrix for eradication strategy*	
11:30am–NOON	**Characterizing Treatment Success** **Objective:** Obtain alignment on determining eradication success • Process • Techniques (eDNA, netting, etc.) • Confidence in effort • CPUE targets for monitoring *Output: Standards framework for eradication*	
Noon–1:15pm	**Lunch Break**	
1:15–1:45pm	**Debrief** Participants discuss limiting factors, surprises, challenges, etc.	
1:45pm–2:45pm	**Simulation: Detection & Decision – Site Rapid Assessment and Triggers** **Scenario:** Validated detection of northern pike in Moose River (public report in Spring/early Summer). Teams must: • Interpret detection data – delineating the problem • Decide whether to initiate a rapid response - triggers • Other considerations	
2:45pm–3:00pm	**Break**	
3:00pm–4:00pm	**Simulation: Confirmed Population** **Scenario:** Confirmed multi-age class population in Swanson River (ADF&G in Fall). Teams must: • Characterize pre-spawning urgency • Address multi-jurisdictional complexity	

	• Outline response strategy that addresses field constraints, realistic resource availability and specific methods *Output: Draft outline Incident Action Plan*	
4:00pm–4:45pm	**Activating and deploying federal response capacity: engaging IInSRRT** **Objective:** Practice accessing the Interjurisdictional Invasive Species Rapid Response Team • Explore and understand triggers for deploying a trained team or resources for response • Budget, justification and timeline • Coordination strategy *Output: Completed Draft IInSRRT Application based on previous scenario*	McKayla Spencer, USFWS
4:45pm–5:00pm	**Day 2 debrief: Discuss and recap specific activities** • Identify challenges and discoveries	
5:00pm	**Adjourn**	

AGENDA – DAY 2: OPERATIONAL SIMULATION + STRESS TESTING

Time	Topic	Presenters
8:00am–9:30am	**Building Rapid Response Plans** **Objective:** Develop core operational site-specific RR plans grounded in reality Potential Teams/Water Bodies – Colville Tribe Reservation, Banks Lake, WA, Kenai Peninsula watershed/system, Mat-Su watershed/system, West Cook Inlet. Each team will: • Identify initial 72-hour actions • Outline detection triggers (eDNA thresholds, confirmation steps) • Identify lead authority + roles across agencies/Tribes • Identify primary communication needs and methods • Outline response strategy *Output: Draft RR Plan*	
10:00am–10:15am	**Break**	
10:15am–12:00am	**Technical and Regulatory Refinement** **Objective:** Strengthen plans using real constraints Teams refine plans using: • Netting and eDNA effort realism • Permitting pathways • Funding strategy Would this plan actually get approved and implemented in time? *Output: Science- and Policy-aligned RR Plan*	
Noon – 1:30 pm	**Lunch Break**	
1:30pm–2:30pm	**Cross-Group Review & Peer Stress Test** **Objective:** Improve plans through external critique and input Teams rotate and review another group's plan: • Is it realistic? • Are roles clearly defined? • Are constraints addressed? • Would this work under pressure? *Output: Peer-reviewed, revised plans*	
2:30pm–3:15 pm	**Early Detection Action List (and other topics)** **Objective:** Identify activities prior to a detection that will make response effective	

	• Identify partner roles BEFORE detection • Explore ways to align early detection monitoring among partners • Identify data sharing protocols (eDNA, sightings) • Identify Communication pathways (who calls who) • Flag critical connections/actions needed to improve preparedness • Other topics *Output: Early detection coordination action list*	
3:15pm–3:30pm	**Break**	
3:30pm–4:00pm	**Cross-Taxa Transfer (Dreissenids + AIS)** **Objective:** Extend learning beyond northern pike • What elements transfer directly to dreissenid or any other AIS response of interest? • What must change if other species are considered (detection, treatment, scale)? *Output: Transferability Framework*	
4:00pm–4:45pm	**Next Steps** • After action review • Additional comments/discussion about exercise elements • Operationalize long-term coordination (consider development of draft community of practice charter that includes communication cadence, shared tools, early detection monitoring coordination across regions, and ownership/leadership roles) • Share actions each participant will take post-exercise	
4:45pm–5:00pm	**Summary and Adjourn**	