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July 5, 2023

MEMORANDUM

TO: Council Members

FROM: Stacy Horton, Washington Staff Policy Analyst/Biologist

SUBJECT: State of Washington Interagency Northern Pike Rapid Response Plan Overview

BACKGROUND:

Presenter: Jesse Schultz, (Washington Department of Fish and Wildlife, Environmental Planner 5) and Dr. Erika Rubenson, (Four Peaks Environmental & Data Science, Senior Scientist)

Summary: We will provide an overview of the new state of Washington interagency Northern Pike rapid response plan. We will highlight the plan's purpose, goals, and objectives and walk through key components of the plan. The goal will be to provide a broad understanding of prevention and early detection, detection verification, rapid response, and extended response activities available in the plan.

Relevance: The Council's [2014 Columbia River Basin Fish and Wildlife Program](#) (Program) acknowledges invasive and non-native species pose direct threats to the Program's fish and wildlife restoration efforts through competition, predation, food web disruption, disease transmission, and habitat modification (Program P. 46). When the Council adopted the 2014 Program, it listed currently known aquatic threats. Northern Pike were not on the list or even on our radar screen. Invasive predators can emerge quickly and imperil native species and ecosystems.

Washington's *Northern Pike Rapid Response Plan* implements Program measures designed to prevent the establishment of non-native and invasive species as well as managing and monitoring pathways of introduction and developing strategies to control invasive fish while also developing public outreach tools (Program P. 46-48).

The Council maintains a [Northern Pike Resource Tool](#) to provide data to track, monitor, and tell the story of Northern Pike, a potential major salmon predator. Should Northern Pike reach anadromous fish waters, 13 salmon and steelhead populations are at risk.

Background: Both the Council's Program and [2020 Addendum](#) acknowledge and focus on the threats of non-native and invasive species. Principles adopted in the Program include the prevention and management of invasive species through early detection and response, public education, monitoring and control efforts to minimize the spread of invasives that may impact native fish. Aggressively addressing non-native and invasive species is among the Program's third highest emerging priorities (Program, P. 116). The 2020 Addendum includes an ecological objective (E-5, P. 23) that calls for the management, prevention, and eradication of invasive species to improve survival and abundance of focal fish and wildlife species. One of the Predator Management Strategy Indicators (E4-5, P. 26) will evaluate trends and the range of Northern Pike to determine if both scope and scale are reducing over time.) The Council utilized cost savings (FY 2016-2019) to help in the effort to suppress Northern Pike (Addendum, P. 6).

The Program notes that hydropower dams can impound water and create habitat favorable for invasive species. One of the general measures in the Program's stronghold policy calls for the support of actions that are intended to eradicate or prevent introduction into stronghold areas. (Program, P. 45). The Council saw a presentation at the May 2023 Wenatchee meeting about the importance of the Hanford Reach for the protection of the Upriver Bright fall Chinook and species like sturgeon and lamprey. The fish and wildlife managers are working hard to keep Northern Pike from migrating into anadromous fish waters.

More Info: The State of Washington Interagency Northern Pike Rapid Response Plan <https://wdfw.wa.gov/publications>

Washington Department of Fish and Wildlife Aquatic Invasive Species Website <https://wdfw.wa.gov/species-habitats/invasive>

Washington Invasive Species Council Website <https://invasivespecies.wa.gov/>

State of Washington Interagency Northern Pike Rapid Response Plan

Jesse Schultz Lead Prevention Biologist
Aquatic Invasive Species Unit
Northwest Power and Conservation Council
July 11, 2023



Washington
Department of
**FISH and
WILDLIFE**



FOUR PEAKS
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NORTHERN PIKE RAPID RESPONSE PLAN FOR THE COLUMBIA RIVER BETWEEN PRIEST RAPIDS AND CHIEF JOSEPH DAMS AND THE OKANOGAN RIVER

October 2022

Prepared for

The Confederated Tribes of the Colville Reservation
258 Mission Road
Omak, Washington 98841

Prepared by

Four Peaks Environmental
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338 South Mission Street
Wenatchee, Washington 98801





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DRAFT STATE OF WASHINGTON INTERAGENCY NORTHERN PIKE RAPID RESPONSE PLAN

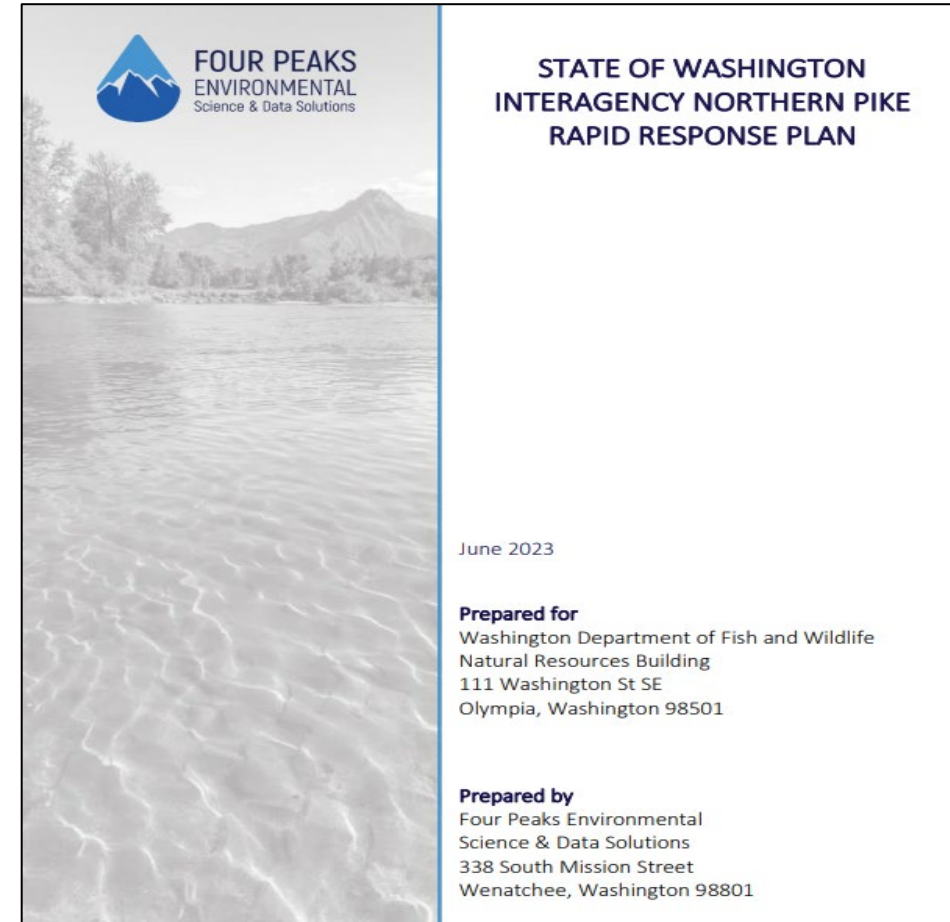
Please provide your comments and feedback on the document to Jesse Schultz at jesse.schultz@wdfw.wa.gov no later than **4:00 p.m. PDT on Monday, June 12, 2023. We value your feedback and appreciate your time.**

June 2023



Plan Completed and Next Steps

- Finalized June 27, 2023
- Place plan in WDFW's public websites
<https://wdfw.wa.gov/publications>
<https://wdfw.wa.gov/species-habitats/invasive/esox-lucius>
- Press release, presentations, and email distribution
- Secure funding for training exercises of the plan
- Secure funding to update the zebra and quagga mussel rapid response plan



Thank you



Jesse Schultz
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360-480-2105





STATE OF WASHINGTON INTERAGENCY NORTHERN PIKE RAPID RESPONSE PLAN OVERVIEW

July 11, 2023

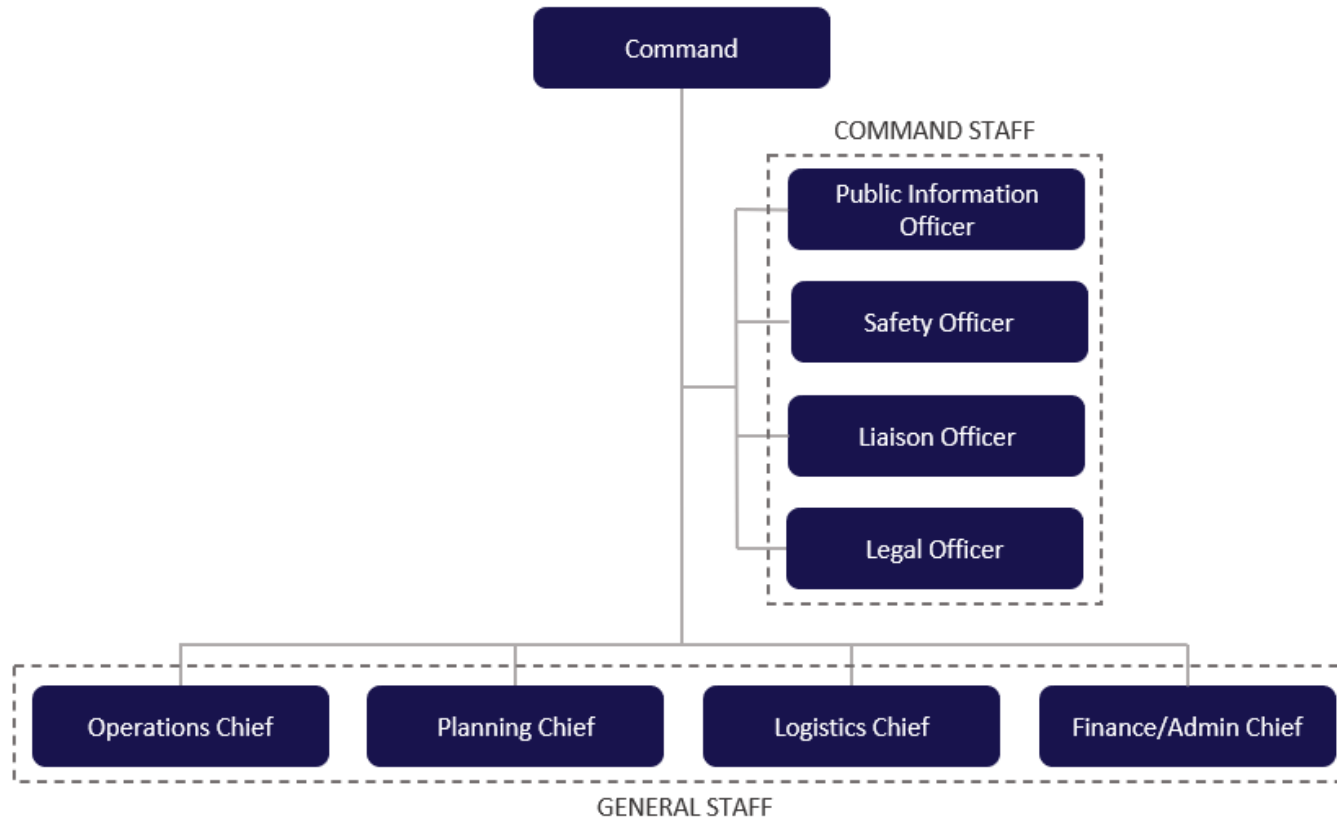
PLAN PURPOSE AND GOALS

- Enhance the efficiency and effectiveness of Northern Pike
 - Prevention efforts
 - Detection
 - Early response
 - Long-term management activities
- Goals
 - Minimize the probability of further Northern Pike invasion
 - Minimize the impact of Northern Pike

PLAN OBJECTIVES

- Minimize the likelihood of Northern Pike establishment in additional waterbodies.
- Increase public awareness of the invasive Northern Pike issue and support for management efforts.
- Maximize the probability of early detection.
- Establish clear requirements to enable action within the first 48 hours of a detection.
- Provide a systematic approach to verify a detection and investigate reported observations.
- Provide clear communication and reporting guidance to trigger extended response activities within 6 weeks of initial detection.
- Implement scientifically sound management to detect, eradicate, contain, and/or suppress Northern Pike.

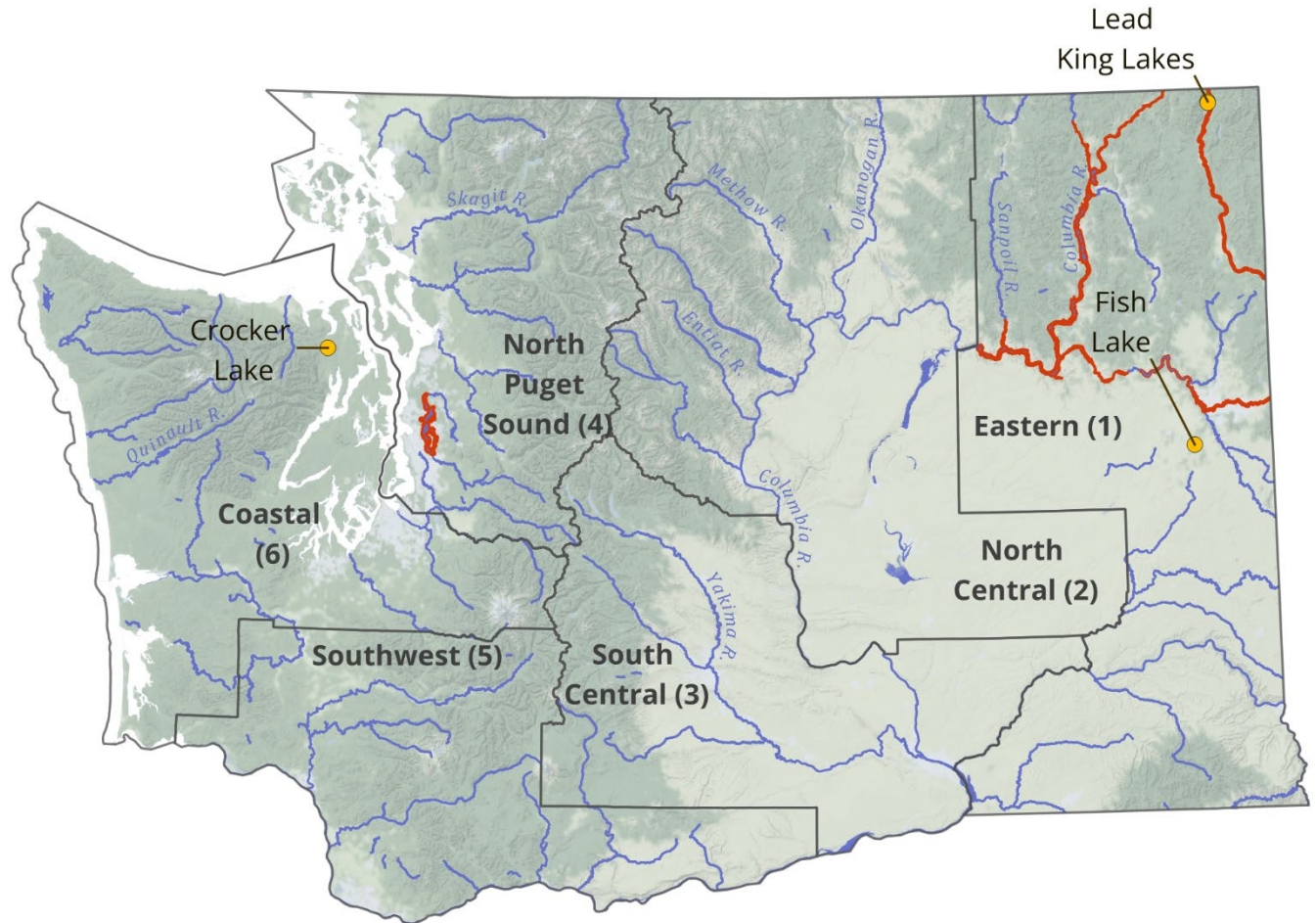
INCIDENT COMMAND SYSTEM



- Overview, benefits, and resources
- Legal authority for Washington Department of Fish and Wildlife (WDFW) to implement ICS for invasive species response
- ICS Command and General Staff Functions
- Role of Multi-Agency Coordination (MAC) Group

HISTORY OF NORTHERN PIKE IN WASHINGTON

- Northern Pike regulations
- Eradication efforts
- Suppression efforts
- Monitoring and research efforts



WATERBODY CLASSIFICATION

- Status Unknown
 - Waterbody has not been monitored.
- Undetected/Negative
 - Sampling/testing is ongoing and nothing has been detected.
- Inconclusive (temporary status)
 - Waterbody has not met the minimum criteria for verified suspect detection and no physical specimen has been collected.
 - Verification Sampling will be initiated

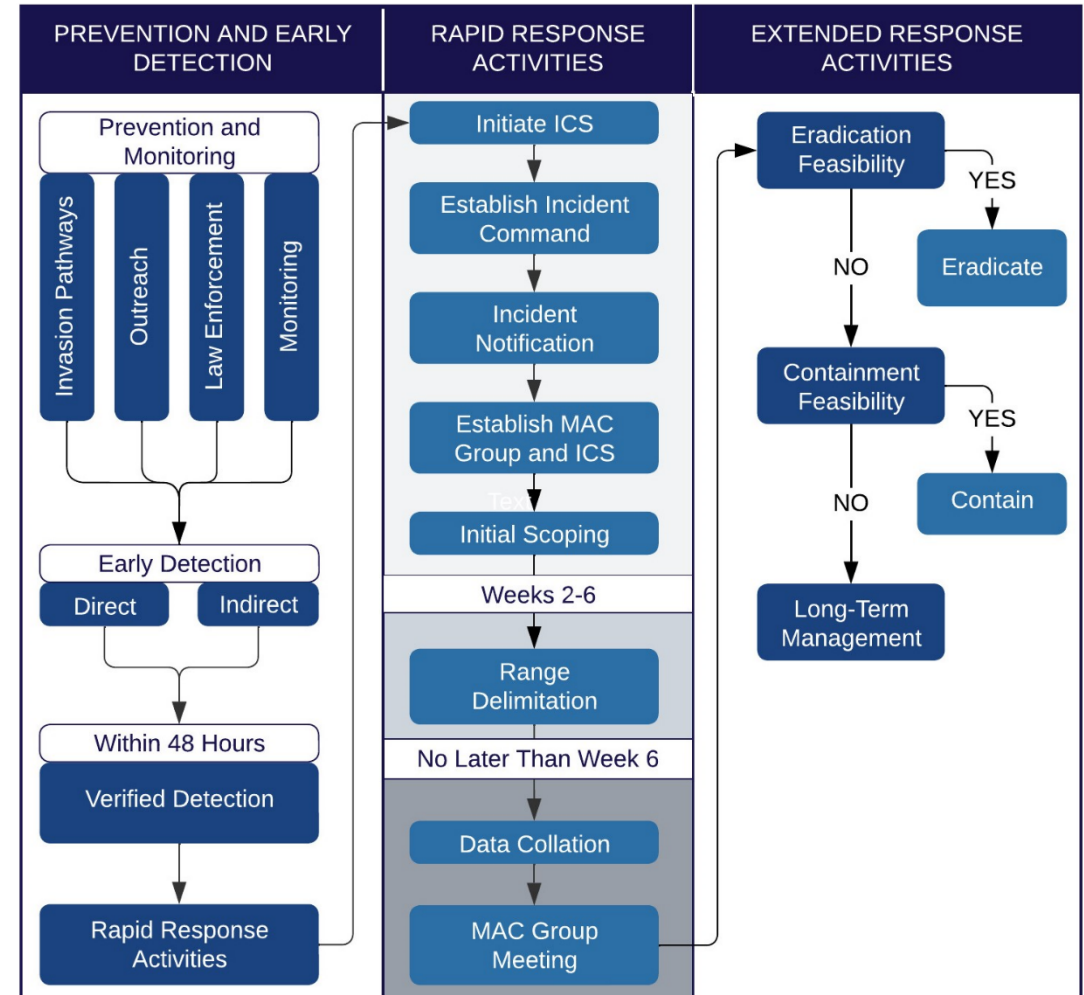
WATERBODY CLASSIFICATION

- **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.
- **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.



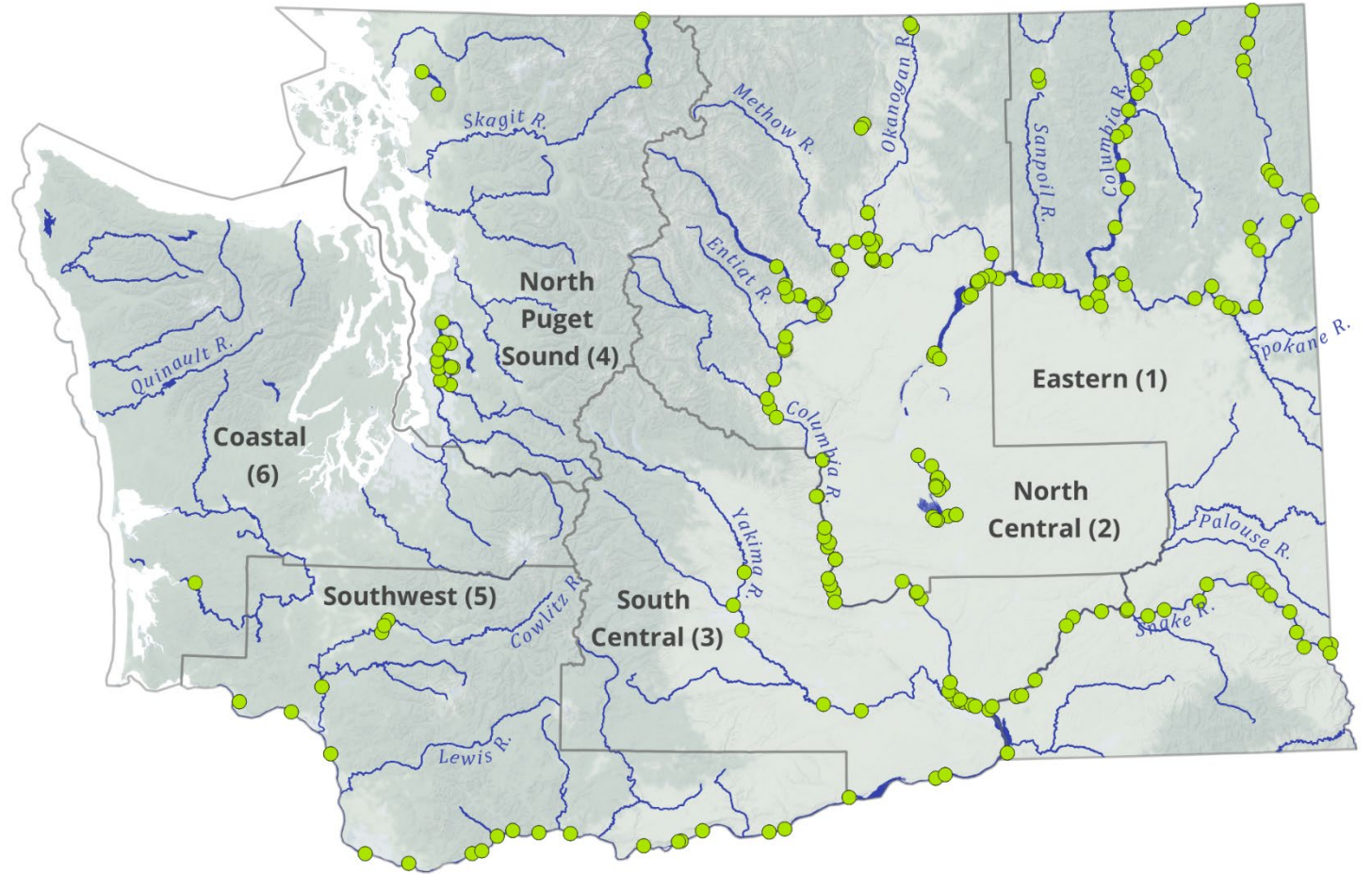
PLAN OVERVIEW

- Prevention and Early Detection
 - Prevention
 - Routine monitoring
 - Detection verification
- Rapid Response Activities
 - Establish Incident Command System (ICS)
 - Sampling and data collation
 - MAC Group meeting
- Extended Response Activities
 - Eradication
 - Containment
 - Long-term management



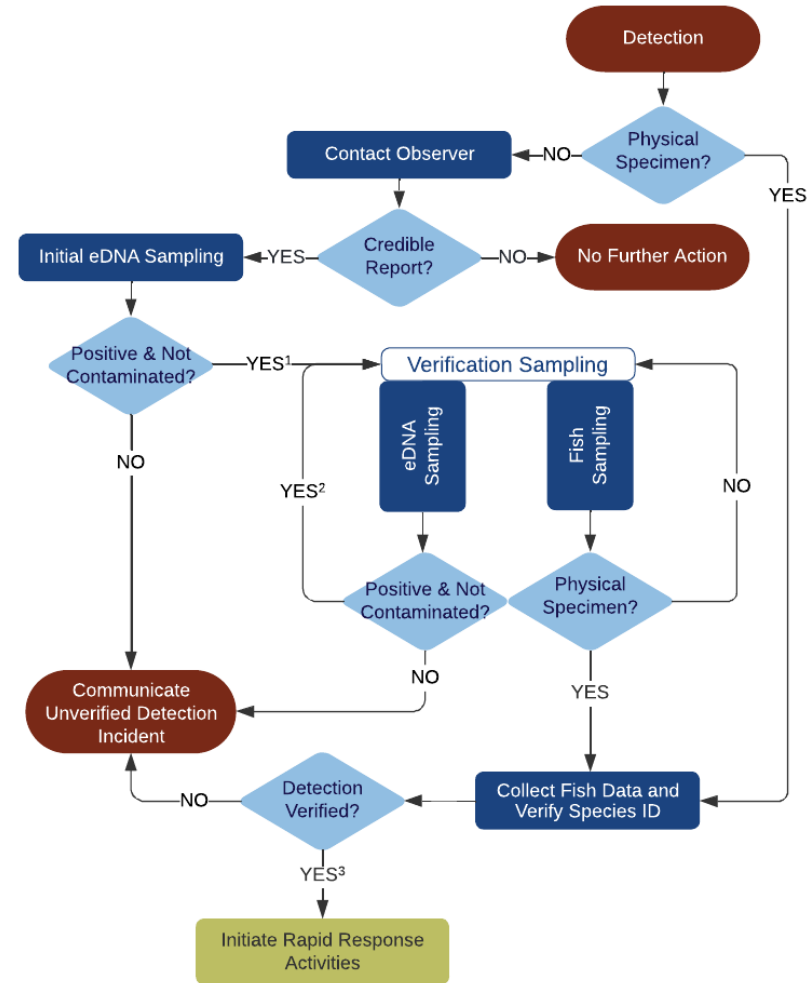
PREVENTION AND EARLY DETECTION

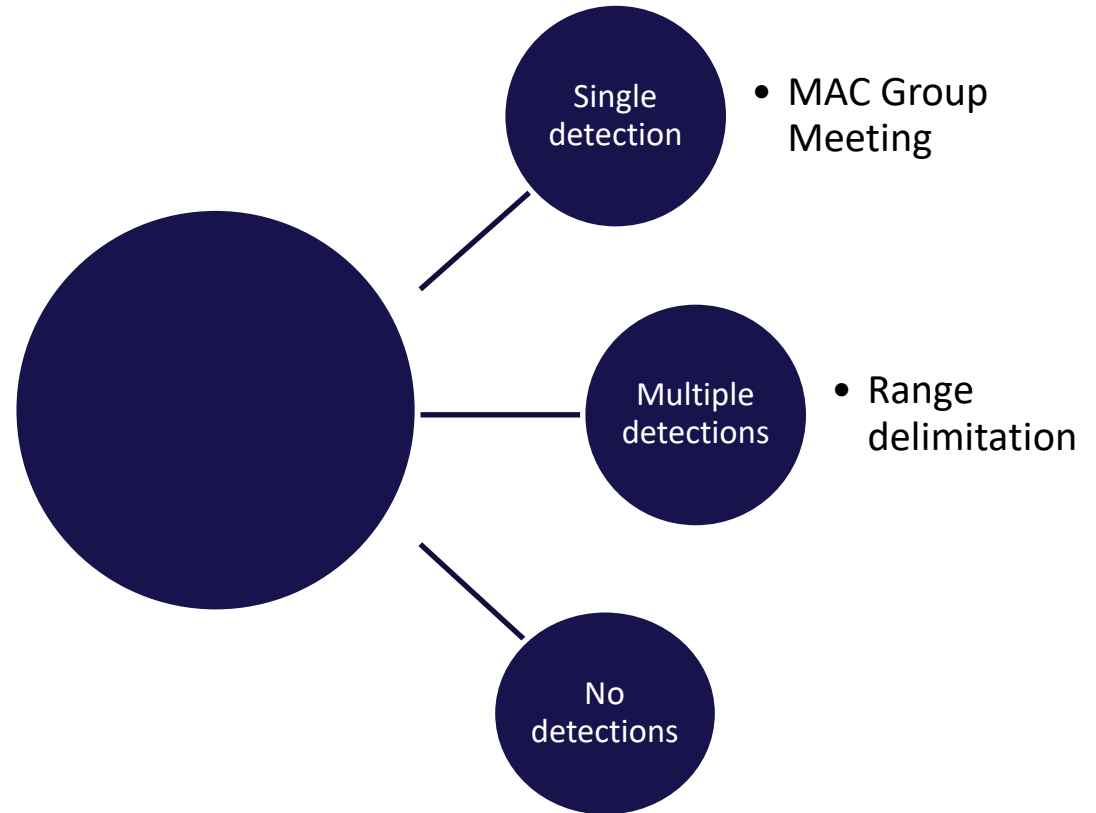
- Invasion pathways and expected habitats
- Outreach
- Law enforcement
- Routine monitoring
- Reporting protocols



DETECTION VERIFICATION

- Physical specimen
 - Collect fish data
 - Verify species ID
- Other detections
 - Credible report
 - Initial eDNA sampling
- Verification Sampling
 - eDNA sampling
 - Fish sampling





WEEKS 2-6 RAPID RESPONSE ACTIVITIES

- Iteratively sample until limits of current invasion are understood or week 6 of Rapid Response is reached
 - Fish sampling
 - eDNA sampling
 - Fish counts
- No later than Week 6 (or when limits of current invasion are understood)
 - MAC Group Meeting
 - Hosted by ICS Command
 - Disseminate information collected to date to the MAC Group
 - Begin coordinating Extended Response Activities

EXTENDED RESPONSE

Invasive Northern Pike Situation Assessment

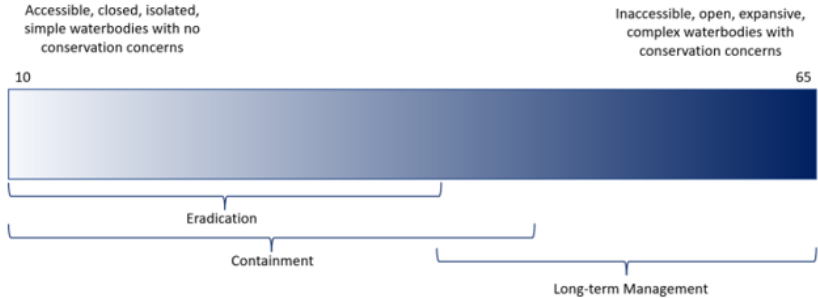
Baseline Information

Date	6/15/2023
Waterbody Name	
Have Northern Pike ever been eradicated here?	Yes or No
Is a bathymetric map available?	Yes or No
Acres	
Max Depth	
Means to access waterbody?	

Scoring

Question	Score
How difficult is the waterbody to access (Scale 1-5)?	Select One
Transportation costs to site?	Select One
Is the waterbody open or closed? <i>(Regular status, not during flood stage)</i>	Select One
If open, on a scale of 1-5 how expansive is the connectivity?	Select One
On a scale of 1-5, how complex is the habitat?	Select One
Are Northern Pike isolated or dispersed?	Select One
Can temporary barriers be used to contain the Northern Pike population?	Select One
Are there conservation concerns in the waterbody?	Yes or No
Are native fish present?	Yes or No
Cost to eradicate?	Select One
Post-eradication, is fishery restoration needed?	Yes or No
Calculate Score	0

- Situation Assessment
 - Eradication
 - Containment
 - Long-term management



ADDITIONAL PLAN COMPONENTS

- Fish sampling guidelines
- Table of entities with fisheries management responsibilities
- Public outreach examples
- eDNA monitoring locations
- Data collection worksheets
- Taxonomic keying characteristics
- Template notification letters
- MAC Group meeting data summary form

QUESTIONS?

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