REPORT TO THE LEGISLATURE

Guidance on Commercial Marine Finfish Net Pen Aquaculture in Puget Sound

Introduction

For more than 40 years, commercial finfish farmers have operated marine net pens in Puget Sound. Various state agencies regulate and lease public aquatic lands for these operations. However, the state is last comprehensive commercial net pen guidance was written in 1990. Recognizing the need for updated guidance, Washington regulatory and leasing agencies started leading a science-based effort in 2015 to bring the state's commercial net pen guidance up to date.

The effort, however, was put on hold after a net pen array near Cypress Island in Skagit County collapsed in August 2017, releasing approximately 250,000 non-native Atlantic salmon into Puget Sound. As a result, the 2018 Washington Legislature passed Engrossed House Bill 2957. Part of the bill phases out Atlantic salmon net pens by 2022 and prohibits commercial marine aquaculture operations from raising non-native fish in state waters. EHB 2957 also directed the state departments of Agriculture, Ecology, Fish and Wildlife, and Natural Resources to finalize the new guidance document with provisions to eliminate commercial net pen escapement as well as negative impacts to water quality and native fish, shellfish, and wildlife.

The guidance document, titled "Commercial Marine Finfish Net Pen Aquaculture in Puget Sound and Strait of Juan de Fuca: Guidance and Risk Management," has been finalized and is available for use by local governments, regulatory agencies, and commercial operators.

National Centers for Coastal Ocean Science and Washington State Guidance Documents

Before the 2017 net pen collapse, state agencies worked with NOAA's National Centers for Coastal Ocean Science (NCCOS) to develop a new guidance document. Following passage of EHB 2957, the agencies found they needed a document with more management guidelines for local permitting and planning as well as a risk assessment and best practices more specific to the state of Washington. NCCOS completed "State of Science on Net-Pen Aquaculture in Puget Sound, Washington" in 2019. It is now available on Ecology's website.

Following the completion of NCCOS's document, and to meet the goals of EHB 2957, the state agencies focused on creating a guidance document that would be suitable for the Puget Sound region. The guidance document required significant effort to integrate

NCCOS's perspectives and Washington-specific concerns. As a result, this effort led the agencies to work beyond the original November 2019 deadline.

The four state agencies worked to provide new guidance to address specific risks to Puget Sound by incorporating current and relevant science. The agencies identified best management practices and recommendations necessary to protect the local environment and species of concern. Compared with the NCCOS document, the new guidance document evaluates additional science and environmental risks for Puget Sound, including sensitive habitats, native finfish rearing, and fish health. The guidance provides information to local governments regarding siting and assessing net pen projects to protect water quality and sensitive habitats. The document also includes best practices and recommendations on how to regulate the industry to protect fish health and other ecological concerns.

The science associated with understanding the risks to marine ecosystems from commercial marine net pen aquaculture is continuously evolving. New research and related scientific papers are being produced regularly. While the guidance document was being developed, the state agencies routinely evaluated new information, which was incorporated into the draft guidance when appropriate. In June 2021, the agencies jointly released a draft of the new guidance document for public review and comment.

Content and Organization

The guidance document discusses the legal framework, interagency collaboration, and best management practices necessary to regulate commercial net-pen aquaculture in Washington. The document provides recommendations for legislative oversight and identifies research necessary to fill data gaps. The guidance is intended as a reference for:

- Local and state agencies responsible for authorizing new and continued net pen operations
- Current finfish net pen operators
- Proponents for new marine finfish net pen projects

Written for a technical audience, the guidance also serves to inform Washington state residents about how net pen aquaculture is collectively regulated and risks are managed to protect Puget Sound.

The guidance consists of three major sections that:

- **Describe the existing legal framework for net pen aquaculture**, including laws, rules, authorizations, leases, licenses and permits, and the responsible authorizing agencies. The section identifies when local, state, federal, and Tribal authorities are engaged or consulted. It is followed by a short section that describes intergovernmental coordination, including incident response to escape events.
- **Examine aspects of the natural environment and associated risks**. The guidance provides best management practices to reduce negative impacts to water quality, benthic environment, fish health, fish genetics, ecological issues, and sensitive

habitats and species, including salmon. The agencies also address escape prevention, biofouling, and marine debris.

- **Provide recommendations for additional legislative oversight and support** to ensure net pen operations in Washington are held to and regulated with the newest science and standards, and sited and managed to be most protective of the natural environment.

Throughout the document, risk assessment and best practices reflect current science and are approached through the lens of risk reduction and management, focusing on physical net pen structures, maintenance, operations, and fish health. Monitoring, inspection, and response are common themes – and planning is a common link between permits and practices. There also are two appendices and an addendum:

- **Appendix A** summarizes the permitting process and best management practices local governments can use to implement shoreline master programs under the state Shorelines Management Act.
- **Appendix B** provides definitions for technical terms in the guidance.
- The **Addendum** catalogs the feedback and comments agencies received from Tribes, Tribal entities, institutions of higher education, environmental organizations, and the public.

Best Management Practices for Reducing Risk

While many of the known risks are addressed through regulatory requirements, following best management practices also will help further reduce environmental risks to Puget Sound and Strait of Juan de Fuca. The guidance document evaluates aspects of the environment, and where possible, is followed by a list of best management practices relating to:

- **Site selection** – The process of siting new commercial marine net-pen facilities considers a range of criteria such as local water quality, tidal currents, benthic composition, and proximity to sensitive and critical habitats.
- **Structure design and construction –** Appropriate net pen design, materials and structural integrity help minimize a variety of adverse environmental impacts.
- **Operations and maintenance** – Routine net pen management practices help ensure net pens comply with required protections through permits, site selection, and design standards.
- **Governance** – Agencies execute laws and regulations governing net pens; in some cases, there is discretion how those laws and rules are applied.

Legislative Recommendations

Engrossed House Bill 2957 directed state agencies to develop guidance “designed to eliminate commercial marine net pen escapement and to eliminate negative impacts to water quality and native fish, shellfish, and wildlife” as well as provide

"recommendations for future legislative oversight of marine finfish net pen aquaculture." The science-based risk assessment and best practices described in this guidance provide local governments, state agencies, and net pen operators the tools to minimize negative impacts to the greatest extent possible by using the latest science and available technology. The recommendations complement the guidance by providing additional oversight and support, allowing agencies to further minimize impacts as new science and technology become available. This includes:

- Funding fish health, pathogen, genetic, and ecological risk management and regulatory actions.
- Funding a study to examine the minimum standard technology net pens should use to further reduce impacts to Puget Sound and Strait of Juan de Fuca.
- Funding research to fill data gaps and better inform net pen management.
- Supporting state agencies in their efforts to complete a future inter-agency report assessing the use of the guidance and implementing its best management practices.

Limitations

While the guidance is intended to help eliminate, reduce, or minimize the negative environmental impacts net pens pose to Washington's natural resources, even if every best practice outlined in the document is followed, not all risk can be eliminated. Natural disasters, criminal activity, and navigational accidents all pose risks beyond the control and management capability of net pen authorities, proponents, and operators. The guidance also does not provide a definitive description and analysis of all potential risks posed by net pen aquaculture. The recommendations identify scientific research necessary to better understand potential impacts associated with net-pen operations. The guidance:

- Only considers commercial marine finfish net pens in Puget Sound and Strait of Juan de Fuca.
- Is not law or regulation; nor is it designed to be adopted into state regulations.
- Does not assess or address potential impacts to Tribal treaty rights, which must be evaluated on a case-by-case basis by each permitting or authorizing agency.
- Is not definitive because laws, regulations, and best management practices will evolve as technology advances and scientific understanding improves.
- Serves as a starting point. It is not a checklist or a one-size-fits-all plan. Each net pen project, site location, and conditions are unique and may need to consider factors not in this guidance.
- Does not describe every aspect of net pen projects. For example, the guidance does not describe how to minimize aesthetic impacts, navigation conflicts, or site-specific water quality or habitat conditions — factors that are considered during the siting process and related regulatory steps.

Seeking Assistance from Tribal and Collegiate Partners

Aside from getting advice and technical assistance from NCCOS, the agencies also sought consultation and participation from the Northwest Indian Fisheries Commission, Northwest Indian College, University of Washington, Washington State University, Western Washington University, and regional Indian Tribes.

Public Comments

In addition to the agencies requesting comments directly from Tribes, Tribal entities, and colleges and universities, Ecology also opened a 21-day comment period on June 1, 2021, to take public feedback on the draft guidance document. The public comment period was later extended another 45 days, ending Aug. 5, 2021.

The agencies received 65 comments from environmental organizations and individual members of the public. The majority of comments expressed a strong desire to ban any commercial net pen operations in state waters. Other comments were related to siting, Tribal treaty rights, and general concerns for water quality, marine debris, fish disease, fish escapes, native fish and orca, and other potential environmental impacts to Puget Sound and Strait of Juan de Fuca.

Representatives from the four agencies carefully assessed all feedback and comments. While not all comments directly addressed issues in the guidance document, the agencies made a number of improvements based on comments received from Tribes, universities, and the public. These improvements focused primarily on additional or clarifying language regarding Tribal rights, benthic and forage fish monitoring, fish feeding practices, siting considerations, marine debris, and fish health. A collection of this feedback is in the Addendum.

Next Steps

The state agencies will now make the guidance document available to local governments, current net pen operators, and the public. Best practices that are not already being used will be incorporated into existing management activities.

Publication information

This report is available on the Department of Ecology's website at: http://ecyapfass/Biblio2/SummaryPages/2206009.html.

Related Information: Publication 19-06-010: Focus on: Marine Finfish Aquaculture; Publication 22-06.008: Commercial Marine Finfish Net Pen Aquaculture in Puget Sound and Strait of Juan de Fuca: Guidance and Risk Management.

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