MEMORANDUM

TO: Fish and Wildlife Committee Members

FROM: Maureen Hess and Mark Fritsch

SUBJECT: Update and Overview of the Hatchery Story Map Web Tool

BACKGROUND:

Presenter: Maureen Hess and Mark Fritsch

Summary: Council staff will provide an update and overview of the Hatchery Story Map web tool that conveys, in a user-friendly manner, information on hatcheries in the Columbia River Basin. The web tool provides hatchery information at various levels and is intended for multiple audiences (e.g., general public, technical, policy).

Relevance: The story map concept was initiated by the Informal Hatchery Workgroup (Workgroup) in an effort to address an information and data availability need that has been identified over the past three decades. Many past artificial production reviews have been supported by the Program but additional work is needed as demonstrated by the results of the 2011 RME & AP Category Review, Research Review, ISRP reviews (i.e., ISRP documents 2010-44A and 2018-8), and Regional Coordination Forum meetings (February and August 2019).

This work supports implementation of several emerging priorities of the Program, including long-term O&M of Program assets (i.e., fish hatcheries).
This work will also address the 2014 Program’s public engagement strategy (Part Three.IV.C.8) by facilitating public access to Program information and conveying the Program’s accomplishments.

This tool is identified in the 2020 Addendum to the Program as one of two main reporting tools for communicating Program performance. It will help staff update relevant information to educate people about the Program and improve our outreach to a broader audience. Information is shared in bold data points and visual storytelling, which is also an effective format to share on the Council’s social media accounts. More detailed information is provided in the Program Tracker.

Workplan: Fish and Wildlife Division; Program Implementation (2014 Program and 2020 Addendum); Program Performance, and other Program implementation.

Background: The Informal Hatchery Workgroup, hosted by Council member Guy Norman, has met six times since mid-2019. It supports a regional collaborative communication effort to provide an updated understanding of progress that has occurred over the past 20-plus years to meet mitigation and conservation objectives using hatcheries. This communication will help the region coordinate its approach to hatchery needs. The Workgroup created a mission statement and prioritized the need for better communication to the public, researchers, managers, and decision-makers, and to tell an updated story about the fish hatcheries in the Columbia River Basin.

To accomplish this, the Workgroup and Council supported the use of story maps, and infographics to tell the story of fish hatcheries in a clear manner to explain the purpose and critical need for hatcheries in the Columbia River Basin.

Council staff worked with the Informal Hatchery Workgroup to develop draft story maps and handouts displayed on the web tool that was initially launched in January 2021. The group published story maps that describe:

- The Genesis of Hatcheries in the Columbia River Basin (January 2021)
- Hatcheries – Mitigation for Hydrosystem Operations and Development of the Basin (January 2021)
- Hatcheries and the Region’s Economy and Culture (January 2021)
- Reviews and Reform – Improving Hatchery Programs in the Basin (January 2021)
- Salmon in the Classroom: Connecting Students with Salmon, Science, and Stewardship (January 2021, updated July 2021)
- The Council’s Resident Fish Hatchery Programs (Fall 2021)
- Challenges for Columbia River Basin Hatcheries (Fall 2021)
The remaining stories and their associated handouts focus on individual hatchery mitigation programs, including a summary of the Council’s Fish and Wildlife Program hatcheries, that will be developed and reviewed over the next several months.

This effort continues the development of the Council’s Program Performance and Progress and Resource Tools and Maps products through the use of existing information (e.g., StreamNet, HGMP’s, HSRG, Ad Hoc, and APRE). An important component of the hatchery web tool is the “Data” section of the website and its connection to the Council’s Program Tracker. The Program Tracker was initially developed to present information on the Council’s Program facilities and hatchery programs, to track facility improvement needs, and access information on particular hatcheries. There is opportunity to better align and expand the Program Tracker with the information displayed on the web tool for the Council’s hatchery programs, in addition to information on all hatchery programs throughout the basin. Council staff continue to adapt the Program Tracker to align with the goals of the Informal Hatchery Workgroup to tell the story of fish hatcheries in the basin.
Update and Overview of the Hatchery Story Map Web Tool

Fish and Wildlife Committee meeting
January 11th, 2022
“Since hatchery fish cannot replace lost habitat or the natural populations that rely on that habitat, programs must be viewed not as surrogates or replacements for lost habitat, but as tools that can be managed as part of a coordinated strategy to meet watershed or regional resource goals, in concert with actions affecting habitat, harvest rates, water allocation and other important components of the human environment.”
Presentation Outline

I. Background and Overview of web tool

II. Review the new story maps
   • Council’s Resident Fish Hatchery Programs
   • Challenges for Columbia River Basin Hatcheries

III. Future story maps and handouts – update

IV. Data & hatchery information compilation – update
Background

- Hatchery information and data availability need identified by past Reviews (2011 RME & AP Category Review, Research Review, ISRP reviews (i.e., ISRP documents 2010-44A and 2018-8)

- Regional Coordination Forum support for a workgroup to focus on the Basin’s hatcheries (2019)
  - Purpose and Importance
  - Mitigation and Conservation
  - Science and progress
Background

- Hatchery information and data availability need identified by past ISRP Reviews (2011 RME & AP Category Review, Research Review, ISRP reviews (i.e., ISRP documents 2010-44A and 2018-8)

- Regional Coordination Forum support for a workgroup to focus on the Basin’s hatcheries (2019)
  - Purpose and Importance
  - Mitigation and Conservation
  - Science and progress

- Informal Hatchery Workgroup formed
  - Prioritize improved communication
  - Support the use of story maps, and infographics to tell the story of hatcheries in the Basin
Hatcheries
Columbia River Basin

Committed to supporting a common vision that supports abundant, healthy wild fish and effective fish hatcheries in the basin

Northwest Power and Conservation Council’s Informal Hatchery Workgroup

video credit: Summer steelhead and spring Chinook in the Leaburg Hatchery trap on the McKenzie River (Source: Erik the Fish Nerd, YouTube)
Harvest, Altered Habitat, and Dams
The Genesis of Hatcheries in the Columbia River Basin

“Hydropower development combined with habitat alterations and historical harvest created challenges that were too great for salmon and steelhead populations to survive without intervention.”
Columbia River Basin Hatcheries
Mitigation for Hydrosystem Operations and Development of the Basin

“As the number of water diversions and dams increased throughout the basin from the 1930s through the 1970s, so did mitigation programs that supported the construction of hatcheries.”
Because of concerns that hatchery fish were affecting the viability of natural salmon and steelhead populations, the basin’s fisheries biologists and policymakers identified a need to review the existing hatchery programs. These concerns would lead to reviews, and subsequently changes, from which the basin's fish populations are benefitting.
Columbia River Fisheries
Hatcheries and the Region’s Economy and Culture

“In addition to providing cultural and ecological benefits, hatcheries are essential for the basin’s recreational, tribal, and commercial fisheries.”
Salmon in Schools
Connecting Students with Salmon, Science, and Stewardship

“As biologists and hatchery operators learned more about salmon, they realized the need to educate the public, especially school children, about how to protect the fish and their environment.”
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   • Challenges for Columbia River Basin Hatcheries

III. Future story maps and handouts – update

IV. Data & hatchery information compilation – update
Council's Resident Fish Hatchery Programs

Mitigating Impacts of the Federal Columbia River Power System
Challenges for Columbia River Basin Hatcheries
Presentation Outline

I. Background and Overview of web tool

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   • Challenges for Columbia River Basin Hatcheries

III. Future story maps and handouts – update

IV. Data & hatchery information compilation – update
II. Future Story Maps and Handouts

Goal: General overview of all hatchery programs in the CRB

Approach: Organize by funding program (i.e., mitigation authorization)
II. Future Story Maps and Handouts

Fall 2021 – Drafted, need Workgroup review

Winter 2022 – In development

USFWS

PCSRF

Northwest Power and Conservation Council
II. Future Story Maps and Handouts

- One page snapshot summary of each Program
- Program description
  - Purpose
  - Funding
  - Facilities
  - Species
- Other highlights
  - # released
  - # harvested
  - Adult return goals
  - Capital infrastructure & deferred maintenance cost estimates
Presentation Outline

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III. Future story maps and handouts – update

IV. Data & hatchery information compilation – update
IV. Update on the data/hatchery information compilation

Refinement of Tools – Program Tools

Tool for **communicating** information on hatcheries broadly

Tool for **tracking** and reporting FW Program information and performance (Goals, Objectives and Indicators)
IV. Update on the data/hatchery information compilation

Program Tracker

A comprehensive list of artificial production facilities in the Columbia River Basin including species and release information, funding sources, and other related documents and projects.

Click here (will open in new tab)

Goal: Alignment of information in Program Tracker with Story Maps
Goal: Alignment of information in Program Tracker with Story Maps

IV. Update on the data/hatchery information compilation

Organize by funding program
Associated hatchery facilities and programs
Twelve funding authorization agencies
Hatchery production in the Columbia River Basin

Construction & operation of hydroelectric dams (9):
- LSRCP
- USACE
- BoR
- Private & Public Utilities
- BPA

Development Impacts (2):
- Mitchell Act
- US Fish and Wildlife Service

No mitigation requirement (1):
- Pacific Coastal Salmon Recovery Fund

Map modified from: https://www.nwd.usace.army.mil/
IV. Update on the data/hatchery information compilation

Goal: Alignment of information in Program Tracker with Story Maps

Additional summary information – linking facilities/programs to mitigation program and purpose

Example:

**Levi George Spring Chinook Hatchery**

The Yakama Nation’s Levi George Spring Chinook Hatchery and Research Facility was built to test the assumption that artificial production can be used to increase harvest and natural production while maintaining the long-term genetic fitness of the fish population being supplemented and keeping adverse genetic and ecological interactions with non-target species within acceptable limits. Production activities occurring at the facility include adult holding, spawning, incubation, and rearing of spring Chinook. Acclimation sites that receive fish from the facility include Easton, Clark Flat, and Jack Creek.
IV. Update on the data/hatchery information compilation

Refinement of information in Program Tracker

Example: Clarify how production programs are funded
Current status

III. Future story maps and handouts – update
   - Working on completing story maps/handouts for all funding programs

IV. Data & hatchery information compilation – update
   - Working to align information in Program Tracker with how information is organized in the Story Maps

Sets up the framework that will feed into the Program Performance efforts for the F&W Program hatcheries/programs
Questions/Discussion?