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March 6, 2018

MEMORANDUM

TO: Council Members

FROM: Council staff

SUBJECT: Update on use of story maps for fish and wildlife information

BACKGROUND:

Presenter: Nancy Leonard and Mark Fritsch.

Summary: Council staff will provide an overview of the story map tools that convey in a user-friendly manner complex information and data about the Council's Fish and Wildlife Program's activities and accomplishments.

Relevance: This work supports implementation of several emerging priorities of the 2014 Fish and Wildlife program, including:

- Long term O&M of program assets
 - fish hatcheries
 - fish screens
 - wildlife lands
- Implement adaptive management by refining program goals and quantitative objectives
 - Natural origin salmon and steelhead objectives
 - Other anadromous fish (lamprey, eulachon)
 - Resident fish (bull trout, cutthroat trout, kokanee, redband trout, sturgeon)
- Other (pilot toxics map, possibly rotary screw traps, etc.)

This work also addresses public engagement as part of the 2014 Fish and Wildlife Program (Part Three.IV.C.8), by facilitating public access to Program information and conveying accomplishments of the Council's fish and wildlife programs over the past 37 years.

Background: Since the adoption of the 2014 F&W Program in October 2014, the Council staff has been working with fish and wildlife managers and consultants to develop several types of story maps. These story maps strengthen the Council's outreach to managers, landowners, interest groups, and the general public by improving access to fish and wildlife information and enhancing understanding of the Fish and Wildlife Program and the Council.

The initial story map effort was intended to organize essential information for the top priority of the 2014 Program, the long-term maintenance the Program's [fish hatcheries](#) , [fish screens](#) and wildlife lands. Staff and the [O&M Subcommittee](#) quickly realized the story map format was ideal not only for clearly showing locations of facilities or projects, but also this tool provided a means to link key documents and contextual information for these priority assets.

Story map tool proved to be very useful in organizing and displaying a diversity of information related to Program focal species and objectives. For example, story map conveys existing natural origin salmon and steelhead [objectives](#) in a manner that engages the interested public, provides context, and supports regional discussions including the [NOAA's Columbia River Partnership Task Force work](#). Now that the Salmon and Steelhead story map is completed, work is ongoing for seven other key resident and anadromous fish species. Those key fish species are: Bull Trout, Cutthroat Trout, Kokanee, Redband Trout, Sturgeon, Eulachon and Lamprey. Staff is currently working with co-managers and other partners to determine the organizational structure for the pilot story map, to be completed by April 20, 2018. The final story maps for these species, anticipated to be completed before the end of calendar year 2018, will be based on input received on the pilot version from committee members, co-managers and other partners.

The development and use of these story maps are a collaborative effort with the region, and has involved, and continue to involve, co-managers, work groups, and others. The Council has expended or committed \$252,360 during 2017/2018 to develop these story maps and staff currently anticipates another \$22,680 commitment in 2018 to complete the Program funded fish hatchery effort. Staff will present to the Committee and Council updates on various story map products in the months ahead and will be prepared to discuss the funding needed for any additional products.

More Info:

Subset of related updates to the Fish and Wildlife Committee

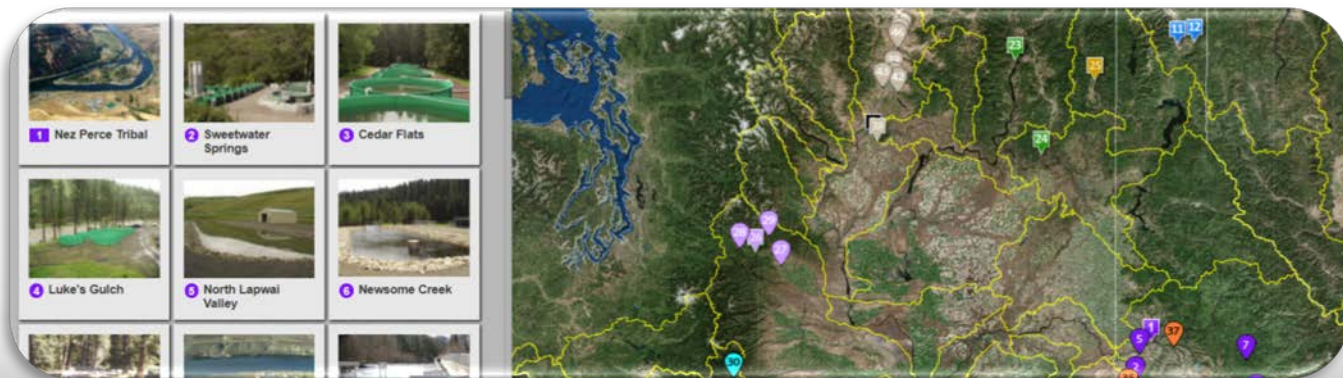
- **February 2015**, Proposed work plan for adult salmon and steelhead objectives objective process <https://www.nwcouncil.org/media/7148796/f5.pdf>
- **July 2015**, Outcome of June 3rd [regional meeting](#) for refining salmon and steelhead objectives <https://www.nwcouncil.org/media/7149369/f3.pdf>
- **December 2015**, presentation on a basic mapping tool for displaying salmon and steelhead objectives <https://www.nwcouncil.org/media/7149796/f1.pdf>
- **May 2016**, update on upcoming May 11, 2016 [technical work-session](#) on salmon and steelhead objectives <https://www.nwcouncil.org/media/7150223/f2.pdf>
- **June 2016**, update on salmon and steelhead objectives and artificial production story map <https://www.nwcouncil.org/media/7150297/f4.pdf>
- **August 2016**, Update on collaborative work related to habitat objectives, PNAMP's regional habitat indicator project, and August 9th [habitat work-session](#) <https://www.nwcouncil.org/media/7150478/f5.pdf>
- **December 2016**, presentation on revised salmon and steelhead objectives story map tool <https://www.nwcouncil.org/media/7150724/f3.pdf>
- **February 2016**, presentation on final salmon and steelhead objectives story map that will be posted on Council website, <https://www.nwcouncil.org/media/7490944/f1.pdf>
- **April 2017**, update on resident fish objective task including the upcoming April 12 [Bull trout objective workshop](#), <https://www.nwcouncil.org/media/7491039/f7.pdf>
- **August 2017**, update on prototype multimedia website about the Fish and Wildlife Program <https://www.nwcouncil.org/media/7491232/f1.pdf>
- **October 2017**, update on the compilation process of existing objective for 7 focal fish species <https://www.nwcouncil.org/news/meetings/2017/10/>
- **January 2018**, update on O&M subcommittee including hatchery mapping tool (story map), fish screen mapping tool and the in development land mapping tool, <https://www.nwcouncil.org/media/7491484/f1.pdf>

Subset of related updates to the Full Council

- **May 2016**, update on the O&M strategy and hatchery mapping tool <https://www.nwcouncil.org/media/7150212/5.pdf>
- **September 2016**, update on the O&M strategic plan and demonstration of the mapping tool (story maps for program hatcheries and fish screens) <https://www.nwcouncil.org/media/7150528/6.pdf>
- **April 2017**, demonstration and discussion about draft web-page for Program story map tools <https://www.nwcouncil.org/media/7491025/4.pdf>

Status of the Fish and Wildlife Program's Story Maps

Nancy Leonard, Mark Fritsch, and Tony Grover
Council Meeting
March 2018



2014 Fish and Wildlife Program

Commitment to Public Engagement (public engagement strategy)

- Educate and involve the public to
 - improve understanding of the program and the Council.
 - strengthen outreach to citizens, landowners and others.
 - enhance the use of social media

Applying the Public Engagement Strategy

To three active areas of 2014 Program work plan

- program assets operation and maintenance (O & M)
- compiling existing fish objectives
- conveying program mitigation efforts (who we are and what we do)

Effective Communication Using Story Maps

- **Conveys complex information**
- **Visually attractive**
- **User friendly**
- **Provides transparency**
- **Facilitates co-managers and public access to information**

Step-wise Approach for Developing Story Maps *facilitating check-ins and engagement*

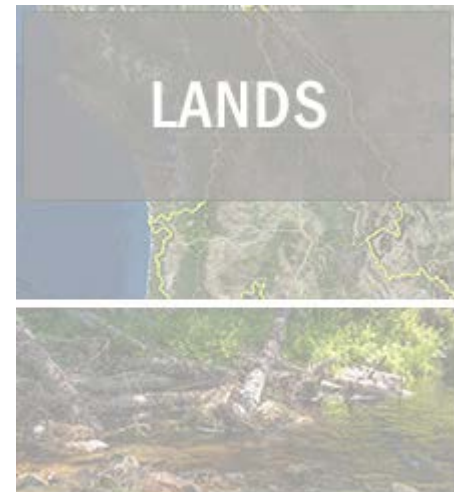
- Working closely with
 - co-managers and other partners
 - O&M subcommittee, FW Committee, Council, PA Division
(see memo for links to past meeting updates)
- Cost effective approach leveraging
 - council and Bonneville staffs, co-managers, and others
 - internal Council funds
- Small contracts to
 - ensure efficiency and effective program tool,
 - facilitate multiple check-ins and adjust per council members' recommendation

Program Assets Operation and Maintenance (O&M)

- 2014 Program's Emerging Priority for funding long-term maintenance of assets
 - fish screens
 - hatcheries and acclimation sites
 - wildlife lands
- Effectively displays keys parts of asset management
 - inventory of assets
 - decision history
 - key documents
 - context information

O&M Story Map

- **Quick view** of current products *(Click image)*



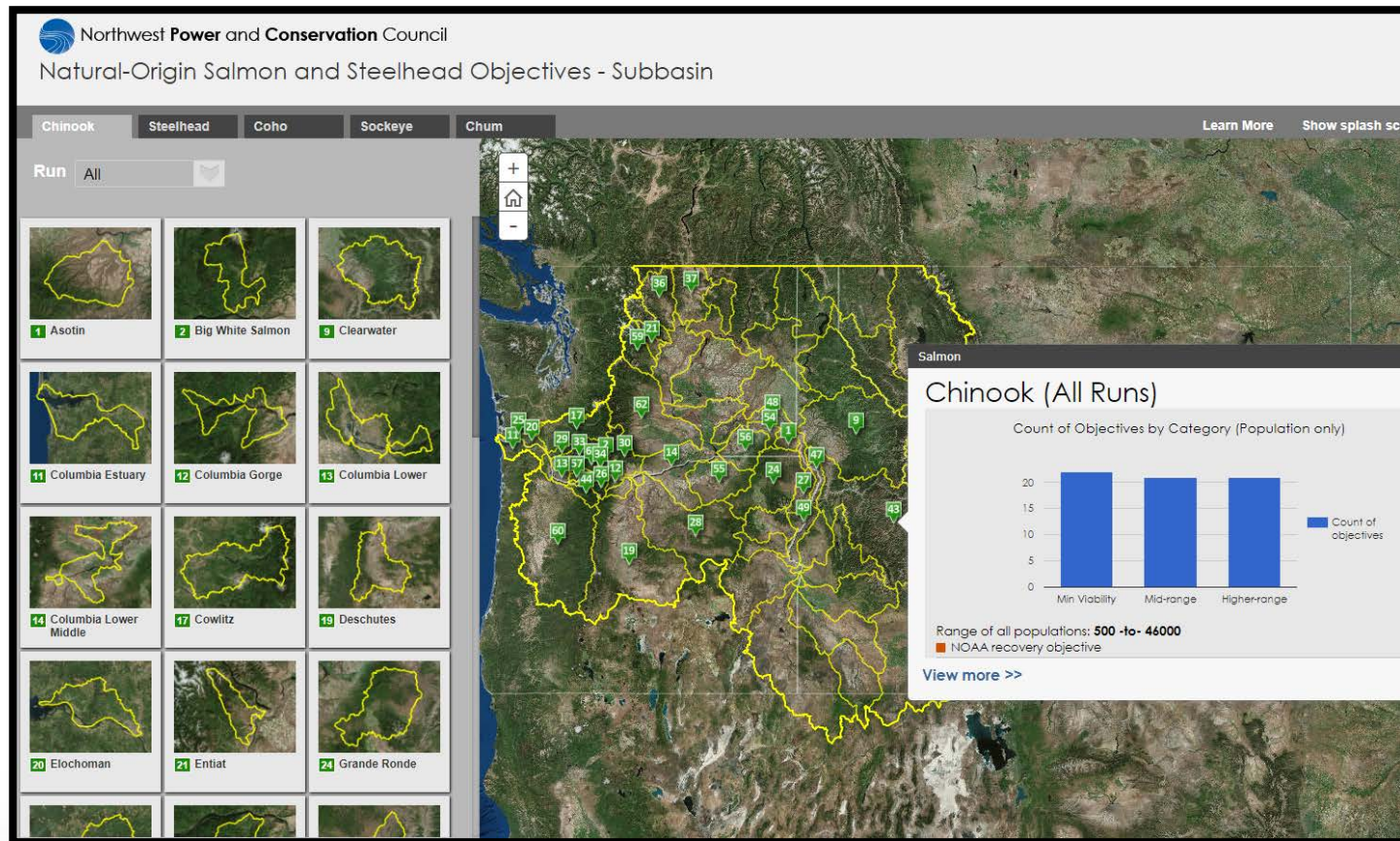
(Coming 2018)

Compiling Existing Fish Objectives

- 2014 Program emerging priority adaptive management
 - refine program objectives by surveying, compiling, and organizing existing objectives
- Story map effectively convey 1000s of fish objectives, abundance estimates, and other information for 12 fish species
 - abundance of natural origin adult anadromous salmon: chinook, coho, chum, sockeye, and steelhead
 - other anadromous fish: Pacific lamprey and eulachon
 - resident fish: kokanee, redband trout, cutthroat trout, bull trout, and white sturgeon

Fish Objectives Story Maps

- **Quick view** of current product (*Click image*)

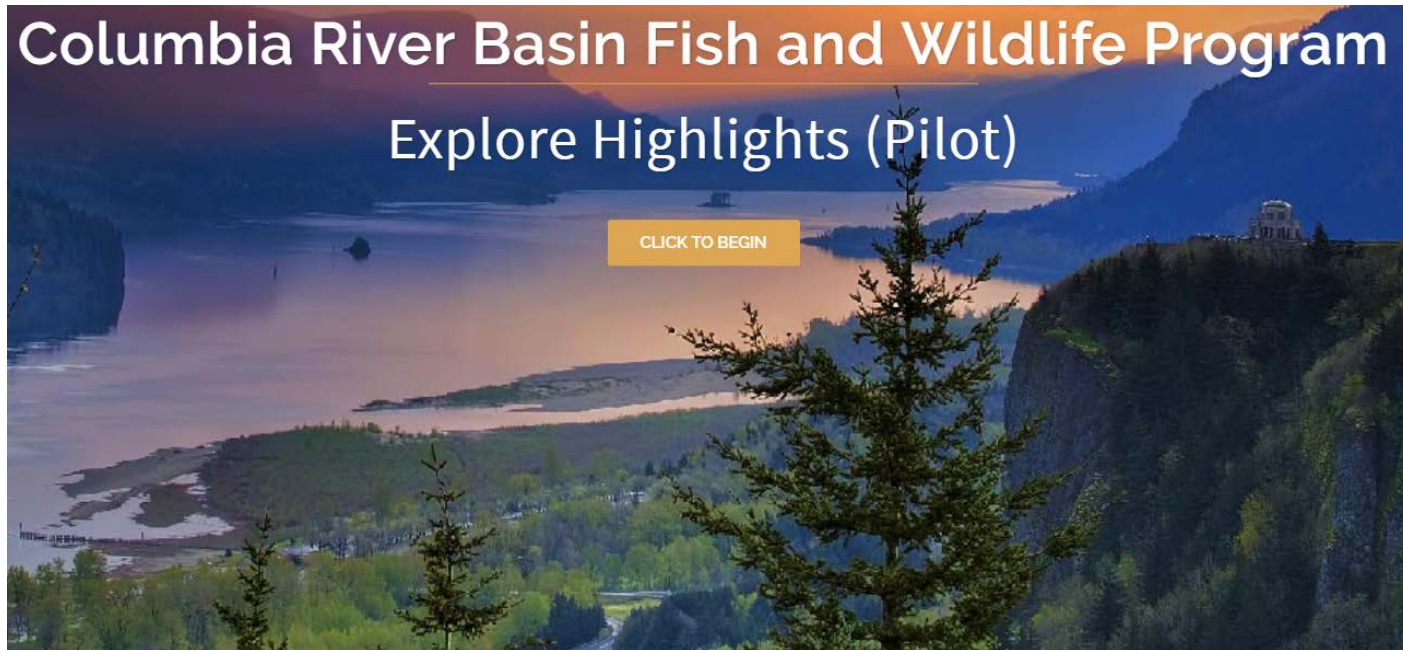


Conveying Program Mitigation Efforts

- Conveying more than 30-years of program efforts
- Story map effectively visually conveys
 - complex and large amounts of information
 - highlights accomplishments with infographics
 - connects to Council articles, blogs, High Level Indicators site, Fish data, and links to partners' sites
 - facilitates sharing on social media

Program Outreach Story Map

- **Quick view** of current prototype product *(Click image)*



2017-2018 Work Summary

- ***Lands O&M***
 - January 2017 to September 2018
- ***Artificial Production O&M***
 - March 2016 with expected end date November 2018
 - Pending June/July 2018 contract to finalize map
- ***Fish Objectives***
 - 5 resident fish species, Pacific lamprey, and Eulachon (*individual tailored contracts for the 7 species and the prototype map*)
 - February 2017 with expected end date December 2018
 - Scope of final contract depending on May/June FW Committee
- ***Program Outreach***
 - January 2017 with expected end date December 2018
 - Scope of final contract depending on June/July FW Committee discussion on Focus Group recommendations

Questions?

