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October 5, 2022

MEMORANDUM

TO: Council Members

FROM: Mark Fritsch

SUBJECT: Update on Program hatchery assessments per the Council's *Asset Management Strategic Plan*

BACKGROUND:

Presenter: Andy Traylor, F&W Administrator, Bonneville Power Administration
Mark Fritsch, Project Review and Implementation Manager

Summary: Bonneville and Council staff will provide an overview of the effort to update to the Fish and Wildlife Programs hatchery assessments associated with the [Asset Management Strategic Plan](#) (Plan). The intent of the effort is to conduct as outlined in the Plan, a five-year condition update, which will be conducted by an independent engineering firm. It is anticipated that the future assessments will use and amend the initial reviews in an effective manner (e.g., teleconference) and that site visits will occur only if needed (e.g., new facility). In this way it is hoped that costs, associated with the condition assessments, will be reduced, and included as part of the funds associated with the implementation of the Plan. The collaboration and relationship of the Plan to Bonneville's Strategic Asset Management Plans for their work categories, including the Fish and Wildlife assets, will also be discussed.

Relevance: The 2014 Fish and Wildlife Program (Program), includes an investment strategy (Part Six, Section II; and Appendix P). Specifically, "...*long-term maintenance of the assets that have been created by prior program*

investments...” is ranked the highest emerging priority in the Program. In response, an Asset Management Strategic Plan was collaboratively developed with Bonneville to address non-recurring maintenance needs for hatcheries, fish diversion screens, and mitigation lands to ensure longevity and integrity of the Program’s past investments made for the benefit of fish and wildlife. That Plan was approved by the Council on October 10, 2018. For the Program hatcheries the Plan called for assessments to be updated every five years.

Workplan: Fish and Wildlife Division Work Plan 2022; Program Implementation; Task D. Implement the Asset Management Strategic Plan.

Background: In 2016, Bonneville and the Council conducted the first round of condition assessments using the engineering firm HDR to develop reports and asset inventories for F&W Program hatchery facilities. In the subsequent years, we’ve used this information to help prioritize available funds to address maintenance needs at these facilities. As outlined in the Plan there is a need to periodically update these condition assessments to keep the information up to date and to accurately capture any changes to facility assets. Bonneville has awarded a contract to Four Peaks Environmental Science & Data Solutions to aid this effort.

In 2022, Bonneville updated their Strategic Asset Management Plans (SAMPS). The SAMPS were prepared for Bonneville’s work categories including Federal hydro, transmission, facilities, Information Technology, Fleet, Environment - Fish and Wildlife. The Fish and Wildlife Program assets were organized by the same categories as the jointly developed Council/Bonneville Asset Management Strategic Plan: lands, hatcheries, and fish screens. These plans represent a significant evolution in how Bonneville plans to address the needs of infrastructure associated with the hatcheries, fish screen, and lands in the Fish and Wildlife Program and builds off and compliments the Council’s asset Plan.

There are 37 individual sites with existing reports and asset data. Those sites will be updated without a physical site visit. There is a desire to minimize the burden on hatchery staff, especially during a busy time of year.

There are three new sites that will receive new assessments this year: Melvin R. Sampson Fish Hatchery, Walla Walla Hatchery, and the Bonneville Hatchery Captive Brood Building. These facilities will receive site visits to inventory assets and develop reports.

More Info:

- Bonneville Power Administration strategic asset management plan (SAMPS) for [Hatcheries](#)

- Resource maps for the Fish and Wildlife Program's [Hatcheries](#), [Screens](#) and [Lands](#).
- [2014 Fish and Wildlife Program](#) (Part Six, Section II, page 114; and Appendix P, Maintenance of Fish and Wildlife Program Investments, page 199).

Bonneville
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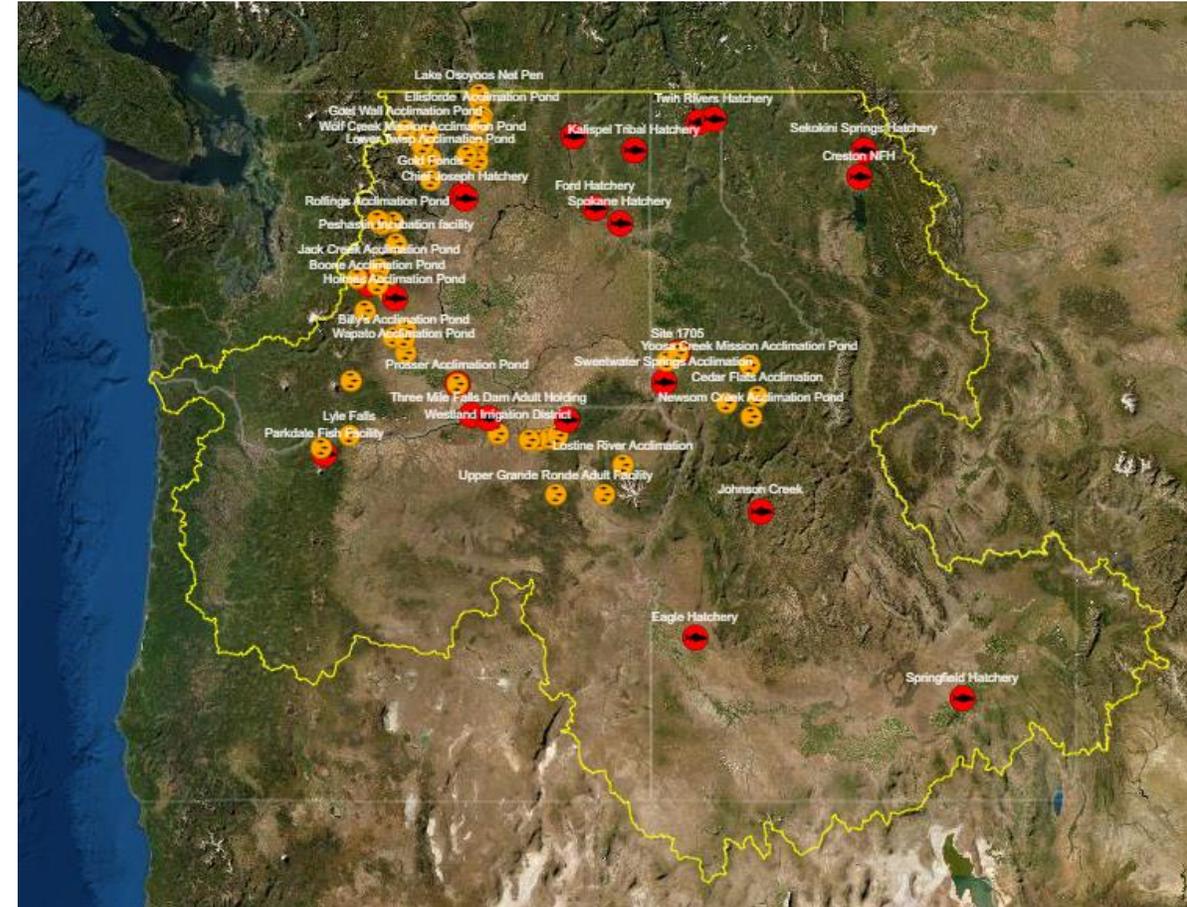
Update on F&W Program Hatchery Condition Assessments

October 11, 2022

Assessment Management

Scope of Asset Management

- Non-routine, non-recurring maintenance or replacement of assets
- Currently performing asset management at 40 individual facilities
- Sites with significant improvements or investments



Assessment Management

AMSP

NPCC, October 2018

Asset Management Strategic Plan

Maintenance for Hatcheries, Screens and Wildlife Lands
Columbia River Basin Fish and Wildlife Program

Introduction

Since the adoption of the 2014 Columbia River Basin Fish and Wildlife Program (Program) the Council and the Bonneville Power Administration have been working with the Asset Management Subcommittee (Subcommittee) to (1) implement annual funding commitments for priority maintenance needs, which have now been identified and funded using cost savings (through Fiscal Year 2020) and, (2) develop a long-term Asset Management Strategic Plan (Plan) to address non-recurring¹ maintenance needs. Through this Plan, the goal is to ensure the longevity and integrity of the Program's past investments made for the benefit of fish and wildlife.²

This Plan is intended to define and provide a strategy to achieve a long-term maintenance, rehabilitation, and replacement system for Program investments associated with hatcheries, fish screens, and lands. This includes developing a prioritized assessment for non-recurring maintenance and securing a monetary mechanism for implementation. The three categories capture the core components of the Program's mitigation and are critical aspects to the success of much of what the Program has accomplished over the past 37 years.

The Plan is also complementary to the strategic asset management program currently being developed by Bonneville for its assets. The plan is being designed in a phased approach consistent with Bonneville's asset management strategy.

- Phase 1: Asset Inventory
 - Shared understanding of definitions (O&M, non-recurring maintenance, etc.)
 - Standardized data
 - Clarity on roles and responsibilities
- Phase 2: Condition Assessment
 - Safety – compliance – condition
- Phase 3: Prioritization
 - Program criticality and condition
- Phase 4: Strategic Planning

¹ Any maintenance that isn't performed at pre-determined intervals and is not addressed through annual operation budgets.

² As part of the 2014 Fish and Wildlife Program implementation, an investment strategy is outlined (Part Six, Section II, and Appendix P). Within this strategy long-term maintenance of past investments was the highest Program priority.

SAMP

2022 HATCHERIES STRATEGIC ASSET MANAGEMENT PLAN

For "EPW
Hatcheries"

This Strategic Asset Management Plan for EPW Fish Hatcheries provides alignment between the Agency strategy, stakeholder requirements, organizational objectives, and resulting asset management objectives to ensure assets are managed and satisfy BPA's fish and wildlife mitigation obligations.

- Implemented in 2018
- Includes hatcheries, lands, fish screens
- Describes AM Subcommittee, Guiding Principles, Annual Processes

- 1st Hatchery SAMP in 2020
- Specific to hatcheries
- Standard format agency-wide
- Describes long-term objectives and strategies, asset criticality, risk assessments

1. Asset
inventory

2. Condition
Assessments

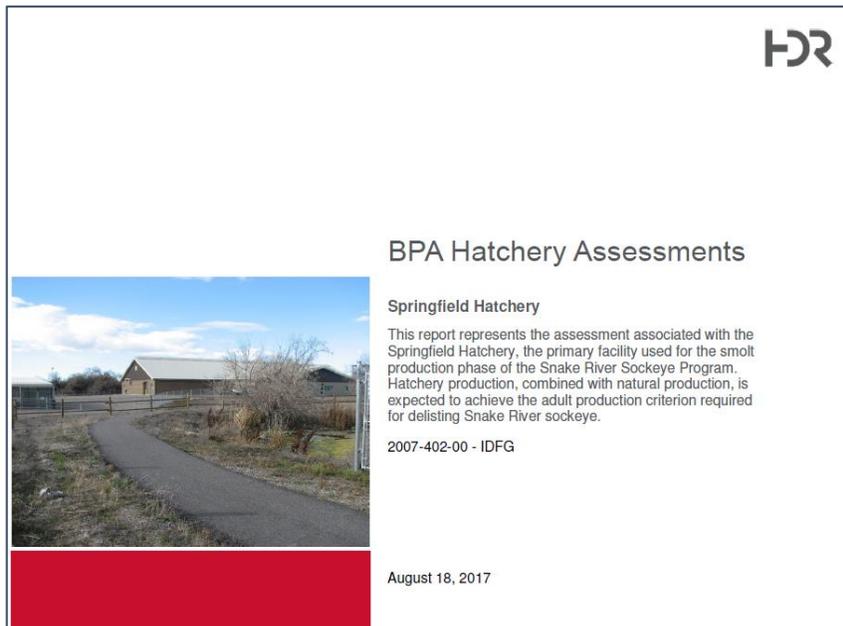
3.
Prioritization
Criticality

4. Strategic
Planning

Hatchery Condition Assessments

Initial Assessment

- Conducted in 2016 and 2017
- Site visits to all hatcheries, adult traps, juvenile acclimation facilities
- Provided baseline data for asset inventory, condition, approx. replacement cost, life expectancy
- Produced 42 individual reports with major asset summaries



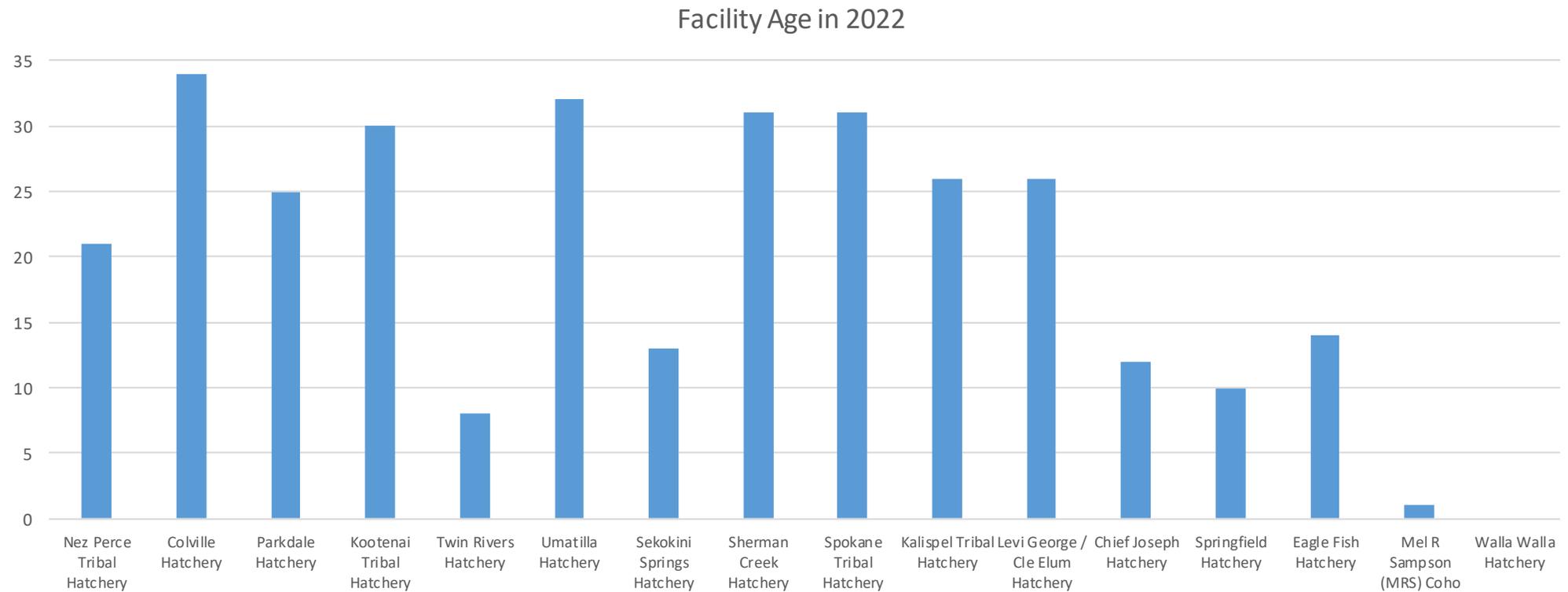
BPA Hatchery Assessments
Springfield Hatchery

Table 1. Summary of Major Assets for Springfield Hatchery.

ITEM	DESCRIPTION / CONDITION	INSTALL DATE	EST LIFE EXPECTANCY (YEARS)	EST REMAINING LIFE (YEARS)	APPROX REPLACEMENT COST
Important Mission Critical Elements					
CHILLER (50 TONS)	System is rated at 50 tons, designed to provide a ΔT of 10°F for 110 gpm (46 tons actual). The operators can only get the system to provide a ΔT of 6°F for 80 gpm (20 tons actual). This system is critical for achieving the full production capacity of the facility. The subcontractor who designed the system told IDFG they don't know why it underperforms. An independent engineering evaluation of the system design is needed to determine the cause(s) of the performance issues.	NA	NA	NA	\$65,000
Essential Maintenance/Improvements					
CONCRETE RACEWAYS					
CONCRETE RACEWAY PAIRS (11), 9' X 95' PER RACEWAY	Condition is good.	2013	40	36	\$2,134,000
ROOF (34,200 SF, UNINSULATED METAL)	Condition is good.	2012	30	25	\$213,800
COVER STRUCTURE (STEEL FRAME WITH CHAINLINK SIDES)	Condition is good. Paint on steel framing is peeling in numerous areas.	2012	40	35	\$1,193,238
HATCHERY BUILDING (18,620 SF) ¹					
ROOF (METAL)	Condition is good.	2012	40	35	\$245,800
STRUCTURE, ADMINISTRATION WING (3847 SF), WOOD-FRAME WITH METAL SIDING	Condition is good.	2012	40		\$718,600
STRUCTURE, PRODUCTION WING (14,773 SF), CMU	Condition is good.	2012	50	45	\$3,750,800
TRAY INCUBATORS (48), 8-TRAY VERTICAL STACKS	Condition is good.	2013	30	26	\$85,100
FIBERGLASS EARLY REARING TROUGH (22), 4' X 42'	Condition is good. Undersized waste removal system necessitates removal of only 1 cleaning standpipe at a time.	2013	30	26	\$320,320
CHILLER (50 TON)	Not performing to design intentions. See line item in Mission Critical elements.	2013	30	26	\$65,000
UTILITY WATER BOOSTER PUMP SYSTEM (4 HP)	Condition is good.	2013	30	26	\$15,700
SHOP/STORAGE BUILDING (2340 SF) ²					
ROOF (METAL)	Condition is good.	2012	40	35	\$30,900
STRUCTURE (INSULATED WOOD-FRAME WITH METAL SIDING)	Condition is good.	2012	40	35	\$203,100
WALK-IN FREEZER (234 SF)	Condition is good.	2013	20	16	\$48,100
STORAGE BUILDING (1376 SF) ²	Remodeled 1 2013.				
ROOF (METAL)	Condition is good.	2013	40	36	\$18,200
STRUCTURE (INSULATED WOOD-FRAME WITH METAL SIDING)	Condition is good.	2013	40	36	\$215,800

Hatchery Condition Assessments

- From 2017 to 2022, Asset Management Subcommittee has annually prioritized funding for asset rehab/replacement at ~\$250K/yr from the Asset Management Placeholder (\$500K)



Hatchery Condition Assessments

2022 Assessment Update

- Update facility list
- Physical site visits for new facilities (Melvin R. Sampson Hatchery, Walla Walla Hatchery, Bonneville Hatchery Captive Brood Building)
- Virtual site inspections for facilities with existing assessments
- Update asset inventory, condition, approx. replacement cost, life expectancy
- Target Q2 of FY23 for finalized reports and asset inventories



Hatchery Condition Assessments

2022 Assessment Update

- Use new data to help prioritize FY24/25 funding
- Update terminology and asset categories
- Will aid goal of addressing 100% of expired mission critical and essential assets by 2027
- Identify areas for cost savings and efficiencies through preventative maintenance
- Proactive asset management, resilience to climate change