Financial Plan Refresh

Public Workshop

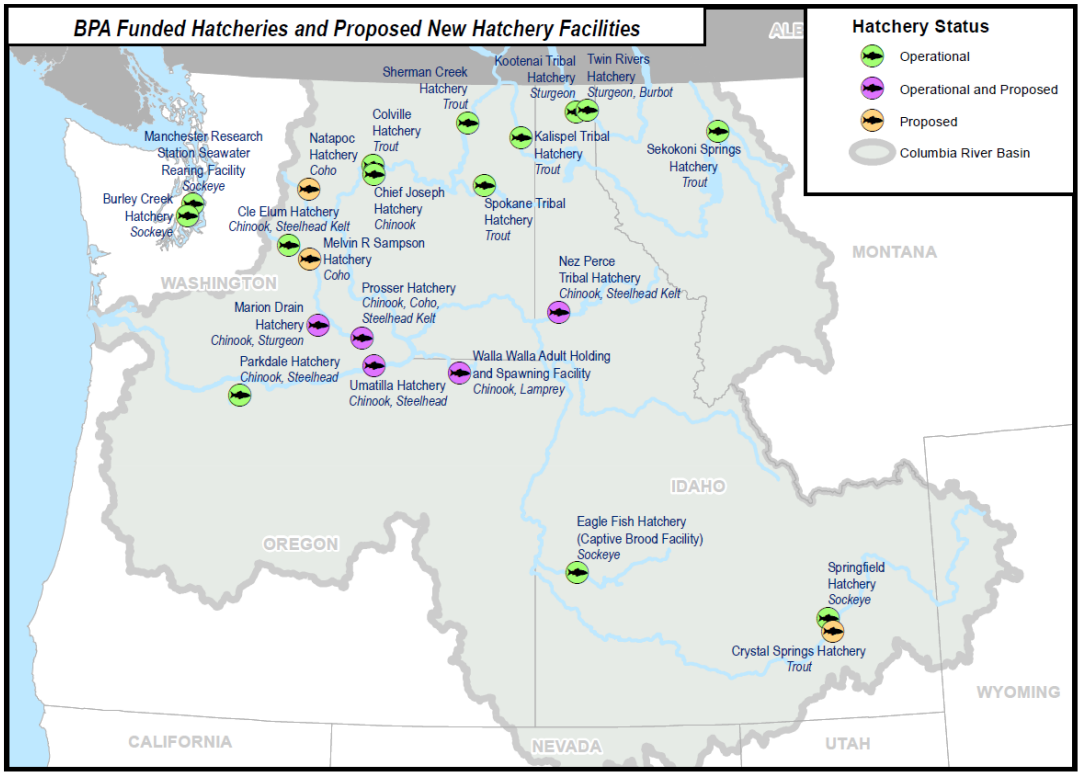
February 9, 2022

Environment, Fish and Wildlife

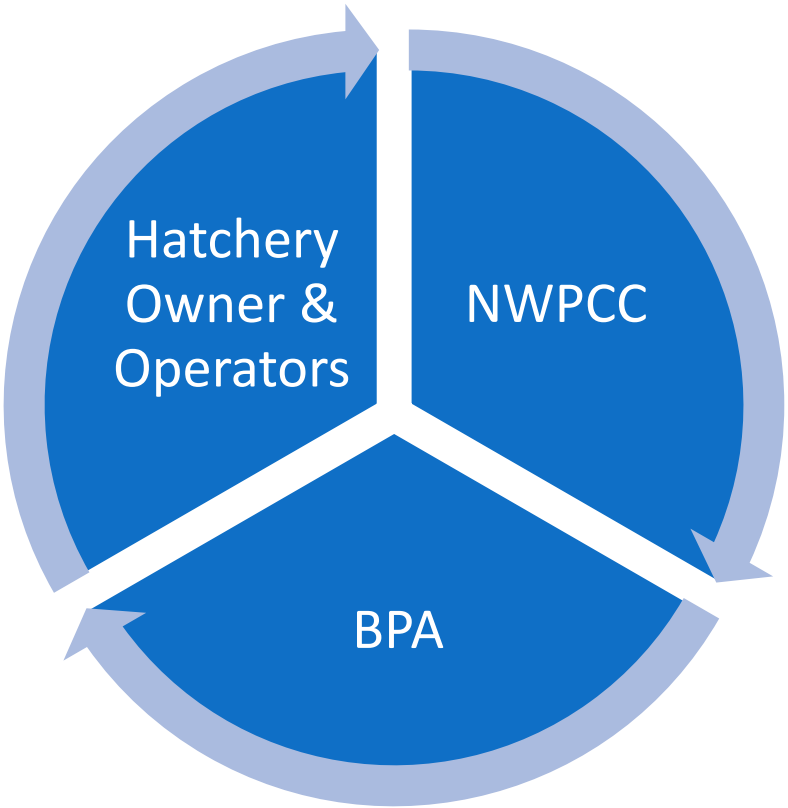
Executive Ownership: Scott Armentrout, EFW VP

Today's Presenter: Rodrigo George, EW Budget Manager

Environment, Fish and Wildlife Capital Prioritization Framework

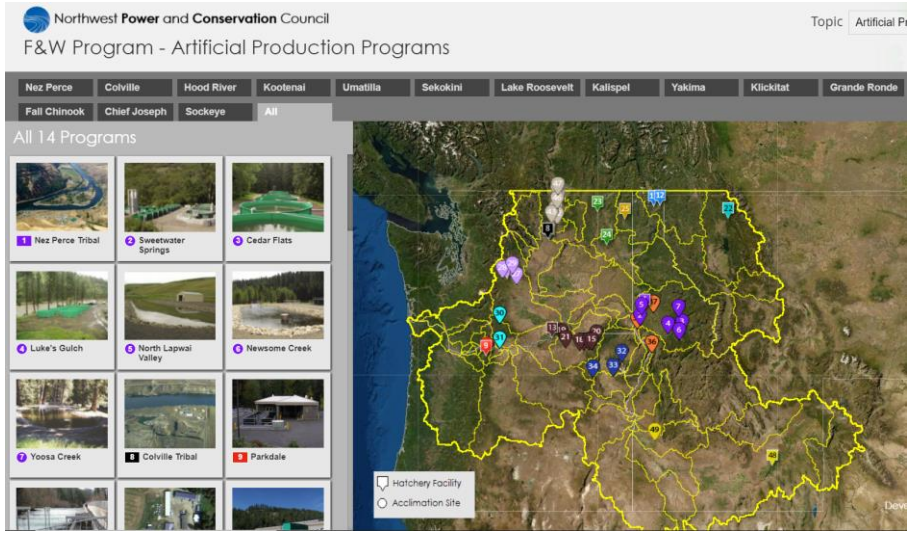


How the Program is Organized



Asset Criticality

1 Asset inventory → 2 Condition Assessment → 3 Prioritization Criticality → 4 Strategic Planning



Program Level

1. Safety Net
2. Conservation
3. Supplementation

Asset Level

1. Mission Critical Elements
2. Essential Maintenance/Improvements

Asset Health *(asset level example)*

Table 1. Summary of Major Assets.

ITEM	DESCRIPTION / CONDITION	INSTALL DATE	EST LIFE EXPECTANCY (YEARS)	EST REMAINING LIFE (YEARS)	APPROX REPLACEMENT COST
Important Mission Critical Elements					
SURFACE WATER FILTRATION	Revision to improve to 20-micron filtration to reduce heat exchanger clogging.	2001	30	14	$100,000
HEAT EXCHANGER	Needs replacement due to annual disassembly for cleaning. Upgrade to reduce loss of flow during rearing season needed.	2001	25	0	$45,000
SURFACE WATER PUMPS (4) 50 HP	All four submersible pumps need to be replaced. Two pumps have been purchased already, two need to be purchased. Cost shown is for 2 pumps.	2001	15	0	$50,000
Essential Maintenance/Improvements					
LHO HEADBOX (120 SF)					
STRUCTURE	Condition is good.	2001	40	24	$33,000
LHO	Condition is good.	2001	30	14	$7,500
HATCHERY BUILDING (20,800 SF)[a]	Condition is good.				
STRUCTURE (METAL BLDG WITH CMU)	Condition is good.	2001	40	24	$2,000,000
ADMIN AREA HEAT PUMP SYSTEM	Condition is good.	2001	20	4	$18,000
TRAY INCUBATORS, 168 STACKS	Condition is good. Minor maintenance on trays performed as needed.	2001	30	14	$247,800
INCUBATION RECIRC PUMPS (10 UNITS)	Condition is good.	2011	10	4	$25,000
NURSERY TANKS, 210 FT^3 EACH (38 UNITS)	Condition is good, with minor deformation and chipping of surface finish.	2001	30	14	$399,000
GENERATOR, 20 kW DIESEL	Condition is good.	2001	30	14	$11,500
HEAT TRANSFER BUILDING (2,400 SF)[a]	Condition is good.				
STRUCTURE (METAL BLDG)	Condition is good.	2001	40	24	$307,000
CHILLER (112.5 Tons)	Condition is good	2001	25	9	$80,000
MECH/ELEC UTILITY BLDG (1,890 SF)[a]					
STRUCTURE (METAL BLDG)	Condition is good. Minor maintenance to repair roof insulation needed.	2001	40	24	$242,000
UV DISINFECTION SYSTEM	Treatment effectiveness is affected by fine sediment.	2001	30	14	$92,000
GENERATOR, 600 kW DIESEL	Condition is good.	2001	30	14	$175,000
POTABLE WATER PUMPHOUSE (100 SF)[a]					

Asset Risk

SCORE	PROBABILITY	IMPACT
5	Almost Certain	Extreme
4	Likely	Major
3	Possible	Moderate
2	Unlikely	Minor
1	Rare	Insignificant

Risk Event Probability Scoring	Rare = .05	Unlikely = .10	Possible = .20	Likely = .40	Almost Certain = .80
Occurrence	0 - 10% Very unlikely to occur This event could occur within the next 100 years	11 – 40% Unlikely to occur This event could occur within the next 50 years	41 - 60% May occur about half of the time This event could occur within the next 13 years	61 - 90% Likely to occur This event could occur within the next 5 years	91 - 100% Very likely to occur This event could occur within the next 2 years

Probability	IMPACT				
(5) = .90	0.05	0.09	0.18	0.36	0.72
(4) = .70	0.04	0.07	0.14	0.28	0.56
(3) = .50	0.03	0.05	0.10	0.20	0.40
(2) = .30	0.02	0.03	0.06	0.12	0.24
(1) = .10	0.01	0.01	0.02	0.04	0.08
	(1) = .05	(2) = .10	(3) = .20	(4) = .40	(5) = .80

Hatcheries Framework Current State

Limitations	Planned Improvements	Prioritization
• Lack of centralized and integrated database of hatchery assets with real-time view into the criticality and health of each individual asset	• Last HDR assessment was in 2016 and requires refresh to reflect completed and ongoing Mission Critical Elements and Essential Maintenance Improvements	• NWPCC subcommittee requests sponsors to provide non-recurring maintenance needs and works with BPA and council staff to review annual funding capacity

Hatcheries Capital Forecast Process

BPA Obligations (MOAs)	• MOAs between BPA and Tribes/States establish commitments to funding the design and construction of new assets
IPR	• BPA collaborates with Tribes/States to develop forecasts of capital spending in advance of each new rate period based on prior year(s) capital execution
OMB Congressional Budget Approval	• Projects above $2.5M require OMB Congressional Budget Approval and to be submitted at least 1 year in advance and is part of the process/forecast
Capital Budget Execution, Monitoring and Forecast Adjustment	• Capital Execution is tracked monthly with annual reports for accomplishments and progress is monitored and incorporated into future out year planning and forecasts

Hatcheries Capital Forecast Adjustments

Planning

- Status of species changed
- Capacity and experience of responsible party to procure the work

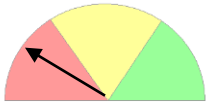
Design

- Real time market costs
- Design changes based on site conditions uncovered during feasibility

Construction

- Permitting requirements with increased cost
- Unforeseen conditions
- Schedule delays

Hatcheries Capital Execution Complexity



High

Factors
Multiple capital projects for design and construction are in current forecasts
Most projects span multiple years from planning, design, construction to operations
Environmental compliance and permitting requirements are a significant part of the process
Mitigation priority and status of species change over time since commitment was made
Supply chain impacts, inflation and labor market changes increase complexity and affect forecasts

Questions?