

**Chehalis River Basin Flood Control Zone District
Regular Meeting
Minutes**

**Lewis County Commissioners Hearing Room
2nd floor of the Historic Courthouse
351 NW North St
Chehalis WA 98532**

Meeting Date: September 23, 2020

Meeting Time: 2:30 pm

I. Call to Order

The meeting was called to order by Chehalis River Basin Flood Control Zone District Supervisor Jackson at 2:30 p.m., Wednesday, September 23, 2020. Those in attendance were:

Edna J. Fund	Chehalis River Basin FCZD Supervisor
Robert Jackson	Chehalis River Basin FCZD Supervisor
Gary Stamper	Chehalis River Basin FCZD Supervisor
Erik Martin	Chehalis River Basin Flood Control Zone District Administrator
Lara McRea	Interim Clerk, Board of Supervisors
John Henriksen	Chehalis River Basin FCZD Advisory Committee Member
Bill Brumsickle	Chehalis River Basin FCZD Advisory Committee Member
Frank Corbin	Chehalis River Basin FCZD Advisory Committee Member (teleconference)
Josh Metcalf	Lewis County Public Works Director
Jim Waldo	Chehalis River Basin FCZD Consultant (teleconference)
J. Vanderstoep	Office of the Chehalis Basin member (teleconference)
Rona Spellacey	HDR Engineer (teleconference)
Lisa Danielski	HDR Engineer (teleconference)
John Braun	Washington State Senator, 20 th District
Claudia Yaw	Chronicle Reporter
Sarah Kohout	Washington State Legislative Assistant

II. Verification of a Quorum

There is a quorum of three district supervisors.

III. Introductions

No introductions.

IV. Approval of minutes for August 26, 2020

Supervisor Jackson made a motion to approve the minutes of August 26, 2020. Supervisor Stamper seconded the motion.

Motion approved.

V. Public Comment

No comments.

VI. Invoice approvals

(Grant 17-1373 Chehalis Basin Strategy Participation)

Vendor	Date	Service	Amount
Gordon, Thomas, Honeywell	August 2020	Governmental affairs svcs	17,770.00
LC Administration	August 2020	Staff time	1,751.12
HDR Engineering	9.1.20	Engineering svcs 8.2-8.29.20	30,538.78
		TOTAL ALL EXPENSES:	50,059.90

(Grant 18-2599 Comprehensive Flood Hazard Management Plan-Phase 2)

Vendor	Date	Service	Amount
Perteet Engineering	8.3-8.30.20	Engineering svcs-CFHMP	2,838.08
		TOTAL ALL EXPENSES:	2,838.08

(Grant .09 Distressed Counties Funding)

Vendor	Date	Service	Amount
Desmond & Louis Inc.	August 2020	Public Education & Communication Program	6,000.00
HDR Engineering	8.6.2020	Eng svcs 7.17-8.1.20	3,267.41
HDR Engineering	9.4.2020	Eng svcs 8.2-8.29.20	18,637.77
Kleinschmidt	9.10.2020	Wetland Mitigation 8.1-8.28.20	2,973.87
		TOTAL ALL EXPENSES:	30,879.05

Grand Total of all expenses: \$ 83,777.03

Motion made by Supervisor Jackson to approve the invoices totaling \$83,777.03. Supervisor Stampler seconded the motion.

Erik gave a briefing of the expenditures.

Motion approved.

VII. Project update

Erik reported that the EIS for the NEPA process was released on September 18. Erik, the consultants and the advisory committee have been reviewing the NEPA document. He noted the document is over 1000 pages. He noted that today the supervisors will get a high level overview of what the document says.

John Robinson said he has been reviewing the NEPA document and noted key items he would like to review.

1. This EIS has a very extensive assessment of alternatives. The Corps went back through all the reports and documents of earlier studies and pulled out alternatives that had been suggested and evaluated the past. They identified 61 different alternatives for the proposed project.
2. The Corps has expanded their analysis of aquatic impacts to take a look at the effect on species and habitat over the entire basin and not just within the project area. They find there is very little impact from the project. There is some impacts in the project area and downstream but very little impact basin-wide.

3. Unlike Ecology's EIS, the NEPA EIS includes a very clear, side by side comparison of the proposed project, the alternatives and the no-action alternatives. The district can now see what happens if they decide not to pursue the project.
4. In Table ES1 in the executive summary, it shows the no action alternative would have negative impacts as would the project before any mitigation. It also highlights the fact that there are benefits to the project. If the project was not constructed, there would be impacts and no mechanism for mitigating them.
5. The EIS has a lot of specific criteria they use for evaluating impacts at different levels.

Supervisor Stamper said people need to understand that 50% of this is also to restore fish runs on the Chehalis. He said if this project doesn't move forward then the fish runs would disappear within 20 years.

Jay said they won't go forward unless you mitigate for specific impacts and unless there is an accompanying aquatic species restoration plan looking at the whole basin.

John discussed the strategy and differences between the SEPA EIS and the NEPA EIS. He felt the Army Corps analysis was more detailed and has richer information.

Further discussion was held by the group.

Erik encouraged everyone to read the executive summary of the NEPA EIS.

VIII. Communications Plan

Erik discussed the polling effort and having some focus groups. This will get a good picture of the communications plan. The districts Facebook page was discussed.

IX. Mitigation Presentation

Shane Cherry gave a PowerPoint presentation on Avoidance, Minimization and Mitigation of the proposed project. (SEE ATTACHED)

Shane reviewed the PowerPoint presentation that he presented to the Office of the Chehalis Basin Board members on September 3. He discussed the mitigation process, opportunities assessment, and significant impacts from the proposed project, major aquatic impacts that require mitigation, mitigation locations, mitigation types and preliminary mitigation costs.

Group discussion was held.

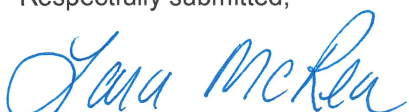
X. Announcements

No comments.

XI. Adjournment

Supervisor Jackson made a motion to adjourn, Supervisor Stamper seconded the motion. Motion passed. Meeting adjourned at 3:36 p.m.

Respectfully submitted,



Lara McRea
Interim Clerk

Update and New Information for Avoidance, Minimization and Mitigation

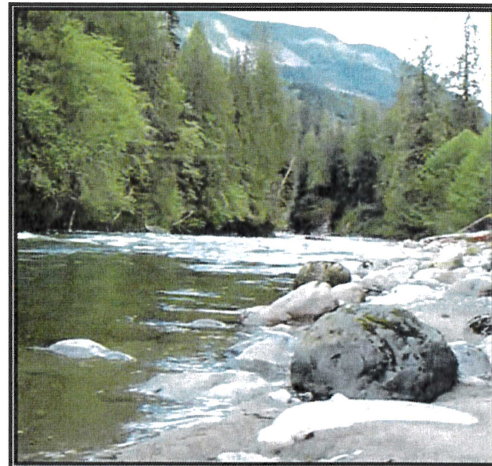
Chehalis River Basin Flood Control Zone District

September 29, 2020

Environmental Benefits of Proposed Project

PROPOSED PROJECT'S FLOOD DAMAGE REDUCTION PRODUCES SIGNIFICANT ENVIRONMENTAL BENEFITS

- *NEPA DEIS Identified benefits to most environmental resources from reducing major and catastrophic flooding impacts.*



Environmental Benefits of Proposed Project

NEPA DEIS found the following benefits:

- **Land Use** – reduced damage to structures and development
- **Recreation** – reduced damage to parks and recreation facilities in the 100-year flood plain
- **Visual Quality** – Reduced downstream flood damage and disruption of view sheds
- **Transportation** – reduced damage to transportation facilities and reduced delays in operation
- **Public Services/Utilities** – reduced damage and outage to public infrastructure and reduced demand for emergency services
- **Environmental Health and Safety** – Reduced risk to public health and personal safety
- **Socioeconomics** – Increased employment/income, governments revenues from reduced flood risk
- **Environmental Justice** – Reduced impacts to environmental justice communities from flooding

3

ROLE OF THE EIS - BALANCING THE CHEHALIS BASIN STRATEGY

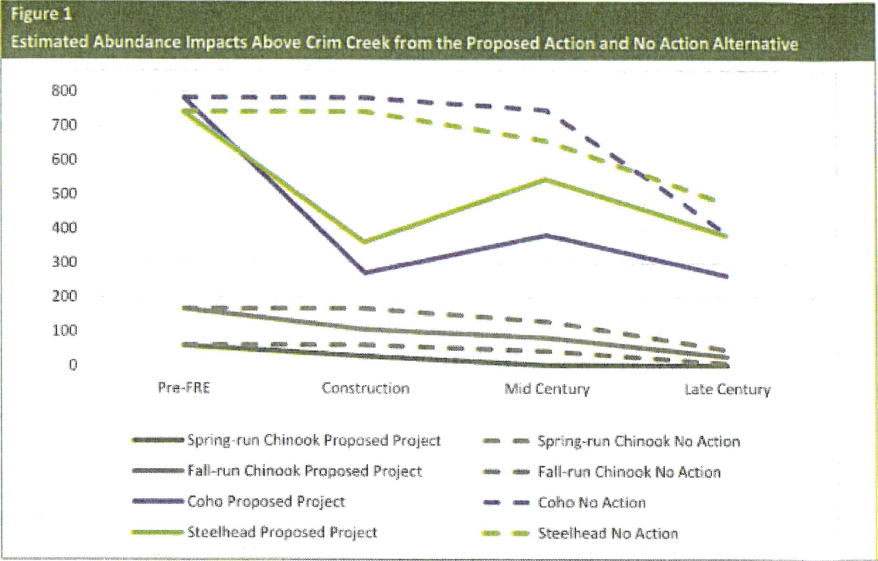
	Flood Damage Reduction Project / ASRP	No Flood Damage Reduction Project or ASRP
Environmental Impacts/Benefits	<ul style="list-style-type: none"> • Facility construction, inundation reservoir (about 830 acres) • Impacts at site and downstream to habitat and species avoided, minimized or mitigated • Benefits of reduced flood damage downstream • Ongoing monitoring and maintenance of avoidance, minimization and mitigation measures • ASRP - Benefits of basin wide restoration/enhancement of aquatic habitat species abundance 	<ul style="list-style-type: none"> • Continued damage to environmental resources during major and catastrophic events. Events recurring every 7 years. • No reduction of flood damage to environmental resources or the built environment. • ASRP - No basin-wide restoration and enhancement of aquatic habitat and species
Project Cost (1)	• On the order of \$370 million plus \$86 million for mitigation for construction plus cost of operation	• On the order of \$3.5 - \$10 billion
ASRP Cost (2)	• On the order of \$1.5 – 1.8 Billion	• On the Order of \$1.1 Billion

1 – Flood Control District filings to USACE and Ecology

2 – Appendix C – Draft Economics Study Update, EES Consulting, September 2016

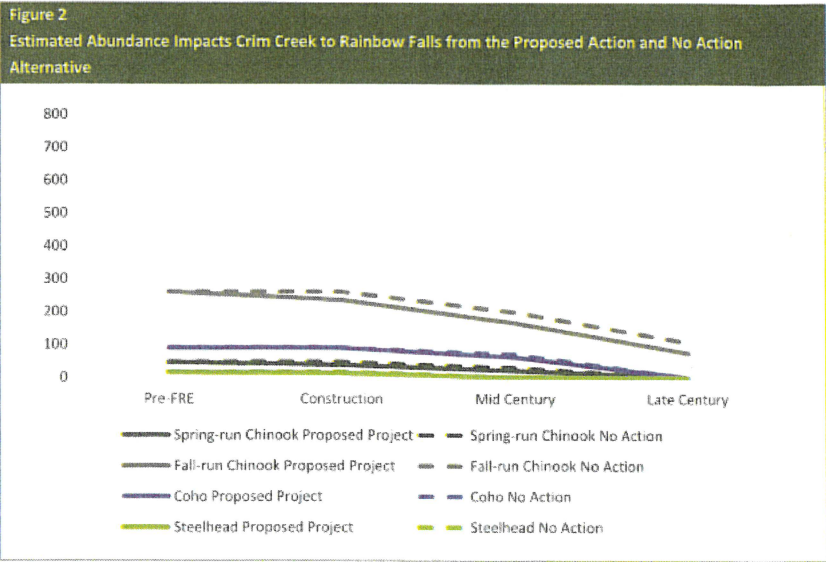
4

Estimated Abundance Impacts



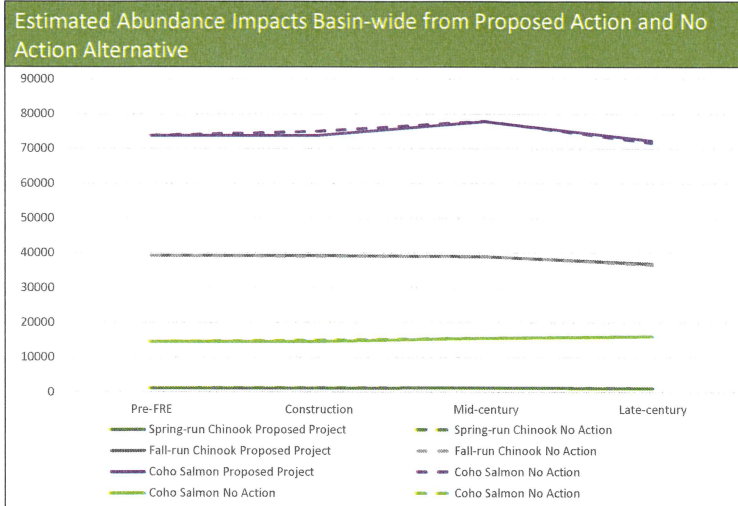
5

Estimated Abundance Impacts



6

Estimated Abundance Impacts



Data source: NEPA DEIS Appendix K, Figures 6.4-9, 6.4-10, 6.4-11, and 6.4-12.

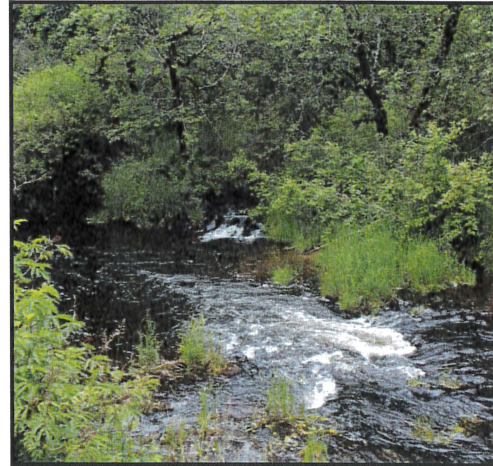
Purpose of Mitigation Update

To provide new information since the release of the SEPA DEIS on aquatic, terrestrial and wetland mitigation opportunities and progress made on avoidance and minimization plans



Mitigation Process Overview

- SEPA EIS identified significant unavoidable impacts that will require mitigation
- Can impacts be mitigated? Proof of concept
- If the project advances, final project design and permitting proceed concurrently
- Mitigation plan is developed and negotiated during permitting process
- Mitigation requirements are enforceable as permit conditions



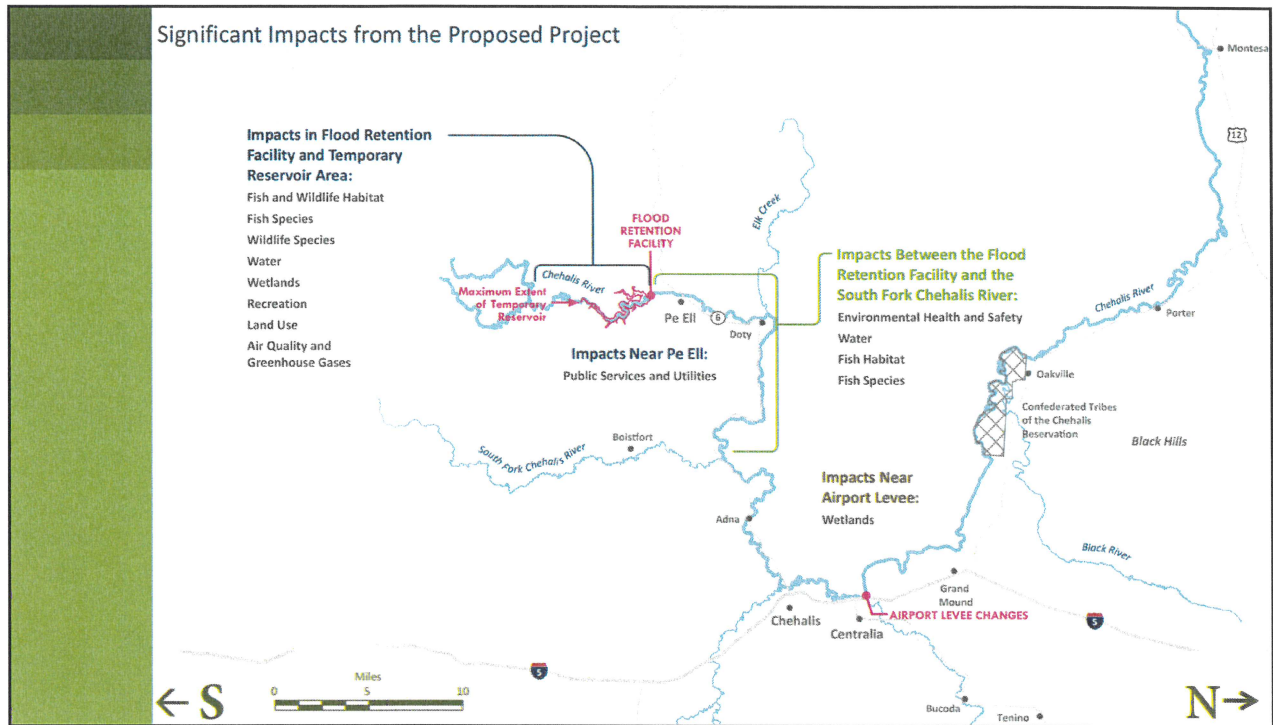
9

Mitigation Opportunities Assessment

- What are the types, locations, and quantities of mitigation likely to be required to address project impacts?
- Are there sufficient mitigation opportunities available to address the anticipated mitigation requirements?
- What is the approximate mitigation cost?

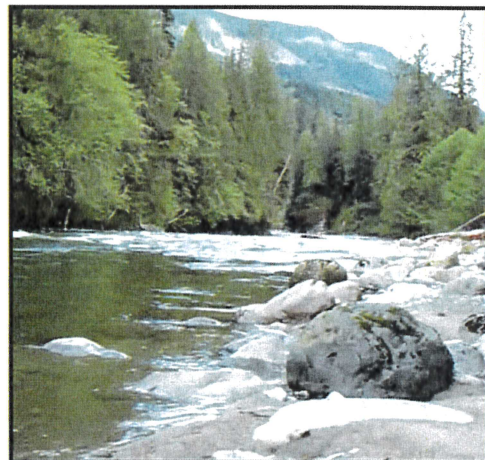


10



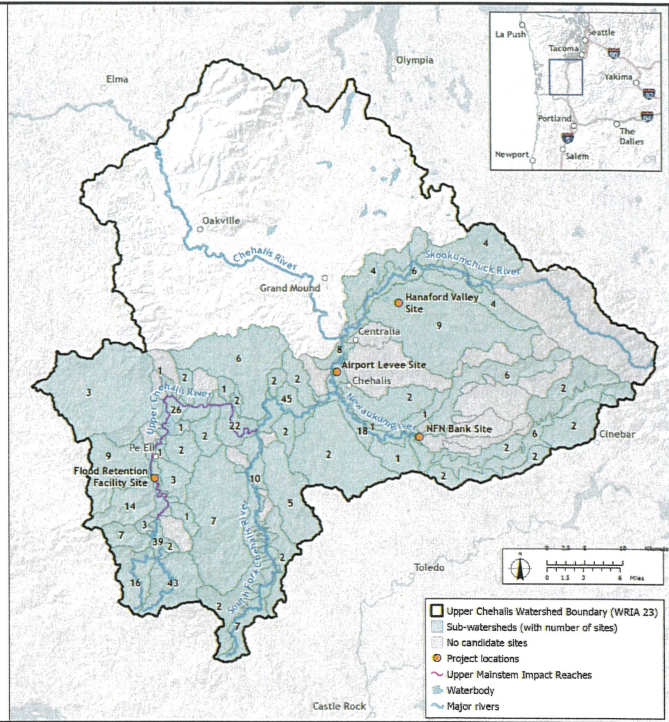
Major Aquatic Impacts that Require Mitigation

- Water Quality
 - Temperature
 - Turbidity
- Habitat Loss
 - Direct elimination
 - Altered natural processes
 - Fish Passage



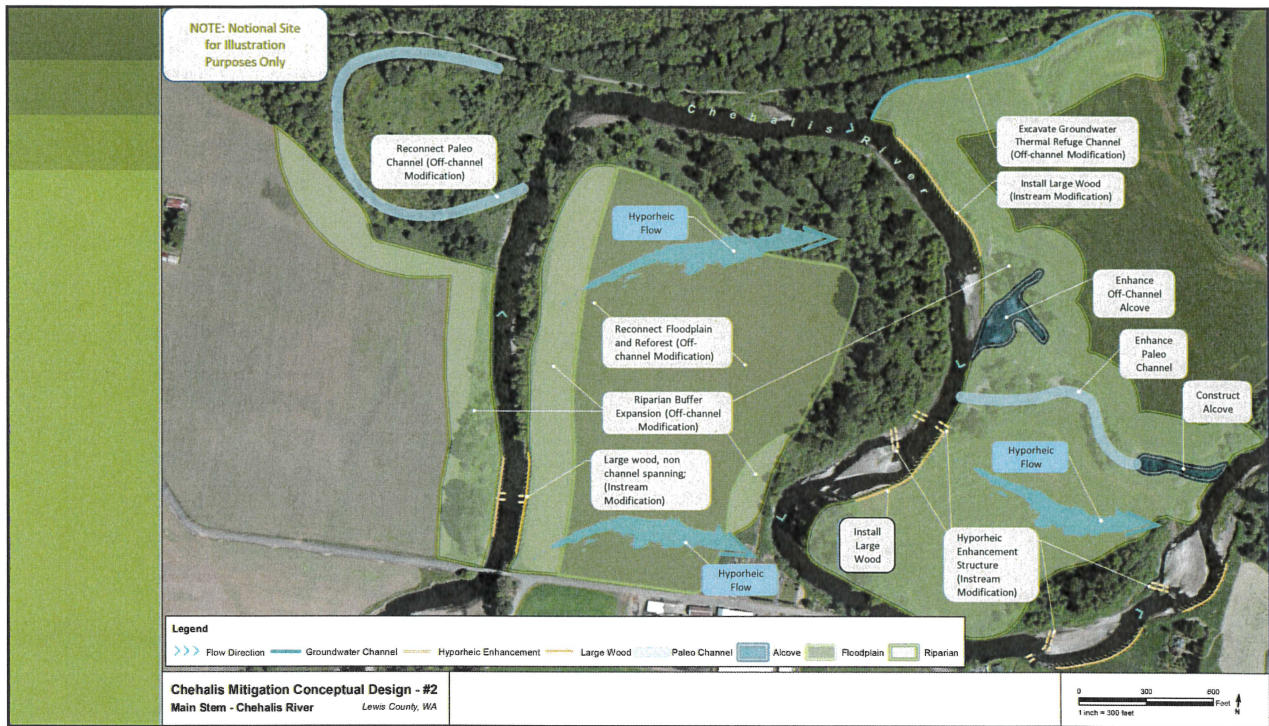
Mitigation Locations

- WRIA 23 Upper Chehalis Basin
- Upstream of Skookumchuck River confluence for aquatic habitat
- Priority will be given to impacted areas including the temporary reservoir, the FRE site, and the 20-mile Chehalis River reach between the FRE site and the SF Chehalis River confluence
 - Focuses on areas of impact (without excluding other sites)
 - Considers ASRP priority areas to maximize complementary benefits to the overall Basin Strategy
- Wetland mitigation areas
 - Integrated with aquatic habitat floodplain projects
 - Mitigation bank credit purchase



Mitigation Types

MITIGATION ACTION TYPES	DESCRIPTION
Riparian Buffer Expansion	Expand riparian buffer beyond forest practices requirements, establish forest vegetation along channel margins
Hyporheic Exchange Enhancements	Instream and bank modifications to enhance the exchange between surface water and shallow groundwater to create or expand cool water pockets for thermal refugia. Several types are proposed based on different landforms.
Cold Water Retention Structures	Off-channel features including floodplain channels and backwater alcoves positioned to intercept colder groundwater or hyporheic flow and maintain a cool water pocket to provide thermal refugia.
Instream Modifications	Construction of habitat features within the perennial wetted channel for several purposes such as habitat complexity, creation of cold-water refuge pockets, and spawning gravel retention.
Off-channel Modifications	Off-channel habitat enhancements including side channel and floodplain actions to reconnect, enhance, and expand off-channel habitat.
Gravel Retention Jams	Larger instream structures composed of large wood pieces and rock located and designed to provide hydraulic roughness and promote accumulation and retention of salmonid spawning gravels. These structures may include gravel augmentation in areas with limited gravel budgets.
Fish Passage	Fish passage improvements including removal of small dams and replacing fish passage barrier culverts with passable crossings.
Wetland Enhancement	Enhancement, restoration, or expansion of wetlands to benefit wildlife species.
Upland Conservation and Enhancement	Conservation and enhancement of specific habitats matching the requirements of focal wildlife species.



Preliminary Estimated Quantities – Aquatic & Terrestrial

MITIGATION ACTION TYPES	PRELIMINARY ESTIMATED NEED	IDENTIFIED OPPORTUNITIES
Riparian Buffer Expansion	17 miles	53 miles
Hyporheic Exchange Enhancements	9,000 ft	28,500 ft
Cold-water Retention Structures	1,000 ft	18,000 ft
Instream Modifications	17,500 ft	89,000 ft
Off-channel Modifications	8,000 ft	220,000 ft
Gravel Retention Jams	13,500 ft	18,000 ft
Fish Passage	5 barriers	23 barriers
Wetland Enhancement	1 location (3 acres)	34 locations
Upland Conservation and Enhancement	2 locations (50 acres each)	10 locations (variable size >50 acres)

Estimated Quantities - Wetlands

- Wetland impacts
 - Quantity (acres) and duration
 - Temporary – construction and operations
 - Permanent – loss due to infrastructure
 - Wetland categories
 - Impacts to Category II, III, and IV wetlands
- Estimated mitigation needed
 - Temporary (construction) – 5.2 acres
 - Permanent – purchase .99 acre of credits or build 1.98 acres of mitigation
 - Temporary (operations) – up to 11.56 acres

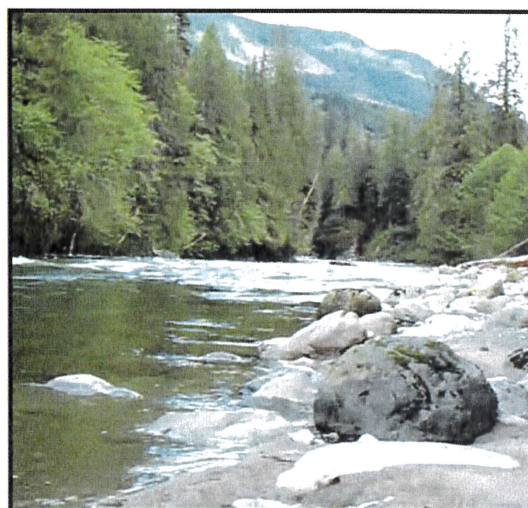


17

Estimating Preliminary Mitigation Costs

Approach

1. Develop example conceptual mitigation designs
2. Build unit prices for cost elements
3. Develop typical unit cost for representative application for each mitigation action type
4. Apply typical costs to estimated mitigation need



18

Preliminary Mitigation Cost Estimate



- Aquatic and Terrestrial Habitat Mitigation: \$43 to 86 million
- Wetland mitigation: \$2.5 to 4.5 million

19

Avoidance and Minimization Progress

- District continues to develop and evaluate means to avoid and minimize project impacts
 - **Inundation Analysis**
 - **Vegetation Management Plan**
 - **Air Quality Impact Analysis**
 - Draft Biological Assessment
 - Pe Ell Water Supply System
 - Construction/Operations Phase BMPs
 - Fish Passage During Construction

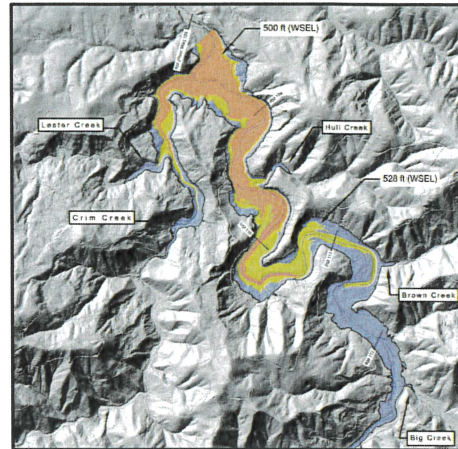


20

Avoiding and Minimizing Impacts to Water Quality and Aquatic Habitat

Inundation Analysis

- Prepared by HDR - Calculates the probability, extent and duration of potential inundation events based on project flood events
- Refines the understanding of potential impacts to various vegetation species and habitat within the inundation zone
- Input to the Vegetation Management Plan



10 year event inundation for FIRE

21

Avoiding and Minimizing Impacts to Water Quality and Aquatic Habitat

Vegetation Management Plan

- Currently being refined – draft to be completed in September
- Refines mapping of vegetation species within the inundation zone
- Proposes program for initial vegetation removal/replacement based on susceptibility to inundation/duration
- Proposes an adaptive management program
 - Maximizes long term habitat function related to water temperature, sedimentation, endangered species habitat, etc.



22

Additional Avoidance and Minimization Measures

Air Quality Impacts

- District reviewed assumptions for the disposal of harvested vegetation in the inundation zone made in the SEPA Draft EIS analysis
- Commitment not to burn harvested vegetation but to re-use as appropriate has been communicated to the USACE for recognition in the NEPA Draft EIS



23

Current Understanding



- Sufficient opportunities for aquatic and wetland mitigation exist
- Adaptive management and durable mitigation are needed
- Preliminary estimated mitigation cost range is \$45 – 90 million
- Impact avoidance and minimization will reduce both impacts and costs

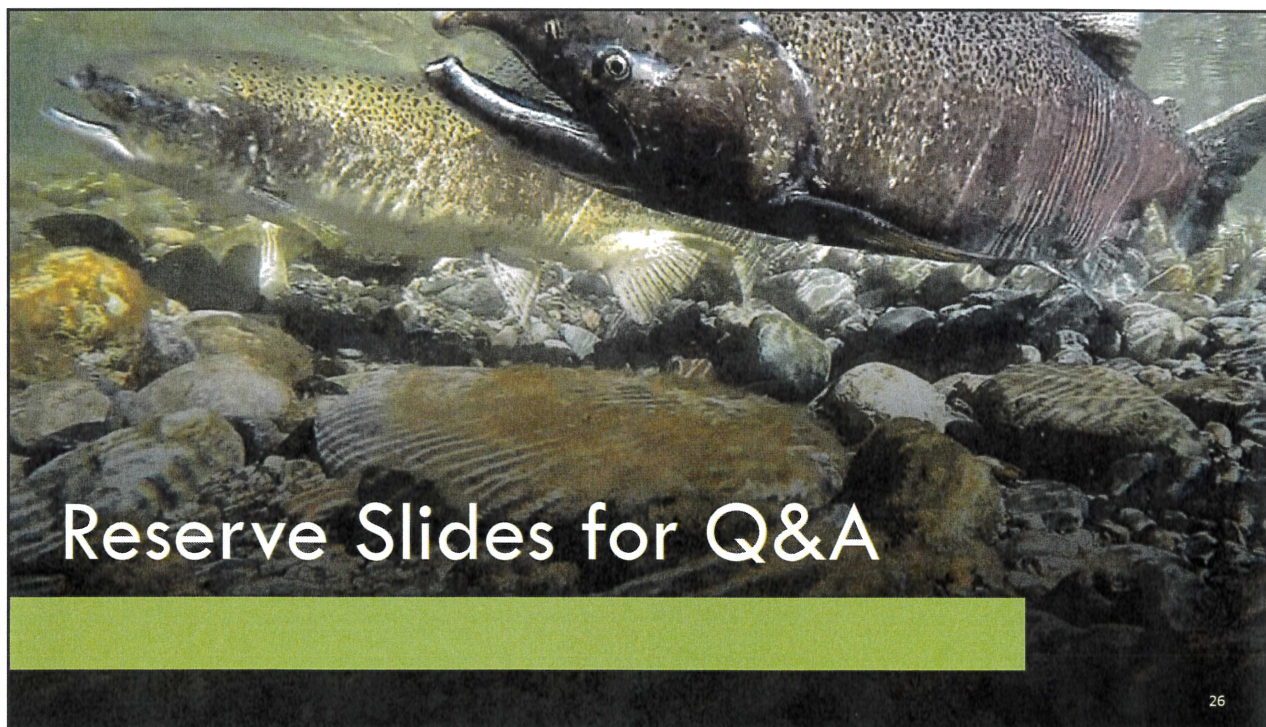
24

Next Steps



- District will make future progress updates to the Board at upcoming monthly meetings
- Continue work on avoidance and minimization efforts
- OCB and District will broadly distribute Mitigation Opportunities Assessment reports for feedback
- Review draft NEPA EIS published on September 18, 2020.

25



Reserve Slides for Q&A

26

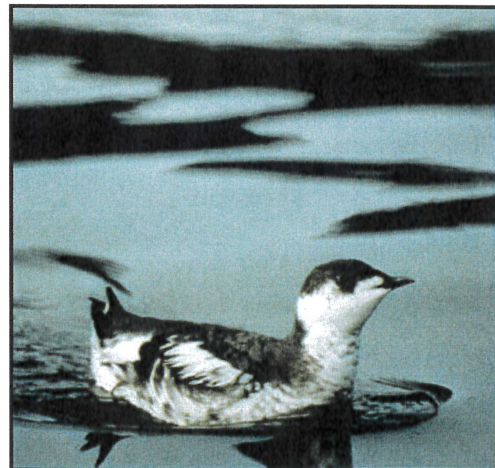
Estimated Quantities - Wetlands

ACTIVITY (FILL, DRAIN, EXCAVATE, FLOOD, ETC.)	WETLAND TYPE ² AND RATING CATEGORY ³	IMPACT AREA	DURATION OF IMPACT	ESTIMATED MITIGATION NEEDED
FRE Facility, and Construction Access and Staging – excavation and fill	PSS/PEM; III	0.18 acres	5 years	Restore temporary impacts – 0.18 acres
FRE Facility Construction Spoil Areas – fill	PFO/PSS/PEM; III	0.41 acres	Permanent	Purchase 0.41 bank credits <i>or</i> Build 0.82 acres permittee responsible mitigation
FRE and CHTR permanent footprint – excavation and fill	PSS/PEM; III	0.58 acres	Permanent	Purchase 0.58 bank credits <i>or</i> Build 1.16 acres permittee responsible mitigation
FRE Debris Management Sorting Yard – clearing and grubbing	PEM/PFO/PSS/PEM; III, II	0.10 acres	Up to 30 days	Restore temporary impacts – 0.10 acres
Pe Ell Water Transmission Line – temporary clearing, grubbing, and excavation	PSS/PEM; III	0.40 acres	3 years	Restore temporary impacts – 0.40 acres
Airport Levee – temporary trimming of vegetation	PSS, PEM, and PUB; II, III	4.50 acres	One year	Restore temporary impacts – 4.5 acres
Episodic temporary inundation within temporary reservoir	PEM, PFO, PSS; III, II	11.56 acres	Episodic and temporary - variable duration and recurrence	Purchase bank credits <i>or</i> Build permittee responsible mitigation <i>Quantities TBD</i>

27

Draft Biological Assessment

- Evaluation of potential project effects to threatened and endangered species and Essential Fish Habitat (EFH).
- Identifies avoidance, minimization and mitigation measures related to effects on ESA species and EFH
- Submitting Draft BA to USACE in September



28

Additional Avoidance and Minimization Measures

Pe Ell Water Supply System

- Potential impacts to Pe Ell water supply pipeline that crosses the inundation zone have been identified
- Commitment to undertake an engineering study to assess pipeline upgrades and relocation to avoid any impacts from FRE operation of disruption to service during construction
- Commitment has been communicated to the USACE for recognition in the NEPA Draft EIS



29

Construction/Operation Phase BMPs

- Protective Best Management Practices incorporated into construction and operations phases for inclusion in the following documents:
 - Department of the Army Permit application – Must be submitted prior to public release of the NEPA Draft EIS by USACE
 - Biological Assessment (BA) – Evaluation of potential project effects to threatened and endangered species and essential fish habitat.
 - Submitting Draft BA to USACE in September



30

Fish Passage During Construction

- Reinitiating work on conceptual design of fish passage facilities during construction
- State (WDFW) and Federal (USFWS, NOAA) fish passage criteria



31