

CHEHALIS BASIN BOARD SUMMARIZED MEETING AGENDA AND ACTIONS

Date: April 6, 2023
Time: 9:00 AM, PST to 4:00 PM, PST
Location: Hybrid meeting – Montesano City Hall, Montesano, Washington

ITEM	FORMAL ACTION	FOLLOW-UP ACTION
1. Approval of Current Agenda and March 2 Meeting Summary	Decision: Current agenda approved; February 2 summary approved	No follow-up action.
2. 2023-2025 Budget Planning	Discussion / Direction	Board members are encouraged to continue talking to legislators in support of their 2023-25 budget recommendations.
3. Aquatic Species Restoration Plan (ASRP)	Discussion/Direction	Staff will report back at the end of the year on the relative percentage of federal grant funding received out of the \$16 million that was applied for. Staff will also report back on the cumulative breakdown of the different sources of salmon recovery project funding, and on what has been most useful regarding securing federal funding,
4. Chehalis Basin Strategy Process Refinement	Discussion / Direction	Sam Imperati will distribute the revised “umbrella questions” to Board members, and schedule field trips with Strategy partners. Board members will provide any specific suggestions they have for changing the language in the “three phases” graphic before the next Board meeting
5. Local Actions Non-Dam Alternative	Discussion / Direction	No follow-up action.
6. Skookumchuck Dam	Discussion / Direction	OCB staff will develop a list of potential next steps for the Skookumchuck dam during the 2023-25 biennium, including costs and timelines, for the Board to consider at the May meeting.
7. Public Comment, Next Steps and Closing	Discussion	No follow-up action.

Attendees

Chehalis Basin Board Members

NAME	APPOINTING AUTHORITY	ATTENDANCE
Vickie Raines	Chehalis River Basin Flood Authority	Present
Edna Fund	Chehalis River Basin Flood Authority	Present
Jay Gordon	Chehalis River Basin Flood Authority	Excused
Tyson Johnston	Quinault Indian Nation	Present
Glen Connelly	Confederated Tribes of the Chehalis Reservation	Present
J. Vander Stoep	Office of the Governor	Present
Steve Malloch	Office of the Governor	Present

Chehalis Basin Board Ex-Officio Members

NAME	AGENCY	ATTENDANCE
Michael Garrity	Department of Fish and Wildlife	Present
Alex Smith	Department of Natural Resources	Present
Mark Gaines	Department of Transportation	Present
Josh Giuntoli	Washington State Conservation Commission	Present
Rich Doenges	Department of Ecology	Present

Board Staff/Board Guests Present:

- See Attachment A

Welcome, Introductions

Chair Vickie Raines called the meeting to order at 9:05 a.m. and welcomed the Board, staff, and audience.

Agenda and Meeting Summary Review

Ken Ghalambor (Ross Strategic) provided an overview of the meeting's agenda. The Board did not have additions or revisions to the [April 6, 2023](#) meeting agenda.

BOARD DECISION: Agenda approved by consensus.

The Board did not have additions or revisions to the [March 2 meeting summary](#).

BOARD DECISION: March 2 Board meeting summary approved by consensus.

2023-2025 Budget Planning

Capital Budget Update

OCB Director Andrea McNamara Doyle provided an update on the Legislative Senate and House budget deliberations related to the Chehalis Basin Strategy (CBS):

- The Senate released its 2023-25 Capital Budget, which included \$70 million for OCB's Chehalis Basin Strategy and \$18.5 million for the Department of Ecology to provide for the Aberdeen/Hoquiam North Shore Levee project with intent language to provide an additional \$18.5 million in the supplemental budget during the second year of the biennium. The Senate Budget used the same major funding buckets the Chehalis Basin Board (CBB) submitted, with equal funding distribution between flood damage reduction and aquatic species restoration (~\$30.5 million each), \$5.2 million for dual-benefit integrated projects, and \$3.9 million for OCB oversight and Board support.
- The House released its 2023-25 Capital Budget which included the full \$73 million the Chehalis Basin Board recommended to the legislature. It also included \$18.5 million for the North Shore Levee with intent language to provide an additional \$18.5 million in the supplemental budget during the second year of the biennium. The proviso in the House Budget is the same as the proviso language in the current biennial budget that says the Board has the discretion to allocate amounts across funding categories with the approval of 6 of 7 Board members.
- Final negotiations for the 2023-25 Capital Budget are occurring until the end of legislative session April 23rd.

Legislative Bill Updates

Andrea McNamara Doyle (OCB) shared an update on bills still active in the legislative process. She highlighted three bills of interest to the Board, as follows.

- [Senate Bill 5649](#) (proposed by Senator Braun [20th District]): A residential floodproofing bill that would allow improvements to residential structures in the floodway and would allow property owners to not have to wait until after flood damage to repair their property. As of 3/1/2023 it has passed the Senate and House Committees and was in the House Rules Committee, on the second reading awaiting action on the floor.
- [House Bill 1170](#): A statewide climate resiliency bill that would update the statewide integrated climate response strategy by September 2024. This bill could affect some of OCBs work regarding federal funding opportunities. As of 3/1/2023 this bill has passed the House and is ready for floor action in the Senate.
- [H.B. 1728](#). A resiliency bill that would direct the military's Department of Emergency Management to administer a statewide resiliency program for all hazards that would include flood planning requirements and provide ongoing coordination for disaster resiliency of communities and infrastructure. If it passes it would need to include a process to prioritize and coordinate state agency funding for climate resiliency. As of 3/1/2023 this bill has passed the House and is in the Senate Rules Committee awaiting movement to the Senate floor.

Key comments and discussion topics included:

- Aside from the additional \$3 million in the House budget, the Board will reach the same place with the House and Senate budget in terms of being able to change or decide where funding is allocated.
- OCB staff cannot lobby the legislature for a larger CBS budget than what Ecology submitted in their agency submittal. If the Board wants to advocate for the full \$73 million, Board members need to directly talk to Senate and House members to gain additional support.
- It is extraordinary that the Chehalis Basin Strategy has received significant biennial appropriations for multiple years in a row. Funding will not continue indefinitely unless the Chehalis Basin Board comes together with a fish and flood plan.

FOLLOW UP:

- Board members are encouraged to continue talking to legislators in support of their 2023-25 budget recommendations.

Aquatic Species Restoration

The aquatic species restoration portion of the meeting included three presentations as follows.

Non-Native Fish Predators of the Chehalis River – John Winkowski (WDFW)

WDFW conducted a study to analyze DNA in predatory fish stomach content to understand smallmouth bass, largemouth bass, rock bass, and native northern pikeminnow predatory effects on salmonoids. Information from the study will help determine where non-native fish predation impacts to salmonoids are occurring and will allow for descriptions of spatial and temporal predation patterns to understand salmon predation. Chinook were the highest concentration in predator consumption with smallmouth and largemouth bass as the highest predators. Discussion topics and clarifications based on Board and OCB questions included:

- There is currently no plan in the Chehalis Basin for control of predatory fish.
- Understanding the percentage of the population being consumed by non-native fish predators needs to be determined to fully understand the severity of the issue and potential next steps.
- Data collection for the study occurred from late April to Early June when smolts were migrating out from the river.
- Higher numbers of fish were caught during the second year of the study because of an increased ability to catch fish.
- Chinook salmon are likely consumed at higher rates because they are easier to eat based on size, inability to evade predation, and timing of outmigration.
- This study did not look at predation of Oregon spotted frog, though data collection methods would be similar to this study.
- The “All H Slider Tool” focuses more on predation from pinnipeds than fish. Quantitative estimates of non-native fish abundance and effects are needed before the slider tool could be effectively used to analyze non-native fish predation.

- Smallmouth bass occupancy is estimated to double to 1400 kilometers by the end of the century based on a climate change analysis, and similar trends are shown for other non-native predators.
- Board members would like to better understand the process of determining how important predatory issues are and what to do about them. More technical questions need to be addressed before policy makers can decide how important this issue is.

Gamefish Management – Kenny Bayhen (WDFW), accompanied by Marissa Litz and Mike Scharph (WDFW)

A group at WDFW is working to understand the interaction of species of concern and non-native game fish that were introduced as a result of the WDFW Warmwater Fish Program, which introduced non-native game fish for recreational fishing from 1890-1950. Four years ago, the Killer Whale Task Force recommended HB 1579 to remove harvest restrictions of non-native gamefish to help increase native fish populations. The Fish and Wildlife Commission developed non-native game fish policy that identified how to manage for non-native game fish. The policy sets guidelines for management, options for control, and what species to consider. It sets sideboards for what to do before exercising a control mechanism.

Salmon Habitat Restoration Funding – Kirsten Harma (Chehalis Basin Lead Entity Program)

Kristen Harma presented on the various sources of funding in the Chehalis Basin for salmon habitat restoration, federal funding applications from the basin, and recommendations. Salmon recovery in the Chehalis Basin has been funded by many programs historically and many new programs have formed in the last 10 years, though more funding programs can bring administrative challenges. The Habitat Restoration Funding Opportunities in the Bipartisan Infrastructure Law and Inflation Reduction Act came out from the Wild Salmon Center as a way to navigate Federal funding opportunities. The Chehalis Basin currently has \$16 million in active federal grant requests. Key takeaways include how local organizations want to take advantage of federal opportunities, though capacity is limited as it takes time to write and manage grants. The ASRP looks for landscape scale projects and wants to use collaboration to create large multi-benefit actions that are most beneficial for investment. ASRP staff appreciates consultant support and recommends that the Board work with the community to develop letters of support and talk with congressional representatives.

Key comments and discussion included:

- Board members requested a report back at the end of the year on the relative percentage of federal grant funding received out of the \$16 million that was applied for.
- It is estimated that over fifty percent of recent salmon related funding in the Basin has come through the CBS process. Board members requested a cumulative breakdown of the different sources of salmon recovery project funding.
- Board members requested that ASRP staff report back to the Board on what has been most useful regarding securing federal funding, such as consultant grant writing support or letters of support from the Board or congressmembers.

- Andrea McNamara Doyle (OCB) noted that ICF has recently been hired to provide OCB consultant support on federal grant writing services. Cindy Bradley (OCB) is working to convene an advisory group with ICF and basin partners to explore future opportunities for support.

Below are links to the presentation materials:

- [Non-Native Fish Predators in the Chehalis River Presentation](#)
- [Salmon Habitat Restoration Funding in The Chehalis Basin Presentation](#)

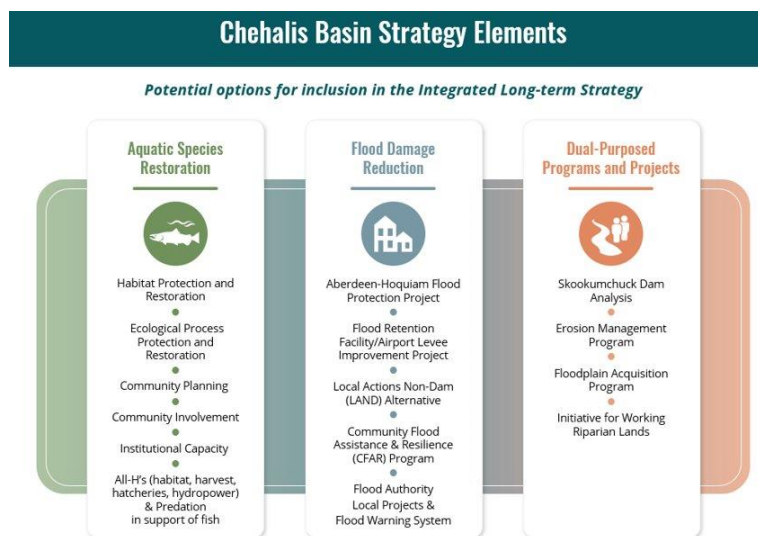
FOLLOW UP:

- ASRP staff will report back at the end of the year on the relative percentage of federal grant funding received out of the \$16 million that was applied for.

Chehalis Basin Strategy Process Refinement

Chehalis Basin Strategy Elements

Sam Imperati reviewed the major Chehalis Basin Strategy work elements through a graphic developed for the forthcoming HB 1154 legislative report. Sam requested Board feedback on the graphic and the notion of combining elements into comprehensive packages for future Board consideration.



Key comments and discussion topics included:

- Steve Malloch: The elements within each of the three categories have the potential to be more integrated than presented in the graphic. OCB could consider modifying the graphic to visualize the interrelatedness of elements within each of the categories.
- Ken Ghalambor (Ross Strategic): It would be helpful for the Board to provide specific suggestions for changing the language in the graphic well before the next Board meeting.

“What-If” Scheduling Exercise

OCB staff met with Flood Control Zone District (FCZD), Department of Ecology, and US Army Corps of Engineers staff prior to the April Board meeting to explore the scheduling implications if the FCZD provides a revised project submittal for the SEPA and NEPA EISs in early (Q1) 2024, followed by a revised mitigation submittal 2-4 months later. Based on this schedule, Ecology suggested a Final SEPA EIS could potentially be complete within a year of receiving the project submittal, i.e., early 2025. The Corps noted that their schedule has much more uncertainty, as the timing of ESA, Section 106, and Tribal Treaty Rights consultation is highly uncertain, and that a Final NEPA EIS would not likely be complete before the end of the 2023-25 biennium. The dates discussed were only hypothetical and primarily meant to serve as a discussion aid for the Board and partners to begin their scheduling discussions surrounding their formal decision-making timing options for an integrated long-term strategy. The Mural schedule (pasted below) was created to help visualize the hypothetical schedule and serve as a discussion aid.

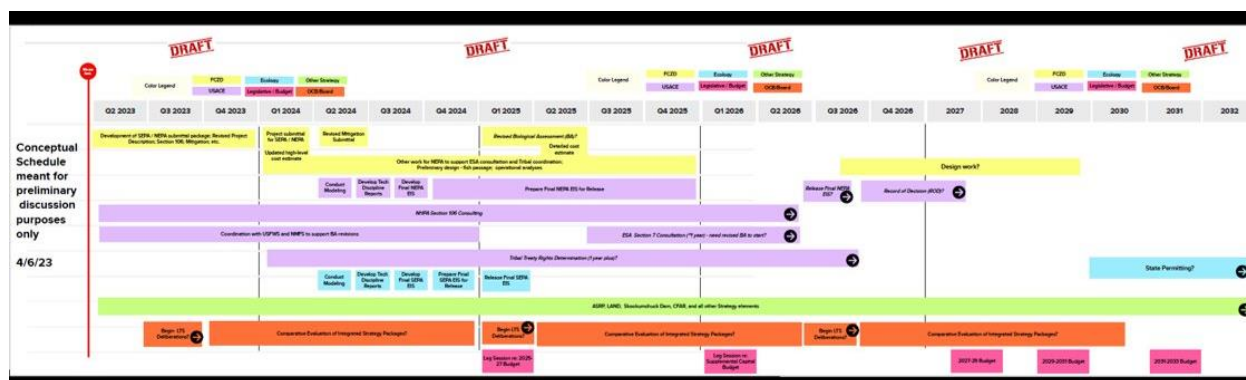


Image: High-level Mural schedule for Board discussion purposes

Based on the schedule, Mr. Imperati proposed potential options to the Board for beginning deliberations on the long-term strategy: (1) begin the process now, (2) wait for the Final SEPA EIS, (3) wait for the Final SEPA EIS *and* Final NEPA EIS, or (4) pick another time the Board deems fit. He also posed several questions to the Board:

- Does the Board want to create option packages and comparatively evaluate them?
- If the Board wants to create option packages, when would the Board want to start this process?
- What scientific, political, and economic realities need to be considered?
- Does the Board want to identify a target end date for developing their integrated long-term strategy? When should “final” negotiations start?
- What would the steps look like to make this process happen?

Key comments and discussion topics included:

- Michael Garrity: the timing of the final EISs is uncertain. Hopefully decisions about whether to move to the next steps of permitting for the FRE are influenced by the Board’s comparative evaluation of option packages. A mistake in this process to-date has been keeping projects in their respective silos for too long, and assuming any major element of the Strategy can succeed irrespective of other major elements of the Strategy. Even if it’s qualitative to start, it makes

sense for the Board to start developing, evaluating, and discussing option packages and refine the evaluation over time as we have more detailed information. The Board understands how major elements relate to each other enough to begin advancing discussions.

- Steve Malloch: agree it would be useful to explore potential scenarios to determine how many option packages there could be and what they might include.
- J. Vander Stoep: there is urgency to make progress on all elements of the Strategy. Funding support from the legislature cannot be guaranteed to continue indefinitely. Acting quickly may be advantageous, though it is still unclear how Board members can accurately consider the FRE until more information is provided on the facility, its impacts, and the ability to mitigate those impacts. Regardless of timing, it's important to recognize that if we can come together and reach consensus on a plan in the relatively near future, the sky's the limit.

Conceptual Approach of the Integrated Long-Term Strategy and Discussion of Long-Term Strategy Preparation

Sam Imperati presented a conceptual approach for the Board to develop an integrated long-term strategy:

1. Each Category Team presents three packages for review (Low – Medium – High)
2. Define a range of mitigation options for each scenario
3. Board creates two or three Option Packages from them
 - A. Not constrained or burdened by benefit-cost
4. Model each of the above scenarios:
 - A. Climate Change -> Hydro (Riverflow 2D) -> Fish (EDT or EDT/LCM)
5. Do Preliminary Benefit-Cost and EJ/Socio-Economic analyses
6. Create a Draft Working Scenario with Sequencing
7. Complete Benefit-Cost and EJ/Socio-Economic analyses
8. Final Selection of Integrated L-T Strategy

After presenting the approach, Mr. Imperati noted that there would need to be a significant amount of work to tee up this analysis and it could be a lengthy process. Waiting for additional information is a calculated tradeoff in terms of scientific, budgetary, and political realities. He encouraged Board members to consider when they might have enough information to start negotiations and answer key questions to decide what option packages to evaluate. Mr. Imperati suggested Board members think about these issues offline after the meeting, recognizing this will be an iterative process.

Key comments and discussion topics included:

- Rich Doenges: when organizations or individuals take ownership in projects, there is more interest in supporting and discussing the project. There is still uncertainty whether there are viable project sponsors for all the potential Strategy elements, e.g., LAND projects.
- J. Vander Stoep: I initially reacted negatively to the idea that each issue group will come up with an idea they like or don't like, as this does not get us out of the catastrophic challenges we may face. No one will get everything they want. The only way to continue to receive legislative

support and continue this process is if everyone agrees on an integrated “fish and flood” plan. I also encourage OCB to stop using the word “dam” when referring to the flood retention facility. We should be conscious of this wording, given that the proposed facility is not a permanent dam, but rather a temporary flood retention facility.

- Michael Garrity: agree option packages can be made soon and there can be various assumptions regarding impacts. Different assumptions can be made depending on what happens regarding the LAND and Skookumchuck Dam processes. If it turns out the flood retention facility is mitigatable, we could chart out ideas to create a net ecological benefit through mitigation with elements like LAND, Skookumchuck, or ASRP related projects to help restore self-sustaining salmon runs. We have the ability now to brainstorm conceptual packages, without making a formal policy call. If there is an implication that a policy call is being made, people will be less creative during the process.

Regarding the proposed idea to hold a charette exercise to brainstorm potential option package creations:

- Board members generally liked the idea of a charette.
- Tyson Johnston noted he would like to ensure Board members are free to invite any advisors and consultants they would like to be in the room to support the exercise.
- Glen Connelly liked the idea conceptually, and an event where the Board can explore conceptual what-ifs would be beneficial.
- Vickie Raines would prefer a full-day event, potentially followed by another half-day. It would also be helpful to have people to be there as resources to help answer questions.
- Michael Garrity would prefer an all-day Thursday, half-day Friday event.

Communications Update

Andrea McNamara Doyle (OCB) provided the Board an update on 2023 communications goals, objectives, and priority audiences, all of which are relevant to work around socializing the umbrella question and how the Board and Strategy partners are talking about the status of the overall process. Mr. Imperati noted he has begun scheduling “field trips” to meet with Strategy partners to learn more about their goals and concerns, receive input on the umbrella question, and discuss the Board’s overall process.

Mr. Imperati noted that there are currently three drafts of the umbrella question: the long version developed with the Board, a revised long version from Pyramid Communications for partner and community input, and a condensed version. All three versions will be sent to the Board for final edits. Pyramid staff noted they want to ensure the umbrella question can be used as a reference point and tool for partners, stakeholders, and basin residents to ensure a shared understanding of the Strategy.

Next Steps: Tentative May Activities

Sam Imperati reiterated that it’s okay the Board has not formally decided when to begin negotiations for a long-term integrated strategy, when negotiations should be complete, and the details of potential option packages. Today’s meeting purpose was primarily to present ideas for consideration. Next steps

for May include continuing long-term strategy preparation, approach, and timeline discussions, and potential discussions regarding establishing clear roles for ex officio members and how the OCB Director and facilitator should assist with formal long-term strategy discussions.

FOLLOW UP:

- Sam Imperati will distribute the revised umbrella questions to Board members, and schedule field trips with Strategy partners.

Below is the link to the meeting materials:

- Long-term strategy [presentation](#)

Satsop Business Park Haul Road Erosion Mitigation Update

During lunch, Kris Koski (Port of Grays Harbor) provided an impromptu update on the Satsop Business Park Haul Road Erosion Mitigation project. Haul Road is under threat of erosion from the Chehalis River and the Port has been proposing actions to protect the road. In October 2022, OCB provided funding for an immediate short-term action using bioengineering techniques to protect a critical portion of the road in time for the flood season. Subsequent action taken in 2023 for a mid-term project includes permitting submittals and Tribal consultation. Construction could begin in July to August contingent upon funding. The Port currently has a funding gap of \$1.3M and is attempting to secure construction funding through the 2023 WA capital budget and federal funding opportunities.

Local Actions Non-Dam Alternative (LAND)

Daniel Iacofano (MIG), Alex Dupey (MIG), and LAND Steering Group members presented their preliminary LAND recommendation developed over the past eighteen months. This is the first of several conversations to present information to the Board. The LAND Alternative includes short-, medium-, and long-term solutions. The presentation provided project context including guiding principles, technical studies and community workshops that helped lead to the chosen LAND Alternative. Alex Dupey (MIG) reviewed preliminary LAND elements including projects, programs, and policies that work together to create an integrated basin wide floodplain management approach that would remove an estimated 1,625 structures from late century flooding and still allow for economic development. They talked about potential technical studies that could refine the alternative, and implementation considerations including who might be project sponsors, preliminary costs, and next steps for the Board's consideration. The May Board meeting will dig into topics the Board members are most interested to hear more on. LAND SG members highlighted key thoughts on the importance of the LAND alternative throughout the presentation including:

- Glen Connelly: The LAND brought forth a diverse set of stakeholders from around the Chehalis Basin to bring as many ideas as possible forward to reduce flood damages. The LAND SG worked hard to connect with the community to gather input on these ideas, with a focus on the upper basin.
- Brian Stewart: Habitat connectivity is an important piece of the LAND alternative. Connectivity is repeated over and over in abiotic and biotic processes. LAND creates connectivity with the

ability to move puzzle pieces around to see how the system changes. Through this process, LAND SG members have begun to understand how dynamic and connected the system is.

- Brandon Parsons: We went from a data poor to data rich basin. LAND addresses multiple sources of flooding in the Chehalis Basin. This effort also considers specific treatments to address the severity of flooding on a case-by-case basis to meet individual needs, e.g., through the Safe Structures Program and larger infrastructure interventions. The LAND allows economic growth while reducing flood risk and allows actions to be implemented immediately. Many of the interventions proposed in the LAND recommendations are being funded in other places across the nation, e.g., the State Revolving Loan fund could be a sustainable funding source.
- Tyson Johnson: The LAND Alternative is very important for the Quinault Indian Nation. It represents long-term resilience for people and salmon in the Chehalis Basin. This is a credible science-based alternative that offers a path forward to serve the shared values and priorities of communities throughout the Basin. The LAND lays out achievable, scalable, and fundable actions to reduce flood damage. Nothing is more important to Quinault Indian Nation than exercising treaty rights and the future health and prosperity of people and creating conditions for salmon to survive and thrive. Climate change poses threats to salmon and people, which is why we have come together in this process. The LAND is not without environmental impacts but offers a balance between health and safety of humans and salmon. I would like to ask the Board to continue the exploration and debate of all options available to deliver the CBS dual mission. The LAND offers the best chance for lasting resilience for communities across the basin. Actions are scalable and some can be implemented right away. The LAND alternative is costly but critically available funding for communities to adapt and reduce damage from climate driven natural disasters lines up with the proposed actions under the LAND. Environmental reviews of the dam and the CBS long term strategy will not be completed for several years. The Quinault Nation asks for the continued investment and development of the LAND and appreciates work of the LAND SG members.
- Steve Malloch: I endorse Tyson's points. I came into this wanting to move people and structures out of harm's way, prevent people from moving into harm's way, and figure out where to integrate considerations of the flood retention facility and ASRP. I recognize we will likely need to have infrastructure in the basin that is feasible, economically rational, and can get through public and legal opposition. The Board charged us to do this work and think about scalable and replicable actions to put forward. We have met this charge in a first draft form. I encourage the Board to think about this vision.

Below are links to the presentation materials:

- [Chehalis LAND Preliminary Alternative Study](#)
- [Memorandum #1: DRAFT CFAR Safe Structures Program](#)
- [Memorandum #2: DRAFT Land Use Recommendations and Receiving Areas](#)
- [Memorandum #3: DRAFT Chehalis LAND Economic Benefits and Tradeoffs](#)
- [Memorandum #4: DRAFT Agriculture Impacts Analysis](#)
- [Memorandum #5: DRAFT Environmental Compliance and Permitting Considerations](#)

Key comments and discussion topics included:

- Board members appreciated the work of the LAND SG in reaching out to community members, and the ability of diverse perspectives on the group to come together and develop a consensus recommendation.
- The LAND presentation did not count the ongoing work of the Chehalis Basin Strategy in elevating and acquiring flood prone structures.
- The presentation shows a slide comparing estimated structures protected by the FRE facility compared to the LAND Alternative. There should also be an accompanying slide that compares the costs.
- LAND should consider prioritizing exploring the feasibility of the bypass option, given that the size, location, and extent of potential levees hinges on the viability of the bypass.
- Sam Imperati requested that during the May Board meeting the LAND SG show estimated timeframes for the additional proposed studies.

Skookumchuck Dam Phase II Results

Nat Kale (OCB) provided a high-level summary of technical analyses of potential alternatives to future management of the Skookumchuck dam conducted in the Phase 2 Analysis requested by the Board and completed in January 2023. Phase 2 included detailed hydraulic modeling of the reservoir, fish sluice, and Skookumchuck River downstream of the dam; development of the concept design for downstream fish passage; initial evaluation of potential benefits and impacts to flooding, habitat, water rights downstream from scenarios; and additional investigation and habitat modeling of the quality of aquatic species habitat upstream of the reservoir. Alternatives evaluated included future management of the dam following current operations, management for fish passage only, management for flood storage only, combined fish-flood management, and dam removal. Panelists from various organizations were invited to respond to two questions to provide their perspectives on the dam, the proposed options, and what they value most. This discussion will feed into the May meeting where OCB staff will request Board direction on how to approach the Skookumchuck dam in the 2023-2025 biennium. Kim Ashmore from City of Centralia and Lewis County Commissioner Lindsey Pollock were not able to attend the meeting.

How would the Skookumchuck Dam options affect your community or constituents?

- Cody Duncan (TransAlta): The reservoir and dam are essential to our business in the short term as we make power until the end of 2025. TransAlta does not want dam removal as it would have drastic impacts to our water bank. The other options are possible, depending on how they affect TransAlta's business. TransAlta agreed to this study due to an interest in what can be done to help fish and reduce flooding while getting the water we need for our business.
- Megan Kernan (WDFW): WDFW has not selected a preferred option but is most interested in options with fish and wildlife benefits. The Skookumchuck Dam Phase 2 analysis needs to better understand the benefits of various operating scenarios of the TransAlta Water Bank to evaluate the scenarios presented in the document.
- Stephen Lyle (Town Council of Bucoda): Bucoda is the first community downstream of the existing dam and the dam as it exists reduces flood depths in town. We would support the flood

only option, compromise with the combined flood/fish option, and not support the fish only option or dam removal.

- Glen Connelly (Natural Resources Director of the Chehalis Tribe): The Chehalis Tribe is right off the mainstem of the Chehalis River, so the flood benefits of the dam do not make a big difference for the Tribe. The Chehalis Tribe is interested in preserving spring Chinook and finding ways to enhance fish habitat. The Chehalis Tribe would support the fish only or the combined fish/flood option. Dam removal would be interesting, but we recognize this would be difficult for people downstream and relating to water rights.
- Larry Lestelle (Fish Biologist and ASRP Science Review Team): The Skookumchuck Dam blocked access for spring Chinook to spawn in the upper half of the river, causing the spring and fall runs to both spawn in the lower half of the river. This caused a decline in egg survival and hybridization of the two runs. Additionally, the summer low flow regime was changed, causing higher than a natural flow to be released in the summer. Water is released at river mile 21 but is withdrawn at river mile 7.2 causing Chinook to arrive ahead of their natural timing and an increase of run hybridization. Alternatives presented other than dam removal would have little benefit, and potentially adverse effects on Chinook salmon. Another alternative can be presented without dam removal: the water bank could distribute water via a pipeline from the TransAlta water diversion point to the purchasers of the water rights. This would cause the flow regime to return to a natural level in the summer, inhibiting return of early fall Chinook.

What actions could the Board take regarding the Skookumchuck Dam in the next two years that would be most beneficial for your community or constituents?

- Cody Duncan (TransAlta): We want to make sure we do not expend resources on something TransAlta cannot do from a dam stability perspective. If we continue with the study, we need good communication up front to understand what outcomes we are pursuing.
- Meghan Kernan (WDFW): It would be helpful to have more understanding of how water bank operations dictate or influence the operation of the dam. How will water be protected instream? How do we ensure purchasers support mitigation efforts? How do we ensure users are not intercepting water? Are there opportunities to increase flow benefits or use off channel storage? Studies on water banks and water rights would be useful.
- Stephen Lyle (Town Council of Bucoda): We have a similar concern in Bucoda as Meghan described. There are senior and junior water rights, and we need to know how water rights are going to be impacted. We need to understand the water bank.
- Glen Connelly (Natural Resources Director of the Chehalis Tribe): We would like to continue to look at water rights and recognize cities will need more water with population growth. We would like to further explore how potential listing of spring Chinook would impact and/or limit potential actions.
- Larry Lestelle (Fish Biologist and ASRP Science Review Team): In addressing what actions the Board could take in next 2 years, the alternative I proposed would be to implement a hybrid natural flow regime downstream of the dam. This has not been analyzed yet. The regime would have TransAlta, through a pipeline, only release the water needed for operations downstream of the dam, in addition to what would occur under the natural regime, plus an amount to satisfy the existing water rights. This would result in the amount of water passing that was originally

the natural flow regime, which would allow the most effective release of Chinook salmon. This proposal can be combined with other proposed alternatives, except dam removal.

Key comments and discussion topics included:

- Most of the options would have potentially negative effects on spring Chinook because most of their habitat upstream has been inundated. It is also unclear how juveniles would survive getting through the reservoir.
- There is currently fry trapping on the Skookumchuck to collect Chinook fry and conduct genetic testing to identify if Chinook are hybridized, spring, or fall runs. This is the fourth year of genetic work being done, and hopefully this work can continue.
- While fish passage options would not provide substantial benefits to Chinook salmon, it would provide some benefits to Coho salmon and more benefits to steelhead because steelhead have more habitat upstream and have a different lifecycle.
- Steelhead populations are not necessarily doing any better in the Chehalis basin than in other locations throughout the state.
- Flood control and fish passage options are not necessarily in conflict. There could be a compromise between the two options.
- The proposed hydrogen hub is not on TransAlta property, and the amount of water needed for the hydrogen hub is unknown. TransAlta is looking at what we can be done with the property going forward. It is anticipated water will be used on the plant site going forward, but TransAlta operations would likely not change much.
- Modeling for the Skookumchuck dam included climate projections using a 60% increase in precipitation in the late century. Low flows have not been considered at this time.
- Mechanical fish separation has been attempted in the past but stopped after four years. One idea for future separation methods is to use beaver dam analogs.
- Water sales have been focused downstream of the diversion point. There could be another method to keep less water in the lower section of the river, but it may cause complications in providing water to customers.

Board member and OCB staff comments included:

- J. Vander Stoep: The Board understands the Skookumchuck dam is not a public facility. The Board is charged with creating a fish and flood recommendation. I apologize if it seems like we are deciding what to do for TransAlta.
- Michael Garrity: The Skookumchuck dam is operated in an old-fashioned way compared to a modern FERC dam, and fish passage requirements are loose, except for below the structure. Over the years, hatchery steelhead releases have turned on and off. The facility has not operated for self-sustaining, naturally reproducing, anadromous fish above the reservoir. WDFW wants to look at this from biological and policy standpoints. We hope to see self-sustaining populations of steelhead, coho, and spring chinook. Looking at the report, the combined flood/fish option might not be much worse for steelhead. Achieving an elevation in the reservoir enough for juvenile fish to pass is less likely with the combined flood/fish option than it would be with the fish only option. Studies could be considered such as survivability in the

reservoir, the piping idea, or off-channel storage that could allow for dam removal with state funding. Ideas should be looked at with an understanding that people respect ownership issues and that no one will impose anything on TransAlta.

- Sam Imperati requested information presented at the May meeting include how long it would take to get information on the water bank issue and piping option, as well as a general sense of cost for these activities.

FOLLOW UP:

- OCB staff will develop a list of potential next steps for the Skookumchuck dam during the 2023-25 biennium, including costs and timelines, for the Board to consider at the May meeting.

Public Comment:

David Ortman: If the Skookumchuck Dam was built in 1970, how was it that there was no fish passage provided? Was this a FERC permitting process and what happened during the last relicensing?

Next Steps and Closing

Ken Ghalambor (Ross Strategic) thanked Board members for their participation and adjourned the meeting. The next regular Board meeting will be May 4, 2023 as a hybrid (in-person/online) meeting at the Veterans Memorial Museum.

Attachment A

Board Staff/Board Guests:

Those that participated virtually are noted with an asterisk.

- Alex Dupey, MIG
- Alexandra Gustafson, Trout Unlimited*
- Alex Smith, DNR*
- Andrea McNamara Doyle, Department of Ecology, Director, Office of Chehalis Basin
- Anthony Waldrop, Grays Harbor Conservation District*
- Arthur RD Grunbaum*
- Bob Stowe, Stowe Development and Strategies
- Brandon Parson, American Rivers*
- Brian Shay, City of Hoquiam*
- Brian Stewart, Conservation Northwest
- Carrie Sessions, Governors Office*
- Casey Hart, Ross Strategic
- Christa Bale, Coast Salmon Partnership
- Cindy Bradley, OCB
- Cody Duncun, TransUltra
- Colleen Granberg, Department of Natural Resources*
- Craig Zora*
- Cynthia Carlstad*
- Dan Maughan, Maughan Family Farms*
- Daniel Iacofano, MIG
- Dave Bingaman, Quinault Nation*
- Dave Rogers, MIG
- David E. Ortman*
- Diane Butorac, Department of Ecology*
- Drew Meador, DFW*
- Erik Martin, Chehalis Flood Control Zone District*
- Frank Corbin, Flood Control Zone District Advisory Committee*
- Heather Page, Anchor QEA
- Hope Rieden, DNR*
- Izzy Zucker, Pyramid*
- Jay Matonte*
- Jenn Tice, Ross Strategic*
- Jess Helsley, Wild Salmon Center*
- Jim Waldo*
- Jim Weber*

- John Robinson, GTH for the District*
- John Winkowski, WDFW
- Kat Dickey, Department of Ecology, Office of Chehalis Basin
- Karen Allston*
- Ken Ghalambor, Ross Strategic
- Kenny Behen, WDFW*
- Kirsten Harma, Chehalis Basin Lead Entity Program
- Kris Koski, Port of Grays Harbor
- Kylin Brown*
- K. Tennyson*
- Larry Karpack, Watershed Science & Engineering*
- Larry Listelle, ASRP
- Lauren Dennis, Ross Strategic*
- Lee First, Twin Harbors Waterkeeper*
- Lizzie Jespersen, Pyramid Communications*
- Marisa Litz, WDFW
- Mark Gaines, WSDOT
- Mark Glyde*
- Matt Dillan, Flood Control Zone District
- Meghan Kernan, WDFW
- Merri Martz, Anchor QEA*
- Michaela Jellicoe*
- Mike Scharph, WDFW
- Mitch Friedman, Conservation NW*
- Nat Kale, Department of Ecology, Office of Chehalis Basin
- Nick Bird, City of Aberdeen*
- Nic Scott*
- Nicole Czarnomski, WDFW*
- Norm Chapman, City of Centralia Planning Commission
- Renelle Smith*
- Sam Imperati, ICM
- Sarah Reich*
- Scott Boettcher, Chehalis River Basin Flood Authority*
- Shelby Thomas, Ross Strategic*
- Sou Garner, MIG
- Stephen Lyle, Bucoda
- Stevie Colson, OCB
- Tara Livingood-Schott. Chehalis Tribe*

- Tammy Domike, Citizens for a Clean Harbor*
- Teri Wright, Wild Orca*
- Todd Chaput, Economic Alliance of Lewis County
- Trish Rolfe*
- Victoria Knorr*