MEMORANDUM

Date: October 5, 2023
To: Chehalis Basin Board
From: Ken Ghalambor, Ross Strategic
Re: October 5 Board Meeting Presentation on Strategy Development Process

Introduction / Background

At the October 5-6, 2023 Board meeting, we will be working on the next series of exercises to develop and refine the Chehalis Basin Strategy process and schedule. The topics will include:

- Recap of major themes and feedback from the September 7 Board meeting
- Review of draft definitions of a Baseline/No Strategy scenario and Work Elements/Options for the comparative analysis, including any updates from the September 7 Board meeting
- Conduct preliminary package development process in small groups, followed by full Board debrief
- Next steps

The Board will not be asked to make any decisions in October. The Board will spend time in small groups and full Board discussions to:

- Develop a preliminary range of packages that will inform the creation of evaluation factors and data collection. This is the first step in the comparative analysis process; the Board will have more opportunities to develop and refine packages.
- Confirm Baseline/No Strategy assumptions.
- Begin to consider how common elements and/or other unique elements should be considered for packages.
- Provide staff direction to inform work and analyses needed over the next 12-15 months, e.g., levee refinements, Skookumchuck dam options, and tradeoff analyses.

In addition to an accompanying PowerPoint presentation for the October meeting, this memo also includes:

- Updated draft definitions of a Baseline/No Strategy scenario for the comparative analysis
- Updated draft definitions of Work Elements/Options
- Preview of package development exercise for the October meeting

Definitions of CBS Package Options: Baseline/No Strategy

This section includes a draft definition of the baseline/no strategy scenario for the comparative analysis. Based on Board feedback at the September meeting, we updated the description for the assumed base-condition to be identical for each work element.

Baseline/No Strategy Definitions

Short: The "Baseline/No Strategy" package includes only activities and projects for each work element that are either currently underway or are *not* funded through or coordinated by OCB. It only includes projects and programs funded through June 2025 and nothing after.

Full: Because the budget for the 2025-27 biennium is uncertain, the recommended Baseline/No Strategy for the comparative analysis should include designed and funded projects and programs to address flood damage and/or aquatic species, including those underway and those funded for implementation or scheduled for implementation through the 2023-25 biennium. For the purposes of the Baseline/No Strategy for the comparative analysis, there is no assumption of OCB-sponsored Strategy work after 6/30/2025 to allow enough time for consultants to complete a benefit-cost, socioeconomic/environmental justice, and ecosystem services analysis of Strategy packages to support Board decision-making before the target decision date of fall 2026. The only exception to this is assuming the Aberdeen-Hoquiam North Shore Levee project receives full funding, given the legislature's expressed commitment to provide the remaining funding needs. This Baseline/No Strategy definition does not preclude the Board from developing their 2025-27 biennium budget recommendations. Finally, for purposes of the comparative analysis only, the analyses will not assume any locally-led projects, though that does not preclude the possibility of continued and future locally-led projects, such as the flood warning system, Chehalis Basin Lead Entity projects, etc.

The Baseline/No Strategy package is summarized across work elements below.

FRE & AIRPORT LEVEE	LEVEES, DIVERSION/ CONVEYANCE WITH ASSOCIATED TRANSPORTATION IMPROVEMENTS	FLOODPROOFING, ELEVATION, AND ACQUISITION	FLOODPLAIN MANAGEMENT & LAND USE PLANNING	SKOOKUMCHUCK DAM	ASRP: HABITAT	OTHER AQUATIC SPECIES ACTIONS: OTHER HS AND PREDATION	COMMON ELEMENTS
• No OCB-led basin-wide coordinated/ funded effort	• No OCB-led basin-wide coordinated/ funded effort	• No OCB-led basin-wide coordinated/ funded effort	• No OCB-led basin-wide coordinated/ funded effort	• No OCB-led basin-wide coordinated/ funded effort	• No OCB-led basin-wide coordinated/ funded effort	• No OCB-led basin-wide coordinated/ funded effort	• No OCB-led basin-wide coordinated/ funded effort

Work Element Descriptions and Options

This section includes high-level descriptions of the major Chehalis Basin Strategy work elements and preliminary options for potential packages for the comparative analysis. Based on Board feedback at the September meeting, we updated the definitions of the flood retention facility options and the options for levees, diversion, and conveyance, all of which will be discussed in detail at the October meeting. [Note that these working definitions are intentionally broad because you will add consensus-based detail as the comparative process evolves.]

WORK ELEMENT	DESCRIPTION/OPTIONS
Common Elements	**Description** • Work elements the Board will continue to support that are consistent across any packages that comprise a long-term Chehalis Basin Strategy: – *Erosion Management Program:* Construct projects that manage erosion and improve aquatic habitat conditions by promoting the use of bioengineering techniques and reducing the use of hard bank stabilization practices. – *Flood Authority Projects:* Construct local-scale flood projects to protect people, property, and infrastructure and improve communities' readiness. – *Flood Warning System:* Maintain and/or improve an early flood warning system that provides real-time information to track and monitor flood conditions and sends email alerts to subscribers to afford them more time to respond to rising water. – *Resiliency Program:* Support actions that increase the ability of basin communities to withstand, respond, adapt, and recover from adversity due to flood events. – *Transportation System and Accessibility Improvements:* Support local actions to protect transportation corridors from flood damage and ensure future transportation projects incorporate flood protection measures, e.g., emergency access routes. – *Agricultural Viability:* Support projects designed to promote the continued viability of agriculture in the Basin (e.g., farm pads, flood fencing, existing WSCC programs, SW Growers Co-Op, Initiative for Working Riparian Lands). – *Additional Analyses for Strategy Development:* Other yet-to-be-identified analyses that support the advancement of the Chehalis Basin Strategy goals, e.g., forestry practices. **Options** • *High*: Support a "high level" of investment for common elements • *Medium*: Support a "medium level" of investment for common elements • *Low*: Support a "low level" of investment for common elements • *None*: Do nothing
Flood Retention Facility (FRE) & Airport Levee Improvements	**Description** • Construct a flood retention facility (dam) near Pe Ell. • Raise the Chehalis-Centralia Airport levee. • Implement associated mitigation actions.

WORK ELEMENT	DESCRIPTION/OPTIONS
	Options • *Yes*: Construct FRE, raise airport levee, and associated mitigation actions • *Modified*: Changes in operation (frequency or timing) or physical structure; different purpose and need than SEPA and NEPA EISs. [Note: could require conducting new project-level environmental review separate from current SEPA and NEPA EIS processes] • *None*: Do nothing
Levees, Diversion/ Conveyance	**Description** • Construct all or a subset of the following actions: – Construct a set of new and/or expanded levees in the upper Chehalis basin, including near the Chehalis, Skookumchuck, and Newaukum Rivers, including raising Chehalis/Centralia airport levee, a new ring levee in Adna, and other new and/or expanded levees in the Chehalis/Centralia area. – Construct a diversion and increase conveyance near the Mellen Street Bridge in Centralia and relocate the Mellen Street Bridge and approaches. – Construct additional measures associated with the levees and diversion/conveyance to minimize impacts to transportation corridors, e.g., I-5, Mellen Street, state highways 6 and 12, etc. – Implement associated mitigation actions. **Options** • *Levees, diversion, and conveyance*: Construct all proposed levees, diversion/conveyance near Mellen Street Bridge, associated transportation improvements, and associated mitigation • *Levees only*: Construct all proposed levees, associated transportation improvements, and associated mitigation • *Diversion and conveyance only*: Construct diversion/conveyance near Mellen Street Bridge, associated transportation improvements, and associated mitigation • *Skookumchuck levees only*: construct new or expanded levees near the Skookumchuck River, associated transportation improvements, and associated mitigation • *None*: Do nothing
Floodproofing, Elevation, and Acquisition	**Description** • Voluntarily floodproof, elevate, acquire, and/or relocate potentially flood-prone structures out of harm's way and acquire properties that can serve dual purposes for the Strategy. **Options** • *High*: "High investment" for floodproofing, elevations, and acquisitions • *Medium*: "Medium investment" for floodproofing, elevation, and acquisitions • *Low*: "Low investment" for floodproofing, elevation, and acquisitions • *None*: Do nothing

WORK ELEMENT	DESCRIPTION/OPTIONS
Skookumchuck Dam	**Description** • Recommendations under consideration by the Board for modifying the Skookumchuck Dam to support flood damage reduction and/or aquatic species restoration goals after the dam is no longer needed for power generation by TransAlta in 2025. **Options** • *Dam removal / off-channel storage:* Remove the dam and construct an alternative, off-channel reservoir • *Dam removal only:* Remove the dam • *Combo fish/flood:* Construct modifications to augment fish passage and increase discharge capacity for flood management, including improving fish collection, improving fish sluice, installing new outlet, and direct pipe to customers • *Fish passage only:* Construct modifications to augment fish passage, including improving fish collection and improving fish sluice • *Flood reduction only:* Construct modifications to increase discharge capacity for flood management • *None:* Do nothing
ASRP: Habitat	**Description** • Construct projects across the basin to restore and protect aquatic habitats to support populations of native aquatic species into the future. **Options** • *High*: (i.e., ASRP Scenario 3+) Protects/restores 555 miles of river/stream/estuary habitat, corrects 450 fish passage barriers, improving access to 400 miles of river/tributary habitat, and restores 16,700 acres of riparian/floodplain habitat. Builds on ASRP Scenario 3 below, with the addition of estuarine habitats, and focus on benefits to Chinook salmon (both fall and spring runs). • *Medium-High:* (i.e., ASRP Scenario 3) Protects/restores 450 miles of river/stream habitat, corrects 450 fish passage barriers, improving access to 400 miles of river/tributary habitat, and restores 15,300 acres of riparian/floodplain habitat. Builds on ASRP Scenario 2 below, with added focus on increasing spatial and life history diversity and distribution of species throughout more of the basin. • *Medium:* (i.e., ASRP Scenario 2) Protects/ restores >300 miles of river/stream habitat, corrects 300 fish passage barriers, improving access to 300 miles of river/tributary habitat, and restores 10,200 acres of riparian/floodplain habitat. Builds on ASRP Scenario 1 below, with an added focus on restoring the best opportunities to benefit multiple species and increase spatial distribution. • *Low:* (i.e., ASRP Scenario 1) Protects/restores >200 miles of river/stream habitat, corrects 200 fish passage barriers, improving access to 200 miles of river/tributary habitat, and restores 9,000 acres of riparian/floodplain habitat. Protects/enhances existing core habitats. • *None:* Do nothing
Other Aquatic Species Actions: "Other Hs" and Predation	**Description** • Recommendations under consideration by the Board on advancing "other H's" (harvest, hatcheries, hydropower) and predation for aquatic species restoration. [Note that the Board recognizes it does not have authority over many of these

WORK ELEMENT	DESCRIPTION/OPTIONS
	policies and will only recommend policies that work in coordination with responsible jurisdictions.] **Options** • *High*: Recommend "high level" of "other H" and predation considerations • *Medium*: Recommend "medium level" of "other H" and predation considerations • *Low*: Recommend "low level" of "other H" and predation considerations • *None*: Do nothing
Floodplain Management / Land Use Planning	**Description** • Provide technical assistance, resources, and recommended actions for local governments to improve their floodplain management and land use programs, including recommendations to improve land use and zoning based on reviews of local jurisdiction comprehensive plans and development codes. **Options** • *High*: Recommend "high level" of floodplain management and land use planning improvements • *Medium*: Recommend "medium level" of floodplain management and land use planning improvements • *Low*: Recommend "low level" of floodplain management and land use planning improvements • *None*: Do nothing
Unique Elements	**Description** • Unique elements that are dependent on the specific Board package under consideration **Options** • *TBD:* Unique elements identified that are dependent on the specific Board package under consideration • *None*: Do nothing

Package Development Exercise

During the October Board meeting, Board members will break into small groups and be asked to identify a set of packages using the options outlined in the table below and based on the definitions for work elements and options provided in the section above. The small group exercise will be followed by a full Board debrief. Note that the packages identified at the October Board meeting *will not necessarily* be the final packages evaluated in the comparative analysis but will inform future work and analyses needed over the next 12-15 months, e.g., levee refinements, Skookumchuck dam options, tradeoff analyses. The Board will complete another package development exercise after new information and updated definitions are available, likely in early 2025.

	Flood Damage Reduction		**Dual-Purposed**			**Aquatic Species Restoration**		**Other**
Elements	Flood Retention Facility & Airport Levee Improvements	Levees & Diversion / Conveyance	Floodproofing, Elevation, & Acquisition	Floodplain Management & Land Use Planning	Skookumchuck Dam	ASRP: Habitat	Non-Habitat Aquatic Species Actions (Other Hs and Predation)	Unique Elements
Options	• Yes • Modified • None	• Levees, diversion, and conveyance • Levees only • Diversion and conveyance only • Skookumchuck levee only • None	• High • Medium • Low • None	• High • Medium • Low • None	• Dam removal/ off channel storage • Dam removal only • Combo fish/flood • Fish passage only • Flood reduction only • None	• High • Medium-High • Medium • Low • None	• High • Medium • Low • None	• TBD • None

Potential Packages

	Flood Damage Reduction		Dual-Purposed			Aquatic Species Restoration		Other
Elements	Flood Retention Facility & Airport Levee Improvements	Levees & Diversion / Conveyance	Floodproofing, Elevation, & Acquisition	Floodplain Management & Land Use Planning	Skookumchuck Dam	ASRP: Habitat	Non-Habitat Aquatic Species Actions (Other Hs and Predation)	Unique Elements
Baseline/No Strategy	No OCB-led basin-wide effort	No OCB-led basin-wide effort	No OCB-led basin-wide effort	No OCB-led basin-wide effort	No OCB-led basin-wide effort	No OCB-led basin-wide effort	No OCB-led basin-wide effort	No OCB-led basin-wide effort
Package A								
Package B								
Package C								