CHEHALIS BASIN BOARD SUMMARIZED MEETING AGENDA AND ACTIONS

Date: April 4, 2019
Time: 9:00 am to 3:00 pm
Location: Aberdeen Rotary Log Pavilion: 1401 Sargent Blvd, Aberdeen, WA 98520

ITEM	FORMAL ACTION	FOLLOW-UP ACTION
1. Consent April 4, 2019 Agenda; Approval of March 7, 2019 Meeting Summary	Decision: Agenda approved. March 7, 2019 meeting summary approved.	No follow-up action.
2. Overview of ASRP and Early Action Reach Example	Discussion	OCB staff will include continued discussion of the ASRP on May Board meeting agenda.
3. ASRP Scenarios, Key Conclusions, Analogy and Model Results	Discussion	No follow-up action.
4. ASRP Breakout Sessions and Report Out	Discussion	No follow-up action.
5. Legislative Session Updates	Decision: Board Members approved Chair Vickie Raines signing a letter of support for the inclusion of 2019-21 Operating funds in the Senate budget for a staff position at the Northwest Agricultural Business Center through a proviso to the Washington Department of Agriculture.	Board members will continue to advocate for the Board budget recommendation to the legislature.
6. Next Steps and Closing	Discussion	The next Board meeting is scheduled for May 2, 2019 in Centralia.

Attendees

Chehalis Basin Board Members Present:

- Edna Fund, Chehalis River Basin Flood Authority
- Harry Pickernell, Confederated Tribes of the Chehalis Reservation
- Jay Gordon, Chehalis River Basin Flood Authority
- Steve Malloch, Office of the Governor
- Tyson Johnston, Quinault Indian Nation
- Vickie Raines, Chair, Chehalis River Basin Flood Authority

Chehalis Basin Board Ex-Officio Members Present:

- Gordon White, Department of Ecology
- Michael Garrity, Department of Fish and Wildlife
- Stephen Bernath, Department of Natural Resources
- Stu Trefry, Conservation Commission

Board Staff/Board Guests Present:

- Alex Rosen, Department of Ecology
- Andrea McNamara Doyle, Department of Ecology, Director of Office of Chehalis Basin
- Anthony Waldrop, Grays Harbor Conservation District
- Bob Amrine, Lewis County Conservation District
- Brian Bennett, Wild Steelhead Coalition
- Brian Cochrane, Conservation Commission
- Brian Shay, City of Hoquiam
- Brian Stewart, Conservation Northwest
- Charlene Andrade, Department of Commerce
- Chip McConnaha, ICF, ASRP Science Review Team
- Chrissy Bailey, Department of Ecology, Office of Chehalis Basin
- Chuck Stambaugh, Department of Fish and Wildlife
- Cindy Bradley, Department of Ecology, Office of Chehalis Basin
- Claire Williamson, Department of Fish and Wildlife
- Colleen Granberg, Department of Natural Resources
- Colleen Suter, Confederated Tribes of the Chehalis Reservation, ASRP Science Review Team
- Curt Hart, Department of Ecology
- Cynthia Carlstad, Northwest Hydraulic Consultants
- Dave Bingaman, Quinault Indian Nation, ASRP Steering Committee
- Dave Howe, Department of Fish and Wildlife

- Glen Connelly, Confederated Tribes of the Chehalis Reservation
- Greg Haller, Pacific Rivers
- Heather Page, Anchor QEA
- Hope Rieden, Confederated Tribes of the Chehalis Reservation, ASRP Science Review Team and Steering Committee
- Jason Gillie, Confederated Tribes of the Chehalis Reservation, ASRP Steering Committee
- Jess Helsley, Wild Salmon Coalition
- Jim Kramer, Ruckelshaus Center (Facilitator)
- John Ferguson, Anchor QEA, ASRP Science Review Team
- John Gaffney, InterFluve
- John Soden, Natural Systems Design
- Ken Ghalambor, Ruckelshaus Center
- Kiley Smith, Grays Harbor Noxious Weed Control Board
- Larry Lestelle, Biostream NW, ASRP Science Review Team
- Mark Mobbs, Quinault Indian Nation, ASRP Science Review Team and Steering Committee
- Merri Martz, Anchor QEA, ASRP Science Review Team
- Michelle Whitfield, Department of Commerce
- Millie Kennedy, Confederated Tribes of the Chehalis Reservation
- Nicole Czarnomski, Department of Fish and Wildlife, ASRP Steering Committee
- Shane Anderson, North Fork Studios
- Tammy Domike, Clean Grays Harbor
- Tim Abbe, Natural Systems Design, ASRP Science Review Team
- Tom Kollasch, Grays Harbor Conservation District

Welcome, Introductions

Chair Vickie Raines called the meeting to order at 9:14 a.m., and welcomed the Board, staff, and audience. Attendees provided brief introductions.

Jim Kramer (Ruckelshaus Center) acknowledged Shane Anderson (North Fork Studios), who was filming and recording the Board meeting. Board members and participants raised no concerns about being filmed.

Jim invited Michael Garrity (Department of Fish and Wildlife) to introduce himself, this being his first meeting serving as WDFW's ex-officio Board member. Michael is the Columbia River Policy Manager in the WDFW Habitat Program and noted his familiarity with the Chehalis Basin Strategy. Jim also acknowledged Nicole Czarnomski (WDFW), who is temporarily serving as WDFW's voting representative on the Aquatic Species Restoration Plan (ASRP) Steering Committee.

Consent Agenda

The Board did not have additions or revisions to the April 4, 2019 agenda.

BOARD DECISION: Agenda approved by consensus with all voting members' thumbs up.

Approval of March 7, 2019 Meeting Summary

The Board did not have additions or revisions to the March 7, 2019 Meeting Summary.

BOARD DECISION: March 7, 2019 meeting summary approved by consensus with all voting member's thumbs up.

Overview of ASRP and Early Action Reach Example:

- ASRP Early Action Reach Example, Wynoochee sub-basin
- ASRP Scenarios - Key Conclusions
- ASRP – Blue Cat Analogy/Thought Exercise
- ARSP- Scenario Model Results
- ASRP Breakout Sessions

BOARD DISCUSSION: Please see Attachment A.

Legislative Session Updates

BOARD DISCUSSION: Please see Attachment B

Next Steps and Closing

The next Board meeting is scheduled for May 2, 2019 in Centralia at the Train Depot Multi-Purpose Room.

Attachment A

Overview of ASRP and Early Action Reach Example

Jim Kramer (Ruckelshaus Center) provided an overview of the ASRP and reminder of the Early Action Reach projects. This information will be brought back to the Board at its May meeting for additional discussion and feedback.

There are four major strategies in the ASRP: Restoration, Protection, Institutional Capacity, and Community Planning and Involvement. Jim noted that the focus of today's presentation was the Restoration strategy. Protection, Institutional Capacity, and Community Planning and Involvement strategies will be addressed in more detail at subsequent meetings.

- Protection strategy - ensure protection of important ecological areas and ecosystem processes, as well as the protection of the state's investment in restoration.
- Institutional Capacity - the needed capacity of in-basin partners to carry out restoration and protection work associated with plan implementation. Focus on a strategic investment strategy to ensure that the ASRP's work is sustainable for the long-term.
- Community Planning and Involvement - address the impact that the plan will have on local communities and build support for a healthy aquatic system as part of a vibrant community.

To begin development of the restoration and protection strategies, the basin was divided into 10 unique Ecological Diversity Regions. These different geographic areas have distinct ecological characteristics. . In order to value the contribution of the diverse parts of the basin and tailor restoration approaches within each, the boundaries were drawn to group similar systems or habitat types together.

Jim reminded the Board members that they will be asked to confirm the ASRP vision statement and objectives.

The ASRP Steering Committee has formulated the following vision statement for the ASRP: *"To provide for a future where the Chehalis Basin can support healthy and harvestable salmon populations, robust and diverse populations of native aquatic and semi-aquatic species, and productive, self-sustaining ecosystems that are resilient to climate change and anthropogenic stressors, while also honoring the social, economic, and cultural values of the region.*"

The Board will be asked to support a plan that meets the following objectives:

- Protects those aspects of the basin that scientific analyses show are currently working for the benefit of aquatic species; and
- Restores ecological elements of the basin that scientists agree pose the greatest risk to the basin's aquatic species to survive and thrive into the future.

Jim then highlighted several aspects working for the benefit of aquatic species within the basin, including:

- Forest practices have been improved
- Most diverse basin in the state for aquatic species
- Significant runs of wild and hatchery salmon
- Important cold-water springs and tributaries
- Opportunity for restoration is one of the most significant in the state

Jim then highlighted the elements of the basin that are not working in the basin and pose a risk to aquatic species, including:

- Lack of suitable habitat and food availability
- Riparian areas outside of managed forests have been significantly degraded
- Summer temperatures are hot, and getting worse
- Lack of large wood in streams
- Invasive (non-native) species are abundant
- Development pressure due to population growth
- Land use practices and policies
- Floodplain wetland functions have been lost and degraded

The effects of the elements that are not working are all limiting factors for survival of the basin's native aquatic species. The approach to restoration in the ASRP will be address what is broken, protect and enhance what is working, and restore or reestablish natural processes to support productive habitat.

Jim reminded the Board that five sub-basins have been selected for "early action", including development of reach-scale restoration designs:

- Newaukum River sub-basin
- South Fork Chehalis River sub-basin
- Skookumchuck River sub-basin
- Satsop River sub-basin
- Wynoochee River sub-basin

John Soden from Natural Systems Design will present next, with a focus on the early action reach design in the Wynoochee sub-basin. Other examples will be provided at future meetings. Key comments and discussion topics included:

- Tom Kollasch (Grays Harbor Conservation District) noted that the lack of riparian cover seen by agricultural landowners in some places on the Wynoochee and Satsop rivers is not due to removal of riparian buffers, but rather other river processes that are affecting riparian buffers like channel migration.

FOLLOW-UP ACTION: OCB staff will include continued discussion of the ASRP on the May Board meeting agenda.

ASRP Early Action Reach Example, Wynoochee sub-basin

John Soden (Natural Systems Design) provided an overview of the Wynoochee sub-basin analysis and design process. The Wynoochee sub-basin supports a number of native aquatic species, including coho and fall Chinook. The area that being analyzed is between approximately river mile 14 and 16, by the Wynoochee-Wishkah Bridge. Between June and October 2018, NSD staff spent time walking the reach, classifying vegetation, measuring pools, counting logs, and examining historical channel migration and erosion risks. They determined the root cause of impairment was the loss of riparian corridor and mature floodplain forest. The channel in this area tends to experience rapid erosion and has minimal large instream wood.

Grays Harbor Conservation District staff coordinated onsite meetings between landowners and technical staff to discuss risk factors related to the river, and allow landowners to share their concerns and questions. Landowners' main concerns included bank erosion and channel avulsion. Once landowners understood their potential risk, there was interest to discuss potential restoration actions. Landowners also want to understand compensation options available to change the use of their land from uses like pasture to riparian forest.

Design and development of the Wynoochee reach-scale "restoration corridor" focuses on restoring the large wood cycle. The immediate proposal includes the addition of engineered logjams to improve habitat and channel stability. Actions like pasture restoration, wetland enhancement and riparian plantings would allow over the long-term (2020-2040), the re-establishment of floodplain forests and self-sustaining riverine and floodplain processes and habitats.

Jim reminded the Board that this project is in the conceptual design phase. The next step is negotiation with the landowners to discuss available compensation options and gain a better understanding of the landowner's interests. Once negotiations are complete, the process of completing design and obtaining permits will begin. Construction could begin within the early part of next year.

Key comments and discussion topics included:

- Stephen Bernath (DNR) was interested in understanding analyses completed both up and downstream of the reach, to understand offsite impacts of engineered logjams. John Soden noted that NSD uses a 2D hydraulic model to determine flow depth, velocity, and extent, and that the model includes areas above the reach area so that back-channeling can be evaluated.
- Board members were interested in knowing where the Wynoochee sub-basin fits within the range of ecological diversity regions in terms of have high potential for restoration and productivity. John noted that the Wynoochee is one of the highest producers of coho in the Chehalis Basin.

ASRP Scenarios - Key Conclusions

Nicole Czarnomski (Department of Fish and Wildlife) briefed the Board on information that was used to develop the three restoration scenarios, as well as the three key takeaway messages from the modeling results for the three scenarios. The ASRP scenarios were developed utilizing several information sources. This includes the expertise of the Science Review Team, summer field trips throughout the basin, scientific research studies funded under the Chehalis Basin Strategy, model analyses, input from local practitioners, 2018 Science Symposium feedback, and input received on the November 2017 initial ASRP document.

When considering the scenario model results, the Steering Committee and SRT identified three key messages that are important to highlight:

1. Climate change and development will threaten all populations in the basin– resulting in a "declining baseline." Not taking any action equals significant reduction in the potential of the basin to support native species, and digging out of the "hole" will become more challenging over time.
2. The ASRP focuses on improving habitat capacity but cannot guarantee numbers of fish or other aquatic species. There is a high degree of confidence in the restoration actions that should be taken and where to improve conditions, but external factors like ocean and estuary conditions could have significant effects on species that utilize both areas in different stages of their lives.
3. It will take a significant investment over the next couple of decades to counter past degradation, temper the effects of climate change, and protect against further degradation from human development.

ASRP – Blue Cat Analogy/Thought Exercise

Cynthia Carlstad (Northwest Hydraulic Consultants) introduced an exercise to help communicate what is being proposed for habitat and aquatic species in the Chehalis basin through the ASRP. She used the analogy of the "Blue Cat Lodge," a waterside lodge motel that was once a popular summer destination, which sadly became run down and poorly attended over time, causing it to shut down. Fortunately, the lodge was ultimately refurbished and reopened, with the help of the community, and now both the lodge and community are thriving again.

The Chehalis Basin historically had thriving populations of diverse species that utilized habitat throughout the basin for food and refuge at different stages of their lives. The Chehalis currently has limited available habitat and food for species to access and conditions are not safe for fish to inhabit areas at certain times of the year when it is most important.

There is an understanding that the basin used to provide for salmon and other aquatic species and how the current conditions have impacts to both species and local communities. Through restoration efforts, there is confidence that we can restore the basin to have enough potential to support increased species abundance and diversity.

ARSP- Scenario Model Results

Jim introduced the Board to the models being used to assess habitat conditions for the ASRP, including an Ecosystem Diagnosis and Treatment (EDT) model, a Watershed Assessment model, and an Amphibian Occupancy Model. Jim noted that all models are interpretations of reality rather than precise predictions, but are useful in providing information on how species might respond to different conditions. The models used for the ASRP are useful tools to point practitioners and the Board in the right direction with regard to where action is needed, what types of actions, and relative levels of benefit that might be realized from those actions.

Uncertainty is inherent in models, due to things like future climate conditions and land use degradation, incomplete or outdated habitat data, and the relative effectiveness of restoration. However without the use of models, uncertainties are even greater and more difficult to deal with. In reviewing model outcomes, it is important to look at the patterns of change predicted and not fixate on specific numbers.

Chip McConnaha (ICF) briefed the Board on model results of EDT, which predicts salmonid responses to restoration and protection actions proposed in the different ASRP scenarios. He provided several key takeaways, including:

- The Chehalis Basin is expected to change significantly in the future and will affect native aquatic species and ecosystems.
- Without significant restoration actions, these changes will have strong negative impacts on native species and ecosystems.
- The ASRP restoration scenarios have the potential to counter these changes to the aquatic environment for salmonids, and the changes are expected to be similar for other native species and their environments.

The EDT model results give a sense of the magnitude of changes, and the direction that can be expected over time. The analysis evaluated the impacts of the ASRP restoration scenarios on the potential of habitat to support five species of anadromous salmonids (Fall Chinook, Spring Chinook, Coho, Steelhead, and Chum).

To provide both ends of the production spectrum in the basin, the main focus of the results being presented at the April meeting were for coho and spring Chinook. Coho are the most widely distributed and occur in every modeled sub-basin. Spring Chinook have the most restricted distribution, are the least abundant, and most negatively affected by habitat conditions. Results are presented for the future baseline (the absence of the ASRP), mid-century (2040), and end-of century (2080).

The scenarios represent increasing levels of effort (1-3), and build on one another. They are additive, not alternatives, and expand the effectiveness/increase the benefits of restoration actions as they increase:

- Scenario 1: Protect and Restore Core Habitats
- Scenario 2: Protect and Expand Restoration
- Scenario 3: Protect Core Habitats, Restore Spatial Diversity

Key conclusions from the modeling include that with "No Action" (the absence of the ASRP), the abundance (number of fish) of coho and spring Chinook decline markedly by late century, mostly due to climate change and temperature. With regard to spatial diversity for coho, the number of "larger" sub-populations (sub-basins with more than 50 fish) declines in late century if no is taken. All scenarios offer substantial benefits over not taking any action.

Another key conclusion is that all three ASRP scenarios substantially moderate baseline effects; scenarios 1 and 2 still result in loss of abundance for spring Chinook, fall Chinook, and chum salmon relative to current conditions, but scenario 3 produced positive changes for all species except fall Chinook by late century relative to current conditions. The model results show that significant action (scenario 3) is needed for positive change in species status by late century relative to today's condition.

More detail on the EDT model results for the ASRP scenarios can be reviewed in the following PowerPoint: EDT Model Results.

ARSP- Draft Scenario Acres, Miles, and Costs

Jim Kramer outlined the range of miles of channel restored, acres of riparian area or floodplain restored, number of fish barriers removed, and average costs associated with each ASRP scenario. Through more discussion over the next few months, the Board, ASRP Science Review Team and ASRP Steering Committee may refine the ASRP scenarios as there is better understanding of what restoration efforts look like on the ground, what trends are coming, and what it takes to affect those trends.

PRELIMINARY ESTIMATES:

Restoration Scenario	Miles of Channel Restored	# of Fish Barriers Removed	Miles Opened Up with Barrier Removal	Riparian & Floodplain Acres Restored	Cost Range		
					Low	Average	High
#1, Protect and Enhance Core Habitats for All Species	220	150	61	9,600	$293M	$442M	$608M
#2, Protect and Enhance Core Habitats and Restore Best Opportunities	315	250	157	10,900	$366M	$541M	$735M
#3a, Protect and Enhance Core Habitats and Expand Diversity and Distribution	430	350	254	15,000	$516M	$762M	$1.3B
#3b, Protect and Enhance Core Habitats, Expand Diversity/Distribution, Remove Skookumchuck Dam	440	351	264	15,000	$610M	$892M	$1.2B

Jim reiterated three key conclusions from the draft ASRP scenarios, model results, and cost estimates:

1. We face a declining baseline looking toward the future. The hole will only get deeper, and prospects for success less certain, unless actions are taken sooner than later.
2. ASRP focuses on improving habitat capacity. We have confidence in the actions to take and locations to take them in the basin's freshwater environment.
3. It will take a significant investment over the next couple decades to make the difference that is needed.

ASRP Breakout Sessions

Board members and meeting participants were divided into four small groups for facilitated breakout sessions to discuss and reflect on the ASRP related information presented at the meeting. Each group included a mix of Board, Steering Committee, and SRT members and other meeting participants, and was asked to answer three questions:

1. From both the Wynoochee early action reach example and ASRP scenarios, what is most inspiring to you?
2. What concerns do you have about the early action projects or scenarios?
3. What more information is important for your consideration of the ASRP, your organization and other important interest groups?

Below is a summary of the major themes discussed in the small groups, broken out by question.

From both the Wynoochee early action reach example and ASRP scenarios, what is most inspiring to you?

- The ASRP takes a collaborative, science-based, multi-species, basin-wide approach that can make a significant difference on-the-ground, even in the face of a changing climate.
- The ASRP and early-action reach process is engaging and taking landowner perspectives into account, which requires integrated local efforts to work within the community, cultural sensitivity, respecting landowner's intelligence, developing appropriate incentive structures, and having a truly "two-way" conversation.
- The ASRP recognizes the needs of both aquatic species and the people/communities of the Basin and provides hope that there is a truly implementable plan that can be economically and politically feasible.
- The ASRP is now moving from a "what can we do" phase to "what we are doing on-the-ground."

What concerns do you have about the early action projects or scenarios?

- The effects of climate change are daunting and may lead to Endangered Species Listings.
- While the ASRP takes a long-term and comprehensive approach, the authorizing environment changes over time, which will make securing long-term funding and political support a challenge.
- The ASRP depends on voluntary landowner willingness, which can impact the feasibility and timeliness of implementation, and how projects are prioritized to ensure they are durable and address underlying causes. There is also a broader question of whether appropriate landowner incentives can be developed, and projects sequenced appropriately to achieve optimal long-term benefits.
- The ASRP does not have a specific element to solicit and address cultural issues (this is not part of the regulatory process) and could better take tribal input/participation into the process.
- The ASRP has not necessarily adequately analyzed the effects of existing infrastructure (e.g., Wynoochee bridge, pipelines) or interactions with potential new projects/programs (e.g., proposed flood retention facility, Community Flood Assistance & Resilience Program).
- Potential changes in land use, population growth and development, and climate change may negatively impact successful implementation and lead to a decline in the overall baseline.
- Achieving long-term adaptive management, cross-agency buy in, and permitting can be a challenge.
- More work will be required to ensure the process is science-driven and continues to use the best available data.
- There is still a need to develop clearer messaging and communication materials, e.g., graphics, outreach materials, case studies.
- Finding enough resources (e.g., wood) and finding good contractors to construct projects may be a challenge.

What more information is important for your consideration of the ASRP, your organization and other important interest groups?

- Understanding our ability to create appropriate incentive options for landowners, while recognizing the need for flexibility and not a "one-size-fits-all" approach. Maintaining effective communication between willing landowners and other landowners across the basin to encourage their participation.
- Understanding project sponsorship and roles, and how implementation will engage local groups and local knowledge.
- Developing clear and concise communication materials that explain the ASRP priorities, timeframe, potential benefits, challenges, sequencing/costs, and on-the-ground examples of successful projects.
- Better understanding potential development pressures.
- Understanding how the ASRP will be integrated with other parts of the Chehalis Basin Strategy and how it will affect different the basin communities.
- Additional information on amphibians and non-salmon species.
- Strategies for maintaining legislative support, long-term funding commitments, and Trust responsibilities.
- Clearer understanding of the benefits/costs of implementation.

Attachment B

Legislative Session Updates

Jim Kramer summarized the Board's, Governor's, House and Senate proposed 2019-2021 Capital and Operating Budgets. The main focus was on the difference in the House and Senate proposals. This comparison table shows where OCB stands heading into the final weeks of the 2019 session:

Chehalis Basin Strategy 2019-21 Proposed Budget Comparisons				
OCB Budgets for 2019-21 (in millions)	**CBB RECOMMENDED** **ECOLOGY REQUESTED**	**GOVERNOR PROPOSED**	**HOUSE PROPOSED**	**SENATE PROPOSED**
Capital Budget				
On-the-Ground	$49.45	$31	$59.45	$33.75
Long-Term Strategy	$23.76	$19	$23.76	$16.25
Total	$73.2	$50*	$83.2**	$50*
Operating Budget				
OCB Operations	$1.46	$1.46	$0	$1.4

*Provides discretion for the Board to move funds between elements to meet program objectives.
**Provides discretion for the Board to move funds between elements so long as $25M is dedicated to the Aberdeen Hoquiam North Shore Levee.

Chairman Vickie Raines introduced Eric Larson (Aberdeen Mayor) and thanked him for use of the Aberdeen Log Pavilion. Mayor Larson provided the Board an update regarding the funding proviso included in the proposed House Capital Budget for the Aberdeen Hoquiam North Shore Levee. Mayor Larson encouraged the additional funding for the Aberdeen Hoquiam North Shore Levee. Project costs over the next biennium are an estimated $73 million with an immediate need of $25-30 million within the next year.

Jim reminded the Board of its approval at the February 2019 Board meeting for OCB Director McNamara Doyle to sign a Letter of Understanding regarding collaboration on regional agriculture development in South Puget Sound. The Northwest Agriculture Business Center has asked the Board to sign a letter of support to the Senate to support the inclusion of 2019-21 Operating Budget funds for Chehalis Basin and Southwest Washington agriculture revitalization efforts.

BOARD DECISION: Board Members approved Chair Vickie Raines signing a letter of support for the inclusion of 2019-21 Operating funds in the Senate budget for a staff position at the Northwest Agricultural Business Center through a proviso to the Washington Department of Agriculture.

Edna Fund (Chehalis River Basin Flood Authority) and Tyson Johnston (Quinault Indian Nation) are continuing efforts to speak with legislators to encourage the full $73.2 Million 2019-2021 Capital Budget funding.