CHEHALIS BASIN PARTNERSHIP

Fairfield Marriott Inn, Rochester, Washington
December 6, 2019
9:30am – 12:00pm

Meeting Summary

MEMBERS* and ALTERNATES' PRESENT

Wes Cormier*, *Grays Harbor County*
Mark Cox', *Grays Harbor County*
Bobby Jackson*, *Lewis County*
Lee Napier', *Lewis County*
Dave Windom*, *Mason County*
Kaitlynn Nelson', *Thurston County*
Alissa Shay', *Port of Grays Harbor*
Kim Ashmore*, City of Centralia*
Terry Harris*, *City of Chehalis*
Dan Wood*, *City of Montesano*
Brian Shay*, *City of Hoquiam (phone)*
Nick Bird*, *City of Ocean Shores*
Bobby Cox*, *Town of Pe Ell*
Dusty Guenther*, *Boistfort Valley Water*
Terry Willis*, *Grays Harbor Citizen*
Jim Hill*, *Lewis County Citizen*
Mike Noone*, *Ecology Water Resources*
Paula Holroyde*, Citizen, *League of Women Voters Thurston County*
Claire Williamson' *WDFW*
Bob Johnson*, *WDNR*
Brian Thompson*, *Lewis County Farm Bureau*
Jason Walter*, *Weyerhaeuser*
Jan Robinson*, *Chehalis River Basin Land Trust*
Lauren McFarland', *Quinault Indian Nation*
John Bryson*, *Quinault Indian Nation*

GUESTS

Jeff Nelson, Grays Harbor County; Caprice Fasano', *Quinault Indian Nation;* Joel Massman, *Keta Waters/Quinault Indian Nation contractor*; Tristan Weiss', *WDFW;* Brad Murphy, *Thurston County Planning;* Tim Wilson, *Thurston County Public Works*; Janet Strong, Grays Harbor *Audubon Society;* Tony Wilson, *Friends of Rocky Prairie;* Brandon Carman, Washington State *Recreation & Conservation Office (RCO);* Samuel Howell, *Aberdeen Citizen;*

STAFF

Kirsten Harma, *Partnership Watershed Coordinator*; Cynthia Carlstad, *Facilitator, NHC*

FOR MORE INFORMATION

- Meeting summaries are available on the Chehalis Basin Partnership website: www.chehalisbasinpartnership.org
- PowerPoint presentations from this meeting are available on the Chehalis Basin Partnership website: www.chehalisbasinpartnership.org/presentations

MEETING

1. Welcome, Introductions

The Chair convened the meeting and participants introduced themselves.

Approval of September Meeting Summary

All were in favor of the meeting summary with no changes were needed.

Ms. Harma passed around an attendance sheet to everyone.

Aquatic Habitat Projects and Streamflow Restoration Act Plans

Tristan Weiss, DFW, gave a presentation on aquatic habitat restoration planning in the context of RCW 90.94. His presentation was intended to point out some potential considerations that may be useful as the Partnership considers projects and actions to include in the Watershed Plan Addendum.

Salmon have a complex life history throughout which they utilize many habitat types and rely upon many stream functions as they migrate between their natal streams, to the ocean, and back again to spawn. Each life stage, from incubation, rearing, and spawning has specific habitat requirements that varies by species, time of year, and accessibility. By broadly targeting the restoration of salmon habitat, we are in practice targeting all aspects of salmon bearing watersheds, from the headwaters to the estuaries – even small streams that do no bear salmon, but provide essential habitat functions.

All of this complexity makes it difficult to prioritize habitat for restoration, given that each species relies on different habitats at different times and to varying degrees. For instance, restoration strategies that focus on the restoration of Coho habitat might first prioritize the restoration of lower river sloughs, then off-channel habitats, tributaries and upper mainstem rivers. Chinook restoration on the other hand might first prioritize upper mainstem rivers, then lower river sloughs, tributaries and off-channel habitats.

The prioritization of different habitat between species stems from their varying life histories – shown below in a salmon periodicity table from Mr. Weiss's presentation. It doesn't take much time to see that there are strong differences between the life stages of each of the four species shown here. Each salmon species utilizes rearing habitat year-round yet has different timings for spawning and incubation periods. Basically, the timing of habitat availability is critical for all species in varying degrees and at different times.

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Steelhead													
	Spawn	■	■	■	■	■							■
	Incubate			■	■	■	■	■					
	Rear	■	■	■	■	■	■	■	■	■	■	■	■
	Smolt			■	■	■	■						
Coho													
	Spawn	■										■	■
	Incubate	■	■	■	■							■	■
	Rear	■	■	■	■	■	■	■	■	■	■	■	■
	Smolt			■	■	■							
Chinook													
	Spawn								■	■			
	Incubate								■	■	■	■	■
	Rear	■	■	■	■	■	■	■	■	■	■	■	■
	Smolt		■	■	■	■	■	■	■				
Chum													
Below Falls	Spawn									■	■	■	■
Only	Incubate	■	■	■	■					■	■	■	■

Variability in habitat availability is largely driven by streamflow. At low flows, there may be insufficient flow for successful spawning. As streamflow increases, stream velocities become more optimal to salmon spawning –this varies slightly by each species. As stream velocities become too fast to enable effective redd building, the available habitat for spawning drops down again.

Because sufficient streamflows are critical to salmon viability, we use models of habitat suitability, salmon periodicity, and other methods to make estimates of how much habitat we can expect for different species across flow states. This is how minimum instream flow levels have been set within much of Washington.

All of this is further complicated by potential impacts from climate change. From 1953 to 1995, streamflows declined by nearly 20% in the Chehalis mainstem near Porter. Current climate projects estimate a similar degree of streamflow change in the next 20 years as a result of climate impacts.

Increased air temperatures are projected to significantly increase stream temperatures between now and 2040, resulting in significant expansion of stream reaches that will exceed mean august temperatures above 20 degrees. Past temperature and flow changes coincided with salmon declines of over 50% for most salmon species over the past 30 years. Largely due to projected in stream temperature increases, Spring-chinook are anticipated to become functionally extinct within the Chehalis by 2080.

Mr. Weiss explained the importance of this background - in a watershed restoration context, it is easy to feel the urgency of salmon habitat restoration in the Chehalis. Water IS habitat for salmon and the intent of RCW 90.94 is to restore and enhance streamflows to levels necessary to support robust, healthy and sustainable salmon populations. And despite all of the complexities and urgency of restoration, a clear, accountable plan towards achievable goals is essential to restore streamflows and improve salmon habitat. Citing from RCW 90.94:

- "At a minimum, the watershed plan must include those actions that the planning units determine to be necessary to offset potential impacts to instream flows associated with permit-exempt domestic water use…."
- "The highest priority recommendations must include replacing the quantity of consumptive water use during the same time as the impact and in the same basin or tributary…."
- "The highest priority recommendations must include replacing the quantity of consumptive water use during the same time as the impact and in the same basin or tributary…."
- "Lower priority projects include projects not in the same basin or tributary and projects that replace consumptive water supply impacts only during critical flow periods…."
- "…The watershed plan may include projects that protect or improve instream resources without replacing the consumptive quantity of water where such projects are in addition to those actions that the planning unit determines to be necessary to offset potential consumptive impacts to instream flows associated with permit-exempt domestic water use."

The remainder of Mr. Weiss's presentation focused on considerations he recommends for the Partnership in developing its portfolio of projects and actions for the Watershed Plan Addendum. To start, he noted the difference between "form-based restoration" - an engineered design to create some specific habitat feature such as a pool, or meet some specific goal such as stabilizing a bank, versus "process-based restoration" approaches - those that explicitly seek to re-establish the normative rates, magnitudes, and timings of processes that create self-sustaining ecosystems.

Process-based restoration tends to have higher success because it addresses the underlying sources of degradation. One example he gave is using beaver dam analogs to help slow down and spread the flow of water in a highly eroded stream channel with little to no riparian vegetation. This encourages riparian vegetation to recolonize and restores wetlands which provide numerous benefits to fish.

In addition to ensuring that individual projects are targeted to address the root causes of ecosystem degradation, other potential considerations when thinking about habitat restoration projects are:

- Look upstream and downstream to understand causes of habitat degradation
- Consider legacy impacts from historical land uses and events
- Consider potential climate and development impacts
- Build synergy between RCW 90.94 restoration and other planning priorities
- Encourage community dialogue and involvement

Regarding the portfolio of projects, Tristan recommends the following:

1. Plan –
    a. Define plan objectives, goals, and milestones; Don't reinvent the wheel!
    b. Incorporate accountability – project tracking, implementation monitoring, adaptive management measures
    c. Identify and account for potential risks – climate change, development uncertainties, project failures or underperformance
2. Track –
    a. Identify suitable shovel/grant-ready projects
    b. Ensure that all subbasins with impacts have offsets
    c. Track projects from ideas to completion
    d. Track Exempt Well growth by subbasin through time
    e. Define clear guidelines for conceptual projects
3. Implement
    a. Ensure that restoration approaches are suitable
    b. Seek community input
    c. Seek sustainable funding
4. Monitor –
    a. Implementation and project monitoring
    b. Reassess impacts and benefits
5. Adapt –
    a. Set goals and milestones for management triggers
    b. Use monitoring to respond to successes/failures
    c. Incorporate new information and science

Chehalis Basin Aquatic Species Restoration Plan (ASRP)

Emelie McKain, WDFW Aquatic Species Restoration Plan (ASRP) Manager, presented information about the Phase 1 ASRP:

- How the ASRP was developed
- Information about proposed actions and areas
- Intersection and benefits of ASRP and Streamflow Restoration alignment

The ASRP was developed through the Chehalis Basin Strategy, a state-led initiative with the mandate: "must include a detailed set of actions to reduce flood damage and improve aquatic species habitat" and "...must include an implementation schedule and quantified measures for

evaluating the success of implementation" (RCW 43.21A.732). Ms. McKain described the ASRP development timeline:

- Phase 1 – published November 15, 2019
    - Full document out for public review
    - Outlines approach, strategies and implementation
- Phase 2: Summer 2020 – refinement of strategies and implementation planning
- Phase 3: Winter 2020 – Final ASRP document integrated with Chehalis Basin Strategy.

She described how the science basis – including observed fish distributions, habitat surveys, updated fish-barrier knowledge and other data points informed decisions about where to conduct restoration, and how to do it most effectively.

The plan is aimed at restoring ecological processes - the work performed, or role played by the physical, chemical, and biological processes that form and maintain habitat features and environments. Restoring and protecting ecological processes will benefit the species that call the basin home by creating more accessible habitat for those species to thrive. As Mr. Weiss described in the earlier presentation, process-based restoration requires diagnosing what isn't working and implementing actions to fix what's broken.

This plan is also not just about salmon. Aquatic and semiaquatic species like frogs or salamanders are also a focus of the plan, with emphasis on identifying opportunities to keep species like spring Chinook off the endangered species list. Currently, Oregon spotted frog is on the endangered species list in the basin and we have no salmon species on the list. We can do a lot to help Oregon spotted frog and keep other species off the list.

The plan is a roadmap for helping aquatic species throughout the basin. The ASRP is meant to be a useful tool for practitioners to carry out restoration and protection actions. It is also meant to help communicate why restoring certain parts of the basin are important for specific species.

The Phase 1 ASRP includes the approach, rationale and recommendations for 5 strategies:

- Habitat and Ecological Process Protection – *protect intact ecosystems, unique habitats, and strategic areas that support critical ecosystem functions and priority species*
- Restoration (includes 3 scenarios) – *Restore ecosystem functions to support native aquatic and semi-aquatic species*
- Community Planning – *Effectively plan for current and future conditions in the Chehalis Basin*
- Community Involvement – *Engage landowners and Chehalis Basin communities to ensure a successful plan and support implementation of actions*
- Institutional Capacity - *Build institutional capacity of existing organizations for restoration, protection, and planning processes to ensure the ASRP is a community-based restoration program.*

A key element necessary for developing the Plan was to strategically prioritize essential actions, including where and when those actions should occur to provide the greatest short-term and long-term habitat benefits. To support the prioritization process, the basin was examined as 10 ecological regions based on underlying geology, topography, climate and hydrologic regime, and channel characteristics. The prioritization process identified areas within each of the basin's ecological regions with the best opportunities to protect and improve species performance and increase spatial distribution and diversity of species.

The strategic prioritization was informed by:

- Recent scientific studies, mapping, and fish passage barrier assessments
- Current and historical knowledge and expertise including mapping of the basin
- On-the-ground observations and analyses by the ASRP Science and Technical Review Team
- Chehalis Basin-specific climate change modeling projections
- The Ecosystem Diagnosis and Treatment (EDT) salmon habitat model
- Baseline information from the National Oceanic and Atmospheric Administration (NOAA) salmonid life-cycle model
- A two model approach to ensure that the wide variety of actions and areas are encompassed in the analyses. The two models are different in structure and utility and are not meant to compare results, but rather inform two strategies of thinking to refine our recommended actions.

This Phase 1 document provides projections of conditions the ASRP could achieve under three additive restoration scenarios which were built from the prioritization process, along with estimated costs for each scenario.

- Scenario 1 is designed to protect and enhance existing core habitats for all aquatic species. It would protects and restores more than 200 miles of river/stream habitat; corrects 200 fish passage barriers, improving access to approximately 200 miles of river/tributary habitat; and restores more than 9,000 acres of riparian and floodplain habitats.
- Scenario 2 builds on Scenario 1 to protect and enhance existing core habitat areas, with the additional focus of restoring the best opportunities to benefit multiple species and increase spatial distribution. Adding more enhancement opportunities, this scenario protects and restores more than 300 miles of river/stream habitat; corrects 300 fish passage barriers, improving access to more than 300 miles of river/tributary habitat; and restores more than 10,200 acres of riparian and floodplain habitats.
- Scenario 3 builds on Scenario 2, with an added focus of increasing spatial and life history diversity and distribution of species throughout more of the basin. It protects and restores 450 miles of river/stream habitats; corrects 450 fish passage barriers, improving access to more than 400 miles of river/tributary habitat; and restores more than 15,300 acres of riparian and floodplain habitats.

The approach to restoration and protection within the plan will be to:

- Address what we understand is broken in the basin;
- Protect and enhance what is working ;
- In partnership with landowners, restore or reestablish ecological processes to support habitat for fish and other creatures.

<u>Restoration Strategies</u>

Restoring ecological processes means giving the river things it is missing so it can function again, like putting large wood back into the river. Large wood helps to kickstart natural processes by helping create fish habitat, providing bugs and other critters for food, and helps slow the flow of the water, which benefits fish and doesn't put as much stress on the riverbanks. Without that large wood in the river, those outcomes will not happen on their own.

Restoration projects can take many shapes and forms, but some of the tools that have been identified are:

- Large wood installation
- Riparian plantings
- Fish passage barrier removal
- Invasive species management

- Experimental techniques: sediment wedges, beaver dam analogs, etc.

These actions will lead to more complex in stream habitat for fish, reconnection of side channels and oxbows for fish and amphibian use. Ponds—such as those associated with beaver dams—benefit hydrology by storing runoff and allowing water to slowly enter groundwater or other waterbodies and by creating wetland and pond habitats that provide high-quality juvenile salmonid rearing habitat.

Most of the Chehalis is in private landownership, so Emelie described how the plan proponents will work with willing landowners to implement recommended actions that will lead to:

- Floodplain connectivity and habitat utilization
- Reconnection of side channels and oxbows for fish and amphibian use
- more complex in stream habitat for fish
- Wetland, lake and marsh habitat that is accessible and provides benefits such as cool water to the system.

Protection Strategies

When thinking about protection, the ASRP aims to protect both areas of intact functioning habitat and those areas that provide critical ecosystem function. They include:

- Cold water inputs
- Glacial outwash lakes
- Forested headwater streams
- Wetland complexes
- Intact reaches of stream habitat

Ms. McKain closed her presentation by saying that the ASRP and Streamflow Restoration Act planning are complementary in:

- Actions – restoration and protection actions can restore flow and groundwater infiltration
- Schedules – ASRP has already prioritized areas and actions that can improve habitat, including flow for aquatic species.

Watershed Plan Addendum Progress Reports

Ms. Carlstad provided an update on progress with the Watershed Plan Addendum:

- Offset Projects
    - 10/25 work session was productive with clarity gained on Ecology evaluation approach for project types and numerous ideas generated from the map session
    - Several potential water right acquisition candidates are being explored
    - Numerous other project concepts are beign followed up on.
    - Technical grant funds will be available soon to support project development.
- Permit-exempt well projections
    - WebMap work session immediately following Partnership meeting to identify known constraints to rural development that might limit new permit-exempt wells.
    - Revised permit-exempt well projection in February, informed by WebMap work session, well log spot check, Ocean Shores wells policy discussion, further building permit analysis.
- Consumptive Use Estimate
    - Preliminary estimate developed based on working draft permit-exempt well connection projections

    - Average irrigated footprint delineations completed for recently-built homes in rural areas
    - Spreadsheet-based consumptive use calculator is ready – can be used for "what-if" scenarios
- Work Plan – An updated work plan was distributed. It reflects the following major changes:
    - January meeting location will be the Satsop Business Park
    - Combining the Habitat and Water Offset Project Work Groups into one
    - Partnership decisions on permit-exempt well projection and consumptive use will be in March/April 2020.

  Discussion occurred around approval process; this will be taken to the Steering-Technical Committee for clarification and presented to the Partnership in January.

For the Good of the Order / Public Comment

Chair Harris opened public comment and partner updates.

Ms. Holroyde announced that the Thurston County League of Women Voters has been working with all the WRIA planning groups that involve Thurston County, and she urged the group to prioritize getting clear messages/requests to the legislature about the important water and natural resources needs such as those discussed at today's meeting.

Ms. Carlstad announced that the WRIA 1 (Nooksack) draft rule is available for public comment until January 17, 2020.

Ms. Harma announced the upcoming Brian Abbott Fish Barrier Removal Board call for proposals for correcting fish passage barriers such as undersized culverts. Cities and Counties are especially encouraged to apply. The deadline for submittals in January 15, 2020.

Mark Mobbs announced the ASRP Phase 1 public comment period deadline is January 14, 2020.

Tim Wilson from Thurston County requested agenda time at the January meeting.

AJOURNMENT

With there being no further business, Chair Terry Harris adjourned the meeting at noon.

RECORD OF DECISIONS:

1. June 28, 2019 – Members voted by full consensus to review the Charter Addendum as edited at this meeting within their organizations and be prepared for a second reading and approval at the July 26, 2019 meeting.
2. July 26, 2019 – Members voted by full consensus to approve the Charter Addendum to the 2004 Operating Procedures. The Quinault Indian Nation voted "Formal Disagreement, but Willing to Go with Majority" and will provide a written statement to include with the final charter.

NEXT MEETING: January 24, 2020