Meeting Minutes
Nisqually River Council Meeting
November 16, 2018
Yelm Community Center
Information: 360.438.8715

Attendees:

Council Members:

Dan Calvert – Puget Sound Partnership
Molly Carmody – City of Yelm
Amy Cruver – Pierce County
Cathy Hamilton-Wissmer - JBLM
Curtis McFeron – NOAA
David Troutt, Chair – NIT

Citizens Advisory Committee Meeting Members:

Phyllis Farrell
Ed Kenney
Fred Michelson
Karelina Resnick
Marjorie Smith
Robert Smith
Lois Ward

Guests:

Jeff Barney – Pierce County
Warren Bergh – NLT/NSS
Chris Ellings – Nisqually Indian Tribe
Nikki Fields – WA State Parks & Rec
Joe Kalama – Nisqually Indian Tribe
Becky Kowalski – JBLM
Martin McCallum – NLT
Etsuko Reistroffer – NLT/NSS
Jim Reistroffer – NLT/NSS
Maya Teeple – Thurston County
Ashley Von Essen – Nisqually Indian Tribe

Staff:

Emily McCartan – NRF
Chrissy Webb – NRF
Brandon Bywater – NRF
Sheila Wilson – NRF

1. **Call to Order, Introductions, Approval of Minutes and Agenda**
   David called the meeting to order at 9:05. He noted that many ongoing issues being tracked by the NRC and CAC are related to climate change, including this summer's lack of any major rain, and current low water levels in reservoirs and fish spawning areas. These management challenges will be ongoing as rapid change continues in the climate. The minutes from October's meeting were approved, as was the agenda for the day.

2. **Committee Reports and Updates**
   <u>Advisory Committee Reports:</u>
   Citizens Advisory Committee – Phyllis Farrell
   Maya Teeple presented to the CAC this month on Thurston County's mineral lands review. Of interest was the issue of whether land trusts would be considered under the parks definition and therefore protected with a 1000 ft setback from mining operations, which is still before the commissioners to decide. The CAC also heard updates on 6091 water planning, Alder Lake dam levels, I-5 proposals, and a grant proposal by the Nisqually Land Trust to acquire the Manke Powell Creek property.

Chair Report – David Troutt
David presented to the South Sound Sierra Club on I-5 and salmon recovery last month. The Puget Sound Acquisition and Recovery board met yesterday. They voted to request that the Department of Ecology enforce TMDLs, and tabled a motion to request funding for incentive programs or pilot projects. The Nisqually uses incentive programs more extensively than many other areas, as an alternative to regulations on landowners. It may be necessary to explore other paths to keep these programs going.

Staff Report – Emily McCartan
Emily has been continuing to support the Nisqually Planning Unit group working on permit exempt well forecasting and mitigation requirements under ESSB 6091. The Legislature has the Nisqually on a very aggressive timeline to complete and submit a plan, which the group hopes will yield frameworks and funding for investment in habitat projects to provide streamflow and net ecological benefit for the watershed. Ecology's first grant round to award project funding under 6091 closed on October 31. There were four applications submitted for the Nisqually:

- Busy Wild Community Forest Protection (910 acres) – Nisqually Land Trust
- Powell Creek Protection (240 acres) – Nisqually Land Trust
- Mainstem/Ohop Riparian Protection and Restoration (400 acres) – Nisqually Land Trust
- Fish Passage Barrier Removal (Toboton at Piessner Rd) – Thurston County

Allied Programs:
Thurston County Subarea Plan Update – Maya Teeple, Thurston County
The public review process for the subarea plan will be moving forward early next year. Maya will keep the NRC advised. Phase 1 (literature review) of the recycled asphalt review is complete and the contract is being expanded to include revision based on comments. There is interest in bringing the consultant to present at the NRC after the public county meeting on it in March, if possible. The CAC continues to follow the subarea plan as it progresses.

Nisqually Land Trust – Martin McCallum
NLT staff are at a land trust climate change meeting today. Martin offered notes from the board meeting. The Board's Lands Committee closely evaluates the choices required to target salmon recovery goals with finite resources. Federal and state resources are a huge part of NLT's ability to acquire properties. He also noted concerns about very low streamflows at creeks around the Nisqually and South Sound area, which have been impeding salmon runs.

Nisqually River Education Project – Sheila Wilson
NREP is wrapping up a busy 2018 planting season, including 2,550 plants at the Mashel Van Eaton site, 2,500 at Middle Ohop, and 550 live stakes at Muck Creek on JBLM. The Tribe's crew provided great help in getting the final plantings done. Volunteers were also key at the events - Jim attended every single planting event, and Etsuko attended all the Ohop plantings and washed every glove! 764 students and 120 parent chaperones participated. Brandon has been a docent at the McLane Creek Nature Trail salmon viewing this week, with 349 students from Nisqually and Salish Middle Schools. NREP is also working on teacher

trainings for the CLAMSS program on ocean acidification, leading up to student-designed field investigations this spring. Salmon tossing will be coming up in December.

Nisqually River Foundation and Community Forest
No report this week (Justin is at AgForestry). The Community Forest grant applications from Ecology are discussed in the staff report.

Salmon Recovery – Chris Ellings
The Yil Me Hu newsletter has gone to press and will be available next month. Salmon Recovery is still getting final numbers on this year's Chinook run, but they are looking low. There are still legacy effects of the Blob and poor ocean conditions affecting returns. Hopefully the age class structure of Chinook will moderate it. The low flows/low reservoir conditions this year also make surveying difficult because of high turbidity from sediment moving through the reservoir. The Mashel also usually gets a pulse of rain in October, which didn't happen this year. Spawning surveys found jaw tags on a majority of fish, meaning they were among the 1,500 trucked from the hatchery to above the Centralia diversion dam (indicates a poor natural return, but successful transfers of hatchery fish). We need to find alternative ways to count fish, because current methods were developed in an entirely different climate and flow regime. Chris has talked with fish commissioners from Alaska about sonar strategy for counting fish in turbid glacial rivers. The Mashel Engineered Log Jam project was completed this summer, with 51 log jams finished. The ultimate goal is to establish and maintain 75 functional log jams between Boxcar and the highway. In years like this, when flows are low, log jam pools are critical for steelhead and Chinook juveniles.

3. Salmon Recovery and Southern Resident Killer Whale Status
Mike Ford, Northwest Fisheries Science Center, NOAA
Killer whales are a globally distributed species. Local population of Eastern North Pacific Killer Whales includes three ecotypes, well-studied in the Puget Sound areas since the 1970s. (Note that the nomenclature is outdated and doesn't really describe their behavior/travel patterns as currently known.)

- Residents – fish eating; highly vocal; stable, matrilineal social structure, calves stay with maternal families their whole lives.
- Transients – eat mammals; less vocal (marine mammal prey has good hearing); smaller social groups, more fluid social structure.
- Offshores – fish eating; large group size, less well studied.

Resident social structure hierarchy:

- Community/population
    - Acoustic clan (group of pods with similar dialect)
        - Pod (group of related matrilines –J, K, L in Southern Resident population – sometimes individuals switch pods, L animal that hangs out with J pod)
            - Matriline – female and her descendants

Southern Resident Killer Whales are in decline, but overall, killer whales as a species are doing well. There are 6-10 resident populations across the Pacific Rim. BC and Alaska resident populations are doing fine. Like all marine mammals, SRKWs were knocked back

from historical abundance in late 1800/1900s. Viewed as a nuisance species through the 1950s and 60s. In the 1960s and 1970s, a third of the species was taken for aquariums – SRKWs were especially hard hit. They were protected under the 1972 Marine Mammal Protection Act (MMPA), and it became illegal to harm or harass them. All three SRKW pods have spent summers mostly in the northern Salish Sea for the last 40 years. In fall, winter and spring, over last 10 years, K and L go down the coast (ranging from California to southeast Alaska, but mostly off Washington). J pod hangs out around Vancouver Island, sometimes head into South Sound in winter.

Current threats to SRKWs:

- Lack of sufficient food
- Too much disturbance
- High contaminant levels (concentrated for animals high on the food chain)
- Other problems:
    - Inbreeding (74 SRKWs, 1/3 of breeding age, a few males doing most of the breeding)
    - Bad luck – bigger problem for smaller populations
    - Recent sex ratio at birth has been skewed toward males

Diet and importance of salmon:

SRKW diet is studied by genetic analysis from fecal samples or observed kills. Chinook is at least half of the diet year-round, with more coho, chum, and other species in fall and winter. The mix suggests that their preferred prey is Chinook, because at the height of the sockeye run, they're still mostly eating Chinook. Their hungry time is in May, when they turn more to other sources of food. Fraser River Chinook is the majority of the summer diet, with more varied stocks in the winter (50% Columbia River off the coast, and 65% Puget Sound stocks in the Sound). The amount they consume is based on metabolic calculations by size and weight, based off of captive animals – estimated at 1,000 adult Chinook salmon for each individual whale. Survival and birth rate is correlated with Chinook abundance, indicating that prey availability is an important factor. Those correlations have gotten weaker over time, with recent good salmon years that haven't corresponded with good killer whale years. Prey pressure also comes from other marine mammals, which have had significant population increases since they were protected in 1972. Salmon are not pinnepeds' only prey (SRKWs are somewhat uniquely specialized in Chinook salmon), but in the aggregate, their consumption adds up. Consumption by all marine mammals increased by 150% since 1970, and human fisheries has gone down by 41%. The total salmon abundance hasn't gone down that much, but allocation has shifted more toward mammals. Boat disturbances also make it harder for whales to catch salmon by ecolocation. Nutritional stress indicators in SRKWs are from photos showing changes in body shape, as well as fetal loss. These changes could be caused by illness or other factors besides lack of food.

- Prey availability = abundance + access
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Trends in Salmon Status:

Estimates of historical salmon abundance are mostly based on cannery records from late 1800s or early 1900s. From BC to California, historical totals are estimated at over 10 million, with current numbers around 3-6 million fairly constant since the 1980s. The

Columbia River dominates Chinook (3-5 million historically, over 1 million in some recent years), and is still a bigger Chinook river than the Fraser. The Central Valley has dropped from about 1 million fish to around 250,000. Puget Sound is the third largest source, but it has declined less than the other systems because of substantial hatchery production. Today's returns are almost entirely hatchery – under 60,000 wild spawning Chinook are estimated on the West Coast overall.

Losses in salmon abundance are due to runs being extirpated. 59 of 396 historical Chinook runs are gone. Chum are extirpated from entire southern portion of historical range (OR/CA coast). Without these runs, it's not possible to restore historical abundances. Extirpation has also affected timing and diversity, with huge reductions in the number of spring runs. Hatchery production in Puget Sound is close to historical numbers for fall Chinook, but that is a big change from historical year-round returns. Hatcheries also produce limited diversity, with convergence on a single type of fish, which is trending toward smaller overall size and younger age to maturity, which yields less food per salmon for a whale. Together, these point to critical issues for salmon recovery and its relationship with SRKW recovery: it will require reintroduction of extirpated stocks and restored diversity for wild salmon, which must be balanced against the current huge role that hatchery production plays in supplying salmon for whale diets and the ecosystem.

Questions:

- Do fish sense that the pod is after them? – They can't hear them because whales talk outside their frequency. But they are sometimes aware – fish will try to take cover underneath an observation boat from hunting whales.
- Will reduced salmon populations eventually lead to die-offs for pinnepeds? - Probably not, because seals and sea lions are generalists with a more diverse diet and can shift to other food sources as needed.
- How many killer whales are there in the region? – SRKWs peaked at just under 100 animals in the early 1990s.
- What solutions are being considered to deal with marine mammal predation? – There is a current process under MMPA to identify and remove nuisance animals individually, which is time-consuming and best-suited to artificial bottleneck areas like the Bonneville locks. There are movements to amend the MMPA to allow states and tribes to remove them – it would take a lot of reduction to make a difference across the whole system. The Task Force recommends more study.
- Do whales mate for life? – Genetics show they don't. Larger, older males are siring most of the offspring. Dolphins as a whole have a wide-open mating system.
- Dam removal on the Snake? – It's very hard to know for sure how much difference that would make for salmon abundance.
- What would you do to solve this problem in a perfect world? – Increasing the portfolio (diversity and timing) of salmon populations is a start – there are concerns about just increasing production of hatchery fish, since they are already abundant. We don't know how long sub-populations like the SRKWs tend to last within the killer whale species – they may emerge from specializing on a type of prey, and then naturally decline.

4. Nisqually State Park Update

Nikki Field, Washington State Parks and Recreation Commission
Nisqually State Park is on the Nisqually River near Eatonville and Pack Forest, about halfway down the river. The state began acquiring in the area in 1991, stemming from the 1987 Nisqually River Management Plan, which recommended a river access site on the Nisqually and Ohop Creek. State Parks currently owns 1,300 acres, bounded by Ohop Creek, Mashel and Nisqually Rivers, and Highway 7. The Legislature funded master plan development beginning in 2005, and State Parks established a partnership with the Nisqually Tribe in 2007. A master plan was adopted in 2010 after public input on design options, designating land classification and long-term park boundaries (areas not owned by Parks, but hope to see managed in ways consistent with the park plan, including a large area owned by Pack Forest, and NLT, NIT, and TPU properties).
The recreation area is located farthest from the Nisqually River, with planned development of camping and day use facilities focused in the uplands to protect rivers and listed species. The Master Plan recognizes that this site is important to the story and cultural values of the Nisqually people. The plan includes a proposed interpretive "People's Center," on land mostly owned by the Tribe, telling story of the Nisqually people. A planned water access site for the Nisqually River will provide "managed access," which is not fully defined. It will be mostly walking access with parking further away, and hand-carried boat launch access open only during times of the year when boating will not harm fish. Permit system or gates have not been determined yet.

The first phase of development from the Master Plan was not fully implmeneted due to budget impacts from the recession. A parking lot and trailhead facility were completed with grant funding, including an interpretive kiosk contributed by the Tribe, but have not improved any trails. The current phase (not yet funded) is for a pre-design study to plan next steps. The Governor's Office has recently expressed interest in developing the site, with Governor Inslee visiting this September and supporting a funding request for the FY 2019-2021 budget. State Parks is requesting $3 million for work on three projects:

- Finish Phase I Mashel loop trail (overlook of Mashel River Valley)
- Improve road/trail to Nisqually River, to allow better maintenance and begin managed water access
- Develop first phase of camping – 40-60 sites, first of several proposed loops.

Questions:

- Did backcountry horsemen and mountaineers help develop trails? – Horseback riders are some of the most common users. There are some user-developed trails through the park, and user groups are working with State Parks on improving them as appropriate.
- Will there be an archaeological survey before any new developments? - Yes. Some surveys have been done already, and there will be surveys and tribal consultation before any development takes place.
- Is this in the Governor's budget request? – The Governor's Office asked State Parks to include it in their budget request. The Governor's final budget will come out in mid-December and they hope to see it in there.

5. Farming in the Floodplain
Jordan Jobe, WSU Extension-Puyallup

Farming in the Floodplain is a project to address agricultural drainage issues in concert with flood risk reduction projects. Jordan has been working largely in the Puyallup, but is aware these are issues throughout Pierce County and hopes to reach out to Nisqually landowners. Funding for the Floodplains for the Future Partnership is largely through Floodplains By Design in the Puyallup, White & Carbon River basins. 22 organizations meet regularly on integrated floodplain management, addressing agricultural viability, reducing flood risk by increasing levee setbacks, and removing critical infrastructure from floodplains.

The program began by looking at hotspots for agriculture in Pierce County. For example, the Clear Creek farm area in the Puyallup has numerous small family farms and frequently floods. It is also a good place for salmon restoration, because salmon need to use the floodplain channels when floods cause fast flows. The group reached out to landowners to find out what farms needed to be viable and identify concerns:

- Concerns about county's maximum levee lines – went through actively farmed land
- Sedimentation concern, climate change, development were concerns.
- Agricultural drainage was the biggest physical barrier and key problem for this area.

There are many opportunities for partnership between habitat restoration and flood risk reduction for communities, but navigating county and drainage district processes is a challenge for landowners. Farmers outside of drainage districts often will try to solve the problem themselves, often with a short-term solution that doesn't tie into the systemic hydrology or coordinate with other landowners. ESA-listed fish regulations (affecting Clear Creek district) are very complicated for farmers to figure out. Pierce County and Pierce Conservation District had lots of interest, but staff limited capacity.

Integrated management team for Floodplains for the Future determined 3 key needs:

- More staff: dedicated person for Pierce County, maybe in partnership with PCD or another nonprofit
- More data: ideally, comprehensive network analysis of all drainage systems in the county to highlight key areas for partnership
- More county-wide consistency and collaboration across divisions to enable more modeling and coordination

Questions:

Is there a legal risk for landowners in trying to manage flood/drainage on their own? – ESA listing especially makes it complicated. Landowners without support may take the action that seems the most logical, even if it's not legal. Drainage districts are legally charged with maintaining the system, but sometimes get called for doing work on ditches that people think are streams.

What is the definition of "agricultural viability"? – The ability of a farmer to continue farming their land (water, economic structure, community/policy support)

Foresee regulation requiring drainage maintenance as easements accompanying land title? - Outside the scope of Farming in the Floodplains.

Are there any places in the Nisqually currently on the radar? – Not yet, still getting the message out. Plan to start with looking for low spots on LIDAR and where they overlap with known farmed properties.

Is Pierce County leadership involved? – Jordan has worked with surface water management staff one on one, and there is a lot of interest. The Pierce County Agricultural Advisory Committee has been meeting monthly in Puyallup this year and is advocating for a network analysis study.

The meeting was adjourned at 12:11pm.

Next meeting: Billy Frank Jr. Nisqually National Wildlife Refuge, December 21, 2018