



Meeting Minutes
Nisqually River Council Meeting
November 17, 2017
Yelm Community Center
Information: 360.438.8715

Attendees:

Council Members:

Matt Curtis – *WDFW*
Amy Cruver – *Pierce County Council*
Amber Martens - *JBLM*
Amber Moore – *Puget Sound Partnership*

René Skaggs – *Pierce Co. Cons. District*
Kevin Skerl – *Mt. Rainier National Park*
David Troutt, Chair – *Nisqually Indian Tribe*
Cindy Wilson – *Thurston County*

Citizens Advisory Committee Members:

Phyllis Farrell – *CAC*
Howard Glastetter – *CAC*
Fred Michelson – *CAC*

Marjorie Smith – *CAC/Stream Stewards*
Robert Smith – *CAC/Stream Stewards*
Lois Ward – *CAC*

Guests:

Jeff Barney – *Pierce County*
Warren Bergh – *Stream Stewards*
Chris Ellings – *Nisqually Indian Tribe*
Lloyd Fetterly – *NLT/Stream Stewards*
Joe Kane – *Nisqually Land Trust*
Renee Kinnick – *WDFW*
Ingo Kuchta – *Pierce Co. Public Works*

Florian Leischner – *Tacoma Power*
Curtis McFeron – *NOAA NMFS*
Jim Reistroffer – *Stream Stewards*
Etsuko Reistroffer – *Stream Stewards*
Kelly Still – *WDFW*
Ashley Von Essen – *Nisqually Indian Tribe*
Rob Wenman – *Pierce Co. Public Works*

Staff:

Brandon Bywater – *NRF*
Emily McCartan – *NRF*

Sheila Wilson – *NRF*

1. Call to Order, Introductions, Approval of Minutes and Agenda

David called the meeting to order at 9:08 AM. Chum salmon are back in the Nisqually River, which means it must be the holiday season.

Approval of the minutes for October 20th (with corrections) was moved and seconded. Howard's comment regarding the JBLM sustainability presentation and concerns about the use of recycled asphalt for road shouldering and parking lots were noted for the record. Already communicated these comments to JBLM. The minutes were approved as corrected, as was the agenda for the day.

2. Committee Reports and Updates

Advisory Committee Reports

Citizens Advisory Committee – The CAC met on Tuesday, 11/14. Phyllis reported out.

- 240 acres in Powell Creek Complex owned by Manke are scheduled for logging in spring 2018. Interest in hearing options for protecting that land, if possible.
- The CAC encourages individuals to contact the National Park Service and Members of Congress regarding proposed seasonal fee increases at Mt. Rainier. Raised possibility of NRC sending an official letter as well.
- Continued concerns about Thurston County proposal to use Conservation Futures funds for pocket gopher development mitigation in the draft Habitat Conservation Plan. May request NRC letter to commissioners about importance of those funds for the Land Trust and other needs. Council sent one last year, can renew efforts.
- CAC is monitoring and requests ongoing information about the Atlantic salmon net pen escape. Update from NIT: so far have caught 2 in the Nisqually (1 in August, 1 in early November). Active issue in the Legislature.
- Alder Dam levels (on the agenda for today with Tacoma Power).
- Status of the Nisqually Subarea plan review for recycled asphalt.
- Water availability in the Nisqually watershed, following Hirst decision and exempt well concerns raised by Squaxin Island Tribe in the Deschutes watershed. CAC members would like to understand what hydrologic data is available for the Nisqually.
 - We have a 2014 Watershed Management Plan under HB 2514 detailing lots of actions to address water issues, but implementation funds have never materialized, especially in upper watershed tributary areas where water is pulled out of the system unmetered. [Link to the HB 2514 watershed plan](#) for those interested – a little dated now, but has the best compilations. Hirst decision requires counties to ensure that stream flow requirements are met when issuing exempt well permits, but didn't provide local governments with resources to do that. Counties are addressing it differently. Lot of pressure to resolve in the Legislature, but unclear what final form will take and whether bond bill to fund it will pass.

Chair Report – David provided an update on the following issues:

- For several years NIT has been working with WSDOT on options for improving the I-5 estuary crossing, which poses challenges for both estuary restoration and upstream flooding with sea level rise. Because the river is channeled under I-5, it can't distribute sediment as efficiently across the estuary to continue building salt marshes for Chinook habitat and guarding against sea level rise. Also concerns about the river eventually jumping the current channel and breaking through the freeway, so the hope is to get ahead on a solution and not wait for a disaster. Making the pitch to WSDOT that this is an urgent issue for both salmon and flooding. Several options in \$900 million range to raise the freeway to allow more migration of the river. South Sound Military & Communities Partnership's 2018 legislative agenda includes request for a study of I-5 transportation issues from Mounts Road to Trosper Road, with \$1 million focused on the Nisqually bridge area. Hoping to put together a coalition of partners advocating for a study of a pier; goal is to get the project into the 10-year transportation budget. Time is not our friend for salt marsh recovery, which is why we need to take some bold actions. Overall, the restoration has been an amazing success story. Several papers out documenting incredible responses from Chinook,

- other fish, birds. Amount of food being produced and growth in fish is astounding. Have recovered 100s of acres of salt marsh, but not 900 acres yet.
- David also working on Southern Resident Killer Whales, which are listed as endangered and now at a critical population point. The nine calves born last year have all died. Governor Inslee has made it a key issue for 2018. Their main food is Chinook, so NIT and others are advocating for mid- and near-term salmon recovery actions that will benefit both fish and whales.
 - Cindy provided an update on Thurston County Sub-Area Plan regarding recycled asphalt product review. There are two processes underway: the Comprehensive Plan update and a citizen initiative. The citizen initiative is further along in the process. Initial RFP didn't receive any responses. Second RFP got one response, which is being evaluated.

Staff Report – The schedule for next year's meetings should be out in next week or so. If you have ideas for topics or speakers, please let Emily know. Justin is at Ag Forestry this week.

Allied Program Reports

Nisqually Land Trust – Joe Kane provided the Land Trust report:

- Closed on the 10-acre Toboton Creek property. Great habitat. Will have a demolition crew in soon to take out the derelict cabin. Also closed yesterday on 13 acres of Yelm shoreline (property from Barb Wood and Jim Park's estate). Incorporated into Yelm Shoreline area, best riparian forest in that area. Keeps in line with vision of having a shoreline trail. Two parcels left to make that a full block. 4th purchase of the SRFB 2015 Whitewater reach grant.
- With capital budget and Conservation Futures funds not currently available, have had to make purchases out of NLT funds. Some risk in not having those reserves available without capital budget or CF funding in the future, but needed to move on these purchases now.
- 3 projects proposed for Pierce County Conservation Futures: Busywild Section 14 (640 acres), Upper Ohop II (32 acres adjoining NW Trek at Ohop-Twenty-Five Mile Creek confluence); South Oro Bay (150 acres on Anderson Island). Leveraged about \$4 million purchases from \$1 million CF funds. Passed unanimously with Pierce Co Council.
- There is no longer a WCC crew at the Refuge (same at all refuges in the state), due to budget cuts. We'll see decrease in trail and other maintenance. Americorps is also zeroed out in presidential budget. Heartbreaking to see the loss of these programs.
- Working with Washington Association of Land Trusts on some major lobbying issues. Monitoring a lawsuit coming up in Pierce County about the Recreational Immunity Statute, which protects parks, land trusts, and other organizations with public access properties from constant threat of lawsuits if someone gets hurt. Big movement to get amicus briefs in defending this statute. Losing that immunity would mean huge changes for recreation and public access in the watershed.
- RE: CAC questions about Manke logging in Powell Creek Complex: Beautiful area upstream from Yelm on major tributary. Land Trust has 350 acres in shoreline protection area there. Manke plans to log off a 200-acre timberland holding this

spring. Old (60-70 years), densely timbered property valued at \$2 million, but have serious concerns about root rot, so Manke needs to monetize it quickly. A local resident put it on the radar with the Land Trust, Tribe, and CAC; scrambling to see if there's something we could do. Not a high-priority site for salmon recovery, so salmon dollars wouldn't be available to support purchase, although if it's logged there will be impacts. Land Trust doesn't currently have any funds available. Would be an interesting place to see in the Community Forest or similar. First step is talking to Manke to try to get a year to put something together. Some tentative ideas out there, but would take time to get a concrete plan in place.

NREP – Sheila reported on a busy month of planting activities with 375 students in Middle Ohop and Coyote Bridge. Many thanks to Land Trust staff and volunteers. 1,500 plants at Middle Ohop, 230 at Coyote Bridge. Participating classes have already participated in water quality monitoring program, and tree planting for creek restoration reinforces their experiences. Speaking of the value of Americorps, Brandon has delivered presentations and surveys to 1000 students and is now processing survey data. Students showing growth and retention, so the lessons are sinking in. The North Thurston superintendent is pointing to Student Green Congress program as an example of serving highly capable students; meanwhile, NREP helps close the achievement gap, and these programs bring all types of students together through outdoor learning. Working on some grants and getting ready for salmon tossing if funding is available. Final planting event in Middle Ohop open to volunteers of all ages tomorrow, 11/18.

Salmon Recovery – Chris and Ashley have been working hard on updating the recovery plan with WDFW and NOAA.

- Ultimate Chinook recovery plan goal is still to have a locally established, self-sustaining run driven by natural conditions, not hatchery. Previous plan involved using the weir to exclude hatchery fish, but the weir was never fiscally or logistically viable to meet its objectives (mostly due to atypical flows every year following implementation – high temps, massive 2012 flood, etc.)
- New alternative plan to move toward a locally adapted population free of hatchery influence, thinking on a 100-year timeframe. Need fish that are adapted specifically to this river to utilize all the restored habitat we're creating.
- Management action phases (similar to Elwha plan):
 - Colonization phase. Using Green River stock from Nisqually hatcheries. Chris has 2 weeks to finalize plan, but have already implemented a huge part of colonization phase this year. Not enough fish are returning to spawn naturally, so NIT Natural Resources has moved over 2,000 Chinook up the watershed this year via trucking, a massive undertaking. Every one was jaw tagged and genetics taken to allow tracking of parents through smolts. Goal is to get more spawners in the system, more smolts at WDFW smolt trap. Will do this for 8 years, then it will sunset based on fish populations.
 - Local adaptation phase comes next: reducing impact of hatchery and reestablish fish. As fish start becoming more productive, can start fishing on them more, into viable population phase.

- Jaw tagged fish have been showing up with great distribution across the upper watershed. Stream Stewards/Salmon Watchers have reported seeing tons of these fish in Upper Mashel, Yelm Creek, places we weren't expecting to find them. Really useful to have those observations. NIT is happy with results so far; we'll see what it means as far as their success spawning. Genetic work will let us sample smolts and compare to see how they're spawning – parentage assessment, determine what proportion are trucked vs. natural fish. Will help inform decisions moving forward. Working to get a fish trap at the Centralia Diversion Dam fish ladder to sample.
- NIT Salmon Recovery team is short-staffed because of the lack of a capital budget, which funds Lead Entity program and staff position. Staff are working hard to manage additional work while continuing to support partners at NRF, NLT, South Sound Enhancement Group.
- NIT will present full plan when completed, likely first quarter next year.

Community Forest – Side purchase and sale agreement on next 640 acres. Tribe has moved its acquisition date up to coincide with closing on Dec. 12. Good conversations with several funding partners, especially Nature Conservancy, to build our capacity. 13,000 acres in Nisqually for sale right now. Can't bid on it ourselves, but will try to carve out some strategic pieces.

3. Upper Nisqually Project – *Rob Wenman and Ingo Kuchta, Pierce County Surface Water Management*

<https://www.slideshare.net/Nisqually/pierce-county-upper-nisqually-protection-stabilization-project>

- Project addresses about a mile of levee on the right bank of the Nisqually, near the entrance to Mt. Rainier National Park. Current levee faces reoccurring damage during high flow events. Rivers will do what they want to do, so this project seeks to minimize the risk by constructing 28 rock deflectors.
- Pierce County Surface Water Management is under Public Works. Most of the department's work focuses on watershed planning and surface water runoff, along with capital improvements and maintenance to levee systems. Work closely on this project with NPS to maintain the levee to protect the park's main entrance, which is a historic site and serves over 1 million visitors every year. Levee also protects businesses and residences in the Nisqually Park subdivision.
- Maintenance to the existing levees has cost over \$5.5 million since 1991. \$1.2 million of that was for Army Corps of Engineers (USACE) project.
- Regarding Pierce County vs. USACE jurisdiction over projects: a federal program offers local jurisdictions ability to partner with USACE for flood emergency response and repair/rehab of levee system, as long as levees are maintained to Corps standards. Allows ongoing debate and new solutions to addressing those standards that fit local situations (for example, USACE says no vegetation, but allows local partners through Systemwide Improvement Framework to develop vegetation strategy. Provides for minimum standards of the corps for visual and physical access for inspection and flood fighting, but balancing that with preserving vegetation for habitat and riparian

- needs.) Tend to think vegetation builds resiliency into the levee – root structure for a 150 ft cottonwood essentially holds it together. If the trees are important along the river, then need to maintain the levee to hold those trees.
- Reach characterization:
 - Sediment driving into levee system scours the banks of the levee, with ongoing impacts. Very braided system.
 - 65-square-mile contributing basin on a steep gradient that comes down quickly to the site. Receives 80 inches of rain annually. Gradient lessens at project site, where an alluvial fan develops with sediment deposit.
 - 2006 flood shows impact of a flood event: 18 inches of rain in 36 hours following an early snowfall. Destroyed dike near Sunshine Point and washed out campground and 200 meters of road. Resulting flood was a 162-year flood event. Typical 100-year flood is 95-100 cfs. 2006 had 21,000 cfs flows.
 - Entrance was cut off for a year and a half at significant impact to NPS and local economy.
 - Ongoing repairs since then. Major repairs following the flood were mostly performed by USACE. Repair projects in 2011, 2012, 2014, and 2017.
 - Fish window when work is permitted is 6-7 weeks. Work requires getting into the channel. Minimize impacts to fish and habitat by diverting the river, defishing areas. In most cases, divert by using pushup berms, working slowly, using existing channels where possible.
 - Q: Flood impacts will be ongoing. Do you see this project as one that can be completed?
 - Effort since 2006 has been to build additional resiliency into the levee, based on better understanding of the possible scour depth and forces of the river. Now using much larger rock (12-man toe rock, and face rock 3 times larger before. Hope that building in more resiliencies will reduce chronic need for repairs.
 - Q: Property downstream is developable – if that were purchased by somebody who wanted to build a house on it, wouldn't that increase pressure on this project?
 - Probably less likely, not sure what the current restrictions are. Recreational developments downstream from the levee are susceptible, but this is what we can handle on our plate. There is an active citizen's movement among residents to protect homes that are there now, but also to let the river be the river.
 - Q: Status of essential fish habitat in this reach?
 - Not a lot of natural habitat up there – large gravel bars, few log jams. It's non-ESA waters, no critical habitat - mostly trout, rainbow, some Kokanee. No ocean-going fish here, even prior to the dams.
 - Ingo provided an in-depth overview of the project technical details:
 - Model flow velocity for 100-year flood events based on existing conditions. Highest velocity flows are right along the levee – water takes path of least resistance, so the main channel likes to settle out along smooth levee face. Constantly works at the toe of our levee with sediment and water flow. Higher events can get scour depths of 8-12 feet. Goal is to slow down peak velocity or at least route it away from the levee

face. Don't believe this model accounts for possible effects of climate change because data is uncertain.

- Modeling showed that engineered log jams were not efficient way of reducing flow velocity. Always had areas in the model where high velocities got through. 13-14 ELJs in the model at the Sunshine Point area just to get flows to desired level, which would have been a \$4 million project. Cost well above budget and landscape impacts for excavations were too high.
- Current project adopts alternative option: 28 deflectors built into the levee. Stick out about 30 ft, 8 ft wide at the top. Deflector toes, with huge rock, goes about 12 feet below channel floor. Successfully pushes out high velocity main flow 30 feet off of the toe of the levee. Not many deep pools in this part of the river, so it provides some low-flow habitat protection for trout, creates gravel sorting. Cost for 28 deflectors is \$1.4 million.
- Lifespan of deflectors is uncertain. Could get a 200-year event that would require us to rebuild. One benefit, however, is protection of the levee itself, which buys time for restoration. Also would give a structure to build off of, lets us stay out of the river for future levee repairs.
- Q: have we ever considered moving the road?
 - It's been mentioned. Not studied. Practicality and cost are hard to know. It would displace homes in the area. Gets pretty steep behind the current road, so wouldn't get it very far away from the river.
- Project is currently in permitting phase. Notice has gone out for the shoreline conditional use permit. SEPA review process. NPS will issue their construction permits tied to NEPA review as well. USFW will assess for marbled muralet, spotted owl. Gone through these reviews before, generally comfortable with level of impact. USACE for Section 404 individual permit to do the work, water quality ecology certification. All coordinated with NPS. WDFW for hydraulic permit. Review process could take up to a year. Budget cuts at USACE mean permit review staff is about 1/3 of what it was a few years ago. Hopeful that permits will approved by 2019, because the need for this project is now. Next devastating flood could be next week.
- Goal is to construct all 28 deflectors within the work window (7 weeks) but rocks come in 1-2 rock loads, so that's the bottleneck – getting them stockpiled now. Fish and marbled muralet windows are short.

4. **Nisqually Hydroelectric Project** – *Florian Leischner, Tacoma Power*

Project Overview:

- Alder Dam, Alder Lake (4000 acres)
- LaGrande Dam, reservoir much smaller, powerhouse is about 2 miles downstream and water diverts through a canal.
- USGS gages record realtime discharge data at several points:
<https://waterdata.usgs.gov/wa/nwis/current?type=nisqually>
- Daily operation based on water supply, regional demand for electricity, and FERC license restrictions.
- Alder and LaGrande dams do not have the capacity to provide flood control. Some dams do. Nisqually Project does not. It wasn't built for that purpose, and evaluation

during FERC relicensing in the 1990s determined it was not a feasible flood control project. It does have the ability to capture some high water events and release later.

- All kinds of data evaluated on a daily basis, forecasted 10 days, 2 years, 2 days, 2 hours, looking at snowpack, runoff, climate events, etc.
- Max storage at Alder Lake is 214,500 acre feet. Operate between 74,000 and 214,000. Average is 167,000, but varies greatly depending on conditions.
- Priorities under FERC license are (1) meeting minimum flow in Nisqually River below LaGrande; (2) keep Alder Lake reservoir above 1,197ft in summer (for recreational purposes primarily); (3) above 1,170ft in winter, except as necessary to meet minimum flows. About every two years, some storage is sacrificed to meet minimum flows; that is the top priority.

Examples of how inflow, outflow, storage balances itself with flood impacts:

- Nov. 2006 – bigger than 1996, highest flow on record at National gage.
 - Probably 30,000 cfs at least during the event.
 - Within 3 days, doubled reservoir (had been quite low, 12-14 ft below average)
 - Outflow – had to spill 7,500 cfs. Less than annual reoccurrence level on lower Nisqually.
 - Reservoir had been low, this one event filled it up.
- Nov. 2014 – much smaller event, 7.5 year flood.
 - Alder storage increased 40,000 in the event. Raised lake level 15 feet. No spilling, captured it all.
- Dec. 2015 – 10-20 year flood
 - Why were we not able to capture more of this event? It came on the heels of an earlier rain event in November, which had filled the lake just to spill gate height. Held the first event, then out of capacity and had to spill in December.
- Try not to spill. It's lost money for TP, but also floods people out. Successful at staying below 15,000cfs for last 20 years, goal is below 12,000.

Response to CAC resolution suggesting keeping reservoir 10 feet below capacity in fall/winter:

- Would need to establish additional guidelines – when can we go above it?
- Potentially require earlier spills and spills at higher magnitude.
- Would jeopardize spring refill for recreational levels and downstream flow requirements in the summer.

Questions:

- Would dredging help by increasing lake capacity?
 - There is sediment filing into the reservoir. Lost about 15% of storage capacity so far based on USGS survey. The more time passes, that will reduce our capacity. No plans to dredge at the moment.
- Can TP lower the outflow unless it gets below 1170ft?
 - No, spill gate is above that level (1172 ft or so). Below that point, can't spill – have to capture it or run it through the generators.
- In 2015, lack of spilling from earlier November event caused more severe spilling in the December event. Would keeping lake 10ft below capacity protect you from this?
 - In December flood, we were 50ft below, 2 events took us up to capacity. Don't want to go maximum flood capacity; monitor events carefully when the lake is full and there is snow in the mountains.

- Is there evasive action TPU can take if they aren't going to lower the winter lake level? Could have done this by spilling in 1996 before lower valley flooded?
 - Looking at all river systems over Puget Sound, Nisqually doesn't get to flood stage nearly as often as others. TPU manages it well even though this facility doesn't operate and isn't designed as flood control. One risk NIT is concerned about is being able to meet minimum flows for 2 endangered species in the river. If trying to do flood control, which dam isn't designed to do, shifts the risk over to the ESA fish side.
 - When storm events are forecast, Nisqually River Coordinating Committee will adjust flows. Sometimes NIT will push back on that because of fish resources – if you push flows into minor streams and get fish spawning in there, then lower flows, you lose the fish spawning.
- David – bigger issue for flood in my perspective is I-5, where river backs up and holds it for 8-10 days. Can do something about that, can't really redesign Alder Dam.
- When you spill, where does water go?
 - Goes into the bypass reach, doesn't go through either powerhouse. If dam level goes up over 1,200ft, it's because we've captured big rain events, like the two back to back in 2015. Often over 1,200 feet in spring and winter, because every storm event fills it back up, then TPU releases, try to manage for incoming snowpack, etc.
- If you adopted the the 10 foot cap, you still couldn't predict which storms would be huge, and you might be overreacting 90% of the time?
 - TP has two people whose whole job is looking at hourly forecasts and monitoring that. It's very hard to predict.

5. For the Good of the Order

- Kevin reported that Randy King has announced his retirement from NPS, leaving in the new year. There will likely be an event for him sometime in January.