



**Meeting Minutes
Nisqually River Council Meeting
August 20, 2021
Online Meeting**

Attendees:

NRC Members:

Amy Cruver – Pierce County Council
Cathy Hamilton-Wissmer – JBLM
Dani Madrone – City of Olympia

Glynnis Nakai – BFNJNR
David Troutt, chair – Nisqually Indian Tribe
Rene Skaggs - Pierce Conservation District

CAC Members:

Yannah Cook
Phyllis Farrell
Howard Glastetter

Paula Holroyde
Etsuko Reistroffer

Guests:

Jesse Barham – City of Olympia
Jeff Barney – Pierce County
Nick Bond - NOAA Climate
Annette Bullchild - Nisqually Indian Tribe
Chris Ellings – Nisqually Indian Tribe
JW Foster - City of Yelm
Kristin Hayman - PSP

Daniel Hull – NRNC
Bob Iyall - Guest
Mike Noone - Dept of Ecology
Julie Rector – City of Lacey
Etsuko Reistroffer – NSS
Larry Stickney - Pierce County Council
Ashley Von Essen – Nisqually Indian Tribe

Staff:

Jeanette Dorner – NLT
Julia Fregonara – NRF

Justin Hall – NRF
Sheila Wilson – NRF

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

David called the meeting to order at 9:06am. Minutes were approved, as was the agenda for the day.

2. Committee Reports and Updates

Advisory Committee Reports:

CAC Report – Phyllis Farrell

The CAC met on Tuesday and talked about the Holroyd proposal to dig their pit below the groundwater line. The CAC and the Nisqually Indian Tribe will be tracking the Holroyd proposal to dig deeper. Howard noted that their pit flooded during the 1996 flood and that he had notified Thurston County of this.

Chair Report – David Troutt

David has been busy with the I-5 project. The legislature with leadership from Andrew Barkis was able to move \$5 million into the transportation budget. Within the existing regular budget, he carved out this funding to continue the work along I-5 and the Nisqually. The Nisqually Indian Tribe is working with the Department of Transportation to create a Memorandum of Understanding that will define how they are working together, including a joint decision making process. It's currently under

review with the Department of Transportation. It will be unique with the State and maybe the country, giving the Nisqually Indian Tribe and the Nisqually River Council a strong voice in how the project goes forward.

David also went down to the Columbia River and gave a presentation to the Washington Legislature's Outdoor Recreation Caucus, about 14 members participated. The goal of the Caucus is to improve opportunities for citizens in Washington to enjoy the outdoors, including ensuring salmon harvest for all constituents. Awesome meeting on the Columbia, fishing on a boat for about 5 hours with a couple of State senators, and caught a Chinook! Spent time with Senator Soldana, who is on the Senate Transportation Committee. Educated committee about Nisqually events that they were unaware of.

David will be meeting with Congresswoman Strickland's staff about all things salmon recovery in Nisqually, which will inform their process in the transportation work and decision. He will be taking about a dozen elected officials with Chairman Willie Frank III. on a boat to show them the risks and what's at stake. We don't want this project to follow the usual process of 10-15yr priorities, which we are not even on the list for yet. They are working to build support to make sure they are getting on that list. Hope is that in the 23-25 budget, they will be ready to go for construction costs. In discussion with the Governor's office, the Nisqually Community Forest is being seen as a valuable tool and this could lead to more funding in future sessions.

Staff Report

No Staff report

Allied Program Reports:

Nisqually Land Trust – Jeanette Dorner

The annual salmon bake will not be an in person event due to rising COVID rates with the delta variant. Instead the NLT will schedule something in October as a virtual event. There is a requirement in the bylaws for an annual meeting, so they will find another way to accomplish that. Jeanette and Joe took a tour with KIRO 4 to highlight the work of the Nisqually Community Forest. That reporter is receptive to learning about these things and could be a good resource in the future. He is promising multiple stories out of the footage from that day. Check out the cool drone footage! The Ohop Ruralite Magazine also did a cover story on the Nisqually Community Forest. Last week the Nisqually Valley News did a story about the acquisition of 6 acres on Hogum Road. Other projects are in the works, but nothing else that can be shared right now! The Nisqually Land Trust Stewardship Team is still hard at work with regular work parties, just Wednesdays during the summer. Saturday events will ramp back up in the fall, including planting events with partners such as the Nisqually River Education Project, South Puget Sound Salmon Enhancement Group, and others. Jeanette's been working on an update to the 5 year strategic plan, drafting updated goals and strategies, and specific actions to implement them. Will be reaching out to get feedback from critical partners before finalizing it. Probably a future agenda item for NRC.

Nisqually River Education Project – Sheila Wilson

The No Child Left Inside (NCLI) grant activities have started up again! We co-hosted a campout for Wa He Lut students to Mt. Rainier National Park with April Roe, Education Director from Nisqually Reach Nature Center. Students enjoyed the hiking and time outdoors, were asking for more nights next year, and even expressed interest in backpacking! The next night was an overnight trip to Cispus with tribal youth from Nisqually Tribe's Youth Center. They completed 2 low-ropes challenge courses together, learning about teamwork and interpersonal skills.

Salmon Camp, also with tribal youth from Nisqually Tribe's Youth Center, ran the week of August 9-13th. We explored the estuary at Billy Frank Jr. Nisqually National Wildlife Refuge, learned about the importance of the restored estuary for salmon, hiked the old growth forest with Mount Rainier Institute, sampled for stream bugs in the Mashel River, observed a boat fish seine done by Nano and the Tribe's Salmon Recovery Crew, then participated in a beach seine with a hand set net. Kids went out on the Munson to observe a zooplankton tow, and conducted wildlife observations on the docks at Zittles. We ended the week with kayaking and learning about the tribe's canoe at Lake St. Clair.

We have filled both NREP AmeriCorps positions. One will continue our usual environmental education work, and the other will focus on the NCLI work with Wa He Lut and the Nisqually Youth Center Programs. They both start September 1st, if all of the paperwork is completed.

We co-hosted a day of learning with Hanford, Joyce, and Don McCloud at the Nisqually Tribe's culture center for Pierce College's Equity, Diversity, and Inclusion: College Access, Retention, and Engagement Services (EDI CARES) office which provides local high school students of color with free summer programs and classes. The TREES Summer Camp program encourages students to create technological solutions for social issues. The camp activities explored fostering local social change, combating racism, and curbing environmental injustice.

We are already hearing from teachers, and scheduling field trips for water testing, hatchery volunteer work, and tree planting!

Thurston Subarea Plan Update

No report.

Nisqually River Foundation – Justin Hall

Joanne has left her position with us. If you know of someone who would be a good fit, please send Justin any recommendations. A job posting will be out soon. We have been working on the Muck Creek Streamflow projects. We released a Request for Qualifications to find a contractor for the project. We received 3 submissions that will be reviewed by Justin, Chris Ellings, Brian Combs, and David Troutt. Justin continued discussion with folks who do the wooden trolls. They are reevaluating how they would tell the story with a local twist vs. the stories of the origins of trolls. The 10th troll will be hidden, with clues given from the other 9 trolls in the area. Their concern is that they are getting several hundred people per day. The way into the Nisqually Community Forest wouldn't provide adequate parking, but it may work at Pack Forest. Let Justin know if you have other ideas.

Nisqually Community Forest – Justin Hall

Justin and Kirk Hanson from Northwest Natural Resource Group did a rapid assessment of the property that the Nisqually Community Forest has added, checking out each forest stand as it was previously defined by Hancock. Each stand was reviewed to see if it needs to be pre-commercially or commercially thinned, and when either 5, 10, or 15 years out. Justin will pull together management plans for Nisqually Community Forest and the Nisqually Indian Tribe's new purchase. The Nisqually Community Forest is getting ready to do some legislative tours. We will be rescheduling with Representatives Wilcox and Barkis, and others in September. The Northwest Community Forest Coalition is putting together a video project that will include Nisqually Community Forest since we are further ahead than other areas.

Salmon Recovery – Chris Ellings

Adult Chinook are starting to return to the river, which starts a really busy season. The trucking program to take a portion of the Chinook that return to the hatcheries, sample and tag them, and bring them into the upper watershed is beginning. It's all part of the phased recovery strategy. The hatchery program is really important for the Nisqually Indian Tribe and the State of Washington so we can continue to fish, and also part of reestablishing a native run. The next component of the plan is to jumpstart natural production in the system. The phased recovery plan starts with colonization. After reversing the destruction of habitat in the system, with improved habitat compared to 50 years ago, we enter the colonization phase, trying to get fish spawning in nature, so when juveniles leave, they will come back as naturalized fish. In a couple of generations, each approximately 5 years, we will move into the next phase of local adaptation. That means we will control the influence of the hatchery fish on the natural population. Natural fish are bigger, wild fish, like wolves. The hatchery fish are more like chihuahuas. They are having some success as shown through the genetic work of out migrating juveniles. We do know that they are spawning in the wild! If you are out on the Mashel River or in the upper watershed, look for a jaw tag or lip ring. Let the Nisqually Indian Tribe know! This project will engage the entire Nisqually Indian Tribe Natural Resources staff to make it work.

This is all against the backdrop of gnarly drought conditions. They are monitoring the river temperatures in real time with a bunch of temperature monitors. If the temperature gets too high, the stress on the fish will be too great, and the program will stop. This also happened in 2015 when we did see lethal temperatures in the river, but that year also included record low levels behind the dam at Alder, and heating waters flowing across the mudflats. This year the folks at the dam have held more water back, and may be able to ameliorate river conditions. Of course the tributaries are not able to be helped by this.

The Ohop project, which is designed to capture the road runoff into a biofiltration box filled with compost and other materials and to remove dangerous chemicals from cars on the road, such as tire dust that causes mortality in Coho salmon in particular is moving forward. It's an exciting and unique project. Unfortunately, the permitting environment hasn't caught up with this type of project yet. It's been a learning experience for all of us, including the Department of Ecology, the Department of Transportation, and Pierce County. Everyone's been supportive and finding ways to get it permitted. All part of a pilot project! If they find that it's successful, the hope is there can be an expedited permitting process for this type of project in the future. It was noted that Tacoma Public Utilities has a requirement to keep the level no less than 10 ft below capacity from Memorial Day to Labor Day.

Been running at $\frac{1}{4}$ to $\frac{1}{2}$ capacity. It is in the FERC licensing but this is the first year they've actually done it (this is unconfirmed).

3. Drought Forecasting in Washington State

Nick Bond, NOAA

This talk will focus on what is happening now, what is the context within the long range climate, and this upcoming season forecasting, i.e. when are we going to get out of this drought that we are in now?

What's happening now - going back to the start of the water year, October 1 2020, this year has been the 7th warmest year on record statewide. Spring and summer have been most problematic. Much of the State was considerably warmer and drier than normal for that 4-5 month period, especially in eastern Washington where it was the 2nd driest in over a century. There are parts in South Sound that are fairing a bit better. This heavily impacts streams and waterflow. Overall during the winter we were in pretty good shape. In spring, there was an early snow melt, really hot weather at the end of June and into July and August. Streamflows have really tanked. There are plenty of streams that are considerably below normal flows. The Chehalis is one of the problem areas. Another perspective is how dry the landscape is, from a forest fire risk perspective, soil moisture is incredibly low. The west side of the Cascades is abnormally dry due to moderate drought. Eastern Washington is worse. There are different ways to get drought in the Pacific Northwest. There have been some major droughts in the past few decades. We thought droughts were due to weird winter weather. In 1992 it was a warm, dry winter. In 2001 we had bad snowpack again. 2015 was the worst snowpack ever because it was so warm, but close to adequate precipitation. 2021 is kind of an odd ball because it was spring that was the problem. There was a healthy snowpack at higher elevations, but the warm dry spring really triggered the drought. This has caused some big problems, especially in Eastern Washington as a result.

Long term with global warming manifesting itself in Washington State.

The State climate office website shows how temperature and precipitation have varied through the years, trends in temperature. Climate change is real, it is here, not just an abstract thing. We have to recognize that. What are our chances of recovering from this drought anytime soon? Ritzville, WA is one of the worst impacted areas in the state due to precipitation deficits, what would it take to get back to normal? It's only had about $\frac{1}{2}$ " or rain since March, normally 5". Only 1-2% chance it will get back to normal by next March! It is unlikely that we will recover any time soon! We normally focus on snowpack for water supply and streamflow in summer months. That is not the whole story since we had a really anomalous spring. Over the past 50 years, our summers have become warmer and drier. La Niña could be helpful this winter.

The Blob had big consequences on the weather, marine ecosystems, and freshwater ecosystems in the Pacific Northwest. The Blob 2014-2016, the winter of 2014-2015 was the warmest ever. Snowpack was terrible. Most of the ski areas didn't even open. That winter streamflow was incredibly low. We had decent precipitation, but it fell as rain instead of snow. So streamflow decreased a lot earlier in the spring than usual. Stream temperatures also rose faster than usual, right when some salmon stocks were beginning to return.

How are temperatures in the Nisqually River? Not as hot as 2015. Currently in the low 60's due to reservoir elevation at Alder. In 2015 the river was warmer than 70 and we saw some pre-spawn mortality in the pinks. This year the tributaries are above 70.

The historical record shows warming trends, more modest in spring than other seasons. The minimum temperatures are trending warmer than the maximum/afternoon temperatures. This could have implications for streams which are very sensitive to night time temperatures. We are getting close to normal precipitation, but it's falling as rain instead of snow. There is a trend towards decreasing snowpack, less snow to get us through the dry periods. The biggest floods get bigger because of this. Big floods are getting bigger. Some floods are good for salmon streams, but major floods, not so much. Timing of stream flow...the idea is that weather is warming in much of the West. That spring pulse of snow melting is occurring earlier than it used to, reflecting that there is more water coming down in the wet season instead of as snowmelt later in the year.

Seasonal forecasting: Where is the climate going? It's going to continue to warm. If we stopped greenhouse gasses tomorrow, the climate would continue to warm for decades, and sea level rise will continue even beyond that. This will especially be dominant on the east side of the Sierras and Cascades. Proximity to the ocean will mute this effect over the next few decades compared to the recent historical past. The expectations for the model as a whole is that we will have even more of a Mediterranean climate, including dryer summers and wetter winters. Some of the things we have been seeing recently will be more common in future years and decades. It's not all doom and gloom. The Northern US States are expected to have greater precipitation overall due to wetter winters. We could see greater flows in the Columbia River than in the historical past. Okanogan, Yakima, and Chehalis may see more water.

One thing that we are definitely anticipating is differences in the timing of the stream flow. Different types of watersheds: Rain dominant lower elevation watersheds like the Samish and Chehalis will have mixed rain and snow; they will have double peak flows. Snow dominant watersheds are mostly spring peak flows. Salmon stocks are adapted to these different timings. The timings will shift with climate change, will there be enough genetic diversity in the stocks to adapt to these changes? We can anticipate, especially for the South Puget Sound region, a shift from mixed rain and snow watersheds to rain dominant watersheds. We still can have major snow events. They will just be fewer, farther between, and less intense than they used to be.

Some folks have done assessments of where there is water stress in the USA. There are plenty of other places in addition to the Columbia Basin that will have this issue. Challenges for water managers include summer demand vs. winter floods, infrastructure like reservoirs, legal issues, hydropower, habitats, recreation/tourism. Ecosystem concerns: air/water temperature impacts, aquatic migration, invasive species, and sea level rise. Some of the forecasts are available at: www.cpc.ncep.noaa.gov

Multiple factors are taken into account, including climate (atmosphere and ocean) computer models, patterns during the last 3 seasons, historical El Niño Southern Oscillation relationships, persistence

and trends. Forecast skill peaks in late winter; temperature more skillful than precipitation all year. Probabilities are split into 3 tiers: below normal, normal, above normal.

La Niña could bring cold air from Alaska and Canada and create good snowpack this year. La Niñas tend to be back to back, and we did have one last one. Models are showing cooler conditions in the tropical Pacific. There is warmer water than usual this week along the coast of the Pacific Northwest. Prevailing winds from the west may counteract the La Niña effect. These factors stack the deck, but don't guarantee anything. If you look at what the tropical Pacific is doing, and the runoff from the Columbia, there can be a correlation, but not always. Remainder of August will probably continue to be a little warmer and drier than usual. Further into the fall, we don't have any indication what the trend for precipitation will be. Chances are with warm water off the coast, fall will be warmer. How will upcoming fall and winter seasons play out? Could be more floods in watersheds with west facing slopes. Slightly higher odds for windstorms. A small number of moderate cold air outbreaks, but extremely low temperatures are highly unlikely. Fog/air pollution has a decreasing long term trend.

Questions: If we are trying to restore resiliency to these systems for salmon, how will this play out over time. Have to be kind of pessimistic about it in some ways. Nooksack tribe is trying to determine how to actually keep temperatures lower. Is it better to plant trees in the riparian corridor, or create deep pools? Hatcheries in the Puget Sound have a monoculture of fish. We can help by diversifying the gene pool of the salmon. They've been around for a long time.

Terry Williams, tribal elder at Tulalip, says maybe it's time to think about flow re-regulation in the upper watershed to have water for salmon, not just power production. There is actually a success story in 2015. Impoundment on upper Yakima had an obligation to have a certain amount of water. Ecology told them if they had water at the top it would have ecosystem benefits all the way down. They were able to put water in the stream at a critical time for fish passage. There are some counter intuitive solutions out there. Can we make up for the decreasing snowpack with dam water storage? We are taking down dams faster than we are putting them up. There is potential for solutions. Surface reservoirs, pumping into groundwater basins that can feed into streams and rivers.

Will salmon be able to adapt quickly enough?

A counterintuitive one - having a thinner forest means more snowpack! Spend money to thin forests, not clear cut, to increase snowpack. This is a win-win for better wildlife habitat and also decreases wildfire risks. Work with EPA and the VELMA model that shows that older aged stands help waterflow as well.

Some aquifers can charge more easily. Others are more impervious. There are some test wells in Chehalis area and another in Eastern Washington. They show very different response to wet and dry periods.

4. Puget Sound Partnership: Puget Sound Climate Advisory Team Recruitment *Kristin Hayman, Puget Sound Partnership*

Puget Sound Climate Advisory Team - what the team is, what they aim to do, what types of activities they do, and if there is anyone in NRC that would like to join the team.

In September of 2016, the Environmental Protection Agency established the Climate Advisory Team to catalyze the Puget Sound Estuary National Estuary Program. The Climate Action Team is the technical advisory team for the Puget Sound Action Agenda Implementation strategies. Currently the makeup of the Climate Advisory Team is the Puget Sound Partnership, the Northwest Indian Fisheries Commission, the Environmental Protection Agency, Washington Department of Fish and Wildlife, Washington Department of Natural Resources, the Washington Department of Health, and the Washington State Stormwater Center. The Climate Advisory Team met from October 2016 through 2018, then went on hiatus when the Puget Sound Partnership didn't have the capacity to convene the group. In 2019 new staff were able to reconvene with even more partners.

The Climate Advisory Team works to advance recovery goals, mitigate, adapt, and create socio-ecological resilience. Mission is shared plans and strategies, research and monitoring, decision making to reduce climate vulnerabilities for Puget Sound recovery. The Climate Advisory Team serves as an advisory group, not a decision making body. Aim is to be diverse, creating adaptive management, and informing Puget Sound recovery programs.

Current Membership: Environmental Protection Agency, Washington Department of Commerce, Washington Department of Fish and Wildlife, Washington Department of Health, Washington Department of Ecology, Washington Department of Natural Resources, Strait Ecosystem Recovery Network, Mid-Sound Fisheries Enhancement Group, and Island County Public Health and Medical Reserve Corp.

Recent work has included drafting the board's climate role. 2022 action agenda outcomes and strategies, regional salmon chapter update actions and strategies. Upcoming in 2022 will be action agenda items, climate progress measures/targets, alternative future scenarios analysis.

They are currently seeking membership from natural resource managers, planners, physical/social/policy government experts, tribal, federal, local, academic institutions, etc.

They meet once a month from 9:30am-12:30pm on the first Thursday of the month. Hoping to taper meeting times back to 2 hours. There can be pre or post meeting work. They review documents and make recommendations. Interested parties receive all communications. You can jump in and out of meetings and track the group via email.

David Troutt will participate on behalf of the Nisqually Indian Tribe and can also wear the hat of the Nisqually River Council until someone else wants to.

5. For the Good of the Order

Renee Skaggs, Pierce Conservation District - Pierce Conservation District still has some RCPP funding remaining that we would love to obligate prior to the grant's expiration next spring. The funding can be used for culvert replacement and riparian plantings in the Nisqually, among other things and although contracts need to be signed next spring, the projects only would need to be implemented in the next 5 years. Please reach out to Renee if anyone has a potential project!

Jeff Barney, Pierce County - We are putting on a lunch meeting for all salmon bearing/salmon related projects. Covers what Pierce County is doing or planning on doing. Construction has commenced on levee near the Mount Rainier National Park entrance. Could get people up there to observe the action when active construction begins. They did a fish out and there should be some good pictures of that coming soon. What species were found? A fair amount of cutthroat and some sculpin. It lasted about 3 days.

Daniel Hull and Nisqually Reach Nature Center - Construction on the boat launch starts 8/23. Launch will be closed 8/23-8/27. They may close on other dates, but that hasn't been announced yet. Parking lot paving is out to bid right now. Gold Star Family Camp starts Friday and will run through Wednesday. The Nisqually Reach Nature Center will hold an in-person fundraiser! Masks will be required to go inside. There will be beer, wine, food, and music. Everyone attending so far will be vaccinated. The event is Saturday August 28th and there are a few tickets available. There are fewer seats than usual due to COVID concerns. April Roe has taken a position with an outdoor school in North Bend after being with the Nisqually Reach Nature Center for 5 years.

Ashley Von Essen, Nisqually Indian Tribe - There will not be an in person Nisqually Watershed Festival this year. With the uptick in COVID cases, it was decided that it wasn't the right time. We have had virtual event fatigue, so there won't be a virtual festival either. Michelle Stevie from Stream Team will help us create a "Nature Sleuths" program using Goose Chase app. They are going to add 2 missions, the twin barns loop and the estuary boardwalk to have an adventure, win stickers, etc. There will be 20 different areas, including the refuge and Nisqually Reach Nature Center, that people will explore. We are also developing an on-line "Things To Do" map that is interactive and encompasses the watershed, including organizations that usually attend the festival.

Jesse Barham: Olympia City Council officially supported the estuary option of Capitol Lake restoration.

David Troutt: By the time of our next meeting, the YMCA project deal will have closed. Lewis County is working on an exemption for zoning to allow for this to happen on Mineral Lake.

Jeanette: NLT Strategic Plan includes increasing public access. Curious to tag on to the Nature Sleuths to increase activity on lands. Also, Pierce Conservation District announcement coming soon on the search for a new Executive Director. Send good candidates Jeanette's way, or share the job announcement with them. Also, Jeanette is on the State Association of Washington Conservation Districts and the Director will be retiring soon and so there will be a search for a new agency director starting soon.

Glynnis Nakai, Nisqually National Wildlife Refuge Complex - The previous Visitor Services Manager transferred to Missouri in mid-July. They will be advertising for that position soon, government wide and open to the public as well.

The meeting was adjourned at 11:30am.

*Next meeting: Friday, September 17, 2021
Online*