



Meeting Minutes
Nisqually River Council Meeting
December 21, 2018
BFJNNWR
Information: 360.438.8715

Attendees:

Council Members:

Dan Calvert – PSP	Lee Roach – DNR
Molly Carmody – City of Yelm	Gary Stamper – Lewis County
Amy Cruver – Pierce County	Kelly Still – WDFW
Gary Edwards – Thurston County	David Troutt, chair – Nisqually Indian Tribe
Amber Martens – JBLM	

Citizens Advisory Committee Members:

Phyllis Farrell	Karelina Resnick
Howard Glastetter	Marjorie Smith
Ed Kenney	Robert Smith
Fred Michelson	

Guests:

Roger Andrascik – NLT/NSS	Kyle Kautz – Nisqually Indian Tribe
Warren Bergh – NLT/NSS	Steve Klein – Yelm citizen
Matt Curtis - WDFW	Peter Lyon – Dept. of Ecology
Liz Darcy – JBLM	Meeta Pannu – Dept. of Ecology
Melanie Davis – UW	Etsuko Reistroffer – NLT/NSS
Chris Ellings – Nisqually Indian Tribe	Jim Reistroffer – NLT/NSS
Shawnté Greenway – Dept. of Ecology	Maya Teeple – Thurston County
Joe Kalama – Nisqually Indian Tribe	Ashley Von Essen – Nisqually Indian Tribe
Stikayu Kalama – Nisqually AmeriCorps	

Staff:

Brandon Bywater - NRF	Emily McCartan – NRF
Justin Hall – NRF	Chrissy Webb –NRF
Joe Kane – NLT	Sheila Wilson – NRF

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

David called the meeting to order at 9:10am. Minutes were approved, as was the agenda for the day. 2019 is the International Year of the Salmon.

2. Committee Reports and Updates

Advisory Committee Reports:

Citizens Advisory Committee – Phyllis Farrell

This month the CAC discussed updates on Tacoma Power, geoduck farming near Tolmie State Park, and continuing concerns with Thurston County's decision to exclude Land Trust properties from the parks designation for mining setbacks. They also discussed the Fire

Mountain Farms biosolids permit application. Steve Klein shared his historical perspective on previous efforts to stop sludge spreading in the Yelm area. There was major activism from community members and the School of Enlightenment in 1988-89 opposing sludge spreading from Seattle in the Bald Hills, which was successfully stopped. Issues include metal and contaminants, including prescription drugs, which are not tested for and are very concerning for runoff into the Nisqually drainage.

Chair Report – David Troutt

David will be spending a fair amount of time in Olympia this legislative session advocating for the full implementation of the Orca Task Force Recommendations. A coalition including tribes, Trout Unlimited and recreational fishing groups, Long Live the Kings, and others has issued a strong letter to the governor urging full funding, especially for salmon habitat restoration and protection, stricter enforcement of environmental regulations, and related measures to support prey availability for orcas. The governor's budget request was a step in the right direction, but not adequate (less than previous bienniums). We need a critical emergency response to address declining salmon stocks and orcas on the brink.

Yesterday the Nisqually Watershed Planning Unit voted to approve and deliver to Ecology a plan to deal with exempt well use (Hirst Fix). The legislation gave Nisqually less than a year to produce this plan (other watersheds had three years); no other watershed has been able to pull this off yet. We are proud of the effort from our partners that made this possible. Great balancing of goals and objectives among governments to provide security for residential growth.

Staff Report – Emily McCartan

The NRC meeting schedule for next year was distributed and is available online: <http://nisquallyriver.org/who-we-are/nisqually-river-council-meetings/> Because of the federal government shutdown, some venues may be subject to change. This year's retreat will be on Anderson Island hosted by the Anderson Island Historical Society in August. Grant awards from the Streamflow Restoration (Hirst) funding are expected to be announced soon.

Thurston County Subarea Plan – Maya Teeple

Nisqually Subarea plan community working group will be starting up in late February/early March. There will be 6-9 meetings to work through the plan and develop new draft. The county requested some changes in the draft RAP report from the consultant. There will be a public meeting when the final report is released in the first half of 2019. As discussed previously, the countywide designation of mineral lands is being updated as part of updates to Chapter 3 of the Comprehensive Plan, which has just gone to the planning commission. The commission has received lots of public feedback and comments so far, and there will be several more opportunities to comment at upcoming meetings.

3. Fire Mountain Farms Biosolid Spreading Application here in yelm.

Fire Mountain Farms (FMF) has applied for an amendment to its general permit to apply biosolids at a site off 128th Ave in Thurston County outside of Yelm. FMF currently applies biosolids at sites in Lincoln, Lewis, Pacific, Grays Harbor, Pierce, Spokane, and Pend Oreille counties. Ecology issued a Determination of Non-Significance (DNS) after reviewing the

SEPA checklist in December. A public meeting will be held on Jan. 24 at the Yelm Senior Center (16530 103rd Ave SE) and Ecology staff attended the NRC meeting to answer questions and hear public input today as well.

Meeta Pannu, the Southwest Regional Biosolids Coordinator at Ecology, reviews applications for beneficial reuse of biosolids (treated waste from publicly regulated wastewater treatment facilities) as fertilizer/organic amendment. The site in question is 180 acres on Bald Hill Road, likely for pasture or maybe forestland. Ecology has reviewed proposal for testing of biosolids and meeting regulatory requirements (more detail about this process will be covered at 1/24 public meeting). Biosolids are applied agronomically – tailored to nitrogen needs of specific crop, meaning nitrogen is not running off into groundwater or rivers, with buffers between wells, roads, rivers. When ECY is satisfied with application, it enters public comment period (now). FMF has a general permit granted by the State, and this would amend that permit to allow application at this site. The general permit lasts for 5 years, with a review and update required for renewal in 2020. The land at this site is owned by a private individual

Discussion:

- It would be helpful at the 1/24 meeting to discuss how permitting requirements have changed over time and the difference between currently permitted biosolids and the untreated “sludge” from the 1980s issue Steve Klein brought up earlier.
- This application caught many people by surprise. What is the process for notifying the public? Attending a public meeting signs you up for notifications about issues at a site or by a permittee. It is the permittee’s responsibility to let interested parties and the public know about changes in their permit. Permittees/applicants are required to submit a public notice in the local newspaper and post public signs. The notice in this case was published in The Olympian. Several participants noted that the Nisqually Valley News is the local paper for Yelm and residents would likely not have seen it in The Olympian. NLT is a downslope neighbor and wasn’t notified about this project. Concerned about impact on the floodplain outside of the buffers. Thurston County Commissioners were also not aware until CAC members brought it to their attention, which is a concern.
- Ecology does a SEPA review for each application, with a comment period posted on the SEPA register. Ecology’s public events webpage has notice of the hearing (1/24) and Ecology notifies SEPA contacts at counties, tribes, and cities.
- The site is outside of Yelm city limits, so it would be a County Commission matter, not City Council.
- Buffers are meant to address nitrogen impacts. Is there research showing water quality impacts from household or pharmaceutical chemicals in biosolids? Ecology’s response was that current regulations are based on whether research shows a harmful effect from a given concentration of a chemical. We don’t currently have evidence showing whether most drugs or household chemicals are harmful and they are not tested. Biosolids are currently tested for pollutants (mostly heavy metals), pathogens, and vector (bug) attraction. The material looks like dirt once treated. Testing is done at wastewater treatment plants on a periodic basis (not every batch, but at least annually) according to regulations.

- What is FMF's history and why have their sites been shut down in the past? FMF has been in business since 2001, when the biosolids program began. They have generally conformed to the rules, with some issues at other facilities. After a significant compliance issue in 2014 in Lewis, FMF has been working with Ecology and EPA to resolve (three sites were shut down related to this issue).
- Do Thurston County Commissioners have any say in this process? Legally, the regulatory authority is given to the state Dept. of Ecology, not local governments, but Ecology welcomes their input. They can submit comments and can reach out to the Health Department for site visits. CAC comments reflect concerns that, from a citizens' perspective, this takes it out of the democratic process. EPA and state legislators have legal oversight.
- Will they bring in septic tank trucks? No, it will all be processed before getting to the site. The 1988 proposed Yelm site was for sewage sludge, while this is treated biosolids.
- The minimum buffer to the river at this site is 1000 feet, and more in some places. Biosolids are applied in the amount indicated for the crop to be grown, not dumped, and these application rates are reviewed every year.
- The land at this site is owned by a private individual. The permit doesn't address if FMF is paying the landowner to apply biosolids.
- To the best of Ecology's knowledge, all states allow land application of biosolids, and there are many more examples of permit process working than not working. All states rely on EPA for baseline regulations; EPA has the legal right to issue permits, but delegates that to the states. State regulations are either the same or stricter than the EPA. Counties do not have authority to permit biosolids.
- Concerns were noted from CAC and community members about the site's proximity to the river. We work hard to protect the Nisqually watershed, including NREP students who visit stream sites to test water quality. Ecology does not have the staff or budget capacity to monitor these operations closely enough to ensure compliance, and the effect of pollutants are not well understood. While participants appreciate Ecology's explanation of how the system is supposed to work, past evidence indicates gaps in the oversight and relying on self-reporting that doesn't always work. The Nisqually is a unique place due to the restoration work done here, and may require a different way of looking at issues like this. This process should move forward based on trust and relationships between Ecology, the applicant, the landowner, and the community. The applicant (FMF) has a history of not appearing to deserve that trust, so it is hard to have confidence that the applicant will follow the process in the ideal world. The next general permit review would be a good opportunity to continue this discussion and review what's covered under testing requirements (pharmaceuticals, etc.)

3. Dynamic Habitat Models for Estuary-Dependent Species

Melanie Davis, UW School of Aquatic and Fishery Sciences

Melanie is a PhD candidate at UW (she also works for USGS Western Ecological Research Center when not furloughed). Her research focuses on data about the Nisqually Estuary restoration and what we can learn that may predict future impacts of climate change, sediment management, and its effects on Chinook salmon. The Nisqually estuary is a good case study of similar degraded habitat throughout Puget Sound. Removing the outer dike

opened the estuary up to tidal impact, leaving a degraded mudflat, which we hope to see return to a more pristine state. Climate change is expected to compound the degradation with drought, lower river flows, increasing ocean temperatures, and sea level rise drowning intertidal habitats. Melanie's research question is about how these factors all interact:

How does this combination of habitat degradation, restoration, and climate change affect estuary and delta dependency issues, specifically for Nisqually juvenile salmon and their prey?

Research Objectives:

1. *Model change in the restoring habitat mosaic through time*

Climate change and marsh accretion models. In restored marsh, expect to see elevations increase and vegetative growth, becoming high marsh with lots of tidal channel networks. As sea levels rise, some of this marsh may get washed away, see a return to more mudflat habitat, similar to degraded habitat just after restoration began. Large areas of the restored marshes are not increasing in elevation/vegetation growth as quickly as hoped. Marshes have a positive feedback response to sea level rise: they trap sediment with vegetation and increase elevation as the tide rises (slowly). This is what's driving a lot of the current recovery in the restoration area. It can also move the estuary upstream – this happened in Elwha. The Nisqually Estuary is sediment-starved because of Alder Dam, which traps over 90% of the sediment that would otherwise be coming down the river. (Even though it looks like a lot of sediment is moving down the river, it is a very small fraction of what would be there without the dam.) This will be a challenge if the system is to keep up with climate change. The marsh accretion model shows that doubling sediment impacts would significantly improve elevation. Management practices could affect sediment availability (dam removal is not on the table in the Nisqually).

2. *Determine prey availability in each habitat type*

Habitat types include forested, transition, salt marsh, mudflat, eelgrass. Juvenile salmon move very quickly through and around the system and digest their food rapidly, so sampling only shows what they've eaten in the last hour or two. Salt marsh has highest prey biomass (combination of terrestrial and aquatic prey). In most systems, we see an increase in prey productivity as salinity increases. Nisqually is unique in that Chinook eat a lot of mysids (delta shrimp)

3. *Determine which prey taxa are being consumed by juvenile Chinook and in what quantity*

Wild and hatchery Chinook have different diets in the estuary. Hatchery fish move through straight to the delta, while wild fish spend lots of time in the upland forested/brackish zones, which are energy rich from terrestrial prey inputs. Because terrestrial prey has higher energy content, the wild fish tended to have more energy in their stomach contents. Melanie's research does not look at pollutants/contaminants, but other studies do. The Tribe and WDFW have worked on a toxin loading study in Chinook and steelhead.

4. *Use a bioenergetics model to estimate the "quality" of estuarine habitat as the habitat mosaic shifts*

This model uses the quantity of prey, quality of prey, and water temperature to estimate growth. Good habitat-specific data sets in the Nisqually allow Melanie to use spatial data to look at climate change impacts. The results are just finished and she is working on the

analysis. As climate change returns salt marsh to more mudflat, expect to see more saltwater crustaceans, less high-quality terrestrial prey sources. Water temperature is also expected to increase, maybe outside the range of thermal tolerance for many salmon species. Expect to see the loss of much of the habitat where Chinook are likely to grow the most (salt marshes with terrestrial-aquatic interface).

5. *Potential applications*

Intensive surveys of birds were conducted during and after the restoration. Hope to link prey availability data to bird habitat (shorebirds vs. benthic prey densities). Bird data has not been reported yet.

The model would also enable predictions about habitats and bioenergetic sources that would emerge with freeway modification scenarios. Additional sampling might be needed but the tool could be very powerful for climate adaptation and I-5 changes.

4. **Allied Program Reports**

Nisqually Land Trust – Joe Kane

NLT is closing on 4 parcels on mainstem Nisqually in Yelm, hoping to expand protections in that reach. Staff were not able to work at the Refuge for three weeks during shutdown; USFWS found additional funding to re-open because it's such a popular site, so they are able to be back in their offices for now.

Nisqually River Education Project – Sheila Wilson

Finished salmon tossing (only 5 trips this year due to low Chinook returns and more uses for hatchery carcasses). Continued meetings with Climate Resiliency Fellow teachers through (3 year grant project), which will wrap up in June. NREP hopes to roll them into new grant applied for in NOAA BWET. Other grants in progress include ALEA, for plantings next fall, and the state No Child Left Inside grant application – working with Nisqually Tribe programs to target outreach to underserved youth. Water Quality Monitoring Day is Feb. 14 and March 21 is 27th annual Student GREEN Congress.

Nisqually River Foundation/Community Forest – Justin Hall

Justin has been meeting with legislators, asking for funding for NRC staffing and operations, and, separately, to advocate for state-level community forest funding. He leaves next week for Ecuador with AgForestry.

Salmon Recovery

Chris introduced Kyle Kautz, the new timber, fish, and wildlife biologist, as that program is integrated with the Salmon Recovery Program. Kyle has been a key technician in native plant restoration for the last 10 years.

5. **Streamflow Restoration Act and Permit-Exempt Well Planning**

David Troutt, Nisqually Indian Tribe, and Emily McCartan, Nisqually River Foundation

The Streamflow Restoration Addendum to the Nisqually Watershed Management Plan, addressing impacts of permit-exempt wells, was finished this week. Legislation passed last January charged the Nisqually Planning Unit with projecting the water use from new permit-exempt over the next 20 years (through 2040) within specific sub-basins, and identifying

mitigation strategies to replace that water use and avoid any impacts to streamflows. The Planning Unit included representatives from Thurston, Pierce, and Lewis Counties, the Nisqually Indian Tribe, Thurston PUD, Cities of Yelm, Olympia, and Lacey, Town of Eatonville, state Departments of Ecology, Agriculture, and Fish & Wildlife, and the NRC CAC. The PU's approach focuses on ambitious, large-scale mitigation strategies that align with salmon recovery and habitat protection and restoration goals, rather than going first to regulations on well users. Ecology has the document in review and must make a decision on whether the plan meets the requirements of the law, including achieving Net Ecological Benefit, by February 1.

Questions:

- Are there opportunities for public involvement? Lois Ward represented the public as the CAC delegate to all Planning Unit meetings. Technical staff from the Planning Unit also briefed a full CAC meeting, open to the public, on the Planning Unit's approach last fall. Comments from that meeting were considered by the Planning Unit throughout the process. Furthermore, after Ecology has reviewed and adopted the Addendum, it will need to go through a formal adoption process by county governments, which will include opportunities for public review and comment.
- Is the plan mandatory or voluntary? The Streamflow Restoration Act (RCW 90.94) passed last January mandates that watershed planning groups take action to address new permit-exempt well impacts on streamflows. The Nisqually Planning Unit's approach prioritizes habitat projects (Community Forest management, stream channel and floodplain restoration) and infrastructure projects (approval of Yelm's water right to move more new development onto city water, Eatonville stormwater projects) over regulations on individual well-users. The legislation provided funding (\$300 million over 20 years) to be awarded statewide as grants to implement these projects. The plan also gives the counties options to consider making changes to the building permit process, but those are not decided and would not be implemented without a public process.
- How does the plan address other tribes' usual and accustomed areas within the Nisqually? Squaxin Island Tribe participated as an ex officio of the Planning Unit. The underlying goal of supporting salmon recovery through this effort is one shared by all stakeholders.
- How practical is it to consider relocating Eatonville's water source? This proposal would need to be studied for feasibility, but it potentially represents a significant streamflow benefit to the Mashel River, so we wanted to be able to consider it as an option.
- The science on what we know about water is always changing. How does the plan address adaptive management? The need to adapt to changing needs and science was a main reason the Planning Unit chose to outline broad strategic goals over the 20-year planning horizon, rather than identifying individual very specific projects. We expect to continue adaptive management discussions over the long term.

6. Further discussion on biosolids

- Biosolids available for household use, purchased from municipalities, is processed differently than the material proposed for the Bald Hills site.
- The oversight process has some flaws – it relies on self-reporting. This applicant has a history of being out of compliance with their permits (from 2001-2013, were mixing

untested, unregulated sludge into their biosolids at other sites). The rules do not require that their previous track record be considered in their permit application for this site.

- While we can push to strengthen the buffer zones on this site application, it may go forward anyway. In that case, the Tribe and others are interested in pressing for changes to the general permit to take FMF's history into account, when the general permit comes back up for review in 2019. Voices of citizens can make a difference in the process.

7. For the Good of the Order

- The League of Women Voters of Thurston County is hosting a series of public meetings on water issues. David Troutt and Kevin Hansen will be speaking at the first one next month. Phyllis will send the schedule when it is finalized.
- Matt Curtis introduced Kelly Still, who will be the new representative from WDFW to the River Council. Matt has been promoted to supervising biologist, but will still come to meetings when he is able.

The meeting was adjourned at 12:05.

*Next meeting:
February 15, 2019
Billy Frank Jr. Nisqually National Wildlife Refuge*