



**Meeting Minutes**  
**Nisqually River Council Meeting**  
**April 19, 2019**  
**BFJNNWR**  
Information: 360.438.8715

*Attendees:*

**Council Members:**

Chad Baumler – NOAA  
Dan Calvert – Puget Sound Partnership  
JW Foster – Yelm  
Abby Gribi – Eatonville  
Amber Martens – JBLM

Glynnis Nakai – BFJNNWR  
René Skaggs – Pierce Conservation District  
Kelly Still – WDFW  
David Troutt, chair – Nisqually Indian Tribe

**Citizens Advisory Committee Members:**

Phyllis Farrell  
Howard Glastetter  
Ed Kenney  
Fred Michelson

Robert Smith  
Marjorie Smith  
Lois Ward

**Guests:**

Jeff Barney – Pierce County  
Warren Bergh – NLT/NSS  
Chris Ellings – Nisqually Indian Tribe  
Michelle Horkings-Brigham – Preserve the Commons  
Joe Kalama – Nisqually Indian Tribe  
Meade Krosby – UW Climate Impacts Group  
Max Lam  
Larry Leveen – Woodland Trail Greenway Assn.  
Salmon Lutz – River Ridge High School  
Sheila Marcoe – Ecology  
Martin McCallum – NLT  
Carol Pashcal – Anderson Is. Historical Society  
Stephanie Kuhns – WDFW

Pat Pringle  
Conner Ralston – River Ridge High School  
Dixie Reimer – NTPS  
Jim Reistroffer – NLT/NSS  
Etsuko Reistroffer – NLT/NSS  
Alexandra Rivera – River Ridge High School  
Izabella Ruisenor – River Ridge High School  
Courtney Schrieve – NTPS  
Gary Stamper – Lewis County  
Maya Teeple – Thurston County  
Ashley Von Essen – Nisqually Indian Tribe

**Staff:**

Brandon Bywater – NRF  
Justin Hall – NRF  
Joe Kane – Nisqually Land Trust  
Emily McCartan – NRF

Chrissy Webb – NRF  
Sheila Wilson – NRF

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

David called the meeting to order at 9:06 am. Minutes from the March 15 meeting were approved along with the agenda for the day.

## 2. Committee Reports and Updates

### *DuPont Historical Area Plan for Sequelitchew Creek – Ed Kenney and Max Lam*

Ed and Max are working with DuPont citizens and organizations to protect the historic area around Sequelitchew Creek, where the City of DuPont has approved building a huge warehouse. The Nisqually Delta Association and industrial partners have appealed and may go into litigation. The group is trying to establish a DuPont Historical District park/recreation area at the mouth of Sequelitchew Creek instead (or as mitigation for) the warehouse. Looking for input. It is one of the oldest sites of contact between Europeans/Americans and native people in Puget Sound. Nisqually people were using the site at least 5,600 years ago. First church in the state was the Methodist mission constructed in 1839, and the first 4<sup>th</sup> of July celebration happened there. 9<sup>th</sup> Cavalry Buffalo Soldiers encamped there in 1904, which laid the groundwork for Ft. Lewis. Max shared concept art she designed for the recreation area to commemorate this history, including a “Three Peoples” statue. Based on surveys of the community, the recreation area should serve nature lovers, military families, service members, and veterans, youth programs, and people interested in local history, culture, and salmon. Ed and Max are looking for input from the Council and other community groups. The DuPont hearings examiner has scheduled a hearing in mid-May on the warehouse zoning.

### **Advisory Committee Reports:**

#### *Citizens Advisory Committee – Phyllis Farrell*

This month the CAC heard updates from members on Nisqually State Park, WRIA 11 planning, Thurston subarea plan and Shoreline Management Plan updates, and Yelm biosolids. The group Preserve the Commons (<https://preservethecommons.org/>) continues to raise public awareness and meets weekly to oppose the proposed application of biosolids by Fire Mountain Farms (FMF). Ed is going through a large public records request documenting FMF’s practices. Water tests at the site are currently pristine, as a baseline if the application goes ahead. FMF has been applying biosolids near Eatonville in Pierce County for 10 years next to the Little Mashel. Records show numerous violations. Ecology staff have reported to David that they are overwhelmed by the number of comments received and are not anticipating having a decision until June or July. Biosolids appear to be a widespread national problem, with not enough testing or monitoring of detrimental impacts in our food and water supplies.

#### *Chair Report – David Troutt*

The North of Falcon harvest management negotiations (see Craig Smith’s presentation last month) wrapped up on Tuesday this week. It is a difficult and contentious process and at times emotional. Some tribes haven’t had a commercial fishery in decades. Stillaguamish Tribe have had an extremely limited ceremonial and subsistence fishery for many years; this year, they negotiated 15 Chinook. Some stocks are so impacted that the margin is one or two fish. David co-authored an op-ed in the Seattle Times with Todd Meyers from Washington Policy Center about salmon recovery funding (<https://www.seattletimes.com/opinion/with-billions-more-in-state-budget-its-time-to-fully-fund-salmon-recovery/>). David’s remarks at the Salmon Recovery Conference also encouraged people to call the Legislative Hotline, which generated 5,000 calls. Salmon recovery advocates have not been this organized in the past. David will be on a King 5

Facebook Live broadcast as part of a panel with tribal and recreational fishing advocates for habitat funding. There is less money in this year's budget than there was 4 years ago, and new proposals are tied to new funding sources that are unlikely to pass.

*Staff Report – Emily McCartan*

Emily continues to work on NWSP Report and 6091 implementation planning. Emily, Justin, and Ed met with the State Parks Commission this week on the pre-design planning process for Nisqually State Park. Expecting to get close to \$3 million in the budget for Phase I, which will include a new entrance, Village Center interpretation center, Mashel overlook trail, campground, and Nisqually River water access/float launch. They will come to a River Council meeting in the next couple months to update and get our input. Emily and Chrissy will be in DC at the end of April to present on NREP's Environmental Literacy Grant for Climate Resiliency Fellows, which is wrapping up this year.

*Thurston County Subarea Plan Update – Maya Teeple*

County staff met with the RAP consultant and outlined the final changes needed in the report. Commissioners have yet to decide whether the Community Working Group for the Nisqually Subarea Plan will be a formal advisory or a stakeholder group.

**Allied Program Reports:**

*Nisqually Land Trust – Joe Kane*

Annual Auction and Dinner last month was most successful ever, raising \$50,000. Land Trusts are concerned about Conservation Futures Funds in Thurston and Pierce Counties being diverted from conservation projects. Last week in Pierce County, Councilwoman Roach passed a short-notice change to the funding advisory board, taking three positions representing unincorporated areas (which is most of the Pierce County Nisqually basin) and restricting them to landowners whose primary income is from farming. Joe is concerned that this will seriously disadvantage conservation projects and harm what had been one of the strongest, balanced, and transparent Conservation Futures programs in the state. There are still some good advocates for conservation projects in the community. The NLT also continues to meet with Capital Land Trust and Thurston County commissioners about CF, which will have a truncated round this year to award prior unspent funds. Hope that commissioners are beginning to understand that these projects need reliable and consistent funding and process, because they build up incrementally over years.

NLT had two acquisition projects funded through the Streamflow Restoration grant program, but transactions are being delayed and opportunities may be missed because Ecology does not have an acquisition program up and running yet to release the funding. David offered to speak to the Director – no one wants this to fall by the wayside because of bureaucratic issues.

*NREP – Sheila Wilson*

Student GREEN Congress was on March 21: 28 participating schools, 100 volunteers/teachers, 387 students. From a partner feedback survey: "The data and authentic real world education these teachers and students receive is leading to a more sustainable and liveable community." NREP participated in a Nisqually Youth beach cleanup at Luhr Beach on

March 31 with tribal council members. Eye On Nature program is up and running with field trips at the Refuge – fundraiser silent auction at Octapas on May 8. OSPI and ESD 113 have invited observers from around the state to use Eye On Nature as a model for informal science educators around the state. NREP and Stream Stewards are participating in outreach events around the community, including at the South Sound Climate Action Convention and Evergreen MES program.

Tomorrow is Nisqually River Cleanup! Boating clubs are organizing kayak and rafts from McKenna to Nisqually Park and Nisqually Park to 6<sup>th</sup> Avenue. Brandon is coordinating the land effort (sorting trash and site cleanup). Volunteers needed mostly at Nisqually Park from 1:00-3:00. NLT would be interested in coordinating volunteer events in future years.

#### *Nisqually River Foundation/Community Forest – Justin Hall*

Justin and Emily are working on Reclamation grant, awarded over a year ago, still working on getting a contract. Evans Event rescheduled for September 4 at Wilcox Farm.

The state community forest funding bill died in the House after passing the Senate. Funding for pilot projects is still included in Senate budget. Work group will happen over the summer and Justin will be involved. Opposition came from some in the industry (Weyerhaeuser). The Northwest Community Forest Coalition does a field tour and forum every other year and will be going to Nisqually this year. Justin will distribute invite.

### **3. Student GREEN Congress Water Quality Presenters**

*Salmon Lutz (water quality teacher at River Ridge High School), Alexandra Rivera, Izabella Ruisenor, and Conner Ralston (students)*

Testing location was at McAllister Creek south of I-5, near a shut-down fish hatchery. The site is influenced by farmland and residential areas on the ridge. It is a tidally influenced area. It was the former city water site for Olympia.

#### *Testing Results:*

- Turbidity and pH levels were normal. Good for egg development and fish respiration. Turbidity was the same fall and winter.
- Hot spots: Low dissolved oxygen (common for tidally influenced streams). High nitrates (next to farmland, although not pasture). Lack of shade and cover could create higher water temperatures in the summer which could affect fry survivability.
- Data initially varied between individual test results. Some samples spilled or test drops were added incorrectly. Retested until more precise results were obtained for reliability.
- Suggestions to improve water equality at this site: increase shade, woody debris, and food sources (log jams etc). Do more testing upstream and downstream to see where source of nitrate pollution is occurring. Clean up glass and trash at the old hatchery.

#### *Questions:*

- History of the creek has always had problems with dissolved oxygen. Glad you're monitoring the creek, this data is valuable to the delta.
- Is this your first time doing WQ sampling? Alexandra and Bella, yes, Conner has done it elsewhere. Would love to do it again, maybe as a career.
- Did you look at a map of the creek and its natural condition? Yes, and that is why students wanted to test other areas of the stream to see where complications might be

coming from. Tidal influence affects our testing at this site, don't know what effects it's having upstream or down.

- What was it like doing a State of the Rivers session with younger students? It was interesting to compare their data and methods. Dixie, the district's science instructional specialist, noted that Timberline High School students led afternoon classes for younger students at this year's GREEN Congress. The younger kids responded really well, and were especially interested in hearing about the future plans for education and careers that the high schoolers were pursuing. Next year, River Ridge students should put together a hands-on workshop as well!
- David: When you've completed your science degrees, there will be a seat here at the table for you. Come back and help us.

#### **4. Salmon Recovery – Chris Ellings**

This year is the 10<sup>th</sup> anniversary of the dike removal at the Refuge. In the intervening 10 years, research on the restored delta has been part of five master's degrees, one PhD, and at least 15 peer-reviewed journal articles and technical reports. Research has influenced multi-billion dollar transportation planning, how we think about hydropower operations impacting sediment and water, and understandings of bird and fish ecology in response to large-scale restoration projects. It has informed major restoration projects in Skagit, Skokomish, and other estuaries and is influencing hatchery operations throughout Puget Sound. Nisqually is also a research site for blue carbon (salt marsh carbon sequestration).

Annual release of Nisqually juvenile steelhead tagged with radio acoustic transmitters is starting soon. Survive The Sound, an online interactive game sponsored by Long Live the Kings and Microsoft, uses the data to engage the public: sponsor a fish and track its progress.

Snowpack is once again low this year (snow in the lowlands did not contribute to long-term snowpack in the mountains.) TPU has had to deviate from minimum flow requirements this winter until the most recent round of rain. There is no storage built up in the reservoir this year, which may mean tough decisions this summer.

#### **5. Geologic History and Hazards of Mount Rainier**

*Pat Pringle, Professor Emeritus, Centralia College*

Pat has researched Northwest volcanoes for over 30 years. His book *Roadside Geology of Mount Rainier* is available online: [http://www.centralia.edu/academics/earthscience/pringle/rainier\\_geology\\_guide\\_pat\\_pringle.htm](http://www.centralia.edu/academics/earthscience/pringle/rainier_geology_guide_pat_pringle.htm)

Our understanding of coastal volcanos is based on continental drift and plate tectonics. Magma is created in subduction zones where ocean plates slip under the continental plate, carrying sediment and water that lower the melting point of the rock, creating a line of volcanoes. The most recent geologic history says subduction started 40 million years ago, with collision between North America and spreading ridge. West of I-5 is all ancient marine intruded rock. The Sawtooth and Tatoosh mountain ranges are remains of older volcano chain and ancient pyroclastic flows from 20-22 million years ago. Most of modern visible Mt. St. Helens is less than 3000 years old. Glacier Vista at Mt. Rainier is a huge lava flow ridge. Present-day Mount Rainier and surrounding areas show effects of a series of ice ages

over the last 2.5 million years. Glacial ice deposits around Mount Rainier have lahar (mudflow) layers underneath, with potentially lower lake deposits from older ice ages.

Mount Rainier is an active volcano. Early settler sketches show heat and geothermal activity at summit. In the Little Ice Age (200-300 years ago) Nisqually Glacier filled the valley. Mapping and dating of Rainier bedrock took place in the 1990s as part of a UN disaster preparedness initiative for 15 volcanoes. Major lava flows occurred 400-500,000 years ago and 200-300,000 years ago. Ice and lava interactions are visible in hexagonal basalt columns that formed where lava cooled next to glaciers. Mount Rainier's face is very chiseled, showing old history of eruptions with layers of lava being carved by glaciers. Lots of hydrothermally altered rock in areas like Sunset Basin play a role in lahars and contribute to collapse of volcanoes. Crater changes directions (Osceola mudflow was a Mt. St. Helens type eruption which collapsed the east face, radically changing the environment). Clay-rich lahars (Osceola, Electron, Paradise mudflows) have been mapped in the Puyallup and Nisqually valleys (deposits of up to 800 feet in Nisqually valley).

Pyroclastic flow moves over 100mph. When they flow over snow and ice, it creates lahars. Upper Nisqually Valley can look like Pompeii with buried trees in mudflows. Pat's current research is studying buried trees associated with lahars, many of which weren't known events until indicated by radiocarbon dating the trees. Ash layers show at least 40 eruptions of Mount Rainier— very active even in just the last 3000 years. These corroborate tribal oral histories which tell about debris flows that sound like lahars, dating back over 1,000 years. Electron Mudflow (around 1500 CE) went right through Orting, which sits on top of a buried forest. Orting lahar tribal story –“water rushed down from Mount Rainier and left it covered with porous stones.”

Volcanic hazard assessment and volcano monitoring include USGS monitoring and lahar warning systems. There are many survivable areas in an eruption! Severe impacts are usually bound to valleys, but based on the buried tree distribution research, can be more expansive than previously thought. Geophones are located to pick up mudflows (Puyallup and Carbon upper rivers), which normal seismographs don't pick up. There are numerous local working groups and response plans in place.

## **6. Tribal Climate Resources Project**

*Meade Krosby, UW Northwest Climate Adaptation Science Center*

The Tribal Climate Resources Project is a suite of resources released this fall to help tribal communities respond to climate impacts affecting their natural and cultural resources. Tribal communities are particularly affected because of their close ties to natural world: dependent on natural resources for cultural, spiritual, subsistence resources, and deeply connected to place. Not easy to move a reservation in response to sea level rise, etc. Northwest tribes are recognized globally as leaders in response to climate change, but some tribes are much further along in planning, and this project is designed for those who are getting started.

Vulnerability assessment is the first step in the process of responding. How is climate changing where we live? How is it affecting where we live? What plans can we make to

reduce the risks. Important elements of the approach were developed with a tribal advisory group including individual tribes, tribal networks, and indigenous scholars:

- Providing climate data at scale of tribal decisionmaking
- Don't just give data – support tribal staff through assessment process with training to increase capacity to use information
- Make process more accessible to tribal staff by developing online resources – methods for vulnerability assessments, funding opportunities, etc. Curating initial list of resources rather than providing a firehose of information at first. Tool is for all tribes in the NW and Great Basin.

Challenges include limited climate information available for tribes. Previously, some information available at the scale of reservations, although not all tribes are on reservations and many have to plan/manage for treaty areas and watersheds that are much larger than reservations. Data also tends to be averaged (average annual temp and precipitation), which doesn't give tribes data on what they need – how will snowpack change? How will that affect stream patterns and fish?

Survey of tribes revealed concerns including: impact on species/habitats, declining snowpack, stream temperatures rising, increased risks of drought, wildfire, flooding, ocean acidification, sea level rise, extreme heat events. These touch on community health and resources tribes care about. Areas of concern include reservations, watersheds, ceded areas, U&As, and other areas - no one-size-fits-all. This project offered an individualized assessment for free to tribes (usually it's expensive for local governments to undertake). Letters were sent to tribal chairs and environmental directors offering 3 areas for specific analysis, which is important to respect tribal sovereignty and confirm that tribal governments have given prior and informed consent to use their information (especially since the tool is public). The team provided reservation information if there was no response. Over half of 84 tribes participated. Range of geography was huge, difficult to compile, but very important to be relevant.

Online tool: <https://climate.northwestknowledge.net/NWTOOLBOX/tribalProjections.php>  
Up to 20 different factors are available for each tribe's areas of concern (only reservation for Nisqually), projected for scenarios based on current emissions trajectories and lower scenarios. Predictions can be displayed as map, table, or graph. Lowering emissions can make an enormous difference on the future.

Meade manages a technical support desk for tribal planners to provide support in interpreting and planning. She gets questions ranging from “where do I start?” to “where's the latest model for X?” Questions have been helpful in designing website that should be accessible for different users. Workshops and webinars are also offered regionally and online. Tribes have taken a variety of approaches to assessing climate vulnerability: indigenous approach, Western-science driven approach, or braided. Many tribes have worked to engage youth and government in their assessment and planning processes. The goal is that these tools can be used to help secure funding, connect with other climate change efforts, and improve tribal resilience and adaptation.

**7. For the Good of the Order**

Glynnis introduced Ryan Munes, new biologist at the Refuge.

The Leschi Honor Walk coming up next Saturday. Registration by 8:30am on the day-of.

LWV Thurston County Water Forum on May 7: Thurston County Streams and Orcas. Mike Ford will be addressing the Sierra Club the next night.

The meeting was adjourned at 12:01.

Next meeting: May 17, 2019 at UW Pack Forest, 9:00-12:00.