



Meeting Minutes
Nisqually River Council Meeting
September 18, 2015
Mount Rainier National Park
Information: 360.438.8715

Attendees:

Council Members

Roger Andrascik – Mount Rainier National Park
Amy Cruver – Pierce County
JW Foster – City of Yelm
Bill Grantham – Center for Natural Land Mgmt
Amber Martens – JBLM

Gary Stamper – Lewis County
Stephanie Suter – Puget Sound Partnership
Erica Taecker – Gifford Pinchot Nat'l Forest
David Troutt – Nisqually Indian Tribe
* CAC Representatives (2)

Citizens Advisory Committee Members

Phyllis Farrell *
Ed Kenney

Karelina Resnick*

Guests

Scott Beason – Mount Rainier Nat'l Park
Ann Boeholt – Pierce County
Greg Burtchard – Mount Rainier Nat'l Park
Allie Denzler – Citizen
Michael Farmer – Eatonville School District
Rebecca Lofgren – Mount Rainier Nat'l Park

Chris Schutz – Pierce County
Darren Swanney – Mount Rainier Nat'l Park
Ashley Von Essen – Nisqually Indian Tribe
Charissa Waters – Thurston County

Staff & Associated Nonprofits

Morgan Greene – Nisqually River Council
Justin Hall – Nisqually River Foundation

Tyler Willey – Nisqually River Ed. Project

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

Call to Order – David called the meeting to order at 9:44 am.

Approval of Meeting Minutes and Agenda – There was a motion to approve the August meeting minutes as presented. They were approved, as was the agenda for the day.

2. Reports

Advisory Committee Reports

- *Citizens Advisory Committee* – Phyllis announced that the last meeting was held on September 8 as a joint meeting with the Nisqually Stream Stewards (NSS). David shared a history of the NRC; the CAC provided updates on member goals.
- *Chair Report* – David enjoyed presenting to the CAC and NSS. He feels the program has retained its momentum, despite the recent changes. David also barbecued salmon at the recent Nisqually Land Trust annual meeting.

Over the last month, David has collaborated with Congressmen Kilmer and Heck on a bill that would establish a Puget Sound-based EPA office. The bill would give Puget Sound the same recognition as Chesapeake Bay and other large bodies, and would coordinate federal, state and tribal efforts. Congressmen Kilmer and Heck will publically announce the bill tomorrow and David hopes it will move forward in October.

David recently sat on a panel to discuss impacts of the drought. Nick Bond, the state climatologist, was also on the panel. The interview will be aired on television. Another television special will be an hour-long show on Salmon Recovery Programs, and will feature the Ohop Valley Restoration Project. Both links will be made available to the NRC as they are released.

- *Staff Report* – Morgan reported that the NSS is coming to a close, after an excellent two months. There will be 22 graduates from the program. Graduation will be held at the Nisqually Watershed Festival at 12:00 in the amphitheater. In other news, Morgan continues to work on the Nisqually River Water Trail. They recently held an Advisory Committee meeting, and are focusing on ways to increase public access in a way that protects salmon and trout populations. A public survey is now available; please share or complete as appropriate. It can be accessed at www.surveymonkey.com/r/NisquallyRiverWaterTrail. Morgan also worked at the Ohop Fish-out this year.

Allied Programs

- *Nisqually Land Trust* – JW reported that the NLT received confirmation that the carbon sequestration project has passed its final reassessment evaluation, and is being passed to the Board for approval. As soon as it is approved, the Land Trust will announce the corporation that purchased the carbon credits.

Last night, the NLT Board approved the new Strategic Plan that will guide the NLT for the next five years. The most notable change to the Plan is to increase efforts to include the public. The NLT has seen a large increase in the desire of community involvement—last year, volunteers logged 3,300 hours of service time. One of the most successful programs has been guided nature walks; the NLT hopes that these walks will continue to inspire community involvement.

The NLT Annual Meeting was last week, and was an opportunity to share recent NLT accomplishments. Looking ahead to April, the annual auction will be held at the Indian Summer Golf Course. JW announced that the Ohop Project construction is completed, and the new channel has been connected. It has been a long-term project—over 20 years in the making! The construction phase has taken 5 years.

- *Nisqually River Education Project* – Justin noted Water Quality Monitoring Day is scheduled for October 15th. Sheila will host a teacher training tomorrow at Tumwater Falls Park; volunteers are welcome. In other news, there are still slots available for Nisqually Idol. Participants MUST register beforehand by emailing Sheila. In addition, today is Tyler's last day with WCC and NREP.
- *Nisqually River Foundation* – Justin took a week of vacation in August. Since then, he has been working with Alliance for a Healthy South Sound (AHSS) to develop near term actions for the Puget Sound Action Agenda. AHSS is working on early elements of a 5-year recovery plan; the first two years of that plan will be dedicated to implementing near term actions. A call for actions will be announced soon, and will be funneled through AHSS.

The Community Forest Board submitted a bid for 5,000 acres of forestland in the Mashel sub-basin. The bid was \$19 million, but was unsuccessful. It is unclear the amount of the successful bid or who the new landowner is—that news will eventually be released through the Assessor's office. The Community Forest Board hopes to be able to carve out smaller chunks of land in critical habitat.

- *Salmon Recovery Update* – Ashley reported that the Nisqually Watershed Festival will be on September 26 from 10 AM to 4 PM. Volunteers are still needed; sign-up through Michael Schramm. The Poster Contest continued this year, and Nisqually Idol will have its debut. The Idol competition is open to people 18 or younger, with registration through Sheila. There will be cash prizes for 1st, 2nd and 3rd place! It will be in the amphitheater from 2:00-4:00. The Education Center will feature an Insect Extravaganza, and displays will be located in the Norm Dicks Visitors Center.

The Eatonville Salmon Fest will be on October 17 at Mill Pond Park from 10:00 to 3:00. It is the 3rd annual celebration, and pinks will be visible in the Mashel. Volunteers are needed for this event too; sign-ups are through Rachael Mueller. Volunteers receive lunch vouchers at both festivals.

There will be a wrap-up meeting for the Ohop Valley Restoration Phase on Monday. Although construction is completed, there will be another two years of tree planting at the site. There will be a volunteer tree planting on October 31st from 9:00 to 12:00; costumes are encouraged! In other news, the Habitat Work Group will meet the first week of October, and will finalize project work plans. The Yil Me Hu newsletter will be published by the end of the year.

David provided an update on water levels and temperatures. The recent cool weather has improved water temperatures, but flows remain low. Weekly calls with the Nisqually River Coordinating Committee continue. As of last week, minimum flows moved from 550 to 750 cubic feet/second, because the weir was unable to operate at low flows. Centralia Light and Power will resume operations on September 25th. In all, temperature problems have disappeared and fish are returning to the system. The return numbers are abnormally low.

Based on smolt production two years ago, the Tribe expected to see 1 million pinks return this year. The weir has based 1,800 pinks so far; the Tribe is now expecting to see 150,000 to 200,000 pinks return. Although that number is still good, it is much lower than originally expected. Other rivers are seeing similar crashes—the commercial catch in Puget Sound was expected to be 11 million pinks, but has been 650,000 so far. Coho are also beginning to return to the river, and similar declines in numbers are being noticed. In fact, a recent test fishery caught one coho, instead of the typical thousands.

The changes may be due to poor ocean conditions this year. Many salmon feed on zooplankton. The water along the west coast has brought sub-tropical zooplankton into Puget Sound, but these species are nutrient poor. The fish still eat the zooplankton, but must eat more in order to obtain the same nutrient levels necessary to survive in cooler waters. David noted that this summer has highlighted the value of conservation work in the freshwater environment: high numbers of juveniles outmigrating is key to ensuring some adults return to the river.

3. Pierce County In Lieu Fee Wetland Mitigation Program – Ann Boeholt, Project Manager

The Pierce County In Lieu Fee Wetland Mitigation Program (PCILF) aims to mitigate the development of wetlands. Although PCILF is relatively new, it has already had several successes. Ann noted that wetlands are designated as critical areas under the Growth Management Act, so efforts must be taken to avoid negative impacts during development. When those impacts are unavoidable, developers must mitigate or provide compensation for those impacts; the PCILF is an example of programmatic mitigation.

Before development begins, entities must follow the mitigation sequence. The sequence is: 1) avoid; 2) minimize; 3) rectify the impacts; 4) reduce or eliminate impacts over time; 5) compensate for impacts by replacement; and 5) monitor and take necessary corrective means. The steps are followed, in order, until satisfactory mitigation is achieved. The PCILF is only an option if the mitigation can't be avoided or minimized on site.

In lieu fee programs are one of three mitigation mechanisms. The other types of mitigation are wetland mitigation banking, and permittee-responsible mitigation. In-lieu fee programs were initially brainstormed in the 1980s, but were largely unsuccessful. In 2008, the federal government began writing rules to revamp mitigation efforts. The final rule declared four things: sponsors must be government or non-profit natural resources agencies; projects must have strong oversight by Corps of Engineers; implementation must be completed within 3 years of fee collection; and programs must have compensation planning frameworks in place.

PCILF launched in 2007-2008 with the first mitigation site construction. It serves as a pre-capitalized site, which informs the price of credits. It also minimizes the risk of losing wetlands during the three-year period, because they've already been built. In 2011, PCILF was accepted as a pilot program through the Puget Sound Partnership, but later Pierce County agrees to be the sponsor of the in-lieu fee program. In 2012, a draft plan was submitted to a review team and in 2013 the second pre-capitalized site was developed. In 2014, the county approved ordinances to sign PCILF and change county code. The final plan was approved on April 2, 2015. Initial funding came from WA Department of Ecology, and from Surface Water Management funds.

Currently, PCILF has two pre-capitalized sites, although they have not yet been officially recognized. Formal recognition is pending a Wetland Report, which will also establish credits for each site. In the meantime, PCILF is

working to expand the program. A potential mitigation site has been identified in the Nisqually Watershed, and other sites will be identified in WRIA 10 and 15, as well as additional sites in WRIA 11 and 12. Ann is tracking inquiries and credit sales, managing fees and credit ledgers, monitoring and maintaining pre-capitalized sites, and developing an annual report and desk guide of the program and program management.

PCILF applies only to freshwater wetlands, and is currently limited to two service areas. When selecting additional sites, the program must use a watershed approach to ensure mitigation areas make sense in a large-scale context by using Ecology's watershed tool. To do this, the program will utilize WA Department of Ecology's watershed tools to identify high priority sites. PCILF will review, on a case-by-case basis, mitigation sites that impact other aquatic wetlands besides freshwater. As of now, the program is established in the Nisqually and Chambers-Clover Watersheds. Each established site has a limited number of credits available for purchase, which are based on Department of Ecology's Credit/Debit valuation method. The tool examines existing wetland and the impact on the watershed, rather than only examining acreage lost. The credit costs are based on overall cost of mitigation and monitoring. One credit does not translate to one acre of wetland mitigation. Ann noted that on average, an average of 30 credits are needed to mitigate for one acre of impact. One credit in the Nisqually watershed costs \$30,000. Developers may purchase in increments of 1/100th of a credit.

There are several types of credits that Ann tracks. This includes advanced credits, per-capitalized credits, and unfulfilled credits. Because there are a limited number of credits available per site, purchased credits become "fulfilled" and no longer available for that site. To date, PCILF has sold 20 advanced unfulfilled credits, 100 advanced credits, and 166 pre-capitalized credits.

Pierce County Department of Transportation has participated in the program and is a great case study. A recent project resulted in a 900 square foot unavoidable wetland impact. To mitigate the damages on its own, DOT would have paid \$140,000. Instead, the department purchased 0.6 credits from PCILF for \$24,000. There are three additional sales pending from various organizations, and Ann has received dozens of inquiries. King County has a similar program—in 3.5 years, the County has had 16 sales and gained \$16 million in mitigation. Ann believes this demonstrates the self-sustaining nature of the in-lieu fee programs.

The first pre-capitalized site is the South Midland Site, located outside of Tacoma city limits. It is 15 acres in size, and required re-meandering a creek and excavating a floodplain. The second site is the Larchmont Wetland Reserve, which was completed in 2015. The site is directly adjacent to Tacoma city limits and is 12 acres in size. The Program hopes to develop the South Creek Headwaters Wetland Reserve in the Nisqually Watershed. This is located along the south fork of Muck Creek, and was purchased by the county in 2009. It is 20-acres in size, and connects to another 5-acre county-owned restoration site. A second Nisqually site has been identified, but not designated. It would also be located in the Muck Creek sub-basin. Ann continues to search for other potential sites; she can be contacted at aboehol@co.pierce.wa.us with suggestions.

Questions:

- Karelina wanted clarification on mitigation and the difference programs. Mitigation is the act of creating and replacing destroyed habitat and/or preserving habitat that is threatened. The two largest programs are Wetland Mitigation Banking and In-Lieu Fee programs. Permitted Responsible Mitigation occurs when the developers conduct their own mitigation.
- JW wondered who assigned the dollar value to each credit. Ann answered that the costs are based on the full cost of the mitigation site. It is not designed to make a profit, but to cover costs of mitigation and long-term monitoring.
- Further questions can be directed through Morgan. Presentation is available here: <http://www.slideshare.net/Nisqually/pierce-countys-inlieu-fee-wetland-mitigation-program>.

4. Mount Rainier Update – Greg Burchard, Rebecca Lofgren, Scott Beason

Rebecca began the Mount Rainier update by presenting information on the unusual weather patterns this summer. She was recently hired as the aquatic ecologist to lead science relating to climate, glacial monitoring and more. To begin, there is a SNOTEL monitoring site at Paradise that measures snow water equivalent (SWE). Total snowfall at the site was 266 inches, whereas normal snowpack measures 650 inches. In addition, the average maximum snow depth at Paradise, as measured in April, is 172 inches. This year, the maximum snow depth was 85 inches, and that was one of the highest in the state. Rebecca noted that this year also marked the second earliest melt-out on record.

Mount Rainier received about 100% normal precipitation between October 2014 and April 2015, but that changed in May, with 42% of normal precipitation. Precipitation remained below average until August 2015, when the mountain enjoyed 1.5 inches of rain. Temperatures were even more extreme. Between October 2014 and August 2015, temperatures were above normal in all months except for November 2014. For instance, June 2015 was 10 degrees warmer than normal. This summer had large consequences on water supplies in the park: Eagle Peak supplies water to Longmire, but received no snow this year; rivers continue to have low flows. In Rebecca's opinion, the biggest impact is the loss of perennial snowfields, which will greatly impact water supplies and have a huge impact in future years.

Overall, Mount Rainier has lost 22% glacial volume in the last 150 years. Olympic and North Cascades National Parks have both lost over 50% glacial volume. However, the high elevation of Mount Rainier was beneficial this year. The Nisqually Glacier is monitored annually for snow depth, SWE and glacial melt. This year, a lot of melt occurred below 6,500 feet in elevation. Above that level, glaciers were resilient and exhibited less melt. Rebecca is hopeful that the Park's high elevation will result in greater resiliency in the future.

Rebecca noted that some people have argued that this year's weather isn't the 'disaster' it's been called, because glaciers have been receding for the past century. In her opinion, that argument misses the point: in the last 10 years, there has been an extreme increase in the rate of glacial melt. She does not foresee any periods of cooling in the future, so current glacial termini mark the maximum. In fact, the Nisqually Glacier retreated an average of one meter every 10 days from June 2006 to May 2014.

Scott Beason resumed the talk by sharing details on the glacial outburst flood and debris flow that occurred on August 13, 2015. The outburst came from the South Tahoma Glacier, mobilizing debris and impacting infrastructure. Tahoma Glacier is on the southeast side of the mountain. Most of the glacier feeds the Puyallup River, although some of the water contributes to the Nisqually. It is a mid-elevation cirque glacier that faces southwest, so it receives large amounts of radiant heat from the sun. The glacier is about 2 miles long and contains about 23 billion gallons of water. The area has a long history of debris flows, which occur when water is stored within a glacier. Eventually, the water bursts through, creating a flood. Although the root of the cause isn't well understood, Scott noted that stagnant ice appears to be a major factor.

By August 13, weather in the area had been warm for a long time. The Emerald Ridge seismograph recognized the first debris flow at 9:49 am. There were four debris flows in all, with the biggest occurring at 11:21 am. The final flow occurred at 12:26 pm, although eight other surges continued until 6:30 pm. The source of the outburst was just below the terminus. There was a large calving event, too, but it's unclear which came first. In all, 5.85 acres of the glacier were lost, with an average thickness of 16.7 feet. There were approximately 4.2 million cubic feet of water in the event.

Based on the current location of the glacier, Scott predicts that the Park is entering a period of increased glacial outburst floods. To warn visitors, the Park installed signs announcing the dangers. If necessary, other management options include road closures. In fact, a second debris flow occurred on September 12th around 5:30 pm. It was a much larger event and increased stream flow for 2 days.

Greg Burchard is an archeologist at the Park, and has recently uncovered new archeological sites. When Greg started his job in 2000, most people believed that human use of the mountain began 5,000 years ago. In addition, people thought that people used lower river basins almost exclusively, and only visited the mountain on an occasional basis. However, Greg soon discovered an archeological site on the north side of the mountain that dated to 9,000 years old. In fact, the age of this site dated to long before people were tied to lowland village systems. A second site was discovered in the Nisqually Watershed; this dated to 8,000 years. Based on those discoveries, scientists now believe humans used the mountain, from all sides, for longer than originally thought.

Until last year, there was no sign of ancient use below 2,000 feet elevation. Scientists discovered four sites near the Ohanapecosh Campground, which dated to 3,000 years. In light of these recent discoveries, the Park funded a research project to examine the landscape more completely and to better understand the use of lower elevation sites. Greg believes these lower sites were used as a stopover point for people moving further up the mountain.

In other news, Greg is also working with the Park and local tribes to establish a tribal use area in the Park. Mount Rainier entered into an agreement to allow the collection of 11 traditional plants. Indigenous communities have a strong connection to traditional plant collection, but collection has not been allowed in the Park. Before entering into the agreement, the Nisqually Tribe and Mount Rainier National Park conducted a research project from 2000 to 2014 to examine if traditional plant collection had an impact on native plant communities. The results showed that using traditional harvesting methods had no significant, measureable impacts on the plants. However, Greg noted that over time, the traditional collection techniques of several plants have been lost. Currently, the Park is working with tribal leaders to rediscover those techniques. The full study and plan will be out by November. In the meantime, the National Park Service is working to change regulations that would allow plant collection for traditionally affiliated tribes.

Rebecca's presentation is available here: <http://www.slideshare.net/Nisqually/dynamic-weather-changing-glaciers-and-water-supply-mount-rainier-national-park-year-in-review>.

Scott's presentation is available here: <http://www.slideshare.net/Nisqually/glacial-outburst-flood-debris-flows-from-the-south-tahoma-glacier-august-12-2015>.

Greg did not provide a presentation.

5. **NWSP Project Brainstorm** – *Justin Hall*
Topic will be revisited in December.

6. **For the Good of the Order**
Nothing at this time.

Adjourn – Meeting was adjourned at 12:53am.

*Next Meeting: Friday, October 16, 2015
UW Pack Forest, 9:30 – 12:30
NWSP Topic: Integrated Communities*