



**Meeting Minutes**  
**Nisqually River Council**  
**January 16, 2015**  
**Nisqually National Wildlife Refuge**  
Information: 360.438.8715

Attendees:

**Council Members**

**Roger Andrascik** – *Mount Rainier National Park*  
**Bob Burkle** – *WA Dept. of Fish & Wildlife*  
**Edna Fund** – *Lewis County*  
**Glynnis Nakai** – *Nisqually National Wildlife Refuge*

**Rene' Skaggs** – *Pierce Conservation District*  
**Stephanie Suter** – *Puget Sound Partnership*  
**David Troutt** – *Nisqually Indian Tribe*  
**\* CAC Representatives (3)**

**Citizens Advisory Committee Members**

**Phyllis Farrell**  
**Ed Kenney**  
**Fred Michelson\***  
**Karelina Resnick\***  
**Marjorie Smith**

**Robert Smith\***  
**David Thorp**

**Guests**

**Lisa Breckenridge** – *Nisqually Indian Tribe*  
**Chris Ellings** – *Nisqually Indian Tribe*  
**Ed Fund** – *Lewis County Resident*  
**John Hayes** – *Mt Rainier Institute*  
**Martin McCallum** – *Nisqually Land Trust*

**Alan Pankau** – *Backcountry Horsemen of Washington*  
**Chris Schutz** – *Pierce County*  
**Ashley Von Essen** – *Nisqually Indian Tribe*  
**Jackie Wall** – *Nisqually Indian Tribe*  
**Cindy Wilson** – *Thurston County*

**Staff & Associated Nonprofits**

**Morgan Greene** – *Nisqually River Council*  
**Justin Hall** – *Nisqually River Foundation*  
**Joe Kane** – *Nisqually Land Trust*

**Tyler Willey** – *Nisqually River Ed. Project*  
**Sheila Wilson** – *Nisqually River Ed. Project*

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

**Call to Order** – Welcome, and happy new year! David Troutt called the meeting to order at 9:00 am.

**Approval of Meeting Minutes and Agenda** – There was a motion to approve December's meeting minutes as presented. They were approved, as was the agenda for today.

**2. Reports**

**Advisory Committee Reports**

- *Citizens Advisory Committee* – At this month's CAC meeting, David Troutt presented on the organization of the Nisqually Indian Tribe's Natural Resources Department, including staffing, budgeting and funding.

Many CAC members are curious about chemical contaminants found in the soil and water. The CAC hopes to have a speaker attend a future meeting to discuss how much, and what types, of contaminants are reaching the water through run-off and stormwater. With that information, the CAC will review the NWSP plan and recommend any changes. Bob Burkle was reminded of a proposal near Willapa Bay and Grays Harbor, which aims at spraying neonicotinoids to control ghost shrimp on oyster beds. Glynnis will share related information with Morgan on the project.

Additionally, there is a subcommittee that is working to establish a NRC Youth Council that connects students in high school environmental programs. The subcommittee is writing a proposal that will be brought before the CAC next month for approval. From there, it will be brought to the NRC.

- *Chair Report* – David had the pleasure of presenting to the CAC earlier this week. He also met with the staff from the Puget Sound Caucus to discuss ways to support watershed groups; this included potentially scheduling a Salmon Day in Washington, DC, to highlight regional efforts. In the last week, David talked to Karen Fraser, who is working to prioritize salmon projects in Puget Sound. Alliance for a Healthy South Sound (AHSS) is also working on developing a tool to determine that.
- *Staff Report* – In the last month, Morgan has been involved with the beginnings of a Nisqually River Water Trail planning process; an initial planning meeting will be held at the end of January. The core planning team took a tour of the watershed last week to gain more familiarity with the planning area. She also assisted with salmon tossing and the End of the Year fundraising campaign.

### **Allied Programs**

- *Nisqually Land Trust* – Joe introduced Martin McCallum, the newest NLT Board Member. Martin has a long history in the watershed—he is a Stream Steward, among other things—and is pleased to take on this new role. Martin’s appointment brings the NLT Board to a total of 11 members.

NLT closed on a 20-acre property along the Mashel River. In early April, NLT will close on a 202-acre property near Ohop Lake, another piece of the Ohop Valley Restoration Project. The parcel is not developed; it contains wetland—including the inlet of Ohop Land—and upland forests. Additionally, NLT is working with Hancock Timber to close on the first parcels of the Busywild Community Forest. The first parcel must close by the beginning of April.

The Land Trust’s Annual Dinner will be held on March 21<sup>st</sup>. Joe mentioned that the annual Year End Campaign was a success, and the NLT collaborated with the South Puget Sound Community College to develop their first pamphlet.

Lisa noted that the Nisqually Tribal Council approved involvement on a small recreational parcel at Lake St. Clair, in partnership with NLT. The property is part of the Environmental Services Project and contains some of the oldest timber in Thurston County. The parcel is about 80 acres and located near the catchment of Olympia’s new wellhead. By keeping a specific minimum number of trees on the property, the property will provide filtration and other ecosystem services. To manage this property, NLT will place an easement on the property and specify the necessary density. The Nisqually Tribe will help manage it.

- *Nisqually River Education Project* – Over the last several months, Sheila collaborated with others to develop a local pollinator guide. She recently held a workshop during which attendees provided feedback. Additionally, on January 27<sup>th</sup>, Sheila will attend an E-book training at LOTT. At the same time, she is working with Eatonville teachers on an Educator-to-Educator project, which aims to improve science learning.

Sheila is currently working on an ALEA grant, which will purchase tree-planting supplies. She is collaborating with Stream Webs, an Oregon based environmental group, to apply for a regional EPA grant. Stream Webs has a map similar to the one Sheila would like to have for her water quality data.

In other news, NREP has completed 4 of 12 salmon tossing field trips. Several classes have utilized the new Bud Blancher Trail in Eatonville. Spring Water Quality Monitoring Day will be on February 12<sup>th</sup>, with a series of teacher meetings beforehand. Student GREEN Congress is on March 20<sup>th</sup>. Please note: the March NRC meeting will be moved to March 13<sup>th</sup> to accommodate for Congress. Later in the year, Sheila will work with South Sound GREEN to monitor pollinators in the watershed. To do this, Sheila will visit local prairies to conduct surveys. She also recently learned that 500 students are interested in attending Nearshore trips this spring!

Finally, Eatonville School District would like to develop a STEM Campus at the Burwash Farm; it would also be a housing location for student teachers. RCO will help provide some of that funding.

- *Nisqually River Foundation* – Justin had a great break! He’s now busy with grant reporting and has been involved with the Nisqually River Water Trail work.
- *Salmon Recovery Update* – Chris shared videos from the newly installed fish counter at the Centralia Powerhouse. For background information, the counter is located inside of the fish ladder at river mile 26.2. The camera is just a portion of the unit—it also has a laser counter on it. The laser measures the length and width of the fish, while the camera films each one. With the new data, Chris hopes to eventually develop a key that can be used to easily identify fish species regardless of water quality conditions.

Chris noted that the current escapement index of Coho is based off of counts conducted in November along Twenty-five Mile Creek. New data suggests the index isn’t as accurate as it could be: since the installation of the fish counter and the weir, the Tribe has captured Coho running from August to January. In fact, over 250 Coho have moved passed the diversion dam since the beginning of the year, and over 600 Coho passed through the weir.

The main goal of the fish counter is for use in Steelhead recovery. In combination with other monitoring and survey techniques, the counter will help to develop Smolt to Adult survival ratios (SAR). In addition, it will be useful for Chinook survival studies: the camera can capture images of jaw tags on natural Chinook, giving a real-time estimate of the weir’s efficiency.

Because the counter is still new technology to the Tribe, a lot of staff time is dedicated to analyzing video and data. However, the development of an identification key less time will be needed to analyze. In the future, Chris also hopes to run Internet to the counter, allowing data to be accessed remotely and in real-time.

### **3. Mount Rainier Institute Update** – *John Hayes, Director, Mount Rainier Institute*

About 2 years ago, John presented the inaugural Mt Rainier Institute (MRI) PowerPoint to the NRC. Last year, MRI welcomed its first round of students! MRI is a partnership initiated in 2009 between UW and Mount Rainier National Park. The vision is to “create a diverse community of ecologically literate people inspired by the natural world and motivated to be stewards.” Likewise, MRI’s mission is “to provide outstanding nature-based education experiences that are rooted in science and nurture the next generation of environmental stewards and leaders. “

The MRI also has several values, which guide all of the institute’s actions. They are: education and excellence; community; place; immersion; and inspiration. With these values, MRI becomes more than a “summer camp”—it becomes an educational institution where students and teachers build strong bonds, experience things beyond the classroom and connect to the environment in a very authentic way.

In exploring the need for MRI, John learned that there are 47 school districts, and 185,000 4<sup>th</sup> through 12<sup>th</sup> grade students within a 90-mile radius of Pack Forest. Including Seattle, the number of students rises to 243,000. Of that, only 50,000 students are being served by other organization; those students are largely enrolled in private schools, or from out-of-state. As such, about 80% of local public school students are not participating in a program like the MRI. From that knowledge, the goal was to engage 700 students in the first year.

During the planning phase, John worked with 69 teachers and learned that 79% were very interested in a program like the MRI. It was also important to understand what teachers and schools were interested in, particularly in a curriculum context. Finally, John analyzed barriers: a lack of funding; a difficulty finding chaperones; and other student commitments, like sport practices. From there, planning led to curriculum development and a teacher retreat. Eventually, after grant writing and a pilot program, the first full season kicked-off in the fall of 2014.

The program has a science focus, but also includes natural history, outdoor recreation, natural resources management, National Park Service interpretive themes, social studies, arts and others. All topics are connected to learning standards, particularly the Next Generation Science Standards. The curriculum targets middle school

students for two reasons: 1) middle school experiences can influence decisions later in life; and 2) middle school curriculum can easily be scaled to elementary or high school levels. Finally, MRI is designed to be accessible to all students, particularly from underrepresented groups.

Groups arrive on Monday, and start with team building games. Later, they are introduced to the idea of ecosystem services—including economics, culture and recreation—so that students can think more about their impacts on a greater society. That evening, students complete a history-based exercise, based on local people and their impacts on land-use. The second day, students design their own research question and develop ways to measure it. They spend the day collecting and analyzing data. On Day 3, students travel to Mount Rainier and investigate park themes. Engaging with Park Service employees is critical, says John, because students get to interact with natural resource professionals. Students also visit the Nisqually Glacier—a “light-bulb” moment in understanding watersheds. On the last day, students conduct a science symposium and present the research they conducted on the second day. The day concludes with a hike and a final journal exercise.

In 2014, MRI served close to 335 students. In the spring of 2015, around 340 participants are projected to attend. This will be the equivalent of 6 schools across 4 districts. Additionally, 61% of participants are on free or reduced lunch, and 50% are non-Caucasian.

In regards to the future, recruitment for MRI is a major priority. Additionally, the hope is to have students attend through the fall and summer. Funding, however, is one of the biggest challenges. Teachers are hesitant to schedule a date and then cancel due to a lack of funding. Grant funding has so far mitigated that problem. Finding a sustainable source of funding is still a priority. The cost to produce the program is \$455 per student for a 4-day program. However, the top tuition charged is \$280 per students.

Because MRI is a part of UW, it can be difficult to raise money in the way that non-profits do. However, the institute does have UW resources at their disposal. Additionally, the institute features a discussion on the Nisqually Tribe; Hanford McCloud spoke with MRI staff in preparation. John’s presentation can be viewed here: <http://www.slideshare.net/Nisqually/mount-rainier-institute>.

#### **4. Nisqually Geoduck Harvest Management – Margaret Homerding, Nisqually Indian Tribe**

Margaret is the Manager of the Tribe’s Shellfish Program. Today’s presentation is on geoduck (*Panopea generosa*) biology, history of harvest and aspects of management. The geoduck is the largest burrowing clam in the world, and can live to be over 160 years old. They are also sedentary, filter species. Although there are several species worldwide, the local species is distributed from California to Alaska. Additionally, geoducks prefer sandy or muddy substrates in the lower intertidal zone.

The ducks release their eggs and sperm into the water column; 2-3 days later, the seed hatches and spend 47 days as larvae. Next, the ducks spend 1 or 2 years as a burrowing and moving juvenile clam. After that, the ducks remain stuck in the same place for the rest of their life. The ducks reach maturity in 2 years, but start to reproduce at age 5. Margaret noted that ducks spawn every couple years, releasing around 10,000 eggs per individual!

Tribal subsistence of intertidal geoduck has been established for thousands of years. Historically, tribal members harvested shellfish in the intertidal zone. In the late 1800s early settlers began to harvest intertidal geoduck for personal consumption. The market was closed in 1905 because of an overharvest. In the 1960s, divers discovered high densities of sub-tidal geoducks. Commercial sub-tidal geoduck started shortly thereafter. The Boldt Decision in 1974 named tribes as co-managers of the shellfish, and gave the right to harvest 50% of wild shellfish.

Sub-tidal harvest is much more involved than intertidal harvest: divers must use either supplied air or SCUBA equipment. They also need a boat and a pressurized water jet. Experienced divers can dig around 3 ducks per minute, and Nisqually divers typically harvest around 400 pounds per day.

Geoduck harvest management plans are loosely based on timber models. The reasoning is that geoducks are long-lived, sedentary species, similar to trees. Divers harvest particular tracts to a certain density—45% of the original density. They then leave the area, and don’t return to that tract until it has recovered to the initial density. The tract should be harvested in about 2 years, and can take 12-45 years to recovery. By ensuring harvesting continues until that minimum density is reached, monitoring and regulating is easier.

Harvestable biomass is 2.7% of the total biomass, as determined by an age structure equilibrium yield model. Margaret conducts surveys in order to determine biomass; she'll focus on the Nisqually Geoduck Tract for this presentation. Each transect is 150ft by 6ft, conducted between the -18 foot and -70 foot contour lines. Data collected includes clams, sea cucumbers, and other creatures present. Divers also grade each geoduck collected. From this data, it is possible to estimate density, biomass and harvestable amounts.

Margaret's presentation includes a map of all harvest tracts. Purple tracts are in recovery; yellow tracts are active and orange are inactive, but ready to be harvested. Red tracts are closed due to pollution and gray tracts lack data. It should be noted that both tribal and state commercial divers abide by these rules. The most prevalent form of pollution is fecal coliform bacteria. Also, because tribes and the state are co-managers, all data collected is shared between all entities. Monitors must be present on all dives, to ensure divers stay in-bounds, and to count every duck removed from the tract.

Margaret's presentation can be viewed here: <http://www.slideshare.net/Nisqually/nisqually-geoduck-tract-survey>.

5. **NWSP Discussion: Recreation, Watershed Education & Retreat Brainstorm** – *Morgan Greene*  
Topic will be revisited next month.
6. **For the Good of the Order**  
Nothing at this time.

**Adjourn** – Meeting was adjourned at 12:00pm.

***Next Meeting: Friday, February 20, 2015, 9:30am – 12:30pm***  
***UW Pack Forest***