Attendees:
Council Members:  
Dan Calvert – Puget Sound Partnership  
Amy Cruver – Pierce County  
Chris Ellings – Nisqually Indian Tribe  
Glynnis Nakai – BFJNNWR  
Kelly Still – WDFW

Citizens Advisory Committee Members:  
Howard Glastetter  
Ed Kenney  
Fred Michelson  
Karelina Resnick  
Marjorie Smith  
Robert Smith  
Lois Ward

Guests:  
Joe Anderson – WDFW  
Roger Andrascik – NLT/NSS  
Jeff Barney – Pierce County  
Brad Beach – Nisqually Indian Tribe  
Warren Bergh – NLT/NSS  
Larry Leveen – WTGA  
Nate Pamplin – WDFW  
Scott Pearson – WDFW  
Etsuko Reistroffer – NLT/NSS  
Jim Reistroffer – NLT/NSS  
Maya Teeple – Thurston County  
Ashley Von Essen – Nisqually Indian Tribe

Staff:  
Justin Hall – Nisqually River Foundation  
Emily McCartan – Nisqually River Fdn  
Joe Kane – Nisqually Land Trust

1. Call to Order, Introductions, Approval of Minutes and Agenda
Justin called the meeting to order at 9:05am. Howard made a note regarding the April minutes that Tacoma Power had reached their Memorial Day goal of 10 feet below capacity at the Alder Reservoir. Minutes were approved, as was the agenda for the day.

2. Committee Reports and Updates
   Advisory Committee Reports:  
   Citizens Advisory Committee – Lois Ward
The CAC met on Tuesday and discussed the streamflow restoration process, legislative updates, NREP’s NOAA grantee conference, and updates on DuPont and Yelm issues. Ed is working with a group in DuPont to advance a historical district to protect Sequalitchew Creek instead of building a proposed warehouse. Ed would like to see more study on the impacts of warehouses expected as online retail storage expands along I-5. Preserve the Commons, the Yelm citizen group organizing in opposition to biosolids application, continues to raise awareness in the community (finding relatively high individual awareness,
but low among businesses). Ecology is still processing the large number of letters and comments received on the proposal and is predicting they will have a response sometime in June. Public disclosure documents show that Fire Mountain Farms, the applicant, has a history of improper practices and avoiding proper public notification. A FMF biosolids site off the Little Mashel outside of Eatonville has been operating for years with low public awareness, in spite of major concerns with the high levels of toxics found in Nisqually steelhead. Karelina brought to the CAC’s attention a change in regulations regarding dredged material being deposited in the Nisqually Aquatic Reserve between Anderson and Ketron Islands. Jeff Barney will provide contact information on the DNR aquatic reserve work group. The Nisqually Reach trench has been a designated site for dredged material for many years and a significant aquatic monitoring component is based there, including ROV studies shared with the NRC. Sediments from harbor dredging are tested prior to aquatic deposit.

Chair Report
David is absent from today’s meeting. He participated in a King 5 Facebook Live event discussing orca and salmon recovery a few weeks ago:

Staff Report – Emily McCartan
The WRIA 11 Planning Unit update met on Wednesday and made some decisions on funding studies to bring streamflow restoration projects to grant-ready stages of development. The Nisqually Indian Tribe will fund scoping for capital stormwater projects in Eatonville and the Planning Unit will fund a proof-of-concept study on deepening existing wells in the Thurston PUD system. Continuing to work on developing a full scope for a multi-pronged analysis for central basins in Thurston and Pierce County, addressing multiple-benefit habitat and water strategies. Looking into avenues for long-term funding to continue this work.

Emily and Chrissy attended a three-day grantee workshop for NOAA Environmental Literacy Program in Washington, DC this month. Chrissy will present a recap to NRC next month. Emily tabled at Prairie Appreciation Day and other outreach events, working with Girl Scout troop from last year’s Stream Stewards and recruiting Stream Stewards for next year: Thursdays, July 11-August 29, at the Refuge.

Thurston County Subarea Plan Update – Maya Teeple
The Comprehensive Plan Update will be divided into two portions, with currently-completed elements published soon and some that will require further work. Mineral Lands is on the longer track, with extensive public input still being evaluated. Planning Commission review is expected in late 2019 or early 2020. The Commissioners were briefed on Wednesday about the Nisqually Subarea Plan. They will discuss whether to proceed with a formal advisory or less formal stakeholder group, and may or may not make a decision. The CAC hopes to see an advisory group with some formal authority. The recycled asphalt consultant report will be available next week, and Maya will provide to Emily for circulation. Public Information Meeting with consultant is on June 20, Lacey Community Center, 6:00-7:30.
**Allied Program Reports:**

**Nisqually Land Trust – Joe Kane**

NLT won two National Coastal Wetland grants, totaling $1.95 million, supporting marine shoreline protection in the Nisqually Aquatic Reserve. 22 grants were awarded in the country. The awards will protect an 88-acre area in Thurston County off Johnson Point, and a 93-acre waterfront property along Drayton Passage in Pierce County (via conservation easement that will allow a non-profit youth camp to stay in business, on land that would otherwise be developed). Still seeking match from several sources, which unfortunately have not been well-funded at the state and county levels recently (Thurston Conservation Futures may still be restricted). Eric Erler has been a driving force in securing these funds. NLT has also received a $500,000 donation from the Puget Sound Energy Foundation for Community Forest acquisition in the Busy Wild. There is an ambitious list of nature hikes on NLT properties scheduled for this year – Etsuko plans to lead one later in the summer.

**Nisqually River Education Project – Emily McCartan**

The Eye On Nature Fundraiser raised over $2,000 for field trips at the Refuge, thanks to generous support from community members, auction donors, and Octapas Cafe. NREP has begun holding CLAMSS nearshore trips with students, while continuing Eye On Nature trips and preparing for invasives field trips with the Land Trust. Sheila is with Climate Resiliency Fellow teachers for their 3rd annual meeting, on a boat tour around Squaxin Island discussing sea mammals and other marine wildlife. Sheila and Chrissy attended a Migration Parade organized by a CRF teacher in Shelton with 400 students. CLAMSS teachers will hold an assessment retreat on June 11. Summer Institute for Teachers will be June 24-26. Chrissy tabled and attended the Rachel Carson Forum at The Evergreen State College yesterday.

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

Justin graduated from AgForestry last month. He will provide a recap presentation to NRC soon. The Foundation’s Evans Event fundraiser, presenting the 3rd Daniel J. Evans Nisqually Stewardship Award to Jim Wilcox, will be September 4, 2019 at Wilcox Family Farms. Justin noted that there will be no grant round for Ecology’s Streamflow Restoration grants in 2019 (guidance will be out this fall with a grant round early next year). June 10 is Nisqually Community Forest field tour. There is a registration fee to cover lunch and transportation.

**Salmon Recovery Program – Chris Ellings**

Ashley asked for the NRC’s approval on an amendment memo to two SRFB/PSAR projects. The amendment will allow the Land Trust to complete transactions in the Upper Busy Wild from 2015 projects with funding from 2017 projects. A Streamflow Restoration grant will fund the remainder of the 2017 parcels. The amendment was approved unanimously.

Chris shared videos of Nisqually steelhead from the fish counter camera at the Centralia diversion dam: [https://www.youtube.com/watch?v=qDJdxKC2z4c&](https://www.youtube.com/watch?v=qDJdxKC2z4c&). Steelhead returns can come from December–May and are extensively surveyed by NIT and WDFW. Population seems to be slowly coming back from the crash in the 1990s. Smolts vs. adult return estimates from wild Nisqually return and hatchery programs show there are a lot of marine survival questions (marine survival dropped from 5% to 1-2% in the 1990s).
3. Impact of Pinnipeds on Chinook Salmon

_Nate Pamplin, Joe Anderson, and Scott Pearson, WDFW_

This multi-year study connects the “fish” and “wildlife” sides of WDFW’s mission. Chinook salmon are part of a complex food web with many direct and indirect effects. Southern Resident Killer Whales (SRKWs) eat 80% Chinook when in the Salish Sea, so their decline is part of the concern around salmon. Predation is one of many factors including hydropower, hatcheries, habitat, harvest, disease, and contaminants. A 2016 paper on bioenergetics (Chasco et al: [https://www.nrcresearchpress.com/doi/10.1139/cjfas-2016-0203#XQQNktNKiTc](https://www.nrcresearchpress.com/doi/10.1139/cjfas-2016-0203#XQQNktNKiTc)) found that three species of pinnipeds (harbor seal, California sea lion, and Steller sea lion) consumed more Chinook than orcas and all fisheries.

- **California sea lions**: primarily present in WA when not breeding, Sept-April. Single US stock. Population increased dramatically after Marine Mammal Protection Act (MMPA), seems to be leveling out. Local populations continue to change via migration.
- **Steller sea lion**: primarily present in WA in northern Sound/outer coast, Sept-April. Smaller populations in many places in inner Puget Sound. Delisted under ESA. WA population is still going up, faster than other populations.
- **Harbor seal**: year-round resident, 4 stocks (1 coastal, 3 inland marine). Puget Sound populations seem to have leveled out, Strait may be going up, Hood Canal may be declining.

Pinniped numbers are tracked by aerial haulout surveys, with a correction factor for assumption that more individuals are in the water and not counted. Last count was in 2013.

**Administrative options to reduce pinniped predation within the MMPA**

MMPA was passed in 1972, in response to dolphin catch and declining whale and pinniped populations. The goal is to maintain stocks at Optimum Sustainable Population (OSP), return depleted stocks to OSP, and reduce bycatch and kills to zero. Placed a moratorium on taking of marine mammals (“take” — harass, hunt, capture or kill, or attempt to). Permits required to do scientific research or capture for aquariums.

3 ways for direct take:
- **Apply for waiver and take permit** (pursued less than 10 times, total, can take decades)
- **Request return of management authority back to State for populations at OSP** (no successful transfer to date, would require new state laws and rules with a major financial and administrative burden)
- **Pinniped removal authority** (allows take of individually identifiable pinnipeds which are having a negative impact on salmonid recovery. Difficult to do individual-level monitoring at a Puget Sound scale.)

**Puget Sound/Outer Coast case study of harbor seals**

Study used a similar modeling approach to Chasco (2016), but with more recent population estimates and new diet information and improved accounting for uncertainty. Diet samples (poops!) were collected in North and South Sound. A sample represents prey from previous meals (24-48 hours). Digested hard parts distinguish adults vs. juveniles, and new DNA approach allows identification of percentage of diet by species. Findings showed a very diverse diet (57 species), highly variable in time and space, and considerable uncertainty. Chinook represent 1-2% of seal diet from February-August. Although it is a small percentage of seals’ total diet by weight, that 1% represents 2.5 juvenile Chinook per day per seal. Adds
up to 47,500 salmon consumed per month. Assumptions about fish size make a big difference in impact on population. Vertebrae suggest harbor seals may be selecting larger juvenile salmon, which would reduce the number of individuals being consumed.

**Impacts to Salmon Populations**

Measurements focus on predation in the marine environment, comparing numbers of outmigrating juveniles to returning adults. Smolt consumption is estimated based on total number of hatchery smolts plus total natural smolts (counted via fish traps in most river). Pinniped consumption estimate range is very broad – 12.2 million median, 5.2-26.8 million range. Total survival rates are less than 2% for both hatchery and natural – most hatchery survival <1%. Assumptions about compensatory mortality are key: if seal consumption drops, but other predators or fisheries consume the same number of salmon, adult survival doesn’t change. The Chasco paper assumes no compensatory mortality, but there is a lot of uncertainty. Predator control would be a test case for whether reducing predation from one source has any impact on the number of prey that survive without being eaten by something else. Based on this modeling, removing the maximum harbor seals permitted under the MMPA (1,290) would yield a maximum of 6,100 adult Chinook assuming no compensatory mortality. The impact could be more significant for individual salmon stocks. Other strategies (hatchery release timing, discouraging haulouts at sensitive estuaries) however, might offer more relief for salmon than pinniped culling.

**Questions:**

- Has removal of individual seals on the Columbia River or elsewhere shown an effect? – Columbia seals are eating adults prior to spawning, not outmigrating smolts. Easier to see and control individual predators.
- How do sea lions compare? – Diet data is collected and being analyzed now.
- Compensatory mortality question is key for management. This suggests pinniped control could be a success if the goal is to feed orcas, but if goal is to get fish on spawning grounds in Nooksack, it’s not as successful. Have we out-mined current data available? Are there new experiments that could tell us more? – Gathering in Canada this month to discuss next steps for science. Key information needs are better current estimates of pinniped populations, better diet reconstruction techniques. Could attempt to take management actions as an experiment, but may face political will challenges. Getting at compensatory mortality would be a 5-10 year experiment, because of complexity of Puget Sound food web. NOAA and others are performing ongoing modeling predictions.
- Who was taking marine mammals prior to MMPA? – They were viewed as nuisance competition for human fisheries, bounty programs existed.
- What are other predators for pinnipeds? – Transient orcas, great white sharks in California. Harbor seal pups are popular prey for eagles, coyotes, etc. Transient orcas are a good deterrent in keeping seals away from salmon.
- How do haulout counts work? – Repeated surveys during a set window of time, when tides mean the highest percent are out of the water.
- How does WDFW plan to get to an overarching strategy for salmon management, if there’s no silver bullet solution? – Chasco paper created heightened interest in predation as a potentially major factor. This study aims to figure out how much focus it should get
for overall salmon recovery. Habitat restoration, hatchery policy, and other factors also need to be part of a holistic analysis.

4. **Yelm Prairie Line Trail**  
   *Larry Leven, Woodland Trail Greenway Association (WTGA)*  

WTGA is a Thurston County coalition. This project is located between Yelm and Roy and would create a trail from 4.8 miles of former rail right-of-way owned by Yelm since 1998, with bridges over the Centralia Canal and Nisqually River. Highway 507 is currently only connection (Mounts Road is 15 miles away). 507 is a high-speed road and lacks sidewalks along most of its length, not good conditions for walking or biking. Trail is consistent with Thurston and Pierce regional and countywide planning policies, parks plans, and Yelm and Roy Comprehensive Plans. Would be a continuation of the Yelm-Tenino Trail. The project has three phases:
- Yelm Ave W-Centralia Canal (already built)
- Canal-Nisqually River (Yelm is working on this phase)
- Nisqually – Roy (Larry is working on coalition to bring Roy and Pierce County on board)

Benefits for Roy include increased downtown business traffic, anchor point for future park/community gathering space in Comprehensive Plan, easier access to Yelm businesses and transit and 47-mile Thurston County trail system. Benefits for Yelm include expanded alternate transit options and connections to existing bike improvements. Future phases could enable a bike commuting option to JBLM. Benefits for everyone include an accessible river crossing for people of all ages/abilities, future connection for Cross-State and National Rail Trails, natural and local history education and awareness, preserves future regional mobility options, and disaster preparedness in case of 507 bridge problems.

Larry is here to ask for the NRC’s support and endorsement for this project. The coalition is seeking grants and has pledges for regional match, and would like to include the NRC as a supporting entity. Joe Kane noted that the NRC has approved salmon recovery purchases nearby that will complement this trail project, and it’s very popular with local businesses. It is in line with River Council priorities from the Stewardship Plan.

It was moved and seconded that the NRC provide Larry with a letter of support for seeking grants. The motion carried unanimously. Emily will draft and circulate for approval before providing to Larry.

5. **2019 Salmon Recovery Grant Round and New Project List**  
   *Ashley Von Essen, Nisqually Indian Tribe Lead Entity Coordinator*

This is a SRFB-only funding year. Nisqually’s estimated allocation is $400,000. The Legislature increased the total SRFB funding, which could yield more for Nisqually. 5 pre-applications were submitted, totaling $699,500 with over $1 million in match. Our partners leverage this money tremendously.

Lackamas Flats Protection (NLT) - $50,000 request. Wilcox reach protection for 12 acres, 0.1 miles of shoreline. Supplement to Ecology Streamflow Restoration grant (would be matched to federal portion).
Middle Ohop Protection Phase 4 (NLT) - $255,000 request. 33.6 acre protection along Ohop Creek adjacent to current active planting project.

Horn Creek Fish Passage Design (SPSSEG) - $238,000 request. Correcting partial fish passage barriers on Lower Horn Creek.

Peissner Rd. at Elbow Lake Creek Fish Passage (Thurston County Public Works) - $80,000 request. Replace partial fish passage barrier. Part of County’s existing barrier removal project, will have over $600,000 of County money invested. Still in design phase.

Nisqually Knotweed Eradication (Pierce Conservation District) - $76,500. Continue to survey and treat knotweed infestations in the Upper Nisqually focusing on mainstem. Revegetate 5 acres of floodplain with native trees and shrubs.

Timeline: Pre-applications are in. Site visits on May 30. Project ranking in July (with presentation and approval to NRC). Final applications due August 9. SFRB awards in December.

6. **For the Good of the Order**

Roger reported on his monitoring of groundwater wells on Ohop Creek. In April, some sites were inaccessible because the creek was bank to bank. Now down it’s about 4 feet and dusty. It’ll be a dry year.

Fred noted that the CAC’s report on legislative action on environmental policy shows how lucky we are to live in a state that will approve these things, even discuss them.

The meeting was adjourned at 12:01pm.

**Next meeting:**

June 21, 2019
Ashford Fire Hall