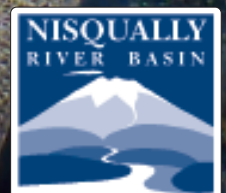


"THE SALMON DANCE ON ITS FIRST ARRIVAL"

Yil-me-hu

WINTER 2012/2013



THE NISQUALLY WATERSHED SALMON RECOVERY NEWSLETTER | WHAT'S INSIDE:

RESTORATION

- More Fish Habitat, More Protection Pg. 4
- Acquisition, Transfer, and Enhancement Pg. 5
- Tagged Coho Guide Future Restoration Pg. 8

PEOPLE

- Nisqually Tribe Receives GIS Award Pg. 3
- GIS Program Takes on Additional Analyst Pg. 7
- Biologist Walker Duval Pg. 7
- Restoration Coordinator Biologist Pg. 10
- Biologist Moves On Pg. 10
- Stream Stewards Class of 2012 Pg. 11
- Volunteer Spotlight Pg. 12

PROTECTION

- Nisqually Reach Aquatic Reserve Pg. 6
- More Fish Habitat, More Protection Pg. 4



TABLE OF CONTENTS

- 3** Director's Corner
- 3** Nisqually Tribe Receives GIS Award
- 4** More Protection for the Mashel
- 5** Nisqually Land Trust Acquisitions
- 6** Nisqually Reach Aquatic Reserve
- 7** GIS Program Acquires Analyst
- 8** PIT Tagging Ohop Coho
- 9** Nisqually Restoration Crew
- 10** Biologist Hired as Restoration Coordinator
- 10** Biologist Moves on
- 11** 2012 Stream Stewards Class
- 12** Volunteer Spotlight
- 12** Volunteer Calendar

Cover photo: The Nisqually Tribe's research vessel collecting fish sampling data along the nearshore environment

Photo by: Michael Grilliot, Washington Dept. of Natural Resources

If you would like to learn more about the Nisqually watershed, visit the Nisqually River Council's website at <http://www.nisquallyriver.org/>. The Nisqually River Council is implementing its Nisqually Watershed Stewardship Plan, which seeks to encourage sustainability efforts in the watershed while continuing the long legacy of working toward collaborative environmental management with watershed communities. Visit the website to find out more information about this and other stewardship efforts within the watershed. You can also become a Facebook friend of the Nisqually River Council to get updates on Nisqually watershed news and events.

 Printed with soy-based ink on recycled paper that is certified by the Forest Stewardship Council.



Artist: Gabe

Yil-me-hu

Yil-me-hu, Nisqually word that means "the salmon dance, on its first arrival."

The first fish ceremony — The first fish caught in the spring was prepared in an earth pit stove, shared and eaten by members of the village. The bones, left intact, were returned to the river, pointing upstream. This display was symbolic. It meant that the villagers were respectful to the fish spirits and wished that, because the ceremony had been done correctly, many more fish would come up the stream during that year. A dance followed the ceremony called the "yil-me-hu," a Nisqually word that means "the salmon dance, on its first arrival."*

* Carpenter, Cecilia Svinth, Fort Nisqually: A Documented History of Indian and British Interaction. A Tahoma Research Publication. 1986. p13.

Nisqually Indian Tribe



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Yil-me-hu is published by the Nisqually Tribe Natural Resources Department to provide information about activities associated with the protection and restoration of salmon and their habitat in the Nisqually watershed. The newsletter is distributed to persons and entities who are interested in or engaged in salmon recovery efforts, and to the community at large.

DIRECTOR'S CORNER



It is hard to believe, especially for me, that I have been with the Nisqually Indian Tribe for 25 years. I am not sure how that happened but I am thankful for every day that I have been here working on these critical issues. I am also thankful for all of you and the amazing things we have accomplished together in the realm of salmon recovery. From the early days of planning to witnessing the tide come and go every day over the Nisqually Delta, we are truly blessed and thankful for all we have accomplished together.

Our fish are responding to these changes and are healthier and more numerous. Survival is increasing, diversity has expanded, and the watershed seems alive with salmon. From the thousands of pink salmon last year to the significant returns of Chinook and coho salmon this year, things are on the mend.

The times we face are also changing and our future success is dependent on how we as a community respond and adapt. Economic challenges, changes in leadership at all levels of our government, and impacts of rapidly changing climate will test our resolve. Being persistent, patient, and resilient will create a path to future success—a path that may look very different from our current course.

One such place to look for inspiration is through the work of our partners at Earth Economics and their efforts to talk about natural capital in terms that most everyone understands – money. We previously worked with them to get a better understanding of the value of things like clean water, clean air, flood protection, salmon, and other environmental benefits in terms of economic value to the people of this watershed and region. We are now embarking on an effort to identify and develop alternative funding streams to support the protection of those values for current and future generations.

Where this leads, and what the funding streams look like is uncertain. But what is certain is that the traditional sources of funds will not be available forever and that this work is a long term commitment. We will share these new ideas with you and look forward to having that conversation with all of you next year. Have a great holiday season and thank you again for your love of the Nisqually.

— **David Troutt,**

Natural Resources Director,
Nisqually Indian Tribe

Nisqually Indian Tribe Receives Special Achievement Award

The Nisqually Indian Tribe received a Special Achievement in GIS (SAG) Award at the Esri International User Conference (Esri UC) in San Diego, California on July 25, 2012. This award, accepted by the tribe's GIS program manager, Jennifer Cutler, acknowledges vision, leadership, hard work, and innovative use of Esri's geographic information system (GIS) technology.

Using Esri ArcGIS technology, the Nisqually Indian Tribe's GIS program is implementing a project that will expand access to information by tribal government staff, tribal members, and the broader community through web mapping applications. Organizations from around the world honored at the Esri UC span industries included agriculture, cartography, climate change, defense and intelligence, economic development, education, government, health and human services, telecommunications, and utilities.

"Each year, the SAG Awards highlight extraordinary achievements and efforts to improve our world," said Esri president Jack Dangermond. "At Esri, we are always deeply impressed with the innovation of our users. This recognition is well deserved for how they've applied geospatial technology to address the needs of their industries and communities. They are defining GIS best practices."



Esri president Jack Dangermond presents Special Achievement Award to Nisqually Indian Tribe GIS Program Manager, Jennifer Cutler

More Fish Habitat, More Protection for the Mashel

The Mashel River received another 6 engineered log jams during 2012, bringing the total to 9 structures that the Washington State Department of Transportation (WSDOT) has installed at this site, and a site adjacent to the Smallwood Park/Highway 161 Bridge since 2011.

"These 6 log jams are designed to reduce flow velocities and direct flow away from the roadway, while protecting its foundation during future storm and flood events, said Les DuBois, field engineer for WSDOT. "The structures also incorporate fish habitat features such as shading of the water and contribution to large woody debris in the system."

This work site presented several challenges as compared to the upstream site at the Smallwood Park Highway 161 Bridge, including twice the number of structures, limited access, and a larger volume of turbid water to manage. With the cooperation of private property owners, the Nisqually Tribe, and the governing environmental agencies, work was completed within the permitted time frame for in-water activity. The installation of vegetation at the site will begin a 3-year restoration site establishment effort by WSDOT.

With the completion of this project, a total of 35 log jams have been installed in the Mashel River between Boxcar Canyon and this site, adjacent to Highway 161, since 2006. Other log jams were installed through efforts of the Nisqually Indian Tribe, South Puget Sound Salmon Enhancement Group, and the Nisqually Land Trust.



Mashel River site prior to restoration work



Restored Mashel River site after mulch installation



Mashel River restoration work in progress.

With the completion of this project, a total of 35 log jams have been installed in the Mashel River between Boxcar Canyon and this site, adjacent to Highway 161, since 2006.

ACQUISITION, TRANSFER, AND ENHANCEMENT RESULTS IN GREATER HABITAT PROTECTION

Land Trust Completes Its Largest Salmon Shoreline Acquisition

The Nisqually Land Trust has acquired 240 acres of Mashel River property (the Mashel is the largest tributary to the Nisqually River) near Eatonville, with more than two-and-one-half miles of salmon producing shoreline. This property, located two miles above Boxcar Canyon, lies in the middle reach of the Mashel River. It ranks as an important reach for restoration of steelhead trout habitat.

The property was acquired from Hancock Forest Management with grants of \$400,000 from the Nisqually Indian Tribe and \$230,000 from the Washington Salmon Recovery Funding Board.



Photo: Nisqually Land Trust

The Mashel acquisition protects 2.5 miles and 240 acres of Mashel River shoreline.



Image: Nisqually Land Trust

Acquisition of five critical acres (outlined in yellow) protects fifty acres of conserved Mashel River shoreline at Boxcar Canyon.

Land Trust Acquires Key Mashel River Salmon Property

The Nisqually Land Trust has acquired yet another key Mashel River shoreline property. Though its 5-acre size is small in comparison to other acquisitions, it has great strategic importance for the recovery of threatened Chinook salmon and steelhead trout on the Mashel.

The newly acquired property is the “gateway” to the larger Boxcar Canyon conservation unit and protects the unit at its most vulnerable point, Alder Cutoff Road. This 5-acre acquisition also adjoins and protects the site of one of the earliest in-stream salmon-habitat restoration projects on the Mashel River – a series of engineered logjams, built from downed trees that help create cool, deep pools and habitat for salmon.

The 5-acre property was deeded to Eatonville for management with other Boxcar Canyon properties the land trust has deeded to the town. The Land Trust will hold a conservation easement on the property to assure protection of its conservation values in perpetuity.

Property Transfer Enhances Nisqually National Wildlife Refuge

The Nisqually Land Trust transferred a portion of its Red Salmon Creek Management Unit to the Nisqually National Wildlife Refuge (a neighboring-landowner), expanding the refuge ownership by two acres. The transfer will allow for the removal of a house on the property and prevent further development.

The transferred property lies within the Land Trust’s Red Salmon Creek Management Unit and adjacent to Red Salmon Creek, a salmon-producing stream that feeds directly into the Nisqually Delta. Extensive restoration work has already been accomplished on the site by the Nisqually Land Trust, and the Refuge anticipates further work including removal of the house.

Transfer of two acres of the Red Salmon Creek Management Unit (bright yellow box area) to the Nisqually National Wildlife Refuge will help prevent further development of the area.



Image: Nisqually Land Trust

Nisqually Reach Aquatic Reserve Fish Ecology Assessment

In 2011 the Washington Department of Natural Resources established the over 14,000 acre Nisqually Reach Aquatic Reserve (Reserve), complementing the successful protection and restoration efforts in the Nisqually Delta. The Reserve includes all state-owned aquatic lands around Anderson, Ketron, Eagle, and part of McNeil Island. Contained within the Reserve are diverse nearshore and offshore marine habitats important to resident and migratory fish including Chinook salmon. Until recently, the fish ecology of much of the Reserve had not been assessed.

From February to October 2012 the first intensive fish ecology assessment of the Reserve was conducted by staff from the Nisqually Indian Tribe's Salmon Recovery Program, Washington Department of Natural Resources, U.S. Geological Survey, Nisqually River Foundation, and Nisqually Reach Nature Center. This monitoring partnership has helped to expand current assessment and research efforts in the Nisqually Delta to include sampling areas ranging from Tolmie State Park to McNeil Island.

The nearshore habitat quality across the Reserve is highly variable, ranging from untouched beaches and lagoons on McNeil Island to highly impaired shoreline along the Burlington Northern Santa Fe railroad causeway. While surveying the Reserve we have documented over 25 species of fish as well as various shellfish and jellyfish. Results from the assessment will help guide future restoration and protection projects.

Image shows Nisqually Aquatic Reserve, land ownership areas, and sampling sites.

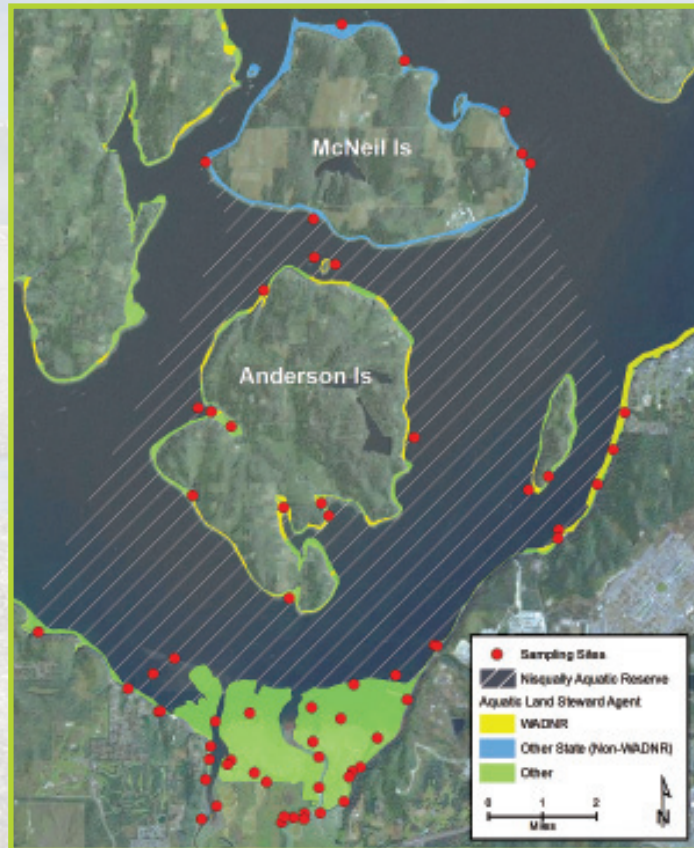


Image: Nisqually GIS Program

GIS PROGRAM TAKES ON ADDITIONAL GIS ANALYST

The Nisqually GIS Program has expanded its services with the addition of GIS Analyst, Amy Callahan. Amy brings over 10 years of GIS analytic and cartographic experience to the Nisqually Indian Tribe. Her background is in natural resources management, landscape ecology and GIS. Amy's experience has focused on providing GIS services for local governments and non-profit community groups.

Born in Washington State, Amy studied at the Evergreen State College and has lived in the South Puget Sound area for over 14 years. In her free time, Amy enjoys playing with her daughter, outdoor recreation, gardening, and long distance running.



Amy Callahan checking coordinates with a Trimble GPS unit

BIOLOGIST WALKER DUVAL

Walker Duval is a biologist with the Nisqually River Foundation, working with the Nisqually Indian Tribe's Salmon Recovery Program. He is currently monitoring salmon interactions within restored areas of the Nisqually River Watershed. Prior to taking this position, Walker earned his BS degree from Eastern Washington University then worked with the Washington Conservation Corps and the Nisqually National Wildlife Refuge.

"I am very excited about my future working with salmon in the Nisqually River Watershed. I love the outdoor recreations scene and the proximity to the mountains, and, it is nice knowing that so many things I want, need and enjoy are right here at home," said Walker. "Having the opportunity to do research in this area is one of the most exciting privileges a biologist could have."

During the hours when he's not beach seining and monitoring fish at nearshore areas of South Puget Sound, Walker enjoys skiing, backpacking, live music, the emotional rollercoaster that is life of a Seattle Seahawks 12th man, and especially riding his mountain bike.



Walker Duval on a beach seining research trip

"Having the opportunity to do research in this area is one of the most exciting privileges a biologist could have."



Photo: Don Perry

Russ Steensland and Erik Arnold netting juvenile salmon for PIT tagging.

Tagged Coho Could Help Guide Future Restoration

By capturing and tagging juvenile coho salmon, the Nisqually Indian Tribe will learn some important things about habitat restoration on Ohop Creek. The information learned will help them see how successful earlier restoration efforts were, and could help guide further planned restoration on the creek.

As a follow-up to restoration work on Ohop Creek that began in 2009 by the Tribe, the Nisqually Land Trust and the South Puget Sound Salmon Enhancement Group, nearly 1,000 juvenile salmon have been captured and tagged with Passive Integrated Transponder (PIT) tags. "Antennas placed in strategic locations of Ohop Creek will detect the tagged fish as they swim by, and record the information including a unique code for each fish," said Sayre Hodgson, research biologist for the Tribe. "The tags will allow us to determine where and how long young coho salmon are rearing in Ohop Creek and to compare between restored and un-restored areas."

Eventually, 7 miles of Ohop Creek could be restored under a plan being developed jointly with local landowners. "Ohop Creek is one of two major tributaries of the Nisqually River that can produce sustainable populations of Chinook salmon as well," said David Troutt, natural resources director for the Nisqually Indian Tribe.

Because there are only a few places other than the mainstem of the Nisqually River where Chinook salmon spawn, increasing the quality of habitat in Ohop Creek is important. "Bringing salmon runs back to the Nisqually means restoring and protecting habitat wherever we can," Troutt said. "Ohop Creek offers us a huge opportunity to do a lot of good for salmon."



Kyle Meier (West Fork Environmental Service) and Sayre Hodgson (Nisqually Tribe) PIT tagging juvenile coho in Ohop Creek.



Photo: Don Perry



Photo: Don Perry

Nisqually Restoration Crew Plays Important Role in Salmon Recovery

Nisqually Technician Crew, from L to R, Sam Stepetin, Robert McGee, Eddy Villegas, Kyle Kautz, Jason Kautz

The Nisqually Tribe’s Native Plant Restoration Technician Crew consists of five members (Jason Kautz, Kyle Kautz, Robert McGee, Sam Stepetin, and Eddie Villegas) and is supervised by Emiliano Perez. The crew focuses on the installation and maintenance of plantings that improve salmon habitat, including re-vegetation of former pasture on the Nisqually Delta and along Ohop creek, under-plantings of conifers along the mainstem Nisqually, and installation of vegetation on engineered log jams of the Mashel River.

Every year, the restoration crew installs thousands of native plants and maintains over 100 acres of existing restoration plantings through all types of weather, from sweltering summer days to pouring rain, and on all kinds of sites, from standing water to the steep slopes of a ravine.

Three members of the crew have been in the position for over four years. The crew supervisor and one member of the crew are licensed herbicide applicators. Three members of the crew maintain Commercial Driver’s Licenses allowing them to operate water trucks and other heavy equipment used to perform planting site preparation and maintenance activities.

The crew also supports fish research monitoring efforts conducted by the Natural Resources Dept., trains volunteers and performs quality control during volunteer planting events, monitors planting success, and provides support to the Tribe’s hatcheries.

Photo: Don Perry



Technician Crew Supervisor, Emiliano Perez

Nisqually Restoration Crew 5-Year Planting Accomplishment		
SEASON	ACRES	PLANTS INSTALLED
2007/2008	25	21,000
2008/2009	33	32,000
2009/2010	47	38,000
2010/2011	49	38,000
2011/2012	48	28,000
Totals:	202 Acres	157,000 Plants

RESTORATION COORDINATOR BIOLOGIST



Kim Gridley

Kim Gridley started work with the Nisqually Indian Tribe's Department of Natural Resources in July of this year as the Salmon Recovery Restoration Coordinator. Kim represents the Nisqually Tribe Salmon Recovery lead entity organization in regional salmon recovery settings, while organizing and coordinating the Nisqually Salmon Habitat Workgroup. She also works with local restoration groups and the Salmon Recovery Program staff to develop an annual work plan.

Prior to joining the tribe Kim worked with WSU's Low Impact Development Program, educating communities and professionals about sustainable stormwater management and worked as a restoration biologist and project manager with the South Puget Sound Salmon Enhancement Group (SPSSEG). During her time with SPSSEG Kim was responsible for managing design and construction of the Ohop Valley Restoration Project, Mashel Monitoring Program, and a number of other restoration projects in the Nisqually Basin.

She holds a B.S in Environmental Science from the Evergreen State College and has over ten years of experience in the field of Natural Resource management, research, and project implementation. In her down time Kim enjoys hanging out with her dog and two baby goats, gardening, cooking, eating, and talking about local food systems with friends.



Florian Leischner

BIOLOGIST MOVES ON

After 12 years of service to the Nisqually Tribe's Natural Resources Department as restoration biologist, Florian Leischner has taken a position as fish biologist with Tacoma Power.

During his time with the Tribe, Florian contributed to the development of the Nisqually Chinook Recovery Plan, as well as managing and coordinating multiple restoration projects in the Nisqually estuary, the Nisqually River, and its tributaries. Florian also offered technical support to various tribal restoration partners. He collected, managed, and analyzed monitoring data from within the watershed, and presented findings at numerous conferences and to community groups throughout Puget Sound. His contributions will not be forgotten.

More Stream Stewards Join the Family in 2012

This year, 16 new Stream Stewards volunteers join the ranks of hundreds who came before them since the course was first offered in 2002. The unique 7-week training course is offered each year by the Nisqually Tribe's Natural Resources Department.

Hands on activities and field tours included gathering benthic macroinvertebrate samples (streambugs), Nature Mapping, measuring streambed dynamics, visiting the WSU bio-retention research facility and assessing several salmon habitat restoration sites.

Classroom learning included such diverse topics as watershed geology, salmon of the Nisqually, nearshore marine and estuary habitat, history, vision and goals of the Nisqually River Council, elements of the Nisqually Watershed Stewardship Plan, upper Nisqually watershed and old growth forests, and cultural and natural resources history of the Nisqually People.

Throughout the year, Nisqually Stream Stewards volunteers participate in community events, assist in restoring salmon habitat areas, collect valuable information such as water quality samples and salmon spawning data, and take on projects such as outreach in their community and building rain gardens. To enroll in the free Stream Stewards course for 2013, contact Don Perry, Outreach & Education Coordinator, at 360-438-8687, ext 2143, or perry.don@nisqually-nsn.gov. Early registration is recommended, as seating is limited to the first 20 applicants.



2012 Stream Stewards Learning about aquatic life forms at the Nisqually Reach Nature Center.



Photos: Don Perry



Stream Stewards learning how to analyze water quality at the Nisqually Reach Nature Center



2012 Stream Stewards gathered to Nature Map a restoration site



VOLUNTEER CALENDAR

JANUARY 5, 2013

SATURDAY | 9 am to 12 noon
Restoration Planting at Northwest Trek *

FEBRUARY 16, 2013

SATURDAY | 9 am to 12 noon
Nature Mapping at Ohop Creek*

FEBRUARY, 2013 (TBA)

WEEKDAY | 9 am to 12 noon
English Ivy Removal
Contact Don Perry at:
perry.don@nisqually-nsn.gov
(360) 438-8687 xt 2143

JUNE 5 THRU JULY 20, 2013

WEDNESDAY EVENINGS & SATURDAYS
Stream Stewards Training Course
(free training)
Contact Don Perry at:
perry.don@nisqually-nsn.gov
(360) 438-8687 xt 2143

*Northwest Trek event.

For times and directions contact:
jessica.moore@nwtrek.org, 360-832-7160

VOLUNTEER SPOTLIGHT

TOM FRIEDRICH

WHEN OPPORTUNITY KNOCKS

We've all heard the old saying about opportunity knocking, but how many of us actually open the door when it happens? It's not that we don't have good intentions, but sometimes change can be scary and risky. Tom Friedrich, an intern with Nisqually Natural Resources heard the knock and answered.

This story begins during Tom Friedrich's first year at Michigan Tech University. "The forestry and wildlife based classes helped me narrow my focus, but after the first year I still was unsure about where I wanted to go," he said. Tom felt he needed an internship to gather "real-life" experience, so he went on the internet and found information on the Nisqually Tribe's Natural Resources Department and its Salmon Recovery Program.

Tom was so impressed with the research and restoration that has been accomplished in the Nisqually River Watershed that he contacted the Nisqually Tribe's Natural Resources Department, eventually talking with hatchery manager Bill St. Jean to see if any internships were available. Luckily, Bill needed some temporary help installing a fish weir on the Nisqually River, so Tom dropped everything and drove 2,000 miles from Michigan for an interview. "Within the first 30 minutes of our interview, I knew Tom would fit in here as an intern," said Bill St. Jean. Since then, Tom has been actively involved at the fish weir, doing spawning surveys, and fish sampling work.

"After working for two months at this opportunity, I knew this is the kind of work and career I want to pursue," Tom said. "I would like to thank Bill St. Jean, the Nisqually River Foundation and the Nisqually Indian Tribe for giving me an opportunity to learn so much and for helping me figure out what I want to do after college." Tom is currently enrolled at Evergreen State College, finishing the work he began at Michigan Tech.

Tom Friedrich sorting fish at the Nisqually Tribe's fish weir.



Photo: Don Perry