



Northwest Indian Fisheries Commission

NWIFC News

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Strength, Courage Bring Down Dams

By Billy Frank Jr.
NWIFC Chairman

I am excited that those two Elwha River dams will begin to come down next year, and you should be excited too. It's been a long time coming. After more than a century, the Elwha River will run free again and provide a good home for salmon.

Built without fish ladders about a century ago, the two dams cut salmon off from nearly 100 miles of excellent habitat. Today a lot of that habitat is protected in Olympic National Park, and that's a good thing for the future of the river, the salmon and all of us.

The idea that those dams are really, truly coming down was driven home for me at the recent groundbreaking ceremony for the Lower Elwha Klallam Tribe's new salmon hatchery.

The new hatchery will be built during the next 18 months and will help support salmon and steelhead recovery efforts on the river. The tribe has a steelhead broodstock program that will make sure native Elwha River steelhead aren't wiped out by the dam removal.

Another fish I hope we haven't lost is the 100-pound chinook that the Elwha River used to produce before the dams were built. Imagine that, 100-pound salmon!

Of course, building a new hatchery alone won't bring the salmon back. There's a lot of work to be done.

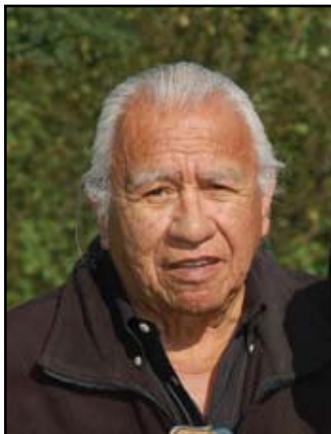
The tribe has been working hard to get the river valley ready for the increased water flow and sediment that are coming. They've been putting in engineered logjams and removing dikes to slow down the river. Undersized culverts are being removed and replaced with larger culverts or bridges. It's a long list.

We're happy for the tribe and its federal and state partners that President Obama's stimulus funding could speed up the date for tearing down the dams. It can't happen soon enough.

Removing the Elwha dams is the dream of a lifetime come true. None of us is here very long. We're just kind of passing through, and what we do with our time is important.

I can remember way back when the tribe first started talking about taking out the dams. A lot of people told them it couldn't be done. That was many years ago, but the Elwha people never gave up. They stayed the course and they are putting this watershed back together.

That's the kind of strength and courage we need to tackle other issues that seem impossible to solve, such as stormwater runoff, shoreline development and fish-blocking culverts. If we can tear down those Elwha dams, we sure as hell can tackle those problems.



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On the cover: Lummi Nation master carver Felix Solomon, left, shows Stillaguamish tribal member Jeff Tatro how to round the edges of a flat-bottom shovel-nosed canoe. See related story on page 3. Photo: K. Neumeyer

Restoring Canoe Culture After 100 Years

A canoe is being carved for the Stillaguamish Tribe for the first time in what is believed to be 100 years.

Lummi Nation master carver Felix Solomon is carving the canoe at his studio, while teaching the craft to Stillaguamish tribal members, including fisheries manager Shawn Yanity and assistant fisheries manager Jeff Tatro.

“I have to give thanks to Felix for all his work and the knowledge of canoe carving that he is sharing with us,” Yanity said.

The Stillaguamish Tribe lost its federal recognition shortly after the Point Elliott Treaty was signed in 1855, and didn’t regain it until the 1970s.

“A lot of us grew up away from our

culture,” Yanity said. “We need to bring back the tradition of carving canoes, just as we need to continue our culture of fishing and hunting.”

They are carving a flat-bottom shovel-nosed canoe from a 300-year-old cedar log that was buried 100 years ago under a road in the Stillaguamish watershed.

The tribe plans to use the canoe in its First Salmon Ceremony this summer.

“I received a grant to research this type of canoe specifically,” Solomon said. “I’m honored to be able to do this work and bring a shovel-nosed canoe to life.”

Members of the Stillaguamish Tribe also have been taking carving lessons at the tribal center.

“We have a responsibility to our ancestors to keep their teachings going,” Yanity said.

Embracing his new skills, Yanity took a carved-off section of the log home to create a small canoe to hang in a Camp Fire USA pavilion that the tribe is funding in Snohomish County. He also has carved a paddle to display at a local Boys and Girls Club. – *K. Neumeyer*



K. Neumeyer

Lummi master carver Felix Solomon, center, teaches assistant fisheries manager Jeff Tatro, left, and fisheries manager Shawn Yanity, both of Stillaguamish, to carve a shovel-nosed canoe.

Shellfish Bed Cleanup Leads To Harvest

About 1,800 acres of shellfish beds in Port Susan reopened to tribal harvest recently, after years of work by the Stillaguamish Tribe.

“This is a great accomplishment,” said Shawn Yanity, the tribe’s fisheries manager. “Last year, we had a First Salmon Ceremony for the first time in as long as anyone can remember. The opening of Port Susan gives us another opportunity that we haven’t had for ages – to provide more traditional food for our ceremonies.”

Port Susan is a protected bay where the Stillaguamish River meets Puget Sound. Threats to its water quality include a dozen dairy operations, three wastewater treatment facilities and a densely developed residential community called Warm Beach.

The state Department of Health closed the area to shellfish harvest because of fecal pollution in 1987, and for years nothing was done to clean it up.

The Stillaguamish Tribe has limited opportunities to harvest shellfish, so the natural resources department made it a priority to reopen the Port Susan beds. In 1998, the tribe started sampling the water to determine and address sources of fecal coliform contamination, with the help of the Warm Beach community, Snohomish County Surface Water Division, Stillaguamish Diking District and the Snohomish County Conservation District.



Stillaguamish Tribe

Stillaguamish natural resources staff members Franchesca Perez, left, and Robbie Hutton sample water in Port Susan.

The tribe shared its data with the Snohomish County Health District, which investigated and corrected problems, such as leaky septic systems and illegal sewer hookups.

The state Department of Health completed a sanitary survey report this winter, finding that the most recent water samples passed the shellfish water quality standard. – *K. Neumeyer*

Bryde's Whale Skeleton Honored and Shared

The skeleton of a rare Bryde's whale that died recently in the Squaxin Island Tribe's homeland will be shared with the public through the tribe's cultural museum.

"It is meaningful to us that the whale died in our traditional territory," said Rhonda Foster, the tribe's cultural resources director.

"Our children will learn from this, in the good way that we treated the spirit of the whale," said Dave Lopeman, tribal chair. "We're taking care of it for future generations."

A resident of tropical and sub-tropical waters, Bryde's whales are rarely seen north of Los Angeles and have never before been documented in Puget Sound. The 35-foot-long male, not quite fully grown, had been spotted for weeks in deep South Sound before dying and washing ashore near Squaxin Island, which is owned by the tribe.

A necropsy showed that the whale likely died of starvation or exposure. There was no food in the whale's stomach and he had only a thin layer of blubber.

In February, the tribe finished cleaning the remains of the whale. After loading the remains onto a barge, the tribe brought them to their seafood company where the bones were pressure-washed and then hand-scraped.

The tribe is looking for grant funding to reassemble the skeleton in their museum.

"We've heard from researchers in Alaska and Canada that are very excited over the possibilities of this skeleton," Foster said.

"This whale belongs to everyone," Lopeman said. "It makes sense to preserve and share this visitor." — *E. O'Connell*



T. Meyer (2)

Top: Wilson Johns, Squaxin Island Tribe, prepares the bones of a Bryde's whale. The tribe will display the whale's skeleton in its museum. Bottom: Whale bones are tagged and stored before they are reassembled and displayed in the tribe's museum.

Johns Creek Exempt Wells Decision by Ecology Appealed to Governor

The Squaxin Island Tribe appealed to Gov. Chris Gregoire a decision by the state Department of Ecology to reject a petition to protect Johns Creek, near Shelton.

This is the second time in two years that Ecology has rejected the tribe's request to protect the creek. Ecology is citing the need to study the connection between ground and surface water in the Johns Creek watershed. The tribe's petitions were based on a state law that closes a watershed to new well-drilling activity if not enough information exists to establish that water is legally available.

"Ecology's inaction further harms our treaty-based fisheries," said Andy Whitener, natural resources director for the tribe. "Salmon recovery should not have to bear a disproportionate share of the fallout from

tough economic times."

"Ecology's excuse is the lack of resources. It takes a commitment to their responsibilities, not money, to close the basin," said Kevin Lyon, the tribe's attorney. "The rule is simple: if you lack information, you don't take water — especially when minimum flows are not being met.

"Ecology acknowledges that it lacks the information, but it won't do the right thing," Lyon added. "Let's hope with the governor's input, this will attract the right attention and action."

"While we agree there needs to be more research, we already know two important things right now: there isn't enough water in the creek to support salmon and a lot of water has been taken out of the creek in recent decades," Whitener said.

Johns Creek does not meet state minimum flow requirements to support salmon. Over the past 25 years, more than 200 exempt wells have been drilled in the watershed.

First intended to allow homeowners and other low volume users easier access to water, the increasing number of exempt wells has impacted groundwater levels.

"They didn't reject our petition because there is enough water in the creek for salmon; they rejected it because there isn't enough money for a solution," Whitener said. In a letter to the tribe outlining the reasons for the denial, the department cites "staff reductions and potential new cuts," and is attempting to secure outside funding to conduct a Johns Creek study.

— *E. O'Connell*

Tribe Breaks Ground for New Hatchery



T. Royal

Representatives from the Lower Elwha Klallam Tribe, Bureau of Indian Affairs, Olympic National Park, National Park Service, Seattle Audubon Society and Congressman Norm Dicks take the first shovel of dirt during the tribe's hatchery groundbreaking ceremony Feb. 5.

Wintry February clouds gave way to blue skies and sunshine for a celebration of the next step in the deconstruction of the Elwha River dams. More than 200 people joined the Lower Elwha Klallam Tribe to break ground on a new tribal salmon hatchery.

"The new space will allow us to expand our hatchery operations, even more so when the dams come down," said Larry Ward, the tribe's hatchery manager. "More fish will have better access to the river valley as well."

Construction is expected to take 18 months and be completed by spring 2011. Once the new facility is functioning, the current hatchery will be decommissioned after the last adults return to the facility.

The new hatchery will provide additional raceways and rearing ponds, as well as greater control over water temperatures while eggs are being incubated.

The tribe has several hatchery programs, including a steelhead broodstock program to help ensure that the remaining Elwha River steelhead aren't wiped out during the deconstruction of the dams.

The tribe also raises chum and coho and

expects to start a pink salmon program in the new facility to restore that species in the Elwha River.

Tribal, federal, state and county dignitaries spoke highly of the work that has been put into preparing the Elwha River valley for the removal of its two dams, the 108-foot-tall Elwha Dam and the 210-foot-tall Glines Canyon Dam. The structures – built without fish passage – have been in place since the early 1900s. Removal is expected to begin in 2011. Currently, only the lower 5 miles of the river is available to salmon.

– T. Royal



T. Royal

A young tribal member dances during the gifting ceremony following the groundbreaking.

Elwha Receives Award for Restoration Efforts

The Lower Elwha Klallam Tribe was recognized recently for its intensive habitat restoration work throughout the North Olympic Peninsula, including work in the Elwha River and Salt Creek watersheds.

The tribe received the 2009-2010 Conservation Organization of the Year award from the American Fisheries Society Washington-British Columbia Chapter at the society's annual meeting in Nanaimo, B.C., March 3. Habitat Program Manager Mike McHenry accepted the award on behalf of the tribe.

"This award is for everyone in our natural resources department who has worked tirelessly to help restore the watersheds within the tribe's usual and accustomed area," McHenry said. "A lot of work has been put into these streams and rivers. Everyone who had a hand in any of these restoration projects should be proud of their accomplishments."

The tribe was honored for extensive habitat restoration along the North Olympic Peninsula; removal and replacement of numerous migration barriers such as culverts; dike removal and installation of engineered logjams; and invasive species control and native vegetation planting.

In addition to habitat restoration, the chapter recognized the tribe's connection to the legacy and importance of salmon recovery in the area. Chapter officials noted that years of evaluating productivity and limiting factors in many tributaries of the Strait of Juan de Fuca have helped the tribe develop effective restoration strategies.

American Fisheries Society is a national organization that promotes conservation and sustainability of fish resources and aquatic ecosystems while helping further the development of fisheries professionals. The Conservation Organization of the Year is awarded to an organization that has significantly contributed to a program or activity for conservation of fishery resources or habitat. – T. Royal

Port Gamble S’Klallam: Keeping Our Bay Healthy



Port Gamble Bay is a unique place. The 2-mile-long waterway is home to a wide variety of salmon and shellfish, on which the Port Gamble S’Klallam Tribe has depended for centuries. Coho, chum, chinook and steelhead make the bay their home, as well as geoducks, oysters and clams.

This bay had fed the tribe for centuries, but the development of the bay’s shoreline has the tribe gravely concerned. The legacy of nearly 150 years of the Pope and Talbot sawmill operation has polluted the bay’s waters. Shoreline development has led to failing septic systems, increased development and negligent hobby farming practices.

Despite these impacts, the bay continues to thrive.

The tribe has been encouraged by the efforts of its partners, such as the state Department of Ecology’s effort to clean the sawmill site. Port Gamble Bay has been a priority in the governor’s Puget Sound Partnership effort to clean up the Sound.

The tribe has been studying the health of juvenile salmon in the area, as well as regularly monitoring the bay’s water quality. This spring, the tribe will start monitoring water quality in the creeks that empty into Port Gamble Bay.

Tribal members don’t want Port Gamble Bay to end up like so many other bays and inlets across Puget Sound. There are too many places where you used to be able to go and dig for clams and oysters.

There is no other place like Port Gamble Bay and the tribe is going to do whatever it must to protect it. It is their home.

Paul McCollum is the Port Gamble S’Klallam Tribe’s natural resources director.



Courtesy of the Burke Museum of Natural History and Culture

Generations

Horse clams and salmon are dried for the winter in front of tribal homes at Point Julia on Port Gamble Bay, in this photo from the early 20th Century, taken by Erna Gunther, an anthropologist who worked with the Port Gamble S’Klallam Tribe.

Across the bay from Point Julia, the Port Gamble Mill was founded by William Talbot in 1853. As the mill grew, tribal members were asked to relocate to Point Julia. The tribe agreed with the promise that its people would have jobs at the mill and lumber to build houses. At their new home on the point, tribal members continued to practice traditional ways, including harvesting the shellfish and fish that were in the bay.

Today, while tribal members have moved up onto the bluff above Point Julia, the spit is still a gathering place for the tribe for activities such as fishing and celebration.

Port Gamble Counts Juvenile Salmon



T. Royal

Hans Daubenberger, Port Gamble's habitat biologist, checks a juvenile salmon for a coded-wire tag.

The Port Gamble S'Klallam Tribe's natural resources staff spent a chilly fall afternoon tow netting the waters just north of Hood Canal. The net targeted juvenile salmon on their outward migration from Hood Canal and Puget Sound.

As part of the tribe's juvenile salmon pilot study, natural resources staff collected data weekly between April and Octo-

ber 2009. Other collection methods included beach seining and SONAR scanning of the water column.

"We want to get a better understanding of the health of salmon coming in and out of Hood Canal," said Hans Daubenberger, the tribe's habitat biologist. "It will help us manage fisheries better."

The objectives of the pilot project were to study the status of the marine environment and to assess the health of juvenile fish as they headed to sea. Collected data included the weight and length of fish, plus genetic and gut samples.

"We know a lot about freshwater systems and what factors play important roles in those habitats, but not so much about nearshore and deepwater marine environments," Daubenberger said.

Information from the pilot project will be used to develop a five-year study of the area starting this summer. — T. Royal

Coho Net Pens Successful

Tribal net pen programs have contributed greatly to fishing opportunities throughout Puget Sound in recent decades. The Port Gamble S'Klallam Tribe, for example, has been operating a net pen for more than 30 years. The Suquamish Tribe, while successful for nearly two decades, had to shut down operations from lack of funding.

But after a seven-year hiatus, the Suquamish Tribe was able to reopen its Agate Pass coho net pens this spring.

"It's great to be able to reengage this program because it provides a Kitsap-based coho fishery for tribal members, with benefits for non-treaty fishers as well," said Jay Zischke, the tribe's marine fish manager.

Net pens provide a transitional rearing environment for young hatchery salmon. The young fish are reared in the pens for a few months before being released. The salmon become imprinted to the waters of the area. Ocean survival rates are higher for net pen fish because they are reared to a larger size than most hatchery fish before being released.

In March, the Suquamish Tribe transferred 265,000 coho smolts from Gorst Hatchery to its 70,000-cubic-foot net pen near Agate Pass, between Suquamish and Bainbridge Island. The cooperative effort included the U.S. Naval Undersea Warfare Center in Keyport, the city of Bremerton and the Washington Department of Fish and Wildlife (WDFW).

The tribe used 1 1/2-year-old coho Minter Creek Hatchery stock, marked as hatchery fish with an adipose fin clip. The fish will spend nearly three months in the pen before being released.



T. Royal (2)

A coho smolt is transferred from the Gorst Hatchery to the Suquamish Tribe's Agate Pass net pens.

The Port Gamble S'Klallam Tribe has found success in its annual net pen transfer operation that began nearly three decades ago.

Port Gamble S'Klallam's natural resources staff worked with WDFW to bring 425,000 coho salmon smolts from the state's George Adams Hatchery in Hoodsport to Port Gamble Bay in mid-February.

Over the course of four days, the young fish were hauled from the hatchery to a tribal barge, then floated out to the tribe's 63,000-cubic-foot net pens near Point Julia. The fish will remain in the pens until June before being released and will return to the area as adults.

"These fish are for everyone, tribal and nontribal, to be harvested when they come back as adults next fall," said Tim Seachord, the tribe's hatchery manager. "It's been a pretty successful program for nearly three decades for all fishermen who participate in the Port Gamble Bay and Hood Canal fisheries."

The coho have coded-wire tags inserted in their snouts. The millimeter-long tag contains information about its hatchery of origin, release date and other data.

— T. Royal

Port Gamble S'Klallam natural resources technician Ben Ives Sr. adjusts the net at the tribe's net pen in Port Gamble Bay.

Spirituality and Safety at Sea

Annual Blessing of the Fleet Includes First Aid Emphasis



D. Preston

Steve Pendleton, Makah tribal member, blesses the fleet at the Makah Marina in March prior to the first halibut fishery of the season.

The fact that fishing was the most deadly profession in the United States in 2009, according to the U.S. Department of Labor, isn't surprising to tribal fishermen who ply the waters of the Pacific Ocean and Puget Sound. Tragic loss of life at sea is a part of the history of Northwest tribes. That means tribal fishermen take first aid and survival courses seriously with the start of the spring ocean fisheries.

"The water isn't a place to mess around," said Makah fisherman Neil Lyons. "It's unforgiving."

Lyons was on hand for the tribe's annual Blessing of the Fleet in Neah Bay, held just before the the first halibut fishery of the year. As a fisherman for 16 years, Lyons appreciated the ceremony's emphasis on the spiritual connection to the resource as well as safety.

"Even if you are within sight of home, bad things can happen," he said. A Makah fisherman once fell in the water close to the Makah Marina. The lone remaining person on board wasn't able to pull him out. It took almost a half hour for help to arrive, and nearly cost the overboard fisherman his life.

D. Preston



Scenarios like that are one of many reviewed in first aid and safety courses required for tribal fishermen. At least one crew member must have a valid first aid card and all crew members must take a safety course that covers the use of survival suits and how to handle emergencies at sea. Washington Sea Grant sponsors the courses with support from the Seattle Fishermen's Committee.

"When I teach this course for fishermen, it's really similar to wilderness medicine," said Art Cole, first aid instructor. "Fishermen are frequently hours from help and they need to know how to stabilize a person until they can get to port or help arrives."

Fishermen are naturals at using supplies at hand in emergency situations.

"Pencils and rolled up newspapers, for example, can be used as splints when something more sophisticated isn't available," Cole said.

Head injuries and accidents involving large bait hooks are common on fishing boats.

"You learn to cut the barb off the hooks to get them out," said fisherman Cory Johnson. Getting tangled in fast-moving lines is another hazard. One person on deck is designated as the line cutter to act quickly when seconds can mean a life.

Cole also emphasized that skippers should know their crew.

"If they have asthma or food allergies, you need to know about it," he said. "They should have medication with them and you should have some as a backup."

At the Blessing of the Fleet, Russ Svec, a Makah tribal member who has worked in Makah fisheries management for more than 24 years, reminded the fishermen of the history that made them renowned ocean fishermen and hunters.

"Our historical success on the ocean comes from our relationship with all things physical and spiritual," Svec said. "Our relationship with our God is important. Skippers, take care of your vessel, take care of yourselves, and take care of your crewmen. Teach our next generation well. We are in challenging times." — D. Preston

Makah tribal member Shannon Cargo hauls gear on the first day of the halibut fishery.



D. Preston

Cory Johnson, left, works with his nephew Thomas Johnson on how to use a tourniquet if needed at sea.

Retreating Glaciers Adding to Fish Woes

Glaciers that feed the Queets and Quinault rivers are just fractions of their size today from a few decades ago. As they recede, they threaten salmon stocks important to the Quinault Indian Nation (QIN).

“These glaciers once provided large amounts of cold water year round that maintained higher summer flows,” said Tyler Jurasin, QIN operations section manager. Lower flows mean less habitat for spring/summer chinook runs in the Queets and Quinault rivers on the Olympic Peninsula, which already face many other threats to their survival.

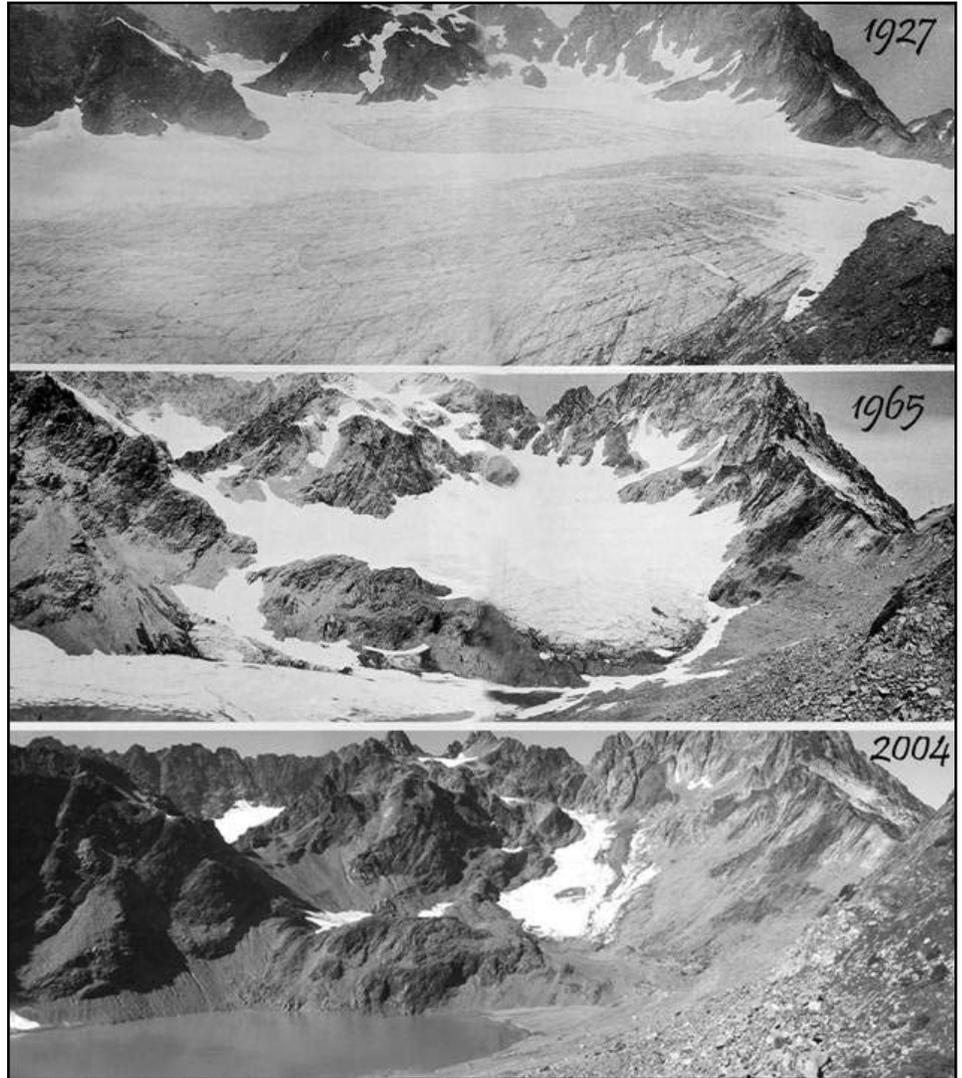
“In addition to lower summertime flows, we are dealing with a lot of sediment released by the retreat of the Humes and Anderson glaciers,” Jurasin said.

“Massive amounts of cobble and gravel once stored under the glaciers are now being flushed onto the floodplain, leading to channel instability,” he said. “Chinook are forced to spawn in vulnerable areas in the main channel because there isn’t sufficient flow for spawning during the summer and early fall in the few remaining side channels.”

When winter floods strike, eggs in the main channel are more likely to be washed away.

Glacial retreat is greatest at mid-slope, near the snowline, where warmer temperatures mean more rain instead of snow. Using data from weather balloons released near Forks, researchers discovered the average January-March temperatures at 4,700 feet have increased about 6 degrees since 1948. According to the University of Washington’s Climate Impacts Group, April 1 snowpack levels in the region have declined about 35 percent over the last 50 years.

“If you look at 5- and 10-year snapshots of these stocks, you see that the north coast chinook runs are holding their own at a low level,” Jurasin said. “But if you look at their numbers beginning in the 1970s, you see the pattern of dramatic decline emerge. From averages of more than 1,500 adults returning for both rivers, now the adult returns average only a few hundred fish, with some years as low as a hundred. At this low



Courtesy of University of Washington and Larry Workman

This series of photographs show Anderson Glacier, the source of the east Fork of the Quinault River. The retreat is nearly complete in the last photograph taken in 2004.

level, the risk of extinction is high for these stocks.”

The Queets community has not fished for Queets spring/summer chinook for more than a decade and there has been no directed fishery for Quinault River spring/summer chinook for many years, Jurasin said.

Using a hatchery reform grant, QIN is working on a plan to supplement spring/summer chinook in both the Quinault and Queets rivers. It will explore several different program options, such as captive

broodstock where eggs and fry are collected from the rivers, reared for four to five years until they are sexually mature, and their offspring are released. Other conventional supplementation options also will be considered.

“The plan will provide the triggers for proceeding with these supplementation strategies as well as benchmarks for assessing program performance,” Jurasin said.

The plan is expected to take about a year to complete. — D. Preston

Coastal Tribes Help Reintroduce Fishers to Olympic National Park

With some gentle taps to its carrier box, a young fisher bolted from the enclosure into the more familiar forest habitat of Olympic National Park in the Sol Duc River valley near Forks.

The weasel-like animal was one of 90 reintroduced recently to Olympic National Park during a cooperative effort by state, U.S. and Canadian government agencies and conservation groups, with assistance from Olympic Peninsula treaty tribes. Tribal biologists and technicians have helped release and track the animals.

Fishers are native to Washington, but a combination of overtrapping and loss of their preferred forest habitat led to their extinction in Washington.

After studies concluded that the best place for the initial re-

introduction of the fisher was the forest of Olympic National Park, a capture effort began in British Columbia where fisher populations are healthy. Since 2008, there have been regular releases of fishers throughout Olympic National Park, culminating in the last of the releases early this year.

Male fishers can weigh up to 12 pounds and will roam far when searching for a mate.

While all reintroduced fishers were released within Olympic National Park, it is understood they will wander. When they do, cooperating agencies



D. Preston
Rob McCoy, wildlife section manager for the Makah Tribe, releases a fisher in the Sol Duc River valley on Rugged Ridge.

such as the Makah Tribe help track them. All fishers are fitted with a transmitter to track their movements and help locate dead animals to determine the cause of death.

“We have one male that has established a home range on the reservation and adjacent timberlands,” said Rob McCoy, wildlife section manager for the Makah Tribe. “We record his movements as we find him every couple of weeks throughout most of the year.”

Biologists have confirmed successful reproduction and located some den sites to observe

the health of new fisher families.

“We had a lot of partners that hung in there,” said Patti Happe, wildlife branch chief for Olympic National Park.

Two other areas in the Cascades Mountains have been identified for future fisher releases. Monitoring of the Olympic Peninsula fishers will continue as part of the recovery plan. — *D. Preston*

For updates about the fishers: wdfw.wa.gov/wlm/diversty/soc/fisher/updates.htm



E. O'Connell

Students Return Salmon to River

Theron Arnold, a student at the Wa He Lut Indian School carries a chinook salmon carcass to the banks of the Nisqually River.

Since the program between the Nisqually River Education Project and the Nisqually Tribe's Stream Stewards began 10 years ago, more than 60 tons of salmon carcasses have been tossed into the river.

The carcasses are collected from the Nisqually Tribe's two hatcheries and are tested for viruses before they are tossed into the river.

As the carcasses decay, small organisms feed on them, and in turn, feed other fish.

Lummi Youth Get Hands Dirty for Habitat

Teens in the Lummi Youth Academy have gotten involved in the effort to restore salmon habitat along Smuggler's Slough.

The group of teenagers joined a Nooksack Salmon Enhancement Association work party in January, when about 100 volunteers planted more than 1,000 trees, including bitter cherry, black hawthorn, cedar and Douglas fir. The students had learned recently about the importance of streamside trees in salmon habitat.

Lummi Youth Academy is a residence hall that provides a safe, structured and culturally appropriate environment to encourage higher education, family unification and wellness.

The tree planting was part of the Lummi Nation's Smuggler's Slough habitat project to restore fish passage between Bellingham Bay and Lummi Bay. Smuggler's Slough was turned into a drainage ditch in the 1930s when most of the Nooksack River delta and associated estuary was converted to farmland.

"It was the talk about fish that sparked my interest," said Youth Academy member Genia-lee Canute-Ridley. "Our people have lived off the fish in this river for years. I'm really supportive of getting the whole cycle restored."

The Lummi Natural Resources Department is restoring tidal and riverine flows

Watch a video of the Lummi Youth Academy at work: go.nwifc.org/4ed76d

to the slough, to allow juvenile salmon access to highly productive habitat. The project will provide fish access to 6.7 miles of slough habitat and wetlands, and restore tidal flow to 640 acres of potential salt marsh habitat.

"We're losing the salmon, and a lot of the Lummi culture is fishing," said Youth Academy member Kyla Frajman. "That's how people make their money."

The wetlands restoration also will help improve the water quality of surface runoff before it enters Lummi Bay.

"The shellfish beds at the mouth of Smuggler's Slough are a culturally and economically significant piece of the project as well," said Merle Jefferson, natural resources director for the Lummi Nation.

The Youth Academy returned to the Smuggler's Slough site throughout the winter to plant additional trees and install devices to protect the seedlings from beaver and vole damage.

"I kind of like being out here, it's kind of fun," Frajman said. — *K. Neumeyer*



K. Neumeyer

Lummi Youth Academy student Genia-lee Canute-Ridley plants a tree at the tribe's Smuggler's Slough restoration site.

Skokomish Tribe Restores Habitat in South Fork

A river mile might not seem like a lot after the hundreds of miles that salmon travel to get back to their home rivers. For the Skokomish Tribe, restoring approximately 1 mile within the upper watershed of the South Fork Skokomish River will help improve fish habitat for salmon and other listed fish.

"Installing formidable wood structure complexes in the river and riparian zone and planting native vegetation in this small stretch will improve spawning and rearing habitat for steelhead,

bull trout, coho and chinook," said Alex Gouley, the tribe's habitat resource manager.

The stretch of the South Fork has been damaged by past land management activities including logging and wood debris removal for a proposed dam project in the 1950s that was abandoned prior to construction.

As a result, the tribe has seen the river channel shift or become wider and shallower because of the degraded conditions. Woody debris and native

vegetation are needed to keep the riverbanks stable.

The tribe, in partnership with the U.S. Forest Service, will construct approximately 30 logjams in the stream channel and plant native vegetation on 12 acres of floodplain area to help stabilize the river and provide proper spawning and rearing areas.

"This work will also complement the Skokomish Tribe's estuary restoration taking place downstream at the delta," said Marc McHenry, a fish biologist

with the Olympic National Forest.

"This is a small section of river but benefits to salmon will pay off in the long run," Gouley said. "Working with the U.S. Forest Service allows us opportunities to take care of important restoration work together that we couldn't have done as individual entities."

Funding for the project came from the state Salmon Recovery Funding Board and the U.S. Fish and Wildlife Service.

— *T. Royal*

PUYALLUP TRIBE OF INDIANS

Electron Salmon Deaths Studied

The Puyallup Tribe of Indians is participating in a study this summer to figure out just how many fish are killed by the Electron hydroelectric project.

“For years, we’ve been putting effort into restoring upper Puyallup watershed salmon,” said Russ Ladley, the tribe’s resource protection manager. “But we aren’t sure how many of these fish are being killed when they pass through Electron.”

The study is funded jointly by the tribe, the state of Washington and Puget Sound Energy (PSE), the owners of the hydroelectric project.

The Electron project diverts water from the Puyallup River into a wooden flume for 10 miles to a reservoir and powerhouse. When salmon reach the reservoir, they either can escape through a trap or be sucked into the powerhouse and killed.

“We know some of the juvenile salmon, steelhead and bull trout from the upper watershed get pulled into the flume,” Ladley said. “What we don’t know is how many end up being killed somewhere along the line instead of being safely trapped.”

Several thousand juvenile chinook, coho and chum salmon will be fitted with electronic tags and released into the flume. The salmon will then be counted as they pass through a trap at the reservoir.

“We’ll be able to get a good idea of how young fish do under different conditions throughout the migration period,” Ladley said.

Until 2000, the low-lying Electron diversion dam blocked more than 30 miles of prime salmon spawning and rearing habitat. As part of an agreement with the tribe, PSE built an adult fish ladder around the dam, allowing salmon to spawn in the upper reaches of the watershed for the first time in nearly 100 years.

Since 1997, the tribe has operated three juvenile salmon acclimation ponds in the upper watershed. The tribe also releases excess coho and chinook salmon from a nearby state-run hatchery into the upper watershed.

“We’re putting a lot of effort to jumpstart the runs up here,” Ladley said. “We need to be sure we aren’t losing all that effort into the Electron powerhouse.” – *E. O’Connell*



E. O’Connell

Terry Sebastian, a biologist for the Puyallup Tribe of Indians, handles an adult steelhead during spawning at the tribe’s Diru Creek hatchery.

Returns Promising in Tribal Steelhead Hatchery Program

Benefits of a tribal steelhead broodstocking program are becoming rapidly apparent.

For four years, the Puyallup and Muckleshoot tribes, along with the state Department of Fish and Wildlife, have spawned about 20 wild steelhead taken annually from an adult trap on the White River. Their offspring are raised in tribal hatcheries and eventually released into the White River.

“Last spring, we saw about 30 offspring return from these efforts,” said Blake Smith, enhancement manager for the Puyallup Tribe of Indians. “It looks like we’re at least replacing the fish we took, however it’s early in the program and given the multiple age classes of the adults returning, these numbers should improve in the future.”

No one is sure why steelhead populations in the Puyallup River watershed and the rest of South Sound have crashed in recent years. Steelhead returning to the Puyallup River watershed are part of a larger Puget Sound-wide stock that is listed as “threatened” under the federal Endangered Species Act.

Each returning adult steelhead from

the broodstock program carries a small tag that can be detected when it is processed at the adult trap.

“We need to keep track of how many fish from the project actually return,” Smith said. “The only way we can do this is to tag them before they’re released into the wild.”

Other hatchery steelhead are distinguished by having their adipose fin – a small, fleshy extremity on the fish’s back – clipped off when they’re young. A missing adipose fin usually means that the fish can be retained during a fishery.

“It’s encouraging to see this many steelhead come back, given the low release numbers,” Smith said. Before its production was curtailed recently because of flood damage and budget cuts, the state’s nearby Voights Creek Hatchery used to release 10 times more juvenile steelhead.

“Even though they released more steelhead, they didn’t produce as many adults as the wild broodstock program,” Smith said. “We hope to be able to find a way to turn this stock around so we can save it from extinction.”

– *E. O’Connell*

IHN Virus Threatens Hatchery Steelhead

Being forced to kill fish is a hatchery manager's worst nightmare, but when a lethal fish virus is detected, protection of the resource comes first.

Hundreds of adult steelhead with the Infectious Hematopoietic Necrosis (IHN) virus were destroyed and disposed of this winter at the state's Bogachiel Hatchery on the Olympic Peninsula. As a precaution, 250,000 of their eggs also were destroyed.

To replace some of the steelhead, the Quileute Tribe and the Washington Department of Fish and Wildlife (WDFW) agreed to move 140,000 healthy steelhead eggs from the Makah Tribe's Hoko Hatchery to the Bogachiel Hatchery. The Hoko and Bogachiel steelhead originally came from the same stock.

"Steelhead are culturally and economically important to the Quileute Tribe," said Mel Moon, the tribe's natural resources director. "We don't want to see IHN established here or spread into the Strait of Juan de Fuca and Canada."

IHN is a deadly virus that has killed hundreds of thousands of steelhead in the Columbia River watershed since it was first detected in Idaho hatchery trout in the 1970s. The Quinault Indian Nation found IHN virus twice in the Queets River and once in Quinault River hatchery steelhead during the past 10 years.

In 2009, the Quinault Indian Nation teamed up with the

U.S. Fish and Wildlife Service (USFWS) to fund research with the U.S. Geological Survey about the impact this strain could have on wild and hatchery fish on the Olympic Coast.

Researchers found that the strain of IHN virus in Bogachiel steelhead, while similar to that found in the Quinault River, was more closely related to a strain infecting Snake River fish at a USFWS hatchery in Ahsahka, Idaho.

"That particular variant of IHN virus has never been found outside the Columbia River until now," said Bruce Stewart, fish health program manager for the Northwest Indian Fisheries Commission (NWIFC). "The genotyping of the strain at Bogachiel is allowing us, for the first time, to at least point the finger back to where this virus is coming from."

The Quileute Tribe and WDFW are discussing some changes of protocol for the state's Bogachiel Hatchery that will help minimize the spread of disease in the future.

"NWIFC tribes have made it a priority to do everything to minimize the risk of this strain of IHN virus establishing itself up here," Stewart said.

The Hoh Tribe is having the NWIFC fish health lab check tribal catch of Hoh River steelhead to see if any of them are carrying the Bogachiel IHN virus. — *D. Preston*

Joe Hinton, left, Hoko Hatchery manager, sorts healthy steelhead eggs to give to Brian Russell, Bogachiel Hatchery manager, as part of a management decision by the Quileute Tribe and WDFW.



D. Preston



E. O'Connell

A box culvert replaces a lost connection to the Beachcrest pocket estuary in the Nisqually Reach near Lacey.

Tribe's Research Leads to Estuary Restoration

A 1.4-acre pocket estuary was restored recently along the shores of the Nisqually Reach near Lacey by the South Puget Sound Salmon Enhancement Group (SPSSEG).

The project was designed based on data gathered by the Nisqually Tribe. "Despite its small size, the Beachcrest estuary is important to salmon runs in South Sound," said David Troutt, natural resources director for the Nisqually Indian Tribe.

The project involved installing a 14-foot-wide box culvert to replace a lost natural connection to the small estuary. The SPSSEG also removed 200 feet of a ripped bulkhead, replacing it with log structures and native plants. About a mile of spawning habitat was reopened by the project.

"The real benefit here is the estuary for fish from other areas to use, but there's certainly a good amount of spawning habitat that salmon will end up using too," said Lance Winecka, executive director of the SPSSEG.

"Research by the tribe laid the essential groundwork for this project to go forward," Winecka said. The Nisqually Tribe has conducted extensive nearshore research in and around the Nisqually River estuary during the last few years.

"The Beachcrest estuary is only one mile from the mouth of the Nisqually River, so this will be one of the first good places for a young chinook to go after leaving the river," Troutt said. "When salmon migrate to the open ocean, they don't simply turn north and swim for deep water. They duck into these little estuaries and move along slowly until they're big enough to survive in the open ocean."

The prevailing theory about the decline of Puget Sound steelhead stocks points to the importance of places like the Beachcrest estuary. In the last decade, steelhead runs across Puget Sound have been declining drastically.

"Even in watersheds where we know steelhead have great freshwater habitat, like the Nisqually, we're seeing the stock numbers fall off a cliff," Troutt said.

"The only likely answer is the decline of marine habitat in Puget Sound, and this project helps reverse that," he added. "The most significant thing we can do to restore weak runs of steelhead or other species is to restore and protect their habitat." — *E. O'Connell*

Radio Collars Aid Elk Research

Makah Tribe Tracks Elk from the Ground Level



T. Royal

WDFW biologist Scott Harris and Skokomish Tribe's wildlife biologist Bethany Tropp-Brinkerhoff steady an elk while wildlife technician Emily Wirtz, right, helps 13-year-old Tomokazu Hager administer medicine.

Skokomish Tribe's Survey Is Teaching Moment for Kids

A group of homeschooled siblings got an unexpected lesson in wildlife biology outside of Shelton recently.

Skokomish tribal natural resources staff were on an elk collaring survey when they spotted an uncollared herd in a private pasture. With permission from the property owners, the team tracked, captured and collared a female from the herd. The Global Positioning System collar enables the tribe to follow the animal's movement for the study.

The elk are regular visitors to the Hager family, which owns the 41-acre pasture. But being able to witness and participate in a real-life science study opened up the eyes of the five Hager children. The two oldest boys helped administer medicines to the elk while she was sedated.

"That was pretty interesting," said Tomokazu Hager, 13. "It felt like we were kind of part of *Animal Planet*."

"We've never seen an elk that close before," added Wes Hager, 10. After the elk was collared and released, the kids received a quick lesson in elk behavior, as well as a tour of the helicopter

that was used to track the herd.

The family decided to name "their" elk Sacajawea.

Since 2008, the Skokomish Tribe has been tracking the herds within its primary hunting area, Game Management Unit 636, counting only about 150 elk.

"That is way too low – the herd population needs to be up around 500 elk or so," said Bethany Tropp-Brinkerhoff, the tribe's wildlife biologist.

The tribe's goal is to collar elk in several herds so movements can be tracked year round. The tribe also will enhance elk foraging areas this fall with the Olympic National Forest.

"Preserving the area's elk population is key to supporting the tribe's treaty-reserved right to hunt elk, which contribute to the tribe's subsistence and ceremonial needs," said Joseph Pavel, the tribe's natural resources director. "Elk is a traditional food that is low in fat and a good source of protein."

The tribe is partnering with the Washington Department of Fish and Wildlife and the U.S. Fish and Wildlife Service on this project. – T. Royal

Painstakingly stalking through second-growth trees and understory litter, a wildlife biologist for the Makah Tribe moves in slow motion to get within 20 yards of skittish elk. Shannon Murphy slows her breathing and looks for a shot with her tranquilizer rifle.

When everything goes well, wildlife personnel manage to get radio collars on an elk or two each day. Other days can mean lots of effort, but no elk to collar. While it's a lot faster and more efficient to use helicopters for the job, it's also quite expensive.

"By simply incorporating some field time into our schedule over a couple of months in the winter, ground darting works fine and is less stressful on the elk and far cheaper than using a helicopter, even if it takes a little longer," said Rob McCoy, wildlife division manager for the Makah Tribe.

Elk are culturally and nutritionally important to the tribe, which restricted cow harvest beginning in 1997 to bolster herds in the Makah traditional hunting area.

Through a grant from the Administration for Native Americans, the tribe is expanding on its previously completed research and focusing on cow elk. Along with diet and home range studies, the tribe has looked at the effects of roads on elk behavior and monitored survival rates.

Beginning this year, the tribe will use the collars to locate each herd for an aerial count, culminating in a population estimate in 2012. "Collecting this aerial survey will make our population estimates that much more technically sound," McCoy said.

Other goals of the research include tracking both calf and bull survival. Elk calves will receive radio collars this spring to track their survival or cause of death. Bulls will receive radio implants to track their survival through hunting season and the following winter. "It's another way of measuring whether management goals are being met," McCoy said. – D. Preston

Makah wildlife biologist Shannon Murphy, left, and wildlife division manager Rob McCoy fit a tranquilized elk with a tracking collar.



D. Preston

Tribes Seek Long-Term Solutions to Elk Damage

A non tribal damage-control elk hunt in December in Skagit County outraged many in the hunting community when a handful of archers breached the state's Hunter's Code of Conduct.

About 70 elk were cornered in a field by a group of hunters who shot at them as they ran back and forth. At least 18 elk were killed and others wounded during the hunt, which was intended to control elk damage to personal property by reducing the herd.

The Hunter's Code stresses that hunters must show respect for wildlife and be considerate

of non-hunters. The Washington Department of Fish and Wildlife (WDFW) canceled the rest of the hunt following the incident.

"I want to assure those who have expressed concern over this hunt that, in the future, WDFW wildlife managers will seek alternative ways to address elk damage in Skagit Valley," said WDFW Director Phil Anderson.

Tribal wildlife managers spoke out against the hunt because damage-control hunts are not a viable long-term solution to elk damage.

The hunts hamper efforts to

rebuild the ailing Nooksack herd, said Todd Wilbur, Swinomish tribal member and chairman of the Inter-tribal Wildlife Committee of the Northwest Indian Fisheries Commission.

"The Skagit Valley bottomlands are the natural winter range for these elk in the Nooksack herd," he said. "As the herd grows, elk will continue to visit the valley floor during winter months."

Elk have very few places to go during the winter because their habitat is so fragmented. Winter snows drive the animals down to the valley to forage, and most of the herd's historic

winter range has been lost to agricultural and residential development. These elk will continue to damage property in search of food unless other quality habitat is available to them, Wilbur said.

"A damage-control hunt can be an effective management tool, but it offers only short-term relief," Wilbur said.

"These elk are not going to stop their seasonal migration to the valley floor," he added. "Fencing and acquiring or leasing property for elk habitat offer the best solutions for elk and people." — K. Neumeyer

Point Elliott Treaty tribes have been seeking to acquire land in the Skagit and Nooksack river basins to enhance and preserve for elk habitat.

Tulalip and Stillaguamish tribes

After successfully planting a meadow on tribal land that became a haven for deer, birds and small animals, the Tulalip Tribes are creating elk habitat on forestland in eastern Skagit County.

The tribes partnered with the Stillaguamish Tribe and the Rocky Mountain Elk Foundation to remove invasive plant species and restore two 6-acre sites as elk forage habitat.

As new plants began to sprout this winter at a site near Concrete, remote cameras photographed about 20 elk using the habitat. The other site is in the Lyman-Hamilton area.

"We don't have enough quality forage for elk in the lower forestlands," said Mike Sevigny, wildlife manager for the Tulalip Tribes. "Timberlands that have closed canopy tree plantations typically do not offer high-quality forage for deer and elk." The newly enhanced habitat should stay green all year long, he added.

"These animals will continue to search for high-quality forage and damage personal property unless we provide some alternatives and work with landowners to provide permanent solutions," said Jennifer Sevigny, wildlife biologist for the Stillaguamish Tribe.



K. Neumeyer

A crew from WildLands hydroseeds elk habitat near the Upper Skagit reservation.

Upper Skagit Indian Tribe

The Upper Skagit Tribe partnered with Bonneville Power Administration and timber company Sierra Pacific to hydroseed elk habitat on 20 acres near the tribe's reservation in Sedro-Woolley.

The \$10,000 project is part of tribal and state efforts to recover the Nooksack elk herd, which had declined in population from more than 1,700 20 years ago to about 300 by 2003. The herd has rebounded to about 700 animals.

"By providing nutritious forage opportunities, we hope to allow

the Nooksack herd to grow without causing a problem for nearby landowners," said Scott Schuyler, Upper Skagit natural resources director. Area landowners have complained that elk that move into the Skagit Valley bottomlands during the winter trample fields, knock down fences, damage crops and create traffic hazards.

"These elk have to go somewhere to feed," Schuyler said. "We hope this enhanced habitat will keep them in the forestlands and away from the populated areas."

— K. Neumeyer

Walking On



Charlotte Kalama

Charlotte Kalama, 86, a lifelong resident of Queets, died Feb. 17 at Grays Harbor Community Hospital. Kalama was born Jan. 14, 1924 in Aberdeen, to Christian and Mable (Lee) Penn. She attended local schools, and later attended the Chewelah Indian School in Salem, Ore.

During World War II, she worked as a welder at the Bremerton shipyard. After returning to Queets, she worked as a clerk for the Queets Medical Center for more than 20 years. She was affectionately known as “The Boss.” To honor her, the new medical center in Queets was named after her.

Kalama was a master basket weaver, fluently spoke the native Quileute language and was first elder in the Queets Indian Shaker Church.

Kalama loved her family and attended the sporting events of her grandchildren and great-grandchildren. She was an advocate for education and traveled throughout the United States.

She is survived by sons Jeff and Pete Kalama, both of Queets; her daughters Pauline Capoeman of Taholah and Sue Kalama of Queets; brothers Christian Penn, Esua Penn Sr., Ronald Penn Jr. and Doug Pullen Sr., all of LaPush; sisters Norma Rodriguez of Auburn and Hazel Black of LaPush; 22 grandchildren and 21 great-grandchildren.

She was preceded in death by her husband Fred; daughters Marion and Charlotte; sons Johnny, Freddie, David Sr., Patrick and Calvin, and numerous brothers and sisters.



Ben Hicks

Ben Hicks, 62, joined his ancestors Jan. 30 at St. Peter’s hospital in Olympia. He was born Sept. 16, 1947 to Ray and Virginia Hicks of the Nisqually and Skokomish tribes.

Hicks graduated from North Thurston High School. He was a local sports hero throughout his high school years. He attended college in Portland. He remained active in sports with the Nisqually and Chehalis tribal baseball teams. He was a big fan of Motown and powwow music.

Hicks’ work skills were widespread, including jobs with General Motors in Atlanta, Boeing Co. in Seattle, Nisqually Rez Mart, BP, Nisqually tribal security and front desk, and many more positions that brought him lifelong friendships.

He was the chairman of the Nisqually Tribal

Fish Commission and chairman of the Nisqually Tacoma City Light Committee. He served his tribe with dedication and pride. He was proud of his Nisqually, Skokomish and Hawaiian heritage. He was most at home when he was on the river exercising his treaty fishing rights.

Hicks was a man of loyalty, integrity and confidence. He was humorous, kind, athletic and generous to a fault. He left a great legacy for future generations.

Hicks is survived by his children Janice Tarach, Betty Pacheco, BJ Hicks Jr. and Amanda Hicks; mother Virginia Hicks; brothers Russell Hicks and Daniel McGee; and sisters Gail Pahlitzsch and Sheila McCloud.