NWIFC News

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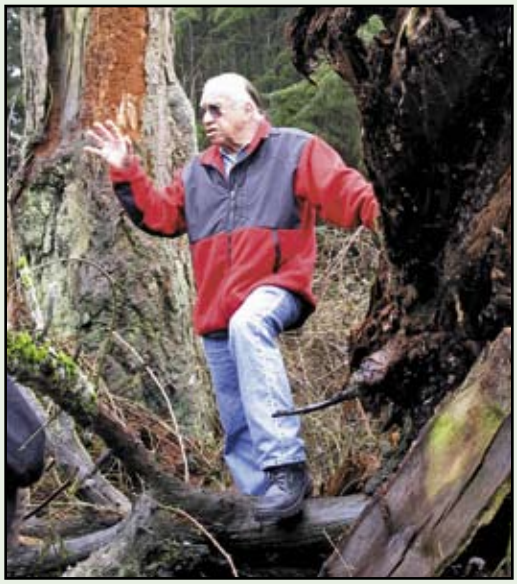
Being Frank

Time Moves On, But Treaties Remain

By
Billy Frank Jr.
Chairman

Tribes from throughout the South Puget Sound region gathered nearly 153 years ago near a grove of trees at the mouth of the Nisqually River. These were powerful men and women – chiefs and other cultural leaders – who waited in a driving rain to hear the words of Isaac Stevens, Washington's first territorial governor.



Billy Frank Jr. at the Treaty Tree.
Photo: T. Meyer

That grove of trees included a Douglas fir that came to be known as the Treaty Tree. Well nourished, it towered above the prairie, sprouting bright green new growth each spring. Its cones dropped every fall, seeding new trees that still survive in the area today.

For thousands of years, tribal members had come to gather food, grasses and medicine near this place called Medicine Creek, known today as McAllister Creek. They dug clams and harvested salmon, waterfowl and other natural treasures, while the Treaty Tree flourished in the pure air and rich soil.

It was a wet, cold day when Stevens summoned the tribes to sign the Medicine Creek Treaty that would forever change our lives. Through that treaty, tribes ceded millions of acres of land and ultimately agreed to move to small reservations. But through the treaty, we also kept some things to ourselves that were most important to us: the right to fish in all of our traditional places, the right to hunt and the right to gather shellfish and cultural materials.

The Treaty Tree, like us Indians, somehow survived the massive population increase, growing pollution and timber razing in the decades that followed. But like all living things, the Treaty Tree's days were numbered. For many years, drivers on I-5 could still see the old snag as they zoomed past.

This past winter, most of what remained of the Treaty Tree came crashing down during a storm. It happened in December, the same month that the Medicine Creek Treaty was signed in 1855. About 40 feet of the snag still stands; the rest toppled into the estuary.

The Treaty Tree may have fallen, but the treaties are alive. Those treaties are as valid today as the day they were signed. Even the U.S. Constitution defines them as "the supreme law of the land."

People forget that non-Indians in western Washington have treaty rights, too. Treaties opened the door to statehood. Without them, non-Indians would have no legal right to buy property, build homes or operate businesses on the millions of acres tribes ceded to the federal government.

Treaty rights should never be taken for granted – by anyone.

NWIFC News

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Muckleshoot	253-939-3311
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Nooksack	360-592-5176
Port Gamble S'Klallam	360-297-2646
Puyallup	253-597-6200
Quileute	360-374-6163
Quinault	360-276-8211
Sauk-Suiattle	360-436-0132
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On The Cover: Dean Jackson, Quileute fisheries technician, removes a scale from a spawned-out chinook carcass in Beaver Creek near Forks. While chinook returns to the coast were about average, coho coastwide did not come back in the numbers expected. *Photo: D. Preston*

Marine Sanctuary Council Formed

The coastal treaty Indian tribes, the state of Washington and the federal National Oceanic and Atmospheric Administration's (NOAA) National Marine Sanctuary Program have established an Intergovernmental Policy Council to manage the marine resources of Olympic Coast National Marine Sanctuary (OCNMS). The policy council will provide a forum for tribal, state and federal governments to coordinate activities within the sanctuary.

A memorandum of agreement (MOA) was signed in January in Olympia. The Intergovernmental Policy Council will facilitate communication, the exchange of information and recommendations regarding management of marine resources within the sanctuary.

"This policy council is a landmark collaborative opportunity, one of the first of its kind and a tribute to the resolve of the partners vested in the future of the sanctuary waters," said Daniel J. Basta, director of NOAA's National Marine Sanctuary Program.

Olympic Coast National Marine Sanctuary is surrounded by the traditional fishing grounds of the Makah, Quileute and Hoh tribes and the Quinault Indian Nation. *Photo: D. Preston*

OCNMS was created in 1994, encompassing 3,310 square miles of Washington coastal waters from Neah Bay to the Copalis River. The area is home to many marine mammal and seabird species, diverse populations of kelp and intertidal algae and thriving invertebrate communities. The sanctuary is entirely made up of the traditional harvest areas of the Hoh, Makah and Quileute tribes and the Quinault Indian Nation (QIN). As sovereign nations, the tribes have treaty fishing rights and co-management responsibilities with the state of Washington for fish and other natural resources within the sanctuary.

'Collaborative management ... is a positive step toward preserving these resources for generations to come.'

– David Hudson, Policy Spokesperson, Hoh Tribe

"This is another positive step toward an ecosystem-based approach to managing these resources," said Mel Moon, natural resources director for the Quileute Tribe. "We must address the entire ecosystem and the relationships between the various components to ensure effective management."

"The policy council brings tribes to the table and integrates us into the management and decision-making process about resources that we co-manage with the state within the sanctuary," said Jim Woods, policy representative for the Makah Tribe. "This is an important step in improving federally mandated government-to-government communication between the tribes, the state and the sanctuary on coastal marine matters."

Coordination of research projects within the sanctuary was a key reason the treaty tribes sought the creation of a policy council. Tribes are especially interested in research of low oxygen zones like the one that occurred this past summer off the beaches of the QIN.

"In the modern era of fisheries management, no one remembers ever seeing anything like this," said Ed Johnstone, fisheries policy representative for QIN. "We need additional and more accurate monitoring devices and more research to understand what's going on."

The Hoh Tribe is also eager to participate in coordinating research projects, said David Hudson, policy spokesperson for the Hoh Tribe. "Many Hoh tribal members have observed a decline in certain marine resources such as razor clams, smelts and flounder in recent years. Collaborative management within the sanctuary is a positive step toward preserving these resources for generations to come." *– D. Preston*

Tribe Reaches Settlement On Oil Spill

On Feb. 9, 2007, the Suquamish Tribe closed a chapter on the 5,000-gallon oil spill that blackened one of the last pristine estuaries in Puget Sound.

In a settlement agreement signed Feb. 9 with Foss Maritime, the tribe received $1.1 million for spiritual and cultural damages to the tribe's historic saltwater marsh and beach, known as Doe-Kag-Wats. The spill polluted important nearshore habitat used by herring and salmon, and damaged shellfish beds. Foss is the company that took responsibility for the December 2003 oil spill that occurred in Shoreline and spread across the sound to the tribe's reservation on the Kitsap Peninsula. The money will be used to help fund a traditional community house on the reservation for use by the Suquamish people and the local community.

The tribe negotiated with Foss for the past three years to obtain compensation for damages to the culturally sensitive site. Tribal members have used Doe-Kag-Wats as a place of healing and worship, as well as for subsistence harvests, since time immemorial.

"We're happy to put the settlement discussions behind us and we look forward to healing the estuary and honoring our ancestors," said Leonard Forsman, Suquamish tribal chairman.

Workers clean up an oil spill at the Doe-Kag-Wats estuary in December 2003. *Photo: D. Friedel*

Foss previously compensated the tribe $126,000 for its initial response and damage assessment costs. Foss agreed to pay an additional $265,000 to a federal fund to restore and mitigate damages to the natural resources at the site. Projects include removing washed-up creosote-soaked logs, reseeding shellfish beds and enhancing beach and estuarine habitat.

To begin the spiritual healing process, the tribe is planning a ceremony at the beach this spring. – *T. Royal*

Generations

"The native woman on the right, holding the fish, is Lizzie Fleming. She was Kathy Duncan and Liz Mueller's great-aunt and is S'Klallam. Her parents were Mathew and Celia Fleming (Celia's first husband was George Fitzgerald). Celia was sister to Old Chubby. This picture was taken at the Dungeness River around 1900 (at the crossing of the Old Olympic Highway)." *Photo: The Fitzgerald Family, used by permission of Kathy Duncan and Liz Mueller.*

Lummi Nation:

Wetlands On Nooksack To Be Restored

The Lummi Indian Nation is working with the state Department of Ecology to protect and restore wetlands in the Nooksack River estuary, one of the few undeveloped estuaries in Puget Sound.

The nearly $1 million project will restore 246 acres of wetlands at Smuggler's Slough, north of Bellingham. The goal is to return the rare coastal wetlands to their natural condition. Restoration elements include removing two fish passage blockages and reconnecting a historic channel to improve the flow through the estuary.

"We are pleased to work with the Department of Ecology to restore and preserve Nooksack River estuary wetlands," said Merle Jefferson, natural resource director for the Lummi Nation. "The project will restore important habitat for fish and wildlife. We also want the project to help address nearshore water quality challenges that threaten treaty-protected shellfish harvest rights."

Funding for the project is being provided by the tribe and ecology, through the National Coastal Wetlands Conservation Grant Program, established by the U.S. Fish and Wildlife Service in 1990 to help states acquire, restore and enhance coastal wetlands.

The Nooksack estuary provides spawning, rearing and saltwater transition habitat for federally listed chinook salmon and bull trout, as well as many other salmon species. The estuary's restoration also benefits bald eagles, trumpeter swans, Canada geese, ducks, herons and shorebirds that nest in the area.

– K. Neumeyer

Lummi shellfish technician Flavian Point examines geoduck seeds magnified on his computer screen. *Photo: K. Neumeyer*

Tribe A Top Geoduck Seed Seller

Production of geoduck seeds at the Lummi Nation's shellfish hatchery is unable to keep up with the demand.

Some of the buyers, mostly South Sound growers, would buy a million seeds at a time if they could, said shellfish manager Ralph Solomon. The hatchery's nursery only has space to grow about 2.5 million at a time.

The tribe has been spawning geoduck clams since 1999. It took a few years to perfect the process. Unlike other shellfish, geoduck don't spawn all at once. They're "spit spawners" that can spawn several times a year. Five geoducks can produce eight to 10 million seeds.

These giant clams prefer to spawn with the lights out.

"Geoduck seem to react better in the dark," Solomon said. "They don't really like the light. We use flashlights and we spawn them in a dark room."

Shellfish technician Flavian Point spawned some geoducks in January. Those seeds should be ready for sale in late spring or early summer.

Geoducks grow a siphon too big to be contained in the shell, so they burrow deep into the bottom sediment. The bivalves can live to be 165 years old, though they usually are harvested sooner and sold. They are a delicacy in China and used for sushi in Japan.

The Lummi Nation gets its broodstock from the Squaxin Island Tribe in exchange for seed. It's ideal for the geoduck seeds to return to South Sound, where they came from, Solomon said. Lummi is one of two major producers of geoduck seeds in Washington, with Taylor Shellfish Farms being the other.

The geoduck operation is the most lucrative aspect of hatchery production. The Lummi hatchery, which was built in 1971 and remodeled in 1995, also produces millions of juveniles and seeds from other clams, oysters and mussels to sell to tribes and other growers. *– K. Neumeyer*

New Hatchery Methods Aid Chinook

The Puyallup Tribe of Indians is using two cutting-edge techniques at its new Clarks Creek hatchery to boost fisheries on abundant hatchery chinook in the lower Puyallup River watershed while protecting a weak wild chinook run.

Tribal and state co-managers have reduced fisheries on abundant hatchery chinook to protect the wild fish.

"The tribe's new hatchery at Clarks Creek will produce more chinook returning to the lower river, away from where returning wild chinook congregate in the upper watershed, so both tribal and non-tribal fishermen should have better chinook fisheries in the upcoming year," said Chris Phinney, harvest management biologist for the Puyallup Tribe. Last year, the tribe had no directed fishery on chinook.

Desiree Wells, NWIFC technician, inspects juvenile chinook for fin clips before they are returned to a rearing pond at the Puyallup Tribe's Clarks Creek hatchery. *Photo: E. O'Connell*

As part of the tribe's effort, a new automated coded wire tagging trailer will insert tiny metals tags into the snouts of the young fish, allowing biologists to better understand their life history.

Also, an innovative type of rearing pond that mimics natural habitat conditions will better prepare the baby chinook for life outside the hatchery.

In the trailer, the finger-long chinook are tagged, counted, and whisked back to a rearing pond. Codes on the millimeter-long tags indicate where and when the salmon were released.

To mark the tagged hatchery fish, the small fleshy adipose fin on their back is clipped. When the tagged salmon are caught in fisheries or found on the spawning grounds, the tags are recovered and biologists track their survival rates, migration patterns and other information.

Complementing the tagging program are the rearing ponds that re-create natural salmon habitat. Root wads, gravel and other materials are incorporated into the ponds to help the young chinook learn to survive better in the wild.

"Chinook born in the wild develop instincts that help them avoid predators and find food," said Smith. "Unfortunately, this isn't something we see a lot of in hatchery fish raised in traditional cement ponds."

Chinook fisheries on the Puyallup River will likely be sharply limited again this year, but with more fish being produced each year at the Clarks Creek hatchery, future fisheries will likely improve. This spring, the tribe will release about 650,000 chinook, and in a few years, nearly one million will be released. – *E. O'Connell*

Habitat Projects Lost To Housing Developments

Puget Sound chinook were listed under the federal Endangered Species Act in 1999. The same year, the Puyallup Tribe of Indians released a list of restoration projects that would help save chinook on the Puyallup River.

Eight years later, Puget Sound chinook are still in trouble and only three of the 13 projects suggested by the tribe have been completed. Five of the projects will never happen and another five are still on the shelf.

"These project sites are valuable not only to salmon but also for houses," said Russ Ladley, resource protection manager for the tribe.

Near Fife, a project was planned to reconnect 40 acres of off-channel habitat in the lower Puyallup River. Instead, the land became the site of hundreds of new houses.

"The pressure to build houses is beating out the pressure to save salmon," said Ladley.

The tribe's catalog of habitat improvement projects focused solely on off-channel habitat, a major need in the Puyallup River.

Dikes along the mainstem of the river cut chinook off from their preferred off-channel hiding places such as wetlands and oxbow lakes.

Completed projects include the reconnections of two wetlands to the mainstem, and a 1,000-yard levee dike setback.

– *E. O'Connell*

Squaxin Island Tribe:

Willow Sticks Help Establish Habitat

Sticks in the ground are helping restore streamside vegetation along Skookum Creek on the Squaxin Island Tribe's reservation.

"It won't look like much because all the passers-by will see are thousands of willow stakes in the ground, but these cuttings will grow into willow trees themselves," said Sarah Haque, habitat biologist for the Squaxin Island Tribe.

"Branches from most species of willow, such as Sitka willow, easily take root, so a willow grove will soon surround the newly constructed logjams, creating habitat for salmon," said Haque.

The tribe constructed a series of logjams along Skookum Creek to slow the creek and provide salmon habitat.

"Fast, straight streams aren't good habitat for salmon," said John Konovsky, environmental program manager for the tribe. "Juvenile and adult salmon need slow water so they can rest and feed."

"It isn't enough just to put trees in the creek," Konovsky said. "We need to grow a healthy forest around the creek, to make sure there will always be trees."

Ease of planting and the ability to root quickly make willow a good choice for salmon restoration projects with limited resources.

"Salmon restoration money is limited, so we try to get the most out of the money we have," said Andy Whitener, natural resources director for the tribe.

Joe Peters, a fisheries biologist with the Squaxin Island Tribe, plants willows as part of a restoration project along Skookum Creek.

Photo: E. O'Connell

Another benefit to the project is that the fully grown willow trees won't grow tall enough to interfere with high-tension power lines that cross the area.

"We have to work with what we've got and still restore the riparian area, which is why we chose to use low-growing willow species and dogwood to revegetate this stretch of the creek," said Haque.

The restoration project will especially benefit coho salmon, which spend more time in freshwater as juveniles.

"Coho over-winter, which means they spend an extra year in freshwater," said Konovsky.

"They have more needs than other species of salmon for food and shelter in freshwater. Streamside shade and habitat features such as logjams give them what they need to survive."

South Sound wild coho populations have been declining steadily for more than a decade.

"We need to continue repairing the habitat these fish need to survive," said Whitener.

– E. O'Connell

Sitka Willow Fast Facts

- Of the more than 350 varieties of willow tree worldwide, Sitka willow is one of four native willow species that are common to the Puget Sound region.
- Latin name: *Salix sitchensis*
- Blooms are cream to yellow in color and up to 2 to 3 inches long.
- Sitka willows are usually found near water, such as creeks and lakes.
- They range from San Luis Obispo County, Calif., north to the Alaska panhandle and as far east as Idaho.
- They can grow anywhere from 3 to 25 feet tall and up to 12 inches in diameter.

Tribes Expanding Laboratory Testing Capa

Editor's Note: Speed is key when it comes to testing for the presence of pollution or natural biotoxins that can harm human health. Throughout western Washington, the treaty Indian tribes are working to expand their laboratory testing capabilities to enable more precise natural resource management. Following are a few examples of those efforts.

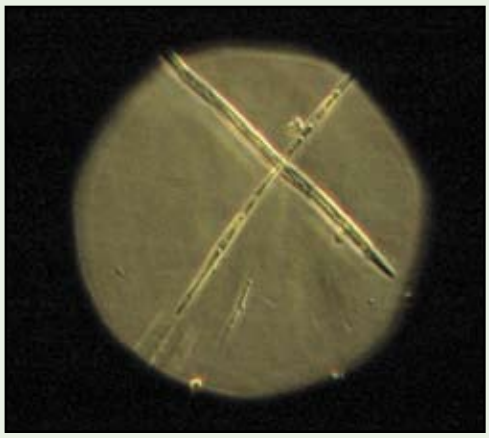
Quinault Indian Nation

Armed with a bucket and microscope, Jonnette Bastian spends several days a week looking for bad guys.

Jonnette Bastian, Quinault Indian Nation harmful algal specialist, processes a seawater sample for testing. *Photo: D. Preston*

The Quinault Indian Nation (QIN) tribal member collects water samples from five different beaches between Kalaloch and Ocean Shores, then inspects the samples for levels of tiny troublemakers that indicate razor clams and other shellfish may be too toxic to eat.

From late spring to late fall, QIN harmful algal specialist Bastian takes



The pseudo-nitzschia algae as it appears under a microscope. *Photo: D. Preston*

two water samples a week from beaches traditionally used by QIN tribal members to harvest razor clams. During the winter months, she collects one sample each week.

This monitoring project is part of QIN's effort to help develop technology for on-site testing to determine whether shellfish are safe to eat.

Bastian is checking for elevated levels of the ocean algae pseudo-nitzschia. Scientists believe it is the microscopic culprit that produces domoic acid, a naturally-occurring toxin that can cause severe illness and sometimes death.

If pseudo-nitzschia levels in the water are high, Bastian collects a sample of razor clams from the beach and sends it to the state Department of Health for further tests. It's a time-consuming and costly process that is driving the need for a testing method for the presence of biotoxins. Because tribal members eat more seafood than the national average, they are exposed to a greater threat from biotoxins.

"We are developing a program that we hope will enable us to conduct our own analysis of domoic acid levels in razor clams," said Bastian. "We're still sending samples to the state Department of Health and comparing our results to the health department's results to check our accuracy."

Personnel from the University of Washington's Olympic Natural Resource Center are working with QIN staff to fine-tune the new tool that can determine domoic acid levels in less than two hours.

Robert Skoog, Tula
microscope in the

Skokomish Tribe

Lalena Amiotte typically has to wait one to three months to get the results of her weekly Hood Canal water quality samples. But with the completion of the tribe's new water quality lab, Amiotte, the Skokomish Tribe's environmental program coordinator, will be able to take those samples and analyze them herself immediately.

"Because we are situated right on the canal," Amiotte said, "We'll be able to quickly test the water samples."

The new 30-foot by 30-foot lab, an addition to the tribe's fisheries building, will include instrumentation and necessary equipment to run dissolved oxygen analyses, E. coli absence/presence testing and fecal coliform counts. It is expected to be fully operational by the summer of 2008.

The water quality lab is the first of its kind in the area. It is located on the southern section of Hood Canal in an area that is experiencing low dissolved oxygen levels and fish kills, said Ron Figlar-Barnes, the tribe's natural resources planner.

The nearest one is a certified large-scale lab in Mason County's Department of Health in Shelton, about 15 miles south of the reservation. It is comparable to what the tribe will have once all the equipment is installed. The goal for the Skokomish Tribe's lab is to become certified to analyze chemical, physical, biological and microbiological elements from water sources, including surface, ground and drinking water.

bilities

lip laboratory technician, examines samples under a tribe's new laboratory. *Photo: K. Neumeyer*

Currently, the tribe has to send water samples off the reservation to be tested, to labs as far away as Oregon.

The tribe typically samples water for fecal coliform and other bacteria as well as excessive nutrients, such as nitrogen from fertilizers. High levels of nutrients fuel algae blooms in Hood Canal, causing dissolved oxygen levels to plunge.

Figlar-Barnes and Amiotte hope scientists from state and federal agencies will use the lab to analyze samples from Hood Canal and other nearby waterways. Funding for the lab came from the U.S. Environmental Protection Agency.

Tulalip Tribes

The Tulalip Tribes have a new laboratory where natural resource specialists can analyze the fish and shellfish samples used to shape fisheries management.

The lab equipment enables the specialists to study information contained in otoliths (salmon ear bones), fish scales and coded wire tags to determine factors such as the age and source of hatchery fish, migration patterns and other information.

Equipment and supplies also are being acquired to identify the unique genetic mark given to all Tulalip hatchery chum salmon.

Combined with 100 percent otolith marking of all chinook and coho salmon, all Tulalip hatchery production is uniquely marked and identifiable.

Hatchery operators give otoliths a "thermal mark" by alternating the temperature of the water flowing over salmon eggs and hatched fry. The temperature fluctuation leaves a distinctive mark on the ear bone.

"Without the ability to assess these stocks, we wouldn't know how many wild and hatchery fish there are in the Snohomish basin or in the region," said Mike Crewson, fisheries enhancement biologist.

To aid shellfish management, for example, shellfish specialist Adam "Rocky" Brisbois uses the new equipment to count the rings on geoduck shells to determine their age.

Crewson obtained the lab equipment for the new facility using limited grant sources and direct contributions of some equipment and supplies. Funding was provided through grants from the Tulalip Tribes Board of Directors, Tulalip Tribes Shellfish Program, Bureau of Indian Affairs and Northwest Indian College.

The U.S. Geological Survey has continued to provide Tulalip with otolith analysis training. The University of Washington's chemistry department is building a specialized grinder for the lab, and the tribes purchased the chemistry department's surplus countertops and sinks.

"Eventually, the stock assessment lab will allow us to eliminate the cost and time delays of sending our samples to outside labs," Crewson said.

– D. Preston, T. Royal & K. Neumeyer

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Swinomish Tribe Studies Shellfish Diet

Members of the Swinomish Tribe eat less seafood than they used to, but many would like to eat more, according to a study recently completed by the tribe's Water Resources Program.

Tribal members cited concerns about pollution, declining availability and limited access as reasons they ate less seafood.

Swinomish researchers spent the past four years studying pollution levels at several of the tribe's traditional shellfish gathering areas. They also hired tribal members to interview 76 tribal households about their seafood eating habits.

The study found that most tribal members are currently eating safe amounts of shellfish.

Swinomish tribal member Jeremy Cayou measures a Dungeness crab in 2003, during the tribe's four-year shellfish study. *Photo: T. Mitchell, Swinomish Tribe*

"Overall, it's healthier for people to be eating seafood," said Jamie Donatuto, environmental specialist for the tribe and coordinator of the research. Medical journals confirm that except for cases of extremely polluted sites, the benefits of seafood outweigh the risks of possible contamination.

These health benefits are especially critical to Indian people, who tend to suffer from higher rates of diabetes and high blood pressure.

Eating fish and shellfish also is important to the cultural health of the community, Donatuto noted.

"When you cut out seafood from your diet as a tribal person, you're losing more than just the health benefits – seafood is an integral part of the community structure," Donatuto said. "We're encouraging tribal members to continue eating fish and shellfish."

Sediment, clams and crabs collected from the waters around the Swinomish Reservation on Fidalgo Island were tested for toxic contamination.

The results and recommended consumption limits from each of the traditional harvesting sites are posted online at www.swinomish.org/planning.

The contamination levels at the sites most often used by tribal members were found to be low enough for risk assessors to recommend eating two meals a week of crab or clams.

"People already are avoiding the sites with the most pollution," Donatuto said.

During the study, tribal staff made numerous presentations about the issue to tribal and non-tribal groups.

The research was conducted with the help of a U.S. Environmental Protection Agency grant of $1.2 million.

– K. Neumeyer

Tribes To Return Tidal Flooding To Wiley Slough

Work could begin this summer on a project to remove dikes and return tidal flooding to Wiley Slough on Fir Island.

The tribal Skagit River System Cooperative (SRSC) is working with the state Department of Fish and Wildlife, the Salmon Recovery Funding Board and other agencies to restore 175 acres of estuarine wetlands.

Historically, salmon and other native fish traveled through Wiley Slough before levees were constructed in the 1960s.

Smaller tidal channels were filled in and the larger channels, including Wiley Slough, accumulated sediments from farmland erosion, becoming narrower and shallower, making it impossible for fish to access the estuary.

Estuary restoration is pivotal to the success of Skagit River chinook salmon recovery. Wiley Slough restoration also will provide habitat for threatened bull trout and other species of concern including coho salmon, Puget Sound steelhead and numerous migratory birds.

When completed, the project will result in fish access to an additional 7.3 miles of tidal channel. Secondary goals include improving an existing boat ramp and parking lot, providing for agricultural drainage and flood protection, and enhancing public access to wildlife viewing sites.

The Skagit River System Cooperative is the natural resource arm of the Swinomish and Sauk-Suiattle tribes. For more information, visit www.wileyslough.org.

– K. Neumeyer

Fewer Coho Return To Coastal Streams

Changes In Marine Ecosystem Possible Cause For Decline

Dean Jackson, left, and Joe Garrick Jr., Quileute fisheries technicians, check for a coho salmon redd in Beaver Creek.
Photo: D. Preston

Fewer adult coho than expected returned to Washington coastal streams this fall and the tribal and state co-managers are planning conservative fisheries to protect the stocks this upcoming season.

"We're not seeing many coho redds (egg nests). We had difficult weather for counting redds, but even with that complication, we aren't seeing them where we should be seeing them," said Roger Lien, fisheries biologist for the Quileute Tribe.

Tribal and state fisheries biologists usually have several good sources of information to predict future returns based on population surveys conducted during the fish's freshwater phase. However, ocean conditions can vary greatly and it's difficult to determine what effect those conditions will have on returning salmon. "Predicting returns is never as clean and neat as you'd like," Lien said.

Scientists are beginning to see signs that the seasonal upwelling of ocean water is changing, possibly as part of global warming.

"This upwelling is critical because it provides food for all manner of sea life," said Lien. "So many marine species have evolved to be present during that upwelling at a certain time in their life cycle. The fish and birds and other marine animals could be arriving to these upwelling areas only to find there is no food."

Thousands of dead seabirds were observed along the Pacific Coast during the past two years.

The Quileute Tribe's concerns are supported by observations of the Makah Tribe.

"Even with the poor weather we had making redd counts difficult, we still saw few coho in traditional hot spots where we usually find them in good numbers," said Caroline Peterschmidt, fisheries biologist for the Makah Tribe.

Casual conversations with regional residents and biologists have indicated that this trend was not limited to the Hoko and Sekiu rivers, said Peterschmidt. – *D. Preston*

Jackson and Garrick record the temperature of Beaver Creek near its headwaters below Beaver Lake.
Photo: D. Preston

Chum Test Fishery Marks 25 Years Of Data Collection

It's rare that 25 years of data about a specific salmon run is readily available, but western Washington treaty tribes have such information at their fingertips, thanks to a test fishery that helps them manage fall chum salmon harvests.

The Northwest Indian Fisheries Commission (NWIFC) and South Puget Sound treaty Indian tribes conduct the test fishery at Apple Cove Point near Kingston each fall.

"The test fishery's strength is that it has been taking place every year since 1981," said Bill Patton, South Sound biologist for NWIFC. "We primarily look for differences in run sizes."

The tribal and state biologists compare test catches from previous years to provide an overall look at the health of the chum run and predict the annual run size.

The long-term data helps biologists see how Puget Sound fall chum are faring. In the last decade, the number of chum returning has generally increased, Patton said. In the 1990s, only about 200,000-300,000 fish were returning each fall. In 2005, the run came in at 407,000 and in 2006, the run was estimated at more than 700,000.

Tribal and state biologists also take scale samples to determine the salmon run's age distribution of 3-, 4- and 5-year-old fish. Because most chum don't mature until age 4, if the test fishery catches a large number of 3-year-olds, it's usually a good indicator that there will be a large return of 4-year-olds the following year, Patton said.

Biologists also record how many male and female chum are caught. It is generally thought that males return earlier than females during the run. When there are equal numbers of both sexes caught during the fishery, it suggests that the run is at its peak.

In the end, the tribes get an idea of how much they can harvest. Biologists estimate the total number of chum returning to the South Sound, then subtract the escapement number – the number of fish that need to make it to the region's rivers and streams to spawn – and the result is the harvestable amount.

The treaty tribes harvest half of the surplus amount. In 2006, the treaty share was about 330,000 chum.

A test fishery fisherman loads the chum catch on board.
Photos: T. Royal

Bill Patton, NWIFC biologist, takes a scale sample from a chum, while NWIFC biometrican Rick Coshow records the sex and length of the fish.

While there haven't been any major differences found from year to year, other than variable numbers of chum coming back to Puget Sound, the test fishery data plays an important role in helping the tribes manage their chum harvests.

"We have these two really good in-season tools – the test fishery and non-treaty commercial catch data – that help biologists gather the best possible in-season information for chum harvest management in the South Sound," Patton said. "While relying on commercial fishery data alone would probably suffice, having 25 years of consistent data from a test fishery is extremely beneficial." – *T. Royal*

Passages

George Cecil Bowechop

George Bowechop

George Cecil Bowechop, former Makah tribal chairman and director of the Makah Whaling Commission when the tribe revived its whaling tradition in 1999, passed on as the result of heart failure on Christmas Eve 2006. He was 85.

He was a lifelong Neah Bay resident, born to Augustus and Annabelle (Butler) Bowechop.

Bowechop was a founding member of the Inter-Tribal Timber Commission, executive director of the Makah Tribe for a number of years, and served as tribal chairman. He was the executive director of the Makah Whaling Commission and elder and ordained pastor of Neah Bay Assembly of God Church. He worked as a log truck driver for Crown Zellerbach and was a certified public accountant.

He married Ione George on June 30, 1947. She preceded him in death in 2005.

He actively promoted the tribe's treaty right to whale and in his last days had written a letter to U.S. Rep. Norm Dicks (D-Wash.) regarding the United States' responsibility to uphold the treaty with Makah that specifically reserved the right to harvest whales along with other fishing and gathering.

Bowechop is survived by five children, three sisters, 11 grandchildren and three great-grandchildren. He was preceded in death by a brother and sister.

Herbert 'Chief Klia' Fisher

Herbert Fisher
'Chief Klia'

Herbert "Chief Klia" Fisher, hereditary chief of the Hoh Tribe, died Dec. 27, 2006 from injuries suffered in a car accident. He was 52.

Born March 7, 1954, Fisher was one of 17 children born to Leila and Herbert Fisher Sr., who preceded him in death.

He was a fisherman most of his life, and also learned the songs, dances and ways of making regalia from his sister Mary Leitka. He mentored many during the annual canoe journeys, starting in 1986.

"He started coming with me to visit the elders and troubled children. His vision was to have a longhouse here at the village. He wanted a place to sing the songs, dance and carve. His foundation was called House of the Raven and we're going to carry on his dream to help the elders and troubled youth," said Leitka, who has a similar foundation.

A cedar log gifted to him for a canoe will be finished in his memory and given to his son, Daki, now the hereditary chief, Leitka said. Pullers from Canada and western Washington will paddle a canoe in his honor this summer.

Besides his brothers and sisters, Fisher is survived by his wife Janet, his son and one daughter.

Swan Serenity

Trumpeter swans, or Hatu·badi· (huh-too-buh-dee) as they are known by their Makah name, make an annual over-wintering visit to Neah Bay. The graceful birds are regularly seen on Village Creek in Neah Bay each winter. The area is in a major bird migration zone and it is not uncommon to see snowy owls among other species.

Photo: D. Preston

Makah Tribe Seeks Winter Bear Lairs

In the children's book, *We're Going on a Bear Hunt,* a family encounters all manner of adventure before rousing an irate bruin, running home, then vowing never again to go on such a hunt.

In real life, as in the book, finding the precise log or stump that a bear uses for its seasonal snooze involves walking through mud, dense forest, streams and winter downpours. Unlike the family in the children's tale, Makah wildlife personnel will embark on many more information-gathering bear hunts.

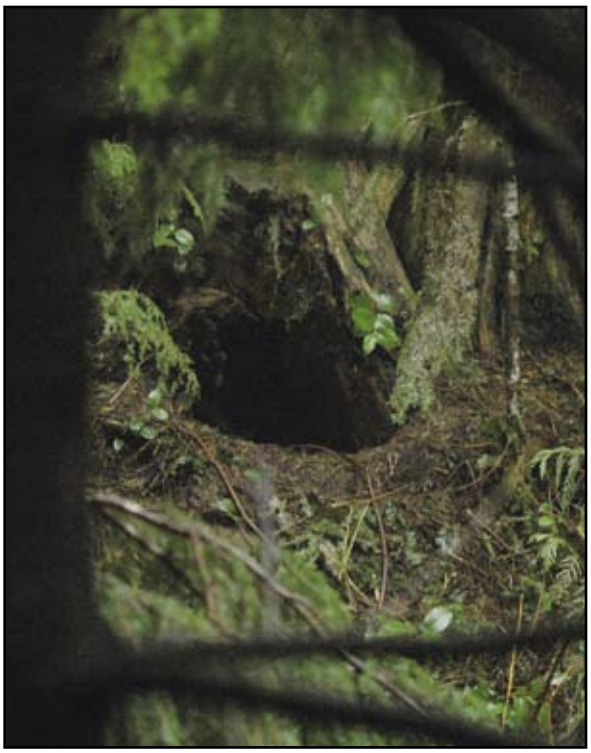
It's part of the Makah Tribe's efforts to learn what habitat black bears use for winter dens, and to protect the habitat through its forest management program.

Last year, five female black bears were trapped, tranquilized and fitted with radio collars. The bears will be tracked for a total of three years and their den sites recorded. Preferred sites so far include large stumps and snags or cozy spaces under large rocks.

"Black bears on the Olympic Peninsula don't hibernate as deeply as their counterparts from areas with longer and colder winters," said Rob McCoy, wildlife division manager for the Makah Tribe. "We have to be pretty quiet around the den sites because it's possible to wake them. We don't want to stress a mother who has cubs."

Female black bears start breeding at nearly 5 years old and produce young every two or three years.

The tribe is in the second year of a three-year study to determine the number of black bears on the reservation. "The tribe wants to know the baseline number of bears before changing harvest regulations or forest practices," said McCoy. "You can easily overharvest black bears because of their low reproduction."



A black bear's den, in the base of an old stump, offers easy access to water during waking periods in the bear's hibernation.

The Makah Tribe also is surveying parts of 3,000 acres of forest lands for bear damage. In early spring, when food supplies are most limited, bears like to eat the inner bark layer of young conifer trees such as Douglas fir and hemlock. Damage caused by the bear can reduce the tree's value and even kill it.

Results so far show that bears prefer the taste of silver and Douglas fir trees, but hemlocks suffer the most damage, because they are the most prevalent trees in the forest.

"By far, thinned forest lands are where the tribe has seen the most bear damage," said Jon Gallie, Makah wildlife biologist. "In some of areas, up to 60 trees per acre were damaged. The number varies across the reservation, with forest stands on Cape Flattery receiving almost no bear damage. The study will determine why some are heavily damaged and others are not."

This spring, tribal wildlife personnel plan to collar five more females.

An Administration for Native Americans Environmental Regulatory Enhancement grant and $157,000 from the Makah Tribe are helping to pay for the study. The Quinault Indian Nation also is donating the use of some of their culvert traps for the project. – *D. Preston*

Jeremiah Johnson, Makah tribal wildlife technician, works to track the signal of a hibernating bear so the site can be noted for a survey of bears' habitat choices for dens. *Photos: D. Preston*

Tribes Corral Elk In North Sound, Sequim

Relocating and fencing are two solutions being used by tribal and state co-managers to deal with problem elk in North Sound and the Strait of Juan de Fuca regions.

Six elk from the 500-head North Cascade herd were captured in Whatcom County and transported to mountains near Darrington in January. The animals were part of a group of 75 to 80 elk that eat crops and destroy fences on farms near Acme.

Historically, the area near Darrington was home to large elk herds. By transplanting North Cascade elk (also called the Nooksack herd), the co-managers are augmenting a declining population.

"We would like to see elk restored to all of their historical areas," said Scott Schuyler, a policy representative for the Upper Skagit Tribe.

Upper Skagit policy representative Scott Schuyler corrals elk in a passive trap near Acme. *Photo: K. Neumeyer*

The six cow elk were lured into a passive trap baited with apples. Upper Skagit technicians, along with state Fish and Wildlife officers and staff from the Sauk-Suiattle and Tulalip Tribes, fitted the elk with radio transmitter collars so they could track them after release.

Near Sequim, members of the public opposed moving the Dungeness Roosevelt elk herd out of the region. Instead, the co-managers are planning to move the herd a short distance south of Highway 101 and construct fences to keep the animals away from traffic and growing urban areas.

The elk, a local icon in Sequim, have become accustomed to residential areas and nearby agricultural lands. They cause tens of thousands of dollars in damage to farmers' crops each year.

– K. Neumeyer & T. Royal

Sauk-Suiattle Tribe Leads Bald Eagle Count

From afar, an adult bald eagle is easy to spot because of its white head – unless the trees are covered in snow.

In January, the Sauk-Suiattle Tribe's Wildlife Manager Chris Danilson and Watershed Manager Scott Morris studied dark shapes in the trees through binoculars, trying to make out the tell-tale white heads against a snowy backdrop.

Chris Danilson, left, and Scott Morris, Sauk-Suiattle Tribe natural resource department personnel, count eagles on a snowy day along the lower Sauk River. *Photo: K. Neumeyer*

Bald eagles are an indicator species of the overall health of the area's rivers. A strong population of eagles suggests that the rivers have plentiful salmon and the water quality is healthy.

The Nature Conservancy began surveying eagles on the lower Sauk River in 1996, but changing priorities and limited funds brought the Sauk survey to an end.

The Sauk-Suiattle Tribe took over the annual count in November 2005. Throughout the winter, staffers visited about 10 sites weekly along the lower 21 miles of the river, noting the location, activity and age of every visible eagle. The tribe welcomed members of the community to accompany technicians on the eagle count.

"It's wonderful that people are learning about the cultural significance of our eagles and that they are protected," said Sauk-Suiattle Chair Janice Mabee. "We feel very blessed that they come into our land for the winter."

The Skagit River basin, which includes the Sauk River, hosts the largest wintering bald eagle population in the lower 48 states. From November to January, bald eagles migrate from Alaska and British Columbia to feast on salmon carcasses in the Skagit and Sauk rivers. Typically, surveyors throughout the basin count between 400 and 500 eagles a day during peak season.

– K. Neumeyer

Tribes Receive Oil Spill Response Trailers

The livelihoods of many Western Washington treaty tribal members depend on the natural resources that thrive in the waters of Puget Sound and the coast. Members of the Port Gamble S'Klallam Tribe experienced the pain of polluted resources when a 200-gallon diesel fuel spill shut down one of its fishing areas in October 2005.

Water resources technician Mann Lewis Jr. (left), fish culturist Merle Jefferson Jr. and project biologist Mike McKay practice oil boom deployment at Fisherman's Cove on the Lummi Reservation. *Photo: S. Fawell, Lummi Nation*

Now the tribe and nine others are armed with oil spill response equipment recently received from the state Department of Ecology. Equipment includes trailers filled with oil containment booms, buoys and absorbent pads.

A $1.45 million state government appropriation last year provided the oil spill response equipment and training to tribal and local governments throughout the state. In addition to Port Gamble S'Klallam, the Hoh, Jamestown S'Klallam, Makah, Nisqually, Swinomish, Tulalip and Quileute tribes and the Lummi and Quinault Indian nations received oil spill equipment.

"The 2005 spill resulted in shellfish closures for several months because the oil seeped into the sediment," said Tamara Gage, Port Gamble S'Klallam interim natural resources director. "It also occurred during the fall salmon runs, making it hard on tribal fishermen."

The proximity of industrial facilities, including oil refineries, to the Lummi reservation has the tribe concerned about possible pollution. The Lummi Natural Resources Department has been training for oil spills for more than five years.

The tribe used a grant from the U.S. Environmental Protection Agency (EPA) to buy oil spill response equipment in 2004 and has conducted several practice deployments. The ecology grant was used to supplement the equipment purchased with the EPA grant.

"The area's water resources are vital for economic stability, growth, and the cultural and spiritual life of the community," said Merle Jefferson, Lummi natural resources director. "The potential contamination of Lummi Nation surface waters has a direct, serious and substantial effect on the health and welfare of the Lummi Nation, its members and everyone on the reservation."

Maintaining their own oil spill response equipment enables tribes to independently protect their cultural and natural resources in the event of a large spill, and provide assistance to tribal members during a small spill, Jefferson said.

– T. Royal & K. Neumeyer

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