Northwest Indian Fisheries Commission

NEWS

Vol. XVI Number 2
Spring 1996

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Welcome To Our Homeland, Director Shanks

By Billy Frank, Jr.
NWIFC Chairman

The State Fish and Wildlife Commission's recent selection of Bernard Shanks as the Director of the State Fish and Wildlife Department appears to be a good choice.

Shanks will find he has big shoes to fill, as Director Robert Turner relinquishes his office following many years of outstanding but thankless public service. It does appear that Shanks is of strong character — a quality he will need in order to maintain a steady hand against the current of confusion that has been the earmark of the state's new commission to date. He appears to have good experience and claims to have a strong position on habitat protection. So although actions will speak louder than words, we choose to enter this new relationship with an open mind. We offer Bernard Shanks the hand of peace. We welcome him to our homeland.

We sincerely hope he will choose to learn the history of the tribes here, and acknowledge their treaty-protected rights in natural resource management. These are not "special" rights, as some choose to describe them. They are fundamental rights that have existed for thousands of years, fully supported by numerous federal court decisions and the United States Constitution. There is no legal or ethical validity in any effort to compromise them. We strongly advise Director Shanks to avoid that path, and be wary of those who will attempt to lead him there.

Tribal and state natural resource managers have seen both conflict and cooperation in this state. Cooperation is better. But having it takes understanding as well as insight. It takes full acknowledgement of the validity of treaty-protected indigenous rights — in deed as well as word. It takes government-to-government team effort, and it takes courage.

Assuming that Mr. Shanks chooses to willingly stand with the tribes, as teammates in natural resource management, what should we stand for, together? Those who have listened to the tribes, or taken heed of our actions, know we stand for good, comprehensive management of natural resources in a way that respects the rights of future generations. We stand for a stable economy, with full understanding that such an economy is completely dependent on a healthy environment. With flourishing natural resources, we are all rich beyond measure.

We hope Bernard Shanks will be an outstanding State Fish and Wildlife director. We like the fact that he is an avid fisherman. Fishing, whether by hook and line or net, connects a person with nature. It is a culturally enriching experience that requires good cooperative management to be sustained. Will he remember that in his work? We hope so.

On The Cover: Juvenile coho being reared at the Nisqually Tribe's Clear Creek Hatchery. The fish were spawned in October and November and are scheduled for release next May. Treaty Indian tribes in western Washington released nearly 51 million healthy young salmon and steelhead in 1995. See story on Page 2. Photo: *T. Meyer*

Northwest Indian Fisheries Commission News

The NWIFC News is published quarterly on behalf of the treaty Indian tribes in western Washington by the Northwest Indian Fisheries Commission, 6730 Martin Way E., Olympia, WA 98516. Complimentary subscriptions are available. Articles appearing in NWIFC News may be reprinted.

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Lummi	360-384-2210	Puyallup	206-597-6200	Stillaguamish	360-652-7362
Makah	360-645-2205	Quileute	360-374-6163	Suquamish	360-598-3311
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Tribes Released Nearly 51 Million Salmon In 1995

Treaty Indian tribes in western Washington produced nearly 51 million hatchery salmon and steelhead in 1995, according to recently released data. Last year's releases represent an increase of over 10 million from 1994, when the tribes released about 40.5 million salmon and steelhead.

"Fisheries enhancement efforts by the tribes benefit everyone," said Billy Frank, Jr., chairman of the Northwest Indian Fisheries Commission. "These fish are an important contribution to tribal, sport and commercial fisheries throughout the region."

Of the 50,926,540 fish released from tribal facilities last year, nearly 16 million were chinook and nearly 14 million were coho. More than 19 million chum, 52,000 sockeye and nearly 1.5 million steelhead were also released. Some of the fish were produced through cooperative enhancement efforts by the tribes, Department of Fish and Wildlife, State Regional Enhancement Groups, U.S. Fish and Wildlife Service and sport or community organizations.

The goal of tribal hatchery production is to supplement, but not replace, declining wild salmon stocks, Frank said. Dams, agricultural and forest practices, urbanization, past overfishing and other factors have contributed to the decline of wild salmon and steelhead populations, he said.

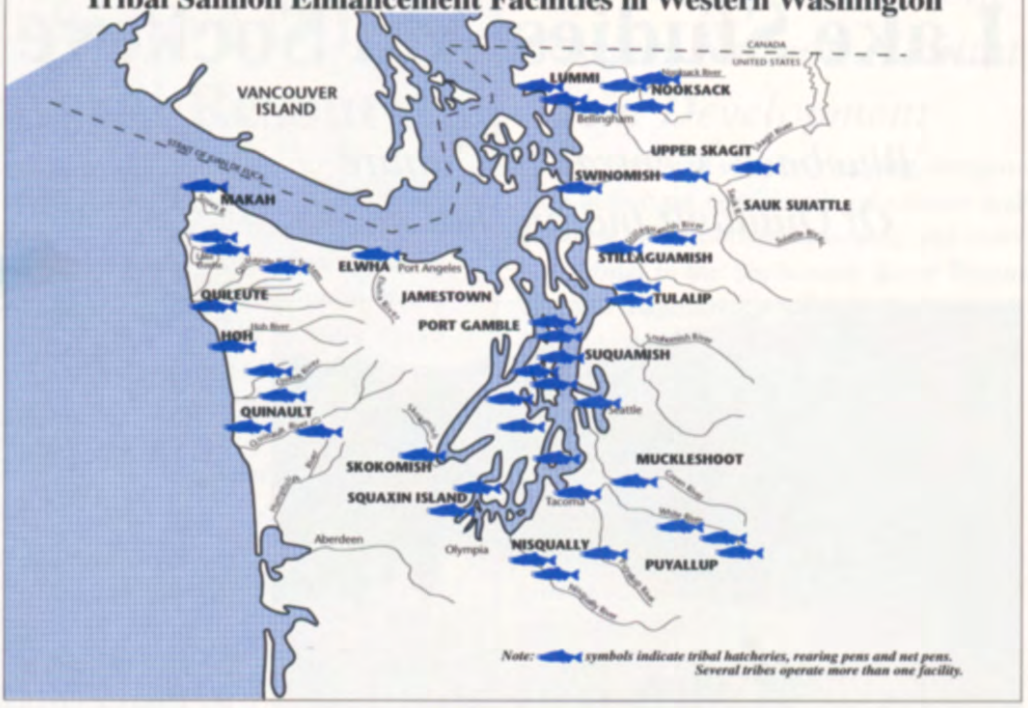
"It is important to remember that these hatchery fish are not meant to replace wild fish," Frank said. "Tribal hatchery production helps reduce fishing pressure on wild stocks while helping to provide meaningful harvest opportunities for Indian and non-Indian fishermen."

At the same time the tribes and state, as co-managers of the resource, are working hard together to restore and protect wild salmon stocks and their habitat, he said.

The tribes and state created the Wild Stock Restoration Initiative in 1991 to address the decline of wild salmon and steelhead. The cooperative effort's focus includes inventorying the status of wild stocks and their habitat, reviewing management strategies and developing recovery and management plans.

"Hatchery production, along with wild stock recovery efforts, are part of a balanced approach to fishery resource management," Frank said.

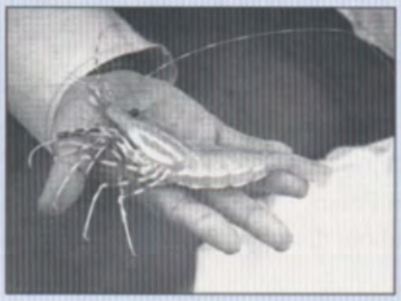
Tribal Salmon Enhancement Facilities in Western Washington



Tribes Begin Harvesting Treaty Share Of Shrimp

Until this year, western Washington treaty Indian tribes harvested just a fraction of the shrimp taken from Hood Canal, the Strait of Juan de Fuca and northern Puget Sound. But as a result of the 1994 federal court ruling re-establishing them as co-managers of shellfish resources, the tribes this year are working to take up to 50 percent of the harvestable deepwater delicacy.

Under a tribal/state shrimp management plan, treaty and non-treaty shrimpers will split an estimated 1.4 million pounds, except on Hood Canal, where they will share about 204,000 pounds. Photos: *D. Williams*



Lake Studies Aid Sockeye Management

'Blueback' Central To Culture Of Quinault Indian Nation

Quinault tribal fisheries technicians tow a screw trap into place to check outmigration of young sockeye. Photos: *C. Boysen*

Just like people, fish need food, water and weather in good measure to survive. While that may sound simple enough, Quinault tribal fisheries biologists use the most advanced scientific tools to find out how water temperatures, adequate food sources and rainfall influence the number of sockeye salmon returning to Lake Quinault.

For centuries, the annual return of the unique "Blueback" or Lake Quinault sockeye salmon has been central to the Quinault Indian people as a source of food and trade.

Part of what makes the sockeye salmon life cycle unique is the need for a lake to serve as a nursery for juvenile sockeye and as a holding area for returning adults several months prior to spawning.

Because Lake Quinault and the surrounding area is mostly protected from development, it offers an exceptional opportunity to study sockeye in a naturally occurring laboratory.

The scientific name for the study of lakes is "limnology" and part of limnology is the study of the interaction between fish and their lake habitat. Information gained from limnological studies at Lake Quinault helps predict current annual returns and future run sizes and are key to making responsible management decisions regarding the resource.

"We look at the factors which are important in determining the carrying capacity in order to find out how many fish the lake can support," said Quinault Lake Studies Biologist Ron Peters. "We want sustainable and ecologically sound harvests without disrupting the integrity of the natural system."

Besides providing technical information needed for management of the sockeye resource, the Lake Studies Project also looks at what types and how much food is available for the developing young sockeye salmon. At five locations in the lake, tribal technicians sample water temperature, dissolved oxygen and phosphate levels to reveal conditions most suitable for the production of algae. Algae is the food for zooplankton, the micro-organisms on which the juvenile fish feed.

Other factors taken into consideration include how rainstorms and snowmelt affect water conditions in the lake. Some of the tributaries feeding Lake Quinault are stable — unaffected by floods or siltation. However, the mainstem Quinault River above the lake, where a large portion of sockeye spawning occurs, is another matter. Intense storm cycles cause flooding that increases sediment. The sediment can suffocate spawning beds and cloud the lake periodically to delay the algae growth necessary to supply food for juvenile sockeye.

Further complicating the water cycle of the lake is the wide fluctuation of the Quinault River's volume from rainstorms and snowmelt. Rainfall in the Quinault Basin ranges from 92 to 178 inches a year, and in one week the lake level can fluctuate 10 to 20 feet.

Dan Jolibois, Quinault tribal fisheries technician, checks a water sample for algae content.

The Quinault Nation's fisheries department has compiled limnological data on the lake reaching back to 1978. However, because sockeye have a long life cycle — up to five years — and with so many factors affecting sockeye, it still remains difficult to predict sockeye returns using any one method.

To get a better idea of how habitat conditions are affecting sockeye production, technicians conduct tow net surveys in the summer and fall to measure the abundance of young sockeye in the lake, while in the spring a trap is installed to estimate the number of juveniles migrating to the sea.

Between limnological data and population surveys, technicians will soon be able to give reasonable estimates of future returns.

"Since 1972 the highest return of sockeye was 134,000; the lowest was in 1983 with 12,000. In 1993, there was a great return of over 100,000,"said Peters. "Our minimum annual escapement objective is 26,500 and harvest is restricted to make sure the objective is met.

"The cutting edge of fisheries management science is happening here with the Nation's fisheries program," Peters said.

— C. Boysen

Tribal Gaming Initiative Offers New Hope For Natural Resources

An initiative on the November ballot to allow a limited number of electronic gaming devices in tribal casinos would increase tribal self-sufficiency and provide a new source of badly-needed funding for wild salmon habitat management and enhancement in Washington state, said Billy Frank, Jr., chairman of the Northwest Indian Fisheries Commission. Initiative 671, filed recently by 13 western Washington treaty Indian tribes, will go before voters in November.

"Right now the state spends less than 2 percent of its budget on natural resource management and enhancement. Even when the contributions of the tribes, federal government and other sources are included, there just isn't enough funding to accomplish our mutual goal of stopping the loss and degradation of the habitat that the salmon needs to survive," said Frank.

"Elected officials are being forced to choose between natural resources and demands for schools, law enforcement and social programs," Frank said. "During this past year we saw deep cuts in state and federal funding cuts for natural resource management. As the drive to balance the federal budget moves forward, many of the necessary spending reductions will come at the expense of natural resource management and protection efforts."

Initiative 671 applies only to tribal gaming facilities operated under compacts with the state. Under phase one of the initiative, the number of electronic gaming devices in tribal casinos is limited to 295 per facility for the first 12 months, a maximum of 7,670 statewide. After specific regulatory requirements are met, and with review and approval of the state gambling commission and tribal gaming authorities, each tribal facility would be allowed up to 495 electronic gaming devices in phase two, or a total of 12,970 statewide if all 26 federally recognized tribes in the state had the maximum number of devices.

The initiative calls for the tribes to contribute 15 percent of the gross gaming revenues from electronic gaming devices, after prizes are paid to players. Of that 15 percent, 45 percent would be designated for restoring and enhancing salmon habitat and watersheds. The portion of revenues from tribal electronic gaming devices earmarked for salmon, fisheries habitat and watershed restoration and enhancement would be distributed by a seven-member board appointed by the governor. This does not include additional funding for tribal natural resource programs and cooperative enhancement and protection efforts that would be available from enhanced tribal gaming revenue.

Most of the remaining 55 percent would would go to economic development in local counties across the state. Funding to counties and cities for public safety, emergency services and other agency needs would also be provided, as well as state costs for regulating the electronic gaming devices and a fund for local charities in areas surrounding tribal gaming facilities.

Initiative 671 also calls for each tribal gaming facility to add three electronic gaming devices in phase one and five in phase two from which all revenues (minus operating, maintenance and regulation costs) would be dedicated to charities statewide. Revenues would be placed in a fund under the administration of a board of directors appointed by the governor.

"The benefits of this are obvious," Frank said. "It would increase tribal economic self-sufficiency and provide a better quality of life for tribal members, enhance economic development and public services across the state, and benefit charities as well. Equally important, it would provide funding critical to continuing the fight to protect and restore the salmon resource and the habitat it depends on."

New Maps Could Help Protect Salmon Habitat From Development

New maps will soon be available that provide important new details of salmon and steelhead distribution, spawning and rearing habitat in the Snohomish River Basin. The added information will help development planning and growth management.

"For the first time we've put it all together in one place for the entire Snohomish watershed," said Libby Nelson, the Tulalip Tribes' environmental planner who coordinated the effort to create the new maps. "These maps make it clear that the distribution of salmon is significantly greater than what was indicated by earlier maps. Now we have an improved understanding of where the fish are and also where potential problem areas are. Hopefully, that means development planners and regulators will be able to protect them better.

"The information will also be digitized, meaning that you can use the maps along with other information in a computer. The maps, both on paper and on computer disk, are available at cost (about $100)."

The greatly improved maps are the product of a workshop that brought together a large number of biologists and others who have studied the Snohomish Basin.

"Strictly speaking this is not really new information," said Nelson. "It already existed in scattered reports and in the heads of biologists. It just wasn't assembled in one place."

The workshop was part of a larger process — the Snohomish River Basin Work Group, which funded the mapping project. The work group is an association of tribal, city, county and state governments working cooperatively to address difficult water allocation and water quality issues in the basin.

"Although these new maps show only current and not historical distribution and are subject to error and change, they're still going to provide an important snapshot of salmon distribution in the Snohomish Basin. They also show something else — that the tribes and local and state government can cooperate successfully in efforts to protect natural resources," said Nelson.

So Long, Salmon

The release of young salmon into a river system is always an important event for tribal communities. But a chum salmon release on the Lower Elwha Klallam Tribe's reservation this spring held special meaning to participants.

About 35,000 young chum salmon were released into Bosco Slough with the help of children from the tribe's HeadStart Program. Fisheries biologists collected about 35,000 chum eggs from native broodstock during the fall chum run. The eggs were reared and hatched in the Lower Elwha Klallam hatchery and released into Bosco Creek in mid-March.

Two dozen HeadStart children, each clutching a small paper cup, lined up behind pails boiling with young fish on the creek bank. Tribal hatchery staff filled each child's cup with a few chum fry and a little water, then watched as the cup's contents were emptied into the short creek, which flows into the Elwha River near its mouth on the Strait of Juan de Fuca. The process was repeated over and over, until each child had released several cups full of fish — some onto the bank, but most into the water. Some children shouted goodbyes or waved to the fish as they swam into the current.

The chum release, which included a blessing of the site by Oliver Charles Sr., is the latest event in a two-year effort to restore the fish runs and habitat of Bosco Creek. Surviving adults will return to spawn in the creek in three to five years. — *D. Williams*

Reggie Ward Jr., Hoh tribal water quality manager, surveys a road repair project threatening fish habitat in the Hoh River. Photo: *C. Boysen*

Hoh Tribe Concerned Abou

A road is being built in the Hoh River, threatening prime native salmon and steelhead spawning and rearing habitat. Worried about damage to the future of their treaty-protected fisheries and aquatic resources, Hoh tribal officials have denounced what is being billed as a simple road repair project.

Last November, massive flooding on the upper Hoh River washed out approximately 1,000 lineal feet of the Upper Hoh/Olympic National Park Road. The Federal Emergency Management Agency (FEMA) provided more than $900,000 to Jefferson County to repair the road.

Reggie Ward, Hoh tribal water quality manager, says that the work now under way will have significant impacts on the biological characteristics and physical features of the Hoh riverine ecosystem.

Five-year-old Lovey Bright (left) watches Bosco Creek flow past after liberating a cupful of young chum salmon in the stream. Duane Charles (below) helps his son, Dale, get a good look at some of the 35,000 fry released with the help of students from the Lower Elwha Klallam Tribe's HeadStart Program. Below left, a youngster gets a helping hand to send the salmon on their way.
Photos: *D. Williams*

Quileute Tribe Expands Water Quality Laboratory

The Quileute Department of Fisheries (QDF) has expanded its water quality laboratory with a move to a new, larger facility better suited for testing shellfish and water quality samples. The move combines the QDF laboratory with the Quileute Reservation water quality lab that monitors domestic water and waste water treatment.

According to QDF Shellfish Technician June Schumack, the laboratory has the capacity to monitor biological toxins sometimes found in crab and razor clams, such as domoic acid and PSP (paralytic shellfish poisoning), and to carry-on a wide range of testing for mineral and nutrient contaminants. Over the last two years, tribal biologists and technicians have increased the amount of testing in local streams to identify potential problems and to verify data about the sources of existing water quality problems.

"Throughout the year we collect clam tissue samples on a biweekly basis at the tribe's beach and Olympic National Park beaches at Kalaloch, and Beach Two and Three near LaPush," said June. "We work in cooperation with the state Department of Health and National Marine Fisheries Service to process the samples."

The water quality facility could be certified by the state and the U.S. Environmental Protection Agency (EPA) to perform testing area-wide. The tribe may choose to provide that service with certification in about a year after a series of standardized tests have been completed at the new facility.

Quileute Natural Resources Director Mel Moon said that risks associated with domoic acid and PSP from shellfish harvesting in recent years requires an aggressive monitoring program that makes a larger facility necessary. "Now we can keep track of the health of both our marine environment and continue studies on the condition of salmon habitat," he said. — *C. Boysen*

Effects Of 'Road In The River' Project On Fish Habitat

"There will be long-term detrimental impacts to fisheries resources of the Hoh watershed caused by armoring the riverbank with rip-rap," said Ward. "Projects like this cannot be driven just for what is politically or economically expedient; it must be scientifically sound to protect treaty and non-treaty resources. We prefer mitigation not litigation. Nothing is being done to reduce increased flows and replace lost pool habitat."

According to Ward, recommendations by the Washington Department of Fish and Wildlife's own biologist were ignored by the agency's upper level administrators who approved a Hydraulic Project Application (HPA) permit to the county for the project. The conditions of the HPA have been violated with toxic pollutant spills, excessive sediment loads and deviation from the project plans, he said.

"These violations represent a clear and present danger to future non-tribal recreational and tribal fisheries," said Hoh Tribal Chair Vivian Lee.

Further complicating the project is the apparent improper use of FEMA funds to benefit a local, private landowner. The funds are earmarked for "emergency road repair." One third of this project is downstream from the previously existing road and was designed to protect private property.

"What can a small tribe like Hoh do?" said Lee. "We don't have the financial resources or political clout to fight this. All we can do is let people know about what's happening to one of the best steelhead fishing streams in the state."

— *C. Boysen*

Nisqually Tribe Hopes County, Army Will Close Polluting Sewage Treatment Plant

The Nisqually Tribe is hoping that Pierce County and the U.S. Army will take advantage of a rare opportunity to close an aging, inefficient sewage treatment plant that is a major contributor of pollution in the fragile Nisqually Reach area of southern Puget Sound.

Explosive development in the community of DuPont, near the Army's Fort Lewis military base in Pierce County, will result in a community of 30,000 in a few years. Major contributors to the growth are Weyerhaeuser's Northwest Landing planned community and Intel's computer assembly plant and research facility.

Pierce County had planned to accommodate the sewage requirements resulting from the growth by constructing a nine-mile-long pipeline to its Chambers Creek sewage treatment plant. The Chambers Creek facility is a modern, efficient treatment plant situated in an area where strong currents quickly and widely disperse treated wastewater released into Puget Sound.

But two years ago, residents of the affluent community of Oakbrook blocked plans to construct the pipeline through their community to reach the Chambers Creek plant, claiming that Pierce County had not considered all of the alternatives.

In examining other choices as part of a draft environmental impact statement, the county learned the Army was willing to sell its Tatsolo Point sewage treatment plant to Pierce County and become a customer. The county is now considering purchasing and upgrading the plant as one of a number of options in a draft environmental impact statement.

The Nisqually Tribe is advocating that county officials consolidate the sewage treatment needs of Northwest Landing and Fort Lewis at the Chambers Creek plant and pave the way for closure of the Tatsolo Point facility, says Georgianna Kautz, tribal fisheries manager.

The 40-year-old Tatsolo Point plant is situated significantly closer to Northwest Landing than the Chambers Creek facility, and serves Fort Lewis, McChord Air Force Base, a veterans hospital and other military facilities, as well as DuPont.

Although upgraded in 1975, the plant has a history of violating state and federal pollution standards. Stormwater flows into the sewage treatment plant, rendering it incapable of treating sewage during periods of heavy rains. Further contributing to the problems is an outfall pipe situated in shallow water close to shore where currents are too weak to disperse the treated — and occasionally untreated — wastewater flowing into Puget Sound and the fragile estuary at the mouth of the Nisqually River. The estuary is an important rearing area for juvenile salmon.

Even treated wastewater contains chemicals and other contaminants that accelerate algae growth in the waters of the Nisqually Reach. As the algae die and decay, they consume oxygen from the water, and smother small aquatic organisms that form the basis of the food chain for salmon and other fish. Nearby rich beds of clams, geoducks and other shellfish also are rendered unfit for human consumption because of the wastewater discharge from the plant.

"The Nisqually Tribe has worked hard to restore the salmon, steelhead and other resources of the Nisqually River Basin," said Kautz. "And the public has made a substantial investment in the Nisqually National Wildlife Refuge at the river's mouth.

"There is also the issue of dollars and cents," she said. "Either plant would have to be upgraded and expanded to handle the increased sewage from Northwest Landing and Intel. The county says the cost would be similar for both options, but we think they have not accurately estimated the actual cost of upgrading and expanding the Tatsolo Point plant. Just because it is closer doesn't make it a better alternative. It would probably cost Pierce County taxpayers a lot more in the long run.

"We have a chance here to eliminate a significant source of pollution in the river's estuary and improve habitat for fish, shellfish and other resources," Kautz said. "Opportunities like that don't come along very often." — *T. Meyer*

Skokomish Again Named To Endangered Rivers List

The Skokomish River has once again been named to a conservation group's list of the 25 most endangered rivers for 1996. This is the third consecutive year that the river, which flows through the Skokomish Indian Tribe's reservation where it enters Hood Canal, has made the American Rivers' list.

"These rivers are in trouble simply not because of development, but because of reckless practices — dams that block fish passage, irrigation practices that waste water, and careless grazing and logging along river banks," said Lorraine Bodi, co-director of American Rivers' Northwest office.

The group cited logging, improper flood management practices, and Tacoma City Light's Cushman hydroelectric project — a complex that includes two dams and a powerhouse that diverts all of the north fork's flow out of the Skokomish's watershed — as the major issues affecting the river. The Cushman dams contain no fish passage facilities and block the most productive portions of the Skokomish watershed from all anadromous fish stocks.

The Federal Energy Regulatory Commission is considering issuing a license for the Cushman Project, despite opposition from the Skokomish Tribe, various state and federal resource agencies, environmental groups, community groups, and others.

American Rivers rated the Clark's Fork of the Yellowstone River in Montana and Wyoming as the nation's number-one threatened river. — *D. Williams*

Earth Day A Day Of Thanks

Volunteers plant native trees as part of the Earth Day celebration on the Swinomish Reservation. Over 200 people participated in the event.

Swinomish Chairman Robert Joe continued an ancient tribal tradition for Earth Day '96. He gave thanks. In front of a crowd of restoration volunteers from throughout Puget Sound, he thanked the mother earth spirit and the hundreds of people who came to the Swinomish reservation to plant native trees and remove invasive spartina.

"We thank the spirit for our time here and acknowledge our responsibility to take care of the earth," said Joe.

These and other comments by Joe followed a day of planting and alien plant removal on the reservation sponsored by the Swinomish Tribe and People for Puget Sound, a Seattle-based environmental group. More than 200 people helped plant native shrubs and western red cedar and pull up the spartina.

Robert Joe, Swinomish tribal chairman, talks to volunteers about the importance of caring for the Earth.

The volunteers included people of all ages and walks of life.

"We had a great turn out," said Swinomish environmental planner Lauren Rich, an organizer of the event. "Everything got planted and we had complete removal of the spartina which can be a real problem. It can harm fish and shellfish habitat by crowding out native plants and causing wetlands to fill in. We are very pleased and grateful to volunteers."

The day ended with a dedication ceremony by Swinomish religious leader Jim Wilbur and singing by the Skagit Valley Singers.

Cooperation Breeds Steelhead Success On Skagit

In early May about 75,000 young hatchery steelhead (smolts) started life in the wild at the mouth of the Baker River where it joins the Skagit River near Concrete. The smolt release is a part of the continuing effort by north sound tribes to rebuild the Skagit River fishery. The steelhead were released at the Upper Skagit Indian Community hatchery near Sedro Woolley then transferred to net pens in Shannon Lake before release into the Skagit River system.

"In two years about two thousand of these steelhead will be coming back into the river" said Scott Schuyler, Upper Skagit hatchery manager. "That's about one quarter of all the hatchery fish returning to the Skagit. We want people to know that these are not tribal fish, they are everyone's fish."

The hatchery program began in 1988 in coordination with the former Washington Department of Wildlife. It is a joint effort of the Skagit System Cooperative (the fisheries management staff of the Upper Skagit, Swinomish and Sauk-Suiattle tribes) and Puget Power & Light Co.

Broodstock for the hatchery come from steelhead that escape harvest. After the fish are corralled in the Puget Power fish facility just below Baker Dam eggs are taken and used to begin the next generation.

Upper Skagit tribal fisheries staff members (from left) Larry Peterson, Robert Schuyler and Scott Schuyler, release thousands of young steelhead into the Skagit River.

"This program has been a success," said Schuyler. "It really shows the value of cooperation between agencies. Maybe eventually it will get bigger and help bring the Skagit back to what it once was."

Sol Duc Watershed Focus Of Monitoring Program

Little white plastic balls bobbing on the surface of a river are helping the Quileute Tribe to measure water quality impacts on fisheries resources in the Sol Duc watershed.

Tribal biologists anchor a length of twine with 20 white plastic balls in a river bottom to act as a scour gauge. If the balls become visible, then scour caused by increased flows can be monitored by the number of balls showing. Scouring from increased flows can wash away gravel deposits in streams that are essential to salmon and steelhead spawning and rearing areas.

"Scour gauges provide us valuable data about the condition of a river — how habitat may be affected by upstream forest practices and high water events like we've had this year," said Quileute Timber/Fish/Wildlife biologist Ed Von Grey. "Usually there are two high flow events every year or two. With so much rainfall this year, there have already been four or five high flow events. Each event has the potential to change the river channel."

Von Grey records the height of the water in streams using a crest gauge. Crest gauges are used to measure the volume of water passing through Bear Creek and other tributaries, which drain into the Sol Duc River.

Together, scour and crest gauges provide a range of data necessary to measure the affects of water flow on fish habitat.

"This data fills in some of the gaps of information needed to complete the watershed analysis process," said Von Grey. "From the combined data we can prescribe remedies for problems identified in the river habitat." Watershed analysis was developed through the Timber/Fish/Wildlife process to identify problems within a given watershed and prescribe strategies for restoration.

Cooperative watershed analysis projects in the Sol Duc Basin are being conducted by the Quileute Natural Resources staff in cooperation with the state departments of Natural Resources and Ecology, U.S. Environmental Protection Agency, Forest Service, and Fish and Wildlife, and private timber companies, such as Merrill-Ring and Rayonier.

Quileute Natural Resources Director Mel Moon said he is encouraged by the potential greater protection offered by the cooperative project. "The state and federal programs now recognize the tribe's essential role in collecting the data, as well as the cultural aspects of the watershed analysis process," he said.

The Sol Duc watershed was targeted as a pilot project in President Clinton's Forest Plan to implement ecosystem management in the Pacific Northwest.

The Calawah River was recently added to the project area, placing an additional 54,000 acres under protection along with the Sol Duc Basin's 145,127 acres. The project now includes four watershed analysis units in part of the tribe's usual and accustomed fisheries management areas where they operate as co-managers of the larger Quillayute Basin. Tribal, federal and state dollars will be combined to maximize resources to accomplish the project.

— *C. Boysen*

Ed Von Grey, Quileute tribal Timber/Fish/Wildlife biologist, checks a scour gauge in Bear Creek, a tributary to the Sol Duc River. Photo: *C. Boysen*

Makah Tribe To Rebuild Cape Flattery Trail

The Cape Flattery Trail, a favorite destination of hikers at the tip of the Olympic Peninsula on the Makah Reservation, is about to undergo a transformation.

The Makah Tribe recently received a $170,000 grant from the state Department of Natural Resources to rebuild the path, which offers spectacular vistas of the Pacific Ocean but discouraged many users because of narrow access and disrepair.

Coupled with a grant from the state Department of Transportation for $85,000 to cover materials, the trail will undergo a substantial overhaul beginning in June.

"It will move from a passable path, which now has limited use, to a very special trail," said Makah Tribal Planner Jennifer Knowlton. "With this funding the tribe can enhance the hike with some boardwalks and protect the sensitive environment."

The trail is muddy throughout most of the year and has a dangerous overlook that drops more than 60 feet. Knowlton said the money will be used to clear and redevelop the trail and construct a viewing deck.

Tourists flock to Neah Bay for the chance to see an unparalled collection of wildlife and marine birds making up the Northern Flyway that passes over the most northwesternmost point of the continental United States. Over 239 species of birds including tufted puffins, bald eagles and arctic terns reside or migrate along the ocean shore, offshore rocks and islands.

— *C. Boysen*

Elwha Dams

Draft Removal Plan Issued; President Earmarks Funding

The federal government has issued a draft plan for removal of the Elwha Dam, shown here, and the Glines Canyon Dam. Photo: *D. Williams*

Having already acknowledged removal of two fish-blocking dams on the Elwha River offers the best chance for salmon and steelhead restoration, the U.S. Department of Interior has now issued a draft environmental impact statement (DEIS) outlining how it plans to get the job done.

Removal of the two dams would change the Elwha River from a blunt, 5-mile-long stream with little spawning habitat, to a dynamic river with at least 70 miles of mainstem spawning habitat, most of which has remained in pristine condition, protected by Olympic National Park.

Elwha Dam was constructed without fish passages eight decades ago about 5 miles from the river mouth. Glines Canyon Dam, built in the 1920s about 13 1/2 miles from the river mouth, now lies within Olympic National Park. It, too, was constructed without fish passages.

The river was legendary for its large salmon runs. All five major salmon species as well as steelhead, and including chinook salmon that reached 100 pounds, utilized the stream. The sediment that flowed down the glacial stream helped create Ediz Hook, which now protects Port Angeles Harbor from the Strait of Juan de Fuca.

The DEIS' preferred alternative calls for a gradual dismantling of the two dams. Lake Mills, behind the Glines Canyon Dam, would initially be drawn down with the dam in place to provide flood control and water storage until a diversion channel to drain the lower reservoir, Lake Aldwell, is complete. The lower dam would be removed by controlled blasting, while Glines Canyon Dam would be removed by controlled blasting and diamond wire saw cutting of concrete blocks. Sediment trapped behind the dams, particularly behind Glines Canyon, would be eroded naturally.

Reservoir drawdown and dam removal is expected to cover an 18- to 22-month period. The current proposal calls for lake drawdown and dam removal to run from June through October of the first year, followed by several months of inactivity during winter floods and fish migrations. Dam removal would resume after high spring runoff has ended.

"We have waited a long time for this..."

— Frances Charles

"Turbidity is going to get extremely high during certain stages of dam removal, but levels will drop down very quickly," said Doug Morrill, fisheries biologist for the Lower Elwha Klallam Tribe.

Morrill said the restoration team is exploring options for protecting fish coming into the river during high turbidity levels.

"The plan right now is to bring adults into the hatchery, spawn them, and outplant their offspring in the upper watershed once those areas are accessible."

In 1994 and 1995, draft and final EIS' were released which determined the Department of the Interior's policy on Elwha River restoration. The decision from these studies was to fully restore the ecosystem and anadromous fisheries on the Elwha River through removal of the two dams.

The recent DEIS estimates that with full restoration and 20 years of recovery time, the Elwha could produce nearly 275,000 pink salmon, 36,000 chum salmon, 35,000 coho salmon, 31,000 chinook salmon and 10,000 steelhead.

Three public meetings — two in Port Angeles and one in Seattle — were conducted in late May to gather comments on the DEIS.

"About 300 people attended the public meetings. The turnout was very encouraging," said Michael Q. Langland, a Lower Elwha tribal member who serves as the tribe's river restoration liaison.

The release of the DEIS comes on the heels of President Clinton's Fiscal Year 1997 budget proposal that includes full funding for restoration of the Elwha River, including the removal of the two fish-blocking dams.

The President's budget includes approximately $111 million for acquiring the dams and restoring salmon runs on the Elwha River, and comes four years after Congress passed the Elwha River Ecosystem and Fisheries Restoration Act. The act calls for federal acquisition and removal of the Aldwell and Glines Canyon dams on the river, as well as plans for restoring anadromous fish runs on the river.

"It was a very good day for our people and for our neighbors throughout Port Angeles and Clallam County," said Frances Charles, chairwoman of the Lower Elwha Klallam Tribe. "We have waited a long time for this, and we hope to continue moving toward the eventual restoration of the Elwha River."

— D. Williams

Oliver Mason, Hereditary Chief Of Quinault Nation

Oliver Mason lent his voice and drum to a gathering at Point Grenville. Photo: *C. Boysen*

As a booming voice that rattled the rafters of the longhouse — Ollie Mason's baritone echoed throughout Indian Country. Ollie Mason's speech was stilled with his death in April, but the memories of his compassionate and joyful leadership will not be forgotten.

Mason, hereditary chief of the Quinault Indian Nation, was highly regarded in his service to the Quinault people. Renowned as a dynamic and powerful speaker for Indian rights and traditions, his warmth and friendship was felt far and wide with people from all walks of life. Representatives from the Makah, Quileute and Hoh tribes offered praise at his service, paid their respects and sang traditional songs at the gravesite in Hoquiam.

Quinault Indian Nation (QIN) Chair Pearl Capoeman-Baller eulogized her uncle's contribution to the life of the Quinault people at the funeral ceremony held in the Taholah Shaker Church. "When I was a child, my father asked Ollie to watch out for me. He guided me — and many, many others. He shared his wisdom with us," Baller said. "He shared everything he had."

In the 1970s, Mason worked as coastal coordinator of fisheries for the Northwest Indian Fisheries Commission. NWIFC Commissioner and QIN Councilmember Jim Harp, Mason's cousin who served as one of the pallbearers, remembers the strong impact that Mason made in his life. "Ollie will be sorely missed," said Harp. "He helped, counseled and consoled many people in so many ways."

Mason served the QIN in a variety of official capacities as a council member, chief of police, judge pro-tem in the tribal court, planning commission, Quinault Housing Authority and property manager. In 1992, the tribe acclaimed him "Chief Taxolah" (Taholah), after his great-grandfather, Taxolah.

Typically, Mason composed his own farewell, read aloud to the nearly 500 family members and friends attending his funeral: "...So please don't grieve or sorrow, I have prepared for this day all my life."

— *C. Boysen*

Bearing The Flame

Ralena "Reba" Charles, a 21-year-old Lower Elwha Klallam tribal member, was selected to carry the Olympic flame as it passed through Washington on its way to Atlanta for this summer's games. She was one of four Clallam County "Community Heroes" picked for the honor.

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