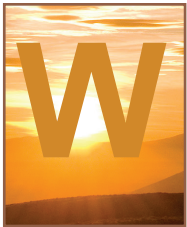


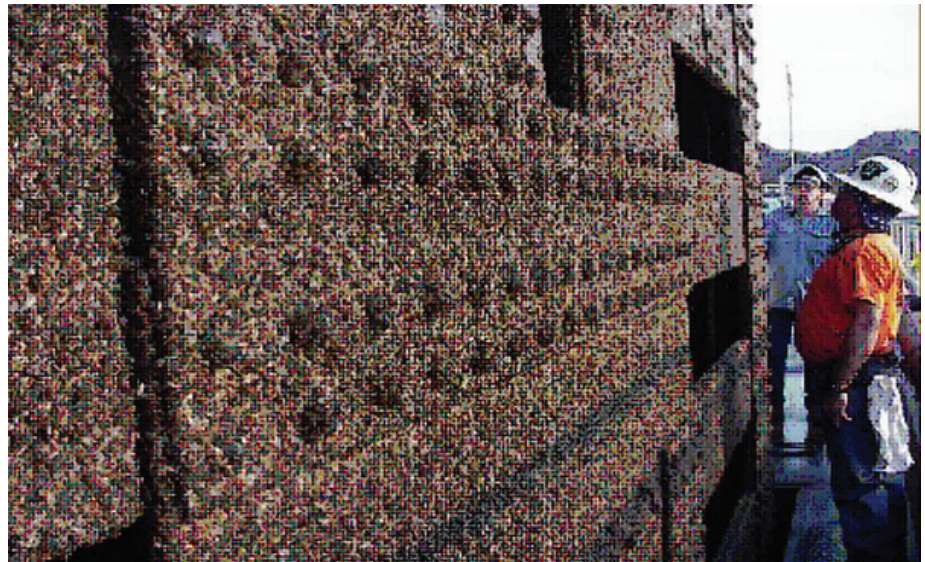
STRIKING A BALANCE BETWEEN ENERGY AND THE ENVIRONMENT IN THE COLUMBIA RIVER BASIN



INVASIVE MUSSELS THREATEN PACIFIC NORTHWEST WATERS

What began with the discovery of a non-native species of mussels in the Great Lakes has now become a major source of alarm for Western states. The small, thumbnail-sized mollusks were brought into U.S. waters by ocean-going vessels from Eastern Europe and the Ukraine in the late 1980s, and have since wreaked havoc on the Great Lakes ecosystem and economy. The zebra and quagga mussels clog water intake pipes and distribution systems, starve fish populations, and spawn noxious algae outbreaks polluting the Midwest's shores.

But what took decades to develop in the Great Lakes has bloomed exponentially here in the West. Quagga mussels were first found in Lake Mead, Nevada in early 2007, and probably arrived via a pleasure boat. The creatures attach to any surface, except copper, and their microscopic larvae are readily transported downstream in water currents or in water distribution systems. Hardy and prolific, the warmer Western climate has enabled quagga mussels to reproduce much faster than in the Great Lakes. With few natural predators in the U.S., they have already colonized the lower Colorado River system, and have now spread into California, Arizona, Utah, and Colorado. State and federal officials fear it's only a matter of time before these invaders contaminate the Columbia River Basin.



Davis Dam operating gate covered in quagga mussels.

In a presentation to the Council this summer, U.S. Bureau of Reclamation researcher Fred Nibbling described the situation at Hoover Dam and Lake Mead, the control methods currently available, and some emerging options. While the exact costs to contain their spread in the West is unknown, Congressional researchers estimated that zebra mussels alone cost the power industry \$3.1 billion in the 1993-1999 period, with their impact on industries, businesses, and communities more than \$5 billion. The state of Idaho estimates that if these mussels become established in state waters, it would cost roughly \$100 million annually to control them.

Water managers say the best way to prevent their spread is to ensure that recreational boats traveling from one body of water to another are mussel-free. Lake

(See *Invasive Mussels* on page 6)

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REQUEST FOR COMMENT ON THE DRAFT SIXTH POWER PLAN

The Council voted unanimously to release its Draft Sixth Power Plan for public comment. The plan is an energy blueprint to assure the region will have an adequate, efficient, economical, and reliable power supply.

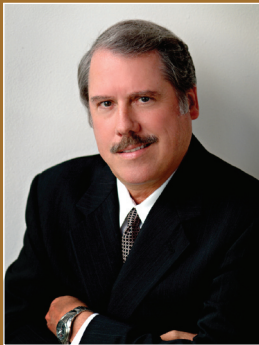
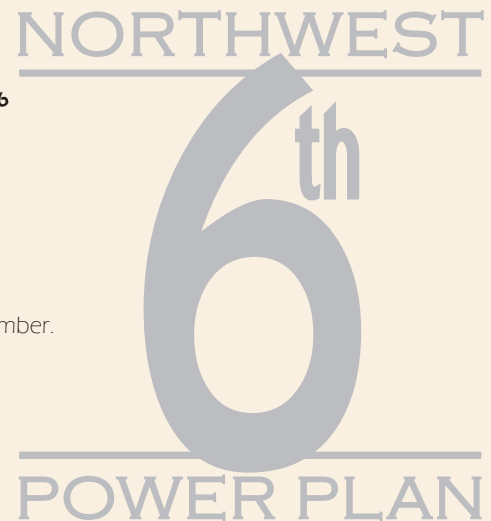
The comment period ends on November 6, 2009. You can view the draft plan at www.nwcouncil.org and comment online or request a printed copy by calling 1-800-452-5161 and asking for document number 2009-12. Please send written comments to Mark Walker, director of public affairs, Northwest Power and Conservation Council, 851 SW Sixth Avenue, Suite 1100, Portland, OR 97204.

Here is the public hearing schedule:

Date	Location
Wednesday, Sept. 9	Astoria, Oregon
Monday, Sept. 14	Tri Cities
Tuesday, Sept. 15	Spokane
Monday, Sept. 28	Eugene
Wednesday, Sept. 30	Seattle
Monday, Oct. 5	Teleconference hearings, 10 a.m. and at 7 p.m.
Tuesday, Oct. 13	Boise
Tuesday, Oct. 13	Missoula
Wednesday, Oct. 14	Idaho Falls
Wednesday, Oct. 14	Portland

The Council's website will have the latest updates on the draft plan's development, including specific locations and times of the hearings.
www.nwcouncil.org/energy/powerplan/6

Call the Council central office, 800-452-5161 for the number.



Notes From the Chair

The stories in this issue of the CQ highlight the status of some of the most significant work going on for fish and wildlife in the Columbia River Basin.

The enormous impact that a non-native, invasive species of mussels could have in the Pacific Northwest is an increasingly likely, and frightening, possibility. These quagga and zebra mussels have already polluted the Great Lakes region, costing millions of dollars worth of damage to water systems and the environment. The piece notes that the best means of protecting the region from this blight is prevention, and describes some of the actions currently being taken to ensure that they do not contaminate our waters.

An important project by the Colville Tribe in north-central Washington is proving it possible to harvest salmon selectively so that listed fish that are caught can be released unharmed to spawn. The goal of this selective harvest experiment is two-fold: to increase naturally spawning fish while also providing harvest for both tribal and non-tribal sport fishing. Also, a number of projects agreed upon by federal, state, and tribal governments were reviewed this summer and an update on their progress is included here. Finally, the new executive director of the Columbia Inter-Tribal Fish Commission, Paul Lumley, introduces himself to you and offers his thoughts on his role, the commission's mission, and the challenges ahead.

NORTHWEST Q&A: PAUL LUMLEY

Paul Lumley, a member of the Yakama Nation in central Washington, began his tenure as executive director of the Columbia River Inter-Tribal Fish Commission (CRITFC) in July.

Lumley has an extensive history working with Northwest tribes on salmon issues, particularly in the Columbia River Basin. He spent 17 years with CRITFC working on biological issues related to the U.S. v. Oregon decision and the Pacific Northwest Electric Power Planning and Conservation Act. He has also assisted in fund raising and establishing a grant program for the four Columbia River treaty tribes.

With a broad background on issues affecting American Indians, Alaska Natives, and Native Hawaiians, Lumley has worked with tribal governments, tribal consortia, and virtually all federal agencies regarding Native American interests.

In 2004, Lumley served as the senior tribal liaison for the Department of Defense's Installations and Environment Program. He was responsible for the Native American Lands Environmental Mitigation Program, as well numerous policy issues affecting Native Americans, Alaska Natives, and Native Hawaiians.

Prior to returning to CRITFC, he was the executive director for the National American Indian Housing Council in Washington D.C. where he secured over half a billion dollars in stimulus funding for Indian housing, and funding for training and technical assistance programs.

Lumley received his bachelor of science degree in mathematics from Western Washington University in 1986.

Q. What is your background?

A citizen of the Yakama Nation, I was born and raised on the Yakama Indian Reservation. I, along with my family, fished Zone 6 on the Columbia River.



I received a bachelor of science degree in mathematics from Western Washington University in 1986. I went to work for CRITFC as a fisheries intern, sampling fish at Bonneville Dam, became a research analyst in the fisheries management department, and eventually the watershed department manager. In 2004, I took an inter-governmental personnel option and moved to Washington, D.C. to become the senior tribal liaison with the U.S. Department of Defense. In 2007, I became the executive director of the National American Indian Housing Council, and I am now delighted to say that I've returned home to the magnificent Pacific Northwest to serve as CRITFC's executive director.

Q. What are your goals for CRITFC?

CRITFC's member tribes establish the organization's goals. Those goals are: (1) increase the return of fish to tribal fishing areas through the implementation of Wy-Kan-Ush-Mi Wa-Kish-Wit, our salmon recovery plan; (2) maintain treaty reserved rights and resources in carrying out tribal co-management responsibilities; (3) assist the tribes in educating and gaining support on treaty rights, self government, tribal culture and values, and salmon restoration; (4) create and implement sound and cost-effective organizational systems that support the efforts of the commission; (5) increase the economic benefits of treaty Indian fisheries; and (6) secure the financial resources necessary to meet CRITFC's mission and goals.

It's my goal to continue to advance CRITFC's mission - ensuring a unified voice in the overall management of the fishery resources, and as managers, to protect reserved treaty rights by exercising the inherent sovereign powers of the tribes. My goal is to make sure that treaty reserved fishing rights are protected, the fishery resource enhanced, and that CRITFC staff is always available to assist the tribes in meeting their goals.

Q. What do you see as the biggest challenges ahead?

The biggest challenge is simple: We've got to get more fish returning to the Columbia Basin and successfully spawning in her rivers and streams.


In the past year, three major agreements have been signed: the Columbia River Fish Management Plan under U.S. v. Oregon, the Pacific Salmon Treaty Chinook Annex, and the Columbia Basin Fish Accords. These three agreements take some important steps in the recovery of salmon in the Columbia Basin. Implementing these agreements in an effective and timely manner is very important to the tribes.

Q. How do you think the fish accords projects are progressing?

The accords projects are well underway and proceeding on the basis of our experience with similar projects during the last 20 years.

The Columbia Basin Fish Accords allow CRITFC and three of our member tribes to implement the Council's sub-basin plans in an efficient manner. The accords provide a consistent avenue for us to implement on-the-ground restoration activities. In the same vein, we also look forward to supporting the Nez Perce Tribe's implementation of sub-basin plans as they are funded through the Bonneville Power Administration's normal funding mechanisms.

Q. How should CRITFC work with the other entities in the region-the Bonneville Power Administration, the Council, etc.?


I see no reason to change the current working relationship between the tribes and the region's federal entities. The tribes will continue to work with federal partners under the same government-to-government relationship that we have always had, based upon the trust responsibilities that the federal agencies carry on behalf of our tribes. We all share the same goals - increasing salmon returns to the Columbia River Basin. 

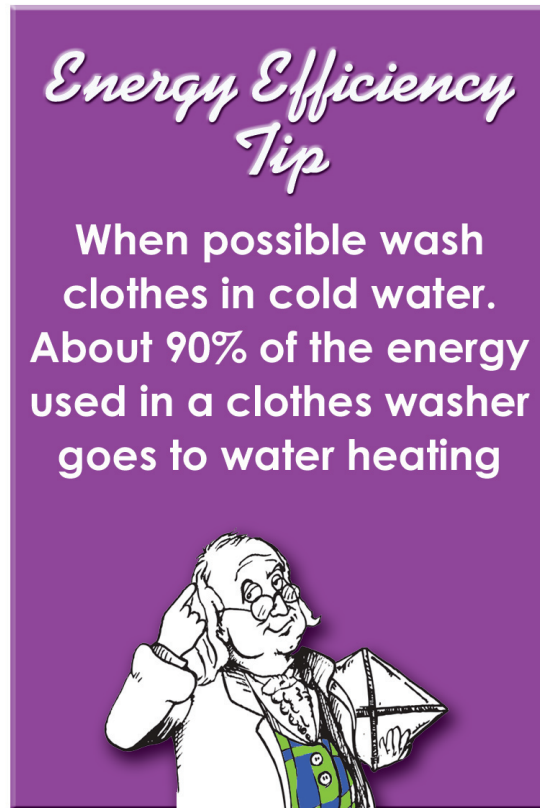
COUNCIL REPORT DETAILS FISH AND WILDLIFE COSTS

A In Fiscal Year 2008, the Bonneville Power Administration reported total fish and wildlife expenditures of \$875.8 million. A portion of that spending implemented the Northwest Power and Conservation Council's Columbia River Basin Fish and Wildlife Program.

The Council provides a breakdown of the spending in its annual report to Northwest governors on fish and wildlife spending. The report also includes information about salmon and steelhead runs in the Columbia River Basin.


Financial information for the report was provided to the Council by Bonneville and was not independently verified by the Council or its staff. Information about salmon and steelhead was compiled from reports by the Fish Passage Center, U.S. Army Corps of Engineers, NOAA Fisheries, the states of Washington and Oregon through the Columbia River Compact, and the University of Washington Joint Institute for the Study of the Atmosphere and Oceans.

The report is posted on the Council's website, www.nwcouncil.org. 



Energy Efficiency Tip

When possible wash clothes in cold water. About 90% of the energy used in a clothes washer goes to water heating



BrainPower

COLVILLE TRIBES DEMONSTRATE SUCCESSFUL SELECTIVE HARVEST OF SALMON IN UPPER COLUMBIA

Using modified commercial fishing gear and traditional salmon-harvest methods, the Confederated Tribes of the Colville Reservation are successfully demonstrating that salmon from weak and strong runs can be harvested together and the fish from weak runs released to continue their spawning journey.

The test fishing is taking place in the spring, summer, and fall in an eight-mile stretch of the Columbia River near the mouth of the Okanogan River, and also in the Okanogan.

The Colville Tribes are constructing a new salmon hatchery near the confluence of the two rivers. One goal for the hatchery is to acquire broodstock using selective harvest without endangering salmon that are protected under the Endangered Species Act.

The intent behind the hatchery is to boost natural production of salmon and ultimately increase salmon-fishing

opportunities for both tribal members and non-tribal sport fishers. Currently, the tribal fishery is confined to a limited area immediately below Chief Joseph Dam.

"This is the fourth year we've been doing selective harvest," Joe Peone, fish and wildlife director for the Colville Tribes, told the Northwest Power and Conservation Council at a meeting in August. "The first two years we were very successful in getting lots of brood-

stock. We held them in hatcheries nearby to assess if there was any mortality. The idea for the next two years was to implement selective harvest to separate the impacts to endangered species. That was our first priority, to demonstrate that we could do that for the Chief Joseph Hatchery."

In the ongoing tests of various live-capture methods, a modified commercial purse seine proved to be the most successful. Survival was 100 percent, allowing for the successful separation



The Colville Tribes used this modified purse seine boat to demonstrate selective harvest of salmon in the Columbia River. Photo credit: Photo by Mike Rayton, Colville Confederated Tribes

of hatchery and natural-origin fish. This was followed by a beach seine, a traditional harvest method, with 99-percent survival, and tangle nets with 80-percent survival. In a tangle net, salmon are snared by their teeth, not their gills, and so they do not drown.

In 2008 the tribes caught 802 summer Chinook, 1,024 sockeye, and six hatchery-origin steelhead, Peone said. Through mid-August 2009, the tribes had caught 2,000 summer

Chinook and 15,000 sockeye. In fact, the tribes caught about 300 additional summer Chinook but had to release them because they were caught with sockeye, and there were so many sockeye that the fishers simply could not safely handle them all without risking harm to the natural-origin Chinook. So they opened the nets and let some of the fish go.

The success of the selective-harvest test supports the hatchery-reform guidance of the Hatchery Scientific Reform Group (HSRG), Peone said. The HSRG,

a committee of fish-production experts, spent nearly two years studying Columbia River Basin hatcheries at the request of Congress and reported last May on ways to improve production practices. Those recommendations included conducting live-capture harvest so that listed and unlisted species can be identified and the listed fish released.

Through the Chief Joseph Hatchery, the Colville Tribes plan to release 2 million juvenile summer Chinook and 900,000 juvenile spring Chinook annually starting in 2011. The hatchery is an important element of the Council's Columbia River Basin Fish and Wildlife Program and is being funded primarily by the Bonneville Power Administration.

Juvenile fish will be incubated in the hatchery and released into acclimation

(See Colville Tribes on next page)

INVASIVE MUSSELS THREATEN PACIFIC NORTHWEST WATERS

(cont. from page 1)


Powell, which is upstream of Lake Mead on the Colorado River, now requires mandatory boat inspections. California has trained dogs to sniff out mussels at inspection points, and boats can be quarantined at the border if a single mussel is spotted on them. All four Northwest states now have boat inspection programs in place. Other preventive steps include coating surfaces to prevent them from attaching and redesigning systems to keep the larvae from entering.

Where mussels have become established, control strategies are costly and labor intensive since facilities must be shut down for cleaning. The use of irradiation with ultraviolet light and bacteria to kill the mussels are other potential options being explored.

The U.S. Fish and Wildlife Service has added some funding to its FY 2010 appropriations budget that will help states implement watercraft inspection and decontamination stations and aid their ability to respond quickly in the case of an outbreak. Research to find additional methods to prevent their spread and eradicate them is also underway.

In addressing this problem, the Council's 2009 Columbia River Basin Fish and Wildlife Program states, "...where aquatic non-native species pose both a direct threat to the hydropower system or to native fish and wildlife species, federal action agencies should support ongoing federal, state, and tribal efforts to: detect and respond; 2) educate the public; and 3) prevent, monitor, control, and stop or minimize the spread of non-native species, including zebra or quagga mussels...that threaten the success of Fish and Wildlife Program measures."

According to the Council's manager for mainstem passage and river operations, Jim Ruff, "These invasive mussels

pose a very real and serious threat to the region's ecosystem. If they were to colonize Columbia Basin waters, the hydropower system, navigation facilities, fish screen and passage facilities, water distribution systems, and recreation, all would be adversely affected, with regional resources to control their spread coming at the expense of ongoing fish and wildlife efforts." 

COLVILLE TRIBES

(cont. from page 5)

ponds along the Okanogan River. Their adipose fins will be removed in order to make them identifiable as fish for harvest when they return from the ocean.

The Colville Tribes and the state of Washington have signed an agreement to share the harvest, which will be enhanced once the Chief Joseph Hatchery fish begin returning to spawn. Under the agreement, the state's share of the harvest will increase as the abundance of fish increases.

The Colville Tribes have guaranteed rights to fish for salmon through the executive order that created their reservation in north-central Washington in 1872 — not through the 1855 and 1868 treaties signed by other Columbia River Basin tribes, including the neighboring Yakama Nation. A harvest-management plan developed by the five Columbia and Snake river treaty tribes and the states of Idaho, Oregon, and Washington and implemented through the United States District Court allocates fish among tribal and non-tribal fishers in the river downstream of McNary Dam. Fish that escape capture in those fisheries are allocated by the states and tribes to fishers upstream, including non-treaty tribes in separate processes outside of federal court.

"The Colville's interest is that our harvest allocation comes from non-treaty allocations," Peone said. "It's important to note that the non-treaty harvesters, whether it's the Colville Tribes, the state of Washington, or the Wanapum Tribe,

have an obligation to try to make this successful."


Keith Kutchins, who managed the Colville Tribes' test fishing until recently, accepting a position with the Upper Columbia United Tribes, said the harvest agreement between the Colville Tribes and the State of Washington benefits tribal and non-tribal fishers in the upper Columbia area.

"It kind of forces more salmon to pass through the lower-river fisheries so there is more salmon for the tribes and for the sport fishery in the upper Columbia, as well," Kutchins said. "This is a historic agreement, in that it is the first that the state of Washington has entered into with an Indian tribe that was ratified outside of a court proceeding."

Kutchins and Peone said the Colville tribal members are excited about the successful test fishing and the harvest agreement for cultural as well as biological reasons.

"What it's all about for the hatchery-origin fish is not just food, but sharing," Kutchins said. "Something that has been extremely successful with this project is the overwhelming ease of distributing these fish, not just among the 9,000 members of the Colville Tribes, but also with the other tribes in the upper Columbia. That's something the Colville Tribes are adamant about — not commercially harvesting these fish. When they talk about processing these fish, it's only processing for their own use."

He gave an example.

"Sometimes, instead of giving an elder a 30-pound salmon that she has to work up in her bathtub, we'd like to be able to provide smoked, canned jars of salmon that she can open up at Christmas," he said. "Getting the elders involved in providing the harvesters with canning classes is reinvigorating a huge piece of culture that was hanging on a thread. So this is very exciting — all in the name of research." 

COUNCIL RECOMMENDS FISH ACCORD PROJECTS

A study of sockeye salmon in the upper Columbia River Basin and habitat improvements for Chinook salmon in Idaho's Potlatch River are among the Columbia Basin Fish Accord projects that are ready for implementation, following reviews by the Northwest Power and Conservation Council and its Independent Scientific Review Panel (ISRP).

Through August 2009, more than two dozen projects in the Accords had been submitted to the Council and ISRP for review, and 14 had been recommended by the Council to the Bonneville Power Administration for funding following ISRP approval. In other cases, the ISRP requested that the sponsors provide additional information in support of the projects or respond to questions.

In the Accords, signed in 2008 and 2009, the Bonneville Power Administration and other federal agencies committed to extensive, 10-year project-implementation plans, with associated actions and funding commitments, to supplement NOAA Fisheries' biological opinions for listed salmon and steelhead and the Council's Fish and Wildlife Program. Parties signing the Accords included the states of Washington, Idaho, and Montana, the Warm Springs, Umatilla, Yakama, Colville, and Shoshone-Bannock tribes, and the Columbia River Inter-Tribal Fish Commission.

Accord projects include hydropower, habitat, and hatchery actions and are based on the foundation built by the Council's program over the last 26 years. This foundation includes water management and fish-passage measures (in the original, 1982 program), mainstem and off-site mitigation measures (1987 and subsequent program amendments), the program framework (2000 amendment), and the subbasin plans (2004-2005 amendment).

The Accords identify more than 200 projects. All will be reviewed by the ISRP. Here is a representative sampling of Accord projects recommended so far by the Council.

Sockeye Studies

The Columbia River Inter-Tribal Fish Commission will evaluate factors limiting the abundance of sockeye salmon in the Okanagan and Wenatchee river basins of Washington. The ISRP commented, "This project could provide valuable information about the sockeye salmon in the upper Columbia River. An improved knowledge of the locations where adult mortality rates are high could be very useful in designing and prioritizing future habitat-restoration efforts. Improved estimates of smolt populations in Lake Wenatchee will be critical to better understanding the factors influencing the performance of this population."

Modify Ponds At Lyons Ferry Hatchery, Washington

Sponsored by the Confederated Tribes of the Umatilla Indian Reservation, the project will modify the adult fall Chinook salmon holding ponds at Lyons Ferry Hatchery by dividing the existing four ponds into eight. The additional ponds will allow fish transported from Lower Granite Dam and adult fish that voluntarily swim into the facility to be segregated by run timing, sex, origin, and sexual maturation. The additional ponds also will reduce the need to crowd fish in the existing ponds, handle the fish, and sort them by maturity status. This should decrease fish stress and improve fish health. The extra ponds also will improve the ability to process adult fall Chinook during spawning operations and meet broodstock goals.

Upper Columbia River Sturgeon Management

Through this project, the Yakama Nation seeks to help rebuild viable populations of white sturgeon and restore sturgeon fisheries in mid-Columbia River reservoirs. The first phase of the project includes developing a master plan for artificial production of sturgeon downstream of Priest Rapids Dam and the lower Snake River dams. The project complements other ongoing sturgeon research and restoration efforts and directly addresses an objective in the Council's Lower Middle Columbia Subbasin Plan to increase sturgeon abundance in the lower mid-Columbia mainstem. The Lower Middle-Columbia Subbasin includes the mainstem Columbia River from the mouth of the Walla Walla River to The Dalles Dam, including the lower reaches of tributaries in Oregon and Washington.

Hazing Sea Lions to Protect Salmon in the Columbia River

The goal of this project, sponsored by the Columbia River Inter-tribal Fish Commission, is to assist in the nonlethal hazing of sea lions to reduce predation of salmon. The project is a collaborative effort with the States of Oregon and Washington and the U.S. Army Corps of Engineers. The objectives are to 1) conduct boat-based non lethal sea lion hazing annually between about March 1 and May 31; 2) develop a video system to count sea lions and estimate predation; and 3) track movements of individual sea lions using acoustic telemetry.



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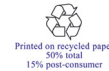
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