



BONNEVILLE DAM SEA LION TOUR



APRIL 20, 2017

 Northwest **Power** and
Conservation Council

Itinerary

Thursday April 20th

10:30 a.m.	Arrive at the Northwest Power and Conservation Council
10:30 - 11:15 a.m.	Check-in, meet-and-greet, refreshments
11:15 a.m.	Load into vans
11:30 a.m.	Depart for Bonneville Dam, Oregon public entrance (I-84, Exit 40). Box lunches provided en route.
12:30 p.m.	Arrive at tour site and receive Corps of Engineers' safety briefing
1 - 3 p.m.	Tour facility and operations with Robin Brown, ODFW Marine Mammal Program leaders
3 p.m.	Load into vans
3:15 p.m.	Depart Bonneville Dam
4:30 p.m.	Arrive at Council offices

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OVERVIEW: Sea Lion Predation of Columbia River Salmon

Background: Sea Lion Populations are Booming

- The California sea lion population (CSL) has grown to a current level of about 300,000 individuals, rebounding from a low of about 10,000 in the 1950s. Marine biologists conclude that the CSL population is currently at carrying capacity.
- CSL have foraged at the mouth of the Columbia River in the past but until recently did not move very far inland to feed. As the CSL move farther upstream their diet is increasingly focused on salmon.
- Recent year counts have now observed over 3,000 sea lions in the Columbia River in the late winter/early spring with increasing numbers exhibiting unusual behavior by moving far inland to feed on spring Chinook salmon.
- Sea lions did not historically feed on salmon very far inland in the Columbia River, and until 2003 were seldom seen 140 miles inland at Bonneville Dam.
- There are 32 populations of ESA threatened and endangered spring Chinook salmon being significantly harmed by the increasing sea lion predation in the Columbia River. The salmon are particularly vulnerable to sea lion predation at structures such as dams that slow migration.

Impacts: ESA-listed Spring Chinook Consumption is Increasing

- Spring Chinook salmon consumption is on the rise, reaching an all-time high of 9,800 at Bonneville Dam in 2015, over double 2014, nearly four times 2013, and over five times the 2012 number of 1,750. In 2016, 9,525 salmon were consumed.
- These numbers, however, reflect only the salmon observed being consumed within ¼ mile of Bonneville Dam. State and federal researchers who have studied predation on the entire lower Columbia River believe that a significant portion of the annual spring Chinook salmon run is lost to sea lion predation.
- State researchers estimate about 20% of the spring Chinook run is lost to sea lions, while a NOAA Fisheries researcher believes it is far higher. According to the NOAA study, as much as 45% of the spring Chinook run disappears each year, and much of that loss is likely attributed to sea lions.
- In contrast, Commercial and recreational fisheries in the lower Columbia River are required to release wild ESA-listed fish while targeting hatchery salmon, and have been restricted to incidental take of no more than 2% of the annual wild return.
- There is concern by the region that the increasing sea lion predation on ESA listed fish is off-setting the large investments being spent on salmon recovery associated with habitat, dam operations, harvest and hatcheries.
- In addition to California sea lions, the number of Steller sea lions moving upstream in the Columbia River is also on the rise. Steller sea lions are larger than CSL and are impacting sturgeon as well as salmon.

COUNCIL ARTICLE: Sea Lion Fish Feast

Spring 2016 was a bad time of the year for salmon and steelhead at the tailrace, or downstream side, of Bonneville Dam.

The U.S. Army Corps of Engineers documented the second-largest number of fish-killing seals and sea lions since observations and recordkeeping began in 2002 — 190 unique individuals — and also the second-largest kill of salmon and steelhead — 9,525 fish, or an estimated 5.8 percent of the run. That was the highest percentage of an annual run taken by seals and sea lions at the dam since 2002. The counts are based on observations from shore and expanded for hours when observation is not possible.

According to a [report issued by the Corps](#), California sea lions consumed an estimated 6,676 fish and Steller sea lions consumed 2,849 fish. Of the 9,525 total, the

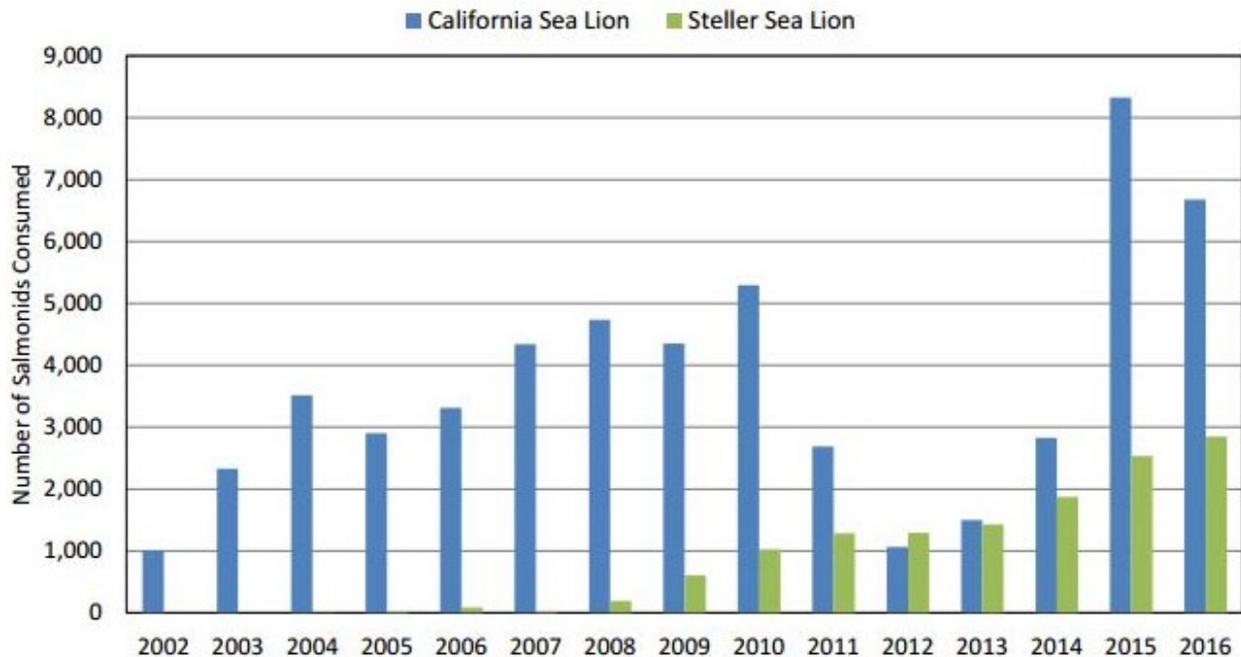
majority — 8,709 fish — were spring Chinook salmon (an estimated 4.5 percent of the spring Chinook run). Sea lions also consumed 302 steelhead (an estimated 4.9 percent of the steelhead run between January 1 and March 31; 143 were winter steelhead), with Steller sea lions consuming the majority. The chart below shows salmon and steelhead consumption by marine mammals in the Bonneville Dam tailrace over time.

Sea lions also consumed Pacific lamprey and white sturgeon. The estimated lamprey consumption was 501, of which 412 (82.2 percent) were taken by California sea lions. This was the third-highest lamprey consumption estimate at the dam since 2004. The estimated consumption of white sturgeon was 90 fish, with 83 (93 percent) attributed to Steller sea lions. This is the second-lowest estimated consumption since 2005, when



Sea lion with a salmon in tailrace at Bonneville Dam





Steller sea lions were first observed feeding on sturgeon at Bonneville Dam.

According to the report, between January 1 and May 31 of last year, 190 unique individual seals and sea lions were documented near the downstream side of the dam at the dam: 149 California sea lions, 41 Steller sea lions. No harbor seals were observed. The maximum number observed in a single day was 120, and the daily mean was 10.8 California sea lions and 18.0 Stellers.

The Corps reported that hazing the marine mammals from shore and from boats using non-lethal pyrotechnics had only limited effectiveness. Since 2008, the Oregon and Washington fish and wildlife departments have captured and branded sea lions and, when branded animals return and resume killing fish, removed them. The state agencies reported that the removal program in 2016 was the most successful to date, with 59 California

sea lions removed from the river. Only individually identifiable California sea lions can be removed from the river. These have to have been present for five separate days, observed eating salmon, and subjected to hazing before going through the process of being listed for authorized removal. The states have not requested authority to remove Steller sea lions.

Sea lions annually arrive in the Columbia River estuary and Bonneville Dam 140 miles upriver in the spring and leave by mid-June for breeding grounds off the coast of Southern California. Because of this timing, their primary prey are spring Chinook salmon and steelhead (summer and winter runs).

(March 2017 blog post)

COUNCIL ARTICLE: Research Shows Salmon Disappearing, Sea Lions Increasing

If the circumstantial evidence bears out, adult salmon returning from the ocean to the Columbia River Basin are being killed by seals and sea lions between the estuary and Bonneville Dam in alarming numbers, according to research by NOAA Fisheries.

Preliminary results of research that began in 2010 show a steady increase in fish mortality over a five-year period that may be attributable to seals and sea lions. Adjusted for other mortality factors, average spring Chinook salmon survival was just 55 percent in 2014, down from 69 percent in 2013 and 82 percent in 2012. If the estimate represents the run at large, this means about 45 percent of the 2014 spring Chinook run died somewhere between the mouth of the river and Bonneville Dam.

“Even I have a hard time believing those numbers, but at least through 2013, estimates of fish mortality do fall within theoretical estimates of predation,” lead researcher Dr. Michelle Wargo-Rub of the Seattle-based Northwest Fisheries Science Center told the Council’s Fish and Wildlife Committee in November.

She said fish mortality, and the number of sea lions in the estuary, have increased dramatically in recent years. NOAA research focuses on spring Chinook because the run coincides with when the sea lion population is largest in the river.

Mostly males, the sea lions follow the spring-returning fish between March and May. Most of the sea lions then go to breeding grounds off southern California in the summer.

Dr. Wargo-Rub and her research team catch and tag salmon in the estuary near Astoria. More than 2,200 salmon have been tagged since the research project began, and of those about 68 percent were determined by genetic testing to be destined for the river and tributaries above Bonneville.

Survival varies over the course of the run, Dr. Wargo-Rub said. It appears that a higher proportion of early-migrating fish die before reaching Bonneville Dam since they take longer to reach the dam and are exposed to potential predators for a longer time.

Committee Chair Phil Rockefeller, a Washington member of the Council, said that even if the 2014 numbers are adjusted, “the trend is such that we have a growing predation problem.” He pointed out that the Council’s Columbia River Basin Fish and Wildlife Program calls on federal agencies to use their authority to address the problem.

Committee member Bill Booth of Idaho, called the research results disturbing.

“When the region is directing more than half a billion dollars a year to fish and wildlife recovery and nearly half of the spring run is being consumed by seals and sea lions, then we definitely have a problem.”

(November 2014 blog post)



Sea lions crowd a walkway at a mooring basin in Astoria

OVERVIEW: Marine Mammal Protection Act Section 120 Permit Process

- The MMPA was amended in the 1990s in response to sea lion predation at Ballard Locks that eventually wiped out the Lake Washington wild steelhead population.
- Section 120 allows states to apply to the Secretary of Commerce for permits to “lethally remove individual sea lions that are causing a significant effect on ESA listed salmon or steelhead”. Section 120 was developed specific to the issue that occurred at Ballard locks and conditions are not as applicable to a large system like the Columbia River. Tribes are not included as eligible applicants.
- In 2006, the states of Washington, Oregon, and Idaho applied to the Secretary of Commerce for a permit under Section 120 of the MMPA to lethally remove predatory California sea lions (CSL) in the area immediately below Bonneville Dam. The states applied for the removal permit after several unsuccessful years of hazing and re-location efforts.
- A Pinniped Task Force (consisting of marine mammal scientists, HSUS, states, tribes, USACE and fishermen) was convened by NOAA as a required step in considering the states’ application. The Task Force recommended lethal removal as necessary to address the threat CSL were imposing to endangered salmon.
- In 2008, the states received a permit with limited authorization to remove individual CSL, with specific criteria and observation data required before a CSL qualified for removal.
- There were several federal court challenges brought by the U.S. Humane Society over the first few years of the program. The federal government and states finally prevailed in the Ninth Circuit Court in 2011.
- Since 2008, the states have trapped and removed 166 CSL that fit the criteria of being observed multiple times consuming salmon at Bonneville Dam. Fifteen of the CSL were transported to zoos and aquariums, the remainder were euthanized by lethal injection.
- The removal program follows specific animal care guidelines that were established by an Animal Care Committee that includes veterinarians and marine mammal scientists.

OVERVIEW: H.R. 2083

- The **Endangered Salmon and Fisheries Predation Prevention Act**, H.R. 2083, was introduced by Congresswoman Jaime Herrera Beutler (R-WA) and Congressman Kurt Schrader (D-OR) on April 8, 2017. It is very similar to a bill that was first introduced by former Congressmen Doc Hastings and Brian Baird, and Congressman Greg Walden (R-OR) in 2011.
- Following Congressman Hastings' retirement, Congresswoman Herrera Beutler reintroduced the bill (H.R. 564) in 2015, which passed the House Natural Resource Committee in November 2016. Unfortunately, it went no further in the legislative process.
- The focus of the bill is to give state and tribal managers more flexibility in addressing predatory sea lions in the Columbia River that are threatening both ESA-listed fish as well as other species like sturgeon, which are facing an increasing threat by Steller sea lions.
- The bill would lift some of the current restrictions under Section 120 of the Marine Mammal Protection Act that limit the ability of managers to address problems at locations in the Columbia Basin other than Bonneville Dam. The bill would also change current labor-intensive requirements to document predatory behavior of individual seal lions, which must be established prior to being designated for removal. The bill would also lift a NEPA requirement.
- The bill would continue limits in terms of the number of sea lions that could be removed annually and require states and tribes to apply through the Secretary of Commerce. Only animals that are part of healthy and non-listed sea lion populations would be subject to removal.
- State fisheries agencies and Columbia River tribes have testified in favor of amending Section 120 since bills were first introduced beginning in 2011.



Harbor seals congregate on Desdemona Sands near Astoria (WDFW)

PRESS RELEASE: Congresswoman Herrera Beutler Introduces H.R. 2083 with Congressman Schrader

April 10, 2017

U.S. Reps. Jaime Herrera Beutler (R-WA) and Kurt Schrader (D-OR) have introduced the Endangered Salmon and Fisheries Predation Prevention Act, a bipartisan bill to improve the survival of endangered salmon, steelhead and other native fish species in the Columbia River system. The legislation provides tribal managers and government fish managers with the means to remove limited numbers of California sea lions from specific areas where they are posing the most harm.

“Our community prioritizes protecting salmon and steelhead in the Columbia River because they are central to our way of life in the Pacific Northwest,” said Rep. Jaime Herrera Beutler. “The Endangered Salmon and Fisheries Predation Prevention Act is critical because sea lion predation is posing a serious threat to our salmon populations, impacting our efforts to ensure their survival. With this solution, we have the tools to better protect the salmon so vital to our recreational, cultural and economic interests.”

“Over the last few years, we’ve seen a record number of California and Steller sea lions in the Columbia River from Astoria to Bonneville Dam,” said Rep. Kurt Schrader. “These predators are present in numbers totally inconsistent with their historic range, and pose such a threat to the salmon in the river that BPA ratepayers and my constituents pay hundreds of millions of dollars annually as part of the largest mitigation program in the country for threatened and endangered species. Even the National Marine Fisheries

Service called the mortality of salmon returning to the Columbia River Basin that’s attributable to sea lions alarming. We need to eliminate this threat to our iconic Oregon salmon that are struggling to survive. I’ve been working with Rep. Herrera Beutler and our states, tribes, and local communities for several years now on solutions to save our salmon, and this legislation will provide the states and tribal managers the authority they need to eliminate this threat once and for all.”

“Unless Congress finally acts to protect our wild and endangered Columbia River basin salmon and steelhead from extensive, unnatural sea lion predation we will likely lose species to extinction,” said Gary Loomis, founder of G-Loomis, Edge Rods and Coastal Conservation Association in the Pacific Northwest. “There is strong scientific consensus on the need for action and I applaud the bipartisan efforts of Representatives Jaime Herrera Beutler and Kurt Schrader to lead this important effort once again. The rest of our Congressional delegation – Senate and House, Republican and Democrat – need to support this effort before it is too late.”

“The spring chinook loss, coupled with the growing sea lion population, has placed us in an emergency situation,” said Leland Bill, chairman of the Columbia River Inter-Tribal Fish Commission. “The Endangered Salmon and Fisheries Predation Prevention Act would give us the flexibility to address the current sea lion situation so conflicts with at-risk species can be managed.”

Specifically, this bipartisan bill would authorize states and tribal managers to lethally remove a limited number of sea lions that are preying

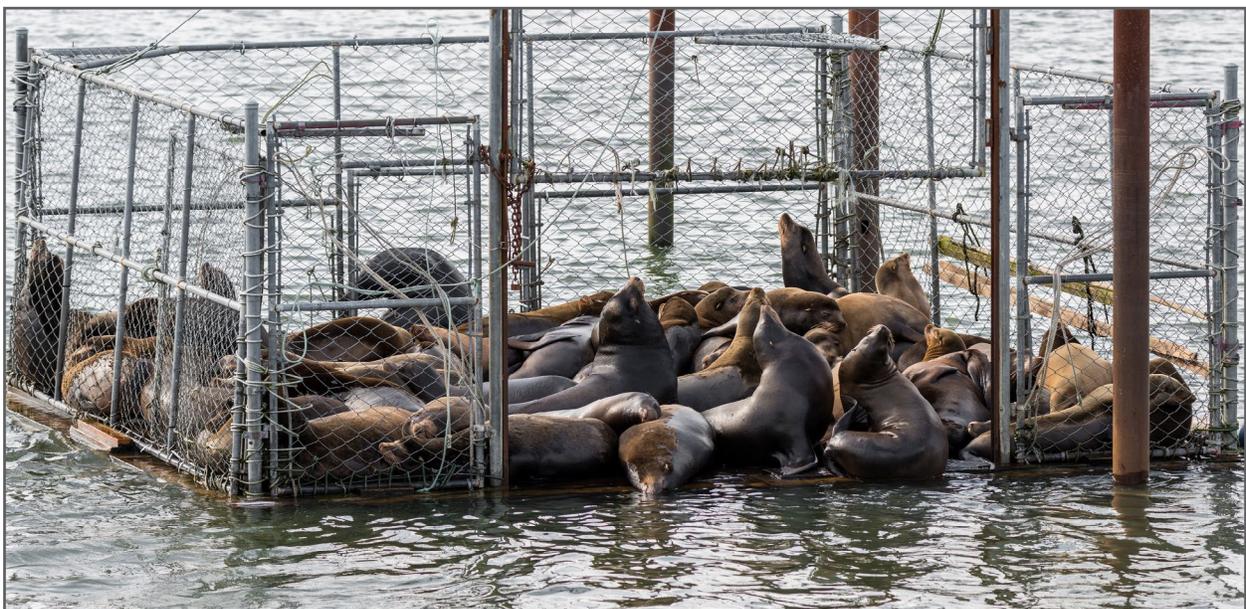
on endangered salmon, steelhead and other native fish species. This bill builds on previous versions of the legislation by requiring eligible entities to have received training in natural resource management. The Endangered Salmon and Fisheries Predation Prevention Act is supported by a broad spectrum of Northwest residents and organizations that includes recreational fishermen represented by the Coastal Conservation Association, Tribes and the Washington State Department of Fish and Wildlife.

Historic recovery efforts of endangered salmon and steelhead populations in the Columbia River have been compromised by exponentially increasing sea lion predation in recent years. According to the National Oceanic and Atmospheric Administration (NOAA), California sea lions have killed the largest proportion of spring Chinook salmon and steelhead this year than any year since 2011.

The estimated consumption of salmon and steelhead by California sea lions in the Bonneville Dam tailrace was 1.14% (1,402 fish) in 2013, 1.17% (2,615 fish) in 2014, 3.12% (7,779 fish) in 2015, and 3.9% (6,371 fish) in 2016.

Protecting salmon populations helps secure a future for recreational fishing in Washington state – an industry that contributes 4,811 jobs, generates \$498 million in sales and contributes \$361 million to the state's gross domestic product (2014 statistics).

(<http://herrerabutler.house.gov/news/documentsingle.aspx?DocumentID=398867>)



Seals in a trap cage

TEXT OF H.R. 2083: To amend the Marine Mammal Protection Act of 1972 to reduce predation on endangered Columbia River salmon and other nonlisted species, and for other purposes

115th CONGRESS

1st Session

H. R. 2083

To amend the Marine Mammal Protection Act of 1972 to reduce predation on endangered Columbia River salmon and other nonlisted species, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

April 8, 2017

Ms. Herrera Beutler (for herself and Mr. Schrader) introduced the following bill; which was referred to the Committee on Natural Resources

A BILL

To amend the Marine Mammal Protection Act of 1972 to reduce predation on endangered Columbia River salmon and other nonlisted species, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Endangered Salmon and Fisheries Predation Prevention Act”.

SEC. 2. FINDINGS.

Congress finds the following:

- (1) There are 13 groups of salmon and steelhead that are listed as threatened species or endangered species under the Endangered Species Act of 1973 that migrate through the lower Columbia River. All lower Columbia River tributaries contain listed species including Chinook, Chum and Coho salmon as well as winter-run steelhead.
- (2) The people of the Northwest United States are united in their desire to restore healthy salmon and steelhead runs because they are integral to the region’s culture and economy.
- (3) The Columbia River treaty Tribes retain important rights with respect to salmon and steelhead.
- (4) Federal, State, and Tribal governments have spent billions of dollars to assist the recovery of Columbia River basin salmon and steelhead populations.
- (5) One of the factors negatively impacting salmonid populations is increased predation by marine mammals, including California sea lions.
- (6) The population of California sea lions has increased 10-fold over the last 3 decades, and is currently approximately 300,000 animals.
- (7) Biologists estimate that in recent years as many as 3,000 California sea lions have been foraging from the lower 145 miles of the Columbia River up to Bonneville Dam during the peak spring salmonid run.

(8) Historically, California sea lions, whose habitat is fundamentally salt water, did not venture very far up into the Columbia River.

(9) The percentage of the spring salmonid run that has been eaten or killed by California sea lions at Bonneville Dam has increased 7-fold since 2002.

(10) Federal, State and Tribal estimates indicate that sea lions are consuming at least 20 percent of the Columbia River spring chinook run and 15 percent of Willamette River steelhead run, two salmonid species listed under the Endangered Species Act of 1973.

(11) In recent years, California sea lions have congregated with greater frequency near Willamette Falls and Bonneville Dam and have entered the fish ladders that salmon must use to return to their historic and biological spawning grounds.

(12) These California sea lions have not been responsive to extensive hazing methods employed to discourage this behavior.

(13) The process established under the 1994 amendment to the Marine Mammal Protection Act of 1972 to address predatory sea lion behavior negatively impacting threatened or endangered salmon runs is protracted and has not worked.

(14) The National Oceanic and Atmospheric Administration has observed that—

(A) management efforts to reduce pinniped predation of endangered and threatened salmon and steelhead in the area around Bonneville Dam has been insufficient to reduce the severity of the threat; and

(B) efforts need to focus more on the lower river and at Willamette Falls.

(15) In the interest of protecting Columbia River threatened and endangered salmonids, a temporary expedited procedure is urgently needed to allow removal of the minimum number of California sea lions as is necessary to protect the passage

of threatened and endangered salmonids in the Columbia River and its tributaries.

SEC. 3. SENSE OF CONGRESS.

It is the sense of the Congress that—

(1) preventing predation by sea lions, recovery of listed salmonid stocks, and preventing future listings of fish stocks in the Columbia River under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) is a vital priority; and

(2) the Federal Government should continue to fund lethal and nonlethal removal measures for preventing such predation.

SEC. 4. TAKING OF SEA LIONS ON THE COLUMBIA RIVER AND ITS TRIBUTARIES TO PROTECT ENDANGERED AND THREATENED SPECIES OF SALMON AND OTHER NONLISTED FISH SPECIES.

Section 120(f) of the Marine Mammal Protection Act of 1972 (16 U.S.C. 1389(f)) is amended to read as follows:

“(f) Temporary Marine Mammal Removal Authority On The Waters Of The Columbia River Or Its Tributaries.—

“(1) REMOVAL AUTHORITY.—Notwithstanding any other provision of this Act, the Secretary may issue a permit to an eligible entity to authorize the intentional lethal taking on the waters of the Columbia River and its tributaries of individually identifiable sea lions that are part of a population that is not categorized under this Act as depleted for the purpose of protecting species of salmon that are listed as endangered species or threatened species under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) and other nonlisted fish species.

“(2) PERMIT PROCESS.—

“(A) IN GENERAL.—An eligible entity may apply to the Secretary for a permit under this subsection.

“(B) DEADLINE FOR CONSIDERATION OF APPLICATION.—The Secretary shall approve or deny an application for a permit under this subsection by not later than 30 days after receiving the application.

“(C) DURATION OF PERMIT.—A permit under this subsection shall be effective for no more than one year after the date it is issued, but may be renewed by the Secretary.

“(3) LIMITATIONS.—

“(A) LIMITATION ON PERMIT AUTHORITY.—Subject to subparagraph (B), a permit issued under this subsection shall not authorize the lethal taking of more than 100 sea lions during the duration of the permit.

“(B) LIMITATION ON ANNUAL TAKINGS.—The cumulative number of sea lions authorized to be taken each year under all permits in effect under this subsection shall not exceed 10 percent of the annual potential biological removal level.

“(4) TRAINING IN NATURAL RESOURCES MANAGEMENT.—Permit holders exercising lethal removal authority pursuant to this Act shall be trained in natural resource management.

“(5) DELEGATION OF PERMIT AUTHORITY.—Any eligible entity may delegate to any other eligible entity the authority to administer its permit authority under this subsection.

“(6) NEPA.—Section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C)) shall not apply with respect to this subsection

and the issuance of any permit under this subsection during the 5-year period beginning on the date of the enactment of this subsection.

“(7) SUSPENSION OF PERMITTING AUTHORITY.—If, 5 years after the date of the enactment of this subsection, the Secretary, after consulting with State and tribal fishery managers, determines that lethal removal authority is no longer necessary to protect salmonid and other fish species from sea lion predation, the Secretary may suspend the issuance of permits under this subsection.

“(8) ELIGIBLE ENTITY DEFINED.—In this subsection, the term ‘eligible entity’ means each of the State of Washington, the State of Oregon, the State of Idaho, the Nez Perce Tribe, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Confederated Tribes and Bands of the Yakama Nation, the Columbia River Inter-Tribal Fish Commission, and the Cowlitz Indian Tribe.

“(9) INDIVIDUAL PINNIPED EXCEPTION.—For purposes of this section, any pinniped located upstream of river mile 112 of the Columbia River and all tributaries that include spawning habitat of threatened or endangered salmon or steelhead is deemed to be individually identifiable.”.

SEC. 5. TREATY RIGHTS OF FEDERALLY RECOGNIZED INDIAN TRIBES.

Nothing in this Act or the amendment made by this Act shall be construed to affect or modify any treaty or other right of any federally recognized Indian Tribe.



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