

Finding of No Significant Impact for Reducing the Impact on At-Risk Salmon and Steelhead by California Sea Lions in the Area Downstream of Bonneville Dam on the Columbia River, Oregon, and Washington

The National Oceanic and Atmospheric Administration Administrative Order 216-6A (April 22, 2016) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality (CEQ) regulations at 40 C.F.R. §1508.27 state that the significance of an action should be analyzed both in terms of “context” and “intensity.” Each criterion listed below is relevant to making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6A criteria and CEQs context and intensity criteria. These include:

1) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat (EFH) as defined under the Magnuson-Stevens Act and identified in FMPs?

Response: There will be no effect on ocean or coastal habitats from the proposed action because the action area is in the lower Columbia River approximately 146 river miles from its confluence with the ocean. Any effects on water quality from the proposed action in the river will be short lived and localized and will represent a miniscule proportion of the total contaminant load in the Columbia River system. There will be no negative effect on the CWA 303(d) listing impairment status of the Columbia River because any effects on water quality in the Columbia River will be small, short lived, and localized, and will represent a miniscule proportion of the total contaminant load in the Columbia River system. There will be no effect on EFH for coho or Chinook salmon because there will be no impact on water quality or substrate necessary for coho and Chinook salmon to carry out spawning, breeding, feeding, or growth to maturity.

2) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

Response: The proposed action will have no effect on benthic productivity because the action will not occur near the benthos; little action will occur in riparian or nearshore areas, so they will not be affected. Lethal removal of a small number of predatory California sea lions after active non-lethal deterrence will have negligible effect on biodiversity in the action area. In spite of limited removals, the abundance of sea lions will continue to fluctuate in response to available prey. The proposed action will not eliminate California sea lions from the action area (the Bonneville Dam tailrace). Although the proposed action will allow lethal removal of up to 92 California sea lions, given the restrictions imposed on removals (identification of individual animals must be certain and free-ranging animals that may only be shot on land or in a restricted area of the river), lethal removal is likely to be less than 92 California sea lions per year¹. California sea lions that are not removed are thus likely to remain in the action area, and there are likely to continue to be California sea lions throughout the lower Columbia. Similarly,

¹ The maximum number of California sea lions removed in a single year was 59 in 2016.

though non-lethal deterrence may temporarily cause Steller sea lions and harbor seals to leave the area, it is likely they will return, though their levels of predation may be reduced.

The lower Columbia River has been described as a highly altered and degraded ecosystem, and active programs have been implemented to control both marine mammal and avian predators in the tailrace at Bonneville Dam. The purpose of these programs, and the one proposed here, is to bring the predator-prey relationship back to a balance that is closer to what would occur in an unaltered environment, and, in particular, to reduce impacts of California sea lion predation on at-risk salmonids in the Columbia River.

3) Can the proposed action be reasonably expected to have a substantial adverse impact on public health or safety?

Response: The proposed action will not have a substantial adverse impact on public health or safety. Non-lethal deterrence activities under this alternative will pose some risk to the public, but it is unlikely that vessels or projectiles will strike bystanders as the employees involved in non-lethal deterrence activities will be trained and experienced and will follow safety procedures established by the Corps of Engineers (Corps). Safety procedures were implemented during non-lethal deterrence activities conducted in the action area in 2005 through 2015, and no accidents involving the public were reported. Since implementation of the pinniped removal program at Bonneville Dam in 2008, all animals intentionally killed have been euthanized by lethal injection. It is likely that the states will continue to use this method under the proposed action. This method will have no adverse impact on public health or safety. Additionally, during lethal removal activities involving firearms, there is a remote risk of errant bullets ricocheting off the hard haul-out surfaces because of the bullet trajectories to the anticipated targets. If a ricochet should occur, there is little likelihood that a bullet or bullet fragments will strike anyone because the haul-outs are located in a part of the project area that is not open to the public and the area is a large open space that is within the Corps' boat restriction zone. Risk of a stray bullet striking anyone will be further minimized by the states' safety plan, which will specify the type of weapons to be used, appropriate ammunition, the training required of marksmen, and the conditions under which animals could be shot, including public area closures as needed.

4) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, their critical habitat, marine mammals, or other non-target species?

Response: The proposed action will adversely impact individual non-listed predatory California sea lions (target species) because as many as 92 sea lions will be killed annually. The most recent stock assessment report reveals the current population estimate for the U.S. stock of California sea lions is 296,750 (Carretta et al. 2015). Permanent removal of 92 animals will have neither a measurable effect on the local abundance of California sea lions elsewhere in the lower Columbia River, nor will there be any effect on the overall range-wide abundance distribution, and productivity of the California sea lion population. The current estimate of the potential biological removal (PBR) level for the U.S. population of California sea lions is 9,200 animals. PBR is the estimated number of animals that can be safely removed from a marine mammal population without affecting its status. Therefore, given the U.S. California sea lion population size and its PBR, the number of animals potentially affected (i.e., 92) is extremely small.

The non-lethal deterrence activities that are part of the proposed action will temporarily displace pinnipeds from the foraging area below the dam but there is no evidence that past non-lethal deterrence efforts affected the numbers of pinnipeds at Bonneville Dam or their rate of predation. Future abundance of California sea lions at the dam will likely fluctuate in response to the fluctuations in prey, regardless of non-lethal deterrence activities.

The proposed action will adversely affect a small number of individual Steller sea lions that will be disturbed by non-lethal deterrence activities directed at pinnipeds below the dam and lethal deterrence activities directed at California sea lions. It is expected that these individuals will leave the action area for some unspecified period of time. However, once displaced from the foraging area at Bonneville Dam, the effect of deterrence activities will be insignificant for individual Steller sea lions or the population range-wide because there is ample room in the remainder of the species' range, including the lower Columbia River, for animals to relocate and thrive. Thus, an expected result of the proposed action is increased displacement of a small number of foraging Steller sea lions from the action area but no effect is expected on the range-wide abundance, distribution, or productivity of the population.

A minimal number of harbor seals may be adversely affected by temporary disturbance from non-lethal deterrence activities but there will be no effect on the range-wide abundance, distribution, and productivity of the harbor seal population.

In sum, the majority of environmental effects will be minimal, localized, and transitory in nature and will not result in permanent alteration of the physical environment. Pinnipeds exposed to active non-lethal deterrence will be temporarily displaced, as has been observed in previous years, but will quickly return to forage. Annually, a small number of individually identifiable predatory California sea lions will be permanently removed (either to permanent captivity or killed) and will no longer be present at the dam.

The proposed action will likely increase survival of ESA-listed salmonids by reducing predation (beneficial effect). Because there will be no negative effect on riparian areas, substrate, or water quality, no negative impacts to salmonid critical habitat are anticipated (e.g., spawning sites, juvenile rearing areas and migration corridors, adult migration corridors, food resources, water quality and quantity, and riparian vegetation).

5) Are significant social or economic impacts interrelated with natural or physical environmental effects?

Response: The effects of the proposed action on the social and economic environment will be very limited. Employment of a few seasonal temporary personnel needed to carry out the action will have no measurable effect on the local economy. Depending on the success of the lethal removal measures it is possible that pinniped predation will decrease, and that there will be a modest improvement in salmonid survival. This will be compatible with goals of protecting cultural and natural resources under the Columbia River Gorge National Scenic Area Designation.

6) Are the effects on the quality of the human environment likely to be highly controversial?

Response: The impacts of the proposed action on the human environment are well known and not the subject of controversy. It is widely acknowledged that California sea lions located at Bonneville Dam prey upon at-risk salmonids, some of which are ESA-listed, as they congregate around the dam. The impacts of the proposed action of removing some predatory California sea lions are straight forward and well understood.

There is, however, disagreement among various constituents as to the significance of sea lion predation on at-risk salmonids and whether these animals should be held responsible for declining salmonid runs or delays in recovery. These differences of opinion were the basis for a number of comments NMFS received from the public expressing support for and opposition to the proposed action.

This is not the first time these disagreements have been aired, and as indicated by the public comments, some members of the public remain opposed to any lethal removals. The proposed action is functionally identical to the previous authorization which was subject to judicial review and upheld.

While the disagreement among some parties continues, the effects of the proposed action on the human environment are not controversial.

7) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas?

Response: The proposed action will not result in substantial impacts to unique areas. Non-lethal deterrence measures under the proposed action will include land-based activities but none of these measures will have the potential to affect cultural resources in the action area. No ground-disturbing activities will take place. When lethal removal activities are underway, some Bonneville Project roads and facilities may be temporarily closed to protect public safety. Portions of the eastern shoreline of Hamilton Island, within the Fort Cascades National Historic Site, may also be closed. Such temporary closures will not affect the historic significance of these sites. No sites upstream of the dam, including "in-lieu" treaty fishing access sites, will be closed during lethal removal activities. It is likely that pinniped predation at the Bonneville Lock and Dam will decrease, and that there will be some improvement in salmon survival under the proposed action. This could result in increased availability of this cultural resource for treaty tribes in the action area.

8) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

Response: The effects of the proposed action are well known and will not involve unique or unknown risk. The effects of active non-lethal deterrence activities, including live capture using a floating trap, have been previously tested in a number of locations and have been shown to be safe and non-injurious. To the extent used, lethal removal activities involving firearms will be managed to minimize the risk of errant discharges (marksmen on land or stable structures, safe

lines of fire, temporary area closures). The effect of lethal removals on the United States stock of California sea lions is well known: removing up to 92 animals, particularly the male California sea lions identified as candidates for removal at Bonneville Dam, will be inconsequential at the population level. The removal of as many as 92 animals annually from the U.S. California sea lion population will have no effect on the overall range-wide abundance, distribution, or productivity of the population because the number of animals involved is extremely small compared to the current number of animals (9,200-PBR) that can be safely removed from the population without affecting its status. It is also known that pinniped removal will result in improved salmonid survival, incrementally contributing to the productivity and abundance of the affected salmonid species.

9) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

Response: There are two resources that have the potential for cumulative effects when the proposed action is added to past, present, and reasonably foreseeable future actions: California sea lions and salmonids. The estimated level of human caused mortality for California sea lions range-wide is below the estimated PBR for the U.S. population. An additional 92 animals removed (transferred to a research facility, zoo, or aquarium, or killed) in the action area each year will still leave total California sea lion mortalities at a fraction of the estimated PBR. Thus, the proposed action will not have cumulative impacts on the California sea lion population.

Many factors have led to the decline of ESA-listed salmonids in the Columbia River and are preventing their recovery. Implementation of the proposed action will make a contribution to improving survival of returning adult salmonids. While as a single action it is not sufficient to recover these listed species, there is no single action available that will accomplish that goal. The proposed action will make an incremental contribution, in addition to other efforts, to decreasing mortality from known sources.

10) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?

Response: The proposed action will have no adverse effects on districts, sites, highways, structures, or objects listed or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural, or historical resources, because sea lion removal measures will not alter the physical environment or result in impacts to dam and/or lock operations or highway closures. There will be no effect on the overall recreational use of the area with the exception of temporary closures of Corps controlled access roads or visitor centers. Portions of the eastern shoreline of Hamilton Island, within the Fort Cascades National Historic Site, may be temporarily closed but this will not affect the historic significance of these sites. No site upstream of the dam, including the "in lieu" treaty fishing access sites.

11) Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?

Response: The proposed action is not expected to import, introduce, or contribute to the spread of non-indigenous species because vessels and equipment used for the project are already in use by the states in Columbia River projects or will be fabricated or purchased for the project.

12) Is the proposed action likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

Response: The proposed action will not establish a precedent for future actions or represent a decision in principle because the proposed action is in response to the specific circumstances outlined in the states' application for lethal removal authority under MMPA Section 120. NMFS, the Task Force, and the states will continue to monitor and evaluate the effectiveness of the actions taken under the authorization. If necessary, NMFS may consult with the Task Force and the states to determine whether the authorization should be modified or extended. The proposed action is specific to the action area described and is not applicable beyond the scope of the subject application received from the states. No additional applications have been received or are under consideration at this time.

13) Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

Response: The proposed action will be conducted in a manner complementary to other Federal, state, tribal, and local plans and policies addressing salmon and steelhead survival in the Columbia River basin. The proposed action will be limited to those activities necessary to reduce adult salmonid losses due to pinniped predation and will be conducted in a manner consistent with all laws.

14) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

Response: The proposed action will not result in substantial cumulative adverse effects on target or non-target species for the reasons outlined in response to question 9 above.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting Supplemental Environmental Assessment prepared for Reducing the Impact on At-risk Salmon and Steelhead by California Sea Lions in the Area Downstream of Bonneville Dam on the Columbia River, Oregon and Washington, it is hereby determined that the approval of the states' January 27, 2016, MMPA section 120 application requesting continued authority through 2021 to conduct a California sea lion lethal removal program will not significantly impact the quality of the human environment. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an environmental impact statement (EIS) for this action is not necessary.



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Date