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January 31, 2008

MEMORANDUM

TO: Council Members

FROM: Jim Ruff -- Manager, Mainstem Passage and River Operations

SUBJECT: Briefing on draft NOAA Environmental Assessment on Pinniped Actions Proposed for the Columbia River

At the February 12, 2008, Council meeting in Portland, Garth Griffin, a Branch Chief in the Protected Resources Division of NOAA Fisheries, will brief the Council on the alternatives and proposed action contained in NOAA's draft Environmental Assessment (EA) entitled "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 draft EA on pinniped control actions on the lower Columbia River was prepared and released by NOAA Fisheries on January 17, 2008, for public review and comment. Copies of the draft EA, a map of the action area and comment instructions are posted on the web at: <http://www.nwr.noaa.gov/Marine-Mammals/Seals-and-Sea-Lions/Sec-120-draft-EA.cfm>.

NOAA is requesting public comment as it considers the four alternatives outlined in the draft EA. The comment deadline is February 19, 2008. The agency will review public comments and is expected to make a final decision on a preferred alternative in late March, which coincides with the time when upriver spring Chinook salmon and steelhead normally begin arriving at Bonneville Dam and when California sea lions are present below the project.

The draft EA states that "the need for the proposed action is that NMFS must respond to the States' section 120 application, as prescribed in the Marine Mammal Protection Act, to address the seasonally recurring problem of pinniped predation, which contributes to the decline or impedes [the] recovery of listed salmon and steelhead passing through Bonneville Dam."

The four alternatives outlined in the draft EA are:

1. Take no action. Under this alternative, the states' request for lethal take of California sea lions would be denied and no further aggressive hazing would be undertaken to deter predation at the dam. Only passive deterrents, such as existing underwater acoustic devices and sea lion exclusion devices installed at the dam's fish ladder entrances, would be used. Estimated cost: none.

2. Non-lethal deterrence only. This alternative would also deny the states' request, but would continue active hazing of animals at and below the dam, including use of firecrackers, rubber bullets, acoustic deterrents, as well as capture, holding and relocation of animals. Estimated cost of this alternative is \$300,000, which includes \$150,000 for capture and marking operations and \$150,000 for boat-based hazing activities.
3. Lethal removal of certain California sea lions after non-lethal deterrence. This is the alternative that NOAA Fisheries is proposing to implement. It would allow the states to kill individually identified sea lions, either directly by shooting them, or by euthanizing them once they had been captured, if no permanent holding facility for them could be found. The agency estimates that up to 30 animals could be killed per year under this alternative. The total estimated cost of this alternative is \$450,000, which includes the cost of non-lethal deterrence activities identified above in alternative 2 plus \$150,000 for lethal removal actions.
4. Lethal removal of all California sea lions within about five miles of Bonneville Dam, with no requirement for prior non-lethal deterrence. This alternative is similar to what the three Northwest states requested in their Section 120 application and to what several task force members recommended. It would permanently remove as many as 150 animals per year¹ and assumes no non-lethal hazing activities. The estimated cost of this alternative is at least \$300,000.

Under alternatives 3 and 4, which allow for the removal of California sea lions, specific safety measures would be required to be in place. Also, an animal care committee approved by NOAA Fisheries would be established to advise on the standards for humanely capturing, holding and killing predatory sea lions. Table 1 below summarizes the comparison of effects of the four alternatives.

Implementation of the proposed action in the draft EA, or alternative 3, "could result in a maximum increase of 327 to 3,299 listed spring chinook (from 0.5 to 7.2 percent of the run) and 7 to 414 listed steelhead (from 2.7 to 36.0 percent of the run) passing Bonneville Dam," according to the draft EA. The EA also states the actual numbers may be lower because eventually new sea lions would likely take the place of sea lions that had been removed.

During the past three years, NOAA Fisheries and other state, tribal and federal agencies have tested various non-lethal deterrence methods² to discourage California sea lions from foraging on salmonids at and immediately below Bonneville Dam, but these hazing efforts have proven to be largely unsuccessful. The draft EA estimates that roughly a third of the salmon and steelhead consumed by sea lions are from listed stocks.

¹ This number of animals is substantially less than the maximum that would be allowed under the two percent of the potential biological removal (PBR) level, or 8,511 animals. The PBR includes natural mortalities and incidental take.

² Non-lethal deterrence methods have included such actions as vessel chasing; the firing of cracker shells, aerial pyrotechnics and rubber projectiles; installation of SLEDs and acoustic deterrent devices; use of underwater firecrackers (seal bombs); capture, marking and relocation efforts; and temporary or permanent captive holding.

Table 1. Comparison of Alternatives Identified in the Draft NOAA Fisheries EA.

	Alternative 1	Alternative 2	Alternative 3 (Proposed Action)	Alternative 4
Non-lethal deterrence actions	No	Yes	Yes	No
Pinnipeds eligible for removal	None	None	Distinguishing features, observed eating salmon	Observed between navig. marker 85 and Bonneville Dam
Est'd. number of pinnipeds removed annually	None	None	30	150
Number of boats	None	2	2	2
Location of pinnipeds to be lethally removed	N/A	N/A	Hauled out below dam or from floating trap	Hauled out or in the water between navig. marker 85 and Bonneville Dam
Location of marksmen	N/A	N/A	Land	Land or vessels
Road closures	N/A	N/A	Within Bonneville project only	I-84 and State Route 14; ~2 hours per day
Fishing closures	N/A	None	Some possible	Some likely
Disruption of vessel traffic	N/A	None	None	Some possible
Days/hours of activity	N/A		5 days per week, 8 hours per day; about 480 hours total	7 days per week, 16 hours per day; about 1,120 hours of on-water activity
Est'd. annual costs		\$300,000	\$450,000	\$300,000
Decrease in number of salmon ¹ consumed	Baseline condition	None	1,308-9,425 Chinook 26--693 Steelhead	6,541-47,124 Chinook 129--3,467 Steelhead

¹ These estimates include both listed and non-listed Chinook salmon and steelhead.

Source: Taken from NOAA National Marine Fisheries Service Draft Environmental Assessment, January 11, 2008.

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