

April 1, 1997

William Stelle, Jr.
Administrator, Northwest Region
National Marine Fisheries Service
7600 Sand Point Way NE
Seattle, WA 98115

Dear Mr. Stelle,

On behalf of the more than 4.3 million members and constituents of the Humane Society of the United States (HSUS), we offer comments on the Draft Environmental Assessment (EA) on Preventing California Sea Lion Foraging and Predation on Salmonids at the Willamette Falls Fish Passage Facility - Oregon City, Oregon.

As you know, we requested an extension on these comments primarily due to our inability to obtain relevant government documentation (e.g., fishway specifications, fisheries data) from agency personnel within the time period allotted. While we respect your agency's denial of our request, we do not understand the basis for your decision. We ask you to note that our ability to comment on the draft EA was severely limited by a lack of information.

INTRODUCTION AND SUMMARY

In summary, the HSUS found the alternatives listed in the EA to be poorly evaluated, poorly presented, and the proposed action based on unsubstantiated speculation. Inferences have been made about the effects of predation and the expected success of actions proposed to mitigate predation despite a notable lack of data and highly contradictory information. It appears very unlikely that the proposed action is likely to accomplish the stated objectives, let alone to notably contribute to the enhancement of depleted fish runs in the Willamette River. A substantial amount of information vital to evaluation of the EA and the proposed action is lacking and we believe that a more thorough and carefully prepared EA is warranted.

The HSUS recommends that another alternative be added to the EA; one that a) investigates the real and primary cause(s) of the fish run declines (e.g. hatchery fish competition, fish passage problems due to construction and operation of the fishway and dam, water and general habitat degradation) and implements solutions to mitigate them and also b) studies and implements sea lion deterrence methods limited to those which are humane and realistically

OFFICERS

David O. Wiebers, M.D.
Chairman of the Board

Anita W. Coupe, Esq.
Vice Chairman

Amy Freeman Lee, Litt.D.
Secretary

Paul G. Irwin
President, CEO

G. Thomas Waite III
Treasurer, CFO

Patricia A. Forkan
Executive Vice President

Roger A. Kindler, Esq.
Vice President/General Counsel

STAFF VICE PRESIDENTS

John W. Grandy, Ph.D.
*Senior Vice President
Wildlife Programs*

Wayne Pacelle
*Senior Vice President
Communications and
Government Affairs*

Andrew N. Rowan, Ph.D.
*Senior Vice President
Research, Education, and
International Issues*

Martha C. Armstrong
*Companion Animals and
Equine Protection*

Katherine Benedict
*Administration, Information
Services, and Technology*

Richard M. Clugston, Ph.D.
Higher Education

Randall Lockwood, Ph.D.
Research and Educational Outreach

Robert G. Roop, SPHR
Human Resources and Education

Martin L. Stephens, Ph.D.
Animal Research Issues

Richard W. Swain Jr.
Investigative Services

DIRECTORS

Patricia Mares Asip
Peter A. Bender

Donald W. Cashen, Ph.D.
Anita W. Coupe, Esq.

Judi Friedman
Alice R. Garey

Jennifer Leaning, M.D.
Amy Freeman Lee, Litt.D.

Franklin M. Loew, D.V.M.
Eugene W. Lorenz

Jack W. Lydman
William F. Mancuso

Joan C. Martin-Brown
Judy J. Peil

Joe Ramsey, Esq.
Jeffery O. Rose

James D. Ross, Esq.
Mary L. Schapiro

Marilyn G. Seyler
John E. Taft

David O. Wiebers, M.D.
Marilyn E. Wilhelm

K. William Wiseman
John A. Hoyt

President Emeritus
Murdaugh Stuart Madden, Esq.
Vice President/Senior Counsel

promising (e.g., alternative barrier designs, expanded acoustic deterrence devices). We oppose sea lion removal (lethal or non-lethal), the use of seal bombs, or any other methods which may inadvertently result in an increase of predation in the long term.

RATIONALE FOR PROPOSED ACTION

The EA specifies the rationale for the proposed action as follows:

- (1) Since 1990, California sea lions have been observed in the lower Willamette River during the spawning migration of spring Chinook salmon and steelhead.
- (2) Sea lions have been observed foraging near the fishway entrance in each of the last four years and preying on adult spring Chinook salmon and winter and summer steelhead for the last two years, and
- (3) In recent years, the spring Chinook salmon and winter steelhead populations, which are the only native salmonid populations above the falls, have declined (raising concern about potential impacts of pinniped predation).

However, the first two statements are possibly related to natural and normal occurrences in an ecosystem where pinnipeds and fisheries interact. The third statement about fisheries declines is not even likely related to sea lion predation. For example, as we discuss later in our comments, our calculations show that the introduced early-winter steelhead run declined by 25% more in 1996 than did the native late-winter run in that year. Since the occurrence of sea lions and the introduced early-winter run do not appear to coincide for a substantial length of time, sea lion predation can probably not be attributed to the decline of this introduced run. Therefore, it is likely that something other than sea lion predation is affecting both the early- and late-winter steelhead runs. While concern about potential impacts of sea lion predation may be warranted, it appears that predation is highly unlikely to have negatively impacted these fish runs in any substantive way.

Furthermore, it is clear that the spring Chinook run was facing serious problems prior to the occurrence of sea lion predation at the Falls. Just one example in the EA is that the objective of a 100,000 run size was "... not reached in 1995 for the fourth consecutive year." (pg. 12). Obviously, sea lion predation cannot be responsible for this decline given the first observed predation at the fishway was in 1995. Consequently, it is our opinion that actions highly consumptive of tax dollars and very unlikely to address the factors responsible for the decline of these runs (let alone reduce predation) are certainly not warranted.

STATED PURPOSE OF THE PROPOSED ACTION

It is unclear how removal of sea lions (lethal or non-lethal) could help to accomplish the stated purpose of the proposed action. The overall stated purpose of the action is "to prevent this problem from escalating to a point where predation is impacting the

salmonid stocks involved” (pg. 2). This statement implies that predation is not currently impacting the fish stocks.

Specifically, the purpose is (1) “to implement measures to deter and repel sea lions from this area”, (2) “to discourage sea lions from returning to this area each year”, and (3) “to prevent additional sea lions from also becoming involved” (pg. 2).

First, it is unlikely that removal of sea lions will be effective in achieving the stated goals of reducing salmonid predation. Previous relocation efforts indicate that removal of sea lions is not likely to be even marginally effective in minimizing localized predation. Given a reasonably worthwhile food source, new sea lions will likely replace those that have been removed. This has been demonstrated in previous relocation efforts from Washington State (Pfeifer 1991). Following relocation to California, “Other sea lions did enter the area and after one week, the predation rates increased and remained high for the remainder of the season indicating that the replacement animals had assumed the role of the primary predators.” (NMFS and WDFW 1994, pg. 32). Consequently, this relocation resulted in relatively inconsequential predation reductions. According to Fraker (1994, pg. 17), “... if all the ‘known-offender’ sea lions in the vicinity of the locks are removed, remaining sea lions may attract other sea lions in the vicinity.” A previous NMFS proposal (1993) also stated that, “Any of these animals will quickly replace a ‘chief’ offender when the opportunity presents itself” (in reference to removal of sea lions at the Locks). Biologists from NMFS have even publicly stated that lethal (let alone non-lethal) removal of sea lions at the Locks is experimental.

Personnel from NMFS have recently attributed reduced sea lion presence and predation at the Ballard Locks to the permanent removal of three sea lions. While this speculation may be used to justify removal, it appears that NMFS has come to this conclusion prematurely. NMFS has not examined other highly important factors (such as potentially reduced sea lion presence in the outer bay of the Locks) which would have influenced sea lion presence at the Locks. Further, the Report and Recommendations of the Ballard Locks Task Force (Anonymous 1996a) states that the Task Force “cannot, in the short term, completely evaluate effectiveness of the actions due to the long-term nature of fish stock recovery.” Consequently, we strongly recommend that such conclusions do not guide management policy in the Willamette Falls area or any other region.

Furthermore, we are stunned that the proposed action involves relocating the sea lions only as far as “downstream or in Oregon coastal waters” (pg. 21), particularly because such a proposal directly contradicts recommendations given by NMFS and WDFW in previous documents (see below). A relocation over such a small distance will probably be doomed to failure given that previous relocations only kept sea lions away from the area of capture for an average time of 30-45 days, despite their involving relocation of animals over much greater distances. An EA on pinniped-fisheries interactions at the Ballard Locks (NMFS and WDFW 1994), acknowledging the need for relocations involving greater distances, stated that “The results of the 1988/89 capture/relocation program, to the southern outer coast of Washington, showed that the relocation site

would need to be much farther south in order to provide a sufficient delay in the return of the animals to provide protection for the fish and to reduce the number of recaptures for individual returning sea lions to a minimum.”

The EA also states that “Transporting the captured sea lions within their natural range as far south as back to the Channel Islands is the most appropriate means of delaying or postponing their return.” More recently, NMFS (1997) stated that “Capture and relocation efforts with California sea lions at the Ballard Locks indicate that transporting captured sea lions relatively short distances (from Ballard to the outer Washington coast) are not effective, as the sea lions quickly return.”

A second and underlying problem with the proposed action is that since the sea lions have not been determined to be negatively impacting the fish runs, removing and deterring them, at best, can only give a false hope for the recovery of the salmonids (see below, “Nuisance Animal Provision” for further discussion).

Third, the EA did not evaluate the potential negative effects associated with removal of sea lions due to diversion of resources. It is possible that removal may even contribute to further decline of these fish stocks because emphasis on sea lion predation diverts precious resources and time away from the long term solutions needed to respond to the original and principal causes of the decline of the stocks. In the application for the lethal removal of sea lions at the Ballard Locks, Washington Department of Fish and Wildlife referred to lethal removal of sea lions as a “... short term solution”. Evidently, non-lethal removal could not be expected to provide any better results. To use another example from the Ballard Locks, Fraker (1994) stated that “Improving the ability of the steelhead to avoid sea lion predation may provide a longer-term solution. Such means could include provision of escape cover and ways to increase the rate of passage near the locks so that the steelhead would be present in an exposed situation for only a minimal amount of time.”

It is evident that once again, promising long-term solutions to fish passage problems are being overlooked in lieu of a simplistic preoccupation with sea lions. Without making artificial structures and habitats more “fish-friendly”, it is inconceivable why predation should be treated as if it were the cause of problem rather than an effect.

Fourth, the EA did not evaluate the potential that removal of some sea lions could actually increase predation of salmonids. The removal of several large, territorial males from the area could potentially result in an increase of more numerous smaller animals in the area. While the impact of such a scenario is difficult to determine, the potential should at least be addressed in the EA.

Consequently, the statement in the EA (pg. 21) that “The non-lethal removal of sea lions will [emphasis mine] benefit salmonids moving through the Willamette Falls passage facility and people who use the resources for recreational or commercial purposes” should be omitted because it is not supported by data. Conversely, available data

indicate that the removal of sea lions from this area is unlikely, at best, to benefit fish runs or affected people.

NUISANCE ANIMAL PROVISION

Negligible Impact of Sea Lion Predation

It is difficult to understand how removal of sea lions from this area can be conducted under the “nuisance animal provision”(Section 109(h)(1)(C)) of the Marine Mammal Protection Act (MMPA). The EA qualifies them as nuisance animals for two reasons: (1) because the “pinniped foraging at this site adversely affects fish passage” (pg. 1) and (2) because “salmonids are especially vulnerable at this location to pinniped predation.” (pg. 1). In addition, the related Federal Register notice (I.D. 030497C) gives the qualification that “the Willamette Falls are 128 miles (205 km) from the lower Columbia River estuary where California sea lions normally occur” as well as the second reason above.

However, reason number one appears to be no more than a theory or a speculation which has been neither tested nor demonstrated. Further, this affirmative statement appears to be contradicted in other areas of the EA, where this “impact” is discussed as a possibility or a potential, not a fact. For example, on page 15, the EA states that “Unabated California sea lion predation in the critical fish passage area at the Willamette Falls may [emphasis mine] exacerbate the current decline in these populations.” Also, on page 2 of the EA, it states that it is necessary to “prevent this problem from escalating to a point where predation is impacting the salmonid stocks involved ...”, clearly noting that the point of impact has not yet occurred. Further, a monitoring program is an aspect of the proposed action designed to “... document the extent of the predation interaction.” which has obviously not yet been done. It is evident that the agencies which prepared this EA have not conclusively determined that pinniped predation is adversely affecting fish passage in this area and that such a determination should be completed prior to approval for removal of pinnipeds. Lastly, we note that “the majority of the spring chinook and steelhead passage takes place through fishway entrance #2” (pg. 4), an area which is apparently not even impacted by sea lion predation due to minimum overlap of timing in which the two species are at the fishway. Consequently, to state that predation is having a negative impact (without substantiation), let alone to use such a hypothetical statement as justification for removal of these animals under the “nuisance” animal provision, seems highly inappropriate.

Reason number two itself (unusual vulnerability to predation at this site) only demonstrates that salmonid vulnerability to predation is the source of the potential problem of predation, not the predation itself. Simple logic shows that the predation would not be possible without factors which make the fish vulnerable in the first place. This indicates the need for immediate solutions which address the source of the problem, rather than one (of perhaps many) of the symptoms. Lastly, in addressing the second qualifier, it is not known what the “normal” range of sea lions in this region is,

since, as the EA states, prior to 1970, population numbers were intentionally kept low around “important fishing areas in the lower Columbia River” (pg. 7). Thus, in the absence of empirical data, it is incorrect for the EA to state that the region around the Willamette falls is not a normal part of their historic range. We cannot know what the historic range would have been in the absence of the extensive and historic killing of sea lions.

Consequently, we assert that the arguments given in the EA for removal of these animals under Section 109 of the MMPA are either incorrect and/or are not substantiated by science and are therefore not satisfactory for the action proposed under this section.

NON-LETHAL REMOVAL/RELOCATION

There does not appear to be enough information to support the following statement, and we propose that it be removed or amended: “There is no scientific controversy or uncertainty on the effects of the proposed non-lethal removal measures because the measures have been used previously and the sea lions involved were not adversely affected.” We believe that there is a high degree of uncertainty on the effects.

First, the EA does not adequately specify the number of sea lions to be removed. The description of the proposed number is extremely vague (“extremely small relative in comparison to the U.S. population of over 160,000 California sea lions, and far below the calculated PBR level of 5,052 sea lions.”) Such a description could mean anywhere from one to 4,000 or more animals. Such a range is not acceptable, despite the underlying fact that we dispute the appropriateness of the removal under Section 109 in the first place. Also, it appears that few of the predatory sea lions have been individually identified .

The EA also is not specific enough about the methods to be used to remove animals. The level of risk associated with the use of a partially submerged trap which, according to the EA (pg. 20), has only been tested on one harbor seal certainly may be unacceptably high for sea lions. If this method is to be used, more information about its use on sea lions should be obtained prior to use on potentially large numbers of animals. This is especially pertinent given that the need for removing these animals is only speculative and certainly does not constitute an emergency situation. Furthermore, the EA should mention how many sea lions were captured through the use of temporary fencing on haul out areas so that readers can assess the relative safety of this method for sea lions. Lastly, the EA does not specify whether “active” capture techniques will be considered for this removal. This is important as these techniques present relatively high risks to both sea lions and humans (NMFS and WDFW 1994). As stated in the EA, these measures must truly be non-lethal to be classified as such; information on the risk of death for each of the removal methods must therefore be assessed more thoroughly in the EA to be considered as such.

PROBLEMS WITH ATTRIBUTING FISH DECLINES TO PREDATION

In addition to the reasons given under “Nuisance Animal Provision” above, there are several other problems with attributing the fisheries declines to sea lion predation. First, it is hard to believe, and is highly unlikely, that the relatively small number of fish eaten by sea lions could have negatively impacted the spring Chinook run, given its proportionately large size.

As we stated earlier, while the size of the winter steelhead run is certainly low, our calculations show that the introduced early-winter steelhead run declined even more in 1996 (76%) than did the native late-winter run (51%). The relatively larger decline in the early-winter run could not be attributed to sea lion predation, as the occurrence of these two species in this region do not appear to overlap for any significant amount of time. Consequently, it is likely that something other than sea lion predation may likely be affecting both early- and late-winter steelhead runs; having an even greater impact on the introduced run. Also, we are interested in knowing how the figure of 72% was obtained in reference to the total decline of winter steelhead from 1995 to 1996 on page 13 of the EA. Based on the information provided, our calculations show that the total decline of winter steelhead from 1995 to 1996 was 62% instead of the 72% reported in the EA.

In addition, and potentially of great importance, is that the EA did not assess the potential impact of heavy runoff and flooding in April and May of 1996 as it did for the spring Chinook run. Consequently, it is clear that potential factors other than sea lion predation have not even been reasonably examined.

The observed foraging has only been occurring for less than two years. In 1995, only one sea lion was identified as exhibiting foraging behavior around the Falls and the predation rate for this animal was estimated to be approximately one fish per hour. However, the EA does not specify the duration of time which this particular animal spent in the area, so an estimated total predation for that season is not even possible.

In 1996, as many as five sea lions were observed to be foraging in the area for only approximately 5 weeks in 1996. It should be noted that this was only slightly more than one month out of the five of the Chinook run and one month out of eight for the summer steelhead. An extrapolation of the approximate predation rate indicates that a total number of salmonids eaten by sea lions in the area may have exceeded 300 fish.

Possibly of most importance is the timing of the decrease in run sizes relative to the observation of sea lion predation at the Falls. While trends and other important historical information are not provided in the EA, it is evident that these runs were exhibiting significant declines prior to the occurrence of sea lions in the area. We find it wholly inadequate for agencies to claim effects from predation without supplying reviewers (let alone examining for themselves) information on fish passage and rates of decline prior, and subsequent to, predation. Such data are critical for determining actual predation impacts and the likely consequences for sea lions removal.

FISH RUNS

The stated goal is to prevent sea lion predation of spring chinook and winter and summer steelhead. However, summer steelhead is an introduced run and conservation of this run is not necessarily consistent with conservation of indigenous runs. Further, sea lions preyed upon adult spring chinook and steelhead, yet the EA does not specify which run of steelhead has been eaten by sea lions. We suggest that the goal of this plan is not to protect biodiversity but to placate the concerns of fishing interests.

Of the six runs of fish which pass through the Falls, only three of them occur at the Falls at the same time as sea lions (spring Chinook and summer and winter steelhead) and only two of them (spring Chinook and winter steelhead) are native above the Falls. Summer steelhead were introduced above the Falls in the late 1960's. Of the native runs, hatchery fish currently comprise the vast majority of the spring Chinook run (85-95%) and a minority of the winter steelhead run (approximately 15% above the Falls). Clearly, while these native runs are important, the significance of the percentage of hatchery fish should not be discounted in management options. Furthermore, managing agencies do not appear to be able to reasonably estimate the number of native fish in the system. This amount is only described as "a significant amount" in the EA, but the basis for such an affirmative description based on such nebulous data is not clear.

There is a notable absence of fisheries data presented in the EA. It is difficult to assess how much this is due to omission of known information or due to a lack of information. For example, the EA should include as much of a historical count of redds for the runs as possible. Further, trends in run counts, so important to assessment of status and potential effects, are completely lacking. Consequently, we have no knowledge of slopes which may indicate a continual decline independent of predation and no knowledge of inter-annual variability or rates of decline before and after observed sea lion predation and other potentially significant events.

For example, page 9 states that more spring chinook were counted in 1996 (21,605) than in 1995 (20,592). Also, the EA states that the 1996 total count of Chinook was 56% lower than the 10-year (1985-1994) average. That the 1996 estimated count of the early-run winter steelhead was 88% below the previous ten year average certainly demands serious attention, yet its relative significance cannot be assessed without data on trends. Consequently, the information in the EA and the basis of the proposed action is relatively meaningless.

On page 9, not enough information has been given to assess the potential relevance of the discrepancy between the total count of spring Chinook passing through the fishway (21,605) and the estimated run size for Willamette spring Chinook returning to the Columbia River in 1996 (34,757). Also, we believe that a priority should be given to determining what percentage of fish pass through fishway #1 where the potential for predation is said to be the greatest. The EA also does not state why the minimum guideline of returning spring Chinook was reduced to 27,000 in 1995 and 1996. We believe that it is inappropriate to omit the explanation for the lowered conservation goal.

We also strongly recommend that the agencies analyze data on the run sizes of the various runs relative to fisheries take and relative to sea lion predation. Not only should the agencies understand the relationship between these variables, but the EA should also include this analysis (such as in a graph). Other relevant aspects of fisheries issues have been addressed above (Problems with Attributing Fish Declines ...) and below ("More Likely Sources ...").

MISCELLANEOUS ERRORS OR PROBLEMS

Relation to Ballard Locks Pinniped-Fishery Interaction

Page 1 and 2 of the EA liken the situation at Willamette Falls with that at the Ballard Locks in Seattle, Washington. Both areas represent situations where salmonid vulnerability to pinniped predation has been artificially increased due to fish passage problems at the respective fish ladders. Even Washington Department of Fish and Wildlife agents have stated that such problems are likely the primary problem at the Ballard Locks. As a notable number of members of the Ballard Locks Pinniped-Fishery Task Force have commented repeatedly (Report and Recommendations of the Ballard Locks Pinniped-Fishery Task Force, 1994 and 1995), the data did not support the assertion that sea lion predation has exerted a significant negative impact on the steelhead population; consequently, it is not agreed that the sea lions at the Locks have caused a "significant negative impact" as is stated on page 2 of the EA. We believe that the EA should fairly represent the wide and notable diversity of professional opinion on this issue and that this statement should be altered accordingly.

No Action Alternative

One statement in the EA (pg. 16) under the No Action alternative is particularly problematic and we recommend that it be altered or stricken: "Conversely, a benefit of the no action alternative is that sea lions would not be disturbed which would be favored by animal protection groups." This statement is misleading because it infers that animal protection groups are in support of the no-action alternative. Not only is this statement erroneous, but it further perpetuates the myth that these groups have more of an interest in protecting marine mammals than fish. Many animal protection groups, including the HSUS, work to protect fish because of their importance to the marine ecosystem. As the largest non-profit animal protection organization in the U.S., we certainly would not support the No Action alternative, (or the non-lethal or lethal removal of sea lions for that matter,) because it does not address the most likely causes for the fisheries decline in the Willamette River nor recommend the most promising actions for further investigation and mitigation of those causes.

Further, the EA states that this alternative will "likely result in a negative reaction by a large sector of the public ..." (pg. 16). However, this statement does not appear to be supported by any data and appears to have been derived solely from the opinions of those who prepared the document. First, a "large sector" of the public does not even

know about this situation. The document shows an obvious bias in referring to the opinions of fishers as if they are representative of the majority of people. The opinion of animal protection groups may just as well be referred to as representing a large sector of the public, given that the HSUS alone represents over 4.3 million members and constituents.

Lastly, we suggest that the statement about many people resenting their tax dollars being spent on “feeding sea lions ... far from the ocean where they normally occur” (pg. 16) be omitted from the EA. First of all, as was mentioned earlier, we are not convinced that it has been established that this region is outside the “normal” and historic range of sea lions. Second, and most important, just as many, if not more, people would likely resent having their tax dollars spent on harassing and removing sea lions when the major cause of the declining fish runs is largely unaddressed in favor of scapegoating the natural predators of the fish.

Other Aspects

We believe that relevant and important information on the sea lion barrier that should have been included in this document was omitted. Detailed information about how the effectiveness of the barrier was evaluated was not included and the results appeared vague. This is relevant not only to this issue, but to the Ballard Locks situation as well. There was also not enough information to determine whether or not the barrier could be placed elsewhere in the area (a more detailed map showing the placement of the gate would be useful). The EA also does not specify the date, month, or season in 1996 in which the barrier was constructed relative to the timing of sea lion predations, presence, and local distribution for that year.

On pages 2, 8, and 16 of the EA, causation is explicitly stated in reference to the impact of sea lion predation on fish. Given the analysis (or lack thereof) conducted for the referenced situations, inference of causation on what may be no more than a correlation (especially without consideration of some other relevant and important factors) is highly inappropriate.

Under the alternative of non-lethal removal, the use of seal bombs is proposed. While temporary benefits may be incurred through the use of these devices, they may ultimately do more harm than good because sea lions may become permanently deafened (immediately or through repeated exposure) (NMFS 1989), making them impervious to other acoustical deterrents. Even some salmon growers in Maine often choose not to use seal bombs because of concerns about consequent deafness making seals unresponsive to other acoustical deterrents (Anonymous 1996b). This may have been what happened in the Ballard Locks situation, yet the draft EA only states that some of the “repeat” problem animals “appeared to have learned to ignore or tolerate the noise”. In fact, it may not be habituation or tolerance, but deafness which is occurring. We recommend that the EA be amended to include the likelihood that animals may be deafened by these devices.

We are also concerned that the potential effects of replacement animals which may take the place of removed sea lions (see “Stated Purpose ...” above) were not discussed in either the lethal or non-lethal removal options in the EA. This is a serious issue and a discussion of these potential effects should be included in the EA.

OTHER LIKELY SOURCES OF DECLINING FISH RUNS

Dams and Hatchery Fish

While the EA states that “maintenance of natural populations is a high priority in Oregon.”, we are completely mystified that managing agencies continue to release huge numbers of hatchery fish, which have been known to compete with and negatively impact native runs. The Willamette Falls may be an example of how large-scale hatchery releases may exacerbate rather than remedy the decline of salmonid populations (Flemming 1994). The EA states that hatchery Chinook and steelhead (as well as other species) were released into the upper river because “Dams have blocked more than 400 stream miles that were originally the principle spawning areas for native Chinook salmon and winter steelhead in the Willamette River basin” (pg. 5). However, there is no discussion of the potential implications of released hatchery fish or introduced runs on the existing native populations, the impacts of which may be substantial.

While we understand that the purpose of the EA is to address pinniped predation, the potential impact of other factors is very important in assessing the appropriateness of the options presented in the EA, as well as that of the proposed action. It is known that hatchery fish can negatively impact natural populations through competition and direct and indirect effects on the genetic composition of the stocks (Waples 1994). As noted by Waples (pg. 885), “For many decades salmon hatcheries have been seen as a means of enhancing fisheries to mitigate declines in natural populations. Unfortunately, this view has also provided a convenient rationale for ignoring the causes of decline.” Further, actions such as “trucking” smolts to areas below the Falls as well as hatchery supplementation may be viewed as “compensatory” or part of a “serialistic policy”, the latter of which has been described as “exhibiting certain unique traits that culminate in a unified negative effect” (Black 1994, pg. 94). We see this situation at the Willamette Falls serving as a likely example of serialistic policy, the negative effects of which should at least be addressed in the EA. Furthermore, we add the following statement from Black (pg. 894) to illustrate the futility of a serialistic approach: “Serialistic policy requires that institutional objectives need to be reframed to *address the symptoms of ecological decline rather than naming and eliminating their causes.*” Black adds that these policies “*stave off or indefinitely postpone a true reckoning of those profiting from destroying fisheries and their watersheds.*” [emphasis original].

Deficiency of Information on Environmental Quality, Fish Passage, and Overfishing

Water quality and other habitat quality issues at the Falls have also not been addressed in the EA. In particular, we are interested to know for how long the paper mill has been

in operation and the nature of water quality testing around the paper mill. The EA also does not address what might be causing the majority of the fish to be using the other fishways disproportionately. Lastly, based on the information provided in the EA, it is difficult to assess to what extent fishing is impacting the fish runs. We recommend that additional information in each of these areas be provided. Without adequate information on the multiple factors contributing to the diminishing status of the fish stocks, it is impossible to adequately assess the effect of any of the options listed in the EA.

RECOMMENDATIONS

The HSUS recommends that another alternative be proposed in the EA in addition to, or instead of, one of the proposed options. This alternative would include aggressive investigation into the real and primary cause(s) of the fish run declines and would implement solutions to mitigate them. For example, fish passage problems due to design and operation of the fishway and dam (especially fishway #1), hatchery supplementation, and water and general habitat degradation are likely to be factors in the depletion of these runs. This alternative would also prioritize expedient implementation of actions designed to mitigate these factors. This would result in predation being of little consequence to the stocks as was the case for millennia before habitat destruction and other anthropogenic impacts decimated them.

We also recommend that the proposed alternative include minimally invasive monitoring of sea lion presence and predation in the Willamette River and implementation of sea lion deterrence methods limited to safe and realistically promising alternatives (e.g., alternative barrier designs, expanded use of non-explosive acoustic deterrence devices). We oppose sea lion removal (lethal or non-lethal), the use of seal bombs, or any other methods which may inadvertently result in an increase of predation in the long term.

CONCLUSION

Based on our review of the EA, the HSUS is concerned about the lack of sound, conservation oriented management practices which are needed to protect and enhance fish runs in the river. Based on our review, we strongly believe that sea lion predation is not responsible for the decline of spring Chinook and steelhead runs at the Falls. We are concerned that NMFS and ODFW appear to be managing the fish runs in the Willamette river in a biologically unsound manner with unfair bias for fishing interests in lieu of management for conservation of ecological biodiversity. To quote Waples (1994, pg. 885), we assert that "If the root causes of decline of salmon populations are not addressed, even the best-informed genetic principles cannot ensure long term viable populations." Many other salmonid fisheries in the Pacific Northwest, as elsewhere in the world, are declining sharply because of factors completely unrelated to pinniped predation (Hedgecock et al. 1994) and it appears that the same is true in the Willamette River.

We see here a situation reminiscent of the Ballard Locks, where despite widespread acknowledgment that sea lion predation was only one of many problems facing the steelhead run, little action was taken to mitigate any of the other threats to the steelhead with the excuse that they were too “long-term” or needed further study. The result was millions of dollars and over a decade wasted on predation reduction with the result of a run of less than 200 fish. At the Willamette Falls, government agencies now have the opportunity to implement methods of improve fish passage, which will mitigate the most serious problems facing the fish runs - before an emergency situation arises.

We thank you for your attention to our concerns and our recommendations. We believe that options exist which will investigate, address, and mitigate the factors which negatively impact these fish runs much more successfully than the proposed action. We hope that you may find our comments helpful in the development of a management plan to enhance depleted fish runs in the Willamette Falls River. We remain ready to work with you in your efforts.

Sincerely,

Toni Frohoff, Ph.D.
Scientific Consultant to the Humane Society of the United States

cc: Dr. John Grandy/Dr. Naomi Rose - HSUS

REFERENCES CITED

Anonymous. 1996a. Report and Recommendations of the Ballard Locks Pinniped-Fishery Interaction Task Force. Prepared for National Marine Fisheries Service, October 29, 1996.

Anonymous 1996b. Report of the Gulf of Maine Aquaculture-Pinniped Interaction Task Force, 1996. Prepared for National Marine Fisheries Service, February 7, 1996.

Black, M. 1994. Recounting a century of failed fishery policy toward California's Sacramento River salmon

Flemming, I.A. 1994. Captive breeding and the conservation of wild salmon populations. *Conservation Biology*, 8(3): 886-888.

Fraker, M. 1994. California sea lions and steelhead trout at the Chittenden Locks, Seattle, Washington. Report to the Marine Mammal Commission, Washington, DC, page 32.

Flemming, I.A. 1994. Captive breeding and the conservation of wild salmon populations. *Conservation Biology*, 8(3): 886-888.

NMFS memorandum, November 1, 1989.

NMFS (National Marine Fisheries Service). 1993. Proposal for Protecting the 1993/1994 Winter-Run Steelhead at the Ballard Locks from Predation by California Sea Lions and 1994 Studies Necessary for Determining Feasibility of Long Term Resolution Through Structural/Operational Changes to the Locks Facility.

NMFS (National Marine Fisheries Service). 1993. Proposal for Protecting the 1993/1994 Winter-Run Steelhead at the Ballard Locks from Predation by California Sea Lions and 1994 Studies Necessary for Determining Feasibility of Long Term Resolution Through Structural/Operational Changes to the Locks Facility.

NMFS (National Marine Fisheries Service) and WDFW (Washington Department of Fish and Wildlife) 1994. Environmental Assessment on Reducing California Sea Lion Predation on Wild Winter-Run Steelhead in The Lake Washington Ship Canal. March 1994, Seattle, WA.

Pfeifer, B. 1991. Monitoring of 1989-1990 California Sea Lion Control Program in the Lake Washington Estuary. Fishery Management Report 90-17, Washington Department of Wildlife, Mill Creek, WA.

Waples, R.S. 1994. Captive breeding and the conservation of wild salmon populations. *Conservation Biology*, 8(3): 884-886.