NATIONAL COALITION FOR MARINE CONSERVATION

Conserving Ocean Fish and Their Environment
For Over 25 Years

March 23, 2000

Lt. Colonel William E. Buhlen, Jr.
Commander, Walla Walla District
United States Army Corps. Of Engineers
201 North 3rd Avenue
Walla Walla, WA 99362-1876

Re: Lower Snake River Study

Dear Commander Buhlen:

The National Coalition for Marine Conservation is the nation's oldest public advocacy group dedicated exclusively to conserving the world's ocean fish, habitat and environment. Since 1973 our mission has been to reverse the depletion of marine fishery resources by advocating sound fisheries management, and scientists, fishermen, divers, boaters, and wildlife enthusiasts support us nationwide.

The NCMC would like to take this opportunity to comment upon the Draft Lower Snake River Juvenile Salmon Migration Feasibility Report and Environmental Impact Statement (FR/EIS). Every salmonid species found in the lower Snake River is listed under Endangered Species Act regulations, and we feel that a plan to seriously address the problems salmon contend with, especially resulting from the hydropower system, is long overdue. Snake River sockeye salmon, listed as endangered in 1991, are now virtually extinct in the basin except for the life support received from a captive broodstock program. The chances are also high for Snake River spring/summer chinook to follow a similar path to extinction, possibly in just a few short years. Other salmonid species are almost guaranteed (93% chance for steelhead) to become extinct within 100 years. Such high risks of extinction are appalling and further underscore the need for swift, effective action to recover these stocks.

Due to their anadromous nature, salmon face a unique set of problems. From improper logging practices inland to changing oceanic conditions offshore, salmon are negatively impacted at every stage of their lives. Any plan to restore these species, and indeed simply to prevent their extinction, must comprehensively address all the problems salmon face. Mitigating just one contributor to salmon mortality will not provide adequate means of recovery.

It should be noted, however, that status-quo mitigation alternatives have been shown to be insufficient to improve Snake River salmon runs. Increased barging and improved juvenile bypass systems have not only failed to recover the listed species, they have also

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failed to even prevent continued decline. After an extensive review of the FR/EIS, and especially the Anadromous Fish Appendix A, the data clearly show that breaching the four lower Snake River dams must be included in any plan to recover Snake River salmon runs. At this point in time, we fail to see how a non-breaching solution could be justified as a means to adequately recover these species. Salmon recovery will require extreme actions, and aside from dam breaching, nothing proposed thus far will be adequate for recovery. Both PATH and CRI analyses show that dam breaching, while not a "silver bullet," certainly provides the best chance for recovery.

Comparing the Alternatives

Alternative 1—Existing Conditions

It is useful to examine this alternative as a baseline to show the need for action; obviously this alternative would accomplish little in recovering the listed salmon runs.

Alternatives 2 and 3—Maximum Transport of Juvenile Salmon and Major System Improvements

These alternatives would both attempt to maximize the number of juvenile salmon transported with barges and trucks either using the current collection facilities with slight improvements or with major system improvements. Voluntary spill to aid juvenile salmon migration would be minimized with the hope of collecting the majority of fish for transport.

The NCMC feels that these alternatives are risk-prone measures that have already been shown to be ineffective. Ever since the dams were built, improvements have been made that attempt to mitigate the problems created for salmon. These years of improvements have been correlated with years of further decline in the salmon runs, and there is no reason to believe that further improvements will render any benefit. Both PATH and CRI analyses show little benefit in increased juvenile transportation or bypass systems. 1

The FR/EIS touts past salmon mitigation efforts at the dams as actions that likely prevented the extinction of these species. We contend, however, that a more accurate assessment is that these actions likely facilitated extinction. Past efforts to improve juvenile bypass and transportation systems simply prolonged the inevitable demise of these salmon runs, effectively diverting attention away from finding constructive solutions while there was time for action. Now, however, we are still confronted with high extinction risks, and the time for action is extremely short. Previous mitigation activities were only adequate enough to transfer the context of the problem thirty years later, to a time when the region is significantly dependent upon the benefits the dams provide. We are in a far worse position to deal with this problem now than we were thirty years ago, and the salmon runs are even more depleted. Snake River sockeye are already extinct in the basin, according to CRI standards, and additional stocks could follow within the next decade.

1 cont.

Action above and beyond anything that has been implemented in the past is necessary. At the present time, approximately 50% of juvenile salmon are transported around the dams. There is absolutely no reason to believe that increasing this percentage to as much as 90% will accomplish any recovery of the listed species. In fact, this option could be devastating if transportation turns out to have a significant negative impact on juvenile salmon.

2

One point frequently mentioned in both CRI and PATH analyses is that there is a large chunk of mortality that is wholly unaccounted for. This is often referred to as "extra mortality," and a number of hypotheses attempt to explain it. One explanation is "differential delayed transportation mortality," or mortality resulting from increased stress from juvenile transportation. This could result from the concentration of fish in the transportation mechanisms, spreading disease and otherwise reducing the fitness of the juvenile salmon. While there seems to be some agreement that differential delayed transportation mortality exists, the extent of this mortality is extremely difficult to quantify. Yet choosing a mitigation alternative that maximizes the transport of juvenile salmon must assume that this mortality is low, and there is no data to confirm such an assumption.

The NCMC is highly concerned with adopting an approach that is predicated on such a gross assumption. In fact, if differential delayed transportation mortality turns out to be high, and we have made a decision to transport 90% of juvenile salmon, then we have effectively terminated these listed species. Conversely, if dam breaching is chosen, and differential delayed transportation mortality turns out to be low, then comparatively little has been lost. The dams can always be re-activated. Extinction, however, is permanent.

3

There are other problems and inaccurately assessed costs with Alternatives 2 and 3. Sedimentation buildup behind the dams is often cited as a problem with dam breaching but is overlooked in other alternatives. The FR/EIS states that under Alternatives 1-3, the amount of sedimentation behind the dams would not change. This is completely false. The amount of sedimentation buildup behind the dams has been increasing ever since the dams were built. If sedimentation buildup is not addressed, the dams will eventually be rendered unusable for hydropower production and navigation. Alternatives 1-3 must include the inevitable cost of dealing with sedimentation buildup.

Alternatives 2 and 3 maximize the transport of juvenile salmon, removing virtually all juveniles from the river and placing them in barges and trucks. There is certainly a loss in aesthetic or intrinsic value to a river that is devoid of fish, especially to Native American interests. Also, the resident fish populations that depend upon juvenile salmon as a source of food would suffer if most of the salmon were removed from the system.

Alternatives 2 and 3 rely upon risk-prone technological fixes that the past has shown to be ineffective. The assumptions that these two alternatives rely upon to be successful are not based in sound science, and if incorrect, will devastate the listed salmon runs. The available science does not show these alternatives to provide the best chance for salmon

3 cont. recovery either. Other options which do not carry the same amount of risk and that have greater chances for success should be pursued.

Alternative 4—Dam Breaching

This option would remove one of the earth-rock wings from one side of each of the four dams on the lower Snake River, leaving the power house and navigation lock in place for future need.

Dams directly and indirectly result in both adult and juvenile mortality. Adults migrating upstream could face 3% mortality at each dam and juveniles are shown to have a 1-10% mortality rate, again at each dam, depending on the method of dam passage. Considering that Snake River salmonids must surmount 8 of these dams as juveniles and again as adults, the sum of mortality at each dam amounts to the removal of an extremely large portion of the population. These figures do not include the myriad other problems dams create for salmon, such as: increased dissolved lethal gasses and decreased beneficial gasses; increased temperatures; and increased out-migration time, resulting in increased predation on salmon smolts, increased exposure to in-river pollution, and a possible disruption in natural cycles. The mortality from these other factors, while largely unmeasured, certainly cripples the ability to restore salmon runs. Removing the four lower Snake River dams could give these threatened and endangered species a jump start on the road to recovery.

4 Of all the listed species, spring/summer chinook are in the most precarious situation since sockeye have already gone extinct. Of all the available options for recovery, both PATH and CRI analyses point to dam breaching as the most likely of the four alternatives to recover these dwindling runs.

In the PATH analysis, dam breaching had the highest frequency of achieving the necessary population levels for recovery. Also, one of the few conclusions of the CRI analysis was that only a suite of major management actions reduced extinction risks to acceptable levels. These major management measures included habitat restoration, harvest limits, predator control and dam breaching. Only the latter, dam breaching, is discussed as a possible alternative in the FR/EIS. Alternatives 1-3 in the FR/EIS rely upon actions that have relatively little value in both PATH and CRI analysis. The only major management action deemed worthy from a CRI standpoint that is proposed in the FR/EIS is dam breaching; the other measures are not included in any of the other alternatives. There is little justification therefore in choosing Alternatives 1-3 because those alternatives rely upon mitigation measures that have been shown to be inadequate, both in the lab and in thirty years of practical application.

CRI analysis also concludes that dam breaching alone is likely to recover both fall chinook and steelhead. While CRI analysis also predicted that a harvest moratorium would have similar results, there is no guarantee that a harvest moratorium will accompany Alternatives 1-3. In fact, the likelihood that the National Marine Fisheries Service will implement a no-take harvest is minimal, so considering such an option in the

context of this FR/EIS is moot. Real benefits that would directly result from Alternative 4 are compared with other management measures that may or may not be implemented with Alternatives 1-3, making such comparisons unjustified and misleading.

It should be noted that dam breaching provides a double benefit to fall chinook. Not only will the species recover from removing hydropower-associated mortality, but an additional 70% of suitable spawning habitat will also be made available. We contend that the lower Snake should be considered Essential Fish Habitat (EFH) and therefore provided with all the legal protections afforded to such areas.

4 cont.

There are other considerations of dam breaching that the NCMC does not feel are adequately assessed. The FR/EIS claims that dam breaching would concentrate pollution in the river because of reduced river depths and cross-sectional areas of the channel. However, the loss of river area will be compensated by increased flows in the river. In assessing the effects on air quality, the FR/EIS is quick to point out the possible increases in emissions from increased rail and truck transportation to replace barging lost as a result of dam breaching. However, the FR/EIS fails to consider the reduction of emissions from lost barge traffic. Also, the loss of hydroelectric power from dam breaching could easily be countered by energy conservation drives, and we feel this option has not been adequately examined. Finally, the FR/EIS seems to imply that uncovering the various cultural and archaeological sites along the river that were submerged when the dams were constructed is an added cost of dam breaching because these sights might be damaged by vandalism or fluctuating river levels. Restoring access to sights of extreme importance to Native Americans and to the history of our country should in no way be construed as an added cost of dam breaching; to the contrary, uncovering these important sights is a laudible byproduct.

Both PATH and CRI analyses show that dam breaching, while possibly not sufficient by itself to recover spring/summer chinook, provides the best chance of recovery for all listed species. These chances may even be increased if the effects of dams are worse than perceived, or if juvenile bypass and transportation systems contribute significantly to extra mortality, two possibilities that are extremely plausible.

The most important consideration, however, is that breaching is not a permanent choice. If the benefits to salmon are found to be negligible and the impacts to humans extreme, the dams can be easily reinstated. The converse is not true. Also, if we choose a non-breaching option, and we find such an alternative insufficient to recover salmon runs, we have lost the narrow window of opportunity to save these fish. The extinction risk is so high that time limits the number of decisions that can be made. The prudent course of action is to adopt the most risk-averse plan with the highest chance for recovery. Non-breaching scenarios do not contain the needed specificity, scope, and promptness of implementation to provide the chances for recovery that dam breaching does.

The NCMC therefore recommends, wholeheartedly and without reservation, the swift implementation of Alternative 4, breaching the four dams on the lower Snake River. Thank you for the opportunity to comment on the Feasibility Report and Environmental Impact Statement.

Sincerely,

J. Tim Hobbs
Fisheries Project Director