



February 27, 2007

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Via email: orca.plan@noaa.gov

RE: Draft Proposed Recovery Plan for Southern Resident Killer Whales (*Orcinus orca*)

Dear Ms. Darm and Ms. Barre,

Thank you for the opportunity to comment on the *Draft Proposed Recovery Plan for Southern Resident Killer Whales (*Orcinus orca*)*, dated November 2006.

People For Puget Sound is a nonprofit, citizens' organization whose mission is to protect and restore Puget Sound and the Northwest Straits, including a specific goal to protect and restore the 2,000 miles of Puget Sound shoreline by 2015.

Defenders of Wildlife is a nonprofit environmental organization with approximately 500,000 members and supporters. Defenders is dedicated to the protection of all native wild animals and plants in their natural communities. Defenders advocates new approaches to wildlife conservation that will help keep species from becoming endangered. Our programs encourage protection of entire ecosystems and interconnected habitats while protecting species that serve as indicator species for ecosystem health.

The National Wildlife Federation's mission is to inspire Americans to protect wildlife for our children's future. With approximately 4 million members and supporters nationwide, National Wildlife Federation educates and empowers Americans to protect and restore wildlife, connect people with nature, and address the threat of global warming.

PEER is a national non-profit alliance of local, state and federal scientists, law enforcement officers, land managers and other professionals dedicated to upholding environmental laws and values.

The Center for Biological Diversity is a non-profit organization dedicated to the protection of imperiled species and wild spaces through science, advocacy and the law.

Save Our Wild Salmon is a nationwide coalition of conservation organizations, commercial and sportsfishing associations, businesses, river groups, and taxpayer and clean energy advocates working collectively to restore self-sustaining, healthy, and abundant wild salmon to rivers, streams and oceans of the Pacific Salmon states.

Southern Resident Killer Whales are a signature species of Puget Sound and their health and population status are indicators of the health of the Sound overall. We believe that significant, aggressive and timely actions must be taken just to protect, let alone to recover, their diminished population.

The draft Recovery Plan, especially the Background Section, is well written, clearly organized, and is inclusive of scientific research to date. The threats to orcas are well defined. We are troubled, however, that the Recovery Strategy, Goals, Objectives, Criteria, Program and Implementation Schedule and Costs are not strong enough to recover the Southern Resident orca population.

We appreciate that NOAA Fisheries has produced orca ESA documents on schedule and is pursuing a high quality orca research program. What we don't see in the document is the partnership effort that is needed with other federal agencies, tribal governments, state agencies, the Canadian government, businesses, nonprofit organizations and others to address orca recovery. It is not clear that significant outreach to these partners has occurred yet. Piggybacking on existing programs such as Shared Strategy and Puget Sound Partnership is an appropriate strategy but this Recovery Plan must go further than these efforts, which are built on compromise and have some serious gaps related to the protection and improvement of critical ecosystem components fundamental to orca recovery.

The ESA requires that the NOAA Fisheries "develop and implement" a recovery plan "for the conservation and survival of" any threatened or endangered species. 16 U.S.C. § 1533(f)(1). Generally, a recovery plan "identifies and assigns priorities to actions required for the recovery of a species." National Marine Fisheries Service Recovery Planning Guidelines (September 1992). Thus, a recovery plan acts as a "basic road map to recovery, i.e., the process that stops or reverses the decline of a species and neutralizes threats to its existence." Fund for Animals v. Babbitt, 903 F. Supp. 96, 103 (D.D.C. 1995). The ESA states that, "to the maximum extent practicable," the recovery plan must contain both "site-specific management actions necessary for the conservation and survival of the species," and "objective, measurable criteria" by which the recovery of the species may be judged. 16 U.S.C. § 1533(f)(1)(B).

The development of the "site-specific management actions" within a recovery plan requires the NOAA Fisheries to "consider the distinct needs of separate ecosystems or recovery zones occupied by a threatened or endangered species." Fund for Animals, 903 F. Supp. at 106. Indeed, for a recovery plan to meet the statutory standard, it must be "as explicit as possible in describing steps to be taken in the recovery of a species." Id. (citing S. Rep. No. 240, 100th Cong., 2d Sess. 9 (1988)). In the absence of detail and specific management actions, the NOAA Fisheries will not be able to properly "implement" the plan, and such "inaction eviscerates the recovery planning provisions . . . and amounts to an abdication of the [NOAA Fisheries] responsibility to plan for the survival and recovery . . . of endangered and threatened species." Id. (quoting Sierra Club v. Lujan, 1993 U.S. Dist. LEXIS 3361, *66 (W.D. Tex. 1993)).

ESA Section 4(f)(1)(B) Statutory Requirements 1 and 3:

Our major comment is that the Management Actions and Implementation Schedule do not meet the ESA Section 4(f)(1)(B) statutory requirements described on page 118 of the draft Recovery Plan:

“1. A description of the site specific management actions necessary to achieve the plan’s goal for the conservation and survival of the species”

nor

“3. Estimates of the time required and cost to carry out those measures needed to achieve the plan’s goal and to achieve intermediate steps toward that goal.”

Below we provide specific comments on the ways that these requirements are not met:

1. Regulatory Actions. Table 6 (page 74), *Factors considered in listing and potentially affecting recovery of Southern Resident killer whales*, clearly identifies threats to orca and the barriers to overcoming these threats. For several of the threats, including Contaminants, Vessel effects, and Sound, an identified barrier is “Inadequacy of Existing Regulations.” Therefore, the Recovery Plan must clearly recommend the specific regulatory actions needed to ensure the recovery of the species.

2. Lack of benchmarks. The approach in the draft Recovery Plan is forgiving rather than directive in terms of timely implementation of actions. Although an adaptive management strategy is warranted, such an approach should also incorporate specific benchmarks that much be achieved by certain dates. At those dates, 5 year or 10-year intervals, an assessment can be made and a change of course implemented. Otherwise, we have a sliding timeline in which we continue to merely “minimize” our impact. History has shown this approach usually “minimizes” the benefits for and protections of listed species.

3. Recovery Program Outline (pages 127-132). This outline of recovery measures relies heavily on the use of such terms as “minimize” and “support.” This soft approach over the past several decades has led to our diminished orca population. It is the responsibility of NOAA Fisheries, we believe, to outline specific actions and benchmarks that get us beyond “minimization.” The terms that should be used are “Significantly reduce” or “eliminate the threat of” or other more directive language. Better yet would be for NOAA Fisheries to identify quantitative benchmarks for toxic clean up, toxic loadings, noise in the marine environment, habitat loss for food species, etc. Interestingly, the language *is* more directive and detailed in the Research and Monitoring section of this chapter.

4. Recovery Action Narrative (pages 133-165). Almost all of the management actions (habitat management, regional restoration, prey contamination, etc.) are described in broad, general terms. By contrast, the Research and Monitoring actions are specific. There is no reason why management actions cannot be specific and directive. We strongly recommend that the management section be re-formatted and significantly strengthened with specific bulleted actions that relate to specific management measures and trace directly back to benchmarks identified under each measure.

Our suggested approach is (this same approach should be taken for each action, these are just examples):

a. Habitat Management (1.1.1.1).

- Improve salmon habitat on a regional basis with targeted recovery of xx salmon populations to xx level in xx years, with a focus on prey density year-round.
- Removal of large bottlenecks for large salmon populations, such as culverts blocking fish passage, tidegates diminishing estuaries, and dams in xx watersheds by xx date, prioritized by amount of prey gain and other related factors.
- Increase nearshore salmon habitat by xx amount in 10, xx in 20 years. Increase nearshore productivity at the same rate as the streams, so that one or the other does not become a bottleneck.
- Implement updated landuse plans, such as shoreline management plans and critical area ordinances that will directly address improvement and protection of salmon and other aquatic habitat including sufficient shoreline buffers, riparian vegetation protection and restoration, and clean water incentives.
- Ensure that Washington Department of Ecology manage streamflow, through allocations and other methods, to provide adequate flows for salmon and other aquatic species.
- Ensure water flow is adequate in the Columbia System (Oregon, Idaho, Montana, British Columbia, California, Nevada and Utah) and in other river systems in California and Oregon, particularly the Klamath.
- Significantly improve water quality management actions in Shared Salmon strategy (and WRIA plans) so that, at a minimum, water quality standards are met.
- Implement stormwater NPDES permits and other stormwater management tools to ensure that water quality standards to protect aquatic species are met
- Implement TMDLs and other actions to remove contaminated waterbodies from the state's 303(d) list
- Create a mechanism (feedback loop) that ensures that habitat management takes into account anticipated climate shifts. Actions adequate in present climate may not be adequate in a warmer climate.
- Etc.

b. Improve restoration for other species (1.1.2)

- Monitor progress of recovery of species that are covered under existing management plans. Identify gaps in these plans.
- Develop management plans for other species not currently covered
- Increase the number and acreage of marine protected areas to a level that ensure adequate protection of important critical spawning, feeding and rearing areas for important other aquatic species
- Identify gaps and increase enforcement of protection of other species
- Etc.

c. Cleanup contaminated sites and sediments (1.2.1)

- Identify and create a GIS map of all sediment and upland sites with contaminants of concern to orca recovery in Puget Sound and the Strait of Juan de Fuca by December 31, 2007 (with contamination levels above recognized government standards)
- Create a cleanup timeline for these sites, prioritized by the largest threats, so that all sites are cleaned up by 2020.
- Clean up all Superfund sites, which should already be a high priority based on their high levels of contamination, on a similar timeline.

- Monitor all cleanup sites for re-contamination problems as well as success of cleanup methods and create a database that tracks this information in a systematic (and easy to use) fashion
- Etc.

Again, these are examples. We would be happy to meet with NOAA Fisheries to help work through a similar process for all management actions.

5. Add new action: Source control. [This action is different from action 1.2.2 that addresses continuing pollution in a broad way] A huge priority should be placed on source control because source control is one of the main limiting factors for site cleanups. USEPA and the Washington Department of Ecology should identify human and financial resources necessary to do this task effectively and devote those resources to source control for Puget Sound cleanup sites. Cleanup cannot proceed until source control is adequately addressed.

6. Add new action: Stormwater control and treatment. Stormwater is such an important issue that it should be addressed by its own directive action. Contamination from stormwater has been described as the most significant toxic threat to Puget Sound. Stormwater control and treatment is also critical for salmon recovery. Recently issued municipal stormwater permits do not adequately address water quality standards and land use planning. Significant funding is needed on local, state and federal levels to remove the threat of stormwater to the health of Puget Sound and to Southern Resident orcas.

7. Strengthen water quality actions. Excessive nutrients, persistent bioaccumulative toxic (PBTs) chemicals, and other contaminants continue to be discharged into the Puget Sound drainage under federal wastewater permits. This contaminant load should be capped at today's levels and then gradually reduced with an aggressive new level of green chemistry and technological investments. Mixing zones for PBTs should be phased out by 2015. Water quality and sediment standards should be upgraded within 3 years to ensure orcas are not exposed to harmful PBTs.

8. Add new action: Endocrine Disruptors. Reduction of endocrine disruptors should be addressed by their own recommended regulatory action. Much recent human, rodent and other mammal research has pointed to fecundity decreases due to endocrine disruptors in products and in the environment. These chemicals, including phthalates, PAHs, some pharmaceuticals, and some pesticides, should be addressed at a state or federal level with Chemicals Policy Reform – that is, manufacturers should be required to identify which chemicals are in products and industrial processes in Washington State, prove that these chemicals cause no reproductive, toxic or carcinogenic harm to mammals and find safer alternatives. As is pointed out on page 98 of the draft Recovery Plan, “environmental levels of many emerging contaminants, which are typically poorly regulated, are probably increasing.” This threat is significant and must be directly addressed more aggressively than the proposed action that calls for an environmental monitoring program.

9. Add new Action: Effective enforcement of existing regulations. The array of existing environmental protection laws, if enforced, could significantly improve the health of the Puget Sound ecosystem and help reduce threats to orcas. This need for enforcement extends to removal of barriers to fish passage with a priority on blockages that cause greatest diminution of salmon runs. Noise is a good example where enforcement of existing regulations would be beneficial. Funding for enforcement is also needed.

10. Harvest and hatcheries. The Recovery Plan should aggressively address the difficult issues of harvest and hatchery management. In terms of salmon restoration, the focus should be on minimizing

harm to wild salmon from hatcheries and supporting wild salmon recovery. For example, wild and hatchery salmon provide different contributions and opportunities as a food source for orcas and the recovery plan should plan actions carefully with these differences and distinctions in mind.

11. MOU with Navy. A Memorandum of Understanding (MOU) should be developed with the Navy so that their specific adverse actions can be addressed directly rather than sprinkled through actions and excluded in the critical habitat designation.

12. Climate Change. Briefly mentioned in Research Action B8, climate change should have a stronger emphasis in this Recovery Plan. Climate change could be one of the most significant factors in the survival and recovery of orcas given the potential for much more frequent sewer or combined sewer overflows, other toxics releases, spread of diseases, loss of nearshore habitat, change in food web characteristics and more.

13. Cumulative Impacts. It's important that management actions be evaluated in terms of cumulative effects rather than on a case-by-case basis. Cumulative impact assessment should be explicitly built into most of the management actions. For example, if the plan calls for increasing nearshore salmon habitat, projects that reduce nearshore habitat should not be approved, even if the reduction in habitat seems insignificant.

14. Dam Removal in Lower Snake River. While much of the draft recovery plan's discussion of prey species necessary for a recovered orca population focuses on those stocks most commonly found in the Puget Sound/Georgia Basin area, the plan correctly concludes that "[p]erhaps the single greatest change in food availability for resident killer whales since the late 1800s has been the decline of salmon in the Columbia River basin." p. 82. Southern Residents, particularly K and L pods, typically vacate the inland waters of for the late fall and winter months and migrate either north along the west coast of Vancouver Island or South along the Washington and Oregon coasts, sometimes as far south as California. As NOAA Fisheries acknowledges in the recovery plan, salmon from the Columbia River Basin, which once numbered from 10-30 million returning salmon per year, were a vital food source for the Southern Resident population during these crucial months. Many Columbia Basin salmon, especially fall chinook, have migration routes that bring them close to the coast where Southern Residents are most frequently spotted. As the recovery plan notes, L pod has been observed feeding on the Columbia River spring chinook run in the spring of 2004. Not only are salmon from the Columbia River an important historic food source, recovered abundant salmon in this river are an indispensable requirement for the recovery of Southern Residents. We believe that NOAA Fisheries' acknowledgment of the importance of this food source in the draft plan is critical and we urge the agency to include in the final recovery plan specific recovery criteria for the number and seasonal distribution of salmon, particularly chinook, that Southern Residents need to return to the Columbia River to support a recovered population. To support and implement these criteria, the agency should include removal of the four Lower Snake River dams as a site-specific recovery action in the recovery plan. This action is the single most effective way to generate the abundant Columbia Basin salmon that Southern Residents need to recover.

15. Klamath River Dams. The Klamath River was once the third largest salmon river in the US portion of the Southern Resident range, and would also benefit from dam removal. Its location between the Columbia and the Sacramento will be important to establishing independent sub-populations.

16. *Pacific Salmon Treaty.* Given its huge impact and NOAA Fisheries' role in consulting on the next round, this treaty is a huge issue that should be addressed in the Recovery Plan. As this treaty is renegotiated orca recovery actions should be included.

17. *Additional Critical Habitat.* The Recovery Plan should prioritize designation of additional Critical Habitat as soon as possible. Recovery targets are inadequate, and as a result Hood Canal is in fact essential to the recovery of the species. Additional data from the Pacific Coast will undoubtedly justify designation of additional Critical Habitat there. Due to the ratchet nature of Critical Habitat, designation sooner rather than later is important.

18. *Shallow Water Use.* Research oriented toward documenting use of shallow water is also needed, as it may be important in expanding critical habitat.

19. *More specific International actions.* Specific language and targets should be included to address international issues related to orca recovery. These actions could enhance the ongoing cooperation with the Canadian Killer Whale Recovery Team and indeed we should support the Canadian effort with funds and research (to protect Southern Residents on their side of the border). Some examples of issues that should be addressed by specific actions are:

- The Fraser is probably the primary source of food for Southern Residents at this time
- Canada has its own habitat that is critical.
- International sources of toxins will become relatively more important as we reduce US sources.
- Salmon fisheries in international waters need to be managed.

20. *Educational map.* Oregon and California as well as Washington are orca habitat, and inland states like Idaho contain watersheds that drain into Southern Residents' habitat. In addition to the toxic sediment map, it would be productive to produce watershed maps showing where contaminant sources drain into the Southern Resident range and an airshed map showing where aerial discharges find their way into orcas through prey. Also, having a range map for prey species would help people envision where human activities affect Southern Residents.

21. *Synthesis of existing knowledge to expedite actions.* Existing knowledge should be synthesized from a regulatory perspective. This should be a priority to allow initial management actions to be taken, followed by adaptive management changes as additional data on threats become available and the effectiveness of on-going management protocols is assessed. That is, a quantitative population dynamics model should be developed that incorporates food availability, disturbance, toxins, disease outbreaks, oil spills, and other factors. The effect of proposed actions on population growth rates could then be estimated. In turn, stakeholders could be convened to set timelines for habitat improvement actions in various sectors (fisheries, vessels, noise, oil, the Navy, stormwater, toxins, etc.) that would result in steady population growth.

22. *Follow-up forums on management actions.* The set of science workshops that NOAA Fisheries have held related to orca recovery have been excellent. We suggest the NOAA Fisheries convene a series of similar workshops to refine the management actions for the Recovery Plan so that the actions can reach the level of specificity and detail of the Monitoring and Research Actions in the draft.

23. *Implementation schedule and costs.* The implementation table of the draft Recovery Plan does not include costs for many actions and does not address additional costs for underfunded programs. Further, the budget should be developed to reflect actions not motivated by killer whale recovery (e.g., superfund

cleanups, recovery of endangered salmon), but that would contribute to killer whale recovery and could be expedited for this reason. Specific gaps noted include:

- The draft Plan assumes that existing salmon recovery plans are adequate even though there are significant gaps and substantial uncertainties in this effort.
- The draft Plan does not address the need for additional funding for contamination cleanup and source control. Existing cleanup efforts are significantly and chronically underfunded.
- Stormwater management will require significant increases in funding to perform at even marginally adequate levels.
- Non-endangered salmon stocks need to be maintained and enhanced where possible, in addition to restoration of listed stocks.
- The budget needs to include an allowance for programs that don't have specific costs (e.g., disease management).

The budget should be front-loaded starting in FY'08 to allow initial actions to be implemented (e.g., essential research, management actions justified based on existing information, the first ten years of salmon recovery, etc.). Finally, it is a huge miscalculation to presume that the research program is expected to cost almost 6 times more than management actions. Although research is critical, on-the-ground actions, if fully described, should cost many multiples of the research costs from the start.

ESA Section 4(f)(1)(B) Statutory Requirement 2:

In addition, we have the following comments regarding the objective measurable criteria that would lead to a removal of orcas from the list:

1. *Biological Criteria* (pages 119-126). There is no compelling evidence presented that a 2.3% per year population growth rate indicates a healthy population of Southern Resident Killer Whales. In fact, after a period of growth at this rate, the Southern Resident population declined precipitously. The 3% per year growth rate of Northern Residents, which are less likely to suffer from reproductive impairment and immuno-suppression due to toxins, is a better target. A larger population is less likely to be affected by random fluctuations so is better able to maintain consistent growth. Nevertheless, some variation in rate is to be expected due to changes in age structure and sex ratio.

As a trigger for downlisting or even delisting, other factors should be more important, and a sustained growth rate close to 3% should be required. Absolute population size (500-1000 individuals), the existence of subpopulations (with three different core areas), the number of breeding individuals (250-1000), population trends (increase near 3%/year), range utilization (use of core areas for weeks to months with travel throughout the range the remainder of the year), and the result of population viability analysis (with population parameters adjusted to produce a stationary rather than increasing population with a maximum possible size set at the then current size, and allowance for catastrophes such as disease outbreaks or oil spills) all should be favorable before change in status takes place.

2. *Threats Criteria, Factor A-2, Fisheries Management* (page 123). This factor should include support of *wild* salmon stocks as a key to the long-term sustainability of the health of the Puget Sound ecosystem and of orcas. Fisheries management needs to consider the status of the Sacramento, Klamath, Columbia, and Fraser rivers, along with smaller coastal rivers. In addition, the importance of non-salmonid species needs to be understood and those species need to be healthy enough that their abundance and trends don't pose a threat to continued SRKW survival. A lot more than Puget Sound salmon need to be considered.

Targets for Salmon Recovery. A 3% per year growth rate for orca recovery (see above) corresponds to about 34% over 10 years, and 81% over 20 years. The food supply will need to keep up with the whales, so 3% is a realistic target. We need to add 10%, since the brief recovery in the population has reversed. The year 2002- 4 average - is the baseline to grow from. Salmon returns vary with natural variations in climate, so an allowance should be made for adequate fish in bad years. Reasonable targets (from the orcas' perspective) might be 50% in 10 years and 100% over 20 years. Toxic load may preclude maximum growth even if fish are abundant, but reduced population growth would be expected until females who already have high toxin levels die or reach post-reproductive age.

3. Threats Criteria, Factor A-3, Contaminant Levels (page 123). Although a focus on legacy pollutants is important, this factor should also include ongoing pollution such as flame retardants, PAHs, endocrine disrupters, metals, emerging chemicals, and more.

4. Threats Criteria, Factor D, Inadequacy of existing regulatory mechanisms (page 124). It is not clear why the objective for this factor is limited to the impact of contaminants on the species. The inadequacy of existing regulatory mechanisms is a contributing factor to a majority of the threats to the whales. Thus, the object here should be stated to include the elimination of all threats that currently exists as result of the lack of necessary regulatory protections, such as, but not limited to: contaminants, vessel effects, sound, oils spills, and invasive species. We recommend that this section be expanded to include all regulatory actions that must be implemented to protect the species from these threats.

5. Threats Criteria, Factor E, Other Natural or Manmade Factors (page 124). Similarly, this section is too limited in scope. Oil spills are not the only manmade factor impacting the species and threatening its recovery. We recommend that specific factors be added to address each item (i.e., oil spills, population status, coastal use, etc).

6. Threats Criteria, Factor E 2, Oil spill prevention (page 124). We object to the language of this factor – that oil spill prevention plans must be “no less protective than those in place at the time of listing.” The plans should be *much more* protective than the old plans. They are outdated and inadequate.

Thank you for your consideration of our comments and we look forward to continuing to work with you to recover our signature orcas.

Sincerely,

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