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November 12, 2009

Teresa A. Eturaspe, SEPA/NEPA Coordinator
Washington Department of Fish and Wildlife
600 Capital Way North
Olympia, WA 98501-1091

Dear Ms. Eturaspe:

Thank you for the opportunity to review the Department of Fish and Wildlife's DRAFT Environmental Impact Statement (DEIS) for the Puget Sound Rockfish Conservation Plan. It is obvious that a lot of time and energy has been put into this DEIS.

Over the last decade, the SeaDoc Society has funded and conducted nearly \$700,000 in scientific research on the status, biology and recovery of rockfish in the inland waters of Washington and British Columbia. These projects include:

- Using Multibeam Bathymetry to Characterize Rockfish Habitat in San Juan County, Washington Marine Reserves, USA
- Larval Rockfish Dispersal Trajectories in the Georgia Basin/Puget Sound Region of Washington State
- Tracking Species of Concern in the Puget Sound Georgia Basin
- The Use of Genetic Tagging to Assess Inshore Rockfish Populations Within a Marine Conservation Area in the Strait of Georgia
- Genetic Identification of Progeny of MPA-Resident Copper Rockfish (*S. caurinus*) - Self-Recruitment or Emigration
- Using Volunteers to Monitor Fish and Invertebrate Populations
- Estimating Importance of Rockfish, Lingcod and Other Bottomfish in the Diet of Harbor Seals in the San Juan Islands
- Data Input Requirements for the Designation of Rockfish Conservation Areas in Howe Sound: Improving Tools for Decision-Making to Enable Rockfish Recovery Strategies in British Columbia
- Evaluating the Efficacy of San Juan County's Voluntary Bottomfish Recovery Zones
- What is Natural in the Puget Sound Ecosystem? Establishing Baseline Conditions and Identifying Ecological Indicators

As noted in the DEIS document, rockfish stocks in Washington's inland marine waters have been greatly depleted and are in urgent need of restoration. Recovery will help restore the Puget Sound



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marine ecosystem, provide viewing opportunities by non-consumptive users like SCUBA divers, and rebuild sustainable fishing opportunities. Our comments on the DEIS are divided into two areas, (1) comments related to the Range of Actions proposed for each of the eight policy categories and (2) comments related to improving the DEIS as written.

Comments related to the Range of Actions proposed for the Policy Categories:

1. **Natural production:** While Alternative 1 is the ideal alternative, the high diversity of rockfish species found in Puget Sound combined with the patchy distribution and rarity of some species makes this an untenable option. We strongly support your preferred option of Alternative 2, to manage rockfish placing a high priority on the protection of key rockfish species and stocks assuming those are the key species listed in Table 1 on page 58.
2. **Habitat:** We strongly support your preferred option of Alternative 1 to protect and restore all marine habitat types for all rockfish species, and not limiting efforts to key rockfish species.
3. **Fishery Management:** Overharvest has been a critical factor in depleting most rockfish species. Also, rockfish bycatch is an issue for the harvest of many species, including salmon, halibut and lingcod. Furthermore, rockfish usually cannot be released unharmed when accidentally caught. Therefore we strongly endorse your preferred option of Alternative 1 to manage all fisheries in Puget Sound to ensure the health and productivity of all rockfish populations.
4. **Ecosystem:** Although you correctly state that our understanding of the food web and other ecosystem functions of rockfish are largely unquantified, this does not justify selecting no action as the preferred option for the Ecosystem Category. It is well understood that large numbers of species prey upon rockfish while others are prey for rockfish. Understanding the food web and accounting for ecosystem connectivity are critical ecological principles for designing healthy ecosystems ([Gaydos et al, 2008](#)). For too long we failed to account for these when setting harvest restrictions or working to recover species in decline. Taking no action on this because of limited information is unacceptable. We should at least consider Alternative 2 that strives to protect the existing functions of key rockfish and conduct opportunistic activities to restore the functions of key rockfish in the complex ecosystem. Lack of understanding is no longer an excuse to not attempt to manage complex ecosystem-level functions as they relate to species recovery.
5. **Monitoring, Evaluation and Adaptive Management:** We strongly encourage you to consider an intermediate option between Alternative 1, which would monitor all rockfish populations and Alternative 2, which would monitor key rockfish populations, once again assuming those are the key species listed in Table 1 on page 58. While scientifically rigorous monitoring of species that occur at low density, at significant depths and with patchy distribution is not financially tenable, the use of the already established citizen-science REEF environmental education foundation monitoring of rockfish currently conducted by volunteer SCUBA divers could help improve on the limitations of only monitoring key rockfish populations. Data collected by trained volunteer SCUBA divers (at no cost or liability to WDFW) should at a



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minimum be reviewed annually by WDFW biologists to help monitor species that are not monitored in a fishery-independent manner by the state.

6. **Research:** Because Alternative 1 would foster the development of sustainable fishing opportunities more than any of the other alternatives, we strongly encourage you to consider changing your preferred option from Alternative 2 to Alternative 1. Science is our best foundation for making informed decisions both on the recovery and the sustainable harvest of species. Had we invested more money in science earlier we might not have let our rockfish populations become this depleted. Investing money in science has much more merit than the proposed investment in enhancement (see Enhancement below).
7. **Outreach and Education:** We strongly support your selection of Alternative 1 to conduct a comprehensive outreach and education program to inform Washington citizens of the value of rockfish populations in Puget Sound. Science and education are key building blocks for recovering and managing species as well as for designing healthy ecosystems ([Gaydos et al., 2008](#)).
8. **Enhancement (Artificial Reef and Hatchery Production):** We are strongly opposed to your preferred option of Alternative 2 to develop plans to utilize hatchery production to assist in recovery and to enhance habitat for key species through the use of artificial habitat. There are no data presented that support the need for hatchery production or the use of artificial reefs for rockfish recovery. It is our understanding that although depleted, existing rockfish populations are not functionally incapable of reproducing (as Northern abalone likely are), nor that hatchery production of rockfish has proven to be a wise use of funds. Historically, the use of hatcheries as in the case of salmon has been a crutch upon which we have precariously balanced as a panacea that permitted us to continue the damaging actions that got us into fisheries declines in the first place. Furthermore, there are no data that show that habitat availability is cause for rockfish declines or a limiting factor for rockfish recovery. It is a well accepted ecosystem principle to respect ecosystem integrity ([Gaydos et al., 2008](#)). Keeping all the parts of an ecosystem and not adding new ones does not include the addition of man-made structures to create artificial reefs. It is interesting that even in the least conservative option, Alternative 4, artificial reef habitat and hatchery production are still called for. What happened to no action and why are these two expensive, yet ecologically ungrounded tools being considered for all alternatives?

Additional comments related to improving the DEIS:

1. On page 15, Table 4: All killer whale ecotypes, including the Southern Resident population are listed as State Endangered (SE). The possible interaction with rockfish is not listed for numerous species. Species should be removed if they do not have a possible interaction with rockfish. Alternately, you should list all of the listed species in Washington. Species like the Western grebe that are found in Puget Sound and are listed are not currently in the table.
2. The frequently cited reference Palsson et al., 2009 is not listed in Appendix 3. Literature Cited.
3. The Food Web Dynamics section (pages 34-35) has multiple points that need to be addressed. Specifically, we believe you are referring to the inland waters stock of harbor seals when



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discussing harbor seal growth. Jeffries name is misspelled on the 3rd line. Harbor seals eat primarily small schooling pelagic fish like herring (and salmon when available) and rockfish can comprise a range of 2 to 12% of harbor seal diet in rocky habitat (not in other areas such as in Puget Sound proper). The Lance and Jeffries work cited was a 2 year study (funded by the SeaDoc Society) and WDFW should acknowledge the interannual variation of rockfish in diet. Also, it bears discussion that the rockfish found in harbor seal diets could not be speciated. River otters also have been reported to predate rockfish however there is no mention of this in the section (Jones, C. 2000. Investigations of prey and habitat use by the river otter, *Lutra canadensis*, near San Juan Island, Washington, MS Thesis Western Washington University). Finally, there are actually a multitude of species of marine birds (not several) in decline in Puget Sound.

Thank you again for the opportunity to provide comment. We are excited to see rockfish recovery move forward in the direction that salmon and killer whale recovery have moved and we hope to see similar funding follow this effort to make this recovery a reality. Please do not hesitate to call or email (jkgaydos@ucdavis.edu) with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'J.K. Gaydos'.

Joseph K. Gaydos, VMD, PhD
Chief Scientist, SeaDoc Society



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