



CITY OF PORTLAND ENVIRONMENTAL SERVICES



1120 SW Fifth Avenue, Room 1000, Portland, Oregon 97204 ■ Charlie Hales, Mayor ■ Dean Marriott, Director

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Steve Stone
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Dear Mr. Stone:

Thank you for the invitation to peer review the critical habitat designations for Lower Columbia River coho and Puget Sound steelhead. My colleague - City of Portland Fish Biologist Melissa Brown - assisted in review of the proposed designation. For the most part, the draft designations rely on extensive, current and robust science to propose many important protections that will be critical for protecting and recovering these threatened populations. We support the designation of critical habitat in many local Portland streams and rivers. These local streams and rivers provide important spawning, rearing and migratory habitats at a critical juncture in the landscape - the joining of the region's two largest rivers at the head of the Columbia River Estuary.

Our proposed additions and suggested changes detailed below are based on available published and unpublished data. While you have included many important habitats, there are additional local habitats where coho presence has been documented. We have identified these locations under the section "Extension of Critical Habitat Endpoints" and encourage you to extend critical habitat to include these habitats with documented coho use. In addition, a second section - "Lateral Extent of Critical Habitat" - describes some issues and suggestions with the proposed lateral extent of critical habitat.

Extension of Critical Habitat Endpoints

Based on published reports (Wild Fish Conservancy 2012, VanDyke et al., 2009) and unpublished fish monitoring data, the following waypoints (highlighted below) proposed by NMFS for critical habitat extent should be modified to include reaches where coho have been captured beyond the proposed critical habitat designation. We would be glad to share and discuss the reports or unpublished data to support these revisions.

(9) Lower Willamette Subbasin 17090012 -

(i) Johnson Creek Watershed 1709001201.

1. Outlet(s) = Johnson Creek (Lat 45.443607, Long -122.646568);
upstream to endpoint(s) in:
2. Unnamed (45.395793, -122.637786);
3. Unnamed (45.479793, -122.637275);

4. Crystal Springs Creek (45.481991, -122.636282);
5. Johnson Creek (45.460935, -122.344466); modified to (45.462435, -122.305859)
6. Kellogg Creek (45.416585, -122.599025);
7. Kelly Creek (45.467217, -122.484045);
8. Mount Scott Creek (45.430427, -122.557033);
9. Tryon Creek (45.447026, -122.687232);
10. Willamette River (45.372568, -122.607652);
11. Oswego Creek (45.410712, -122.662215);

(iii) Columbia Slough/Willamette River Watershed 1709001203.

12. Outlet(s) = Willamette River (Lat 45.653521, Long -122.764965);
upstream to endpoint(s) in:
Propose to include Miller Creek up to (45.611495, -122.812947) (Note: Miller Creek is one of the most intact, fully vegetated and protected watersheds in the Lower Willamette)
12. Swan Island Basin (45.565019, -122.713073);
13. Columbia Slough (45.607691, -122.745914); modified to (45.583522, -122.647913)
14. Unnamed (45.615235, -122.740691);
15. Unnamed (45.627985, -122.754739);
16. Willamette River (45.443607, -122.646568); modified to (45.352927, -122.61694).

Lateral Extent of Critical Habitat

The draft designation defines the lateral extent of critical habitat “as the width of the stream channel defined by the ordinary high water line.” This lateral extent is insufficient to support the PCEs, and excludes many “physical or biological habitat features essential to their conservation.” Limiting critical habitat to below OHW excludes many of the features directly listed within the PCEs (floodplains, shade, side-channels), and does not protect the riparian areas that maintain suitable instream conditions and functions, including but not limited to wood supply, cover, water quality and channel structure. These features and functions become impaired and vulnerable to loss when the riparian areas that sustain them are not intact and protected. There is strong scientific consensus that many of the most critical functions for maintaining stream habitat are provided by the riparian area, and that the linear configuration and dynamic nature of stream habitats makes the connection between these two areas particularly tight (see, for example, Gregory et al. 1991; Naiman et al. 1992; FEMAT 1993; Spence et al. 1996; Beechie and Bolton 1999). “...the health of aquatic systems is inextricably tied to the integrity of the riparian zone” (Spence et al. 1996, pg. 51). Because of the critical role of riparian areas and floodplains in maintaining and providing coho habitat, we recommend that these areas be included in critical habitat. It is clear through the most recent status reports that these habitats are not adequately protected to sustain and recover the species, as there is no long term improvement in the species’ overall status (Ford 2011).

For the 2005 critical habitat designations, NMFS biologists developed a list of physical and biological attributes relevant to determining habitat features essential to the conservation of Pacific salmon species. The current proposed rule states that these PCEs have been re-evaluated and determined to all be fully applicable to lower Columbia River coho and Puget Sound steelhead. The six features listed are certainly critical to the function-of salmon

habitat, but the crucial importance of off-channel and floodplain habitats to salmon and steelhead production is underemphasized, and should be added to the coho critical habitat designation. The PCE for freshwater rearing sites with water quantity and floodplain connectivity includes floodplain benefits in its description but the designation excludes the actual floodplain areas that provide so many critical elements necessary for survival – water quality and forage supporting juvenile development; and natural cover such as shade, submerged and overhanging wood, log jams, beaver dams, etc. These PCEs are not limited to main channel habitats below ordinary high waters of the Lower Columbia River, and may in fact be more prevalent in riparian, off-channel and floodplain habitats.

Excluding habitat above ordinary high water from the final rule designation is problematic for coho in particular, given coho life history and habitat preferences. Of all the Pacific salmonids, coho have the strongest affinity for marginal quiescent areas and off-channel habitats. During winter high flows, coho seek lower velocities and protected areas in side channels, off-channel habitats and floodplains (Swales and Levings 1985; Nickelson et al. 1992; Beechie et al. 2001; Beechie and Liermann 2005; Lestelle 2007. Off-channel habitats in particular are one of the more threatened and rare habitat types in rivers and streams (Pess et al. 1999). Many of these PCEs are found above OHW but they are not proposed for protection from impacts that other habitat types are. Specific floodplain refugia, riparian areas and off-channel habitats should be included in this designation to protect habitat deemed critical to the recovery of listed salmon and trout. It is ineffective to protect aquatic habitats but not the riparian areas that maintain them; it is particularly problematic when the habitats that are actually occupied by coho during high water periods at a life stage and stream condition during which juveniles are particularly vulnerable – habitat features essential to their survival - are not included.

The justification for excluding riparian and floodplain areas from critical habitat is unsupported by the analysis in the designation. The designation states that "...the quality of aquatic habitat within stream channels is intrinsically related to the adjacent riparian zones and floodplain..." and that "[h]uman activities that occur outside the stream or designated critical habitat can modify or destroy physical and biological features of the stream." Yet in spite of these clear and unambiguous statements about the importance of these areas to coho habitat, they are inexplicably excluded from the designation solely because it is putatively difficult to define the extent of riparian influence. This ignores the fact that many approaches have been developed for defining riparian zones of influence (e.g., FEMAT 1993 and Site Potential Tree Height), and that designation of OHW and bankfull width comes with its own set of ambiguities and difficulties in repeatability across observers.

The exclusion of riparian and floodplain areas is also inconsistent with previous analyses and designations. The 1993 critical habitat designations for Snake River sockeye and Chinook describe the importance of these areas, included them as critical habitat, and gave unambiguous guidelines on their lateral extent (50 CFR Part 226). The analysis does not address why riparian and floodplain areas were included in critical habitat for the Snake River populations but excluded for a salmonid species which has a stronger affinity for and makes greater use of these off-channel areas. The coho designation states "[t]his designation will help to ensure that Federal agencies are aware of these important habitat linkages for lower Columbia River coho and Puget Sound steelhead." This statement does not seem to be

supported when these areas were excluded from the current proposed critical habitat designation but were included in earlier designations.

Thank you for the opportunity to comment on the proposed critical habitat designations. The proposed designation would protect a great deal of habitat that is critical to the conservation of these threatened population. We feel that these efforts would be more adequately supported by the scientific literature by expanding the designation to include adjacent habitats with documented coho use, and lateral expansion to include riparian, floodplain and off-channel habitats that coho either directly occupy during high water periods, or that provide functions critical to maintaining the health of instream coho habitats. Please don't hesitate to contact me if you would like to discuss these comments further.

Sincerely,



Chris Prescott
Watershed Ecologist
Portland Science, Fish and Wildlife Program

References

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- Beechie, T.J. and M. Liermann. 2005. A classification of habitat types in a large river and their use by juvenile salmonids. *Trans. Am. Fish. Soc.*, 134:717-729.
- Ford, M.J. (ed.). 2011. Status review update for Pacific salmon and steelhead listed under the Endangered Species Act: Pacific Northwest. U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-113, 281 p.
- Nickelson, T.E., M.F. Solazzi, S.L. Johnson, and J.D. Rodgers. 1992. Effectiveness of selected stream improvement techniques to create suitable summer and winter rearing habitat for juvenile coho salmon (*Oncorhynchus kisutch*) in Oregon coastal streams. *Can. J. Fish. Aquat. Sci.* 49(4):790-794.
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