



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Northwest Region  
7600 Sand Point Way N.E., Bldg. 1  
Seattle, WA 98115

Refer to NMFS No.:  
2009/03120 (FS)  
2009/03121 (BLM)

November 6, 2009

Meg Mitchell  
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Willamette National Forest  
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Gary Larsen  
Forest Supervisor  
Mount Hood National Forest  
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Aaron Horton  
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Bureau of Land Management  
1717 Fabry Road SE  
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Re: Nonconcurrence and Notice of Biological Opinion in Preparation for the Reinitiation of Informal Consultation on the 2007-2009 Low-Risk Thinning Timber Sales Programmatic Action for the Lower Columbia/Willamette Recovery Domain

Dear Ms. Mitchell, and Messrs. Larsen and Horton:

This letter is in response to your June 4, 2009, letter (received by our office on June 11, 2009) in which you requested reinitiation of informal consultation under the Endangered Species Act (ESA) on the action title "2007-2009 low-risk thinning timber sales programmatic action." The purpose of reinitiating consultation is to cover proposed forest thinning activities for fiscal year 2010 in 12 watersheds located in the Lower Columbia/Willamette Recovery Domain. Your letter included the number of proposed thinning acres by 5<sup>th</sup>-field hydrologic unit code watershed and administrative unit, and environmental baseline information for these watersheds. The project design criteria would remain the same as the action agencies proposed for the 2007-2009 action.



An April 10, 2007, biological assessment (BA) prepared by the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM) concluded that thinning timber sales within 22 watersheds inside the Lower Columbia/Willamette Recovery Domain were “not likely to adversely affect” the following ESA-listed species or their designated critical habitat: Lower Columbia River Chinook salmon, Upper Willamette River Chinook salmon, Lower Columbia River Coho salmon<sup>1</sup>, Lower Columbia River steelhead, and Upper Willamette River steelhead. The current request for reinitiation reiterated the above ESA determinations of effect.

The NMFS issued a letter concurring with the above ESA determinations of effect for the 2007-2009 proposed action on July 10, 2008. The letter noted that NMFS had posed questions and concerns in May 2007,<sup>2</sup> and January 2008,<sup>3</sup> regarding an analysis titled “Northwest Forest Plan Temperature Total Maximum Daily Load (TMDL) Implementation Strategies” (USDA Forest Service and USDI Bureau of Land Management 2005) that the action agencies had used as the basis for the ESA determinations of effect with respect to potential changes in stream shade and water temperature.

The proposed action includes the stream buffers shown in Table 1. Within these buffers, the action agencies propose no tree felling or yarding (with the exception of felling and yarding through skyline corridors that are limited in size and frequency by the project design criteria [PDC]). Stream buffers would be measured from the edges of the active channel (streambanks) on both sides of a given stream. The BA states that the buffers would be expanded to include the following features, if applicable:

- a. Slope break: the point of topographic change below which management will result in active erosion or introduction of material into the stream channel or floodplain area.
- b. Floodprone area: area accessed by the stream during medium to large peak flow events, typically defined as 2 times the bankfull depth.
- c. High water table area: wetlands, seasonally saturated soils, standing water, seeps, bogs, *etc.*

**Table 1.** Minimum stream protection buffer widths by stream type and proximity to listed fish habitat (LFH<sup>4</sup>).

Adjacent to LFH habitat	Within 1 mile of LFH		Greater than 1 mile upstream from LFH	
	Perennial and Intermittent Streams	Perennial Streams	Perennial Streams	Intermittent Streams
Maintain a minimum 100-foot wide buffer	Maintain a minimum 50-foot wide buffer	Maintain a minimum 50-foot wide buffer	Maintain a minimum 50-foot wide buffer	Maintain a minimum 30-foot wide buffer

<sup>1</sup> NMFS has not designated critical habitat for Lower Columbia River coho salmon.

<sup>2</sup> May 22, 2007, letter from Michael R. Crouse, NMFS to Kathryn J. Silverman, USFS, and Mike Haske, BLM.

<sup>3</sup> January 11, 2008, letter from D. Robert Lohn, NMFS, to Edward W. Shepard, BLM.

<sup>4</sup> LFH = Listed fish habitat, defined as any stream reach potentially occupied by an ESA protected fish species, any stream reach designated as critical habitat, or any stream reach designated as essential fish habitat.

The proposed action includes the following additional PDC regarding thinning of trees in riparian areas:

- B1. Trees must not be felled within the primary shade zone<sup>5</sup> associated with any perennial stream (with the exception of trees within skyline yarding corridors; see below).
- B2. Thinning within the secondary shade zone on perennial streams may occur; however, at least 50% canopy closure must remain in this treated zone.

The proposed action includes additional criteria for logging in riparian areas that are shown in Table 2.

**Table 2.** Thinning restrictions for streams near and upstream of LFH.

Stands of trees adjacent to LFH habitat, or adjacent to tributary streams within 1 stream mile of LFH habitat	Stands of trees adjacent to stream reaches that are greater than 1 mile upstream of LFH
Maintain a conifer RD <sup>6</sup> value of at least 30 in the stand area located between the protection buffer [Table 1] and one site potential tree height from the stream.	Maintain a conifer RD value of at least 30 within 100 feet from the stream.

In a September 2, 2009, meeting, representatives of the BLM and USFS presented information responding to the questions and concerns raised by NMFS about the analysis concerning stream shade and water temperature. Representatives of NMFS's Northwest Fisheries Science Center and the U.S. Environmental Protection Agency also participated in the meeting. Based on information presented and discussed at that meeting, and on an analysis of additional data and scientific literature not considered in its prior informal consultation, NMFS does not concur that the proposed action is NLAA ESA-listed species of salmon and steelhead and their critical habitat. Rather, the information available to NMFS leads the agency to conclude that the no-cut buffers and level of tree retention proposed for perennial stream reaches located upstream of stream reaches with ESA-listed species of salmon and steelhead and their critical habitat would allow reductions in stream shade and increases in water temperature. The information reviewed by NMFS to reach this conclusion includes the following:

1. Background information about the development of the SHADOW model used in the TMDL strategies document that was presented at the September 2, 2009, meeting by Chris Park, Hydrologist at the Rogue-Siskiyou National Forest (developer of the model).
2. Scientific literature used to develop the model, *e.g.*, Brazier and Brown (1973), Steinblums *et al.* (1984), Platts *et al.* (1987).

<sup>5</sup> The primary shade zone is defined in the Northwest Forest Plan Temperature TMDL Implementation Strategies, USDA Forest Service and Bureau of Land Management, 2005. Based on the September 2, 2009, interagency meeting referenced later in this letter, NMFS understands that the action agencies are defaulting to primary shade zones for perennial streams that are 60 feet wide on each side of streams, effectively changing the no-cut buffers for the second and third columns of Table 1 from 50 feet to 60 feet.

<sup>6</sup> Relative density (RD) is the basal area of the stand divided by the square root of the quadratic mean diameter of the stand.

3. Scientific literature related to methods used in the model (*e.g.*, Teti 2006).
4. Scientific literature related to riparian forest management, stream shade, and water temperature, *e.g.*, Steinblums (1977), Barton and Taylor (1985), Kiffney *et al.* (2003), Macdonald *et al.* (2003), Story *et al.* (2003), Johnson (2004), Chan *et al.* 2005, Moore *et al.* (2005), Gomi *et al.* (2006), Wilkerson *et al.* 2006.
5. An unpublished manuscript with data on characteristics of unmanaged riparian forest stands in Washington State collected by scientists from NMFS's Northwest Fisheries Science Center.
6. Results of modeling of stream temperature responses to riparian forest management scenarios in Canton Creek by the Oregon Department of Environmental Quality.

The likely increases in water temperature under the proposed action are reasonably certain to adversely affect ESA-listed salmon and steelhead and their critical habitats.

Another pathway for adverse effects from the proposed action is the abrupt change from a 100-foot no-cut buffer adjacent to LFH to a 50-foot no-cut buffer immediately upstream of LFH. The 50-foot no-cut buffer is likely to contribute less woody material to streams than the larger no-cut buffer, and this is likely to reduce the amount of wood in stream reaches with LFH for several reasons. First, the upstream limit of LFH is likely to vary with stream flows. Further uncertainty in the delineation of LFH is likely due to the varying amounts and quality of data available on the distribution of ESA-listed salmon and steelhead. Finally, areas for some distance upstream of LFH are likely to contribute woody material to LFH by fluvial transport in certain geomorphic contexts that occur commonly in the action area. The likely reduction in availability of instream wood in LFH due to the abrupt transition in the size of the no-cut buffer is likely to reduce habitat complexity and cover, and thereby reduce the growth and survival of juvenile ESA-listed salmon and steelhead and adversely affect their critical habitat.

Accordingly, NMFS requests that the BLM and USFS initiate formal consultation for this action. The NMFS has sufficient information to complete this consultation; however, it is the lead action agency's duty to identify likely effects, to decide whether consultation is required, and to ensure that its actions are not likely to jeopardize ESA-listed species. Therefore, if you do not agree with NMFS' request, please notify us immediately.

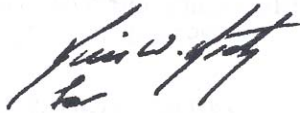
Also, regarding the PDC that requires maintaining a conifer RD value of at least 30 within 100 feet of a stream when thinning stands of trees adjacent to stream reaches that are greater than 1 mile upstream of LFH, NMFS requests clarification about how the action agencies are implementing the criterion. As written, the PDC would allow the RD values in the thinned portion of the area within 100 feet of a stream effectively to be subsidized by the RD in the no-cut buffer, which means that the actual RD in the thinned portion of a riparian area would be below the RD that NMFS determined previously is necessary for its contribution toward recruitment of woody material and stream shade (*i.e.*, an RD of 30). Are the action agencies measuring RD separately in the thinned portion of the 100-foot wide riparian area subject to this PDC, or are they measuring overall RD for the entire 100-foot wide area?

As a reminder, the ESA requires that after initiation of formal consultation, the Federal lead action agency may not make any irreversible or irretrievable commitment of resources that limit future options. This ensures that Federal agency actions do not preclude the formulation or accomplishment of reasonable and prudent alternatives that avoid jeopardizing the continued existence of endangered or threatened species or destroying or modifying their critical habitats.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) at 50 CFR Part 600 Subpart K requires the BLM and USFS consult on activities that may adversely affect essential fish habitat (EFH) designated in Federal fishery management plans. The proposed project area has been designated as EFH for Chinook and coho salmon. Because the proposed action is reasonably likely to adversely affect ESA-listed salmon and steelhead, we assume it also may adversely affect EFH. However, MSA consultation requirements can be satisfied using ESA procedures and will be addressed in a section of the biological opinion issued as part of the ESA consultation.

Please direct questions regarding this letter to Jeff Lockwood, Fishery Biologist in the Lower Columbia/Oregon Coast Habitat Branch of the Oregon State Habitat Office, at 503.231.2249

Sincerely,

A handwritten signature in black ink, appearing to read "Barry A. Thom". The signature is written in a cursive style with a large initial "B".

Barry A. Thom  
Acting Regional Administrator

cc: Brad Goehring – FWS, Portland

## LITERATURE CITED

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