



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
1201 NE Lloyd Boulevard, Suite 1100
PORTLAND, OR 97232-1274

Refer to NMFS No:
WCRO-2021-01639

September 30, 2021

Scott Smithline
Environmental Manager
U.S. Department of Transportation
Western Federal Lands Highway Division
610 E. Fifth Street
Vancouver, Washington 98661

Re: Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the East Lolo Pass Road Bank Stabilization and Surface Preservation Project (HUC 170800010102), Clackamas County, Oregon.

Dear Mr. Smithline:

This letter responds to your March 2, 2021, request for initiation of consultation with the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act (ESA) for the subject action. Your request qualified for our expedited review and analysis because it met our screening criteria and contained all required information on, and analysis of, your proposed action and its potential effects to listed species and designated critical habitat.

We reviewed the Federal Highway Administration's (FHWA), Western Federal Lands (WFL) Highway Division consultation request and related initiation package. Where relevant, we have adopted the information and analyses you have provided and/or referenced but only after our independent, science-based evaluation confirmed they meet our regulatory and scientific standards. We adopt by reference here the following sections of the East Lolo Pass Road Stabilization and Surface Preservation (Project) Biological Assessment (BA; MB&G 2021):

- Section 1 *Introduction* (of the BA) including the background and proposed action;
- Section 3 *Project Description* including the proposed action and action area;
- Section 4 *FAHP Proposed Design Criteria* including the proposed;
- Section 5 *Natural History and Species Occurrence* including the rangewide status of the species and critical habitat;
- Section 6 *Environmental Baseline Conditions* including the environmental;
- Section 7 *Analysis of Effect of the Proposed Action* including the effects of the action and cumulative;
- Section 8 *Conservation Measures* including the effects of the action; and
- Section 9 *Essential Fish Habitat Consultation* for the Magnuson-Stevens Fisheries Conservation and Management Act essential fish habitat response section of this Opinion.

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Pre-consultation discussions were held between the applicant’s consultant – Stuart Myers of Mason, Bruce and Girard, Inc (MB&G) – and NMFS, beginning in September 2020. Initial discussions were on the scope and scale of the project and use of FHWA’s Federal Aide for Highway Projects (FAHP) Programmatic Opinion (NMFS 2021). Additional meetings were held in January and February of 2021 to determine if the project could be reviewed through the FAHP programmatic opinion. However, due to the nuances of the project funding and because the Oregon Department of Transportation (ODOT) was not involved in project oversight, NMFS determined the Project required an individual formal consultation. The Projects Biological Assessment (BA) was submitted on March 2, 2021.

The WFL Highway Division is proposing to fund, in part, pavement preservation activities along four miles of East Lolo Pass Road near the town of Zigzag, Oregon, implement streambank stabilization measures along approximately 320 linear feet (lf) of the Sandy River, revegetate approximately 1.8 acres of streambank and mitigation planting area. The use of WFL funds constitutes a federal nexus for this action, requiring the FHWA to complete ESA Section 7 inter-agency consultation. Clackamas County Department of Transportation and Development, the applicant, will carry out management and oversight of the funds and action. The action is proposed to extend the functional life of the road corridor and improve safety conditions. The proposed streambank stabilization activities will repair damage that occurred during the 2011 Sandy River flood and improve the safety and longevity of the adjacent East Lolo Pass Road. Construction is proposed from 2021 and 2022, with bank stabilization work occurring in the in-water work window (IWWW) of July 15 through August 31. A complete description of proposed action, its location, and construction sequencing is detailed in the BA, Sections 1, 3, and 6.1.1 (MB&G 2021).

We examined the status of each species that would be adversely affected by the proposed action to inform the description of the species’ “reproduction, numbers, or distribution” as described in 50 CFR 402.02. We also examined the condition of critical habitat throughout the designated area and discuss the function of the physical or biological features essential to the conservation of the species that create the conservation value of that habitat. Section 1.1 of the BA (Project Background) identifies the listed species and designated critical habitat in Table; whereas, Section 5 provides specific status information on those listed species and designated critical habitats occurring in the Project’s action area (MB&G 2021). Based on our own analysis and data, (NMFS 2013; NMFS 2016; NWFSC 2015) NMFS concurs with the listed species and critical habitats which may be adversely affected, which include:

ESA-Listed Species	Status
Lower Columbia River Chinook salmon ^{1,2} (<i>Oncorhynchus tshawytscha</i>)	Threatened 6/28/05 CH 09/02/05
Lower Columbia River coho salmon ^{1,3} (<i>O. kisutch</i>)	Threatened 6/28/05 CH 09/02/05
Lower Columbia River steelhead ^{4,2} (<i>O. mykiss</i>)	Threatened 1/5/06 CH 09/02/05

¹ 70 FR 37160; ² 70 FR 25630; ³ 71 FR 834; ⁴ 81 FR 9252

“Action area” means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02). Section 3.2 of the Project BA describes the action area for the pavement preservation work, the bank stabilization work, including potential for downstream turbidity and suspended sediments, and mitigation planting areas. Section 3.2 of the BA (MB&G 2021) provides a detailed description of the action area and is adopted here per 50 CFR 402.14(h)(3).

The “environmental baseline” refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultations, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency’s discretion to modify are part of the environmental baseline (50 CFR 402.02). Section 6 of the BA (MB&G 2021) provides a detailed discussion of the environmental baseline conditions and the status of listed species and designated critical habitat, and is adopted here per 50 CFR 402.14(h)(3). NMFS has evaluated this section and after our independent, science-based evaluation determined it meets our regulatory and scientific standards, including discussion of Physical and Biological Factors (PBF).

The Lower Columbia River (LCR) Chinook Evolutionarily Significant Unit (ESU) is considered to be at high risk due to low natural-origin abundance levels, passage barriers, and hatchery production (NMFS 2016). The Sandy River Demographically Independent Population (DIP) is at moderate risk – better than the ESU population in general, due to the removal of Marmot Dam, removal of a diversion dam on the Little Sandy River, and a high number of natural spawners (NMFS 2016). The Sandy River DIP is considered a Viable Population Segment (VPS) with a high probability of persistence (NMFS 2013).

The LCR coho ESU is considered to be at moderate risk due to low abundance, loss of spatial structure, and reduced diversity (NMFS 2013; NMFS 2016). Within the ESU, the Sandy and Clackamas subbasins are the only ones to have a clear record of continuous natural spawning, though spawner abundance is well below long-term minimum abundance thresholds (NMFS 2013). The Sandy River subpopulation is not considered viable with a very low probability of persistence (NMFS 2013).

The LCR Steelhead Distinct Population Segment (DPS) is considered at moderate risk due to low abundance, hatchery interactions in select basins, and habitat loss (NMFS 2016). The Sandy River subpopulation is not considered viable and has a low probability of persistence.

Under the ESA, “effects of the action” are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved

in the action (see 50 CFR 402.17). In our analysis, which describes the effects of the proposed action, we considered 50 CFR 402.17(a) and (b).

The BA provides a detailed discussion and comprehensive assessment of the effects of the proposed action in Section 7 of the Project BA (MG&B 2021), including the proposed use of FAHP design criteria (Section 4), and is adopted here (50 CFR 402.14(h)(3)). NMFS has evaluated this section and after our independent, science-based evaluation determined it meets our regulatory and scientific standards. Potential effects include:

- Minor, temporary, disturbance impacts from in-stream/near-stream construction activities, including behavioral changes.
- Minor, temporary, disturbance impacts from streambank stabilization and revegetation activities, including increased suspended sediments, turbidity, and accidental chemical spills.
- Minor, long-term, local improvement in streambank and riparian condition from streambank plantings and compensatory mitigation plantings.

The Sandy River DIP of LCR Chinook salmon, the Sandy River population of LCR coho salmon, and the Sandy River population of LCR steelhead will be affected by the proposed action. The effects of in-stream/near-stream construction will be temporary, constrained to the IWWW, isolated from the active channel, and will not impact more than one cohort of the affected populations. Fish removal and dewatering of the isolated work area constitutes a short-term impact that could result in injury or mortality of approximately 2% of listed species juveniles removed from the isolated work area (NMFS 2000; Sharber et al., 1994). Suspended sediment and turbidity are expected to be short-term, temporary impacts that could result in disturbance or injury; however, only a few individual fish within each species population may suffer injuries from elevated turbidity.

Critical habitat for the Sandy River DIP of LCR Chinook salmon, the Sandy River population of LCR coho salmon, and the Sandy River population of LCR steelhead will be affected by the proposed action. The effects of streambank stabilization activities will likely result in minor, localized changes in sedimentation and embeddedness. Such changes are likely inconsequential given the extent of available unaffected habitat, and such conditions are unlikely to persist for more than one high-water event. Compensatory mitigation planting of the stabilized streambank and adjacent shoreline and island will result in a long-term, localized, beneficial effects as riparian structure and reserves mature, contributing to improved channel forming processes, large wood recruitment, and riparian habitat condition.

“Cumulative effects” are those effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 CFR 402.02 and 402.17(a)). Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA. Future land use development and population growth is expected in the vicinity of the proposed action. An increase in population density in proximity to the Project alignment can result in increased watershed development, increased stormwater contributions to receiving waters, and adverse human interaction with riparian and stream

habitats. Increases in stormwater volume can result in adverse hydromodification, fragmentation/loss of existing riparian habitat, and render currently suitable habitat unsuitable in the future (Claytor and Brown 1996; CWS 2016; Sandahl et al. 2007). Such development is expected to be consistent with local growth management plans and include provisions to address stormwater runoff and other development impacts. Actions within the Mt. Hood Forest are expected to comply with existing forest management plans that have undergone section 7 review and are not considered here.

The Integration and Synthesis section is the final step in our assessment of the risk posed to species and critical habitat as a result of implementing the proposed action. In this section, we add the effects of the action to the environmental baseline and the cumulative effects, taking into account the status of the species and critical habitat, to formulate the agency's biological opinion as to whether the proposed action is likely to: (1) Reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing its numbers, reproduction, or distribution; or (2) appreciably diminish the value of designated or proposed critical habitat as a whole for the conservation of the species.

The proposed action will occur in and adjacent to a section of the Sandy River that is utilized for migration and rearing by LCR Chinook salmon, LCR coho salmon, and LCR steelhead. As described in Sections 3, 4, and 7 of the BA (MB&G 2021), the proposed activities will result in construction-related adverse effects that have the potential to harass, harm, or kill multiple life stages of all three species. Similarly, the proposed activities have the potential to temporarily render suitable habitat less suitable until the next high-water event. Section 4 of the BA identifies construction Best Management Practices (BMP) and avoidance and minimization measures to limit the anticipated pathways for effects. The BMPs that are proposed were selected based on their consistency with measures detailed in FHWA's FAHP programmatic opinion for transportation-related actions which are consider protective of listed species and critical habitat and conducive to species recovery (NMFS 2021). These measures are likely to minimize exposure of ESA-listed fish species to the adverse effects of construction noise and disturbance, turbidity and sedimentation, and limitations to up and downstream passage. However, all risk of adverse effects cannot be eliminated and a certain number of listed species will be subject to temporary harassment, injury, or death.

Listed species populations in the Sandy River range from moderate risk of extinction (LCR coho and LCR steelhead) to high risk of extinction (LCR Chinook). Within the action area, the presence East Lolo Pass Road constitutes a permanent impairment to habitat PBFs. Of the limiting factors identified for these species, substrate and water quality both have the potential to be temporarily impaired as a result of construction activities. Within the Willamette-Lower Columbia (WLC) recovery domain, stream substrate is limiting for LCR Chinook salmon, LCR coho salmon, and LCR steelhead and water quality is limiting for LCR Chinook salmon, and LCR coho salmon (NMFS 2013; NMFS 2016).

Taken in context, the effects of the proposed action have the potential to temporarily degrade the PBFs of water quality and substrate, which are already compromised by the existing conditions. The streambank stabilization activities will buttress a section of streambank compromised by previous flood events, exacerbated, in part, by the presence of the East Lolo Pass Road and its

effects on channel migration. Revegetation of the stabilized bank will aid in limiting future bank failures and compensatory mitigation plantings will improve vegetation structure and channel forming processes in the localized area over the long-term.

Climate change presents a number of unknowns for Columbia Basin salmonids, including those that use the Sandy River subbasin. A projected regional shift in precipitation, from winter snowfall to rainfall, is likely to have pronounced effects on water quantity and quality in the basin (Abatzoglou et al. 2014; Dominguez et al. 2012; Raymondi et al. 2013). Decreased snow-fed runoff could have significant impacts on all the three listed species covered in this Opinion. Changes in runoff patterns, volume, and temperature can adversely affect individual fitness, run timing, and habitat suitability for listed species and critical habitat (Crozier et al. 2008; Goode et al. 2013; Raymondi et al. 2013; Zabel et al. 2006). Increased water temperature, especially from summer into fall, has the potential to be a significant stressor to LCR Chinook salmon, LCR coho salmon, and LCR steelhead trout. Alteration in run timing, diminished individual fitness, and habitat suitability are all possibilities, potentially resulting in a decrease in species numbers, their distribution, and availability of suitable habitat within the basin (NMFS 2013; NMFS 2016, NMFS 2018).

After reviewing and analyzing the current status of the listed species and critical habitat, the environmental baseline within the action area, the effects of the proposed action, the effects of other activities caused by the proposed action, and cumulative effects, it is NMFS' biological opinion that the proposed action is not likely to jeopardize the continued existence of the LCR ESUs of Chinook salmon, coho salmon, and the LCR DPS of steelhead, or destroy or adversely modify their designated critical habitat.

INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is further defined by regulation to include significant habitat modification or degradation that actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 222.102). "Incidental take" is defined by regulation as takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant (50 CFR 402.02). Section 7(b)(4) and section 7(o)(2) provide that taking that is incidental to an otherwise lawful agency action is not considered to be prohibited taking under the ESA if that action is performed in compliance with the terms and conditions of this ITS.

Amount or Extent of Take

In this biological opinion, NMFS determined that incidental take is reasonably certain to occur as follows:

LCR Chinook salmon, LCR coho salmon, and LCR steelhead are likely to occur in habitats directly affected by construction-related actions. These species occur in the Sandy River where

construction activities are proposed. Potential direct effects to these species that may result in take include the reduction or disturbance of aquatic habitat, increased sedimentation and turbidity, potential fish salvage methods, work area isolation methods, and removal and fill within the active channel. Fish affected by Project work will likely incur short-term stress due to fish removal activities, up to, and including mortality. Nonlethal stress experienced by individual fish can vary in duration from brief (minutes to hours for removal activities), to moderate (weeks to months for construction disturbances), to long (years for riparian vegetation regeneration).

The proposed action includes a number of avoidance and minimization BMPs to prevent, to the extent practicable, take of LCR Chinook and coho salmon and LCR steelhead individuals from construction activities (MB&G 2021). BMPs include seasonal work restriction for in-water work (e.g., work windows); dewatering screening criteria; use of experienced biologists to conduct fish removal activities; development and implementation of a Spill Prevention, Control and Countermeasures Plan; development and implementation of a Temporary Erosion and Sediment Control Plan; Project staff who will conduct monitoring and maintenance of all plan requirements and permit conditions. Proper implementation of these BMPs will reduce the potential for take, but will not remove all such potential.

The following take indicators will be monitored and recorded during construction activities and reported back to NMFS throughout project construction. These indicators include:

1. For streambank stabilization activities:
 - a. ESA-listed fish captured (number salvaged) during in-water work area isolation. No adult fish are likely to be included in this total as they can be effectively excluded from the work area before it is completely isolated from flowing water. Of the juvenile fish that will be collected, fewer than 2% are likely to be killed while the remaining fish are likely to be released and survive with no adverse effects. This number is too small to result in a fraction over one single adult equivalent and therefore will not delay recovery of any species regardless of the recovery status of the population those juveniles are drawn from.
2. For construction discharge:
 - a. In-water construction turbidity may not exceed a 10% increase over background stream turbidity, as demonstrated by a turbidity monitoring protocol that is sufficient to meet Clean Water Act section 401 certification requirements, except for limited duration activities necessary to address an emergency or accommodate essential construction activities (e.g., channel reconstruction, removal of work area containment), provided that all practicable turbidity control techniques have been applied.
3. For site revegetation and compensatory monitoring:
 - a. Acres of upland vegetation restored in the riparian zone and floodplain.
 - b. Number and species of trees replanted in the riparian zone.

Incidental take within the Project area that meets the terms and conditions of this incidental take statement will be exempt from the taking prohibition.

Effect of the Take

In the biological opinion, NMFS determined that the amount or extent of anticipated take, coupled with other effects of the proposed action, is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

Reasonable and Prudent Measures

“Reasonable and prudent measures” are nondiscretionary measures that are necessary or appropriate to minimize the impact of the amount or extent of incidental take (50 CFR 402.02).

1. Minimize incidental take associated with Project construction by ensuring that all BMPs described in the BA are implemented and reported, as appropriate.
2. Monitor the impacts of incidental take on listed species in the action area from streambank stabilization activities by implementing a monitoring and reporting program for in-stream turbidity and fish removal activities. Both monitoring and reporting shall be authorized or conducted by the FHWA or its applicants. Reports will be sent to NMFS within 60 days of completion of project activities.

Terms and Conditions

The terms and conditions described below are non-discretionary, and the FHWA or any applicant must comply with them in order to implement the RPMs (50 CFR 402.14). The FHWA or any applicant has a continuing duty to monitor the impacts of incidental take and must report the progress of the action and its impact on the species as specified in this ITS (50 CFR 402.14). If the entity to whom a term and condition is directed does not comply with the following terms and conditions, protective coverage for the proposed action would likely lapse.

1. The following terms and conditions implement reasonable and prudent measure 1:
 - a. Carry out all relevant conservation measures as described in the BA.
 - b. Turbidity: The FHWA, or its applicants, must implement appropriate BMPs to minimize turbidity during in-water work. Any activity that causes turbidity to exceed 10% above natural stream turbidity is prohibited except as specifically provided below:
 - i. Monitoring: Turbidity monitoring must be conducted and recorded as described below. Monitoring must occur at two-hour intervals each day during daylight hours when in-water work is being conducted on streambank portion of the project area. A properly calibrated turbidimeter is required unless another monitoring method is proposed and authorized by the Oregon Department of Environmental Quality (DEQ).
 1. Representative Background Point: Applicant must take and record a turbidity measurement every two hours during in-water work at an undisturbed area. A background location shall be established at a representative location approximately 100 feet upstream of the in-

water/streambank activity unless otherwise authorized by DEQ. The background turbidity, location, date, tidal stage (if applicable) and time must be recorded immediately prior to monitoring downstream at the compliance point described below.

2. Compliance Point: The Applicant must monitor every two hours. A compliance location shall be established at a representative location approximately 100 feet downstream from the disturbance at approximately mid-depth of the waterbody and within any visible plume. The turbidity, location, date, and time must be recorded for each measurement.
- ii. Compliance: The Applicant must compare turbidity monitoring results from the compliance points to the representative background levels taken during each two-hour monitoring interval. Pursuant to OAR 340-041-0036, short term exceedances of the turbidity water quality standard are allowed as follows:

Turbidity Level	Restriction to Duration of Activity
0 to 4 NTU above background	No Restrictions
5 to 29 NTU above background	Work may continue a maximum of 4 hours. If turbidity remains 5 to 29 NTU above background, stop work and modify BMPs. Work may resume when NTU is between 0 to 5 NTU above background.
30 to 49 NTU above background	Work may continue a maximum of 2 hours. If turbidity remains 30 to 49 NTU above background, stop work and modify BMPs. Work may resume when NTU is between 0 to 5 NTU above background.
50 NTU or more above background	Stop work immediately and inform NMFS

c. Fish salvage reporting:

- i. All fish removal and fish release activity shall be documented in a log book with the following information: project location, date, methods, personnel, personnel qualifications, instream temperature, water conductivity, visibility, electrofisher settings, and other comments. Special note will be made if multiple fish removal operations must be conducted.
- ii. Species, number of each species, age class estimate, and location of release will be recorded for all fish handled.
 1. All juvenile rainbow trout (*Oncorhynchus mykiss*), all shall be recorded as steelhead.
- iii. Information regarding the number of ESA-listed species injured or killed will be documented, including species, age class estimate, number injured, and number killed.

2. The following terms and conditions implement reasonable and prudent measure 2:
 - a. Ensure completion of a monitoring and reporting program to confirm that the take exemption for the proposed action is not exceeded, and that the terms and conditions in this incidental take statement are effective in minimizing incidental take.
 - i. Turbidity. The FHWA must record all turbidity monitoring required by subsection 1.b above in daily logs. The daily logs must include calibration documentation; background NTUs; compliance point NTUs; comparison of the points in NTUs; location; date; and time for each reading. Additionally, a narrative must be prepared discussing all exceedances with subsequent monitoring, actions taken, and the effectiveness of the actions. The FHWA must make available copies of daily logs for turbidity monitoring to DEQ, NMFS, USFWS, and ODFW upon request.
 - ii. Fish Salvage. The FHWA must record all fish removal actions required by 1.c above in event logs. The event log must include date of activity, water temperature, water conductivity, personnel, personnel qualifications, start time, stop time, total time electrofishing, electrofisher settings, changes to electrofisher settings and rationale, fish handling methods, holding time, release location, species captured, age class estimate, any injuries, any mortalities.
 - iii. Project completion notification. The FHWA must provide a notification of the completion of project activities, excluding monitoring, if applicable, within 60 days of completing all construction. Include the turbidity monitoring report and fish salvage report with the project completion notification.
 - iv. Submit all reports and notifications to:

Attn: WCRO-2021-01639
projectreports.wcr@noaa.gov

Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Specifically, conservation recommendations are suggestions regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information (50 CFR 402.02).

No conservation recommendations are included as part of this Opinion.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by FHWA or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) The amount or extent of incidental taking specified in the ITS is exceeded, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) the identified action is subsequently

modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this biological opinion; or if (4) a new species is listed or critical habitat designated that may be affected by the identified action.

NMFS also reviewed the proposed action for potential effects on essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding the potential effects of the action. This review was conducted pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation. In this case, the entire action area is designated as EFH for Pacific salmon (PFMC 2014). NMFS concluded the proposed action would adversely affect EFH as follows:

1. Temporary, localized impairment of water quality (water column) from construction-related suspended sediments and turbidity.
2. Temporary, localized degradation of channel substrate from construction-related sedimentation.

NMFS recommends that the FHWA carry out the following conservation recommendations to avoid, mitigate, or offset the impact of the proposed action on EFH:

1. Carry out Terms and Conditions to implement Reasonable and Prudent Measure 1 and 2 from the ESA portion of this document.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The biological opinion will be available through NOAA Institutional Repository <https://repository.library.noaa.gov/>. A complete record of this consultation is on file at Oregon Washington Coastal Office, Portland, Oregon.

Please direct questions regarding this letter to Brad Rawls, Oregon-Washington Coast Office, 503-231-5414, brad.rawls@noaa.gov.

Sincerely,



Kim W. Kratz, Ph.D
Assistant Regional Administrator
Oregon Washington Coastal Office

cc: Joshua Taylor

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