



**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-2021-00701**

October 4, 2021

Cindy Callahan  
Federal Highway Administration  
Oregon Division  
530 Center Street NE, Suite 420  
Salem, Oregon 97301

**Re:** Endangered Species Act Section 7 Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the OR 569 River Road - Delta Highway (170900030201 – Upper Willamette River-Spring Creek), Lane County, Oregon

Dear Ms. Callahan:

This letter responds to your March 31<sup>st</sup>, 2021, request for initiation of consultation with the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act (ESA) on the effects of the proposed action to replace the Beltline Bridge as described in the above titled Biological Assessment (BA) (FHWA 2021).

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) consultation request and related initiation package, including the BA and additional supplemental information, which is available on file at the NMFS Oregon Washington Coastal Office in Portland, Oregon. Where relevant, we adopted the information and analyses provided in the BA, 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 BA:

- Section 1 for the purpose and need;
- Section 3 for the description of the proposed action;
- Section 4 for the description of the action area, and
- Section 5 for the status of species and critical habitat;
- Section 6 for the environmental baseline;
- Section 7 for the effects of the proposed action, and;
- Section 8 for the cumulative effects.

The FHWA notified the National Marine Fisheries Service (NMFS) of the impending bridge replacement and proposed action during a phone meeting in with Molly Cary of ODOT in November of 2019. This was followed up by an in-person meeting at the ODOT Region 2 office in Salem, Oregon with FHWA, ODOT, NMFS, USFWS, ODFW, and Jacobs Consulting Firm.



Follow-up meetings were held with NMFS, ODOT and FHWA on a monthly basis during production of the BA.

The FHWA submitted the BA for this proposed action on March 31<sup>st</sup>, 2021. This BA went through three preliminary reviews by ODOT, FHWA and NOAA fisheries prior to this final submittal.

The FHWA is proposing to construct two bridge structures over the Willamette River (one replacement of the two existing bridges and one new bridge crossing); two replacement bridge crossings of Debrick Slough; widening of one bridge structure over an unnamed slough; roadway improvements to connector roads and a highway overpass bridge and intersection improvements, including sound walls; new or enhanced stormwater treatment areas between River Road and the Delta Hwy/Coburg Road intersection; reconstruction of the Project-related impacts to two sections of the U.S. Army Corps of Engineers (USACE) Lower Goodpasture revetment on the eastern edge of the Willamette River; and potential removal of anthropogenic material within the functional floodplain to offset added fill resulting from the proposed project, as required.

Bridge and other construction activities may be phased or constructed over a period of years as funding becomes available. New bridges (e.g., the proposed Willamette River Arterial Bridge) are anticipated to be constructed within a single year (one in-water work season), while replacement structures (e.g., the existing Willamette River Beltline EB and WB Bridges) are anticipated to be removed and reconstructed over approximately three years to accommodate traffic staging. An additional in-water work season may be required for any in-water work associated with actions to offset potential impacts to the functional floodplain, including removal of anthropogenic fill. Proposed construction sequencing is included under each bridge description; however, a proposed Project start date is unknown at this time due to funding.

“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 5 of the BA describes the action area as follows (see also, BA, Figure 23 - Action Area):

- Proposed roadwork (including lane additions, bicycle/pedestrian paths, and intersection reconfigurations and improvements) along Beltline Hwy River Road in western Eugene to the Delta Hwy in eastern Eugene, including multiple associated connector roads and an intersection at Coburg Road and Beltline Hwy;
- Existing and proposed bridge crossings over the Willamette River, including removing and replacing the existing Beltline bridges, a proposed new arterial bridge, and proposed replacement bridges over Debrick Slough, as well as temporary work trestles and platforms.
- Performing in-water work within the Willamette River and Debrick Slough:
  - Potential sedimentation and measurable turbidity from in-water construction activities;
  - All proposed stormwater facility improvements;
  - Conveyance of stormwater pollutants (metals) from the proposed Project Footprint to the Pacific Ocean;
  - Potential staging areas

- Widening the existing Debrick Slough Hwy 069 EB at MP 10.15 Bridge;
- Reconstructing the main line Delta Hwy Bridge over the Beltline Hwy;
- Offsetting proposed habitat actions:
  - Opportunistic riprap removal and concrete debris within the functional floodplain of the existing Beltline Bridge vicinity; and
  - Floodplain restoration activities (e.g., dike breaching, regrading, and replanting along the mainstem of the Willamette River between the McKenzie River and the Coast Fork Willamette River/Middle Fork Willamette River confluence.
- Hydro-acoustic effects upstream and downstream have threshold levels for impacts to fish. Underwater SPLs from pile driving attenuates to:
  - Peak threshold levels (mortality) at 2 meters; and
  - Threshold levels for fish greater than or equal to 2 grams and less than 2 grams (injury) at 185 meters.
  - Effective quiet (behavioral effects) at 1,000 meters;

Reaching agreement on the description of the action area is desirable, but ultimately NMFS is responsible for this biological determination. In this case, NMFS concurs with the FHWA's description of the action area.

Table 26 in the BA lists the following 15 ESA-listed fish populations as likely to occur within the action areas as occurring within the action area, NMFS confirms that the following species are likely to occur in within that action area (BA, Table 26), and NMFS concurs with this list:

1. Upper Willamette River Chinook salmon
2. Upper Willamette River steelhead
3. Lower Columbia River Chinook salmon
4. Columbia River chum salmon
5. Lower Columbia River coho salmon
6. Lower Columbia River steelhead
7. Southern DPS green sturgeon
8. Southern DPS eulachon
9. SR fall run Chinook salmon,
10. SR spring run Chinook salmon,
11. Middle Columbia River steelhead,
12. UCR steelhead,
13. SR steelhead,
14. SR sockeye salmon
15. Upper Columbia River spring-run Chinook salmon

According to the BA, Section 5.1, and supplemental information obtained, critical habitat for the Chinook salmon, chum salmon, sockeye, and coho ESUs, and steelhead DPSs, are also likely to be adversely affected by the proposed action due to:

- Water quality impacts from temporarily elevated turbidity or other contaminants that may result during construction;

- Elevated underwater noise levels during construction may temporarily degrade the freshwater migration PBF of critical habitat at the Project Area;
- Temporary aquatic habitat impacts associated with temporary work bridges, temporary piles, cofferdams, drilled shaft casings, dredging and riprap removal, may temporarily degrade the freshwater migration and rearing PBFs of critical habitat at the Project Area;
- Permanent aquatic habitat impacts from a net increase in artificial fill within the functional floodplain from the replacement bridge and new bridge will be offset by the proposed measures for removal of the existing artificial fill;
- Fish salvage activities may temporarily degrade the freshwater migration and rearing PBFs of critical habitat at the Project Area;
- Stormwater treatment BMPs will be designed to treat a design storm event, and storm events that exceed this level will result in discharge of untreated stormwater. This pollutant discharge will degrade the freshwater migration and estuarine PBFs.

We used information in Section 5.1 of the BA to examine the status of each species and the condition of critical habitat throughout the designated area, as described in 50 CFR 402.02, and supplemented that with additional information from NMFS (2020) for species and critical habitats in the lower Columbia River, including the function of the physical or biological features (PBFs) essential to the conservation of the species that create the conservation value of those critical habitats. We also considered information from conservation and recovery plans for those species (NMFS 2020) describing the presence, abundance, density or periodic occurrence of listed species and the condition and location of the species' habitat, including critical habitat, as described in 50 CFR 402.14(c)(1)(iii).

We used information in Section 6.1 and 6.2 of the BA to examine the “environmental baseline,” including 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 actions 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 (50 CFR 402.02).

Generally, the environmental baseline in the action area is relatively poor as a result of urban growth with limited environmental controls. Some locations within the action area have been improved over time through various restoration efforts, but overall the project location and action area are heavily impacted by anthropogenic factors such as pollution, and unmitigated development along the riparian corridor.

This environmental baseline includes impacts of the existing Beltline Bridge that will also be analyzed as “effects of the action” due to the continued presence of the OR 569 River Road - Delta Highway in the environment after the proposed rehabilitation is complete (see Thom 2018). 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 also part of the environmental baseline.

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). Because the proposed action will extend the useful life of the OR569 Beltline Bridge in a meaningful way, we also considered the future impacts associated with the presence of the OR569 Beltline Bridge in the environment separate from consideration of the impacts of construction necessary to replace the OR569 Beltline Bridge (see Thom 2018).

Section 7 of the BA provide a detailed discussion and comprehensive assessment of the effects of the proposed action, and are adopted here pursuant to 50 CFR 402.14(h)(3)(i). NMFS evaluated these Sections of the BA and after our independent, science-based evaluation determined that it meets our regulatory and scientific standards. A detailed discussion of the proposed action's potential impact on critical habitat is included in Section 6.1 of the BA. Direct and indirect effects include: hydro-acoustic effects, sediment, turbidity, electrofishing, herbicide use, slight increases in temperature due to vegetation removal, water quality due to construction water discharge, water quality due to stormwater pollutants,

“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. Section 8 of the BA describes ongoing non-Federal actions that contribute to cumulative effects in the immediate project area. Additionally, NMFS relied on information in NMFS 2014 and NMFS 2020 for cumulative effect information for the lower Columbia River and estuary part of the action area. In general, cumulative effects are likely to accrue as population growth typically results in increased residential and commercial development. Improvements and upgrades to infrastructure (including highways, other transportation facilities, pipelines, power lines, and power plants) can be expected to follow increased residential and commercial development. Pathways of potential effects of future land development include further loss and degradation of floodplain and riparian habitat, decreased water quality, contamination of waterways and uplands, changes to runoff patterns, habitat fragmentation and loss of habitat diversity.

Integration and synthesis of information for the status of species, environmental baseline, effects of the action, and cumulative effects is the final step in our assessment of the risk posed to species and critical habitat as a result of implementing the proposed action. Here, 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 our 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.

As described in the BA, in Sections 5 and 6, individual UWR Chinook salmon, LCR Chinook salmon, UCR Chinook salmon, SR fall run Chinook salmon, SR spring run Chinook salmon,

LCR steelhead, Middle Columbia River steelhead, UCR steelhead, UWR steelhead, and SR steelhead, SR sockeye salmon, LCR coho salmon, Columbia River chum salmon, green sturgeon, and Pacific eulachon use the action area to complete part of their life history requirements. Some salmon and steelhead migrate and rear in the action area, while others only migrate through, once as out-migrating juveniles and then again as adult fish on upstream spawning migration.

The status of each salmon and steelhead species, as well as Pacific eulachon and green sturgeon, addressed by this consultation varies considerably from very high risk of extinction (UWR and LCR Chinook salmon, SR Sockeye salmon), moderate to high risk (LCR coho salmon) to moderate risk (UWR and LCR steelhead). Similarly, the many individual populations affected by the proposed action vary considerably in their biological status. The species addressed in this opinion have declined due to numerous factors. A factor for decline that all these species share is degradation of freshwater and estuarine habitat. Human development of the Pacific Northwest has caused significant negative changes to stream and estuary habitat across the range of these species. Climate change is likely to exacerbate several of the ongoing habitat issues, in particular, increased summer temperatures, and decreased summer flows in the freshwater environment, ocean acidification, and sea level rise in the marine environment.

As described in Section 6.1 and 6.2 of the BA, the environmental baseline for critical habitat within the action area in the immediate vicinity of the OR569 River Road project offers little in terms of conservation value to listed fish species under current conditions. The Willamette River has been repeatedly filled and dredged for development purposes, including historical side channels, back-waters, alcoves, periphery, and floodplain habitat. The landscape surrounding the river is highly urbanized and is dominated by impervious surfaces, commercial development, and transportation infrastructure. Waterfront parks, residential land use, and industrial properties are also present. Due to construction of the existing bridge and the existing riprap bank protection that are part of the OR569 River Road project, historic riparian areas and adjacent floodplains are hydrologically disconnected from the mainstem Willamette River, to adequately provide the essential ecosystem functions associated with their natural or relatively undisturbed conditions, such as less extreme flooding, flood water retention, reduced erosion and sedimentation, reduced impacts from waves and storm surges, maintenance of water quality, ground water recharge, and provision of other physical and biological features necessary for ESA-listed fish to grow and thrive. Similarly, the bridges and the riprapped bank largely excludes ESA-listed fish from any remaining habitat on the land side of the bridges (except for any marginal use in Debrick Slough), and limits their shallow water habitat options on the water side of the bridges to the highly simplified, degraded, and unfavorable conditions where the affected rivers face the riprap and bridge bents.

The environmental baseline for the action area farther downstream of the OR569 River Road project includes an increased likelihood of flooding, and an increased danger that pollutants and contaminants from developed areas will be flushed into the river. As described in NMFS (2020), the environmental baseline in the lower Columbia River is not meeting all biological requirements of individual fish of listed species, and critical habitat is not fulfilling its full conservation potential due to one or more impaired aquatic habitat functions related PBFs for water quality, substrate, off-channel habitat, channel conditions and dynamics, stream hydrology,

and other habitat factors limiting the recovery of the species in that area. Similar to their impacts on species, current trends in climate and marine conditions are likely to place additional stress on the conservation value of critical habitats.

The design of the OR 569 River Road - Delta Highway as described in Section 3 of the BA is a key factor in our assessment of the construction impacts associated with the proposed action, and the management of post-construction stormwater discharge. As described in Section 7 of the BA, the effects of the upland construction will be relatively short term, including increased turbidity caused by erosion, stormwater run-off, and use of heavy machinery near a major waterbody; all of which will be minimized using construction BMPs intended to isolate the construction areas. These effects will also be relatively minor, and are expected to result in a small, temporary reduction in the use of the action area for feeding, resting, and refuge from predators by ESA-listed species, and in the conservation value of their critical habitats to support of those behaviors.

Post-construction operation and maintenance will result in increased stormwater runoff that will be managed through stormwater management facilities that will be designed, built, and maintained as described in NMFS (2021). However, despite being treated, post-construction stormwater runoff still contains a wide variety of pollutants and contaminants, including sediment, nutrients, metals, petroleum-related compounds, pesticides, particles of tire tread, and other chemical compounds. Some of those contaminants are persistent and can travel long distances in aquatic systems. Some are also likely to accumulate in species as they pass from one species to the next through the food web. Those constituents have been observed to harm fish that come into contact with them far downstream when they enter fish tissues at levels high enough to modify behavior, disrupt endocrine functions, or cause immunotoxic disease effects, either by themselves or through additive, interactive, and synergistic interactions with other contaminants in the river.

The volume of stormwater that would be discharged from the OR 569 River Road - Delta Highway is small in comparison to the volume of streamflow downstream, and the impact of pollutants and contaminants in that discharge are also small when compared to the adverse effects caused by the contaminants in all historical or existing stormwater discharges. Nonetheless, this discharge will have an incremental effect on the pollutant levels at the watershed scale due to the sustained, long-term, and chronic nature of stormwater discharges, and due to the compounding effects of environmental processes that affect the fate and transport of those pollutants.

Commensurate with the relatively small amount of treated runoff that will be produced by the OR 569 River Road - Delta Highway, and the large size of the Willamette River in this reach; the intensity and severity of this additional increment of adverse effect on species and critical habitats in the action area will be very low. Moreover, any runoff from impervious surfaces adjacent to the OR 569 River Road - Delta Highway that had previously been discharged into the footprint of the OR 569 River Road - Delta Highway, and that was either untreated or under-treated relative to the methods prescribed in SLOPES; will now achieve the same level of stormwater treatment as the new impervious area itself, further minimizing the overall adverse effects of this action. Thus, the impacts of the proposed action on species and critical habitat are

not expected to reduce the abundance, productivity, or genetic or spatial diversity of any affected population of Pacific salmon, southern green sturgeon, or eulachon, or reduce the conservation value of any of critical habitat PBFs considered here, at either the site, watershed or designation scale.

The effects of the continued existence of OR 569 River Road - Delta Highway into the foreseeable future are likely to be similar to those described as environmental baseline conditions including disconnection of the floodplain in the project area. The proximity of those effects to ESA-listed species and critical habitats will remain the same, as will the distribution, timing, nature, duration, frequency, intensity, and severity of the effects.

Cumulative effects will include actions by the City of Eugene, the State of Oregon, Lane County and other entities that are likely to continue to undertake projects to improve habitat for listed anadromous species in the lower Willamette River that are likely to have a beneficial effect on listed species and their critical habitats.

The Portland Harbor Superfund Site located downstream is expected to result in remediation of some existing contaminated river sediments which will benefit water and habitat quality.

Past actions have substantially impacted the natural functions of the Willamette River and adjacent habitats within the Project Area and broader watershed. These impacts have altered hydrology, filled wetlands, displaced fish and wildlife species, impacted water quality, and reduced the extent and quality of upland and aquatic habitat.

Conversely, as the human population grows, new residential and industrial growth will likely occur in the action area. We also used additional information from NMFS (2020) to complete this part of our analysis and conclude that overall, urban areas are likely to experience continued population growth while redevelopment and private restoration actions will begin to improve negative baseline conditions and, in rural areas, agricultural and forestry practices are also likely to continue at a scale similar to that in the past.

After reviewing and analyzing the current status of the 15 ESA-listed species and their designated critical habitats considered in this opinion, 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 fifteen species considered in this opinion, or destroy or adversely modify their designated critical habitats.

### **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 (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**

NMFS determined that harm to juveniles and adults of all ESA-listed salmon and steelhead considered in this opinion will be caused by:

- Electrofishing and other fish salvage efforts within cofferdams and other isolated work areas.
- Impact pile driving
- Decreased water quality and increased sediment, noise, light, and human presence during construction of the OR 569 River Road - Delta Highway; and,
- Adverse effects associated with the presence of the OR 569 River Road - Delta Highway in the environment, separate from effects caused by its construction, including, but not limited to, the impact of post-construction stormwater discharge and a range of hydraulic and hydrological impacts.

The distribution and abundance of fish that occur within an action area are affected by habitat quality, competition, predation, and the interaction of processes that influence genetic, population, and environmental characteristics. These biotic and environmental processes interact in ways that may be random or directional, and may operate across far broader temporal and spatial scales than are affected by the proposed action. Thus, the distribution and abundance of fish within the action area cannot be attributed entirely to habitat conditions, nor can NMFS precisely predict the number of fish that are reasonably certain to be injured or killed if their habitat is modified or degraded by the proposed action. In such circumstances, NMFS cannot provide an amount of take that would be caused by the proposed action.

1. The best available indicator for the extent of take associated with harm due to impaired feeding, resting, and refuge from predators caused by decreased water quality and increased dust, noise, light, and human presence during construction of the OR 569 River Road - Delta Highway, is the extent of suspended sediment plumes.

Specifically, the anticipated take will be exceeded if increased suspended sediment from construction activities that take place near a water body causes a suspended sediment plume 300 feet from the boundary of such activities to cause turbidity, as measured in nephelometric turbidity units (NTUs), to exceed 5 NTU over the background level.

The extent of a suspended sediment plume is an effective reinitiation trigger because it is a leading indicator for the most critical type of off-site damage caused by construction practices, turbidity monitoring is consistent with National Pollutant Discharge Elimination

System (NPDES) requirements and Section 401 water quality certification requirements by the Oregon Department of Environmental Quality for construction activities will take place in or near water bodies, and the Corps has contractual authority to take actions to address non-compliance.

2. The best available indicator for harm associated with the continuing presence of the OR 569 River Road - Delta Highway in the environment is the as-built footprint for construction actions related to the total and increased size of the bridge footings.

Specifically, the anticipated take for harm associated with the continued existence of the rehabilitated OR 569 River Road - Delta Highway will be exceeded if the proposed action is completed in a way that results in an as-built footprint that results in footings that does not concur with size and volume shown by maps and drawings in the BA Figures 9-18, 20-21, and Appendix A.

The as-built footprint of the OR 569 River Road - Delta Highway project is extent an effective reinitiation trigger because it is directly correlated to the area over which harm due to functional floodplain fill is likely to occur, as well as the level of impacts to species (the more area filled by the OR 569 River Road - Delta Highway, the greater the loss of available habitat). Such drawings are required by the FHWA as part of the close-out process for completed work to identify whether actual conditions deviate from plans and specification documents, and the FHWA has authority to modify contracts or issue other directions as necessary to ensure that all contract terms have been met.

3. The best available indicator for harm associated with the impact of post-construction stormwater discharge are a combination of stormwater facility design, construction, and maintenance, and operations as described in NMFS (2014) because they will determine whether the stormwater treatment system is operated and maintained in way that continues to minimize the concentration of pollutants in stormwater runoff as designed, and thus reflect the amount of incidental take analyzed in the opinion.
4. The best available indicator for incidental take associated fish salvage due to electrofishing, seining, and use of minnow traps of isolated work areas and cofferdams during construction of the OR 569 River Road - Delta Highway, is the estimated take associated with these isolated work areas. For OR 569 River Road - Delta Highway there will be twelve isolated work areas over three seasons associated with the Piers and the riprap removal. The dimensions of these areas are: Beltline Bridge (four areas for three seasons) the total area is 68,362 ft<sup>2</sup>, or 6,351 m<sup>2</sup>. At variable 2 and 3 feet of depth in these isolated areas, the total volume is 4,461 m<sup>3</sup>. For the Arterial Bridge (three areas for one season) the total area is 12,700 ft<sup>2</sup>, or 1,180 m<sup>2</sup>. At variable 1 to 4 feet of depth in these isolated areas, the total volume is 1,132 m<sup>3</sup>. As an estimate for potential off-setting areas for removal of artificial floodplain fill (three areas for one season) the total area is 15,000 ft<sup>2</sup>, or 1,394 m<sup>2</sup>. At an estimated 2 feet of depth in these isolated areas, the total volume is 929 m<sup>3</sup>. For the Debrick arterial (one season), the Debrick Overflow (three seasons) and the unnamed Tributary (one season) the total area is 11,820 ft<sup>2</sup>, or 1,578 m<sup>2</sup>. At an estimated 1 foot of depth in these isolated areas, the total volume is 527 m<sup>3</sup>. Using habitat densities of 0.07 Chinook salmon/m<sup>3</sup>

(Newton, J. M. and M. R. Brown. 2005; Earley, L.A., and M.R. Brown. 2013; and Reedy, Gary D. 1995) assuming they are equally spread through the water column and come from various habitat types upstream, we used average densities to calculate incidental take for up to 1.3 meters of depth. This section of the Willamette River is bounded by riprap and has habitat types of riffle, glide, and lateral scour pools. It is estimated that within these isolated cofferdams that 474 UWR Chinook salmon juveniles could be isolated and salvaged.

Exceeding either of the indicators for extent of take will trigger the reinitiation provisions of this opinion.

### **Effect of the Take**

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 necessary or appropriate to minimize the impact of the amount or extent of incidental take (50 CFR 402.02).

The FHWA shall:

1. Minimize incidental take from design, construction, in-water work, pile driving, of the OR 569 River Road - Delta Highway by applying conditions to the proposed construction actions that avoid or minimize adverse effects to water quality and the ecology of aquatic systems.
2. 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.

### **Terms and Conditions**

The FHWA 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.

Note: FHWA has included many construction elements and their BMP's into the Proposed Action and therefore will not have Terms and Conditions associated with those elements. These are all listed in section 3.2.13 Table 24 of the BA [Typical Project Impact Avoidance and Minimization Measures/Best Management Practices – FAHP Biological Opinion (WCRO-2021-00004) and ODOT Standard Specifications] and are incorporated by reference into the proposed action in this Opinion. These include: pile driving attenuation, use of fish screens, use of herbicides, stormwater management BMP's, working during the in-water work period, a pollution and erosion control plan, addressing construction discharge water, pre-construction activity and marking boundaries, selection of heavy equipment, site preparation, site restoration,

temporary access roads, revegetation, barge use, painting and coating, work area isolation, fish salvage, and the stormwater management plan. All of these conservation measures are in the BA in section 3.2.13, Table 241.

1. To implement reasonable and prudent measure #1 (design, construction, in-water work, pile driving, of the OR 569 River Road - Delta Highway), the FHWA shall ensure that the OR 569 River Road - Delta Highway rehabilitation is completed as follows:
  - a. Carry out all relevant conservation measures as described in the BA.
  - b. Turbidity: The FHWA must implement appropriate Best Management Practices (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 the river side of the project area. A properly calibrated turbidimeter is required unless another monitoring method is proposed and authorized by 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 upcurrent of the in water activity unless otherwise authorized by DEQ. The background turbidity, location, date, tidal stage (if applicable) and time must be recorded immediately prior to monitoring downcurrent 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 300 feet downcurrent from the disturbance at approximately mid-depth of the waterbody and within any visible plume. The turbidity, location, date, tidal stage (if applicable) 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	Restrictions to Duration of Activity
0 to 4 NTU above background	No Restrictions
5 to 29 NTU above background	Work may continue maximum of 4 hours. If turbidity remains 5-29 NTU above background, stop work and modify BMPs. Work may resume when NTU is 0-5 above background.
30 to 49 NTU above background	Work may continue maximum of 2 hours. If turbidity remains 30-49 NTU above background, stop work and modify BMPs. Work may resume when NTU is 0-5 above background
50 NTU or more above background	Stop work immediately and inform NMFS

- c. When the construction of OR 569 River Road - Delta Highway is complete, the FHWA will ensure that all equipment is removed, temporary buildings and other infrastructure are removed, post-construction cleanup is complete, and that the project was completed with no unintended increase in the length, width, or height of any new or rehabilitated infrastructure, or reduction in the area affected by the project.
  - d. Minimize Impact Area. Confine construction impacts to the minimum area necessary to achieve project goals.
  - e. Cessation of Work. Operations will cease under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage.
  - f. Inspection of Erosion Controls. During construction, all erosion controls must be inspected daily during the rainy season and weekly during the dry season to ensure they are working adequately.
    - i. If inspection shows that the erosion controls are ineffective, work crews must be mobilized immediately to make repairs, install replacements or install additional controls as necessary.
    - ii. Sediment must be removed from erosion controls once it has reached 75% of the capacity of the control.
2. 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.
- a. 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; time; and tidal stage (if applicable) 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.
  - b. Project completion report. The FHWA must provide a report with the following information within 60 days of completing all construction:

- i. As-built drawings of the bridge bents and configuration in the OR569 Beltline Bridge corresponding to maps and drawings in figures 4a, 4b, and 10 of the BA Appendix, and a table or set of tables as necessary to summarize the final dimensions of the project footprint, including:
  - (1) The total volume on internal bents in the functional floodplain and associated off-setting measures;
  - (2) Dimensions of isolated work areas requiring fish salvage.
  - (3) The final project CIA and associated BMP's with maintenance schedules;
  - (4) A pile driving summary describing the locations, type, driving method, size and number of pile driven on the project.
  - (5) Fish salvage records (species and numbers) including any data required under the NOAA Electrofishing Guidelines.
- ii. Evidence of compliance with fish screen criteria for any pump used.
- iii. A summary of the results of pollution and erosion control inspections, including any erosion control failure, contaminant release, and correction effort.
- c. Post Construction Stormwater Management. The FHWA must record all monitoring required by the Post-Construction Stormwater Management Plan described in subsection 3.c. above in an annual monitoring report for a period of three years after project completion.
- d. Reporting. Submit all monitoring reports to:  
projectreports.wcr@noaa.gov  
Attn: WCR-2021-00701

### **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).

NMFS offers the following conservation recommendation:

Identify and implement habitat enhancement or restoration activities in the Willamette River that restore or create off-channel habitat or access to off-channel habitat, side channels, alcoves, wetlands, and floodplains.

Please notify NMFS if the FHWA carries out this recommendation so that we will be kept informed of actions that are intended to improve the conservation of listed species or their designated critical habitats.

## **Reinitiation of Consultation**

Reinitiation of consultation is required and shall be requested by the 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.

## **ESSENTIAL FISH HABITAT**

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), and the Columbia River estuary is also designated as EFH for groundfish and coastal pelagic species (PFMC 1998, 2005), and as a Habitat Area of Particular Concern (HAPC) for all three types of EFH. NMFS concluded the proposed action would adversely affect EFH as follows:

1. Decreasing water quality and increasing dust, noise, light, and human presence during construction of the OR 569 River Road - Delta Highway.
2. Adverse effects associated with the presence of the OR 569 River Road - Delta Highway in the environment, separate from effects caused by its construction, including, but not limited to, the impact of post-construction stormwater discharge and a range of hydraulic and hydrological impacts.

The latter effects, in particular, will include water quality degradation caused by persistent pollutants and contaminants discharged into the Willamette River and the Columbia River as constituents of post-construction stormwater, and modified hydraulics and hydrology throughout the action area caused by the historic and continued presence of the OR 569 River Road - Delta Highway and other bridge structures within that reach.

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, 3 and 4 from the ESA portion of this document.
2. Identify and implement habitat enhancement or restoration activities in the Willamette River that restore or create off-channel habitat or access to off-channel habitat, side channels, alcoves, wetlands, and floodplains.

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 the Oregon Washington Coastal Office, Portland, Oregon.

Please direct questions regarding this letter to Tom Loynes, [Tom.loynes@NOAA.gov](mailto:Tom.loynes@NOAA.gov), (503) 881-6023.

Sincerely,



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

cc: John Raasch: ODOT Environmental Unit Manager  
Daniel Ohrn - ODOT Region 2 Interim Region Environmental Manager  
Molly Cary – ODOT Region 2 Transportation Project Manager  
Emily Cline – FHWA Environmental Manager  
Cindy Callahan – FHWA Senior Biologist  
Satvinder Sandhu – FHWA Operations Engineer  
Cash Chesselet - FAHP Coordinator & NOAA Liaison  
Sage Jensen – Senior Biologist – Jacobs



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