No Effect Memorandum
ESA Finding of NO EFFECT
KN 09320 Newberg Dundee Bypass Project
Fed Aid No S091(018)
May 17, 2010

X USFWS Species  □ NMFS Species  □ EFH

Project Type: Bypass Construction
Location: Between Oregon 18 milepost 51.6 and Oregon 99W milepost 19.6.
Lat/Long:
City: Cities of Newberg and Dundee
County: Washington and Yamhill Counties
HUC6: 17090012
Project Topography: generally flat with some incised stream channels
Surrounding Environment: farmland, orchards, forest land
X Area of Project Impact (API) map is attached, including survey/clearance area(s) and location(s) of closest aquatic resources.

Data Sources and Survey Method(s) Utilized: (Check all that apply.)

□ NMFS Staff Contacted [Include name(s)]  Date(s):
X USFWS Staff Contacted [David Leal – Liaison]  Date(s): May 14, 2010
X Species List – NMFS Website  Date(s): May 7, 2010
X Species List – USFWS Website  Date(s): March 11, 2010
X Federal Register  Date(s): June 28, 2005 (70 FR 123); September 2, 2005 (70 FR 170)
X ORNHIC Database  Date(s): February 2010
X StreamNet  Date(s): March 2010
X ODOT TransGIS Environmental  Date(s): May 11, 2010
□ Field Survey – Complete Assessment  Date(s):
X Field Survey – Appropriate Sample  Date(s): May-August 2006
□ Other [Provide references if appropriate]  Date(s):

Field Survey Technique(s):

Rare plant surveys were conducted in May, June, July, and August 2006 to document possible populations of listed plants from the Oregon National Heritage Information Center (ORNHIC) database and the U.S. Fish and Wildlife Service (USFWS) Yamhill County species list.
Listed Species likely to be within the API:

Listed Insect Species with Potential to be Present in the Project Area

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Federal Status</th>
<th>Discussed in which Document?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fender’s blue butterfly</td>
<td>Icaricia icariodes fenderi</td>
<td>Endangered</td>
<td>NE</td>
</tr>
</tbody>
</table>

Listed Plant Species with Potential Habitat within the Project Area

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Federal Status</th>
<th>Discussed in which Document?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willamette daisy</td>
<td>Erigeron decumbens var. decumbens</td>
<td>Endangered</td>
<td>NE</td>
</tr>
<tr>
<td>Nelson’s checkermallow</td>
<td>Sidalcea nelsoniana</td>
<td>Threatened</td>
<td>NE</td>
</tr>
<tr>
<td>Kincaid’s lupine</td>
<td>Lupinus sulphureus var. kincaidi</td>
<td>Threatened</td>
<td>NE</td>
</tr>
<tr>
<td>Water howellia</td>
<td>Howellia aquatilis</td>
<td>Threatened</td>
<td>NE</td>
</tr>
</tbody>
</table>

Designated Critical Habitat within the API:

No Designated Critical Habitat has been identified within the API for insects or plants.

Essential Fish Habitat (EFH) within the API:

A Biological Assessment (BA) for National Marine Fisheries Service (NMFS) is being prepared that will address listed fish and EFH within the API.

Brief Project Description:

ODOT and the Federal Highway Administration (FHWA) are proposing to build the Bypass (proposed project), an 11-mile, access-controlled expressway around the cities of Newberg and Dundee in Yamhill County, Oregon. The proposed project is needed to reduce congestion on Oregon 99W through Newberg and Dundee by redirecting traffic traveling through this area to the Bypass and to improve downtown livability in Newberg and Dundee and the overall flow of traffic through this area.

The proposed project is located along the south sides of Newberg and Dundee, extending from the Oregon 99W/Oregon 18 junction near Dayton (Oregon 18 approximately milepost 51.6) to just past the top of Rex Hill, east of Newberg (Oregon 99W approximately milepost 19.6). Most of the proposed project is located in Yamhill County, but a small portion, about 1,000 feet, extends east of Newberg along Oregon 99W into Washington County. The proposed project includes the alignment (the specific location) of the Bypass and four interchanges, as well as required changes to local streets that will be relocated to accommodate the Bypass. The four
interchanges provide access to and from the Bypass, and are located at each end of the Bypass and at two intermediate locations in Newberg and Dundee. The interchanges are:

- **Dayton Interchange**: Located at the Oregon 99W/Oregon 18 junction, just north of Dayton.
- **East Dundee Interchange (and connector road)**: Located between Dundee and Newberg.
- **Oregon 219 Interchange**: Located at the south edge of the Newberg urban growth boundary (UGB) on Oregon 219.
- **East Newberg Interchange**: Located on the east side of Newberg at Rex Hill.

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**Finding of Effect.**

ODOT, acting as an agent of FHWA or other federal agency because of a federal nexus, determines that the project will have: (Check all that apply.)

**X No Effect on Listed Species**…
- **X** Because there is no reason to believe that listed species are present in the Area of Project Impact (API). **[Absence Determination]**
- Because **avoidance measures** will be implemented to prevent effects on the listed species identified below that occur or are likely to occur within the API. (Complete Section A below.)

**X No Effect on Designated Critical Habitat**…
- **X** Because designated critical habitat does not occur in the API. **[Absence Determination]**
- Because **avoidance measures** will be implemented to prevent effects on the designated critical habitat identified below that occurs within the API. (Complete Section B below.)

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**Required Avoidance Measures.**

For each applicable section below:
- Identify *specific* project impacts that could affect the identified resource if avoidance measures are not implemented to eliminate *all* potential impacts.
- Provide a brief description of *each* required avoidance measure.

**Section A – Listed Species**

**Introduction**

In order to determine effects to listed species due to project impacts, it is necessary to determine the habitat utilized by listed species. The table below shows habitats utilized by listed plant species with potential presence in the project area.
Listed Plant Species Habitat

<table>
<thead>
<tr>
<th>Species Common Name</th>
<th>Species Scientific Name</th>
<th>Habitat Type</th>
<th>Potential Habitat Within Bypass Project Area</th>
<th>Habitat Condition Within Bypass Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willamette daisy</td>
<td><em>Erigeron decumbens</em> var.<em>decumbens</em></td>
<td>Wetland and upland prairies</td>
<td>Yes</td>
<td>Disturbed</td>
</tr>
<tr>
<td>Nelson's checkermallow</td>
<td><em>Sidalcea nelsoniana</em></td>
<td>Wetland prairies and streamsides</td>
<td>Yes</td>
<td>Disturbed</td>
</tr>
<tr>
<td>Kincaid's lupine</td>
<td><em>Lupinus sulphureus</em> var.<em>kincaidii</em></td>
<td>Upland prairies with perennial grasses and forbs; dry open woods, banks, meadows</td>
<td>Yes</td>
<td>Disturbed</td>
</tr>
<tr>
<td>Water howellia</td>
<td><em>Howellia aquatilis</em></td>
<td>Ponds and lakes along shallow edges, ephemeral ponds and river oxbows</td>
<td>Yes</td>
<td>Disturbed</td>
</tr>
</tbody>
</table>

In May-August of 2006 rare plant surveys were conducted to determine if rare plants were present at the project site. No listed plant species shown in the table above were found during rare plant surveys conducted. Habitat for rare plants within the project area is very limited and primarily restricted to roadside ditches and degraded wetlands. A remnant wet prairie patch is located in the project area near Dundee, and native species such as common camas (*Camassia quamash*) and meadow checkermallow (*Sidalcea campestris*) were identified at this site. Meadow checkermallow is a state candidate species found in meadows, fencerows, and roadside ditches within the Willamette River valley. Meadow checkermallow is the only rare plant identified in the project area over the course of the site surveys and it is not a federally listed species. ORNHIC data acquired for a 2-mile radius of the project area documents two documented occurrences of Kincaid’s lupine in McMinnville southwest of the project area. However, it does not show any occurrence of any listed plant within the project area, which is consistent with the surveys.

The other listed USFWS species with potential presence near the project site is Fender’s blue butterfly. This species occurs in native prairie habitats and utilizes three lupine species as larval food plants which include: Kincaid’s lupine (*Lupinus sulphureus kincaidii*), sickle-keeled lupine (*L. albicaulis*) and spur lupine (*L. arbustus*). Adult Fender’s blue butterflies utilize several other plants for food, including tapertip onion (*Allium acuminatum*), narrowleaf onion (*Allium ampletens*), Tolmie’s mariposa lilly (*Calochortus tolmiei*), small camas (*Camassia quamash*), clearwater cryptantha (*Cryptantha intermedia*), wooly sunflower (*Eriophyllum lanatum*), Oregon geranium (*Geranium oreganum*), toughleaf iris (*Iris tenax*), pale flax (*Linum angustifolium*), blue flax (*Linum perenne*), meadow checkermallow, rose checker-mallow (*Sidalcea virgata*), bird vetch (*Vicia cracca*), common vetch (*V. sativa*), and tiny vetch (*V. hirsute*). Dry, fescue prairies make up the majority of habitat for Fender's blue butterfly, though this species may also be found on steep, south-facing slopes and barren rocky cliffs (NatureServe 2010).

Fender’s blue butterfly populations generally co-occur with Kincaid’s lupine and have a limited dispersal ability from their natal lupine population. The maximum reported dispersal distance is two miles (Severns 2004 as cited in 71 FR 63862). Since the 2006 plant survey results did not discover any Kincaid’s lupine populations, it can be assumed that Fender’s blue butterfly is not present within the project area.
Project Impacts

The Project would impact non-listed native and non-native plants along the project corridor in several ways. Plants within the right-of-way of the Project would be destroyed by project construction. The Project would displace about 77 to 80 acres of wildlife habitat as shown in the table below. The largest loss of wildlife habitat, more than 40 acres, would be to the lowlands-conifer-hardwood forest habitat; the second largest loss would be to riparian-wetland habitat, about 27 to 28 acres. Loss of other habitat types would be less than about 4 acres each.

Table 1. Direct Impact Best- and Worst-Case Scenarios to Wildlife Habitat Within the Bypass Right-of-Way

<table>
<thead>
<tr>
<th>Regional Wildlife Habitat Classification</th>
<th>Best-Case (acres)</th>
<th>Worst-Case (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Westside Lowlands Conifer-Hardwood Forest</td>
<td>40.43</td>
<td>42.09</td>
</tr>
<tr>
<td>Westside Oak, Dry Douglas Fir Forest, and Woodland</td>
<td>2.92</td>
<td>2.92</td>
</tr>
<tr>
<td>Lakes, Ponds, Reservoirs, and Rivers</td>
<td>2.93</td>
<td>3.33</td>
</tr>
<tr>
<td>Herbaceous Wetlands(^a)</td>
<td>3.28</td>
<td>3.76</td>
</tr>
<tr>
<td>Westside Riparian-Wetlands</td>
<td>27.30</td>
<td>28.23</td>
</tr>
<tr>
<td><strong>Total Habitat</strong></td>
<td><strong>76.86</strong></td>
<td><strong>80.33</strong></td>
</tr>
</tbody>
</table>

\(^a\) These numbers are larger than those described in the Wetlands section since they reflect the entire area found within the right-of-way, not just that area directly affected.

Plants within the remaining habitat could be indirectly affected by changes in hydrology and reduced population size. The installation of a roadbed would interrupt hydrologic flow through soil, which may have long-term impacts to micro-habitats in the remaining areas.

Furthermore, construction of the proposed project would fragment and isolate some habitats. The creation of approximately 11 miles of new highway would fragment and isolate wildlife and wildlife habitat along the entire length of the Bypass. The Bypass would create a substantial permanent barrier across the landscape. This barrier would be penetrable in some locations and for some species (i.e., within riparian zones) and impenetrable for others (i.e., small mammals in agricultural areas). This wildlife barrier may affect plant species by limiting their seed dispersal within the area and consequently, this may cause population isolation. With the exception of the cities of Newberg and Dundee, where urbanization currently fragments and isolates wildlife habitats, riparian zones south of Oregon 99W currently provide contiguous habitat to the Willamette or Yamhill Rivers. However, since nearly all remaining wildlife habitat within the project area is within riparian corridors, and since the project proposes to use bridges to fully span the majority of streams along the Bypass, potential impacts due to habitat fragmentation would be greatly reduced.

Highways can promote the spread of noxious weeds. Seeds can be carried to new locations by vehicles in the loads they carry and, if conditions are appropriate, these seeds can establish new populations. ODOT would follow prescribed maintenance practices to control the spread of noxious weeds. However, even with these maintenance activities, noxious weeds would be expected to spread along the proposed project in the medians and highway shoulders. This would likely affect plant species by introducing weeds that may out-compete native species.
Of the project area, the East Dundee Interchange would have the greatest impact of all segments on plant and wildlife habitats, due to the proximity of the Bypass to the riparian zone of Chehalem Creek Tributary A and to a wet prairie that includes several native plants. Despite all these potential impacts to plant species, no terrestrial plant species listed under the federal ESA are known to occur within the project right-of-way. Therefore, these potential impacts are anticipated to have no effect on these species.

Dry, fescue prairies make up the majority of habitat for Fender's blue butterfly and are not known to be present within the project area. ORNHIC data acquired for a 2-mile radius of the project area, shows no documented occurrence of Fender’s blue butterfly. Wet prairie habitat onsite (4.65 acres) would be impacted by construction. This habitat includes meadow checkermallow, a known food source of adult Fender’s blue butterflies. However, since Fender’s blue butterfly are highly mobile and not known to be present at the project area, the project is anticipated to have no effect on this species.

Avoidance Measures
Avoidance and conservation measures have been incorporated into the preliminary project design to avoid or minimize many of the potential impacts to wildlife habitats. Direct impacts to wildlife habitats within the Bypass were substantially avoided during the preliminary project design. Avoidance and conservation measures for wildlife impacts already considered and incorporated into the preliminary project design and to be considered throughout the design process include the following measures:

- Avoid the impact entirely through design modification or by not taking a certain action or parts of an action (e.g., by realigning the Bypass to avoid impacts to a stream and wetland as was done in the case of a ramp near Wynooski Road at Hess Creek).

- Minimize impacts through design modification or by limiting the degree or magnitude of the action and its implementation (e.g., by placing bridges over streams and riparian zones).

The project design incorporates full span bridges for most of the project area stream and/or wetland crossings. In addition, only one bridge pier, at Hess Creek Tributary B, would be located within the 2-year floodplain of streams. Since the majority of remaining natural wildlife habitat and wildlife corridors within the project area are located in riparian zones, direct and indirect impacts have been minimized by bridging and selective pier placement. Current bridge designs also follow the Final Fluvial Performance Standards established for the Oregon Transportation Investment Act (OTIA) III Bridge Delivery Program. These performance standards protect normative physical processes that shape stream channels and floodplains.

In addition, ODOT’s Standard Specifications (ODOT 2008) outline specific measures for road construction and operation. Pertinent standards that aid in minimizing effects to wildlife and plant species include those that address drainage and erosion control, vegetation removal, and revegetation. The Project would be constructed in accordance with state and local regulations requiring approved sedimentation and erosion control plans, compensatory wetland mitigation, and measures to avoid disturbance to plant and wildlife species.
No Effect Memorandum
Newberg Dundee Bypass Project

Section B – Designated Critical Habitat

N/A

Section C – Essential Fish Habitat

N/A
References:


No Effect Memorandum  
Newberg Dundee Bypass Project  

Required Signatures.

Individuals Responsible for the No Effect Determination:

[Molly Cary]  
Region 2 Environmental Manager, ODOT

[Elisabeth Bowers]  
Consultant Biologist  
[Parametrix]  

Date  
5-18-10

Individuals Responsible for Ensuring Implementation of Avoidance Measures (if they are required):

[Shane Ottosen]  
Project Manager  
[ODOT]  

Date  
5/18/10

[Kelly Amador]  
Senior Project Leader  
[ODOT]  

Date  
5-18-10
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Background: Subsequent to completion of the No Effect memorandum (attached) for the subject project in May, 2010, various refinements were made to the original scope and design of the Bypass project, resulting in substantial changes to initial construction phasing collectively known as Phase 1. As a result these Phase 1 refinements, previously unanalyzed areas were added to the Area of Potential Impact (API) of the Bypass project, requiring additional surveys and impact analyses for ESA-listed species. Phase 1 impacts to ESA-listed fish have been addressed through a Project Change Form submittal to National Marine Fisheries Service (NMFS), which amends the existing ESA consultation with that agency. This addendum addresses Phase 1 impacts to ESA-listed plants and terrestrial animals regulated by U.S. Fish and Wildlife Service.

Phase 1 location information: Most of the Phase 1 alignment overlaps the Bypass footprint already addressed in the original No Effect memorandum. However, Phase 1 also includes improvements to existing roadways in Newberg and to Oregon 99W. The expanded project areas are in East Newberg and south of Dundee, where improved roadways will connect Oregon 99W to the Bypass. These previously unsurveyed areas, addressed in this addendum, are shown in Attachment A.

Phase 1 project description: Phase 1 will begin at a new signalized intersection on Oregon 219, traveling through south Newberg into Dundee. South of Dundee, the Phase 1 alignment will diverge from the full Bypass footprint, proceeding west, parallel to the Dundee city limits, and cross over the Willamette and Pacific Railroad and Oregon 99W. After crossing over Oregon 99W, Phase 1 will loop around and connect to Oregon 99W at a new signalized intersection. The Phase 1 connection between the Bypass and Oregon 99W will be removed when the Bypass is extended to Oregon 18 in Dayton. Phase 1 will not include construction of the East Dundee Connector Road or interchange. Other Phase 1 improvements include:

- Additional southbound left turn lane on Oregon 99W at Springbrook Road;
- Widening Springbrook Road to three lanes (one northbound lane, one southbound lane, and a center left turn lane between Oregon 99W and Oregon 219);
- Constructing a traffic signal at the intersection of Springbrook and Fernwood Roads;
- Adding a southbound left turn lane on Springbrook Road at Oregon 219;
- Widening Oregon 219 to five lanes between Springbrook Road and the new Bypass signalized intersection on Oregon 219;
- Connecting Wilsonville Road to the new Bypass signalized intersection on Oregon 219;
- Restricting Oregon 219 at 2nd Street to right in/right out;
- Adding a right turn lane on Wynooski Road at Oregon 219;
• Constructing a traffic signal at the new Bypass intersection on Oregon 99W;
• Widening westbound Oregon 99W west of the new Bypass intersection to two travel lanes; and
• Widening eastbound Oregon 99W west of the new Bypass intersection to include two left turn lanes onto the Phase 1 Bypass.

Phase 1 ESA Survey Technique: The expanded Phase 1 API shown in Attachment A was surveyed in mid-July, 2011, using an intuitive controlled survey method whereby intensive botanical surveys were performed in habitats exhibiting potential suitability for ESA-listed plants, while other areas were given only cursory attention due to their clear unsuitability to native species. Examples of potentially suitable habitats include vegetated vacant lots, fallow pastures, and margins of roads, fence lines and railroad grades possessing some constituent of intact native vegetation. Examples of unsuitable habitats include areas such as residential lawns, active pastures and agricultural fields, gravel parking lots, monospecific thickets of blackberry and reed canarygrass, and herbicided road shoulders and railroad grades. Precise locations of potentially suitable habitat areas included in botanical surveys are documented in the Phase 1 Botanical Clearance Report, available from ODOT upon request.

Listed species likely within the expanded Phase 1 API: Because Phase 1 largely overlaps, or lies adjacent to, the original Bypass API, the listed species addressed in this addendum are the same as those included in the original No Effect memo. Results of botanical surveys reveal the majority of habitats within the expanded Phase 1 API are unsuitable to ESA-listed plants and terrestrial animals due to intensive agricultural and urban development. Some potentially suitable undeveloped habitats were identified during botanical surveys, but even these contained very few native plants, much less rare ESA-listed species. The only moderately rare species observed during surveys was meadow checkermallow (*Sidalcea campestris*), which occurred as a single patch of six plants in an otherwise weedy field. This species is not federally listed, but is designated a state Candidate species by Oregon Department of Agriculture. Given their location, the patch of checkermallows is unlikely to be impacted by Phase 1 activities. However, if impacts are expected to occur, the checkermallows will be relocated to a safe and suitable location prior to construction.

Finding of Effect: Due to lack of ESA-listed plants and terrestrial wildlife species, and lack of Designated Critical Habitat, ODOT believes Phase 1 construction activities will have No Effect to these resources, consistent with the original ESA No Effect memo attached to this addendum.

Individual responsible for Addendum No Effect determination:

[Signature]

Steven Gisler
ODOT Region 2 Biologist
Attachment A: Expanded Phase 1 API (orange) addressed in this No Effect Addendum
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Biological Opinion Signature Page
Refer to NMFS No: 2010/02492

December 17, 2010

Chris Woods
Team Leader, Planning & Program Development
Federal Highway Administration
530 Center Street NE, Suite 100
Salem, Oregon 97301

Re: Endangered Species Act Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Conservation Recommendations for the Newberg Dundee Bypass (Key # 09320) (Federal Aid # S091(018)), Washington and Yamhill Counties, Oregon (5th field HUCs: 1709000703 and 1709000807).

Dear Mr. Woods:

The enclosed document contains a biological opinion (Opinion) prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7(a)(2) of the Endangered Species Act (ESA) on the effects of the Federal Highway Administration (FHWA) funding the Oregon Department of Transportation (ODOT) to construct the Newberg Dundee Bypass (Key # 09320) in Washington and Yamhill Counties, Oregon. In this Opinion, NMFS concludes that the proposed action is not likely to jeopardize the continued existence of Upper Willamette River (UWR) Chinook salmon (Oncorhynchus tshawytscha) and UWR steelhead (O. mykiss) or result in the destruction or adverse modification of designated critical habitat for these species.

As required by section 7 of the ESA, NMFS is providing an incidental take statement with the Opinion. The incidental take statement describes reasonable and prudent measures NMFS considers necessary or appropriate to minimize the impact of incidental take associated with this action. The take statement sets forth nondiscretionary terms and conditions, including reporting requirements, that the FHWA and ODOT must comply with to carry out the reasonable and prudent measures. Incidental take from actions that meet these terms and conditions will be exempt from the ESA’s prohibition against the take of listed species.

This document also includes the results of our analysis of the action’s likely effects on essential fish habitat (EFH) pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), and includes three conservation recommendations to avoid, minimize, or otherwise offset potential adverse effects on EFH. These conservation recommendations are a subset of the ESA take statement’s terms and conditions. Section 305(b)(4)(B) of the MSA requires Federal agencies to provide a detailed written response to NMFS within 30 days after receiving these recommendations.
If the response is inconsistent with the EFH conservation recommendations, the FHWA must explain why the recommendations will not be followed, including the scientific justification for any disagreements over the effects of the action and the recommendations. In response to increased oversight of overall EFH program effectiveness by the Office of Management and Budget, NMFS established a quarterly reporting requirement to determine how many conservation recommendations are provided as part of each EFH consultation and how many are adopted by the action agency. Therefore, we request that in your statutory reply to the EFH portion of this consultation, you clearly identify the number of conservation recommendations accepted.

If you have questions regarding this consultation, please contact Cidney Howard, fisheries biologist in the Willamette Basin Habitat Branch of the Oregon State Habitat Office, at 541.388.6420.

Sincerely,

William W. Stelle, Jr.
Regional Administrator

cc: Frannie Brindle, ODOT
    Ken Cannon, ODOT
    Molly Cary, ODOT
    Rod Thompson, ODOT
Biological Opinion Change Form
OREGON DEPARTMENT OF TRANSPORTATION

Project Change Proposal

Section 1: To be Completed by Project Manager/Maintenance Manager/Region Environmental Manager
Project Name: Newberg Dundee Bypass; Waterway Impacted: Mid-Willamette River Tributaries
Highway & MP: New Alignment; County: Yamhill & small portion of Washington
Permit/Tracking Numbers: DSL: N/A COE: N/A NMFS: 2010/02492 USFWS: N/A
FHWA Federal Aid #: S091(018)/S01W(036)/S091(015) ODOT Key #: 092320
Requested by: Rod Thompson, Title: Senior Environ, Project Manager, Telephone #: (503) 986-2690;
Date: 01/06/12
Name and Address the authorized extension is to be returned to: Rod Thompson, ODOT
Region 2 Technical Center, 455 Airport Road SE, Building B, Salem, OR 97301-5395

Type of Change:
☐ In-Water Variance (Permitted in-water work period: ) Extension Date(s): 
☒ Project Design Change
☐ Alternative Mitigation

Was ESA consultation completed? Yes ☒; No ☐ If yes, with: NMFS ☒; USFWS ☒

Reason why the work can not be completed as defined in the regulatory documentation and/or during the permitted in-water work window and why the change and/or extension is needed. List scheduling adjustments that have already occurred in an attempt to complete the work on time and avoid the need for a variance request (e.g. double shifts, working weekends, working at night, bringing in extra crews and equipment). (be specific).

*See attached Document.

Activities that will be performed that are different than described in the biological documentation and/or during the extension, methods used to perform them (pile driving, riprap placement etc.), and documentation of contacts and discussions regarding the change and/or extension: (be specific)

*See attached Document.

Additional conservation/mitigation measures, if needed, that will be taken: (be specific)

*See attached Document.

Section 2: To Be Completed By ODOT Environmental Specialist
1. Is a permit modification necessary? Yes ☐; No ☒
2. Is re-initiation of ESA consultation necessary? Yes ☐; No ☒
If yes to 1 or 2, with which authority: DSL ☐; COE ☐; NMFS ☐; USFWS ☐

Assessment of additional impact(s) to Threatened & Endangered Species and/or their habitat(s), including possible benefits:

*See attached Document.
Additional conservation/mitigation measures that will be implemented:

*See attached Document.

**Section 3:** To Be Completed By ODOT Permit Coordinator And/Or ODOT Biologist

<table>
<thead>
<tr>
<th>Agency</th>
<th>Representative Name</th>
<th>Concurrence Date</th>
<th>Reference*</th>
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<td>DSL</td>
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<tr>
<td>NMFS</td>
<td>Tom Loynes</td>
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<td>Other</td>
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</tbody>
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Attachments / Supplemental Information (drawings, photos, maps, communications, project sequencing and schedule, etc.) *See attached Document.
ODOT Newberg Dundee Bypass Project Change Proposal – Additional Information

The Federal Highway Administration (FHWA) and the Oregon Department of Transportation (ODOT) propose building the Newberg-Dundee Bypass (Bypass) project, an 11-mile, four-travel lane, access-controlled expressway around the cities of Newberg and Dundee in Yamhill and Washington Counties, Oregon. The proposed project would reduce congestion on Oregon 99W through Newberg and Dundee by redirecting traffic to the Bypass. FHWA funds are used for this project and constitute the federal nexus. ODOT is responsible for administering these funds and is the applicant.

On June 10, 2010, the National Marine Fisheries Service (NMFS) received a letter from the FHWA requesting formal consultation pursuant to the Endangered Species Act (ESA) for the issuance of a biological opinion for providing FHWA funds to ODOT to construct the Bypass. The FHWA determined that the proposed action is likely to adversely affect (LAA) Upper Willamette River (UWR) Chinook salmon (Oncorhynchus tshawytscha) and UWR steelhead (O. mykiss) due to harassment and turbidity effects to juvenile Chinook salmon during construction and stormwater effects to Chinook and steelhead. The FHWA also determined that the proposed action is not likely to result in destruction or adverse modification of designated critical habitat.

Several amendments and clarifications were made to the project in mid- and late 2010. A Biological Opinion (BO) (NMFS No. 2010/02492) was published on December 17, 2010.

After the issuance of this BO, Bypass designs were further advanced. Project elements related to construction of bridges were refined, and changes to the project description occurred. The changes are in regard to the initial phasing of construction (known as Phase 1), confirmation of proposed impervious surface area, and addition of temporary work bridges necessary for the construction of the permanent bridges. The following is a detailed discussion of these project changes and an analysis of effects on listed fish and their habitats.

Analysis of Phase 1

Phase 1 Project Description:
In order to relieve traffic congestion before the entire Bypass can be constructed, ODOT proposed Phase 1. Phase 1 of the Preferred Alternative (Phase 1) will extend from Oregon 219 in Newberg and connect to Oregon 99W just south of the City of Dundee. Most of the Phase 1 alignment overlaps with the Bypass footprint as described in the Biological Assessment (BA) and BO. However, Phase 1 also includes improvements to existing roadways in Newberg and to Oregon 99W. The expanded project areas are in East Newberg and south of Dundee, where improved roadways will connect Oregon 99W to the Bypass. Bypass improvements included in Phase 1 are shown on Figure 1.

Phase 1 will begin at a new signalized intersection on Oregon 219, traveling through south Newberg into Dundee. South of Dundee, the Phase 1 alignment will diverge from the full Bypass footprint, proceeding west, parallel to the Dundee city limits, and cross over the Willamette and Pacific Railroad and Oregon 99W. After crossing over Oregon 99W, Phase 1 will loop around and connect to Oregon 99W at a new signalized intersection. The Phase 1 connection south of
Dundee between the Bypass and Oregon 99W will be removed when the Bypass is extended to Oregon 18 in Dayton (i.e. temporary). Phase 1 will not include construction of the East Dundee Connector Road or interchange. Other Phase 1 improvements include:

**Permanent Improvements in East Newberg**

Improvements in East Newberg are shown on Figure 1, and include the following elements:

A. Restricting Oregon 219 at 2nd Street to right in/right out;
B. Constructing a traffic signal at the intersection of Springbrook and Fernwood Roads;
C. Additional southbound left turn lane on Oregon 99W at Springbrook Road;
D. Adding a southbound left turn lane on Springbrook Road at Oregon 219;
E. Widening Springbrook Road to three lanes (one northbound lane, one southbound lane, and a center left turn lane between Oregon 99W and Oregon 219);
F. Widening Oregon 219 to five lanes between Springbrook Road and the new Bypass signalized intersection on Oregon 219, and connecting Wilsonville Road to the new Bypass signalized intersection on Oregon 219;
G. Adding a right turn lane on Wyonooski Road at Oregon 219;

**Interim Improvements South of Dundee**

Interim improvements south of Dundee are shown on Figure 2, and include the following elements:

A. Constructing a traffic signal at the new Bypass intersection on Oregon 99W;
B. Constructing an interim structure to connect Phase 1 Bypass to Oregon 99W over Willamette and Pacific Railroad and Oregon 99W;
C. Widening westbound Oregon 99W west of the new Bypass intersection to two travel lanes; and
D. Widening eastbound Oregon 99W west of the new Bypass intersection to include two left turn lanes onto the Phase 1 Bypass.

**Phase 1 Stream Crossings**

The Phase 1 alignment (see Figure 3) crosses the following identified stream sites with permanent bridges:

- Unknown Stream Tributary A, Bypass WB (now identified as Unnamed Stream 1)
- Chehalem Creek Bypass WB
- Hess Creek North Bypass WB
- Hess Creek Tributary C, Bypass WB

The Phase 1 alignment crosses the following identified streams with temporary bridges:

- Hess Creek Tributary A (Dundee), Phase 1 of the Bypass WB & EB
- Hess Creek Tributary B (Dundee), Phase 1 of the Bypass WB & EB

Only Chehalem Creek contains ESA-listed (listed) fish. No in-water work is anticipated at this site. All permanent bridges identified above were addressed in the BA and BO.
Phase 1 Stormwater

While additional interim and permanent roadwork is anticipated at the northern and southern termini of Phase 1, all stormwater runoff from new impervious surface will be collected and treated in accordance with the conditions of the Bypass BO which stipulated that treatment use the design criteria contained in the SLOPES IV BO. Figure 3 shows the location and type of the proposed treatment facilities for Phase 1.

Phase 1 will entail approximately 35 acres of new contributing impervious area (CIA), of which a little over 4 acres is part of the interim CIA. For the full Bypass, the impervious area within the project footprint would remain at approximately 175 acres, as discussed in the project BA and BO.

Temporary Work Bridge Construction
Temporary work bridge construction was originally proposed only for the Yamhill River at Dayton. The original proposal included the use of up to 200 piles with a maximum diameter of 24 inches. After further refinement of the work bridge designs (originally proposed as 40-foot spans, now designed as 80-foot spans for fish-bearing streams) and confirmation of the ordinary high water (OHW) line for all project streams, the quantity of temporary work bridge piles in the Yamhill River (originally estimated to be 625 feet wide, now 150 feet wide) has been reduced to an estimated 30 piles. This change results in a decrease of 170 temporary piles in the Yamhill River compared to the amount analyzed in the BA and BO.

In addition, the project team identified the need for temporary work bridges at all but one of the other stream crossings spanned by a bridge or bridges. Appendix A lists the streams at which temporary work bridges are proposed and provides details on bridge elements above and below OHW. There are 36 permanent bridges and 2 temporary bridges (Phase 1 – Dundee Connector) proposed for project stream crossings (many are paired structures over an individual stream resulting in 28 individual bridge sites) and 26 work bridges are needed to construct the permanent and temporary structures.

Of the temporary work bridges, 8 of 26 are anticipated to need temporary piles installed below the OHW elevation. These 8 bridges will have piles in water during summer flows. However, only 1 of these crossings occurs in a stream reach that has confirmed or potential presence of listed fish. This crossing is located at the Yamhill River at Dayton, and will entail approximately 30 temporary piles. The Yamhill River at Dayton site will experience a net decrease of 170 temporary piles from what was described in the BA and BO.

In addition to the temporary work bridge needed at the Yamhill River, 4 additional temporary work bridges cross streams with confirmed or potential listed fish. However, no in-water work will be required at these sites and stormwater will be treated in accordance with the conditions of the Bypass BO. These stream crossings and associated permanent bridges include:

- Miller Creek, Bypass West Bound (WB) & East Bound (EB);
- Hess Creek, Bypass WB & EB
- Hess Creek, Frontage Road, and
• Chehalem Creek, Bypass WB & EB;

The temporary work bridge for Chehalem Creek, Bypass WB & EB will likely be built for the Phase 1 construction of 1 permanent bridge and would then be removed. At the time of full Bypass construction, this temporary work bridge may need to be reinstalled in order to construct the second permanent bridge. In-water work will not be required for this crossing.

The remaining seven bridges with temporary piles below OHW, which therefore will likely require in-water work, do not contain listed fish due to natural or artificial barriers that will still be in place before and during construction. A total of 244 temporary piles will be placed below OHW for these work bridges. These stream crossings and associated permanent bridges are as follows:

• Unknown Stream 1 Tributary A, Bypass (Unnamed Stream 1);
• Hess Creek Tributaries A & B, Bypass WB & EB;
• Spring Brook Tributary A, Bypass WB & EB;
• Springbrook Tributary B, Bypass WB & EB (2 temporary bridges at this site);
• Spring Brook Tributary B, Bypass EB Ramp; and
• Spring Brook Tributary B, Bypass WB Ramp.

Due to absence of listed fish and their habitat at these seven sites, the effects of in-water work at these streams are not discussed further.

Of the 26 temporary work bridge sites, 14 have no listed fish and will not have piles below OHW. Of these 14 sites, 4 (Hess Creek Tributary B, Unknown Stream Tributary A [Unnamed Stream 1], Bypass WB & EB; Hess Creek North, Bypass WB & EB; and Hess Creek North Tributary C, Bypass WB & EB) are in Phase 1 of the project. These sites will require 1 temporary bridge to be installed for the construction of 1 permanent bridge during Phase 1, and would then be removed. At the time of full Bypass construction, temporary work bridges may need to be reinstalled to construct the second permanent bridge at each site.

The piles used for construction of temporary work bridges are anticipated to be HP12 or steel pipe piles with a maximum diameter of 16 inches. Piles will be installed using vibratory methods. All piles below OHW will be installed during the recommended in-water work windows for these streams.

Effects of Refined Designs of Temporary Bridges

Physical disturbance to listed fish habitat within the Yamhill River will be less than what was analyzed in the BA and BO. Due to the temporary and relatively small footprint of the temporary piles at the Yamhill River, no permanent effects to in-water habitat are anticipated. Temporary piles will be in place for approximately two to three years. Temporary effects to in-water habitat could be as much as 1.4 ft$^2$ per 16-inch diameter pile placed, for a total of up to 42 ft$^2$ within the Yamhill River.
Increased in-water impacts are not anticipated at the 4 other streams that contain listed fish. The refined designs of temporary work bridges as it relates to pile placement has caused a net decrease of in-water impacts in project streams assumed or known to contain listed fish. The net decrease of these impacts is approximately 238 ft².

Impacts to listed fish in the Yamhill River from the installation of these temporary piles will be limited due to the work occurring only during the recommended in-water work window, when presence of listed fish is minimal. In addition, hydroacoustic impacts from installation will likely be limited only to short periods of disturbance-causing noise. Vibratory installation of piles of this size have not been shown to exceed interim injury thresholds for fish. Interim guidance for behavioral disturbance is currently 150dB RMS. Based on the CalTrans Pile Driving Compendium values for vibratory installation of similarly sized piles results in 150 to 155dB RMS values at 1C meters from the pile. Similarly, the Columbia River Crossing project measured vibratory installation of 24-inch diameter piles at 157 and 162dB RMS². Given the size of the piles being installed, even with a conservative estimate of 160dB RMS, it is unlikely that sound levels above 150cB RMS would extend more than 46 meters (150 feet) from the pile being installed.

In the Bypass BO, the amount or extent of take was described as follows:

Incidental take of UWR Chinook salmon and UWR steelhead that is reasonably certain to be caused by the adverse effects of the proposed action will include (a) capture of juvenile fish, some of which will be injured or killed during work area isolation; and (b) death or significant impairment of essential behaviors from increased turbidity and exposure to PAHs [Polycyclic aromatic hydrocarbons]. Take will occur within an area 500 ft upstream and 500 ft downstream from the new bridges. Incidental take within that area that meets the terms and conditions of this ITS [Incidental Take Statement] will be exempt from the taking prohibition.

Isolation of in-water work areas under the proposed project will isolate approximately 2,450 ft² of the action area. UWR Chinook salmon [and] UWR steelhead juveniles within this action area will be exposed to activities that will harass them to the extent that most will flee the area. The NMFS expects the process of work area isolation is reasonably certain to cause additional incidental take (capture or wound) up to 75 of these juvenile UWR Chinook salmon and UWR steelhead inside the isolation area. Four of the captured and handled UWR Chinook salmon and four UWR steelhead will likely die. These numbers are based on an estimate from ODFW [Oregon Department of Fish and Wildlife]. The spatial extent of the “take zone” is a subset of the action area (extending 500 ft upstream and downstream from each stream crossing).

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1 Available at: http://www.dot.ca.gov/hq/env/bio/files/pile_driving_snd_comp9_27_07.pdf.

In the accompanying Opinion, NMFS determined that this level of incidental take is not likely to result in jeopardy to the affected species. Moreover, the habitat that will be affected is not limited at the site or watershed scale. The re-initiation provisions of this Opinion will be triggered if greater than 2,450 ft² of channel is isolated and dewatered and 1,155 ft² of permanent fill for the new bridge bents is exceeded during construction of the Bypass, a turbidity plume resulting from construction extends more than 500 ft downstream from the construction sites, or more than 75 fish are captured or more than 8 are killed.

Based on the preceding discussion of impacts, the total physical impact to in-water habitat containing listed fish will be the same or slightly lower due to a decrease of 170 temporary piles. No injury to individual fish from installation is anticipated, and behavioral disturbance would be limited to approximately 150 feet. This value is less than the value analyzed for turbidity and PAH effects on fish from construction of the permanent bridges, which was presented in the BA and BO.

**Permanent Yamhill River Bridge Construction**

Also due to the confirmation of the OHW line at this location, there is a reduction in the number of permanent bridge bents below OHW. In the BA/BO three bridge bents were identified below the OHW line, now two of those bents are confirmed to be located outside the OHW. The remaining bent might be outside the OHW, but very close to the OHW line, so to be conservative this bent will be assumed to still be within the OHW line. By confirming the OHW line at this location, the impacts associated with bridge bents below OHW are reduced by approximately 576 ft² of proposed permanent impacts to the Yamhill River.

Coinciding with the reduction in permanent bents for the Yamhill River Bridge, the number of proposed cofferdams needed to build the permanent bridge bents will be reduced by two. This means a reduction in approximately 600 feet² of proposed temporary impacts to the Yamhill River within the cofferdams.

With the reduction in cofferdams, also comes a reduction in the need to conduct fish rescue (salvage) than what was consulted on in the original BA/BO from approximately 2,450 ft² to 1,850 ft². Therefore reducing the opportunity for incidental take of ESA listed fish through salvage activities.

**Conclusion**

As required under several authorizations, regulations, and guidelines, the Bypass project will continue to identify ways to avoid or minimize impacts to natural resources as the project design advances.

When a project modifies design details, the project proponent and the lead federal agency must analyze whether any existing authorizations under the ESA is still valid. As stated on page 27 of the BO:

*Reinitiation of formal consultation is required and shall be requested by the Federal agency or by NMFS where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) If*
the amount or extent of taking specified in the incidental take statement is exceeded, (b) if new information reveals effects of the action that may affect listed species or designated critical habitat in a manner or to an extent not previously considered; (c) if the identified action is subsequently modified in a manner that has an effect to the listed species or designated critical habitat that was not considered in the biological Opinion; or (d) if a new species is listed or critical habitat is designated that may be affected by the identified action (50CFR 402.16).

The design refinements discussed in this memorandum potentially relate to items (a) and (c) in the re-initiation clause. The refinements do not exceed the amount or extent of take specified in the incidental take statement. Nor do the refinements result in effects to species or critical habitats that were not previously considered.

Based on the foregoing information, all of the refined designs for the Bypass project elements addressed in this memorandum are within the scope and analysis of the BO for this project. Therefore, our analysis supports that re-initiation of consultation with NMFS is not required at this time.
Figure 1 Phase 1 New Areas in East Newberg

- Restricted right in/right out.
- Add traffic signal.
- Additional southbound left turn lane.
- Additional southbound left turn lane.
- Wilson Springbrook Road to three lanes.
- Widen Oregon 219 to five lanes. Add traffic signal. Connect Wilsonville Road to new Bypass.

Legend:
- Phase 1
- Roadway Improvements
- Planter Strip
- Sidewalks
- Bike Lane

Map ID: Fig2.0-7 PhNeu+resE/Neu+resE.indd
Print Date: December 2011
Figure 2 Phase 1 New Areas South of Dundee

- **A**: Construct new signalized intersection.
- **B**: Interim structure connects Phase 1 to Oregon 99W.
- **C**: Widen westbound Oregon 99W to two travel lanes.
- **D**: Widen eastbound Oregon 99W. Include two left turn lanes.
## APPENDIX A: TEMPORARY WORK BRIDGES AT WATER CROSSINGS - ULTIMATE BYPASS BUILD OUT

<table>
<thead>
<tr>
<th>Item</th>
<th>Bridge Name</th>
<th>Fish Bearing Y/N</th>
<th>ESA Fish Presence Y/N</th>
<th>Station</th>
<th>Fish Passage Total Length</th>
<th>Hydraulic Model OHW Width</th>
<th>Hydrologic Model OHW Width</th>
<th>Vegetative Survey OHW Width</th>
<th>Vegetative Survey Flood Width</th>
<th>Vegetative Survey Flood Length</th>
<th>Vegetative Survey Flood Spans</th>
<th>Piles Above OHW</th>
<th>Piles Below OHW</th>
<th>Comments</th>
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<td>300</td>
<td>75</td>
<td>20</td>
<td>16</td>
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<td>11</td>
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<td>0</td>
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<td>YES 3 45 46</td>
<td>Stream not on fish distribution maps.</td>
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<td>13</td>
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<td>8 &amp; 7 1.5 2</td>
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<td>Curved barrier identified downstream of bridge crossings listed from here down in this Table.</td>
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<td>Y</td>
<td>N</td>
<td>38+00</td>
<td>250</td>
<td>85</td>
<td>60</td>
<td>11.4</td>
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<td>25</td>
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<td>N</td>
<td>61+00</td>
<td>490</td>
<td>250</td>
<td>180</td>
<td>290</td>
<td>N</td>
<td>YES</td>
<td>409</td>
<td>9</td>
<td>2</td>
<td>YES 3 36 40</td>
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<tr>
<td>26</td>
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<td>78+00</td>
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<td>96</td>
<td>88</td>
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<td>250</td>
<td>180</td>
<td>290</td>
<td>N</td>
<td>YES</td>
<td>409</td>
<td>9</td>
<td>2</td>
<td>YES 3 36 40</td>
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**NOTES:** Clay banking indicates westbound bridge included in final construction phase of the bypass.

**Total:** Number of bridges at water crossings: 30

**TEMPORARY BRIDGES FOR PHASE 1 CONNECTION AT WEST END**

<table>
<thead>
<tr>
<th>Item</th>
<th>Bridge Name</th>
<th>Fish Bearing Y/N</th>
<th>ESA Fish Presence Y/N</th>
<th>Station</th>
<th>Fish Passage Total Length</th>
<th>Hydraulic Model OHW Width</th>
<th>Hydrologic Model OHW Width</th>
<th>Vegetative Survey OHW Width</th>
<th>Vegetative Survey Flood Width</th>
<th>Vegetative Survey Flood Length</th>
<th>Vegetative Survey Flood Spans</th>
<th>Piles Above OHW</th>
<th>Piles Below OHW</th>
<th>Comments</th>
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<tbody>
<tr>
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<td>Hess Creek Tributary &amp; Temp. Conector</td>
<td>U</td>
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<td>70</td>
<td>YES</td>
<td>269</td>
<td>5</td>
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Biological Opinion Change Form Approval
Ms. Eraut:

Per your email with attachments dated January 25, 2012, I understand that the FHWA is proposing to alter the Newberg to Dundee Bypass Project, Federal Aid # S091(018), from the description of the project in the biological opinion issued by NMFS on December 17, 2010.

Part of the proposed alterations will affect temporary work bridges that cross tributaries of the Yamhill River, i.e., Chehalem, Hess, Springbrook, Miller, and Unnamed Creeks. However, those alterations will not require additional in-water construction or else will not occur in areas that are occupied by ESA-listed species, either due to natural fish passage barriers or to the presence of artificial barriers that are already planned to be in place before and during construction.

An additional set of proposed project alterations will affect the work and permanent bridges over the Yamhill River itself. These changes will reduce the number of piles necessary to complete this work bridge from approximately 200 to approximately 30, and reduce the number of in-channel bents necessary to complete the permanent bridge from three to one. The latter change will allow for a concurrent reduction in the number of coffer dams and fish salvage operations necessary to construct the permanent bridge.

Finally, project alterations related to road improvements deemed necessary to relieve bypass traffic congestion along Highway 99W, Highway 219, Springbrook Road, Wilsonville Road, and other smaller roads and intersections affected by the project, will all be constructed to meet stormwater management criteria described in the December 17, 2010 opinion, will not increase the total contributing impervious surface for the project as a whole, and thus will not result in an increase in highway runoff during construction or after project completion.

Because these proposed changes reduce the amount of pile driving from levels already considered in the December 17, 2010 biological opinion, reduce the number of ESA-listed fish likely to be injured or killed during work area isolation, and will not increase highway runoff, the proposed changes are within the range and extent of effects considered in the opinion and do not require reinitiation of consultation on this action.

Please note that all reasonable and prudent measures and terms and conditions of the December 17, 2010 biological opinion remain in effect, and that reinitiation of consultation on this action is required if (a) the amount or extent of taking specified in the Incidental Take Statement is exceeded; (b) 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; (c) the identified action is subsequently modified in a manner that has an effect to the listed species or critical habitat that was not considered in the biological opinion; or (d) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16).
On Wed, Jan 25, 2012 at 12:24 PM, <Michelle.Eraut@dot.gov> wrote:
> Please consider this e-mail and attachments as the official submittal for
> the Project Change Proposal for Newberg Dundee. Thank you.
>
> Michelle Eraut
>
> Environmental Program Manager
>
> Oregon Division, Federal Highway Administration
>
> 530 Center Street, NE, Suite 420
>
> Salem, Oregon 97301
>
> 503-316-2559 (direct dial)