



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office
510 Desmond Dr. SE, Suite 102
Lacey, Washington 98503

In Reply Refer To:
13410-2009-I-0408

SEP -9 2009

Michelle Walker, Chief Regulatory Branch
Seattle District, Corps of Engineers
ATTN: Regulatory Branch
P.O. Box 3755
Seattle, Washington 98124-3755

Subject: Regional Programmatic Letter of Concurrence for Nationwide Permit (NWP)
Decisions in Southwest Washington

Dear Ms. Walker:

We have now completed the second year of our collaborative effort with the State of Washington, Governor's Office of Regulatory Assistance on the Integrated Project Review and Mitigation Tools (IPRMT) project. As established by the Interagency Steering Committee, the overall goal of this project has been to improve the timeliness and quality of environmental permitting decisions associated with development projects.

In accordance with this goal and pursuant to section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)(Act), the U.S. Fish and Wildlife Service (FWS) would like to provide you with a new programmatic consultation to replace the programmatic consultation we provided you on August 11, 2008, for Clark County. As with the former programmatic, this programmatic consultation provides a framework for making section 7 decisions which supports the IPRMT goal of faster permitting with better environmental outcomes for public agencies. This new programmatic consultation covers a variety of routine and repetitive maintenance activities, including repair, modification, and upgrade for existing infrastructure, expands the geographic scope to six counties, and includes a more streamlined documentation process for permit decisions made by the U.S. Army Corps of Engineers, Seattle District (Corps) under section 404 of the Clean Water Act (33 U.S.C. § 1251 *et seq.*).

This consultation can now be used to meet the Corps' section 7 requirements through December 2011 for proposed actions in Clark, Skamania, Cowlitz, Lewis, Wahkiakum, and Pacific Counties that are consistent with the project descriptions and conservation measures included herein. This programmatic consultation is generally for infrastructure maintenance projects proposed by the Washington Department of Transportation (WSDOT) and any city Public Works or county Parks Departments, but it may also be used for your 404 permit decisions on private party actions.

To make your permit reviews and decision documentation more efficient, we have included a Specific Project Information Form (SPIF) for any project implemented under this programmatic consultation (Enclosure 4) that you determine "may affect, but are not likely to adversely affect" the threatened bull trout (*Salvelinus confluentus*), marbled murrelet (*Brachyramphus marmoratus*) (murrelet), and northern spotted owl (*Strix occidentalis caurina*) (spotted owl). Programmatic approvals for projects with "may affect, are likely to adversely affect" determinations for any listed species or designated critical habitat are not covered by this programmatic. The Corps is responsible for making the determination that the proposed activity meets the conditions described herein and each authorization under the Act goes into effect when you issue the appropriate NWP for a given activity. These conditions outlined below are expected to align well with conditions currently under development in the IPRMT program and we do not expect any other Federally-listed resource under the jurisdiction of the FWS to be affected.

Project Categories and Activities

The project categories include roadway transportation development and maintenance, environmental restoration and mitigation, rail transportation maintenance and repair, and sewer line and outfall maintenance and repair (Enclosure 1, Table 1). We expect construction activities associated with these project categories (Enclosure 1, Table 2) to frequently affect the aquatic resources under the jurisdiction of the Corps.

These are the same project categories included in the August 11, 2008, programmatic letter of concurrence for Clark County. However, we have significantly reduced the types of restoration projects covered under the environmental restoration and mitigation category. This was necessary to eliminate redundancy with the restoration projects covered in the joint National Marine Fisheries Service (NMFS) and FWS, state-wide programmatic consultation for restoration activities issued to the Corps on July 8, 2008.

Geographic and Jurisdictional Limits

This regional section 7 concurrence is available for Operations and Maintenance projects proposed by city, county, and state governmental agencies in Skamania, Clark, Cowlitz, Wahkiakum, Pacific, and Lewis Counties in southwest Washington in need of obtaining a NWP from the Corps. These projects can occur anywhere in these counties except within the Lewis River watershed in Clark and Cowlitz Counties and in mainstem of the Columbia River bordering Pacific, Wahkiakum, Clark, and Skamania Counties.

Activities excluded within the mainstem or near the confluence of tributaries to the Columbia River are those projects directly or indirectly affecting the in-water or near-water environment (below the ordinary high water line). Further, this section 7 approval is not available for actions occurring on Federal lands (National Forests, National Parks, National Refuges, etc.) and Tribal lands.

Conservation Measures

Within the geographical limits described above, the following conservation measures are expected to be sufficient for the Corps to ensure that the effects on listed resources will be minimized or avoided on all maintenance projects permitted under this programmatic consultation. Fundamental to this assumption is that the projects are routine maintenance activities, they occur within the footprint of existing facilities or infrastructure and they will not directly or indirectly result in urban growth or expansion. All your NWP decisions are subject to the following general conditions and conservation measures to activate the section 7 authorization provided herein.

General Measures

All construction activities listed in Table 2 (Enclosure 1) receive coverage under this programmatic consultation for all waterways and wetlands where the Corps has jurisdiction when they incorporate these general measures. Enclosure 2 contains a list of construction activities that are outside the scope of this consultation.

Bull Trout Core Areas

This programmatic consultation is not to be used for projects that are located within or immediately adjacent (within 0.25 mi) to the Lewis River bull trout core area. On occasion, projects located outside of the Lewis River bull trout core area or upstream within tributaries that are connected to known bull trout streams may adversely affect bull trout or bull trout habitat. The 0.25 mi exclusion area around this bull trout core area will insure that waterways important for the recovery of the species will not be affected by any maintenance projects approved under this programmatic consultation.

Vegetation Management

Hazard tree removal and other vegetation maintenance activities within transportation right-of-ways and within the perimeter of existing facilities are expected to be common activities. Generally, routine vegetation management is considered to have a low likelihood to affect listed resources. However, in the counties where critical habitat has been designated or at locations known to contain listed species, the risk from vegetation management may be considerably higher. To reduce the risk of affecting listed species, their habitat, or designated critical habitat, we have established vegetation management guidelines (see below).

New Impervious Surface and Stormwater Management

We established an annual limit of 5 acres per year for the amount of new impervious surface within each 6th field watershed from all projects (annual total), except in the 6th field watersheds where the E. Fork Lewis River and Allen Creek occur in Clark County (subwatersheds 170800030406 and 170800020506). A lower limit of 1 acre per year has been established for these subwatersheds. All new proposed impervious surface must be contained within the footprint of existing infrastructure and all projects resulting in new impervious surface are required to include basic stormwater treatment features as part of the design. When maintenance projects are proposed at sites currently lacking stormwater treatment, project proposals must include retrofitting in order to use this programmatic as a preapproved section 7 consultation. The stormwater analysis for transportation projects must also follow the agreed upon procedures described in the February 16, 2009, memorandum between FWS, NMFS, WSDOT, and the Federal Highway Administration.

Specific Measures

Bull Trout and Bull Trout Critical Habitat: Clark and Cowlitz Counties

Bull trout and designated critical habitat for the species within the Lower Columbia River interim recovery unit may be affected by construction activities listed Table 2 of Enclosure 1. There is one bull trout core area within the programmatic area and it is located in the northern portion of Clark County and southern portion of Cowlitz County in the Lewis River watershed. The Lewis River bull trout core area contains bull trout spawning, rearing, forage, migration, and overwintering habitats and contains designated critical habitat. Critical habitat for bull trout has been designated in the Lewis River immediately below the Merwin dam at the downstream extent of Lake Merwin and extending to the confluence of the Lewis River with the Columbia River. This entire reach of the Lewis River has been excluded from the programmatic work area.

Two tributaries within the Lewis River bull trout core area, the E. Fork Lewis River and Allen Creek, extend beyond the core area boundary in Clark County. In-water and riparian construction activities occurring in or adjacent to these or any tributary pose a higher risk of adversely affecting bull trout or designated critical habitat from increases in sedimentation or stormwater runoff. To minimize this risk in Clark and Lewis Counties, we established a buffer zone around the Lewis River bull trout core area for projects and we established more restrictive conservation measures for projects adjacent to the two above-mentioned tributaries.

The specific measures to minimize the effects on bull trout and designated bull trout critical habitat in Clark or Cowlitz Counties are as follows:

- 1) Projects proposed in the E. Fork Lewis River and Allen Creek watersheds have an annual total of no more than 1 acre per year (all projects added together) of new impervious surface;

- 2) Projects proposed in the E. Fork Lewis River and Allen Creek watersheds must include flow control measures when new impervious surface will be added; and
- 3) Projects must be located more than 0.25 mi away from the Lewis River bull trout core area boundary.

When implemented as above, the Corps can conclude there will be “no effect” to designated critical habitat for bull trout. However, due to a higher potential for bull trout presence in the E. Fork Lewis River and Allen Creek, there is a reasonable likelihood that some construction activities in or near these streams “may affect” individual bull trout (see *Effects* section for further discussion).

Murrelet and Murrelet Critical Habitat: Cowlitz, Lewis, Wahkiakum, and Pacific County

Murrelets are known to nest in Pacific, Wahkiakum, Cowlitz, and Lewis counties and critical habitat has been designated for the species in these counties. To avoid or minimize adverse effects to these Federally-listed resources, we established the following conservation measures:

- 1) No trees will be removed or physically damaged within suitable murrelet nesting habitat (see definition in Enclosure 3) or designated critical habitat.
- 2) Projects located within 5 mi of suitable murrelet nesting habitat or designated critical habitat must include a trash-handling plan. The purpose of this plan is to insure that food wastes and attractants to common avian predators of murrelet nests are disposed of in a timely (daily) manner to minimize the presence avian predators. This measure reduces the likelihood that this programmatic will directly increase the abundance of avian predators near suitable murrelet nest habitat.
- 3) Project construction activities generating noise above ambient levels within 200 ft of suitable murrelet nesting habitat will not occur from April 1 to August 5. Any activity occurring within 200 ft of suitable nesting habitat from August 6 to September 15 will only occur between 2 hours after sunrise and 2 hours before sunset.
- 4) If an active murrelet nest is discovered adjacent to or within a project location, the applicant must cease activities immediately if operating less than 200 ft of the nest site. The Corps will then notify the FWS of the discovery and all activities within 200 ft of the nest location will be postponed until after young have fledged.

When implemented as described above, the Corps can conclude there will be “no effect” to designated critical habitat for the murrelet. However, we expect that nesting murrelets in adjacent suitable habitat will be exposed to above-ambient sound from construction activities

resulting in a reasonable likelihood that some construction activities “may affect” individual nesting murrelets (see *Effects* section for further discussion).

Spotted Owl and Spotted Owl Critical Habitat: Pacific, Wahkiakum, Cowlitz, Lewis, Clark, and Skamania Counties

The following conservation measures are required throughout the programmatic area to avoid adverse effects to spotted owls, spotted owl nesting, roosting, forage, and dispersal habitat (see definition in Enclosure 3), and designated critical habitat for the species:

- 1) No trees will be removed or physically damaged within suitable spotted owl nesting, roosting, and foraging habitat, within dispersal habitat, or within designated critical habitat (critical habitat has been designated within Lewis and Skamania Counties).
- 2) Project construction activities generating noise above ambient levels within 200 ft of suitable nesting habitat will not occur from March 1 to July 31.
- 3) If an active spotted owl nest is discovered adjacent to or within a project location, the applicant must cease activities immediately if operating less than 200 ft of the nest site. The Corps will then notify the FWS of the discovery and all activities within 200 ft of the nest location will be postponed until after fledging has been documented.

When implemented as described above, the Corps can conclude there will be “no effect” to designated critical habitat for the spotted owl. However, due to a higher potential for the exposure of individual spotted owls to above-ambient sound from construction activities during the nesting season, there is a reasonable likelihood that some construction activities “may affect” nesting spotted owl pairs (see *Effects* section for further discussion).

Columbian White-tailed Deer: Cowlitz and Wahkiakum Counties

Columbian white-tailed deer (*Odocoileus virginianus leucurus*) currently have a highly limited distribution in Washington State. They are found in portions of Wahkiakum County (Puget Island, in the Columbia River, and the Julia Butler Hansen National Wildlife Refuge) and in Cowlitz County (Fisher Island, Hump Island, Willow Grove Peninsula, in the Columbia River, and portions of the mainland near the Columbia River). Within Wahkiakum and Cowlitz Counties, projects on or adjacent to State Route (SR) 4 west of Longview and E. of Skamokawa or on SR 409, are expected to be within the range of Columbia white-tailed deer.

The FWS is has determined that transportation projects directly or indirectly resulting in increased traffic volume or speed and projects that alter suitable habitat (forage, hiding, and thermal cover) pose the greatest risk of having significant effects to Columbian white-tailed deer. The following conservation measure, if adhered to for projects in Cowlitz and Wahkiakum Counties, is expected to avoid adverse impacts to Columbian white-tailed deer or their habitat:

- Projects located within Wahkiakum and Cowlitz Counties, on SR 4 west of Longview and E. of Skamokawa, or on SR 409, will not alter suitable woodland habitat, have a prolonged duration, or promote higher traffic speeds within the Columbia River corridor or tidal spruce forest communities.

When implemented as described above, the Corps can conclude there will be “no effect” to Columbian white-tailed deer or their habitat.

Brown Pelican: Pacific County

Brown pelicans (*Pelecanus occidentalis*) are only found in Washington during the summer and fall months (approximately June 1 to October 31), and no nesting occurs in the State. Brown pelicans are limited to a narrow band of shoreline along the Pacific coast and tend to concentrate in the estuaries and bays.

Many of the construction activities listed in Table 2 (Enclosure 1) are expected to produce above-ambient sound levels (in air) that may affect brown pelicans at night roosts in the coastal areas of Pacific County. It is reasonable to assume that the high sound levels from construction noise or pile driving may flush brown pelicans from night roost sites or be displaced away from a foraging site in some instances. The following conservation measures are necessary to avoid or minimize these risks:

- 1) Pile driving activities conducted June 1 through October 31 and located within 1 mi of a brown pelican night roost site are prohibited from 2 hours before sunset until 2 hours after sunrise and must have vegetative or topographic screening to avoid a direct line-of-sight from the roost site.
- 2) Construction activities conducted June 1 through October 31 and located within 200 ft of a brown pelican night roost site that generate above-ambient noise levels are prohibited from 2 hours before sunset until 2 hours after sunrise and must have vegetative or topographic screening to avoid a direct line-of-sight from the roost site.

When implemented as described above, high sound pressure levels from construction activities are not expected to affect roosting brown pelicans. Therefore, the Corps can conclude the action will have “no effect” on the brown pelican.

*Western Snowy Plover (snowy plover) and snowy plover designated critical habitat:
Pacific County*

Snowy plovers (*Charadrius alexandrinus nivosus*) are present year round on marine beaches in Washington State and nesting occurs on beaches in Pacific County from early March to late September. Projects that may directly or indirectly affect unvegetated beach areas or designated critical habitat in Pacific County will not be covered in this programmatic consultation. Unvegetated beach areas are considered potentially suitable snowy plover nest habitat. The

species forages primarily along the wrack line within the surf zone. Two sites have been designated critical habitat in the Pacific County.

The Corps can determine that a project proposed in Pacific County will have “no effect” to the snowy plover and/or snowy plover designated critical habitat if the project is at least 0.25 mi from an unvegetated beach or designated critical habitat.

Oregon Silverspot Butterfly): Pacific County

Oregon silverspot butterflies (*Speyeria zerene hippolyta*) historically inhabited sand dunes, salt-spray meadows, and open field habitat in the coastal portion of Pacific County and are restricted to locations where the western blue violet (*Viola adunca*) grows. The western blue violet is the host plant for Oregon silverspot butterfly larvae. Oregon silverspot butterfly habitat is still present in Pacific County and is being maintained and restored for potential reintroduction. The following measures are necessary to avoid adverse effects to Oregon silverspot butterfly:

- 1) Projects within 200 ft of potentially suitable sand dune, salt-spray meadow, or open field habitat will implement and maintain appropriate best management practices to ensure that no foreign material enters this habitat (such as pavement slurry from asphalt grinding equipment). Activities in the Pacific coastal area of Pacific County may occur in or within 200 ft of potential Oregon silverspot butterfly habitat and may work outside of the developed portion of the road prism if the larval host species is not detected during an appropriately-timed survey (conducted by a qualified biologist).
- 2) Contractor staging areas will be located more than 100 ft from potential Oregon silverspot butterfly habitat.

When implemented as described above, the Corps can conclude there will be “no effect” to the Oregon silverspot butterfly.

Plants listed under the Act: Clark, Cowlitz, and Lewis Counties

Bradshaw's lomatium (*Lomatium bradshawii*), Kincaid's lupine (*Lupinus sulphureus kincaidii*), Nelson's checker-mallow (*Sidalcea nelsoniana*), and water howellia (*Howellia aquatilis*) are known to occur within Clark, Cowlitz, and Lewis Counties. Bradshaw's lomatium occurs in wet seasonally flooded, low elevation grasslands and prairies. The present distribution of Bradshaw's lomatium is limited to two locations in Clark County.

Kincaid's lupine has been detected in three locations in Lewis County, where suitable habitat (i.e., native upland prairies, which may include scattered oaks) is available. Suitable habitat for the Nelson's checker-mallow is wet, remnant grasslands and prairies. The species is known to occur in a few populations, one in Cowlitz County and several in Lewis County. The last listed plant, water howellia, occurs in shallow water or along the edges of deep ephemeral ponds and vernal pool wetlands encompassed by deciduous vegetation. In western Washington, there are several known populations of water howellia, some of which occur in Clark County.

This section 7 “concurrency” is available for effects to these plant species when:

- 1) Pre-construction plant surveys were conducted and survey results are included with the NWP application for those projects that the Corps determines “may affect” the above-described habitats these plants depend upon,
- 2) Applicants install and maintain the appropriate best management practices to ensure that no foreign material (e.g. pavement slurry) is sidecast into potentially suitable habitats for listed plants when projects are located within 200 ft of potentially suitable habitats (a Corps project biologist must verify), and
- 3) Contractor staging areas will be located at least 200 ft away from potentially suitable habitats, as identified by the Corps project biologist, unless an on-site review determines that impacts to the potentially suitable habitats will not occur due to topography or other factors.

When implemented as described above, the Corps can conclude there will be “no effect” to these Federally-listed plants.

Rationale for Concurrency

Approach to the Analysis

The FWS uses a simple exposure-response approach to assess whether the effects on a listed resource, either individually or collectively, would be expected to be significant. We assess the significance of potential effects in the context of two objectives: 1) to identify whether any listed resources may be exposed to any project stressors and 2) describe the extent (magnitude, duration, and frequency) of all potential direct and indirect effects on each listed resource from an exposure to the project stressors.

To address exposure, we first evaluate whether any listed resource may be exposed to potential stressors from the activities included in this programmatic consultation. Stressors are considered to be any physical, chemical, or biological entity resulting directly or indirectly from a project that co-occur with the listed resources in the area affected by the action. Project-caused stressors, if of sufficient magnitude, duration, or frequency, can adversely affect (suppress) a species’ habitat use, reproduction, survival, or distribution. If exposure to the potential stressor is extremely unlikely, we conclude the effect is discountable. If we are unable to conclude the effect is discountable, we assume the listed resource will be exposed to the potential stressor(s) and we evaluate the consequence of the exposure.

Exposure of one or more listed individuals (or designated critical habitat) is evaluated in terms of whether it will produce a significant effect. We define significant effects as any measurable or detectable effect on the listed resource and they often relate to the size of the impact. If we

determine, based upon our best judgment, that we can not meaningfully measure, detect, or evaluate the effect, we conclude the effect is insignificant.

At this point, we have based our section 7 decision to “concur” with the regulatory determination of “may affect, not likely to adversely affect” on either the effect(s) being discountable or insignificant and thus we are able to conclude the informal consultation. If we are unable to reach either of these conclusions, we then would assume the effect is significant. However, our objective here is to provide a pre-approved suite of construction activities that have either a discountable or insignificant effect to listed resources in the six counties covered under this consultation. Accordingly, all activities with the likelihood of having significant effects are excluded from this programmatic consultation.

Bull Trout

The Lewis River bull trout core area, included in the Lower Columbia River Interim Recovery Unit, is the only core area that occurs in the six-county programmatic area. The core area is located along the shared border between Cowlitz and Clark Counties. Currently, reproducing populations of bull trout within the Lewis River Core Area are found in Lake Merwin, Yale, and Swift Creek reservoirs. The number of bull trout inhabiting the Lewis River Core Area is believed to be low. Spawning and juvenile rearing occurs in Cougar Creek (Yale Lake), and in Rush and Pine creeks (Swift Creek Reservoir).

Historically, bull trout may have inhabited areas within the Cowlitz and Kalama rivers, but current distribution within the basin is unknown. The Cowlitz and Kalama rivers are identified as locations where additional research is needed to determine if each respective system is important for bull trout recovery. Throughout the programmatic area, the species is believed to have an extremely low abundance or is absent.

Instream construction activities have the potential to affect bull trout and bull trout habitat from an increase in sedimentation and turbidity caused by the release of fine sediments. Sedimentation and turbidity can cause significant effects to individuals and habitat (gill trauma, loss of spawning habitat, loss of redds, reduced egg-to-fry survival, lower feeding efficiency, and physiological and behavioral impacts). As a result, increases in the proportion of fine sediments deposited into streambeds or suspended in the water column may increase the risk of reduced bull trout productivity and persistence, for individuals and local populations. The FWS assumes that any activity under the Corp’s jurisdiction pursuant to the Clean Water Act will be implemented during the stream-designated in-water work periods established by the Washington Department of Fish and Wildlife. However, to avoid exposure, the FWS has excluded construction activities proposed within 0.25 mi of the Lewis River bull trout core area boundary to protect spawning and rearing habitat.

Further, we have limited the effects of stormwater inputs by limiting the amount of impervious surface to 1 acre per year and requiring stormwater treatment in the E. Fork Lewis River and Allen Creek watersheds because these tributaries to the lower Lewis River originate from within the Lewis River bull trout core area. Both waterways are considered to be foraging, migration,

and over-wintering habitat for bull trout but the species is believed to occur in very low abundance.

The 0.25 mi buffer around the Lewis River bull trout core area and the watershed-level conservation measures are expected to significantly reduce the likelihood of exposure to bull trout and bull trout habitat in the E. Fork Lewis River and Allen Creek. Given the species very low abundance in the E. Fork Lewis River and Allen Creek, the FWS considers bull trout exposure to any construction activity in this programmatic consultation to be extremely unlikely to occur (discountable).

Marbled Murrelet

The programmatic area occurs within murrelet Conservation Zone 2 (FWS 1997, p. 126). As part of the overall recovery strategy, the FWS has identified the conservation of occupied nesting habitat as an important component for murrelet recovery (FWS 1997, p. 100). Construction activities in the terrestrial environment have a high risk of adversely affecting murrelet survival and recovery when the quality or quantity of occupied or unoccupied nesting habitat is reduced or disturbance to breeding birds occurs during the nesting period (FWS 1997, p. 100).

Murrelet presence in nesting habitat is determined through surveys, but the difficulty and cost of the surveys have led land managers and conservation planners to assume all suitable nest habitat for the species as occupied for the purposes of project planning and design. However, not all suitable nest habitat is expected to actually be occupied during a given nesting season. Rather than performing a probabilistic analysis of the likelihood of occupancy in various locations throughout programmatic area, we simplified our approach to reducing the risk of adverse effects to murrelets (from construction sound or human disturbance) or murrelet nesting habitat.

For the purpose of this programmatic consultation, we assumed that all suitable nesting habitat within 55 miles of marine waters on federal and non-federal lands in Cowlitz, Lewis, Wahkiakum, and Pacific Counties could be occupied during the nesting season (April 1 to September 15). With this assumption, we considered buffering suitable nest habitat during the more sensitive early nesting season (April 1 to August 5) from construction activities and placing a daily timing restriction on construction activities within the buffer from August 6 to September 15.

The scientific information directly assessing the impacts of noise or human presence on murrelets is scarce. To address this gap, the FWS consulted several murrelet experts for their review of available relevant data on individual response thresholds where anthropogenic sound and presence may affect nesting murrelets. The effort resulted in a consensus that the likelihood of injury increases as sound levels increase and distance to active murrelet nest sites decreases from anthropogenic activities. Potential injury to nestlings was defined as a significant interruption to either the incubation or provisioning behaviors and measured by adults flushing from a nest or an aborted feeding attempt (FWS 2003, p. 264). Considering the findings of the authors (FWS 2003, p. 195) and the type of construction activities included in this programmatic consultation, a minimum 180-ft (60-yd) buffer for construction activities would be necessary to

avoid a significant (measurable) effect to either the incubation or provisioning behaviors of nesting murrelets.

Feeding periods for nestlings largely occurs during a concentrated time from just prior to sunrise until two hours after and two hours before sunset to slightly after sunset. To address the risk of disrupting murrelet nesting activities (adult incubation and provisioning for nestlings), this programmatic consultation cannot be used for projects within 200 ft of suitable nest habitat during the early nesting season (April 1 to August 5). From August 6 to September 15, any above-ambient sound activity occurring within 200 ft of suitable nesting habitat can occur only during the time period from 2 hours after sunrise until 2 hours before sunset (daily).

The FWS expects these distance and timing measures will reasonably preclude a measurable effect to adult murrelets and their nestlings, although some murrelets may exhibit a reaction to above-ambient sound. Behavioral responses such as wing flapping, head turning, crouching, hiding, or assuming a defensive stance are expected when a project occurs within 200 ft after August 5 or beyond 200 ft prior to August 5. However, the FWS does not expect the effect of these behaviors to be biologically significant such that it would result in a measurable loss in individual fitness.

To eliminate the risk of a measurable effect to murrelet nesting habitat, no trees can be removed or physically damaged within suitable murrelet habitat or within designated critical habitat (critical habitat has been designated within Pacific, Wahkiakum, Lewis, and Cowlitz Counties). This insures that degradation of the quality of suitable nesting habitat and/or designated critical habitat located in blocks of mature forest will not occur.

One of the recovery actions identified in the Recovery Plan for the Marbled Murrelet (FWS 1997, p. 124) is to reduce the risk of predation. Accordingly, projects proposed under this programmatic consultation within 5 mi of suitable murrelet nesting habitat or designated critical habitat must include a trash-handling plan to insure that food wastes and attractants to avian predators of murrelet nests will be disposed of daily. This measure significantly reduces the likelihood that a project will directly or indirectly reduce murrelet nest success through an increase in avian predator abundance near suitable murrelet nest habitat.

Adhering to these conservation measures during implementation of projects under this programmatic consultation is expected to avoid disruptions to murrelet adults and nestlings during the nesting period. Thus, this programmatic consultation is not expected to measurably affect murrelet fitness, survival, productivity, or habitat use patterns.

Northern Spotted Owls

The Recovery Plan for the Northern Spotted Owl (FWS 2008) lays out a recovery strategy that is founded on a network of Managed Owl Conservation Areas (MOCA) and Conservation Support Areas (CSA) nested within large, spatially delineated geographic provinces. The MOCAs are established on federal lands to support a stable number of breeding spotted owls pairs over time and allow for movement of spotted owls across the network. CSAs have been established largely

on non-federal lands to facilitate juvenile dispersal, thereby lending recovery support for the species by shortening the time needed for recovery through the demographic support of spotted owl core populations. Lands outside of MOCAs and CSAs are not considered necessary for the recovery of the spotted owl.

The programmatic area is overlaid with the spotted owl Western Lowlands, Western Cascades, and Eastern Cascades geographic provinces, with the majority occurring within the Western Lowlands province. There are no MOCAs or CSAs within the Western Lowlands province (entirely encompassing Pacific and Wahkiakum Counties and the western half of Lewis, Cowlitz, and Clark Counties). The Eastern half of Lewis, Cowlitz, and Clark Counties occur in the Western Cascade geographic province and contain MOCAs and CSAs. Skamania County is entirely encompassed by a combination of the Western and Eastern Cascades geographic provinces and includes portions of the county mapped as either MOCAs or CSAs.

We again simplified the analysis by assuming that any suitable spotted owl nesting, roosting, and forage habitat (Enclosure 3), scattered in various locations throughout the programmatic area, may be occupied during the more sensitive (early) nesting season (March 1 to July 15). We then considered the effect of prohibiting project construction activities that generate noise above ambient levels within 200 ft of suitable nesting habitat from March 1 to July 15.

As with the murrelet, there are relatively few studies assessing the impacts of noise or human presence on spotted owls. The FWS's effort in 2003 to assess the effects of sound on murrelets also included the spotted owl (FWS 2003, p. 187) and similarly concluded that the likelihood of injury of nesting spotted owls from anthropogenic activities increases with sound pressure levels and is inversely related to the distance. Based on the results the FWS (2003, p. 264) and the highest sound pressure level (from chainsaws) included in this programmatic consultation, a 200-ft buffer would be adequate to avoid a measurable effect on nesting spotted owls.

During the nesting season, spotted owls are strongly associated with their nest sites during the day and exhibit higher movement patterns at night when most of the foraging occurs (Forsman et al. 1984; Sovern et al. 1994). Being predominately nocturnal, adult nesting birds are reasonably more susceptible to injury from a significant disruption at the nest site. Injury is defined in this situation as adults being flushed during incubation or while caring for nestlings.

To eliminate the risk of disrupting the nesting activities of the species, this programmatic consultation restricts the occurrence of above-ambient sound from construction activities within 200 ft of suitable nest habitat during the early spotted owl nesting season (March 1 to July 15). After this time, activities can occur within 200 ft of suitable spotted owl nesting habitat because nestlings have typically fledged (although many may remain at the nest site for a few weeks following fledging).

The FWS expects that some nesting spotted owls may exhibit a reaction to above-ambient sound such as wing flapping, head turning, crouching, hiding, or assuming a defensive stance when a project occurs within 200 ft after July 15 or farther than 200 ft from an active nest site prior to July 15. However, the FWS does not expect the effect of these behaviors to be biologically significant such that it would result in a measurable loss in individual fitness.

No trees will be removed or physically damaged within suitable spotted owl nesting, roosting, and foraging habitat, within dispersal habitat, or within designated critical habitat (critical habitat has been designated within Lewis and Skamania Counties). The intent of this restriction is to avoid the risk of degrading the quality of nesting, roosting, and forage habitat or dispersal habitat that is contained in designated critical habitat or blocks of mature forest. These habitats support the conservation and recovery needs of the species.

Application of these conservation measures is expected to preclude any effects to spotted owl habitat (including designated critical habitat, MOCAs, and CSAs) and spotted owls during the nesting period from implementing projects under this programmatic consultation. Thus, projects implemented under this programmatic consultation are not expected to measurably affect spotted owl fitness, survival, productivity, or habitat use patterns and thus the effects are considered insignificant.

Project Tracking and Reporting Requirements

A copy of each SPIF along with the 404 permit issued under this programmatic letter of concurrence must be sent to the FWS following issuance of the 404 permit. This is a required condition for the section 7 coverage to be enacted.

Guidance for use of other Programmatic Consultations

The future reissuance of the "Phase 1" programmatic consultation by the FWS and the joint programmatic consultation between NMFS and FWS with your Office for restoration activities (issued July 8, 2008) are expected to provide additional tools for the Corps to obtain approvals pursuant to section 7 of the Act. In some cases, there may be overlapping programmatic approvals for the same project category or construction activity. Therefore, we suggest that the applicant coordinate with the FWS prior to preparing their application to ensure the appropriate consultation tool is used. In general, we recommend the use of other programmatic consultations that are designed specifically to cover the action in question (i.e. WSDOT programmatic, Corps restoration programmatic).

Final Considerations

Although not required for fulfilling the requirements of this programmatic consultation, we recommend that the conservation measures and best management practices for actions covered in this consultation include those required or otherwise established through the IPRMT or through regulation by the Washington Department of Fish and Wildlife and Washington Department of Ecology. In some cases, the FWS may recommend additional conservation measures pursuant to the Fish and Wildlife Coordination Act or the 1992 Memorandum of Agreement between the Department of the Interior and Department of the Army establishing the policies and procedures to implement Section 404(q) of the Clean Water Act.

Pursuant to the regulations implementing the Act (50 CFR 402.13), informal consultation is now complete when applicants comply with the project category definitions, design criteria, and

documentation requirements as specified above. This programmatic consultation should be re-analyzed if new information reveals effects of the action that may affect listed species or critical habitat in a manner, or to an extent, not considered in this consultation. This programmatic consultation should also be re-analyzed if the action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this consultation, and/or a new species is listed or critical habitat is designated that may be affected by this project.

If you have any questions about this letter or our joint responsibilities under the Act, please contact my assigned staff lead Kevin Shelley at (360) 753-4325 or kevin_shelley@fws.gov.

Sincerely,



Ken S. Berg, Manager
Washington Fish and Wildlife Office

Enclosures

cc:

Governor's Office of Regulatory Assistance, Olympia, WA (F. Lumsden)
National Marine Fisheries Service, Lacey, WA (M. Grady)
Washington Department of Transportation, Olympia, WA (M. White)
Washington Department of Fish and Wildlife, Olympia, WA (G. Hueckle)
Washington Department of Ecology, Lacey, WA (G. White)
Clark County, Endangered Species Act Program, Vancouver, WA (J. Rupley)
Clark County Public Works Department, Vancouver, WA (P. Kapell, K. Streeter)
Washington Association of Counties, Olympia, WA (N. Aaland)
City of Vancouver, Vancouver, WA (P. McDonnell, D. Scott, T. Rorabaugh)
Association of Washington Cities, Olympia, WA (M. McCarty)
Central Washington Fish and Wildlife Office, Wenatchee, WA (J. Gonzales)
Oregon Fish and Wildlife Office, Portland, OR (J. Zisa)

References

- Forsman, E.D., E.C. Meslow, and H.M. Wight. 1984. Distribution and biology of the spotted owl in Oregon. *Wildlife Monographs* 87:1-64.
- Newcombe, C.P. and J.O.T. Jensen. 1996. Channel suspended sediment and fisheries: a synthesis for quantitative assessment of risk and impact. *North American Journal of Fisheries Management* 16:693-727.
- Sovern, S.G., E.D. Forsman, B.L. Biswell, D.N. Rolph, and M. Taylor. 1994. Diurnal behavior of the spotted owl in Washington. *Condor* 96:200-202.
- U.S. Fish and Wildlife Service (FWS). 2003. Biological Opinion and letter of concurrence for effects to bald eagles, marbled murrelets, northern spotted owls, bull trout, and designated critical habitat for marbled murrelets and northern spotted owls from Olympic National Forest program of activities for August 5, 2003, to December 31, 2008. U.S. Fish and Wildlife Service, Lacey, Washington.
- U.S. Fish and Wildlife Service. 2007. Recovery Plan for the Threatened Marbled Murrelet (*Brachyramphus marmoratus*) in Washington, Oregon, and California. Portland, Oregon. 203 pp.
- U.S. Fish and Wildlife Service. 2008. Final Recovery Plan for the Northern Spotted Owl, *Strix occidentalis caurina*. U.S. Fish and Wildlife Service, Portland, Oregon. xii + 142pp.

ENCLOSURE 1

Table 1. Project categories authorized under this programmatic consultation that may need a Nationwide Permit under Section 404 Clean Water Act when affecting streams or wetlands within the geographic work area of Clark County, Washington.

<i>ROADWAY TRANSPORTATION MAINTENANCE</i>
1. Pavement Preservation
2. Landslide Abatement and Repair
3. Bank Stabilization and Flood Damage Repair
4. Bridge Repair, Retrofit, Replacement, and Maintenance
5. Mobility Improvement
6. Safety Improvement
7. Facilities Preservation and Construction
8. Environmental Retrofit and Enhancement
9. Drainage System Maintenance and Repair
10. Pedestrian Safety
11. Parking Lots/Park and Ride Facilities
<i>ENVIRONMENTAL RESTORATION AND MITIGATION</i>
1. Wetland Restoration
2. Riparian Restoration
<i>RAIL TRANSPORTATION MAINTENANCE & REPAIR</i>
1. Rail tie replacement
2. Rail replacement
3. Ballast replacement
4. Culvert replacement under rail line
5. Bridge replacement under rail line
6. Vegetation Control
7. Operation and Maintenance
<i>SEWER LINE & OUTFALL MAINTENANCE & REPAIR</i>
1. Sewer Outfall Maintenance/Upgrades/Repair
2. Sewer Line Construction (usually in roadway, upgrade and improvements only)
3. Sewer Plant Upgrades

Table 2. Activity types authorized under this programmatic consultation that may need a Nationwide Permit under Section 404 Clean Water Act when conducted in streams or wetlands within the geographic work area of Clark County, Washington.

<i>APPROVED CONSTRUCTION ACTIVITIES</i>
1. Construction Illumination
2. Construction Wastewater and Upland Excavation De-watering
3. Equipment Crossing
4. Equipment Operation
5. Equipment Staging
6. Excavation, Backfilling, and Grading
7. Fill Placement and/or Removal
8. Horizontal Boring, Drilling, and/or Jacking
9. Materials Management
10. Overwater Structure Placement
11. Pile Driving and/or Removal
12. Removal of Structure
13. Removal/ Placement of Native Habitat Features
14. Site Restoration
15. Temporary Access Road
16. Treated Wood Placement
17. Vegetation Maintenance

ENCLOSURE 2

Nine Activities Not Covered Under this Programmatic Consultation

The following projects have been excluded in the programmatic consultation. If any of these nine construction activities, with the exceptions noted herein, are a necessary component of any project, the entire project will require an individual and separate consultation under section 7 of the Act.

1. Projects that include vibratory or impact pile driving in marine or estuarine waters. Tidally influenced rivers (except the Columbia River) are included in this programmatic consultation if there is sufficient distance or a topographic feature that precludes high sound pressure levels from reaching marine and estuarine areas.
2. Projects that require blasting.
3. Projects that result in adverse effects to bull trout or their critical habitat in the Lower Columbia River Basin Interim Recovery Unit.
4. Projects that create brown and/or brook trout access into previously isolated bull trout populations.
5. Projects that remove suitable or potentially suitable murrelet or northern spotted owl nesting habitat during the nesting season.
6. Projects that permanently eliminate or impede passage for any life stage of bull trout and/or their forage.
7. Projects, including new general purpose lanes, new interchanges, or new lanes from interchange to interchange, which result in or contribute to increased traffic capacity or other land use changes that result in effects, including indirect effects, not consider in this programmatic consultation.
8. Projects requiring the removal and disposal of contaminated soils. This exclusion does not apply to the Subsurface Investigation and Hazardous Waste Sampling.
9. Non-emergency bank stabilization and non-emergency flood damage repair projects using hardened structures or materials (such as riprap) in streams that may be used by bull trout or their forage species. This exclusion does not apply to the use of riprap or other material used for bridge pier scour prevention and repair projects or those projects that replace previously existing riprap provided the placed bed and bank armor is in-kind and does not exceed the pre-existing ("as built") condition by more than 5 percent.

ENCLOSURE 3

Nesting Habitat Definition Pertaining to the Marbled Murrelet

Soil type, aspect, tree species, and elevation can all influence how quickly trees can mature and develop the forest structure that determines murrelet habitat. The development of murrelet habitat does not happen quickly after disturbance that eliminates entire stands, such as regeneration harvest. The Marbled Murrelet Recovery Plan (FWS 1997a, p. 6) states that “the effects of deforestation...can persist for 100 to 200 years until forests have grown to achieve structure that permits murrelet nesting.” In this context, the Washington Fish and Wildlife Office developed the following definition of suitable murrelet nesting habitat.

Potential murrelet nesting habitat in Washington is typically found in old-growth or mature forest types (Hamer and Nelson 1995) generally characterized by large trees containing nesting platforms, a multistoried stand, and a moderate to high canopy closure (FWS 1997, pg 40). The presence of platforms is the most important habitat characteristic of murrelet nesting habitat. A platform is a relatively flat surface at least 4 inches in diameter (10 centimeters (cm)) and 33 ft (10 meters) high in the live crown of a coniferous tree. Platforms may be horizontal branches, mistletoe, witches brooms, or other natural deformities and structures such as squirrel nests. Vertical and horizontal cover and substrate such as moss and lichen are important structural attributes of platforms (Nelson et al. 2006) and the number of canopy layers and the presence of mistletoe in forest stands have been shown to be strongly correlated with active nest sites in Washington (Hamer et al. 2008).

Tree diameter and height have been positively correlated with platform size and the abundance of platforms; however, this relationship will vary depending upon tree species and growing conditions. Known nest sites have occurred in stands dominated by Sitka spruce (*Picea stitchensis*), western hemlock (*Tsuga heterophylla*), and Douglas fir (*Pseudotsuga menziesii*)

Nesting Habitat Definitions Pertaining to Northern Spotted Owls

The Washington Forest Practices Rules contain several specific definitions that pertain to the identification and management of northern spotted owl habitat (WAC 222-16-085):

1. **Suitable northern spotted owl habitat** means forest stands which meet the description of old forest habitat, sub-mature habitat or young forest marginal habitat found in (a) and (b) of this subsection. Old forest habitat is the highest quality, followed in descending order by submature habitat and young forest marginal habitat.
 - a. **Old forest habitat** means habitat that provides for all the characteristics needed by northern spotted owls for nesting, roosting, foraging, and dispersal, described as stands with:
 - i. A canopy closure of 60 percent or more and a layered, multispecies canopy where 50 percent or more of the canopy closure is provided by large overstory trees (typically, there should be at least 75 trees greater

than 20 inches diameter at breast height per acre, or at least 35 trees 30 inches diameter at breast height or larger per acre); and

- ii. Three or more snags or trees 20 inches diameter at breast height or larger and 16 feet or more in height per acre with various deformities such as large cavities, broken tops, dwarf mistletoe infections, and other indications of decadence; and
 - iii. More than two fallen trees 20 inches diameter at breast height or greater per acre and other woody debris on the ground.
- b. **Sub-mature habitat and young forest marginal habitat.** Sub-mature habitat provides all of the characteristics needed by northern spotted owls for roosting, foraging, and dispersal. Young forest marginal habitat provides some of the characteristics needed by northern spotted owls for roosting, foraging, and dispersal. Sub-mature habitat and young forest marginal habitat stands can be characterized based on the forest community, canopy closure, tree density and height, vertical diversity, snags and cavity trees, dead and down wood, and shrubs or mistletoe infection. They are described in Tables 8-13 and 8-14.

Northern spotted owl dispersal habitat means habitat stands that provide the characteristics needed by northern spotted owls for dispersal. Such habitat provides protection from the weather and predation, roosting opportunities, and clear space below the forest canopy for flying. Timber stands that provide for northern spotted owl dispersal have the following characteristics:

- a) **For western Washington,** timber stands 5 acres in size or larger with:
 - i. 70 percent or more canopy cover; and
 - ii. 70 percent or more of the stand in conifer species greater than 6 inches diameter at breast height; and
 - iii. A minimum of 130 trees per acre with a diameter at breast height of at least 10 inches or a basal area of 100 square feet of 10 inch diameter at breast height or larger trees; and
 - iv. A total tree density of 300 trees per acre or less; and
 - v. A minimum of 20 feet between the top of the understory vegetation and the bottom of the live canopy, with the lower boles relatively clear of dead limbs.

Table 1. Western Washington Northern Spotted Owl sub-mature and young forest marginal habitat characteristics from the Washington Forest Practices Rules (WAC 222-16-085)

Characteristic	Habitat Type	
	Sub-Mature	Young Forest Marginal
Forest Community	conifer-dominated or conifer hardwood (greater than or equal to 30% conifer)	conifer-dominated or conifer hardwood (greater than or equal to 30% conifer)
Canopy Closure	greater than or equal to 70% canopy closure	greater than or equal to 70% canopy closure
Tree Density and Height	115-280 trees/acre (greater than or equal to 4 in dbh) with dominants/codominants greater than or equal to 85 feet high <i>OR</i>	115-280 trees/acre (greater than or equal to 4 in dbh) with dominants/codominants greater than or equal to 85 feet high <i>OR</i>
Vertical Diversity	dominant/codominants greater than or equal to 85 ft high with 2 or more layers and 25 - 50% intermediate trees	dominant/codominants greater than or equal to 85 ft high with 2 or more layers and 25 - 50% intermediate trees
Snags/Cavity Trees	Greater than or equal to three per acre (greater than or equal to 20 in dbh and 16 ft in height)	greater than or equal to two per acre (greater than or equal to 20 in dbh and 16 ft in height) <i>OR</i> greater than or equal to 10% of the ground covered with 4 in diameter or larger wood, with 25-60% shrub cover
Dead, Down Wood	N/A	
Shrubs	N/A	

The values indicated for canopy closure and tree density may be replaced with a quadratic mean diameter of greater than 13 in and a basal area of greater than 100.

References

- Hamer, T. E., and S. K. Nelson. 1995. Nesting chronology of the marbled murrelet. Pages 49–56 in C. J. Ralph, G. L. Hunt, Jr., M. G. Raphael, and J. F. Piatt, technical editors. Ecology and conservation of the marbled murrelet. U.S. Department of Agriculture Forest Service, General Technical Report PSW-GTR-152, Albany, California, USA.
- Hamer, T.E., D.E. Varland, T.L. McDonald, and D. Meekins. 2008. Predictive Model of Habitat Suitability for the Marbled Murrelet in Western Washington. *The Journal of Wildlife Management* 72(4): 983-993.
- Nelson, S.K., M.H. Huff, S. L. Miller, and M.G. Raphael. 2006. Chapter 2: Marbled Murrelet Biology: Habitat relations and populations. Pages 9-30 in Northwest Forest Plan – The First 10 Years (1994-2003): Status and Trends of Populations and Nesting Habitat for the Marbled Murrelet, M.H. Huff, M. G. Raphael, S. L. Miller, S.K. Nelson, and J. Baldwin technical editors. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, Portland, OR. PNW-GTR-650. 149 p.
- U.S. Fish and Wildlife Service. 2007. Recovery Plan for the Threatened Marbled Murrelet (*Brachyramphus marmoratus*) in Washington, Oregon, and California. Portland, Oregon. 203 pp.

ENCLOSURE 4

**Infrastructure Maintenance, Repair and Improvement
Programmatic Consultation for Southwest Washington**

Specific Project Information Form

U.S. Army Corps of Engineers, Seattle District, Regulatory Branch

v. 07/2009

Use this form to notify the U.S. Army Corps of Engineers, Seattle District (Corps) of a proposed infrastructure maintenance or improvement project that falls within the scope of approved project type and construction activities considered by the U.S. Fish and Wildlife Service (USFWS) during its Section 7 of the Endangered Species Act (ESA) consultation (USFWS Reference No. 13410-2009-I-0409). Applicants may also use this form if your project slightly deviates from the description and scope of the project categories addressed in this consultation. However, should the resulting impacts exceed those considered in the USFWS letter of concurrence for the Southwest Washington programmatic consultation, applicants will be required to consult individually (which generally takes longer) and potentially provide additional information. The Corps is responsible, in most cases, for ensuring that a project complies with the requirements of Section 106 of the National Historic Preservation Act.

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I GENERAL INFORMATION

A. Date: _____ **Corps reference no.:** _____

B. Applicant name (same as in JARPA): _____

Address

C. Agent Name (same as on JARPA): _____

Address: _____

D. Location(s) of activity:

Section: _____ Township: _____ Range: _____

Latitude (xxx° xx' xx.x"): _____

Longitude (xxx° xx' xx.x"): _____

UTM: _____

Waterbody: _____ County: _____

ESU or IRU: _____

E. Project elements. In the table below, identify the type of project proposed by checking the appropriate box in the second column and listing the activity types that correspond to the construction activities in Section F. This information will be used by the CORPS to determine

Project Category	Check Appropriate Box	Construction Activities (See Section F)
<i>ROADWAY TRANSPORTATION DEVELOPMENT & MAINTENANCE</i>		
1. Pavement Preservation		
2. Landslide Abatement and Repair		
3. Bank Stabilization and Flood Damage Repair		
4. Bridge Repair, Retrofit, Replacement, and Maintenance		
5. Mobility Improvement		
6. Safety Improvement		
7. Facilities Preservation and Construction		
8. Environmental Retrofit and Enhancement		
9. Drainage System Maintenance and Repair		
10. Pedestrian Safety		
11. Parking Lots/Park and Ride Facilities		

ENVIRONMENTAL RESTORATION AND MITIGATION		
1. Wetland Restoration		
2. Riparian Restoration		
RAIL TRANSPORTATION MAINTENANCE & REPAIR		
1. Rail tie replacement		
2. Rail replacement		
3. Ballast replacement		
4. Culvert replacement under rail line		
5. Bridge replacement under rail line		
6. Vegetation Control		
7. Operation and Maintenance		
SEWER LINE & OUTFALL MAINTENANCE & REPAIR		
1. Sewer Outfall Maintenance/Upgrades/Repair		
2. Sewer Line Construction (usually in roadway, upgrade and improvements only)		
3. Sewer Plant Upgrades		

F. Description of the proposed work: [Describe the work to be accomplished including purpose, number and type of structures to be installed or constructed, construction materials and machinery to be used, and anticipated construction techniques to be employed. You may attach additional pages or, if completing this form by computer, expand the space below to provide this information. Attach maps or drawings to clearly illustrate the location, nature, and extent of the proposed work.]

APPROVED CONSTRUCTION ACTIVITIES
1. Construction Illumination
2. Construction Wastewater and Upland Excavation De-watering
3. Equipment Crossing
4. Equipment Operation
5. Equipment Staging
6. Excavation, Backfilling, and Grading
7. Fill Placement and/or Removal
8. Horizontal Boring, Drilling, and/or Jacking
9. Materials Management
10. Overwater Structure Placement

11. Pile Driving and/or Removal
12. Culvert Removal, Replacement, Maintenance, and Repair
13. Removal of Structure
14. Removal/ Placement of Native Habitat Features
15. Site Restoration
16. Temporary Access Road
17. Treated Wood Placement
18. Vegetation Maintenance

G. Project timing:

Start date	Start Date In-water Work
End date	End Date In-water Work

H. Culvert replacements:

1. Append the applicable "Summary Form for Fish-Passage Design Data" that can be found in the WDFW Culvert Manual ((Bates et al. 2003) Appendix F).
2. Append maintenance plan that shows that culvert will be in design condition prior to each fish passage season.
3. If your project is in gradients 6 – 10 % and a bridge is not feasible, use stream simulation option and provide annual monitoring data of substrate, invert elevation, and channel form (elements of roughened channel: boulders, pools, low flow channel) including a picture prior to each migration season.
4. If your culvert is longer than 150 feet include Tribal comments. If you discussed your design with WDFW, include WDFW comments or a record of your conversation with WDFW.
5. Are you increasing the amount of rip-rap. If so, by how much?
6. Describe how proper ecological functions (bedload movement, debris movement, flood flows) in addition to fish passage will be met.
7. If you are increasing the length or width of a road:
 - a. Quantify the increased impervious surface created as a result of this activity.
 - b. List measures that you propose to use to avoid impacts to resources and water quality.

Note: Permanent road improvements that result in increased traffic or development are not permitted under this section 7 consultation.

- I. Will you be isolating the work area?** [Explain how your decision on working in the wet or dry, or partially isolating the area, will minimize impacts to salmonids.]
- J. Give a maximum estimate for the duration and length of downstream turbidity impacts. The Services will use this estimate for giving you your take exemption.** (During construction you will be monitoring downstream sedimentation every 20 min to verify/refine your given estimate.)
- K. Explain what equipment will generate noise above ambient levels and for what period during the day and for how many days.**

L. Please attach HPA or explain why you do not need one.

M. If your project does not meet all of the criteria outlined in the section 7 consultation, but is a infrastructure maintenance, repair, or repair action of similar scope and impacts, contact the USFWS with the project's description, conservation measures and reason(s) it may not currently fit. Provide documentation on any supporting conversations USFWS staff, including a list of the criteria your project won't meet. This is a "living document" and we are continuously working on refining the proposed/covered actions and conservation measures.

II EFFECT DETERMINATIONS FOR FEDERALLY-LISTED AQUATIC RESOURCES

Each project should have the appropriate effect determination. This programmatic consultation allows for “No Effect” (NE) and “Not Likely to Adversely Affect” (NLAA) determinations for listed resources. Each determination must be adequately documented in this form. If you need assistance in determining the appropriate effect determination, consult the Corps or USFWS (the USFWS contact is Martha Jensen, 360-753-9000).

Check all current Federally-listed resources that may occur in the fifth field watershed where the project is located.

Endangered

___ Bradshaw’s lomatium (*Lomatium bradshawii*)

Threatened

___ Bull trout, Columbia River IRU (*Salvelinus confluentus*)
 ___ Western snowy plover (*Charadrius alexandrinus nivosus*)
 ___ Water howellia (*Howellia aquatilis*)

Designated Critical Habitat

___ Critical habitat for Columbia River bull trout IRU

Directions: Check the appropriate determination (only one box may be checked for each species) and explain your rationale under the Table to document your decision for the effect determination(s).

Endangered Species		“No Effect”	“May Affect, Not Likely to Adversely Affect”
<i>Lomatium bradshawii</i>	Bradshaw’s Lomatium		
Threatened Species			
Bull trout	<i>Salvelinus confluentus</i>		
<i>Howellia aquatilis</i>	Water Howellia		
Designated Critical Habitat			
Bull Trout			

Rationale for effect determination(s).

Note: If you are dewatering, electroshocking, or are doing major in-water work in a stream segment where Federally-listed resources under the jurisdiction of the National Marine Fisheries Service are likely to be present (during the work window), the Corps will be required to consult separately with the National Marine Fisheries Service.

III EFFECT DETERMINATIONS FOR FEDERALLY-LISTED TERRESTRIAL SPECIES

Each project should have the appropriate effect determination. This programmatic consultation allows for "No Effect" (NE) and "Not Likely to Adversely Affect" (NLAA) determinations for listed resources. Each determination must be adequately documented in this form. If you need assistance in determining the appropriate effect determination, consult the Corps or USFWS staff.

Directions: Please check all current Federally-listed resources that may occur in the fifth field watershed where the project is located.

Endangered

- Brown Pelican (*Pelecanus occidentalis*)
- Columbia White-tailed Deer (*Odocoileus virginianus leucurus*)

Threatened

- Marbled murrelet (*Brachyramphus marmoratus*)
- Western snowy plover (*Charadrius alexandrinus nivosus*)
- Northern spotted owl (*Strix occidentalis caurina*)
- Oregon Silverspot Butterfly (*Speyeria zerene hippolyta*)
- Kincaid's lupine (*Lupinus sulphureus kincaidii*)
- Nelson's checker-mallow (*Sidalcea nelsoniana*)

Designated Critical Habitat

- Marbled murrelet
- Northern spotted owl

Directions: Check the appropriate determination (only one box may be checked for each species) and explain your rationale under the Table to document your decision for the effect determination(s).

Endangered Species		“No Effect”	“May Affect, Not Likely to Adversely Affect”
Brown Pelican	<i>Pelecanus occidentalis</i>		
Columbia White-tailed Deer	<i>Odocoileus virginianus leucurus</i>		
Threatened Species			
Marbled murrelet	<i>Brachyramphus marmoratus</i>		
Northern spotted owl	<i>Strix occidentalis caurina</i>		
Oregon Silverspot Butterfly	<i>Speyeria zerene hippolyta</i>		
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>		
Kincaid’s lupine	<i>Lupinus sulphureus kincaidii</i>		
Nelson’s checker-mallow	<i>Sidalcea nelsoniana</i>		
Designated Critical Habitat			
Marbled murrelet			
Northern spotted owl			

Rationale for effect determination(s).

Note: If you are dewatering, electroshocking, or are doing major in-water work in a stream segment where Federally-listed resources under the jurisdiction of the National Marine Fisheries Service are likely to be present (during the work window), the Corps will be required to consult separately with the National Marine Fisheries Service.

IV SIGNATURE

I hereby verify that this work will comply with all applicable requirements of the above-referenced section 7 consultation should a Corps authorization be issued for this work.

For projects deviating from established conservation measures, the Corps or USFWS may require post-construction reporting. These reports will be clearly identified and agreed upon by the all the stakeholders during the coordination process. By signing this form, the applicant agrees to adhere to all the conditions of this section 7 consultation.

Applicant: _____ Date _____

Applicant's Agent: _____ Date _____

Dewatering And Fish Capture Protocol

Work to facilitate habitat restoration may occur in isolation from flowing waters or in flowing water depending on site conditions to minimize impacts to salmonids.

If bull trout or other listed salmonids could be present in the vicinity of the project use the following dichotomous key to determine which dewatering protocol and timing window you need to implement for your project. This key references information within the *Draft Recovery Plan for the Coastal-Puget Sound Distinct Population Segment of Bull Trout Volumes I and II* (USFWS 2004a; USFWS 2004b), and the *Draft Recovery Plan for the Columbia River Distinct Population Segment of Bull Trout* (USFWS 2002). <http://www.fws.gov/pacific/bulltrout/recovery.html>. If you have questions, contact the Service in Lacey, WA.

1. Is the project located within a documented or potential bull trout Local Population Area that is excluded from coverage under this programmatic consultation (see Table 1)?
 - a. Yes – Dewatering in a documented or potential bull trout Local Population Area in Western Washington is not covered under this programmatic consultation. Complete an individual section 7 consultation for the project. Please contact the Service office in Lacey for assistance.
 - b. No – go to 2
2. Is the project located within a water body where any listed salmonids are likely to be present? For specific bull trout areas where projects are permitted see Table 2.
 - a. Yes – go to 3
 - b. No - use “Protocol for Dewatering Outside High Likelihood Listed Fish Areas”;
3. Is the stream flow at the time of project construction anticipated to be greater than or equal to 5 cubic feet per second **and** is the dewatered stream length (not including the culvert and plunge pool length, if present) greater than or equal to 33 ft?
 - a. No - use “Protocol for Dewatering Outside High Likelihood Listed Fish Areas”;
 - b. Yes - use “Protocol I Dewatering Within High Likelihood Listed Fish Areas” and consult with the Service in Lacey, WA on the appropriate timing window.

Protocol I Dewatering in Streams Where Listed Fish Occur

A. Fish Capture – General Guidelines

1. Fish Capture Methods
 - a. Minnow traps. Optional. Traps may be left in place prior to dewatering and may be used in conjunction with seining. Once dewatering starts, minnow traps should

only be used if there is someone present to check the traps every few hours, and remove the traps once the water level becomes too low.

- b. Seining. Required. Use seine with mesh of a size to ensure entrapment of the residing Federally-listed fish and age classes.
 - c. Sanctuary dip nets. Required. Use in conjunction with other methods as area is dewatered.
 - d. Electrofishing. Optional. Use electrofishing only after other means of fish capture have been exhausted or where other means of fish capture are not be feasible. Applicants shall adhere to NMFS Backpack Electrofishing Guidelines (NMFS 2000).
2. Fish capture operations will be conducted by or under the supervision of a fishery biologist experienced in such efforts and all staff working with the capture operation must have the necessary knowledge, skills, and abilities to ensure the safe handling of all Federally-listed fish.
 3. The applicant must obtain any other Federal, State and local permits and authorizations necessary for the conduct of fish capture activities.
 4. A description of any capture and release effort will be included in a post-project report, including the name and address of the supervisory fish biologist, methods used to isolate the work area and minimize disturbances to Federally-listed species, stream conditions before and following placement and removal of barriers; the means of fish removal; the number and size of fish removed by species and age class; condition upon release of all fish handled; and any incidence of observed injury or mortality.
 5. Storage and Release. Federally-listed fish must be handled with extreme care and kept in water at all times during transfer procedures. The transfer of Federally-listed fish must be conducted using a sanctuary net that holds water during transfer, whenever necessary to prevent the added stress of an out-of-water transfer. A healthy environment for non-Federally-listed fish shall be provided by large buckets (five gallon minimum to prevent overcrowding) and minimal handling of fish. The water temperature in the transfer buckets shall not exceed the temperature of cold pool water in the subject stream. Retain fish the minimum time possible to ensure that stress is minimized, temperatures do not rise, and dissolved oxygen remains suitable. Release fish as near as possible to the isolated reach in a pool or area that provides cover and flow refuge.

B. Dewater Instream Work Area and Fish Capture

Fish screen. Except for gravity diversions that have gradual and small outfall drops directly into water, all water intake structures must have a fish screen installed, operated, and maintained in accordance with NMFS Guidelines (NMFS 1997; Chapter 11 in NMFS 2008).

The sequence^a for stream flow diversion will be:

1. Install flow conveyance devices (pumps, discharge lines, gravity drain lines, conduits, and channels), but do not divert flow.
2. Install upstream barrier. Allow water to flow over upstream barrier.
3. Install block net at upstream end of work area. Block nets will be checked every 4 hr, 24 hr a day. If any fish are impinged or killed on the nets they will be checked hourly.
4. Reduce flow over upstream barrier by one-third for a minimum of 6 hrs.
5. Inspect as discharge is diminishing and in dewatered areas for stranded and trapped fish and remove them with sanctuary dip nets.
6. Reduce flow over upstream barrier by an additional one-third for a minimum of 6 hr.
7. Again, inspect dewatered areas for stranded and trapped fish and remove them with sanctuary dip nets.
8. Leave the project area in a stable, low flow (one-third of flow) condition, overnight, allowing fish to leave the area volitionally.
9. In the morning, remove any remaining fish from the area to be dewatered using seines and/or hand held sanctuary dip-nets.
10. Divert upstream flow completely.
11. Install downstream barrier if necessary (only in low gradient, backwatered reaches).
12. If water remains within the work area; seine, dip net, and lastly electrofish (if using this technique), the project area until catch rates have reached no fish for three consecutive passes. Move rocks as needed to flush fish and effectively electrofish the work area.
13. If needed, pump water out of isolated pools within the project area to a temporary storage and treatment site or into upland areas and filter through vegetation prior to reentering the stream channel. Continue to seine, dip net and electrofish while pumping.
14. If fish continue to be captured, shut pump off before average water depths reach one foot. Continue to seine, dip net and electrofish until no fish are caught for three consecutive passes.
15. Pump dry and check substrate for remaining fish.
16. Continue to pump water from the project area as needed for the duration of the project.

The diversion structure is typically a temporary dam built just upstream of the project site with sand bags that are filled with clean gravel or stream/floodplain rock and covered with plastic sheeting. A portable bladder dam or other non-erosive diversion technologies may be used to contain stream flow. Mining of stream or floodplain rock can be used for diversion dam construction if it does not result in significant additional floodplain or stream disturbance. Often gravel has to be moved to key in logs in which case it makes sense to use this gravel for the diversion structure.

^a Note: this sequence will take one 24-hr period prior to construction to complete (of which 12 hr are for staged dewatering with 6 hr overnight). We suggest you start in the morning the day before project construction is scheduled and leave the reach dewatered overnight according to instruction below.

The temporary bypass system must consist of non-erosive techniques, such as a pipe or a plastic-lined channel, both of which must be sized large enough to accommodate the predicted peak flow rate during construction. In cases of channel rerouting, water can be diverted to one side of the existing channel.

Dissipate flow at the outfall of the bypass system to diffuse erosive energy of the flow. Place the outflow in an area that minimizes or prevents damage to riparian vegetation. If the diversion inlet is a gravity diversion and is not screened to allow for downstream passage of fish, place diversion outlet in a location that facilitates gradual and safe reentry of fish into the stream channel.

C. Rewater Instream Work Area

Remove stream diversion and restore stream flow. Heavy machinery operating from the bank may be used to aid in removal of diversion structures. Slowly re-water the construction site to prevent loss of surface water downstream as the construction site streambed absorbs water and to prevent a sudden increase in stream turbidity. Look downstream during re-watering to prevent stranding of aquatic organisms below the construction site.

All stream diversion devices, equipment, pipe, and conduits will be removed and disturbed soil and vegetation will be restored after the diversion is no longer needed.

Protocol II Dewatering in Streams Where Listed Fish are Less Likely to Occur

If bull trout or other listed salmonids are captured at any time during the dewatering process, immediately notify a USFWS bull trout biologist or NMFS biologist and obtain guidance to either continue to dewater and remove fish or stop activities and re-water the project site.

Normal guidance:

1. If you encounter listed fish at or prior to step 3 switch to Protocol I
2. If you encounter listed fish after step 3, continue to dewater and remove fish, paying close attention to presence of additional listed salmonids.

A. Fish Capture – General Guidelines

1. Fish Capture Methods
 - a. Minnow traps. Optional. Traps may be left in place prior to dewatering and may be used in conjunction with seining. Once dewatering starts, minnow traps should only be used if there is someone present to check the traps every few hours, and remove the traps once the water level becomes too low.
 - b. Seining. Required. Use seine with mesh of such a size to ensure entrapment of the residing Federally-listed fish and age classes.
 - c. Sanctuary dip nets. Required. Use in conjunction with other methods as area is dewatered.

- d. Electrofishing. Optional. Use electrofishing only after other means of fish capture have been exhausted or where other means of fish capture are not be feasible. Applicants shall adhere to NMFS Backpack Electrofishing Guidelines.
2. Fish capture operations will be conducted by or under the supervision of a fishery biologist experienced in such efforts and all staff working with the seining operation must have the necessary knowledge, skills, and abilities to ensure the safe handling of all Federally-listed fish.
3. The applicant must obtain any other Federal, State and local permits and authorizations necessary for the conduct of fish capture activities.
4. A description of any seine and release effort will be included in a post-project report, including the name and address of the supervisory fish biologist, methods used to isolate the work area and minimize disturbances to Federally-listed species, stream conditions before and following placement and removal of barriers; the means of fish removal; the number and size of fish removed by species; conditions upon release of all fish handled; and any incidence of observed injury or mortality.
5. Storage and Release. Fish must be handled with extreme care and kept in water to the maximum extent possible during transfer procedures. A healthy environment for the stressed fish shall be provided by large buckets (five gallon minimum to prevent overcrowding) and minimal handling of fish. The temperature of the water shall not exceed the temperature in large deep holding pools of the subject system. The transfer of any Federally-listed fish must be conducted using a sanctuary net that holds water during transfer, to prevent the added stress of an out-of-water transfer. Retain fish the minimum time possible to ensure that stress is minimized, temperatures do not rise, and dissolved oxygen remains suitable. Release fish as near as possible to the isolated reach in a pool or area that provides cover and flow refuge.

B. Dewater Instream Work Area and Fish Capture

Fish screen. Except for gravity diversions that have gradual and small outfall drops directly into water, all water intake structures must have a fish screen installed, operated, and maintained in accordance with the NMFS Guidelines (NMFS 1997; Chapter 11 in NMFS 2008).

The sequence for stream flow diversion would be as follows:

1. Install flow conveyance devices (pumps, discharge lines, gravity drain lines, conduits, and channels), but do not divert flow.
2. Install block net at upstream end or work area.
3. Seine and dip net through the entire project area in a downstream direction, starting at the upstream end; thereby moving fish out of the project area. Then, if necessary electrofish.
4. Install upstream barrier and divert upstream flow completely.
5. Capture any remaining fish using hand held dip-nets.
6. Install downstream barrier if necessary (only in low gradient backwatered reaches).

7. If water remains within the work area; seine and dip net, if necessary electrofish the project area until catch rates have reached no fish for three consecutive passes.
8. Pump water out of isolated pools within the project area to a temporary storage and treatment site or into upland areas and filter through vegetation prior to re-entering the stream channel. Continue to seine, dip net, or electrofish while pumping.
9. If fish continue to be captured, shut pump off before average water depths reach one foot. Continue to seine, dip net, or electrofish until no fish are caught for three consecutive passes.
10. Pump dry and check substrate for remaining fish and remove them.
11. Continue to pump water from the project area as needed for the duration of the project.

The diversion structure is typically a temporary dam built just upstream of the project site with sand bags that are filled with clean gravel or stream/floodplain rock and covered with plastic sheeting. A portable bladder dam or other non-erosive diversion technologies may be used to contain stream flow. Mining of stream or floodplain rock can be used for diversion dam construction if it does not result in significant additional floodplain or stream disturbance. Often gravel has to be moved to key in logs in which case it makes sense to use this gravel for the diversion structure.

The temporary bypass system must consist of non-erosive techniques, such as a pipe or a plastic-lined channel, both of which must be sized large enough to accommodate the predicted peak flow rate during construction. In cases of channel rerouting, water can be diverted to one side of the existing channel.

Dissipate flow at the outfall of the bypass system to diffuse erosive energy of the flow. Place the outflow in an area that minimizes or prevents damage to riparian vegetation. If the diversion inlet is a gravity diversion and is not screened to allow for downstream passage of fish, place diversion outlet in a location that facilitates gradual and safe reentry of fish into the stream channel.

C. Rewater Instream Work Area

Remove stream diversion and restore stream flow. Heavy machinery operating from the bank may be used to aid in removal of diversion structures. Slowly re-water the construction site to prevent loss of surface water downstream as the construction site streambed absorbs water and to prevent a sudden increase in stream turbidity. Look downstream during re-watering to prevent stranding of aquatic organisms below the construction site.

All stream diversion devices, equipment, pipe, and conduits will be removed and disturbed soil and vegetation will be restored after the diversion is no longer needed.

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