Oregon
Theodore R. Kulongoski, Governor

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Col. Richard W. Hobernicht
District Commander
U.S. Army Corps of Engineers, Portland District
P.O. Box 2946
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Dear Col. Hobernicht:

The Oregon Department of Environmental Quality (DEQ) has reviewed the request for section 401 Water Quality Certification (WQC) for the proposed Oregon Department of Transportation Bridge Repair and Replacement regional general permit (RGP). The request was contained in the US Army Corps of Engineers (USACE, Corps) Public Notice ID# 2004-00035 issued on February 10, 2004, with an expiration date of March 11, 2004. The Corps is proposing to issue the RGP to the Oregon Department of Transportation (ODOT) for programmatic work in waters of the United States within the state of Oregon.

The Public Notice requested Section 401 Water Quality Certification (WQC) pursuant to the federal Clean Water Act (CWA) from the Oregon Department of Environmental Quality (DEQ), and State Coastal Zone concurrence pursuant to the federal Coastal Zone Management Act (CZMA) from the Department of Land Conservation and Development (DLCD).

Regional General Permits: A regional general permit is a permitting process authorized by the Clean Water Act which allows the Corps to issue general permits on a regional basis for a certain category or categories of activities in waters of the US which are substantially similar in nature and would cause no more than minimal adverse environmental effects, individually or cumulatively. Upon issuance individual activities are verified for qualification under the RGP without further authorization; however, the Corps may override the RGP on a case-by-case basis if environmental concerns indicate, at which time the project is subject to individual review.

Description of Permitted Activity: ODOT proposes to implement a bridge repair and replacement program for a large number of Oregon bridges which are at or near the end of their anticipated 50-year life span. Many of these bridges date back to the 1950s and '60s and are associated with the creation and construction of Interstates 5 and 84. The bridge network is essential for maintaining primary commercial transportation corridors in Oregon. ODOT plans to facilitate and streamline the RGP permitting process by establishing programs, and processes and criteria (Environmental Performance Standards) by which projects can be evaluated, monitored, and verified. (For further details refer to the *Endangered Species Act- Section 7 Consultation, Informal Concurrence and Formal Biological Opinion and Conference Assessment & Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation*

(June 28, 2004), for *Oregon Department of Transportation's OTIA III Statewide Bridge Delivery Program, Oregon.*

Thresholds for Eligibility: Projects qualifying for RGP authorization will have no more than 1.0 acre of total fill in waters of the US, with no more than 0.5 acres of permanent fill allowed per single and complete project. In cases where two bridges cross the same water feature in the same location, and are being repaired or replaced concurrently, the two structures shall be considered a single project. Permanent impacts greater than 0.5 acres may be authorized if approved on a site specific basis by the Corps.

Endangered Species Act (ESA) Consultation: The RGP has undergone formal consultation under Section 7 of the ESA. The US Fish and Wildlife Service and NOAA Fisheries delivered a joint Biological Opinion (hereinafter referred to as the Biological Opinion, or BO) to the Federal Highway Administration (FHWA) and the Corps on June 28, 2004. The Services concluded that the FHWA/Corps' proposed action of funding and permitting the Oregon Transportation Improvement Act III (OTIA III) Statewide Bridge Delivery Program is not likely to jeopardize the continued existence of shortnose and Lost River suckers, bull trout, Snake River Spring/summer-run Chinook salmon, Upper Willamette River Chinook salmon, Lower Columbia River Chinook salmon, Oregon Coast coho salmon, Southern Oregon/Northern California coho salmon, Lower Columbia River coho salmon, Columbia River chum salmon, Upper Willamette River steelhead, Middle Columbia River steelhead, and Lower Columbia River steelhead, and is not likely to destroy or adversely modify designated or proposed critical habitat.

Compensatory Mitigation: The Bridge Program Environmental Performance Standards (EPS) were developed to drive impact avoidance and minimization. For unavoidable impacts to waters of the U.S., ODOT will use a Comprehensive Mitigation/Conservation Strategy (CMCS) to provide integrated resource compensation benefits. This strategy addresses on-site impacts; as well as on- and off-site mitigation measures; and ties together resource management objectives for wetlands, waters, wildlife species and habitats, and federally protected species and habitats. The CMCS is a collaborative effort between ODOT, private consultants, Northwest Habitat Institute, and Federal Highways Administration (FHWA), in conjunction with federal and Oregon state resource and regulatory agency representatives, including DEQ.

The CMCS focuses on ecosystem services and resource function and value. The CMCS will identify regional ecological priorities for the program and focus impact avoidance, minimization, and mitigation/conservation efforts toward identified priorities. The CMCS divides Oregon into "Ecoprovinces" (defined at the 3rd field Hydrologic Unit Code (HUC) to identify ecological priorities within the context of the surrounding landscape. Ecoprovince priorities can serve as a driving force for mitigation efforts rather than strict, in-kind mitigation, if priorities are determined to be of greater significance in the Ecoprovince.

The CMCS is an on-going process and the following actions will be collaboratively developed and finalized for the RGP program and regional and individual mitigation sites, subject to Corps approval prior to final implementation:

- Develop regional ecological priorities to target and benefit appropriate resources.
- Identify potential mitigation sites for consideration in the CMCS.
- Model potential mitigation sites for current and potential value based on potential mitigation improvements.
- Develop an impact assessment and mitigation/conservation credit system.
- Design conceptual compensatory mitigation plans for approval by appropriate resource agencies. These sites may be in the form of regional mitigation sites, existing banks, new ODOT joint mitigation/conservations banks, or a variety of other instruments. Once agency feedback is obtained, final mitigation plans will be prepared for approval, including compensatory mitigation criteria (function and value based).
- Develop an Adaptive Management Program to provide a method for documenting monitoring results and maintenance activities, while providing a decision-making framework for assessing success and dealing with change. An adaptive program allows resource site managers flexibility to deal with unforeseen circumstances.
- Develop financial assurances for mitigation sites.

Conceptual regional CMCS plans for agency reviews are anticipated in October 2004 (Bridge Program Stage 1A and Stage 2 only, subsequent stages to follow). ODOT is currently developing a statewide umbrella mitigation program proposal for Bridge Program and other future ODOT project uses, incorporating regional CMCS mitigation sites as bank sites.

Variances and Project Modifications:

Variances- Variance requests are designed to allow ODOT the flexibility to implement certain alternate bridge design or construction methods which may comply with the intent of the Environmental Performance Standards but not the precise description contained in the RGP or the BO. The applicant may submit a variance request to the appropriate Regulatory Agencies and the Services (US Fish and Wildlife Service and NOAA Fisheries) for review and approval.

Project Changes/Modifications- Bridge proposal changes/modifications may be foreseen or unforeseen and may occur either before or after RGP authorization.

A variance, or project modification, may unintentionally place a project into non-compliance with the WQC. DEQ must be included in the Notification process outlined in detail in the RGP under **Variances and Project Changes**. DEQ will respond either directly to ODOT, or through the Corps process in a timely manner.

Section 401 Water Quality Certification Authorities: In exercising authority under 33 U.S.C. 1341 and Oregon Revised Statutes (ORS) 468, the Department of Environmental Quality has reviewed and evaluated the ODOT Bridge Program request for WQC pursuant to the following:

- *Conformance with state water quality standards as provided for in ORS 468 and other appropriate requirements of state law, and*
- *Conformance with the provision of using all known, available and reasonable methods to prevent and control pollution of state waters as required by ORS 468.*

On behalf of the State of Oregon, DEQ certifies that there is a reasonable assurance that the activities proposed in the Public Notice for the RGP will be conducted in a manner that will not violate applicable state water quality standards, including Oregon Administrative Rule (OAR) 340-041-0026 (0004), Antidegradation Policy for Surface Waters, provided the section 401 WQC conditions which follow are incorporated into the permit.

This section 401 WQC authorizes only those activities specifically described in the RGP for ODOT's OTIA III Statewide Bridge Delivery Program (Bridge Program). Many conditions of the section 401 WQC duplicate, or are similar to, the Bridge Program Environmental Performance Standards (EPS) contained in OTIA III Statewide Bridge Delivery Program Environmental Performance Standards, Oregon Department of Transportation (July 2004). The applicant or their agents are encouraged to refer to that document, as well as to the section 404 permit, and the BO, which contain detailed descriptions, definitions, and references. Adherence to the WQC conditions and the EPS will ensure compliance with state water quality standards and other provisions of state law.

Section 401 Water Quality Certification Conditions

1. **Fluvial Standards:** In order to maintain or improve water quality, the applicant must allow normative physical processes within the stream-floodplain corridor.

   a. *Channel Processes-* Design water crossings other than overflow crossings that: (1) promote natural sediment transport patterns for the reach, (2) provide unaltered fluvial debris movement, and (3) allow for longitudinal continuity and connectivity of the stream-floodplain system. If one of the three objectives cannot be restored at the project site, then locate an alternate, non-Bridge Program project within the same project watershed that will achieve an equal or greater function. Temporary fill below the bankfull elevation that results in embedded streambed material is not allowed, unless approved in writing by the Services and the appropriate Regulatory Authorities.

      i. Ensure the functional floodplain is absent of roadway, embankment, or approach fills.

         (1) For purposes of this project, the functional floodplain will be determined using the following process, unless another process (e.g., channel migration zone) is more appropriate

for site conditions and is approved in writing by the Services and the appropriate Regulatory Authorities:

(a) Step 1: Determine the bankfull width, depth, and elevation.

(b) Step 2: Determine the floodprone elevation and width.

(c) Step 3: Determine the Entrenchment Ratio (E).

(i) If E < 2.2, then the floodprone area is considered the functional floodplain.

(ii) If E > 2.2, then 2.2 times the bankfull width is considered the functional floodplain.

(d) Process Considerations:

(i) The bankfull discharge level (elevation) can be located using field indicators as defined by Dunne and Leopold (1978). Bankfull indicators include: (1) topographic break from vertical bank to flat floodplain, (2) topographic break from steep slope to gentle slope, (3) change in vegetation from bare to grass, moss to grass, grass to sage, grass to trees, or from no trees to trees, (4) textural change of depositional sediment, (5) elevation below which no fine debris (needles, leaves, cones, seeds) occurs, and (6) textural change of matrix material between cobbles or rocks (Dunne and Leopold 1978).

(ii) Surveys of the bankfull discharge elevation should be conducted upstream and/or downstream of the bridge, outside of the area influenced by the bridge. Five to seven channel widths (one average meander wavelength; 10 widths is preferred) is often used as a minimum distance to survey upstream and downstream, however, site conditions will dictate the appropriate distance for surveying.

(iii) Bankfull width (BFW) is the active channel width at the bankfull discharge elevation as defined above. Averaging several width measurements (taken at riffle sections, if available) are preferable to a single

measurement. Comparing upstream and downstream measurements is valuable for determining various physical processes in operation at specific sites. Avoid measuring widths where bank stabilization structures are located. Vast disparities in upstream and downstream bankfull widths may indicate stream instability and should be further investigated.

(iv) Average bankfull depth can be determined by either averaging the measured depths across the stream channel at the bankfull width level, or by dividing the cross-sectional area by the bankfull width.

(v) The floodprone width (FPW) is determined by finding the elevation at twice the maximum bankfull depth at a riffle or three times the average bankfull depth. The width of the floodplain, or floodprone area, is then measured at this elevation. Using three times the average depth is a more robust approach because it is not as sensitive to the exact location of the cross-section.

(2) As a means of evaluating bridge placement, appropriate span length, and overall program goals, perform scour analysis to:

(a) Evaluate the bridge length so that there is equivalent contraction scour at the bridge crossing as in the area upstream of the bridge crossing or would be expected under natural conditions up to the 10-year flood event.

(b) Ensure that the discharge at which incipient motion begins under the bridge is similar to the discharge at which incipient motion begins upstream of the bridge.

(c) Ensure scour through the bridge opening is equivalent to reach conditions outside of the influence of the bridge structure and road prism.

ii. Remove man-made constrictions within the functional floodplain of the project area.

(1) Reduce existing fill volumes in the functional floodplain: Possible measures to reduce fill volumes could include

removing existing approach fills, installing relief conduits through existing fill, or removing other floodplain fill volumes located within the project area.

(2) Avoid increases and decrease, as feasible, net fill volumes within the floodprone area.

(3) Remove vacant bridge support structures in the functional floodplain: Possible measures may include removing structures to below the modeled scour depth or removing structures located within debris transportation corridors.

iii. Design and locate bridge support structures with the following considerations:

(1) Avoid inducing localized scour of streambanks and reasonably likely spawning areas.

(2) Bridge supports will avoid supplemental scour prevention (e.g., riprap) and incorporate scour protection (e.g., drilled shafts, piles driven below critical scour depth).

(3) Bridge supports will allow the fluvial transport of large wood through the project area.

(a) Avoid the need for removal or modification (e.g., cutting, limbing) of large wood resting against bridge support structures.

(b) Design span length to facilitate potential large wood movement through the project area with the following considerations:

(i) The site-potential tree height and the large wood transport capacity of the project watershed upstream of the bridge.

(ii) The orientation of the bridge crossing and bent locations relative to stream flow in order to capitalize on the orientation of drift material relative to the bridge structure.

b. *Floodway Processes*- Design crossings that allow lateral connectivity between the stream and floodplain.

i. Bridge the functional floodplain.

ii. Accommodate potential flow pathways at multiple flood stages by:

(1) Locating bridge opening to maximize floodplain function;

(2) Providing flood-relief conduits (bottomless arch and embedded culvert design only) within existing road fill at potential flood flow pathways based on analysis of flow

patterns (or floodplain topography) at multiple flood stages, as necessary;

(3) Locating bridge abutments with consideration of channel migration patterns over the designed lifetime of the bridge.

2. **Turbidity Control:** The following conditions relating to turbidity shall be observed:

a. The authorized work shall not cause turbidity of affected waters to exceed natural background turbidity by 10 percent, measured 100 feet downstream from the activity causing turbidity.

b. For projects in streams where the gradient is less than or equal to 2 percent (rise/run), monitoring shall take place at no less than 4-hour intervals during active, in-water work. Where erosion control measures specified in Condition 3 of this certification have been fully implemented, the turbidity standard may be exceeded for a maximum of 1 (one) monitoring interval per 24-hour work period.

c. For projects in streams where the gradient is greater than 2 percent (rise/run), monitoring shall take place at no less than 2-hour intervals during active, in-water work. Where erosion control measures specified in Condition 3 of this certification have been fully implemented, the turbidity standard may be exceeded for a maximum of 2 (two) hours.

d. Water quality monitoring compliance points shall be established: at an undisturbed site 100-feet upstream from the point of disturbance to measure background turbidity; at the point of permitted work; and at a point 100-feet downstream from the point of permitted activity. Other monitoring locations may be authorized by DEQ if the applicant or contractor has been denied access. A turbidimeter is recommended for measuring; however, visual gauging is acceptable. If measured visually, turbidity that is visible over background is considered an exceedance of the standard.

e. The person(s) doing the monitoring shall be responsible for immediately notifying the permit holder or the permit holder's on-site representative of any exceedance of the turbidity standard and shall keep a record of the exceedance. If a 10 percent exceedance of the background level occurs at 100 feet below the project site, erosion control measures shall be improved or additional erosion controls shall be implemented until the turbidity standard is met, then monitoring shall continue at permitted intervals. If exceedances caused by the permitted activity occur during two consecutive measurements, the activity causing the turbidity shall stop until appropriate abatement techniques bring the project back into compliance with the water quality standard.

3. **Erosion Control:** The following erosion control measures (and others as appropriate) shall be observed:

a. Filter bags, sediment fences, sediment traps or catch basins, leave strips or berms, or other measures shall be used sufficient to prevent movement of soil from uplands into waterways or wetlands.

b. To prevent erosion, use of compost berms, impervious materials or other equally effective methods, shall be used to protect soil stockpiles during rain events or when the stockpile site is not moved or reshaped for more than 48 hours. This requirement may be waived upon review and approval by DEQ.

c. Erosion control measures shall be inspected and maintained daily, or more frequently as necessary, to ensure their continued effectiveness and shall remain in place until all exposed soil is stabilized.

i. If monitoring or inspection shows that the erosion and sediment controls are ineffective, mobilize work crews immediately to make repairs, install replacements, or install additional controls as necessary.

ii. Remove sediment from erosion and sediment controls once it has reached 1/3 of the exposed height of the control.

d. Unless part of the authorized permanent fill, all construction access points through, and staging areas in, riparian or wetland areas shall use removable pads or mats to prevent soil compaction. However, in some wetland areas under dry summer conditions, this requirement may be waived upon approval by DEQ.

e. Unless part of the authorized fill, dredged or other excavated material shall be placed on upland areas having stable slopes and shall be prevented from eroding back into waterways or wetlands.

Prevent delivery of contaminants to soils and waters of the state caused by surveying, construction, and demolition operations. Prepare and carry out a Pollution and Erosion Control Plan that contains the elements outlined in Sections 280.00 and 290.30 of ODOT's *Standard Specifications for Highway* Construction (2002), meets requirements of all applicable laws and regulations, and includes the following:

a. The name and address of the party(s) responsible for accomplishment of the pollution and erosion control plan.

b. Practices to prevent erosion and sedimentation associated with access roads, stream crossings, drilling sites, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations, staging areas, and roads being decommissioned.

c. Practices to confine, remove, and dispose of excess concrete, cement, grout, and other mortars or bonding agents, including measures for washout facilities.

d. A description of any regulated or hazardous products or materials that will be used for the project, including procedures for inventory, storage, handling, and monitoring.

e. A spill containment and control plan with notification procedures, specific cleanup and disposal instructions for different products, quick response containment and cleanup measures that will be available on the site, proposed methods for disposal of spilled materials, and employee training for spill containment.

f. Practices to prevent construction debris from dropping into any waters of the State, and to remove any material that does drop with a minimum disturbance to the aquatic habitat and water quality. Include complete and detailed plans for removing any structure and constructing new structures. Outline specific containment measures necessary to keep bridge removal and construction debris out of waters of the State.

4. **Spill Prevention and Staging Activities:** Fuel, operate, maintain, and store vehicles and construction materials in areas that minimize disturbance to habitat and prevent adverse effects from potential fuel spills.

a. Limit staging areas to the minimum size necessary to complete the project. To reduce the staging area and potential for contamination, ensure that only enough supplies and equipment to complete a specific task will be stored on-site.

b. Complete vehicle staging, cleaning, maintenance, refueling, and fuel storage in a vehicle staging area placed 150 feet or more from any waters of the State, unless this distance is not appropriate because of the following site conditions:

i. Physical constraints that make this distance not feasible (e.g., steep slopes, rock outcroppings).

ii. Natural resource features would be degraded as a result of this setback.

iii. Equal or greater spill containment and effect avoidance if staging area is less than 150 feet of any waters of the State.

c. If staging areas are within 150 feet of any waters of the State, full containment of potential contaminants shall be provided to prevent soil and water contamination, as appropriate.

d. Inspect all vehicles operated within 150 feet of any waters of the State daily for fluid leaks before leaving the vehicle staging area. Repair any leaks detected in the vehicle staging area before the vehicle resumes

operation. Document inspections in a record that is available for review on request by the Services and the appropriate Regulatory Authorities.

e. Before operations begin and as often as necessary during operation, steam clean (or an approved equal) all equipment that will be used below bankfull elevation until all visible external oil, grease, mud, and other visible contaminates are removed.

f. Diaper all stationary power equipment (e.g., generators, cranes, stationary drilling equipment) operated within 150 feet of any waters of the State to prevent leaks, unless other suitable containment is provided to prevent potential spills from entering any waters of the State.

g. In the event that oil, fuel, or other chemicals are discharged into State waters, or onto land with a potential to enter State waters, the discharge shall be promptly reported to the Oregon Emergency Response Service (OERS, 1-800-452-0311). Containment and cleanup must begin immediately and be completed as soon as possible.

5. **Construction Discharge Water:** Avoid adverse affects to water quality from construction discharge water (e.g., concrete washout, hydromilling, pumping for work area isolation, vehicle wash water, drilling fluids).

a. *Discharge Containment*- Design, build, and maintain facilities to collect and treat all construction discharge water, including any contaminated water produced by drilling, using the best available technology applicable to site conditions. Provide treatment to remove debris, nutrients, sediment, petroleum hydrocarbons, metals, and other pollutants likely to be present. An alternate to treatment is collection and proper disposal offsite.

b. *Discharge Velocity*- If construction discharge water is released using an outfall or diffuser port, velocities may not exceed 4 feet per second.

c. *Pollutant Containment*- Do not allow pollutants including petroleum products, contaminated water, silt, welding slag, sandblasting abrasive, green concrete, or grout cured less than 24 hours to contact any area within 150 feet of waters of the State, unless approved by the Services and the appropriate Regulatory Authorities.

d. *Drilling Discharge*- All drilling equipment, drill recovery and recycling pits, and any waste or spoil produced, will be completely isolated, recovered, then recycled or disposed of to prevent entry into waters of the State.

e. Drilling fluids will be recycled using a tank instead of drill recovery/recycling pits, whenever feasible.

f. When drilling is completed, attempts will be made to remove the remaining drilling fluid from the sleeve (e.g., by pumping) to reduce turbidity when the sleeve is removed.

g. Follow the necessary terms and conditions of ODOT's most recent drilling programmatic biological opinion.

6. **Piling Removal:** Immediately place removed piling onto the appropriate dry storage site.

a. Attempt to remove the entire temporary or permanent piling unless otherwise approved in writing by the Services and the appropriate Regulatory Authorities.

b. Ensure remaining treated wood piling is broken, cut, or pushed at least 3 feet below the sediment surface and covered with a cap of clean, native substrates that match surrounding streambed materials.

c. Fill the holes left by each treated timber piling with clean, native substrates that match surrounding streambed materials, whenever feasible.

7. **Treated Wood:** Avoid adverse affects to aquatic habitats during handling of treated wood.

a. Ensure that no treated wood debris falls into waters of the State. If treated wood debris does fall into waters of the State, remove it immediately.

b. Dispose of all treated wood debris removed during a project, including treated wood pilings, at an upland facility approved for hazardous materials of this classification. Do not leave a treated wood piling in the water or stacked on the streambank.

c. Projects using treated wood that may contact flowing water or that will be placed over water where it will be exposed to mechanical abrasion are not authorized, except for pilings installed following NOAA Fisheries' guidelines.

8. **Fish Avoidance:** Minimize adverse effects to fish species from in-water work activities.

a. *Timing of In-water Work-* All work below the Ordinary High Water (OHW) elevation, including temporary fills or structures, shall occur within the time periods recommended by Oregon Department of Fish and Wildlife (ODFW) for in-water work specified in the most current version of *Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources*. Any exception to the Guidelines shall require specific approval from the Corps after consultation with the Services.

b. *Cessation of Work-* Cease project operations under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage.

c. *Fish Screens*- Have a fish screen installed, operated, and maintained according to NOAA Fisheries' fish screen criteria on each water intake used for project construction, including pumps used to isolate an in-water work area. Screens for water diversions or intakes that will be used for irrigation, municipal or industrial purposes, or any use besides project construction are not authorized.

d. *Fish Passage*- Provide passage for any adult or juvenile fish species present in the project area during and after construction, for the life of the project, unless otherwise approved in writing by the Services and the appropriate Regulatory Authorities.

e. *Isolation of In-water Work Area*- If adult or juvenile fish are reasonably certain to be present, or if the work area is within 300 feet upstream of reasonably likely spawning habitats, completely isolate the work area from the active flowing stream using inflatable bags, sandbags, sheet pilings, or similar materials, unless otherwise approved in writing by the Services and the appropriate Regulatory Authorities. Prepare a Work Area Isolation Plan for all work below the bankfull elevation requiring flow diversion or isolation. Include the sequencing and schedule of dewatering and re-watering activities, plan view of all isolation elements, as well as a list of materials to adequately provide appropriate redundancy of key plan functions (e.g., an operational, properly sized backup generator).

f. Capture and Release- Before, intermittently during, and immediately after isolation and dewatering to isolate an in-water work area, attempt to capture and release fish from the isolated area using trapping, seining, electrofishing, or other methods as are prudent to minimize risk of injury. The entire capture and release operation must be conducted or supervised by a fishery biologist experienced with work area isolation and competent to ensure the safe handling of all fish.

   i. If electrofishing equipment is used to capture fish, comply with NOAA Fisheries' electrofishing guidelines.

   ii. Ensure water quality conditions, including dissolved oxygen levels, within fish transport systems (e.g., buckets) are sufficient to promote fish recovery. Brief holding times; clean, cold, and circulated water; and aerators may be used to maintain water quality conditions.

   iii. Release fish into a safe release site as quickly as possible, and as near as possible to capture sites.

   iv. Allow the Services and the appropriate Regulatory Authorities to accompany the capture team during the capture and release activity, and to inspect the team's capture and release records and facilities.

v. Report salvage effort results, as called for in relevant permits, including the name and address of the supervisory fish biologist, methods used to isolate the work area and minimize disturbances to fish, stream conditions before and following placement and removal of barriers, the means of fish removal, the number and species of fish removed, the condition of all fish released, and any incidence of observed injury or death.

9. **Deleterious waste materials:** The following conditions relating to control of hazardous, toxic and waste materials shall be observed:

a. Petroleum products, chemicals, cement/concrete cured less than 24 hours, construction debris, welding slag and grindings, concrete saw cutting by-products, sandblasted materials, chipped paint or other biologically harmful waste materials shall not be allowed to enter waterways or wetlands during the activity authorized by this permit.

b. Authorized fill material must be free of these and any other deleterious materials.

c. Waste materials or construction debris, such as tires, wire, steel posts, asphalt and concrete shall not be placed in waterways or wetlands.

d. The applicant must remove all foreign materials, refuse, and waste from the area.

10. **Riparian Vegetation Protection:** Vegetation associated with waters of the state including wetlands is absolutely essential in preserving and enhancing water quality. In many cases this includes vegetation on adjacent upland buffer areas. Therefore riparian, wetland, and shoreline vegetation in the project area shall be protected from disturbance to the maximum extent possible and be restored and enhanced when unavoidably disturbed due to activities associated with the authorized work, pursuant to Condition 11, Site Restoration which follows.

11. **Site Restoration:** Renew habitat access, water quality, production of habitat elements, channel conditions, flows, watershed conditions, and other ecosystem processes that form and maintain productive habitats. Prepare and carry out a site restoration plan as necessary to ensure that all habitats and accesses (e.g., streambanks, soils, large woody material, and vegetation) disturbed by the project are cleaned up and restored as follows:

a. *General Considerations*:

i. Streambank shaping- Restore damaged streambanks to a natural slope, pattern and profile suitable for establishment of permanent woody vegetation, unless precluded by pre-project conditions (e.g., a natural rock wall).

ii. Revegetation- Replant or reseed each area requiring revegetation before the end of the first planting season following construction. Use a diverse assemblage of species native to the project area or region, unless approved in writing by the Services and the appropriate Regulatory Authorities.

iii. Pesticides- No pesticides, including herbicides, will be allowed within 150 feet of waters of the State. Mechanical, hand, or other methods may be used to control weeds and unwanted vegetation.

iv. Fertilizer- Do not apply surface fertilizer within 50 feet of any stream channel, unless approved in writing by the Services and the appropriate Regulatory Authorities.

v. Fencing- Install wildlife-friendly fencing as necessary to prevent access to revegetated sites by livestock, wildlife, or unauthorized persons.

vi. Source of Materials- Obtain boulders, rock, woody materials and other natural construction materials used for the project outside the bankfull elevation and at least 150 feet from any waters of the State, except for native materials obtained from within the project footprint to be stockpiled and reused on site.

(1) If possible, leave native materials where they are found.

(2) If native materials (e.g., downed wood) are damaged or destroyed, replace them with a functional equivalent during site restoration.

(3) Stockpile all large wood, native vegetation, weed-free topsoil, and native channel material displaced by construction for use during site restoration in-channel, in the riparian area, or in adjacent uplands, as appropriate.

b. *Plan Contents*. Include each of the following elements:

i. Responsible Party- The name and address of the party(s) responsible for meeting each component of the site restoration requirements, including providing and managing any financial assurances and monitoring necessary to ensure restoration success;

ii. Baseline Information- Include the location and extent of resources surrounding the restoration site (i.e., historic and existing conditions). This information may be obtained from existing sources (e.g., land use plans, watershed analyses, subbasin plans, and ODOT's Environmental Baseline Reports), where available;

iii. Goals and Objectives- Restoration goals and objectives that describe the extent of site restoration necessary to restore lost function, by resource type;

iv. Design Criteria- Use these criteria to help design the plan and to assess whether the restoration goal is met. While no single criterion is sufficient to measure success, the intent is that these features should be present within reasonable limits of natural and management variation:

(1) Bare soil spaces that approximate the size and dispersal pattern of pre-existing conditions;

(2) Soil movement, such as active rills or gullies and soil deposition around plants or in small basins, is absent or slight and local;

(3) If areas with past erosion are present, they are completely stabilized and healed;

(4) Plant litter is well distributed and effective in protecting the soil with few or no litter dams present;

(5) Native woody and herbaceous vegetation, and germination microsites, are present and well distributed across the site;

(6) Vegetation structure is resulting in rooting throughout the pre-existing, available soil profile;

(7) Plants have normal, vigorous growth form, and a high probability of remaining vigorous, healthy and dominant over undesired competing vegetation;

(8) High impact conditions are confined to small areas that are necessary for access or other special management situations;

(9) Streambanks have less than 5% exposed soils with margins anchored by deeply rooted vegetation or coarse-grained alluvial debris.

v. Work Plan- Develop a work plan with sufficient detail to include a description of the following elements, as applicable:

(1) Boundaries for the restoration area;

(2) Restoration methods, timing, and sequence;

(3) Irrigation plan, including water supply source, if necessary;

(4) Woody native vegetation appropriate to the restoration site. This must be a diverse assemblage of species that are native to the project area or region, including grasses;

(5) List forbs, shrubs and trees to be planted. This may include allowances for natural regeneration from an existing seed bank or planting;

(6) A plan to control exotic invasive vegetation;

(7) Elevation(s) and slope(s) of the restoration area to ensure they conform with required elevation and hydrologic requirements of target plant species;

(8) Geomorphology and habitat features of stream or other open waters;

(9) Site management and maintenance requirements.

vi. Five-year monitoring and maintenance plan:

(1) A schedule to visit the restoration site annually for 5 years or longer as necessary to confirm that the design standards are achieved. Revise the restoration plan if design standards are not achieved after initial 5-year period. Continue annual monitoring until restoration performance criteria are met;

(2) During each visit, inspect for and make plans to correct any factors that may prevent attainment of design criteria (e.g., low plant survival, invasive species, wildlife damage, and drought);

(3) Keep a written record to document the date of each visit, site conditions and any corrective actions taken.

12. **Streambank Protection-** Avoid and minimize adverse effects to natural stream and floodplain function by limiting streambank protection actions to those that are not expected to have long-term adverse effects on aquatic habitats. Whether these actions will also be adequate to meet other streambank protection objectives depends on the mechanisms of streambank failure operating at site- and reach-scale.

a. *Choice of Techniques*: The following bank protection techniques are approved for use individually or in combination:

i. Woody plantings and variations (e.g., live stakes, brush layering, facines, brush mattresses).

ii. Herbaceous cover, where analysis of available records (e.g., historical accounts and photographs) shows that trees or shrubs did not exist on the site within historic times, primarily for use on small streams or adjacent wetlands.

iii. Deformable soil reinforcement, consisting of soil layers or lifts strengthened with fabric and vegetation that are mobile ('deformable') at approximately two- to five-year recurrence flows.

iv. Coir logs (long bundles of coconut fiber), straw bales, and straw logs used individually or in stacks to trap sediment and provide growth medium for riparian plants.

v. Bank reshaping and slope grading, when used to reduce a bank slope angle without changing the location of its toe, increase roughness and cross-section, and provide more favorable planting surfaces.

vi. Floodplain roughness (e.g., floodplain tree and large woody debris rows, live siltation fences, brush traverses, brush rows, and live brush sills) used to reduce the likelihood of avulsion in areas where natural floodplain roughness is poorly developed or has been removed.

vii. Floodplain flow spreaders, consisting of one or more rows of trees and accumulated debris used to spread flow across the floodplain.

viii. Flow-redirection structures known as barbs, vanes, or bendway weirs, when designed as follows, and as otherwise approved in writing by the Services and the appropriate Regulatory Authorities.

(1) No part of the flow-redirection structure may exceed bank full elevation, including all rock buried in the bank key.

(2) Build the flow-redirection structure primarily of wood or otherwise incorporate large wood at a suitable elevation in an exposed portion of the structure or the bank key. Placing the large woody debris near streambanks in the depositional area between flow direction structures to satisfy this requirement is not approved, unless those areas are likely to be greater than 3 feet in depth, sufficient for target-species rearing habitats.

(3) Fill the trench excavated for the bank key above bankfull elevation with soil and topped with native vegetation.

(4) The maximum flow-redirection structure length will not exceed 1/4 of the bankfull channel width.

(5) Place rock individually without end dumping, unless approved in writing by the Services and the appropriate Regulatory Authorities.

(6) If two or more flow-redirection structures are built in a series, place the flow-redirection structure farthest upstream within 150 feet or 2.5 bankfull channel widths, from the flow-redirection structure farthest downstream.

(7) Include woody riparian planting as a project component.

b. *Use of Large Wood and Rock*: Whenever possible, use large wood as an integral component of streambank protection treatments. Avoid or minimize the use of rock, stone, and similar materials.

i. Large wood will be intact, hard, and undecayed to partly decaying with untrimmed root wads to provide functional refugia habitat for fish. Use of decayed or fragmented wood found lying on the ground or partially sunken in the ground is not acceptable.

ii. Rock may be used instead of wood for the following purposes and structures. The rock may not impair natural stream flows into or out of secondary channels or riparian wetlands. Whenever feasible, place topsoil over the rock and plant with woody vegetation.

(1) As ballast to anchor or stabilize large woody debris components of an approved bank treatment.

(2) To fill scour holes, as necessary to protect the integrity of the project, if the rock is limited to the depth of the scour hole and does not extend above the channel bed.

(3) To construct a footing, facing, head wall, or other protection necessary to prevent scouring or downcutting of, or fill slope erosion or failure at, an existing structure (e.g., culvert, utility line, or bridge support) to be repaired. New and replacement structures shall comply with the Fluvial Performance Standard.

(4) To construct a flow-redirection structure as described above.

13. **Habitat Removal**- Avoid or minimize habitat modification that will impair the ability of threatened, endangered, proposed, or selected sensitive species to complete essential biological behaviors, such as breeding, spawning, rearing, migrating, feeding, and sheltering.

a. *Designated Critical Habitat*: Maintain designated critical habitat within the project footprint.

i. Review appropriate sources (e.g., Biological Assessment, Federal Registers) to determine if designated critical habitat is present or likely present within the project area.

ii. Flag and survey the boundary of designated critical habitat, as appropriate.

iii. Do not degrade any primary constituent elements within the boundary of designated critical habitat.

b. *Breeding Habitat*: Do not remove potential nesting, breeding, or alter reasonably likely spawning habitat during the breeding season of listed species, unless protocol surveys show the area is not occupied.

c. *Functional Habitat*: Whenever possible, do not modify or degrade functional habitats for listed species in the project area. If functional habitats for listed species cannot be avoided, then provide the justification(s), such as:

   i. Social: public safety, right-of-way

   ii. Physical: geomorphologic, built environment

   iii. Ecological: conflicting resources

      (1) Conserve habitat with the highest value relative to the listed species that will be affected, given the likelihood and timing of mitigation success.

      (2) Use ecological value (uniqueness, rarity, resource utilization) and ease of replacement (probability of success, recovery time lags) to evaluate and justify the decision.

d. *Replacement*: Mitigation must be functionally equivalent to the habitat modified or degraded.

13. **Stormwater Management:** *Discharges of stormwater to waters of the state must not violate state water quality standards, including* ***Oregon Administrative Rule (OAR) 340-041-0004****, the Antidegradation Policy for Surface Water.*

Stormwater from all new impervious surfaces resulting from authorized activities, discharged through outfalls, culverts, ditches, or any other conveyance, to a water of the state including wetlands shall be treated by a facility, appliance, or treatment train specifically designed to remove stormwater contaminants, before entering streams or wetlands, including mitigation wetlands, so as to minimize pollutants entering those water bodies.

Stormwater Management Strategy- Avoid or minimize adverse effects resulting from changes to the quality and quantity of stormwater runoff for the life of the project by improving or maintaining natural runoff conditions within project watersheds.

a. *Plan*: Prepare and implement a Stormwater Management Plan for any project that will produce a new impervious surface or a land cover conversion that slows the entry of water into the soil. Include the following:

   i. Logic and science (e.g., engineering equations and models or scientific literature and findings) supporting the selected stormwater management option. For projects that require engineered facilities to meet stormwater requirements, use a

continuous rainfall/runoff model, if available for the project area, to calculate stormwater facility water quality and flow control rates.

ii. Schedule to inspect and clean each facility as necessary to ensure that the design capacity is not exceeded and whether improvements in operation and maintenance are needed. Make improvements as needed.

b. *Water Quality:* Improve long-term water quality conditions associated with pollutant loading from the road network within the project watershed.

i. Drains: Eliminate direct discharge from the bridge deck to waters of the U.S.

ii. Treatment Level: Increase treatment of stormwater runoff discharged to waters of the U.S. Reduce the annual pollutant loading to waters of the U.S., relative to pre-project conditions by providing treatment for the water quality event[1].

iii. Groundwater: Protect groundwater from pollutant loading.

(1) Manage the water quality event stormwater runoff from pollution generating surfaces before infiltration to groundwater or discharge into waters of the U.S., as necessary to minimize any pollutant load likely to be present.

(2) Management may include, but is not limited to, biofiltration (filtration, adsorption, and biological decomposition from soils that have sufficient organic content and sorption capacity to remove pollutants), filtration (engineered filtration systems), settling/sediment ponds (engineered stormwater facilities), or any combination treatment train thereof.

iv. Placement: Avoid sensitive natural resource areas (e.g. riparian and wetland areas, unstable hill slopes, ESA-listed species habitat) during placement of stormwater treatment facilities.

v. Erosion: Prevent erosion caused by the conveyance of stormwater runoff (also see Condition 3). Consider the following:

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[1] For purposes of this project, "water quality event" refers to the volume of runoff predicted from a 6-month, 24-hour storm, which may be assumed to be 72 percent of the 2-year, 24-hour amount (See, Washington State Department of Ecology (2001), Appendix I-B-1), unless another storm size is more appropriate for the local climate and hydrology and provides equivalent conservation benefit (less than or equal adverse effects provided by the defined storm size) and is approved in writing by the Services and the appropriate Regulatory Authorities.

(1) Maintain natural drainage patterns and, whenever possible, ensure that discharges from the project site occur at the natural location.

(2) Use a conveyance system comprised entirely of manufactured elements (e.g., pipes, ditches, outfall protection) that extends to the ordinary high water line of the receiving water, where risk of erosion precludes conveyance through sheet flow.

(3) Stabilize any erodible elements of the conveyance system as necessary to prevent erosion.

(4) Do not divert surface water from, or increase discharge to, an existing wetland if that will cause a significant adverse effect to wetland hydrology, soils, or vegetation.

(5) The velocity of discharge water released from an outfall or diffuser port may not exceed 4 feet per second (attraction flow for fish).

c. *Water Quantity*: Increase the annual site infiltration potential of the project watershed, with emphasis on the project area.

i. Urbanized. For urbanized watersheds[2], reduce the post-project frequency, magnitude, and duration of the flow from ½ of the 2-year storm event up to the 50-year storm event as measured against pre-project frequency, magnitude and duration of flow from the same range of storm events.

ii. Wildland: For wildland (forest, rangeland) watersheds, reduce the post-project or maintain the pre-project frequency, magnitude, and duration of the flow from ½ of the 2-year storm event up to the 50-year storm event as measured against pre-project frequency, magnitude and duration of flow from the same range of storm events.

iii. Infiltration: Provide infiltration opportunities for stormwater runoff derived from the project area.

(1) Infiltration opportunities may include, but are not limited to; adequate soils, non-concentrated overland flow, vegetation

[2] For purposes of this project, "urbanized watersheds" are determined by a low percentage of natural vegetation and a high percentage (equal to or greater than 10 percent total impervious area) of impervious surface within the project watershed (6th Field HUC). Other methods may include Federal Emergency Management Agency mapping, land management, land cover types, or land ownership. The hydrology of these watersheds has been significantly altered by land development.

management, land cover conversions, permeable bedded detention basins, and infiltration swales.

(2) Minimize, disperse, and infiltrate stormwater runoff onsite using sheet flow across permeable vegetated areas to the maximum extent possible without causing flooding, erosion impacts, or long-term adverse effects to groundwater.

iv. Discharge: Ensure that the post-project discharge is less than the pre-project discharge rates from 50 percent of the 2-year flow up to the 50-year flow.

14. **Underground Injection Control:** Projects employing sumps or dry wells for discharge to groundwater must conform to OAR 340-044-050. Contact Barbara Priest, DEQ, at 503-229-5945 for more information.

15. **Duration of Certification:** This water quality certification (WQC) shall remain in effect for 5 years from the date of RGP issuance by the Corps. Details of a coordinated annual review of RGP performance standards are outlined in the *Program Administration* section of the *OTIA III Statewide Bridge Delivery Program Environmental Performance Standards (July, 2004).* Upon satisfactory review, compliance with water quality standards, and adherence to conditions herein, the WQC may be renewed indefinitely.

16. **Notification:** All required notifications to DEQ may be electronically submitted to RGP.BDP@deq.state.or.us with Category 2, or Category 3 Notification in the Subject Line, or mailed to Department of Environmental Quality, 811 SW 6th Ave. Portland OR 97204, Attn: WQ, 401 RGP Coordinator.

17. A copy of this WQC letter shall be kept on the job site and readily available for reference by the Corps of Engineers, DEQ personnel, the contractor, and other appropriate state and local government inspectors.

18. DEQ reserves the option to modify, amend, or revoke water quality certification for the Regional General Permit, or for any single authorized activity in the event that new information indicates that the activity is having a significant adverse impact on State water quality or aquatic resources.

19. DEQ is to have site access upon reasonable request.

If the applicant is dissatisfied with the conditions contained in this certification, you may request a hearing before the Environmental Quality Commission. Such request must be made in writing to the Director of DEQ within 20 days of the mailing of this certification. You may also request written information about alternative dispute resolution services under Oregon Revised Statute 183.502, including mediation or any other collaborative problem-solving process.

The DEQ hereby certifies that ODOT's Bridge Delivery Program will comply with section 401 of the Clean Water Act and state water quality standards, if the above conditions are made a part of the RGP.

The applicant shall notify the DEQ of any change in ownership, scope, or construction methods of the project subsequent to certification. If you have any questions, please contact Tom Melville at (503) 229-5845.

Sincerely,

Holly R. Schroeder, Administrator
Water Quality Division

T:TM.Certhober.OTIA3.RGP.401
Cc: Applicant
Susan Sturges, USACE
Hal Gard, ODOT
Bill Ryan, ODOT
Michelle Wilson, Parametrix
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Randy Reeves, ODFW
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