APPENDICES

APPENDICES TO THE PROGRAMMATIC BIOLOGICAL OPINION AND MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT ESSENTIAL FISH HABITAT CONSULTATION FOR THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT PROGRAMS IN OREGON

APPENDIX A

HUD ENVIRONMENTAL REVIEW
STORMWATER DESIGN ELEMENTS
STORMWATER ENGINEERING DESIGN CRITERIA
NMFS NOTIFICATION AND CONSISTENCY REVIEW
PROGRAM REPORTING CRITERIA

Effective August 2, 2024

The following administrative elements and design criteria comprise the actions required of the U.S. Department of Housing and Urban Development (HUD) and/or its Responsible Entities (REs) to comply with the Terms and Conditions detailed in Section 2.9.4 of the HUD Programmatic Biological Opinion (Opinion). A glossary of terms is provided in Appendix E of this Opinion.

1. **HUD Environmental Review**. To demonstrate compliance with the Endangered Species Act (ESA) and Magnuson-Stevens Fisheries Conservation and Management Act (MSA) requirements for consultation with the National Marine Fisheries Service (NMFS) in Oregon, HUD's Environmental Review for each project must include:
    a. **Effects Determination.** Every HUD action must include an effects determination. Appendix B provides guidance on making an effects determination under the ESA and MSA. The two possible findings of effect for HUD actions under this Opinion include:
        i. **No Effect**. A project may be determined to have *No Effect* on ESA-listed species, designated critical habitat(s), or essential fish habitat (EFH), if it meets all applicable criteria found in Table 2 of Appendix B. If a *No Effect* determination is warranted, no further consultation with NMFS is required. Documentation of the *No Effect* determination for NMFS' trust resources[1] should be included in the action's Environmental Review Record.
        ii. **May Affect, Likely to Adversely Affect**. A project that cannot meet the requirements for a *No Effect* determination should reach a determination of *May Affect, Likely to Adversely Affect* (*LAA*) for ESA-listed species, designated critical habitat(s), and EFH. A project that is *Likely to Adversely Affect* ESA-listed species may obtain coverage under this Opinion only upon demonstration that it will comply with the applicable stormwater engineering design criteria listed in Sections 3 and 4 of this Appendix and upon NMFS's determination that the project is consistent with this Opinion pursuant to the notification and NMFS consistency review process detailed in Section 5 of this Appendix.
    b. **Project and Stormwater Plans.** Each project's conformity with this Opinion must be demonstrated through project and stormwater plans illustrating how the project will comply with the applicable stormwater engineering design criteria specified in Sections 3 and 4 of this Appendix.

[1] NMFS and the U.S. Fish & Wildlife Service (the Services) share responsibility in administering the ESA. This Opinion, and its appendices, deal exclusively with NMFS' ESA trust resources and EFH. Environmental review for species and habitats administered by the U.S. Fish & Wildlife Service must be completed following that agency's specific guidance.

i. For projects proposing to reconstruct a single-family residence,[2] compliance with the applicable stormwater engineering design criteria must be demonstrated through **ALL** of the following:

(1) Notification email, as described in Appendix C; **AND,**
(2) Preliminary Site Design, as described in Section 4 of this Appendix; **AND,**
(3) Conceptual Stormwater Design, as described in Section 4 of this Appendix; **AND,**
(4) Site Information, as described in Section 4(c)(i-xvii), of this Appendix.

ii. For all other projects, compliance with the applicable stormwater engineering design criteria will be demonstrated through submittal of **ALL** of the following:

(1) Notification email, as described in Appendix C; **AND,**
(2) Action Notification Form, as described in Appendix D; **AND,**
(3) Stormwater Information Form, as described in Appendix D; **AND,**
(4) Post-construction Stormwater Management Plan (PCSMP); **AND,**
(5) All project-related reports and studies that assist in review (e.g., wetland delineation reports, soil infiltration testing, environmental site assessment reports) .

2. **Stormwater Design Elements.** With the exception of single-family residence reconstruction projects, all projects submitted for coverage under this Opinion must include stormwater engineering that incorporates stormwater reduction design practices, stormwater treatment practices, flow control practices for stormwater discharge, conveyance practices for stormwater discharge, and monitoring and maintenance practices for proposed stormwater best management practices (BMPs).

NMFS requires implementation of Low Impact Design[3] (LID) BMPs as the primary approach to stormwater design. LID methods seek to recreate (or mimic) more natural hydrologic processes at the project site scale. LID stresses the use of site planning and implementation of BMPs to minimize the generation of stormwater, maximize evapotranspiration, and infiltrate precipitation and runoff into soils and shallow groundwater. LID practices will reduce post-construction runoff, which conveys pollutants into receiving waters, thereby protecting aquatic resources[4] and the species that rely upon such habitats. Implemented and maintained correctly, these practices are cost effective, limit stormwater from leaving a project site under normal, annual storm events, and discharge less runoff with fewer pollutants during larger storm events.

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[2] For the purposes of this Opinion, NMFS adapts HUD's definition of a single-family residence from 24 CFR 58.35. A single-family residence means up to four dwelling units where there is a maximum of four units on any one tax lot. The units can be four (4) one-unit buildings or one (1) four-unit building or any combination in between. To be considered a single unit, the dwelling must include a kitchen. For the purposes of reconstruction actions, the tax lot density may not be increased beyond four units, the size or capacity of each unit cannot be expanded more than 20%, and the land use cannot be changed.

[3] Information on LID practices for treating and managing stormwater runoff can be found on the Washington Department of Ecology's website: https://ecology.wa.gov/regulations-permits/guidance-technical-assistance/stormwater-permittee-guidance-resources/low-impact-development-guidance

[4] For the purposes of this Opinion, an "aquatic resource" is any stream, river, lake, pond, ocean, bay, estuary, wetland, or tidally-influenced area, either permanently or seasonally inundated or submerged that may provide habitat to listed species.

a. Stormwater Reduction Design. Site-specific LID design elements to limit the generation of stormwater and reduce the quantity of stormwater discharged from a site during storm events. Examples include, but are not limited to:

i. Minimize impervious area
   (1) Shared parking spaces
   (2) Minimize pavement widths
   (3) Minimize front setbacks
   (4) Shared driveways
   (5) Minimize building footprint
   (6) Minimize foundations
   (7) Minimize roadway cross sections
   (8) Minimize new pavement

ii. Limit ground disturbance
   (1) Construction sequencing
   (2) Conserve soils with best drainage
   (3) Cluster development
   (4) Tree and shrub protection

iii. Landscape and hardscape areas
   (1) Restored and amended soils
   (2) Tree and shrub planting
   (3) De-pave existing pavement (such that it becomes pervious area)
   (4) Contained planters (over impervious areas)
   (5) Vegetated roof
   (6) Porous pavement/asphalt or pavers
   (7) Rock storage galleries
   (8) Infiltration rain garden
   (9) Infiltration swale
   (10) Lined/Unlined stormwater planters
   (11) Soakage trench (some forms of underground injection control[5],[6] (UIC) may count as LID)
   (12) Drywell (some forms of UIC may count as LID)
   (13) Downspout disconnection and dispersal to upland soils and vegetation

b. Stormwater Treatment Design. Specific BMPs to improve the water quality of discharged stormwater through filtration through soils and vegetation, infiltration, settling, and adhesion. Manufactured stormwater treatment technologies can be utilized where project constraints would prevent LID approaches or where use of a manufactured treatment technology would achieve greater conservation value.

i. Examples of LID treatment practices include, but are not limited to:
   (1) Infiltration rain garden
   (2) Infiltration swale
   (3) Unlined/Lined stormwater planter
   (4) Water quality conveyance swale
   (5) Vegetated filter strips
   (6) Lined rain garden

[5] Underground Injection Control may be prohibited by state or local code. A project's engineer should confirm UIC methods are allowed and appropriate.

[6] Underground Injection Control methods are prohibited for actions where soil or groundwater contamination were identified and in areas proximate to municipal well fields or sole source aquifers.

(7) Dispersal to upland soils and vegetation

ii. Manufactured stormwater treatment technologies are acceptable if a product is certified through the Washington State Department of Ecology's (DOE's) Evaluation of Emerging Stormwater Treatment Technologies - Technology Assessment Protocol (TAPE).[7]

c. Flow Control (Water Quantity) Design. Specific BMPs to retain, detain, or infiltrate stormwater on-site. The goal of flow control BMPs is to contain stormwater on-site for infiltration, reuse, or later discharge. Stormwater generated in excess of what can be infiltrated or reused is managed onsite so it can be discharged from the site over a longer duration to reduce adverse hydromodification[8] to receiving waters. Both LID BMPs and manufactured flow control technologies can be utilized to meet flow control design goals.

i. LID flow control BMPs include many of the elements listed in 2(a)(ii-iii) and 2(b)(i), listed above.

ii. Manufactured flow control systems may include, but are not limited to:
(1) Detention and retention basins (ponds)
(2) Outflow control structures (weirs, orifices, or similar)
(3) Below ground storage (pipes, tanks, rock galleries, or similar)

iii. Following stormwater treatment, compliant with 3(b), below, flow control is not required if a proposed project's stormwater discharges directly into a "major water body."[9] In limited circumstances, flow control may be excluded where local directives preclude its implementation.[10]

d. Conveyance Design. Specific approaches for transporting stormwater within a site or off-site to a discharge location. Points of discharge can include receiving waters, municipal stormwater systems, municipal combined wastewater and stormwater systems, or similar. Conveyance systems are typically comprised of engineered materials, such as pipe (metal, concrete, ABS, or similar), culverts, curb and gutters, and ditches. Conveyance design should conform with local jurisdiction requirements for capacity and appropriate materials.

e. Monitoring and Maintenance Practices. Policies and procedures required to ensure the continued functionality of a project site's specific stormwater BMPs and facilities. A monitoring and maintenance plan, frequently referred to as an "operations and maintenance" (O&M) plan defines the schedule for routine assessment of a stormwater BMP or facility's functionality and identifies routine maintenance actions that will be required to ensure proper functioning of specific BMPs and facilities.

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7 Proposed products should be designated as General Use Level Designation (GULD), but Conditional Use Level Designation (CULD) technologies may be considered with sufficient justification. Products proposed to treat runoff from streets, parking areas, or other areas where metals are of concern (zinc roofs, other metal roof products, etc.) must be listed on the "Metals" tab of the emerging technologies list. The emerging technologies list can be found on DOE's website at: http://www.ecy.wa.gov/programs/wq/stormwater/newtech/technologies.html.

8 Adverse hydromodification is the degradation of aquatic systems as a result of changes to the physical condition of an aquatic system from the influence of water. Stormwater runoff can cause stream channel erosion, increased sedimentation, loss of habitat features required by listed species (e.g., large wood, spawning gravels), direct injury to aquatic species, and the incremental degradation of overall habitat quality.

9 For the purposes of this Opinion, NMFS defines a "major water body" as the mainstem Columbia River, the Willamette River downstream of Eugene, large lakes, reservoirs, the ocean, bay, or an estuary.

10 Typical situations when this may occur is where the local jurisdiction seeks to prevent localized flooding or the project is within a hydrologically managed basin, such as behind a levee system.

3. **Stormwater Engineering Design Criteria**. With the exception of single-family residence reconstruction actions (discussed in Section 4, below), all projects submitted for coverage under this Opinion must include a Post-construction Stormwater Management Plan (PCSMP) that describes the engineering design narratively, through graphical presentation (engineering plans sheets, schematics), and documents compliance through modeling, calculations, or approved presumptive approaches. The PCSMP should conform to the professional standards of the Oregon State Board of Examiners for Engineering and Land Surveying and suffice to meet local code requirements for all of a project's civil engineering aspects, including stormwater design.

   NMFS does not expect a separate PCSMP be prepared to address our design criteria exclusively, but encourages plans that address NMFS' criteria as additional content within a stormwater management plan prepared to secure local construction permits. In cases where NMFS' criteria differs from local regulations or requirements, engineering design must meet the more conservative (protective) requirements and documentation must be included in the PCSMP explaining the differing requirements. Similarly, should one regulatory body have requirements that are not required by the alternate jurisdiction, the engineering design must comply with all regulatory requirements.

   A thorough and complete PCSMP shall include information documenting compliance with the following engineering design criteria:

   a. Stormwater Reduction Design Elements. All projects must identify all LID and non-LID design elements incorporated to reduce stormwater generation. This information should be summarized on the Stormwater Information Form (Appendix D) and detailed in the PCSMP.

   b. Stormwater Treatment Design Criteria. Treat all post-construction stormwater generated from a project site's total impervious surface area (both new impervious surface areas constructed and existing impervious surface areas retained or reconstructed). Minimum treatment is equal to the water quality design storm, which NMFS defines as 50% of the two-year, 24-hour storm event.[11]

      i. Describe each proposed LID BMP's capacity in terms of discharge and volume managed.[12]

      ii. Describe each manufactured stormwater treatment technology's capacity in terms of discharge and volume managed.[13]

      iii. Describe any other structural source control practices in terms of discharge and volume managed and specific treatment objective (i.e., amount or percent of contaminant reduction, treatment, or management).[14]

   c. Flow Control Design Criteria. On-site retention/detention of stormwater should favor LID BMPs, to the maximum extent feasible, and facilities of any kind must collectively

[11] The default water quality storm event employed by NMFS is 50% of the 2-year, 24-hour storm event. Should the local jurisdiction, or other authority, require use of a specified storm event or require a different method for calculating the water quality design storm, HUD or its RE shall use the method that results in the larger storm event. The PCSMP shall identify the differing standards and report values generated for both the local jurisdiction and NMFS' methods.

[12] Appropriate units of measure include cubic feet per second (cfs) and cubic feet (ft^3).

[13] Appropriate units of measure are cfs and ft^3.

[14] Appropriate units of measure are cfs, ft^3, and units specific to the contaminant targeted for management.

limit the post-development stormwater discharge to the pre-development discharge rates,[15] or less, for flows from the following events:

i. 50% of the 2-year, 24-hour storm (i.e., water quality design storm); **AND**,
ii. 2-year, 24-hour storm; **AND**,
iii. 5-year, 24-hour storm; **AND**,
iv. 10-year, 24-hour storm.

d. Hydromodification Design Criteria: If a proposed project will:

i. Discharge peak runoff of more than 0.5 cfs during the 2-year, 24-hour storm; **AND**,
ii. Discharge into an intermittent or perennial waterbody in a watershed smaller than 100 square miles (upstream of the point of discharge); **AND**,
iii. Will not discharge directly into a major waterbody (e.g., mainstem Columbia River, Willamette River downstream of Eugene, large lakes, reservoir, ocean, or estuary); **THEN**,
iv. Flow control treatment and practices must be designed using continuous modeling to maintain the frequency and duration of flows generated by storms within the following endpoints:
(1) Lower discharge endpoint, by U.S. Geological Survey (USGS) flood frequency zone = 50% of 2-year, 24-hour storm event (i.e., water quality design storm)
(2) Upper discharge endpoint
a. Entrenchment ratio[16] <2.2 = 10-year event, 24-hour storm; **or**,
b. Entrenchment ratio >2.2 = bank overtopping event

e. Conveyance Design Criteria. When conveyance is necessary to discharge treated stormwater directly into a surface water or a wetland, the following requirements apply:

i. Maintain natural drainage patterns such that runoff is not redirected to a different drainage basin (i.e., watershed, subwatershed) from the pre-project conditions.
ii. To the maximum extent feasible, ensure that water quality treatment for the project is completed before commingling with offsite runoff during conveyance.
iii. Prevent erosion of the flow path from the project to the receiving water and, if necessary, provide a discharge facility made entirely of manufactured elements (e.g., pipes, ditches, discharge facility protection) that extends at least to the ordinary high-water elevation of the receiving water.

f. Monitoring and Maintenance Plan Requirement. The PCSMP shall include a monitoring and maintenance plan for all proposed stormwater BMPs associated with a proposed project. The monitoring and maintenance plan shall include:

i. A description and schedule of the proposed inspection and maintenance activities for each stormwater facility.
ii. Identification of events that would trigger an inspection outside of the required routine schedule (e.g., a large storm event, localized flooding).

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[15] For the purposes of this opinion, NMFS defines the "pre-development" conditions as the site conditions based on its natural ground cover at its highest potential quality, prior to European settlement of the region.

[16] Entrenchment ratio is a measurement of the vertical containment of a stream or river. It is calculated as the floodprone width, divided by the surface bankfull discharge width. The lower the entrenchment ratio, the more vertical containment of flood flows exists. Higher entrenchment ratios depict more floodplain development. U.S. Environmental Protection Agency. 2016. Watershed Academy Web: Fundamentals of Rosgen Stream Classification System. U.S. Environmental Protection Agency website, available at: https://cfpub.epa.gov/watertrain/moduleFrame.cfm?parent_object_id=1259.

iii. Identification of the party or parties legally responsible for maintenance and monitoring activities.

iv. The name, email address, and telephone number of the person responsible for designing the stormwater management facilities so that NMFS may contact that person if additional information is necessary.

g. Construction Restrictions and Requirements. The following restrictions and requirements apply to all proposed actions.

i. All exterior lighting shall be positioned and/or directed to prevent illumination onto/over aquatic resources.

ii. New landscape plantings are of native species approved by the local jurisdiction (no invasive species shall be permitted).

iii. Sprinkler or irrigation systems direct spray away from pollution generating impervious surfaces (e.g., roads, parking areas, driveways).

iv. Access and staging areas are located at least 150 feet away from any aquatic resources.

v. Construction source materials and material source sites have been assessed as part of the proposed action.

vi. All construction activities comply with state and local erosion and sediment control Best Management Practices.

vii. Best Management Practices will be implemented to prevent debris, trash, and chemicals and discarded materials from entering aquatic resources.

viii. The action does not replace an existing roof structure with hot tar roofing methods, torch down roofing methods, treated wood, copper, or galvanized metal.[17]

ix. The action does not replace existing siding with galvanized sheeting.

x. All new or replaced heating ventilation air conditioning (HVAC) systems (or similar mechanical systems) constructed of galvanized metal must be painted or physically covered to prevent exposure to precipitation.

xi. All waste materials must be disposed of at an approved disposal site (landfill or hazardous waste facility).

4. **Reconstruction of Single-family Residence Design Criteria.** Due to the challenges in retrofitting stormwater facilities for reconstruction projects on small lots, NMFS has established specific stormwater design criteria to facilitate the use of this Opinion when considering reconstruction[18] actions for single-family residences.[19] Actions proposed for review under this criteria must meet all of the following:

a. Submit a Preliminary Site Design, which includes, at a minimum:

i. Brief narrative description of the proposed reconstruction activity; **AND,**

[17] Galvanized flashing, gutters, or fasteners may be used as part of a roofing system if coated or painted to prevent exposure to precipitation.

[18] For the purposes of this Opinion, reconstruction of a single-family residence actions include the significant repair or replacement of an extant single-family residence (one to four units) upon the same tax lot, without change in land use designation or intended use, and where the size and capacity of each unit cannot be increased more than 20 percent.

[19] See footnote 2, above.

ii. Schematics, plans, design sheets, or similar, illustrating the size, location, and position of the single-family residence proposed for reconstruction on the tax lot; **AND,**

iii. Preliminary site design must depict all dwelling and non-dwelling impervious surface areas (i.e., driveways, parking spaces, pathways, sidewalks, patios, access roads, covered walkways, or similar) in relation to the proposed single-family residence(s) and the tax lot boundaries.

b. Submit a Conceptual Stormwater Design, which includes, at a minimum:

i. Brief narrative of proposed stormwater treatment and management approach; **AND**,

ii. Schematics, plans, design sheets, modeling, calculations, or similar, illustrating the type, size, and location of all stormwater treatment and flow control BMPs in relation to the proposed single-family residence(s), all impervious surface areas, and the tax lot boundaries; **AND**,

iii. Demonstrates compliance with the stormwater engineering treatment criteria, as detailed in Section 3(b), above; **AND,**

iv. To the greatest extent practicable,[20] demonstrates compliance with the engineering flow control criteria, as detailed in Section 3(c)(i-iv), above; **AND,**

v. Demonstrates compliance with the conveyance criteria, as detailed in Section 3(e), if applicable; **AND**,

vi. Includes the construction restrictions and requirements as conditions on the funding instrument or authorization, as detailed in Section 3(g)(i-xi), above.

c. Submit, as part of the email notification to NMFS, detailed in Section 5 below, the following information:[21]

i. Project name/Project ID

ii. Location
   (1) County
   (2) Street address (if known)
   (3) Tax Lot ID
   (4) Latitude/ Longitude

iii. HUC 8 watershed name

iv. Nearest waterbody (or waterbodies) to which the project will discharge

v. Brief description of proposed reconstruction activities

vi. Tax lot size (sq. ft.)

vii. Reconstructed impervious surface area (ft^2) proposed, differentiated as follows:
   (1) Roof, hardscape patios, walkways, sidewalks, other non-pollutant generating impervious surface (PGIS) areas;
   (2) Driveways, uncovered parking areas, other PGIS areas.

viii. LID stormwater treatment BMPs proposed, as detailed in Section 2(b), of this Appendix

ix. Summary of site constraints for stormwater treatment

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[20] To the greatest extent practicable, in this context, means that stormwater will, at a minimum, be discharged or will drain to upland soils and vegetated areas associated with the property.

[21] Multiple notifications can be sent in one email. Requested data can be aggregated into one spreadsheet. The preliminary site plan, item f(xvii), following page, and any supplemental documentation, must be attached in compressed PDF format and contain the Project ID in the filename for easy correlation to the spreadsheet data.

x. If the proposed treatment BMPs treats the water quality design storm volume (Yes/No)
xi. If the proposed treatment BMPs treats the water quality design storm peak discharge (Yes/No)
xii. LID stormwater flow control practices proposed, as detailed in Section 2(c), of this Appendix
xiii. Summary of site constraints for stormwater flow control
xiv. If the post-development runoff for the 50% of the 2-year 24-hour storm event is equal to or less than the pre-development runoff (Yes/No)
xv. If the post-development runoff for the 10-year 24-hour storm event is equal to or less than the pre-development runoff (Yes/No)
xvi. If Hydromodification design is required (Yes/No)
xvii. Proposed hydromodification prevention practices proposed for implementation, if necessary
xviii. Preliminary Site Design(s) in PDF format
xix. Conceptual Stormwater Design(s) in PDF format

5. **Notification and NMFS Consistency Review**. Pursuant to the procedures detailed in Appendix C, every HUD project proposed for coverage under this Opinion must be submitted to NMFS for review prior to HUD or its REs obligating HUD funds for that project. Upon review, NMFS will issue a finding as to whether the proposed project is consistent with this Opinion. This finding must be documented in HUD's Environmental Review Record for each project. While a NMFS finding of consistency is generally required for all projects, for projects that propose to reconstruct single-family residences, if NMFS fails to reply to a review request within two (2) weeks, HUD or its RE may consider NMFS' non-reply as a finding of a project's consistency with the Opinion.

6. **Project Completion Report**. HUD or its RE must prepare and submit a Project Completion Report (Appendix D) within 60 days following the completion of construction.[22] The Project Completion Report should include all information necessary to document that the project was constructed in compliance with the provisions of this Opinion. The Project Completion Report shall include such materials as final plans/as-built drawings, photos of installed facilities, and an explanation of any deviations from designs submitted for review.

7. **Annual Report**. With the exception of projects that reconstruct single-family residences **and** meet all criteria in Section 4, above, HUD and each RE that submits an action for review and/or completes construction on an action previously submitted for consistency review under this Opinion, will prepare and submit to NMFS an annual summary report detailing the following:
   a. Number of actions submitted for consistency review under this Opinion;
      i. Number of actions submitted, but denied;
      ii. Number of denied actions that were modified, resubmitted, and verified consistent with this Opinion.
      iii. Number of actions canceled that were previously submitted and verified consistent with this Opinion.

[22] For the purposes of this Opinion, a constructed project is one that has received a certificate of occupancy from the appropriate jurisdiction. OAR 918-480-0140

b. Number of actions constructed within the previous calendar year.[23]
c. Sum of impervious surface area acreage of all actions constructed during the previous calendar year, differentiated as follows:
   i. Sum acreage of new impervious surface area created;
   ii. Sum acreage of existing impervious surface area retained, reconstructed, and/or replaced.
d. Submittal should follow the guidelines established in Appendix C.
e. REs that **do not** submit an action for consultation under this Opinion, **or do not** complete construction on an action that previously received consistency review under this Opinion, are **not** required to submit an Annual Report.

8. **Failure to Report May Trigger Reinitiation**. NMFS may recommend reinitiation of this consultation if HUD or the RE fails to provide all applicable notifications and completion reports or fails to attend quarterly and annual meetings, as specified.

[23] See footnote 21.

APPENDIX B

Guidance for Making Effects Determinations under the Endangered Species Act & Magnuson-Stevens Act for HUD Projects in Oregon

This Appendix is organized as follows:

1 Introduction
2 A brief overview of the Endangered Species Act (ESA) and the Magnuson-Stevens Fisheries Conservation and Management Act (MSA).
3 Potential effects from U.S. Department of Housing and Urban Development (HUD) actions/Responsible Entities[1] (REs) projects[2] on National Marine Fisheries Service (NMFS) ESA and MSA-regulated species and habitats.
4 Guidance for making effects determinations under the ESA and MSA.
- No Effect
- May Affect, Not Likely to Adversely Affect
- May Affect, Likely to Adversely Affect

5 Consultation with NMFS.
6 Contacting NMFS

The footnotes within this Appendix are intended to provide further clarification, additional context, exceptions or alternatives to specific guidance or policy, specific examples, and references to additional resources or citations. A glossary of terminology is included in Appendix E of this Opinion.

1 Introduction

The purpose of this Appendix is to assist the U.S. Department of Housing and Urban Development (HUD) and their Responsible Entities[3] (REs) in meeting their compliance and documentation obligations under the Endangered Species Act (ESA) and the Magnuson-Stevens Fisheries Conservation and Management Act (MSA). The ESA is administered jointly by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) [collectively, "the Services"], while the MSA is administered solely by the NMFS. This document provides guidance solely for the NMFS' regulatory compliance process with specific focus on using HUD's Programmatic Biological Opinion and MSA Consultation for HUD Programs in Oregon (Opinion).[4] The USFWS has a parallel compliance process that must also be completed, which is not addressed in this Opinion. Nearly all HUD projects, including those funded, financed, subsidized, guaranteed, authorized, or implemented, constitute a federal action

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1 A Responsible Entity (RE) is a state, unit of general local government, or Indian tribe assuming the environmental responsibilities for HUD under 24 CFR Part 58.1(b)(3)(ii) and (6) through (12). 24 CFR Part 58.

2 This Opinion uses the terms "action" and "project" interchangeably for any activity funded, authorized, or otherwise carried out under 24 CFR Part 50 or 24 CFR Part 58.

3 A Responsible Entity (RE) is a state, unit of general local government, or Indian tribe assuming the environmental responsibilities for HUD under 24 CFR Part 58.1(b)(3)(ii) and (6) through (12). 24 CFR Part 58.

4 National Marine Fisheries Service (NMFS). 2016. Endangered Species Act Section 7 Formal Programmatic Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the U.S. Department of Housing and Urban Development Housing Programs in Oregon. West Coast Region. Portland, Oregon. July 25, 2016. [https://www.hud.gov/sites/dfiles/State/documents/NMFS_HUD_Oregon_Biological_Opinion.pdf]

requiring project review for compliance with the ESA and MSA. Table 1 lists the statutory authority for the ESA and MSA and the corresponding HUD regulations.

Table 1: ESA & MSA Regulatory Authority		
General Requirements	**Legislation**	**HUD Regulations**
Section 7(a)(2) of the Endangered Species Act mandates that actions that are authorized, funded, or carried out by Federal agencies do not jeopardize the continued existence of plants and animals that are listed, or result in the adverse modification or destruction of designated critical habitat.	The Endangered Species Act of 1973; 16 U.S.C. 1531 et seq.	24 CFR 58.5(e) 24 CFR 50.4(e)
Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires Federal agencies to consult with NOAA Fisheries on any action that they authorize, fund, or undertake that may adversely affect essential fish habitat (EFH).	Magnuson-Stevens Fishery Conservation and Management Act; 16 U.S.C. 1801	

2 ESA and MSA Overview

2.1 Endangered Species Act

The ESA requires all Federal agencies to use their authorities to help conserve "listed species" (i.e., those listed as "threatened" or "endangered" under the ESA).[5] Further, each Federal agency shall, in consultation with USFWS and NMFS, ensure that any action authorized, funded, or carried out by such agency, is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined to be critical ("critical habitat").[6] As such, HUD staff, or REs designated by HUD under 24 CFR Part 58, are required to consult with the Services to minimize the effects of actions on ESA-listed species, designated critical habitat, and habitats identified in recovery plans.

The consultation process begins with HUD or its REs assessing the effects of a proposed action and reaching a finding of effect with respect to potential effects on listed species and their critical habitat. The assessment process typically takes the form of an effects analysis that considers all effects potentially caused by a proposed action. There are three possible findings of effect that can be reached from an effects analysis:

1. No Effect (NE)
2. May Affect, Not Likely to Adversely Affect (NLAA)
3. May Affect, Likely to Adversely Affect (LAA)

An action reaching a finding of No Effect does not need to consult with the Services. An action determined to have an effect, whether adverse or not, must consult with the Services. Consultation can take one of two forms, informal or formal, depending on whether the action is determined to have potential adverse effects to listed species and/or adversely modify critical habitat. With the exception of actions that can reach a finding of No Effect (described in Section 2.1.1, below), NMFS considers all activities that construct new impervious surface area or reconstruct existing

[5] Endangered Species Act [16 U.S.C. 1531 § 7(a)(1)]

[6] Endangered Species Act [16 U.S.C. 1531 § 7(a)(2)]

impervious surface area - and therefore generate stormwater runoff - as having an adverse effect on ESA-listed species and critical habitat, extending downstream from the source of runoff (i.e., the project site) to the Pacific Ocean.

2.1.1 No Effect (NE)

No Effect means literally no measurable (or perceived measurable) effects are associated with the action. This includes possible effects occurring as a result of project construction **and** the operation and maintenance of the project over its anticipated life. Assessment must include consideration of direct and indirect effects (those that may occur later in time or further removed from the actual project location). Further, beneficial effects are considered an effect under the ESA and projects with beneficial effects cannot reach a determination of No Effect. Additionally, No Effect determinations do not benefit from liability protection should "take"[7] occur. Unauthorized take of ESA-listed species or adverse modification of critical habitat can result in civil and criminal penalties being assessed.

HUD, or its REs, are solely responsible for making a finding of effect for a project and cannot defer responsibility to an external party. NMFS rarely issues any correspondence for a No Effect finding, except when there is strong disagreement about that finding. Section 4.2 of this Appendix provides a decision tree-style guidance to assist in making an accurate finding of effect. If you make a No Effect finding for your project, document the rationale for your decision in a memo to the project file and Environmental Review Record (ERR), as this will aid HUD should the project be reviewed internally or by another party. The guide presented in Section 4.2 of this appendix should be included in a project's ERR to document what finding of effect was reached.

Further guidance for when a No Effect finding is appropriate is presented in Section 4, Table 2 of this appendix.

2.1.2 May Affect, Not Likely to Adversely Affect (NLAA)

If the effects of the action, whether temporary or permanent, are insignificant, discountable, or entirely beneficial, the action is considered "not likely to adversely affect" (NLAA) ESA-listed species and/or designated critical habitats. Consultations for projects reaching an NLAA determination are identified as "informal consultations."

NMFS has determined that any project that generates and discharges stormwater cannot reach an NLAA finding. Projects that are solely focused on environmental restoration or enhancement could reach an NLAA finding, though HUD does not typically implement these types of actions. If you believe that your project should reach an NLAA finding, contact NMFS to discuss prior to submission for review.

2.1.3 May Affect, Likely to Adversely Affect (LAA)

If the effects of the action on ESA-listed or proposed species and/or critical habitats are not discountable, insignificant, or entirely beneficial, they are considered "likely to adversely affect" (LAA) ESA-listed species and/or designated critical habitats, and HUD or its REs must initiate "formal consultation" with NMFS prior to committing HUD resources to the project.

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[7] "*Take*" of a listed species is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." [50 CFR 402.02]

Formal consultation is the process by which the Services assess an action's potential to jeopardize listed species, to result in the destruction or adverse modification of critical habitat, or to result in "incidental take"[8] of a listed species.

Formal consultation requires HUD or its REs to submit to NMFS a Biological Assessment (BA) or Biological Evaluation (BE). A BA/BE requires a thorough assessment of a proposed action's likely effects and should be prepared by a qualified professional.[9] A BA/BE describes the proposed action, the project location, the action area,[10] identification of the ESA regulated species and habitats potentially occurring in the action area, the action's anticipated effects on the ESA-protected resources occurring within the action area, measures proposed to minimize and/or avoid identified effects, and additional information supporting the LAA finding.

Once submitted with a request for formal consultation, NMFS will review the materials for completeness within approximately 30 days. Once a submittal has been deemed complete, NMFS will review the documentation and complete an analysis of the proposed action and issue a Biological Opinion (BO or opinion) for the proposed action within 135 days, unless an extension is agreed upon by the agencies. A BO includes NMFS' analysis of a project's anticipated effects, reflects NMFS' conclusions regarding whether the project will jeopardize the continued existence of a listed species or adversely modify critical habitat, and provides non-discretionary terms and conditions to minimize and/or avoid project impacts to listed species and protected habitats. The opinion will also include an "incidental take statement" for project actions and conservation recommendations, if appropriate. The BO is NMFS' official response to the Federal action agency's (or its RE's) request for consultation and should be included in the project's Environmental Review Record to demonstrate compliance with the ESA for NMFS.[11]

Further guidance for when an LAA finding is appropriate is presented in Section 5 of this Appendix.

2.2 Magnuson-Steven Fisheries Conservation and Management Act

The MSA requires Federal agencies to evaluate the effect of their actions on habitats used by a range of marine species that are commercially harvested. These habitats are identified as "essential fish habitat" (EFH).[12] In many cases, projects that have the potential to affect critical habitat designated under the ESA have similar effects on EFH, particularly with respect to

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8 "*Incidental take*" refers to takings of an ESA-listed species that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant. [50 CFR 402.02]

9 A "*qualified professional*" is a biologist trained in the assessment of habitat requirements of the ESA-listed species that overlap with your project's action area.

10 The "*action area*" includes all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. It encompasses all of the consequences of the project, not just those that occur within the construction footprint. Effects include those that extend beyond the project site itself, such as noise, air pollution, water quality, stormwater discharge, and visual disturbance. Effects to habitat must be considered, including the project's effects on roosting, feeding, nesting, spawning and rearing habitat, overwintering sites, and migratory corridors [50 CFR 402.02].

11 The ESA is administered jointly by NMFS and the U.S. Fish and Wildlife Service (USFWS). The USFWS has a parallel compliance process that must also be completed.

12 Essential Fish Habitat (EFH) has been designated for Pacific salmon (Chinook, coho, and chum salmon), coastal pelagic species, groundfish, and highly migratory species.

Chinook, coho, and chum salmon, which are species regulated under both the ESA and MSA. Assessment for ESA and MSA effects are typically conducted concurrently, as the species and habitats regulated by both acts tend to overlap. Unlike the ESA, there are only two potential findings of effect under the MSA: No Effect and Adverse Effect. As part of the MSA consultation, NMFS is required to provide "Conservation Recommendations"[13] to Federal and state agencies for actions that would adversely affect EFH.

3 Potential effects from HUD actions/RE projects on NMFS' ESA and MSA-regulated species and habitats.

Few HUD actions occur within the designated critical habitat of NMFS-managed species, where direct injury or harm to an ESA-listed species or destruction of critical habitat/EFH is likely to occur. However, there are often effects from many HUD projects that occur outside the construction limits or property boundaries of a given project, which can reach critical habitat/EFH and affect listed species. By far, the largest concern for NMFS is the generation of stormwater runoff from new or redeveloped impervious surfaces (e.g., concrete, asphalt, roofing materials, compacted gravel). Because many HUD projects result in the creation or redevelopment of impervious surfaces, which generate stormwater runoff that can negatively affect aquatic species and ecosystems, assessment of stormwater runoff from a project is the most likely way that you will interact with NMFS and the ESA-listed/MSA species and habitats under its authority.

Impervious surfaces prevent precipitation from absorbing into the soil, resulting in runoff into storm drains and waterways. Stormwater runoff can transport pollutants (e.g., soil, fertilizer, metals, pesticides, tire particles) that degrade water quality in streams, lakes, reservoirs, and rivers where ESA-listed/MSA-regulated species occur. Many of these pollutants persist for years in the environment and can be transported downstream hundreds of miles from their point of origin. Pollutants can also make their way into the food chain where they can harm listed species and degrade prey suitability. Of particular concern are dissolved metals and tire particulates. Dissolved metals can be generated from the wearing of a vehicle's brake pads and leach from certain types of metal roofing and siding. Dissolved metals can be carried hundreds of miles downstream and interfere with listed salmon and steelhead's ability to navigate back to their spawning streams, among a range of other sub-lethal effects. Rubber particulate matter is generated from the wearing of a vehicle's tires and can leach compounds into the aquatic environment that have both lethal and sub-lethal effects on listed species.

Additionally, impervious surfaces interrupt the natural cycle of rainwater infiltration into soil by diverting large volumes of runoff into streams, wetlands, rivers, and lakes. When this occurs, the volume and velocity of stormwater discharge to a receiving water can result in adverse hydromodification: the degradation of aquatic systems as a result of changes to the physical condition of a waterbody from water. Stormwater runoff can cause stream channel erosion, loss of habitat features required by listed species (e.g., large wood, spawning gravels), direct injury to aquatic species, and the incremental loss of overall habitat quality.

Because the constituents of stormwater runoff are particularly harmful to aquatic species, a **May Affect, Likely to Adversely Affect** determination is the most common outcome of

[13] Magnuson-Stevens Fisheries Conservation and Management Act [50 CFR 600.925]

consultation with NMFS for HUD-funded projects. It is important to note that a finding of adverse effects does not preclude project implementation. For HUD projects, in most cases, an LAA finding simply means that stormwater treatment and management practices will need to be incorporated into project design and construction.

4 Effects Determination Guidance for NMFS-Regulated Resources

This section describes the process of making an effects determination for species under NMFS' jurisdiction. Specifically, it provides guidance for when a finding of No Effect may be appropriate. As previously stated, a project that reaches a finding of No Effect does not require coordination with, or approval from NMFS, and documenting a finding of No Effect satisfies the ESA/MSA review obligations by HUD (or its RE).

Making an appropriate effects determination for both the ESA and MSA is an essential part of carrying out HUD's obligation to use its federal authority to help conserve listed species. While there are a great number of HUD activities that will have No Effect on federally listed species, designated critical habitat, and EFH, there are a number of activities that will require further analysis, documentation, and consultation with NMFS. The following steps will assist you in making a finding of effect for your project.

4.1 Obtain Species List & Determine Critical Habitat / Essential Fish Habitat

NMFS' trust resources occur primarily in the marine environment; however, these resources include a number of ESA-listed fish species that spend a portion of their lives in inland, freshwater streams, rivers, reservoirs, and lakes. Additionally, through the MSA, NMFS manages a number of species that spend a portion of their lives in rivers, estuaries, and bays. Most watersheds in Oregon are within or upstream of a waterbody occupied by an ESA-listed species or habitats designated as critical habitat/EFH.[14] As stormwater pollutants can be transported downstream and can persist in the environment, all projects that discharge post-construction stormwater have the potential to affect ESA-listed and MSA species and critical habitat/EFH. NMFS considers discharge of post-construction stormwater an Adverse Effect on these species and habitats.

With few exceptions, discharge of post-construction stormwater extends from its point of origin to the nearest receiving water, then downstream, terminating at the Pacific Ocean.[15] This means that most HUD projects that create new impervious surface area or reconstruct existing impervious surface area are likely to have an adverse effect on NMFS listed species and critical habitat/EFH. Table 2, following page, identifies the ESA-listed species under NMFS' jurisdiction that may be affected by your project; identify the area of the state in which your project occurs and see the ESA-listed species and critical habitat that may be affected.

Should you desire more specificity, NMFS maintains GIS data[16] for the range and distribution of listed species and a web-based map application for identifying designated critical habitat and EFH.[17] Familiarity with web-based GIS applications will be necessary to utilize these resources.

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14 Exceptions include watersheds in: Harney, Klamath, Lake, and Malheur counties.

15 Exceptions to this finding are identified in Table 3.

16 NOAA Fisheries GIS Portal: [https://maps.fisheries.noaa.gov/portal/home/]

17 Protected Resources App: [https://www.fisheries.noaa.gov/resource/map/species-and-habitat-app]

Table 2: NMFS' ESA-Listed Species & Critical Habitat Designations in Oregon		
Oregon Coast (Middle/Northern)[18]	**Columbia River Basin**	
Coho Salmon	Chinook Salmon	Sockeye Salmon
Oregon Coast Coho Salmon	Lower Columbia River	Snake River sockeye salmon
Southern Green Sturgeon	Upper Columbia River spring-run	Steelhead Trout
Southern Eulachon	Snake River spring/summer-run	Upper Columbia River
	Snake River fall-run	Lower Columbia River
Oregon Coast (Southern)[19]	Upper Willamette River	Middle Columbia River
Coho Salmon	Chum Salmon	Snake River basin
Southern Oregon-Northern California Coast Coho	Columbia River chum	Upper Willamette River
Southern Green Sturgeon	Coho Salmon	Southern Green Sturgeon
Southern Eulachon	Lower Columbia River coho	Southern Eulachon

Figure 1, following page, depicts the geographic extent of NMFS' ESA-listed species and critical habitat occurrence in Oregon.

If your project will discharge stormwater that reaches a receiving water, your project may adversely modify EFH for Pacific Salmon and Groundfish.

Oregon counties where ESA-listed species and critical habitat do not occur include Harney, Klamath, Lake, and Malheur counties. Projects occurring in these counties are assumed to have **No Effect** as the areas are inaccessible to species under NMFS' jurisdiction. Please note that the counties listed above are only excluded from NMFS' managed species and habitats and that ESA-listed species and critical habitat under USFWS' jurisdiction may be present.

If you need assistance confirming whether your action is in proximity to ESA-listed species, designated critical habitat, or EFH, please contact the appropriate NMFS office, identified in Section 6 of this Appendix.

[18] Extending from Cape Blanco north to the mouth of the Columbia River.

[19] Extending from Cape Blanco south to the California border.

APPENDIX B

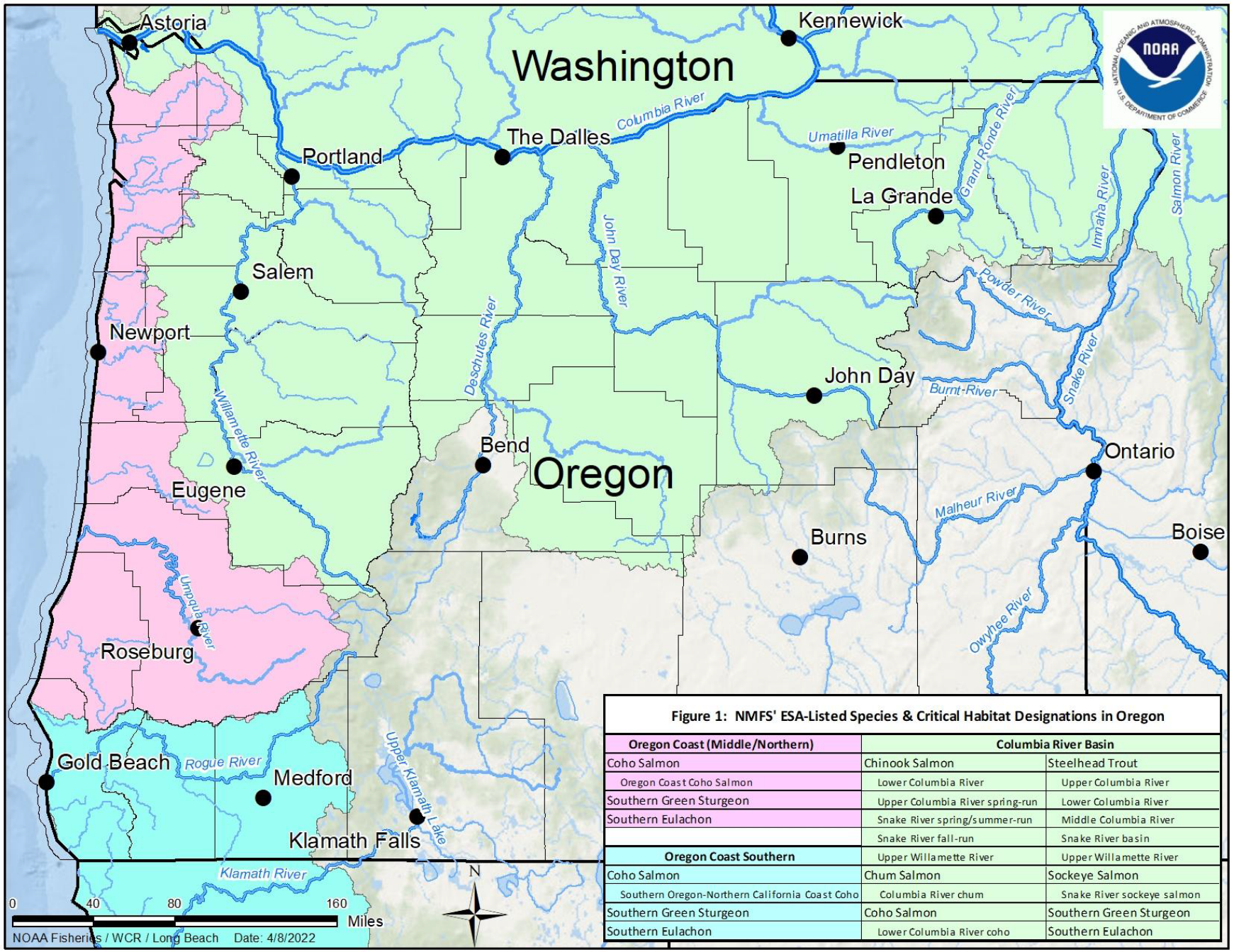

Figure 1: NMFS' ESA-Listed Species & Critical Habitat Designations in Oregon

Oregon Coast (Middle/Northern)	Columbia River Basin	
Coho Salmon	Chinook Salmon	Steelhead Trout
Oregon Coast Coho Salmon	Lower Columbia River	Upper Columbia River
Southern Green Sturgeon	Upper Columbia River spring-run	Lower Columbia River
Southern Eulachon	Snake River spring/summer-run	Middle Columbia River
	Snake River fall-run	Snake River basin
Oregon Coast Southern	Upper Willamette River	Upper Willamette River
Coho Salmon	Chum Salmon	Sockeye Salmon
Southern Oregon-Northern California Coast Coho	Columbia River chum	Snake River sockeye salmon
Southern Green Sturgeon	Coho Salmon	Southern Green Sturgeon
Southern Eulachon	Lower Columbia River coho	Southern Eulachon

4.2 Determine Effects of Proposed Action

Answering the following questions will assist in reaching an appropriate finding of effect for your project.

Question 1: Will the project's effects overlap with federally-listed or proposed species, designated or proposed critical habitat, and/or essential fish habitat regulated by NMFS?

Note that project effects include those that extend beyond the project site itself, such as noise, water quality, stormwater discharge, visual disturbance; habitat assessment must include consideration for feeding, spawning, rearing, overwintering sites, and migratory corridors. Typically, discharge of post-construction stormwater extends from its point of origin to the nearest receiving water, then downstream, terminating at the Pacific Ocean.

☐ **NO, the project and all effects are outside the range of listed species and critical habitat covered by NMFS.** Therefore, the project will have **No Effect** on ESA-listed or proposed species or designated critical habitat/EFH.
- Record your determination of **No Effect** on species and habitats covered by NMFS.
- Maintain documentation in the Environmental Review Record. For example, a map showing that your project is not in or upstream of a watershed of a listed species.

☐ **YES, project effects may overlap with ESA-listed species or designated critical habitat/EFH regulated by NMFS**.
- Continue to Question 2.

Question 2: Is the project activity listed in Table 3 (following page) <u>AND</u> does it meet all of the required parameters?

☐ **YES, the activity is listed in Table 2 <u>and</u> meets all the required parameters.** Therefore, the project will have **No Effect** on ESA-listed species and/or designated critical habitat/EFH.
- Record your determination of **No Effect** and maintain this documentation, including a species list and map of your project location, in the Environmental Review Record.
- Attach a statement to your determination explaining how the project meets the required parameters in Table 3.

☐ **NO, the activity does not match those described in Table 3 and/or all of the specified parameters**.
- Continue to Question 3.

Question 3: Do you have some other basis for a No Effect determination, for example a biological assessment or other documentation from a qualified professional?[20]

☐ **YES, the project has professional documentation for a No Effect determination.**

[20] A "qualified professional" is a biologist trained in the assessment of habitat requirements of the ESA-listed species that overlap with your project's action area.

- Record your determination of **No Effect** and maintain this documentation, including a species list and map of your project location, in the Environmental Review Record.
- Attach the biological assessment or other professional documentation.

☐ **NO, the project does not have professional documentation supporting a No Effect determination.**

- YOU MUST INITIATE SECTION 7 CONSULTATION WITH NMFS.
- *Your project may qualify for inclusion under the Programmatic Biological Opinion for HUD Projects in Oregon.* See Section 5 of this Appendix and Appendix A for additional details.
- Contact information for NMFS' offices is provided in Section 6 of this document.

Table 3: Potential No Effect Categories and Required Criteria

Purchase of a building or property can reach a *No Effect* finding, if:

- The action does not change any existing structures.
- The action does not create new impervious surface area, either constructed or reconstructed.
- The action does not modify existing stormwater collection or drainage patterns.
- The action does not involve ground disturbing activities/construction.[21]

Landscaping maintenance/improvement actions can reach a No Effect finding, if:

- The action does not remove riparian vegetation or trees within 150 feet of an aquatic resource.[22]
- The action does not include fill of jurisdictional waters of the nation or of the state, unless proposed for species habitat restoration or enhancement.
- The action does not increase impervious hardscape area unless an equal area of impervious surface area is converted to pervious surface.
- Hazard tree[23] removal must be matched by replanting of a native, canopy-forming tree species appropriate for the location.[24,25]

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21 Studies or surveys that do not require soil/ground disturbance are allowed. Permitted ground disturbing activities include wetland delineation, soil infiltration testing, geotechnical drilling/boring, or similar investigations.

22 For the purposes of this guidance, an "aquatic resource" is any stream, river, lake, pond, ocean, bay, estuary, wetland, or tidally-influenced area, either permanently or seasonally inundated/submerged that may provide habitat to listed species.

23 A "hazard tree" is a tree that has a structural defect that creates a risk of failure and resulting damage to people or property.

24 An "appropriate tree" is one that will be the correct size and species for the specific location and that the selected location is appropriate for the selected tree species at maturity. An arborist can recommend an appropriate species for replacement.

25 When replacing trees adjacent to impervious surface area, give preference to evergreen species (e.g., firs, pines), as they intercept precipitation and re-evaporate it back to the atmosphere, reducing stormwater generation.

Table 3: Potential No Effect Categories and Required Criteria

Landscaping maintenance/improvement actions (continued):

- Installed lighting does not illuminate aquatic resources occupied by listed species.
- New landscape plantings are of native species approved by the local jurisdiction (no invasive species shall be permitted).
- Pesticides or herbicides shall only be applied if 150 feet from aquatic resources, or by a licensed applicator, and in compliance with all federal, state, and local regulations.
- Sprinkler or irrigation systems direct spray away from pollution generating impervious surfaces.

Interior rehabilitation actions can reach a No Effect finding, if:

- The action applies only to existing structures.
- The action's access and staging areas are located at least 150 feet away from any aquatic resources.
- The action's material source sites have been assessed as part of the proposed action.
- Best Management Practices will be implemented to prevent debris, trash, and chemicals and discarded materials from entering aquatic resources.
- All waste materials must be disposed of at an approved disposal site (landfill or hazardous waste facility).

Exterior repair or improvement actions can reach a No Effect finding, if:

- The action does not increase the amount of impervious surface area.
- The action does not replace an existing roof structure with hot tar roofing methods, torch down roofing methods, treated wood, copper, or galvanized metal.[26]
- The action does not replace existing siding with galvanized sheeting.
- All new or replaced heating ventilation air conditioning (HVAC) systems (or similar mechanical systems) constructed of galvanized metal must be painted or physically covered to prevent exposure to precipitation.
- All exterior lighting shall be positioned and/or directed to prevent illumination onto/over aquatic resources.
- All construction access and staging sites are located at least 150 feet away from aquatic resources.
- All construction activities comply with state and local erosion and sediment control Best Management Practices.
- The action will implement Best Management Practices to prevent debris, trash, chemicals and discarded materials from entering aquatic resources.
- All waste materials must be disposed of at an approved disposal site (landfill or hazardous waste facility).
- Any repair/maintenance of parking lots and access roads is limited to re-pavement, filling potholes/sealing, and re-painting. Repairs that require asphalt grinding or other methods of removal are excluded. Repairs that change the collection, conveyance, and discharge of surface runoff are excluded.

[26] Galvanized flashing, gutters, or fasteners may be used as part of a roofing system if coated or painted to prevent exposure to precipitation.

Table 3: Potential No Effect Categories and Required Criteria
New construction or reconstruction actions can reach a No Effect finding, if:[27] • The proposed action complies with all state and local building codes. **AND**, • All waste materials are recycled or otherwise disposed of in an EPA-approved sanitary or hazardous waste disposal site. **AND**, • The proposed action incorporates Low Impact Development or Underground Injection Control (UIC)[28,29] methods capable of infiltrating on-site,[30] the 10-year, 24-hour storm event; **OR** • The proposed action incorporates stormwater filtration prior to discharge to a pre-existing, functional, and appropriately sized stormwater facility.[31]

Actions that contain multiple elements described in Table 3 (i.e., landscaping improvements and exterior repairs) must meet the criteria for all applicable project activities to reach a finding of *No Effect*. It is important to note that a beneficial effect is still an effect under the ESA, so a *No Effect* finding is not appropriate for projects that may have beneficial effects. Projects that cannot meet the above criteria are considered to have an effect on ESA/MSA-listed species and habitats and must consult with NMFS to obtain *take* coverage, as described in the following sections.

5 Consultation with the National Marine Fisheries Service

If you completed the checklists in Section 4.2 of this document and determined your project cannot meet the criteria to make a *No Effect* determination,[32] then your project is subject to the requirement of completing "*formal consultation*" with NMFS.

This programmatic biological opinion is the result of HUD's formal consultation with NMFS on the potential effects of many common HUD projects, including actions to construct or redevelop housing and public facilities in Oregon, including single and multifamily housing units, commercial and public buildings (e.g., public services offices, libraries, community centers), mixed-use development, healthcare facilities (e.g., clinics, senior centers, other care facilities), associated minor infrastructure (e.g., sidewalks, street safety modifications, utility

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27 Examples include building a new structure on an undeveloped site, complete or partial tear down and rebuild, addition to an existing structure, or similar.

28 Underground Injection Control may be prohibited by state or local code. A project's engineer should confirm UIC methods are allowed and appropriate.

29 Underground Injection Control methods are prohibited for actions where soil or groundwater contamination were identified and in areas proximate to municipal well fields or sole source aquifers.

30 Infiltration means that no stormwater from the 10-year, 24-hour storm event (or lesser events) is discharged from the site.

31 Examples of existing stormwater facilities may include either on-site or off-site treatment and flow control facilities/infrastructure to which a project can connect. This provision excludes connection to a municipal stormwater, storm sewer, or sewer conveyance and/or use of a municipal wastewater treatment facility to provide treatment and/or flow control. A civil engineer will need to assess any existing facilities to ensure its functionality and capacity.

32 Should you have questions regarding a finding of effect, please contact the NMFS branch where you project is located, listed in Section 6 of this Appendix. In some cases, a project can be modified to reach a No Effect finding.

lines), and similar activities. This Opinion does not cover complex infrastructure such as new road systems or wastewater treatment facilities.

Use of this Opinion to document ESA/MSA compliance forgoes the need to prepare a BA/BE, as described in Section 2.1.3, above, requiring much less documentation be submitted to NMFS for review. Conformity with this Opinion fulfills the formal consultation requirements for all HUD actions, as described above, provided those projects comply with the terms and conditions listed in this Opinion's incidental take statement and further detailed in the Opinion's appendices. Specifically, if a covered project is designed to conform to the applicable stormwater design criteria detailed in Appendix A, Sections 3 or 4, and such conformity is demonstrated through the documentation and notification requirements detailed in Appendix C, Sections 1 and 2, the project may be deemed by NMFS to be consistent with this Opinion, thereby fulfilling the proposed action's ESA/MSA consultation obligations.

Review of projects submitted for consistency review through this Opinion commences with an email notification, detailed in Appendix C and upon NMFS determining a submittal package is complete. NMFS' review of a submitted action is typically completed within 30 days, at which time NMFS will issue a "consistency letter" or "non-consistency letter" via email. A consistency letter is NMFS' statement that the reviewed action is consistent with the requirements of this Opinion. The consistency letter should be included in the ERR as documentation of completion of ESA/MSA consultation with NMFS.[33] If a non-consistency letter is received, HUD funds, vouchers, assurances, or permissions cannot be issued to advance the project. In the case of a non-consistency letter, NMFS encourages HUD (or its REs) to contact NMFS staff to discuss how the action can be brought into compliance with this Opinion or if an individual formal consultation will be necessary to comply with the ESA/MSA.

Projects not covered by this Opinion, and projects covered by this Opinion but unable to demonstrate compliance with the stormwater design criteria and administrative requirements detailed in the incidental take statement, cannot rely on this Opinion to fulfill its ESA/MSA consultation obligations. Consequently, HUD may not proceed with such actions until the ESA/MSA consultation obligations for those projects are fulfilled through a separate and new consultation with NMFS, as summarized in section 2.1 of this appendix.

[33] The ESA is administered jointly by NMFS and the U.S. Fish and Wildlife Service. The USFWS has a parallel compliance process that must also be completed.

6 Contacting NMFS

At any stage in making your determination, you may wish to contact the appropriate NMFS field offices for technical assistance. Contact information is available at:

OREGON COAST
Jeff Young, (acting) Branch Chief
Oregon Coast Branch
jeff.young@noaa.gov
541-957-3383

WILLAMETTE RIVER
Kate Wells, Branch Chief
Willamette Branch
kathleen.wells@noaa.gov
503-230-5400

LOWER COLUMBIA RIVER
David Price, Branch Chief
Washington Coast/Lower Columbia River Branch
david.price@noaa.gov
360-871-8300

INTERIOR COLUMBIA BASIN
Justin Yeager, Branch Chief
Columbia Basin Branch
justin.yeager@noaa.gov
509-240-9203

NORTHERN SNAKE RIVER
Johnna Sandow, Branch Chief
Northern Snake Branch
johnna.sandow@noaa.gov
208-378-5696

SOUTHERN SNAKE RIVER
Bill Lind, Branch Chief
Southern Snake Branch
bill.lind@noaa.gov
208-378-5696

KLAMATH RIVER
Jim Simondet, Branch Chief
Klamath Branch
jim.simondet@noaa.gov
707-825-5126

APPENDIX C

EMAIL SUBMITTAL GUIDELINES & INSTRUCTIONS

This appendix provides instructions on how HUD or its REs should submit proposed actions (projects) to NMFS for review under HUD's Programmatic Biological Opinion (Opinion). Section 1 provides the instructions that will apply to most projects. Section 2 provides guidance specifically for actions carried out under the Oregon Housing and Community Services' (OHCS) ReOregon Program.

1. Project Submittal Instructions for HUD Programmatic Review

Notifications, forms, documentation, and plans for projects submitted for review under the HUD Programmatic are to be submitted via email to the HUD programmatic mailbox at HUDBiOp.wcr@noaa.gov. Once you have received a NMFS project identification number , all communications and submittals should be directed to NMFS' consultation updates mailbox at consultationupdates.wcr@noaa.gov.

1.1. Use of the HUD Programmatic Email Box

Use the HUD programmatic mailbox at HUDBiOp.wcr@noaa.gov for the following:

- Request consultation with NMFS for review of a proposed HUD or RE's action; **AND,**
- Submit required forms, the Post-construction Stormwater Management Plan, Monitoring and Maintenance Plan, schematics, engineering design, and other relevant supporting information.

The mailbox will send a reply after receipt of any submittal. The reply will provide you NMFS' project identification number[1] for the proposed consultation and identify the Branch Chief or staff biologist that will serve as the point of contact for your project. Please direct all other communications or questions to the appropriate NMFS Branch Chief or biologist, except as noted below.

1.2. Use of the Consultation Updates Email Box

Once a project has been submitted for review and a project identification number received, HUD or its RE, should send any subsequent project information to the consultationupdates.wcr@noaa.gov mailbox. Always include the NMFS project identification number with any submittal and in the file name of any attachments submitted. Instances where HUD or its REs should use the consultation updates mailbox include:

- Requested supplemental information (e.g., additional narrative text, data, engineering design, modeling, subsequent report versions),
- Withdrawing a project from NMFS' review,

[1] NMFS' Project ID Number uses the following format: WCRO-2016-00002-XXXX, where WCRO = West Coast Regional Office; 2016 = the year the HUD Programmatic Opinion was issued; 00002 = the sequential number of consultations issued in the year the Opinion was issued (i.e., 00002 was the second consultation issued a number in 2016); and XXXX = a four digit number representing the sequential project number issued under a programmatic opinion (e.g., 7246 would be the 7,246th project number issued under any of NMFS' programmatics in effect within the WCRO).

- Modifications or revisions to information previously submitted (e.g., plan revisions, later design versions),
- Submitting the Project Completion Report following project completion.[2]

When submitting to either the HUD programmatic mailbox or the consultation updates mailbox, please only submit one action or project per e-mail. If project files exceed the mailbox limit of 20 megabytes (per email), you may send multiple emails containing the information or request access to NMFS' FTP site.

- If sending multiple emails, please indicate in the subject line how many emails will be sent in total and identify each email in the series (e.g., email 1 of 3, email 2 of 3, email 3 of 3).
- If you have a file that exceeds the 20 megabyte email limit, you may send a request for FTP site access to the HUD programmatic mailbox. An invitation will be sent that will allow you to upload files without a size limit.

1.3. Email Title Requirements

In the subject line of the email clearly state the type of action you are requesting (i.e., Action Notification, Withdrawal, etc.), Project Name, Applicant Name (HUD Office or Responsible Entity), County, Waterway (to which the project will discharge), and the NMFS' project identification number (if/once received from NMFS).

Use caution when entering the necessary information in the subject line. If these titling conventions are not used, NMFS' response software will not accept the email.

Examples:

> *Action Notification: River View Apartments, Portland Housing Bureau, Multnomah County, Willamette River*
>
> *Withdrawal: Creekside Apartments, Housing Authority of Jackson County, Jackson County, Bear Creek, WCRO-2016-00002-4516*
>
> *Project Completion Report: Amazon Community Center, City of Eugene Community Development Department, Lane County, Amazon Creek, WCRO-2016-00002-2515*
>
> *Project Documents: Hacienda Heights Apartments, Washington County Office of Community Development, Washington County, Chicken Creek, WCRO-2016-00002-6922*

1.4. NMFS' Consistency Review

To request that NMFS review a project, HUD or its REs must submit to the HUD mailbox, at a minimum, an Action Notification Form, a complete Stormwater Information Form, and a complete Post-construction Stormwater Management Plan (PCSMP). Within 30 calendar days of

[2] For the purposes of this Opinion, a constructed project is one that has received a certificate of occupancy from the appropriate jurisdiction. OAR 918-480-0140

receiving all materials necessary to complete review, NMFS will confirm whether or not the proposed stormwater plan is consistent with the Opinion's criteria.

- Projects that are found to be consistent with the Opinion's criteria will be issued a "Consistency Letter" via email. This email should be included in the project's Environmental Review Record to document compliance with the ESA and MSA for NMFS' trust resources.[3]
- Projects that are found to be inconsistent with the Opinion's criteria will be issued an "Inconsistency Letter" via email that details how the project does not meet the Opinion's requirements. Projects found to be inconsistent with the Opinion will end NMFS' review process and consultation on the action. Additional communication and meetings can be scheduled with NMFS' staff to discuss options to address deficiencies so the project can be re-submitted for review.

NMFS may delay its review if the Action Notification Form, the Stormwater Information Form, or the PCSMP is incomplete, unsatisfactory, or if additional information is required to complete review. Projects that do not contain sufficient information for NMFS to complete review may be issued an "Insufficiency Letter" via email that details the information or materials required for NMFS' review to progress. Review of projects that are found to have insufficient information are typically paused, pending receipt of the requested information. Specific communication between HUD or its RE and NMFS should occur to establish a timeframe in which required information is provided. In cases where the timeframe to receive required information may extend beyond a month, NMFS may request the project be withdrawn and resubmitted.

Issuance of a Consistency Letter by NMFS is generally required for all projects. However, for projects proposing to reconstruct single-family residences, if NMFS fails to reply within two (2) weeks to a notification seeking consistency review, HUD or its RE may consider NMFS's non-reply as a finding of a project's consistency with the Opinion.

Please contact NMFS early during the development phase of a project if you have any questions about how these guidelines may affect your project.

1.5. Withdrawing a Request for Review

If it is necessary to withdraw a request for review, submit a separate email with the word "WITHDRAWAL" at the beginning of the email subject line, but otherwise follow the email titling conventions described above. State the reason for the withdrawal in the email. If HUD or its RE re-submits a request for NMFS review that has been previously withdrawn, NMFS will process the resubmittal as if it was a new action notification.

1.6. Project Completion Report

HUD or its REs must submit the Project Completion Report to NMFS within 60 days of receiving a certificate of occupancy for the project. The Project Completion Report can be found

[3] The ESA is administered jointly by NMFS and the U.S. Fish and Wildlife Service (USFWS). The USFWS has a parallel compliance process that must also be completed.

in Appendix D. Failure to submit the Project Completion Report may result in NMFS recommending reinitiation of this consultation.

2. Guidance specific to the Oregon Housing and Community Services ReOregon Program

Notifications and submittals for OHCS' ReOregon Program are to be submitted via email to HUD's ReOregon mailbox at HUD-reoregon.wcr@noaa.gov. All communications and submittals after the initial submittal should be directed to NMFS' consultation updates mailbox at consultationupdates.wcr@noaa.gov.

2.1. ReOregon Projects Submitted for NMFS Review

All ReOregon projects submitted for review under the HUD Programmatic Biological Opinion should submit consultation requests and required documentation to the HUD-reoregon.wcr@noaa.gov mailbox. If supplemental materials need to be submitted after the initial notice/request, send all such emails and attachments to consultationupdates.wcr@noaa.gov mailbox.

With the exception of single-family residence reconstruction projects,[4] when submitting a ReOregon project for review to either the HUD's ReOregon mailbox or the consultation updates mailbox, please only submit one action or project per e-mail. If project files exceed the mailbox limit of 20 megabytes (per email), you may send multiple emails containing the information or request access to NMFS' FTP site, as detailed above.

For single-family residence reconstruction projects, multiple notifications can be sent in one email. Required project information (see Appendix A, Section 4(f)(i-xvii)) can be aggregated into one spreadsheet. The Preliminary Site Design, (see Appendix A, Section 4(a)), Conceptual Stormwater Design (see Appendix A, Section 4(b)), and any supplemental documentation, must be attached in compressed PDF format and contain the Project ID in the filename for easy correlation to the spreadsheet data.

Issuance of a Consistency Letter by NMFSis generally required for all projects. However, for projects proposing to reconstruct single-family residences, if NMFS fails to reply within two (2) weeks to a notification seeking consistency review, HUD or its RE may consider NMFS's non-reply as a finding of a project's consistency with the Opinion.

2.1.1. Email Title Requirements

For ReOregon projects submitted for review, include the following: ReOregon - type of action request, project ID number (or other unique identifier), county, waterway into which project discharges, and NMFS Project ID (if/once available).

ReOregon - Action Notification: Project ID 0253, Douglas County, North Umpqua River

[4] See Appendix A, Section 4 for guidance on single-family residence reconstruction projects.

ReOregon - Project Completion Report: Addams Rd Property, Clackamas County, Deep Creek (WCRO-2024-00782)

Should you have any questions regarding these guidelines and instructions, please direct all communications or questions to the appropriate NMFS Branch Chief or biologist.

APPENDIX D

PROGRAMMATIC FORMS

With the exception of single-family residence reconstruction projects, the forms in this appendix are required as part of a complete project submittal to NMFS for consistency review and project completion, as detailed in Appendix A.

- Action Notification Form
- Stormwater Information Form
- Project Completion Report Form

ACTION NOTIFICATION FORM

HUD PROGRAMMATIC OPINION

Submit this form to NMFS by email to: ***HUDBiOp.wcr@noaa.gov*****.** Applies only to projects that qualify for inclusion under NMFS' HUD Programmatic Biological Opinion for Projects in Oregon **# WCR-2016-00002**.

PROJECT APPLICANT INFORMATION			PROJECT LOCATION INFORMATION	
PROJECT NAME			**DATE OF REQUEST**	
RESPONSIBLE ENTITY			**COUNTY**	
NAME	**PHONE**		**STREET ADDRESS**	
TITLE	**EMAIL**		**CITY**	**ZIP**
HUD OFFICE/PROGRAM			**6TH FIELD HUC NAME**	
NAME	**PHONE**		**6TH FIELD HUC #**	
TITLE	**EMAIL**		**PROJECT LATITUDE**	
APPLICANT /CONSULTANT			**LONGITUDE**	
NAME	**PHONE**		**CONSTRUCTION START DATE**	
TITLE	**EMAIL**		**CONSTRUCTION END DATE**	

NMFS SPECIES & CRITICAL HABITAT PRESENT IN ACTION AREA

☐ **SOUTH OR COAST** – SONCC COHO [CAPE BLANCO TO CA BORDER]	☐ **MID/NORTH OR COAST** – OC COHO [CAPE BLANCO TO COLUMBIA RIVER]	☐ **COLUMBIA BASIN** - ALL COLUMBIA, SNAKE, & WILLAMETTE RIVER SALMONIDS
☐ SOUTHERN DPS GREEN STURGEON	☐ SOUTHERN DPS GREEN STURGEON	☐ SOUTHERN DPS GREEN STURGEON
☐ EULACHON	☐ EULACHON	☐ EULACHON

EFH SPECIES OCCURRING IN THE ACTION AREA

☐ PACIFIC SALMON, CHINOOK	☐ COASTAL PELAGICS
☐ PACIFIC SALMON, COHO	☐ GROUNDFISH

PROJECT DESCRIPTION

Form Version: August 02, 2024

STORMWATER INFORMATION FORM

HUD PROGRAMMATIC OPINION

If you are submitting a project that includes a stormwater plan for review, please fill out the following cover sheet **to be included with** any stormwater management plan and any other supporting materials. Submit this form with/or after the Action Implementation Form to NMFS at ***HUDBiOp.wcr@noaa.gov***.

PROJECT INFORMATION	**NMFS PROJECT TRACKING #: WCR-2016-00002-____**
PROJECT NAME	**COUNTY**
TYPE OF PROJECT (select all that apply)	☐ REDEVELOPMENT ☐ RESIDENTIAL ☐ INSTITUTIONAL ☐ NEW DEVELOPMENT ☐ COMMERCIAL ☐ OTHER
HAVE YOU CONTACTED ANYONE AT NMFS	☐ YES ☐ NO **If Yes, Who:**
NEAREST RECEIVING WATER	
STORMWATER DESIGNER / ENGINEER INFORMATION	**NAME**
AFFILIATION/FIRM	**PHONE** **EMAIL**
STORMWATER DESIGN MANUAL USED, INCLUDING YEAR/VERSION	
DESCRIBE WHICH ELEMENTS OF YOUR STORMWATER PLAN CAME FROM THE MANUAL EMPLOYED	

DESIGN STORMS

1	**2-YEAR, 24-HOUR STORM**	**INCHES**	**IN/HR**
2	**WATER QUALITY DESIGN STORM (50% OF 2-YEAR, 24-HOUR STORM)**	**INCHES**	
3	**WATER QUANTITY DESIGN STORM (10-YEAR, 24-HOUR STORM)**	**INCHES**	

SITE CHARACTERISTICS

4	**TOTAL PROJECT AREA** [Tax Lot/Parcel acreage + any additional ground disturbance area outside Tax Lot]	**ACRES**	**FT^2**
5	**TOTAL IMPERVIOUS SURFACE AREA** [Existing impervious acreage + Proposed impervious acreage]	**ACRES**	**FT^2**
6	**TOTAL LANDSCAPE AREA** [Landscaping acreage + Vegetated treatment facility acreage]	**ACRES**	**FT^2**
7	**WILL IMPERVIOUS AREA BE REDUCED FROM CURRENT CONDITIONS? IF YES, BY HOW MUCH?** ☐ YES ☐ NO	**ACRES**	**FT^2**
8	**IS THE SITE CONTAMINATED?** [If yes, provide investigation results to NMFS]	☐ YES ☐ NO	

WATER QUALITY INFORMATION

9	ARE LOW IMPACT DEVELOPMENT (LID) METHODS INCORPORATED INTO DESIGN?	☐ YES	☐ NO
10	HOW MUCH OF TOTAL STORMWATER IS TREATED USING LID?	%	FT^3

11 — SPECIFIC LID WATER QUALITY TREATMENT ELEMENTS INCORPORATED

SITE DESIGN ELEMENTS	TREATMENT METHODS	OTHER LID WATER QUALITY TREATMENT METHODS
☐ SITE LAYOUT	☐ VEGETATED ROOF	☐ LID NAME
☐ CLUSTERED DEVELOPMENT	☐ INFILTRATION RAIN GARDEN / LID SWALE	SOURCE
☐ DE-PAVE EXISTING PAVEMENT	☐ INFILTRATION STORMWATER PLANTERS	☐ LID NAME
☐ CONSERVE SOILS W/ BEST DRAINAGE	☐ SOAKAGE TRENCH	SOURCE
☐ TREE PROTECTION	☐ DRYWELL	☐ LID NAME
☐ CONSTRUCTION SEQUENCING	☐ WATER QUALITY SWALE	SOURCE
☐ REFORESTATION/TREE PLANTING	☐ VEGETATED FILTER STRIPS	
☐ RESTORED SOILS	☐ LINED RAIN GARDEN/LID SWALE	
☐ POROUS PAVEMENT	☐ LINED STORMWATER PLANTER	

12	DESCRIBE THE TREATMENT TRAIN, INCLUDING PRETREATMENT AND LID BMPS USED TO TREAT WATER QUALITY					
13	WHY THIS TREATMENT TRAIN WAS CHOSEN FOR THE PROJECT SITE					
14	PAGE IN STORMWATER PLAN WHERE MORE DETAILS CAN BE FOUND					
15	STORMWATER TREATMENT REQUIRED	VOLUME FT^3		PEAK DISCHARGE	CFS	AREA TREATED FT^2
16	IS THE WATER QUALITY DESIGN STORM FULLY TREATED?	VOLUME ☐ YES ☐ NO		PEAK DISCHARGE ☐ YES ☐ NO		
17	IF ANSWERS TO 16 ARE "NO," WHY NOT? HOW WILL PROJECT OFFSET THE EFFECTS FROM UNTREATED STORMWATER?					

WATER QUANTITY INFORMATION

18	PRE-DEVELOPMENT RUNOFF RATE & VOLUME	WATER QUALITY DESIGN STORM (50% OF 2-YEAR, 24-HOUR)	CFS	FT^3
		WATER QUANTITY DESIGN STORM (10-YEAR, 24-HOUR)	CFS	FT^3
19	POST-DEVELOPMENT RUNOFF RATE & VOLUME	WATER QUALITY DESIGN STORM (50% OF 2-YEAR, 24-HOUR)	CFS	FT^3
		WATER QUANTITY DESIGN STORM (10-YEAR, 24-HOUR)	CFS	FT^3

** POST-DEVELOPMENT RUNOFF RATE MUST BE LESS THAN OR EQUAL TO PRE-DEVELOPMENT RUNOFF RATE **

Water Quantity Information (continued)

20	**Methods used to limit stormwater discharge from project**
21	**Page in stormwater plan where more details can be found**
22	**Specific discharge reduction elements incorporated** ☐ Porous pavement ☐ Soakage Trench ☐ Dry Detention Pond ☐ Infiltration rain garden / LID swale ☐ Drywell ☐ Wet Detention Pond ☐ infiltration Stormwater planters ☐ Downspout disconnection ☐ Underground Storage
23	**Are both water quantity design storms fully managed (i.e., attenuated)?** **Volume** ☐ **Yes** ☐ **No** **Peak Discharge** ☐ **Yes** ☐ **No**
24	**If No, why not? How will the project offset the effects from unmanaged stormwater?**
25	**Does the project discharge directly into a major water body?** ☐ **Yes** ☐ **No** [Large waterbody = ocean, estuary, mainstem Columbia River, Willamette River downstream of Eugene]
26	**Is the post-developed peak discharge >0.5 cfs during the 2-year, 24-hour storm event? If yes, flow control management required** ☐ **Yes** ☐ **No**
27	**Flow control proposed** **cfs** **% of 2-year, 24-hour storm Event**

Maintenance and Inspection Plan

28	**Have you included a stormwater maintenance and Inspection plan?** ☐ **Yes** ☐ **No**
29	**Contact information for the party/parties that will be legally responsible for performing/ contracting the inspections and maintenance of the stormwater facilities:**
	Name
	Affiliation/Responsibility
	Phone **Email**
	Name
	Affiliation/Responsibility
	Phone **Email**

Other Relevant Information

PROJECT COMPLETION REPORT

HUD PROGRAMMATIC OPINION

Submit this form within 60 days of receiving a certificate of occupancy.
Submit by email to: ***consultationupdates.wcr@noaa.gov*.**

DATE OF NOTIFICATION		NMFS TRACKING # WCR0-2016-00002-	
PROJECT NAME		COUNTY	
RESPONSIBLE ENTITY		APPLICANT/CONSULTANT	
NAME	PHONE	NAME	PHONE
TITLE	EMAIL	TITLE	EMAIL
CONSTRUCTION COMPLETION DATE			

COMPLIANCE DOCUMENTATION

1 **An explanation of the stormwater system as built or installed by the construction contractor, including any on-site changes from the original plans. Add additional sheets, if necessary.**

☐ Attached as a separate document

2 **Photographs of the constructed stormwater facility, including photos of the outfall structure, vegetation, facility location relative to other site features, etc.**

☐ Attached

3 **A map showing the stormwater facility's location(s)**

☐ Attached

4 **As built design drawings for the stormwater facility and site stormwater collection system (PDF versions only please. No CAD files)**

☐ Attached

APPENDIX E

Glossary of Terms and Abbreviations

Best management practice (BMP). A device, practice, or method for removing, reducing, retarding, or preventing targeted stormwater runoff constituents, pollutants, and contaminants from reaching receiving waters.[1]

Biofiltration. Use of amended soils, compost, and vegetation to remove pollutants from stormwater by maximizing contact between the stormwater and vegetation and media. Biofiltration is used in flow-through treatment systems, such as bio-swales and amended soil filter strips, and in facilities that pond the stormwater, also known as bioretention facilities.

Biological Opinion (Opinion). Endangered Species Act - Section 7 Programmatic Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for U.S. Department of Housing and Urban Development Housing Programs in Oregon. Consultation Number: WCR-2016-4853. United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, West Coast Region. Issued July 25, 2016.

Bioretention. The process in which contaminants and sedimentation are removed from stormwater runoff. Stormwater is collected into the treatment area, which consists of a grass buffer strip, sand bed, ponding area, organic or mulch layer, planting soil, and plants. Runoff passes first over or through a sand bed, which slows the runoff's velocity, distributes it evenly along the length of the ponding area, which consists of a surface organic layer or groundcover and the underlying planting soil. The ponding area is graded, its center depressed. Water is ponded to a depth of approximately 15 cm (5.9 inches) and gradually infiltrates the bioretention area or is evapotranspired. The bioretention area is graded to divert excess runoff away from itself. Stored water in the bioretention area planting soil exfiltrates over a period of days into the underlying soils.

Bioslopes, or ecology embankments. Linear flow-through stormwater runoff treatment facilities that can be sited along highway side-slopes, medians, borrow ditches, or other linear depressions. They consist of four basic components: a gravel no-vegetation zone, a vegetated filter strip, the ecology-mix bed, and a gravel-filled underdrain trench.

Bioswales. Landscape elements designed to remove silt and pollution from surface runoff water consisting of a swaled drainage course with gently sloped sides (less than 6%) and filled with vegetation, compost or riprap.

Catchment. The area that drains an individual development site to its first intersection with a stream, ranging from a few acres up to several hundred acres in size. Best management practices and site design are the management focus at this scale.

Constructed wetland. Natural-looking, lined marsh systems that pretreats wastewater by filtration, settling, and bacterial decomposition.

Contained planter BMP. A container with plants placed over an impervious surface intentionally implemented to reduce runoff and prevent or reduce pollution.

Contaminated soils. Soils at sites where contaminants have accumulated as a result of historic activities, not necessarily limited to industrial sites. Contaminated sites have a highly regulated development path with additional permitting. Coordination with the local DEQ Cleanup program is advised.

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[1] U.S. Environmental Protection Agency. Preliminary Data Summary of Urban Stormwater Best Management Practices. Retrieved from: http://www.epa.gov/guide/stormwater/files/montch1and2.pdf

Conveyance swale. Long, open channel that conveys stormwater runoff, but may not provide substantial water quality treatment due to a lack of tall, structured plants to slow flows. These are not considered LID BMPs. An example of a conveyance swale is a rock lined roadside ditch.

Detention/Detain. The attenuation (i.e., reduction of peak flows) of runoff from a design storm by storing and releasing runoff slowly to the downstream waterways with no reduction in volume on-site. Detention has been used to reduce flooding, but has been found to be inadequate at protecting downstream water quality. The Environmental Protection Agency now prefers low impact development BMPs, which reduce flooding and improve downstream water quality.[2] Because detention facilities do not reduce runoff and have been found to pollute water with temperature, scouring, and changing flows that impact streams, detention facilities are not considered an LID BMP.

Downspout disconnection. A form of dispersion that directs a building's roof drains to a lawn or garden instead of into storm sewer pipes.

Drywell. A well, assemblage of perforated pipes, or drain tiles that receive runoff and infiltrate that runoff underground.

Endangered Species Act (ESA). The Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 et seq.).

Essential Fish Habitat (EFH). A Congressional mandate in the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act, or Magnuson-Stevens Act. Essential Fish Habitat describes all waters and substrate necessary for fish for spawning, breeding, feeding, or growth to maturity.

Evaporation. The process of water changing from a liquid to a gas. Evaporation is a significant portion of the annual water cycle that reduces runoff in undeveloped and/or forested areas of Western Oregon.

Evapotranspiration. The collective term for the process of water returning to the atmosphere via interception and evaporation from plant surfaces and transpiration through plant leaves.

Federal action agency. HUD or the Responsible Entity, identified under 24 CFR Part 58.

Filter strip. A filter strip is an area of vegetation, generally narrow and long, that slows the rate of runoff, allowing sediments, organic matter, and other pollutants that are being conveyed by the water to be removed by settling out. Filter strips reduce erosion and the accompanying stream pollution.

Hydrologic Unit Code (HUC). The hydrologic unit code is a sequence of numbers or letters that identify a hydrological feature like a river, river reach, lake, or area like a drainage basin or catchment. As of 2010 there are six levels in the hierarchy, represented by hydrologic unit codes from 2 to 12 digits long, called regions, subregions, basins, subbasins, watersheds, and subwatersheds.

Impervious surface. A surface that prohibits water from soaking into the ground. Examples include roofs, concrete, asphalt, pavers, compacted gravel, compacted clay, plastic liners, and clogged landscape fabric.

Infiltration. Flow or movement of water through the soil surface and into the subsoils.

Infiltration ponds or basins (i.e.,, recharge basins, sumps). Shallow artificial ponds that are designed to infiltrate stormwater through permeable soils into the groundwater aquifer. Infiltration basins do not

[2] U.S. Environmental Protection Agency. (2009). Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act. Retrieved from: http://www.epa.gov/sites/production/files/2015-09/documents/eisa-438.pdf

discharge to a surface water body under most storm conditions, but are designed with overflow structures (pipes, weirs, etc.) that operate during flood conditions.

Isopluvial. Mapped lines of equal rainfall depths.

Likely to Adversely Affect (LAA). A determination of finding under the ESA for a listed species. A finding of "May affect, and is likely to adversely affect" means that listed resources are likely to be exposed to the action or its environmental consequences and will respond in a negative manner to the exposure. Exposure to stormwater runoff has been determined to constitute an impact that "May affect, and is likely to adversely affect" listed fish species in Oregon. Actions that are determined to be LAA must enter formal consultation with the U.S. Fish and Wildlife Service and/or NMFS. Use of this Opinion is one aspect of formal consultation with NMFS.

Limit disturbance BMP. Any BMP that protects a site or portion of a site in its current, natural vegetated state and/or protects soil permeability.

Low impact development (LID). A pattern of land development that preserves natural resources and promotes opportunities to manage stormwater where it falls. LID relies on a collection of carefully selected techniques to reduce, receive, and clean stormwater runoff to protect and improve water availability and quality. LID designs minimize stormwater runoff based on natural features and decentralized micro-scale controls that intercept, evaporate, transpire, filter, or infiltrate precipitation to avoid or minimize off-site discharge.

Lower discharge endpoint: The design storm depth above which streambank erosion is caused.

LID swale. Long, planted, open channel that conveys stormwater runoff and is designed and constructed to promote infiltration.

Maintenance. Performance of work on a planned, routine basis, or the response to specific conditions and events, as necessary to maintain and preserve the condition of a project feature at an adequate level of service.

Management/Manage. To retain or detain peak flows to reduce streambank scouring and flooding from the water quantity design storms.

Media filters. Media filters are usually two-chambered, including a pretreatment settling basin and a filter bed filled with sand or other absorptive filtering media, used to reduce pollutant loading in runoff.

Minimize impervious area BMP. Any BMP that reduces land area not able to infiltrate or evaporate rainfall or runoff as a result of being covered by buildings, roofs, and roads, parking lots and sidewalks.

Municipal separate storm sewer system (MS4). A conveyance or system of conveyances (e.g.,, roads with drainage systems, municipal streets, catch basins, curbs, gutters, man made channels or storm drains) owned or operated by a governmental entity that discharge to waters of the State.

National Marine Fisheries Service (NMFS).

New development. Any project where the land cover is changed from a natural, pre-developed state into another land cover.

No Effect. A determination of finding under the ESA for a listed species. A finding of "no effect" means there will be no impacts, positive or negative, to listed or proposed resources. Generally, this means no listed resources will be exposed to the action and its environmental consequences. A determination of "not effect" does not require consultation with the U.S. Fish and Wildlife Service and/or NMFS. Please

consult Appendix B of this Opinion for guidance on making an ESA/MSA effects determination for NMFS trust resources.

Pervious. See "Porous" definition**.**

Permeable. See "Porous" definition.

Post-construction stormwater management plan (PCSMP). A stormwater plan specifically prepared to address long-term stormwater management and treatment from a HUD-funded project, which demonstrates compliance with NMFS' stormwater criteria.

Predevelopment or predeveloped condition. The naturally vegetated land cover and contour (i.e., shape and slope) that would historically have been on a site.

Porous. A material that allows water to pass through it.

Porous pavement. Permeable pavement surface with a stone reservoir underneath. The reservoir temporarily stores surface runoff before infiltrating it into the subsoil. Runoff is thereby infiltrated directly into the soil and receives some water quality treatment. Porous pavement often appears the same as traditional asphalt or concrete but is manufactured without "fine" materials, and instead incorporates void spaces that allow for infiltration.

Post-development or post-developed condition. The land cover on a site as a result of development activities, which may include but is not limited to buildings; roads; sidewalks; ornamental, and working and protected landscapes.

Rainfall management. Use of BMPs to treat and reduce the volumes of stormwater leaving a site by infiltrating or evaporating rain that falls directly on the surface of the BMP. Examples of rainfall management facilities include restored soils, vegetated roofs, and contained planters. When rainfall management BMPs are used, they are referred to as "Runoff Prevention BMPs".

Rain garden. A "sunken garden bed" with gentle side slopes that collects and treats stormwater runoff by ponding runoff and passing it through soils and plants. A rain garden does not function like a wetland nor is it considered a wetland for regulatory purposes.

Redevelopment. Any project where existing land cover, which was previously developed, is changed to another land cover.

Responsible Entity (RE). The city, county, state or Tribe that assumes the responsibility for environmental review decision-making and action that would otherwise apply to HUD, including the responsibility to comply with ESA.

Retention/Retain. The attenuation (i.e., control of flow) of runoff from a design storm by reducing volume on-site through infiltration, evaporation, and evapotranspiration.

Retrofit. Any project that improves water quality from an existing developed area without a change to the land cover contributing runoff.

Runoff prevention BMP. Any BMP that reduces the volume of runoff generated by evaporating and/or infiltrating rainfall that falls directly on it.

Runoff reduction BMP. Any BMP that decreases the volume of runoff leaving a site by evaporating and/or infiltrating runoff directed to the BMP from another area.

Soakage trench. An excavated trench filled with coarse stone that receives runoff and stores it until it infiltrates underground into surrounding soils.

Stormwater or runoff. Surface water runoff that originates as precipitation on a particular site, basin, or watershed.

Stormwater planter. A structural container (either above or sunken into the ground) with vertical side slopes and a flat bottom that collects and treats stormwater runoff, primarily from rooftops, driveways, sidewalks, parking lots, and streets by ponding runoff and passing it through soils and plants.

Treatment/Treat. To reduce pollution in runoff from the water quality design storm.

Treatment train. The use of multiple site- and/or BMP-scale strategies to reduce pollution.

Tree planting. To install a new tree in a permanent location that provides adequate soil volume and other site conditions to meet its long-term health needs.

Tree protection. To preserve trees by fencing, limiting soil compaction, guarding from animal damage and other practices.

Water quality, or quantity, design storm. Depth of rainfall predicted from a storm event of a given frequency used to size water quality treatment and flow control facilities. Watershed. Designated hydrologic unit, or drainage area, typically at the 5th or 6th field, for identification and hierarchical cataloging purposes.

Water quality conveyance swale. Long, planted, open channel that conveys stormwater runoff. These facilities are generally not designed to promote infiltration. Instead, they are designed for conveyance and sometimes detention, providing some water quality treatment.

Underground injection control (UIC). A manmade structure that places fluid underground.[3]

Upper Discharge Endpoint. The design storm depth above which additional discharge does not cause erosion because the floodplain begins conveying water and slows flows; and, impervious surface extent has little effect on stream discharges.

U.S. Department of Housing and Urban Development (HUD).

Vegetated filter strips. A dispersion BMP that manages runoff flowing onto it from pavement and roof surfaces.

Vegetated stormwater facilities. This is a general term that applies to rain gardens, stormwater planters, and LID swales, which are configured differently, but achieve a similar, high level of treatment and runoff reduction through intentional temporary ponding of water.

[3] Oregon Department of Environmental Quality. Frequently Asked Questions on UICs. Retrieved from: http://www.deq.state.or.us/wq/uic/faqs.htm#What_is_a_UIC_System