

**U.S. ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT
SUPPLEMENT TO THE NATIONAL DECISION DOCUMENT
FOR 2017 NATIONWIDE PERMIT 48 AND REGIONAL CONDITIONS
19 March 2017**

This document is a supplement to the national decision document for Nationwide Permit (NWP) 48, *Commercial Shellfish Aquaculture Activities*, and addresses the regional modifications and conditions for this NWP. The Northwestern Division Engineer has considered the potential cumulative adverse environmental effects that could result from the use of this NWP, including the need for additional modifications of this NWP by imposing regional conditions to ensure that those cumulative adverse environmental effects are no more than minimal. These regional conditions are necessary to address important regional issues relating to jurisdictional waters and wetlands. These regional issues are identified in this document. These regional conditions are being required to ensure this NWP authorizes activities that result in no more than minimal individual or cumulative adverse environmental effects.

1.0 Background

In the June 1, 2016, issue of the Federal Register (81 FR 35186), the U.S. Army Corps of Engineers (Corps) published its proposal to reissue 50 existing NWPs and issue two new NWPs. To solicit comments on its proposed regional conditions for these NWPs, the Corps, Seattle District Regulatory Branch (Seattle District) issued a public notice on June 20, 2016. The issuance of the NWPs was announced in the January 6, 2017, Federal Register notice (82 FR 1860). The Seattle District issued a public notice on January 27, 2017, to announce the Federal Register final rule as well as the beginning of the 60-day period for States, Tribes, and the Environmental Protection Agency (EPA) to complete their water quality certification (WQC) processes for the NWPs and the beginning of the 90-day period to complete their Coastal Zone Management Act (CZMA) consistency determination processes. After the publication of the final NWPs, the Northwestern Division considered the need for regional conditions for this NWP. The Northwestern Division's findings are discussed below, and have been informed by the analysis of the Seattle District also contained below.

2.0 Consideration of Public Comments

2.1 General Comments

In the June 1, 2016, issue of the Federal Register (81 FR 35186), the U.S. Army Corps of Engineers (Corps) published its proposal to reissue 50 existing NWPs and issue two new NWPs. To solicit comments on its proposed regional conditions for these NWPs, the Seattle District (District) issued a public notice on June 20, 2016. Based on comments received during this public review period, the District revised the proposed regional conditions specific to NWPs and regional general conditions (RGCs) applicable to all NWPs in the Seattle District's regulatory boundaries. Because of heightened public interest in NWP 48 – *Commercial Shellfish Aquaculture Activities*, the District issued a second public notice on November 30, 2016, to allow an additional opportunity for public comment. Comments in response to the public notices are addressed in section 2.0.

Issues pertaining to the NWP regional conditions were discussed with the resource agencies (Environmental Protection Agency, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Washington Department of Ecology, Washington Department of Fish and Wildlife, and Washington Department of Natural Resources) in a series of ten meetings held on November 18, 2015, December 15, 2015, January 7, 2016, February 4, 2016, March 3, 2016, July 7, 2016, September 1, 2016, October 6, 2016, January 5, 2017, and February 2, 2017. In addition, electronic communications concerning the development of regional conditions occurred during the review period from November 3, 2015 to March 18, 2017. As discussed in Section 6.1 (Consultation Summary) of this document, correspondence was sent and meetings were held with tribes in Washington State during the review period. Two public meetings were held to discuss aquaculture activities authorized by NWP on April 20, 2016, and September 13, 2016. In response to the public notices, comment letters from organizations, tribes, agencies, and individuals were received. The Seattle District reviewed and considered all comments received in response to the notices.

The issuance of the NWPs was announced in the January 6, 2017, Federal Register notice (82 FR 1860). After the publication of the final NWPs, the District finalized the regional conditions for the NWPs. The final regional conditions are in section 9.0. The Northwestern Division's findings are discussed below.

Comments in Response to Public Notice:

Comment 1 (Compensatory Mitigation and “No Net Loss”): One commenter stated the NWP Program incorporates compensatory mitigation requirements unevenly, and should do more to ensure impacts to jurisdictional waters and wetlands are fully offset. One commenter supported the Corps' preference for mitigation banks and in-lieu fee programs to compensate for losses to jurisdictional waters. One commenter objected to the Corps' compensatory mitigation preferences for mitigation banks and in-lieu fee credits, stating the preferred compensatory mitigation be avoidance and then on-site restoration of wetlands. One commenter stated “no net loss” should not be applied for activities where redevelopment is planned or where landscapes have been previously modified, as it creates conditions where nonfunctional and poor habitats are not improved. One commenter stated unless it can be shown site specific and cumulative impacts of past activities allowed under NWP 12, 14, 21, 29, 39, 42, 43, 44, 50, 51, and 52 have resulted in no net loss, it is recommended the 1/2 acre be reduced to ensure protections are in place. One commenter urged the Corps to reevaluate the amount of mitigation required for impacts.

Response 1: Compensatory mitigation as required by NWP general condition 23 – *Mitigation* is determined on a case by case basis. Compensatory mitigation of NWP authorized activities can be required by the district engineer after he or she reviews the PCN and determines compensatory mitigation is necessary to comply with the “no more than minimal adverse environmental effects” requirement for NWPs (see 33 CFR 330.1(e)(3)). There is no federal statute or regulation requiring “no net loss” of aquatic resources. The “no overall net loss”

goal for wetlands articulated in the 1990 U.S. EPA-Army Memorandum of Agreement for mitigation for Clean Water Act Section 404 permits states the Section 404 permit program will contribute to the national goal. The 1990 Memorandum of Agreement only applies to standard individual permits. All compensatory mitigation must comply with the 2008 Federal Mitigation Rule (see 33 CFR 332), which establishes the standards and criteria for the use of all types of compensatory mitigation on the various Department of the Army permits, including NWP. The Federal Mitigation Rule establishes the preference for compensatory mitigation types (banks, in-lieu fee programs, permittee responsible on-site/in-kind, and off-site/out-of-kind). To ensure wetland functions are mitigated, RGC 8 – *Mitigation* was developed to require compensatory mitigation for all permanent wetland losses exceeding 1,000 square feet. Projects may result in the loss of up to ½ acres of wetlands can still be considered minimally impacting due to compensatory mitigation that offsets the loss of functions.

Comment 2 (Endangered Species Act Section 7(a)(1) and 7(a)(2) Programs): One commenter recommended the Corps implement integrated Section 7(a)(1) and 7(a)(2) programs as articulated in the Endangered Species Act (ESA), which requires Federal agencies to utilize their authority in furtherance of the purpose of the ESA by carrying out programs for the conservation of endangered and threatened species, and requires that any actions carried out by the Federal agencies are not likely to jeopardize the continued existence of any endangered or threatened species.

Response 2: NWP regulations at 33 CFR 330.4(f) and NWP general condition 18 – *Endangered Species*, ensures all activities authorized by NWPs comply with Section 7 of the Endangered Species Act (ESA). Section 330.4(f)(2) and paragraph (c) of NWP general condition 18 requires non-federal permittees to submit PCNs “if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat.” Federal permittees should follow their procedures for ESA Section 7 compliance (see 33 CFR 330.4(f)(1)). The Corps evaluates non-federal project proponent’s PCNs and makes an effect determination for the proposed NWP activity in accordance with Section 7 of the Endangered Species Act. When evaluating a PCN, the district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat. The applicant shall not begin work until the Corps has provided notification the proposed activity will have “no effect” on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-federal project proponent does not comply with 33 CFR 330.4(f)(2) and NWP general condition 18, and does not submit the required PCN, then the activity is not authorized by NWP. In such situations, it is an unauthorized activity and the Corps will determine an appropriate course of action to respond to the unauthorized activity.

Comment 3 (Communication with Native American Tribes): One commenter stated the Seattle District should improve their communications with Indian Nations and Tribes to effectively advocate for tribal treaty-protected resources and rights. One commenter stated NWPs do not provide adequate notification and opportunity for tribal consultation. One commenter noted NWP general condition 32 – *Mitigation*, describes Federal and state agencies

that will be notified in the event of a proposed activity, but fails to provide an avenue for coordination with locally affected tribes under the Corp's tribal trust responsibility. The same commenter stated an interest in consulting on individual bank armoring projects and adequate notification of construction schedules and plans, so unintended impacts to current fishing practices at usual and accustomed fishing grounds can be avoided. One commenter stated no NWP should be authorized without consultation with the tribe if the proposed activity will adversely impact treaty reserved resources, or impede a tribe's ability to exercise their treaty rights. One commenter asked the Corps consider, in addition to direct and cumulative effects, indirect effects on treaty rights. One commenter stated the Corps, as a part of the Department of Defense, were not meeting their federal trust obligations as articulated by the passage of Resolution SPO-16-002 from the National Congress of American Indians. One commenter pointed out the Seattle District had recently changed the amount of information made available to Native American Tribes through informal requests, requiring the submission of Freedom of Information Act (FOIA) requests which impedes effective communication. One commenter stated concern about the streamlining of certain shoreline (saltwater and freshwater) activities through regional conditioning of NWPs, which may include significant adverse effects on treaty rights and natural resources within usual and accustomed fishing areas.

Response 3: The number of tribes in each state and their interest in the Corps' regulatory review of projects varies greatly; therefore, Corps headquarters defers decisions on how best to coordinate with tribes on a project-by-project basis to each district. During the NWP reissuance process, the Seattle District sent the federally recognized tribes with interests in Washington State five letters with updates, meeting invitations, and information about the reissuance process. The Seattle District has 33 tribes either with reservations and/or historical lands within the District's boundaries. At this time, the Seattle District has established Tribal Notification Procedures with the following 23 Tribes: Confederated Tribes of the Colville Reservation, Cowlitz Indian Tribe, Confederated Tribes of Grand Ronde, Jamestown S'Klallam Tribe, Kalispel Tribe of Indians, Lower Elwha Klallam Tribe, Lummi Nation, Muckleshoot Indian Tribe, Nez Perce Tribe, Nisqually Indian Tribe, Port Gamble S'Klallam Tribe, Puyallup Tribe of Indians, Confederated Tribes of the Samish Indian Nation, Skagit River System Cooperative, Skokomish Tribal Nation, Snoqualmie Indian Tribe, Spokane Tribe, Squaxin Island Tribe, Stillaguamish Tribe of Indians, Suquamish Tribe, Swinomish Indian Tribal Community, Tulalip Tribes and the Confederated Tribes of the Umatilla Indian Reservation. The Seattle District established coordination procedures with these Tribes to ensure NWP activities comply with NWP general condition 17 – *Tribal Rights*. Through these procedures, the Seattle District contacts the appropriate Tribe(s) and requests comments on proposed projects. The District will continue to reach out to the remaining tribes to establish notification procedures. Any tribe without a coordination procedure in place is also invited to contact the Seattle District to discuss establishing a notification procedure. If comments are received from a tribe raising concerns regarding tribal rights, the Corps encourages communication between the tribe and the project proponent to ensure compliance with NWP general condition 17. If a tribe objects to a project and a resolution between the project proponent and the tribe cannot resolve the issue, the Corps

will make a determination on whether the proposed action would comply with NWP general condition 17. The Seattle District utilizes these procedures to streamline obtaining site specific input from the Tribes on NWPs, helping the Corps comply with Section 106 of the National Historic Preservation Act and fulfill its trust obligations. Without these procedures, requesting and distributing of information would take place using the FOIA procedures. The District is reviewing its FOIA procedures specific to tribal coordination as a result from the recent listening sessions with Tribes. The Corps uses the Department of Defense American Indian and Alaska Native Policy to guide its interactions with tribes. The Corps also had developed additional policies, which are available at: <http://www.usace.army.mil/Missions/Civil-Works/Tribal-Nations/>. NWP general condition 17 must be complied with for all NWP activities. The Seattle District has added additional PCN requirements to the following: NWPs 4, 5, 6, 10, 12, 14, 19, 23, 27, 28, 33, 35, 36, and 41 and RGCs 5, 6, 7, and 8.

Comment 4 (NWP User’s Guide): One commenter encouraged the Seattle District to retain the use of notes in the NWP User’s Guide to assist the regulated public in the permitting process.

Response 4: The NWP User’s Guide is a tool used by the Seattle District to inform the regulated public about the permitting process in Washington State, as it relates to the NWPs. Notes in the User’s Guide are an effective way to provide relevant information to project proponents without adding conditions to restrict the use of the permit. The Seattle District agrees notes improve the regulatory process, and strives to provide important information without burdening the public with too much information.

Comment 5 (Support for new RGCs): Many commenters expressed support for individual RGCs; one commenter supported the following proposed new RGCs: RGC 1 – *Pre-Construction Notification*, RGC 6 – *Crossings of Waters of the United States*, RGC 7 – *Stream Loss*, RGC 8 – *Mitigation*, RGC 10 – *Submerged Aquatic Vegetation and Forage Fish*, and RGC 14 – *Temporary Impacts and Site Restoration*. One commenter offered support for proposed revisions that add clarity and flexibility.

Response 5: Comments in support of, or comments related to specific RGCs have been noted or addressed under the respective RGC comment review section. General comments of support have been noted. Changes have been made to these conditions as discussed in the comment review sections of the respective RGCs to add clarity and flexibility.

Comment 6 (Provide Additional Summary Data in Correspondence to Tribes): One commenter remarked the Corps should provide summaries including tables and a geographic distribution of concerns when corresponding with Tribes during the NWP re-issuance to facilitate the development of comments.

Response 6: The Seattle District recognizes the challenges in coordinating with Tribes at both the policy and staff levels. Throughout the process of issuing the NWPs, letters were prepared and sent to individual Tribes to inform them of upcoming tribal meetings, postings in the Federal Register, public notices, comment reviews, and the ability to request government-to-government meetings. The Corps relies on Tribes to provide comments and respond to inquiries to

understand concerns and identify issues. Comments received in response to the public notice announcing the draft proposed regional conditions were made public and available for review on the Seattle District website. The District will continue to update and improve coordination with Tribes to insure effective and efficient communication.

Comment 7 (Hold Meetings for Tribes on the East Side of the Cascade Mountains): One commenter requested that the Seattle District hold a consultation meeting on the East Side of the Cascade Mountains to recognize the regulatory reach across Washington State, and requested a staff level meeting to better understand the NWP program in preparation for briefing their Tribal Council.

Response 7: The Corps provided multiple invitations during the re-issuance to Tribes to request meetings on the east side of the Cascade Mountains and did not receive any requests. The Seattle District is committed to its relationships with Tribes in Washington State, and welcomes all requests to participate in staff level meetings and government-to-government consultations.

Comment 8 (Revocation of Specific NWPs): One commenter recommended only NWPs 1, 2, 5, 9, 10, 11, 16, 20, 24, 28, 30, 34, 37, and 46 should be reissued with the current PCN requirements, and all other NWPs should be revoked requiring standard individual permit review. The commenter further stated all other NWPs should automatically trigger the requirements of NWP general condition 20 – *Historic Properties* requiring compliance with the National Historic Preservation Act, and triggering a PCN. One commenter recommended NWPs 12; 14; 21; 29; 39; 40; 44; 48; and 50 be rescinded and not re-issued because they are not categories of activities similar in nature. The same commenter stated all other NWPs should include a requirement for an alternatives analysis, and requested the EPA review its Section 404(b)(1) guidelines to determine why an alternatives analysis is not required for NWPs.

Response 8: The NWPs authorize activities having no more than minimal individual and cumulative adverse environmental effects. Some NWP activities may proceed without notifying the Corps, as long as those activities comply with all applicable terms and conditions of the NWPs, including regional conditions imposed by division engineers. Other NWP activities cannot proceed until the project proponent has submitted a pre-construction notification to the Corps, and for the NWPs requiring pre-construction notifications the Corps has 45 days to notify the project proponent whether the activity is authorized by NWP. In some cases the project cannot proceed unless notification from the Corps occurs, despite the 45 day timeline. Such cases include compliance with NWP general condition 18 – *Endangered Species*, and NWP general Condition 20 – *Historic Properties*. The NWP program provides a three tiered approach to ensure compliance with Section 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act of 1899. Those three tiers are: (1) The terms and conditions of the NWPs issued by Corps Headquarters; (2) the authority of division engineers to modify, suspend, or revoke NWPs on a regional basis; and (3) the authority of district engineers to modify, suspend, or revoke NWPs on a case-by-case basis. The regional conditions, including regional PCN requirements, and the ability to evaluate PCNs on a case-by-case basis will ensure the NWPs authorize activities have no more than minimal individual and cumulative adverse environmental effects in

Washington State. The conditions of NWP general condition 20 – *Historic Properties*, as written, applies to every project authorized by NWP. Section 404(e) of the Clean Water Act allows the issuance of general permits for any category of activity similar in nature resulting in no more than minimal individual and cumulative adverse environmental effects. To restate language in 82 FR 1864, “[The Corps] interpret[s] the requirement for general permits to authorize categories of activities that are similar in nature broadly, to provide program efficiency, to keep the number of NWPs manageable, and to facilitate implementation by the Corps and project proponents that need to obtain Department of the Army (DA) authorization for activities that have only minimal adverse environmental effects.” As articulated in 82 FR 1868, “Alternatives analyses are not required for specific activities authorized by NWPs (see 40 CFR 230.7(b)(1)). Paragraph (a) of NWP general condition 23 requires project proponents avoid and minimize adverse effects to waters of the United States to the maximum extent practicable on the project site, but “an analysis of off-site alternatives is not required.” Requests for review of the 404(b)(1) guidelines should be sent directly to the EPA.

Comment 9 (Restrict the Use of NWPs in the Skagit and Samish River Basins): One commenter recommended reducing the amount of direct habitat loss to wetlands and streams in the Skagit and Samish River basins, stating the Northwest Indian Fisheries Commission’s (NWIFC) State of Our Watersheds report offers evidence to the perilous state of the Tribal salmon stocks. The same commenter stated the NWP program as currently administered appears to be a significant factor in the decline of salmon and steelhead populations.

Response 9: The Seattle District recognizes ecosystems within Washington State have been altered by cumulative impacts over time. Those cumulative impacts to ecosystems may be caused by, but are not limited to: pollution from land, rivers, and oceans; overharvesting fishery resources; habitat loss; species introductions; nutrient inputs; activities reducing necessary sediment inputs; land use changes converting habitats such as forests, wetlands to urban, industrial, and recreational developments; the construction and operation of ports and other facilities; transportation projects; dredging; aquaculture activities; and shore protection structures. In order to evaluate individual project impacts to ensure they result in no more than minimal individual and cumulative adverse environmental effects, division engineers modify NWPs to impose regional conditions and add PCN requirements. Through the PCN process, the Corps is able to evaluate projects on a case-by-case basis and issue notification to Tribe(s) with resource concerns near the proposed project. The Seattle District has established coordination procedures with tribes to help in this notification process. Any tribe without a coordination procedure in place is invited to contact the Seattle District and Seattle District will work with the tribe to develop one. The Corps reviews and considers comments on projects the Tribe(s) identify as needing further coordination. If comments are received from a tribe raising concerns regarding tribal rights, the Corps encourages communication between the tribe and the project proponent to ensure compliance with NWP general condition 17. If a tribe objects to a project and a resolution between the project proponent and the tribe cannot resolve the issue, the Corps will make a determination on whether the proposed action would comply with NWP general condition 17. If the district engineer determines, after considering mitigation, that there will be

more than minimal individual or cumulative adverse environmental effects, he or she will exercise discretionary authority and require an individual permit for the proposed activity. That determination will be based on consideration of the information provided in the PCN and other available information obtained through ESA Section 7, Tribal, NHPA Section 106, or other consultation(s). After review of the information submitted during the public comment period for the proposed Seattle District regional conditions, several changes were made to address concerns with Tribal salmon stocks. RGCs 3, 5, 6, and 7 have been modified to address these concerns. NWP general condition 23 – *Mitigation*, as well as RGC 10 – *Forage Fish*, will adequately address direct habitat loss to wetlands and other aquatic resources, and RGC 7 – *Stream Loss*, will adequately address losses to streams authorized by NWP.

Comment 10 (Established NWP Limits and Thresholds): One commenter requested additional information to show how established NWP limits and thresholds ensure no more than minimal adverse effects, especially where treaty rights may be affected. One commenter stated with the predicted levels of population growth in Washington State, 59% increase by 2030 (State of Our Watershed Report 2016), non-tidal water impacts of 1/2 acre and losses of 300 feet of stream habitat from a cumulative effects basis are no longer minimal. One commenter urged the Seattle District to reevaluate authorized limits and prohibit the use of NWPs in areas where existing conditions from cumulative impacts would result in more than a minimal adverse environmental effects, stating that NWPs in areas where critical and essential habitat exists for ESA listed species as well as other salmon and forage fish is essential.

Response 10: The limits of activities authorized by NWPs as described in the individual NWP permit language set the parameters for what is considered a minimally impacting activity.

The number of tribes in each state and their interest in the Corps' regulatory review of projects varies greatly; therefore, Corps headquarters defers decisions on how best to coordinate with tribes on a project-by-project basis to each district. Seattle District's has regulatory jurisdiction within Washington State. During the NWP reissuance process, the Seattle District sent the federally recognized tribes within Washington State five letters with updates, meeting invitations, and information about the reissuance process. The Seattle District has established coordination procedures with a number of tribes to help ensure NWP activities comply with NWP general condition 17 – *Tribal Rights*. Any tribe without a coordination procedure in place is invited to contact the Seattle District and Seattle District will work with the tribe to develop one. If comments are received from a tribe raising concerns regarding tribal rights, the Corps encourages communication between the tribe and the project proponent to ensure compliance with general condition 17. If a tribe objects to a project and a resolution between the project proponent and the tribe cannot resolve the issue, the Corps will make a determination on whether the proposed action would comply with NWP general condition 17. The preamble language for the NWPs in the Federal Register contains rationale for the establishment of parameters such as acreage limits and PCN thresholds at 82 FR 1869. ESA-listed species and their habitat are adequately addressed by NWP general condition 18 – *Endangered Species*. Concerns related to

forage fish are adequately addressed by NWP general condition 2 – *Aquatic Life Movements*, NWP general condition 3 – *Spawning Areas*, and RGC 7 – *Forage Fish*.

The Corps Headquarters has completed decision documents for each NWP which includes a discussion of compliance with applicable laws, consideration of public comments, an alternatives analysis, and a general assessment of individual and cumulative environmental effects, including the general potential effects on each of the public interest factors specified at 33 CFR 320.4(a). These documents are available at: http://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Nationwide-Permits/2017_NWP_FinalDD/

Comment 11 (Increased Documentation and Transparency): One commenter suggested the Corps increase the documentation and transparency of the NWPs so the full extent of impacts can be recognized.

Response 11: NWPs, as well as other general permits, are intended to reduce administrative burdens on the Corps and the regulated public while maintaining environmental protection, by efficiently authorizing activities having no more than minimal adverse environmental effects, consistent with Congressional intent in the 1977 amendments to the Federal Water Pollution Control Act. In order for the NWP program to function as intended, keeping the documentation commensurate with the project impacts is critical to reducing unnecessary permitting burdens while allowing fair and reasonable use of the nation’s aquatic resources. In the Federal Register publication of the 2017 NWPs (82 FR 1872), the Corps announced as a part of the commitment toward increasing transparency of regulatory decisions, quarterly reports will be posted on the headquarters’ website. These reports will show summary statistics pertaining to the use of each NWP, aggregated per Corps District, and may include the number of verifications provided per quarter, acres of waters of the United States permanently lost, as well as including summary information on the use of waivers during the previous quarter. The Seattle District also posts by the 15th of the following month a list of all final decisions. This list can be found at: <http://www.nws.usace.army.mil/Missions/Civil-Works/Regulatory/Permit-Decisions-Appeals/>

Comment 12 (Avoid Impacts to Treaty Reserved Resources): One commenter urged the Corps to avoid making in-water and land use decisions that will impact treaty-reserved resources (cultural, fishery, and other natural resources) within adjudicated usual and accustomed fishing areas. Another commenter stated the NWPs result in significant impacts to the tribes' treaty-secured salmon and shellfish resources and that the use of the NWP process needs to be significantly curtailed.

Response 12: NWP general condition 17 – *Tribal Rights* and NWP general condition 20 – *Historic Properties*, provide protection of cultural resources and treaty U&A areas as they relate to the NWP program. Additionally, NWP general condition 23 – *Mitigation*, requires all project to avoid and minimize adverse effects, both temporary and permanent, to waters of the U. S. to the maximum extent practicable. The Seattle District has established coordination procedures with tribes to help ensure NWP activities comply with NWP general condition 17. Any tribe without a coordination procedure in place is invited to contact the Seattle District and Seattle

District will work with the tribe to develop one. NWP general condition 17 must be complied with in all cases. Some new RGCs were developed, including RGC 7 – *Stream Loss*, that states no activity authorized by NWP shall result in the loss of perennial stream beds. RGC 6 – *Crossings of Waters of the United States*, was strengthened to ensure the best design for salmonid passage is utilized.

Comment 13 (Cumulative Effects): Multiple commenters stated the Corps needs to do a more comprehensive, rigorous, and transparent cumulative effects assessment. One commenter stated cumulative impacts are a significant reason why the Treaty Rights at Risk initiative has risen to a regional and national platform; delaying a cumulative effects analysis is not an appropriate solution. One commenter stated the impacts of activities covered by NWPs may appear minimal on an individual basis, but in aggregate can have serious consequences to treaty-reserved resources. One commenter noted an analysis should be done for each NWP at a watershed level, and this data should be made available for future NWP reauthorizations so trends can inform the need for regulatory changes. Another commenter stated that the Corps must look at the immediate impacts of dredging and filling and the net effects of the dredging and filling during and after placement has occurred to meet section 404(b)(1) guidelines. The same commenter noted that salmon recovery and restoration efforts in the Puget Sound are not intended to provide mitigation for Corps-approved dredge and fill activities.

Response 13: The phrase “minimal cumulative adverse effect on the environment” refers to the collective direct and indirect adverse environmental effects caused by the all the activities authorized by a particular NWP during the time period the NWP is in effect in a specific geographic region. The cumulative impact analyses in the national decision documents, including the NEPA cumulative effects analysis and the 404(b)(1) impacts analysis, examine the wide variety of activities affecting the structure, dynamics, and functions of the nation’s waters and wetlands. The ecological functionality or ecological condition of those waters and wetlands are directly and indirectly affected by many types of human activities, not just discharges of dredged or fill material regulated under Section 404 of the Clean Water Act or structures or work regulated under Section 10 of the Rivers and Harbors Act of 1899. The Corps’ NEPA cumulative effects analyses considers past actions in the aggregate, consistent with the Council on Environmental Quality’s 2005 guidance entitled “Guidance on the Consideration of Past Actions in Cumulative Effects Analyses.” The aggregate effects of past actions includes the present effects of past actions that were authorized by earlier versions of the NWPs, as well as other DA permits. In the national decision documents, the Corps added more discussion of the contribution of reasonably foreseeable future actions to NEPA cumulative effects, based on general information on reasonably foreseeable future actions that can be discerned at a national scale for categories of activities associated with NWP activities. Many of the reasonably foreseeable future actions related to the operation of the facility, after the permitted activities were completed. The Corps does not have the authority to regulate the operation of facilities that may have been constructed under activities authorized by NWPs or other DA permits, unless those operation activities involve discharges of dredged or fill material into waters of the United States and/or structures or work in navigable waters of the United States. The Seattle District

completed a supplemental decision document for each NWP during the re-issuance process that discussed cumulative effects at a regional level if they differ from the national cumulative effects analysis and required the division engineer to modify, suspend, or revoke NWPs on a regional basis (see 33 CFR 330.5(c)). When evaluating NWP preconstruction notifications (PCNs), the district engineer evaluates adverse environmental effects in an appropriate geographic area (e.g., watershed, ecoregion, Corps district geographic area of responsibility).

Comment 14 (NWP Use at CERCLA Sites): One commenter stated if a site is managed under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) through a restoration plan, NWPs should not have special conditions for CERCLA requirements such as pre and post project sediment sampling. The same commenter stated it was not clear under what authority extra conditions (such as sediment sampling and analysis plans) were being requested.

Response 14: The EPA has the responsibility to direct and conduct remediation activities authorized by CERCLA, and is the federal agency responsible to administer Section 401 water quality certification under the Clean Water Act. NWP activities authorized by the Corps are required to obtain individual Section 401 water quality certification at CERCLA project locations if they cannot meet the 401 conditions issued by the EPA for the NWPs. The Seattle District has a notification agreement with EPA for activities that may be authorized by NWP for non-federal project proponents proposing work within CERCLA sites. If the activity, after review of the PCN and notification to the EPA does not meet all Section 401 conditions an individual water quality certification is required. The authority to add special conditions to NWP verifications is discussed in NWP final rule (82 FR 2005); “D. District Engineer’s Decision,” states, “[t]he district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns” (See also 33 CFR 330.6).

Comment 15 (NWPs are not Similar in Nature): One commenter stated many NWPs are not a category “similar in nature” as articulated in Section 404(e) of the Clean Water Act, or have more than minimal adverse environmental effects when performed separately or cumulatively. The same commenter stated, “categories of activities that are similar in nature,” should be interpreted narrowly, not broadly.

Response 15: 82 FR 1864 provides a thorough evaluation of comments regarding the NWP program’s compliance with Section 404(e) of the Clean Water Act. To restate, “[The Corps] interpret[s] the requirement for general permits to authorize categories of activities that are similar in nature broadly, to provide program efficiency, to keep the number of NWPs manageable, and to facilitate implementation by the Corps and project proponents that need to obtain Department of the Army (DA) authorization for activities that have only minimal adverse environmental effects.”

Comment 16 (NWPs are Not an Important Tool for Minimizing Impacts): One commenter remarked NWPs are not an important tool for protecting the environment by providing incentives

to minimize impacts to jurisdictional waters, as they allow the filling of the Nation's wetlands without any alternative analysis or public notice and comment.

Response 16: The NWP program provides valuable protection to the Nation's aquatic resources by establishing incentives to avoid and minimize losses of jurisdictional waters and wetlands in order to qualify for the streamlined NWP authorization. The Seattle District acknowledges activities authorized by NWP may result in impacts to jurisdictional waters of the U.S., including wetlands, however NWPs only authorize those activities resulting in no more than minimal individual and cumulative adverse environmental effects. In addition, the NWPs help the Corps better protect the aquatic environment by focusing its limited resources on those activities having the potential to result in more severe adverse environmental effects. A 404(b)(1) guidelines analysis has been provided in the national and supplemental decision documents for the issuance of each NWP, which includes comments received during a public notice comment period as well as a complete evaluation of all comments received. When Section 404(e) of the Clean Water Act became law in 1977, lawmakers endorsed the general permit concept that was developed by the Corps in its 1975 and 1977 regulations (see 40 FR 31335 and 42 FR 37140, 37145 respectively). For the issuance or reissuance of NWPs and other general permits, the public involvement process occurs during the development of the general permit.

Comment 17 (Issue Individual Permits for all Section 404 NWPs): One commenter urged the Corps to "comply with the Clean Water Act and return to individual permit applications for the disposal of dredged or fill material in order to preserve and protect our Nation's Wetlands." The same commenter stated the NWPs are not streamlined because there are over 50 NWPs occupying many pages in the Federal Register.

Response 17: For details on compliance with Section 404(e) of the Clean Water Act, please refer to 82 FR 1868. Keeping the number of NWPs manageable is a key component for making the NWPs protective of the environment and streamlining the authorization process. The number of NWPs available to the regulated public has increased over the years to recognize the categories of activities that are similar in nature. To facilitate the public use of the NWPs, the Seattle District issues a "User's Guide," offering guidance on how to best utilize the NWPs to receive authorization for their project. Members of the regulated public may choose to hire consultants to submit PCNs on their behalf, but there are no requirements do so and the Corps frequently works with project proponents to answer all questions related to use of the NWPs.

Comment 18 (Excessive Supplemental Information Required): One commenter was concerned about the increases in supplemental information required in permit application packages to obtain NWP coverage for projects that have a minimal environmental impact.

Response 18: 82 FR 1979 contains a description of how the Paperwork Reduction Act interacts with the NWP program requirements. The Seattle District recognizes the need to reduce the paperwork burden on the regulated public for activities resulting in only minimal individual and cumulative environmental effects. Throughout the course of PCN review, the Seattle District may send requests to project proponents for information required to verify that a project meets

all of the NWP terms and conditions. The Seattle District special public notice issued on June 20, 2016, solicited comments on new and modified regional conditions requesting new information requests, designed to improve the review process by avoiding numerous information requests, speed up permit processing time, and improve program transparency. Because some of the information requested may not be needed to verify every project, the Seattle District has modified several of the RGCs, and the regional conditions of specific NWPs.

Comment 19 (Electronic PCN Submittal): One commenter encouraged the Corps to allow electronic PCN submittals to further streamline the Section 404 and Section 10 permitting process, and to reduce paperwork.

Response 19: Under NWP general condition 32 – *Pre-Construction Notification*, Paragraph (c) states: “Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.” The Seattle District does not currently have a system allowing electronic submission of PCN through a web-browser. Because the Corps keeps physical copies of all documents associated with each project in an administrative record, physical copies will be requested for all documents more than a few pages. Project proponents may choose to send emails with small attachments; however, current account limitations are restricted to only accept files smaller than 10 megabytes. PCN may be submitted to the Seattle District electronically in the form of a compact disk (CD), or data DVD.

Comment 20 (Use of Chemically Treated Wood): Multiple commenters recommended including an RGC to prohibit the use of wood products treated with biologically harmful leachable chemical components (e.g., copper, arsenic, zinc, creosote, chromium, chloride, fluoride, and pentachlorophenol). Another commenter recommended the Corps discontinue authorization for the use of chemically treated wood except for framing purposes above waters within Washington State, and should prohibit ACZA treated wood on projects with total maximum daily load (TMDL) implementation plans issued by the Department of Ecology. If treated wood is used, it shall be treated with wood preservatives in compliance with the Registration Documents issued by the EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and following the Western Wood Preservatives Institute (WWPI) guidelines and BMPs to minimize the preservative migrating from treated wood into aquatic environments. The same commenter recommended the Corps require compensatory mitigation to offset unavoidable adverse impacts to ESA listed species if the use of treated wood is authorized.

Response 20: NWP general condition 6 – *Suitable Material* requires, “[n]o activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).” Treated wood may be considered a suitable material for activities, as long as the district engineer determines its use complies with this condition. General condition 25, *Water Quality*, requires each project proponent to obtain an individual water quality certification or waiver for discharges authorized by the NWP if the state or authorized tribe has not previously certified compliance of the NWP with Section 401 of the Clean Water Act (see 33 CFR

330.4(c)). If it is determined adverse environmental effects would be more than minimal, the Seattle District will add a special condition to the verification letter requiring compliance with the *EPA Region 10 Best Management Practices for Piling Removal and Installation in Washington State* dated 18 February 2016. The Department of Ecology, the Environmental Protection Agency, and Tribes with 401 authority are the appropriate entities to make effect determinations on issues related to water quality. Compliance with the requirements of the ESA and the use of compensatory mitigation are described in NWP general condition 18 – *Endangered Species*, and NWP general condition 23 – *Mitigation*, respectively. These conditions are adequate to evaluate and mitigate for the adverse environmental effects of a project on a case by case basis.

Comment 21 (Fees for Section 106 Review): One commenter stated the Corps should comply with the 6 July 2001 memorandum *Fees in the Section 106 Process* issued by the Executive Director of the Advisory Council on Historic Preservation (ACHP). The memorandum states, "When, during the identification phase of the Section 106 process, an agency or applicant seeks to identify historic properties that may be significant to an Indian tribe, it may ask for specific information and documentation regarding the location, nature, and condition of individual sites, or actually request that a survey be conducted by the tribe. In doing so, the agency essentially asks the tribe to fulfill the role of a consultant or contractor. In such cases, the tribe would seem to be justified in requiring payment for its services, just as any other contractor."

Response 21: The Corps' activities are consistent with the memorandum. The National Historic Preservation Act and the ACHP's regulations encourage agencies to actively involve Indian tribes in the Section 106 review process. During the identification phase of the Section 106 process, the Corps reviews existing information, seeks information from consulting parties, and gathers information from Indian tribes on historic properties. The Corps does not expect tribes to conduct surveys in response to coordination or to provide specific information or documentation regarding the location, nature, and condition of individual sites. Based on the information gathered, the Corps assesses data needs, such as an archaeological survey, a built environment study, an ethnographic study, an oral history study, etc. The Corps requests the applicant provide the information necessary for the Corps to conduct Section 106 consultation. It is not unusual for an applicant to pay a tribe for their services in completing our data needs request. However, neither the memorandum nor Section 106 requires Federal agencies to pay for any aspect of tribal nor other consulting party participation in the Section 106 process. While the Corps seeks and considers views of participating tribes to factor them into decisions the Corps makes regarding project authorizations, the Corps is not required to submit payment to tribes for their views.

Comment 22 (CZMA on Indian lands): One commenter stated text in the NWP Coastal Zone Management Act Consistency section should clarify the CZMA does not apply to certain lands (e.g., lands held in trust by the United States) and the State does not have a role in reviewing certain Federal permits for consistency with the State's coastal zone management program. The same commenter asked if a tribe has adopted coastal zone management regulations under the

tribal government's inherent authority, would the Corps seek a consistency concurrence from that tribe, or should the Corps defer to the tribal permitting process to protect coastal resources.

Response 22: By its terms, the Coastal Zone Management Act of 1972 (CZMA), as amended (16 U.S. Code section 1451 et seq.), encompasses only the coastal zone management programs of designated "coastal states," including Washington, and specified territories. Following approval of a State's program by the Secretary of Commerce, under section 1456(c)(3)(A) an applicant for a Federal permit to conduct an activity, whether located inside or outside of that State's coastal zone and affecting any land or water use or natural resource of the coastal zone must provide a certification, submitted for State concurrence, that the proposed activity complies with the enforceable policies of the State's program as approved by the National Oceanic and Atmospheric Administration, and that the activity will be conducted in a manner consistent with that program. In carrying out its permitting program, the Corps implements this statutory program through, among others, compliance with NOAA's implementing regulations at 15 CFR Part 930, the Army's regulations at 33 CFR Part 325, and NWP general condition 26 – *Coastal Zone Management* as well as the applicable terms of the NOAA-approved Washington State Coastal Zone Management Program. Together, these references comprise the entirety of the existing Federal program focused expressly on the Congressional policy of protection, preservation, and development of the coastal zone. The extent of the obligations of an applicant for NWP authorization, and the processes the Seattle District will follow in permit application evaluation, are clear in the relevant statute, regulations, and general permit conditions and require no further amplification. As the Act mandates cooperation with coastal States, and extends geographically throughout a statutorily designated coastal zone, there is no provision by which the Seattle District would coordinate specifically under the CZMA with a tribal government with respect to proposed activities located outside, and not affecting uses or resources within, the specified coastal zone. Nevertheless, the Seattle District would take into consideration tribal concerns on the effects of a proposal as required by the NWP general conditions, including NWP general condition 17 – *Tribal Rights*.

Comment 23 (Waivers): One commenter expressed lack of support for waivers for NWP activities because they could be very subjective (making consistency very difficult which is not ideal when implementing regulations), and should not be allowed on an already streamlined process. The commenter also stated there has been no project level or cumulative analysis of impacts to show the use of waivers will result in minimal impacts. The commenter noted waivers also remove the mechanism for tribal notification.

Response 23: Waivers are an important tool to provide flexibility in the NWP program to authorize activities that are determined by district engineers to have no more than minimal adverse environmental effects after coordinating certain waiver requests with other government resources agencies. A waiver can only occur after the district engineer makes a written determination a waiver is appropriate and the proposed activity will result in no more than minimal individual and cumulative adverse environmental effects. To improve transparency, Corps Headquarters is going to start tracking waivers issued by district engineers by adding a

field to our automated information system to indicate whether a waiver was issued for a NWP verification. This information will be displayed on the Corps website. Waivers do not impact tribal notification procedures. Tribes with notification procedures will be notified of the proposed project; the notification will include quantities that would be authorized by any waiver.

Comment 24 (Best Management Practices): One commenter recommended requiring the use of best management practices when working in wetlands and streams.

Response 24: Best management practices (BMPs) are defined under the Definitions section of the NWPs. In most cases where work is proposed in waters of the U.S., the district engineer will defer to individual project proponents and their contractors to design their projects using the most up to date BMPs to ensure activities authorized by NWP result in no more than minimal individual and cumulative adverse environmental effects. NWP general condition 11 – *Equipment*, requires heavy equipment working in wetlands or mudflats to be placed on mats or to implement other measures to minimize soil disturbance. In addition, paragraph (a) of NWP general condition 23 – *Mitigation*, requires permittees avoid and minimize adverse effects to waters of the United States to the maximum extent practicable on the project site.

Comment 25 (Climate Change): One commenter stated there needs to be inclusion of current up-to-date data that includes climate projections including but not limited to sea level rise, and other potential changes to coastal areas (both riverine and saltwater). The commenter elaborated data should be incorporated into the cumulative effects analysis, especially in areas that include bank stabilization and other shoreline modifying activities.

Response 25: Climate change projections have been considered at the national level in the national decision document, and have been detailed in the Federal Register at 82 FR 1878. Available data, including data and studies related to climate change was reviewed when considering whether to add, modify, or revoke regional conditions.

Comment 26 (Regional General Permits (RGPs)): One commenter requested all RGPs for areas smaller than a state be rescinded, as such RGPs invite wetland fill without an alternatives analysis or public notice and comment.

Response 26: RGPs are issued on a regional (limited geographic scope) basis for a category of activities when those activities are similar in nature and cause only minimal individual and cumulative impacts on the aquatic environment. An alternatives analysis is completed when the RGP is issued. It is often appropriate to develop RGPs for an area smaller than a state. Each RGP has specific terms and conditions that must be met in order for an applicant to qualify for an RGP. Similar to NWPs, RGPs encourage project proponents to avoid and minimize impacts.

Comment 27 (Impervious Surfaces and Stormwater): One commenter recommended revoking NWPs that cause or facilitate any increases of impervious surfaces in USGS 12-digit hydrologic unit (HUC-12) watersheds that have 5% or more impervious cover.

Response 27: The Corps does not have the authority to review the impacts from all projects potentially contributing to impervious surface coverage as many developments do not impact

waters of the U.S. Furthermore, impacts related to the discharge of stormwater and water quality because of impervious surfaces are outside of the Corps control and responsibility. Evaluation of these impacts are administered under authority of the National Pollution Discharge Elimination System and Section 401 of the Clean Water Act, by the Environmental Protection Agency on Federal Lands and the State of Washington on state lands.

2.2 Comments on Proposed RGCs

The RGCs in Section 2.2 were proposed by the Seattle District in the June 20, 2016 Public Notice. The final regional conditions for the 2017 NWP are in section 9.

2.2.1 Proposed RGC 1, Pre-Construction Notification (PCN)

This is a new RGC.

1. Pre-Construction Notification (PCN)

When pre-construction notification (PCN) is required, the prospective permittee shall submit a printed copy of the following documents in addition to the national requirements in General Condition 32 (Pre-Construction Notification):

- a. Joint Aquatic Resources Permit Application (JARPA). The applicable portions of the JARPA shall be fully completed and signed.
- b. Documentation to meet NWP general or regional conditions (e.g., General Condition 18. Endangered Species or General Condition 20. Historic Properties).
- c. Drawings in accordance with the Seattle District Corps of Engineers' Drawing Checklist (including a drawing of existing conditions). The checklist is located at: <http://www.nws.usace.army.mil/Missions/CivilWorks/Regulatory/PermitGuidebook/PermitProcessing/SampleDrawings.aspx>
- d. Dated pre-project color photographs showing waters of the U.S. proposed to be impacted on the site and existing shoreline conditions as applicable.
- e. A mitigation plan for unavoidable impacts per regional general condition 8 and General Condition 23. At a minimum, a conceptual mitigation plan should be submitted with the PCN and must include the following information: proposed compensation type (bank or in-lieu-fee credit, restoration, creation, preservation, etc.), location and brief discussion on factors considered for site selection (i.e. soils, water source, potential for invasive species, etc.), amount proposed per resource type and a discussion of how the proposal will compensate for aquatic resource functions and services lost as a result of the project.

The PCN will not be considered complete until all of the required information is received.

Comments in Response to Public Notice:

Comment 1 (Require PCN for all NWPs): One commenter stated all NWP-permitted activities and projects are undertakings as defined within the National Historic Preservation Act of 1966, and due to the high potential for historic properties in and near waters of the U.S., all project should be required to submit a PCN. Some commenters recommended adding a PCN requirement for all NWPs within the Boldt Decision Case Areas to provide adequate protection for tribal trust resources. One commenter recommended a PCN should be required for all projects in anadromous waters or in waters that may affect downstream anadromous waters in order to meet general condition 17. One commenter stated not having PCN on all NWP activities removes the mechanism providing advanced notice to tribes of activities that may impact treaty rights and resources so all NWPs should require PCN.

Response 1: NWP general condition 20 – *Historic Properties* requires non-federal project proponents to submit a PCN if the activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. NWP general condition 21 identifies the procedures for the discovery of previously unknown remains and artifacts. NWP general condition 17 addresses tribal rights. PCN is required for all projects in the Salish Sea under NWP general condition 18 – *Endangered Species*. Finally, certain NWPs themselves have a PCN requirement regardless of the NWP general conditions. The Seattle District has established coordination procedures with tribes to help ensure NWP activities comply with NWP general condition 17 – *Tribal Rights*. Any tribe without a coordination procedure in place is invited to contact the Seattle District and the Seattle District will work with the tribe to develop one.

Comment 2 (Color Photographs): One commenter recommended requiring pre-project and post-project color photos be provided by the project proponent as part of this condition. One commenter asked for clarification on the visual content and level of detail expected in the photographs.

Response 2: In the special public notice dated June 20, 2016, the Seattle District requested comments on the proposed RGC 1 – *Pre-Construction Notification (PCN)*, which included pre-project color photographs. As not all projects will require pre-project photographs to allow the district engineer to make a determination a proposed project would be more than minimally impacting (i.e., maintenance activities, survey activities, minor dredging), this requirement has been removed. NWP general condition 32 – *Pre-Construction Notification (PCN)* identifies the items required to consider a PCN complete. However, project managers can require the submittal of post-construction photographs and color photographs on a case-by-case basis if it is deemed necessary.

Comment 3 (Documentation to meet all NWP General and Regional Conditions): One commenter recommended section “b” of RGC 1 be amended to state, “[d]ocumentation to meet all NWP general or regional conditions, including but not limited to, General Condition 18 or General Condition 20.”

Response 3: This condition has been removed from RGC 1 as it is duplicative of other conditions, and because it implies project proponents can themselves make a determination they are in compliance with certain laws. Where NWP general or regional conditions require documentation, e.g., delineations required by NWP general condition 32 – *Pre-Construction Notification*, project proponents will be required to submit the documentation to the district engineer for review. NWP general conditions 18 and 20, as well as 16, 19, 25, 26, and 31 require permittees to be in compliance with federal law before they are authorized by NWP. In those cases where the project proponent is subject to PCN, the district engineer will evaluate compliance with any applicable conditions.

Comment 4 (Drawings Checklist): One commenter recommended the following criteria be added to the Seattle District’s Drawings Checklist:

1. Permit drawings should also include a measurable scale appropriate for the paper size.
2. The checklist should require applicants to provide details on substrate at the site.
3. The checklist should require applicants to provide known fish distribution information and nearest natural barriers for projects involving streams and ditches that can provide salmon habitat.
4. The checklist should require applicants to provide figures showing all existing water features on or within 300 feet of the project site.
5. The checklist should require applicants to provide a figure showing the project site location within the affected watershed.

Response 4: The Seattle District provides the Drawings Checklist to offer guidance to project proponents on how to provide the district engineer with drawings that can quickly be reviewed and accurately portray impacts to waters of the U.S. Clean drawings can also facilitate streamlined notification and agency and tribal coordination. However, this condition is being modified to remove the requirement project proponents meet the criteria specified in the Drawings Checklist. The requirements of NWP general condition 32 – *Pre-Construction Notification* must be met for a PCN to be considered complete. As NWP general condition 32 states, sketches usually clarify the activity and when provided result in a quicker decision. The RGC has been amended to require drawings be submitted with each PCN.

Comment 5 (Add Additional Requirements to PCN): One commenter recommended the following information be included with each PCN:

1. Information regarding how long the proposed project is expected to last.
2. If the project is a repair or replacement, the applicant should provide proof the project had been permitted previously, along with date and description of previous repairs or replacements, and evidence the applicant has communicated with the affected tribe(s) and the WA Dept. of Fish and Wildlife regarding whether the proposed project, or repair or replacement, is occurring in an area proposed for modification under a salmon habitat improvement plan.
3. If not all impacts of the proposed action are avoided, then a compensatory mitigation plan should be provided.

Response 5: The district engineer reviews project impacts as they will occur, and reviews existing site conditions to determine the form of mitigation for each project to ensure the impacts have no more than minimal individual and cumulative environmental effects. A discussion of previous authorization can be read in the Final Rule for the 2017 NWP, at 82 FR 1879, and to paraphrase states, “[t]o qualify for NWP 3 authorization, it is not necessary for the project proponent to produce a copy of the prior authorization.” Compensatory mitigation requirements, to include procedures for mitigation plans are adequately addressed by NWP general condition 23 – *Mitigation*.

Comment 6 (Additional Requirements Burden to the Public): Two commenters stated the additional requirements of RGC 1 will place an administrative burden far in excess of the 11 hours estimated by the Corps of Engineers to complete a Pre-Construction Notification (Federal Register/Vol 81 No 105 Pg. 35214 re: Paperwork Reduction Act) and will result in a financial impact to local government. The same commenters requested the Seattle District evaluate this regional impact to local governments in accordance with NEPA, or revise the pre-construction notification requirements.

Response 6: The Seattle District has made modifications to RGC 1 to reduce the paperwork burden to the public, remove redundancy with other NWP regional conditions, and improve the effectiveness and efficiency of the NWP program in the State of Washington.

Comment 7 (Electronic PCN Submittal): Two commenters noted Federal conditions encourage the submission of PCN in electronic format, and requested that RGC 1 be revised to allow for submission in electronic formats.

Response 7: Under NWP general condition 32 – *Pre-Construction Notification*, paragraph (c) states: “Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.” The Seattle District does not currently have a system allowing electronic submission of PCN through a web-browser. Because the Corps keeps physical copies of all documents associated with each project in an administrative record, physical copies will be requested for all documents more than a few pages. Project proponents may choose to send emails with small attachments; however, current account limitations are restricted to only accept files smaller than 10 megabytes. PCN may be submitted to the Seattle District electronically in the form of a compact disk (CD), or data DVD.

This RGC has been revised as discussed above to only require drawings. This condition is now titled RGC 1 – *Project Drawings*. The final RGCs are listed in Section 9 of this document.

2.2.2 Proposed RGC 2, Aquatic Resources Requiring Special Protection

This has been a NWP RGC since 2002. Revisions are proposed as shown in *italics*:

2. Aquatic Resources Requiring Special Protection

Activities resulting in a loss of waters of the United States in mature forested wetlands, bogs, *bog-like wetlands*, aspen-dominated wetlands, alkali wetlands, vernal pools, camas prairie

wetlands, estuarine wetlands, wetlands in coastal lagoons, and wetlands in dunal systems along the Washington coast cannot be authorized by a NWP, except by the following NWPs:

- NWP 3 – Maintenance
- NWP 20 – Response Operations for Oil and Hazardous Substances
- NWP 32 – Completed Enforcement Actions
- NWP 38 – Cleanup of Hazardous and Toxic Waste

In order to use one of the above-referenced NWPs in any of the aquatic resources requiring special protection, prospective permittees must submit a PCN to the Corps of Engineers in accordance with Regional General Condition 1 (Pre-Construction Notification) and obtain written authorization before commencing work.

Comments in Response to Public Notice:

Comment 1 (Remove the Exception for Maintenance): Several commenters did not support the exception for NWP 3 – *Maintenance*, in this RGC. One commenter stated the NWP activities and projects which are designed to maintain existing structures too often ignore or fail to consider viable alternatives, do not adequately address ongoing causes for failure, and do not include or incorporate adequate compensatory mitigation to offset impacts to ecosystem processes and functions.

Response 1: Maintenance activities permitted by NWP 3, do not authorize any significant increase in the original structure or fill. Only minor deviations necessary to conduct repairs and maintenance are eligible for authorization under NWP 3. If a Department of the Army permit was required to construct the original structure or fill, the need for compensatory mitigation to offset the loss of aquatic resource functions and services would have been determined by the district engineer when the permit was issued. As the impacts have already occurred for any structures and/or discharges of dredged or fill material previous authorized these activities are considered a part of the existing environment and the environmental baseline. Therefore, because of the nature of activities authorized by NWP 3, as a general rule, compensatory mitigation should not be required for the maintenance. The terms and conditions for NWP 3, along with the regional conditions, will ensure NWP 3 authorizes only those activities with minimal individual and cumulative adverse environmental effects. As NWP 3 authorizes only activities repairing or returning an activity to previously existing conditions, it is not necessary to modify this RGC to limit maintenance activities.

Comment 2 (Native Seagrass and Floating Kelp): One commenter recommended adding native seagrass beds and floating kelp beds to the list of aquatic resources requiring special protection.

Response 2: Under “Definitions,” in the NWPs, *Vegetated Shallows* includes seagrasses in marine and estuarine systems. Vegetated shallows are special aquatic sites under the 404(b)(1) guidelines, and delineations of these sites may be required by NWP General Condition 32. Additionally, impacts to designated critical habitat are evaluated under NWP General Condition 18 – *Endangered Species* for federally listed threatened and endangered species, such as

salmonids with designated critical habitat in the Salish Sea. Although the Corps does not list floating kelp beds as a special aquatic site, impacts to kelp at a project location may be reviewed on a case by case basis to ensure projects authorized by NWP result in no more than minimal individual and cumulative adverse environmental effects. Due to ESA listings in the Salish Sea, all projects are required to submit a PCN to the district engineer.

Comment 3 (Interdunal Wetlands): One commenter suggested only high functioning interdunal wetlands as rated by the 2014 Washington State Wetland Rating System for Western Washington should be included in this RGC, stating impacts to low functioning interdunal wetlands are appropriate for authorization by NWP.

Response 3: The NWP program provides valuable protection to the region's aquatic resources by establishing incentives to avoid and minimize losses of jurisdictional waters in order to qualify for the streamlined NWP authorization. The Seattle District acknowledges there may be low functioning interdunal systems along the Washington Coast, however these systems are unique and difficult to replace once the functions are lost. To ensure impacts to these resources are fully avoided and minimized, a standard individual permit is required to evaluate the project has met the conditions of the least environmentally damaging practicable alternative and is in the public interest.

Comment 4 (Support for RGC 2): One commenter supported proposed language for RGC 2.

Response 4: Comment noted.

Comment 5 (Bogs and Bog-Like Wetlands): One commenter requested the Corps update its definition for "bogs and bog-like wetlands."

Response 5: The Corps has revised its definitions section to include bogs, fens, and peatlands.

Comment 6 (Headwater Wetlands): Two commenters recommended adding headwater wetlands to the list of aquatic resources requiring special protection.

Response 6: The Seattle District acknowledges headwater wetlands and streams provide important ecological functions. NWP general condition 23 requires all projects to avoid and minimize impacts to waters of the U.S. to the maximum extent practical on all proposed activities, and RGC 8 – *Mitigation*, has been implemented to require compensatory mitigation for wetland impacts over 1,000 square feet. Activities authorized by NWP must meet RGC 7 – *Stream Loss*, unless waived by the district engineer.

Comment 7 (Shellfish Beds and Forage Fish Spawning Areas): A few commenters recommended adding shellfish beds and forage fish spawning areas to RGC 2.

Response 7: To identify the importance of forage fish spawning areas in the Salish Sea, the Seattle District will implement RGC 10 – *Forage Fish* in addition to the requirements of NWP

general condition 3 – *Spawning Areas*. Shellfish beds are addressed by NWP general condition 5 – *Shellfish Beds*.

This RGC will be retained with the proposed revisions. The final RGCs are listed in Section 9 of this document.

2.2.3 Proposed RGC 3, New Bank Stabilization in Tidal Waters of the Salish Sea

3. New Bank Stabilization in Tidal Waters of the Salish Sea

Activities involving new bank stabilization in tidal waters of the Salish Sea cannot be authorized by a NWP. For the purposes of this condition, replacement of existing, currently serviceable or recently damaged, previously authorized bank stabilization within the original footprint is not considered “new” bank stabilization. See Figure 1 for a graphic depiction of the regional general condition 3 Salish Sea boundaries.

Comments in Response to Public Notice:

Comment 1 (Revocation of NWPs that Authorize New Bank Stabilization): Several commenters supported the Seattle District’s proposed RGC in the June 20, 2016 special public notice revoking all new bank stabilization in the Salish Sea. One commenter stated RGC 3 would not result in improved environmental outcomes and should be removed or amended so applicants can use NWP 54 – *Living Shorelines*. A few commenters recommended revoking authorization for all new and maintenance bank stabilization by NWP in all waters. One commenter recommended all new bank stabilization projects in all anadromous waters flowing into the Salish Sea should require review as a standard individual permit. One commenter recommended revoking the use of NWPs to authorize new bank stabilization in water resource inventory areas (WRIA) 24, 25, 27, 28, and 29. One commenter recommended the Seattle District revoke the use of NWPs to authorize new bank stabilization in the Skagit River and its tributaries. Two commenters recommended expanding RGC 3 to fresh water tributaries to the Puget Sound. One commenter recommended expanding the bank stabilization revocation area to include areas specifically detailed in the FEMA National Flood Insurance Program biological opinion (FEMA 2008).

Response 1: Revocation of new bank stabilization in tidal waters of the Salish Sea (RGC 3 in the June 20, 2016 special public notice) was proposed as a result of recommendations to the Seattle District by agencies and tribes in Washington State. Studies showing impacts to tidal waters of the Salish Sea were submitted by commenters to offer support for restricting authorization of new bank stabilization by NWP. For the 2012 NWP issuance, revocation was applied in certain Water Resource Inventory Areas (WRIAs) where a large percentage of the banks have been stabilized along of eastern shoreline in Puget Sound. That revocation was the result of scientific studies and data from the Puget Sound Nearshore Ecosystem Restoration Project (PSNERP). The Corps has considered the option to revoke the use of NWPs in the tidal waters of the Salish Sea and other waterbodies after careful review of the comments and the additional best available science published since 2012. RGC 3 will be retained with the same

restrictions used for the 2012 NWP to only include new bank stabilization in tidal waters of WRAs 8, 9, 10, 11 and 12. Additional waterbodies submitted to the Corps have not been identified as areas where NWP revocation will be implemented.

The Seattle District recognizes ecosystems within Washington State have been altered by cumulative impacts over time. Those cumulative impacts to ecosystems may be caused by, but are not limited to: pollution from land, rivers, and oceans; overharvesting fishery resources; habitat loss; species introductions; nutrient inputs; activities reducing necessary sediment inputs; land use changes converting habitats such as forests and wetlands to urban, industrial, and recreational developments; the construction and operation of ports and other facilities; transportation projects; dredging; aquaculture activities; and shore protection structures. The Seattle District also recognizes the NWP program is an important tool to streamline the permitting process while also incentivizing impact avoidance and minimization. Revoking the use of NWPs for all new bank stabilization activities across all tidal waters of the Salish Sea would have resulted in a requirement to evaluate all activities as standard individual permits, even in cases where impacts would be minimally impacting, such as protection for outfall structures or bridge footings. The concern of many commenters was related to fisheries, endangered species, and tribal treaty rights, which all receive a level of protection through the NWP general conditions such as NWP general condition 2, 3, 5, 17, 18 and other proposed RGCs such as RGC 6, 7, 8, and 10. Furthermore, the ability for tribes to comment through the tribal notification process with the Corps offers an opportunity to the tribes to evaluate the impacts of a proposed activity and to provide information supporting their position regarding whether the proposed projects are minimally impacting. Through various NWP general conditions and RGCs, the Seattle District will receive PCN allowing evaluation on a case by case basis of each new bank stabilization project within Corps jurisdiction. The Corps regularly evaluates the impacts of bank armoring in all waters of the U.S. (tidal waters, streams and lakes) on a case by case basis to determine activities authorized by NWP result in no more than minimal individual and cumulative adverse environmental effects. To facilitate effective and efficient review of bank stabilization projects, the Seattle District will require PCN to include specific information related to new bank stabilization activities in all waters of the U.S. under RGC 5 – *Bank Stabilization*. If the district engineer determines, after considering mitigation, that there will be more than minimal individual or cumulative adverse environmental effects, he or she will exercise discretionary authority and require an individual permit for the proposed activity. That determination will be based on consideration of the information provided in the PCN and other available information obtained through ESA Section 7, Tribal, NHPA Section 106, or other consultation(s).

NWP 54 – *Living Shorelines* will not be applicable within many areas of the Salish Sea for new bank stabilization projects due to high energy waves; however, it may be appropriate to permit the replacement of hard armoring with a living shoreline design using this permit. Any project having the potential to impact endangered species is required to submit a PCN per national general NWP condition 18 – *Endangered Species*. The National Flood Insurance Program biological opinion is concerned with impacts from the FEMA program. FEMA is the federal lead for that program and as such FEMA is the appropriate agency to address those concerns.

Comment 2 (Tidally Influence Areas of Tributaries to the Salish Sea): One commenter recommended expanding the restriction on bank stabilization to tidally influence areas of tributaries to the Salish Sea. One commenter recommended the term “tidal waters” be changed to “areas below the High Tide Line,” to clarify areas of tidally influenced rivers and streams would be included in the area covered by RGC 3.

Response 2: Revocation from the NWP for new bank stabilization in the Salish Sea was proposed under RGC 3 in the June 20, 2016 special public notice. This proposal has not been carried forward. Instead RGC 3 will be retained with the same restrictions used for the 2012 NWP to only include new bank stabilization in tidal waters of WRIAs 8, 9, 10, 11 and 12. Tidal waters of these WRIAs include all tidally influenced areas of rivers and streams that outlet into the Puget Sound. Tidal waters are defined by regulation at 33 CFR 328.3(f) as meaning “those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured and predictable rhythm due to masking by hydrologic, wind, or other effects.”

Comment 3 (Maintenance Bank Stabilization Projects): Two commenters recommended revoking all maintenance authorized by NWP in tidal waters of the Salish Sea. One commenter recommended requiring compensatory mitigation for maintenance bank stabilization projects. One commenter recommended limiting the use of NWP to authorize maintenance to bank stabilization projects to 10% of the length of the structure. One commenter recommended maintenance to bank stabilization projects should not be authorized to repair damage caused by natural erosion or wave action. Two commenters did not support revoking the use of NWP for maintenance bank stabilization projects within the Salish Sea.

Response 3: Maintenance activities to bank stabilization permitted by NWP 3 – *Maintenance*, do not authorize any significant increase in the original structure or fill. Only minor deviations necessary to conduct repairs and maintenance are eligible for authorization under NWP 3. Because of the nature of activities authorized by NWP 3, as a general rule, compensatory mitigation should not be required for the maintenance. If a Department of the Army permit was required to construct the original structure or fill, appropriate compensatory mitigation would have been required by the district engineer when the permit was issued to offset the loss of aquatic resource functions and services resulting from the authorized work. Additional compensatory mitigation is usually unnecessary to maintain those structures or fills. The terms and conditions for NWP 3, along with the regional conditions, will ensure that NWP 3 authorizes only those activities with no more than minimal individual and cumulative adverse effects on the aquatic environment. As NWP 3 authorizes only activities that repair or return an activity to previously existing conditions, we do not believe it is necessary to further restrict or limit maintenance of bank stabilization structures to a specific length of the existing footprint. As noted in 33 CFR 320.4(g)(2), “a landowner has the general right to protect their property from erosion,” which applies to natural erosion and erosion caused by wave action. RGC 3 does not restrict maintenance bank stabilization to a specific length. RGC 3 will be retained with the

same restrictions used for the 2012 NWP to only include new bank stabilization in tidal waters of WRIAs 8, 9, 10, 11 and 12.

Comment 4 (Previous Authorization): One commenter recommended the Corps require project proponents provide documentation sufficient to establish bank stabilization projects had been previously authorized prior to the Corps permitting any maintenance activity.

Response 4: NWP 3 – *Maintenance*, authorizes “[t]he repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification.” This requires the structure or fill be previously authorized, either through a Department of the Army permit, or by being grandfathered in by the age of the structure. Many applicants do not have a full site history of the project when they apply for a permit and rely on Corps records and research to determine the status of the structure as being authorized or not. To qualify for NWP 3 authorization, it is not necessary for the project proponent to produce a copy of the prior authorization. While the Corps encourages project proponents to provide the Corps with as many details as they can, this information is not always available, and will not be required as a part of a complete PCN.

Comment 5 (Remove Existing Bank Stabilization): One commenter recommended the Seattle District work to remove more bank stabilization in the Salish Sea than the new bank stabilization projects for which it issues permits.

Response 5: The Corps of Engineers regulatory program is tasked with ensuring projects abide by the regulations as prescribed. While the Corps requires avoidance and minimization on every project, compensatory mitigation for lakes, streams, and marine waters is assessed on a case-by-case basis. NWPs authorize categories of activities resulting in no more than minimal individual and cumulative adverse environmental effects, including NWP 27 – *Aquatic Habitat Restoration, Establishment, and Enhancement Activities*. Project proponents proposing compensatory mitigation by means of removing existing bank armoring will be considered if compensatory mitigation is required, however the Seattle District Regulatory program’s mission is to review activities for compliance with federal law, not to implement restoration goals.

Comment 6 (Soft Shoreline Armoring): One commenter recommended the Corps incentivize using less harmful “soft” shoreline armoring approaches.

Response 6: The Seattle District encourages the use of bioengineering and “soft” shoreline armoring design methods, but understands these approaches are not appropriate for all sites due to high energy impacts from wind and waves. NWP 54 – *Living Shorelines*, has been created to permit the use of a wide variety of alternative shoreline armoring design methods.

Comment 7 (Impact Evaluation): Two commenters requested the Corps evaluate the regional impact to local governments caused by the administrative burden of being permitted by an

individual permit for road maintenance, which could include either new or maintenance of existing bank stabilization.

Response 7: The Corps evaluates public interest factors and alternatives through the NEPA process on the national level prior to issuance of the NWP. If the road maintenance requires maintenance of existing bank stabilization, this RGC does not apply. For those projects where new bank stabilization is required, this condition will only apply in the tidal waters of WRIAs 8, 9, 10, 11 and 12. Processing as an individual permit will require slightly more time because of the 30-day public comment period and possibly providing additional information beyond what is required in RGC 5 – *Bank Stabilization*. However, the need to complete an ESA Section 7 consultation, NHPA Section 106 consultation, possible development of a mitigation plan, resolution of tribal treaty right issues, and/or the need to get an individual Section 401 Water Quality Certification remains the same.

RGC 3 will be implemented with modified language to only include WRIAs 8, 9, 10, 11, and 12 in tidal waters of Puget Sound. The final RGCs are listed in Section 9 of this document.

2.2.4 Proposed RGC 4, Commencement Bay

This has been an RGC since 1994. No changes are proposed.

4. Commencement Bay

The following NWPs may not be used to authorize activities located in the Commencement Bay Study Area (see Figure 2):

- NWP 12 – Utility Line Activities (substations)
- NWP 13 – Bank Stabilization
- NWP 14 – Linear Transportation Projects
- NWP 23 – Approved Categorical Exclusions
- NWP 29 – Residential Developments
- NWP 39 – Commercial and Institutional Developments
- NWP 40 – Agricultural Activities
- NWP 41 – Reshaping Existing Drainage Ditches
- NWP 42 – Recreational Facilities
- NWP 43 – Stormwater and Wastewater Management Facilities

Comments in Response to Public Notice:

Comment 1 (Increase RGC 4 to the Eastern Shore of Puget Sound): Two commenters recommended expanding RGC 4 to add areas defined in the Corps' 2014 study titled *Cumulative Effects Analysis Eastern Shore of Central Puget Sound Washington* (Eastern Shore study). One commenter recommended expanding this restriction to include Elliott Bay and the Duwamish River up to River Mile 11.

Response 1: The Eastern Shore study and other data were evaluated during the development of the regional conditions. The Corps recognizes the eastern shore of Puget Sound has been modified through more than 100 years of development, and currently reviews projects in the areas defined by the Eastern Shore study to ensure the effects from those projects result in no more than minimal individual and cumulative adverse environmental effects. While the Corps recognizes impacts occur, and are frequently concentrated in urban environments, each area surveyed in this study does not share identical cumulative impacts. The regional conditions, including regional PCN requirements and the ability to evaluate PCNs on a case-by-case basis, will ensure the NWP authorizations have no more than minimal individual and cumulative adverse environmental effects in these areas. Elliott Bay and the Duwamish River up to River Mile 4 were included in the Eastern Shore study. As the urban development between River Miles 0 through 4 of the Duwamish River are consistent with River Miles 4 through 11, the Seattle District will evaluate projects in these areas with the same level of review.

Comment 2 (Re-Evaluate which NWPs are Restricted by RGC 4): One commenter requested the Corps evaluate if new NWPs beyond the 10 specified by the current condition should be added, due to changes over the last five years.

Response 2: The Seattle District reviewed the *Commencement Bay Cumulative Impact Study* and reviewed permitting data and trends in the study area and it is determined no additional NWPs should be added to the condition.

Comment 3 (Lakes Washington and Sammamish): One commenter recommended including Lakes Washington and Sammamish in RGC 4, due to cumulative impacts.

Response 3: The *Commencement Bay Cumulative Impact Study* reviewed impacts to estuarine wetlands and marsh from an undeveloped state in 1877 to the time of the study around 1990, and determined that that 89.4% of historic mudflats, and 98.5% of historic marsh had been eliminated. While the Corps recognizes impacts occur, and are concentrated in urban environments, the Seattle District has not determined cumulative adverse environmental effects have occurred in Lakes Washington and Sammamish, such that the use of NWPs should be restricted. NWP authorizations occurring in Lakes Washington and Sammamish are required under NWP general condition 23 – *Mitigation* to avoid and minimize impacts, and provide compensatory mitigation for unavoidable impacts so the projects result in no more than minimal individual and cumulative adverse environmental effects.

Comment 4 (Establish a Work Group to Evaluate Impacts to Additional Areas): One commenter proposed the creation of an interagency technical work group following the 2017 NWP issuance committed to identifying future RGCs based on the same rationale used to establish RGC 4.

Response 4: Comment noted.

Comment 5 (Add NWP 3 – Maintenance to the List of NWPs under RGC 4): Two commenters supported the retention of RGC 4, but recommended adding NWP 3 to the list.

Response 5: Maintenance activities permitted by NWP do not authorize any appreciable increase in the original structure or fill. Only minor deviations necessary to conduct repairs and maintenance are eligible for authorization under NWP 3. Appropriate compensatory mitigation would have been required by the district engineer when the permit was issued to offset the loss of aquatic resource functions and services resulting from the authorized work. The terms and conditions for NWP 3, along with the regional conditions, will ensure NWP 3 authorizes only those activities with minimal individual and cumulative adverse environmental effects. As NWP 3 authorizes only activities repairing or returning an activity to previously existing conditions, it is not necessary to modify this RGC to limit maintenance activities.

Comment 6 (Impervious Surface Cover): One commenter suggested adding to RGC 4 all HUC-12 (hydrologic unit code) watersheds draining into the Salish Sea and its tributaries, Grays Harbor, and the Chehalis basin where impervious surface cover is 5% or greater.

Response 6: The Corps does not track or review the impacts from all projects potentially contributing to impervious surface coverage as many developments do not impact waters of the U.S. As a percent impervious surface cover cannot be equated to losses of waters of the U.S. it should not be used to determine whether there are more than minimal cumulative impacts and thus restrict the use of NWPs. Furthermore, impacts because of impervious surfaces are generally related to the discharge of stormwater and water quality and are outside of the Corps' control and responsibility. Evaluation of these impacts are administered under authority of the National Pollution Discharge Elimination System and Section 401 of the Clean Water Act, by the Environmental Protection Agency on Federal Lands and the State of Washington on state lands.

Comment 7 (Remove all NWP Restrictions in Commencement Bay): One commenter stated the restrictions in Commencement Bay are not required as there is no bay-wide approach for mitigation and restoration, and many contaminated areas of the Superfund site have been identified and remediated. The same commenter stated there is no difference between the impacts in Commencement Bay operated by the Port of Tacoma and the lower Duwamish waterway operated by the Port of Seattle. The same commenter requested NWPs 12, 13, 14, 39, 41, and 43 be allowed in the study area and RGC 4 be updated to consider the positive changes having occurred in the bay over the last 19 years.

Response 7: The restricted use of NWPs in the Commencement Bay Study Area are related to the historic loss of mudflats, wetlands and marsh as identified in the *Commencement Bay Cumulative Impact Study*. This condition is not related to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), nor is it connected with any restoration goals or contaminated sediment concerns. The Seattle District has reviewed the impacts in the lower Duwamish waterway, and will not be adding this area to RGC 4.

The Seattle District reviewed the use of NWPs in the study area and evaluated the effectiveness of RGC 4 and determined no changes to the condition are needed at this time. Therefore, this RGC will be retained.

This RGC will be retained as proposed. The final RGCs are listed in Section 9 of this document.

2.2.5 Proposed RGC 5, Bank Stabilization

This has been an RGC since 2012 and revisions are proposed.

5. Bank Stabilization

All projects including new or maintenance bank stabilization activities require PCN to the Corps of Engineers in accordance with Regional General Condition 1 and NWP general condition 32.

For new bank stabilization projects the following must be submitted to the Corps of Engineers:

- a. Include the cause of the erosion and the threat posed to property, structures, infrastructure, and/or public safety. Specify the distance of existing structures from the area(s) being stabilized.
- b. Describe the type and length of existing bank stabilization within 300 feet of the project area.
- c. Current and expected post-project sediment movement and deposition patterns in and near the project area. In tidal waters, describe the location and size of the nearest bluff sediment sources (feeder bluffs) to the project area and current and expected post-project nearshore drift patterns in the project area.
- d. Current and expected post-project habitat conditions, including the presence of fish, wildlife and plant species, submerged aquatic vegetation, spawning habitat, and special aquatic sites (e.g., wetlands, vegetated shallows, riffle and pool complexes, or mudflats) in the project area.
- e. In rivers and streams, an evaluation of the likely impact of the proposed work on upstream, downstream and cross-stream properties (at a minimum the area assessed should extend from the nearest upstream bend to the nearest downstream bend of the watercourse). Discuss the methodology used for determining effects. The Corps of Engineers reserves the right to request an increase in the reach assessment area to fully address the relevant ecological reach, associated habitat, and potential for damage to the property of others.
- f. Description of how the project design incorporates elements avoiding and minimizing adverse environmental effects to the nearshore environment and riparian vegetation. These elements include, but are not limited to, the use of bioengineering, root wads, large woody material, and native plantings.

In addition to a. through f., the results from any geotechnical investigations should be submitted with the PCN.

Comments in Response to Public Notice:

Comment 1 (Revocation of NWP that Authorize Bank Stabilization): One commenter recommended all new bank stabilization in the Hood Canal should only be reviewed as a standard individual permit. One commenter recommended adding cumulative effects restrictions to the Snohomish, Skykomish, and Snoqualmie Rivers, and within the Snohomish Estuary and the shorelines to the north and south, to include PCN requirements, mitigation, and length limits established on a case by case basis.

Response 1: Additional waterbodies submitted to the Corps have not been identified as areas where cumulative effect restrictions will be implemented. RGC 5 – *Bank Stabilization*, requires PCN for all new and maintenance bank stabilization projects and requires information be submitted before an activity can be authorized by the district engineer. Through this process the Corps, can review the projects on a case by case basis and determine if the activity will result in more than minimal individual and cumulative adverse environmental effects. If the district engineer determines, after considering mitigation, that there will be more than minimal individual or cumulative adverse environmental effects, he or she will exercise discretionary authority and require an individual permit for the proposed activity. That determination will be based on consideration of the information provided in the PCN and other available information obtained through ESA Section 7, Tribal, NHPA Section 106, or other consultation(s). The Seattle District has established notification procedures with tribes to help ensure NWP activities comply with NWP general condition 17 – *Tribal Rights*. Any tribe without a notification procedure in place is invited to contact the Seattle District and Seattle District will work with the tribe to develop one. NWP general condition 17 must be complied with in all cases.

Comment 2 (Require RGC 5 for Maintenance Projects): Seven commenters recommended requiring applicants to complete the RGC 5 questions for maintenance projects. One commenter recommended the Seattle District use language from the 2012 bank stabilization condition requiring project proponents demonstrate how the proposed project incorporates the least damaging bank protection methods, and to provide compensatory mitigation if the Corps determines projects do not incorporate those methods. One commenter stated the Seattle District should not consider maintenance, repair, and replacement of structures to be “no impact.” Three commenters requested the Seattle District clarify if maintenance work exempt by 33 CFR 323.4 (a)(2) would be required to comply with RGC 5.

Response 2: Maintenance activities under NWP 3 – *Maintenance* authorize the repair, rehabilitation, or replacement of any previously authorized, currently serviceable structures, or fills provided they are not to be put to uses differing from those uses specified or contemplated for in the original permit or most recent authorization. If a structure has previous authorization from being grandfathered, or from a Department of the Army permit, the structure is authorized. The Corps does not assert its jurisdiction to require permittees modify their project if it is functioning within the parameters authorized. The questions under RGC 5 are relevant to new bank stabilization projects, where the existing environmental baseline is not a stabilized shoreline. Providing answers to these questions for maintenance projects would not likely inform the Corps decision on whether the structure needed maintenance and would place undue

burden and confusion on project proponents. Language from the 2012 NWP's requiring project proponents to demonstrate how the proposed project incorporates the least damaging bank protection methods was modified to RGC 5(d), "[a] statement describing how the project incorporates elements avoiding and minimizing adverse environmental effects to the aquatic environment and nearshore riparian area, including vegetation impacts in the waterbody." This change was made because the 2012 language was similar to NEPA, which is completed on the NWP's at their issuance. Compensatory mitigation for bank stabilization projects is determined on a case by case basis as appropriate. The Corps does not consider maintenance to be "no impact," however it does consider the impact to be limited in duration to the maintenance activity. Activities exempt by 33 CFR 323.4(a)(2) are exempt from needing a permit, therefore do not need to comply with the conditions of a Corps permit.

Comment 3 (Bank Stabilization Design Guidance): One commenter recommended the Seattle District provide notes in their User's Guide to provide guidance to project proponents, and another commenter recommended the Seattle District add a note to encourage project proponents to use the Washington State Department of Fish and Wildlife's Marine Shoreline Design Guidelines. One commenter recommended changing the language to describe the 300-foot area around projects to be more precise. One commenter stated repair of or new projects should be required to provide improved habitat functions in situations where the current condition is disturbed.

Response 3: The NWP User's Guide is a tool used by the Seattle District to inform the regulated public about the permitting process in Washington State, as it relates to the NWP's. Notes in the User's Guide are an effective way to provide relevant information to project proponents without adding conditions to restrict the use of the permit. The language in RGC 5 describing the 300-foot area around projects precisely communicates the required information. Temporary project impacts are addressed in NWP general condition 23 – *Mitigation*, and RGC 13 – *Temporary Impacts and Site Restoration*. Maintenance activities permitted by NWP do not authorize any appreciable increase in the original structure or fill. Only minor deviations necessary to conduct repairs and maintenance are eligible for authorization under NWP 3. NWP general condition 23 – *Mitigation*, requires all projects to avoid and minimize impacts; however, maintenance activities generally cause no more than minimal adverse environmental effects and do not generally require compensatory mitigation. The Seattle District will not require applicants to provide improved habitat functions to conduct maintenance activities under NWP.

Comment 4 (Changes to RGC 5 Language): One commenter recommended changing the language of the following RGC 5 conditions:

Condition "c" – State the RGC does not apply to tidal waters of the Salish Sea, Commencement Bay, Elliot Bay, and the Duwamish River.

Condition "d" – Include existing and expected post project habitat conditions that fully discuss existing habitat impairment, including temperature impaired areas and a risk assessment of further degradation in water quality from removal of trees that provide shade.

Condition “e” – Add potential impacts to tribal fishing sites to the list of reasons why an increase in reach assessment may be needed for these projects.

Condition “f” – Require the results of any hydraulic investigations be submitted with the project PCN.

Response 4: Although RGC 3 revokes the use of NWP to authorize new bank stabilization in specific Water Resource Inventory Areas (WRIAs) of the Puget Sound, RGC 5 still applies to all waters as a trigger for PCN on new and maintenance bank stabilization projects. PCN requirements for new and maintenance projects, and the revocation of new bank stabilization applies to tidal waters of WRIAs 8, 9, 10, 11 and 12 which includes Commencement Bay, Elliot Bay, and the tidally influenced areas of the Duwamish River. NWP general condition 2 – *Aquatic Life Movements*, and NWP general condition 3 – *Spawning Areas* adequately address concerns of habitat impairment and degradation, and concerns in water quality will be evaluated through section 401 of the Clean Water Act coordination as implemented by the Washington Department of Ecology, or the Environmental Protection Agency. The Seattle District has established notification procedures with tribes to help ensure NWP activities comply with NWP general condition 17 – *Tribal Rights*. Any tribe without a notification procedure in place is invited to contact the Seattle District and Seattle District will work with the tribe to develop one. NWP general condition 17 must be complied with in all cases. Potential impacts to tribal fishing sites are not always known by project proponents prior to notification with tribes, therefore the notification procedures currently in place are appropriate to address these concerns. The results of hydraulic investigations may be submitted by applicants if they are available, however these investigations may not be a requirement for all projects and are therefore not required by RGC 5. The Seattle District will consider the need for hydraulic investigations on a case by case basis.

Comment 5 (Additional Requirements): One commenter recommended adding a requirement the project proponents meet the requirements detailed in the FEMA National Flood Insurance Program biological opinion (FEMA 2008) to protect essential fish habitat. One commenter recommended adding restrictions to forage fish spawning areas and critical habitat, channel migration zones, and habitats occupied by ESA listed species. One commenter requested the Corps clarify what will be required for stream reach assessments, and one commenter recommended the Seattle District remove the requirement to perform stream reach assessments. One commenter expressed concern that submittal of geotechnical investigations would add a substantial amount of paperwork required for a complete application.

Response 5: Not all activities in the channel migration zone or floodplains occur in waters of the U.S. and thus, are within the Corps jurisdiction. Further, the Corps cannot require applicants to meet the requirements of the FEMA NFIP biological opinion; FEMA may require such compliance under its own federal activities. NWP activities must in all cases comply with NWP general condition 18 – *Endangered Species*, under which ESA coordination specific to Corps regulated activity may occur. Projects that may adversely affect EFH species require consultation with the National Marine Fisheries Services to meet the requirements of the Magnuson-Stevens Fishery and Conservation Management Act, and is a Seattle District

requirement under RGC 9 – *Magnuson-Stevens Fishery Conservation and Management Act – Essential Fish Habitat*. Should a consultation conclude with requirements or recommendations for a specific project, they can be made conditions of NWP permit verifications as appropriate. NWP general condition 2 – *Aquatic Life Movements* and NWP general condition 3 – *Spawning Areas*, adequately address concerns with forage fish spawning areas and critical habitat, channel migration zones, and habitats occupied by ESA listed species. In addition to these NWP general conditions, the Seattle District will issue RGC 6 – *Crossings of Waters of the United States*, to further avoid impacts to salmonid species in Washington State, and RGC 10 – *Forage Fish*, to address concerns with forage fish. Stream reach assessments as described in the June 20, 2016 special public notice have been removed. The Corps recognizes streams are complex systems, are not “one size fits all,” and reach assessments may not be required for every project authorized by NWP. The requirements under RGC 5 have been amended to more appropriately assess if projects authorized by NWP will result in more than minimal individual and cumulative adverse environmental effects. The need for reach assessments will be evaluated commensurate with the project impacts on a case by case basis. RGC 5 does not require submittal of geotechnical investigations for every project; however, if any geotechnical investigations have been completed, they can be submitted with the PCN.

Comment 6 (District Engineer Waivers): One commenter recommended the Seattle District disallow the use of waivers for projects resulting in net losses to habitat or habitat function.

Response 6: Waivers are an important tool to provide flexibility in the NWP program to make consideration of site specific conditions and impacts. The Seattle District has not included specific waiver revocations or restrictions for NWPs in this regional condition, however the RGCs proposed by the Seattle District will be made requirements of all NWPs verified. Restrictions can only be waived after the district engineer makes a written determination the activity will result in no more than minimal individual and cumulative adverse environmental effects. In the Federal Register publication of the 2017 NWPs (82 FR 1872), the Corps announced as a part of the commitment toward increasing transparency of regulatory decisions, quarterly reports will be posted on the headquarters’ website. These reports will show summary statistics pertaining to the use of each NWP, aggregated per Corps District, and may include the number of verifications provided per quarter, acres of waters of the United States permanently lost, as well as including summary information on the use of waivers during the previous quarter. There is no federal statute or regulation requiring “no net loss” of aquatic resources. The “no overall net loss” goal for wetlands articulated in the 1990 U.S. EPA-Army Memorandum of Agreement for mitigation for Clean Water Act Section 404 permits states the Section 404 permit program will contribute to the national goal. The 1990 Memorandum of Agreement only applies to standard individual permits.

RGC 5 will be implemented with modified language as discussed above. The final RGCs are listed in Section 9 of this document.

2.2.6 Proposed RGC 6, Crossings of Waters of the United States

This has been an RGC since 2012. Revisions are proposed.

6. Crossings of Waters of the United States

Any project including installing, replacing, or modifying crossings of waters of the United States, such as culverts or bridges, a PCN must be submitted to the Corps of Engineers in accordance with Regional General Condition 1 and General Condition 32 (Pre-Construction Notification).

If a culvert is proposed to cross waters of the U.S. where salmonid species are present or could be present the project shall apply the stream simulation design method from the Washington Department of Fish and Wildlife located in the *Water Crossing Design Guidelines* (2013), or a design method which achieves equivalent stream simulation results. If the stream simulation design method is not applied for a culvert where salmonid species are present or could be present, the project proponent shall provide information in the PCN sufficient to establish one of the following:

1. An emergency involving an immediate threat to life, or property, or of environmental degradation for which application of the stream simulation design method cannot be implemented in time to forestall that threat. Culverts installed due to emergency conditions will require evaluation to meet the stream simulation design method after-the-fact.
2. The existence of extraordinary site conditions.
3. How the proposed design will provide equivalent or better fish passage and fisheries habitat benefits than the stream simulation design method.

As part of the PCN, project proponents must provide a monitoring plan that specifies how the proposed culvert will be effective in providing passage at all life stages at all flows where the salmonid species would naturally seek passage. Project proponents must also provide a maintenance plan that describes how the culvert will be maintained to prevent development of fish barriers.

Comments in Response to Public Notice:

Comment 1 (Include All Fish Life, Not Just Salmonids): Some commenters recommended RGC 6 be revised to include all fish species, not just salmonids.

Response 1: NWP general condition 2 – *Aquatic Life Movements* addresses all species of aquatic life, including fish species, indigenous to waterbodies. In Washington State, the salmonid species utilize waterways in unique ways that were not adequately addressed by the NWP general condition. This RGC was developed to specifically address the ways culverts must be designed to ensure NWPs authorize only those activities having no more than minimal

individual and cumulative adverse environmental effects on the salmonid species. In addition, if the design will benefit salmonids it will likely also benefit other species of fish.

Comment 2 (Support for RGC 6): One commenter supported the addition of the Stream Simulation design method or a design method which achieves equivalent results.

Response 2: Comment noted.

Comment 3 (Require PCN to Include Avoidance Measures, ESA): One commenter stated RGC 6 should be amended to require avoidance measures and to substantiate the type of crossing used (bridge vs. culvert) and to support an effects analysis under the ESA in the PCN.

Response 3: All projects authorized by NWP are required to avoid and minimize adverse effects to waters of the U.S. under NWP general condition 23 – *Mitigation*. The Seattle District will not require project proponents to substantiate which type of crossing is best suited at the location of a proposed crossing. There are many criteria used by project proponents to select the best design at a location. Because a PCN is required for all crossings, the Corps will review all projects on a case by case basis to ensure the NWP authorizes only those activities having no more than minimal individual and cumulative adverse environmental effects. All projects authorized under NWP are required to meet NWP general condition 18 – *Endangered Species*.

Comment 4 (Consistency with U.S. v Washington Injunction): One commenter provided a revised version of RGC 6 to be consistent with the Ninth Circuit District Court Injunction in *United States v Washington* (June 2016; document 20384 in the District Court record). Some additional commenters supported the proposed revised version. One commenter stated the Corps has a duty to require project proponent adhere to the standards enunciated in *United States v. Washington*, and associated orders.

Response 4: The court case referenced pertains just to Washington State agencies and is only in effect in a portion of the state of Washington. Nevertheless, RGC 6 is believed to be consistent with the concerns laid out in the case. Monitoring will also be required per RGC 6 to ensure these projects will provide passage at all life stages and at all flows where salmonid species would naturally seek passage.

Comment 5 (Documentation of Exceptions): One commenter offered support for RGC 6 and stated any exceptions allowed by the condition should be well documented and provided to tribes with notification agreements.

Response 5: Any crossing proposed in waters of the U.S. in the Seattle District region will be required to submit a PCN to the district engineer. RGC 6 requires specific design criteria, and requires the project proponent to provide a rationale in the PCN sufficient to establish the exemptions. The Seattle District has established coordination procedures with several tribes to help ensure NWP activities comply with NWP general condition 17 – *Tribal Rights*. Any tribe without a coordination procedure in place is invited to contact the Seattle District and the District will work with the tribe to develop one. NWP general condition 17 must be complied with in all cases. Any information not subject to the Freedom of Information Act requirements can be

added to the tribal notification. The Seattle District is reviewing its FOIA procedures specific to tribal coordination in light of recent listening sessions with tribes.

Comment 6 (Removal of Decommissioned Infrastructure): One commenter stated when a crossing structure is replaced all associated infrastructure, non-native in-stream debris and bank protection needs to be removed as well.

Response 6: Under NWP general conditions 9 – *Management of Water Flows*, and 14 – *Proper Maintenance*, project proponents will be required to remove decommissioned structures in streams to the maximum extent practicable.

Comment 7 (Exempt Maintenance Work): Three commenters stated all general conditions should include allowed exemptions, and requested to reinstate the language, “this requirement does not apply to maintenance work exempt by 33 CFR 323.4 (a)(2).”

Response 7: The NWPs are general permits authorizing work under Section 10 of the Rivers and Harbors Act of 1899, and Section 404 of the Clean Water Act (Section 404). Maintenance work exempt from Section 404 requirements are not required to meet the terms and conditions of the NWPs because they do not require authorization from the Department of the Army. The Seattle District removed this language to avoid confusion from project proponents qualifying for maintenance exemptions.

Comment 8 (Do not Include Salmonids that are not Federally Regulated): Two commenters stated “salmonids” is assumed to include any fish in the family Salmonidae (including salmon, trout, char, whitefish and grayling) because this term is undefined in the draft regional conditions. ACOE does not directly manage wildlife therefore, provisions should be limited to segments of the environment that the ACOE regulates, or are regulated by other federal agencies through consultation. Inclusion of un-federally regulated salmonid species is arbitrary. Please revise the general condition to reflect the ACOE scope of authority.

Response 8: Response to “Comment 1” for this RGC includes the rationale for inclusion of salmonid species. In its project evaluation process the Corps is required to balance the project purpose against the public interest, as required by the National Environmental Policy Act (NEPA) of 1969. The public benefits and detriments of all factors relevant to each case are carefully evaluated and balanced. Relevant factors may include conservation, economics, aesthetics, wetlands, cultural values, navigation, fish and wildlife values, water supply, water quality, and any other factors judged important to the needs and welfare of the people. NWP general condition 2 – *Aquatic Life Movements* requires NWPs do not substantially disrupt the life cycle movements of all aquatic life, so it is not outside of the Corps’ scope of authority to consider non-federally regulated species to ensure projects result in no more than minimal individual and cumulative adverse environmental effects. For the purposes of this RGC, and consistent with the Culverts case, “salmonids” refers to the following species: The word “salmon” shall mean any of the six species of anadromous salmonids of the genus *Oncorhynchus*, commonly known as chinook (*Oncorhynchus tshawytscha*), chum (*Oncorhynchus keta*), coho (*Oncorhynchus kisutch*), pink (*Oncorhynchus gorbuscha*), and sockeye (*Oncorhynchus nerka*) salmon, and steelhead (*Oncorhynchus mykiss*).

Comment 9 (Design Requirements Discourage Innovation and Recovery): Two commenters stated specific design standards based on wildlife limit the agencies who directly manage these resource from taking the primary role in their management. It discourages innovative design solutions these agencies and tribes may approve of by requiring additional analysis and justification for non-stream sim designs. The same commenters stated stream simulation requirements may prolong salmonid recovery by prioritizing local government resources on culverts having failed rather than infrastructure that poses a significant barrier to salmonids.

Response 9: RGC 6 does not preclude consideration and verification of an alternative design if the design would provide equivalent or better fish passage and fisheries habitat benefits than the stream simulation design method. If another culvert design method is established proving to have superior fish, water, large wood, and sediment passage functions, the Corps will consider revising the Regional Condition, in coordination with other resource agencies and tribes. Stream simulation is a design regionally supported to provide passage to salmonid species at all life stages at all flows where they would naturally seek passage.

Comment 10 (Delays may Risk Public Safety): Two commenters stated stream simulation and emergency replacement requirements may result in a standard local government permittees cannot meet if the required culvert size results in a design extending beyond the right of way and the adjacent landowner is unwilling to grant an easement. Delays in maintenance may result in infrastructure sustaining additional damage, risking public safety and increasing the size and scope of repairs. The same commenters stated new requirements to determine if salmonid species are present may delay projects for several years.

Response 10: The language of RGC 6 has been updated to more clearly address emergency situations. A Corps of Engineers designated emergency is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures. If the district engineer determines a situation is an emergency, delays will be avoided to the maximum extent practicable. The Seattle District cannot insert itself into local government affairs of negotiating easements. By including these requirements as an RGC, the typical project proponents are being provided ample time to plan their culvert projects to meet this condition. If the criteria of this condition cannot be met, a standard individual permit is available as an alternative permitting pathway. Additionally, maintenance activities may be exempt from permitting requirements under 33 CFR 323.4 if there is no alteration to the size, scope, or character of the original fill design. RGC 6 does not have a requirement for salmonid species surveys.

Comment 11 (Maintenance and Monitoring): Two commenters stated the new requirements to establish a monitoring and maintenance plan for all culverts replaced would result in a financial impact to local government. Please evaluate this impacts with an economic impact statement to local governments as part of a NEPA process; or revise the general condition to

eliminate the requirement. One commenter stated it is unclear what a maintenance plan looks like for this NWP.

Response 11: Due to the dynamic nature of streams, there is a need to monitor the function of new culverts using the stream simulation design methodology. The requirement to provide a monitoring and maintenance plan for all replaced culverts is not considered to be a major federal action significantly affecting the quality of the human environment, therefore a NEPA EIS is not required and an economic impacts statement will not be completed.

RGC 6 has been amended to include a five year timeframe on monitoring that will be sufficient to ensure the project is meeting the stream simulation design goals. Additionally, NWP general condition 14 – *Proper Maintenance* states “[a]ny authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.” Monitoring plans will be required to demonstrate the culvert is functioning sufficient to meet the stream simulation design methodology and is not resulting in more than minimal adverse environmental effects. The District will be developing guidance on what to include in a maintenance plan.

Comment 12 (Fish Presence): One commenter recommended referring project proponents to the WDFW's Priority Habitat Species database (available online) to determine where fish can be present or could be present to achieve statewide consistency.

Response 12: Comment noted. This will not be made a requirement of the condition but will consider adding this resource to its User's Guide as a note.

Comment 13 (Design Flexibility for Crossings): One commenter stated the stream simulation design is not always the most appropriate design for some stream crossings due to unique geomorphic and hydrological conditions making a stream simulation design inappropriate. The same commenter stated there are other acceptable methods such as bridges, and to add flexibility to this section so the Corps expectations are consistent with WDFW's water crossing requirements.

Response 13: RGC 6 allows flexibility and does not require a stream simulation culvert if a bridge is proposed. This condition requires stream simulation or a design method which achieves equivalent stream simulation results. It also allows the project proponent to provide a rationale if site conditions warrant a design other than stream simulation.

Comment 14 (Definition of a Bridge): One commenter recommended the Seattle District adopt the definition of a bridge as defined by the Federal Highway Administration, (i.e., opening measured along the center of the roadway of more than 20 feet)

Response 14: The common dictionary definition of a bridge is being used for this definition.

Comment 15 (After the Fact Permit Requirements): One commenter was concerned about the requirement for after-the-fact stream simulation when culverts are installed during emergencies, and asked for clarity on what is meant by “evaluation.”

Response 15: The RGC 6 language has been amended to more clearly state emergency activities are not authorized by NWP. Projects proceeding under emergency authorization from the district engineer are required to seek a permit after the work has been completed, through an “after-the-fact” process. If a culvert is installed under emergency procedures, the project proponent will need to seek permitting under NWP (in which case they must meet all terms and conditions, including RGC 6), or under a standard individual permit. Emergency maintenance meeting the exemptions under 33 CFR 323.4 are exempt from permit requirements.

RGC 6 will be implemented with modified language as discussed above. The final RGCs are listed in Section 9 of this document.

2.2.7 Proposed RGC 7, Stream Loss

This is a new RGC.

7. Stream Loss

No activity shall result in the loss of perennial stream beds or the loss of greater than 300 linear feet of intermittent and/or ephemeral stream beds. A stream may be rerouted if it is designed in a manner that maintains or restores hydrologic, ecologic, and geomorphic stream processes, provided there is not a reduction in the linear feet and area of stream bed. Streams include brooks, creeks, rivers, and historical waters of the U.S. that have been channelized into ditches. This condition does not apply to ditches constructed in uplands.

Stream loss restrictions may be waived on a case-by-case basis where the primary project purpose is the improvement of ecological function in accordance with the conditions of NWP 27, *Aquatic Habitat Restoration, Establishment, and Enhancement Activities*.

Comments in Response to Public Notice:

Comment 1 (Support for RGC 7): Four commenters offered support for this condition, and one commenter offered additional support for the waiver condition for projects if the primary purpose is to restore and improve ecological function. Two commenters recommended the district engineer require PCN for any project resulting in the loss of intermittent and ephemeral streams.

Response 1: Comment noted. The Seattle District has modified RGC 7 to include a PCN requirement for all projects resulting in the loss of stream beds.

Comment 2 (Clarify Loss): One commenter requested additional clarification on RGC 7 addressing stream loss. The condition proposed in the June 20, 2016, special public notice states

"no activity shall result in the loss of perennial stream beds [...]" which may eliminate the option for a NWP for many projects currently considered minimally impacting, such as the installation of a bridge footing. The same commenter offered examples of various projects that may result in a loss of streams, but provide increases in stream function. Another commenter asked if this condition precluded any activity affecting perennial stream beds and requested clarification on temporary impacts. The same commenter stated concern that any work in a perennial stream would require evaluation as a standard individual permit.

Response 2: The Corps agrees the concern is regarding the loss of linear feet of stream bed and there can be minimally impacting projects such as the installation of a bridge footing. Therefore, we have amended the language of RGC 7 clarifying the loss is to linear feet of stream bed. This change is consistent with the restrictions found in the terms and conditions in NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52. The language for RGC 7 proposed in the June 20, 2016 special public notice also contained a waiver for projects meeting the terms and conditions of NWP 27 – *Aquatic Habitat Restoration, Establishment, and Enhancement Activities*. The waiver has been amended to read, “Stream loss restrictions may be waived by the district engineer on a case-by-case basis provided the activities result in net increases of aquatic resource functions and services.” Loss does not include temporary impacts. The Seattle District is confident this will allow projects to be authorized by NWP resulting in increased stream function.

Comment 3 (District Engineer Waiver): One commenter suggested adding a statement or note to clarify the district engineer cannot waive the 300 linear foot limit described in the terms for NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52. Another commenter requested the Seattle District remove the waiver condition. Another commenter stated their project may result in improvements in ecological functions, but will be permitted under NWP 13 or NWP 14, rather than NWP 27. The same commenter stated culvert replacement for restoration should be waived.

Response 3: RGC 7 states, “[n]o activity shall result in the loss of perennial stream beds or the loss of greater than 300 linear feet of intermittent and/or ephemeral stream beds.” The condition further states the restrictions may be waived by the district engineer on a case-by-case basis provided the activities result in net increases of aquatic resource functions and services. The Seattle District is confident this language adequately addresses the use of waivers and the parameters for stream loss. The use of waivers to authorize projects resulting in benefits to stream function will allow minimally impacting projects to be authorized by NWP without placing undue burden on the regulated public.

Comment 4 (Intermittent and Ephemeral Stream Beds): One commenter stated 300 linear feet is too great of a loss to be authorized for NWPs for intermittent and ephemeral stream beds that may provide salmon habitat. The same commenter stated the condition should be scaled based on the stream length of potential fish habitat with project impacts limited to 10% of the entire stream length from any proposed and previous authorizations. A few commenters stated no loss should be permitted in intermittent and ephemeral stream beds in anadromous waters, and one commenter recommended only allowing waivers for streams not supporting salmon. Another commenter stated the 300 linear foot limit is too high because these types of streams are

utilized by fish important to tribal harvest and the intermittent nature of a stream is not permanent as beaver activity may impound water which provides perennial flow. One commenter recommended removing the loss of intermittent streams, stating many productive salmon and steelhead streams have low flows or dry up in the summer. Another commenter stated the loss of intermittent and ephemeral streams can only be justified by restoration projects.

Response 4: The Seattle District recognizes in streams, quantifying impacts and compensatory mitigation as linear feet does not take into account the width of the stream, which is important to indicate the area of stream performing ecological functions and services. Use of linear feet in the condition sets a parameter that is simple to track and encourages minimization without creating a condition that is difficult to comply with and complicated to enforce. The Seattle District recognizes intermittent and ephemeral streams provide important ecological functions, but will not preclude use of NWP to authorize losses as some stream loss may be considered minimal. The Seattle District has modified RGC 7 to include a PCN requirement for all projects resulting in the loss of stream beds allowing for case by case project review. Loss of anadromous waters will be reviewed for all projects subject to PCN and any project authorized by NWP will be required to meet NWP general condition 2 – *Aquatic Life Movements*, and NWP general condition 18 – *Endangered Species*. Waivers issued by the district engineer will be limited to projects resulting in net increases of aquatic resource functions and services and will not allow greater than 300 linear feet of stream loss. Rates of stream flow are determined at the time of the project impact; however, the potential impact from beaver dams may be considered on a case by case basis.

Comment 5 (Impacts to Infrastructure): A few commenters stated RGC 7 would limit the ways local government could manage drainage and may result in infrastructure damage, local property flooding, and shorter infrastructure design life. The same commenters stated, for example, if a perennial stream is scouring out a bridge abutment then logs could not be installed upstream to direct the water towards the center of the channel if it lowers the sinuosity of the reach. The commenters further stated if the primary purpose is failing infrastructure and not improvement of ecological function then it would not be permitted under the proposed language.

Response 5: Stream loss under RGC 7 would not apply to these examples, which may be authorized under a number of different NWPs, and under some circumstances may be exempt from Section 404 permit requirements as maintenance. The installation of logs will not be considered a loss of streams in all cases, and could have beneficial hydrologic and habitat value. RGC 7 allows waivers in cases where the activities result in net increases of aquatic resource functions and services.

Comment 6 (Maintenance): One commenter requested clarification if the RGC 7 requirements apply to maintenance work exempt by 33 CFC 323.4, and requested the condition be modified to make it clear these new requirements do not apply to exempt maintenance work.

Response 6: The NWPs are general permits authorizing work under Section 10 of the Rivers and Harbors Act of 1899, and Section 404 of the Clean Water Act (Section 404). Maintenance

work exempt from Section 404 requirements are not required to meet the terms and conditions of the NWP's because they do not require authorization from the Department of the Army. The Seattle District did not include this language to avoid confusion of project proponents qualifying for maintenance exemptions. Some activities which propose stream loss may occur in waterbodies regulated under Section 10 of the Rivers and Harbors Act, which does not allow exemptions.

Comment 7 (Compensatory Mitigation): One commenter stated complete loss cannot be avoided in all circumstances when building linear transportation projects, and the Seattle District should allow perennial stream loss with compensatory mitigation.

Response 7: All projects authorized by NWP are required to meet NWP general condition 23 – *Mitigation*, which requires avoidance and minimization before considering compensatory mitigation. Any project which results in the loss of perennial streams will not be considered minimally impacting under RGC 7 and must be authorized by a standard individual permit unless the requirement is waived. Culvert and bridge projects meeting all the NWP terms and conditions will not result in a loss of perennial streams in all cases, and may be authorized after the district engineer has reviewed the PCN.

RGC 7 will become a new RGC with the revisions discussed above. The final RGCs are listed in Section 9 of this document.

2.2.8 Proposed RGC 8, Mitigation

This is a new RGC.

8. Mitigation

Pre-construction notification, in accordance with Regional General Condition 1, is required for any project that will result in wetland loss of 1,000 square feet or more. In addition to the requirements of General Condition 23 (Mitigation), compensatory mitigation at a minimum one-to-one ratio will be required for all wetland losses that exceed 1,000 square feet. When a PCN is required for wetland losses less than 1,000 square feet, the Corps of Engineers may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment.

Compensatory mitigation for impacts to marine waters, lakes, and streams will be determined on a case-by-case basis. If temporary impacts to waters of the U.S. exceed six months, the Corps of Engineers may require compensatory mitigation for temporal effects.

Comments in Response to Public Notice:

Comment 1 (Require Compensatory Mitigation for All Loss): One commenter did not support this condition, and stated RGC 8 should require compensatory mitigation for any and all

net loss of jurisdictional waters. One commenter supported the condition but stated compensatory mitigation should be required for all wetland losses.

Response 1: Compensatory mitigation as required by NWP general condition 23 – *Mitigation* is determined on a case by case basis. Compensatory mitigation can only be required by the district engineer after he or she reviews the PCN and determines compensatory mitigation is necessary to comply with the “no more than minimal adverse environmental effects” requirement for NWPs (see 33 CFR 330.1(e)(3)). There is no federal statute or regulation requiring “no net loss” of aquatic resources. The “no overall net loss” goal for wetlands articulated in the 1990 U.S. EPA-Army Memorandum of Agreement for mitigation for Clean Water Act Section 404 permits states the Section 404 permit program will contribute to the national goal. The 1990 Memorandum of Agreement only applies to standard individual permits. All compensatory mitigation must comply with the 2008 Federal Mitigation Rule (see 33 CFR 332), which establishes the standards and criteria for the use of all types of compensatory mitigation. The Federal Mitigation Rule establishes the preference for compensatory mitigation types (banks, in-lieu fee programs, permittee responsible on-site/in-kind, and off-site/out-of-kind). NWPs authorize projects resulting in no more than minimal individual and cumulative adverse environmental effects, but recognizes some loss of waters can be considered minimal.

Comment 2 (Support for RGC 8): One commenter offered support for the inclusion of mitigation as a general condition to ensure the federal mitigation rule requirements are transparent to the public. Two commenters offered support for requiring compensatory mitigation for wetland losses that exceed 1,000 square feet. Another commenter supported the PCN requirement for wetland losses over 1,000 square feet.

Response 2: Comment noted.

Comment 3 (Require RGC 8 to apply to all Aquatic Resource Types): One commenter stated RGC 8 should be expanded to include other aquatic resource types such as freshwater streams and tidal areas. Another commenter stated compensatory mitigation should be required for permanent and temporary impacts to streams in WRIAs 8, 9, and 10 to ensure impacts and proposed mitigation meet NWP general condition 17 – *Tribal Rights*.

Response 3: The Seattle District has considered various types of resources under other RGCs, such as RGC 7 – *Stream Loss*, which has been amended to include submittal of a PCN. Tidally influenced areas currently require PCN for all projects due to ESA-listed species presence, and all new and maintenance bank stabilization projects will require PCN under RGC 5 – *Bank Stabilization*. All projects authorized by NWP are required to meet NWP general condition 23 – *Mitigation*, which requires avoidance and minimization before considering compensatory mitigation. The regional conditions, including regional PCN requirements, and the ability to evaluate PCNs on a case-by-case basis ensure the NWPs authorize activities having no more than minimal individual and cumulative adverse environmental effects in these areas. The Seattle District has established coordination procedures with tribes to help ensure NWP activities

comply with NWP general condition 17 – *Tribal Rights*. Any tribe without a coordination procedure in place is invited to contact the Seattle District and Seattle District will work with the tribe to develop one. NWP general condition 17 must be complied with in all cases.

Comment 4 (Require Compensatory Mitigation for all ESA Species and Critical Habitat):

One commenter stated RGC 8 should be expanded to say where ESA listed species and their critical habitat are concerned, compensatory mitigation will be required for all aquatic resource impacts.

Response 4: NWP general condition 18 – *Endangered Species*, and NWP general condition 23 – *Mitigation*, adequately address concerns to ESA listed species and critical habitat.

Comment 5 (District Engineer’s Discretionary Authority): One commenter recommended the Seattle District emphasize the district engineer can use discretion to require compensatory mitigation for any and all unavoidable adverse impacts no matter how small.

Response 5: When a PCN is reviewed by the district engineer compensatory mitigation can be required in all cases to ensure the activity authorized by NWP results in no more than minimal individual and cumulative adverse environmental effects, including for impacts less than 1/10th of an acre.

Comment 6 (NWP User’s Guide): One commenter encouraged the Seattle District to retain the use of notes in the NWP User’s Guide to assist the regulated public in the permitting process.

Response 6: The NWP User’s Guide is a tool used by the Seattle District to inform the regulated public about the permitting process in Washington State, as it relates to the NWPs. Notes in the User’s Guide are an effective way to provide relevant information to project proponents without adding conditions to restrict the use of the permit.

Comment 7 (Salmon Recovery): One commenter stated if projects were designed so impacts were avoided and habitat improvements were made through restoration efforts eventually salmon stocks would recover.

Response 7: All projects authorized by NWP are required to meet NWP general condition 23 – *Mitigation*, which requires avoidance and minimization before considering compensatory mitigation. NWP 27 – *Aquatic Habitat Restoration, Establishment, and Enhancement Activities* allows authorization of restoration efforts under NWP.

Comment 8 (Emphasize On-Site, In-Kind Mitigation): Two commenters stated the USACE’s preference for mitigation banks and in-lieu-fee programs is opposite of how compensatory mitigation should be prioritized. Mitigation banks and in-lieu-fee programs are off-site and often out-of-kind mitigation that may not address habitat for a critical life stage the project impacts.

Response 8: Activities authorized by NWP must meet all NWP general conditions and regional conditions including NWP general condition 23 – *Mitigation*. This condition states, “[f]or the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an

appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.” The Federal mitigation rule allows for consideration of hard to replace resources, and the district engineer will review compensatory mitigation plans that deviate from the mitigation preference on a case by case basis.

Comment 9 (Native Plantings): One commenter stated riparian mitigation requirements should be consistent with the jurisdiction where the mitigation is occurring. In locations where no pre-existing native riparian vegetation was present the riparian area should be rehabilitated to mimic what would have been present historically.

Response 9: Comment noted. Compensatory mitigation plans are evaluated on a case by case basis in accordance with NWP general condition 23 – *Mitigation* to determine the appropriate need to mitigate any functions and services impacted by a proposed project.

Comment 10 (Mitigation Requirements): One commenter stated compensatory mitigation should be two-for-one ratio for wetland and stream area impacted by the action. Two commenters requested clarification on what mitigation would be required for work in streams. Another commenter stated concern RGC 8 would prohibit flexibility of mitigation options proposed under the national program. One commenter stated the requirements to submit a mitigation plan should be “right-sized” for the extent of impacts a project or activity causes. Another commenter stated that all impacts, even minimal, should be mitigated, and the Corps should use Ecology’s mitigation ratios.

Response 10: Compensatory mitigation requirements are described in NWP general condition 23 – *Mitigation*. All compensatory mitigation plans required by the terms and conditions of the NWPs are reviewed by the district engineer to ensure they will adequately compensate for the loss of functions and services impacted by a proposed project. The Seattle District utilizes the joint guidance (Corps, Ecology) *Wetland Mitigation in Washington State* to evaluate compensatory mitigation plans and works with project proponents on a case by case basis to ensure proposed plans and monitoring address site specific concerns. RGC 8 requires compensatory mitigation for impacts to wetlands exceeding 1,000 square feet but does not place a threshold on impacts to streams. Streams are difficult to replace resources, and compensatory mitigation for stream losses should be provided through rehabilitation, enhancement, or preservation per 33 CFR 332.3(e)(3). RGC 8 sets a threshold that compensatory mitigation will be required for wetland losses over 1,000 square feet, but does not eliminate any of the flexibility allowed by the national conditions. The complexity of a mitigation plan should be commensurate with the proposed impacts of the activity or project.

Comment 11 (Wetland Loss): One commenter requested clarification for the term “wetland loss,” inquiring if it only applies to permanent wetland impacts or temporary impacts. One commenter stated a PCN should be required for any wetland loss, due to the no net loss policy.

Response 11: RGC 8 has been amended to include the word “permanent” to clarify the type of loss this condition refers to. Temporary impacts are addressed under RGC 13 – *Temporary*

Impacts and Site Restoration. There is no federal statute or regulation requiring “no net loss” of aquatic resources. The “no overall net loss” goal for wetlands articulated in the 1990 U.S. EPA-Army Memorandum of Agreement for mitigation for Clean Water Act Section 404 permits states the Section 404 permit program will contribute to the national goal. The 1990 Memorandum of Agreement only applies to standard individual permits. The NWP program allows loss of waters of the U.S. provided the loss is no more than minimal individually and cumulatively.

Comment 11 (Work with the Tribes to Review Mitigation): One commenter stated the Corps' mitigation program cries out for review and the tribes would like to be involved.

Response 11: At the national level, overall comments on the Corps' mitigation program should be directed and coordinated with Corps' HQ. At the district level, tribes are invited to participate in any applicable mitigation banking and in-lieu fee program review board. (See 33 CFR 332). At the project level, the Seattle District has established coordination procedures with tribes to help ensure NWP activities comply with NWP general condition 17 – *Tribal Rights*. Any tribe without a coordination procedure in place is invited to contact the Seattle District and Seattle District will work with the tribe to develop one. Mitigation activities which utilize an NWP require compliance with NWP general condition 17.

Comment 12 (Limit all NWPs to 5,000 Square Feet of Impact): One commenter requested the Seattle District reduce the maximum amount of loss of waters of the U.S. authorized by some NWPs from ½ acre (21,780 square feet) to 5,000 square feet, due to the importance of micro-habitats promoting biological diversity in a mosaic landscape context.

Response 12: A complete discussion of the ½ acre limit imposed on some NWPs (i.e., NWPs 12, 14, 21, 29, 39, 42, 43, 44, 50, 51, and 52) can be read in the 2017 NWP final rule at 82 FR 1869. The NWP program is designed to allow some loss of waters of the U.S., so long as those losses are no more than minimal individually and cumulatively. The Corps' regulatory program allows for fair and reasonable use of the nation's aquatic resources and the Corps works with project proponents to be flexible, understanding not every project can be designed within rigid parameters. The Seattle District recognizes the importance of wetland functions in a landscape context and routinely reviews its regional guidance to ensure the success of the various authorized forms of compensatory mitigation. Mitigation banks and in-lieu fees are the preferred method of compensatory mitigation as described in the federal mitigation rule codified in 33 CFR 332. When a project proponent proposes on-site, in-kind compensatory mitigation if the use of a bank or in-lieu fee is not available or appropriate, the Corps will review the proposal and may approve the mitigation plan where there is a likelihood the mitigation will be successful. NWP general condition 23 – *Mitigation*, emphasizes avoidance and minimization to reduce impacts to wetland resources before any compensatory mitigation will be considered. Therefore, based PCN requirements and mitigation options, the current acreage limits provide effective environmental protection while allowing district engineers flexibility to take into account site-specific characteristics of the affected aquatic resources.

Comment 13 (Increased Documentation): One commenter was concerned about the increased burden of submitting mitigation plans for wetland losses over 1,000 square feet, particularly with the increased PCN requirements of RGC 1.

Response 13: The Seattle District has made modifications to RGC 1 to reduce the paperwork burden to the public, remove redundancy with other NWP regional conditions, and improve the effectiveness and efficiency of the NWP program in the State of Washington. Compensatory mitigation plans should provide details sufficient to meet NWP general condition 23 – *Mitigation*, as well as the federal mitigation rule at 33 CFR 332. The requirements of RGC 8 do not change the requirements of submitting mitigation plans; but they do specify a minimum acreage when mitigation will be required.

Comment 14 (Temporary Impacts): One commenter was concerned about projects spanning multiple seasons (exceeding six months) and requested the six month timeframe be removed, or increased to two years.

Response 14: Temporary impacts are more fully addressed by RGC 13 – *Temporary Impacts and Site Restoration*. Temporary impacts spanning multiple years may result in a temporal loss of function to waters of the U.S., and may require compensatory mitigation to ensure the activities authorized by NWP result in no more than minimal individual and cumulative adverse environmental effects. We retained the six month timeframe as a reference point in time after which we “may” require compensatory mitigation. However, in consideration of the various site specific concerns and the variety and quality of wetland functions throughout Washington State, the final decision regarding compensatory mitigation requirements will be considered on a case by case basis after the district engineer has received a PCN for the proposed activity.

RGC 8 will become a new RGC as discussed above. The final RGCs are listed in Section 9 of this document.

2.2.9 Proposed RGC 9, Magnuson-Stevens Fishery Conservation and Management Act – Essential Fish Habitat

This has been an RGC since 2007. Revisions are proposed.

9. Magnuson-Stevens Fishery Conservation and Management Act – Essential Fish Habitat

Essential Fish Habitat (EFH) is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. If EFH may be adversely affected by, a proposed activity, the prospective permittee must provide a written EFH assessment with an analysis of the effects of the proposed action on EFH. The assessment must identify the type(s) of essential fish habitat (i.e., Pacific salmon, groundfish, and/or coastal-pelagic species) that may be affected. If the Corps of Engineers determines the project will adversely affect EFH, consultation with NOAA Fisheries will be required. EFH Conservation Recommendations may be provided by NOAA Fisheries as part of an EFH consultation.

Comments in Response to Public Notice:

Comment 1 (User’s Guide Note): One commenter encouraged the Seattle District to retain the use of notes in the NWP User’s Guide to assist the regulated public in the permitting process.

Response 1: This comment is addressed in the General Comments section under Comment 4.

Comment 2 (Tribal Rights): One commenter noted Essential Fish Habitat considerations and requirements only apply to certain listed species but not all species protected under tribal reserved treaty rights.

Response 2: Treaty reserved rights are addressed by NWP general condition 17 – *Tribal Rights*.

Comment 3 (Support for RGC 9): One commenter offered support for RGC 9.

Response 3: Comment noted.

This RGC will be retained with the proposed revisions. The final RGCs are listed in Section 9 of this document.

2.2.10 Proposed RGC 10, Submerged Aquatic Vegetation and Forage Fish

This is a new proposed RGC.

10. Submerged Aquatic Vegetation and Forage Fish

To the maximum extent possible, all activities and structures must avoid submerged aquatic vegetation (e.g., eelgrass, macroalgae attached to or rooted in substrate). A delineation using current protocols may be required. For activities in marine waters with the potential to impact eelgrass and/or macroalgae, the PCN must include a survey of any eelgrass and/or macroalgae.

For projects in marine waters, the PCN must include the location and size of documented forage fish spawning areas within one mile of the project site (i.e., Pacific sand lance (*Ammodytes hexapterus*), Pacific herring (*Clupea pallasii*), and surf smelt (*Hypomesus pretiosus*)). Please specify the distance to each documented site; refer to the spawning location map on Washington Department of Fish and Wildlife’s website located at:
http://wdfw.wa.gov/conservation/research/projects/marine_beach_spawning/

This regional general condition does not apply to NWP 48 – *Commercial Shellfish Aquaculture Activities*. Please see specific regional conditions for NWP 48.

Comments in Response to Public Notice:

Comment 1 (NWP 48 Exception): Many commenters stated RGC 10 should not offer an exception for NWP 48 – *Commercial Shellfish Aquaculture Activities* with one justifying the request because NWP 48 permittees are not relieved of the responsibility for documenting potential impacts and losses. One commenter stated “standard aquaculture practices may have profound effects on the benthic ecology of WA state tidelands and the conservation of eelgrass

and forage fish spawning beds.” One commenter stated exempting NWP 48 is not consistent with the Federal Task Force on Treaty Rights at Risk as eelgrass, salmon, and forage fish are critical to Tribal resources and not adequately addressed in the national conditions. One commenter encouraged increased RCs to address forage fish and eelgrass. One commenter stated NWP 48 should be exempt from RGC 10 because commercial shellfish aquaculture has minimal adverse to beneficial environmental impacts and ESA conditions are adequate to ensure effects minimal.

Response 1: In the original text for RCG 10 there was language regarding the avoidance and minimization of impacts to submerged aquatic vegetation and the need for a delineation of eelgrass and/or macroalgae. There was also a requirement to document forage fish spawning areas. Per the Special Public Notice titled “*Clarification to November 23, 2016 Special Public Notice for Nationwide Permit 48 ‘Commercial Shellfish Aquaculture Activities’ reissuance Request for Comments*” dated November 30, 2016, the District recommended not applying RGC 10 to NWP 48. RGC 10 has been revised after consideration of NWP general condition 23 – *Mitigation*, which already requires avoidance and minimization, and NWP general condition 32 – *Pre-Construction Notification* which already requires the submittal of a delineation of special aquatic sites. In light of these requirements, RGC 10 has been revised to only include requirements regarding forage fish work windows. In the Seattle District, all shellfish aquaculture occurs in marine waters with ESA-listed species and/or critical habitat in the vicinity. Therefore, under NWP general condition 18, a PCN is required in all cases in the Seattle District. When the district engineer receives a PCN, impacts to forage fish will be evaluated by the Seattle District by reviewing documented spawning locations, as well as evaluating site specific conditions such as substrate appropriate to support spawning. As NWP 48 authorizes continual, on-going activities throughout the 5-year verification and impacts to forage fish will be dependent on the types of activities proposed; the need for work windows will be evaluated on a case-by-case basis. Therefore, RGC 10 will not be applied to NWP 48.

Comment 2 (Support for RGC 10): Two commenters offered support for RGC 10.

Response 2: Comment noted.

Comment 3 (User’s Guide Note): One commenter encouraged the Seattle District to retain the use of notes in the NWP User’s Guide to assist the regulated public in the permitting process.

Response 3: This comment is addressed in the General Comments section under Comment 4.

Comment 4 (Forage Fish Habitat): One commenter recommended amending this condition to include evaluation of all potential forage fish habitat, not just what has been documented. Another commenter stated the protection of forage fish spawning will result in better protection for treaty-reserved salmon and shellfish.

Response 4: The Seattle District has modified RGC 10 with concern to forage fish. Documented forage fish spawning locations are an important tool to evaluate the potential presence of forage fish at a discrete location, but documentation does not guarantee or exclude

the presence of forage fish spawning during the time of project construction. When the district engineer receives a PCN, impacts to forage fish will be evaluated by the Seattle District by reviewing documented spawning locations, as well as evaluating site specific conditions such as substrate appropriate to support spawning. For all activities including those not subject to PCN, the condition will restrict work to in-water work windows for forage fish, except in cases where an approved biologist has lifted the in-water work restriction.

Comment 5 (Non-Native Submerged Aquatic Vegetation): One commenter stated RGC 10 should be modified to specify it only applies to native vegetation, as there may be places and times where it is desirable to remove non-native submerged aquatic vegetation. Another commenter stated invasive submerged aquatic vegetation such as milfoil should not be included in this RGC.

Response 5: As required by Executive Order 13112 (Invasive Species) attention will be given to invasive species and provide for their control. This condition has been modified to no longer include provisions for submerged aquatic vegetation, as adequate protection for special aquatic sites and requirements for delineations are already requirements of the NWP program.

Comment 6 (Survey Requirements): One commenter recommended the Seattle District allow existing surveys for eelgrass and/or microalgae [sic] within 5 years prior to PCN submittal, rather than requiring new surveys.

Response 6: This condition has been modified to no longer include provisions for submerged aquatic vegetation, as adequate protection for special aquatic sites and requirements for delineations are already requirements of the NWP program. NWP general condition 32 – *Pre-Construction Notification* (5) states, “The PCN must include a delineation of wetlands, other special aquatic sites, and other waters such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site.” Eelgrass beds are defined as vegetated shallows, a special aquatic site.

This condition has been amended as the survey requirements were redundant with the requirements of NWP general condition 32 – *Pre-Construction Notification*. This condition is now titled RGC 10 – *Forage Fish*. The final RGCs are listed in Section 9 of this document.

2.2.11 Proposed RGC 11, Notification of Permit Requirements

This has been an RGC since 2012. Revisions are proposed.

11. Notification of Permit Requirements

The permittee must provide a copy of the NWP authorization letter, conditions, and permit drawings to all contractors and any other parties performing the authorized work prior to the commencement of any work in waters of the U.S. The permittee shall ensure all appropriate contractors and any other parties performing the authorized work at the project site have read and understand relevant NWP conditions as well as plans, approvals, and documents referenced in the NWP letter.

Comments in Response to Public Notice:

Comment 1 (Maintain Authorization On-Site): One commenter recommended the permittee and contractors be required to maintain the NWP verification letter, conditions and permit drawings onsite during construction.

Response 1: RGC 11 has been amended to include the following: “A copy of these documents must be maintained onsite throughout the duration of construction.”

This RGC will be retained with the proposed revisions. The final RGCs are listed in Section 9 of this document.

2.2.12 Proposed RGC 12, Cultural Resources and Human Burials

This has been an RGC since 2007.

12. Cultural Resources and Human Burials

Permittees must immediately stop work and notify the District Engineer within 24 hours if, during the course of conducting authorized work, there are inadvertent discoveries of human burials, cultural resources, or historic properties as identified by the National Historic Preservation Act and the Native American Graves and Repatriation Act. Failure to stop work in the area of discovery until the Corps of Engineers can comply with the provisions of 33 CFR 325 Appendix C, the National Historic Preservation Act, Native American Graves and Repatriation Act, and other pertinent laws and regulations could result in a violation of federal and state laws. Violators are subject to civil and criminal penalties.

Comments in Response to Public Notice:

Comment 1 (NAGPRA): One commenter noted the word “Protection” was omitted in the RGC language from “The Native American Graves Protection and Repatriation Act (NAGPRA).”

Response 1: Comment noted. This typo will not need to be fixed as this condition has not been retained. See the “Consistency with National Program” discussion below.

Comment 2 (NHPA): One commenter requested the Seattle District clarify and stipulate, within the text of proposed RGC 12 pertaining to Cultural Resources and Human Burials, that all permittees within the Seattle District are required to comply with Section 106 of the National Historic Preservation Act (NHPA).

Response 2: Historic properties under section 106 of the NHPA are adequately addressed by NWP general condition 20 – *Historic Properties*.

Comment 3 (Retain RGC 12): One commenter stated RGC 12 should be retained as NWP general condition 21 – *Discovery of Previously Unknown Remains and Artifacts* offers some discretion for permittees to determine if their work may affect historic properties.

Response 3: RGC 12 has been removed from the Seattle District RGCs based on the below considerations. NWP general condition 21 – *Discovery of Previously Unknown Remains and Artifacts* requires permittees to immediately notify the district engineer of what was found, and to avoid, to the maximum extent practicable, construction activities that may affect the remains and artifacts until coordinated has been completed. This condition permits construction activities to continue outside of the discovery, while protecting the area of the discovery until coordination is complete. If previously unknown remains and artifacts are determined, after NHPA Section 106 consultation, to be historic properties, other types of measures to avoid, minimize, or mitigate adverse effects to those historic properties may be implemented on a case-by-case basis. In Washington State, per the Revised Code of Washington Title 68, Chapter 68.50, any person engaged in ground disturbing activity and who encounters or discovers skeletal human remains in or on the ground must immediately cease any activity which may cause further disturbance, make a reasonable effort to protect the area from further disturbance, report the presence and location of the remains to the coroner and local law enforcement in the most expeditions manner possible, and comply with the remainder of RCW 68.50.645 and other applicable state regulations. On federal and Indian lands, the requirements of the Archaeological Resources Protection Act (Public Law 89-665; 16 USC 470 et seq. *as amended*) apply. Further, upon notification of such discoveries, the district engineer may exercise his or her discretion authority to suspend verification.

Comment 4 (Training of Contractors): One commenter recommended contractors receive training on how to identify cultural resources and human burials before beginning activities authorized by NWP.

Response 4: Project proponents may seek out training or professional assistance in making determinations on the likely presence or absence of cultural resources and human burials at the location of any activities. For projects subject to PCN, the district engineer initiates notification procedures with local tribes which allows opportunity for further evaluation over the area of potential effect. The district evaluates all PCNs to ensure compliance with Section 106 of the NHPA. The Corps does not offer training on how to identify cultural resources and human burials before authorizing an activity; however, all activities carried out by NWP are required to meet all NWP general conditions and regional conditions.

Consistency with National Program: After careful review of the comments received during the June 20, 2016, special public notice for Seattle District regional conditions, RGC 12 – *Cultural Resources and Human Burials* will not be retained. The Seattle District evaluates all regional conditions for consistency with the NWP program and cannot issue regional conditions that are redundant or otherwise conflict with the national language. NWP general condition 20 – *Historic Properties*, and NWP general condition 21 – *Discovery of Previously Unknown Remains and Artifacts*, provide adequate conditions to ensure the NWPs will not cause effects to properties listed, or eligible for listing, in the National Register of Historic Places. In addition to the conditions of the NWPs, state and federal law require anyone who discovers human remains to stop work and notify authorities, as discussed above in Response 3. Additionally, the Seattle District determined a requirement to stop work immediately may not be practicable for all

activities authorized by NWP, and in some situations the requirement to stop work immediately may result in unsafe working conditions that risk public safety. When inadvertent discoveries occur on active construction sites, the immediate halt of work may leave the discovery at risk of further damage if actions are not taken to stabilize the site. For projects subject to PCN, the district engineer can add a special condition related to inadvertent discovery procedures to NWP verifications in cases where there are site specific concerns to historic properties. All projects authorized by NWP are required to meet NWP general conditions 20, and NWP general condition 21. The final RGCs are listed in Section 9 of this document.

2.2.13 Proposed RGC 13, Construction Boundaries

This is a new proposed RGC.

13. Construction Boundaries

Permittees must clearly mark all construction area boundaries before beginning work on projects that involve grading or placement of fill. Boundary markers and/or construction fencing must be maintained and clearly visible for the duration of construction. Permittees should avoid and minimize removal of native vegetation (including submerged aquatic vegetation) to the maximum extent possible.

Comments in Response to Public Notice:

Comment 1 (Require Boundaries After Verification): One commenter recommended modifying this condition to include, “[o]nce a project has been verified by the Corps,” preceding the first sentence.

Response 1: This RGC applies to all activities authorize by NWP, including activities not required to submit a PCN. The requirement to mark boundaries before beginning the construction work is required of all authorized activities. Any work which proceeds without meeting this condition will not be authorized by NWP, and may be subject to enforcement under either Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act. This condition will be retained as written in the June 20, 2016, special public notice.

This RGC will be implemented with the proposed revisions. The number for this RGC has changed due to the removal of the RGC titled *Cultural Resources and Human Burials*. The final RGCs are listed in Section 9 of this document.

2.2.14 Proposed RGC 14, Temporary Impacts and Site Restoration

This is a new proposed RGC.

14. Temporary Impacts and Site Restoration

- a. Temporary impacts to waters of the U.S. shall not exceed six months unless the prospective permittee requests and receives a waiver by the District Engineer. Temporary impacts to waters of the U.S. must be identified in the PCN.
- b. No more than 1/2 acre of waters of the U.S. may be temporarily filled unless the prospective permittee requests and receives a waiver from the District Engineer (temporary fills do not affect specified limits for loss of waters associated with specific NWPs).
- c. Native vegetation and soils removed from waters of the U.S. for project construction should be stockpiled and used for site restoration. If soil is not available from the project site for restoration, other locally-obtained, suitable, native soil may be used. Other vegetation (including seed) or soils may be used only if identified in the PCN.
- d. Restoration of temporarily disturbed areas shall include returning the area to pre-project ground surface contours. The permittee shall revegetate temporarily disturbed areas with native, noninvasive herbs, shrubs, and tree species sufficient in number, spacing, and diversity to restore affected functions. A maintenance and monitoring plan commensurate with the temporary impacts, may be required.
- e. Revegetation of the site shall begin as soon as site conditions allow and in the same growing season as the disturbance unless the schedule is approved by the Corps of Engineers. Species to be used for seeding and planting shall follow this order of preference: 1) species native to the site; 2) species native to the area; 3) species native to the state. Revegetated areas eventually shall have enough cover to sufficiently control erosion without silt fences, hay bales, or other mechanical means.
- f. If projects will result in temporary impacts of submerged aquatic vegetation (SAV) that are more than minimal, a monitoring plan must be included to evaluate whether the SAV has recovered. If recovery is not achieved after the monitoring period, contingencies must be implemented and additional monitoring will be required.

This regional general condition does not apply to NWP 48, *Commercial Shellfish Aquaculture Activities*. Please see specific regional conditions for NWP 48.

Comments in Response to Public Notice:

Comment 1 (Support for RGC 14): One commenter offered support for this condition. Another commenter offered support for including monitoring requirements for any NWP activities resulting in a potential net loss of submerged aquatic vegetation.

Response 1: Comment Noted.

Comment 2 (Remove Exception for NWP 48): Many commenters recommended removing the exception for NWP 48 from this RGC. One commenter stated project proponents are not relieved of the responsibility for documenting potential impacts and losses and another

commenter recommended the NWP 48 exception be removed to ensure all NWPs are required to meet the same standards and criteria when it comes to impacts to submerged aquatic vegetation. One commenter recommended exempting NWP 48 because commercial shellfish aquaculture has minimal adverse to beneficial environmental impacts.

Response 2: RCG 14 will not apply to activities under NWP 48. This is because the concept of temporary impacts is not applicable to NWP 48. Aquaculture activities are of a reoccurring nature; i.e., they can occur at any time, multiple times, and/or for differing durations during the 5-year authorization period. As the activities and associated impacts can occur throughout the authorization period it is not appropriate to require restoration of the areas in between. All impacts associated with the aquaculture activities will be evaluated during the NWP 48 verification process and any special conditions deemed to be necessary will be added at the time of authorization.

Comment 3 (Waivers): One commenter did not support waivers allowing the district engineer to authorize NWP activities and projects resulting in net losses of habitat or habitat function.

Response 3: Waivers are an important tool to provide flexibility in the NWP program to make consideration of site specific conditions and impacts. Restrictions can only be waived after the district engineer makes a written determination the activity will result in no more than minimal individual and cumulative adverse environmental effects. In the Federal Register publication of the 2017 NWPs (82 FR 1872), the Corps announced as a part of the commitment toward increasing transparency of regulatory decisions, quarterly reports will be posted on the headquarters' website. These reports will show summary statistics pertaining to the use of each NWP, aggregated per Corps District, and may include the number of verifications provided per quarter, acres of waters of the United States permanently lost, as well as including summary information on the use of waivers during the previous quarter. The waiver provision of this RGC will be retained.

Comment 4 (Tribal Notice): One commenter stated temporary impacts can adversely affect tribal fishing and fishing sites, and should not be approved without tribal notification to the tribes.

Response 4: The district engineer sends out notification to local tribes with notification agreements once a complete PCN is received. The notification includes summary project, including both permanent and temporary impacts, and location data, thus allowing tribes the opportunity to ask questions, provide comments, or object to projects potentially impacting tribal fishing and/or fishing sites. The Seattle District has established notification procedures with tribes to help ensure NWP activities comply with NWP general condition 17 – *Tribal Rights*. Any tribe without a coordination procedure in place is invited to contact the Seattle District and Seattle District will work with the tribe to develop one. NWP general condition 17 must be complied with in all cases.

Comment 5 (Native Plants and Soils): One commenter recommended amending RGC 14 to require use of plants native to the site where the project could directly or indirectly affect salmon

and potential salmon habitat waterbodies. Another commenter expressed concern stockpiling and re-using native vegetation and soil on site would not be feasible due to time and space restrictions on site. The same commenter stated identifying off-site soil may not be practicable in a PCN, and planting plans are often not available at the time of PCN submittal to meet the RGC conditions.

Response 5: This RGC has been amended to state, “[t]he permittee must revegetate disturbed areas with native plant species sufficient in number, spacing, and diversity to restore affected functions.” To address concerns about stockpiling native plants, this RGC has been amended to clarify, “[n]ative plants removed from waters of the U.S. for project construction should be stockpiled and used for revegetation when feasible.” To address concerns with soil, this RGC has been amended to state, “[i]f native soil is not available from the project site for restoration, suitable clean soil of the same textural class may be used. Other soils may be used only if identified in the PCN.” The RGC will still require the PCN to identify off-site soil, which will allow the district engineer to determine if a project will result in no more than minimal individual and cumulative environmental effects from altered ecological functions. The requirement to include information about other vegetation in the PCN has been removed from this RGC.

Comment 6 (Temporary Impacts): One commenter was concerned about projects spanning multiple seasons (exceeding six months) and requested the six month timeframe be removed, or increased to one year in accordance with the joint wetland guidance. The same commenter recommended replacing the word “area” with “waters of the U.S.” to clarify that upland areas are not subject to the RGC.

Response 6: Temporary impacts spanning multiple years may result in a temporal loss of function to waters of the U.S., and may require compensatory mitigation to ensure the activities authorized by NWP result in no more than minimal individual and cumulative adverse environmental effects. In consideration of the various site specific concerns and the variety and quality of wetland functions throughout Washington State, compensatory mitigation requirements will be considered on a case by case basis after the district engineer has received a PCN for the proposed activity. While upland areas are not within the Corps’ jurisdiction, once there is an impact within the Corps’ jurisdiction, the Corps must consider the secondary or indirect impacts from the authorized activity. These impacts could occur by being associated with the discharge or dredged or fill material and can occur later in time or further in distance. Therefore, if the clearing of the upland areas are associated with the activity regulated by the Corps, to minimize the impacts to the waters of the U.S. the Corps may require these areas to be restored. After the receipt of a PCN the Corps will make a determination on a case-by-case basis based on the strength of the relationship between the regulated activity and the temporary impact.

Comment 7 (Monitoring Plan): One commenter was concerned about the requirement to submit a monitoring plan with the PCN when temporary impacts to submerged aquatic vegetation are more than minimal.

Response 7: The determination of “more than minimal” environmental effects is made by the district engineer after the receipt of a PCN. This RGC has been amended to state, “[i]f the Corps determines the project will result in temporary impacts of submerged aquatic vegetation (SAV) that are more than minimal, a monitoring plan must be submitted.”

This condition will become a new RGC with the proposed revisions discussed above. The number for this RGC has changed due to the removal of the RGC titled *Cultural Resources and Human Burials*. The final RGCs are listed in Section 9 of this document.

2.2.15 Proposed RGC 15, Access

This has been a RGC since 2002.

15. Access

The permittee must allow representatives of the Corps of Engineers to inspect the authorized activity at any time deemed necessary to ensure the work and any required mitigation is being, or has been, accomplished in accordance with the terms and conditions of the NWP. Notification will normally be given in advance of the inspection to allow a property owner or representative to be on site.

Comments in Response to Public Notice:

Comment 1 (Support for RGC 15): One commenter offered support for the new sentence added to the end of this RGC, “Notification will normally be given in advance of the inspection to allow a property owner or representative to be on site.” The same commenter remarked advanced notice would ensure the appropriate staff could be on-site to answer questions and to ensure the safety of the Army Corps inspector.

Response 1: Comment noted.

Consistency with National Program: After careful review this condition will not be retained. All regional conditions are evaluated for consistency with the NWP program. 33 CFR 326.4 discusses the district engineer’s duty to inspect permitted activities to ensure they comply with the specified terms and conditions. The final RGCs are listed in Section 9 of this document.

2.3 Recommendations for Additional Regional Conditions

Comment 1 (Bank Stabilization): Comments were received from multiple tribes and agencies requesting a prohibition on new bank stabilization and in some instances for the maintenance of existing bank stabilization. Some commenters recommended a broad revocation of bank stabilization activities in freshwater and tidal waters. Other commenters specified waterbodies for revocation including all tributaries to Puget Sound; Skagit River and its tributaries; Columbia River and its tributaries from the mouth to Lyle; Lake Washington; Lake Sammamish; lower Puyallup River; Green/Duwamish River; Snohomish River; Stillaguamish River, Skykomish

River, Snoqualmie River, Nooksack River; Dungeness River; lower White River watershed; lower Carbon River watershed; tributaries to Hood Canal; and the Snohomish Estuary.

Tribes and resource agencies assert bank armor in freshwater and marine waterbodies has resulted in more than minimal individual and cumulative adverse environmental effects. Numerous commenters linked the decline of salmon and the increase in number of listed species to bank stabilization. Several commenters stated streamlined permitting of both new bank stabilization projects and repair of existing projects does not meet federal obligations to Indian tribes. One commenter noted the Corps should require avoidance, minimization, and mitigation for maintenance projects that will continue to impact salmon and aquatic habitat. One commenter stated new bank stabilization proposals must include adequate compensatory mitigation to offset impacts to ecosystem processes and functions.

Response 1: There is no set threshold for percentage of bank armor in a waterbody that is considered to be minimally impacting. The Corps reviews existing rules and regulations, available data, and past NWP use to determine if a type of action in a waterbody would have more than a minimal individual or cumulative adverse environmental effect. Although the watersheds described in the comment letters have been impacted by bank stabilization, the Corps believes some bank stabilization projects in these waterbodies could result in minimal individual and cumulative adverse environmental effects.

If the district engineer reviews the PCN and determines the proposed activity will result in more than minimal individual and cumulative adverse environmental effects, they may notify the project proponent and offer the prospective permittee the opportunity to submit a compensatory mitigation proposal to reduce the adverse environmental effects so they are no more than minimal (see 33 CFR 330.1(e)(2)). If the district engineer determines, after considering mitigation, that there will be more than minimal individual or cumulative adverse environmental effects, he or she will exercise discretionary authority and require an individual permit for the proposed activity. That determination will be based on consideration of the information provided in the PCN and other available information obtained through ESA Section 7, Tribal, NHPA Section 106, or other consultation(s). The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

Mitigation requirements for NWP activities can include permit conditions to avoid or minimize adverse effects on certain species or other resources. Mitigation requirements may also consist of compensatory mitigation requirements to offset authorized losses of jurisdictional waters so the net adverse environmental effects are no more than minimal. If the district engineer determines, after considering mitigation, there will be more than minimal individual and cumulative adverse environmental effects, they will either modify the NWP authorization to reduce or eliminate the adverse impacts or notify the prospective permittee the proposed activity is not authorized by NWP and provide instructions on how to seek authorization under a regional general or individual permit. The determination will be based on consideration of the information provided in the PCN and other available information.

The Seattle District is confident the regional conditions, including regional PCN requirements, and the ability to evaluate PCNs on a case-by-case basis will ensure the NWP's authorize activities having no more than minimal individual and cumulative adverse environmental effects in these areas.

Comment 2 (Additional Revocation on Eastern Shore of Puget Sound and revocation of certain NWP's on the Green/Duwamish Rivers): One commenter recommended using the Corps' 2014 study titled *Cumulative Effects Analysis Eastern Shore of Central Puget Sound Washington* to help identify multiple NWP's that should be revoked in areas of Puget Sound having experienced cumulative losses of aquatic resources. Another commenter recommended the Corps revoke the use of NWP's 3, 12, 13, 14, 18, 23, 25, 29, 36, 39, 40, 41, 42, and 43 in the Lower Green/Duwamish Watershed from the mouth of the Duwamish Estuary, upriver to SR 18 due to the adverse cumulative impacts having occurred in this area.

Response 2: The Corps' 2014 study and other data were evaluated during the development of the regional conditions. The Corps recognizes the eastern shore of Puget Sound has been modified through more than 100 years of development. While the Corps recognizes impacts occur and are frequently concentrated in urban environments, each area surveyed in this study does not share identical cumulative impacts. The Corps currently reviews and will continue to review proposed projects in the areas defined by the Eastern Shore study to ensure the effects from those projects result in no more than minimal individual and cumulative adverse environmental effects.

When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider the cumulative adverse environmental effects caused by activities authorized by NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent aquatic resource functions will be lost as a result of the NWP activity, the duration of the adverse effects, the importance of the aquatic resource functions to the region, and mitigation required by the district engineer.

The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns. If the district engineer determines, after considering mitigation, that there will be more than minimal individual or cumulative adverse environmental effects, he or she will exercise discretionary authority and require an individual permit for the proposed activity. That determination will be based on consideration of the information provided in the PCN and other available information obtained through ESA Section 7, Tribal, NHPA Section 106, or other consultation(s).

Comment 3 (PCN in Boldt Decision Case Areas): To uphold tribal treaty-protected rights, multiple commenters requested all projects located within the Salish Sea, coastal Washington, and tidally influenced portions of the Columbia River (or all areas located within tribal usual and accustomed areas per the *United States v Washington* (June 2016; document 20384 in the District Court record) (Boldt) case area), require a PCN to the Corps of Engineers. One commenter stated NWP general condition 17 should be modified to require PCNs for all NWP activities or all of the NWPs should be modified to require PCN to the Corps and affected tribal governments.

Response 3: NWP general condition 17 – *Tribal Rights*, must be complied with for all authorizations using an NWP. A PCN is required for all projects in the Salish Sea and the Columbia River due to NWP general condition 18 – *Endangered Species*. NWP general condition 18 requires nonfederal permittees to submit PCNs for any proposed activity that might affect ESA-listed species or designated critical habitat, if listed species or designated critical habitat are in the vicinity of the proposed activity, or if the proposed activity is located in critical habitat. The Salish Sea and many of the tributaries draining to the Salish Sea contain listed species and critical habitat and therefore, must submit a PCN to the Corps. The Seattle District has established coordination procedures with tribes to help ensure NWP activities comply with NWP general condition 17. Any tribe without a coordination procedure in place is invited to contact the Seattle District and we will work with the tribe to develop one.

Comment 4 (Wetland Loss): One commenter expressed strong support for regional conditions restricting the types of waters of the United States where the NWPs are used, such as fens, bogs, bottomland hardwoods, etc. The commenter also stated NWPs should not be used in regions where more than 50 percent of an historic wetland classification has been destroyed.

Response 4: The Seattle District is maintaining RGC 2 – *Aquatic Resources Requiring Special Protection*. For most NWPs, activities resulting in the loss of mature forested wetlands, bogs and peatlands, aspen-dominated wetlands, alkali wetlands, vernal pools, camas prairie wetlands, estuarine wetlands, wetlands in coastal lagoons, and wetlands in dunal systems along the Washington coast cannot be authorized by a NWP. These are among Washington’s most sensitive and rare types of wetlands. The Seattle District also has RGC 8 – *Mitigation* requiring compensatory mitigation at a minimum one-to-one ratio for all permanent wetland losses exceeding 1,000 square feet. When a PCN is required for wetland losses less than 1,000 square feet, the Corps of Engineers may determine on a case-by-case basis if compensatory mitigation is required to ensure the activity results in minimal adverse effects on the aquatic environment.

In areas having experienced heavy losses of wetlands, the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider the cumulative adverse environmental effects caused by activities authorized by NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or

magnitude to which the aquatic resources perform those functions, the extent aquatic resource functions will be lost as a result of the NWP activity, the duration of the adverse effects, the importance of the aquatic resource functions to the region, and mitigation required by the district engineer. If the district engineer determines, after considering mitigation, that there will be more than minimal individual or cumulative adverse environmental effects, he or she will exercise discretionary authority and require an individual permit for the proposed activity. That determination will be based on consideration of the information provided in the PCN and other available information obtained through ESA Section 7, Tribal, NHPA Section 106, or other consultation(s).

Comment 5 (Stormwater Discharge Pollution Prevention): One commenter recommended adding an RGC for stormwater discharge pollution prevention that would apply to NWP 7 – *Outfall Structures and Associated Intake Structures*, NWP 29 – *Residential Developments*, NWP 39 – *Residential Developments* and NWP 43 – *Stormwater Management Facilities*.

Response 5: The Seattle District relies upon the expertise of the Washington Department of Ecology, the Environmental Protection Agency, and Tribes with Section 401 authority to develop Section 401 Water Quality Certification conditions for water quality management measures to ensure the authorized activity does not result in more than minimal degradation of water quality. All projects authorized by NWP are required to minimize adverse environmental effects. For PCNs, the district engineer will evaluate each project on a case-by-case basis and make a determination that the project will not result in more than minimal individual and cumulative adverse environmental effects. It is the responsibility of the State, EPA, and Tribes with Section 401 authority to administer their water quality standards, and the responsibility of permittees to ensure they are in compliance with all applicable local, state, and federal regulations.

Comment 6 (Freshwater Aquatic Vegetation): Two commenters recommended an RGC be added to require fresh water vegetation surveys and to avoid existing native aquatic vegetation through established buffers.

Response 6: Under “Definitions,” in the NWPs, *Vegetated Shallows* includes a variety of vascular rooted plants in freshwater systems. Vegetated shallows are special aquatic sites under the 404(b)(1) guidelines (40 CFR Part 230.43). NWP general condition 32 – *Pre-Construction Notification* requires all PCN’s include a delineation of wetlands and other special aquatic sites. Therefore, an RGC is not needed as this is already a requirement of the NWPs.

Comment 7 (Use of Chemically Treated Wood): Multiple commenters recommended including an RGC to prohibit the use of wood products treated with biologically harmful leachable chemical components (e.g., copper, arsenic, zinc, creosote, chromium, chloride, fluoride, and pentachlorophenol). Another commenter recommended the Corps discontinue authorization for the use of chemically treated wood except for framing purposes above waters within Washington State, and should prohibit ACZA treated wood on projects with total maximum daily load (TMDL) implementation plans issued by the Department of Ecology. If

treated wood is used, it shall be treated with wood preservatives in compliance with the Registration Documents issued by the EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and following the Western Wood Preservatives Institute (WWPI) guidelines and BMPs to minimize the preservative migrating from treated wood into aquatic environments. The same commenter recommended the Corps require compensatory mitigation to offset unavoidable adverse impacts to ESA listed species if the use of treated wood is authorized.

Response 7: NWP general condition 6 – *Suitable Material*, requires, “[n]o activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).” Treated wood may be considered a suitable material for activities, as long as the district engineer determines its use complies with this condition, and is free from toxic pollutants in toxic amounts. NWP general condition 25 – *Water Quality*, requires each project proponent to obtain an individual water quality certification or waiver for discharges authorized by the NWP if the state or authorized tribe has not previously certified compliance of the NWP with Section 401 of the Clean Water Act (see 33 CFR 330.4(c)). The Seattle District can add a special condition, if it is appropriate, to the verification letter requiring compliance with the *EPA Region 10 Best Management Practices for Piling Removal and Installation in Washington State* dated 18 February 2016. The Department of Ecology, the Environmental Protection Agency, and Tribes with 401 authority are the appropriate entities to make effect determinations on issues related to water quality. Compliance with the requirements of the ESA and the use of compensatory mitigation are described in NWP general condition 18 – *Endangered Species*, and NWP general condition 23 – *Mitigation*, respectively. The Seattle District is confident these conditions are adequate to evaluate and mitigate for the adverse environmental effects of a project on a case by case basis.

Comment 8 (Work Windows): One commenter recommended a condition be developed to require all work that could impact ESA-listed species as well as other species be conducted within an in-water work window to avoid or minimize impacts to those species.

Response 8: If ESA-listed species or forage fish are present, the Seattle District may add a special condition to the verification letter or permit requiring adherence to a work window. For some projects, a work window is not required because the work will have no effect on ESA-listed species and for a small suite of projects, a work window may not be practicable. To allow for flexibility, the Seattle District prefers to add a work window special condition when it is determined necessary to minimize effects and conserve listed species.

2.4 Comments on NWP 48:

The following regional condition(s) for this NWP were proposed by the Seattle District in the November 23, 2016 Public Notice. The final regional conditions for this NWP are in section 9.2.

NWP 48 Specific Regional Conditions:

1. The pre-construction notification (PCN) must include a complete description of the NWP 48 activities anticipated to occur over the duration of the permit authorization within the applicant's project area. If an operator intends to undertake unanticipated changes to the commercial shellfish aquaculture operation during the effective period of this NWP, and those changes require DA authorization, the operator must contact the district engineer to request a modification of the NWP verification and receive written approval prior to commencing work.
2. The harvest of clams by means of hydraulic escalator harvester equipment is not authorized by this NWP.

Comments in Response to Public Notice:

Comment 1 (Proposed RGC 1 Specific to NWP 48 PCN Requirements/Staffing): One commenter provided the following suggested text for the proposed RGC 1 specific to NWP 48, the PCN requirement: “The PCN must include a complete description of the NWP 48 activities anticipated to occur over the duration of the permit authorization within the applicant’s project area. If a complete description of the proposal has previously been provided, the operator may satisfy the PCN requirement by referencing such information and requesting permit authorization. An operator may indicate in its PCN that multiple species of shellfish and multiple culture techniques may be utilized and changed throughout the effective period of this NWP. If an operator intends to undertake unanticipated changes to the commercial shellfish aquaculture activities during the effective period of this NWP beyond those indicated in the PCN, and those changes required Department of the Army authorization, the operator must contact the district engineer to request a modification to the NWP verification and receive written approval prior to commencing work. If the Corps does not deny such a modification request within 14 days, it shall be deemed approved.” Another comment was received stating the Seattle District is understaffed and need more personnel to evaluate and monitor shellfish aquaculture permitting.

Response 1: The Seattle District agrees with the National Decision Document for NWP 48 regarding PCN requirements for NWP48 and to its response to a similar comment and suggestion for text. The National Decision Document provides the information required for an NWP 48 PCN and states, “If the operator requests a modification of the NWP, he or she must wait for a verification letter from the district engineer.” This is relevant in the Seattle District because a proposed aquaculture work modification may trigger additional evaluation to determine if the work still complies with NWP general conditions 17 - *Tribal Rights*, 18 - *Endangered Species*, and 20 - *Historic Properties*. The language in proposed regional condition 1 is duplicative to the National Decision Document and the Federal Register notice (January 6, 2017) for NWP 48; therefore, regional condition 1 for NWP 48 is not necessary and will not be included in the Seattle District regional conditions for NWP 48. Instead, a note will be added to the Seattle District NWP reminding applicants if they request a modification of the NWP, they must wait for a written response from the district engineer before commencing the work. The Corps balances, prioritizes, and manages the overall permitting workload based on the number of available staff.

Comment 2 (Proposed Regional Condition 2 - Hydraulic Escalator Harvester): One commenter requested clarification to proposed regional condition 2 with the definition of

hydraulic escalator harvester equipment. Another commenter encouraged the continued prohibition of clam hydraulic harvester equipment.

Response 2: Listing all of the types of mechanical harvesting methods or equipment allowed under NWP 48 would be cumbersome. Mechanical clam harvester methods having already submitted PCNs and received verifications are aware the exclusion does not apply to their equipment. The Seattle District expects shellfish aquaculture will continue to change as new techniques and methodologies are developed and cannot make a pre-decision if use of an unknown type of mechanical harvest equipment has minimal individual and cumulative adverse environmental effects. The harvest method would be provided in the PCN, so the Seattle District would know a mechanical method was being proposed and could discuss with the grower if necessary. Therefore, the District will continue to list the one type of harvester that is not authorized and encourage growers to contact the District if they have questions regarding their specific harvester.

Comment 3 (“New” Definition): Many commenters had concerns with the new aquaculture definition, “a ‘new’ commercial aquaculture operation is an operation in a project area where commercial shellfish aquaculture activities have not been conducted during the past 100 years.” Many commenters were concerned with the definition because if any commercial aquaculture had occurred in the 100 year period, then the NWP would not apply a limit of direct affects to ½ acre of submerged aquatic vegetation beds (e.g., eelgrass). Instead, there would be no limits of direct affects to submerged aquatic vegetation beds. A commenter stated there is no legal or scientific basis for the “new” verses “continuing” distinction for commercial aquaculture project areas and also stated the “extent of impacts depends upon the kind of disturbance and individual grower practices – not simply upon whether the operation is considered by the Corps to be “new” or “existing/continuing”. Another commenter stated they were unaware of any other Corps authorized activity that considers areas inactive for many decades to be ongoing and was aware of more than 2,000 acres in one waterbody that had been fallow for 35 years or more and overlapped with eelgrass beds. Work could resume in these 2,000 acres without taking any avoidance measures to avoid loss of critical eelgrass habitat or mitigate for the losses. Another commenter stated the “Corps determination that any area which may have been used for aquaculture within the past 100 years – or that was just potentially planned to have been used – may be considered ‘continuing fallow’ and exempted from habitat and species protecting provisions is deeply troubling and stands in direct contradiction to the mandates of the ESA and the MSA.” This commenter requested a regional condition to establish a modest and limited time frame when determining and regulating ‘fallow’ areas.

Another commenter expressed concerns that all areas within Puget Sound, Willapa Bay and Grays Harbor will be considered ‘existing’ and/or ‘ongoing’. And because there is no limits to the amount of submerged aquatic vegetation that can be impacted in those areas, this will allow for significant adverse impacts to submerged aquatic vegetation and forage fish habitat areas. Another commenter was also concerned this additional direct impact is more than minimally impacting to submerged aquatic vegetation, especially eelgrass. This commenter also asked for a regional condition to require an applicant to formally demonstrate how commercial aquaculture activities were conducted on a project area with the past 100 years. Another commenter stated

deeds should not be used as a mechanism for determining the project area because not all sales to private owners were done for the purpose of aquaculture or had aquaculture implemented. Other commenters were concerned that just a statement from the applicant would not be adequate to establish if a site had historically been used for aquaculture.

Response 3: The decision to define a new commercial shellfish aquaculture operation as an operation in a project area where commercial shellfish aquaculture activities have not been conducted during the past 100 years was explained in the National Decision Document for NWP 48. If an existing grower proposes to include in their project area an adjacent parcel they have never farmed before, it would only be considered new if it has never been farmed in the last 100 years. Similarly, if a new grower proposes activities at a site where they have never farmed, it would only be considered new under the regulations if the site has never been farmed by anyone in the last 100 years. In other words, the history of the site and not the status of a grower at a particular site is what determines whether a project area is new. A regional condition is not required to establish whether a project area qualifies as ‘existing’. PCN is required in all cases under NWP 48 due to requirements from NWP general conditions. A note will be added to NWP 48 recommending the grower include the history of a site that has not previously been authorized for commercial aquaculture. Effects of this decision to eelgrass and forage fish will be discussed further under comments relating to eelgrass and forage fish.

Comment 4 (ESA Conditions as Regional Conditions/Use of SPIF): Many commenters stated concerns with adverse effects from commercial shellfish aquaculture to ESA-listed species. One commenter stated the ESA conditions resulting from the Seattle District’s recently completed ESA and MSA programmatic consultation for shellfish activities in Washington State adequately ensure the “individual and cumulative effects associated with activities authorized under NWP 48 in Washington State remain no more than minimal.” This commenter further stated even projects not obtaining ESA and MSA coverage under this programmatic consultation will need to address the underlying substantive concerns supporting the conditions to secure individual ESA and MSA coverage. One commenter said the Seattle District must comply with ESA and the Incidental Take Statement by including the conservation measures from the programmatic biological opinions as regional conditions to NWP 48. Another commenter said failure to require submittal of a Specific Project Information Form (SPIF) violates the obligations of the Corps under the ESA and/or the CWA.

Response 4: For those activities authorized by NWP 48, it is reasonable to allow project proponents the opportunity to individually consult under the ESA by not including in the current programmatic consultation as a regional condition. Activities authorized by this NWP must comply with NWP general condition 18 - *Endangered Species*, which requires a PCN for any listed species or critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in critical habitat. In the Seattle District, all shellfish aquaculture occurs in marine waters with ESA-listed species and/or critical habitat in the vicinity. Therefore, under NWP general condition 18, a PCN is required in all cases in the Seattle District. The project proponent has the option to meet the programmatic ESA and MSA biological opinions’ terms and conditions or instead have an individual ESA/MSA consultation for his or her project area. The terms and conditions of the programmatic ESA and MSA biological opinions cover more

activities than those included in NWP 48, such as shellfish research, restoration and recreational activities. In addition, the programmatic was not developed for any one type of Corps authorization and can be used for standard individual authorizations as well as for NWPs. The Corps will not incorporate the terms and conditions of the programmatic consultation as regional conditions. The use of a SPIF is optional. The SPIF is not required for the Seattle District to determine if a project meets the terms and conditions of the programmatic biological opinions or NWP 48.

Comment 5 (Eelgrass/ Eelgrass Mitigation): Many commenters stated concerns for impacts to eelgrass noting the variety of ecological functions and high productivity eelgrass provides, including the role in remediating ocean acidification and hypoxia. One commenter stated “Standard aquaculture practices may have profound effects on the benthic ecology of Washington State tidelands and the conservation of eelgrass and forage fish spawning beds.” One commenter noted “applying mitigation sequencing to eelgrass is important because eelgrass restoration for mitigation is difficult to achieve and expensive” concluding that eelgrass restoration costs range from \$100,000 to \$1,000,000 per acre. One commenter recommended use of the ½ acre threshold for both new and existing shellfish operations. One commenter requested a restriction to use of NWP 48 for new or expansion in eelgrass beds. Another commenter stated new aquaculture should be prohibited from encroaching on eelgrass. One commenter stated aquaculture at a landscape-level has minimal impacts to eelgrass cover and the level of reduction caused by aquaculture is within the range of existing natural disturbances, such as storms. This commenter also stated the functional value of eelgrass and aquaculture combined can provide positive benefits from a broader ecosystem perspective. Another commenter stated the Corps needs to enforce Clean Water Act regulations to protect eelgrass.

Response 5: Eelgrass is specifically named as a type of vegetated shallow and are special aquatic sites under the 404(b)(1) Guidelines. The Seattle District agrees with the commenters on the important value of eelgrass, but believes it is more appropriate to evaluate each commercial aquaculture project individually as the direct impacts to eelgrass will vary with the site and the type of cultivation methods being proposed. This evaluation on a project-specific basis when a PCN is submitted is appropriate because, as the NWP 48 National Decision Document states, “if the vegetated shallows are high value and the proposed activity will result in more than minimal adverse effects on the aquatic environment the district engineer will exercise discretionary authority to require the project proponent to obtain an individual permit.”

Comment 6 (Forage Fish): Multiple commenters were concerned with the impacts of aquaculture on forage fish spawning areas. One commenter noted the NWP general condition 3 to avoid activities in spawning areas during spawning season to the maximum extent practicable and recommended aquaculture be required to stay 100 feet from spawning areas and comply with work widows. One commenter stated the high densities of filter feeders could deplete phytoplankton and zooplankton. One commenter stated conditions applied to NWP 48 from ESA consultations adequate to ensure effects are minimal.

Response 6: In Washington State, the forage fish species known to spawn in aquaculture areas

are Pacific sand lance (*Ammodytes hexapterus*), Pacific herring (*Clupea pallasii*), and surf smelt (*Hypomesus pretiosus*). Pacific sand lance and surf smelt spawn directly in the substrate at tidal elevations typically higher than shellfish aquaculture occurs. Pacific herring spawn in the same tidal elevations as shellfish aquaculture but spawn directly on vegetation or natural features rather than in the substrate. Herring is also known to spawn on aquaculture gear. The Seattle District will evaluate PCNs to determine if a forage fish spawning area would be directly lost to spawning by the aquaculture activity. NWP general condition 3 also states “activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.”

Per the Special Public Notice titled “*Clarification to November 23, 2016 Special Public Notice for Nationwide Permit 48 ‘Commercial Shellfish Aquaculture Activities’ reissuance Request for Comments*” dated November 30, 2016, the District is not applying RGC 10 – *Forage Fish* to NWP 48. As NWP 48 authorizes continual, on-going activities throughout the 5-year verification and impacts to forage fish will be dependent on the types of activities proposed, the need for work windows needs to be evaluated on a case-by-case basis.

Comment 7 (Aquaculture Gear/Marine Debris): One commenter stated concerns with the amount of massive netting being used and the amount of microplastics and marine debris being generated by shellfish aquaculture. Another concern was allowing massive amounts of canopy nets interferes with migratory bird feeding areas and is modifying the shorelines and federal agencies should be required to monitor approved areas using aerial photos. A commenter provided a list of impacts from marine debris, such as Polyvinyl chloride (PVC) tubes and High Density Polyethylene (HDPE) oyster bags and fasteners, individual geoduck nets, and derelict canopy nets, and recommended specific mitigation solutions, such as not using tubes, or other PVC and securely anchoring canopy nets. The commenter also provided a list of effects of specific gear types and mitigation solutions and recommended not allowing the use of netting or limit areas of nets.

Response 7: The Seattle District recognizes marine debris is a serious impact on the marine environment, but believes it would not be a practicable solution to regionally condition NWP 48 to not allow the use of PVC and HDPE gear as there are no current alternatives to use of these materials. We believe NWP 48 and the NWP general conditions adequately address aquaculture gear and potential marine debris. NWP 48 requires the PCN include information on whether canopy nets will be used so they can be evaluated. NWP general condition 6 - *Suitable Material*, states material used for construction or discharged must be free from toxic pollutants in toxic amounts. NWP 14 - *Proper Maintenance*, states any authorized structure or fill shall be properly maintained, including maintenance to ensure the public safety and compliance with the applicable NWP specific conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization. The district engineer may also add specific conditions if a structure/activity is proposed in an area where the local marine hydrodynamic conditions (e.g., fetch length, tidal currents) would make securing aquaculture gear difficult.

Comment 8 (Request for Regional General Permit): Many commenters supported revoking NWP 48 in the Seattle District and instead supported the development of a regional general

permit (RGP) for shellfish activities and/or using an individual (standard) permit. One commenter recommended NWP 48 be maintained but with pathways to balance environmental with economic concerns. One commenter recommended a RGP be developed tailored for Puget Sound and another RGP developed for Willapa Bay/Grays Harbor to reflect the differences in aquaculture activities and in the ecologies of the water bodies. Adding regional specific conditions to NWP 48 in addition to the national conditions results in a confusing set of conditions that are difficult for the grower to follow and implement. Whereas, having a RGP would allow the Seattle District to protect the public interest for clean water and wildlife habitat, especially for ESA species. Another commenter requested NWP 48 be maintained and not revoked while a longer collaborative process proceeds with the state to develop a RGP or state programmatic general permit.

Response 8: The Seattle District is not pursuing an RGP for aquaculture activities at this time. This option is open for future discussion, but in the interest of time and national consistency, the Seattle District determined the NWP 48 is the best method of authorization for Washington State. Should an RGP be developed in the future, its draft terms and conditions would be put forth for public review and comment. An RGP may or may not have different parameters than those currently proposed under NWP 48. Either an RGP or NWP 48 protects the public interest because both require public involvement during their development and would require compliance with the same Federal laws and regulations, such as ESA and ensuring there are no more than minimal individual or cumulative adverse impacts.

Comment 9 (PCN Required for Change of Bottom Culture to Floating or Suspended): One commenter requested a PCN requirement for changing from bottom culture to floating or suspended culture as the change may interfere with exercise of treaty fishing rights.

Response 9: NWP 48 requires a request for modification if the cultivation method changes. Tribes would then be notified under the current Seattle District tribal notification procedures; all authorized activities must comply with NWP general condition 17 – *Tribal Rights*.

Comment 10 (Navigation): One commenter stated aquaculture gear may limit safe, unrestricted access to public waters. Changing from bottom aquaculture to suspended aquaculture can result in unsafe navigation in public waters. One commenter described specific incidents of prop entanglement and wind surfer entanglement in aquaculture netting.

Response 10: Activities authorized by this NWP will not adversely affect navigation, because these activities must comply with NWP general condition 1 - *Navigation*. In the Seattle District activities authorized by this NWP require PCN in all cases due to NWP general condition 18 – *Endangered Species*. This will allow district engineers to review activities and determine if there will be any adverse effects on navigation. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific navigational concerns. NWP 48 Note 1 reminds permittees to notify the applicable U.S. Coast Guard office regarding the project.

Comment 11 (Specific to Waterbody): A number of commenters stated their concerns for impacts of shellfish aquaculture in specific waterbodies: Hood Canal, Squamish Harbor (north

Hood Canal) and Samish Bay (north Puget Sound). One commenter is concerned with a proposal adjacent to Dungeness National Wildlife Refuge would be considered existing because of minimal oyster operations having historically occurred within the project area.

Response 11: Under National Condition 18 – *Endangered Species*, a PCN is required in all cases for shellfish aquaculture in the Seattle District. The District Engineer will consider site specific factors, such as the importance of the aquatic resource functions to the region. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns. The district engineer may assert discretionary authority by modifying, suspending, or revoking NWP authorization for a specific activity whenever he determines sufficient concerns for the environment or any other factor of the public interest so requires.

Comment 12 (Cumulative Impacts): One commenter noted no environmental impacts analysis has been performed for aquaculture at the state or federal level and requested the Seattle District perform a cumulative impact analysis for aquaculture. This commenter went on to say the cumulative impact analysis currently conducted for NWP 48 activities is insufficient and the exercise of discretionary authority has been eliminated through industry lobbying; adding “Documentary support and substantive evidence is either not available, outdated, or provided by industry or their consultants.” In addition, this commenter was concerned some of the data/opinions were provided by a non-objective person. Another comment stated peer reviewed scientific studies need further review and examination by the Seattle District. One commenter requested an environmental impact study on general conversion of Puget Sound tidelands to plastics and monoculture farming. Another commented federal agencies should prepare site maps of all aquaculture sites to facilitate addressing cumulative impacts. These maps would show the concentrations of shellfish aquaculture in bays and coves resulting in habitat fragmentation with minimal natural habitat that is more than minimal. One commenter stated aquaculture impacts, such as continual or periodic soil disturbance, plastic pollution, or human disturbances are long term into the future will continue to persist while the aquaculture is occurring. Another commenter stated the Seattle District must consider impacts of all existing operations, including fallow lands, and new operations.

One commenter stated “there is extensive scientific support for the finding that commercial shellfish aquaculture operations have minimal individual and cumulative adverse environmental impacts, much of which is identified in the Federal Register notice and [draft] Decision Document for NWP 48.” The Washington Sea Grant’s final report to the Washington state legislature in 2013 concluded, “The limited disruptions associated with geoduck aquaculture are within the range of natural variation experienced by benthic communities in Puget Sound.” The commenter also added “Projects that obtain individual ESA and MSA coverage will likely be required to comply with similar conditions [from programmatic consultation recently completed] and, at the very least, must address the underlying substantive concerns that support the conditions. These conditions, in addition to the conditions and limits of NWP 48 and the numerous other regulations and programs with which shellfish farmers must comply, are more than adequate to ensure that the individual and cumulative effects associated with activities authorized under NWP 48 in Washington State remain no more than minimal.”

Response 12: The Seattle District has a discussion of cumulative impacts for NWP 48 in Section 8.3.4 of this document. NEPA cumulative impacts is accomplished at the national level for NWP 48 activities.

Comment 13 (Migratory Bird Breeding Areas): One commenter noted the NWP national general condition to avoid to the maximum extent practicable breeding areas for migratory birds. This commenter stated the shellfish industry encourages the intentional harassment of migratory birds in their Pest Management Plan to keep migratory birds from foraging on shellfish; in addition, aquaculture activity may drive off migratory birds.

Response 13: NWP 48 does not authorize pest management activities that are not in accordance with other federal laws, such as the Migratory Bird Treaty Act. For an NWP activity, compliance with the Bald and Golden Eagle Protection Act (16 U.S.C. 668(a)-(d)), the Migratory Bird Treaty Act (16 U.S.C. 703; 16 U.S.C. 712), and the Marine Mammal Protection Act (16 U.S.C. 1361 et seq.) is the responsibility of the project proponent. NWP general condition 19 – *Migratory Birds and Bald and Golden Eagles*, states the permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether “incidental take” permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

Comment 14 (Pesticide Use): One commenter was concerned with pesticide use in Willapa Bay and Grays Harbor. Another commenter stated pesticide use must be included in the Seattle District’s analysis.

Response 14: The Corps does not have the authority to regulate the use of pesticides as this authority resides with the Environmental Protection Agency and/or the Washington State Department of Ecology.

Comment 15 (Coordinate with Puget Sound Recovery Goals or the Salmon Recovery Goals): One commenter requested the Seattle District coordinate with Puget Sound Recovery Goals or the Salmon Recovery Goals.

Response 15: The Seattle District coordinates and is involved with implementing the Puget Sound Recovery Goals and Salmon Recovery Goals throughout the agency.

Comment 16 (Mitigation): One commenter stated because more than 38,000 acres are currently authorized under NWP 48, mitigation must be considered and is currently not adequate. This commenter provided a list of specific practices that should be mitigated (e.g., reduction in attenuation of wave energy, reduced fish refuge, relocation of natural features and species) and suggested possible mitigations (e.g., relocating animals nearby, not removing natural features, creation of vegetation with appropriate ratios, requiring buffers to forage fish spawning, etc.).

Response 16: NWP general condition 23 – *Mitigation*, requires avoidance and minimization of

adverse effects, both temporary and permanent, to waters of the U.S. to the maximum extent practicable at the project site. Most shellfish aquaculture activities would not be expected to result in a temporary or permanent loss of waters of the United States. Permanent loss of waters would be a regulated activity where the discharge of dredged or fill material changes an aquatic area to dry land, increases the bottom elevation of a waterbody, or changes the use of the waterbody. However, NWP 48 does authorize discharge of dredged or fill material into waters of the United States necessary for shellfish seeding, rearing, cultivating, transplanting and harvesting activities. NWP general condition 23(i) states where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level. If the District Engineer determines an activity to have more than minimal adverse environmental impacts compensatory mitigation requirements may be addressed through conditions to the NWP authorization.

Comment 17 (Alteration of Substrate): One commenter provided a list of the effects to the substrate from aquaculture activities, such as grading or excavation, use of harvest machinery, or use of hydraulic liquefaction to harvest geoduck and recommended excluding geoduck harvest from mudflats, aquatic vegetation areas, or in or near forage fish spawning areas.

Response 17: In the Seattle District many aquaculture sites occur in mud flats, which are special aquatic sites under the 404(b)(1) Guidelines. Aquaculture may affect the substrate, including mud flats, for varying lengths of time, depending on the activity, but the district believes it is more appropriate to evaluate each commercial aquaculture project individually as the direct impacts to the substrate will vary with the site and the type of cultivation methods being proposed.

3.0 Alternatives

3.1 No Regional Conditions

Proposing no RGCs was determined to not be a viable alternative in Washington State. In Washington State high quality, rare, and unique waters of the U.S. requiring additional protection have been identified and additional protection through restriction has been determined to be needed to ensure impacts of the NWPs are minimal. These aquatic resources are generally very difficult, if not impossible, to recreate. Without RGC 2 – *Aquatic Resources Requiring Special Protection*, impacts to these aquatic resources would not be minimized. The Commencement Bay Study Area (CBSA) has been identified as an area where cumulative impacts to wetlands are a serious concern. In making the determination to take discretionary authority on June 17, 1994, the division engineer stated “[t]he potential cumulative resource loss, the limited resources remaining, competition for the development and utilization of the resource, the potential for restoration habitat in the CBSA, and the need to protect the natural resource and the Native American trust interests have caused the Corps to exert discretionary authority.” These same conditions still exist; Without RGC 4 – *Commencement Bay*, impacts to Commencement Bay would not be minimal. As discussed in the Cumulative Effect sections of this document, in the tidal waters of WRIAs 8, 9, 10, 11 and 12, the cumulative impacts due to

bank hardening are at a point where the impacts are more than minimal and individual permits are required. Therefore, without RGC 3 – *New Bank Stabilization in Tidal Waters of Puget Sound*, impacts to aquatic resources in these WRIAs would not be minimal. Certain activities, such as bank stabilization, destruction of vegetation in riparian corridors and work impacting essential fish habitat have been identified as activities which can adversely impact water quality, water storage, and endangered or threatened species as well as tribal rights. The national conditions do afford a level of protection regarding these issues and the district engineer has the ability to take discretionary authority on a case-by-case basis. However, as required by the reauthorization process, the district coordinated with the resource agencies, the tribes, and the public to take into account regional differences in aquatic resource functions and services in the state of Washington. As the Corps evaluated the comments received not all of the concerns raised were determined to require regional conditions to address the concerns. Regional conditions were retained or added where there were concerns the impacts would be more than minimal on a broad geographic basis. Therefore, without RGC 5 – *Bank Stabilization*, RGC 6 – *Crossings of waters of the United States*, RGC 7 – *Stream Loss*, RGC 8 – *Mitigation*, RGC 9 – *Magnuson-Stevens Fishery Conservation and Management Act – Essential Fish Habitat*, RGC 10 – *Forage Fish*, and RGC 13 – *Temporary Impacts and Site Restoration*, impacts to aquatic resources, endangered species, and/or tribal rights would not be minimized.

3.2 Alternative Regional NWP Limits or Pre-Construction Notification Thresholds

See responses to comments in Section 2 for alternative regional NWP limits and PCN thresholds considered but rejected by the District. Based on the above discussion, at this time, the Seattle District does not believe it is necessary to add additional regional limits or PCN thresholds to this NWP. The Seattle District believes the requirements under the national, regional conditions are sufficient to ensure only projects resulting in minimal impacts are authorized by this NWP.

3.3 Other Regional Conditions

1. No Additional Regional Conditions for NWP 48.

The Seattle District has determined only one regional condition for NWP 48 is necessary.

2. RC to Establish Limited Time Line When Determining and Regulating Fallow Areas.

The national decision document for NWP 48 provides an explanation for determining 100 years as the threshold for identifying new commercial shellfish aquaculture activities. The Seattle District will not regionally condition NWP 48 to modify this definition.

3. Incorporate the Conservation Measures from the Seattle District’s Shellfish Activity Programmatic Biological Assessment and Associated Reasonable and Prudent Conservation measures, and Terms and Conditions from the Services’ Biological Opinions.

In September 2016, the Corps completed a programmatic consultation with National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) to comply with the

requirements of ESA Section 7(a) and MSA Section 305(b) for the Regulatory Program authorization of inland marine shellfish activities. The resulting programmatic ESA and MSA Biological Opinions cover more shellfish activities than those included in NWP 48, such as activities for shellfish research, restoration and recreational activities, and can be used for both general and standard permit types. The conservation measures were developed in cooperation with NMFS and USFWS as actions to avoid or reduce specific impacts to ESA-listed species and critical habitat. The grower has the option to meet the programmatic ESA and MSA biological opinions' terms and conditions or instead have an individual ESA/MSA consultation for his or her project area. The Corps considers this option to meet the programmatic or instead have an individual consultation to be important as it allows flexibility to both streamline the ESA/MSA consultation process for the majority of growers who meet the terms and conditions of the programmatic, and alternatively, allows for individual consideration of project specific avoidance or reduction measures. Incorporating the conservation measures as a RC would standardize NWP 48 with the programmatic biological opinions; however, any project not meeting the programmatic would require an individual permit evaluation. This would result in any project not in compliance with even one conservation measure, being precluded from using the NWP 48 in the Seattle District.

4. RC to Require Applicants to Formally Demonstrate How the Project Area Was Used for Commercial Aquaculture Within the Past 100 Years.

A note will be added to NWP 48 recommending the project proponent include the history of a site that has not previously been authorized for commercial aquaculture.

5. RC to Protect Spawning Forage Fish.

A NWP 48 regional condition to further protect forage fish spawning areas is not necessary. The Seattle District will evaluate a PCN to determine if a forage fish spawning area would be directly lost to spawning by the aquaculture activity. NWP general condition 3 also states "activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized." Pacific herring spawn in the same tidal elevations as shellfish aquaculture but spawn directly on vegetation or natural features rather than in the substrate. Herring is also known to spawn on aquaculture gear. Pacific sand lance and surf smelt spawn directly in the substrate typically above +5 ft. (MLLW), but sometimes lower. However, prohibiting all work above the MLLW is not necessary to protect sand lance and surf smelt spawning areas. As NWP 48 authorizes continual, on-going activities throughout the 5-year verification and impacts to forage fish will be dependent on the types of activities proposed special conditioning a NWP verification, such as to include work windows, needs to be evaluated on a case-by-case basis.

6. RC to Prohibit New Aquaculture Activities Encroaching on Eelgrass and to Increase Protection to Eelgrass Beds.

NWP 48 does not authorize activities directly affecting more than ½-acre of submerged aquatic vegetation beds in project areas that have not been used for commercial aquaculture in the past 100 years. Eelgrass is one type of submerged aquatic vegetation. Because a PCN is required for NWP 48 in the Seattle District, the district engineer can review each proposed NWP 48 activity

to ensure those activities result in no more than minimal individual and cumulative effects on eelgrass. General Condition 23, *Mitigation*, requires the grower to minimize and avoid impacts to the maximum extent practicable at the project site. During the evaluation of a preconstruction notification, the district engineer may determine additional avoidance and minimization is practicable. The district engineer may also condition the NWP authorization to require mitigation to reduce impacts to waters of the United States and ensure the net adverse environmental effects on the aquatic environment are no more than minimal. If the proposed activity will result in more than minimal adverse environmental effects, then the district engineer will exercise discretionary authority and require an individual permit.

7. RC to Prohibit Use of Plastic Gear.

As previously stated, the Seattle District recognizes marine debris is a serious impact on the marine environment, but believes it would not be a practicable solution to regionally condition NWP 48 to not allow the use of PVC and HDPE gear as there are no current practicable alternatives to use of these materials. We believe NWP 48 and the NWP national general conditions adequately address aquaculture gear and potential marine debris. NWP general condition 6 – *Suitable Material*, states material used for construction or discharged must be free from toxic pollutants in toxic amounts. NWP general condition 14 – *Proper Maintenance*, states any authorized structure or fill shall be properly maintained, including maintenance to ensure the public safety and compliance with the applicable NWP specific conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization. The district engineer may also add specific conditions if a structure/activity is proposed in an area where the local marine hydrodynamic conditions (e.g., fetch length, tidal currents) would make securing aquaculture gear difficult.

8. RC to Not Allow Use of Pesticides (Herbicides, Insecticides, Etc.) for Operations Covered by NWP 48.

The Corps does not have the authority to regulate the use of pesticides as this authority resides with the Environmental Protection Agency and/or the Washington State Department of Ecology. NWP 48 is no exception to other NWPs in this regard.

9. RC to Require Agency Coordination and Notification with the EPA and Other Agencies for All Proposed NWP 48 Authorizations That Propose Impacts to Submerged Aquatic Beds or Forage Fish Habitat.

The Seattle District does not believe a RC is necessary for agency coordination, but will work with any agency requesting notification.

Other regional conditions were not considered necessary as the Seattle District believes the national and proposed RGCs as discussed in Section 2 provide the appropriate safeguards to ensure this NWP does not authorize activities with more than minimal adverse effects on the aquatic environment.

4.0 Section 7 of the Endangered Species Act

On October 15, 2012, the Chief Counsel for the Corps issued a letter to the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) (the Services) clarifying the Corps' legal position regarding compliance with the ESA for the February 13, 2012, reissuance of 48 NWP and the issuance of two new NWPs. That letter explained that the issuance or reissuance of the NWPs, as governed by NWP general condition 18 – *Endangered Species* (which applies to every NWP and which relates to endangered and threatened species), and 33 CFR part 330.4(f), results in “no effect” to listed species or critical habitat, and therefore the reissuance/issuance action itself does not require Endangered Species Act (ESA) section 7 consultation. Although the reissuance/issuance of the NWPs has no effect on listed species or their critical habitat and thus requires no ESA section 7 consultation, the terms and conditions of the NWPs, including general condition 18, and 33 CFR 330.4(f) ensure that ESA consultation will take place on an activity-specific basis wherever appropriate at the field level of the Corps, FWS, and NMFS. The principles discussed in the Corps' October 15, 2012, letter apply to the 2017 NWPs as well.

NWP regulations at 33 CFR 330.4(f) and NWP general condition 18 – *Endangered Species*, ensure that all activities authorized by NWPs comply with section 7 of the ESA. Section 330.4(f)(2) and paragraph (c) of NWP general condition 18 require non-federal permittees to submit PCNs “if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat.” Federal permittees should follow their procedures for ESA section 7 compliance (see 33 CFR 330.4(f)(1)). The Corps evaluates the non-federal permittee's PCN and makes an effect determination for the proposed NWP activity for the purposes of ESA section 7. The Corps established the “might affect” threshold in 33 CFR 330.4(f)(2) and paragraph (c) of general condition 18 because it is more stringent than the “may affect” threshold for section 7 consultation in the Services ESA section 7 consultation regulations at 50 CFR part 402. The word “might” is defined as having “less probability or possibility” than the word “may.”

Paragraph (b)(7) of NWP general condition 32 – *Pre-Construction Notification* requires the project proponent to identify, in the PCN, any listed species or designated critical habitat that might be affected by the proposed NWP activity. If the project proponent is required to submit a PCN because the proposed activity might affect listed species or critical habitat, the activity is not authorized by NWP until either the Corps district makes a “no effect” determination, or makes a “may affect” determination and formal or informal ESA section 7 consultation is completed.

If the Corps makes a “may affect” determination, the district engineer will notify the non-federal project proponent the activity is not authorized by NWP until ESA Section 7 consultation has been completed. If the non-federal project proponent does not comply with 33 CFR 330.4(f)(2) and NWP general condition 18, and does not submit the required PCN, then the activity is not authorized by NWP. In such situations, it is an unauthorized activity and the district engineer will determine an appropriate course of action to respond to the unauthorized activity.

4.1 General Considerations

There are over 50 species in Washington State listed under the ESA as threatened or endangered. Over 20 species have designated critical habitat. With the high number of listed species and critical habitat, ensuring compliance with ESA comprises a significant percentage of the workload for the Seattle District.

Compliance with the ESA is required for all actions authorized by the Corps. For determinations of “may affect, not likely to adversely affect” (NLAA) and “may affect, likely to adversely affect” (LAA), informal and formal consultations, respectively, are required. The consultation initiation package for both informal and formal consultation includes an evaluation of impacts from the project and its associated construction techniques to the listed species and to designated critical habitat.

Regional notification requirements or restrictions have been placed on various NWPs in the Seattle District to ensure activities authorized by NWPs are minimally impacting, are consistent with the ESA, and permittees are aware of these requirements.

4.2 Local Operating Procedures for Section 7 of the Endangered Species Act

The Seattle District first determines if the proposed activity will have “no effect” on threatened or endangered species and critical habitat. The determination of “no effect” will be documented in the administrative record and if all the other NWP terms and conditions are met, the Seattle District will proceed to issue the NWP verification.

If the activity may affect a threatened or endangered species or their critical habitat, then the Seattle District will consult with the appropriate Service(s). When ESA consultation is required the project proponent needs to be informed of this decision. The Seattle District developed a standard letter informing the project proponent the District intends to authorize the proposed project by a NWP, however verification cannot occur until the Corps completes the evaluation and consultation required by the ESA. The Seattle District informs project proponents that construction cannot occur until this process is completed. Modifications to the proposed project may occur during the ESA consultation in order to minimize impacts to threatened and endangered species or designated critical habitat.

There are several methods the Seattle District uses to complete consultation. The Seattle District completed various ESA Section 7 programmatic consultations with the Services. Programmatic consultations are done for a pre-identified category of activities that are similar in nature and are located in a pre-defined geographic area. If a project proponent would like coverage under an existing programmatic consultation, they must ensure their project meets the design criteria and conservation measures described in the programmatic consultation. If the Seattle District does not have a programmatic consultation for activities covered by a NWP, an individual informal or formal consultation will be conducted.

A majority of PCNs received by the Seattle District require consultation with the Services. The

Seattle District has developed, and continues to develop, additional streamlining tools such as reference biological evaluations and impact reduction guidelines to minimize impacts to listed species, reduce documentation and improve consultation efficiency for individual Section 7 consultations.

The Seattle District has proposed RGC 6 – *Crossings of Waters of the United States*, to add additional consideration for the unique life cycle stages of salmonid species (listed and not listed under the ESA) as well as RGC 10 – *Forage Fish* to protect spawning of important prey species for some listed species (although this condition does not apply to NWP 48 activities). In addition, some of the NWP general conditions also help support the conservation of listed species including NWP general condition 2 – *Aquatic Life Movements*, NWP general condition 3 – *Spawning Areas*, NWP general condition 18 – *Endangered Species*, NWP general condition 23 – *Mitigation*, and NWP general condition 32 – *Pre-Construction Notification*. Special conditions and compensatory mitigation will be required on a case-by-case basis to minimize impacts to ESA-listed species and designated critical habitat. Project specific in-water work windows to protect ESA-listed species are included as a special conditions of NWP verifications as needed.

5.0 Section 106 of the National Historic Preservation Act

5.1 General Considerations

The Seattle District ensures compliance with the provisions of the National Historic Preservation Act (NHPA) for all permit applications, including those for NWPs. The Seattle District reviews every permit application received, including PCN for NWPs, to evaluate impacts to historic properties.

The Seattle District proposed RGC 12 – *Cultural Resources and Human Burials*, to ensure proposals comply with the provisions of the NHPA and the Native American Graves Protection and Repatriation Act (NAGPRA). After careful review of the comments received during the June 20, 2016, special public notice for Seattle District regional conditions, RGC 12 – *Cultural Resources and Human Burials*, will not be retained. The Seattle District evaluates all regional conditions for consistency with the NWP program and cannot issue regional conditions that are redundant with the NWP general conditions. NWP general condition 20 – *Historic Properties*, and NWP general condition 21 – *Discovery of Previously Unknown Remains and Artifacts*, are sufficient to ensure the NWPs will not cause effects to properties listed, or eligible for listing, in the National Register of Historic Places. In addition to the conditions of the NWPs, state and federal law require anyone who discovers human remains to stop work and notify authorities, as discussed above in Response 3. Additionally, the Seattle District determined a requirement to stop work immediately may not be practicable for all activities authorized by NWP, and in some situations the requirement to stop work immediately may result in unsafe working conditions. When inadvertent discoveries occur on active construction sites, the immediate halt of work may leave the discovery at risk of further damage if actions are not taken to stabilize the site. For projects subject to PCN, the district engineer can add a special condition related to inadvertent discovery procedures to NWP verifications in cases where there are site specific concerns to historic properties. When notified of the discovery of previously unknown remains and artifacts,

the district engineer has authority to exercise his discretionary authority and modify, suspend, or revoke the permit as discussed in 33 CFR 330.4. All projects authorized by NWP are required to meet NWP general conditions 20 and NWP general condition 21.

When the Seattle District consults with tribes and the Tribal Historic Preservation Office (THPO) or State Historic Preservation Office (SHPO) under the NWP process, the project proponent is notified in writing work cannot be verified under the NWP until all Section 106 requirements have been satisfied. If the Seattle District determines the activity would have no potential to cause effects on any historic properties, the Seattle District then issues the NWP authorization without further consultation with the THPO/SHPO.

5.2 Local Operating Procedures for Section 106 of the National Historic Preservation Act

Archaeologists in the Seattle District, with the assistance of a database provided by the SHPO, determine if a historic site is present in the permit area. If the Seattle District determines a site could be present and the proposed work could adversely impact the site, an archaeological survey is required. Coordination between the Seattle District, tribes, and the THPO/SHPO occurs when the Seattle District determines a proposal could adversely impact a historic or cultural site. The Seattle District regularly coordinates with the THPO/SHPO and tribes to improve procedures and to address other concerns.

6.0 Government-to-Government Consultation with Tribes

6.1 Consultation Summary

On November 5, 2015, the Seattle District sent letters to all tribes with interests in Washington State (the Tribes), the Northwest Indian Fisheries Commission (NWIFC), and the Skagit River System Cooperative (SRSC) with notification of the anticipated reissuance of the NWPs. An updated letter was sent to the Spokane Tribe of Indians on November 9, 2015, to correct an error. On November 16, 2015, the Seattle District sent letters to the Tribes, the NWIFC, and the SRSC inviting them to participate in Government-to-Government (G to G) consultation regarding NWPs. No requests for G to G consultations were received in response to this letter, however consultations were later requested in response to concerns over regional conditions detailed later in this section.

On December 14, 2015, the Seattle District invited all tribes with an interest in Washington State to participate in a meeting. The purpose of the meeting was to summarize the NWP program and give an overview of the reissuance process. During this meeting it was determined more information was needed from the tribes to evaluate the need for regional conditions. On January 11, 2016, the Seattle District sent letters to the Tribes, the NWIFC, and the SRSC recapping the January 11 meeting, and providing an invitation to a meeting to discuss cumulative effects. On February 4, 2016, the Seattle District held a meeting with tribal staff to discuss the various methods that would be used to evaluate cumulative effects in order to determine the need for regional conditions. During the meeting, the Seattle District described the national level analysis, the drafting of supplemental decision documents, and the methods, techniques, and data tools that would be used to evaluate whether regional conditions were needed to ensure activities

authorized by NWP resulted in minimal individual and cumulative adverse environmental effects.

On March 10, 2016, the Deputy Commanding General for Civil and Emergency Operations issued guidance for conducting government-to-government consultation with tribes on the proposed 2017 NWPs. The Seattle District sent letters to tribes with interests in Washington State to initiate consultation on the 2017 NWPs, including regional conditions, the potential for suspension or revocation of the NWP in specific geographic areas, and the development of coordination or consultation procedures for NWP PCNs.

On May 23, 2016, the Seattle District sent letters to tribes with interest in Washington State, the NWIFC, and the SRSC providing advanced digital copies of the proposed 2017 NWPs prior to publication in the Federal Register on June 1, 2016. On June 23, 2016, the Seattle District sent letters to the tribes, the NWIFC, and the SRSC informing the Seattle District proposed regional conditions special public notice had been issued on June 20, 2016. On July 12, 2016, the Seattle District held a meeting with the NWIFC and staff representatives from their member tribes to discuss changes in the 2017 NWPs proposed in the Federal Register, and how the tribes could submit meaningful comments on the regional conditions during the 60-day comment period. On August 9, 2016 the Seattle District met with the Port Gamble S'Klallam Tribe regarding NWP reissuance and comments regarding regional issues. On September 29, 2016, the Seattle District held a meeting with the NWIFC and staff representatives from their member tribes to discuss the process the Seattle District would be using to evaluate comments received during the June 20, 2016 special public notice comment period. On October 5, 2016, the Seattle District held a meeting with staff from the Muckleshoot Indian Tribe, Lower Elwha S'Klallam Tribe, and the Port Gamble S'Klallam Tribe to discuss comments and changes to RGC 6 – *Crossings of Waters of the United States*. This group had drafted proposed language for RGC 6 with the intention of addressing the court decision *United States v Washington* (June 2016; document 20384 in the District Court record, Western District of Washington). The Seattle District explained the exact wording used in the court decision was not appropriate for use in the RGC because the context of the case would not translate completely. RGC 6 comments received during the public comment period, as well as comments received during this meeting were evaluated to determine if changes to the RGC were needed. A complete review of RGC 6 comments is in section 2.2.6 of this document, and the final RGC 6 language is in section 9.1.6.

On October 24, 2016, the Seattle District held a meeting with staff from the Upper Skagit Indian Tribe to discuss impacts to streams and salmon populations. The staff discussed data they had collected and analyzed to show the impact of bank stabilization to treaty reserved fisheries in the Skagit River watersheds.

On November 3, 2016, the Seattle District met with the Northwest Indian Fisheries Commission and a number staff from member tribes to discuss NWP 10 – *Mooring Buoys*, and the effects it has on treaty reserved rights and the environment.

On November 7, 2016, the Seattle District held a meeting with staff from SRSC to discuss comments submitted during the June 20, 2016 special public notice comment period. The Seattle

District held a second meeting on November 7, 2016 with the SRSC, as well as the NWIFC and staff representatives from their member tribes to discuss categories of concerns related to comments received during the comment period for the June 20, 2016, special public notice on proposed Seattle District regional conditions. These concerns included new marine bank armoring, new freshwater bank armoring, maintenance to existing bank armoring, cumulative impacts from impervious surfaces, PCN requirements in the “Boldt case area,” NWP 10 – *Mooring Buoys*, RGC 6 – *Crossings of Waters of the United States*, wetland loss, stream loss, NWP 52 – *Water-Based Renewable Energy Generation Pilot Projects*, and the use of Corps authority to improve habitat.

On November 8, 2016, the district engineer hosted the Upper Skagit Indian Tribe in a government to government meeting. A member from the Upper Skagit Indian Tribe’s Tribal Council was present, along with staff biologists to discuss their concerns with the Seattle District commander. This meeting highlighted the Tribe’s request for increased communication with the Seattle District.

On January 23, 2017, the Seattle District sent email to the Tribes, the (NWIFC), and the (SRSC) notifying the 2017 NWP’s were published in the Federal Register on January 6, 2017.

On March 6, 2017, the Seattle district engineer met with the NWIFC and member tribes to discuss proposed regional conditions and their comments submitted during the public comment period. On March 8, 2017, the division engineer met with Swinomish Indian Tribal Community leadership to discuss coordination procedures with the Tribe, and NWP 48.

6.2 Local Operating Procedures for Protecting Tribal Rights, Tribal Trust Resources, and Tribal Lands

The Seattle District has 33 tribes either with reservations and/or historical lands within the District’s boundaries. At this time the Seattle District has established Tribal Notification Procedures with the following 23 Tribes: Confederated Tribes of the Colville Reservation, Cowlitz Indian Tribe, Confederated Tribes of Grand Ronde, Jamestown S’Klallam Tribe, Kalispel Tribe of Indians, Lower Elwha Klallam Tribe, Lummi Nation, Muckleshoot Indian Tribe, Nez Perce Tribe, Nisqually Indian Tribe, Port Gamble S’Klallam Tribe, Puyallup Tribe of Indians, Confederated Tribes of the Samish Indian Nation, Skagit River System Cooperative, Skokomish Tribal Nation, Snoqualmie Indian Tribe, Spokane Tribe, Squaxin Island Tribe, Stillaguamish Tribe of Indians, Suquamish Tribe, Swinomish Indian Tribal Community, Tulalip Tribes and the Confederated Tribes of the Umatilla Indian Reservation. Through these procedures, the Seattle District contacts the appropriate Tribe(s) and requests comments on permit actions the tribe has requested coordination on based on geographic areas. The District will continue to update these agreements and to reach out to the remaining tribes to establish notification procedures. These procedures allow for coordination with the tribes on individual projects that may affect their tribal rights.

7.0 Essential Fish Habitat

Federal agencies are required, under section 305(b)(2) of the MSA and its implementing regulations (50 CFR 600 Subpart K), to consult with NMFS regarding actions authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat (EFH). If an action would adversely affect EFH, NMFS is required to provide the Federal action agency with EFH conservation recommendations (MSA section 305(b)(4)(a)). In some cases, ESA conservation measures are adequate to avoid, minimize, or otherwise offset potential adverse effects to the EFH and specific EFH conservation recommendations are not necessary. In other cases, NMFS provides specific conservation recommendations in order to minimize the potential adverse effects to the EFH.

The Corps and the project proponent must fully consider the EFH conservation recommendations provided by NMFS and must provide, within 30 days of receipt of the recommendations, a detailed written response to NMFS. The response includes a description of measures proposed, such as a permit special condition, to avoid, mitigate, or offset the adverse effects of the activity on EFH. In the case of a response that is not consistent with the EFH conservation recommendations, the response must explain the reasons for not following the recommendations, including the scientific justification for any disagreements over anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate or offset such effects.

The Seattle District has RGC 9 – *Magnuson-Stevens Conservation and Management Act – Essential Fish Habitat*, prohibiting project proponents from conducting activities that may adversely affect EFH until all EFH requirements have been met. The RGC requires project proponents to provide a written EFH assessment with an analysis of the effects of the proposed action on EFH, and states if the Corps of Engineers determines the project will adversely affect EFH, consultation with NOAA Fisheries will be required. The Seattle District has determined this RGC is necessary to properly notify project proponents of their responsibilities and to ensure compliance with the MSA.

8.0 Regional Supplement to the Analyses in the National Decision Document

8.1 Public interest review factors (33 CFR 320.4(a)(1))

In addition to the discussion in the national decision document for this NWP, the Seattle District has considered the local impacts expected to result from the activities authorized by this NWP, including the reasonably foreseeable cumulative effects of those activities.

(a) Conservation: The NWPs could impact the existence and viability of many rare and unique aquatic systems in Washington such as mature forested wetlands, bogs and peatlands, aspen-dominated wetlands, alkali wetlands, vernal pools, camas prairie, estuarine wetlands, wetlands in coastal lagoons and wetlands in dunal systems along the Washington coast. By restricting the use of the NWPs with an RGC, in these systems, the Seattle District is able to ensure activities authorized by NWPs would have minimal impact and support the conservation of these critical aquatic systems.

(b) Economics: Same as discussed in the national NWP decision document.

(c) Aesthetics: Marine debris can accumulate on the shoreline from storm events, or growers not maintaining or securing their equipment. Nets, tubes, mesh bags, rope, plastic poles and other debris can collect on the shoreline. Geoduck cultivation results in about 42,000 tubes per acre with the top of each tube covered with individual nets and secured with rubber bands. Equipment has been found washed up on beaches many miles from the aquaculture area. This debris impairs the aesthetics for shoreline homeowners and others using the shorelines for recreation.

(d) General environmental concerns: Same as discussed in the national NWP decision document.

(e) Wetlands: RGC 2 – *Aquatic Resources Requiring Special Protection*, protects many specialized wetlands which are of high quality or are very rare. Compensatory mitigation for many of these systems also would be difficult, if not impossible in some situations, to develop and implement effectively. For impacts to wetlands and all other waters of the U.S., mitigation is required. RGC 8 – *Mitigation* was added to require mitigation for impacts wetlands exceeding 1,000 square feet to ensure impacts are minimal. Mitigation consists of actions to avoid, minimize, and compensate for impacts from the project. All permit applicants are required to avoid and minimize impacts to waters of the U.S. A compensatory mitigation plan is used to compensate for the unavoidable loss of waters of the U.S. (wetlands, streams, rivers, etc.) and to ensure those losses minimize adverse effects to the aquatic environment. Mitigation plans must be prepared in accordance with the Federal Compensatory Mitigation for Losses of Aquatic Resources Final Rule (33 CFR Parts 325 and 332, April 10, 2008). In the Seattle District, applicants can meet this requirement for wetland compensatory mitigation by preparing a mitigation plan in accordance with the Washington State Department of Ecology Publication #06-06-011a, *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance and Part 2: Developing Mitigation Plans (Version 1)*, dated March 2006. The Seattle District worked in conjunction with the State and the Environmental Protection Agency to develop this document to ensure wetland mitigation plans are designed appropriately so wetland impacts are fully mitigated.

(f) Historic properties: Refer to Section 5.2 of this document for Seattle District’s Local Operating Procedures for compliance with the NHPA.

(g) Fish and wildlife values: Certain aquatic systems which support unique species composition, such as vernal pools, aspen forested wetlands, and camas prairie wetlands, have been further protected through RGCs. Systems like bogs, peatlands and mature forested wetlands have been further protected because they support a larger variety of wildlife species. Minimization of impacts to all shorelines is supported with the regional conditions requiring minimization of impacts to native vegetation in riparian corridors. RGC 6 – *Crossings of Waters of the U.S.*, will reduce the adverse effects to fish and other aquatic species on projects involving crossings of waters of the U.S. by requiring design methods to facilitate the movement of flood flows and debris, allow passage of nearly all fish and aquatic organisms and allow many natural stream processes to continue to function. Compliance with RGC 6 takes into account the unique life

cycle stages of certain salmonids, and will ensure the authorized activity has minimal adverse effects. Equipment used for commercial shellfish aquaculture, such as canopy nets and lines, can entangle birds and other types of aquatic species, such as forage fish and crabs. Nets can also disrupt the movements of fish and other aquatic species or exclude aquatic life use, such as the nets associated with floating rafts which exclude fish from habitat under the rafts. Two species of forage fish spawn directly into the substrate and a third species spawns on eelgrass or other vegetation and structures. Shellfish activities conducted when forage fish are spawning or after eggs have been deposited could potentially disturb these species or destroy eggs through trampling or smothering. Use of cover nets on the substrate, such as for Manila clam culture, could exclude forage fish from spawning in the substrate altogether.

(h) Flood hazards: Same as discussed in the national NWP decision document.

(i) Floodplain values: Same as discussed in the national NWP decision document.

(j) Land use: Same as discussed in the national NWP decision document.

(k) Navigation: Activities authorized under NWP 48 must comply with NWP general condition 1 – *Navigation*. In the Seattle District activities authorized by this NWP require a PCN in all cases due to NWP general condition 18 – *Endangered Species*. This allows the district engineer to review activities on a case-by-case basis and determine if there will be any adverse effects to navigation. The district engineer may add special conditions to the NWP verification to address site-specific navigational concerns. NWP 48 also requires a request for modification if the cultivation method changes, such as from bottom cultivation to suspended line cultivation. NWP 48 Note 1 reminds permittees to notify the applicable U.S. Coast Guard office regarding the project.

(l) Shore erosion and accretion: Same as discussed in the national NWP decision document.

(m) Recreation: Same as discussed in the national NWP decision document.

(n) Water supply and conservation: Same as discussed in the national NWP decision document.

(o) Water quality: Same as discussed in the national NWP decision document.

(p) Energy needs: Same as discussed in the national NWP decision document.

(q) Safety: Same as discussed in the national NWP decision document.

(r) Food and fiber production: Same as discussed in the national NWP decision document.

(s) Mineral needs: Same as discussed in the national NWP decision document.

(t) Considerations of property ownership: Same as discussed in the national NWP decision document.

8.2 Section 404(b)(1) Guidelines Impact Analysis (Subparts C-F)

- (a) Substrate: Same as discussed in the national NWP decision document.
- (b) Suspended particulates/turbidity: Same as discussed in the national NWP decision document.
- (c) Water: Same as discussed in the national NWP decision document.
- (d) Current patterns and water circulation: Through RGC 3 – *New Bank Stabilization in Tidal Waters of Puget Sound*, RGC 5 – *Bank Stabilization*, RGC 7 – *Stream Loss*, and NWP general condition 18 – *Endangered Species*, the Seattle District will be able to fully assess impacts to current patterns and water circulation.
- (e) Normal water level fluctuations: Same as discussed in the national NWP decision document.
- (f) Salinity gradients: Same as discussed in the national NWP decision document.
- (g) Threatened and endangered species: Refer to Section 4 of this document.
- (h) Fish, crustaceans, molluscs, and other aquatic organisms in the food web: Same as discussed in the national NWP decision document.
- (i) Other wildlife: Same as discussed in the national NWP decision document.
- (j) Special aquatic sites: The potential impacts to specific special aquatic sites are discussed below:
 - (1) Sanctuaries and refuges: Same as discussed in the national NWP decision document.
 - (2) Wetlands: Refer to Section 8.1(e) (Wetlands) of this document.
 - (3) Mud flats: Because of the abundance of ESA-listed species in tidal waters, a PCN is required for work in tidal waters per NWP general condition 18 – *Endangered Species*. Work in or affecting mudflats in marine areas will be fully assessed through the PCN process and ESA/MSA consultation. This general condition will ensure impacts to mudflats are minimized.
 - (4) Vegetated shallows: Because of the abundance of ESA-listed species in tidal waters, a PCN is required for work in tidal waters per NWP general condition 18 – *Endangered Species*. Work in or affecting submerged aquatic vegetation (SAV) in marine areas will be fully assessed through the PCN process and ESA/MSA consultation. This general condition will ensure impacts to vegetated shallows are minimized.
 - (5) Coral reefs: Not applicable, no coral reefs are located in Washington State.

(6) Riffle and pool complexes: While impacts to riffle and pool complexes are not specifically restricted by any regional condition, potential adverse impacts to these special aquatic sites receive additional review and are restricted for the protection of the species listed as threatened or endangered under NWP general condition 18 – *Endangered Species*. These systems are very important for all life stages of the fish protected under the ESA. These systems are especially important because they are typically located near or within spawning areas for the fish. RGC 7 – *Stream Loss* was added to ensure a case-by case review of project's that would result in a loss of stream beds, where riffle and pool complexes occur. Individual review of projects under this condition would allow the District to ensure project impacts to riffle and pool complexes are minimal and appropriately mitigated.

(k) Municipal and private water supplies: Same as discussed in the national NWP decision document.

(l) Recreational and commercial fisheries: Same as discussed in the national NWP decision document.

(m) Water-related recreation: Same as discussed in the national NWP decision document.

(n) Aesthetics: Same as discussed in the national NWP decision document.

(o) Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar areas: Same as discussed in the national NWP decision document.

8.3 Regional Cumulative Effects Analysis

This section discusses the anticipated cumulative effects of the use of NWP 48 in the State of Washington during the period this NWP is in effect.

The cumulative effects of this NWP on the aquatic environment are dependent upon the number of times the NWP is used and the quantity and quality of waters of the United States lost due to the activities authorized by this NWP (see 40 CFR 230.7(b)). See Section 8.3.4 below for a discussion of the proposed use and impacts acreage for NWP 48.

8.3.1 Cumulative effects of Bank Armoring in Tidal Waters of the Puget Sound

Through the 2017 NWP reissuance process, comments and concerns from resource agencies and tribes have focused on bank armoring in the Salish Sea. Puget Sound (the lower half of the Salish Sea located within the borders of the United States) is one of the largest estuaries in the United States having over 4,000 kilometers (2400 miles) of shoreline, more than 8,000 square kilometers (2 million acres) of marine waters and estuarine environment, and a watershed of more than 33,000 square kilometers (8.3 million acres). In 1987, Puget Sound was given priority status in the National Estuary Program. This established it as an estuary of national significance under an amendment to the Clean Water Act. In 2005, the Center for Biological Diversity

recognized about 7,000 species of organisms in the Puget Sound Basin, including 4,248 animals, 1,504 plants, 851 fungi, and 392 algae, which rely on the wide variety of habitats provided by Puget Sound. Many studies have identified substantial changes to Puget Sound's nearshore ecosystem as a result of shoreline armoring and other impacts over time. Because of the regional importance of Puget Sound and comments received from agencies and tribes concerning the impacts of bank stabilization, the Seattle District performed a cumulative effect analysis to supplement the national analysis for Nationwide Permits. For this portion of the cumulative effects analysis, the Seattle District reviewed the historical conditions and trends since the 1800s, the current conditions and trends, the reasonably foreseeable future trends, and conditions of Puget Sound in light of the specific resource of concern. The names Puget Sound and Salish Sea are used throughout this analysis interchangeably, and have been maintained for the integrity of references.

Historical Conditions: Puget Sound shorelines historically consisted of gravel and sand beaches, shallow shorelines and vegetated wetlands bordered by steep bluffs, supporting various species of birds, animals, and plants. In 1792, George Vancouver from Great Britain landed in the inland marine waters of the Pacific Northwest. Prior to that, most of the human inhabitants of the Puget Sound region were Native Americans who lived in villages along the coast and in major river valleys, supported by the region's abundant natural resources. The first non-native settlements occurred in Tumwater, near Olympia, in the 1850s, and have continued to shape the sequence of development occurring in the area since that time. Over the last 200 years, human impacts have changed from the dispersed influence of local native Tribes, to occupation by millions of people undertaking diverse economic activities and developmental patterns (Shipman, 2010). Actions such as timber harvesting, commercial fishing, shipbuilding, railroad development, aircraft manufacturing, and other heavy industry, as well as the development and expansion of the state and federal highway systems and urban residential communities with their supporting infrastructure, have transformed the shorelines across Puget Sound.

Traditionally, most shoreline armoring was associated with the construction of railroads and roads along the shore, and the reclamation of intertidal and low-lying areas for industrial development (Shipman, 2010). Beginning in 1970, Puget Sound started to see a new round of shoreline development from residential property owners who started upgrading small shoreline vacation cabins and summer homes to larger homes and structures requiring longer lengths of bank armoring to protect the developed upland property. This change over time has resulted in longer lengths of total shoreline being armored throughout Puget Sound.

Historically, the Puget Sound nearshore environment consisted of many different types of ecosystems and habitat types such as mudflats, eelgrass and macroalgae beds, wetlands and marshes, upper beach, feeder bluffs, and vegetated uplands. These nearshore habitats work to support an array of aquatic plant and animal species.

Affected Environment: Due to the high-energy tidal environment and wide tidal fluctuations in Puget Sound, many shorelines consist of unvegetated beaches and rocky shores. Marine wetlands are concentrated in estuarine areas on deltas and in the lower reaches of most rivers emptying into Puget Sound. Estuarine wetlands are highly rich in organic matter as they support

a diversity of invertebrates, macro invertebrates, and terrestrial and aquatic plants, including eelgrass. Eelgrass is an underwater vascular plant found in the shallow sub-tidal area. Aquatic microorganisms collect on eelgrass leaves and as the leaves decay, the detritus provides food for many marine invertebrates resulting in large concentrations of invertebrates. Consequently, eelgrass beds provide rich feeding and spawning areas for fish and marine birds. In particular, Pacific herring – a major food source for many salmonid species, seabirds, and marine mammals – spawn on eelgrass.

The shallow nearshore area provides suitable substrate such as sand and small cobbles for spawning forage fish such as surf smelt, Pacific herring and Pacific sand lance. A critical element of spawning habitat is the availability of a suitable amount of appropriately textured spawning substrate at a certain tidal elevation along the shoreline. If the substrate is too large, such as riprap or hardpan, spawning may not occur as it would in areas with more suitable substrate.

The shallow nearshore area also provides protected rearing areas and migration corridors for juvenile salmonids. Shoreline vegetation provides complex shade, protective cover, detrital input, and terrestrial prey (e.g., insects) to young salmonids moving close inshore (Thom, 1994). In addition to providing a migration corridor for juvenile salmonids, the nearshore habitat of Puget Sound provides a transportation corridor for sediment, inorganic and organic nutrients, and detritus.

In 1999, the Puget Sound Chinook salmon was listed as threatened under ESA. Since that time more species including steelhead, bull trout, marbled murrelet, green sturgeon, three species of rockfish, and killer whales have been listed as either threatened or endangered under the Endangered Species Act. The nearshore environment of Puget Sound, which includes eelgrass beds, mudflats, wetlands, and shoreline riparian vegetation, currently supports the spawning, rearing and migratory habitat and food web of these ESA-listed species and other non-listed species. Because ESA-listed species are an important indicator of the health of the ecosystem, it is important to focus on resources directly affecting ESA-listed species. This includes the rearing and migratory pathways of the species themselves as well as the abundance of their prey species. Forage fish (Pacific herring, surf smelt and Pacific sand lance) comprise a majority of ESA-listed salmonids' prey species and in turn salmonids comprise a majority of the prey for other ESA-listed and non-listed species, including the Southern Resident Killer Whale. The abundance and sustainability of these species is dependent upon the amount of appropriate spawning areas which are directly located in the nearshore tidal areas.

Historical and Current Stressors: Historical and current stressors on the nearshore environment from the increased activities described above include bank armoring, increased stormwater runoff, loss of upland forest cover, modification of natural drainages, upland development, dredging and dredge disposal, and construction of marine facilities such as boat ramps, piers, marine rails, access stairs and outfalls. While the Seattle District recognize all marine and upland construction and development have the potential to impact the nearshore environment of Puget Sound, the specific focus of this analysis is on the direct and indirect effects of bank armoring (seawalls, bulkheads, riprap revetments, retaining walls, etc.) on the nearshore

environment including forage fish spawning areas and rearing areas and migration corridors for juvenile salmonids.

To date there have been many studies on the impact of armoring on Puget Sound and nearshore processes. These studies suggest a broad range of potential localized and regional effects of erosion control structures (bank armoring) on Puget Sound shorelines such as the direct loss of upper beach, loss of aquatic-terrestrial interaction, localized erosion, interruption of sediment delivery and transport, and altered wave action (Shipman, 2010). These physical effects are believed to cause beach narrowing, sediment coarsening, and a decrease in the natural sediment supply from eroding bluffs (Ruggiero, 2010), but the impacts of bank armoring in one location may be greater than others in specific circumstances (Dethier and others, 2016b)

The following is a specific discussion on each of the potential effects of shoreline armoring on the nearshore environment and the subsequent effects on forage fish spawning areas and rearing areas, food chain, and migration corridors for juvenile salmonids:

1. Direct loss of upper beach. Shoreline armoring is typically installed in upper beach areas, often directly filling the nearshore environment. Even when built high on the beach profile, seawalls typically eliminate a narrow zone of the high tide beach. On Puget Sound, this would result in the direct loss of dry beach at high tides, which may in turn reduce the actual area available for forage fish spawning (Penttila, 2007). The destruction or alteration of nearshore habitat may result in direct burial and isolation of spawning habitat for forage fish, a prey species of ESA-listed salmonids. As shoreline modifications encroach into intertidal beach elevations, invertebrate assemblages are negatively affected by the amount of seaward armoring (Sobocinski and others, 2010). At about 0.5 meters below mean higher high water the loss of upper beach prevents accumulation of large wood and wrack (habitat for beach biota), and eliminates shallow areas critical to salmonid predator avoidance (Dethier and others, 2016b). Additionally, bank armoring can interrupt the stability and amount of appropriately sized spawning substrate required by surf smelt, Pacific herring, and Pacific sand lance. According to Dethier and others (2016a), armored beaches have far less shade from overhanging vegetation, fewer stranded drift logs, and a narrower log lines, with lower wrack accumulation of algae, seagrass, and terrestrial plant material compared to unarmored beaches.
2. Loss of aquatic-terrestrial interaction. The installation of shoreline armoring directly cuts off the natural transition between the aquatic and terrestrial ecosystems, eliminating the input of organic material, shading and other important functions. This disruption affects movement of materials and organisms between aquatic and terrestrial systems which results in a reduced quality of riparian functions and nearshore habitat (Shipman, 2010). Shoreline vegetation provides shade, protective cover, detrital input, and terrestrial prey. The removal of riparian shoreline vegetation is a typical side effect of shoreline armoring, which in turn directly affects the nearshore habitat by creating hotter, drier habitats and

removes vegetation-dependent organisms, such as insects, that contribute to the aquatic food web (Sobocinski, 2003). Rossell (2006) and Rice (2006) found modified, unvegetated beaches had substantially lower surf smelt egg survival than did naturally shaded beaches. In another study, Penttila (2001) found shading provided by terrestrial vegetation of the marine riparian corridor has a positive effect on the survival of surf smelt. By removing the interaction between the aquatic and terrestrial environment, the survivability of forage fish is directly affected.

3. Localized erosion. Seawalls or revetments may effectively stabilize the area landward of the structure, but contributes negatively to the continued erosion and retreat of the beach face or shoreline on the waterward side of the structure. This results in the narrowing of the remaining beach, the loss of the upper beach, and increased interaction of the structure with waves over time (Shipman, 2010). This then results in a change of beach elevation adjacent to the armoring as well as alterations of the beach material available for forage fish spawning and rearing. Mechanisms causing negative effects to nearshore habitats are often related to the physical alterations surrounding bank armoring, such as creating a steeper physical profile, limiting the sediment supply, and reflecting wave energy (Toft and others, 2010). Eroding banks and bluffs are widespread around the Salish Sea; however, beach-building sand and gravel come from a limited subset of feeder bluffs (Dethier 2016b).
4. Sediment delivery and transport. Bank armoring on coastal bluffs stop the natural erosion of the bluffs, thereby reducing the delivery of sediment to the system and reducing the overall budget of the local littoral cell. Armoring can cut off sediment supply from upper beaches and can cause direct onsite impacts to habitat features (e.g., the shift of the beach to a lower elevation, localized higher energy, and harder substrate shoreline), as well as indirect impacts within the drift cell (Williams and others, 2001). Increased wave energy and action and loss of sediment supplies can lead to coarsening of the beach as sand and small gravel are progressively winnowed from the beach. The result is a shift to a coarser gravel and cobble beach and more frequent exposure of underlying hardpan or bedrock. Additionally, loss of sediment supply can lead to erosion of beach profiles and the lowering of the beach gradient. This change results in the loss or impairment of species and communities adapted for utilizing higher elevations and particular substrates (Williams and others, 2001). Likewise, when the supply of sediment is blocked, the survival of specific biota depending on a certain amount and type of substrate – specifically forage fish and invertebrates – is impacted, degrading the larger shoreline ecosystem (Zelo, Shipman, Brennan, 2000). Thom and others (1994) suggest shoreline armoring may be the primary threat to surf smelt and sand lance spawning habitat. Shoreline armoring blocks, delays, or eliminates the natural erosion of material onto the beach and its subsequent transport (Johannessen and MacLennan, 2007). Dethier and others (2016a) show bank armoring results in the reduction of fine grain-size portions of beaches reducing the available spawning areas for forage fish. These

processes under natural conditions maintain forage fish spawning substrate on the upper beach (Williams and Thom, 2001).

5. Altered wave action. Waves can reflect off structures in some instances increasing erosion and scour and in some cases influencing longshore sediment transport patterns (Shipman, 2010). Bank armoring extending further into the nearshore may act as a groin, impeding longshore transport of sediments by directly interrupting or changing wave action at the armored and adjacent sites. By changing erosional patterns and sediment distribution, the substrate of spawning habitats (pea gravel to fine grain sand) may be lost or altered, adversely affecting the amount of suitable spawning habitat.
6. Loss of species diversity. Specific studies have looked at the direct effect of bank armoring on species richness and abundance in response to the changes in physical processes described above. Sobocinski and others (2010) found species richness and absolute abundance in supratidal invertebrates (compared between paired beaches) in central Puget Sound tended to be lower at the base of armored sites than on natural substrates. Ongoing monitoring at two beach restoration sites (Olympic Sculpture Park in WRIA 8 and Seahurst Park in WRIA 9) in central Puget Sound has documented increased taxa richness after removal of the shoreline armoring (Rice, 2010). Munsch and others observed in 2014 that modified shorelines reduce habitat function and alter fish assemblages to differ from historical assemblages (altering species diversity), and further demonstrated in 2015 that some species may benefit from the engineered subtidal habitats creating novel ecosystems. As Hobbs and others (2006) describe, novel ecosystems may be difficult or impossible to restore once the impact has occurred, and consideration needs to be given to developing appropriate management goals.

In summary, scientific research and review of the impacts of bank armoring has found that shoreline armoring in Puget Sound over the last 200 years, and in particular during more recent decades of accelerated industrialization, through the alteration of physical processes, has a more than minimal direct and indirect effect on nearshore fish abundance, distribution, and behavior patterns (Toft and others, 2007), as well as survival of eggs in beach spawning surf smelt and forage fish (Rice, 2006), which are important to the survivability of ESA-listed predator species and the overall health of the Puget Sound ecosystem.

Current Conditions and Trends: The Puget Sound Nearshore Ecosystem Restoration Project (PSNERP), a general investigation project between the Corps and the State of Washington, reviewed the historical changes to Puget Sound's shoreline environment between 1850-1880, and 2000-2006, and found the most pervasive change to Puget Sound to be the simplification of the shoreline and reduction in natural shoreline length. The assessment found the total natural shoreline length of all shoreforms combined including deltas within Puget Sound declined by approximately 15% since the 1800s (Simenstad, 2011). The same data shows only 6.5% of areas around Puget Sound lack any modification today. Additionally, shoreline armoring was found to cover approximately 27% (666 miles) of the Puget Sound Basin shoreline (Simenstad, 2011).

Armoring is most extensive on the heavily developed eastern shore between Everett and Tacoma and generally less pervasive along portions of northern and western Puget Sound, where development levels are lower and bedrock shorelines are more common. Based on the PSNERP inventory of existing shoreline conditions, it appears the majority of these armoring structures were built using traditional bank armoring methods with the use of timbers, rock, and/or concrete. Armoring projects reviewed by the Seattle District in Puget Sound currently and in recent years are primarily ongoing repair and replacement of older bank stabilization structures, with few new bulkheads.

The South Central Puget Sound sub-basin contains the most developed region of the Puget Sound, stretching from Everett to Tacoma. Puget Sound has lost considerable proportions of its barrier estuary, barrier lagoon, closed lagoon/marsh and open coastal inlet shoreline length and virtually 100% of its delta (Duwamish and Puyallup Rivers) shoreline (Simenstad, 2011). Upland development in this area is high, resulting in natural land cover converted to moderate to high intensity residential, commercial and industrial development.

Current Washington State Fish and Wildlife (WDFW) permitting data found bank armoring projects resulted in 2.04 miles of new armoring, 7.99 miles of replacement armoring and 1.71 miles of removed armoring between 2012 and 2015. Because the Seattle District did not review this number of projects over the same time period, projects may have been performed without a Department of the Army permit, or projects were completed landward of the Corps' jurisdiction and did not require a DA permit. Under the 2012 NWP, regional general condition 4 – *Bank Stabilization* required project proponents to submit detailed information on proposed bank stabilization activities, including maintenance activities. Because of this information requirement and the requirement for compensatory mitigation, many project proponents design their projects to be landward of the Corps' jurisdiction. The regulated public is well aware of the regulatory process for completion of a standard individual permit when they cannot minimize their project impacts to utilize the streamlined permitting of a NWP. Therefore, the evidence suggests many structures authorized by WDFW were constructed landward of the Corps' jurisdiction. Regulations exist at the local and state level to control the construction, replacement, modification and maintenance of these structures so it is presumed existing bank armoring structures received authorization at some level, depending on the location of the structure within local and state jurisdiction.

Washington State has divided the State's watersheds into 62 Water Resource Inventory Areas or (WRIAs). There are 19 WRIAs in Puget Sound. By using the inventory of shorelines conducted by the Puget Sound Nearshore Restoration Partnership in 2010, the Seattle District conducted an independent analysis of the data on the current amount of shoreline armoring across Puget Sound by WRIA. This data shows the current state of the shoreline across Puget Sound in terms of bank armoring. The data ranges from as high as 91.2% of shorelines armored in WRIA 10 to 4.0% of shorelines armored in WRIA 2.

Studies have been conducted across the Salish Sea identifying the localized adverse effects of bank armoring on the nearshore environment and disruption of processes as described above. Sobocinski (2010) studied paired beach sites with natural shorelines versus armored shorelines

across WRIAs 8 and 9 and found the overall beach substrate grain size was smaller and the overall organic debris was observed in greater abundance at natural beach sites versus armored sites. These localized results at four different beaches in these WRIAs indicate there is a direct effect from bank armoring in these areas on the physical character of the nearshore environment where armoring is present versus areas where the shoreline is natural.

A change analysis conducted by PSNERP found in the South Central Puget Sound Sub-Basin (containing all five of the above described WRIAs), 34% of the original bluff-back beaches are now impaired by artificial landforms (structures, roads, railroads, etc.) with the highest level of impairment in bluff-backed beach landform occurring from Elliott Bay south to Seahurst and along the southern margin of Commencement Bay in Tacoma (Simenstad, 2011). This leads to a disruption of the sediment and debris transport process feeding these and nearby down-drift beaches. As previously discussed, the blocking of sediment supply to the beach and nearshore environment, impacts the physical habitat of the nearshore. This habitat is used for spawning, rearing, and foraging of many species within the food web of Puget Sound, from invertebrates through ESA-listed salmonids and fish, and on up the food web to the Southern Resident Killer Whale.

These three localized studies indicate an overall decrease in taxa richness, increased grain size of beach substrate and decrease in organic debris in the marine areas of the Puget Sound due to the high level of bank armoring. The direct environmental effects of bank armoring on the nearshore environment and the documented subsequent effects on forage fish spawning and rearing areas, food web, and migration corridors for juvenile salmonids, would be compounded in this region due to the high level of existing shoreline armoring.

According to the Corps ' permit database, since March 19, 2012 (effective date of the 2012 NWP), approximately sixty-one projects involving maintenance of existing bank stabilization in Puget Sound were authorized by NWP 3 (Maintenance) and seventeen projects under other NWPs (2, 3, 7, 9, 12, 13, 14, 15, 18, 25, 27, 28, 29, 33, 35, 36, and 39) were used to authorize some type of new bank stabilization within Puget Sound. Additionally, nine projects involving bank stabilization were authorized by standard individual permits in the same time period and areas.

Future Trends: The need for ongoing bank armoring activities appears to primarily occur within highly residential and industrialized areas. This suggests the greatest quantity of bank armoring has and will continue to occur within the most heavily populated areas of Puget Sound. In 1900, the population of the 12 counties around Puget Sound was just over a quarter of a million people. In more recent times, human population growth in the Puget Sound region has increased from about 1.29 million people in 1950 to about 4.22 million in 2005 (Quinn 2010). Between 2010 and 2040, Washington's population is expected to grow by about 2,375,500 persons, reaching 9,100,100 in 2040 (WAOFM 2017). With the anticipated population and permitting trends, it can be projected shoreline armoring within Puget Sound will continue through the maintenance of existing structures and the construction of new structures.

The Seattle District estimates approximately five projects involving new bank stabilization will

be authorized under the NWP each year over the next five years in the Salish Sea within WRIAs not revoked by RGC 3. The District estimates each new project will on average result in permanent impacts to approximately 120 linear feet of waters of the U.S. based on a review of previous projects. Projects may propose fewer, or more linear feet of impact, but must minimize the adverse environmental effects specific to the project site in accordance with the NWP terms and conditions. All projects will be reviewed on a case-by-case basis, to ensure impacts are no more than minimal.

Existing Puget Sound initiatives and efforts including restoration projects and the removal of hardened shoreline armoring, are anticipated to increase over the coming years. For example the PSNERP team is in the process of identifying areas throughout Puget Sound providing the highest benefit for shoreline restoration. Other private and public restoration projects have also been occurring or are anticipated to occur such as creating off-channel habitat on the tidally influenced portion of the Duwamish Waterway, creation and reconnection of new estuaries, removal of levees at tributaries, and floodplain restoration projects. In October of 2016, the Obama administration announced the creation of a Task Force comprised of representatives from several federal agencies and co-chaired by the White House Council on Environmental Quality, that will develop a “Puget Sound Action Plan” to better coordinate federal programs and focus on restoration efforts should funding be available (Goldfuss 2016). These actions, increased regional awareness of bank armoring impacts, combine with the most recent WDFW data suggest that shoreline armoring in the Puget Sound will remain at current levels, or increase or decrease slightly over the next five years.

Conclusions: The 2012 RGC 3 revoked bank stabilization within five WRIAs (8 (Cedar/Sammamish), 9 (Duwamish/Green), 10 (Puyallup/White), 11 (Nisqually), and 12 (Chambers/Clover)), and did not include other areas of the Salish Sea. These areas were shown through PSNERP data to have more than minimal cumulative effects. The Corps completed a cumulative impact study (USACE, 2014) that confirmed these impacts on the eastern shore of Puget Sound. Based on the inventory of the current condition of the shoreline, and the numerous scientific papers that have been published studying the impacts of armored shorelines, the Seattle District has determined the existing revocation of new bank stabilization in tidal waters of WRIAs 8, 9, 10, 11 and 12 will be retained in 2017.

For the 2017 NWPs, the Seattle District proposed in the June 20, 2016 special public notice to expand the revocation of new bank stabilization to all WRIAs in the Salish Sea, not only the five identified in 2012. Revocation of new bank stabilization in tidal waters of the Salish Sea was proposed as a result of recommendations to the Seattle District by agencies and tribes in Washington State. The Seattle District reviewed studies from the past five years that have focused on impacts to the Salish Sea which indicated new bank stabilization has contributed to impacts on habitat quality, species diversity, and nearshore functions. The Seattle District also reviewed information submitted throughout the public comment period. While there have been historic impacts to nearshore functions in the Salish Sea, impacts in those WRIAs not revoked in 2012 are not projected to result in more than minimal cumulative effects from bank stabilization. The Seattle District estimates approximately 5 projects involving new bank stabilization will be authorized each year over the next five years in the Salish Sea. These projects must comply with

all terms and conditions of the NWP, and will therefore result in no more than minimal cumulative adverse environmental effects. Revoking new bank stabilization in the entirety of the Salish Sea is not required at this time to ensure the NWP will result in no more than minimal cumulative environmental effects, and the RGC proposed in the special public notice will not be retained.

Therefore, RGC 3 – *New Bank Stabilization in Tidal Waters of Puget Sound*, will revoke new bank stabilization in tidal waters in WRIAs 8, 9, 10, 11, and 12. This RGC requires any project involving new bank stabilization within those tidal areas to go through the standard individual permit process including a public notice and a comprehensive review of alternatives and public interest factors. This revocation does not apply to the maintenance of existing bank stabilization structures, as construction impacts will typically be within the existing footprint of the structures and will not result in additional permanent impacts to the nearshore environment beyond what currently exists. This revocation will not apply to freshwater areas of tributaries to the Puget Sound where the shorelines have been altered by development and armoring. To ensure the individual and cumulative impacts of bank stabilization in all other waters of the U.S. are minimal, all projects involving bank stabilization (new and maintenance) in the Seattle District will be required to meet the conditions of RGC 5 – *Bank Stabilization* (discussed below).

RGC 5 – *Bank Stabilization* increases the thoroughness of the review for all new bank stabilization structures in all waters of the U.S. within the Seattle District, and adds a PCN requirement for all new and maintenance bank stabilization activities. The Seattle District believes the requirements of RGC 5 – *Bank Stabilization*, will allow the district engineer to evaluate projects in those non-revoked areas of the Salish Sea on a case by case basis to ensure the activities result in no more than minimal individual or cumulative adverse environmental effects. RGC 5 requires submittal of site specific information on the causes of erosion, type and length of existing stabilization in the project area, a description of current conditions and expected post-project conditions in the waterbody, and requires a statement describing how the project incorporates elements avoiding and minimizing adverse environmental effects to the aquatic environment and nearshore riparian area, including vegetation impacts in the waterbody. To ensure new bank stabilization projects result in no more than minimal individual or cumulative adverse environmental effects, This condition also communicates to project proponents they can submit results from any relevant geotechnical investigations can be submitted with the PCN if it describes current or expected conditions in the waterbody.

If the Corps determines a proposed project does not incorporate appropriate minimization methods, the project proponent must submit a compensatory mitigation plan to compensate for impacts to aquatic resources. Incorporating appropriate minimization methods and implementing compensatory mitigation may result in minimal direct impacts. If the district engineer determines, after considering mitigation, that there will be more than minimal individual or cumulative adverse environmental effects, he or she will exercise discretionary authority and require an individual permit for the proposed activity. That determination will be based on consideration of the information provided in the PCN and other available information obtained through ESA Section 7, Tribal, NHPA Section 106, or other consultation(s).

If, at a later time, the Division Engineer determines the use of certain NWP's for new bank stabilization activities would have more than a minimal adverse effect on the aquatic environment, individually or cumulatively, the modification, suspension, or revocation procedures at 33 CFR 330.4(e) or 33 CFR 330.5 may be used.

8.3.2 Wetland Mitigation

Due to historic losses and intense development pressures in Washington, multiple uncompensated losses of wetlands exceeding 1,000 square feet could result in more than minimal cumulative adverse environmental effects. Regional General Condition 8 – *Mitigation* requires a PCN for any impact to wetlands that would result in a wetland loss of 1,000 square feet or more. In addition, RGC 8 requires compensatory mitigation to offset impacts to any wetland loss that exceeds 1,000 square feet (NWP general condition 23 – *Mitigation*, requires compensatory mitigation for all wetland losses that exceed 1/10-acre and require PCN).

Structural components of a wetland and its surrounding landscape (such as plants, soils, rocks, water, and animals) interact with a variety of physical, chemical, and biological processes to perform functions. Wetlands in Washington play an essential role in improving water quality, including that of drinking water, by intercepting surface runoff and removing or retaining inorganic nutrients, processing organic wastes, and reducing suspended sediments before they reach open water. Wetlands store and slowly release surface water, rain, snowmelt, groundwater, and flood waters. Wetland vegetation also impedes the movement of flood waters and distribute them more slowly over floodplains. This combined water storage and slowing action lowers flood heights and reduces erosion downstream and on adjacent lands.

Wetlands in Washington State have been shown to be critical in maintaining regional biodiversity. Wetlands in Washington State represent approximately 2.1% of the area of the state (Dahl 1990). However, over two-thirds of all terrestrial vertebrate species in Washington can be considered “wetland dependent” or “wetland users.” In Washington and Oregon, all but one of the big game animals (deer, elk, moose, etc. with the exception of bighorn sheep) rely on riparian/wetland ecosystems for part of their habitat requirements. In Washington and Oregon, 204 (77%) of the 266 species of inland birds breeding in the two states do so in riparian and wetland environments. Wetlands play an essential role in sustaining native salmonid populations; they filter water leading to improved water quality in streams, they are an important source of food, and they provide overwintering habitat. Wetlands are essential for the health of Washington’s communities. Wetlands provide protection from the effects of flooding and erosion, maintain clean water, and help support and maintain a strong economy (Sheldon et al, 2005).

Washington’s economy is expected to continue to perform better than California and the rest of the U.S. as a whole. Migration will be the main cause of population growth. Between 2010 and 2040, Washington’s population is expected to grow by about 2,375,500 persons, reaching 9,100,100 in 2040 (WAOFM 2017). The increase in population will continue to increase development pressures in and adjacent to wetlands.

If a wetland is lost, most if not all of its wetland functions are also lost. In the 200-year period previous to the 1980s, the state lost an estimated 31% of its 135 million acres (55 million ha) of wetlands as a result of filling or draining (Dahl, 1990). Other estimates place loss of wetlands at 50 percent, and some of the urbanized areas of the Puget Sound area have experienced losses of 70 to 100 percent. Estimates of continuing wetland loss range from 700 to 2,000 acres per year. In addition, most of Washington's remaining wetlands have been significantly degraded. Studies in the Pacific Northwest illustrate that the loss of wetlands continues in this region (Washington State Department of Ecology, 1992a,b). Eastern Washington riparian wetlands have been reduced from an estimated 2% cover of the landscape to 0.5%, with most of the remaining riparian wetlands at high elevations (Chappell et al. 2001).

More than 400 private organizations are active in the preservation and protection of wetlands in Washington (Seattle Audubon Society, 1993). Despite efforts by private and government groups to conserve wetlands, data collected by governmental and non-governmental organizations shows there are consistent wetland losses regionally and statewide.

To ensure important wetland functions are replaced, the Seattle District will require PCNs and compensatory mitigation for wetland that exceed 1,000 square feet. This measure will help ensure NWP's that result in the loss of wetlands will have no more than minimal cumulative adverse environmental effects. In addition, a PCN requiring notification for 1,000 square feet or more of wetland loss will help the Seattle District better track the status of the State's wetlands to better assess cumulative effects into the future.

8.3.3 Stream Loss

In Washington State, rivers and streams supply our drinking water; irrigate our crops; mitigate damage from floods; power our cities with hydroelectricity; support fish and other species; and provide countless recreational and commercial opportunities. Streams perform a number of important ecological functions and services. Streams, including ephemeral and intermittent streams, play a key role in providing critical habitat, food and shelter for waterfowl, fish, and other aquatic species. Tribes throughout the State of Washington rely on anadromous fish, especially salmon species. For many tribes, salmon provide the core subsistence and are directly tied to their treaty rights.

According to the Washington Department of Fish and Wildlife, there are approximately 624 populations of salmon in Washington grouped by where the fish spawn. Salmon species have adapted to use virtually every part of every stream in the northwest. Although each river and watershed has a different trend, there is an overarching trend downward. Salmon populations have declined roughly 90 percent over the past several decades (Mckane et al. 2016). Information on the biological condition of the nation's rivers and streams, the key stressors that affect them, and how the condition of small streams has changed was analyzed nationally. In the west it was determined that 28.2% of the streams had good biological conditions, 24.9% had fair biological conditions, and 46.1% had poor biological conditions (EPA 2016).

Many of the streams and rivers in Washington have been heavily altered since the mid-1800s.

With population growth on the rise in most parts of Washington State, the Seattle District has determined it is important to maintain the quantity and quality of perennial streams and to track the loss of intermittent and ephemeral streams. In order to address the loss of linear feet of perennial streams and to assess the effects of loss of intermittent and ephemeral streams, the district developed RGC 7 – *Stream Loss*. PCN is required for all activities that result in the loss of linear feet of stream beds. RGC 7 restricts the loss of any linear feet of perennial stream beds or the loss of greater than 300 linear feet of intermittent and/or ephemeral stream beds. Stream loss restrictions may be waived by the district engineer on a case-by-case basis provided the activities result in net increases of aquatic resource functions and services.

In addition to RGC 7, RGC 6 – *Crossings of Waters of the United States*, requires submittal of a PCN for any project including installing, replacing, or modifying crossings of waters of the United States, such as culverts or bridges. If a culvert is proposed to cross waters of the U.S. where salmonid species are present or could be present, the project must apply the stream simulation design method or a design method which provides passage at all life stages at all flows where the salmonid species would naturally seek passage. This condition was developed to ensure that culverts do not become impediments to fish passage. With the addition of RGC 6 and RGC 7, the Seattle District has determined that projects authorized by NWP will result in no more than minimal cumulative adverse environmental effects.

8.3.4 Cumulative Effects Analysis for NWP 48

Throughout the 2007 and 2012 NWP verification time periods and through the 2017 NWP reissuance process, comments and concerns from resource agencies, Tribes, the aquaculture industry, and the public have been raised regarding commercial shellfish aquaculture activities. This analysis summarizes the historical conditions, the affected environment, historical stressors, current conditions, and future trends surrounding commercial shellfish aquaculture activities.

Historical Conditions: The state of Washington supports the largest commercial aquaculture industry in the United States. In the state of Washington approximately 70% of the tidelands were historically sold so they are in private ownership. This in part was facilitate when in 1895, the Washington State Legislature passed the Bush Act and the Callow Act, which allowed for sale of state-owned tidelands into private ownership for the purpose of oyster planting. These lands may have thus been engaged in aquaculture historically and may or may not be engaged in aquaculture today.

The shellfish industry has a long history in the state of Washington as documented by the Pacific Shellfish Institute (2017). Shellfish production on both private and public lands has been occurring since the 1860s and extensive estuarine areas in the state are currently used for commercial cultivation of oysters, clams, and mussels. Western Washington Indian tribes have harvested wild shellfish, including oysters and clams from Puget Sound and the coastal areas for thousands of years. Shellfish farming began in the mid-1800s (prior to statehood) and originally focused on the native Olympia oyster, which was abundant in Willapa Bay and South Puget Sound. The Olympia oyster industry reached its peak in the 1890s and then abruptly crashed due to over harvest and declining water quality conditions. By 1915, Olympia oyster harvest was

almost non-existent in Puget Sound.

In the 1920s, the Washington aquaculture industry began experimenting with the Japanese Pacific oyster and found it was resilient and grew well in Puget Sound waters. However, natural reproduction of the species is not reliable in Puget Sound so growers had to import young oysters (seed) from Japan. In the 1970s, methods were developed to produce shellfish seed in hatcheries, which increased the availability of shellfish for aquaculture throughout the region. This allowed for a substantial expansion of the aquaculture industry. Today, a number of species of oyster are raised on Washington tidelands, however, the Pacific oyster remains the most important and widely cultivated oyster in Washington and along the West Coast. Other commercially important bivalve species have developed over the years. These include mussels, Manila clams, softshell clams, and, more recently, cultivation of the native geoduck clams. The geoduck aquaculture industry started about 2000.

Affected Environment: For the purposes of NWP 48 2017, the project area is defined as the area in which the operator is authorized to conduct commercial shellfish aquaculture activities, as identified through a lease or permit issued by an appropriate state or local government agency, a treaty, or any easement, lease, deed, contract, or other legally binding agreement that establishes an enforceable property interest for the operator. The fact commercial aquaculture can occur on either private property or state owned lands has influenced how aquaculture operations are managed in Washington State. When on private property, the areas of active cultivation range from the entire parcel to only portions of a parcel, with other areas having never been engaged in aquaculture. For state owned lands, generally the state only leases areas where active cultivation will occur throughout the entire leased area. For the purposes of this analysis the geographic areas producing shellfish aquaculture were divided into the waterbodies of Willapa Bay, Grays Harbor, Puget Sound, and Hood Canal.

Willapa Bay is an estuary located along the Washington Coast opening to the Pacific Ocean. As the bay is fairly shallow there are large expanses of intertidal habitat suitable for aquaculture operations. There are several rivers draining into the bay and there are several towns located on the bay or the adjacent rivers supporting both commercial and recreational marine activities as well as farming and forestry activities. The nearshore habitat has been substantially altered since the mid-1800s. Changes have occurred from developments such as dredging to maintain navigational channels, extensive drainage and diking systems, construction of bulkhead, pier, and shoreline facilities, runoff from the farming and forestry practices influencing water quality and sediment loading, and filling of surrounding wetlands and tidal marshes. There has also been an invasion of non-native eelgrass (*Zostera japonica*) in the 1930s as well as non-native cordgrass (*Spartina alterniflora*). The aquaculture activities have impacted eelgrass habitat (discussed in more detail below).

Grays Harbor is also an estuary located on the Washington Coast opening to the Pacific Ocean. The bay has pockets of shallower areas suitable for aquaculture activities. There are several rivers draining into the bay and there are several towns located on the bay or the adjacent rivers supporting both commercial and recreational marine activities as well as farming and forestry activities. The impacts described for Willapa Bay area similar to those experienced in Grays

Harbor. There is a more robust Port facility located at the mouth of the Chehalis River. Anecdotal observations (Thom) indicated that some flats in the outer (South Bay) area of Grays Harbor were eroded shortly after the navigation channel was deepened in the early 1990s (Borde et al. 2003).

The above description under bank armoring summarizes the affected nearshore environment of Puget Sound and Hood Canal.

There are a number of studies on the impacts of commercial scale aquaculture on the marine nearshore environment in Washington. Commercial shellfish aquaculture activities can result in conversion of substrates (e.g. mudflats to gravel bars), impacts to submerged aquatic vegetation, alteration in aquatic communities from native to non-native shellfish species, and water quality impacts from harvest activities. The introduction of non-native shellfish species could result in increased competition for native species affecting their viability.

Detailed information about aquaculture in Washington can be found in the Seattle District's Programmatic Biological Assessment *Shellfish Activities In Washington State Inland Marine Waters* (2016) and the programmatic Biological Opinions for Shellfish Activities in Washington State Inland Marine Waters (NOAA 2016, USFWS 2016). Two indicator groups, native eelgrass and forage fish, may be representative of the stressors to the environment caused by aquaculture operations.

Eelgrass is a type of vegetative shallows, which are considered a "special aquatic site" under the Clean Water Act (40 CFR 230.43). Eelgrass is also protected by a number of other Federal regulations. Under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), seagrasses, specifically eelgrass, are designated as an essential fish habitat (EFH) habitat area of particular concern (HAPC) for certain species in Washington. Aquatic vegetation, which includes eelgrass, is a primary constituent element for designated critical habitat for several species in the action area listed under the Endangered Species Act including Puget Sound Chinook salmon (70 FR 52630), Hood Canal summer run chum salmon (70 FR 52630), and Puget Sound steelhead (78 FR 2726).

Eelgrass is an important aquatic resource in Washington as documented by Washington Department of Natural Resources (WDNR) (2015). Eelgrass is an aquatic flowering plant found in fine grained intertidal and subtidal habitats. It provides numerous high-value regional ecosystem services within the coastal ecosystem. It creates structural complexity and supports high levels of biodiversity. Eelgrass serves as a focal habitat for perhaps hundreds of species in the Sound (Thom et al. 2011). It provides nursery habitat for economically important Dungeness crab and Pacific salmon (Fernandez et al. 1993, Phillips 1984, Simenstad 1994); spawning substrate for Pacific herring (Penttila 2007); and foraging habitat for numerous water birds including black brant. Eelgrass improves water quality by trapping and storing particulates and nutrients (Short and Short 1984, Gacia et al. 1999, Asmus & Asmus 2000); enhances productivity and alters nutrient cycling (Hemminga and Duarte 2000); mitigates wave energy and increases shoreline stabilization (Koch et al. 2006); and serves as a globally significant carbon sink (Fourqurean et al. 2012).

Natural conditions (especially water quality) play a significant role in controlling the distribution of eelgrass. Eelgrass meadows in Puget Sound are characterized by substantial interannual variability appearing to be related to the occurrence of El Niño climate events (USACE 2015). Eelgrass areas on the Pacific coast can expand by as much as 5 meters (m) and contract by as much as 4 m annually (WDNR 2012).

Herring, surf smelt, and sand lance are all acknowledged to be of great ecological importance in local marine food webs (Bargmann 1998). Herring are known to spawn on vegetation, such as eelgrass. Surf smelt spawning activity occurs in a wide variety of wave-exposure regimes, from very sheltered beaches in southernmost Puget Sound and Hood Canal to fully-exposed pebble beaches on the outer coast of the Olympic Peninsula. The spawning habitat of the Pacific sand lance generally resembles the surf smelt: upper intertidal beaches consisting of sand and gravel. The life histories of all three species is intimately linked to nearshore geophysical processes and therefore, can be impacted by aquaculture operations. Because herring spawns on vegetation, such as eelgrass, the discussion on eelgrass describes impacts to herring spawning habitat. Pacific sand lance and surf smelt have similar life histories and stressors to the species.

Stressors: Eelgrass requires certain environmental conditions including appropriate tidal elevation, light, temperature, salinity, substrata, nutrients, waves, and current velocities (Philips 1984, Thom 2003). The WDNR contracted with Pacific Northwest National Laboratory to summarize and rank known stressors to eelgrass in Puget Sound. The summary of stressors on native eelgrass in Table 1 is reproduced from the final report (Thom et al. 2011). The focus of the review was Puget Sound but the analysis is relevant to Willapa Bay and Grays Harbor to the extent the identified stressors occur. The results have been used to develop an eelgrass recovery strategy in Puget Sound (WDNR 2015).

Stressor	Controlling Factor	Characteristics of Stressor					Trend	Case Study Evidence	Global Studies	Threat Score	Knowledge Score
		Magnitude	Spatial Extent	Temporal Extent	Reversibility						
Invasive species	Competition	Low **	Med **	Med **	Med **	Med **	Increase **	Direct *	O	2.00	1.80
Nutrient-driven harmful algal blooms	Competition, light	Med **	Med *	Med *	Med **	Med **	Increase *	Direct *	SW, W, D, O	2.20	1.40
Suspended sediment	Light	Med ***	Med *	High *	Med **	Med **	Increase *	Direct *	SW, D, O	2.40	1.60
Sea level rise	Light	Med **	High *	High *	Low ***	Low ***	Increase *	None	SN, D, O	2.80	1.60
Overwater structures	Light	High ***	Low ***	High ***	Low ***	Low ***	Increase **	Direct ***		2.60	2.80
Aquaculture	Light, substrate	Med **	Low **	Med *	Med **	Med **	Increase **	Direct ***		2.00	1.60
Bionurbation	Substrate	Low *	Low *	Low *	Med *	Med *	Same *	Direct, spec. **		1.40	1.00
Storms	Energy	High *	Med *	Low *	High **	High **	Increase **	None		2.00	1.20
Construction	Substrate, direct	High ***	Med ***	Med **	Med **	Med **	Increase **	Direct ***		2.40	2.00
Boat grounding /anchoring	Direct	High **	Low *	Low *	High *	High *	Increase *	Direct *	W	1.80	1.20
Shoreline armoring	Substrate, energy	Low **	High ***	High **	Med *	Med *	Increase *	Ambiguous *		2.40	1.40
Dredging/ filling	Substrate, direct	High ***	Med **	High ***	Med **	Med **	Increase **	Direct **		2.60	2.20
Propeller wash/ boat wake	Energy	Med **	Low *	Med *	High **	High **	Increase *	Direct/Ambiguous *		1.80	1.20
Anthropogenic contaminants	Direct	Low *	High **	Low *	Low *	Low *	Increase **	None	SW	2.20	1.40
Disease	Direct	Low *	High **	Med *	Med **	Med **	Increase **	None *		2.20	1.20
Organic matter discharge/sulfides	Direct	High **	Low *	Med *	Med **	Med **	Same *	Direct *		2.00	1.20
Sea temperature rise	Temperature	Med *	High *	Med *	Low **	Low **	Increase *	None	SN, O	2.60	1.20
Freshwater input	Salinity	Med **	High **	Med *	Med **	Med **	Same *	None *		2.20	1.40
Overfishing	Herbivory	Low *	Med *	Med *	Med **	Med **	Same *	None *		1.80	1.00

Table 1. Eelgrass stressor ranking table (from Thom et al. 2011). The stressor score is determined by assigned point values to stressor characteristic values. For most categories, High = 3, Medium = 2, and Low = 1, with the exception of the Reversibility category, in which High = 1 and Low = 3 (because high reversibility reduces the threat presented by a stressor). The final stressor score is the mean of all of the points for each stressor, with a value of 3 (red) indicating the highest possible threat to eelgrass and 1 (green) the lowest. All columns included are currently weighted equally in the calculations. The knowledge score is the mean number of asterisks assigned to each stressor (not including case studies). A high knowledge score (3, green) indicates the most information is available about the stressor, while a low score (1, red) indicates very little information is available.

There is a substantial overlap between eelgrass and much of the project areas authorized under the 2012 NWP 48. Currently, Seattle District estimates 66% of continuing active aquaculture acreage is potentially co-located with eelgrass. The Seattle District estimates co-location of active aquaculture acreage with eelgrass occurs in the following percentages: 74% in Willapa Bay; 67% in Grays Harbor; and 84% in the north Puget Sound region. In the Hood Canal region, active aquaculture acreage is somewhat equally split between areas with and without eelgrass (41%). The south Puget Sound region appears to be the notable exception where a minority of the currently active acreage is co-located with eelgrass (8%).

Overall, the Seattle District estimates the current acreage of all aquaculture activities potentially co-located with eelgrass throughout the state of Washington is 25,866 acres (20%). To

understand what this means on a regional/waterbody scale, the Seattle District estimates the following acreage of each waterbody contains activities which are potentially co-located with eelgrass: Grays Harbor 1,918 acres (5%), Willapa Bay 19,618 acres (49%), Hood Canal 685 acres (21%), and Puget Sound, south and north respectively 275 acres and 3,370 acres (7-9%).

There has been interaction between aquaculture operations and eelgrass since the beginning of commercial operations in the 1800s. The nature of the impacts are different depending on the activity; eelgrass can be completely removed, there may be temporary impacts, and eelgrass can recover between activity events, as discussed below. One study observed in Willapa Bay commercial oyster beds were negatively correlated with the extent of total and dense eelgrass beds, and positively correlated with patchy beds. (Wilson and Atkinson 1995).

In Washington State there is substantial overlap between forage fish spawning locations and aquaculture activities. The estimated percentage of spawning habitat in regions potentially co-located with aquaculture is 7,391 acres (20%) through the state of Washington: Grays Harbor 73 acres (2%), Willapa Bay 2,710 acres (10%), Hood Canal 663 acres (49%), and Puget Sound, south and north respectively 1,082 acres and 2,864 acres (34-78%). In Puget Sound and in Hood Canal, acreage is co-located with mapped spawning habitat for all three forage fish species analyzed. In Grays Harbor and Willapa Bay, aquaculture acreage appears co-located only with herring spawning areas. The analysis suggests Willapa Bay and north Puget Sound are the regions where the most overlap of forage fish spawning and aquaculture may occur. Relative to the total mapped herring spawning area in each region, activities in Willapa Bay tend to occur in well over half of the mapped spawning area. In the north Puget Sound region much of the overlap with the herring spawning area is in Samish Bay. The south Puget Sound region acres are co-located more with surf smelt spawning areas relative to the other two species.

Current Conditions and Trends: Aquaculture is an important industry in Washington State. The combined oyster harvest from Willapa Bay and Grays Harbor alone constitutes approximately 25 percent of total oyster landings in the United States (WDOE 2017). A wider variety of shellfish are cultivated in Puget Sound, including the geoduck clam. Washington State is the largest producer and exporter of geoducks in the world.

The industry is growing and expected to continue to grow both in Washington State and nationally. As the industry expands, more tidelands with and without special aquatic sites are expected to be put into production as well as areas supporting forage fish spawning.

The impacts to eelgrass from aquaculture can be temporary, depending on the activity, because the habitat conditions themselves (elevation, water quality, etc.) are not permanently altered which allows eelgrass to eventually recover given sufficient time. In Washington State, the timeframe for recovery has been documented to be about 5 years depending on the activity and other factors. For example, when a geoduck farm is seeded it is covered with tubes and nets for 2 or more years and then the tubes and nets are removed until harvest, 3-5 years later. The eelgrass would have died back under the nets, had a chance to return when nets were removed, and then eelgrass is disturbed/removed again when harvest occurs. While this process allows for eelgrass return at the site, the frequency of disturbance and relatively long recovery times result

in a local habitat condition where eelgrass more often than not is either not present or present at a much reduced functional state. This effect would persist as long as aquaculture is occurring at the site. In some cases, such as when nets are placed over planted clam beds, any eelgrass is likely to be permanently smothered and not recover. This is because of the permanence of the nets, which are only removed between harvest and the next planting cycle. The time between harvest and planting may only be a matter of weeks or months. Other impacts are discussed in the national decision document. This existing cycle of impacts to eelgrass represents the existing environment from aquaculture activities authorized under NWP 2012; and these or similar effects may continue if verification under NWP 48 2017 is requested and received. Impacts to eelgrass from all operations will be reviewed by the district engineer upon receipt of the PCN. Special conditions may be applied on a project specific basis to ensure impacts are minimal. The district engineer may exercise his discretionary authority as discussed below to ensure impacts are minimal both individually and cumulatively. When properly sited and operated, impacts to eelgrass are minimal.

Impacts to sand lance and surf smelt are dependent on location. Aquaculture in Puget Sound affects an estimated 24 miles or 12% of the total surf smelt spawning habitat and 9 miles or 7% of the total sand lance spawning habitat. However, the degree to which aquaculture activities are actually collocated with spawning habitat is variable because some culture activities typically occur lower on the beach than spawning. A notable exception is clam culture above the +5 ft. MLLW spawning zone for sand lance and above the +7 ft. MLLW for surf smelt. This activity would overlap with spawning habitat depending on if there is in fact habitat present. Impacts of culture on forage fish spawning which occurs on beaches immediately upslope of the culture could be negligible in some cases. This is true for operations which do not conduct activities in the upper slopes of the adjacent beach where spawning occurs. However, other operations may conduct substantial activities in these upslope areas including driving vehicles, storing materials, and even culturing itself. In these cases, harm to spawning fish can occur or spawning areas could be removed from use by the population. The issue is really about individual husbandry practices of which there is a wide range. Activities which affect beach morphology such as aquaculture structures, cover nets stretched over the substrate, trampling, and substrate disturbing harvest activities can all result in harm or loss of spawning habitat for these two species. Impacts to spawning areas will be reviewed by the district engineer upon receipt of the PCN. Special conditions may be applied on a project specific basis to ensure impacts are minimal. The district engineer may also exercise his discretionary authority as discussed below to ensure impacts are minimal both individually and cumulatively.

One main vector of stress to eelgrass and forage fish are the various nets, equipment and structures associated with aquaculture. Culture methods utilizing structures can result in a change to the substrate (e.g., bag culture, cover nets) and/or benthic community. Nets and equipment can result in loss of eelgrass due to shading, and actual removal. Such impacts would be more or less continuous for the period of the permit authorization because there is often no return to the prior substrate and habitat conditions. This is because new equipment (e.g., bags, nets or tubes) would be placed shortly after the previous crop is harvested. Depending on individual grower practices, structures to support culture are expected to occur between 30 and 100% of the time. The placement of such artificial structure for growing shellfish occurs in all

the geographic regions. The number of current acres potentially with artificial structure is summarized by region in Table 2 below. This acreage may overestimate the acres with current structures due to portions of the acreage not currently in active cultivation. The presence of structures from aquaculture activities authorized under NWP 2012 represent the existing environment; such effects may continue if verification under NWP 48 2017 is requested. Impacts regarding artificial structures for all operations will be reviewed by the district engineer upon receipt of the PCN. Special conditions may be applied on a project specific basis to ensure impacts are minimal. The district engineer may also exercise his discretionary authority as discussed below to ensure impacts are minimal both individually and cumulatively.

As discussed in the national decision document, for many current operations, verification under NWP 2017 will create no appreciable change to the baseline environmental conditions, and the impacts will be minimal both individually and cumulatively. For other operations, however, activities may create a change in current conditions, for example if activities are proposed on land populated with recovered eelgrass. The district engineer will review the PCN to ensure that activities proposed for such project areas are minimally impacting, both individually and cumulatively. The district engineer will exercise discretionary authority when necessary to ensure impacts from activities authorized by NWP 48 cause no more than minimal impacts individually or cumulatively. For example, the district engineer may add activity specific conditions, or require project modifications to ensure impacts are minimal, if avoidance, minimization and mitigation still result in project impacts more than minimal.

Table 2. Current artificial structure use by region (acres).

	Grays Harbor	Willapa Bay	Hood Canal	South Puget Sound	North Puget Sound
oyster longline/ stake	1,265	6,290	9,312	222	2,800
rack and/or bags (clam and oyster)	35	901	138	240	2,378
geoduck tubes	0	68	563	1,449	2,477
cover nets	0*	6,017	875	2,735	2,841
Total	1,500	13,476	2797	5542	11,126
total (plastic structure only)	125	7,186	2,452	5,320	8,326

Notes:

1. Acreages are estimates associated with limited detail on permit applications. Grays Harbor is likely under-reported based on recent PCNs received in late 2016. Acreages are best interpreted as a maximum for each activity which, if implemented, would result in a less than equivalent decrease in acreage for another activity in the region.

2. All new acres assumed to potentially contain plastic structure or longline/stake.

* More recent verifications for Grays Harbor included cover net use.

Future Trends: Under the 2012 NWP 48, the Seattle District issued about 1,720 verifications. Of that number about 700 were authorizations of projects previously verified under the 2012 NWP 48 and verified a second time to update ESA coverage. In other words, the same operations received two verifications within the 2012 NWP time period. The remainder of the about 1,720 verifications were either existing operations verified only once or were new operations. All current verified operations under the NWP 48 2012 will need to receive verification under the NWP 48 2017, should the project proponent seek to utilize the NWP program to continue their operation. Over the next 5 years, a portion of the estimated verifications will be issued to existing projects and a portion will be issued to new operations. Based on reported use of this NWP, and discussion with the shellfish industry and individual shellfish growers, the Seattle District anticipates verifying NWP 48 about 1,300 times over the next five years. The Seattle District anticipates about 800 of those verifications will be issued to the operations previously verified under the NWP 2012. The remainder are anticipated to be for operations not previously verified by the Seattle District.

It is important to note that the number of verifications issued is not an indicator of the scope of activities from an acreage or effects standpoint. The vast majority of acreage for commercial aquaculture is for activities authorized under the 2012 NWP 48. Because these activities represent the majority of all shellfish activity potentially authorized under the 2017 NWP 48, an evaluation of this information is useful for understanding the action and its effects. Effects of these ongoing activities are discussed in the National Decision Document. For the purposes of this future trends analysis, it is assumed that these ongoing activities would seek re verification by the Seattle District under the 2017 NWP 48.

There are 216,045 marine tideland acres in Washington State. Approximately 26% of all tideland acres were authorized under the 2012 NWP 48. The greatest percentage of what was authorized was in Willapa Bay (81% of authorized acres).

To estimate the total project area acreage that could be authorized over a five year period from 2017-2022, the Seattle District considered the project areas previously authorized under NWP 2012, the current pending NWP 48 applications, other project areas which could potentially meet the definition as 'existing' under NWP 2017, and the projected amount of project areas seeking authorization as a 'new'. To estimate the other project areas which may meet the definition of 'existing' under NWP 2017 the Seattle District evaluated the acreage of Bush Act and Callow Act land (Bush and Callow Act) and the state oyster reserves. In concluding the total project area acreage estimation for NWP 48 2017, the Seattle District further considered estimates provided by commercial shellfish growers for future aquaculture production, coordinated with WDNR and the Washington State Department of Fish and Wildlife (WDFW) on their potential

shellfish activities, and considered the general knowledge of Corps’ staff.

The state owned Willapa Bay Oyster Reserves are lands managed by WDFW. Commercial shellfish growers apply for a state license to cultivate oysters on these lands. The total acreage of the Willapa Bay Reserves is 9,985 acres. The Seattle District expects to receive applications from the state seeking to use NWP 48 to authorize operations in these areas. Many of these areas would likely meet the definition of ‘existing’.

The Bush and Callow Act lands are lands which passed into private ownership for the purposes of oyster production, and could therefore meet the definition of existing operations under the 2017 NWP 48 terms if they were farmed in the last 100 years. Bush and Callow Act lands actively engaged in aquaculture today that are authorized for the work under the 2012 NWP 48, are expected to seek reauthorization under the 2017 NWP 48. Those Bush and Callow Act lands currently not active are nevertheless expected to request verification under the 2017 NWP 48, based on discussion with individual shellfish operations. Therefore the Seattle District estimates growers could potentially seek authorization for the total acreage of Bush and Callow Act lands under NWP 48 2017. This estimation was made for the purposes of this future trends analysis, and may ultimately be an overestimation of the acreage that is actually verified and/or put in to active use under NWP 48 2017.

The Seattle District expects the majority of the 2017 NWP 48 verifications will be for existing project areas, as defined by the 2017 NWP 48. This is due to the number of operations previously authorized under 2012 NWP 48 which are expected to seek authorization again, and due to the ability of many project areas seeking authorization for the first time to potentially meet the definition of ‘existing’ based on the long history of shellfish aquaculture in the state. The Seattle District has estimated for the purposes of this future trends analysis the acres which could potentially meet the definition of “existing” under NWP 48 by taking the acres that have been previously authorized, an estimate of Bush Callow Act land that has not already been previously authorized, and the Washington State oyster reserves lands. There are likely other private owned lands which will meet the 2017 NWP 48 definition of ‘existing’, therefore this acreage total is considered a minimum estimate. The estimate for ‘new’ project areas under NWP 48 2017 was determined based on information we have received from the shellfish industry and the Seattle District’s coordination with project proponents.

This acreage presented below may not indicate the actual acreage of aquaculture cultivation activities, because portions of project areas may not be in cultivation. Prior to undertaking changes to operations, project proponents must provide either a PCN or notification to Seattle District and comply with all applicable conditions including GC 17 and 18.

Table 4. Estimated acreage that could potentially be included in Project Areas that seek authorization under the 2017 NWP 48

Project area acreage	Grays Harbor	Willapa Bay	Puget Sound/Hood Canal	Total
Existing acreages: aquaculture within past 100 yrs.	7,517	49,714	14,695	71,926

(includes Bush/Callow, WA oyster reserves, and other acreage in coordination)				
New Acreages (no aquaculture in past 100 years)	24	19	289	332
Total Estimated (rounded)	7,550 (about 3,850 was authorized under NWP 48 2012)	49,750 (about 36,320 was authorized under NWP 48 2012)	15,000 (about 9,414 was authorized under NWP 48 2012)	72,300 (about 49,575 was authorized under NWP 48 2012)

Conclusion:

The impacts from NWP 48 activities are expected to continue throughout the 2017 NWP 48 authorization period. All aquaculture activity co-located with eelgrass or forage fish spawning areas could impact the eelgrass and forage fish in the manner described above. Impacts from previously authorized existing activities would not change the current existing environmental baseline within the NWP 2017 authorization period.

All activities authorized under the 2017 NWP 48 must comply with the terms and conditions of NWP 48 and the applicable national general conditions, regional general conditions, and NWP 48 regional conditions. A PCN is required for all requests for verifications NWP 48 or because of NWP general condition 18 – *Endangered Species*; all aquaculture operations in the state are located in waters where there are either listed threatened or endangered species or listed critical habitat. When reviewing the PCN the district engineer will also ensure compliance with the applicable NWP general conditions to help insure the impacts are no more than minimal. These conditions include, but are not limited to NWP general condition 1 – *Navigation*, NWP general condition 2 – *Aquatic Life Movement*, NWP general condition 3 – *Spawning Areas*, NWP general condition 6 – *Suitable Material*, NWP general condition 14 - *Proper Maintenance*, NWP general condition 17 – *Tribal Rights*, NWP general condition 18 – *Endangered Species*, NWP general condition 23 – *Mitigation*, and NWP general condition 32 – *Pre-Construction Notification*. RGC 1 – *Project Drawings* and NWP 48 general condition 1 will provide information about and restrictions to the proposed activities. New operations are limited to ½ acre of impacts to submerged aquatic vegetation.

After reviewing the PCN the district engineer may add activity specific conditions to ensure the operation complies with the terms and conditions of the NWP and the adverse impacts on the aquatic environment are individually and cumulatively minimal (see 33 CFR 330.1(e)(2)). This could include requiring compliance with a compensatory mitigation proposal submitted by the applicant to reduce the adverse environmental effects so they are no more than minimal (see NWP general condition 23 – *Mitigation*). If after these steps are taken the impacts are more than minimally impacting, either individually or cumulatively, the district engineer may exercise his discretionary authority and require the project to be modified to reduce or eliminate the adverse impacts or will notify the prospective permittee to seek authorization under an individual permit (see 33 CFR 330.4(e)(2)).

While the impacts from any NWP 48 authorized activities are expected to continue throughout the 2017 NWP 48 authorization period, the effects will be individually and cumulatively minimal

based on the compliance with the conditions above, and the district engineer's ability to require activity specific conditions or exercise discretionary authority. No additional regional conditions are proposed, except as listed below under 9.2. Impacts from operations vary greatly based on the location, and individual husbandry practices and any further conditions can be evaluated for a proposed activity at the PCN review stage.

9.0 List of Final Corps Regional Conditions

9.1 Regional General Conditions

1. Project Drawings

Drawings must be submitted with pre-construction notification (PCN). Drawings must provide a clear understanding of the proposed project, and how waters of the U.S. will be affected. Drawings must be originals and not reduced copies of large-scale plans. Engineering drawings are not required. Existing and proposed site conditions (manmade and landscape features) must be drawn to scale.

2. Aquatic Resources Requiring Special Protection

Activities resulting in a loss of waters of the United States in mature forested wetlands, bogs and peatlands, aspen-dominated wetlands, alkali wetlands, vernal pools, camas prairie wetlands, estuarine wetlands, wetlands in coastal lagoons, and wetlands in dunal systems along the Washington coast cannot be authorized by a NWP, except by the following NWPs:

- NWP 3 – Maintenance
- NWP 20 – Response Operations for Oil and Hazardous Substances
- NWP 32 – Completed Enforcement Actions
- NWP 38 – Cleanup of Hazardous and Toxic Waste

In order to use one of the above-referenced NWPs in any of the aquatic resources requiring special protection, prospective permittees must submit a PCN to the Corps of Engineers (see NWP general condition 32) and obtain written authorization before commencing work.

3. New Bank Stabilization in Tidal Waters of Puget Sound

Activities involving new bank stabilization in tidal waters in Water Resource Inventory Areas (WRIAs) 8, 9, 10, 11 and 12 (within the areas identified on Figures 1a through 1e) cannot be authorized by NWP.

4. Commencement Bay

The following NWPs may not be used to authorize activities located in the Commencement Bay Study Area (see Figure 2):

- NWP 12 – Utility Line Activities (substations)
- NWP 13 – Bank Stabilization
- NWP 14 – Linear Transportation Projects
- NWP 23 – Approved Categorical Exclusions
- NWP 29 – Residential Developments
- NWP 39 – Commercial and Institutional Developments
- NWP 40 – Agricultural Activities
- NWP 41 – Reshaping Existing Drainage Ditches
- NWP 42 – Recreational Facilities
- NWP 43 – Stormwater and Wastewater Management Facilities

5. Bank Stabilization

All projects including new or maintenance bank stabilization activities require PCN to the Corps of Engineers (see NWP general condition 32).

For new bank stabilization projects only, the following must be submitted to the Corps of Engineers:

- a. The cause of the erosion and the distance of any existing structures from the area(s) being stabilized.
- b. The type and length of existing bank stabilization within 300 feet of the proposed project.
- c. A description of current conditions and expected post-project conditions in the waterbody.
- d. A statement describing how the project incorporates elements avoiding and minimizing adverse environmental effects to the aquatic environment and nearshore riparian area, including vegetation impacts in the waterbody.

In addition to a. through d., the results from any relevant geotechnical investigations can be submitted with the PCN if it describes current or expected conditions in the waterbody.

6. Crossings of Waters of the United States

Any project including installing, replacing, or modifying crossings of waters of the United States, such as culverts or bridges, requires submittal of a PCN to the Corps of Engineers (see NWP general condition 32).

If a culvert is proposed to cross waters of the U.S. where salmonid species are present or could be present, the project must apply the stream simulation design method from the Washington Department of Fish and Wildlife located in the *Water Crossing Design Guidelines* (2013), or a design method which provides passage at all life stages at all flows where the salmonid species would naturally seek passage. If the stream simulation design method is not applied for a culvert where salmonid species are present or could be present, the project proponent must provide a rationale in the PCN sufficient to establish one of the following:

- a. The existence of extraordinary site conditions.
- b. How the proposed design will provide equivalent or better fish passage and fisheries habitat benefits than the stream simulation design method.

If a culvert is proposed to cross waters of the U.S. where salmonid species are present or could be present, project proponents must provide a monitoring plan with the PCN that specifies how the proposed culvert will be assessed over a five-year period from the time of construction completion to ensure its effectiveness in providing passage at all life stages at all flows where the salmonid species would naturally seek passage.

Culverts installed under emergency authorization that do not meet the above design criteria will be required to meet the above design criteria to receive an after-the-fact nationwide permit verification.

7. Stream Loss

A PCN is required for all activities that result in the loss of any linear feet of stream beds. No activity shall result in the loss of any linear feet of perennial stream beds or the loss of greater than 300 linear feet of intermittent and/or ephemeral stream beds. A stream may be rerouted if it is designed in a manner that maintains or restores hydrologic, ecologic, and geomorphic stream processes, provided there is not a reduction in the linear feet of stream bed. Streams include brooks, creeks, rivers, and historical waters of the U.S. that have been channelized into ditches. This condition does not apply to ditches constructed in uplands.

Stream loss restrictions may be waived by the district engineer on a case-by-case basis provided the activities result in net increases of aquatic resource functions and services.

8. Mitigation

Pre-construction notification is required for any project that will result in permanent wetland losses that exceed 1,000 square feet. In addition to the requirements of General Condition 23 (Mitigation), compensatory mitigation at a minimum one-to-one ratio will be required for all permanent wetland losses that exceed 1,000 square feet. When a PCN is required for wetland losses less than 1,000 square feet, the Corps of Engineers may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment.

Compensatory mitigation for impacts to marine waters, lakes, and streams will be determined on a case-by-case basis. If temporary impacts to waters of the U.S. exceed six months, the Corps of Engineers may require compensatory mitigation for temporal effects.

9. Magnuson-Stevens Fishery Conservation and Management Act – Essential Fish Habitat

Essential Fish Habitat (EFH) is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. If EFH may be adversely affected by a proposed activity, the prospective permittee must provide a written EFH assessment with an analysis of the effects of the proposed action on EFH. The assessment must identify the type(s) of essential fish habitat (i.e., Pacific salmon, groundfish, and/or coastal-pelagic species) that may be affected. If the Corps of Engineers determines the project will adversely affect EFH, consultation with NOAA Fisheries will be required.

Federal agencies should follow their own procedures for complying with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act. If PCN is required for the proposed activity, Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

10. Forage Fish

For projects in forage fish spawning habitat, in-water work must occur within designated forage fish work windows, or when forage fish are not spawning. If working outside of a designated work window, or if forage fish work windows are closed year round, work may occur if the work window restriction is released for a period of time after a forage fish spawning survey has been conducted by a biologist approved by the Washington State Department of Fish and Wildlife (WDFW). Forage fish species with designated in-water work windows include Pacific sand lance (*Ammodytes hexapterus*), Pacific herring (*Clupea pallasii*), and surf smelt (*Hypomesus pretiosus*).

This RGC does not apply to NWP 48, *Commercial Shellfish Aquaculture Activities*. Please see specific regional conditions for NWP 48.

11. Notification of Permit Requirements

The permittee must provide a copy of the nationwide permit authorization letter, conditions, and permit drawings to all contractors and any other parties performing the authorized work prior to the commencement of any work in waters of the U.S. The permittee must ensure all appropriate contractors and any other parties performing the authorized work at the project site have read and understand relevant NWP conditions as well as plans, approvals, and documents referenced in the NWP letter. A copy of these documents must be maintained onsite throughout the duration of construction.

12. Construction Boundaries

Permittees must clearly mark all construction area boundaries before beginning work on projects that involve grading or placement of fill. Boundary markers and/or construction fencing must be maintained and clearly visible for the duration of construction. Permittees should avoid and minimize removal of native vegetation (including submerged aquatic vegetation) to the maximum extent possible.

13. Temporary Impacts and Site Restoration

a. Temporary impacts to waters of the U.S. must not exceed six months unless the prospective permittee requests and receives a waiver by the district engineer. Temporary impacts to waters of the U.S. must be identified in the PCN.

a. No more than 1/2 acre of waters of the U.S. may be temporarily filled unless the prospective permittee requests and receives a waiver from the district engineer (temporary fills do not affect specified limits for loss of waters associated with specific nationwide permits).

b. Native soils removed from waters of the U.S. for project construction should be stockpiled and used for site restoration. Restoration of temporarily disturbed areas must include returning the area to pre-project ground surface contours. If native soil is not available from the project site for restoration, suitable clean soil of the same textural class may be used. Other soils may be used only if identified in the PCN.

c. The permittee must revegetate disturbed areas with native plant species sufficient in number, spacing, and diversity to restore affected functions. A maintenance and monitoring plan commensurate with the impacts, may be required. Revegetation must begin as soon as site conditions allow within the same growing season as the disturbance unless the schedule is approved by the Corps of Engineers. Native plants removed from waters of the U.S. for project construction should be stockpiled and used for revegetation when feasible. Temporary Erosion and Sediment Control measures must be removed as soon as the area has established vegetation sufficient to control erosion and sediment.

d. If the Corps determines the project will result in temporary impacts of submerged aquatic vegetation (SAV) that are more than minimal, a monitoring plan must be submitted. If recovery is not achieved by the end of the monitoring period, contingencies must be implemented, and additional monitoring will be required.

This RGC does not apply to NWP 48, *Commercial Shellfish Aquaculture Activities*. Please see specific regional conditions for NWP 48.

9.2 NWP 48 Regional Conditions.

1. The commercial harvest of clams by means of hydraulic escalator harvester equipment is not authorized by NWP.

10.0 Water Quality Certification (WQC) and Coastal Zone Management Act (CZMA) consistency determinations

In Washington State, two agencies and nine tribes currently have 401 WQC authority. The Washington State Department of Ecology (Ecology) is authorized to make 401 WQC decisions in Washington State for activities on public and private lands, and all Federal lands not managed by the EPA. Ecology is responsible for making all CZMA consistency determinations in Washington State.

The EPA has 401 WQC authority in Indian Country. Indian Country includes reservation lands, trust lands, and Dependent Indian Communities. Dependent Indian Communities refers to a limited category of Indian lands that are neither reservation or trust lands that satisfy the following two requirements: (1) they are set aside by the Federal government for the use as Indian land and, (2) they must be under federal superintendence. To date, the EPA has granted the following nine tribes 401 WQC authority over activities on their respective tribal lands:

- Confederated Tribes of the Chehalis Reservation
- Kalispel Tribe of Indians
- Lummi Nation
- Makah Tribe
- Port Gamble S'Klallam Tribe
- Puyallup Tribe of Indians
- Spokane Tribe of Indians

- Swinomish Indian Tribal Community
- Tulalip Tribes

All Section 401 WQCs have been received from Ecology, EPA, and the nine tribes with WQC authority on their lands. The Seattle District is coordinating with Ecology to ensure the CZMA consistency determinations are issued by April 6, 2017.

11.0 Measures to Ensure No More than Minimal Adverse Environmental Effects

The terms and conditions of the NWP, including the national conditions, pre-construction notification requirements and the regional conditions listed in Section 9.0 of this document, will ensure that this NWP authorizes only activities with no more than minimal individual and cumulative adverse environmental effects. High value waters will be protected by the restrictions in NWP general condition 22 – *Designated Critical Resource Waters*, the regional conditions discussed in this document, and applicable pre-construction notification requirements of the NWP. Through the pre-construction notification process, the district engineer will review activities on a case-by-case basis to ensure those activities result in no more than minimal adverse environmental effects, individually and cumulatively. Through the pre-construction notification review process, the district engineer can add special conditions to an NWP authorization to ensure the NWP activity results in no more than minimal adverse environmental effects, individually and cumulatively. During the pre-construction notification process, the district engineer may assert discretionary authority to modify, revoke or suspend a NWP authorization for any maintenance activity whenever he determines sufficient concerns for the environment or any other factor of the public interest so require. If the district engineer determines, after considering mitigation, that there will be more than minimal individual or cumulative adverse environmental effects, he or she will exercise discretionary authority and require an individual permit for the proposed activity. That determination will be based on consideration of the information provided in the PCN and other available information obtained through ESA Section 7, Tribal, NHPA Section 106, or other consultation(s).

The Seattle District, Regulatory Branch has local procedures for projects involving excavation and dredging activities. If the projects involve excavation or dredging in open water, the Seattle District Dredged Material Management Office (DMMO) is contacted to determine if there is a potential to encounter contaminated sediments. If there is the potential, the Seattle District will coordinate with the DMMO and may require testing to ensure the appropriate dredging and disposal methods are implemented.

The Seattle District has local procedures for projects in or affecting sites designated by the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund site). If the project is within Superfund site boundaries or has the potential to impact a Superfund site, the Seattle District has a standard operating procedure outlining requirements to coordinate with EPA. This process ensures the Superfund site and any past, present, or future clean up action is not adversely impacted by the project, as well as ensuring the project results in no more than minimal individual and cumulative adverse environmental effects due to contaminated sediment release and disturbance.

In the Seattle District, special conditions may be added to the NWP verification letter to minimize effects of individual projects.

Mitigation plans must be prepared in accordance with the Federal Compensatory Mitigation for Losses of Aquatic Resources Final Rule (33 CFR 332, April 10, 2008). In the Seattle District, project proponents can meet this requirement for wetland compensatory mitigation by preparing a mitigation plan in accordance with the Washington State Department of Ecology Publication #06-06-011a, Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance, and Part 2: Developing Mitigation Plans (Version 1), dated March 2006. The Seattle District worked in conjunction with the State and the Environmental Protection Agency to develop this document to ensure wetland impacts are fully mitigated.

Work authorized by any general permit may have special conditions added to restrict work to the authorized in-water work windows. If, at a later time, the district engineer, division engineer, or Chief of Engineers determines that the use of this NWP would result in more than minimal individual and cumulative adverse environmental effects, the modification, suspension, or revocation procedures at 33 CFR 330.4(e) or 33 CFR 330.5 will be used.

12.0 Final Determination

Based on the considerations discussed above, and in accordance with 33 CFR 330.4(e)(1) and 330.5(c), I have determined that this NWP, including its terms and conditions, as well as these regional conditions, will authorize only those activities that have no more than minimal individual and cumulative adverse environmental effects.

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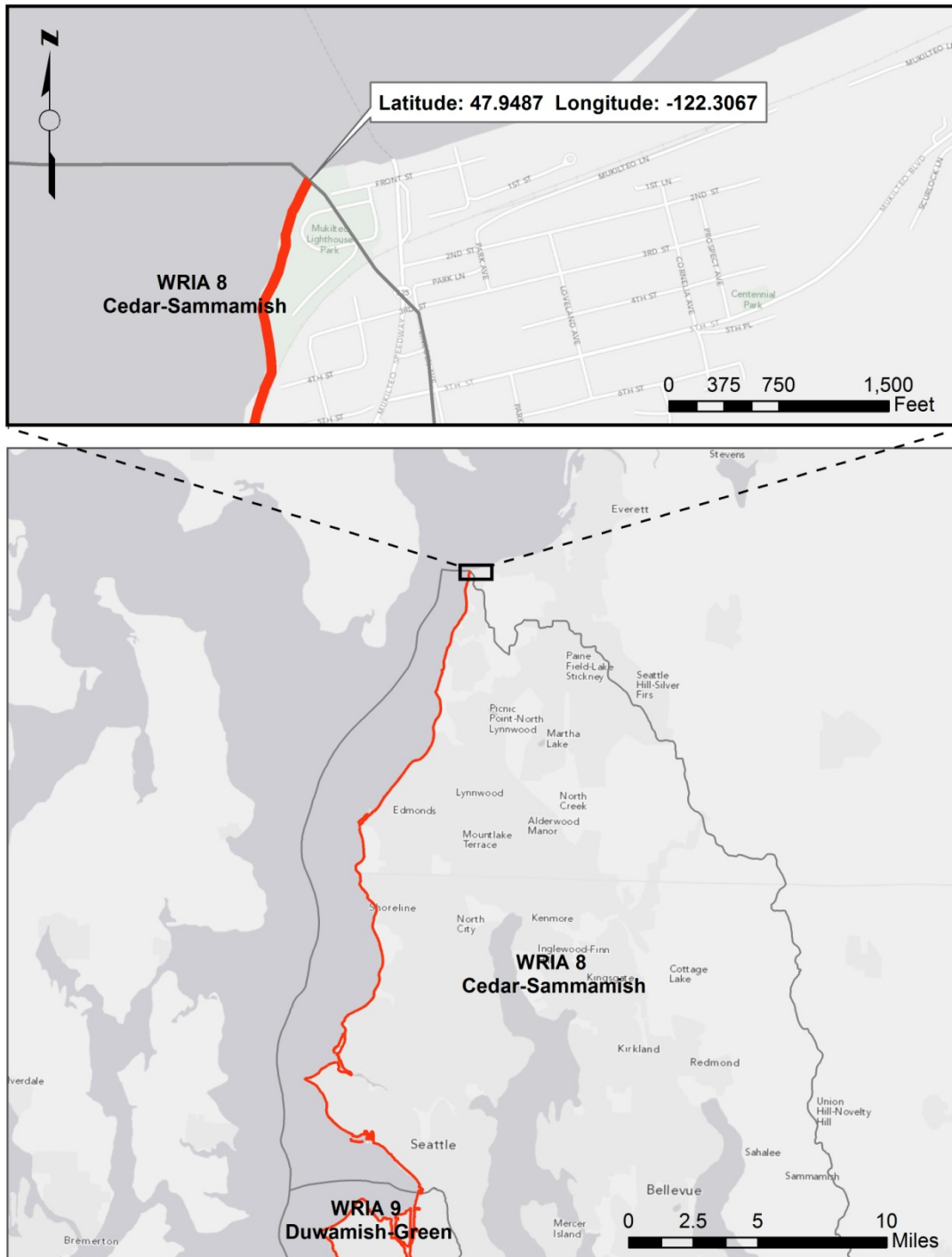
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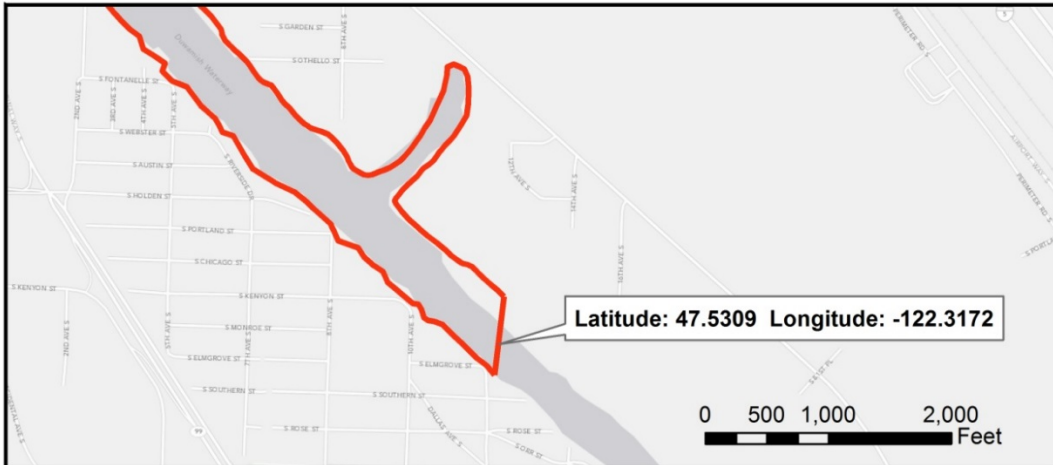
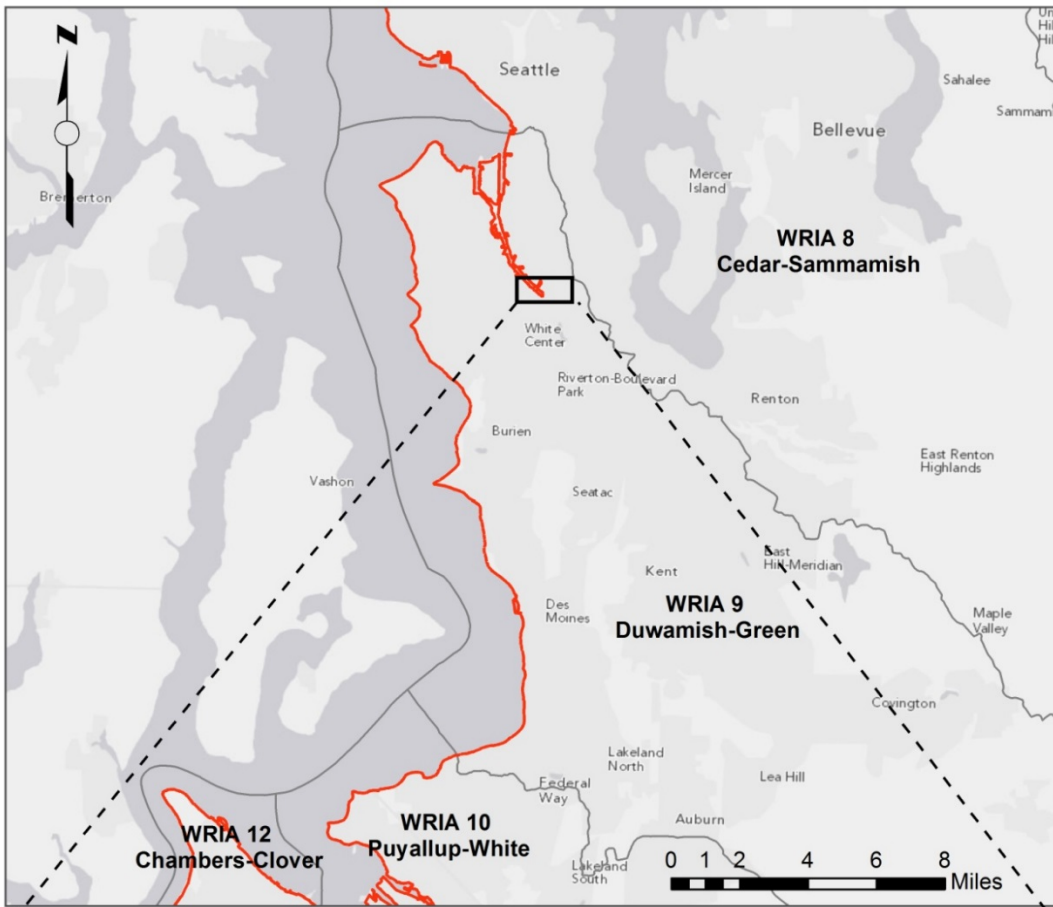
14.0 Figures

Figure 1: RGC 3 – WRIAs 8, 9, 10, 11, and 12

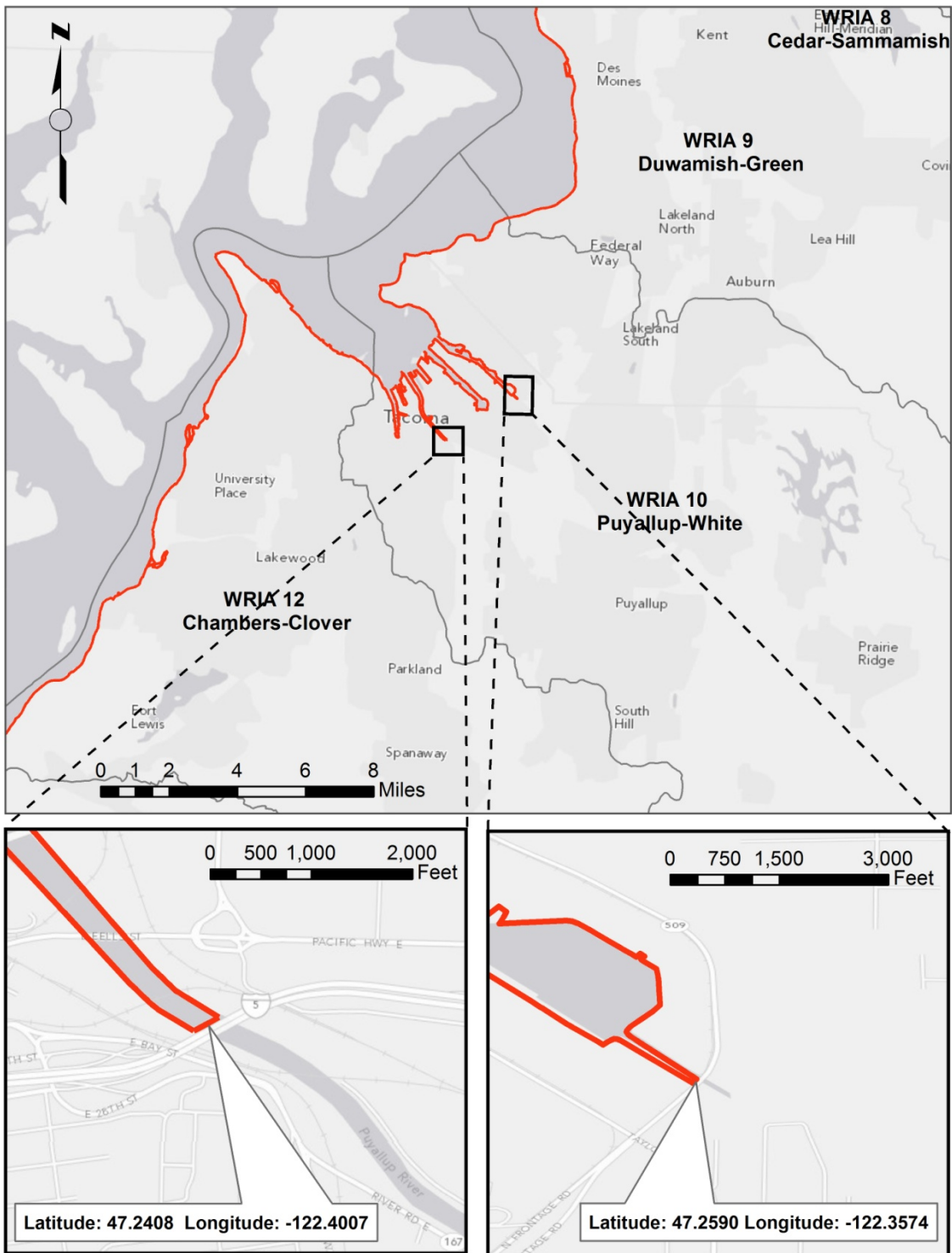
a. WRIA 8



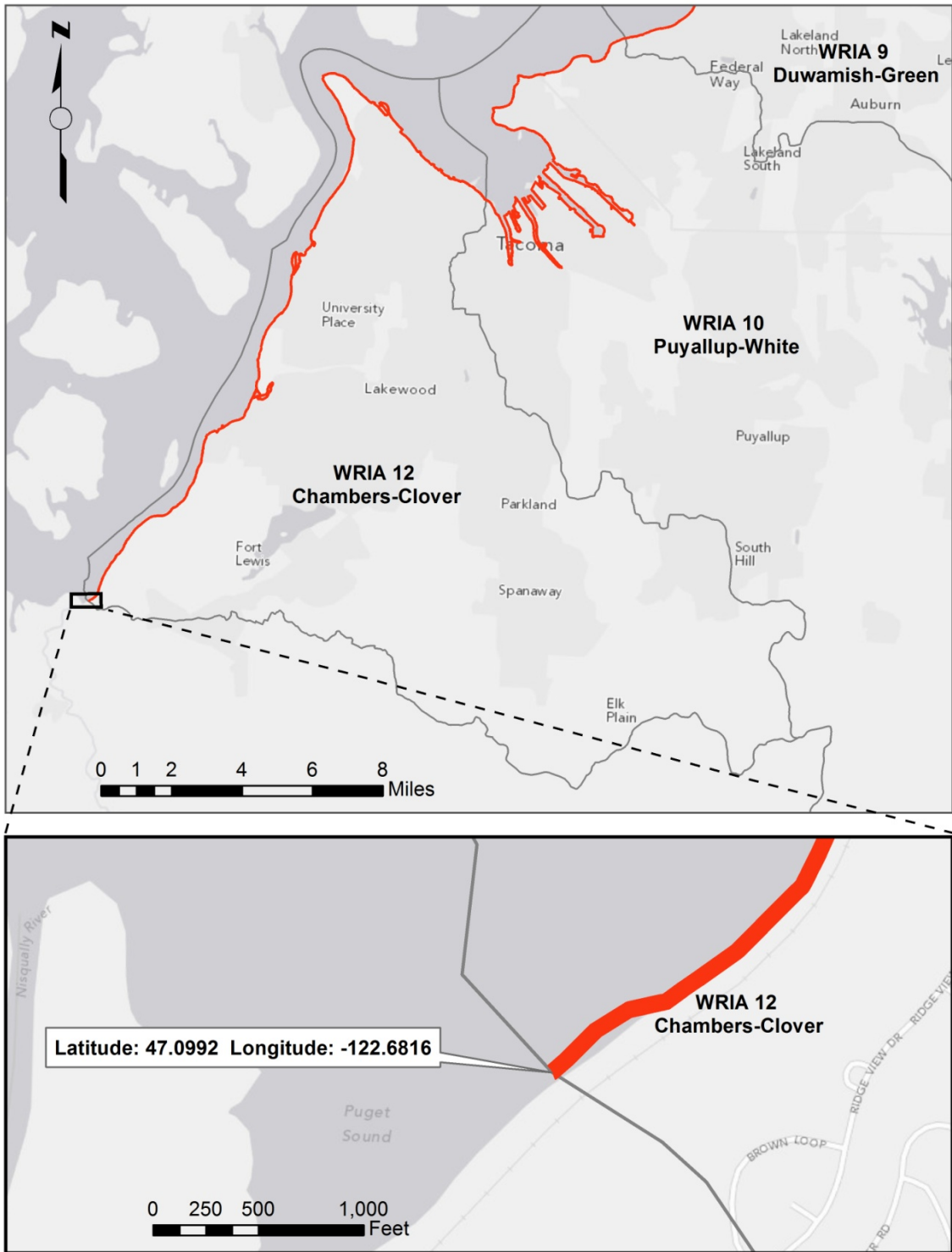
b. WRIA 9



c. WRIA 10



d. WRIA 12



e. WRIA 11

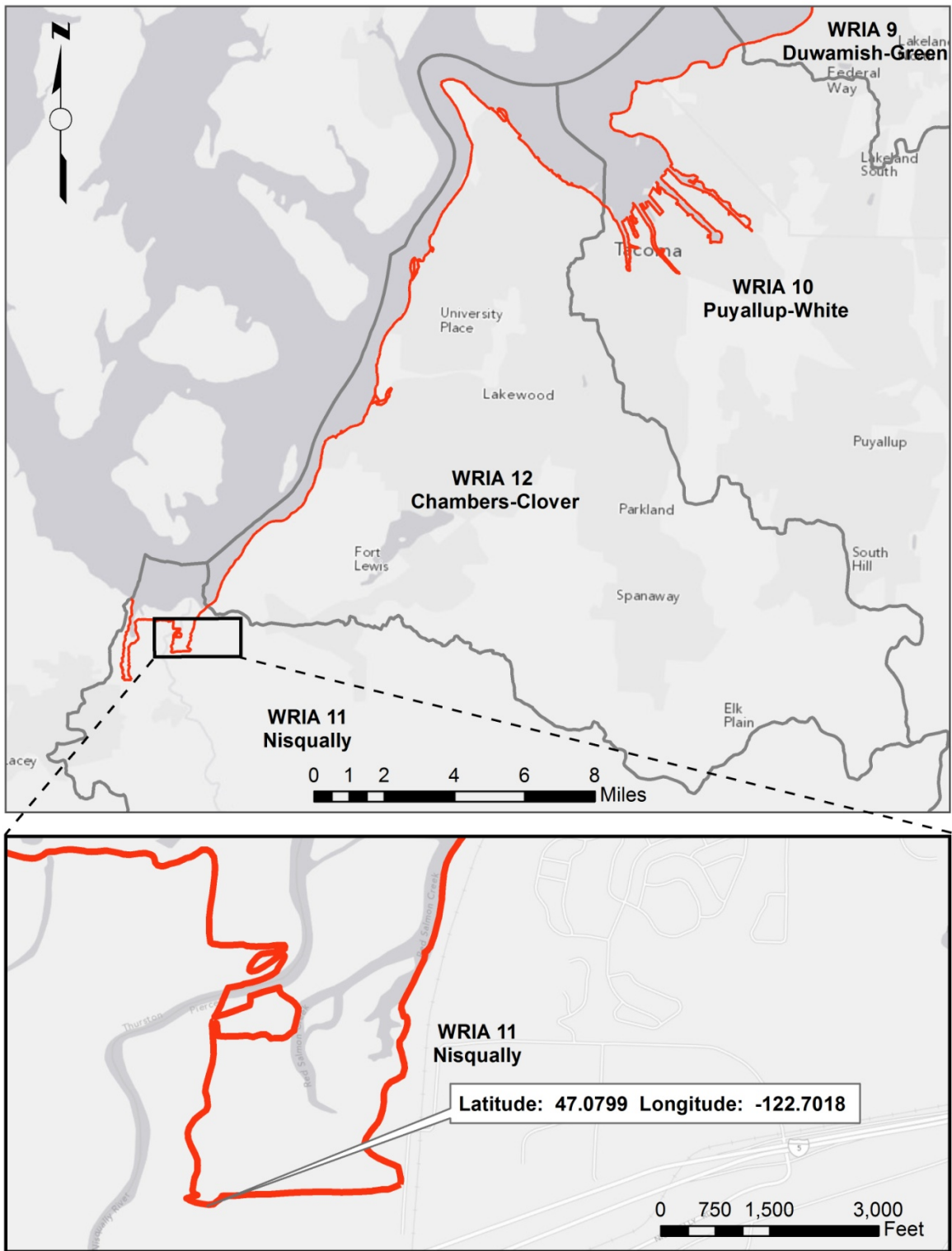


Figure 2. RGC 4 – Commencement Bay Study Area

