



November 2, 2017

VIA U.S. CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Lieutenant General Todd T. Semonite
Commanding General and Chief of Engineers
U.S. Army Corps of Engineers Headquarters
441 G Street NW
Washington, D.C. 20314-1000

Colonel Aaron L. Dorf
Commander and District Engineer
Portland District, U.S. Army Corps of Engineers
P.O. Box 2946
Portland, OR 97208-2946

Re: Notice of Intent to Sue for Violations of the Endangered Species Act Regarding Impacts of the Willamette River Basin Flood Control Project on Upper Willamette River Chinook Salmon, Upper Willamette River Steelhead, and Their Designated Critical Habitats.

Dear Sirs:

In accordance with the 60-day notice requirement of the Endangered Species Act (ESA), 16 U.S.C. § 1540(g), I am writing on behalf of my clients, Northwest Environmental Defense Center (NEDC), WildEarth Guardians, and Native Fish Society, to provide this notice of intent to sue for the Army Corps of Engineers' (the Corps) violations of the ESA relating to its ownership, operation, and maintenance of dams and other components of the Willamette River Basin Flood Control Project (Willamette Project) that adversely impact threatened salmon and steelhead within the Willamette River Basin of Oregon.

As detailed below, the Corps has violated and is violating the ESA by failing to reinitiate consultation over impacts of the Willamette Project on the listed fish and their critical habitat. The Corps is also violating the ESA because it has failed to comply with the reasonable and prudent alternative actions set forth in the National Marine Fisheries Service's (NMFS) biological opinion for the Project, thereby continuing to jeopardize the survival and recovery of Upper Willamette River Chinook salmon and steelhead and adversely modify their critical habitat, and because it is causing unlawful "take" of these species through the operations of the Project. The Corps must reinitiate and complete new consultations to ensure that it is satisfying

its duties to avoid jeopardy, adverse modification of critical habitat, and take of these important and highly imperiled species.

FACTUAL BACKGROUND

I. Upper Willamette River Chinook Salmon and Steelhead

The Willamette River provides habitat for numerous runs of salmon and steelhead, but only two are native to the Upper Willamette River above Willamette Falls: Upper Willamette River (UWR) Chinook salmon and UWR steelhead. These species of salmon and steelhead are each listed as a threatened species under the ESA and have designated critical habitat. 70 Fed. Reg. 37,160 (June 28, 2005) (UWR Chinook salmon), 71 Fed. Reg. 834 (Jan. 5, 2006) (UWR steelhead), 70 Fed. Reg. 52,630 (Sept. 2, 2005) (UWR Chinook and steelhead critical habitat). They consist of multiple local populations that inhabit different portions of the Willamette Basin.

There are seven populations of UWR Chinook, which occur in the Clackamas, Molalla, North Fork Santiam, South Fork Santiam, Calapooia, McKenzie, and Middle Fork Willamette Rivers. The Middle Fork population is considered a core population and critical to the long-term persistence of UWR Chinook. These seven river basins also contain designated critical habitat for UWR Chinook salmon. UWR Chinook are one of the most genetically distinct groups of Chinook salmon in the Columbia River Basin, and adapted an early migration timing compared to other salmon because they could get over Willamette Falls only during high flows in winter and spring. They begin appearing in the lower Willamette River in February, with most of the run ascending the falls in April and May. Spawning occurs in September and early October and incubation of eggs in the gravel lasts until the following spring. Historically, the Upper Willamette supported hundreds of thousands of Chinook salmon, but populations of UWR Chinook have declined dramatically. About 90% of UWR Chinook are hatchery fish, with less than 10,000 wild fish returning each year. Five of the seven populations are at very high risk of extinction. The McKenzie and Clackamas populations were considered stronghold populations because they were the only ones not at very high risk of extinction, but the McKenzie population has experienced a disturbing decline in recent years. The risk of extinction for UWR Chinook as a whole is high.

UWR steelhead consists of four populations: Molalla, Calapooia, North Santiam, and South Santiam. Designated critical habitat for UWR steelhead occurs in each of the four river basins. These steelhead are winter run steelhead, entering the Willamette River in January and February but not migrating to their spawning areas until late March or April. They spawn between April and early June, and eggs incubate in gravels through the summer. There are no hatchery fish in the UWR winter steelhead run. Instead, out-of-basin summer steelhead are released into the Upper Willamette for recreational fishing. Extinction risk was considered moderate for each of the four populations as well as for UWR steelhead as a whole, but numbers have continued to decline and fish counts in 2017 were extremely low.

II. Willamette River Basin Flood Control Project

The Willamette Project consists of thirteen dams, 42 miles of revetments along the banks of the Willamette and its tributaries, and five hatcheries that produce salmon and steelhead to mitigate for the impacts of the dams. The principal purpose of the dams is flood control, but they also are used for power, storage for irrigation, recreation, and fish and wildlife.

The dams that primarily impact UWR salmon and steelhead and their critical habitat occur in the Middle Fork Willamette sub-basin (Dexter, Lookout Point, Fall Creek, Hills Creek dams), McKenzie sub-basin (Cougar, Blue River dams), North Santiam sub-basin (Big Cliff, Detroit dams), and South Santiam sub-basin (Foster, Green Peter dams). In the Middle Fork Willamette, dams cut off more than 90% of the historic Chinook spawning habitat, while in the North and South Santiam sub-basins, dams cut off about 70% of the Chinook spawning habitat. More spawning habitat is available in the McKenzie sub-basin because dams block only about 16% of historic habitat. For UWR steelhead, a greater amount of spawning habitat exists below the dams compared to Chinook, but the dams still block access to 1/3 of historic steelhead spawning habitat.

In addition to blocking access to habitat, the dams and reservoirs behind them impact salmon and steelhead in various ways. They alter the natural water flows of the river, storing it in reservoirs and releasing it in quantities that are sometimes lower and sometimes higher than natural flows. This creates conditions downstream of the dams that are not appropriate for high quality fish habitat and can adversely affect spawning or incubation. These flow alterations also cause downstream water quality problems, particularly water temperatures and dissolved gas levels that are outside the optimum range for salmon and steelhead. And by blocking peak flows, sediment, and large woody debris, the dams prevent attributes necessary for creating good fish habitat, thereby reducing the quality of downstream spawning and rearing habitat for Chinook and steelhead. Reservoirs behind the dams are large bodies of stagnant water that prove difficult for juvenile salmon and steelhead to navigate when they migrate downriver because there is no flow to direct them. The reservoirs also are habitat for warm water fisheries that can prey upon the juveniles. The fisheries and large bodies of calm water attract recreational boaters and fishermen to many of these reservoirs. Keeping reservoirs at high levels during the summer to appease recreationists can cause low flows below dams that create poor water quality and poor fish habitat.

Because of the impacts of these dams on salmon and steelhead, the Corps funds five hatcheries run by Oregon Department of Fish and Wildlife (ODFW) that provide spring Chinook to the North Santiam, South Santiam, McKenzie, and Middle Fork Willamette rivers as well as summer steelhead to the North and South Santiam rivers. The use of hatchery fish is problematic for maintaining wild fish genes because hatchery fish can occupy limited spawning grounds and preclude wild fish from spawning, compete for resources with wild fish, interbreed with wild fish, and if wild fish are captured and incorporated into hatchery broodstock, they cannot spawn naturally. These effects are even more problematic for UWR steelhead because the hatchery fish are out-of-basin summer steelhead so are not at all related to the UWR winter steelhead. The Corps also funds several trap and haul facilities, where adult fish are collected below the dams and released above the dams to try and stimulate production of fish in historic spawning habitat.

Even with outplanting of adult fish above the dams, however, high mortality of adults prior to spawning and even higher mortality of juveniles trying to migrate downstream past the dams has prevented much successful production above the dams. Therefore, heavy reliance on hatchery fish continues.

The Corps has built and maintains about 42 miles of revetments along the banks of the Willamette River and its tributaries, which prevent bank erosion and movement of the river channel. However, they also reduce off-channel habitat, side channels, and in-river eddies and slow-water pockets, which eliminates rearing habitat for juveniles and migratory resting habitat.

III. ESA Consultation over Willamette Project

The Corps, along with Bureau of Reclamation (which manages the irrigation contracts) and Bonneville Power Administration (which markets power generated at the dams), consulted with the National Marine Fisheries Service (NMFS) over effects of the configuration, operations, and maintenance of the Willamette Project on listed salmon and steelhead species that use the Willamette River and their designated critical habitat. These action agencies submitted a biological assessment to NMFS in 2000 and a supplemental biological assessment in 2007. NMFS completed consultation by issuing a biological opinion (BiOp) in 2008. The proposed action in the consultation was the continued operation and maintenance of the Willamette Project, with specific measures addressing different components of the Project that included:

- Minimum and maximum flow objectives for the mainstem Willamette River and key tributaries;
- Limiting the amount of water that can be removed from the system for irrigation;
- Measures to reduce impacts to wild fish from hatchery fish and improvements to the adult outplant program and facilities;
- On-site and off-site habitat restoration actions;
- Structural modifications to improve adult fish collection facilities and studies to assess options to improve downstream fish passage;
- Measures to address water temperature and dissolved gas problems;
- Research, monitoring, and evaluation to determine further appropriate mitigation actions;
- Coordinating with NMFS and Oregon Department of Fish and Wildlife on management of the dams and hatcheries.

The proposed action gave the Corps discretion to change many of these measures and noted that some could only be implemented if the Corps obtained funding for them. The BiOp was intended to last until 2023, but can be extended upon request by the action agencies and approval of NMFS.

NMFS assessed the effects of the proposed action and determined they would continue to cause significant adverse effects to UWR Chinook salmon and steelhead and their critical habitat, and thus the proposed action was likely to jeopardize both species and adversely modify their critical habitat. It discussed effects to each population and found that the proposed action would adversely affect most populations of UWR Chinook and two of four UWR steelhead

populations, noting that many of the measures aimed at reducing impacts were not certain to occur or had no deadline for implementation.

For UWR Chinook, the BiOp explained that limited access to historical habitat and low juvenile survival during downstream migration past dams were still significant problems for the Middle Fork, North Santiam, South Santiam, and McKenzie populations because the Corps proposed no certain actions for improving downstream passage. It also noted the need to rebuild adult trap and haul facilities for the adult outplant program in the Middle Fork, South Santiam, and North Santiam sub-basins but the proposed action imposed no deadlines for those improvements. The BiOp stated specifically that production in historic habitat above dams is critically important for the Middle Fork population. Other threats that would continue to impact these populations from the proposed action were water temperatures and dissolved gas levels below dams and impairment of habitat quality below dams. Again, the proposed action contained measures and studies to address some of these problems, but there were few specific actions that were certain to occur. Threats from hatchery fish were still a concern for the Middle Fork, McKenzie, North Santiam and South Santiam populations, and failure to meet flow objectives were a substantial threat to the North and South Santiam populations. The BiOp concluded that the very small existing populations of UWR Chinook salmon would continue to decline and be at even higher risk of extinction under the proposed action and critical habitat would be further degraded. Concrete actions are needed to improve fish passage past dams, water temperatures, dissolved gas levels, flows below dams, hatchery interference, and degraded rearing and migration habitat. By lacking concrete, certain to occur mitigation measures, the operation of the Project under the proposed action was likely to jeopardize UWR Chinook salmon and adversely modify its critical habitat.

Similarly, the BiOp stated that the proposed action would continue to have significant adverse effects on the North Santiam and South Santiam populations of UWR steelhead by restricting access to historic spawning habitat above the dams, altering water temperatures and flows below the dams, degrading rearing and migration habitat below the dams, and interfering with natural genetics of winter steelhead by releasing hatchery summer steelhead. Again, the BiOp explained that measures proposed for improving fish passage, water temperatures, dissolved gas levels, habitat, and hatchery practices were not specific actions certain to occur within a definite timeframe. Thus, the proposed action would not address the effects of the Willamette Project such that UWR steelhead are likely to survive with an adequate potential for recovery. Instead, it is likely to jeopardize the continued existence of UWR steelhead and adversely modify its critical habitat.

The BiOp then set forth a “Reasonable and Prudent Alternative” action (RPA) that would allow operation of the Willamette Project to continue in a way that would avoid jeopardy to the species and adverse modification of critical habitat. The BiOp stated that the RPA adds on-the-ground measures that the action agencies will carry out to address the effects of the Willamette Project, and that avoiding jeopardy and adverse modification of critical habitat is based on the benefits attributed to successful completion of these measures. The RPA requires deadlines for various studies, specific improvements at dams and hatcheries, and habitat restoration, some of which must occur in the short-term and the rest by the end of the BiOp. Short-term measures done in the first seven years would improve population viability and reduce short-term risk of

extinction by improving flows and water temperatures, updating hatchery operations and facilities, upgrading fish collection facilities and outplanting procedures, and completing habitat projects. Longer-term measures to be completed in the second half of the BiOp term included three significant downstream passage facilities at three dams and temperature control at another dam, which would contribute significantly to both species' survival and potential for recovery. Although NMFS stated that some of the RPA measures might need Congressional authorization or funding, it relied on implementation of these measures for its no-jeopardy conclusion.

The RPA added mitigation measures for a number of categories, including flow management, irrigation contracts, fish passage, water quality, hatcheries, habitat, and research, monitoring, and evaluation. Many of these measures had deadlines for completion. The following are some of the measures imposed by the RPA:

- Flow management measures included: completing studies and modifying flow and ramping rate objectives by January 2011 so that flows are sufficient for fish habitat needs downstream of dams for all life stages of both species; modifying Project operations by January 2012 to best meet tributary and mainstem flow objectives; modifying flows to improve stream morphology for fish habitat below dams, starting with Dexter Dam in 2009, and monitoring effectiveness of flow modifications at achieving ecological objectives; operating the system to make fish flows higher priority than recreation.
- Irrigation contract measures required: installation of fish screens at all existing diversions by April 2010; installation of fish screens, lockable headgates, and flow measuring devices at diversions for all new or renewed contracts; curtailment of water deliveries in deficit water years and in other years, release of additional flow to offset the impacts of the diversions for habitat downstream; reinitiation of consultation before issuing new water contracts that would make the total quantity of irrigation use from the Project more than 95,000 acre-feet.
- Water quality measures called for: short-term changes to operations to improve water temperatures and dissolved gas levels below dams, with Detroit and Big Cliff dams to be assessed and changes implemented in 2009 and changes at other dams in early 2010; evaluating and implementing more complex operational changes by May 2011; making structural or major operational changes to at least one dam during the BiOp, with Detroit Dam first priority for significant temperature control changes to be analyzed by 2011 and implemented by March 2019; developing and implementing protocols for emergency or unusual events, with actions that do not need further authorization or permits to occur by March 2010 and other actions to occur by May 2011 if permits are obtained.
- Hatchery measures included: implementing Hatchery and Genetic Management Plans (HGMPs); building and operating a new adult fish sorting facility at Leaburg Dam by 2014 or reducing hatchery straying to <10% in the McKenzie River; taking actions to reduce impacts of the summer steelhead hatchery and Chinook hatcheries.
- Habitat measures required completing at least two high priority off-site restoration projects by 2010 and more projects each year through the end of the BiOp; completing a revetment assessment by the end of 2010; completing habitat

surveys in all major tributaries by June 2008 and using them to inform restoration priorities.

- Research, monitoring, and evaluation measures mandated numerous studies on different issues related to flow and ramping objectives, fish passage, water quality, hatcheries, and habitat, and modification of operations and facilities based on the results of the studies.

Finally, with respect to fish passage, the BiOp stated that lack of passage is one of the single most significant adverse effects to the species, and specific passage measures are necessary to address the effects of the Project. The RPA included specific measures to improve passage that must be completed and operational by set deadlines, such as: rebuild adult fish collection facilities at Minto Pond by December 2012, at Foster Dam by December 2013, at Dexter Dam by December 2014, and at Fall Creek Dam by December 2015; complete construction of new outplant adult fish release sites by June 2012; evaluate interim changes to dam operations to improve downstream migration by April 2011, and begin to implement measures by May 2011; construct prototype juvenile collection facility above Lookout Point or Foster reservoir by September 2014, evaluate effectiveness of the facility in 2015 and 2016 and issue final report by December 2016; conduct studies to assess juvenile passage through reservoirs and dams, with studies to begin in 2008 and be completed by 2015; and implement feasible structural or major operational changes to improve downstream passage, with specific dates of completion for Cougar Dam, Lookout Point Dam, and Detroit Dam. Studies would begin for Cougar in 2010, for Lookout Point in 2012, and for Detroit in 2015. Feasibility determinations would occur in 2010 for Cougar, in 2014 for Lookout Point, and in 2017 for Detroit. And construction would be completed for Cougar in 2014, for Lookout Point in 2021, and for Detroit in 2023. The RPA stated that this was a high priority measure and would *ensure that passage would happen at three dams in the next fifteen years* and that plans for other locations would begin.

To help evaluate actions in the RPA for downstream passage, fish collection, temperature control, and other significant structural or operational changes, the Corps would conduct a multi-year study with timelines for key decision points about feasibility of RPA actions. Phase I of the study was to be completed by October 2009 and Phase II by September 2012. The RPA noted that if the study determined key actions were not feasible, the Corps must come up with other alternatives or reinitiate consultation.

The BiOp concluded that the RPA will benefit UWR Chinook and steelhead because it contains measures that will improve fish passage for adults and juveniles, and improve water temperatures and flows downstream of dams. The BiOp again noted that the Proposed Action mainly provided for further studies, while the RPA included specific measures to improve access to higher quality habitat above dams as well as downstream habitat conditions. By addressing key limiting factors for each species, the RPA was expected to significantly improve the status of the populations. The BiOp noted the short-term deadlines and longer-term deadlines for water temperature control actions, rebuilding fish collection facilities, and downstream passage improvements, and that these measures would allow Chinook and steelhead to increase in numbers, productivity, distribution, and genetic diversity during the fifteen years of the BiOp and beyond. In sum, implementation of these RPA actions under certain deadlines and the assumed

benefits from them were the basis of NMFS's conclusion that the RPA would not jeopardize the species or adversely modify their critical habitat.

Finally, the BiOp included an Incidental Take Statement that estimated the amount or extent of incidental take that was authorized for operation of the Project. Incidental take was estimated for the impacts from the adult collection and outplant program, downstream juvenile migration, periodic failure to meet flow and ramping rate objectives, detrimental water temperatures and dissolved gas levels, poor habitat conditions, and hatcheries. Reasonable and Prudent Measures and Terms and Conditions intended to minimize adverse effects of the Project operations consisted of best management practices for construction activities, maintenance of revetments, and habitat restoration activities; minimizing harm from research and monitoring; minimizing harm from hatcheries; and completing all monitoring and reporting requirements.

IV. Information Subsequent to the 2008 Biological Opinion

Since the 2008 BiOp, many of the key mitigation actions in the RPA have not occurred, or were implemented well past their deadlines, and populations of UWR Chinook and steelhead have remained perilously low. As described further below, major operational or structural changes to the Project to address fish passage, water temperature, and dissolved gas have not occurred; maintenance projects, power outages, and other operational failures have inflicted harm to salmon and steelhead on a regular basis; operation of the dams has not provided flows sufficient to support downstream migration, spawning, incubation, and rearing; approved HGMPs have not been implemented; changes to flow and temperature objectives have occurred to maintain reservoir levels for recreational purposes without adequately showing those changes will not be detrimental to fish below the dams; and required studies have not been conducted. Projects to improve fish passage in the Middle Fork Willamette are particularly behind schedule. Thus, many of the assumed benefits to the listed fish in the RPA are not being achieved.

Rather than increasing in abundance, productivity, spatial distribution, and genetic diversity, these species have remained well below viable populations. A 2015 status review by NMFS noted a downward trend for wild UWR Chinook during the previous five years. Five of the seven populations remain well below recovery goals, and the two populations that were not at high risk of extinction—McKenzie and Clackamas—both declined in abundance. Absence of effective passage around dams in the four key tributaries was still a significant limiting factor, and given the prospect of long-term climate change, the inability of these populations to access historic headwater habitat may put UWR Chinook at even greater risk of extinction in the near future. The 2015 status review stated that UWR steelhead also declined in the previous five years. Both the North Santiam and South Santiam populations are below recovery goals, and the South Santiam population averaged just 304 fish from 2011-2015. In 2017, ODFW fish counts for Willamette Falls show that UWR steelhead numbers plummeted, with just over 800 fish going past the falls compared to the normal average of 5,600.

Recent studies show continuing high levels of mortality for adults and juveniles in the Willamette River system. Studies published in 2016 and 2017¹ show high rates of mortality for

¹ Caudill and Keefer, "Pacific Salmon Prespawn Mortality: Patterns, Methods, and Study Design Considerations," *Fisheries* (Dec. 6, 2016); Keefer *et al.*, "Condition-Dependent En Route

Chinook salmon adults both during migration in the mainstem Willamette and after they reach tributaries but before they spawn. Mainstem mortality rates were higher than for other spring Chinook populations, with 10-21% of adults dying before they reach tributaries. Pre-spawn mortality in tributaries remains high and is largely caused by high water temperatures and poor fish conditions. High juvenile mortality continues to be a problem, particularly at Foster Dam, which has turbines that cause the second lowest survival rate for downstream passage of all Kaplan turbines at dams in the Northwest. Sea lion predation below Willamette Falls has also significantly increased since the BiOp, with almost forty sea lions at the falls in 2017 taking 20-25% of winter steelhead that pooled below the falls. Average UWR winter steelhead run sizes have declined 28-55% since 2009 for four populations due at least in part to sea lion predation. Finally, extended drought conditions and high summer temperatures caused abnormally high water temperatures in the Willamette River in 2015, which led to a severe fish-kill for Chinook. Increased knowledge about climate change indicates that similar situations will occur more frequently in the future, leading to greater impacts on these listed fish.

This recent information shows that the status of UWR Chinook salmon and steelhead has not improved, and in fact many populations have declined, during the first nine years of the BiOp, while the Corps has delayed or failed to implement many of the RPA measures.

LEGAL BACKGROUND

Section 7 of the ESA imposes a substantive obligation on federal agencies to “insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of” habitat that has been designated as critical for such species. *See* 16 U.S.C. § 1536(a)(2); *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 524 F.3d 917, 924 (9th Cir. 2008). Jeopardy results where an action reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species. 50 C.F.R. § 402.02. Destruction or adverse modification of critical habitat occurs where there is a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. *Id.* The ESA also prohibits “take” of a species—take is defined to include harassing, harming, wounding, killing, trapping, capturing or collecting a listed species, and harm includes significant habitat modification or degradation. 16 U.S.C. §§ 1538(a)(1), 1532(19); 50 C.F.R. § 17.3.

To fulfill the substantive mandates of section 7 of the ESA, federal agencies must consult with an expert agency—FWS or NMFS, depending on the species at issue. The ESA’s implementing regulations allow an agency to enter into informal consultation with the relevant expert agency to determine whether its actions “may affect” threatened or endangered species or their critical habitats. *See* 50 C.F.R. § 402.13. Usually this is done by completing a biological assessment and submitting it for the expert agency’s concurrence. *Id.* § 402.12(j), (k). If the agency determines that the action is “not likely to adversely affect” listed species and their habitats, and the expert agency concurs, no further action is necessary. *Id.* §§ 402.13, 402.14(b).

Migration Mortality of Adult Chinook Salmon in the Willamette River Main Stem,” *North American Journal of Fisheries Management* (March 3, 2017).

If, through the informal consultation process or otherwise, the agency determines that its action “is likely to adversely affect” listed species or their critical habitats, formal consultation is required that results in a biological opinion. *Id.* § 402.14(a). In carrying out the consultation process, “each agency shall use the best scientific . . . data available.” 16 U.S.C. § 1536(a)(2).

If the expert agency determines that the proposed action is likely to jeopardize a species or adversely modify its critical habitat, the biological opinion may contain a reasonable and prudent alternative action that allows the project to go forward in a way that will not cause jeopardy or adverse modification. 50 C.F.R. § 402.14(g), (h). If the expert agency determines that the proposed action will “take” a species, the biological opinion must include an incidental take statement that: (1) specifies the extent and impact of that take; (2) specifies reasonable and prudent measures necessary or appropriate to minimize such impact; (3) sets forth terms and conditions to implement those measures; and (4) contains a monitoring and reporting requirement to report impacts to the expert agencies. 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(i).

After consultation is completed, federal agencies have a continuing duty under section 7 of the ESA to insure that their actions will not jeopardize the continued existence of listed species or adversely modify designated critical habitat. An agency must re-initiate consultation whenever the amount or extent of taking specified in the incidental take statement is exceeded; if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; if the action is subsequently modified in a manner that causes an effect to the species or critical habitat in a way not considered in the consultation; or if new critical habitat is designated that may be affected by the proposed action. 50 C.F.R. § 402.16. The duty to reinitiate consultation lies with the action agency and the consulting agency. *Id.*; *Envtl. Protection Info. Ctr. v. Simpson Timber Co.*, 255 F.3d 1073, 1076 (9th Cir. 2001).

In addition, once a consultation under 16 U.S.C. § 1536(a)(2) has been initiated, the action agency must not make any irreversible or irretrievable commitment of resources that would foreclose implementation of any reasonable and prudent alternative measures. 16 U.S.C. § 1536(d). It also must ensure that its actions do not jeopardize or take a species or adversely modify its critical habitat pending completion of consultation. *Wash. Toxics Coalition v. EPA*, 413 F.3d 1024, 1034-35 (9th Cir. 2005); *Defenders of Wildlife v. Martin*, 454 F. Supp. 2d 1085, 1095-98 (E.D. Wash. 2006); *Native Ecosystems Council v. Krueger*, 946 F. Supp. 2d 1060, 1076 (D. Mont. 2013).

VIOLATIONS OF LAW

I. The Corps Must Reinitiate Consultation With NMFS Over the Effects of the Willamette Project on UWR Chinook Salmon and Steelhead.

The Corps must reinitiate consultation over the Willamette Project because the agency’s multiple failures to implement key aspects of the 2008 BiOp and RPA, along with other new information and changed circumstances since 2008, show that effects to the species from the Project are greater than what was considered in the 2008 BiOp. 50 C.F.R. § 402.16 (b), (c).

A. The Operation of the Willamette Project Continues to Adversely Affect UWR Salmon and Steelhead and their Critical Habitat to a Greater Extent Than Considered by the Biological Opinion.

The Corps has failed to fulfill, or delayed by years, numerous RPA measures from the 2008 BiOp, as detailed below. Timely fulfillment of those measures would have resulted in benefits to the listed fish and their critical habitat, upon which NMFS relied to conclude that the Project would not jeopardize the species or adversely modify their critical habitat. By failing to fulfill these mitigation measures on time, the Project is causing adverse effects to the fish and their habitat that are greater than what NMFS considered when assessing the effects of the RPA in the 2008 BiOp. Where conservation or mitigation measures relied upon in a biological opinion to protect a species are not met, reinitiation of consultation must occur because the action has affected a listed species in a manner and to an extent not previously considered. *Forest Guardians v. Johanns*, 450 F.3d 455, 465-66 (9th Cir. 2006); *Sierra Club v. Marsh*, 816 F.2d 1376, 1379-80 (9th Cir. 1987).

The Corps has failed to fulfill its duties under the RPA in many ways, including the following:

1. Short-term and long-term fish passage

The Corps has not, and will not, meet the firm deadlines within the RPA to construct and operate structural downstream fish passage at Cougar, Lookout Point, and Detroit dams. The Corps has already failed to complete construction of structural downstream fish passage facilities at Cougar Dam, which RPA 4.12.1 required by December 2014, and will not complete construction until at least 2023. This delay will impede downstream juvenile fish passage on the McKenzie River for eight years longer than the BiOp considered when reaching its no-jeopardy conclusion. The Corps has admitted that it also will not meet the deadlines within RPA 4.12.2 and 4.12.3 to construct and operate downstream fish passage facilities at Lookout Point Dam and Detroit Dam by 2022 and 2024 respectively, missing these deadlines by at least several years. In fact, the Corps has not decided whether it will ever comply with the requirements of RPA 4.12.2 by providing downstream fish passage at Lookout Point Dam.

NMFS included these long-term fish passage requirements in the RPA to ensure the Corps addressed the most significant factor limiting the viability of these species by specified dates and within the term of the BiOp.

The Corps has also failed to provide interim downstream fish passage through all Willamette Project reservoirs until permanent downstream fish passage facilities are available as required by RPA 4.8. The 2017 Willamette Fish Operations Plan (“WFOP”) identified no special or interim operations the Corps planned to implement to provide downstream passage at Big Cliff, Green Peter, Blue River, Cougar, Hills Creek, Lookout Point, and Dexter Dams. The BiOp assumed that the Corps would implement interim passage measures to increase the survival of juvenile Chinook salmon and steelhead.

With regard to necessary improvements for upstream fish passage, the Corps failed to upgrade the Dexter Ponds Fish Facility by December 2014 and operate the new facility by March 2015 as required by RPA 4.6.3, and has no plans to complete these upgrades within the term of the BiOp. The Corps also missed the deadline to upgrade and operate the Fall Creek Dam Trap by December 2015 and March 2016 as required by RPA 4.6.4, and will miss these deadlines by at least two years. NMFS required these upgrades to minimize stress and injury to adult fish at collection facilities and thereby improve upstream passage to historical habitat above the dams.

The Corps' failure to fulfill short and long-term passage requirements stems, in part, from related delays and failures with planning and research required by the RPA. RPA 4.13 required the Corps to conduct a multi-year, multi-level evaluation of beneficial actions, including fish passage improvements, as part of a "Configuration Operation Plan" (COP). A feasibility study conducted as part of the COP process was to be completed by September 2012 and include specific recommendations on improvements and evaluations of high priority actions to benefit fish. Not only was the study three years late, it failed to provide all the required recommendations. Most notably, the COP did not recommend actions to provide structural fish passage for the Middle Fork Willamette River and failed to identify any alternatives that would improve fish passage within the same timeline, which should have triggered reinitiation of consultation under RPA 4.13. Since completing the feasibility study, the Corps has stopped planning for passage at other high priority dams, such as Green Peter, even though RPA 4.12 requires the agency to continue planning to ensure the agency is "ready to construct and operate the next facility soon after completion of the term of this Opinion."

Additionally, the Corps did not comply with RPA 4.9's requirement to build and evaluate a prototype *head-of-reservoir* juvenile collection facility above either Lookout Point or Foster dam to improve downstream juvenile migration. Instead, the agency built an *at-dam* collection facility for Cougar Dam, which failed to fulfill the RPA's intention to demonstrate whether head-of-reservoir collection was feasible. The Corps also did not complete all field investigations, study reports, and NEPA analyses to assess downstream juvenile fish passage through dams and reservoirs that were called for within RPA 4.10 and 4.11 by December 31, 2015.

Overall, the Corps' failure to comply with these and other various planning and research requirements related to fish passage is inconsistent with the RPA; in turn, this failure resulted in delays and non-compliance with substantive requirements to improve both upstream and downstream fish passage in the short-term and long-term. As a result, the benefits that the BiOp assumed the RPA would have on the survival and recovery of threatened Chinook salmon and steelhead have not materialized and the harm to these species caused by the lack of fish passage has been, and will continue to be, greater than the BiOp considered.

2. Water quality

Since issuance of the BiOp, high total dissolved gas (TDG) levels and unnatural stream temperatures caused by the Willamette Project have continued to adversely impact threatened Chinook salmon and steelhead because the Corps has not taken steps required by RPA 5 to address these problems in the short or long-term.

RPA 5.1 called for interim operational measures to provide temperature control and reduced TDG exceedences below Project dams, identifying Lookout Point and Hills Creek dams as priorities for such interim measures. But the Corps recently admitted in the 2017 WFOP that it does not implement special or interim operations to address both of these problems at Green Peter, Foster, Dexter, Big Cliff, Hills Creek, and Lookout Point dams.

RPA 5.2 requires the Corps to complete structural or major operational changes to improve water quality in the long-term for at least one dam by December 2018, and identified Detroit Dam as a priority for temperature control structures. While the Corps has agreed to provide temperature control at Detroit Dam, the agency is not scheduled to construct and operate the necessary structures for at least several more years, well beyond the December 2018 deadline. This delay undermines the purpose of RPA 5.2 to provide a date certain when construction will be complete and water quality improvements achieved. Instead, this delay will allow temperature problems to adversely impact threatened Chinook salmon and steelhead in the North Santiam River for at least several years longer than the BiOp considered.

RPA 5.3 requires the Corps to take actions to protect water quality during unusual events and conditions, which includes taking steps “to prepare for emergency and unscheduled events that may alter water quality and cause harm to listed fish in Project reservoirs and downstream habitat.” But the Corps has not taken sufficient or available actions to ensure adequate protection of water quality and to reduce impacts to Chinook salmon and steelhead when unplanned events arise. For example, between November 2016 and March 2017, a series of outages and maintenance issues arose at Big Cliff Dam that resulted in high TDG levels in a reach of the North Santiam River where 521 wild Chinook salmon had been outplanted and observed.

Overall, the Corps’ failure to comply with RPA measures to address water quality issues for both normal and unusual events and conditions has resulted in greater impacts to threatened Chinook salmon and steelhead than the BiOp considered.

3. Hatcheries

The BiOp relied on the implementation of Hatchery and Genetic Management Plans (HGMPs) approved by NMFS as the key measure to ensure hatchery programs do not reduce the viability of salmon and steelhead. RPA 6.1. But nearly ten years after issuing the BiOp, NMFS has yet to approve HGMPs for the Chinook salmon and steelhead hatchery programs in the Upper Willamette River basin. NMFS has encouraged the Corps to implement certain beneficial measures in the HGMPs while awaiting official approval, but the Corps has apparently rejected NMFS’s request to do so.

The Corps failed to fulfill other specific measures in the RPA related to hatcheries. For instance, the Corps determined a sorting facility at Leaburg Dam on the McKenzie River was not feasible, but has not taken sufficient alternative actions to reduce hatchery fish straying to less than 10% of the total wild spawning population, which RPA 6.1.4 required in the event the sorting facility was not completed.

The Corps has also failed to comply with RPA 6.1.5's requirement to limit outplanting of hatchery Chinook salmon above Cougar dam to 50% of all outplanted fish. The BiOp explained, "continual release of hatchery fish upstream of Cougar Dam is inconsistent with RPA measure 6.1.4" by continuing "to allow hatchery fish to influence the natural-origin population." The failure to abide by these RPA measures is causing greater harm to wild fish from the Chinook hatcheries than what the BiOp considered.

4. Coordination

The Corps' failure to fulfill many of the requirements of the RPA stems, in part, from shortcomings related to the Willamette Action Team for Ecosystem Restoration (WATER) and decision-making processes required by RPA 1. The Corps has not always acknowledged NMFS' significant authority to oversee the RPA and the BiOp's requirement that the Corps modify decisions, seek dispute resolution, or reinitiate consultation when NMFS disagrees with the Corps' decisions. *See, e.g.*, RPA 1.3. Communication and decision-making problems have interfered with implementation of RPA requirements, including development of the WATER charter and guidelines, fish-passage design, and appropriate research to support the RPA measures. The Corps also recently decided to eliminate funding for required hatchery baseline monitoring and evaluation without consulting NMFS.

The Corps has also fallen short on its duties to notify and coordinate with NMFS when emergency situations, scheduled and unscheduled maintenance, or other unusual events that can adversely impact listed-species arise, as set forth in RPA 2.2 and RPA 4.3. For example, the Corps informed NMFS four weeks late of an unplanned turbine outage at Big Cliff Dam that lasted several days and caused a spike in TDG in a reach of the North Santiam River that includes key spawning habitat for Chinook salmon. This and other examples involving Big Cliff Dam, the Foster Fish Facility, Cougar Dam, and other Project components demonstrate that the Corps has failed and continues to fail to comply with RPA 2.2 and 4.3 during unusual events, emergencies, and scheduled or unscheduled maintenance, allowing for greater harm to salmon and steelhead than what NMFS had envisioned in the RPA.

Moreover, RPA 4.3 required the Corps to complete the Willamette Fish Operations Plan (FOP) by October 1, 2008. The BiOp described the FOP as the "critical link between measures required by the Proposed Action and [the] RPA and on-the-ground implementation activities." The FOP must include, *inter alia*, operating criteria for dams to minimize fish injury and mortality, protocols for fish collection facilities, plans for maintenance and measures to minimize impacts and coordinate responses with resource agencies during scheduled and unscheduled maintenance, and protocols for emergency events and deviations. However, the Corps did not complete a FOP until at least November 2014, which was more than 6 years late, preventing years of benefits to the species that NMFS relied upon to reach its no jeopardy conclusion in the BiOp.

5. RPA Conclusion

The Corps' non-compliance with the RPA measures detailed above means that water quality and habitat downstream of the dams, fish passage around the dams, and hatchery practices have not improved in the short-term, nor will they improve over the fifteen year term of the BiOp, to the extent NMFS expected and relied upon to make its no-jeopardy/no-adverse modification conclusion for the RPA. The lack of progress on fish passage projects in particular is a large set back for UWR Chinook given the importance of access to historic spawning habitat for recovery of this species. Due to significant non-compliance with the RPA, the Corps and NMFS must reinitiate consultation to reassess the effects of the Project.

Moreover, re-initiation must occur now, rather than waiting until the agency misses more RPA deadlines, such as those for providing downstream fish passage at Detroit and Lookout Point Dams. The lack of fish passage is the most serious impediment to the survival and recovery of these populations but the Corps will exceed by years the deadlines for fish passage at Cougar, Detroit, and Lookout Point dams. Immediate reinitiation of consultation is necessary to determine how to avoid jeopardy to these species given the known harm that will continue to occur for years due to the lack of passage. Only a new consultation can adequately assess the impacts to the species from the Corps' non-compliance with the RPA, when combined with new threats to the species, and determine under these changed circumstances what interim and long-term measures must be taken to prevent jeopardy of the species. Informal decisions or agreements between the agencies to continue to ignore or delay various portions of the RPA are unlawful and inadequate to protect the fish populations.

Nearly two-thirds of the BiOp's 15-year term has passed and the Corps has completed important baseline and feasibility studies, fulfilled some initial milestones, and identified new threats to the species. The agencies should use this information to immediately begin a new consultation that incorporates the lessons learned and the progress made, and details a new RPA that the Corps can implement by firm deadlines. The Chinook and steelhead populations are in a precarious state, so waiting until the BiOp expires to re-initiate consultation may be too late to ensure their survival and recovery.

B. New Information Since the Biological Opinion Warrants Reinitiation.

In addition to the lack of compliance with the RPA, new information that has arisen since the 2008 BiOp further supports the need for reinitiation. As discussed above, the 2015 status review found that populations of UWR Chinook and steelhead have not improved, and in fact most have declined in abundance, and the species are still well below recovery goals. Sea lion predation is having a greater impact since 2009 and caused 20-25% loss of UWR winter steelhead in 2017. New studies and data show that: mortality of adult Chinook salmon migrating up the mainstem and in the tributaries before spawning is high; non-volitional fish-passage measures like trap-and-haul facilities for adults are not as effective as the BiOp assumed; disease at hatcheries is an increasing problem; and stray rates from hatcheries are high.

This new information shows that UWR Chinook and steelhead continue to have high mortality and have not increased in abundance, productivity, or spatial distribution, contrary to

expectations in the BiOp. Other stressors, such as sea lions and climate change, are increasingly adding adverse effects to these species and their habitat.

The Corps and NMFS must therefore reinitiate consultation to take into account the continued adverse effects of the Willamette Project, along with effects from other threats to the species, that in combination are much greater than what NMFS considered in its analysis of whether the RPA would cause jeopardy to the species or adverse modification of critical habitat.

II. The Corps is Causing Jeopardy, Adverse Modification of Critical Habitat, and Illegal Take of UWR Chinook Salmon and Steelhead Through Its Continued Operation of the Willamette Project.

The ESA prohibits agencies from jeopardizing the continued existence of listed species, adversely modifying their critical habitat, or causing “take” of listed species. 16 U.S.C. §§ 1536(a)(2), 1538. The operation of the Willamette Project continues to cause jeopardy to UWR Chinook and steelhead, adverse modification of critical habitat, and illegal take of individual fish.

Although the RPA was supposed to modify operations enough to avoid jeopardy to the species and adverse modification of critical habitat, the Corps’ failure to implement many of the RPA measures means the effects of the Project are largely the same as under the original Proposed Action, which NMFS concluded would cause jeopardy and adverse modification. The dams continue to block access to the vast majority of spawning habitat in the Middle Fork, North Santiam, and South Santiam rivers, which is the biggest limiting factor for UWR Chinook and steelhead, and adult pre-spawn mortality and mortality of juveniles migrating downstream remain high. Deadlines for implementing juvenile passage improvements will be exceeded by many years for dams on these rivers and the McKenzie River, resulting in low juvenile survival for many more years. Rebuilding the adult fish collection facility at Dexter Dam is also delayed for many years, adding to the fish passage problems in the Middle Fork and delaying benefits to that critically important UWR Chinook population. Project operations and maintenance continue to impair water temperatures, dissolved gas levels, and habitat features below dams, which continue to harm spawning, incubation, and rearing habitat downstream of the dams for both species. The production of these species remains below replacement levels, which means they are not even maintaining stable populations for survival, let alone increasing to meet recovery goals. Until the Corps makes significant changes to the Project and its operations that will improve production of both UWR Chinook and steelhead, these species will continue to be jeopardized and their critical habitat adversely modified from the operation of the Willamette Project, in violation of the ESA.

The Corps also continues to cause illegal take of UWR Chinook and steelhead by killing, harming, and harassing the fish and degrading their habitat, and the Corps is liable for such take because the operation of the Project disregarded the Reasonable and Prudent Measures (“RPM”) and terms and conditions of the ITS. The ITS provides that the Corps must carry out the terms and conditions of the ITS to be exempt from the take prohibitions of Section 9 of the ESA, which NMFS extended to threatened Chinook salmon and steelhead populations. *See* 50 C.F.R. § 223.203(a); 50 C.F.R § 223.102. But the Corps is not complying with the ITS requirement to

fully implement RMP #4, which ordered completion of all mandatory monitoring and reporting identified in the BiOp, because the Corps *inter alia*, decided to cut funding for hatchery baseline monitoring and evaluation required by the RPA and NMFS.

Moreover, the Corps continues to cause illegal take of UWR Chinook by funding the Chinook salmon hatcheries because such take is not authorized by the ITS. The ITS stated that authorization of incidental and direct take of natural Chinook due to the Chinook hatcheries would occur through the HGMP process. Nine years after the ITS was issued, however, NMFS has still not yet approved the HGMPs for these hatcheries and thus has not provided incidental take authorization. Thus, the Corps is liable under Section 9 of the ESA for any take caused by funding and implementing the Chinook hatchery programs at the Marion Forks, South Santiam, McKenzie, and Willamette hatcheries. The unlawful take from these hatchery programs occurs through numerous mechanisms detailed in the supplemental biological assessment, the BiOp, ITS, and subsequent reports such as the HGMPs for the hatcheries, including: the collection, handling, and use of wild Chinook salmon for broodstock; ecological interactions between hatchery and wild fish through competition, predation, and residualism; genetic introgression; disease introduction; and harm from hatchery facilities such as improperly screened water intakes.

The continued harm to UWR Chinook and steelhead and significant degradation of their habitat caused by operation of the Willamette Project that is not authorized by the ITS is unlawful under the ESA. Likewise, continued operation of the Project that results in jeopardy to the species and adverse modification of their critical habitat violates the ESA. These substantive violations of ESA Sections 7 and 9 require the Corps to alter its operations and maintenance to reduce adverse impacts to UWR Chinook and steelhead.

The duty to avoid jeopardy and take of the species and adverse modification of critical habitat continues during the consultation process if agencies reinitiate consultation. In addition, agencies must avoid making any irreversible or irretrievable commitment of resources that would foreclose implementation of any future RPA actions during completion of consultation. 16 U.S.C. § 1536(d). If the Corps and NMFS reinitiate consultation here, the Corps must take additional steps to reduce the harm to UWR Chinook salmon and steelhead and their critical habitat from operation and maintenance of the Willamette Project pending completion of a new BiOp.

CONCLUSION

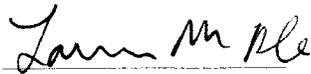
This letter provides 60 days' notice required under section 11(g) of the ESA, 16 U.S.C. § 1540(g), of NEDC, WildEarth Guardians, and Native Fish Society's intent to sue the Corps for violations of the ESA unless the Corps agrees to correct the violations described herein within a reasonable timeframe. NEDC, WildEarth Guardians, and Native Fish Society are interested in discussing ways to resolve these issues without litigation, and achieving protections for salmon and steelhead in the most efficient and expeditious manner possible. Please feel free to contact me and/or my clients if you wish to discuss this notice letter and ways to resolve the claims identified here. The contact information for NEDC, WildEarth Guardians, and Native Fish Society is:

NEDC
Mark Riskedahl, Executive Director
10015 SW Terwilliger Blvd.
Portland, Oregon 97219
(503) 768-6673
msr@nedc.org

WildEarth Guardians
Greg Dyson, Wild Places Program Director
80 SE Madison Street Ste. 210
Portland, Oregon 97214
(503) 730-9242
gdyson@wildearthguardians.org

Native Fish Society
Mark Sherwood, Executive Director
813 7th Street Ste. 200A
Oregon City, Oregon 97045
(303) 898-8988
mark@nativefishsociety.org

Sincerely,



Lauren M. Rule
Elizabeth H. Potter
Advocates for the West
3115 NE Sandy Blvd., Suite 223
Portland, OR 97232
Tel: (503) 914-6388
lrule@advocateswest.org
epotter@advocateswest.org

Attorneys for NEDC, WildEarth Guardians, and
Native Fish Society

cc:

Secretary Wilbur Ross
U.S. Department of Commerce
1401 Constitution Avenue, NW
Washington, DC 20230

Barry Thom, Regional Administrator
NMFS West Coast Region
1201 NE Lloyd Blvd., Suite 1100
Portland, OR 97232