



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
304 S. Water Street, Suite 201
Ellensburg, Washington 98926-3617

November 28, 2018

Refer to NMFS No: WCR-2018-10870

Candace McKinley
Environmental Program Manager
Columbia-Cascades Area Office
U.S. Bureau of Reclamation
1917 Marsh Road
Yakima, WA 98901-2058

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Pasco Pump Lateral Wasteway 5.8 (PPL 5.8) project on the Columbia River in Franklin County, Washington; (6th-field Hydrologic Unit Code 170200160602, City of Richland–Columbia River)

Dear Ms. McKinley:

On October 9, 2018, NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence that the Bureau of Reclamation (Reclamation) and South Columbia Basin Irrigation District's (SCBID) proposal to construct a wastewater outlet on the Columbia River, under authority of the Reclamation Act of 1939 and the Columbia Basin Project Act of 1943, is not likely to adversely affect (NLAA) species listed as threatened or endangered, or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

NMFS also reviewed the proposed action for potential effects on essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation. In this case, NMFS concluded the action would not adversely affect EFH. Thus, consultation under the MSA is not required for this action.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The concurrence letter will be available through NMFS' [Public Consultation Tracking System](https://pcts.nmfs.noaa.gov) (<https://pcts.nmfs.noaa.gov>). A complete record of this consultation is on file at NMFS' Columbia Basin Branch in Ellensburg, Washington.

Proposed Action and Action Area

Reclamation and SCBID propose to construct a 1.25-mile-long pipeline and wastewater outlet on the Columbia River near Pasco, Washington. The new structures will be part of the Columbia Basin Project (CBP) and allow return flow directly to the Columbia River. Irrigation water in the CBP canal system is gravity fed in a southerly direction and has multiple, direct-return flow locations from Quincy to Pasco. In the event of an emergency shutdown of the irrigation system water currently backs up in PPL 6.0 and ultimately wastes onto the privately owned Adams' property. Chronic backwatering enabled by continued lack of a reliable wastewater outlet directly to the Columbia River may result in eventual failure of the PPL system and extensive flooding in an area that is undergoing rapid urban development. Construction of PPL 5.8 will avoid spilling wastewater on private land and provide protection for the canal system between the PPL 4.3 check structure and the PPL 6.2 pumping plant. Potential impacts for construction and operation of the PPL 5.8 outlet structure are assessed in this consultation. The outlet of the new PPL 5.8 will be at river mile 339.5 on the left (east) bank of the river. Reclamation determined that pipeline construction in upland areas would have "no effect" on listed species or their critical habitat due to its distance from the Columbia River.

The pipeline will exit into a baffled outlet structure designed to dissipate energy and act as a barrier to fish entry into the canal system. Wastewater flows will enter the rectangular concrete structure and initially impact a baffle, then back up behind a downstream sill wall that creates a stilling basin. Water will spill over the 4-foot-high sill wall onto a 27.5-foot-long concrete flume set at a 7 percent grade. Depending on reservoir level, flow will exit the ramp directly into the river or dissipate on a 125-square-foot bed of 12-inch-median diameter riprap covered by a mix of cobble and gravel. Maximum flow will be about 88 cubic feet per second (cfs) for 1 to 2 hours but the majority of discharge has been reported in the 1 to 10 cfs range. The entire outlet structure will sit above the ordinary high water mark (OHWM). Metal grating will cover the top of the structure to prevent public access or injury. Bird coil wire will be installed on the structure to eliminate perching sites for would-be avian piscivores. The structure will not extend over the water.

Prior to work, the construction area will be isolated. Lake Wallula water level is typically low enough during the work window to render the activity zone a muddy expanse of exposed riverbed incapable of supporting salmonids. Under these circumstances, isolation will consist of a silt fence and hay bales anchored by hand-placed wooden stakes. In the unlikely event that water levels are atypically high and flow is present, any juvenile fish in the work area will be herded from the site with a seine which will remain in place until a turbidity curtain is installed. A rapidly deployable coffer dam system with a footprint of no more than 10 feet in width may be used for high flow events. Water depth in the work area during this worst-case scenario is expected to be about 1 foot at most. A debris boom would also prevent any vegetation falling into the channel during clearing operations from drifting downstream. The debris boom, turbidity curtain, and coffer dam system (if utilized) will be installed and removed by a crane operating from shore. Collected debris will be removed by hand. The maximum possible area of isolation in the event of high water, including isolation structures, would be 60 feet long by 20 feet wide. Within the area of isolation 125 square feet will be excavated to a depth of 1 foot and backfilled

with gravel. Excavation will be conducted by equipment working from shore. The gravel pad will be situated at the edge of OHWM and serve as a stable platform for construction of the outlet flume foundation as well as bedding for energy-dissipating riprap described earlier.

A portion of the outlet structure will be recessed into the slope break where the underground pipeline exits the bank. Excavation in this area, although above the OHWM, may attract capillary flow, which will be routed to an upland dispersal site via a properly screened pump and allowed to infiltrate into the soil. If lake levels are higher than normal, this area of excavation will be protected from water infiltration by the aforementioned coffer dam structure. Brush along 60 feet of shoreline and five invasive trees less than 12 inches diameter at breast height will be removed to provide access for construction. Vegetation will be cut and not grubbed where possible to allow for eventual regeneration. Removed invasive vegetation will be replaced in kind with native species after construction is complete.

The action area will extend 300 feet waterward of OHWM from the upstream extent of vegetation removal to 300 feet downstream of excavation activities. This action area will contain all work activities associated with installation of the outlet structure and account for suspended sediment possibly mobilized from the near shore work area which we expect will extend about 300 feet downstream from the area of isolation before approaching background levels. Work will take place from November 1 through February 28 of 2019–2021.

Action Agency's Effects Determination

Reclamation has determined that the proposed action “may affect” but is “not likely to adversely affect” the listed species managed under NMFS authorities in Table 1 below, and their critical habitat.

Table 1. Federal Register notices for final rules that list threatened and endangered species, designated critical habitat, or apply protective regulations to listed species considered in this consultation.

Species	Listing Status	Critical Habitat	Protective Regulations
Steelhead (<i>Oncorhynchus mykiss</i>)			
Middle Columbia River	T 1/05/06; 71 FR 834	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Upper Columbia River	T 1/05/06; 71 FR 834	9/02/05; 70 FR 52630	2/01/06; 71 FR 5178
Snake River Basin	T 1/05/06; 71 FR 834	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Chinook salmon (<i>Oncorhynchus tshawytscha</i>)			
Upper Columbia River spring-run	E 6/28/05; 70 FR 37160	9/02/05; 70 FR 52630	ESA section 9 applies
Snake River spring/summer-run	T 6/28/05; 70 FR 37160	10/25/99; 64 FR 57399	6/28/05; 70 FR 37160
Snake River fall-run	T 6/28/05; 70 FR 37160	12/28/93; 58 FR 68543	6/28/05; 70 FR 37160

Species	Listing Status	Critical Habitat	Protective Regulations
Sockeye salmon (<i>Oncorhynchus nerka</i>)			
Snake River Basin	E 6/28/05; 70 FR 37160	12/28/93; 58 FR 68543	ESA Section 9 applies

Note: Listing status 'T' means listed as threatened under the ESA; 'E' means listed as endangered.

Consultation History

On March 2, 2018, Reclamation initially contacted NMFS with 60 percent design plans for the proposed project. This began a series of email and phone conversations to determine final project design which included input from NMFS' engineering staff. On October 9, 2018, we received Reclamation's request to initiate informal consultation on construction and operation of the PPL 5.8 outlet structure. Reclamation provided a final plan of action for replanting at the site on November 26, 2018, and NMFS had sufficient information to proceed with consultation.

ENDANGERED SPECIES ACT

Effects of the Action

Under the ESA, "effects of the action" means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is NLAA listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

The proposed action could potentially affect ESA-listed species through physical harm from construction activities (e.g., direct injury from being crushed by excavation work or by placement of riprap) and from increased suspended sediment concentrations. Adult fish may also be attracted to wastewater effluent and potentially become entrapped within the irrigation system. Critical habitat could be affected by mobilized sediments, temporary loss of riparian vegetation, and substrate disturbance, all of which may reduce available forage. Although project timing ensures that the majority of out-migrating smolts will not be exposed to construction activities, some adults and juveniles of listed species could pass through the action area during and after construction and possibly be exposed to project effects.

Species Determination

It is highly unlikely that listed species of any age class will occupy the work area, as it is expected to be dry. Even if flows are extraordinarily high, water at the work site during construction are expected to be more than 1 foot deep. During the winter work window, neither adults nor juveniles of any of the subject species are likely to occupy water less than 1 foot deep. In addition, the silt fence will be deployed in a manner to herd fish out of the work area and will remain in place during construction, ensuring fish do not enter the area in the event the water surface elevation increases.

After construction, adult salmonids may be attracted to the discharge outlet, but Reclamation will employ specific design features to prevent access including a 4-foot-high vertical sill wall at the top of the high-velocity, 27.5-foot-long flume ramp. The elevation at the base of the sill wall will be 345.41 feet and the maximum recorded elevation of Lake Wallula is 344.2 feet. Thus, even at historically high reservoir levels, a portion of the concrete flume ramp at the base of the sill wall will be exposed. Fish are unlikely to navigate through 1.5 miles of darkened tunnel into the irrigation system, but access through the outlet will be impossible with a high velocity, shallow jump point over a 4-foot-high wall at the top of the ramp. The outlet of the flume will also be unobstructed, preventing entrapment of fish that may swim into the structure at high reservoir levels.

ESA-listed species will not be exposed to construction activities, including the placement of riprap, or the possibility of entrapment during operations, and these effects are therefore discountable. Most suspended sediment generated within isolated areas will be contained by turbidity curtains and allowed to settle prior to removal. Any increases in turbidity outside the barrier will be too low to adversely affect salmonids. Effects from turbidity will be insignificant.

Critical Habitat Determination

The designations of critical habitat for the subject species use the terms primary constituent element (PCE) or essential features. Subsequent critical habitat regulations (81 FR 7414) replace these terms with physical or biological features (PBFs). The shift in terminology does not change the approach used in conducting a “destruction or adverse modification” analysis, which is the same regardless of whether the original designation identified PCEs, PBFs, or essential features. In this opinion, we use the term PBF to mean PCE or essential feature, as appropriate for the specific critical habitat.

The action as proposed has the potential to affect the following PBFs: (1) Water quality and quantity (2) Substrate, (3) Forage, and (4) Migration (Table 2). Any modification of these PBFs may affect freshwater rearing and migration in the action area. Proper function of these PBFs is necessary to support successful adult and juvenile migration, rearing, and the growth and development of juvenile fish. All remaining PBFs would not be affected by the proposed action.

Table 2. Types of sites, essential physical and biological features, and the species life stage each physical and biological feature supports.

Site	Essential Physical and Biological Features	Species Life Stage
Snake River Basin Steelhead^a		
Freshwater rearing	Water quantity and floodplain connectivity to form and maintain physical habitat conditions, water quality and forage ^b , natural cover ^c	Juvenile
Freshwater migration	Free of artificial obstructions, water quality and quantity, natural cover ^c	Juvenile and adult mobility and survival

Site	Essential Physical and Biological Features	Species Life Stage
Snake River Spring/Summer Chinook Salmon, Fall Chinook, and Sockeye Salmon		
Juvenile Rearing	Water quality and quantity, cover/shelter (Chinook only), food, riparian vegetation, space (Chinook only), water temperature and access (sockeye only)	Juvenile
Migration	Substrate, water quality and quantity, water temperature, water velocity, cover/shelter, food ^d , riparian vegetation, space, safe passage	Juvenile and adult
Upper Columbia River Chinook, and Steelhead Middle Columbia River Steelhead		
Juvenile Rearing	Water quality and quantity, floodplain connectivity, forage, natural cover	Juvenile
Migration	Corridors free of obstruction and predation, water quality and quantity, natural cover, side channels, undercut banks	Juvenile and adult

^a Additional PBFs pertaining to estuarine, nearshore, and offshore marine areas have also been described for listed species. These PBFs will not be affected by the proposed action and have therefore not been described in this opinion.

^b Forage includes aquatic invertebrate and fish species that support growth and maturation.

^c Natural cover includes shade, large wood, log jams, beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks.

^d Food applies to juvenile migration only.

Excavation will most likely occur outside of flowing water at normal reservoir levels. If lake levels are unusually high, turbidity generation during excavation of the 125-square-foot riprap and gravel area will be minor and short-lived. As stated previously, most fine sediment will be contained within the isolated area and work will pause if turbidity exceeds state mandated levels. NMFS does not expect the small amount of sediment mobilized by the action will redistribute in a manner that alters the value of local habitats for rearing or migration. Operation of PPL 5.8 will not change total flow volume in the Columbia River, although it will re-time discharge. These changes will not be significant relative to the flow of the Columbia River. Under baseline conditions, water that spills onto the Adams' property likely seeps back to the Columbia at a relatively stable rate. Under the proposed action, return flows will vary from about 1 cubic foot per second to as much as 88 cubic feet per second; this range of change is insignificant when compared to both the average discharge of the Columbia River and the rate of change in instant discharge associated with hydropower operations at McNary Dam. Because the discharge will be directly to the river instead of over agricultural and residential properties, the quality of water discharged to the river will likely be higher than under baseline conditions.

Silt substrate at the site does not provide ideal macroinvertebrate habitat but some individuals will likely be displaced or killed within the construction footprint below OHWM. NMFS expects the maximum possible disturbed area of 1,200 square feet will be recolonized by individuals from surrounding, unaffected areas and that the loss of food production from this patch will be insignificant. The small patch of cobble-covered riprap will also be an improvement over current available invertebrate habitat. Removal of invasive vegetation along 60 linear feet of bank will result in a temporary loss of terrestrial invertebrate production. However, removed vegetation

will be replaced in kind with native species and the scale of impact is small enough and the volume of impacted vegetation so inconsequential that the effects of removal will be insignificant. An effective barrier has been designed within the outlet structure and no migrating fish potentially attracted by wastewater discharge will be entrapped within the irrigation system. Accordingly, NMFS has determined that negative impacts to existing substrate and forage availability from construction will be insignificant.

Conclusion

Based on this analysis, NMFS concurs with the Reclamation that the proposed action is NLAA the subject listed species and designated critical habitats.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by Reclamation or by NMFS, where discretionary federal involvement or control over the action has been retained or is authorized by law, and (1) 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, (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter, or (3) if a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

“Section 7(a)(1) of the ESA directs federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of threatened and endangered species. Reclamation also has the same responsibilities, and informal consultation offers action agencies an opportunity to address their conservation responsibilities under section 7(a)(1).” Please direct questions regarding this letter to Roman Pittman at the Columbia Basin Branch at (509) 962-8911 extension 804 or email at roman.pittman@noaa.gov.

Sincerely,



Dale Bambrick, Chief
Columbia Basin Branch
NOAA Fisheries, West Coast Region

cc: S. Archuleta, Bureau of Reclamation, sarchuleta@usbr.gov