

Habitat Management Plan

US 395 North Spokane Corridor Spokane River Bridge Project

Spokane, Washington

Preparers

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Introduction

The Washington State Department of Transportation (WSDOT) is proposing to construct new bridges over the Spokane River, adjacent to the existing East Greene Street Bridge, in Spokane, Washington (**Figure 1**) as part of the overall North Spokane Corridor (NSC) project. Two of the structures will be for the main highway and one will be for the new mixed-use pathway Children of the Sun Trail.

This Habitat Management Plan (HMP) provides details on the proposed project, assesses the natural resource features of the riparian habitat buffer, discusses the impacts of the project on those resources, and outlines a proposed mitigation plan, pursuant to the City of Spokane Municipal Code (SMC) 17E.020. The HMP is reviewed by Washington State Department of Fish and Wildlife (WDFW) as part of the City of Spokane’s Critical Areas Ordinance.

The project is located within the southeast quarter of Section 17, Township 25 north, Range 43 east, Section 10. The project footprint is located within the urban city limits of Spokane in Spokane County, Washington.



Figure 1: Vicinity Map

Proposed Action

The bridge design includes six 12-foot lanes, four 10-foot shoulders, and a traffic barrier between the opposing lanes for the highway. The pathway structure will be 19 feet wide with barrier on each side for a clear pathway of 16 feet in width. The bridges will clear-span the river with footings and rip rap armoring installed below the OHWM. Riparian vegetation must be removed from the riverbanks. A temporary work platform (TWP) may need to be constructed across the river from which the new bridge

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will be built, requiring 161 24-inch steel piles to be driven into the riverbed. Once the new bridge is complete, the TWP will be removed and disturbed areas restored with native vegetation.

Jurisdictional Setting

The Spokane River is a Shoreline of Statewide Significance, with jurisdiction extending 200 ft from the Ordinary High Water Mark (OHWM). In this location, the shoreline designation is Limited Urban Environment to the south and Shoreline Residential to the north, with a buffer of 75 feet. This project is new construction and will require a shoreline conditional use permit from the City of Spokane as well as other environmental permits from State and Federal regulatory agencies.

The project also lies within the floodplain, and Riparian Habitat Area (RHA) of the Spokane River. Designation and regulations are found in the Spokane Municipal Code, under Title 17E Environmental Standards. The project is located within Riparian Zone 2 of the Spokane River, for which the RHA width is the outer limit of the 100-year flood, or 130 feet from the OHWM, whichever is greater. An aerial view of the project site is presented in Figure 2, which depicts the OHWM, RHA, floodplain, and Shoreline limits along with the total project area. The amount of RHA with the project area is 0.57 acres.

Field Review and Habitat Assessment

WSDOT wildlife biologist Geoffrey Gray documented site conditions of the proposed project area and referred to the following data sources:

- Washington State Priority Habitats and Species geographic information system (GIS) layer (PHS layer)
- State and Federal listed and species of concern GIS layers
- Wildlife occurrence species and habitat polygon GIS layers
- Washington Department of Fish and Wildlife fish distribution GIS layer
- U.S. Fish and Wildlife Service Spokane County listed species and species of concern list

Existing Conditions

The Spokane River flows 112 miles from Lake Coeur d'Alene in Idaho to the upper Columbia River in Washington. Seven hydroelectric dams span the river, all installed between 1890 and 1922. The Upriver Dam is owned and operated by the City of Spokane Water Department, while the others are owned by Avista Corporation. Little Falls Dam, the dam furthest downstream, completed in 1911 at river mile (RM) 29, blocks fish from moving upstream. The much larger Long Lake Dam, completed in 1915 five miles further upstream at RM 34, also has no fish ladder. The new bridges will cross the Spokane River at RM 78.0, 2.0 RM downstream of the Upriver Dam (RM 80), operated by the City of Spokane. Post Falls Dam (RM 102) is also located further upstream, at the outlet of Lake Coeur d'Alene.

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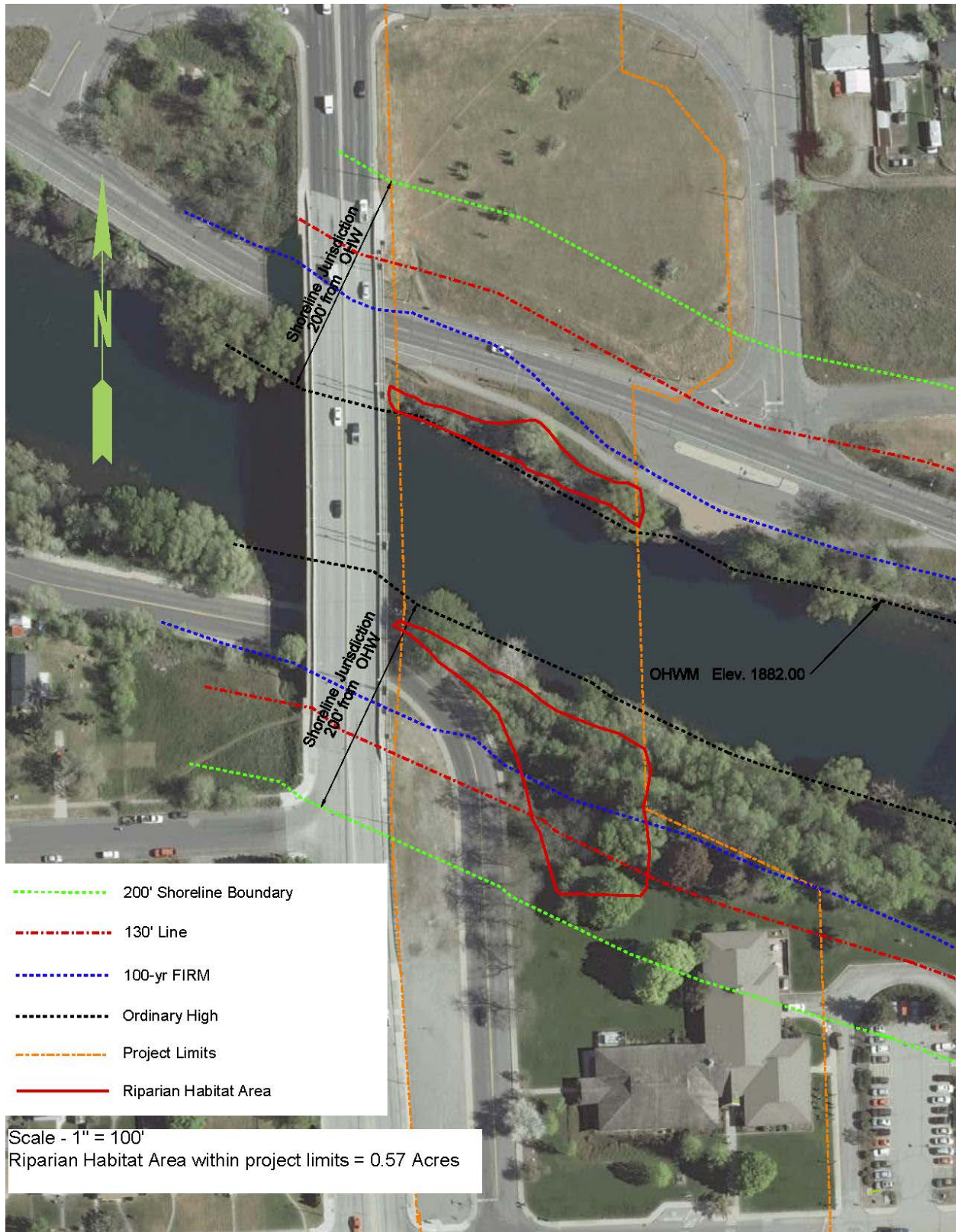


Figure 2: Project Area and Regulatory Limits Map (UPDATE)

Soils in the project area include Garrison very gravelly ashy loam. The riverbed and banks are composed of various-sized cobblestone and some outcroppings of basalt. The geotechnical investigation at pier locations performed in October 2019, with **holes bored as deep as 80 feet, did not encounter bedrock**. The banks of the Spokane River in this area are steep, and, in places, have been over-steepened with imported fill material to allow development to encroach to the river's edge. The narrow bands of vegetation on the banks are comprised of a mix of black cottonwood, ash, willow and locust trees along with understory of serviceberry, smaller willows, grasses and some areas of knapweed. Adjacent lands are highly developed, including homes, paved streets, and Spokane Community College.

The riverbed is comprised of a mixture of mixed gravel and cobble, covered in fine sediment. Algae is present in patches, supported by shallow water, high water temperature, low shading, and high nutrient load.

The project area lies within the Aquifer Sensitive Area established by the City of Spokane. **A piezometer on the northeast quadrant of the project area has shown winter groundwater levels 13 to 19 feet below the ground surface.** This reach of the Spokane River is on the Department of Ecology 303(d) list for exceeding multiple water quality thresholds (Categories 1-5), including, but not limited to, PCBs, dissolved oxygen, and temperature.

Priority Habitat and Species

Of the Habitats of Local Importance identified by the City of Spokane (SMC 17E.020.030), this project impact area includes Riparian, and Instream. The Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) mapping tool shows three priority species within the project area: rainbow trout (*Oncorhynchus mykiss*), westslope cutthroat trout (*Oncorhynchus clarki lewisi*), and big brown bat (*Eptesicus fuscus*). The PHS mapping result is attached in **Appendix 1**.

Federally Listed Threatened and Endangered Species and Critical Habitats

There is no federally designated critical habitat in the project area. WSDOT's assessment of potential impacts of the project determined the project is not likely to adversely affect bull trout (*Salvelinus confluentus*) (Threatened), and would have no effect on any other federally listed species. The U.S. Fish and Wildlife Service (USFWS) concurred with this determination (**Appendix 2**).

Project Impacts

There is no change in land use proposed with this project. The impacts to the river and riparian area will be temporary during construction of the new bridge. Full completion of this project is projected to extend over 2.5 years. Cofferdams will be utilized to separate temporary piers from flowing water. Once cofferdams are in place, any captured fish will be placed back in the river. The Hydraulic Permit Application, approved by WDFW, contains additional specifications on minimizing impacts and protecting fish life (HPA attached in Appendix 3). The activities in and around the river will also be limited by the conditions Section 404 permit from US Army Corps, and Section 401 permit from Ecology to minimize the potential for adverse effects to species, habitats, and water quality. No traffic detour will be required, since the North Greene Street bridge will remain open during construction.

The project will have an unavoidable impact on riparian vegetation during demolition and construction. Approximately 6,000 square feet (ft²) of cut and 2000 ft² of fill is required on the

riverbanks and below the OHWM to accommodate the new bridge footings. Existing vegetation includes a mix of native and non-native species, with no threatened, endangered, or priority species of plants.

Avoidance, Minimization, Mitigation of Impacts

While impacts to vegetation is unavoidable, the area affected will be the minimum necessary for the replacement of the bridge over the Spokane River. Temporary impacts during construction will also be minimized with the use of Best Management Practices (BMPs). The following BMPs are focused on preventing runoff discharges to the river and the undisturbed vegetation buffer:

- Silt fence shall be installed within the project area to prevent stormwater runoff from carrying silt and sediments off-site. No runoff will be allowed to enter any surface waters.
- Blowing dust will be controlled using water on exposed soils until they are stabilized with vegetation or an approved dust palliative.
- Maintenance of equipment, staging, and storage of materials shall be within an approved upland site.
- Steep slopes will be covered with temporary erosion control material until vegetation can be established.
- All disturbed areas within the project will be smoothed to conform to the surrounding terrain at the end of the project. The areas not planted during the fall planting window will be seeded and mulched with an approved native seed mix suitable for the region.
- Work on this project will be carefully monitored with experienced inspectors to ensure the environment is protected. All BMPs will be installed or implemented according to accepted practices.
- Noxious weed species will be controlled.

In order to mitigate for unavoidable impacts to the riparian zone, vegetation will be restored per the planting plan developed by the WSDOT Office of Landscape Architecture. This plan includes replacement of trees at a ratio based on the size of each tree removed.

Planting, Monitoring and Maintenance

WSDOT is developing a planting plan to mitigate for the loss of existing vegetation. In this HMP we include the draft plan for revegetation which includes a mix of native trees and shrubs: Bebb and Peachleaf willows, red-osier dogwood, golden currant, Nootka rose, and common snowberry. The planting plan will specify the planting window for best plant establishment, the incorporation of compost and mulch, irrigation methods, and monitoring period. All other disturbed areas will be seeded with native grasses.

All planting included in this project will be performed in compliance with WSDOT's Standard Specifications Manual, Chapters 8-02 and 9-14. During project construction, inspection of planting areas are reviewed for compliance with:

- Planting Area Weed Control – review all areas to be seeded and planted to ensure that the areas are weed free prior to seeding or planting.
- Layout of Planting – review the layout of the plant material prior to planting.
- Plant Condition – review plant material prior to planting.

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- Completion of Initial Planting – following the completion of planting, review all planting areas to ensure that they are planted per plan, mulched, weed-free and all unsatisfactory conditions corrected.
- Erosion Control – Temporary erosion control within all planting areas will consist of, but are not limited to, the following: organic temporary erosion control fabric, compost, and bark or wood chip mulch.

Summary of Effects

No habitat for any of the listed PHS species will be permanently impacted by this project. Any fish and wildlife that currently uses the area for feeding, cover, and movement to other sites will be temporarily affected during bridge construction. These species, having adapted to life in urban areas, are expected to return once construction is complete. Tree removal will take place outside bird nesting seasons. BMPs will protect water quality. Trees and shrubs will be replaced with native species to enhance the riparian zone.

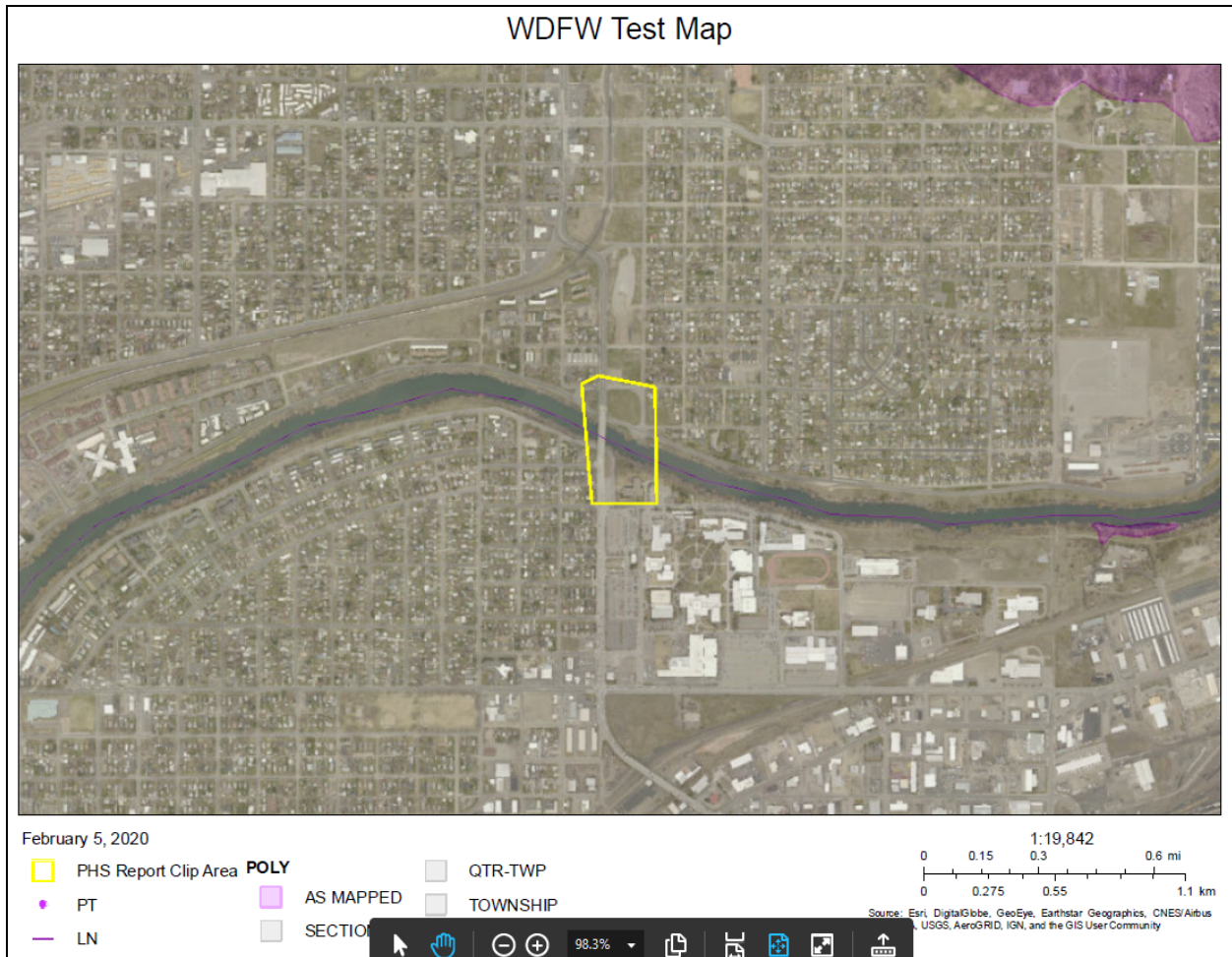
Review by WDFW

This report will be submitted to Leslie King, WDFW Area Habitat Biologist for review

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Appendix 1: WDFW PHS Report

Common Name	Site Name	Priority Area	Accuracy	Federal Status	Sensitive Data	Source Entity
Scientific Name	Source Dataset	Occurrence Type		State Status	Resolution	Geometry Type
Notes	Source Record	More Information (URL)		PHS Listing Status		
	Source Date	Mgmt Recommendations				
Big brown bat <i>Eptesicus fuscus</i>	WS_OccurPoint 147631 July 23, 2018	Breeding Area Biotic detection http://wdfw.wa.gov/publications/pub.php?	GPS	N/A N/A PHS LISTED	Y TOWNSHIP	WA Dept. of Fish and Wildlife Points
Rainbow Trout <i>Oncorhynchus mykiss</i>	Spokane River SWIFD 1950	Occurrence/Migration Occurrence/migration http://wdfw.wa.gov/wlm/diversty/soc/soc.htm	NA	N/A N/A PHS LISTED	N AS MAPPED	Lines
Westslope Cutthroat <i>Oncorhynchus clarki lewisi</i>	Spokane River SWIFD 1957	Occurrence/Migration Occurrence/migration http://wdfw.wa.gov/wlm/diversty/soc/soc.htm	NA	N/A N/A PHS LISTED	N AS MAPPED	Lines



Appendix 2: USFWS Concurrence Letter



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office
510 Desmond Dr. SE, Suite 102
Lacey, Washington 98503



MAY 22 2019

In Reply Refer To:
01EWF00-2019-1-0906

Mark Norman
Biology Program Manager
South Central Region
Washington State Department of Transportation
2809 Rudkin Road
Union Gap, Washington 98903-1648

Dear Mr. Norman:

This letter is in response to your request for informal consultation on the United States (US) 395 North Spokane Corridor – Spokane River Bridge Project (XL5855). The Washington State Department of Transportation (WSDOT) is proposing to construct a new bridge over the Spokane River, adjacent to the existing North Green Street Bridge, within the City of Spokane, in Spokane County, Washington. On April 29, 2019, we received your cover letter and Biological Assessment (BA), both dated April 24, 2019, providing information in support of a "may affect, not likely to adversely affect" determination for the bull trout (*Salvelinus confluentus*). On April 30, 2019, we requested additional information to clarify that no potential land use changes would result from construction of the new bridge. It is our understanding that this request has been submitted by the WSDOT on behalf of the Federal Highway Administration (FHWA).

The FHWA and WSDOT have concluded that the project will have "no effect" on additional listed species and designated critical habitats known to occur in Spokane County. The U.S. Fish and Wildlife Service (Service) has no regulatory or statutory authority for concurring with "no effect" determinations, and no consultation with the Service is required. This informal consultation has been completed in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Mark Norman

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Construction of the new bridge includes the following elements: 1) six, 12-foot-wide traffic lanes, 2) four, 10-foot-wide shoulders, and 3) a median traffic barrier between opposing lanes of traffic. The new bridge will span the river at river mile 78, approximately two miles downstream of the Upriver Dam. A temporary work platform will be constructed across the Spokane River for construction of the new bridge. The temporary work structure will require 161 24-inch diameter steel piles to be driven into the riverbed over a period of approximately 50 days. Riparian vegetation will be removed from both riverbanks to accommodate both the temporary work platform and new bridge. Approximately 2,848 ft² of riparian vegetation, dominated by Siberian elm (*Ulmus pumila*) and black cottonwood (*Populus balsamifera*) trees, will be impacted, with 4,273 ft² of vegetation being permanently removed. Fill, totaling 5,020 ft² (1,500 yd³), including 150 linear feet of rip-rap per bank, will be placed below the ordinary high water mark along the east and west shorelines in order to install and armor the new footings. Cofferdams will be installed to isolate in-water work areas and prevent debris, turbidity, and concrete from entering the river. No traffic detour will be required since the North Green Street Bridge will remain open to traffic. All temporary structures and piles will be removed and areas of the riverbanks not within the footprint of the new bridge will be replanted. Work is scheduled to be conducted over the course of three years, beginning May 2021 and extending to November 2023. Most of the work will occur during the approved in-water work window (June 16 to August 31), but some construction activities may extend to November 30 and will be outlined in the hydraulic project approval issued by the Washington Department of Fish and Wildlife.

Post-construction, the project will result in approximately 26,220 ft² of new overwater shading and 2.61 acres of pollution-generating impervious surface (PGIS). All stormwater runoff from the new PGIS will be captured and infiltrated or directed into the city's sewer system.

The action area is defined by the farthest reaching effects of the project overland and in the water. The farthest reaching overland effect of the project is the area where noise from pile driving will exceed ambient background levels, which extends 3,000 feet from the source. The aquatic portion of the action area is defined as the area that will be ensonified during impact pile driving and is bounded by the nearest bends in the river. This area extends approximately 3,700 ft upriver and 1,875 ft downriver from the project footprint and includes the extent of water quality changes from temporary increases in turbidity during construction.

Bull Trout

The bull trout was listed range-wide as threatened by the Service in 1999. The Spokane River is the outflow of Coeur d'Alene Lake, which supports a single bull trout core area that is part of the Columbia Headwaters Recovery Unit. This Recovery Unit only includes the Spokane River from Coeur d'Alene Lake to Post Falls. The Post Falls Hydroelectric Dam is located at a natural fish passage barrier falls and does not contain fish passage facilities. Post Falls is upriver of the project site and there are no populations of bull trout in the Spokane River downstream of the dam. Bull trout records in the Spokane River below Post Falls are very rare. Because it is extremely unlikely that bull trout will be present and exposed to construction activities, effects to bull trout are considered discountable.

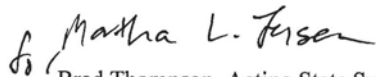
Mark Norman

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This concludes informal consultation pursuant to the regulations implementing the Endangered Species Act (50 CFR 402.13). This project should be re-analyzed and re-initiation may be necessary if 1) new information reveals effects of the action that may affect listed species or critical habitat in a manner, or to an extent, not considered in this consultation, 2) if the action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this consultation, and/or 3) a new species is listed or critical habitat is designated that may be affected by this project.

If you have any questions about this letter, or our shared responsibilities under the Endangered Species Act, please contact DeeDee Jones at (360) 905-2185 (deean_jones@fws.gov) or Martha Jensen at (360) 753-9000 (martha_1_jensen@fws.gov).

Sincerely,



Brad Thompson, Acting State Supervisor
Washington Fish and Wildlife Office

cc:

FHWA, Olympia, WA (C. Callahan)
WSDOT, Spokane, WA (T. Williams)
WSDOT, Union Gap, WA (G. Gray)
USFWS, Spokane, WA (E. BrittonKuttel)
USFWS, Vancouver, WA (D. Jones)

Appendix 3: Approved HPA

Appendix 4: DRAFT Planting Plan