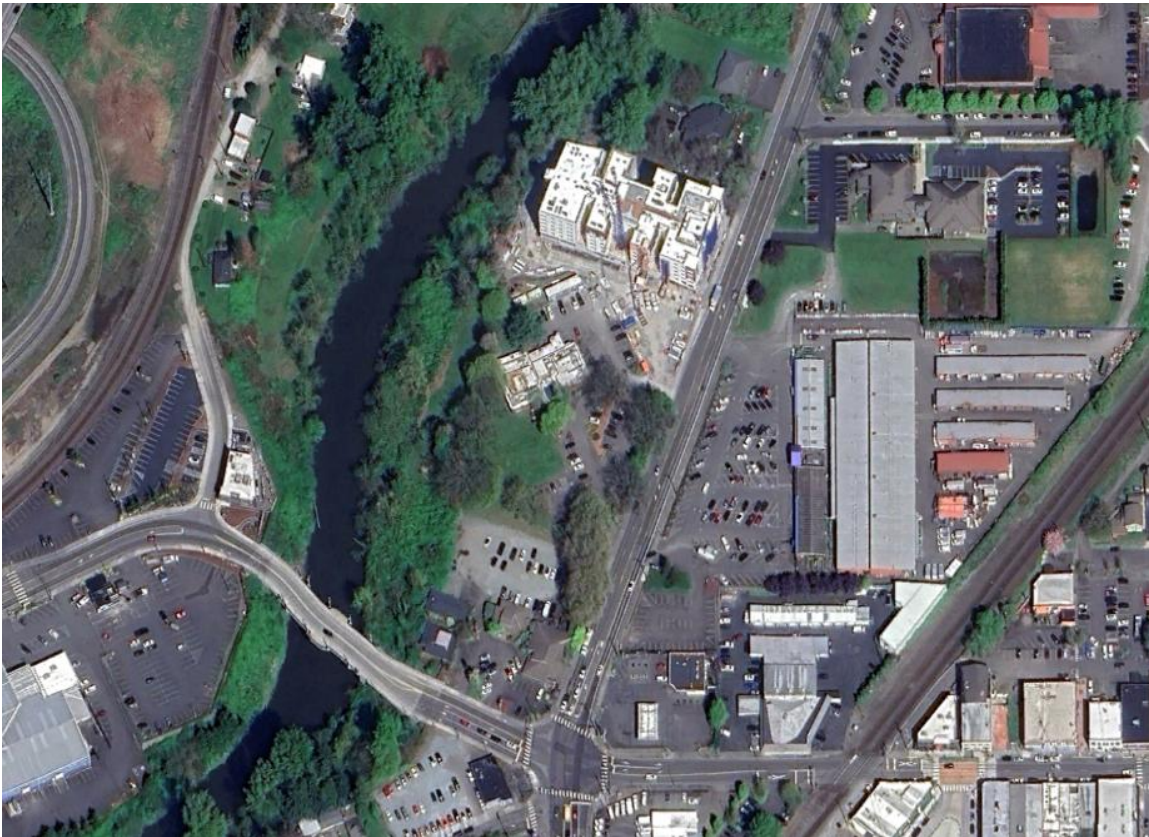


Fryar Avenue Shared Use Trail Project

Habitat Management and Mitigation Plan
City of Sumner, Pierce County, Washington



Prepared for:

City of Sumner Public Works Department
1104 Maple Street
Suite 260
Sumner, WA 98390

Prepared by:

Widener & Associates
Transportation & Environmental Planning

April 2026

Contents

1. Introduction	2
2. Project Description.....	2
3. Existing Environmental Conditions	2
3.1 Terrestrial Resources	2
Topography	2
Land Use.....	2
Vegetation.....	3
3.2 Water Resources	3
Hydrology.....	3
Wetlands	3
4. Species & Habitat Presence	4
5. Project Impacts	5
5.1 Shoreline Buffer Impacts.....	5
5.2 Floodplain and Floodway Impacts	5
5.3 Shoreline Stabilization Consistency (Retaining Walls and Pin Pile Bridge).....	6
6. Minimization & Mitigation Measures	7
6.1 Minimization/Avoidance for Temporary Impacts.....	7
6.2 Mitigation for Impacts	7
6.3 Shoreline Stabilization Compliance.....	8
6.4 Monitoring and Maintenance	9
7. Performance Standards and Contingency Plan	14
7.1 Performance Standards	14
7.2 Contingency Plan.....	15
8. Conclusion.....	16
9. References	17

1. Introduction

This Habitat Management and Monitoring Plan has been prepared for the Fryar Avenue Shared Use Trail Project in accordance with Sumner Municipal Code (SMC) 16.56.080. This plan has been prepared to assess potential effects on fish and wildlife habitat and describe the implementation of permanent mitigation and restoration measures.

2. Project Description

The proposed project will construct about 3,300 feet of new trail/sidewalk which connects to W Main Street near the intersection with Traffic Avenue, Bridge Street/Cannery Way, and Fryar Avenue. It will continue to the north under the Bridge Street Bridge following the bank of the White River and then connect to Fryar Avenue about 300 feet south of its intersection with 57th Street E. Approximately 140 feet of the trail south of Bridge Street/Cannery Way will be constructed on a pin pile bridge. Several retaining walls are proposed in order to minimize the trail impact footprint. The west side of Fryar Avenue from this point will be improved to provide a 10-foot wide shared use trail/sidewalk to the north. Minor roadway channelization and pavement marking removal will occur along Fryar Avenue to accommodate the new trail alignment and maintain safe traffic circulation. Stormwater conveyance features (curb, gutter, and catch basins) will be relocated as needed along Fryar Avenue to accommodate the trail improvements and maintain existing drainage patterns, with no new discharge to the White River. The project will also remove approximately 2,700 SF of concrete from the project area as part of the mitigation process.

The project proposes connecting the Sumner Link Trail and White River Trail with approximately 3,300 feet trail that will run from W Main Street, underneath the Bridge Street Bridge, and then along Fryar Avenue north of Zehnder Street. The project is within Sections 48 and 49 of Township 20 North, Range 4 East.

3. Existing Environmental Conditions

3.1 Terrestrial Resources

Topography

The project is adjacent to the nearly level floodplain of the White River (FEMA 2017). The project area is relatively flat. Soil within the project area consists of Puyallup fine sandy loam and Sultan silt loam (USDA 2019).

Land Use

Land use along Fryar Avenue is industrial and commercial. Land use along W Main Street is mostly residential with some commercial developments. The project area is zoned as 6 Stories, Multi-Family/Commercial (City of Sumner 2019). The project will occur primarily within existing and acquired public ROW and easements.

Vegetation

The project is located within the Eastern Puget Riverine Lowlands ecoregion and the western hemlock (*Tsuga heterophylla*) major vegetation area (EPA 2010; Franklin and Dyrness 1973).

Currently the area is characterized by a sparse overstory of black cottonwoods (*Populus balsamifera*) and bigleaf maples (*Acer macrophyllum*) with some small red alders (*Alnus rubra*) and willows (*Salix spp.*). The shrub layer is dominated by invasive Himalayan blackberry (*Rubus armeniacus*) with some red osier dogwood (*Cornus sericea*), snowberry (*Symphoricarpos albus*), bracken fern (*Pteridium aquilinum*), sword fern (*Polystichum munitum*), horsetail (*Equisetum sp.*), and miscellaneous grasses.

There are also many invasive vines including common ivy, evergreen clematis (*Clematis vitalba*), and field bindweed (*Convolvulus arvensis*). Near the Bridge Street bridge, the dense common ivy has resulted in the death of several trees and prevented the establishment of native species.

3.2 Water Resources

Hydrology

The project area is located within the Puyallup/White River Basin. The White River is the main source of hydrology for the project area with a drainage area of approximately 494 square miles. The headwaters of the White River originate from the Emmons and Fryingpan Glaciers on the north face of Mt. Rainier (Fahnestock 1963; Czuba et al. 2012; Marks et al. 2019). The White River flows 68 miles from its mountain source to its confluence with the Puyallup (Kerwin 1999).

Within the project action area, the White River flows generally in a southwestern direction flowing into the Puyallup River approximately 0.7 miles southeast of the project area. The White River within the action area is listed as an impaired waterbody for temperature (WSDOE 2016b). Flows within the project area are regulated by the Mud Mountain Dam (RM 29.6) which diverts upstream flows to Lake Tapps. These flows rejoin the White River through the Dieringer Tailrace (RM 3.6) located approximately 2.9 miles upstream of the project action area.

The average annual precipitation in the basin area is approximately 30-40 inches in the greater Tacoma area and over 120 inches in the Cascades. The majority of this precipitation occurs in the winter months (WSDOE 2016a).

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), portions of the project area adjacent to the White River are located within the 100-year floodplain (Zone AE) and regulated floodway. These areas generally correspond with the White River channel and its immediate overbank area.

Wetlands

According to the USFWS National Wetlands Inventory there are no wetlands within the project area. This has been confirmed with site visits.

4. Species & Habitat Presence

The USFWS and NMFS species lists were accessed on their websites on February 20, 2026. The list indicated the potential presence of the species and critical habitat(s) shown in Table 1.

Table 1. USFWS and NMFS listed species and critical habitats potentially present in project vicinity.

Species	Federal Status	Jurisdiction
Bull Trout – (<i>Salvelinus confluentus</i>) U.S.A., Conterminous, Lower 48 States	Threatened	USFWS
Bull Trout U.S.A., Conterminous, Lower 48 States Critical Habitat	Designated	USFWS
Chinook Salmon – (<i>Oncorhynchus tshawytscha</i>) PS Evolutionarily Significant Unit (ESU)	Threatened	NMFS
Chinook Salmon PS ESU Critical Habitat	Designated	NMFS
Steelhead Trout – (<i>Oncorhynchus mykiss</i>) PS (Distinct Population Segment) DPS	Threatened	NMFS
Steelhead Trout PS DPS Critical Habitat	Designated	NMFS
Northwestern Pond Turtle – (<i>Actinemys marmorata</i>)	Proposed Threatened	USFWS
Marbled Murrelet – (<i>Brachyramphus marmoratus</i>)	Threatened	USFWS
Streaked Horned Lark – (<i>Eremophila alpestris strigata</i>)	Threatened	USFWS
Yellow-Billed Cuckoo – (<i>Coccyzus americanus</i>) (Western U.S. DPS)	Threatened	USFWS
Monarch Butterfly – (<i>Danaus plexippu</i>)	Proposed Threatened	USFWS
Suckley's Cuckoo Bumble Bee – (<i>Bombus suckleyi</i>)	Proposed Endangered	USFWS

A search of the Washington State Department of Fish and Wildlife (WDFW) Priority Habitat and Species (PHS) and National Marine Fisheries Service (NMFS) Endangered Species Act (ESA) listings was conducted to identify the presence of habitats and species potentially present at the site. Salmonid species documented to utilize the White River in the project vicinity include Chinook, Coho, pink, sockeye, and chum salmon as well as bull trout and steelhead trout. Of these, bull trout (Coastal/Puget Sound DPS), Chinook salmon (Puget Sound ESU), and steelhead (Puget Sound DPS) are listed as threatened under the Endangered Species Act. Critical habitat for bull trout, Chinook salmon, and steelhead trout has also been designated within the proposed project area.

The project may affect but is not likely to adversely affect these aquatic species as no in-water work or tree removal in the riparian area is proposed, and the impacted habitat is of low quality due to invasive species and sparse cover. Permanent impacts will be mitigated with native plantings, invasive species removal, pervious trail surfaces, and BMPs to minimize runoff and sediment into the river.

As for the terrestrial species, the project area is situated in a developed portion of the White River shoreline and is characterized by low shrub cover and sparse tree presence, with minimal bare ground. The area is dominated by invasive and weedy species, including Himalayan blackberry and common ivy, which currently reduce habitat quality. While riparian areas exist along the White River, they are limited in size and fragmented, quickly transitioning to upland habitats and developed areas within the project footprint. Given the small and disturbed nature of the riparian corridor, coupled with the high prevalence of invasive species, the project is not expected to affect the listed species in the area.

5. Project Impacts

5.1 Shoreline Buffer Impacts

Based on the City of Sumner Shoreline Master Program (June 2020), the portion of the White River adjacent to the project area is designated Urban, with a required shoreline buffer width of 50 feet measured from the Ordinary High-Water Mark (OHWM).

Proposed project activities within the shoreline jurisdiction and buffer include trail construction, grading, concrete removal, and invasive vegetation removal. Work will be conducted within the White River riparian buffer but will avoid removal of any existing trees. Impacts within the shoreline buffer are summarized in Table 2 below.

Table 2. Shoreline Buffer Impact Areas.

Impact Type	Description	Area (SF)
Permanent	Trail Construction	Approx. 1,370 SF
Permanent	Concrete Removal	Approx. 1,515 SF
Temporary	Grading (Cut)	Approx. 655 SF
Temporary	Invasive Vegetation Removal	Approx. 8,270 SF
Total		11,810 SF (0.27 acre)

In total, project activities within the 50-ft shoreline buffer area account for approximately 11,810 SF (0.27 acre) of impact. Please refer to Figure 1 for reference.

5.2 Floodplain and Floodway Impacts

A portion of the project area is located within the FEMA-designated 100-year floodplain and regulated floodway of the White River. Project elements within these areas include sections of the shared-use trail and removal of existing concrete slabs within the riparian corridor.

Impacts within the floodplain and floodway are summarized in Table 3 below.

Table 3. Floodplain and Floodway Impact Areas.

Impact Type	Floodway (SF)	100-Year Floodplain (SF)*	Floodplain Only (Outside Floodway) (SF)
Trail Construction	Approx. 2,110 SF	Approx. 9,600 SF	Approx. 7,490 SF
Cut/Fill (Grading)	Approx. 187 SF	Approx. 2,750 SF	Approx. 2,563 SF
*Floodplain values include areas within the floodway.			

Please refer to Figure 2 and 3 for reference.

The project has been designed to minimize impacts to floodplain function. The majority of the trail will be constructed at or near existing grade, and approximately 140 feet of the trail will be supported on a pin pile bridge, allowing floodwaters to pass beneath the structure without reducing floodplain storage or conveyance. Concrete slab removal within the floodplain will reduce existing impervious surface and improve floodplain infiltration.

Overall, grading within the floodplain and floodway is limited, and the project does not introduce significant fill within the floodway. As such, the project is not expected to alter floodplain elevations, storage capacity, or hydraulic conveyance of the White River floodplain.

5.3 Shoreline Stabilization Consistency (Retaining Walls and Pin Pile Bridge)

The proposed project includes limited structural elements within the shoreline buffer, including several retaining walls and a short segment of trail supported on a pin pile bridge. These elements have been designed to comply with the shoreline stabilization policies and regulations contained in the City of Sumner Shoreline Master Program (SMP) Section 7 – Shoreline Stabilization Regulations.

Consistent with SMP policy direction to avoid or minimize shoreline stabilization where feasible, the project design limits structural features to only those areas necessary to safely construct the trail while minimizing vegetation clearing and grading within the riparian buffer. The retaining walls are not proposed for shoreline armoring or erosion control of the White River bank. Instead, they are located landwards of the OHWM and are used to stabilize cut slopes and support the trail alignment in order to reduce the overall footprint of grading and vegetation disturbance within the shoreline buffer.

Where the trail crosses a constrained portion of the corridor near Bridge Street, a pin pile bridge structure is proposed. This design avoids the need for additional fill or bank modification and allows floodwaters and natural shoreline processes to continue beneath the structure. The bridge therefore minimizes disturbance to the riparian corridor and floodplain compared to a traditional fill embankment trail design.

Through use of limited retaining walls, the elevated pin pile bridge section, and restoration of riparian vegetation, the project is designed to minimize impacts to shoreline ecological functions while maintaining public access and trail connectivity along the White River corridor. The project therefore remains consistent with the shoreline stabilization policies and regulations of the City of Sumner SMP.

6. Minimization & Mitigation Measures

6.1 Minimization/Avoidance for Temporary Impacts

During the course of the entire project, standard best management practices (BMPs) and other minimization measures will be implemented prior to, and maintained throughout, construction in order to avoid or reduce impact to fish and wildlife habitat. These BMPs and minimization measures include, but are not limited to:

- Temporary Erosion and Sedimentation (TESC) plan includes installation of appropriate sediment and erosion control devices where appropriate, including:
 - Silt fence
 - Straw wattle
 - Catch basin filter inlet protection
 - Covering unworked and unstabilized areas
 - Hydroseeding
 - Stabilized construction entrances
- Limiting ground disturbance to the minimum amount necessary and marking clearing limits with high visibility fencing
- Implementation of a Spill Prevention, Control and Countermeasures (SPCC) plan to ensure that all potential contaminants are properly contained and handled
- Implementation of a Stormwater Pollution Prevention Plan (SWPPP) and monitoring requirements in accordance with the NPDES permit
- Preventing equipment from entering the water
- Containing and properly disposing of all waste materials in accordance with federal, state, and local laws

6.2 Mitigation for Impacts

Planting of native riparian vegetation within the White River riparian habitat (fish and wildlife habitat) is proposed to mitigate clearing and construction activities occurring within the 50-foot shoreline buffer measured from the OHWM. Although the proposed project results in approximately 11,810 SF (0.27 acre) of combined temporary and permanent buffer impacts, the previously submitted Biological Assessment (BA) dated August 2022 identified mitigation areas totaling 0.52 acres of riparian planting and an additional 0.19 acres of invasive removal and enhancement. This Habitat Management and Mitigation Plan is consistent with and will implement the mitigation acreage identified in the submitted BA. All existing trees within the riparian buffer will be protected during construction.

Mitigation planting will occur in two primary areas (see Figure 1):

1) Trail and Concrete Removal Impact Mitigation Area:

This area addresses temporary and permanent impacts associated with trail construction, grading (cut and fill), and concrete removal. As part of site preparation, invasive and noxious weeds will be cleared from the project area. Approximately 0.52 acres of riparian habitat will be planted with native species identified in Table 1, including installation of approximately 160 native trees. Planting will occur in the fall or early spring following trail construction.

2) Invasive Removal and Conifer Planting Area:

In addition to the riparian planting described above, approximately 0.19 acres of invasive species north of Bridge Street, between the trail and the OHWM, will be selectively cleared to improve habitat conditions. Planting pockets will be created for installation of conifer trees, primarily western red cedar. Red cedar trees greater than five feet in height will be planted at 15 feet on center. No additional ground disturbance will occur in this area.

In total, approximately 0.71 acres of riparian planting will occur. Planting will take place in the fall or early spring following construction. Monitoring and watering will occur for the first eight months after planting, followed by a 10-year monitoring plan with a performance goal of achieving 80 percent native riparian cover. The 10-year monitoring period is included to comply with conditions of the project’s Section 7 consultation under the Endangered Species Act. Table 1 identifies the proposed native species to be installed adjacent to the trail.

Table 2. Proposed buffer plantings

Scientific Name	Common Name	Planting Density	Size of Plants	Percentage in Plant Strata
Trees:				
<i>Populus balsamifera</i>	Black Cottonwood	12’ on center	1 gallon	20
<i>Thuja plicata</i>	Western Red Cedar	12’ on center	1 gallon	20
<i>Tsuga heterophylla</i>	Western Hemlock	12’ on center	1 gallon	20
<i>Alnus rubra</i>	Red Alder	12’ on center	1 gallon	20
<i>Pseudotsuga menziesii</i>	Douglas Fir	12’ on center	1 gallon	20
Shrubs:				
<i>Symphoricarpos albus</i>	Common Snowberry	4’ on center	1 gallon	20
<i>Acer circinatum</i>	Vine Maple	4’ on center	1 gallon	20
<i>Holodiscus discolor</i>	Oceanspray	4’ on center	1 gallon	20
<i>Salix sitchensis</i>	Thimbleberry	4’ on center	1 gallon	20
<i>Oemleria cerasiformis</i>	Indian Plum	4’ on center	1 gallon	20

6.3 Shoreline Stabilization Compliance

The project design and mitigation measures are also consistent with the shoreline stabilization policies and regulations of the City of Sumner SMP Section – Shoreline Stabilization Regulations. Structural elements within the shoreline buffer, including retaining walls and the pin pile bridge, are limited to the minimum necessary to support the trail alignment and reduce grading and vegetation disturbance. These structures are located landward of the OHWM and are not intended to function as shoreline armoring. Riparian restoration planting and invasive species removal described above will further mitigate temporary and permanent disturbances and support long-term improvement of shoreline ecological functions.

6.4 Monitoring and Maintenance

All restoration areas will be monitored for a period of ten years, or until success standards have been met. This is in accordance with the requirements of City of Sumner Shoreline Master Program (June 2020). Upon project completion, an “As Built” report will be submitted to the City of Sumner documenting the final design of the restoration areas. This report will include both the proposed planting plan and the “As Built” planting plan showing densities, sizes, and locations of planted vegetation as well as which nurseries supplied the plants, the time of plantings, locations of reference points established as photo points, and sampling plot locations. It will also provide an analysis of any changes to the mitigation plan that occurred during construction.

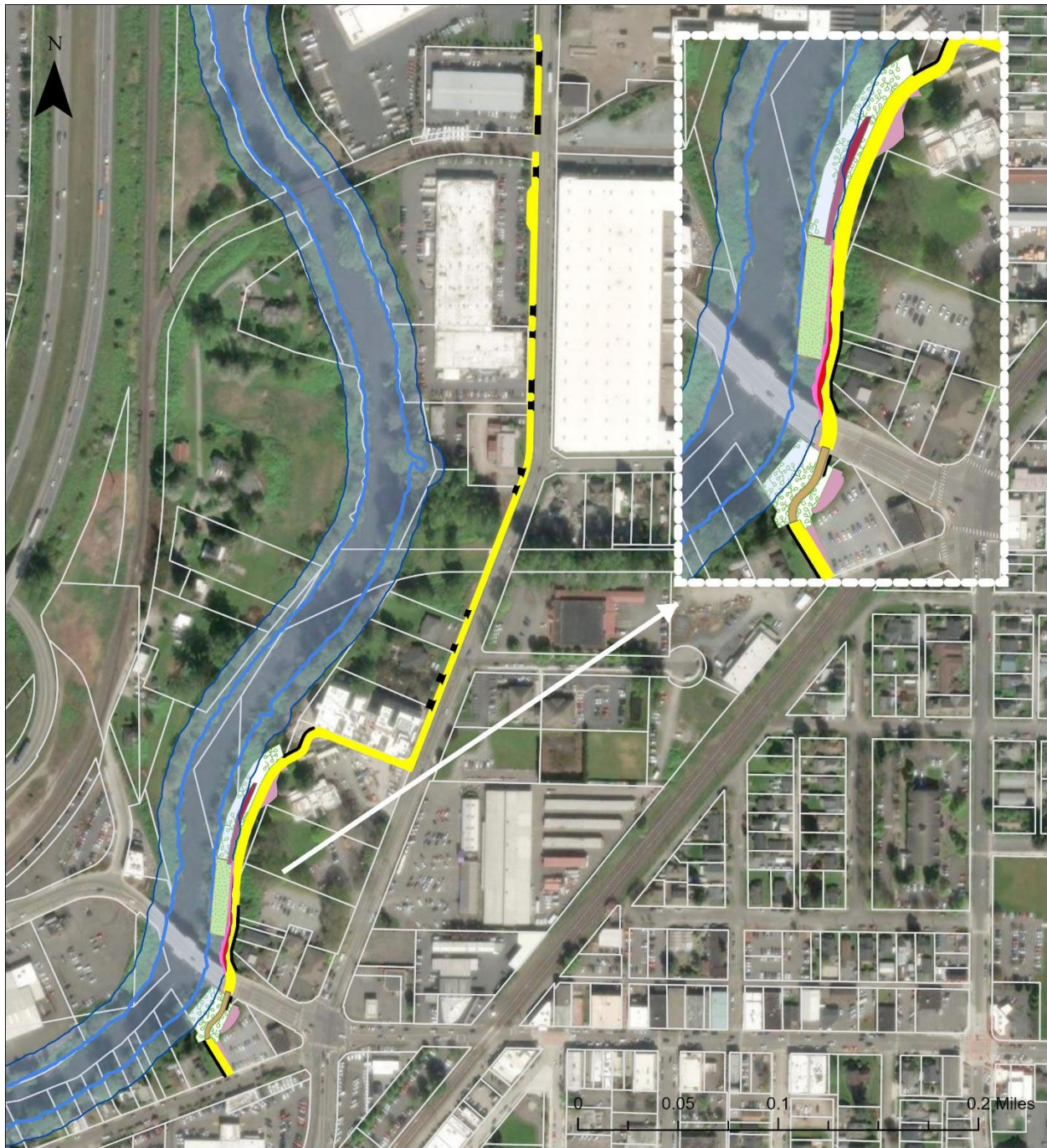
Approval of the “As Built” report will establish the beginning of the monitoring period. A site visit will be made the summer after planting and survival rates of plantings will be assessed. Formal monitoring procedures will be performed in years one, two, three, five, seven and ten after initial acceptance of the “As Built” report. Successful mitigation will be measured by attainment of the performance standards described in this Habitat Management and Monitoring Plan document.

The variables that will be measured during each monitoring year include stem density of woody plants and percent cover of herbaceous, shrub, and tree strata within each established sampling plot. Photo points will also be established to create a representative view of the entire planted restoration area. A total of eight photo points will be established, with photos taken in each cardinal direction (N, S, E, and W) during each monitoring year. These photos will be submitted with each monitoring report.

Sampling plots will be randomly established throughout the restoration areas. These sampling plots will be 10 feet by 10 feet square plots demarcated in the field with a steel post as the center of the plot. Some of the plot centers will likely be used as photo points. Formal monitoring will be performed during the growing season in years one, two, three, five, seven, and ten after approval of the “As Built” report. Monitoring reports will be submitted to the City of Sumner before the end of each monitoring year.

The City of Sumner Department of Public Works will be responsible for the long-term maintenance of the restoration site after the monitoring period has concluded. Site inspections will occur at a minimum of every eight (8) years, consistent with the City’s periodic Growth Management Act (GMA) comprehensive plan update cycle. Management/maintenance activities will include inspection of mitigation site planting areas to assess plant survival with replacement as necessary. Pierce County listed noxious weeds will be assessed and controlled as necessary. Trash will be removed, vandalism repaired, and signage/fencing repaired or replaced as necessary. Long-term maintenance and management will be funded by the City of Sumner.

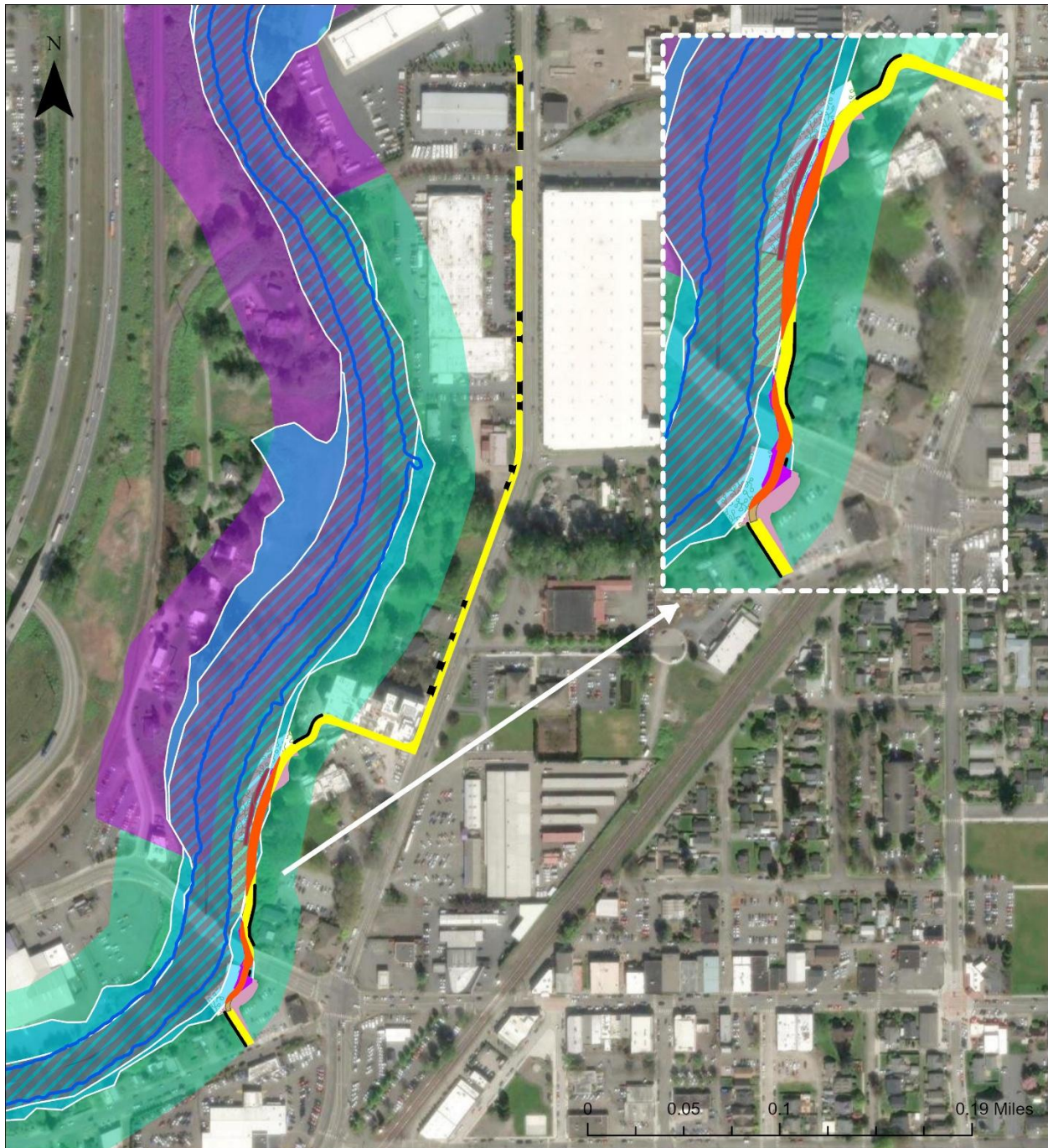
Figure 1. Project Elements within White River Buffer



Legend	
■ Trail in Buffer (1,370 SF of Perm Impact)	■ Cut/Fill
■ Cut/Fill in Buffer (655 SF of Temp Impact)	■ Trail with Shoulders
■ Concrete Removal (1,515 SF of Perm Impact in Buffer)	■ Trail Bridge
■ Proposed Planting Area (Mitigation Area - total 0.52 ac)	■ White River OHWM
■ Weed Removal & Conifer Replant (Mitigation Area 2 - 0.19 ac)	■ Parcels_2025
■ White River - 50 ft Buffer	■ Driveway Connections
— Soldier Pile Walls	

**Fryar Avenue Shared
 Use Trail Project**
 City of Sumner, Pierce County, WA
 Sections 42, 48, 49
 Township 20N, Ranger 4E
 April 10, 2026

Figure 2. Shoreline Elements

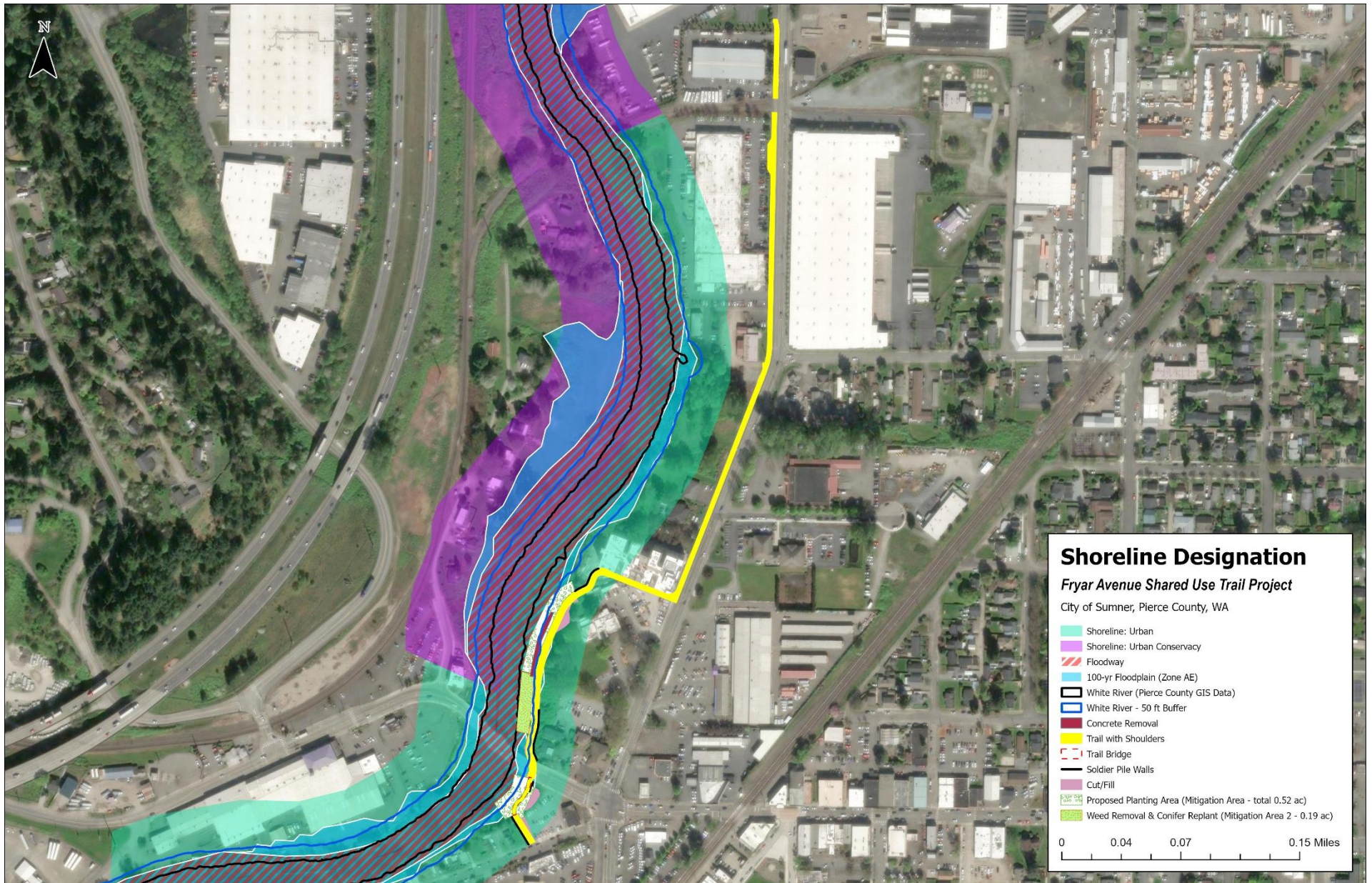


Legend

- | | |
|--|------------------------------|
| Concrete Removal (1,515 SF of Perm Impact in Buffer) | Driveway Connections |
| Proposed Planting Area (Mitigation Area - total 0.52 ac) | Soldier Pile Walls |
| Weed Removal & Conifer Replant (Mitigation Area 2 - 0.19 ac) | White River OHWM |
| Trail with Shoulders | Floodway |
| Trail within 100-yr Floodplain | 100-yr Floodplain (Zone AE) |
| Cut/Fill | Shoreline: Urban Conservancy |
| Cut/Fill within 100-yr Floodplain | Shoreline: Urban |
| Trail Bridge | |

**Fryar Avenue Shared
Use Trail Project**
City of Sumner, Pierce County, WA
Sections 42, 48, 49
Township 20N, Ranger 4E
March 17, 2026

Figure 3. SMP Shoreline Designation and Buffer



This page intentionally left blank for printing purposes.

7. Performance Standards and Contingency Plan

7.1 Performance Standards

The following performance standards provide quantifiable standards to measure mitigation success. Mitigation will be deemed successful when the restoration areas exhibit all of the Year 10 performance standards (success standards) below. The contractor will be responsible for replacing any dead plants during these first two years. Herbaceous cover will also have attained complete coverage within one growing season. If not, any areas of bare soil will be reseeded with appropriate native species. The following performance standards will be met during each respective monitoring year:

Year 1 Performance Standards

- 100% plant survival
- 100% coverage of herbaceous groundcover
- Less than 20% aerial coverage of all noxious weeds, 0% coverage of Class A noxious weeds
- Installed habitat features secure and functioning

Year 2 Performance Standards

- 100% plant survival
- Less than 20% aerial coverage of noxious weeds, 0% coverage of Class A noxious weeds
- Installed habitat features secure and functioning

Year 3 Performance Standards

- 5 woody stems per 100 sq. ft.
- Less than 20% aerial coverage of noxious weeds, 0% coverage of Class A noxious weeds
- Installed habitat features secure and functioning

Year 5 Performance Standards

- 35% aerial coverage of woody plants (trees/shrubs)
- Less than 20% aerial coverage of noxious weeds, 0% coverage of Class A noxious weeds
- Installed habitat features secure and functioning

Year 7 Performance Standards

- 50% aerial coverage of woody plants (trees/shrubs)
- Less than 20% aerial coverage of noxious weeds, 0% coverage of Class A noxious weeds
- Installed habitat features secure and functioning

Year 10 Performance Standards/Success Standards

- 80% aerial coverage of woody plants (trees/shrubs)
- Less than 20% aerial coverage of noxious weeds, 0% coverage of Class A noxious weeds
- Installed habitat features secure and functioning

7.2 Contingency Plan

The following contingency actions may occur if deemed necessary to promote successful development of the site:

- 1) Failure to meet a 100 percent survival rate at any of the aforementioned sites within two years after planting will result in the following contingency actions:
 - Replanting will be conducted to replace all dead woody (tree/shrub) plantings.
- 2) Failure to meet the aforementioned aerial cover or stem density performance measures in a given year within planted areas will result in the following contingency actions:
 - A review of vegetation management will be conducted with the resource agencies and the City of Sumner to determine a corrective course of action if the aerial coverage or stem density performance measures are not met.
- 3) Failure to meet non-native invasive species performance measures and standards in a given year at a given site, including the 25 ft. vegetation enhancement areas, will result in the following contingency actions:
 - The area in question will receive biological and/or mechanical weed control and if deemed necessary, chemical applications will be made by licensed applicators with a valid aquatic endorsement in accordance with Department of Ecology guidelines.
- 4) Significant mortality due to herbivory will result in the following contingency action:
 - Herbivory guards will be added to any new plantings.

Any revisions to the mitigation plan will be coordinated with and approved by the City of Sumner Planning Department prior to implementation.

8. Conclusion

The Fryar Avenue Shared Use Trail Project is located adjacent to the White River, which is designated Urban under the City of Sumner Shoreline Master Program (June 2020) and subject to a 50-foot shoreline buffer measured from the Ordinary High-Water Mark (OHWM). Portions of the project are also located within the FEMA-designated 100-year floodplain and regulated floodway.

Certain proposed project activities will occur within the shoreline buffer, however, it will avoid removal of existing trees and will not include in-water work. Total impacts within the shoreline buffer are approximately **11,810 SF (0.27 acre)**, consisting of:

- **Permanent impacts:** Approximately **2,885 square feet**, including trail construction (1,370 SF) and concrete removal (1,515 SF).
- **Temporary impacts:** Approximately **8,925 square feet**, including grading (655 SF) and invasive vegetation removal (8,270 SF).

Limited work will also occur within the floodplain and floodway; however, the project is designed to minimize impacts to floodplain function by constructing the trail primarily at existing grade and incorporating a pin pile bridge to maintain hydraulic conveyance. No significant fill is proposed within the floodway, and the project is not expected to alter floodplain elevations or storage capacity.

All temporary disturbance areas will be restored, and permanent impacts will be mitigated through native riparian planting, invasive species removal, and a 10-year monitoring program with performance standards designed to achieve 80 percent native woody vegetation cover. Structural elements within the shoreline buffer, including retaining walls and the pin pile bridge, have been minimized to the extent practicable, are located landward of the OHWM, and are not intended to function as shoreline armoring.

While the proposed project is anticipated to have short-term impacts on fish and wildlife habitat adjacent to the White River, the minimization and mitigation strategies presented in this Habitat Management and Mitigation Plan are expected to result in long-term improvements to riparian habitat within and adjacent to the project area. Listed fish species may be present in the White River during construction; however, no in-water work is proposed. There are no sensitive terrestrial species known to occupy the area within the project site, and no wetlands are present within the immediate vicinity.

Appropriate temporary sediment and erosion control BMPs and construction measures will be implemented and maintained throughout construction to prevent impacts to the White River. Overall habitat value will be enhanced through installation of site-appropriate native trees and shrubs, establishment of native groundcover, and removal of noxious and invasive species.

9. References

- City of Sumner. 2019. City of Sumner Zoning Map. Accessed February 20, 2026. Retrieved from: https://sumnerwa.gov/wp-content/uploads/2019/08/Zoning_Map_Sumner_08-19.pdf.
- City of Sumner. 2020. Shoreline Master Program. Accessed February 20, 2026. Retrieved from: <https://sumnerwa.gov/wp-content/uploads/2020/08/Shoreline-Master-Program-Final-2020.pdf>
- EPA (Environmental Protection Agency). 2010. Level III and IV Ecoregions of Washington.
- IPaC Tool and Species List. U.S. Fish & Wildlife Service. (n.d.). Accessed February 20, 2026. <https://ipac.ecosphere.fws.gov/location/index>
- Fahnestock, R. K. 1963. Morphology and Hydrology of a Glacial Stream—White River, Mount Rainier Washington. U.S. Department of the Interior Geological Survey. U.S. Government Printing Office. Washington D.C. Retrieved from: <https://pubs.usgs.gov/pp/0422a/report.pdf>.
- FEMA (Federal Emergency Management Agency). 2017. FEMA's National Flood Hazard Layer (NFHL) Viewer. Accessed February 20, 2026. <https://hazardsfema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd&extent=-122.46504175665238,48.94474640235287,-122.4546562433476,48.9482695555002>.
- Franklin, J.F. and C.T. Dyrness. 1973. Natural Vegetation of Oregon and Washington. Oregon State University Press, Corvallis, OR. Retrieved from: <http://www.fsl.orst.edu/rna/Documents/publications/Natural%20vegetation%20of%20Oregon%20and%20Washington%201988.pdf>.
- Kerwin, J. 1999. Salmon Habitat Limiting Factors Report for the Puyallup River Basin (Water Resource Inventory Area 10). Washington Conservation Commission. Olympia, WA. July.
- Priority Habitats and Species on the Web. Washington Department of Fish & Wildlife. (n.d.). Accessed February 20, 2026. <https://geodataservices.wdfw.wa.gov/hp/phs/>
- Species and Habitat App. NOAA Fisheries. (2024). Accessed February 20, 2026. <https://maps.fisheries.noaa.gov/portal/apps/webappviewer/index.html?id=e8311ceaa4354de290fb1c456cd86a7f>
- USDA (United States Department of Agriculture). 2019. Web Soil Survey. Last updated July 31. Accessed February 20, 2026. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- WSDOE. 2016a. Focus on Water Availability: Puyallup-White Watershed, WRIA 10. Southwest Regional Office, Water Resources Program. Olympia, WA. November. Retrieved from: <https://fortress.wa.gov/ecy/publications/documents/1111015.pdf>.
- WSDOE. 2016b. Washington State Water Quality Atlas. Accessed February 20, 2026. <https://fortress.wa.gov/ecy/waterqualityatlas/StartPage.aspx>.