Exhibit 12.A.10

BIOLOGICAL EVALUATION

COSTCO WAREHOUSE & RELATED INFRASTRUCTURE IMPROVEMENTS

Lake Stevens, Washington

2404 S Lake Stevens Road
Lake Stevens, Washington 98258

Prepared for:
Costco Wholesale
999 Lake Drive
Issaquah, WA 98027

Prepared by:
Cedarock Consultants, Inc.
19609 244th Avenue NE
Woodinville, Washington 98077

August 13, 2019

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

1. Proposed Activity

Costco is partnering with the City of Lake Stevens, for their mutual benefit, to develop the southern edge of the city. Costco will build a new warehouse in the area and provide some of the needed upfront funding and infrastructure improvements the City needs to encourage growth in this area. Development will include road upgrades, fish passage improvements, and a stormwater facility.

Under the proposed action approximately 25-acres of mixed second growth coniferous/deciduous forest intermixed with a few houses and an old borrow pit will be cleared, and 1.83 acres of wetland will be filled. Providing a new round-about as part of the inter-related infrastructure improvements will require lengthening a road crossing over a presumed fish-bearing stream.

As mitigation, potentially fish-bearing wetlands will be expanded on-site, six fish passage blockages will be removed, and credits will be purchased from the Snohomish County Habitat Bank, an approved mitigation bank for the area of the site. Stormwater runoff from the site will be captured and detained onsite using the most current Washington Department of Ecology (DOE) stormwater manual.

With no federally listed species known to be found within the Action Area (>1 mile), the project is expected to have **No Effect** on habitat or species listed under the ESA. Presumed EFH for coho is present nearby and may be adversely affected.

2. Drawings: Construction drawings and reports relied on for this analysis were provided with the JARPA application.

3. Date: August 13, 2019

4. Applicant: Costco Wholesale
Attn: Peter Kahn
999 Lake Drive
Issaquah, WA 980271

5. Agent: Carl Hadley
Cedarock Consultants, Inc.
19609 244th Avenue NE
Woodinville, Washington 98077

6. Project Name: Costco Warehouse and Infrastructure Improvements

7. Location of Activity

Street Address: 2404 S Lake Stevens Road, Lake Stevens, Washington
Section: Sec. 25 Township: 29N Range: 05E
Latitude: 47.975N Longitude: -122.1059W
Waterbody: Mosher Creek / Unnamed tributary to Pilchuck River
County: Snohomish State: Washington

8. Description of Work

The following actions will affect the natural environment:

- Clear and grade approximately 25-acres of mixed second-growth forest.
- Fill approximately 79,944 sf (1.83 acres) of wetland.
- Replace 60-feet of impassable 26-inch CMP culvert with new 110-foot long fish-passable box culvert to include new stream channel meeting WDFW Stream Simulation criteria[1]. Includes permanently culverting 50 linear feet (lf) of manmade presumed fish-bearing channel (Pilchuck River tributary) and slightly moving 35 lf of the same manmade channel.
- Permanently remove three blocking culverts on Mosher Creek, and replace three additional blocking culverts with fish-passable structures.

9. Construction Techniques

A. Construction sequencing and timing of each stage: The project as a whole will take approximately two years to complete and will occur as a single phase. The stream and wetland work will take approximately two months to complete and will occur during the summer in-water work window specified by WDFW (June 15 to October 15). All waterbodies are expected to be naturally dry during this period.

B. Site preparation: Existing paved and unpaved roads will be used for access, staging, and stockpiling. Site preparation will start with TESC as appropriate before clearing and grading commences. An existing stormwater pond is available immediately adjacent to the site for use as the new regional facility is developed.

C. Equipment to be used: Construction equipment will consist of normal dirt moving and material delivery trucks. Equipment and material will be delivered to the site on existing roads.

D. Construction materials to be used: Only clean rounded river rock meeting WDFW size specifications, and clean topsoil from local quarries will be used in and near the streams.

E. Work corridor: The work area consists of the approximately 35-acre relatively flat and partially forested site. The area has a very low grade dropping only a couple of feet across the site.

F. Staging areas and equipment wash outs: All equipment and material will be staged on the site greater than 100-feet from streams. No equipment will be washed on the site unless wash water is completely contained.

G. Stockpiling areas: Material will be stockpiled on the upland site.

H. Running of equipment during construction: All work will be done during standard daytime hours.

[1] Cedarock. 2019. Recommended Culvert Sizing Analysis, Lake Stevens Road at SR-9. Consultant memo to Peter Kahn at Costco dated March 26, 2019. 6pp

I. Soil stabilization needs / techniques: All disturbed areas will be seeded with a TESC mix and otherwise protected per requirements of the most current DOE stormwater manual.

J. Clean-up and re-vegetation: All disturbed areas to remain within sensitive areas or their buffers will be replanted/seeded as needed to help prevent erosion and increase habitat suitability.

K. Storm water controls / management: TESC per current DOE stormwater manual.

L. Source location of any fill used: Fill for the wetlands will come mainly from the project site. Some clean material may be brought in from local quarries if needed.

M. Location of any spoil disposal: All spoils will be reused on the site or trucked to local quarries for disposal.

10. Action Area

The action area reviewed for potential impacts to listed species includes the project work area described above, the Mosher Creek downstream for one mile, the Pilchuck River tributary downstream for one mile, and terrestrial uplands within one mile of the site.

The project site is located on the divide between the Mosher Creek sub-basin to the west, and the Pilchuck River sub-basin to the east (Figure 1). Both basins are in the lower Snohomish River Watershed (WRIA 7).

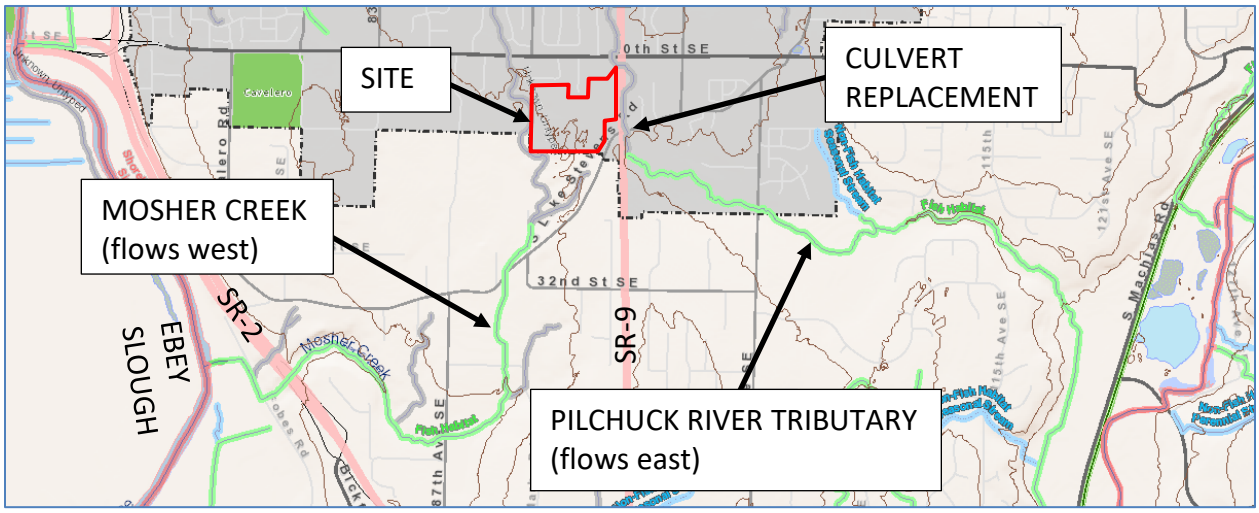


Figure 1. Project position relative to waterbodies (green streamlines are mapped fish use; it is likely that fish habitat extends further upslope into the site).

A small seasonal headwater tributary to Mosher Creek is found on the site and it is likely that most of the site drains in that direction either through the wetland system or via groundwater.

The on-site creek is not known to be fish-bearing[2,3,4]. The nearest mapped fish-bearing waters are located approximately 0.4 miles downstream. However, the creek and a tributary to the south meet presumption criteria for fish use and will be treated as such for protection standards. The nearest salmon (coho and presumably bull trout) have been mapped starting around 1.7 miles downstream. Tulalip Fisheries biologists report seeing coho juveniles much closer to the site than show up on current mapping[5]. Chinook salmon and steelhead are found more than 2 miles downstream in Ebey Slough.

The Pilchuck River tributary is not located on-site but some surface water may drain via piped systems in this direction, and an inter-related road project will replace a culvert on the tributary. The stream is seasonal and not known to be fish-bearing. However, the creek meets presumption criteria for fish use and will be treated as such for protection standards. The nearest known fish-bearing waters are located approximately 500 feet downstream over a 13 percent grade. However, the creek meets presumption criteria for fish use and will be treated as such for protection standards. The nearest known salmon (coho and presumably bull trout) have been mapped starting around 1.1 miles downstream. Chinook salmon and steelhead are found more than 3 miles downstream in the Pilchuck River.

11. Species Information:

Information gathered from the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), WDFW, and Snohomish County databases indicates six federally protected species may be present within the Action Area (Table 1). Species descriptions are found in the individual listing documents, on the NMFS and USFWS web sites. The potential for presence within the Action Area was summarized from WDFW and Snohomish County documents.

Table 1
Federal Species of Concern

Common Name	Scientific Name	Federal Status
Bull trout	*Salvelinus confluentus*	Threatened
Chinook salmon	*Oncorhynchus tshawytscha*	Threatened, EFH*
Steelhead	*Oncorhynchus mykiss*	Threatened
Dolly Varden	*Salvelinus malma*	Proposed
Coho salmon	*Oncorhynchus kisutch*	EFH*
Pink salmon	*Oncorhynchus gorbuscha*	EFH*

[2] WDFW. 2019. Salmonscape. http://apps.wdfw.wa.gov/salmonscape/
[3] WDFW. 2019. PHS. Priority habitat and species database. http://apps.wdfw.wa.gov/phsontheweb/
[4] Snohomish County. 2019. PDS Map Portal, critical areas layer, fish distribution.
[5] Tulalip Tribe. 2019. Comment Letter to Melissa Place, City of Lake Stevens, from Zach Lamebull. May 6, 2019.

* Essential Fish Habitat designated by the Pacific Fisheries Management Council

Bull Trout / Dolly Varden

Native char do not spawn or rear anywhere within two miles of the site. However, they may on occasion forage in small headwater streams and are often temporary visitors in places where juvenile coho are found. Char are not believed to be present in the Action Area[2, 3, 4] and this area has not been listed as Critical Habitat for bull trout.

Chinook and Steelhead

The nearest documented population of both Chinook salmon and steelhead is located in Ebey Slough starting about 2.0 miles downstream of the project site[2, 3]. Critical Habitat has not been identified for either species within the Action Area.

Coho Salmon

Coho salmon are believed to use the Pilchuck River tributary to within about 0.25 miles downstream of the site[2]. Other databases[3,4] put them further downstream, about 1.1 miles. Under existing conditions, they would not be able to reach the culvert replacement site due to the very small size of the channel and 13 percent grade. However, future conditions may improve and coho salmon access through the culvert will be provided.

Tulalip fisheries biologists report seeing coho juveniles within a few hundred yards downstream of the site in the Mosher Creek basin. Blocking culverts in this vicinity may limit their ability to move further upstream.

Pink Salmon

Pink salmon are not found within two miles of the site.

12. Existing Environmental Conditions:

Photographs of the work site and surrounding area are provided in recent Critical Areas reports[6, 7].

A. Riparian vegetation and habitat features: The only riparian vegetation that will be disturbed was recently planted when the Pilchuck River tributary was moved to its current location due to road widening a few years ago. The riparian buffer on Mosher Creek will be preserved. No old growth habitat is present on the site or in the vicinity.

B. Aquatic substrate and vegetation: Aquatic substrates consist primarily of deep silts (Mosher Creek) and commercial gravel where the channel was created (Pilchuck River).

[6] Watershed Company. 2017. Wetland and stream delineation report, 24th Street SE extension. Consultant report prepared for City of Lake Stevens. Sept. 7, 2017. 133pp.

[7] Sewall Wetland Consulting. 2019. Costco Wholesale Lake Stevens – Critical Areas Report. Feb. 18, 2019.

C. Surrounding land/water uses: The subject property is zoned commercial. Adjacent properties are a mix of commercial and residential.

D. Level of development: Mix of moderate to low density housing and commercial uses.

E. Water quality: Section 303(d) of the 1972 Federal Clean Water Act (CWA) requires states to identify and list threatened and impaired water bodies. There are no listed waterbodies within the Action Area[8]

F. Distance to nearest bull trout spawning / foraging / overwintering areas: The nearest documented bull trout riverine habitat is more than 20 miles away[9].

G. Is the project located within designated / proposed bull trout critical habitat? No

H. Is the project located within designated / proposed Pacific salmon critical habitat? No, there are no listed salmon-bearing streams within the Action Area.

I. Is the project located within designated steelhead critical habitat? No.

J. Is any work proposed within a floodplain? No.

13. Effects Analysis

This section describes potential direct, indirect, and interrelated-interdependent effects of the proposed action on fish species listed under the federal ESA. Factors related to the proposed action potentially having an influence on properly functioning habitat conditions include: (1) direct physical loss or degradation of aquatic habitat features resulting from work within aquatic habitat or the adjacent riparian area; (2) the change in delivery or movement of sediment; (3) impacts to the functionality of riparian zones; (4) effects on water quality (including fine sediment); (5) changes in flood storage volumes or habitat associated with floodplains; 6) impacts to prey species availability; 7) construction related disturbances.

Direct Impacts

In-water work will be conducted to fill the wetlands and replace four existing culverts. All of the work can be conducted when the watercourses are naturally dry. None of this work will occur within more than a mile of ESA listed habitat or critical areas.

Sediment Supply and Movement

There are no significant sources of sediment (e.g. feeder bluffs) or potential for transport within the very low gradient work areas. The proposed work will not have any adverse effect on sediment supply. Removal of some of the blocking culverts will eliminate perched culverts that partially block sediment movement under existing conditions. Sediment movement in the affected channel reaches will be restored to a natural condition.

[8] Washington Department of Ecology. 2019. Water quality atlas. https://fortress.wa.gov/ecy/waterqualityatlas/
[9] Washington State Department of Fish and Wildlife. 2019. Priority habitat and species database search.

Riparian Function

The project will preserve and protect all riparian buffers on-site under the assumption the streams are fish-bearing. Where the culvert replacement projects occur, the buffers will be restored and replanted with native species.

Water Quality

The proposed action will disturb small areas of watercourse as manmade features and wetlands are filled and removed. All work will be completed in the dry. This type of work has little potential to create turbidity issues. Standard erosion and sedimentation best management construction practices from the current DOE stormwater manual will be implemented and the work will occur in a flat, well-drained area of sandy soils.

Impact mitigation/minimization measures such as timing restrictions, TESC, use of clean equipment, and other measures required to avoid impacts to water quality are described in Section 15. With appropriate use of BMPs, close supervision, and the most current stormwater manuals no significant adverse effects on water quality are expected during construction or over the long-term use of the site. With the nearest listed species being found outside of the Action Area, the project is expected to have no adverse water quality effects on these species.

Water Quantity/ Floodplain Storage/Floodplain Habitat

There are no springs, seeps, groundwater sources, or floodplains known to occur within the work area. The project will result in a net increase of impervious surface. New stormwater management (detention) will be installed for all new impervious surface. This project is subject to the requirements in the most current DOE Storm Water Design Manual. Drainage generated from the developed site will likely be divided between maintaining hydrology to the Mosher Creek tributary, with excess directed into the public storm system.

No work is located within a 100-year floodplain mapped by FEMA. The project will have no effect on water quantity in reaches accessible to ESA species. There is no floodplain habitat on the site.

Aquatic Prey Availability

No fish use has been documented within the work area but presumed future use is possible. Prey produced by the site consists of macroinvertebrates and allochthonous material. To help avoid impacts to water quality, and therefore macroinvertebrates, all work will be completed in the dry with equipment and staging located in the upland area. Mitigation measures such as TESC, use of clean equipment, buffer enhancement, and other measures required to avoid impacts to water quality are described in Section 15. With these measures, no adverse effects to aquatic habitat for fish prey are expected.

Noise and Visual Disturbances

No work will occur within more than a mile of listed salmonid habitat. Construction noise and movement will have no effect on listed fish.

14. Primary Constituent Elements

No critical habitat for any listed species is found in the Action Area. The project will not have any effect on Primary Constituent Elements (PCEs).

15. Conservation Measures

No work is proposed within more than a mile of any listed species observations or critical habitat. Conservation measures for federally listed species consist primarily of impact avoidance. The following measures will help ensure that construction and long-term changes in land use do not lead to adverse effects on prey species, and critical habitat downstream.

Impact Minimization and Avoidance

- Streams and riparian buffers shall be protected under the assumption they are fish-bearing.
- All work below OHW, to include wetland filling, culvert replacement, and new channel construction shall take place in a dry watercourse after all flow has ceased for the season or been diverted around the job site using a temporary bypass.
- All TESC and stormwater controls shall be completed using BMPs from the current DOE Stormwater Management Manual.
- No riparian vegetation other than non-native and invasive species (e.g. reed canarygrass, Himalayan blackberry) and potentially a few native shrubs such as salmonberry shall be disturbed. Disturbed areas shall be immediately replanted with a native seed mix. New native shrubs and trees shall be planted during the next appropriate planting season (See Mitigation Plan).
- All work below OHWM shall be completed with clean equipment in good condition with no evidence of petroleum product leakage. All equipment shall be inspected, serviced, and cleaned off site as necessary to prevent leakage or any contamination of the beach or water.
- Emergency spill response and clean-up equipment shall be available on site during all work activities. At a minimum, this kit will include material for containment and clean-up of petroleum product. Telephone numbers of appropriate agency/department contacts shall be readily available on-site in case a spill should occur (e.g., Ecology, County Fire Department Hazmat Team, County Fire and Rescue).

Compensatory Mitigation

- Wetland fill within the Mosher Creek basin shall be mitigated in the immediate area such that total wetland area in the Mosher Creek headwater is equal or greater than under existing conditions.
- All other wetland impacts shall be mitigated at the Snohomish County Habitat Bank.
- The blocking culvert on the Pilchuck River tributary associated with the SR-9 round-about shall be removed and replaced with a fish-passable culvert meeting WDFW Stream Simulation criteria.
- Three blocking culverts downstream of the site in Mosher Creek shall be removed and the locations restored with an open creek channel and functional buffer.
- Three additional blocking culverts downstream in Mosher Creek shall be removed and replaced with fish-passable crossing structures meeting WDFW Stream Simulation criteria.

16. Determination of Effect

No listed species or critical habitat are present within the Action Area (more than a mile from the site). Conservation measures employed during construction are expected to protect aquatic habitat downstream where listed species (Chinook, bull trout, and steelhead) are found. Over the long-term the project will employ current stormwater management techniques as part of a regional system to protect downstream habitat. A blocking culvert will be made fish passable should fish ever reach the location.

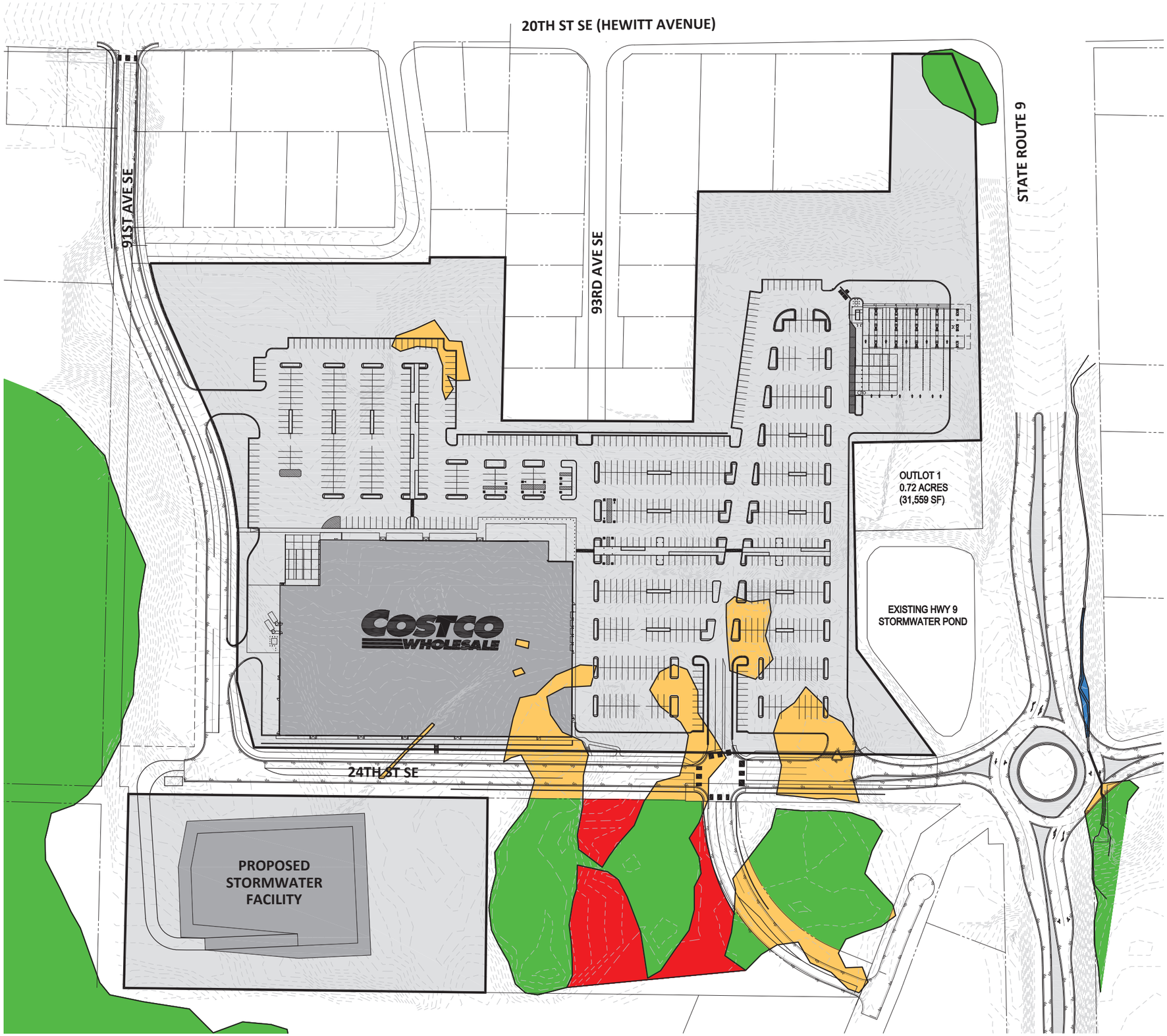
It is expected that the proposed action with listed conservation measures will have **No Effect** on Chinook salmon, steelhead, or bull trout; and will not destroy or adversely modify critical habitat for any listed species.

17. EFH Analysis

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the 1996 Sustainable Fisheries Act (SFA), an Essential Fish Habitat (EFH) evaluation of impacts is provided for construction of the store and interrelated actions. EFH is defined by the MSA as "*those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity*."

Potential EFH is found on and near the project site in the form of juvenile coho rearing and overwintering habitat. Potential impacts to habitat and proposed conservation measures to avoid, minimize, and mitigate impacts are described in Sections 13 and 15. Based on the analysis in this document, it is expected that implementation of the proposed action **Will Adversely Affect** existing EFH for salmonid species. Adverse effect as defined under the MSA "*means any impact*

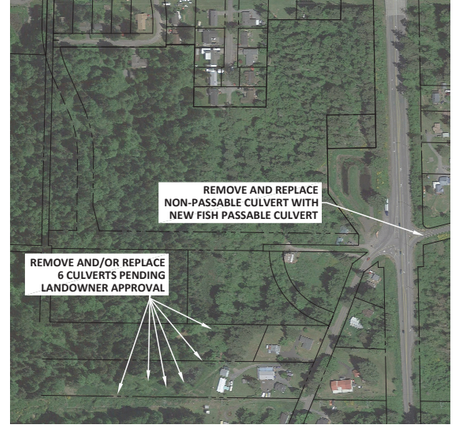
which reduces quality and/or quantity of EFH". Adverse effects will be minimized by construction measures and are expected to be mitigated by opening up additional headwater habitat including a headwater wetland currently blocked by numerous culverts. With these minimization and mitigation measures, long term adverse effects will be avoided.



WETLAND ID	TOTAL FILL	ROAD	STORE
WETLAND "A"	12,637 SF (0.29 ACRES)	12,637 SF (0.29 ACRE)	0 SF (0.00 ACRE)
WETLAND "B"	19,086 SF (0.44 ACRES)	9,284 SF (0.21 ACRE)	9,802 SF (0.22 ACRE)
WETLAND "C"	8,579 SF (0.20 ACRES)	0 SF (0.00 ACRE)	8,579 SF (0.20 ACRE)
WETLAND "D"	32,326 SF (0.74 ACRES)	14,019 SF (0.32 ACRE)	18,307 SF (0.42 ACRE)
WETLAND "F"	5,811 SF (0.13 ACRES)	0 SF (0.00 ACRE)	5,811 SF (0.13 ACRE)
WETLAND "J"	646 SF (0.02 ACRES)	333 SF (0.01 ACRE)	313 SF (0.01 ACRE)
WETLAND "Z"	859 SF (0.02ACRES)	859 SF (0.02 ACRE)	0 SF (0.00 ACRE)
	79,944 SF (1.83 ACRES)	**37,132 SF (0.85 ACRE)**	**42,812 SF (0.98 ACRE)**

1/1 **WETLAND FILL SUMMARY**

SCALE - 1:4000



1/1 **CULVERT REMOVAL/REPLACEMENT**

SCALE - 1:4000

Know what's **below.** **Call** before you dig.

N

0 500 1000

SCALE IN FEET

LEGEND:

- WETLAND RETAINED
- WETLAND TO BE FILLED (79,944 SF - 1.83 ACRES)
- WETLAND MITIGATION (42,407 SF - 0.97 ACRES)

Sewall Wetland Consulting, Inc.

PO Box 880 - Fall City, Washington 98024 Phone: 253-859-0515

999 LAKE DRIVE
ISSAQUAH, WASHINGTON 98027
(425) 313-8100

COSTCO WHOLESALE CORPORATION

PROJECT: **WETLAND MITIGATION CONCEPT - LAKE STEVENS COSTCO STORE -**

CLIENT:

NO.	DATE	NOTES

DATE: 07/10/2019
JOB NUMBER: 18-105

Mitigation Concept Plan

SHEET: 1 OF 1

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February 21, 2020

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Under the proposed action approximately 25-acres of mixed second growth coniferous/deciduous forest intermixed with a few houses and an old borrow pit will be cleared, and 1.72 acres of wetland will be filled.

As mitigation, 0.45 acres of potentially fish-bearing wetlands will be expanded on-site, six fish passage blockages will be removed, and 3.06 credits will be purchased from the Snohomish County Habitat Bank, an approved mitigation bank for the area of the site. Stormwater runoff from the site will be captured, treated, and detained onsite using the most current Washington Department of Ecology (DOE) stormwater manual.

With no federally listed species known to be found within the Action Area (>1 mile), the project is expected to have **No Effect** on habitat or species listed under the ESA. Presumed EFH for coho is present nearby and may be adversely affected.

2. Drawings: Construction drawings and reports relied on for this analysis were provided with the JARPA application.

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Latitude: 47.975N Longitude: -122.1059W
Waterbody: Mosher Creek / Unnamed tributary to Pilchuck River
County: Snohomish State: Washington

8. Description of Work

The following actions will affect the natural environment:

- Clear and grade approximately 25-acres of mixed second-growth forest.
- Fill approximately 74,903 sf (1.72 acres) of wetland.
- Create approximately 19,602 sf (0.45 acres) of wetland.
- Permanently remove two blocking culverts on Mosher Creek, and replace four additional blocking culverts with fish-passable structures.

9. Construction Techniques

A. Construction sequencing and timing of each stage: The project as a whole will take approximately two years to complete and will occur as a single phase. The stream and wetland work will take approximately two months to complete and will occur during the summer in-water work window specified by WDFW (June 15 to October 15). All waterbodies are expected to be naturally dry during this period.

B. Site preparation: Existing paved and unpaved roads will be used for access, staging, and stockpiling. Site preparation will start with TESC as appropriate before clearing and grading commences. An existing stormwater pond is available immediately adjacent to the site for use as the new regional facility is developed.

C. Equipment to be used: Construction equipment will consist of normal dirt moving and material delivery trucks. Equipment and material will be delivered to the site on existing roads.

D. Construction materials to be used: Only clean rounded river rock meeting WDFW size specifications, and clean topsoil from local quarries will be used in and near the streams.

E. Work corridor: The work area consists of the approximately 35-acre forested site. The area has a moderate grade.

F. Staging areas and equipment wash outs: All equipment and material will be staged on the site greater than 100-feet from streams. No equipment will be washed on the site unless wash water is completely contained.

G. Stockpiling areas: Material will be stockpiled on the upland site.

H. Running of equipment during construction: All work will be done during standard daytime hours.

I. Soil stabilization needs / techniques: All disturbed areas will be seeded with a TESC mix and otherwise protected per requirements of the most current DOE stormwater manual.

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10. Action Area

The action area reviewed for potential impacts to listed species includes the project work area described above, Mosher Creek downstream for one mile, and terrestrial uplands within one mile of the site.

The project site is located on the divide between the Mosher Creek sub-basin to the west, and the Pilchuck River sub-basin to the east (Figure 1). Both basins are in the lower Snohomish River Watershed (WRIA 7).

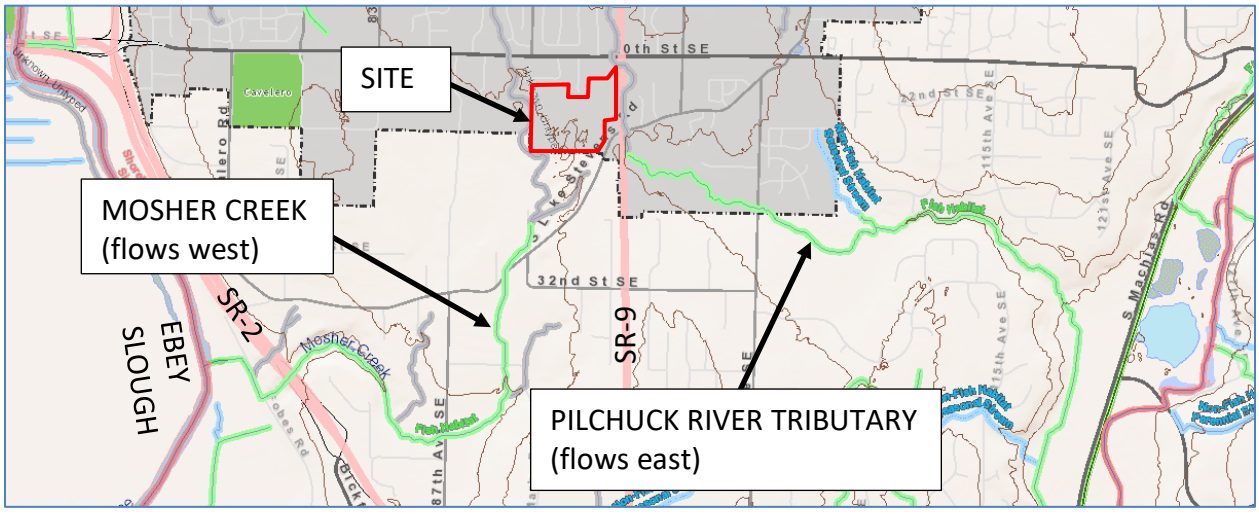

Figure 1. Project position relative to waterbodies (green streamlines are mapped fish use; it is known that fish use actually extends further upslope into the site).

A small seasonal headwater tributary to Mosher Creek is found on the site and it is likely that most of the site drains in that direction either through the wetland system or via groundwater. The on-site creek is not known to be fish-bearing[1,2,3]. The nearest mapped fish-bearing waters are located approximately 0.2 miles downstream. However, the creek and a tributary to the south meet presumption criteria for fish use and will be treated as such for protection standards. The nearest salmon (coho and presumably bull trout) have been mapped starting around 1.7

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miles downstream. Tulalip Fisheries biologists report seeing coho juveniles much closer to the site than what shows up on current mapping[4]. Chinook salmon and steelhead are found more than 2 miles downstream in Ebey Slough.

The Pilchuck River tributary is not located on-site but some minor amount of surface water from the site drains via piped systems in this direction. The drainage is seasonal and not known to be fish-bearing. However, the creek meets presumption criteria for fish use and will be treated as such for protection standards. The nearest known fish-bearing waters are located approximately 1,000 feet downstream over a 13 percent grade. The nearest known salmon (coho and presumably bull trout) have been mapped by WDFW starting around 1.1 miles downstream. Chinook salmon and steelhead are found more than 3 miles downstream in the Pilchuck River.

11. Species Information:

Information gathered from the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), WDFW, and Snohomish County databases indicates six federally protected species may be present within the Action Area (Table 1). Species descriptions are found in the individual listing documents, on the NMFS and USFWS web sites. The potential for presence within the Action Area was summarized from WDFW and Snohomish County documents.

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Chinook salmon	*Oncorhynchus tshawytscha*	Threatened, EFH*
Steelhead	*Oncorhynchus mykiss*	Threatened
Dolly Varden	*Salvelinus malma*	Proposed
Coho salmon	*Oncorhynchus kisutch*	EFH*
Pink salmon	*Oncorhynchus gorbuscha*	EFH*

* Essential Fish Habitat designated by the Pacific Fisheries Management Council

<u>Bull Trout / Dolly Varden</u>

Native char do not spawn or rear anywhere within two miles of the site. However, they may on occasion forage in small headwater streams and are often temporary visitors in places where juvenile coho are found. Char are not believed to be present in the Action Area[2, 3, 4] and this area has not been listed as Critical Habitat for bull trout.

[4] Tulalip Tribe. 2019. Comment Letter to Melissa Place, City of Lake Stevens, from Zach Lamebull. May 6, 2019.

Chinook and Steelhead

The nearest documented population of both Chinook salmon and steelhead is located in Ebey Slough starting about 2.0 miles downstream of the project site[2, 3]. Critical Habitat has not been identified for either species within the Action Area.

Coho Salmon

Coho salmon are believed to use the Pilchuck River tributary to within about 0.25 miles downstream of the site[2]. Other databases[3,4] put them further downstream, about 1.1 miles. Under existing conditions, they would not be able to reach the project site due to the very small size of the channel and 13 percent grade. However, future conditions may improve and coho salmon access through at least one blocking culvert in the intervening distance is scheduled to be improved.

Tulalip fisheries biologists report seeing coho juveniles within a few hundred yards downstream of the site in the Mosher Creek basin. Blocking culverts in this vicinity currently limit their ability to move further upstream. All six of these culverts will be removed under the proposed action.

Pink Salmon

Pink salmon are not found within two miles of the site.

12. Existing Environmental Conditions:

Photographs of the work site and surrounding area are provided in recent Critical Areas reports[5,6].

A. Riparian vegetation and habitat features: No old growth habitat is present on the site or in the vicinity. The riparian buffer on Mosher Creek will be protected and preserved. 1.41 acres of wetland buffer will be impacted as the area is converted to wetland. 0.41 acres of riparian buffer adjacent to the Mosher Creek tributary that currently consists of reed-canarygrass and Himalayan blackberry will be enhanced.

B. Aquatic substrate and vegetation: Aquatic substrates consist primarily of deep silts, sand and some gravel in places.

C. Surrounding land/water uses: The subject property is zoned commercial. Adjacent properties are a mix of commercial and residential.

D. Level of development: Mix of moderate to low density housing and commercial uses.

[5] Watershed Company. 2017. Wetland and stream delineation report, 24th Street SE extension. Consultant report prepared for City of Lake Stevens. Sept. 7, 2017. 133pp.

[6] Sewall Wetland Consulting. 2019. Costco Wholesale Lake Stevens – Critical Areas Report. Feb. 18, 2019.

E. Water quality: Section 303(d) of the 1972 Federal Clean Water Act (CWA) requires states to identify and list threatened and impaired water bodies. There are no listed waterbodies within the Action Area[7]

F. Distance to nearest bull trout spawning / foraging / overwintering areas: The nearest documented bull trout riverine habitat is more than 20 miles away[8].

G. Is the project located within designated / proposed bull trout critical habitat? No

H. Is the project located within designated / proposed Pacific salmon critical habitat? No, there are no listed salmon-bearing streams within the Action Area.

I. Is the project located within designated steelhead critical habitat? No.

J. Is any work proposed within a floodplain? No.

13. Effects Analysis

This section describes potential direct, indirect, and interrelated-interdependent effects of the proposed action on fish species listed under the federal ESA. Factors related to the proposed action potentially having an influence on properly functioning habitat conditions include: (1) direct physical loss or degradation of aquatic habitat features resulting from work within aquatic habitat or the adjacent riparian area; (2) the change in delivery or movement of sediment; (3) impacts to the functionality of riparian zones; (4) effects on water quality (including fine sediment); (5) changes in flood storage volumes or habitat associated with floodplains; 6) impacts to prey species availability; 7) construction related disturbances.

Direct Impacts

Work below ordinary high water will be conducted to fill wetlands, create new wetlands, and remove/replace six fish-blocking culverts. All work can be conducted when the watercourses are naturally dry. None of this work will occur within more than a mile of ESA listed habitat or critical areas.

Sediment Supply and Movement

There are no significant sources of sediment (e.g. feeder bluffs) or potential for transport within the very low gradient work areas. The proposed work will not have any adverse effect on sediment supply. Removal of some of the blocking culverts will eliminate perched culverts that partially block sediment movement under existing conditions. Sediment movement in the affected channel reaches will be restored to a natural condition.

[7] Washington Department of Ecology. 2019. Water quality atlas. https://fortress.wa.gov/ecy/waterqualityatlas/
[8] Washington State Department of Fish and Wildlife. 2019. Priority habitat and species database search.

Riparian Function

The project will preserve and protect all riparian buffers on-site under the assumption the streams are fish-bearing (City of Lake Stevens Type F). Where the culvert replacement projects occur, the buffers will be restored and enhanced with native species.

Water Quality

The proposed action will disturb small areas of watercourse as wetlands and manmade features (culverts) are filled and removed. All work will be completed in the dry. This type of work has little potential to create turbidity issues. Standard erosion and sedimentation best management construction practices from the current DOE stormwater manual will be implemented and the work will occur in a flat, well-drained area of sandy soils.

Impact mitigation/minimization measures such as timing restrictions, TESC, use of clean equipment, and other measures required to avoid impacts to water quality are described in Section 15. With appropriate use of BMPs, close supervision, and the most current stormwater manuals no significant adverse effects on water quality are expected during construction or over the long-term use of the site. With the nearest listed species being found outside of the Action Area, the project is expected to have no adverse water quality effects on these species.

Water Quantity/ Floodplain Storage/Floodplain Habitat

There are no springs, seeps, groundwater sources, or floodplains known to occur within the work area. The project will result in a net increase of impervious surface. New stormwater management (detention) will be installed for all new impervious surface. This project is subject to the requirements in the most current DOE Storm Water Design Manual. Drainage generated from the developed site will be divided based on a detailed analysis of existing drainage patterns per current DOE guidelines.

No work is located within a 100-year floodplain mapped by FEMA. The project will have no effect on water quantity in reaches accessible to ESA species. There is no floodplain habitat on the site.

Aquatic Prey Availability

No fish use has been documented within the work area but presumed future use is possible. Prey produced by the site consists of macroinvertebrates and allochthonous material. To help avoid impacts to water quality, and therefore macroinvertebrates, all work will be completed in the dry with equipment and staging located in the upland area. Mitigation measures such as TESC, use of clean equipment, buffer enhancement, and other measures required to avoid impacts to water quality are described in Section 15. With these measures, no adverse effects to aquatic habitat for fish prey are expected.

Noise and Visual Disturbances

No work will occur within more than a mile of listed salmonid habitat. Construction noise and movement will have no effect on listed fish.

14. Primary Constituent Elements

No critical habitat for any listed species is found in the Action Area. The project will not have any effect on Primary Constituent Elements (PCEs).

15. Conservation Measures

No work is proposed within more than a mile of any listed species observations or critical habitat. Conservation measures for federally listed species consist primarily of impact avoidance. The following measures will help ensure that construction and long-term changes in land use do not lead to adverse effects on prey species, and critical habitat downstream.

Impact Minimization and Avoidance

- Streams and riparian buffers shall be protected under the assumption they are fish-bearing.
- All work below OHW, to include wetland filling, culvert replacement, and new channel construction shall take place in a dry watercourse after all flow has ceased for the season or has been diverted around the job site using a temporary bypass.
- All TESC and stormwater controls shall be completed using BMPs from the current DOE Stormwater Management Manual.
- No riparian vegetation other than non-native and invasive species (e.g. reed canarygrass, Himalayan blackberry) and potentially a few native shrubs such as salmonberry shall be disturbed. Disturbed areas shall be immediately replanted with a native seed mix. New native shrubs and trees shall be planted during the next appropriate planting season (See Mitigation Plan).
- All work below OHWM shall be completed with clean equipment in good condition with no evidence of petroleum product leakage. All equipment shall be inspected, serviced, and cleaned off site as necessary to prevent leakage or any contamination of the beach or water.
- Emergency spill response and clean-up equipment shall be available on site during all work activities. At a minimum, this kit will include material for containment and clean-up of petroleum product. Telephone numbers of appropriate agency/department contacts shall be readily available on-site in case a spill should occur (e.g., Ecology, County Fire Department Hazmat Team, County Fire and Rescue).

Compensatory Mitigation

- Wetland fill within the Mosher Creek basin shall be mitigated in the immediate area such that total wetland area in the Mosher Creek headwater is equal or greater than under existing conditions.
- All other wetland impacts shall be mitigated at the Snohomish County Habitat Bank.
- Two blocking culverts downstream of the site in Mosher Creek shall be removed and the locations restored with an open creek channel and functional buffer.
- Four additional blocking culverts downstream in Mosher Creek shall be removed and replaced with fish-passable crossing structures meeting WDFW Stream Simulation criteria.

16. Determination of Effect

No listed species or critical habitat are present within the Action Area (more than a mile from the site). Conservation measures employed during construction are expected to protect aquatic habitat downstream where listed species (Chinook, bull trout, and steelhead) are found. Over the long-term the project will employ current stormwater management techniques as part of a regional system to protect downstream habitat. Six fish-blocking culverts will be made fish passable.

It is expected that the proposed action with listed conservation measures will have **No Effect** on Chinook salmon, steelhead, or bull trout; and will not destroy or adversely modify critical habitat for any listed species.

17. EFH Analysis

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the 1996 Sustainable Fisheries Act (SFA), an Essential Fish Habitat (EFH) evaluation of impacts is provided for construction of the store and interrelated actions. EFH is defined by the MSA as "*those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity*."

Potential EFH is found on and near the project site in the form of juvenile coho rearing and overwintering habitat. Potential impacts to habitat and proposed conservation measures to avoid, minimize, and mitigate impacts are described in Sections 13 and 15. Based on the analysis in this document, it is expected that implementation of the proposed action **Will Adversely Affect** existing EFH for salmonid species. Adverse effect as defined under the MSA "*means any impact which reduces quality and/or quantity of EFH*". Adverse effects will be minimized by construction measures and are expected to be mitigated by opening up additional headwater habitat including a headwater wetland currently blocked by numerous culverts. With these minimization and mitigation measures, long term adverse effects will be avoided.