

Sponsor	Project	Additional Information Request
1. Cosmopolis	Mill Creek Multi Objective Implementation Plan: Channel and Culvert Improvements for Flood Reduction and Fish Passage/Habitat Restoration	<p>a. Please describe and provide map showing how the City of Aberdeen’s proposed Farragut Street Pump Station Rebuild project benefits Cosmopolis and Mill Creek. <i>A downstream analysis will be required for the new Farragut Street Pump Station to ensure that discharge from the new station does not create a new downstream hydraulic problem or add to any existing downstream hydraulic problems in the lower Mill Creek basin. The downstream analysis will be completed during the design phase and will be closely coordinated with the City of Cosmopolis’ Mill Creek Multi Objective Implementation Plan for the Mill Creek system. Through the downstream analysis and coordination with Cosmopolis, there is the potential to optimize pump station discharge relative to existing conditions and improve downstream hydraulic conditions for the lower Mill Creek basin.</i></p> <p>b. Please describe how barriers identified here (https://geodataservices.wdfw.wa.gov/hp/chehalisprioritization/index.html) will factor into the City’s planning and prioritization process. <i>See attached reports from the WDFW Fish Passage & Diversion Screening Inventory Database. There are however updates that need to be made to Site ID 125 1709W23A Mill Creek Dam.</i></p> <ol style="list-style-type: none"> <i>1. Mill Creek Dam has been replaced with thru Dam fish passage as well as a new fish ladder for both high and low flow conditions.</i> <i>2. For PI Species, Chum Salmon needs to be added to the report as we have an annual return of Chum in Mill Creek.</i> <p>c. Please discuss plans and budget for ensuring meaningful archaeological and cultural resource survey and documentation. <i>The City and HDR will sub consult to a firm to perform cultural resource assessment at the site during the design phase of the project. This includes background research of the WISAARD database, field investigation and shovel test probes at the site, and preparation of the reports required by the Department of Archaeology and Historic Prevention (DAHP).</i></p> <p>d. Can you provide more details (quantification) about the current nature of the road flooding severity? Can you provide more details about the damage to dwellings?</p>

We have not had any severe storms since the completion of the Mill Creek Dam construction. Prior to the new Dam and Fish Passage Facility being constructed, we would see water over the roadway at C, E, F, G, H, and I Streets. We have had times where roads were not passable due to water depth over the roads, cutting off access for emergency services.

We have had as many as 10-12 homes per event that had water in their garages, basements, and inside the homes during the floods of 1990, and 2007, 2008.

- e. How much have past flooding issues already been reduced by the changes at the Mill Creek dam?

At this time this is hard to quantify as we have not had any real severe storms since the completion of Mill Creek Dam in 2019. No flooding has occurred since the project has been completed, however as mentioned earlier, no real storms have occurred.

- f. Please provide more details for question 18. What fish species currently use Mill Creek? What is the passability (using WDFW rating) of the current culverts? Provide information on current and potential rearing and spawning habitat availability. Please provide these data by using the WDFW new fish passage prioritization tool:

<https://geodataservices.wdfw.wa.gov/hp/chehalisprioritization/index.html>.

See attached reports from the WDFW Fish Passage & Diversion Screening Inventory Database. There are however updates that need to be made to Site ID 125 1709W23A Mill Creek Dam.

- 1. Mill Creek Dam has been replaced with thru Dam fish passage as well as a new fish ladder for both high and low flow conditions, removing all barriers.***
- 2. For PI Species, Chum Salmon needs to be added to the report as we have an annual return of Chum in Mill Creek.***

- g. Is the Mill Creek outfall/tide gate going to be considered in the scope of the evaluation?

Yes, the Mill Creek outfall/tide gates will be evaluated within the scope of this project. The outfall and tide gates were constructed by USACE for the benefit of the cities of Cosmopolis and Aberdeen. We will be evaluating:

- 1. Do we need to install pumps that could benefit the storage capacity behind the levy for the benefit of Mill***

		<p><i>Creek and the pump station at Farragut Street in South Aberdeen?</i></p> <p><i>2. If pumps are determined to be a benefit, perform a hydraulic analysis to size pumps to meet needs of flow and storage.</i></p> <p><i>3. Perform as cost/benefit analysis to determine whether or not it makes sense to seek funding for this project.</i></p>
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Washington Department of Fish and Wildlife

Fish Passage & Diversion Screening Inventory Database Report Cover Sheet

The following report is extracted from the Washington Department of Fish and Wildlife's (WDFW) Fish Passage and Diversion Screening Inventory Database (FPDSI). WDFW makes every attempt to keep these reports in sync with FPDSI; however, the dynamic nature of the data and workflows associated with maintaining the database may result in short-term differences.

Users are encouraged to contact WDFW to discuss appropriate use of the data and how we can assist with fish passage barrier removal or inventory. Please visit the Fish Passage web site for contact information at: <https://wdfw.wa.gov/species-habitats/habitat-recovery/fish-passage/about>

Disclaimers:

- Data presented here represent a snapshot observation of conditions in a dynamic environment that is subject to change. Fish passage data are also collected from a variety of agencies and sources. Therefore, WDFW makes no guarantee concerning the data's content, accuracy, completeness, or the results obtained from use of the data. WDFW assumes no liability for the data represented here.
- These data are not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife.
- Note that some fish passage features, habitats or species may occur in areas not currently known to the WDFW Fish Passage division, and may not be reflected in this database. A lack of data does not necessarily indicate that a feature, habitat, or species are not present.
- Unauthorized attempts to alter or modify these data are strictly prohibited.
- Bankfull width measurements included in these reports should not be used for fish passage crossing design. They are solely for assessment purposes.
- The barrier status reported in this document is based on the swimming abilities of adult salmonids. Passabilities are a qualitative value, and should not be interpreted as a quantitative calculation. Please see page 1-4 of the Fish Passage Inventory, Assessment and Prioritization Manual for further clarification: <https://wdfw.wa.gov/publications/02061>
- EXIF data presented with Image Reports may be erroneous due to camera battery failures and resetting of camera clock functions.

Abbreviations:

Most abbreviations in this report are defined in the Quick Reference Tables of the Fish Passage Inventory, Assessment, and Prioritization Manual. Additional commonly used abbreviations are defined as follows:

NFB = no potential salmonid use, **BB** = both banks, **LB** = left bank looking downstream, **RB** = right bank looking downstream, **US** or **U/S** = upstream, **DS** or **D/S** = downstream, **WSDrop** = water surface drop, **BFW** = bankfull width, **OHW** = ordinary high water, **SLW** = scour line width, **CMP** = corrugated metal pipe, **Q_p** = fish passage flow, **V&D** = Velocity and Depth, **ROW** = Right of Way

The FPDSI database often uses default values such as '-99.99' or '-999' to represent null values.

WDFW Fish Passage and Diversion Screening Inventory Database

Site Description Report

Site ID 125 1709W14A

Project CHEHALIS

Geographic Coordinates

Latitude (WGS 84):	46.9518097
Longitude (WGS 84):	-123.774784
East (HARN 83):	822,823.0
North (HARN 83)	607,184.6

Waterbody

Stream:	Mill Cr
Tributary To:	Chehalis R
WRIA:	22.0245
River Mile:	0.98
Fish Use Potential:	Yes
FUP Criteria:	Mapped

General Location

Road Name:	Mill Cr Dr
Mile Post:	-999.99
County:	Grays Harbor
WDFW Region:	6

Owner

Type:	City
Name:	City of Cosmopolis

PI Species

<input type="checkbox"/> Sockeye	<input type="checkbox"/> Chinook	<input checked="" type="checkbox"/> Sea Run Cutthroat
<input type="checkbox"/> Pink	<input checked="" type="checkbox"/> Coho	<input checked="" type="checkbox"/> Resident Trout
<input type="checkbox"/> Chum	<input checked="" type="checkbox"/> Steelhead	<input type="checkbox"/> Bull Trout

Associated Features

<input checked="" type="checkbox"/> Culvert	<input type="checkbox"/> Dam	<input type="checkbox"/> Natural Barrier	<input type="checkbox"/> Diversion
<input type="checkbox"/> Non-Culvert Xing	<input type="checkbox"/> Other	<input type="checkbox"/> Fishway	

Location/Directions

C Street

Site Comments

Channel banks are lined with rip rap and concrete slab armoring.

Print Date: 4/17/2019

These data represent a snapshot of the Washington Department of Fish and Wildlife's current records. Due to the ongoing nature of assessment and inventory of these features, these data may not accurately represent conditions on the ground, and are subject to change.

WDFW Fish Passage and Diversion Screening Inventory Database

Level A Culvert Assessment Report

Site ID: 125 1709W14A	Stream: Mill Cr	WRIA: 22.0245
Latitude: 46.9518097	Tributary To: Chehalis R	Fish Use Potential: Yes
Longitude: -123.774784		

Data Source: <input type="text" value="WDFW"/>	Field Crew: <input type="text" value="Fredley;Paulus"/>	Review Date: <input type="text" value="8/7/2017"/>
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Culvert Details							Level A Parameters					
ID	Shape	Material	Span	Rise	Length	WDIC	Apron	WSDrop	Location	Countersunk	Backwater	Slope (%)
1.2	RND	CST	1.22	1.22	12.30	0.38	NO	0.14	Inlet	No	0	3.01
2.2	RND	CST	1.22	1.22	12.30	0.36	NO	0.14	Interior	No	0	2.52

All dimensions in meters

Channel Description	
Toe Width (m):	<input type="text" value="3.4"/>
Average Width (m):	<input type="text" value="2.95"/>
Culvert/Stream Width Ratio:	<input type="text" value="-99.99"/>
Plunge Pool	
Length (m):	<input type="text" value="0.00"/>
Max Depth (m):	<input type="text" value="-99.99"/>
OHW Width (m):	<input type="text" value="-999.99"/>
Road	
Fill Depth (m):	<input type="text" value="3.00"/>



Assessment Results			
Barrier:	<input type="text" value="Yes"/>	Passability (%):	<input type="text" value="33"/>
Reason:	<input type="text" value="Slope"/>	Fishway Present:	<input type="text" value="No"/>
		Method:	<input type="text" value="Level A"/>
		Recheck:	<input type="text"/>

Comments
 Wingwalls at US end and concrete headwall both ends. Internal grade breaks caused by separation of pipe extensions (~1m long) at both ends. Debris build up at both inlets. All inverts badly rusted.

Potential Habitat Gain			
Survey Type:	<input type="text"/>	Spawning (sq m):	<input type="text"/>
Significant Reach:	<input type="text" value="Yes"/>	Rearing (sq m):	<input type="text"/>
		Length (m):	<input type="text"/>
		PI Total	<input type="text"/>

Print Date: 4/17/2019

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**WDFW Fish Passage and Diversion Screening Inventory Database
Image Report - Active**

Site ID:	125 1709W14A	Stream:	Mill Cr	WRIA:	22.0245
Latitude:	46.9518097	Tributary To:	Chehalis R	Fish Use Potential:	Yes
Longitude:	-123.774784				

Associated Features

<input checked="" type="checkbox"/> Culvert	<input type="checkbox"/> Dam	<input type="checkbox"/> Natural Barrier	<input type="checkbox"/> Diversion
<input type="checkbox"/> Non-Culvert Xing	<input type="checkbox"/> Other	<input type="checkbox"/> Fishway	



Image Name: 125 1709W14A_1.JPG, Date/Time: 08/07/2017 13:33



Image Name: 125 1709W14A_2.JPG, Date/Time: 08/07/2017 13:55

Print Date: 4/17/2019

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WDFW Fish Passage and Diversion Screening Inventory Database

Site Description Report

Site ID

Project

Geographic Coordinates

Latitude (WGS 84):	<input type="text" value="46.953829"/>
Longitude (WGS 84):	<input type="text" value="-123.778725"/>
East (HARN 83):	<input type="text" value="821,870.2"/>
North (HARN 83):	<input type="text" value="607,961.3"/>

Waterbody

Stream:	<input type="text" value="unnamed"/>
Tributary To:	<input type="text" value="Chehalis R"/>
WRIA:	<input type="text" value="22"/>
River Mile:	<input type="text" value="-999.99"/>
Fish Use Potential:	<input type="text" value="Yes"/>
FUP Criteria:	<input type="text" value="Physical"/>

General Location

Road Name:	<input type="text" value="Franklin Dr"/>
Mile Post:	<input type="text" value="-999.99"/>
County:	<input type="text" value="Grays Harbor"/>
WDFW Region:	<input type="text" value="6"/>

Owner

Type:	<input type="text" value="City"/>
Name:	<input type="text" value="City of Cosmopolis"/>

PI Species

<input type="checkbox"/> Sockeye	<input type="checkbox"/> Chinook	<input checked="" type="checkbox"/> Sea Run Cutthroat
<input type="checkbox"/> Pink	<input checked="" type="checkbox"/> Coho	<input checked="" type="checkbox"/> Resident Trout
<input type="checkbox"/> Chum	<input checked="" type="checkbox"/> Steelhead	<input type="checkbox"/> Bull Trout

Associated Features

<input checked="" type="checkbox"/> Culvert	<input type="checkbox"/> Dam	<input type="checkbox"/> Natural Barrier	<input type="checkbox"/> Diversion
<input type="checkbox"/> Non-Culvert Xing	<input type="checkbox"/> Other	<input type="checkbox"/> Fishway	

Location/Directions

Site Comments

Unknown location of outlet

Print Date: 3/16/2020

These data represent a snapshot of the Washington Department of Fish and Wildlife's current records. Due to the ongoing nature of assessment and inventory of these features, these data may not accurately represent conditions on the ground, and are subject to change.

WDFW Fish Passage and Diversion Screening Inventory Database

Level A Culvert Assessment Report

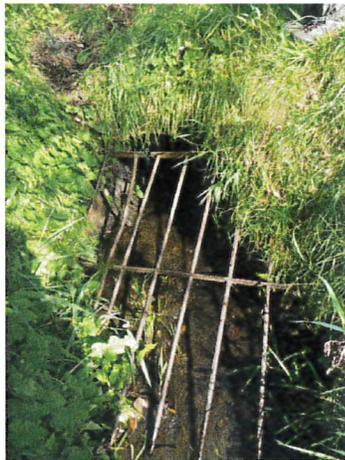
Site ID: 921346	Stream: unnamed	WRIA: 22	
Latitude: 46.953829	Tributary To: Chehalis R	Fish Use Potential: Yes	
Longitude: -123.778725			

Data Source:	Washington Department of Fish and Wildlife		
Field Crew:	Arams;Young	Review Date:	9/25/2019

Culvert Details							Level A Parameters					
ID	Shape	Material	Span	Rise	Length	WDIC	Apron	WSDrop	Location	Countersunk	Backwater	Slope (%)
1.1	RND	CST	0.69	0.69	-999.90	0.10	NO	-99.99		No	0	-99.99

All dimensions in meters

Channel Description	
Toe Width (m):	<input type="text"/>
Average Width (m):	<input type="text" value="1.60"/>
Culvert/Stream Width Ratio:	<input type="text" value="0.43"/>
Plunge Pool	
Length (m):	<input type="text" value="-999.99"/>
Max Depth (m):	<input type="text" value="-99.99"/>
OHW Width (m):	<input type="text" value="-999.99"/>
Road	
Fill Depth (m):	<input type="text" value="1.00"/>



Assessment Results			
Barrier:	<input type="text" value="Unknown"/>	Passability (%):	<input type="text" value="Unknown"/>
Reason:	<input type="text" value="Insufficient Data"/>	Fishway Present:	<input type="text" value="No"/>
		Method:	<input type="text" value="Level A"/>
		Recheck:	<input type="text"/>

Comments
 Couldn't find outlet, WSD and countersunk status not collected. Culvert has bituminous lining and a rack on US inlet. US Rack Gap=0.23m, Headroom=0.08m. WDIC measured on upstream end. US stormwater input on RB.

Potential Habitat Gain			
Survey Type:	<input type="text"/>	Spawning (sq m):	<input type="text"/>
Significant Reach:	<input type="text" value="Unknown"/>	Rearing (sq m):	<input type="text"/>
		Length (m):	<input type="text"/>
		PI Total	<input type="text"/>

Print Date: 3/16/2020

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WDFW Fish Passage and Diversion Screening Inventory Database
Image Report - Active

Site ID: 921346	Stream: unnamed	WRIA: 22
Latitude: 46.953829	Tributary To: Chehalis R	Fish Use Potential: Yes
Longitude: -123.778725		

Associated Features

<input checked="" type="checkbox"/> Culvert	<input type="checkbox"/> Dam	<input type="checkbox"/> Natural Barrier	<input type="checkbox"/> Diversion
<input type="checkbox"/> Non-Culvert Xing	<input type="checkbox"/> Other	<input type="checkbox"/> Fishway	



Image Name: 921346_1.JPG, Date/Time: 09/25/2019 10:37



Image Name: 921346_2.JPG, Date/Time: 09/25/2019 10:37

Print Date: 3/16/2020

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WDFW Fish Passage and Diversion Screening Inventory Database

Site Description Report

Site ID 125 1709W14G

Project SRFBGRANT

Geographic Coordinates

Latitude (WGS 84):	46.96042
Longitude (WGS 84):	-123.775614
East (HARN 83):	822,746.2
North (HARN 83):	610,330.8

Waterbody

Stream:	Mill Cr
Tributary To:	Chehalis R
WRIA:	22.0245
River Mile:	0.01
Fish Use Potential:	Yes
FUP Criteria:	Mapped

General Location

Road Name:	Dike Rd
Mile Post:	-999.99
County:	Grays Harbor
WDFW Region:	6

Owner

Type:	City
Name:	City of Cosmopolis

PI Species

<input type="checkbox"/> Sockeye	<input type="checkbox"/> Chinook	<input checked="" type="checkbox"/> Sea Run Cutthroat
<input type="checkbox"/> Pink	<input checked="" type="checkbox"/> Coho	<input checked="" type="checkbox"/> Resident Trout
<input type="checkbox"/> Chum	<input checked="" type="checkbox"/> Steelhead	<input type="checkbox"/> Bull Trout

Associated Features

<input checked="" type="checkbox"/> Culvert	<input type="checkbox"/> Dam	<input type="checkbox"/> Natural Barrier	<input type="checkbox"/> Diversion
<input type="checkbox"/> Non-Culvert Xing	<input type="checkbox"/> Other	<input type="checkbox"/> Fishway	

Location/Directions

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Site Comments

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Print Date: 5/18/2020

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WDFW Fish Passage and Diversion Screening Inventory Database

Level A Culvert Assessment Report

Site ID: 125 1709W14G	Stream: Mill Cr	WRIA: 22.0245
Latitude: 46.96042	Tributary To: Chehalis R	Fish Use Potential: Yes
Longitude: -123.775614		

Data Source:	Lewis Co Conservation District
Field Crew:	Beebe;Verd
Review Date:	3/21/2006

Culvert Details								Level A Parameters				
ID	Shape	Material	Span	Rise	Length	WDIC	Apron	WSDrop	Location	Countersunk	Backwater	Slope (%)
1.3	BOX	PCC	-99.99	-99.99	3.50	-99.99	NO	0.00		No	99	-99.99
2.3	BOX	PCC	-99.99	-99.99	3.50	-99.99	NO	0.00		No	99	-99.99
3.3	BOX	PCC	-99.99	-99.99	3.50	-99.99	NO	0.00		No	99	-99.99

All dimensions in meters

Channel Description	
Toe Width (m):	<input type="text" value="8"/>
Average Width (m):	<input type="text" value="-99.99"/>
Culvert/Stream Width Ratio:	<input type="text" value="-99.99"/>
Plunge Pool	
Length (m):	<input type="text" value="-999.99"/>
Max Depth (m):	<input type="text" value="-99.99"/>
OHW Width (m):	<input type="text" value="-999.99"/>
Road	
Fill Depth (m):	<input type="text" value="0.00"/>

No Image Available

Assessment Results			
Barrier:	<input type="text" value="Yes"/>	Passability (%):	<input type="text" value="0"/>
Reason:	<input type="text" value="Tidegate"/>	Fishway Present:	<input type="text" value="No"/>
Method:	<input type="text" value="Other"/>		
Recheck:	<input type="text"/>		

Comments
Recheck tidegate type, may effect passability.

Potential Habitat Gain			
Survey Type:	<input type="text"/>	Spawning (sq m):	<input type="text"/>
Significant Reach:	<input type="text" value="Unknown"/>	Rearing (sq m):	<input type="text"/>
		Length (m):	<input type="text"/>
		PI Total	<input type="text"/>

Print Date: 5/18/2020

These data represent a snapshot of the Washington Department of Fish and Wildlife's current records. Due to the ongoing nature of assessment and inventory of these features, these data may not accurately represent conditions on the ground, and are subject to change.