APPENDIX H: Tenmile Sub-basin Report

WHATCOM COUNTY FISH PASSAGE ASSESSMENT SUB-BASIN REPORT TENMILE SUB-BASIN

Description of Sub-basin

The Tenmile Sub-basin includes all the Nooksack River tributary streams south of the main stem between Everson to the Nooksack River delta at Bellingham Bay (figure 1-3). Tributary streams along this reach include Silver Creek, Cougar Creek, Tenmile Creek, Fourmile Creek, and Deer Creek Scott ditch.

Land use is chiefly agricultural and rural residential. Land use jurisdiction is entirely Whatcom County (Whatcom County, 1997).

Silver Creek has five tributaries, including Bear Creek, Andreason Creek, Lost Lake Creek, and Tennant Creek (Figure 1). These streams start as seasonal streams in the glacial till uplands between Ferndale and Bellingham before draining to the sandy glacial outwash flats and the Nooksack River floodplain. The main stem parallels the Nooksack River for almost two miles on the river floodplain before joining a Nooksack delta distributory channel near Marrietta. Beaver ponds, pools and riffles characterize in-stream habitat along most headwater reaches. Substrate is silt and exposed till with scattered patches of silty gravel, and riparian vegetation is characterized by immature to mature deciduous forest. Fish use is mostly coho salmon, and cutthroat and steelhead trout. Some lower reaches are also utilized by chum salmon (Whatcom County, 1994, NWIFC, 2003).

Andreason Creek and Tennant Creek tributaries are different. Andreason Creek originates in a peat wetland that is fed year around by Larabee Springs. The wetland was ditched in the early 1900s leaving little in-stream structure or sinuosity. Substrate is peat and fine silt and riparian vegetation is overhanging reed canary grass except where riparian enhancement projects have established a buffer of native shrubs and trees. Fish use is coho and chum salmon, and cutthroat and steelhead trout (Whatcom County, 1994, NWIFC, 2003).

Tennant Creek originates at multiple beaver dams that impound Tennant Lake, and flows south along the old Nooksack River floodway in a straight ditch dug through an expansive reed canary grass marsh. Substrate is fine silts and peat, and riparian vegetation is almost entirely overhanging reed canary grass. Clay pit Pond, an old clay quarry located next to the Recomp, Inc. incinerator ash landfill, joins Tennant Creek north of Slater Road. Heavy metals leaching from the landfill are an ongoing water quality problem for Silver Creek. Fish use is mostly coho salmon and cutthroat trout (Whatcom County, 1994, NWIFC, 2003).

Large deep pools characterize the main stem of Silver Creek between Northwest Drive and Slater Road and short riffles. Stream substrate is sand with patches of gravel and cobble sufficient to support spawning. Riparian vegetation is immature to mature deciduous forest and native shrubs. Fish use is coho and chum salmon, and cutthroat and steelhead trout (Whatcom County, 1994, NWIFC, 2003).

Whatcom County Draft Tenmile Sub-basin Report The lower reach of Silver creek flows through a wide expanse of reed canary grass and agricultural fields. Unrestricted access by grazing animals has trampled and collapsed the banks and aggravated the spread of canary grass. In-stream habitat is degraded in this reach: channel substrate is fine silt and muck, and riparian vegetation is overhanging mats of reed canary grass punctuated occasionally by willow thickets. Fish use is primarily juvenile rearing for coho salmon and cutthroat trout (Whatcom County, 1994, NWIFC, 2003).

Cougar Creek originates in Wiser Lake and flows westward for three miles through a peat filled outwash channel to the Nooksack River (Figure 2). Land use surrounding the ditch is agricultural and rural residential. Stream substrate is silt, clay and peat, and streamside vegetation is composed of reed canary grass in the upper reaches, and patchy immature deciduous forest in the lower mile where the creek is confined to a shallow ravine. A dam at the outlet of Wiser Lake blocks fish passage. Anadromous fish use is primarily coho salmon and cutthroat trout (Whatcom County, 1994, NWIFC, 2003).

Tenmile Creek and its two tributaries, Fourmile and Deer Creeks, comprise the major watercourses in the sub-basin (Figure 2 and 3). Tenmile Creek originates as numerous small, moderate gradient tributary streams that drain the glacial till uplands west of Goshen (figure). These small tributaries feed a complex of wetlands and peat bogs located in wide bottoms of glacial channels that are deeply incised into the till. Ditches dredged down the center of these channels in the early 1900s drain northwest to low gradient reaches that traverse westward across a sandy outwash plain for six miles to Barrett Lake, and then to the Nooksack River near Ferndale. Except for the steeper gradient headwater tributaries, in-stream habitat is predominantly slow glides and pools with occasional riffles for most of its length. Substrate is generally sand or peat with scattered patches of gravel in the lower watershed and gravel and sand in the headwater areas. Riparian vegetation is mature to immature deciduous forest in the upper watershed transitioning to mostly overhanging grasses in the middle reaches and returning to discontinuous patches of immature deciduous forest in the lower reaches by Barrett Lake. Fish use is mainly coho salmon and cutthroat trout, with some chum salmon utilization in the lower reaches (Whatcom County, 1994, NWIFC, 2003).

Fourmile Creek originates east of Green Lake and is almost entirely an excavated channel through peat that lines the bottom of a broad low gradient glacial outwash channel. In-stream habitat is typically slow pools and glides with occasional riffles. Rare gravel patches punctuate the predominantly silt to sand substrate, especially in the upper reaches above Green Lake. Although riparian enhancement projects are making good headway toward providing a forested buffer, riparian vegetation is typically reed canary grass or low thickets of native shrubs. Fish use is primarily coho salmon and cutthroat trout (Whatcom County, 1994, NWIFC, 2003).

Deer Creek originates as numerous seasonal tributary streams just east of Hannegan Road that drain the glacial till uplands between Axton and Smith Roads. Deer Creek then flows west to a large spring-fed peat wetland complex near Aldrich Road and across a low gradient sandy outwash plain to its confluence with Tenmile Creek at Barrett Lake. In-stream habitat is typically shallow pools and glides with occasional riffles. Substrate is typically sand interspersed with moderate patches of gravel and cobble. Considerable quantities of gravel and

Whatcom County Draft Tenmile Sub-basin Report cobble substrate occur in the upper reaches and, again, in the lower reach west of Northwest Road. Riparian vegetation is patchy immature forest interspersed with overhanging grasses and shrubs. Fish use is primarily coho salmon and cutthroat trout, with some chum salmon use in the lower reaches (Whatcom County, 1994, NWIFC, 2003).

Scott Ditch flows westward from Everson to the Nooksack River (figure 3). Except for the westernmost mile, this watercourse is an artificial ditch dug in the early 1900s to drain extensive wetlands and peat bogs that lay at the northern toe of a glacial outwash terrace. Land use surrounding the ditch is entirely agricultural. Ditch substrate is silt, clay and peat, and streamside vegetation is composed of Reed Canary grass except where riparian enhancement projects have recently planted native shrubs and trees. Fish use is coho salmon and cutthroat trout (Whatcom County, 1994, NWIFC, 2003).

Data Integration from Previous Projects

In the Tenmile Sub-basin, previous barrier data from Whatcom County (County roads), The Washington Department of Transportation (WSDOT), The Washington Department of Fish and Wildlife (WDFW), and Nooksack Salmon Enhancement Association (NSEA) are standardized and integrated into the WDFW Fish Passage and Diversion Screening Inventory (FPDSI) data base format and is included in the final summary table.

Reach Prioritization Summary

Prior to contacting landowners for access permission, inventory staff met with tribal and State biologists, and local fisheries professionals to identify priority stream reaches that had not been previously inventoried. In the interest of efficiency, we did not include areas with previously completed inventories, or where barrier inventories are required by law, and focused on reaches where information was lacking.

Similar inventories have been completed by the Washington State Department of Transportation (WSDOT) for their ownership. WSDOT and Whatcom County Public Works will be repairing barriers on roadways as part of their ongoing maintenance and repair program.

The following reaches were inventoried in the Tenmile Sub-basin:

- Deer Creek: Comprehensive inventory of anadromous habitat by WDFW in 1999.
- Tennant Creek: Inventoried by WDFW as part of their Wildlife Areas Program.
- Ten Mile Creek: From Guide Meridian to the end of anadromous use.
- West Laurel Road Trib (WRIA 01.0177): From confluence to the end of anadromous use.
- <u>East Hemmi Road Tribs (WRIA 01.0184 and 01.0186)</u>: From confluence to the end of anadromous use.
- <u>Shuksan Creek tribs. (WRIA 01.0187 and 01.0188):</u> From confluence to the end of anadromous use.
- Starry Road Tribs (01.0189 and 01.190): From confluence to the end of anadromous use.
- <u>Upper Ten Mile Creek Tributaries: (01.0191, and Unnamed Trib at Everson Goshen Rd MP 2.46)</u>: From confluence to the end of anadromous use.

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- <u>Four Mile Creek:</u> From Green Lake to end of anadromous use, includes the system that eventually drains into Ten Mile Creek.
- <u>Lattimore Road Tribs:</u> From confluence to the end of anadromous use.
- Paradise Road Tribs (WRIA 01.0193): From confluence to the end of anadromous use.
- Scott Ditch: From Hannegan Rd to upstream extent of anadromous habitat.
- <u>Silver Creek Mainstem</u>: Upstream from Slater Road to end of anadromous use.
- Silver Creek Tributaries (WRIA 01.0126, 01.0127, 01.0128, 01.0136, 01.0137, 01.0138, 01.0140, 01.0141, unnamed tribs at Rural Road MP 1.10 and MP 2.05, and WRIA 01.0143 including an associated unnamed trib: Comprehensive surveys of entire anadromous habitat.

Barrier Assessment

Prior to conducting fieldwork, landowners adjacent to stream inventory sites provided written or verbal permission for field crews to access their property. Field crews did not evaluate culverts or habitat conditions on land parcels in which property access was denied.

Two levels of assessment are included in this report. The first is a road inventory conducted by Whatcom County Public Works staff that identified fish blocking culverts on the County road system for known and possible fish bearing streams. The second level of assessment was a stream-based inventory by Nooksack Tribe and Nooksack Salmon Enhancement Association field crews on priority stream reaches identified in the reach prioritization effort described above. All human made features in priority stream reaches were geo-referenced using GPS and evaluated for their ability to pass fish. Field evaluation and data collection followed the methodologies described in the *Fish Passage Barrier and surface Water Diversion Screening Assessment and Prioritization Manual* (WDFW 2000).

Summary of Results

Figure 1 is a map of the Tenmile Sub-basin showing the location and site ID number of each feature inventoried. Table 1 summarizes the inventory results sequentially by site ID number for the Tenmile Sub-basin. Table 2 summarizes the details associated with identified fish passage barriers and is sorted by Priority Index number (PI). Due primarily to property access restrictions, some blockages did not have PI's calculated. However, this project captured the vast majority of fish passage barriers for a reasonably complete inventory of all passage barriers to anadromous fish in this sub-basin.

Table 1. Stream features inventoried in the Tenmile Sub-basin, sorted by Site ID number.

		Street III the		Owner		Repair ²	%	Addition	nal Barriers	Company Trema ³	Total DI
Site ID	Sequencer ¹	Stream	Tributary To	Туре	Feature	Status	Passable	Upstream	Downstream	Survey Type ³	I Otal Pi
01.0124 5.10		Silver Cr	Nooksack R	Private	Fishway	ОК	100			LME	
01.0165 5.60	1.1	Deer Cr	Tenmile Cr	Private	Culvert	RR	0	14	2	PS3	46.59
01.0184 0.10		Unnamed	Tenmile Cr	Private	Dam	RR	0			TD	
01.0184 0.20	1.1	Unnamed	Tenmile Cr	Unknown	Culvert	RR	33	2	0	RSFS	
01.0191A 0.10	1.1	Unnamed	Tenmile Cr	County	Culvert	RR	33	0	2	RSFS	
1280068	1.1	Unnamed	Bear Cr	Private	Culvert	OK	100				
1280147	1.1	Starry Cr	Tenmile Cr	Private	Culvert	ок	100				
1280148	1.1	Starry Cr	Tenmile Cr	Private	Culvert	RR	33	1	2	RSFS	8.07
1280149	1.1	Unnamed	Starry Cr	Private	Culvert	RR	33	0	1	RSFS	4.31
1280150	1.1	Starry Cr	Tenmile Cr	Private	Culvert	RR	67	2	1	RSFS	8.66
1280151	1.1	Shuksan Cr	Tenmile Cr	Private	Culvert	ОК	100				
1280152	1.1	Tenmile Cr	Nooksack R	Private	Culvert	OK	100				
1280153	1.1	Unnamed	Tenmile Cr	Private	Culvert	ОК	100				
1280154	1.1	Tenmile Cr	Nooksack R	Private	Culvert	RR	33	2	1	RSFS	24.48
1280155	1.1	Unnamed	Shuksan Cr	Private	Culvert	OK	100				
1280159	1.1	Shuksan Cr	Tenmile Cr	Private	Culvert	OK	100				
1280160	1.1	Shuksan Cr	Tenmile Cr	Private	Culvert	ОК	100				
1280163	1.1	Unnamed	Silver Cr	County	Culvert	LG	67			TD	
1280164	1.1	Unnamed	Silver Cr	Private	Culvert	LG	33	0	3	RSFS	3.93
1280165	1.1	Unnamed	Silver Cr	Private	Culvert	LG	33	0	3	RSFS	3.68
1280166	1.1	Unnamed	Silver Cr	Private	Culvert	ОК	100				
1280167	1.4	Unnamed	Silver Cr	Private	Culvert	ОК	100				
1280168	1.1	Unnamed	Silver Cr	Private	Culvert	ОК	100				
1280169	1.1	Unnamed	Silver Cr	Private	Culvert	ОК	100				
1280170	1.1	Unnamed	Silver Cr	Private	Culvert	RR	33	0	2	RSFS	5.60

¹ Sequencer: 1:2 – One culvert of two, 1:3 - One culvert of three, etc.

² Repair Status: OK – No action needed, RR – Repair required, LG – Habitat gain is less than 200 m., UD – Habitat gain undetermined, FX – Fixed, Blank – No fish use potential.

³ Survey Type: TD – Threshold Determination, LME – Lineal Map Estimate, ETD – Expanded threshold determination, UETD – Unexpanded Threshold Determination, FS, PS – Full habitat Survey, RSFS – Reduced Sampling Physical Survey.

Site ID	Samuanaari	Stroom.	TuibustamaTa	Owner	Feature	Repair ²	%	Addition	nal Barriers	Survey Type ³	Total PI
Site iD	Sequencer ¹	Stream	Tributary To	Туре	reature	Status	Passable	Upstream	Downstream	Survey Type	I Otal PI
1280204	1.1	Unnamed	Silver Cr	County	Culvert	RR	0	1	1	RSFS	14.26
1285077	1.1	Fourmile Cr	Tenmile Cr	Private	Culvert	UD					
1285080		Neevel Cr	Nooksack R	Private	Dam	RR	33	1	0	RSFS	16.61
1285081	1.1	Neevel Cr	Nooksack R	Private	Culvert	RR	33	0	1	RSFS	14.24
1285082	1.1	Neevel Cr	Nooksack R	Private	Culvert	UD					
1285083	1.1	Clarkson Cr	Nooksack R	Private	Culvert	UD					
1285084	1.1	Unnamed	Tenmile Cr	Private	Culvert	RR	33	1	0	RSFS	7.26
1285085	1.1	Unnamed	Tenmile Cr	Private	Culvert	ОК	100				
1285086	1.2	Unnamed	Tenmile Cr	Private	Culvert	ОК	100				
1285087	1.1	Unnamed	Tenmile Cr	Private	Culvert	ОК	100				
1285088	1.1	Unnamed	Tenmile Cr	Private	Culvert	ОК	100				
1285089	1.1	Unnamed	Tenmile Cr	Private	Culvert	RR	33	0	0	RSFS	11.55
1285090	1.1	Unnamed	Tenmile Cr	Private	Culvert	ОК	100				
1285091	1.1	Unnamed	Tenmile Cr	Private	Culvert	LG	33			TD	
1285092	1.1	Unnamed	Scott Cr	Private	Culvert	RR	33	0	2	RSFS	9.20
1285093	1.1	Scott Ditch	Nooksack R	Private	Culvert	ОК	100				
1285094	1.1	Silver Springs Cr	Tenmile Cr	Private	Culvert	RR	67	1	1	RSFS	16.81
1285095	1.1	Silver Springs Cr	Tenmile Cr	Private	Culvert	ОК	100			,	
1285096	1.1	Silver Springs Cr	Tenmile Cr	Private	Culvert	RR	33	0	2	RSFS	17.70
1285097	1.1	Silver Springs Cr	Tenmile Cr	Private	Culvert	ОК	100				
1285098	1.1	Unnamed	Silver Cr	Private	Culvert	RR	33	0	0	RSFS	17.58
1285100	1.1	Unnamed	Silver Cr	Private	Culvert	ОК	100				
1285101	1.1	Unnamed	Silver Cr	Private	Culvert	RR	33	1	2	RSFS	24.55
1285102	1.1	Unnamed	Silver Cr	Private	Culvert	OK	100				
1285103	1.1	Unnamed	Silver Cr	Private	Culvert	UD					
1285104	1.1	Unnamed	Silver Cr	Private	Culvert	UD					

¹ Sequencer: 1:2 – One culvert of two, 1:3 - One culvert of three, etc.

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³ Survey Type: TD – Threshold Determination, LME – Lineal Map Estimate, ETD – Expanded threshold determination, UETD – Unexpanded Threshold Determination, FS, PS – Full habitat Survey, RSFS – Reduced Sampling Physical Survey.

C:4- ID	C1	Ct	T.:!	Owner	Feature	Repair ²	%	Addition	nal Barriers	Cumray Tyma3	Total DI
Site ID	Sequencer ¹	Stream	Tributary To	Туре	Feature	Status	Passable	Upstream	Downstream	Survey Type ³	Total PI
1285105	1.1	Unnamed	Silver Cr	Private	Culvert	RR	33	0	3	RSFS	18.40
1285106	1.1	Unnamed	Silver Cr	Private	Culvert	UD					
1285107	1.1	Unnamed	Silver Cr	Private	Culvert	UD					
1285108	1.1	Unnamed	Silver Cr	Private	Culvert	OK	100				
1285109	1.1	Unnamed	Silver Cr	Private	Culvert	ОК	100				
1285110	1.1	Scott Ditch	Nooksack R	Private	Culvert	OK	100				
1285111	1.1	Scott Ditch	Nooksack R	Private	Culvert	RR	33	3	0	RSFS	36.16
1285112	1.1	Unnamed	Tenmile Cr	Private	Culvert	OK	100				
1285113	1.1	Unnamed	Tenmile Cr	Private	Culvert	OK	100				
1285114	1.1	Unnamed	Tenmile Cr	Private	Culvert	ОК	100				
1285115	1.1	Unnamed	Tenmile Cr	Private	Culvert	ОК	100				
1285116	1.1	Unnamed	Tenmile Cr	Private	Culvert	RR	33	1	0	RSFS	19.56
1285117	1.1	Unnamed	Tenmile Cr	Private	Culvert	RR	33	0	1	RSFS	10.41
1285118	1.1	Unnamed	Fourmile Cr	Private	Culvert	OK	100				
1285119	1.1	Silver Springs Cr	Tenmile Cr	Private	Culvert	OK	100				
1285120	1.1	Silver Springs Cr	Tenmile Cr	Private	Culvert	OK	100				
1285121	1.1	Silver Springs Cr	Tenmile Cr	Private	Culvert	OK	100				
1285122	1.1	Unnamed	Fourmile Cr	Private	Culvert	RR	33	0	1	RSFS	18.58
1285123	1.1	Unnamed	Fourmile Cr	Private	Culvert	RR	67	1	0	RSFS	16.76
1285150	1.2	Tenmile Cr	Nooksack R	Private	Culvert	RR	33	7	0	RSFS	32.43
1285155	1.1	Unnamed	Silver Cr	Private	Culvert	OK	100				
1285156	1.1	Unnamed	Silver Cr	Private	Culvert	OK	100				
1285157	1.1	Unnamed	Silver Cr	Private	Culvert	ОК	100				
1285158	1.1	Unnamed	Silver Cr	Private	Culvert	RR	33	3	1	RSFS	11.47
1285159	1.1	Unnamed	Silver Cr	Private	Culvert	ОК	100				
1285160		Unnamed	Silver Cr	Private	Other	RR	33	0	4	RSFS	16.93

¹ Sequencer: 1:2 – One culvert of two, 1:3 - One culvert of three, etc.

² Repair Status: OK – No action needed, RR – Repair required, LG – Habitat gain is less than 200 m., UD – Habitat gain undetermined, FX – Fixed, Blank – No fish use potential.

³ Survey Type: TD – Threshold Determination, LME – Lineal Map Estimate, ETD – Expanded threshold determination, UETD – Unexpanded Threshold Determination, FS, PS – Full habitat Survey, RSFS – Reduced Sampling Physical Survey.

Site ID	Samuan aan1	C4	TuibantonaTo	Owner	Feature	Repair ²	%	Addition	nal Barriers	TD RSFS RSFS RSFS TD TD RSFS RSFS	Total Di
Site ID	Sequencer ¹	Stream	Tributary To	Туре	reature	Status	Passable	Upstream	Downstream	Survey Type	I Otal PI
1285161	1.1	Unnamed	Silver Cr	Private	Culvert	LG	0				
1285162		Unnamed	Silver Cr	Private	Dam	RR	0			TD	
370113	1.1	Unnamed	Silver Cr	County	Culvert	RR	33	1	11	RSFS	14.10
370114	1.2	Silver Cr	Nooksack R	County	Culvert	RR	33	1	11	RSFS	19.22
370115	1.2	Unnamed	Silver Cr	County	Culvert	UD		2	1	RSFS	20.73
370116	1.1	Deer Cr	Tenmile Cr	County	Culvert	ok	100				
370118	1.1	Unnamed	Tenmile Cr	County	Culvert	RR	33	0	1	RSFS	6.51
370119	1.1	Unnamed	Cougar Cr	County	Culvert	OK	100				
370130	1.1	Unnamed	Fourmile Cr	County	Culvert	OK	100				
370140	1.1	Unnamed	Deer Cr	County	Culvert	LG				TD	
370156	1.1	Unnamed	Tenmile Cr	County	Culvert	OK	100				
370157	1.2	Unnamed	Fazon Lk	County	Culvert	OK	100				
370158	1.1	Unnamed	Fazon Lk	County	Culvert	OK	100				
370159	1.1	Unnamed	Tenmile Cr	County	Culvert	OK	100				
370160	1.1	Unnamed	Tenmile Cr	County	Culvert	RR	67				
370163	1.1	Clarkson Cr	Nooksack R	County	Culvert	OK	100				
370164	1.1	Unnamed	Cougar Cr	County	Culvert	OK	100				
370173	1.1	Unnamed	Silver Cr	County	Culvert	RR	33	1	3	RSFS	16.93
370191	1.1	Deer Cr	Tenmile Cr	County	Culvert	OK	100				
370192	1.1	Deer Cr	Tenmile Cr	County	Culvert	RR	67				
370196	1.1	Unnamed	Tenmile Cr	County	Culvert	RR	67				
370197	1.1	Unnamed	Tenmile Cr	County	Culvert	RR	67				
370198	1.1	Unnamed	Tenmile Cr	County	Culvert	ОК	100				
370199	1.1	Unnamed	Shuksan Cr	County	Culvert	RR	33	0	1	RSFS	7.37
370205	1.1	Crystal Springs Cr	Tenmile Cr	County	Culvert	ОК	100				
370227	1.2	Tenmile Cr	Nooksack R	County	Culvert	ок	100				

¹ Sequencer: 1:2 – One culvert of two, 1:3 - One culvert of three, etc.

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³ Survey Type: TD – Threshold Determination, LME – Lineal Map Estimate, ETD – Expanded threshold determination, UETD – Unexpanded Threshold Determination, FS, PS – Full habitat Survey, RSFS – Reduced Sampling Physical Survey.

Cita ID	Samuanaari	Ctroom	TaibantanaTa	Owner	Feature	Repair ²	%	Addition	nal Barriers	Sumov Typo3	Total BI
Site ID	Sequencer ¹	Stream	Tributary To	Туре	reature	Status	Passable	Upstream	Downstream	Survey Type ³	TOLAI PI
370228	1.1	Unnamed	Shuksan Cr	County	Culvert	UD					
370229	1.1	Unnamed	Fazon Lk	County	Culvert	LG	67			TD	
370230	1.1	Unnamed	Fazon Lk	County	Culvert						
370231	1.1	Unnamed	Fazon Lk	County	Culvert	OK	100				
370255	1.1	Silver Cr	Nooksack R	County	Culvert	OK	100				
370286	1.1	Unnamed	Silver Cr	County	Culvert	OK	100				
370288	1.1	EF Elder Cr	Elder Cr	County	Culvert	ОК	100				
370340	1.1	Andreasen Ditch	Silver Cr	County	Culvert	ОК	100				
370341	1.1	Unnamed	Scott Cr	County	Culvert	ОК	100				
370360	1.2	Unnamed	Silver Cr	County	Culvert	RR	67			TD	
370361	1.1	Unnamed	Airport Cr	County	Culvert	UD					
370362	1.1	Airport Cr	Bellingham Bay	County	Culvert	ОК	100				
370369	1.1	Unnamed	Tenmile Cr	County	Culvert	RR	67			TD	
370370	1.1	Unnamed	Shuksan Cr	County	Culvert	UD					
370392	1.1	Neevel Cr	Nooksack R	County	Culvert	ОК	100				
370396	1.1	Scott Ditch	Nooksack R	County	Culvert	ОК	100				
370400	1.1	Unnamed	Starry Cr	County	Culvert	ок	100				
370401	1.1	Shuksan Cr	Tenmile Cr	County	Culvert	ОК	100				
370402	1.1	Unnamed	Scott Cr	County	Culvert	RR	67	0	1	RSFS	5.83
370403	1.1	Scott Ditch	Nooksack R	County	Culvert	RR	67	1	1	RSFS	27.05
370421	1.1	Unnamed	Silver Cr	County	Culvert	RR	33	5	2	RSFS	23.36
370422	1.2	Bear Cr	Silver Cr	County	Culvert	ок	100				
370423	1.1	Silver Cr	Nooksack R	County	Culvert	ок	100				
370424	1.1	Silver Cr	Nooksack R	County	Culvert	ОК	100				
370425	1.1	Unnamed	Silver Cr	County	Culvert	RR	33	3	0	RSFS	27.32
370426	1.1	Unnamed	Silver Cr	County	Culvert	LG				TD	

¹ Sequencer: 1:2 – One culvert of two, 1:3 - One culvert of three, etc.

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³ Survey Type: TD – Threshold Determination, LME – Lineal Map Estimate, ETD – Expanded threshold determination, UETD – Unexpanded Threshold Determination, FS, PS – Full habitat Survey, RSFS – Reduced Sampling Physical Survey.

Site ID	Sequencer ¹	Stroom	Tributan, Ta	Owner	Feature	Repair ²	%	Addition	nal Barriers	Survey Type ³	Total BI
Site iD	Sequencer	Stream	Tributary To	Туре	reature	Status	Passable	Upstream	Downstream	Survey Type	I Olai Pi
370427	1.1	Unnamed	Silver Cr	County	Culvert	RR	67			TD	
370429	1.1	Neevel Cr	Nooksack R	County	Culvert	ОК	100				
370430	1.1	Clarkson Cr	Nooksack R	County	Culvert	LG	67			TD	
370431	1.1	Cougar Cr	Nooksack R	County	Culvert	ОК	100				
370478	1.1	Unnamed	Silver Cr	County	Culvert	RR	33	4	0	RSFS	19.05
370479	1.1	Unnamed	Silver Cr	County	Culvert	RR	33	1	0	RSFS	5.33
370501	1.1	Silver Cr	Nooksack R	County	Culvert	RR	67	10	0	RSFS	27.08
370502	1.1	Silver Cr	Nooksack R	County	Culvert	UD					
370519	1.1	Unnamed	Starry Cr	County	Culvert	LG				TD	
370520	1.1	Starry Cr	Tenmile Cr	County	Culvert	ОК	100				
370521	1.1	Unnamed	Starry Cr	County	Culvert	ОК	100				
370539	1.1	Silver Cr	Nooksack R	County	Culvert	ОК	100				
370545	1.1	Unnamed	Tenmile Cr	County	Culvert	UD	67			TD	
370546	1.1	Scott Ditch	Nooksack R	County	Culvert	OK	100				
370547	1.1	Scott Ditch	Nooksack R	County	Culvert	ОК	100				
370570	1.1	Unnamed	Silver Cr	County	Culvert	RR	33	2	2	RSFS	11.00
370582	1.1	Unnamed	Deer Cr	County	Culvert	ОК	100				
370584	1.1	Unnamed	Deer Cr	County	Culvert	LG				TD	
370588	1.1	Unnamed	Tenmile Cr	County	Culvert	ОК	100				
370589	1.1	Unnamed	Tenmile Cr	County	Culvert	ОК	100				
370593	1.1	Unnamed	Tenmile Cr	County	Culvert	RR	0	1	0	RSFS	10.02
370594	1.1	Unnamed	Cougar Cr	County	Culvert	UD					
370595	1.1	SF Deer Cr	Deer Cr	County	Culvert	UD					
370597	1.1	Andreason Ditch	Silver Cr	County	Culvert	ОК	100				
370603	1.1	Airport Cr	Bellingham Bay	County	Culvert	RR	67			TD	
370617	1.1	Unnamed	Tenmile Cr	County	Culvert	LG	33			TD	

¹ Sequencer: 1:2 – One culvert of two, 1:3 - One culvert of three, etc.

² Repair Status: OK – No action needed, RR – Repair required, LG – Habitat gain is less than 200 m., UD – Habitat gain undetermined, FX – Fixed, Blank – No fish use potential.

³ Survey Type: TD – Threshold Determination, LME – Lineal Map Estimate, ETD – Expanded threshold determination, UETD – Unexpanded Threshold Determination, FS, PS – Full habitat Survey, RSFS – Reduced Sampling Physical Survey.

Cita ID	C	Ctua	Tuibto.m. To	Owner	Feature	Repair ²	%	Addition	nal Barriers	Survey Type ³	Total Bi
Site ID	Sequencer ¹	Stream	Tributary To	Туре	reature	Status	Passable	Upstream	Downstream	Survey Type	TOtal FI
370618	1.1	Unnamed	Silver Cr	County	Culvert	OK	100				
370619	1.1	Unnamed	Silver Cr	County	Culvert	LG	33			TD	
981803	1.1	Unnamed	Tennant Cr	County	Culvert						
981804	1.1	Unnamed	Tennant Cr	County	Culvert						
981805	1.1	Unnamed	Tennant Cr	County	Culvert						
981806	1.1	Unnamed	Tennant Cr	County	Culvert	OK	100				
981807	1.1	Unnamed	Tennant Cr	County	Culvert						
981810	1.2	Tennant Cr	Silver Cr	County	Culvert	ОК	100				
981811		Unnamed	Tennant Cr	State	Dam	RR	67	0	0	PS4	17.32
981812	1.1	Tennant Cr	Silver Cr	State	Culvert	ОК	100				
981813	1.1	Tennant Cr	Silver Cr	Private	Culvert	ОК	100				
981814		Claypit Pond	Tennant Cr	State	Dam	RR	67	0	0	PS4	15.33
990112	1.1	Deer Cr	Tenmile Cr	State	Culvert	RR	33	15	3	PS3	31.44
990509	1.1	Unnamed	Green Lk	State	Culvert	OK	100				
993028	1.1	Deer Cr	Tenmile Cr	Private	Culvert	OK	100				
993029	1.1	Deer Cr	Tenmile Cr	Private	Culvert	RR	67	15	2	ETD	33.33
993030	1.1	Deer Cr	Tenmile Cr	County	Culvert	OK	100				
993031	1.1	Deer Cr	Tenmile Cr	Private	Culvert	RR	67	18	0	PS3	34.19
993034	1.1	Deer Cr	Tenmile Cr	County	Culvert	OK	100			_	
993036	1.1	Deer Cr	Tenmile Cr	Private	Culvert	OK	100				
993037	1.2	Deer Cr	Tenmile Cr	County	Culvert	ОК	100				
994258	1.1	Deer Cr	Tenmile Cr	Private	Culvert	RR	67	13	3	PS3	32.43
994259	1.1	Deer Cr	Tenmile Cr	Private	Culvert	OK	100				
994260	1.1	Deer Cr	Tenmile Cr	Private	Culvert	RR	67	12	4	PS3	30.38
994261	1.2	Deer Cr	Tenmile Cr	Private	Culvert	RR	33	11	5	PS3	35.62
994358	1.1	Deer Cr	Tenmile Cr	Private	Culvert	OK	100				

¹ Sequencer: 1:2 – One culvert of two, 1:3 - One culvert of three, etc.

² Repair Status: OK – No action needed, RR – Repair required, LG – Habitat gain is less than 200 m., UD – Habitat gain undetermined, FX – Fixed, Blank – No fish use potential.

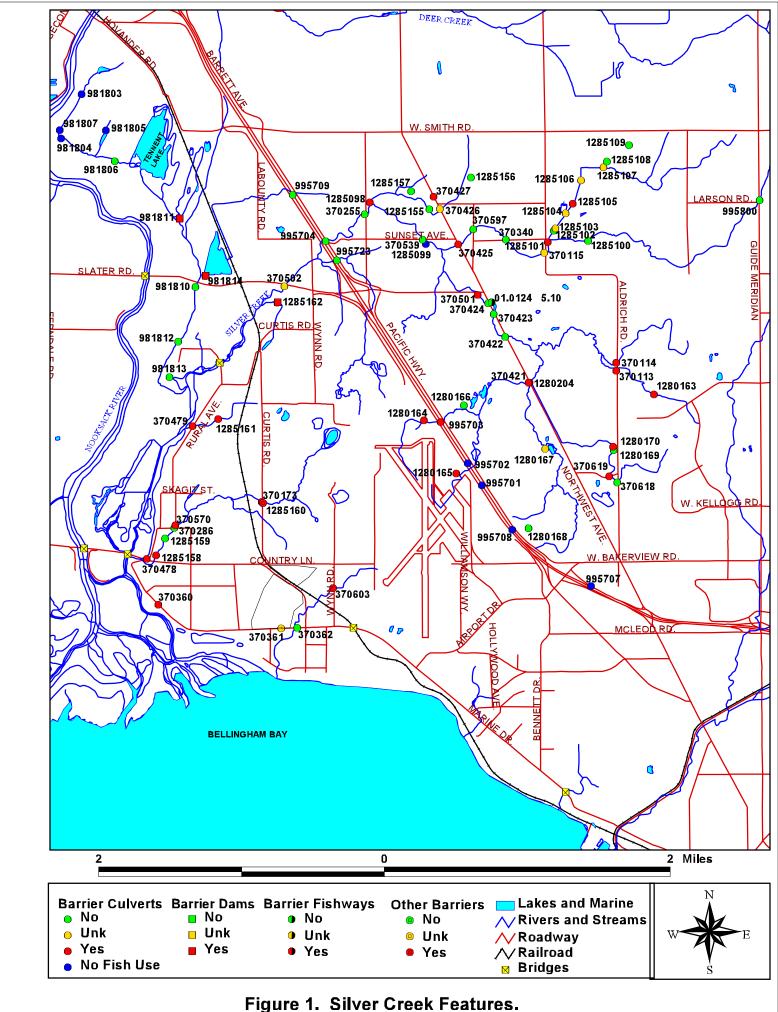
³ Survey Type: TD – Threshold Determination, LME – Lineal Map Estimate, ETD – Expanded threshold determination, UETD – Unexpanded Threshold Determination, FS, PS – Full habitat Survey, RSFS – Reduced Sampling Physical Survey.

0:1 10	a 1	24	T	Owner	F4	Repair ²	%	Addition	nal Barriers	Survey Type ³	Total DI
Site ID	Sequencer ¹	Stream	Tributary To	Type	Feature	Status	Passable	Upstream	Downstream	Survey Type	IOtal Fi
994359	1.1	Deer Cr	Tenmile Cr	Private	Culvert	RR	67	3	6	PS3	17.63
994360	1.1	Deer Cr	Tenmile Cr	Private	Culvert	RR	67	2	7	PS3	17.42
994361	1.2	Deer Cr	Tenmile Cr	Private	Culvert	RR	0	1	6	PS3	22.56
994362	1.2	Deer Cr	Tenmile Cr	County	Culvert	RR	67	0	7	PS3	16.02
994363	1.1	SF Deer Cr	Deer Cr	County	Culvert	RR	0	6	0	PS3	33.27
994364	1.1	SF Deer Cr	Deer Cr	Private	Culvert	RR	67	4	2	PS3	25.89
994365	1.2	SF Deer Cr	Deer Cr	Private	Culvert	RR	33	5	1	PS3	31.21
994366	1.1	SF Deer Cr	Deer Cr	Private	Culvert	RR	0	3	7	PS3	33.79
994367		SF Deer Cr	Deer Cr	Private	Dam	RR	0	2	4	PS3	19.30
994368		SF Deer Cr	Deer Cr	Private	Dam	RR	0	1	5	PS3	8.59
994369		SF Deer Cr	Deer Cr	Private	Dam	LG	0	0	6	TD	
995701	1.1	Unnamed	Silver Cr	State	Culvert						
995702	1.1	Unnamed	Silver Cr	State	Culvert						
995703	1.1	Unnamed	Silver Cr	State	Culvert	LG	33	0		UETD	
995704	1.1	Silver Cr	Nooksack R	State	Culvert	OK	100				
995707	1.1	Unnamed	Silver Cr	State	Culvert						
995708	1.1	Unnamed	Silver Cr	State	Culvert						
995709	1.1	Unnamed	Silver Cr	State	Culvert	OK	100				
995723	1.1	Unnamed	Silver Cr	State_	Culvert	OK	100				
995800	1.1	Unnamed	Silver Cr	State	Culvert	OK	100				
996168	1.1	Unnamed	Green Lk	State	Culvert						

¹ Sequencer: 1:2 – One culvert of two, 1:3 - One culvert of three, etc.

² Repair Status: OK – No action needed, RR – Repair required, LG – Habitat gain is less than 200 m., UD – Habitat gain undetermined, FX – Fixed, Blank – No fish use potential.

³ Survey Type: TD – Threshold Determination, LME – Lineal Map Estimate, ETD – Expanded threshold determination, UETD – Unexpanded Threshold Determination, FS, PS – Full habitat Survey, RSFS – Reduced Sampling Physical Survey.



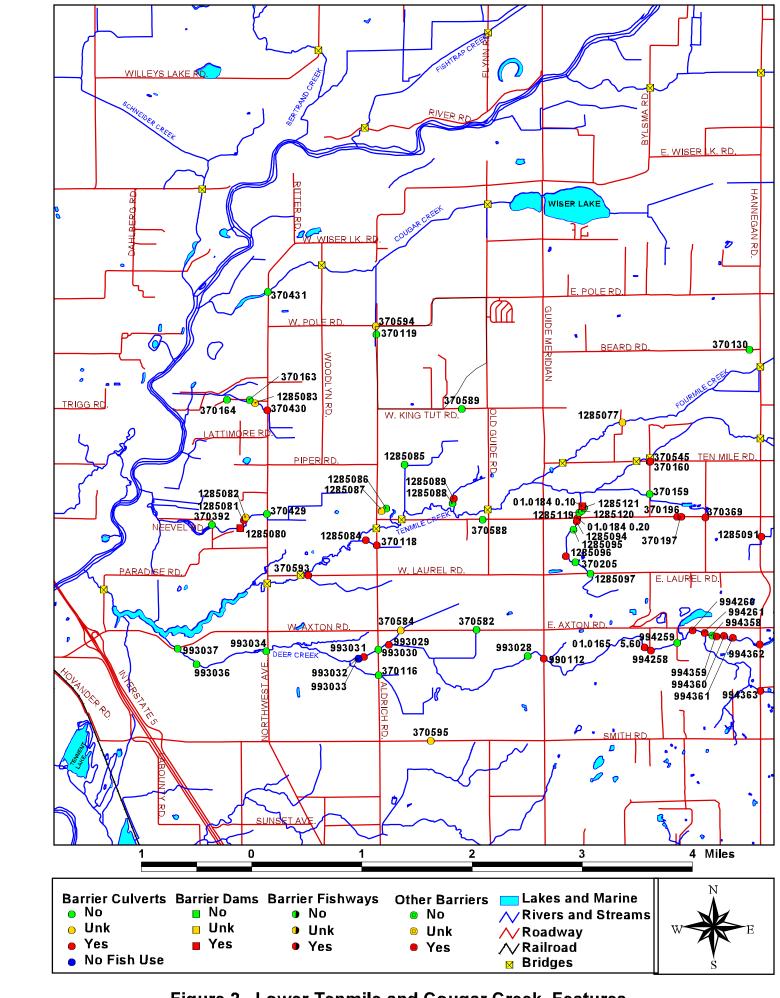


Figure 2. Lower Tenmile and Cougar Creek Features.

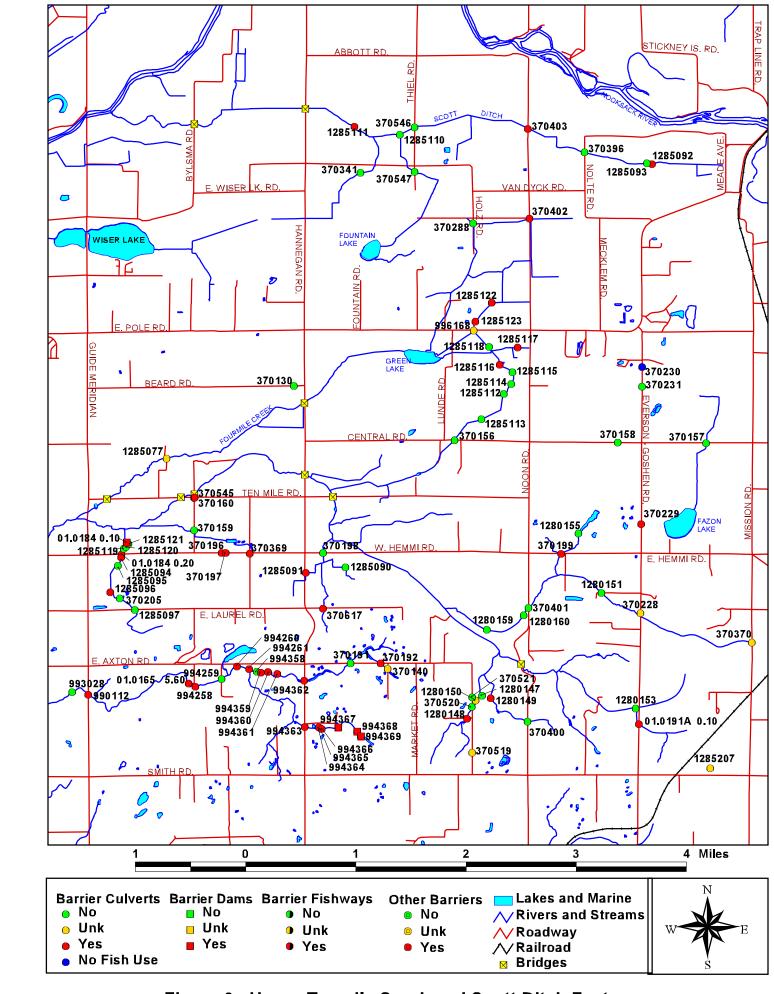


Figure 3. Upper Tenmile Creek and Scott Ditch Features.

PI TOTAL:

46.59

GENERAL INFORMATION

01.0165 5.60

Tenmile Cr

Stream: Deer Cr

Site ID:

Trib To:

Owner: Private

HABITAT GAIN

Shape:

Material:

Span (m):

Length (m):

BARRIER STATUS Problem: Slope Lineal Gain (m): Ds Barriers: 2 Spawn Area (m2):

Us Barriers: 14 Rear Area (m2):

PI TOTAL:

36.16

GENERAL INFORMATION

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

BOX CPC

4.40

6.39

5.537

1,697

3.75

RND

CST

0.93

6.00

16,283

Site ID: 1285111 **ARCH** Shape: Stream: Scott Ditch Material: CPC Trib To: Nooksack R Span (m): 1.65

Private Owner:

BARRIER STATUS

Problem: slope Ds Barriers: 0

Us Barriers:

Site ID:

HABITAT GAIN

Length (m):

Shape:

Material:

Span (m):

Length (m):

Lineal Gain (m): 11,117 Spawn Area (m2): 7,379 Rear Area (m2): 10,171

CULVERT ATTRIBUTES

PI TOTAL:

35.62

GENERAL INFORMATION

3

994261

Stream: Deer Cr Trib To: Tenmile Cr

Private Owner:

BARRIER STATUS

Problem: Slope Ds Barriers: 5 Us Barriers: 11

HABITAT GAIN

Lineal Gain (m): 3,888 Spawn Area (m2): 742

Rear Area (m2): 9,369

PI TOTAL:

35.62

GENERAL INFORMATION

CULVERT ATTRIBUTES

Site ID: 994261 RND Shape: Stream: Deer Cr Material: CST Trib To: Tenmile Cr 0.93 Span (m): Owner: Private Length (m): 6.00

BARRIER STATUS

Problem: Slope Ds Barriers: 5 Us Barriers: 11

HABITAT GAIN

Lineal Gain (m): 3,888 Spawn Area (m2): 742 Rear Area (m2): 9,369



PI TOTAL:

34.19

GENERAL INFORMATION

CULVERT ATTRIBUTES



Site ID: 993031 Shape: **RND** OTH Stream: Deer Cr Material: Trib To: Tenmile Cr Span (m): 1.70 Owner: Private Length (m): 3.96

BARRIER STATUS

Ds Barriers:

Lineal Gain (m):

HABITAT GAIN

Spawn Area (m2): 3,823

Problem: Slope

Us Barriers: 18 Rear Area (m2): 38,896

PI TOTAL:

33.79

GENERAL INFORMATION

CULVERT ATTRIBUTES



Site ID: 994366 **RND** Shape: Stream: SF Deer Cr Material: OTH Trib To: Deer Cr Span (m): 0.50 Private 4.50 Owner: Length (m):

BARRIER STATUS

Undersized/Blocka Problem:

Ds Barriers: 7 Us Barriers: 3 **HABITAT GAIN**

Lineal Gain (m): 777 Spawn Area (m2): 130 Rear Area (m2): 5,454

PI TOTAL:

33.33

GENERAL INFORMATION

CULVERT ATTRIBUTES

RND

CST

0.91

5.66

RND

PCC

0.91

31.21

Site ID: 993029 Shape: Stream: Deer Cr Material: Trib To: Tenmile Cr Span (m): Private Length (m): Owner: **BARRIER STATUS**

Problem: Slope Ds Barriers: 2 Us Barriers: 15

HABITAT GAIN

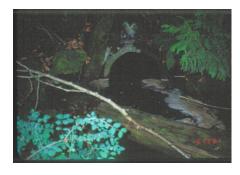
Lineal Gain (m): 10,613 Spawn Area (m2): 3,524 Rear Area (m2): 35,010

PI TOTAL:

33.27

GENERAL INFORMATION

CULVERT ATTRIBUTES



Site ID: 994363 Stream: SF Deer Cr Trib To: Deer Cr Owner: County

HABITAT GAIN

Shape:

Material:

Span (m):

Length (m):

BARRIER STATUS Problem: Slope Lineal Gain (m): 1,025 Ds Barriers: 0 Spawn Area (m2): 295 Us Barriers: 6 Rear Area (m2): 5,730

Culvert Shape: RND = Round, BOX = Rectangular, ARCH = Bottomless arch, SQSH = Pipe arch, ELL = Ellipse, OTH = Other. Culvert Material: PCC = Pre-cast concrete, CPC = Cast in place concrete, CST = Corrugated steel, SST = Smooth Steel, CAL = Corrugated aluminum, SPS = Structuural plate steel, SPA = Structural plate aluminum, PVC = Plastic, TMB = Timber, MRY = Masonary, OTH = Other

PI TOTAL: 32.43

GENERAL INFORMATION

Site ID: 1285150 Shape: BOX CPC Stream: Tenmile Cr Material: Trib To: Nooksack R Span (m): 2.50 Owner: Private Length (m): 4.10

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

HABITAT GAIN

HABITAT GAIN

HABITAT GAIN

HABITAT GAIN

BARRIER STATUS

 Problem:
 Outfall drop
 Lineal Gain (m):
 12,246

 Ds Barriers:
 0
 Spawn Area (m2):
 2,098

 Us Barriers:
 7
 Rear Area (m2):
 13,138



32.43

GENERAL INFORMATION

Site ID: 1285150 **RND** Shape: Stream: Tenmile Cr Material: CST Trib To: Nooksack R 1.83 Span (m): Private 9.55 Owner: Length (m):

BARRIER STATUS

 Problem:
 Slope
 Lineal Gain (m):
 12,246

 Ds Barriers:
 0
 Spawn Area (m2):
 2,098

 Us Barriers:
 7
 Rear Area (m2):
 13,138

PI TOTAL:

32.43

GENERAL INFORMATION

Site ID: 994258 Shape: **RND** Stream: Deer Cr Material: CST Trib To: Tenmile Cr Span (m): 1.50 Private 7.00 Owner: Length (m):



 Problem:
 Slope
 Lineal Gain (m):
 4,825

 Ds Barriers:
 3
 Spawn Area (m2):
 1,098

 Us Barriers:
 13
 Rear Area (m2):
 12,461



31.44

GENERAL INFORMATION

Site ID: 990112 BOX Shape: Stream: Deer Cr Material: PCC Trib To: Tenmile Cr 1.22 Span (m): Owner: State Length (m): 14.63



 Problem:
 Slope
 Lineal Gain (m):
 7,609

 Ds Barriers:
 3
 Spawn Area (m2):
 2,060

 Us Barriers:
 15
 Rear Area (m2):
 20,821



PI TOTAL: 31.21

GENERAL INFORMATION

Site ID: 994365 Shape: **RND** SF Deer Cr PVC Stream: Material: Trib To: Deer Cr Span (m): 0.20 Owner: Private Length (m): 4.43

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

HABITAT GAIN

HABITAT GAIN

HABITAT GAIN

BARRIER STATUS

Problem: Slope Lineal Gain (m): 822 Ds Barriers: Spawn Area (m2): 160 1 5 Us Barriers: Rear Area (m2): 5,504

PI TOTAL:

31.21

GENERAL INFORMATION

Site ID: 994365 **RND** Shape: Stream: SF Deer Cr Material: **PVC** Trib To: Deer Cr Span (m): 0.20 Private 4.30 Owner: Length (m):

BARRIER STATUS

Problem: Slope Lineal Gain (m): 822 Ds Barriers: 1 Spawn Area (m2): 160 5 Rear Area (m2): Us Barriers: 5,504

PI TOTAL:

30.38

GENERAL INFORMATION

Site ID: 994260 Shape: **RND** Stream: Deer Cr Material: **CST** Trib To: Tenmile Cr Span (m): 1.20 Private Length (m): 5.81 Owner:



Problem: Slope Lineal Gain (m): 4,069 Ds Barriers: 4 Spawn Area (m2): 820 Us Barriers: 12 Rear Area (m2): 9.824





GENERAL INFORMATION

Site ID: 370425 RND Shape: Stream: Unnamed Material: PCC Trib To: Silver Cr 1.52 Span (m): Owner: County Length (m): 42.98

BARRIER STATUS

HABITAT GAIN Problem: Slope Lineal Gain (m): 5,388 Ds Barriers: 0 Spawn Area (m2): 5,578 Us Barriers: 3 Rear Area (m2): 7,664



27.08

GENERAL INFORMATION

County

370501 Shape: **RND** PCC Silver Cr Material: Nooksack R Span (m): 1.83

Length (m):

Span (m):

Length (m):

HABITAT GAIN

HABITAT GAIN

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

HABITAT GAIN

CULVERT ATTRIBUTES

29.87

1.83

15.54

BARRIER STATUS

Site ID:

Stream:

Trib To:

Owner:

Problem: Velocity Lineal Gain (m): 11,163 Ds Barriers: Spawn Area (m2): 4,081 Us Barriers: Rear Area (m2): 10 27,589

PI TOTAL:

PI TOTAL:

27.05

GENERAL INFORMATION

CULVERT ATTRIBUTES Site ID: 370403 BOX Shape: Stream: Scott Ditch Material: **PCC**

Trib To: Nooksack R Owner: County

BARRIER STATUS

Problem: Velocity Lineal Gain (m): 3,036 Ds Barriers: 1 Spawn Area (m2): 6,274 Rear Area (m2): Us Barriers: 1 6,989

PI TOTAL:

25.89

GENERAL INFORMATION

RND Site ID: 994364 Shape: Stream: SF Deer Cr Material: CAL Trib To: Deer Cr Span (m): 0.50 Owner: Private 3.38 Length (m):

BARRIER STATUS

undersized Problem: Lineal Gain (m): 800 Ds Barriers: 2 Spawn Area (m2): 145 Us Barriers: 4 Rear Area (m2): 5.480

PI TOTAL:

24.55



GENERAL INFORMATION

Site ID: 1285101 RND Shape: Stream: Unnamed Material: PCC Trib To: Silver Cr 1.23 Span (m): Owner: Private Length (m): 7.50

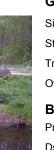
BARRIER STATUS

HABITAT GAIN Problem: Slope Lineal Gain (m): 3,987 Ds Barriers: 2 Spawn Area (m2): 4,523 Us Barriers: 1 Rear Area (m2): 4,208

Culvert Shape: RND = Round, BOX = Rectangular, ARCH = Bottomless arch, SQSH = Pipe arch, ELL = Ellipse, OTH = Other. Culvert Material: PCC = Pre-cast concrete, CPC = Cast in place concrete, CST = Corrugated steel, SST = Smooth Steel, CAL = Corrugated aluminum, SPS = Structuural plate steel, SPA = Structural plate aluminum, PVC = Plastic, TMB = Timber, MRY = Masonary, OTH = Other

PI TOTAL:

24.48



GENERAL INFORMATION

Site ID: 1280154 Tenmile Cr Stream: Trib To: Nooksack R Owner: Private

BARRIER STATUS

Problem: slope, Ds Barriers: 1 2 Us Barriers:

BARRIER STATUS

CULVERT ATTRIBUTES

Shape: **RND** CST Material: Span (m): 0.90 Length (m): 6.10

HABITAT GAIN

Shape:

Material:

Span (m):

Length (m):

HABITAT GAIN

Lineal Gain (m): 1.637 Spawn Area (m2): 2,098 Rear Area (m2): 2,352

CULVERT ATTRIBUTES

RND

CST

0.91

17.37

PI TOTAL:

23.36



Site ID: 370421 Stream: Unnamed Trib To: Silver Cr Owner: County

Problem: Slope Lineal Gain (m): 4,896 Ds Barriers: 2 Spawn Area (m2): 27 5 Us Barriers: Rear Area (m2): 21,704

PI TOTAL:

22.56

GENERAL INFORMATION

Site ID: 994361 Stream: Deer Cr Trib To: Tenmile Cr Private Owner:

BARRIER STATUS

Problem: Slope Ds Barriers: 6 Us Barriers: 1

CULVERT ATTRIBUTES

Shape: **SQSH** Material: CST Span (m): 0.80 Length (m): 6.13

HABITAT GAIN

Lineal Gain (m): 844 Spawn Area (m2): 41 Rear Area (m2): 1.566

PI TOTAL:

22.56

GENERAL INFORMATION

Site ID: 994361 Stream: Deer Cr Trib To: Tenmile Cr Owner: Private

CST

CULVERT ATTRIBUTES

RND Shape: Material: 0.46 Span (m): Length (m): 6.05

BARRIER STATUS

Problem: Slope Ds Barriers: 6 Us Barriers: 1

HABITAT GAIN

Lineal Gain (m): 844 Spawn Area (m2): 41 Rear Area (m2): 1,566



Culvert Shape: RND = Round, BOX = Rectangular, ARCH = Bottomless arch, SQSH = Pipe arch, ELL = Ellipse, OTH = Other. Culvert Material: PCC = Pre-cast concrete, CPC = Cast in place concrete, CST = Corrugated steel, SST = Smooth Steel, CAL = Corrugated aluminum, SPS = Structuural plate steel, SPA = Structural plate aluminum, PVC = Plastic, TMB = Timber, MRY = Masonary, OTH = Other

PI TOTAL:

19.56

GENERAL INFORMATION

1285116

Private

370114

Silver Cr

County

370114

Nooksack R

Stream: Unnamed

Trib To: Tenmile Cr

BARRIER STATUS

Site ID:

Owner:

Site ID:

Stream:

Trib To:

Owner:

Site ID:

Problem: Slope
Ds Barriers: 0
Us Barriers: 1

CULVERT ATTRIBUTES

Shape: RND

Material: CST

Length (m): 8.97

0.92

1,092

HABITAT GAIN

Span (m):

Lineal Gain (m): 788 Spawn Area (m2): 702

Rear Area (m2):

PI TOTAL:

19.22

GENERAL INFORMATION

CULVERT ATTRIBUTES

Shape: RND Material: PCC

Span (m): 0.91

L

Length (m): 23.77

BARRIER STATUS

Problem: Outfall drop

Ds Barriers: 1
Us Barriers: 1

HABITAT GAIN

Lineal Gain (m): 1,960 Spawn Area (m2): 2,067

Rear Area (m2): 1,335

PI TOTAL:

19.22

GENERAL INFORMATION

Stream: Silver Cr
Trib To: Nooksack R

Owner: County

BARRIER STATUS

Problem: Slope
Ds Barriers: 1

Us Barriers:

Trib To:

CULVERT ATTRIBUTES

Shape: RND

Material: PCC Span (m): 0.61

Length (m): 22.86

HABITAT GAIN

Lineal Gain (m): 1,960 Spawn Area (m2): 2,067 Rear Area (m2): 1,335

PI TOTAL:

19.05

GENERAL INFORMATION

1

Silver Cr

CULVERT ATTRIBUTES

Site ID: 370478
Stream: Unnamed

Owner: County

Shape: RND

Material: CAL

Span (m): 0.91

Length (m): 30.48

BARRIER STATUS

Problem: Slope
Ds Barriers: 0
Us Barriers: 4

HABITAT GAIN

Lineal Gain (m): 3,467 Spawn Area (m2): 894 Rear Area (m2): 2,367



PI TOTAL:

18.58



GENERAL INFORMATION

Site ID: 1285122
Stream: Unnamed
Trib To: Fourmile Cr
Owner: Private

BARRIER STATUS

Problem: Slope
Ds Barriers: 1
Us Barriers: 0

CULVERT ATTRIBUTES

Shape: RND
Material: PVC
Span (m): 0.46
Length (m): 9.00

HABITAT GAIN

Lineal Gain (m): 1,772 Spawn Area (m2): 563 Rear Area (m2): 2,658

CULVERT ATTRIBUTES

PI TOTAL:

18.40



Site ID: 1285105 **RND** Shape: Stream: Unnamed Material: CAL Trib To: Silver Cr Span (m): 1.22 Private 7.15 Owner: Length (m):

BARRIER STATUS

Problem: Slope
Ds Barriers: 3
Us Barriers: 0

HABITAT GAIN

Lineal Gain (m): 1,753 Spawn Area (m2): 1,416 Rear Area (m2): 1,337

PI TOTAL:

17.70

GENERAL INFORMATION

Site ID: 1285096

Stream: Silver Springs Cr

Trib To: Tenmile Cr

Owner: Private

CULVERT ATTRIBUTES

Shape: RND

Material: CST

Span (m): 0.87

Length (m): 5.40

BARRIER STATUS

Problem: Slope
Ds Barriers: 2
Us Barriers: 0

HABITAT GAIN

Lineal Gain (m): 1,331 Spawn Area (m2): 39 Rear Area (m2): 1,749

PI TOTAL:

17.63

GENERAL INFORMATION

Site ID: 994359
Stream: Deer Cr
Trib To: Tenmile Cr
Owner: Private

CULVERT ATTRIBUTES

Shape: RND

Material: SST

Span (m): 0.61

Length (m): 5.11

BARRIER STATUS

Problem: Slope
Ds Barriers: 6
Us Barriers: 3

HABITAT GAIN

Lineal Gain (m): 1,108
Spawn Area (m2): 44
Rear Area (m2): 1,837



PI TOTAL:

17.58



GENERAL INFORMATION

 Site ID:
 1285098

 Stream:
 Unnamed

 Trib To:
 Silver Cr

 Owner:
 Private

BARRIER STATUS

Problem: Slope
Ds Barriers: 0
Us Barriers: 0

CULVERT ATTRIBUTES

Shape: RND
Material: CST
Span (m): 1.06
Length (m): 13.80

HABITAT GAIN

Lineal Gain (m): 1,144
Spawn Area (m2): 853
Rear Area (m2): 1,428

CULVERT ATTRIBUTES

PI TOTAL:

17.42

GENERAL INFORMATION

Site ID: 994360 **RND** Shape: Stream: Deer Cr Material: **PCC** Trib To: Tenmile Cr Span (m): 0.61 Private 5.28 Owner: Length (m):



Us Barriers:

Problem: Slope
Ds Barriers: 7

HABITAT GAIN

Lineal Gain (m): 993

Spawn Area (m2): 44

Rear Area (m2): 1,698

PI TOTAL:



GENERAL INFORMATION

2

Site ID: 370173
Stream: Unnamed
Trib To: Silver Cr
Owner: County

CULVERT ATTRIBUTES

Shape: RND

Material: PCC

Span (m): 0.61

Length (m): 17.68

BARRIER STATUS

Problem: Slope
Ds Barriers: 3
Us Barriers: 1

HABITAT GAIN

Lineal Gain (m): 1,083 Spawn Area (m2): 894 Rear Area (m2): 1,058

PI TOTAL:





GENERAL INFORMATION

Site ID: 1285094

Stream: Silver Springs Cr

Trib To: Tenmile Cr

Owner: Private

CULVERT ATTRIBUTES

Shape: RND

Material: PCC

Span (m): 0.79

Length (m): 64.50

BARRIER STATUS

Problem: Depth and Velocity

Ds Barriers: 1
Us Barriers: 1

HABITAT GAIN

Lineal Gain (m): 1,909 Spawn Area (m2): 105 Rear Area (m2): 2,552

Culvert Shape: RND = Round, BOX = Rectangular, ARCH = Bottomless arch, SQSH = Pipe arch, ELL = Ellipse, OTH = Other. Culvert Material: PCC = Pre-cast concrete, CPC = Cast in place concrete, CST = Corrugated steel, SST = Smooth Steel, CAL = Corrugated aluminum, SPS = Structural plate steel, SPA = Structural plate aluminum, PVC = Plastic, TMB = Timber, MRY = Masonary, OTH = Other

16.76

PI TOTAL:

GENERAL INFORMATION

CULVERT ATTRIBUTES

Site ID: 1285123 Stream: Unnamed Trib To: Fourmile Cr Owner: Private

Shape: **RND** PVC Material: Span (m): 0.46 Length (m): 8.70

BARRIER STATUS

Problem: Velocity Lineal Gain (m): 2.146 Ds Barriers: Spawn Area (m2): 563 Us Barriers: 1 Rear Area (m2):

HABITAT GAIN

4,159

PI TOTAL:

16.02

GENERAL INFORMATION

CULVERT ATTRIBUTES

RND Site ID: 994362 Shape: Stream: Deer Cr Material: **PCC** Trib To: Tenmile Cr Span (m): 0.75 County Owner: Length (m): 24.64

BARRIER STATUS

Problem: Slope Ds Barriers: 7 Us Barriers: n

HABITAT GAIN

Lineal Gain (m): 342 Spawn Area (m2): Rear Area (m2): 1,231

CULVERT ATTRIBUTES

PI TOTAL:

16.02

GENERAL INFORMATION

Site ID: 994362 Shape: **RND** Stream: Deer Cr Material: **PCC** Trib To: Tenmile Cr Span (m): 0.75 Owner: County Length (m): 25.13



BARRIER STATUS

Problem: Slope Lineal Gain (m): Ds Barriers: 7 Us Barriers: 0

HABITAT GAIN

Spawn Area (m2): 31 Rear Area (m2): 1,231

342

PI TOTAL:

14.48

GENERAL INFORMATION

370227

CULVERT ATTRIBUTES RND Shape:

Stream: Tenmile Cr Material: CST Trib To: Nooksack R 0.91 Span (m): Owner: County Length (m): 39.30

BARRIER STATUS

Problem:

Site ID:

Ds Barriers: 2 Us Barriers: 0

HABITAT GAIN

Lineal Gain (m): 389 Spawn Area (m2): 0 Rear Area (m2): 1,827



PI TOTAL:

14.26



GENERAL INFORMATION

Site ID: 1280204 Shape: Stream: Unnamed Material: Trib To: Silver Cr Span (m): Owner: County Length (m):

BARRIER STATUS

Problem: Lineal Gain (m): Length Ds Barriers: 1 Us Barriers: 1 Rear Area (m2):

HABITAT GAIN

1.058 Spawn Area (m2): 106 690

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

RND CST

0.45

770.00

PI TOTAL:

14.24



Site ID: 1285081 **RND** Shape: Stream: Neevel Cr Material: CST Trib To: Nooksack R Span (m): 0.77 Private 6.00 Owner: Length (m):

BARRIER STATUS

Problem: Slope Ds Barriers: 1 Us Barriers: 0

HABITAT GAIN

Lineal Gain (m): 1,988 Spawn Area (m2): 0 Rear Area (m2): 5,284

CULVERT ATTRIBUTES

RND

PCC

1.22

30.18

PI TOTAL:

14.10

GENERAL INFORMATION

Site ID: 370113 Shape: Stream: Unnamed Material: Trib To: Silver Cr Span (m): County Owner: Length (m):



BARRIER STATUS

Problem: Slope Ds Barriers: 1 Us Barriers: 1

HABITAT GAIN

Lineal Gain (m): 640 Spawn Area (m2): 880 Rear Area (m2): 264

PI TOTAL:

11.55

GENERAL INFORMATION

Site ID: 1285089 Stream: Unnamed Trib To: Tenmile Cr Owner: Private

CULVERT ATTRIBUTES

RND Shape: Material: SST Span (m): 0.67 Length (m): 7.00

BARRIER STATUS

Problem: Slope Ds Barriers: 0 Us Barriers: 0

HABITAT GAIN

Lineal Gain (m): 318 Spawn Area (m2): 0 Rear Area (m2): 2,288



PI TOTAL: 11.47

GENERAL INFORMATION

Site ID: 1285158 Shape:
Stream: Unnamed Material:
Trib To: Silver Cr Span (m):
Owner: Private Length (m):

BARRIER STATUS

 Problem:
 Slope
 Lineal Gain (m):
 3,257

 Ds Barriers:
 1
 Spawn Area (m2):
 0

 Us Barriers:
 3
 Rear Area (m2):
 2,225

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

HABITAT GAIN

HABITAT GAIN

HABITAT GAIN

HABITAT GAIN

RND CST

0.91

6.10

PI TOTAL:

11.00

GENERAL INFORMATION

RND Site ID: 370570 Shape: Stream: Unnamed Material: CAL Trib To: Silver Cr Span (m): 1.07 15.24 Owner: County Length (m):

BARRIER STATUS

 Problem:
 Slope
 Lineal Gain (m):
 2,833

 Ds Barriers:
 2
 Spawn Area (m2):
 0

 Us Barriers:
 2
 Rear Area (m2):
 1,879



10.41

GENERAL INFORMATION

Site ID: 1285117 Shape: **RND** Stream: Unnamed Material: **PCC** Trib To: Tenmile Cr Span (m): 0.61 Owner: Private Length (m): 7.68



BARRIER STATUS

 Problem:
 Slope
 Lineal Gain (m):
 162

 Ds Barriers:
 1
 Spawn Area (m2):
 85

 Us Barriers:
 0
 Rear Area (m2):
 202



10.02

GENERAL INFORMATION

Site ID: 370593 RND Shape: Stream: Unnamed Material: CAL Trib To: Tenmile Cr 0.91 Span (m): Owner: County Length (m): 37.19



BARRIER STATUS

 Problem:
 Outfall drop
 Lineal Gain (m):
 381

 Ds Barriers:
 0
 Spawn Area (m2):
 0

 Us Barriers:
 1
 Rear Area (m2):
 868

Culvert Shape: RND = Round, BOX = Rectangular, ARCH = Bottomless arch, SQSH = Pipe arch, ELL = Ellipse, OTH = Other. Culvert Material: PCC = Pre-cast concrete, CPC = Cast in place concrete, CST = Corrugated steel, SST = Smooth Steel, CAL = Corrugated aluminum, SPS = Structural plate steel, SPA = Structural plate aluminum, PVC = Plastic, TMB = Timber, MRY = Masonary, OTH = Other

PI TOTAL:

9.20



GENERAL INFORMATION

Site ID: 1285092
Stream: Unnamed
Trib To: Scott Cr
Owner: Private

BARRIER STATUS

Problem: Slope

Ds Barriers: 2

Us Barriers: 0

CULVERT ATTRIBUTES

Shape: RND
Material: PCC
Span (m): 0.31
Length (m): 6.20

HABITAT GAIN

Lineal Gain (m): 1,003 Spawn Area (m2): 0 Rear Area (m2): 297

HABITAT GAIN

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

PI TOTAL:

8.66



Site ID: 1280150 Shape: **RND** Stream: Starry Cr Material: CST Trib To: Tenmile Cr Span (m): 0.95 Owner: Private 17.00 Length (m):



 Problem:
 velocity
 Lineal Gain (m):
 376

 Ds Barriers:
 1
 Spawn Area (m2):
 390

 Us Barriers:
 2
 Rear Area (m2):
 724

PI TOTAL:

8.07

GENERAL INFORMATION

Site ID: 1280148 Shape: **RND** Stream: Starry Cr Material: **PCC** Trib To: Tenmile Cr Span (m): 0.75 Private Length (m): 11.20 Owner:



BARRIER STATUS

Problem: Slope Lineal Gain (m):

Ds Barriers: 2 Spawn Area (m2):

Us Barriers: 1 Rear Area (m2):

PI TOTAL:

7.37



GENERAL INFORMATION

Site ID: 370199
Stream: Unnamed
Trib To: Shuksan Cr
Owner: County

BARRIER STATUS

Problem: depth and Velocity

Ds Barriers: 1
Us Barriers: 0

CULVERT ATTRIBUTES

72

15

545

Shape: RND

Material: PCC

Span (m): 0.76

Length (m): 11.89

HABITAT GAIN

HABITAT GAIN

Lineal Gain (m): 535
Spawn Area (m2): 0
Rear Area (m2): 379

Culvert Shape: RND = Round, BOX = Rectangular, ARCH = Bottomless arch, SQSH = Pipe arch, ELL = Ellipse, OTH = Other. Culvert Material: PCC = Pre-cast concrete, CPC = Cast in place concrete, CST = Corrugated steel, SST = Smooth Steel, CAL = Corrugated aluminum, SPS = Structuural plate steel, SPA = Structural plate aluminum, PVC = Plastic, TMB = Timber, MRY = Masonary, OTH = Other

PI TOTAL:

7.26



GENERAL INFORMATION

Site ID: 1285084 Shape: **RND** PCC Stream: Unnamed Material: Trib To: Tenmile Cr Span (m): 0.46 Owner: Private Length (m): 8.50

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

HABITAT GAIN

HABITAT GAIN

BARRIER STATUS

 Problem:
 Slope
 Lineal Gain (m):
 539

 Ds Barriers:
 0
 Spawn Area (m2):
 0

 Us Barriers:
 1
 Rear Area (m2):
 358

PI TOTAL:

6.51



GENERAL INFORMATION

Site ID: 370118 **RND** Shape: Stream: Unnamed Material: **PCC** Trib To: Tenmile Cr Span (m): 0.46 Owner: County Length (m): 10.97

BARRIER STATUS

 Problem:
 Slope
 Lineal Gain (m):
 348

 Ds Barriers:
 1
 Spawn Area (m2):
 0

 Us Barriers:
 0
 Rear Area (m2):
 230

PI TOTAL:

5.83



Site ID: 370402 Shape: **RND** Stream: Unnamed Material: CAL Trib To: Scott Cr Span (m): 1.22 15.54 Owner: County Length (m):



BARRIER STATUS

Problem: Slope Lineal Gain (m): 660

Ds Barriers: 1 Spawn Area (m2): 0

Us Barriers: 0 Rear Area (m2): 301

PI TOTAL:

5.60

GENERAL INFORMATION

Shape: RND
Material: PCC
Span (m): 0.38

CULVERT ATTRIBUTES

5.50

HABITAT GAIN

No Image Available

BARRIER STATUS

Site ID:

Stream:

Trib To:

Owner:

Problem: Slope

Ds Barriers: 2

Us Barriers: 0

1280170

Unnamed

Silver Cr

Private

HABITAT GAIN

Length (m):

Lineal Gain (m): 408
Spawn Area (m2): 0
Rear Area (m2): 127

PI TOTAL: 5.33

GENERAL INFORMATION

Site ID: 370479 Shape: **RND** PCC Stream: Unnamed Material: Trib To: Silver Cr Span (m): 1.22 Owner: County Length (m): 21.34

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

HABITAT GAIN

HABITAT GAIN

HABITAT GAIN

CULVERT ATTRIBUTES

BARRIER STATUS

Problem: Slope Lineal Gain (m): Ds Barriers: Spawn Area (m2): Us Barriers: 1 Rear Area (m2): 104

PI TOTAL:

4.31

GENERAL INFORMATION

Site ID: 1280149 **RND** Shape: Stream: Unnamed Material: CST Trib To: Starry Cr Span (m): 0.92 Private Owner: Length (m): 9.40

BARRIER STATUS

Problem: Slope Lineal Gain (m): 154 Ds Barriers: 1 Spawn Area (m2): 98 Us Barriers: 0 Rear Area (m2): 89

PI TOTAL: 3.93

GENERAL INFORMATION

CULVERT ATTRIBUTES Site ID: 1280164 Shape: **RND** Stream: Unnamed Material: CST Trib To: Silver Cr Span (m): 0.62 Private Length (m): 155.00 Owner:



BARRIER STATUS

Problem: Slope Lineal Gain (m): 90 Ds Barriers: 3 Spawn Area (m2): 0 Us Barriers: 0 Rear Area (m2): 31



3.68

GENERAL INFORMATION

Site ID: 1280165 RND Shape: Stream: Unnamed Material: CST Trib To: Silver Cr 0.46 Span (m): Owner: Private Length (m): 56.40



BARRIER STATUS

Problem: Slope Ds Barriers: 3 Us Barriers: 0

HABITAT GAIN

Lineal Gain (m): 134 Spawn Area (m2): 0 Rear Area (m2): 23

PI TOTAL:



GENERAL INFORMATION

Site ID: 1285093 Shape: Stream: Scott Ditch Material: Trib To: Nooksack R Span (m): Owner: Private Length (m):

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

HABITAT GAIN

HABITAT GAIN

HABITAT GAIN

RND PCC

0.91

6.65

BARRIER STATUS

Problem: Lineal Gain (m): Ds Barriers: Spawn Area (m2): Us Barriers: Rear Area (m2):

PI TOTAL:



GENERAL INFORMATION

RND Site ID: 1285091 Shape: Stream: Unnamed Material: **PCC** Trib To: Tenmile Cr Span (m): 0.61 Owner: Private 4.73 Length (m):

BARRIER STATUS

Problem: Slope Lineal Gain (m): Ds Barriers: Spawn Area (m2): Us Barriers: Rear Area (m2):

PI TOTAL:



GENERAL INFORMATION

Site ID: 1285083 Shape: **RND** Stream: Clarkson Cr Material: CST Trib To: Nooksack R Span (m): 0.92 Private Length (m): 15.20 Owner:

BARRIER STATUS

HABITAT GAIN Problem: Lineal Gain (m): Ds Barriers: Spawn Area (m2): Us Barriers: Rear Area (m2):

PI TOTAL:



GENERAL INFORMATION

Site ID: 1285082 RND Shape: Stream: Neevel Cr Material: PVC Trib To: Nooksack R 0.78 Span (m): Owner: Private Length (m): 6.23

BARRIER STATUS

Problem: Lineal Gain (m): Ds Barriers: Spawn Area (m2): Us Barriers: Rear Area (m2):

Culvert Shape: RND = Round, BOX = Rectangular, ARCH = Bottomless arch, SQSH = Pipe arch, ELL = Ellipse, OTH = Other. Culvert Material: PCC = Pre-cast concrete, CPC = Cast in place concrete, CST = Corrugated steel, SST = Smooth Steel, CAL = Corrugated aluminum, SPS = Structuural plate steel, SPA = Structural plate aluminum, PVC = Plastic, TMB = Timber, MRY = Masonary, OTH = Other

PI TOTAL: **GENERAL INFORMATION CULVERT ATTRIBUTES** Site ID: 1280152 Shape: **SQSH** Stream: Tenmile Cr Material: CST Trib To: Nooksack R Span (m): 1.65 No Image Owner: Private Length (m): 5.70 Available **BARRIER STATUS HABITAT GAIN** Problem: Lineal Gain (m): Ds Barriers: Spawn Area (m2): Us Barriers: Rear Area (m2): PI TOTAL: **GENERAL INFORMATION CULVERT ATTRIBUTES** Site ID: 370196 **RND** Shape: Stream: Unnamed Material: **PCC** Trib To: Tenmile Cr Span (m): 0.46 Owner: County Length (m): 13.11 **BARRIER STATUS HABITAT GAIN** Problem: Depth Lineal Gain (m): Ds Barriers: Spawn Area (m2): Us Barriers: Rear Area (m2): PI TOTAL: **GENERAL INFORMATION CULVERT ATTRIBUTES** Site ID: 370192 Shape: **RND** Stream: Deer Cr Material: **PCC** Trib To: Tenmile Cr Span (m): 0.61 No Image County Owner: Length (m): 29.87 Available **BARRIER STATUS HABITAT GAIN** Problem: Slope Lineal Gain (m): Ds Barriers: Spawn Area (m2): Us Barriers: Rear Area (m2): PI TOTAL: **GENERAL INFORMATION CULVERT ATTRIBUTES** Site ID: 01 0191A 0 10 RND Shape: Stream: Unnamed Material: CST Trib To: Tenmile Cr 0.76 Span (m): Owner: County Length (m): 46.00

BARRIER STATUS

Slope

2

0

Problem:

Ds Barriers:

Us Barriers:

HABITAT GAIN

Spawn Area (m2):

409

522

267

Lineal Gain (m):

Rear Area (m2):

PI TOTAL:



GENERAL INFORMATION

Site ID: 01.0184 0.20
Stream: Unnamed
Trib To: Tenmile Cr
Owner: Unknown

Slope

0

2

Span (m): 0.91 Length (m): 16.46

Shape:

Material:

HABITAT GAIN
Lineal Gain (m): 1,958
Spawn Area (m2): 110
Rear Area (m2): 2,621

PI TOTAL:



GENERAL INFORMATION

BARRIER STATUS

Problem:

Ds Barriers:

Us Barriers:

Site ID: 1280163
Stream: Unnamed
Trib To: Silver Cr
Owner: County

BARRIER STATUS

Problem: Velocity
Ds Barriers:

Us Barriers:

Problem:

Ds Barriers:

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

RND

CST

1.83

31.39

CULVERT ATTRIBUTES

RND PCC

Shape: RND

Material: CAL

Span (m): 0.58

Length (m): 19.61

HABITAT GAIN

Lineal Gain (m): Spawn Area (m2): Rear Area (m2):

PI TOTAL:

PI TOTAL:

GENERAL INFORMATION

BARRIER STATUS

 Site ID:
 370424

 Stream:
 Silver Cr

 Trib To:
 Nooksack R

 Owner:
 County

Length (m): HABITAT GAIN

Shape:

Material:

Span (m):

Lineal Gain (m): Spawn Area (m2): Rear Area (m2):

No Image Available

Us Barriers:

State

GENERAL INFORMATION
Site ID: 995703
Stream: Unnamed
Trib To: Silver Cr

CULVERT ATTRIBUTES Shape: RND

Shape: RND

Material: OTH

Span (m): 0.46

Length (m): 91.32

No Image Available

BARRIER STATUS

Problem: Slope

Ds Barriers:

Owner:

Us Barriers: 0

HABITAT GAIN

Lineal Gain (m): 110
Spawn Area (m2):
Rear Area (m2):

PI TOTAL:	GENERAL	INFORMATION	CULVERT A	ATTRIBUTES	
	Site ID:	370619	Shape:	RND	
	Stream:	Unnamed	Material:	PCC	
	Trib To:	Silver Cr	Span (m):	0.46	
No Image	Owner:	County	Length (m):	13.20	
Available	BARRIER	STATUS	HABITAT GAIN		
	Problem:	Obstructed	Lineal Gain (m)):	
	Ds Barriers:		Spawn Area (m	12):	
	Us Barriers:		Rear Area (m2)):	
PI TOTAL:	GENERAL	INFORMATION	CULVERT A	ATTRIBUTES	
	Site ID:	370617	Shape:	RND	
	Stream:	Unnamed	Material:	CAL	
	Trib To:	Tenmile Cr	Span (m):	0.76	
No Image	Owner:	County	Length (m):	12.20	
Available	BARRIER	STATUS	HABITAT G	AIN	
	Problem:	Gradient	Lineal Gain (m):		
	Ds Barriers:		Spawn Area (m	12):	
	Us Barriers:		Rear Area (m2)):	
PI TOTAL:	GENERAL	INFORMATION	CULVERT A	ATTRIBUTES	
	Site ID:	370603	Shape:	RND	
	Stream:	Airport Cr	Material:	CAL	
	Trib To:	Bellingham Bay	Span (m):	0.91	
	Owner:	County	Length (m):	10.97	
A CONTRACTOR OF THE PARTY OF TH	BARRIER	STATUS	HABITAT G	AIN	
	Problem:	Slope	Lineal Gain (m)):	
	Ds Barriers:		Spawn Area (m	n2):	
	Us Barriers:		Rear Area (m2)):	
PI TOTAL:	GENERAL	INFORMATION	CULVERT A	ATTRIBUTES	
			0.	DND	
	Site ID:	370547	Shape:	RND	
	Site ID: Stream:	370547 Scott Ditch	Shape: Material:	PCC	
No Image	Stream:	Scott Ditch	Material:	PCC	
No Image Available	Stream: Trib To:	Scott Ditch Nooksack R County	Material: Span (m):	PCC 1.83 19.81	
	Stream: Trib To: Owner:	Scott Ditch Nooksack R County	Material: Span (m): Length (m):	PCC 1.83 19.81	
	Stream: Trib To: Owner: BARRIER	Scott Ditch Nooksack R County	Material: Span (m): Length (m): HABITAT G	PCC 1.83 19.81 6 AIN):	

PI TOTAL:	GENERAL	INFORMATION	CULVERT A	ATTRIBUTES	
	Site ID:	370546	Shape:	BOX	
	Stream:	Scott Ditch	Material:	PCC	
	Trib To:	Nooksack R	Span (m):	1.83	
No Image	Owner:	County	Length (m):	15.24	
Available	BARRIER Problem:	STATUS	HABITAT GAIN Lineal Gain (m):		
	Ds Barriers:		Spawn Area (m	12):	
	Us Barriers:		Rear Area (m2)):	
PI TOTAL:	GENERAL	INFORMATION	CULVERT A	ATTRIBUTES	
	Site ID:	370545	Shape:	RND	
No.	Stream:	Unnamed	Material:	CAL	
	Trib To:	Tenmile Cr	Span (m):	0.91	
	Owner:	County	Length (m):	13.72	
	BARRIER Problem:	STATUS Depth	HABITAT GAIN Lineal Gain (m):		
	Ds Barriers:	·	Spawn Area (m		
	Us Barriers:		Rear Area (m2)		
PI TOTAL:	GENERAL	INFORMATION	CULVERT A	ATTRIBUTES	
	Site ID:	370539	Shape:	RND	
	Stream:	Silver Cr	Material:	CAL	
	Trib To:	Nooksack R	Span (m):	2.44	
No Image	Owner:	County	Length (m):	31.09	
Available	BARRIER	STATUS	HABITAT G	AIN	
	Problem:		Lineal Gain (m)	:	
	Ds Barriers:		Spawn Area (m	2):	
	Us Barriers:		Rear Area (m2)	:	
PI TOTAL:	GENERAL	INFORMATION	CULVERT A	ATTRIBUTES	
	Site ID:	370502	Shape:	SQSH	
	Stream:	Silver Cr	Material:	CST	
	Trib To:	Nooksack R	Span (m):	4.27	
No Image	Owner:	County	Length (m):	43.59	
Available	BARRIER Problem:	STATUS	HABITAT GAIN Lineal Gain (m):		

Spawn Area (m2):

Rear Area (m2):

Ds Barriers:

Us Barriers:

PI TOTAL:

GENERAL INFORMATION

CULVERT ATTRIBUTES

Site ID: Stream:

Owner:

Problem:

370431 Cougar Cr

County

Shape: Material:

RND SST 2.29

No Image Available

Trib To: Nooksack R

> Length (m): 15.24

Span (m):

HABITAT GAIN

BARRIER STATUS

Lineal Gain (m):

Ds Barriers: Spawn Area (m2): Us Barriers:

Rear Area (m2):

PI TOTAL:

GENERAL INFORMATION

CULVERT ATTRIBUTES



Site ID: 370430 **RND** Shape: Stream: Clarkson Cr Material: **PCC** Trib To: Nooksack R Span (m): 1.07 Owner: County Length (m): 24.38

BARRIER STATUS

Problem: Depth

Ds Barriers: Us Barriers: **HABITAT GAIN**

Lineal Gain (m): Spawn Area (m2):

Rear Area (m2):

PI TOTAL:

GENERAL INFORMATION

Shape: **RND**

CULVERT ATTRIBUTES

Site ID: Stream: 370255 Silver Cr

Material:

Trib To: Owner:

Nooksack R

County

Span (m): Length (m): 2.44 37.19

RND

CST

No Image Available

BARRIER STATUS

Problem:

Ds Barriers:

Us Barriers:

HABITAT GAIN

Lineal Gain (m):

Spawn Area (m2):

Rear Area (m2):

PI TOTAL:

GENERAL INFORMATION

CULVERT ATTRIBUTES



Site ID: 370427 Stream: Unnamed Trib To: Silver Cr Owner: County

Shape: Material: PCC 1.04 Span (m): Length (m): 14.02

BARRIER STATUS

Problem: Slope

Ds Barriers:

Us Barriers:

HABITAT GAIN

Lineal Gain (m): Spawn Area (m2):

Rear Area (m2):



No Image

No Image

Available

No Image

GENERAL INFORMATION CULVERT ATTRIBUTES

Site ID: 1285110 Shape: **RND** Scott Ditch CAL Stream: Material: Trib To: Nooksack R Span (m): 1.88 Owner: Private Length (m): 6.60

HABITAT GAIN

HABITAT GAIN

BARRIER STATUS

Problem: Lineal Gain (m):

Ds Barriers: Spawn Area (m2):

Us Barriers: Rear Area (m2):

PI TOTAL: GENERAL INFORMATION CULVERT ATTRIBUTES

Site ID: 370423 **RND** Shape: Stream: Silver Cr Material: CST Trib To: Nooksack R 1.83 Span (m): 58.22 Owner: County Length (m):

Available BARRIER STATUS

Problem: Lineal Gain (m):

Ds Barriers: Spawn Area (m2):

Us Barriers: Rear Area (m2):

PI TOTAL: GENERAL INFORMATION CULVERT ATTRIBUTES

Site ID: 370396 Shape: **RND** Stream: Scott Ditch Material: CST Trib To: Nooksack R Span (m): 1.52 Owner: County Length (m): 12.50

BARRIER STATUS HABITAT GAIN

Problem: Lineal Gain (m):

Ds Barriers: Spawn Area (m2):

Us Barriers: Rear Area (m2):

PI TOTAL: GENERAL INFORMATION CULVERT ATTRIBUTES

Site ID: 370392 RND Shape: Stream: Neevel Cr Material: PCC Trib To: Nooksack R 0.76 Span (m): Owner: County Length (m): 15.24

Available BARRIER STATUS HABITAT GAIN

Problem: Lineal Gain (m):

Ds Barriers: Spawn Area (m2):

Us Barriers: Rear Area (m2):

Culvert Shape: RND = Round, BOX = Rectangular, ARCH = Bottomless arch, SQSH = Pipe arch, ELL = Ellipse, OTH = Other. Culvert Material: PCC = Pre-cast concrete, CPC = Cast in place concrete, CST = Corrugated steel, SST = Smooth Steel, CAL = Corrugated aluminum, SPS = Structuural plate steel, SPA = Structural plate aluminum, PVC = Plastic, TMB = Timber, MRY = Masonary, OTH = Other

PI TOTAL:



GENERAL INFORMATION

Site ID: 370369 Shape: **RND** Unnamed CAL Stream: Material: Trib To: Tenmile Cr Span (m): 0.46 Owner: County Length (m): 17.98

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

HABITAT GAIN

HABITAT GAIN

HABITAT GAIN

HABITAT GAIN

BARRIER STATUS

Problem: Depth Lineal Gain (m):

Ds Barriers: Spawn Area (m2):

Us Barriers: Rear Area (m2):

PI TOTAL:

AL: GENERAL INFORMATION

Site ID: 370362 **RND** Shape: Stream: Airport Cr Material: **PCC** Trib To: Bellingham Bay 1.22 Span (m): Owner: County Length (m): 17.37

No Image Available

BARRIER STATUS

Problem: Lineal Gain (m):

Ds Barriers: Spawn Area (m2):

Us Barriers: Rear Area (m2):

PI TOTAL:



GENERAL INFORMATION

Site ID: 370360 Shape: **RND** Stream: Unnamed Material: **PCC** Trib To: Silver Cr Span (m): 0.61 County Length (m): 10.97 Owner:

BARRIER STATUS

Problem: Slope Lineal Gain (m):

Ds Barriers: Spawn Area (m2):

Us Barriers: Rear Area (m2):

PI TOTAL:

GENERAL INFORMATION

Site ID: 995704 BOX Shape: Stream: Silver Cr Material: CPC Trib To: Nooksack R 2.40 Span (m): Owner: State Length (m): 103.76

No Image Available

BARRIER STATUS

Problem:NoneLineal Gain (m):Ds Barriers:Spawn Area (m2):Us Barriers:Rear Area (m2):

PI TOTAL:



GENERAL INFORMATION

Site ID: 370360
Stream: Unnamed
Trib To: Silver Cr
Owner: County

BARRIER STATUS

Problem: Slope Lineal Gain (m):

Ds Barriers: Spawn Area (m2):

Us Barriers: Rear Area (m2):

PI TOTAL:



GENERAL INFORMATION

RND Site ID: 370197 Shape: Stream: Unnamed Material: **PVC** Trib To: Tenmile Cr Span (m): 0.55 Owner: County Length (m): 14.33

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

CULVERT ATTRIBUTES

RND

PCC

0.46

10.97

Shape:

Material:

Span (m):

Length (m):

HABITAT GAIN

HABITAT GAIN

Rear Area (m2):

HABITAT GAIN

HABITAT GAIN

BARRIER STATUS

Us Barriers:

Problem: Slope Lineal Gain (m):

Ds Barriers: Spawn Area (m2):

PI TOTAL:

GENERAL INFORMATION

BARRIER STATUS

Site ID: 370163 Shape: **RND** Stream: Clarkson Cr Material: **PCC** Trib To: Nooksack R Span (m): 1.52 Owner: County Length (m): 20.42

No Image Available

Problem: Lineal Gain (m): Ds Barriers: Spawn Area (m2): Us Barriers: Rear Area (m2):

PI TOTAL:

GENERAL INFORMATION

Site ID:	370160	Shape:	RND
Stream:	Unnamed	Material:	PCC
Trib To:	Tenmile Cr	Span (m):	1.52
Owner:	County	Length (m):	12.50

No Image Available

BARRIER STATUS

Problem: depth Lineal Gain (m):

Ds Barriers: Spawn Area (m2):

Us Barriers: Rear Area (m2):

PI TOTAL:



GENERAL INFORMATION

Site ID: 1285161 Shape: RND Unnamed Material: CST Stream: Trib To: Silver Cr Span (m): 0.61 Owner: Private Length (m): 18.20

BARRIER STATUS

Problem: Outfall drop and SI Lineal Gain (m): Ds Barriers: Spawn Area (m2): Us Barriers: Rear Area (m2):

PI TOTAL:

GENERAL INFORMATION

CULVERT ATTRIBUTES RND Shape: Material: **PCC** Span (m): 1.07

HABITAT GAIN

CULVERT ATTRIBUTES

No Image Available

Problem: Lineal Gain (m): Ds Barriers: Spawn Area (m2): Us Barriers: Rear Area (m2):

Stream: Neevel Cr Trib To: Nooksack R Owner: County Length (m): 31.70 **BARRIER STATUS HABITAT GAIN**

Tenmile Barrier Dams:

PI TOTAL:

19.30



GENERAL INFORMATION

 Site ID:
 994367

 Stream:
 SF Deer Cr

 Trib To:
 Deer Cr

 Owner:
 Private

DAM ATTRIBUTES

Dam Name

Height (m): 2
Span: Full

BARRIER STATUS

Fish passage (%): 0
Ds Barriers: 4
Us Barriers: 2

HABITAT GAIN

Lineal Gain (m): 581

Spawn Area (m2): 0

Rear Area (m2): 5,235

PI TOTAL: 17.32



GENERAL INFORMATION

Site ID: 981811
Stream: Unnamed
Trib To: Tennant Cr
Owner: State

DAM ATTRIBUTES

Dam Name

Height (m): 0.65
Span: Partial

BARRIER STATUS

Fish passage (%): 67
Ds Barriers: 0
Us Barriers: 0

HABITAT GAIN

Lineal Gain (m): 849 Spawn Area (m2): 0 Rear Area (m2): 14,677

PI TOTAL: 16.61



GENERAL INFORMATION

Site ID: 1285080
Stream: Neevel Cr
Trib To: Nooksack R
Owner: Private

DAM ATTRIBUTES

Dam Name Private-ROES 4
Height (m): 1.9

Span: Full

BARRIER STATUS

Fish passage (%): 33
Ds Barriers: 0
Us Barriers: 1

HABITAT GAIN

Lineal Gain (m): 158
Spawn Area (m2): 0
Rear Area (m2): 9,781

PI TOTAL: 15.33



GENERAL INFORMATION

Site ID: 981814
Stream: Claypit Pond
Trib To: Tennant Cr
Owner: State

DAM ATTRIBUTES

Dam Name

Height (m): 2
Span: Full

BARRIER STATUS

Fish passage (%): 67
Ds Barriers: 0
Us Barriers: 0

HABITAT GAIN

Lineal Gain (m): 475 Spawn Area (m2): 0 Rear Area (m2): 9,033

Tenmile Barrier Dams:

Available

PI TOTAL: 8.59 GENERAL INFORMATION DAM ATTRIBUTES

 Site ID:
 994368
 Dam Name

 Stream:
 SF Deer Cr
 Height (m):
 1.5

 Trib To:
 Deer Cr
 Span:
 Full

No Image Owner: Private

BARRIER STATUS HABITAT GAIN

 Fish passage (%):
 0
 Lineal Gain (m):
 200

 Ds Barriers:
 5
 Spawn Area (m2):
 0

 Us Barriers:
 1
 Rear Area (m2):
 206

PI TOTAL: GENERAL INFORMATION

 Site ID:
 1285162
 Dam Name
 None

 Stream:
 Unnamed
 Height (m):
 4.5

 Trib To:
 Silver Cr
 Span:
 Full

DAM ATTRIBUTES

HABITAT GAIN

DAM ATTRIBUTES

HABITAT GAIN

Span:

Owner: Private

BARRIER STATUS HABITAT GAIN

Fish passage (%): 0 Lineal Gain (m):

Ds Barriers: Spawn Area (m2):

Us Barriers: Rear Area (m2):

PI TOTAL:

No Image

Available

GENERAL INFORMATION DAM ATTRIBUTES

 Site ID:
 994369
 Dam Name

 Stream:
 SF Deer Cr
 Height (m):
 5

 Trib To:
 Deer Cr
 Span:
 Full

BARRIER STATUS

Owner:

Private

Fish passage (%): 0 Lineal Gain (m): 20

Ds Barriers: 6 Spawn Area (m2):

Us Barriers: 0 Rear Area (m2):

PI TOTAL: GENERAL INFORMATION

Site ID: 01.0184 0.10 Dam Name Boxx Dam
Stream: Unnamed Height (m):

Trib To: Tenmile Cr
Owner: Private

BARRIER STATUS

Fish passage (%): 0 Lineal Gain (m):

Ds Barriers: Spawn Area (m2):

Us Barriers: Rear Area (m2):

Other Miscellaneous Tenmile Barriers:

PI TOTAL:

16.93

GENERAL INFORMATION

BARRIER ATTRIBUTES

Rip Rap Shelf

Site ID: Stream: 1285160

Unnamed

Trib To: Silver Cr

Owner: Private

BARRIER STATUS

HABITAT GAIN

BarrierType:

Fish Passage (%): 33

Ds Barriers: 4

Us Barriers: 0

Lineal Gain (m): 1,063 Spawn Area (m2): 894 Rear Area (m2): 1,058