

**Brian Abbott Fish Barrier Removal Board
2019-21 Coordinated Pathway
Approved Project List**



**BRIAN ABBOTT
FISH BARRIER
REMOVAL BOARD**

On July 17, 2018, the Brian Abbott Fish Barrier Removal Board (FBRB) approved a ranked list of Coordinated Pathway fish passage correction projects. This Coordinated Pathway project list will be merged with the FBRB's Watershed Pathway project list and a funding request will be submitted to the Governor's Office and Legislature for consideration in the 2019-21 Washington State Biennial Capital Budget.

Funding of these projects is dependent on the passage of a 2019-21 Capital Budget, and the final enacted level of appropriation. Approval of these projects by the FBRB does not guarantee funding.

For information about the FBRB, please visit: <https://wdfw.wa.gov/about/advisory/fbrb/>.

For information about the FBRB grant program, please visit:
https://www.rco.wa.gov/documents/manuals&forms/Manual_22.pdf.

Rank	FBRB ID	FPDSI Site ID	Stream	Scope	Ownership Type	Page #
1	03a	603526	Chumstick Cr	Restoration	County - Chelan	2
	03b	603531	Chumstick Cr	Restoration	County - Chelan	3
2	45	160508	Thorndyke Cr	Planning	County - Jefferson	43
3	21	040089	Mill Cr	Restoration	County - Chelan	23
4	18	1350003	Mason Cr	Planning	County - Clark	21
5	33	15.0400 0.60	Seabeck Cr	Restoration	County - Kitsap	33
6	12	01.0392 0.10	Kenney Cr	Planning	County - Whatcom	15
7	39	990435	Squalicum Cr	Restoration	City - Bellingham	40
8	07a	03.0181 0.55	Fisher Cr	Planning	County - Skagit	6
	07b	03.0181 2.45	Fisher Cr	Planning	County - Skagit	7
9	38a	115 TC125	Spurgeon Cr	Restoration	County - Thurston	38
	38b	341645	Spurgeon Cr	Restoration	County - Thurston	39
10	24a	160756	Naylor Cr	Planning	County - Jefferson	25
	24c	162127	Naylor Cr	Planning	County - Jefferson	26
11	09a	127Y0316	Geissler Cr	Restoration	Private	8
	09b	127Y0374	Geissler Cr	Restoration	Private	9
	09d	103-1022	Geissler Cr	Restoration	County - Grays Harbor	10
12	31	601854	Scammon Cr	Restoration	Private	32
13	29	021(91025)(01010)	Scammon Cr	Restoration	County - Lewis	29
14	05	15.0231 0.40	Dickerson Cr	Restoration	Private	4
15	23	105 K050818b	Minter Cr	Planning	County - Pierce	24
16	10a	920017	George Davis Cr	Planning	Private	11
	10b	920111	George Davis Cr	Planning	City - Sammamish	12
	10c	920112	George Davis Cr	Planning	City - Sammamish	13
17	16	101SC-07	Langlois Cr	Planning	County - King	19
18	06	920108	Ebright Cr	Planning	City - Sammamish	5
19	15	1320092	Kristoferson Cr	Restoration	County - Island	18
20	41	CR77	Starbird Cr	Planning	County - Skagit	41
21	30a	021(14001)(01340)	Scammon Cr	Planning	County - Lewis	30
	30b	021(14004)(00698)	Scammon Cr	Planning	County - Lewis	31
22	37	310516	Sexton Cr	Planning	County - Snohomish	37
23	13	700119	King Cr	Restoration	Private	16
24	14	700120	King Cr	Restoration	County - Lewis	17
25	49	600300	Willows Cr	Restoration	City - Redmond	46
26	28a	930418	Ravensdale Cr	Restoration	County - King Co Parks	27
	28b	930417	Ravensdale Cr	Restoration	County - King Co Parks	28
27	19	933309	Trib to MF Quilceda Cr	Restoration	City - Marysville	22
28	34	992167	Secret Cr	Planning	County - Snohomish	34
29	11	132131541	Trib to Grader Cr	Restoration	Private	14
30	43	CR80	Trib to Starbird Cr	Planning	County - Skagit	42
31	48	XID5170	Williams Cr	Planning	County - Snohomish	45
32	17	990253	Lyon Cr	Planning	City - Lake Forest Park	20
33	35	992169	Secret Cr	Planning	County - Snohomish	35
34	36	991974	Secret Cr	Restoration	County - Snohomish	36
35	46	993125	Trib to Silver Lk	Planning	City - Everett	44

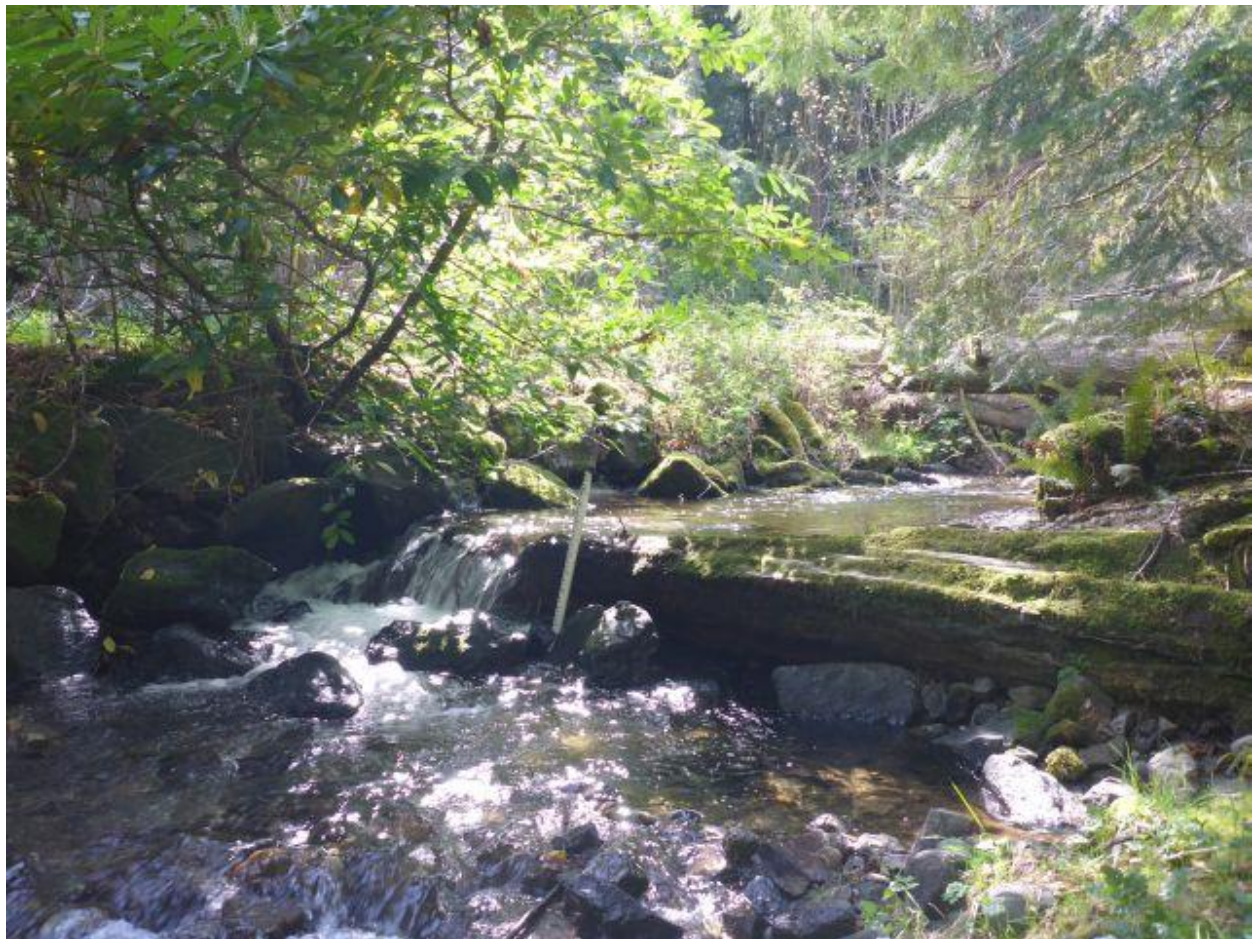
FBRB ID	03a
FPDSI SITE ID	603526
STREAM NAME / TRIB TO	Chumstick Cr / Wenatchee R
ROAD NAME	Motteler Rd
OWNERSHIP / APPLICANT	County - Chelan / Chelan Co Nat Res
WRIA NAME	Wenatchee
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	0
SPECIES AFFECTED	CHIN, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$178,838
NUMBER OF BARRIERS IN PACKAGE	2
LINEAR GAIN FOR ENTIRE PACKAGE	14.29 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$488,286



FBRB ID	03b
FPDSI SITE ID	603531
STREAM NAME / TRIB TO	Chumstick Cr / Wenatchee R
ROAD NAME	Eagle Ridge Rd
OWNERSHIP / APPLICANT	County - Chelan / Chelan Co Nat Res
WRIA NAME	Wenatchee
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	1 (FBRB ID 03a)
SPECIES AFFECTED	CHIN, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$158,000
NUMBER OF BARRIERS IN PACKAGE	2
LINEAR GAIN FOR ENTIRE PACKAGE	14.29 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$488,286



FBRB ID	05
FPDSI SITE ID	15.0231 0.40
STREAM NAME / TRIB TO	Dickerson Cr / Chico Cr
ROAD NAME	Private; David Rd NW
OWNERSHIP / APPLICANT	Private / Kitsap Co CD
WRIA NAME	Kitsap
FEATURE TYPE	Other
% PASSABILITY	33
# OF D/S BARRIERS	1
SPECIES AFFECTED	CHUM, CHIN, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$494,500
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	0.83 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$494,500



FBRB ID	06
FPDSI SITE ID	920108
STREAM NAME / TRIB TO	Ebright Cr / Lake Sammamish
ROAD NAME	E Lake Sammamish Parkway
OWNERSHIP / APPLICANT	City - Sammamish / City of Sammamish PW
WRIA NAME	Cedar / Sammamish
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	0
SPECIES AFFECTED	SOCK, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$352,100
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	1.37 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$352,100



FBRB ID	07a
FPDSI SITE ID	03.0181 0.55
STREAM NAME / TRIB TO	Fisher Cr / Carpenter Cr
ROAD NAME	Cedardale Rd
OWNERSHIP / APPLICANT	County - Skagit / Skagit Co PW
WRIA NAME	Lower Skagit / Samish
FEATURE TYPE	Culvert / Fishway
% PASSABILITY	67
# OF D/S BARRIERS	0
SPECIES AFFECTED	CHUM, CHIN, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$192,000
NUMBER OF BARRIERS IN PACKAGE	2
LINEAR GAIN FOR ENTIRE PACKAGE	5.39 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$332,000



FBRB ID	07b
FPDSI SITE ID	03.0181 2.45
STREAM NAME / TRIB TO	Fisher Cr / Carpenter Cr
ROAD NAME	Starbird Rd
OWNERSHIP / APPLICANT	County – Skagit / Skagit Co PW
WRIA NAME	Lower Skagit / Samish
FEATURE TYPE	Culvert / Fishway
% PASSABILITY	67
# OF D/S BARRIERS	1 (FBRB ID 07a)
SPECIES AFFECTED	CHUM, CHIN, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$140,000
NUMBER OF BARRIERS IN PACKAGE	2
LINEAR GAIN FOR ENTIRE PACKAGE	5.39 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$332,000



FBRB ID	09a
FPDSI SITE ID	127Y0316
STREAM NAME / TRIB TO	Geissler Cr / Wynoochee R
ROAD NAME	Driveway; Geissler Rd
OWNERSHIP / APPLICANT	Private / Chehalis Basin Task Force
WRIA NAME	Lower Chehalis
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	0
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$163,495
NUMBER OF BARRIERS IN PACKAGE	3
LINEAR GAIN FOR ENTIRE PACKAGE	2.35 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$590,408



FBRB ID	09b
FPDSI SITE ID	127Y0374
STREAM NAME / TRIB TO	Geissler Cr / Wynoochee R
ROAD NAME	Driveway; Geissler Rd
OWNERSHIP / APPLICANT	Private / Chehalis Basin Task Force
WRIA NAME	Lower Chehalis
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	1 (FBRB ID 09a)
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$127,081
NUMBER OF BARRIERS IN PACKAGE	3
LINEAR GAIN FOR ENTIRE PACKAGE	2.35 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$590,408



FBRB ID	09d
FPDSI SITE ID	103-1022
STREAM NAME / TRIB TO	Geissler Cr / Wynoochee R
ROAD NAME	Wynoochee Rd W
OWNERSHIP / APPLICANT	County - Grays Harbor / Chehalis Basin Task Force
WRIA NAME	Lower Chehalis
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	3 (incl. FBRB ID 09a, 09b)
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$299,832
NUMBER OF BARRIERS IN PACKAGE	3
LINEAR GAIN FOR ENTIRE PACKAGE	2.35 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$590,408



FBRB ID	10a
FPDSI SITE ID	920017
STREAM NAME / TRIB TO	George Davis Cr / Lake Sammamish
ROAD NAME	None
OWNERSHIP / APPLICANT	Private / City of Sammamish PW
WRIA NAME	Cedar / Sammamish
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	0
SPECIES AFFECTED	SOCK, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$294,000
NUMBER OF BARRIERS IN PACKAGE	3
LINEAR GAIN FOR ENTIRE PACKAGE	1.26 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$722,350



FBRB ID	10b
FPDSI SITE ID	920111
STREAM NAME / TRIB TO	George Davis Cr / Lake Sammamish
ROAD NAME	E Lake Sammamish Parkway
OWNERSHIP / APPLICANT	City - Sammamish / City of Sammamish PW
WRIA NAME	Cedar / Sammamish
FEATURE TYPE	Culvert
% PASSABILITY	0
# OF D/S BARRIERS	1 (FBRB ID 10a)
SPECIES AFFECTED	SOCK, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$300,500
NUMBER OF BARRIERS IN PACKAGE	3
LINEAR GAIN FOR ENTIRE PACKAGE	1.26 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$722,350



FBRB ID	10c
FPDSI SITE ID	920112
STREAM NAME / TRIB TO	George Davis Cr / Lake Sammamish
ROAD NAME	None
OWNERSHIP / APPLICANT	City - Sammamish / City of Sammamish PW
WRIA NAME	Cedar / Sammamish
FEATURE TYPE	Dam
% PASSABILITY	33
# OF D/S BARRIERS	2 (incl. FBRB ID 10a, 10b)
SPECIES AFFECTED	SOCK, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$127,850
NUMBER OF BARRIERS IN PACKAGE	3
LINEAR GAIN FOR ENTIRE PACKAGE	1.26 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$722,350



FBRB ID	11
FPDSI SITE ID	132131541
STREAM NAME / TRIB TO	Unnamed / Grader Cr
ROAD NAME	Private Forest Rd
OWNERSHIP / APPLICANT	Private / Pacific Coast Salmon Coal
WRIA NAME	Soleduc / Hoh
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	0
SPECIES AFFECTED	COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$68,931
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	0.06 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$68,931



FBRB ID	12
FPDSI SITE ID	01.0392 0.10
STREAM NAME / TRIB TO	Kenney Cr / NF Nooksack R
ROAD NAME	North Fork Rd
OWNERSHIP / APPLICANT	County – Whatcom / Whatcom Co PW
WRIA NAME	Nooksack
FEATURE TYPE	Culvert / Fishway
% PASSABILITY	33
# OF D/S BARRIERS	0
SPECIES AFFECTED	PINK, CHUM, CHIN, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$442,500
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	4.26 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$442,500



FBRB ID	13
FPDSI SITE ID	700119
STREAM NAME / TRIB TO	King Cr / Olequa Cr
ROAD NAME	Private; King Rd
OWNERSHIP / APPLICANT	Private / Lewis County CD
WRIA NAME	Cowlitz
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	2
SPECIES AFFECTED	CHIN, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$200,076
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	1.79 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$200,076



FBRB ID	14
FPDSI SITE ID	700120
STREAM NAME / TRIB TO	King Cr / Olequa Cr
ROAD NAME	King Rd
OWNERSHIP / APPLICANT	County – Lewis / Lewis Co PW
WRIA NAME	Cowlitz
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	3 (incl. FBRB ID 13)
SPECIES AFFECTED	COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$371,678
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	1.60 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$371,678



FBRB ID	15
FPDSI SITE ID	1320092
STREAM NAME / TRIB TO	Kristopherson Cr / Triangle Cove
ROAD NAME	E Camano Dr
OWNERSHIP / APPLICANT	County – Island / Island Co DNR
WRIA NAME	Island
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	0
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$544,718
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	1.11 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$544,718



FBRB ID	16
FPDSI SITE ID	101SC-07
STREAM NAME / TRIB TO	Langlois Cr / Snoqualmie R
ROAD NAME	None
OWNERSHIP / APPLICANT	County – King / Snoqualmie Valley Improve Dist
WRIA NAME	Snohomish
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	0
SPECIES AFFECTED	CHUM, CHIN, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$65,200
NUMBER OF BARRIERS IN PACKAGE	Planning
LINEAR GAIN FOR ENTIRE PACKAGE	0.38 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$65,200



FBRB ID	17
FPDSI SITE ID	990253
STREAM NAME / TRIB TO	Lyon Cr / Lake Washington
ROAD NAME	SR 104
OWNERSHIP / APPLICANT	Private / City of Lake Forest Park
WRIA NAME	Cedar / Sammamish
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	7
SPECIES AFFECTED	SOCK, CHIN, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$200,000
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	0.03 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$200,000



FBRB ID	18
FPDSI SITE ID	1350003
STREAM NAME / TRIB TO	Mason Cr / EF Lewis R
ROAD NAME	NE 102nd Ave
OWNERSHIP / APPLICANT	County – Clark / Clark Co PW
WRIA NAME	Lewis
FEATURE TYPE	Culvert
% PASSABILITY	0
# OF D/S BARRIERS	0
SPECIES AFFECTED	COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$155,200
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	3.15 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$155,200



FBRB ID	19
FPDSI SITE ID	933309
STREAM NAME / TRIB TO	Unnamed / MF Quilceda Cr
ROAD NAME	city trail; 152 nd St NE
OWNERSHIP / APPLICANT	City - Marysville / Adopt A Stream
WRIA NAME	Snohomish
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	2
SPECIES AFFECTED	CHUM, CHIN, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$162,740
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	0.17 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$162,740



FBRB ID	21
FPDSI SITE ID	040089
STREAM NAME / TRIB TO	Mill Cr / Peshastin Cr
ROAD NAME	Mountain Home Ranch Rd
OWNERSHIP / APPLICANT	County - Chelan / Kane Nat Res
WRIA NAME	Wenatchee
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	0
SPECIES AFFECTED	COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$494,599
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	4.35
REQUESTED AMT FOR ENTIRE PACKAGE	\$494,599



FBRB ID	23
FPDSI SITE ID	105 K050818b
STREAM NAME / TRIB TO	Minter Cr / Henderson Bay
ROAD NAME	188th Ave NW
OWNERSHIP / APPLICANT	County - Pierce / Pierce Co PW
WRIA NAME	Kitsap
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	2
SPECIES AFFECTED	PINK, CHUM, CHIN, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$90,000
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	3.42 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$90,000



FBRB ID	24a
FPDSI SITE ID	160756
STREAM NAME / TRIB TO	Naylors Cr / Chimacum Cr
ROAD NAME	W Valley Rd
OWNERSHIP / APPLICANT	County - Jefferson / Jefferson Co PW
WRIA NAME	Quilcene / Snow
FEATURE TYPE	Culvert / Fishway
% PASSABILITY	33
# OF D/S BARRIERS	2
SPECIES AFFECTED	PINK, CHUM, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$99,425
NUMBER OF BARRIERS IN PACKAGE	2
LINEAR GAIN FOR ENTIRE PACKAGE	4.93 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$198,850



FBRB ID	24c
FPDSI SITE ID	162127
STREAM NAME / TRIB TO	Naylors Cr / Chimacum Cr
ROAD NAME	Gibbs Lake Rd
OWNERSHIP / APPLICANT	County - Jefferson / Jefferson Co PW
WRIA NAME	Quilcene / Snow
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	3 (incl. FBRB ID 24a)
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$99,425
NUMBER OF BARRIERS IN PACKAGE	2
LINEAR GAIN FOR ENTIRE PACKAGE	4.93 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$198,850



FBRB ID	28a
FPDSI SITE ID	930418
STREAM NAME / TRIB TO	Ravensdale Cr / Lake Sawyer
ROAD NAME	None
OWNERSHIP / APPLICANT	County - King Co Parks / King Co Parks and Rec
WRIA NAME	Duwamish / Green
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	2
SPECIES AFFECTED	CHIN, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$1,855,138
NUMBER OF BARRIERS IN PACKAGE	2
LINEAR GAIN FOR ENTIRE PACKAGE	0.65 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$2,513,614



FBRB ID	28b
FPDSI SITE ID	930417
STREAM NAME / TRIB TO	Ravensdale Cr / Lake Sawyer
ROAD NAME	None
OWNERSHIP / APPLICANT	County - King Co Parks / King Co Parks and Rec
WRIA NAME	Duwamish / Green
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	3 (incl. FBRB ID 28a)
SPECIES AFFECTED	CHIN, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$658,476
NUMBER OF BARRIERS IN PACKAGE	2
LINEAR GAIN FOR ENTIRE PACKAGE	0.65 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$2,513,614



FBRB ID	29
FPDSI SITE ID	021(91025)(01010)
STREAM NAME / TRIB TO	Scammon Cr / Chehalis R
ROAD NAME	Graf Rd
OWNERSHIP / APPLICANT	County - Lewis / Lewis Co PW
WRIA NAME	Upper Chehalis
FEATURE TYPE	Culvert
% PASSABILITY	0
# OF D/S BARRIERS	1 (FBRB ID 31)
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$561,560
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	1.21 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$561,560



FBRB ID	30a
FPDSI SITE ID	021(14001)(01340)
STREAM NAME / TRIB TO	Scammon Cr / Chehalis R
ROAD NAME	Graf Rd
OWNERSHIP / APPLICANT	County - Lewis / Lewis Co PW
WRIA NAME	Upper Chehalis
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	3 (incl. FBRB ID 29, 31)
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$84,800
NUMBER OF BARRIERS IN PACKAGE	2
LINEAR GAIN FOR ENTIRE PACKAGE	8.56 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$160,100



FBRB ID	30b
FPDSI SITE ID	021(14004)(00698)
STREAM NAME / TRIB TO	Scammon Cr / Chehalis R
ROAD NAME	Blanchard Rd
OWNERSHIP / APPLICANT	County - Lewis / Lewis Co PW
WRIA NAME	Upper Chehalis
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	5 (incl. FBRB ID 29, 30a, 31)
SPECIES AFFECTED	CHUM, COHO,STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$75,300
NUMBER OF BARRIERS IN PACKAGE	2
LINEAR GAIN FOR ENTIRE PACKAGE	8.56 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$160,100



FBRB ID	31
FPDSI SITE ID	601854
STREAM NAME / TRIB TO	Scammon Cr / Chehalis R
ROAD NAME	Private; Cooks Hill Rd
OWNERSHIP / APPLICANT	Private / Lewis Co CD
WRIA NAME	Upper Chehalis
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	0
SPECIES AFFECTED	CHUM, CHIN, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$147,227
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	1.10 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$147,227



FBRB ID	33
FPDSI SITE ID	15.0400 0.60
STREAM NAME / TRIB TO	Seabeck Cr / Hood Canal
ROAD NAME	Holly-Seabeck Rd
OWNERSHIP / APPLICANT	County - Kitsap / Hood Canal SEG
WRIA NAME	Kitsap
FEATURE TYPE	Culvert / Fishway
% PASSABILITY	33
# OF D/S BARRIERS	0
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$2,066,837
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	10.20 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$2,066,837



FBRB ID	34
FPDSI SITE ID	992167
STREAM NAME / TRIB TO	Secret Cr / Pilchuck Cr
ROAD NAME	4th Ave NW
OWNERSHIP / APPLICANT	County - Snohomish / Snohomish Co PW
WRIA NAME	Stillaguamish
FEATURE TYPE	Culvert / Fishway
% PASSABILITY	67
# OF D/S BARRIERS	2
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$122,230
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	1.77 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$122,230



FBRB ID	35
FPDSI SITE ID	992169
STREAM NAME / TRIB TO	Secret Cr / Pilchuck Cr
ROAD NAME	W Sunday Lake Rd
OWNERSHIP / APPLICANT	County - Snohomish / Snohomish Co PW
WRIA NAME	Stillaguamish
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	3 (incl. FBRB ID 34)
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$144,755
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	0.18 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$144,755



FBRB ID	36
FPDSI SITE ID	991974
STREAM NAME / TRIB TO	Secret Cr / Pilchuck Cr
ROAD NAME	268th St
OWNERSHIP / APPLICANT	County - Snohomish / Snohomish Co PW
WRIA NAME	Stillaguamish
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	4 (incl. FBRB ID 34, 35)
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$694,025
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	0.19 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$694,025



FBRB ID	37
FPDSI SITE ID	310516
STREAM NAME / TRIB TO	Sexton Cr / Pilchuck Cr
ROAD NAME	Sexton Rd
OWNERSHIP / APPLICANT	County - Snohomish / Snohomish Co PW
WRIA NAME	Snohomish
FEATURE TYPE	Culvert / Fishway
% PASSABILITY	67
# OF D/S BARRIERS	0
SPECIES AFFECTED	PINK, CHUM, CHIN, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$141,780
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	1.37 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$141,780



FBRB ID	38a
FPDSI SITE ID	115 TC125
STREAM NAME / TRIB TO	Spurgeon Cr / Deschutes R
ROAD NAME	Chehalis Western Trail
OWNERSHIP / APPLICANT	County - Thurston / Thurston Co PW
WRIA NAME	Deschutes
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	0
SPECIES AFFECTED	CHUM, CHIN, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$518,500
NUMBER OF BARRIERS IN PACKAGE	2
LINEAR GAIN FOR ENTIRE PACKAGE	1.20 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$1,700,000



FBRB ID	38b
FPDSI SITE ID	341645
STREAM NAME / TRIB TO	Spurgeon Cr / Deschutes R
ROAD NAME	Latigo St SE
OWNERSHIP / APPLICANT	County - Thurston / Thurston Co PW
WRIA NAME	Deschutes
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	1 (FBRB ID 38a)
SPECIES AFFECTED	CHUM, CHIN, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$1,181,500
NUMBER OF BARRIERS IN PACKAGE	2
LINEAR GAIN FOR ENTIRE PACKAGE	1.20 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$1,700,000



FBRB ID	39
FPDSI SITE ID	990435
STREAM NAME / TRIB TO	Squalicum Cr / Bellingham Bay
ROAD NAME	Squalicum Pkwy
OWNERSHIP / APPLICANT	City - Bellingham / City of Bellingham PW
WRIA NAME	Nooksack
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	8
SPECIES AFFECTED	CHUM, CHIN, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$447,268
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	8.90 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$447,268



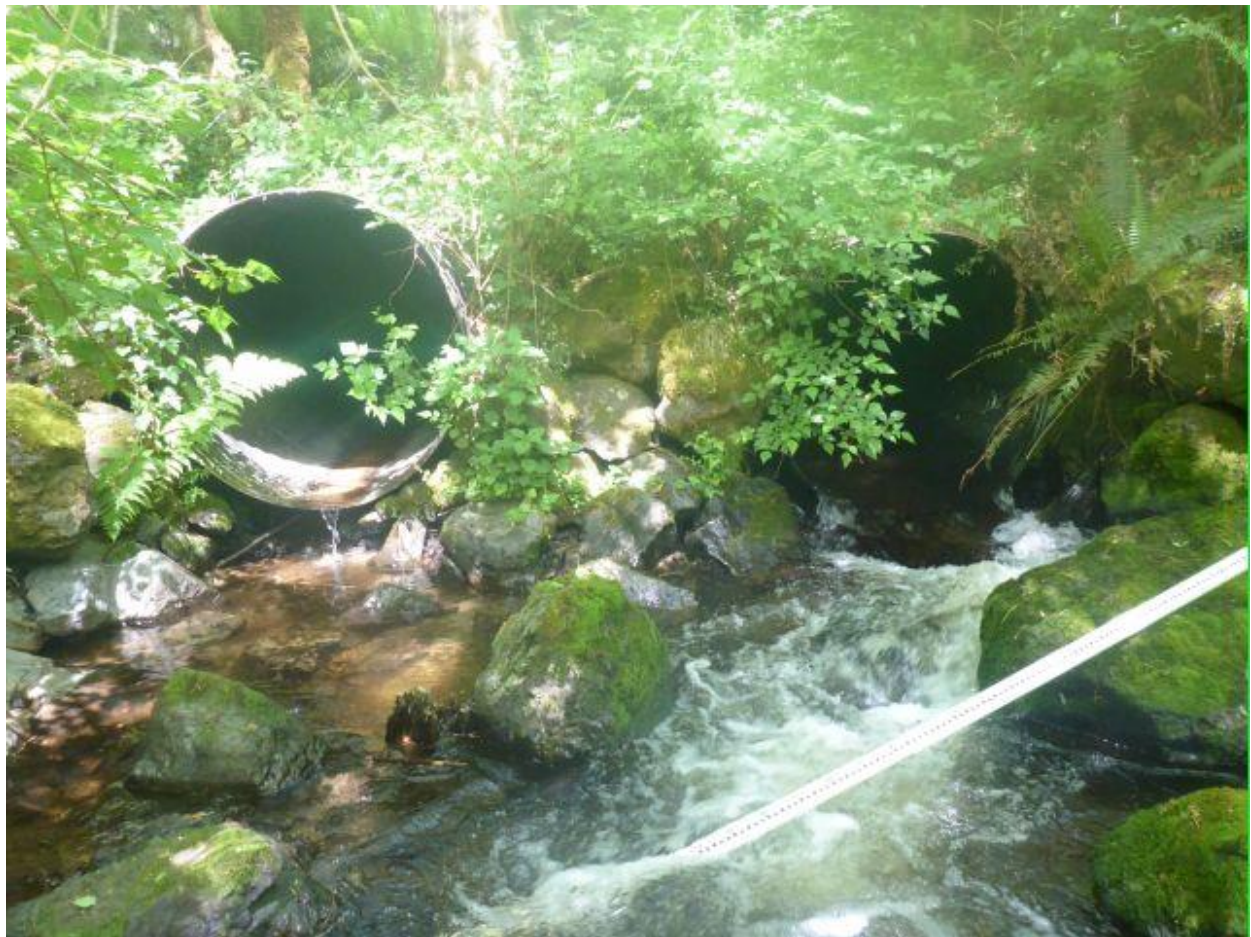
FBRB ID	41
FPDSI SITE ID	CR77
STREAM NAME / TRIB TO	Starbird Cr / Fisher Cr
ROAD NAME	Bulson Rd
OWNERSHIP / APPLICANT	County - Skagit / Skagit Co PW
WRIA NAME	Lower Skagit / Samish
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	2 (FBRB ID 07a, 07b)
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$46,500
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	0.82 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$46,500



FBRB ID	43
FPDSI SITE ID	CR80
STREAM NAME / TRIB TO	Unnamed / Starbird Cr
ROAD NAME	Starbird Rd
OWNERSHIP / APPLICANT	County - Skagit / Skagit Co PW
WRIA NAME	Lower Skagit / Samish
FEATURE TYPE	Culvert
% PASSABILITY	0
# OF D/S BARRIERS	4 (incl. FBRB ID 07a, 07b, 42)
SPECIES AFFECTED	COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$64,000
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	0.24 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$64,000



FBRB ID	45
FPDSI SITE ID	160508
STREAM NAME / TRIB TO	Thorndyke Cr / Hood Canal
ROAD NAME	Thorndyke Rd
OWNERSHIP / APPLICANT	County - Jefferson / Jefferson Co PW
WRIA NAME	Quilcene / Snow
FEATURE TYPE	Culvert
% PASSABILITY	67
# OF D/S BARRIERS	0
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$198,313
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	10.04 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$198,313



FBRB ID	46
FPDSI SITE ID	993125
STREAM NAME / TRIB TO	Unnamed / Silver Lake
ROAD NAME	Silver Lake Rd
OWNERSHIP / APPLICANT	City - Everett / City of Everett PW
WRIA NAME	Cedar / Sammamish
FEATURE TYPE	Culvert
% PASSABILITY	0
# OF D/S BARRIERS	6
SPECIES AFFECTED	COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$188,000
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	0.09 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$188,000



FBRB ID	48
FPDSI SITE ID	XID5170
STREAM NAME / TRIB TO	Williams Cr / Pilchuck R
ROAD NAME	Private; S Machias Rd
OWNERSHIP / APPLICANT	County - Snohomish / Snohomish Co PW
WRIA NAME	Snohomish
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	0
SPECIES AFFECTED	CHUM, COHO, STHD
SCOPE	Planning
REQUESTED AMT FOR THIS BARRIER	\$63,750
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	0.22 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$63,750



FBRB ID	49
FPDSI SITE ID	600300
STREAM NAME / TRIB TO	Willows Cr / Sammamish R
ROAD NAME	Willows Rd NE
OWNERSHIP / APPLICANT	City - Redmond / City of Redmond Nat Res
WRIA NAME	Cedar / Sammamish
FEATURE TYPE	Culvert
% PASSABILITY	33
# OF D/S BARRIERS	3
SPECIES AFFECTED	SOCK, COHO, STHD
SCOPE	Restoration
REQUESTED AMT FOR THIS BARRIER	\$400,000
NUMBER OF BARRIERS IN PACKAGE	1
LINEAR GAIN FOR ENTIRE PACKAGE	1.12 miles
REQUESTED AMT FOR ENTIRE PACKAGE	\$400,000



draft list of 2019-21 Watershed Pathway proposals - subject to change (July 16, 2018)

Region - Approved Watershed	Site ID	Ownership	Creek	Road	Likely Funding Request	Probable Scope	Lead Entity	Bio
Puget Sound - Pilchuck	993472	Private	Catherine Cr	Callow	\$400,000	Restoration	Snohomish Basin Lead Entity	GP
Puget Sound - Pilchuck	993474	Private	catherine creek	off Callow	\$174,000	Restoration	Snohomish Basin Lead Entity	GP
Puget Sound - Pilchuck	07.0146 5.70	Private	Little Pilchuck	66th st NE	\$200,000	Planning	Snohomish Basin Lead Entity	GP
Puget Sound - Goldsborough	115 MC209	County	Dayton Creek	Highland Rd	\$460,00	Restoration	WRIA 14 Salmon Habitat Recovery Committee Lead Entity	GP
Puget Sound - Goldsborough	115 MC018	County	Uncle Johns	Agate Loop Rd	\$200,00	Planning	WRIA 14 Salmon Habitat Recovery Committee Lead Entity	GP
Puget Sound - Goldsborough	115 MC027	County	Uncle Johns	Agate Loop Rd	\$331,205	Restoration	WRIA 14 Salmon Habitat Recovery Committee Lead Entity	GP
Puget Sound - Hoko	80001261	County	Johnson	Ozettee Lake Rd	\$200,000	Planning	North Olympic Peninsula Lead Entity for Salmon	GP
Coast - Newaukum	125 1301W18A	County	Unnamed to MF Newaukum	Kruger Rd	\$110,000	Planning	Chehalis Lead Entity	CR
Coast - Newaukum	021(94001)(15790)	County	MF Newaukum	Centralia Alpha Rd	\$110,000	Planning	Chehalis Lead Entity	CR
Lower Columbia - Lower Cowlitz	601773	Private	NF Ostrander Cr	Railroad	\$462,049	Restoration	Lower Columbia Fish Recovery Board	CR
Lower Columbia - Lower Cowlitz	106c0159	County	NF Ostrander Cr	Ostrander Rd	\$250,000	Planning	Lower Columbia Fish Recovery Board	CR
Lower Columbia - Lower Cowlitz	106c0057	County	Delameter Cr	Garlock Rd	\$200,000	Planning	Lower Columbia Fish Recovery Board	CR
Middle Columbia - Wilson/Cherry	Col05.09	County	Coleman Cr	Vantage Highway	\$1,560,734	Restoration (incl. designs)	Yakima Basin Fish and Wildlife Recovery Board	DC
Upper Columbia - Omak Cr (Okanogan)	990217/960240	State	Johnson Cr	US 97	\$973,851	Restoration (incl. 960240)	Upper Columbia Salmon Recovery Board	DC
Upper Columbia - Omak Cr (Okanogan)	990255	City	Johnson Cr	State Street	\$550,951	Restoration (incl. designs)	Upper Columbia Salmon Recovery Board	DC
Upper Columbia - Omak Cr (Okanogan)	114JC005	County	Johnson Cr	Green Acres Road	\$1,422,778	Restoration (incl. designs)	Upper Columbia Salmon Recovery Board	DC
Snake River - Tribs to Snake R and Grande Ronde R	602004	County	Cottonwood Creek	Grande Ronde Rd	\$514,800	Restoration	Snake River Salmon Recovery Board	DC

Total \$7,460,368



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July 9, 2018

Mr. Tom Jameson, Chair
Brian Abbott Fish Barrier Removal Board
Washington Department of Fish & Wildlife
1111 Washington St. SE
Olympia, WA 98501

Subject: Request for watershed priority change to Mill Creek; Re: Applications for 2019-2021 Brian Abbott Fish Barrier Removal Board (FBRB) Watershed Pathway Grant Program

Dear Chairman Jameson and members of the Board,

The Snake River Salmon Recovery Board (SRSRB) received your April 24, 2018 letter regarding the 2019-2021 FBRB Watershed Pathway Grant Program applications. We understand that Washington Department of Fish and Wildlife (WDFW) is currently soliciting new proposals, as well as feedback regarding potential reprioritization of existing proposals. Currently, *Tributaries to the Grande Ronde River and Snake River* are the priority watersheds for funding consideration through the FBRB's Watershed Pathway in the Snake River Region of Washington. Based upon discussion and feedback from our presentation on Mill Creek fish passage at the April 17, 2018 FBRB meeting, the SRSRB requests that the FBRB consider approving a shift in watershed priority from the *Tributaries to the Grande Ronde and Snake River* to *Mill Creek*. In working with FBRB staff Dave Collins and Justin Zweifel, we have prepared responses to several questions that have arisen regarding the request:

- ***Why are we proposing to move away from the previously approved focus watersheds?***

When the FBRB originally created the Watershed Pathway grant program and the recovery regions were asked to provide input to designate a priority watershed, the SRBRB identified the Mill Creek watershed as the top priority for fish passage in the region. Given the uncertainty of the alignment of Mill Creek fish passage with the legislation creating the FBRB and the link to transportation, the SRSRB was asked to select another watershed in 2014. As the FBRB has evolved, and upon further discussion with the April 17th meeting and with FBRB staff over time, Mill Creek fish passage projects have now been identified as being eligible. With this knowledge, as a technical matter, the SRSRB Regional Technical Team formally voted to support shifting the priority watershed to Mill Creek at their June 20th meeting.

- ***How / when will we come back to address the crossings that were previously identified as high priority in the Snake and Grande Ronde systems?***

The highest ranking barrier in the Tributaries to the Grande Ronde and Snake River, Buford Creek passage, is scheduled for implementation in 2019 with the vast majority of funding coming from the FBRB – this will make that tributary barrier free. Cottonwood Creek barrier design has been funded by the FBRB and we hope to work with the Board to see that project through to completion via the watershed pathway as well. Once these two projects that were started in through the watershed pathway are complete, we propose to focus solely on the Mill Creek watershed. If that were to occur, the remaining barriers in the Grande Ronde and Snake River tributaries would be proposed as projects through the coordinated pathway. In the case that Mill Creek passage is complete, we would likely propose moving the priority watershed back to the Grande Ronde and Snake River tributaries.

- ***What are the different fund sources you're working with and how do they fit together in regards to the Mill Cr project? How secure is that funding?***

As discussed at the April FBRB meeting, Mill Creek passage is complex and can be summarized as a 7-mile long barrier. For simplicity in responding to this question, let us consider this barrier in three components, 1. The non-federal weir section (upper and lower sections, approximately four linear miles of flood control), 2. The concrete flume (~10,000 feet), and 3. The federal component, additional one mile weir section and two dams with failing fish ladders (including Bennington Dam and Yellowhawk Division Works).

Currently, on the non-federal portions of the barrier, we have worked almost exclusively with funding from the Salmon Recovery Funding Board (SRFB) and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) through the Bonneville Power Administration (BPA) Accords. The majority of this funding has been focused on the concrete flume. Beyond where passage improvements within the concrete flume section have already been completed (~1,620 feet of the entire 10,000), we have funding secured from SRFB and CTUIR for 880 feet of passage – this is the funding that is proposed as match for the current FBRB coordinated pathway Mill Creek proposal (\$976,077 match secured). The FBRB coordinated pathway proposal includes an additional 2,000 feet of passage through the concrete flume (\$1,667,912 funding request). Beyond that, we have final designs prepared for an additional 2,100 feet in the concrete channel funded by SRFB and the Regional Fisheries Enhancement Group (RFEG) which is administered by WDFW. We also expect to have an additional 1,050 feet of the concrete channel designed for passage using 2019 SRFB and RFEG funding. That leaves approximately 2,350 feet within the concrete channel left to complete final designs for in addition to the bridge piers. Additionally, within the weir section there are 263 energy-dissipating stabilizers (weirs). The weirs have been identified as barriers only during low flow periods, therefore the focus of our fish passage efforts have been on the concrete channel. Within the weir section we have constructed a low flow pilot channel and completed trial notching at 5 weirs in total.

With regard to the federal component of the passage project, we have been successful in pushing for two line items in the President's budget to the Army Corp of Engineers. Currently identified in the President's budget for FY19 are \$500,000 for designs at Bennington for the fish ladder improvements

and \$750,000 for final designs and implementation of the Yellowhawk Division Works passage (90% designs are in-hand). Additionally, as of June 2018, the Mill Creek Working Group was informed that their request for a flood control general investigation study (GI Study) to be completed by ACOE 2019-21, was funded. A coalition of business owners and citizens are providing matching funding for the study (\$1.5 million). Walla Walla County will be the project sponsor in partnership with the ACOE.

- ***What is the total estimated cost to fix everything within the Mill Cr Flume? How do you plan on breaking out the overall project into different phases? How long would you anticipate the Board being involved in funding the Mill Cr work?***

In total, the remaining fish passage expenses for Mill Creek are estimated to be \$27 million, with approximately \$13 million federal funding required. This figure can be further refined based upon additional assessment and final design where needed. To break down this estimate more specifically, the total estimated cost to fix everything remaining within the Mill Creek concrete flume for fish passage based upon both conceptual and final engineering designs would be approximately \$7 million – this would include the current FBRB coordinated pathway request. This figure does not include required fish passage fixes at the 3 remaining bridge piers (Roosevelt St, 5th and 6th Ave.). The total non-engineer estimated cost to implement fish passage in the federal weir section is \$6 million based upon an ACOE budget request – this would be federally funded. The total 2009 conceptual design cost estimate to implement fish passage in the non-federal weir section to include both weir notching and a low flow channel is approximately \$6.8 million. However, the preferred passage solution in the weir section has yet to be determined. The estimated costs for implementing the Bennington Dam fish passage based upon preliminary designs are \$7-8 million – this would also be federally funded. Please keep in mind that these are budget estimates, and the estimates for the weir section are particularly rough.

Currently, work in the concrete channel is limited by both funding and by access to the channel. Remaining work in the concrete channel would likely be phased between bridges due to access limitations. The underground sections pose a logistical difficulty will require additional design/planning. Regarding the weir sections, once a preferred alternative has been selected and funded, work would likely be limited by how much could be accomplished in a single in-stream work window.

In relation to the flow component of Mill Creek passage, CTUIR is working directly with the largest and oldest water right holder in the basin, the City of Walla Walla, to find efficiencies and add water during low flow periods. This ongoing flow enhancement work is being paid for by CTUIR through BPA. Direct water savings within the City water supply is estimated to be 20 cfs over the next 10 years, with a 6 cfs direct instream benefits during low flow planned in 2019 alone (for reference, the Lower Mill Creek Assessment base flow target is considered aggressive at 30 cfs).

We would anticipate that the Board would be involved in funding the Mill Creek passage work until fish passage criteria is achieved for passability. We have been working on fish passage in Mill Creek in earnest since 2002, but have ramped up our progress over the last several years. Realistically, the concrete flume section could be retrofitted for fish passage over the next 7-8 years depending on access to the channel with significant progress being made over the next 2-3 years. The weir sections could move quicker than that if we have the capacity to implement passage in these sections simultaneously

and funding is available. There is good access for project implementation in the weir section. Passage at both Bennington Dam and the Yellowhawk Division Works has been, and will continue to be dependent on federal funding.

The budget, timeline, and phased approach can be solidified once a significant funding source is identified and permitting completed. The past and current phasing of projects and timeline has been limited as a result of both current funding levels and equipment access to the concrete channel.

- ***What design standards do you propose to implement on the Mill Cr corrections? Adult Steelhead primarily? Will you take Chinook passage through the flume into consideration as well? How about juvenile passage?***

In short, we have worked to meet fish passage requirements for steelhead (*O. mykiss*), Chinook, and bull trout at all life stages for the range of flows observed in Mill Creek. Due to the complexities and nuances of the Mill Creek passage barrier, a bioenergetics model was utilized to assess passability in the flume and at individual sills to account for specific hydraulic conditions and the ability of fish to swim through a channel with those conditions varying through the length and cross-section of the channel (see Mill Creek Fish Passage Assessment, October 2009 by Waterfall Engineering, Kozmo Bates, and Chinook Engineering). To analyze overall passability, the model reflects the sizes of fish within the entire population rather than a single size such as the average, largest, or smallest fish. It is important to note that we are working to fix both a low flow and high flow barrier within the concrete channel.

- ***What are the current population levels of the anadromous stocks in Mill Cr? How many fish would be expected to benefit from these corrections?***

It is important to note that Mill Creek is not a complete passage barrier but rather at any given flow, there is a barrier somewhere in the channel and at any given location in the channel, there is a barrier at some flow. Our goal is to provide passage throughout the entire channel.

Regarding current fish population levels, we have rough estimates from redd surveys of between 0-200 adult mid-Columbia steelhead in Mill Creek (currently listed as threatened) over the last 15-20 years. The high point of 200 occurred when flow conditions were ideal for passage when the fish were present. The minimum recovery goal for the Walla Walla major population group is 1,000 adults, with approximately 500 of those coming from Mill Creek. Recovery of the Mill Creek steelhead population is critical for the mid-Columbia distinct population segment to reach viability (and potential de-listing).

Spring Chinook in Mill Creek are extirpated with active reintroduction efforts ongoing by the CTUIR. Currently approximately 50 adults are being out planted into Mill Creek annually for the last several years. Once the South Fork Walla Walla hatchery is completed in 2019, supplementation is anticipated to be around 150,000 smolts annually with a target of 450 spawning adults returning to Mill Creek.

Current estimates for Columbia River bull trout (also threatened) are 500 adults. This population is genetically distinct from the Touchet population and has both migratory and resident life histories.

Pacific lamprey are also currently extirpated.

- ***What is the status of the work proposed upstream at Bennington Dam? How bad is passage through the current fishway there? What is the timeline to rehab the facility? How secure is the funding that goes along with it?***

The fish passage way at Bennington Dam needs improvement given it is a partial barrier. As mentioned above, there is a federal funding request to complete final passage designs at Bennington Dam, currently in the President's budget for FY19. Upon final design, implementation funding will need to be secured, but the likelihood of that funding being available would be improved with the final designs being completed by the ACOE.

According to ACOE staff, the degree of passage likely varies on a yearly basis due to differences in flow and is likely different for each species. Spring Chinook pass later in the season when flows are lower. They are generally able to pass the dam, but are often delayed due to false attraction flow coming through the low flow outlet and delays can be for several days. Steelhead are eventually able to pass, but are delayed any time flows are above 400 cfs which occurs for 10 days per year on average (not necessarily consecutive days), but can occur more. For example, in 2017, there were 43 days with flows above 400 cfs. Passage for bull trout is much like passage for Chinook. The new ladder that the ACOE is planning for would operate at a wider range of flows, reducing false attraction and increasing passability when flows are higher.

Thank you for the opportunity to revise our priority watershed for the FBRB's Watershed Pathway grant program. We greatly appreciate the feedback from the FRBR staff on the daunting task of fish passage in Mill Creek. Please take the figures in this memo as estimates as an attempt to summarize a complex passage issue and let me know if you need any additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read 'John Foltz', with a stylized flourish at the end.

John Foltz
Executive Director, Snake River Salmon Recovery Board