

PROJECT: 16-1215 REST, BEAR CREEK REACH 6 - PHASE II CONSTRUCTION Sponsor: Adopt A Stream Foundation Program: Puget Sound Acq. & Restoration Status: Active Project Start Date: 01/20/2018 Agreement End Date: 06/30/2021

Final Report Status: Accepted 10/27/2021

Description PROJECT AGREEMENT DESCRIPTION

FINAL PROJECT DESCRIPTION

Adopt A Stream Foundation (AASF) used funds to complete final designs and construct Phase II of a stream restoration along Bear Creek at the Friendly Village Mobile Home Park in Redmond, Washington. This instream restoration project improved adult spawning and juvenile rearing habitat for Chinook, coho, and sockeye salmon by reducing the slope of over-steepened streambanks, adding off-channel habitat along the edges of the creek, removing a foot bridge that confined the channel, installing significant quantities large wood, and restoring native riparian vegetation in areas that were previously manicured lawn. In 2014, AASF completed the first instream restoration project at this properl (project #12-1282). Preliminary Designs for this second phase of restoration were developed with Salmon Recovery Funding Board funding (project #15-1059). Bear Creek is I priority for restoration in the WRIA 8 Chinook Conservation Plan. This project improved habitat conditions for juvenile and adult salmonids by addressing key limiting factors identified in the WIRA 8 Plan: reducing fine sediment inputs, increasing instream complexity, improving riparian conditions and improving floodplain connection.

King County Housing authority (KCHA) installed an above ground irrigation system to water the native plants that were installed as part of this project. The irrigation system that was paid for by KCHA will help to establish a healthy riparian buffer and ensure the long-term success of this project.

Narrative

How the project was identified:

This project was identified during prior restoration work at this property. In 2014, AASF constructed a smaller scale restoration project a few hundred feet upstream of the curre project location. During the implementation of the 2014 project, AASF identified several sites at this location that were prime for restoration, having steep eroding stream-banks little or no riparian vegetation, and lacking habitat complexity. This property is listed in the WIRA 8 Chinook Recovery Plan, which calls for reducing fine sediment inputs, increasing in-stream complexity, improving riparian conditions and improving floodplain connection. We are currently working to secure funding to continue our restoration effect at this site.

Landowner Engagement

The Friendly Village Park is a privately owned property, so landowner support and permission was essential to the success of the project. Initially, this property was owned by I Marcus, who was very supportive of our efforts. However, Mr. Marcus sold this property to King County Housing Authority (KCHA), who was a bit more apprehensive about the project at first, but warmed up quickly to the idea of improving fish habitat and removing the footbridge. The initial contact with KCHA was via email with phone calls and site vis following. With landowner support secured, AASF made attempts to gain the support of residents of the park. Although their support was not required, as they are not landowner we felt that it would be beneficial and help to foster stewardship of the project. AASF made project brochures that we distributed to the residents, offered to conduct a communi meeting, which was canceled due to Covid-19, and offered a free stream and wetland class at our Northwest Stream Center Facility in Everett, WA.

Project Concept, Feasibility, and Design Development

This project was designed with the focus of benefiting juvenile Chinook rearing, as that was the primary life stage using this location. To benefit juvenile Chinook rearing, an emphasis was placed on edge habitat and low velocity refuge, as well as LWD and riparian vegetation. The benefits to rearing habitat were accomplished via the incorporation LWD structures primarily along the stream margins, scallops to create small low velocity refuge areas, and sloping of the stream-bank to improve flood plain connectivity and the planting of an acre of riparian vegetation. Several iterations of the projects designs were reviewed by different agencies, including USACE, WDFW, WRIA 8 and City of Redmond. The Muckleshoot tribes reviewed the project separately and had significant design comments. Jay Kidder of Chinook engineering created the designs for this proje Walter Rung Senior Ecologist of AASF supervised construction. The Adopt A Stream foundation constructed this project and the project engineer certified that it was construct according to the designs. There were no significant change orders during the construction.

Fish Presence

Shortly after project construction two sockeye salmon were observed, one in a newly constructed scallop and the other utilizing a LWD jam.

Lessons Learned:

The major lesson learned for this project was that unlike WRIA 7 where the tribes have a strong presence. In the WRIA 8 group the tribes (Muckleshoot's) do not have representation, this is unfortunate and I think steps should be taken to repair this relationship, as the tribes are very influential. To my surprise we received many comments fro the WRIA during the designs review process, however no one asked if the Muckleshoot's tribe had reviewed the designs.

Also, reimbursements were lower than anticipated due to a gap in sponsor match, but AASF was able to leverage costs associated with the King County Housing Authority's irrigation system that was installed to support riparian plant health. In the future we will work to secure matching grants or donations to supplement the donated materials and lat earlier in the life of the project.

Worksites

Worksite #1: Friendly Village Phase II worksite (downstream of

Worksite Address (Optional) Street Address 18425 NE 95th St City Redmond State, Zip WA 98052

Worksite Details

Worksite #1: Friendly Village Phase II worksite (downstream of

Friendly Village Phase II worksite (downstream of Worksite Name

WORKSITE DESCRIPTION

Phase II project restores degraded habitat along 330 linear feet of stream that flows through the Friendly Village mobile home park. Throughout the project site, the majoril the streambank is vertical or nearly vertical with extensive erosion occurring along each bank. Lawn is the only significant vegetation present, a footbridge confines the channel and the site lacks any significant large woody debris (LWD)

Project is located on the Friendly Village Mobile Home park property, located just downstream of the Snohomish Dr car bridge and will continue downstream for approxima 330' to the property boarder. The project will extended up the right bank approximately 100-150' and up the left bank 50'.

Activities that will be conducted at work site include riparian restoration, addition of LWD and meanders to the stream channel, removal of a foot bridge, and re-sloping of streambank

Geographic Coordinates

From mapped point:	Latitude	47.682790 Longitude	-122.093122
For Directions:	Latitude	47.683101 Longitude	-122.092401

SITE ACCESS DIRECTIONS

Take exit 182 for Interstate 405 S toward Bellevue/Renton 0.9 mi

- 8. Merge onto I-405 S 9.2 mi
- 9. Take exit 20 for NE 124th St 0.3 mi
- 10. Turn left onto NE 124th St 3.6 mi
- 11. Continue onto NE 128th St
- 1.0 mi
- 12. Turn right onto Avondale Rd NE 2.2 mi
- 13. Turn left onto NE 95th St/Conrad Olson Road 0.1 mi
- 14. Turn right onto Snohomish Dr

Properties

Worksite #	Worksite Name	Property Name	Sponsor Verified	RCO Verified	RCO Verified Ma
1	Friendly Village Phase II worksite (downstream of	Friendly Village Mobile Home Park	✓Clarification	✓Clarification	N/A

Restoration Metrics

	Current Agreement	Final
Worksite: Friendly Village Phase II worksite (downstream of (#1)		

Worksite: Friendly Village Phase II worksite (downstream of (#1)

	15
Targeted salmonid ESU/DPS (A.23)	No Salmon ESU or No Salmon ESU or Steelhead DPS Steelhead DPS
	 ✓ Chinook Salmon-Puget Sound ESU ✓ Chinook Salmon-Puget Sound ESU
	Chinook Salmon- unidentified ESU unidentified ESU
	Chum Salmon-Puget Sound/Strait of Georgia ESU ESU
	Chum Salmon-unidentified Chum Salmon-unidentified ESU ESU
	 ✓ Coho Salmon-Puget Sound/Strait of Georgia ESU ✓ Coho Salmon-Puget Sound/Strait of Georgia ESU
	Coho Salmon-unidentified Coho Salmon-unidentifie ESU ESU
	Pink Salmon-Odd yearPink Salmon-Odd yearESUESU
	Pink Salmon-unidentifiedPink Salmon-unidentifiedESUESU
	✓ Steelhead-Puget Sound DPS Steelhead/Trout- Steelhead/Trout-
	unidentified DPS unidentified DPS
Targeted species (non-ESU species)	None None Unknown Unknown
	Brook Trout Brook Trout
	Brown Trout Brown Trout
	✓ Bull Trout ✓ Bull Trout
	✓ Cutthroat ✓ Cutthroat
	Forage Fish Forage Fish
	Kokanee Kokanee
	Lamprey Lamprey
	Rainbow Rainbow
	RainbowRainbow✓Searun CutthroatSearun Cutthroat
Miles of Stream and/or Shoreline Treated or Protected (C.0.b)	-
Miles of Stream and/or Shoreline Treated or Protected (C.0.b) Project Identified In a Plan or Watershed Assessment (C.0.c)	✓ Searun Cutthroat Searun Cutthroat 0.06 0.0 Note: To get this distance, measured down the center of
	 Searun Cutthroat Searun Cutthroat 0.06 Note: To get this distance, measured down the center of channel on Google Earth. Shared Strategy Development Cor Not Collected at Closure
	 Searun Cutthroat Searun Cutthroat 0.06 Note: To get this distance, measured down the center of channel on Google Earth. Shared Strategy Development Con https://www.westcoast.fisheries.no; WRIA 8 Salmon Recovery Council
Project Identified In a Plan or Watershed Assessment (C.0.c)	 Searun Cutthroat Searun Cutthroat 0.06 Note: To get this distance, measured down the center of channel on Google Earth. Shared Strategy Development Cor https://www.westcoast.fisheries.no: WRIA 8 Salmon Recovery Council (WRIA) 8, Seattle, WA. http://psp.v This reach is identified in the WRIA 8 Chinook Conservation Plan as a Tier 1-Core Chinook Use N214 listed in the WRIA 8 Chinook Conservation Plan. The overall technical hypothesis of N214 is to reduce fine sediment inputs, add LWD, restore riparian conditions, and reduce channel confinement. N214 calls out the proposed project area specifically, stating, "Restoration is needed throughout Friendly Village."Chinook habitat-limiting factors identified in Chapter 3:
Project Identified In a Plan or Watershed Assessment (C.0.c) Priority in Recovery Plan	✓ Searun Cutthroat Searun Cutthroat 0.06 0.0 Note: To get this distance, measured down the center of channel on Google Earth. Shared Strategy Development Con https://www.westcoast.fisheries.no; Not Collected at Closure WRIA 8 Salmon Recovery Council (WRIA) 8, Seattle, WA. http://psp.v Not Collected at Closure This reach is identified in the WRIA 8 Chinook Conservation Plan as a Tier 1-Core Chinook Use Not Collected at Closure N214 listed in the WRIA 8 Not collected at Closure N214 listed in the WRIA 8 Not collected at Closure N214 listed in the WRIA 8 Not collected at Closure N214 listed in the WRIA 8 Not collected at Closure N214 listed in the WRIA 8 Not collected at Closure N214 listed in the WRIA 8 Not collected at Closure N214 listed in the WRIA 8 Not collected at Closure N214 listed in the WRIA 8 Not collected at Closure N214 is to reduce fine sediment inputs, add LWD, restore riparian confinement. N214 calls out the proposed project area specifically, stating, "Restoration is needed throughout Friendly WRIA 8 Chinook Recovery Plan Implementation Monitoring

	Unsile	Unsile
	Upslope	Upslope
	Upstream	Upstream

Instream Habitat Project	
Total Miles Of Instream Habitat Treated (C.4.b)	0.06 0.07 Note: Based on measurement the length of stream bank crea at each scallop we created 0.0 miles of additional off channel habitat.
Channel reconfiguration and connectivity (C.4.c.1)	
Total cost for Channel reconfiguration and connectivity	\$94,256 Not Collected at Closure
Type of change to channel configuration and connectivity (C.4.c.2)	Channel Bed Restored Creation of Instream PoolsChannel Bed Restored Creation of Instream PoolsCreation/Connection to Off-Channel Habitat Levee removal/Alteration Meanders Added NoneCreation/Connection to Off-Channel Habitat Levee removal/Alteration Meanders Added NoneCreation/Connection to Off-Channel Habitat Levee removal/Alteration Meanders Added NoneNote: Connecting stream to floodplain terraces + off channel
Miles of Stream Treated for channel reconfiguration and connectivity (C.4.c.3)	0.06 0.07 Note: Entire stream reach.
Miles of Off-Channel Stream Created or Connected (C.4.c.4)	0.13 0.07 Note: Both sides of creek 0.07 terraces + 7 pockets +6.99 ft/ea 0.15' lengthed to 21.99') (Right bank = 316.8 feet + 3 0.07 pockets = 337.8') + (Left back = 316.8 feet + 4 pockets = 344.8') = 682.6' = 0.13 mi 0.07
Acres Of Channel/Off-Channel Connected Or Added (C.4.c.5)	0.3 0.1 Note: Aerial imagery area calculation. 0.3 Note: 228 sqft times 6 scallop 1,338 sqft / # feet in acre = 0.1 acres rounded up to 0.1 acre
Instream Pools Created/Added (C.4.c.6)	0 0

Channel structure placement (C.4.d.1)

Final Report, Project 1	16-1215
Total cost for Channel structure placement	\$44,528 Not Collected at Clos
Material Used For Channel Structure (C.4.d.2)	Deflectors/BarbsDeflectors/BarbsFlood FencingGabionsGabionsGabionsIndividual Logs (Anchored)Individual Logs (Anchored)Individual Logs (Unanchored)Individual Logs (Anchored)Individual Logs (Unanchored)Individual Logs (Logiam)Individual Logs (Unanchored)Individual Logs (Logiam)Individual Logs (Unanchored)Individual Logs (Logiam)Individual Logs (Unanchored)Individual Logs (Logiam) <t< td=""></t<>
Miles of Stream Treated for channel structure placement (C.4.d.3)	0.06
Pools Created through channel structure placement (C.4.d.5)	9
Number of structures placed in channel (C.4.d.7)	9 Note: Jam = 4 logs w/roots + 2 logs w/o; anchored w/chain to ~14 boulders; + 22 smaller (<=1 ft diam) logs woven in.
liparian Habitat Project	
otal Riparian Miles Streambank Treated (C.5.b.1)	0.12
otal Riparian Acres Treated (C.5.b.2)	1.0
Planting (C.5.c.1)	
Total cost for Planting Species Of Plants planted in riparian (C.5.c.2)	\$30,000 Not Collected at Closes Including but not limited to: Willow Species Planted: Willow S [salix ssp.], Sitka spruce [Picea sitchensis], red alder [Alnus rubra], bitter cherry [Prunus emarginata], W. red cedar [Thuja emarginata], W. red cedar [Thuja plicata], black twinberry [Lonicera Birch, Pacific Willow, Sitk involucrata], red elderberry [Sambucus racemosa], Common Names: Spruce, Cedar, Douglas
	Fir, Alder, Big Leaf Maple, Birch, Red Flowering current, Snow berry, Nine Bark.
Acres Planted in riparian (C.5.c.3)	Fir, Alder, Big Leaf Maple, Birch, Red Flowering current, Snow
Acres Planted in riparian (C.5.c.3) Miles of streambank planted (C.5.c.4)	Fir, Alder, Big Leaf Maple, Birch, Red Flowering current, Snow berry, Nine Bark.
	Fir, Alder, Big Leaf Maple, Birch, Red Flowering current, Snow berry, Nine Bark. 1.0
Miles of streambank planted (C.5.c.4)	Fir, Alder, Big Leaf Maple, Birch, Red Flowering current, Snow berry, Nine Bark. 1.0 0.13
Miles of streambank planted (C.5.c.4) Average Riparian Width	Fir, Alder, Big Leaf Maple, Birch, Red Flowering current, Snow berry, Nine Bark. 1.0 0.13
Miles of streambank planted (C.5.c.4) Average Riparian Width Unspecified or other riparian habitat project (C.5.k.1)	Fir, Alder, Big Leaf Maple, Birch, Red Flowering current, Snow berry, Nine Bark. 1.0 0.13 100

Cultural Resources

Cultural resources

Final Report, Project 16-1	215	
Cultural resource work completed	Collected at Closure	NumberAcres excavated1Hours of184monitoring184required0Number of0structures0documented0
Total cost for Cultural resources	\$4,950	Not Collected at Closure
Acres surveyed for cultural resources	1.00	1.10
Permits		
Obtain permits		
Total cost to Obtain permits	\$150	Not Collected at Closure
Number of permits required for implementation of project	2	2
Architectural & Engineering		
Architectural & Engineering (A&E)		
Total cost for Architectural & Engineering (A&E)	\$26,083 Collected at Closure	Not Collected at Closure
Did A&E costs exceed billed amount (Yes/No)	Collected at Closure	No
Agency Indirect Costs		
Agency Indirect		
Total cost for Agency Indirect		Not Collected at Closure
Overall Metrics Completion Date	Current Agreement	Final
Projected date of completion	12/31/2020	06/30/2021
Project Goals		
Goals, purpose, and expected benefits (A.17)	This project will implement the 1 acre of riparian planting portion the project to provide benefits to Chinook salmon. Future phases addition of alternate funding (207 PSAR funds) will allow the instream LWD to be implented.	constructed the instream habit orrestoration designs titled " Bea

Restoration Costs

		Final amounts include a pending Date of Last Released Billing 01/2	
		Proposed	Final
Worksite: Friendly Village Phase I	ll worksite (downstream of (#1)		
	SPLIT OUT FINAL TOTAL BELOW	\$200,000	\$374,293
Instream Habitat Costs (C.4.a)		\$138,784	\$214,363
Riparian Habitat Costs (C.5.a)		\$30,000	\$47,604
Cultural Resource Costs		\$4,950	\$25,968
Permits Costs		\$150	\$16,114
Architectural & Engineering Costs		\$26,083	\$51,216
Agency Indirect Costs			\$19,028
	Difference		\$0

Billed Summary

Final amounts include a pending billi Date of Last Released Billing 01/28/20.

	Project Agreement		nt Totals To Date		Totals To Date	
Category	RCO	Total	Expended	Non Reimbursable	Total Bille	
Restoration						
Construction	266,298.56	313,297.39	272,279.40	50,797.54	323,076.9	
AA&E	51,000.44	60,001.61	45,876.02	5,340.00	51,216.0	
Restoration Total	317,299.00	373,299.00	318,155.42	56,137.54	374,292.9	
Total	317,299.00	373,299.00	318,155.42	56,137.54	374,292.9	

Sponsor Match

	Proposed	Final
Project Funding		
Federal Funds		
State Funds (A.11)	\$317,299.00	\$301,434.05
Pending Billing - RCO Share Approved	Collected at Closure	\$0.00
Retainage - RCO amount retained	Collected at Closure	\$15,864.95

Match Details

Match Category	Match Type	Proposed	Final

Unable to tie Billed match Proposed match.

i mai Keport, Fi	

Donated Unpaid Labor Donated Gener

Donated Unpaid Labor

Donated General Labor

Unable to tie Billed match Proposed match.

i mai Roport, i re	•	

Attachments

PHOTOS (JPG, GIF) Photos (JPG, GIF)

#485218 #485219 #485220 #486584 #486585

PROJECT DOCUMENTS AND PHOTOS

Project Documents and Photos

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Sh
	10/06/2021	Photo	20210910_094509.jpg	WalterR	20210910_094509.jpg, 486586 Final Report, 10/27/2021, Accepted	×
	10/06/2021	Photo	20210910_094701.jpg	WalterR	20210910_094701.jpg, 486585 Final Report, 10/27/2021, Accepted	×
	10/06/2021	Photo	20210910_094517.jpg	WalterR	20210910_094517.jpg, 486584 Final Report, 10/27/2021, Accepted	×
	09/10/2021	Photo	riparian planting 3.jpg	ElizabethB	20210910_094517.jpg, 485220 Final Report, 10/27/2021, Accepted	×
	09/10/2021	Photo	riparian planting 2.jpg	ElizabethB	20210910_094701.jpg, 485219 Final Report, 10/27/2021, Accepted	×
	09/10/2021	Photo	riparian planting.jpg	ElizabethB	20210910_094509.jpg, 485218 Final Report, 10/27/2021, Accepted	N
	08/13/2021	Final project report	Final Report, 16-1215 (accepted 08/13/21 15:06:53)	ElizabethB	Accepted Final Report 22145 for project 16-1215.pdf, 483378 Final Report, 10/27/2021, Accepted	•
	08/13/2021	Stewardship plan	Stewardship plan.docx	WalterR	Stewardship plan.docx, 483374 Final Report, 10/27/2021, Accepted	ľ

Certify & Submit

Status History			
Report Status	Date	User	Note
Accepted	10/27/2021	Elizabeth Butler	Thank you!
Submitted	10/20/2021	Walter Rung	
Returned	09/08/2021	Elizabeth Butler	Returning, since there is another bill that has come in \sim
Accepted	08/13/2021	Elizabeth Butler	Thank you Walt~ Appreciate your time on this! with gratitude, Elizabeth
Submitted	08/13/2021	Walter Rung	
Draft	05/20/2021	Elizabeth Butler	



PROJECT: 16-1215 REST, BEAR CREEK REACH 6 - PHASE II CONSTRUCTION <u>Sponsor: Adopt A Stream Foundation</u> Program: Puget Sound Acq. & Restoration Status: Active Project Start Date: 01/20/2018 Agreement End Date: 06/30/2021

PROPERTY: Friendly Village Mobile Home Park (1: Friendly Village Phase II worksite (downstream of)

Property Basics

Acquisition √Restoration

Property Location

Property Name Property Address (optional) City State	Friendly Village Mobile Home Park 18425 NE 95th St, Redmond, WA 98052 Zip	Property Description Associated Worksite	The Bear Creek Reach 6 Restoration – Phase II project restores degraded habitat along 330 linear feet of stream that flows through the Friendly Village mobile home park. Friendly Village Phase II worksite (downs
Landowner			Control and Tenure

Landowner Name	King County Housing Authority	Instrument Type	Landowner Agreement
Address	King County Housing Authority now owns property	Timing	Proposed
(optional)		Term Type	Fixed # of years
City	72	# Yrs	10
State	Zip	Expiration Date	12/31/203 ⁻
Landowner Type	Private	Note	

Parcel Numbers

County Name No parcels	Parcel Number	Mapped Notes (optional)	
Recording Numbers			
Instrument Type No recordings	Recording Number	Notes	
Sponsor Clarification			

KCHA owns property NOT Matt Marcus

✓ The above information is correct and complete

RCO Notes

Updated landowner details...

✓ Property data verified by RCO Staff

Property Report: Friendly Village Mobile Home Park (Worksite #1: Friendly Village Phase II worksite Attachments

PHOTOS (JPG, GIF) Photos (JPG, GIF)

PROJECT DOCUMENTS AND PHOTOS

Project Documents and Photos

File	Attach	
Туре	Date	Attachment Type
w	07/28/2016	SRFB Review Panel Comment Form

Title

Bear Creek Reach 6 Comment Form

Person JoshL File Name, Number Associations Bear Creek Reach 6 Comment Form.docx, 274050 Property: Friendly Village Mobile Home Park

Shared √