
PROJECT: 19-1366 REST, GRANT CREEK CONSTRUCTION

Sponsor: Wild Fish Conservancy Program: Salmon State Projects Status: Active
Project Start Date: 12/12/2019 Agreement End Date: 12/31/2021

Final Report Status: Accepted 03/01/2022

Description

PROJECT AGREEMENT DESCRIPTION

Implementing preliminary designs created by Grant Creek Construction Designs grant (SRFB #17-1107), Sound Salmon Solutions proposes construction on Grant Creek, a tributary to the Lower North Fork Stillaguamish in WRIA 5 east of Cicero Bridge. The project will extend north of Hillis Rd up past Grant Creek Rd and will include LWD placement, riparian planting, and a historic side channel reconnection.

The project area encompasses a degraded reach with two distinct areas; (1) the lower 1/3 mile between Hillis Rd and Grant Cr Rd consisting mainly of riffles with little LWD and few rearing pools and heavily invaded Himalayan blackberry and reed canarygrass riparian buffers along both banks. (2) the 2/3 mile above Grant Cr Rd Bridge that is down cutting, consists mainly of riffles, and is currently moderately forested with plans by the landowner for supplemental planting.

To remedy these degraded conditions SSS will place 15 pcs/100' of LWD at key locations along the project reach, plant 12.3 acres with 100-200ft buffers where feasible, and re-connect a historic channel next to the creek to improve flood storage, groundwater infiltration, and provide slow water refuge. This will benefit spawning for Chinook, steelhead, coho, chum, and pink documented using the lower reach and steelhead, coho, chum, and pink documented using the upper reach. Chinook have presumed presence in the upper reach with new eDNA results confirming Chinook presence in the upper reaches of Grant Creek.

A scope change amendment was needed due to a property line dispute. Metrics were reduced based on the new work area.

FINAL PROJECT DESCRIPTION

Grant Creek Construction was completed through final designs and permitting and ready to go to construction summer 2020. The bulk of the LWM had been purchased and delivered on site. Due to COVID related issues securing a construction contractor was delayed and the summer 2020 fish window was passed. In order to complete installation of the LWM and to save on funding both a time extension and a sponsor change were requested and granted. Wild Fish Conservancy, the A&E contractor for this project became project sponsor.

Prior to handing off project sponsorship SSS working with WFC was able to ensure cultural resources was completed, all survey, permitting, and design work were done and cleared access routes for construction. SSS took the lead in working with the landowner and navigated past issues with neighboring properties. JTI Construction was awarded the bid in winter 2021, and construction was completed during summer 2021.

The purpose of the design shown in these plans is to restore, to the extent possible, the natural processes that will create and maintain complex fish habitat in Grant Creek. During this project WFC placed 115 pieces of large wood within a 0.3 mile reach of Grant Creek between Grant Creek Road and Hillis Rd. The 17 large wood complexes will encourage the development of new scour pools and to improve overall channel complexity. Wood placements will also help to sort sediment, encourage aggradation and localized deposition of spawning-sized gravel, and improve floodplain connectivity. SSS planted a native riparian corridor along both sides of the 0.3 mile long project reach.

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Narrative

SSS: Our experience with this project has been one of multiple challenges. The first challenge was having to scale back the scope of the project due to adjacent landowners disputing property lines between them and the project landowner. That triggered the first redesign with a change in the number of pieces of wood required. Then COVID happened and threw everything sideways for everyone for a spell. The next challenge was when a very large cottonwood fell across the creek spring 2020 and caused the main channel to avulse. The flood that caused the tree fall also cleared the creek of the existing instream wood that had been surveyed. This triggered yet another redesign and change in the number of pieces of wood needed. By the time the redesigns were ready and approved by WDFW and ACOE, we had a very short time to develop bid documents and secure a construction contractor. Our attempt to secure one ran passed the fish window and it was decided that the project needed an extension and a change in sponsors so that construction could be completed summer 2021.

WFC: After several false starts and delays (see above), the project went fairly smoothly in 2021. The competitive bid process was successful; the selected contractor was effective, creative, and reasonably priced; and the weather cooperated during the construction window. We had a steep learning curve when it came to the site isolation / dewatering approach that worked best given interstitial flow, but by the third jam we had a process in place. Still, constructing mid-channel jams is open heart surgery and water management was challenging. It's been great to see the project after the first few high flows rearranged the substrate and the jams settled into place.

Lessons learned:

Invest time with the selected contractor - walk the site, walk through the sequencing, and troubleshoot. Everyone has different experiences and perspectives to bring to each challenge - keep an open mind and be willing to consider alternative approaches that may be more effective to reach the project goals.

Project outcomes:

During this project WFC placed 115 pieces of large wood within a half-mile reach of Grant Creek between Grant Creek Road and Hillis Rd. The 17 large wood complexes will encourage the development of new scour pools and to improve overall channel complexity. Wood placements will also help to sort sediment, encourage aggradation and localized deposition of spawning-sized gravel, and improve floodplain connectivity.

Worksites

Worksite #1: Grant Creek

Worksite Address (Optional)

Street Address 16209 Grant Creek Rd

City Arlington

State, Zip WA 98223

Worksite Details

Worksite #1: Grant Creek

Worksite Name Grant Creek

WORKSITE DESCRIPTION

Selected sites on Grant Creek will have LWD placement to create pools in a reach dominated by riffles. This reach of the creek is bordered by forestry upstream of the Grant Cr Rd Bridge and agricultural fields with existing but degraded riparian buffers downstream of the bridge. 100ft minimum width riparian buffers will be planted on left bank above the bridge and on both sides of the creek below the bridge. Upstream of the bridge, is mostly bordered by a moderately forested area where forestry replanting will take place in the future by the landowner. The historic channel reconnection is located roughly 500ft upstream of the Grant Cr Rd Bridge.

Geographic Coordinates

From mapped point: Latitude 48.274212 Longitude -122.012786

For Directions: Latitude 48.275599 Longitude -122.012548

SITE ACCESS DIRECTIONS

From Arlington, head east on WA-530 for 7.5 miles. Turn left onto Hillis Rd and continue for 0.6 miles. Turn right onto Grant Creek Rd and continue for 0.2 miles. Once on the bridge on Grant Creek Rd, turn left into the first driveway.

Properties

Worksite #	Worksite Name	Property Name	Sponsor Verified	RCO Verified	RCO Verified Map
1	Grant Creek	Grant Creek - Bright property	✓	✓	N/A

Restoration Metrics

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	Current Agreement	Final
Worksite: Grant Creek (#1)		
Targeted salmonid ESU/DPS (A.23)	<input type="checkbox"/> No Salmon ESU or Steelhead DPS <input checked="" type="checkbox"/> Chinook Salmon-Puget Sound ESU <input type="checkbox"/> Chinook Salmon-unknown ESU <input checked="" type="checkbox"/> Chum Salmon-Puget Sound/Strait of Georgia ESU <input type="checkbox"/> Chum Salmon-unknown ESU <input checked="" type="checkbox"/> Coho Salmon-Puget Sound/Strait of Georgia ESU <input type="checkbox"/> Coho Salmon-unknown ESU <input checked="" type="checkbox"/> Pink Salmon-Odd year ESU <input type="checkbox"/> Pink Salmon-unknown ESU <input checked="" type="checkbox"/> Steelhead-Puget Sound DPS <input type="checkbox"/> Steelhead/Trout-unknown DPS	<input type="checkbox"/> No Salmon ESU or Steelhead DPS <input checked="" type="checkbox"/> Chinook Salmon-Puget Sound ESU <input type="checkbox"/> Chinook Salmon-unknown ESU <input checked="" type="checkbox"/> Chum Salmon-Puget Sound/Strait of Georgia ESU <input type="checkbox"/> Chum Salmon-unknown ESU <input checked="" type="checkbox"/> Coho Salmon-Puget Sound/Strait of Georgia ESU <input type="checkbox"/> Coho Salmon-unknown ESU <input checked="" type="checkbox"/> Pink Salmon-Odd year ESU <input type="checkbox"/> Pink Salmon-unknown ESU <input checked="" type="checkbox"/> Steelhead-Puget Sound DPS <input type="checkbox"/> Steelhead/Trout-unknown DPS
Targeted species (non-ESU species)	None Unknown Brook Trout Brown Trout <input checked="" type="checkbox"/> Bull Trout Cutthroat Forage Fish Kokanee Lamprey <input checked="" type="checkbox"/> Rainbow Searun Cutthroat	None Unknown Brook Trout Brown Trout <input checked="" type="checkbox"/> Bull Trout <input checked="" type="checkbox"/> Cutthroat Forage Fish Kokanee Lamprey <input checked="" type="checkbox"/> Rainbow Searun Cutthroat
Miles of Stream and/or Shoreline Treated or Protected (C.0.b)	0.38	0.38
Project Identified In a Plan or Watershed Assessment (C.0.c)	Shared Strategy Development Cor 2007, Puget Sound Salmon Recov https://repository.library.noaa.gov/ This project is not specifically listed works towards goals of riparian res placement and connecting side ch:	<i>Not Collected at Closure</i>
Priority in Recovery Plan	This project is not specifically listed in the Chinook Recovery Plan for the Stillaguamish Basin, but works towards goals of riparian restoration, LWD placement and connecting side channels.	<i>Not Collected at Closure</i>
Type Of Monitoring (C.0.d.1)	Implementation Monitoring <input checked="" type="checkbox"/> None	Implementation Monitoring <input checked="" type="checkbox"/> None
Monitoring Location (C.0.d.2)	<input checked="" type="checkbox"/> No monitoring completed <input type="checkbox"/> Downstream <input type="checkbox"/> Onsite <input type="checkbox"/> Upslope <input type="checkbox"/> Upstream	<input checked="" type="checkbox"/> No monitoring completed <input type="checkbox"/> Downstream <input type="checkbox"/> Onsite <input type="checkbox"/> Upslope <input type="checkbox"/> Upstream

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Instream Habitat Project

Total Miles Of Instream Habitat Treated (C.4.b)	0.38	0.38
Channel reconfiguration and connectivity (C.4.c.1)		
Total cost for Channel reconfiguration and connectivity	\$3,000	Not Collected at Closure
Type of change to channel configuration and connectivity (C.4.c.2)	<ul style="list-style-type: none"> Channel Bed Restored Creation of Instream Pools ✓ Creation/Connection to Off-Channel Habitat Levee removal/Alteration Meanders Added None 	<ul style="list-style-type: none"> Channel Bed Restored Creation of Instream Pools Creation/Connection to Off-Channel Habitat Levee removal/Alteration Meanders Added None
Miles of Stream Treated for channel reconfiguration and connectivity (C.4.c.3)	0	
Miles of Off-Channel Stream Created or Connected (C.4.c.4)	0.06	
Acres Of Channel/Off-Channel Connected Or Added (C.4.c.5)	0.4	
Instream Pools Created/Added (C.4.c.6)	1	
	Note: TBD, depending on final designs.	

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

Total cost for Channel structure placement	\$176,810	Not Collected at Closure
Material Used For Channel Structure (C.4.d.2)	<ul style="list-style-type: none"> Deflectors/Barbs Flood Fencing Gabions ✓ Individual Logs (Anchored) Individual Logs (Unanchored) ✓ Logs Fastened Together (Logjam) None Other Engineered Structures Rocks/Boulders (Fastened Or Anchored) Rocks/Boulders (Unanchored) Stumps With Roots Attached (Rootwads) Weirs 	<ul style="list-style-type: none"> Deflectors/Barbs Flood Fencing Gabions Individual Logs (Anchored) ✓ Individual Logs (Unanchored) ✓ Logs Fastened Together (Logjam) None Other Engineered Structures Rocks/Boulders (Fastened Or Anchored) Rocks/Boulders (Unanchored) Stumps With Roots Attached (Rootwads) Weirs
Miles of Stream Treated for channel structure placement (C.4.d.3)	0.38	0.38
Pools Created through channel structure placement (C.4.d.5)	1	10
	Note: TBD during final designs	
Number of structures placed in channel (C.4.d.7)	90	17
	Note: 15 pieces of LWD per 100ft.	

Note: Construction will be completed summer 2021 with Fish Conservancy as project sponsor.

Riparian Habitat Project

Total Riparian Miles Streambank Treated (C.5.b.1)	0.38	0.38
Total Riparian Acres Treated (C.5.b.2)	12.3	12.3
Planting (C.5.c.1)		

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Total cost for Planting	\$44,118	<i>Not Collected at Closure</i>
Species Of Plants planted in riparian (C.5.c.2)		Thuja plicata Pseudotsuga menziesii Tsuga heterophylla Picea Sitchensis Alnus rubra
Acres Planted in riparian (C.5.c.3)	12.3	12.3
Miles of streambank planted (C.5.c.4)	0.38	0.38
Average Riparian Width	125	125

Cultural Resources

Cultural resources

Cultural resource work completed	<i>Collected at Closure</i>	Number
		Acres excavated
		0
		Hours of monitoring required
		0
		Number of structures documented
		0
Total cost for Cultural resources	\$5,000	<i>Not Collected at Closure</i>
Acres surveyed for cultural resources	18.00	18.00

Permits

Obtain permits

Total cost to Obtain permits	\$15,000	<i>Not Collected at Closure</i>
Number of permits required for implementation of project		4

Architectural & Engineering

Architectural & Engineering (A&E)

Total cost for Architectural & Engineering (A&E)	\$50,190	<i>Not Collected at Closure</i>
Did A&E costs exceed billed amount (Yes/No)	<i>Collected at Closure</i>	No
Percent architectural & engineering	<i>Collected at Closure</i>	60,000.00

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Overall Metrics

	Current Agreement	Final
Completion Date		
Projected date of completion	6/30/2022	12/31/2021
Funding not reported to RCO		
Provide the dollar amount spent to complete the scope of this project identified in PRISM that was not included in the grant or as match to the grant in the project agreement.	<i>Collected at Closure</i>	\$0
Planned Operation & Maintenance Costs		
Estimated FTE's	<i>Collected on Application</i>	<i>Not Collected at Closure</i>
Estimated O&M Costs	<i>Collected on Application</i>	<i>Not Collected at Closure</i>
O&M Funding Source(s)	<i>Collected on Application</i>	<i>Not Collected at Closure</i>
O&M Activities	<i>Collected on Application</i>	<i>Not Collected at Closure</i>
Project Goals		
Goals, purpose, and expected benefits (A.17)	Implement preliminary designs including LWD placement, riparian planting, and a historic side channel reconnection. Project will benefit spawning for Chinook, steelhead, coho, chum, and pink documented.	Implemented preliminary design including LWD placement, riparian planting, and a historic side channel reconnection. Project will benefit spawning for Chinook, steelhead, coho, chum and pink salmon.

Restoration Costs

	Proposed	Final
<i>Final amounts include a pending bill. Date of Last Released Billing 11/16/21</i>		
Worksite: Grant Creek (#1)		
	\$294,118	\$317,405
SPLIT OUT FINAL TOTAL BELOW		
Instream Habitat Costs (C.4.a)	\$179,810	\$194,241
Riparian Habitat Costs (C.5.a)	\$44,118	\$44,118
Cultural Resource Costs	\$5,000	\$5,000
Permits Costs	\$15,000	\$15,000
Architectural & Engineering Costs	\$50,190	\$59,046
Difference		\$0

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Billed Summary

*Final amounts include a pending billi
Date of Last Released Billing 11/16/20.*

Category	Project Agreement		Expended	Totals To Date	
	RCO	Total		Non Reimbursable	Total Bille
Restoration					
Construction	210,769.23	247,963.85	210,005.70	48,353.00	258,358.7
AA&E	63,230.77	74,389.15	59,046.06		59,046.0
Restoration Total	274,000.00	322,353.00	269,051.76	48,353.00	317,404.7
Total	274,000.00	322,353.00	269,051.76	48,353.00	317,404.7

Sponsor Match

	Proposed	Final
Project Funding		
Federal Funds		
State Funds (A.11)	\$274,000.00	\$260,300.00
Pending Billing - RCO Share Approved	<i>Collected at Closure</i>	\$0.00
Retainage - RCO amount retained	<i>Collected at Closure</i>	\$8,751.76

Match Details

Match Category	Match Type	Proposed	Final
Other Monetary Funding	Grant - State		
Amount		\$44,118.00	\$44,118.00
Funding Organization			Dept. of Ecology
Grant Program			Clean Water Act funding
Other In-Kind Contributions	Donated Services		<i>Unable to tie Billed match t Proposed match.</i>
Amount		N/A	\$4,235.00
Funding Organization			Sound Salmon Solutions

Project Funding Total	\$274,000.00	86.13 %	\$269,051.76	84.77 %
Sponsor Match Total	\$44,118.00	13.87 %	\$48,353.00	15.23 %
Project Total	\$318,118.00	100.00 %	\$317,404.76	100.00 %
Total Billed			\$317,404.76	
Difference			\$0.00	

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Attachments

PHOTOS (JPG, GIF)

Photos (JPG, GIF)



495269

495270

495271

PROJECT DOCUMENTS AND PHOTOS

Project Documents and Photos

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Sh
	01/03/2022	Photo	Jams 3-4.JPG	JamieG	Jams 3-4.jpg, 495271 Final Report, 03/01/2022, Accepted	v
	01/03/2022	Photo	Jam 4.JPG	JamieG	Jam 4.jpg, 495270 Final Report, 03/01/2022, Accepted	v
	01/03/2022	Photo	MLW at Grant Creek_low res.jpg	JamieG	MLW at Grant Creek_low res.jpg, 495269 Final Report, 03/01/2022, Accepted	v
	01/03/2022	Design document (as built)	Grant Creek AS-BUILT Plans - 12-10-21.pdf	JamieG	Grant Creek AS-BUILT Plans - 12-10-21.pdf, 495268 Final Report, 03/01/2022, Accepted	v
	01/03/2022	Bid Proposal	Grant Creek Restoration - JTI Bid.pdf	JamieG	Grant Creek Restoration - JTI Bid.pdf, 495267 Final Report, 03/01/2022, Accepted	

Certify & Submit

Status History

Report Status	Date	User	Note
Accepted	03/01/2022	Amee Bahr	Thanks for all of your work to complete a great project. We saw salmon on our final inspection. Looking forward to seeing how the habitat adapts in the future.
Submitted	02/28/2022	Jamie Glasgow	Thanks for your patience, Ameen. Jamie
Draft	01/03/2022	Jamie Glasgow	

PROJECT: 19-1366 REST, GRANT CREEK CONSTRUCTION
 Sponsor: Wild Fish Conservancy Program: Salmon State Projects Status: Active
 Project Start Date: 12/12/2019 Agreement End Date: 12/31/2021

PROPERTY: Grant Creek - Bright property (1: Grant Creek)

Property Basics

Acquisition Restoration

Property Location

Property Name	Grant Creek - Bright property	Property Description	LWD placement, riparian planting, and side channel reconnection will happen on this property. Grant Creek and this property is segmented by the Grant Cr Rd Bridge. Upstream of the bridge is degraded forestry area and below the bridge is surrounded by ag
Property Address (optional)		Associated Worksite	Grant Creek (#1)
City			
State	Zip		

Landowner

Landowner Name Nick Bright
Address (optional) 16209 Grant Creek Rd
City Arlington
State WA **Zip** 98223
Landowner Type Private

Control and Tenure

Instrument Type Landowner Agreement
Timing Proposed
Term Type Fixed # of years
Yrs 10
Expiration Date 12/31/203
Note

Parcel Numbers

County Name	Parcel Number	Mapped	Notes (optional)
No parcels			

Recording Numbers

Instrument Type	Recording Number	Notes
No recordings		

Sponsor Clarification

The above information is correct and complete

RCO Notes

Property data verified by RCO Staff

Property Report: Grant Creek - Bright property (Worksite #1: Grant Creek)

Attachments

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

PROJECT DOCUMENTS AND PHOTOS
Project Documents and Photos

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Shared
No attachments match filter criteria						