

21-1005, Rest, Asotin Co Conservation Dist Cougar Creek Fish Passage Restoration, RCO Grant Request: \$200,000

BASICS

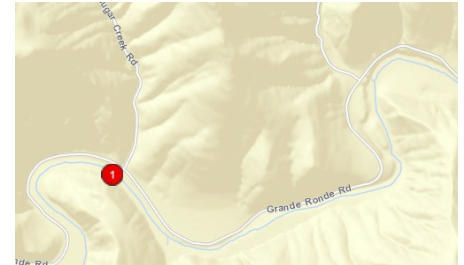
FUNDING

Costs

RCO	\$200,000	80%
Sponsor Match	\$50,000	20%
Total	\$250,000	100%

Sponsor Match Breakdown

Grant - Federal	\$20,000
Grant - State	\$30,000
Total	\$50,000



Minimum match required
15.00%

DESCRIPTION

The Asotin County Conservation District is sponsoring the restoration of the Cougar Creek culvert, which is a partial fish passage barrier where Cougar Creek flows under the Grande Ronde River Road. The barrier poses an imminent threat to anadromous fish (Steelhead) and limits their access to approximately 2.25 miles of rearing and spawning habitat upstream of the culvert. As stated in the Snake River Salmon Recovery Plan, Steelhead are especially effective at accessing and utilizing stream reaches with suitable habitat, however, their distribution is limited by environmental issues such as migration barriers. Cougar Creek flows directly into the Grande Ronde River approximately 140 feet below the barrier. The current culvert was identified in 2010 by the Walla Walla Community College Road Crossing Barrier Assessment as a barrier. ACCD is utilizing funds received a 2020 SRFB grant and BPA to complete the design for the project. The culvert is located where Cougar Creek flows under the Grande Ronde River Road approximately 4.5 miles west of highway 129. The project lies within the Lower Grande Ronde Subbasin and is part of the Grande Ronde MSA.

[Project Application](#)

LOCATION

Related PRISM Projects

PRISM Number	Project Name	Current Status	Relationship Type	Notes
20-1055 P	Cougar Creek Fish Passage Design	Active	Earlier Phase	Funded in 2020 Grant Round - Design Phase
20-1617 R	Cougar Creek Fish Passage Restoration	Application Complete	Matching Grant	FBRB application - Restoration Project Match

Project Location Questions

Project Factsheet

#1: Project location. Describe the geographic location, water bodies, and the location of the project in the watershed, i.e. nearshore, tributary, main-stem, off-channel, etc.

The Cougar Creek Fish Passage Restoration Design Project is located where Cougar Creek flows under the Grande Ronde River Road approximately 4.5 miles west of highway 129. The project lies within the Lower Grande Ronde Subbasin and is part of the Grande Ronde MSA.

#2: How does this project fit within your regional recovery plan and/or local lead entity's strategy to restore or protect salmonid habitat? Cite section and page number.

Northwest Marine Fisheries Service. 2017. ESA Recovery Plan for Snake River Spring/Summer Chinook Salmon (*Oncorhynchus tshawytscha*) & Snake River Basin Steelhead (*Oncorhynchus mykiss*). Portland, OR.

This project is identified as a top priority and located in a major spawning area for Steelhead and a priority protection reach in the Snake River Salmon Recovery Plan and 3 yr workplan.

#3: Is this project part of a larger overall project?

Yes

#3a: How does this project fit into the sequencing of the larger project?

This project location was identified as one of four significant barrier locations associated with road crossing in the Lower Grande Ronde River watershed that needed to be addressed in order to restore fish passage to tributaries in the watershed. This will provide the designs for the final barrier to be replaced in order to provide fish access to spawning and rearing habitat.

METRICS/COSTS

OVERALL PROJECT METRICS

RESTORATION METRICS

Worksite: Cougar Creek (#1)

COSTS

Category	Work Type	Estimated Cost	Note
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Project Factsheet

Fish Passage Improvement	Culvert installed or improved (C.2.f.1)	\$210,000
	Subtotal:	\$210,000
Admin, Architecture, and Engineering		\$40,000
	Total Estimate For Worksite:	\$250,000

METRICS

Miles of Stream and/or Shoreline Treated or Protected (C.0.b)	0.01
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FISH PASSAGE IMPROVEMENT

Miles Of Stream Made Accessible (C.2.b.1)	2.25
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Habitat made accessible (2489)

Channel upstream is confined for ~200 feet before the floodplain widens for ~1000 feet. This section has good floodplain connectivity, several short side channels and some visible instream wood. Moving upstream to ~1 mile above the culvert, there are several pockets of connected floodplain that exist, large wood has fallen into the channel and caused some deposition. It is relatively well connected to the floodplain. large tree vegetation exists and the channel is well shaded.

Additional barriers (2490)

There are no barriers below this project area either on Cougar Creek or the Grande Ronde River. The next barrier on Cougar Creek is more that 2.25 miles upstream. There are 2 additional barriers identified in the upper reaches of Cougar Creek, however the fish usage of the stream above those barriers would likely be minimal due to the grade of the stream. Without additional survey work completed, those barriers would not be significant enough to warrant removal.

Type Of Barrier (C.2.b.3)	Culvert
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Number of blockages / impediments / barriers impeding passage (C.2.b.4)	1
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Describe the current barrier (2486)

Corrugated culvert that is more than 40 years old. Round with a 6 foot diameter. Damaged on the bottom of the outlet side and perched. Approx. 40 feet in length at the bottom and 30 feet at the top. Approx 3 to 4 feet of fill and paved road.

Passage problem (2487)	Water surface drop Slope Other
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Passability (2488)	33% (Partial)
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Culvert installed or improved (C.2.f.1)

Number of culverts (C.2.f.2)	1
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Miles of stream made accessible by culvert installation/repair (C.2.f.3)	2.25
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Project Factsheet

Total Restoration Cost

\$250,000

PROJECT PROPOSAL

Targeted ESU Species

Worksites	Species by ESU	Egg Present	Juvenile Present	Adult Present	Population Trend
1	Steelhead-Snake River, Grande Ronde River Lower Mainstem, Threatened	✓	✓	✓	Unknown

Reference or source used

WDFW

PROPOSAL QUESTIONS

- #1: Problem statement. What are the problems your project seeks to address? Include the source and scale of each problem. Describe the site, reach, and watershed conditions. Describe how those conditions impact salmon populations. Include current and historic factors important to understand the problems.

Cougar Creek is a tributary to the Grande Ronde River in southeast Washington. A fish passage barrier exists approximately 140 feet above the mouth of the Cougar Creek where it passes under the Grande Ronde River Road. The barrier poses an imminent threat to anadromous fish, including steelhead, limiting their access to approximately 2.25 miles of spawning and rearing habitat. As stated in the Snake River Salmon Recovery Plan, steelhead are especially effective at accessing and utilizing stream reaches with suitable habitat, however, their distribution is limited by environmental issues such as migration barriers. Cougar Creek has been identified as a priority protection reach for steelhead. Fish passage is identified in the Snake River Salmon Recovery Plan as a primary limiting factor for steelhead in several lower tributaries to the Grande Ronde River. Site characteristics upstream of the barrier: The channel upstream of the culvert is confined for approximately 200 feet before the floodplain widens for approximately 1000 feet. This section has good floodplain connectivity, several short side channels and visible instream wood. Moving upstream to approximately 1 mile above the culvert, there are several pockets of connected floodplain that exist where large wood has fallen into the channel and caused some deposition. This reach is relatively well connected to the floodplain, and small fish, possibly juvenile salmonids, were documented in small pools at several locations during field surveys in August 2019. Large tree vegetation exists throughout this reach and the channel is well shaded. The removal of the barrier will increase the benefit of current conditions and future restoration projects.

Project Factsheet

- #2: Describe the limiting factors, and/or ecological concerns, and limiting life stages (by fish species) that your project expects to address.

Fish passage is identified in the Snake River Salmon Recovery Plan as a primary limiting factor for steelhead in several lower tributaries to the Lower Grande Ronde River, including Cougar Creek. Passage at this structure will benefit all life stages of steelhead. The ability for adults to access spawning habitat above the culvert will expand capacity for egg to emerging fry (in gravel) life stages. Juvenile capacity and access of Cougar Creek will be greatly increased as fish are able to move upstream freely to better rearing habitat than what is available on the mainstem Grande Ronde River, including colder, shaded pools and several side channels.

- #3: What are the project goals? The goal of the project should be to solve identified problems by addressing the root causes. Then clearly state the desired future condition. Include which species and life stages will benefit from the outcome, and the time of year the benefits will be realized. **Example Goals and Objectives**

The goal is to complete the removal of the fish passage barrier that currently limits the movement of steelhead in Cougar Creek access to spawning and rearing habitat upstream. The undersized culvert will be replaced with an adequately sized structure improving access to more than 2.25 miles of habitat. By improving passage at this location, this project once implemented will allow all life stages of steelhead to fully utilize the stream reach. This includes suitable habitat upstream of the barrier as documented in the problem statement. This will provide improved utilization of shaded, cool reaches of the stream with instream habitat suitable for steelhead juveniles to survive year round. ACCD is completing a geomorphic assessment for the lower Grande Ronde River and its tributaries, including Cougar Creek. A conceptual restoration plan will be developed based on the assessment which will identify project areas where restoration efforts will be a priority.

- #4: What are the project objectives? Objectives support and refine biological goals, breaking them down into smaller steps. Objectives are specific, quantifiable actions the project will complete to achieve the stated goal. Each objective should be SMART (Specific, Measurable, Achievable, Relevant, and Time-bound). **Example Goals and Objectives**

The sponsor proposes to implement a project within 3 years of funding that will include the following specific objectives:

- Replace the existing barrier culvert on Cougar Creek with structure that would achieve 100% fish passage to 2.25 miles of habitat for all life stages of steelhead and other aquatic organisms.
- Site restoration will also aim to enhance existing native riparian vegetation and replace any vegetation removed during the construction of the passage project by planting native tree/shrub species on approximately 0.1 acres upstream and downstream of the culvert. Plantings will occur during the fall, winter and spring following construction. In addition, a native grass seed mix will be planted to reduce potential noxious weeds on all areas that were disturbed during construction.

Project Factsheet

#5: Scope of work and deliverables. Provide a detailed description of each project task/element and how they will lead to the objectives. With each task/element, identify who will be responsible for each, what the deliverables will be, and the schedule for completion.

Deliverables associated with development of the design package and environmental compliance requirements are underway utilizing funds from Bonneville Power Administration and RCO SRFB Grant 20-1055. The Asotin County Conservation District will complete the following deliverables for this project that will lead to the implementation of the fish passage restoration and barrier removal.

Construction Bid – Jan 2022

- The construction bid process initiated to select a contractor for the construction of the project.

Hire a Contractor – Feb 2022

- The bid process completed and contract signed with successful firm.

Secure Permits – May 2022

- Permits finalized, uploaded in PRISM and packaged to be available onsite during construction

Start Construction – July 2022

- Construction requiring in-water work completed during the approved work window in accordance with the permits issued.

Finish Construction – November 2022

- Additional site rehab and revegetation completed during plant dormancy.

Project Completion – April 2023

- All aspects of the project including permit reports and site visits, billing and reporting will be completed, and the project closed out.

#6: What are the assumptions and physical constraints that could impact whether you achieve your objectives? Assumptions and constraints are external conditions that are not under the direct control of the project, but directly impact the outcome of the project. These may include ecological and geomorphic factors, land use constraints, public acceptance of the project, delays, or other factors. How will you address these issues if they arise?

Funding is the significant constraint that could impact the ability to complete this project. The project location was identified during barrier assessments. WDFW and Asotin County support the ACCD in seeking funds to develop designs and complete the construction of the fish passage project.

#7: How have lessons learned from completed projects or monitoring studies informed this project?

The scope and goals of the project are straightforward. We are confident in the ability of ACCD to manage this project. We will be working closely with partners that have extensive past experience with similar projects to provide guidance and expertise. ACCD staff have also recently completed a similar project on Cottonwood Creek. Those experiences will ensure this project is completed successfully.

Project Factsheet

#8: Describe the alternatives considered and why the preferred was chosen.

This project is to develop a construction ready design plan to remove a fish passage barrier. During the development of the designs, there will be a phase that identifies design options and a local team as well as RCO will be a part of selecting the design option to utilize.

LIDAR was acquired for the project site in the fall of 2018 and will be utilized, along with information from the hydraulic, hydrologic and scour analysis and a geotechnical investigation with will be completed as a part of the design process. The design will include features to ensure the replacement of the culvert does not result in head cutting or any other issues above or below the project area where construction will take place.

#9: How were stakeholders consulted in the development of this project? Identify the stakeholders, their concerns or feedback, and how those concerns were addressed.

The culvert was identified as a fish passage barrier in the Walla Walla Community College Road Crossing Barrier Assessment in 2008 and identified in the WDFW Inventory Assessment in 2016.

The existing culvert is blocking access to Cougar Creek from the Grande Ronde River, which will provide 2.5+ miles of spawning and rearing habitat once access is reestablished. This project has been supported by the Snake River Regional Technical Team and landowner (WDFW). Asotin County Commissioners and Engineer were also consulted since the barrier is associated with a county road and they have expressed support for the project.

#10: Does your project address or accommodate the anticipated effects of climate change?

Yes

#10a: How will your project be climate resilient given future conditions?

Removing the barrier will improve access during critical low flow periods and provide access to upstream habitat. This will be even more important with expected climate change. Many streams in Asotin County, including Cougar Creek, originate in the Blue Mountains and the current hydrologic regime is snow-rain dominated for these streams, however it is anticipated to shift to a rain dominated regime. This will likely decrease summer base flows and increase summer water temperatures.

#10b: How will your project increase habitat and species adaptability?

during all stream flow levels. Currently the culvert outlet is perched causing a fish passage barrier, especially for juvenile fish trying to access cooler stream reaches.

Project Factsheet

#11: Describe the sponsor's experience managing this type of project. Describe other projects where the sponsor has successfully used a similar approach.

ACCD has extensive experience managing RCO funded projects and is very familiar with SRFB funding expectations. In recent years, ACCD was the lead on other fish passage barrier projects. We partnered with DOT to complete the Rattlesnake Barrier project which was completed in 2015. In 2016, we sponsored the Headgate Dam notching project on Asotin Creek. We have recently completed the design and implementation for the Cottonwood Fish Passage project and will be going to construction during the summer of 2020.

#12: Will veterans (including the veterans conservation corps) be involved in the project? If yes, please describe.

No

RESTORATION SUPPLEMENTAL QUESTIONS

#1: What level of design (per Appendix D) have you completed? Please attach.

None

#1a: What level of design will be produced prior to construction?

Final

#2: Will (or did) a licensed professional engineer design the project?

Yes

#3: Does the project include measures to stabilize an eroding stream bank?

No

#4: Is the primary activity of the project invasive species removal?

No

#5: Is the project a Road Maintenance and Abandonment Plan (RMAP) project?

No

Project Factsheet

- #6: Describe the steps you will take to minimize the introduction of invasive species during construction and restoration. Consider how you will use un-infested materials and clean equipment entering and leaving the project area.

ACCD will require all equipment used by the contractor/crew to be cleaned and inspected prior to accessing the project site. There will be a dip station available for everyone to treat boots and waders prior to accessing the site. All areas disturbed during construction, it will be seeded with a native grass mix.

- #7: Describe the long-term stewardship and maintenance obligations for the project.

The project area lies within the Asotin County right of way associated with the Grande Ronde River Road. They will provide on-going management of the passage project after completion. ACCD staff will provide monitoring on the site to ensure the disturbance areas are restored and enhanced to prevent any future resource concerns due to the project construction.

ATTACHMENTS

PHOTOS (JPG, GIF)



462208











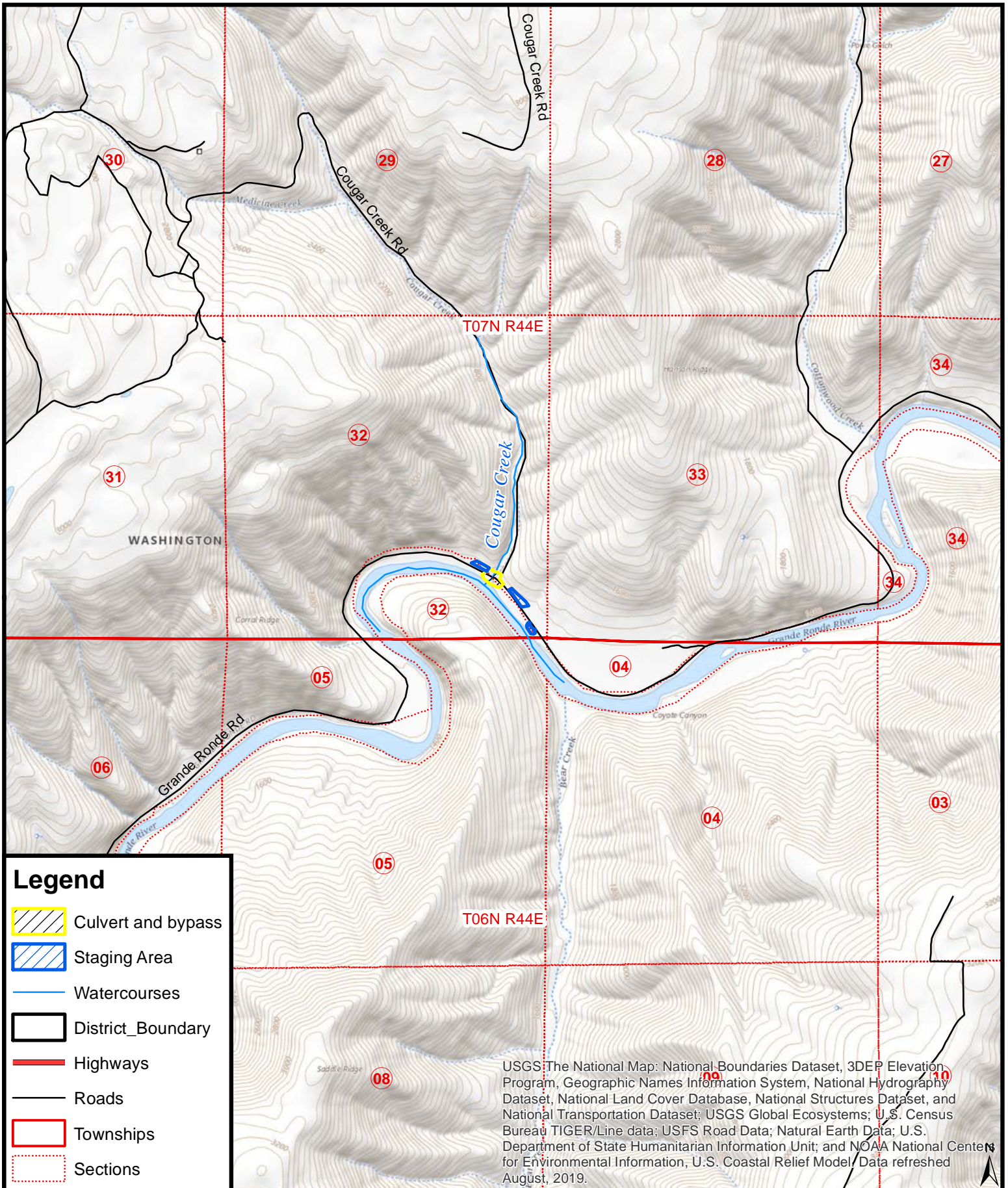
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RELEVANT DOCUMENTS

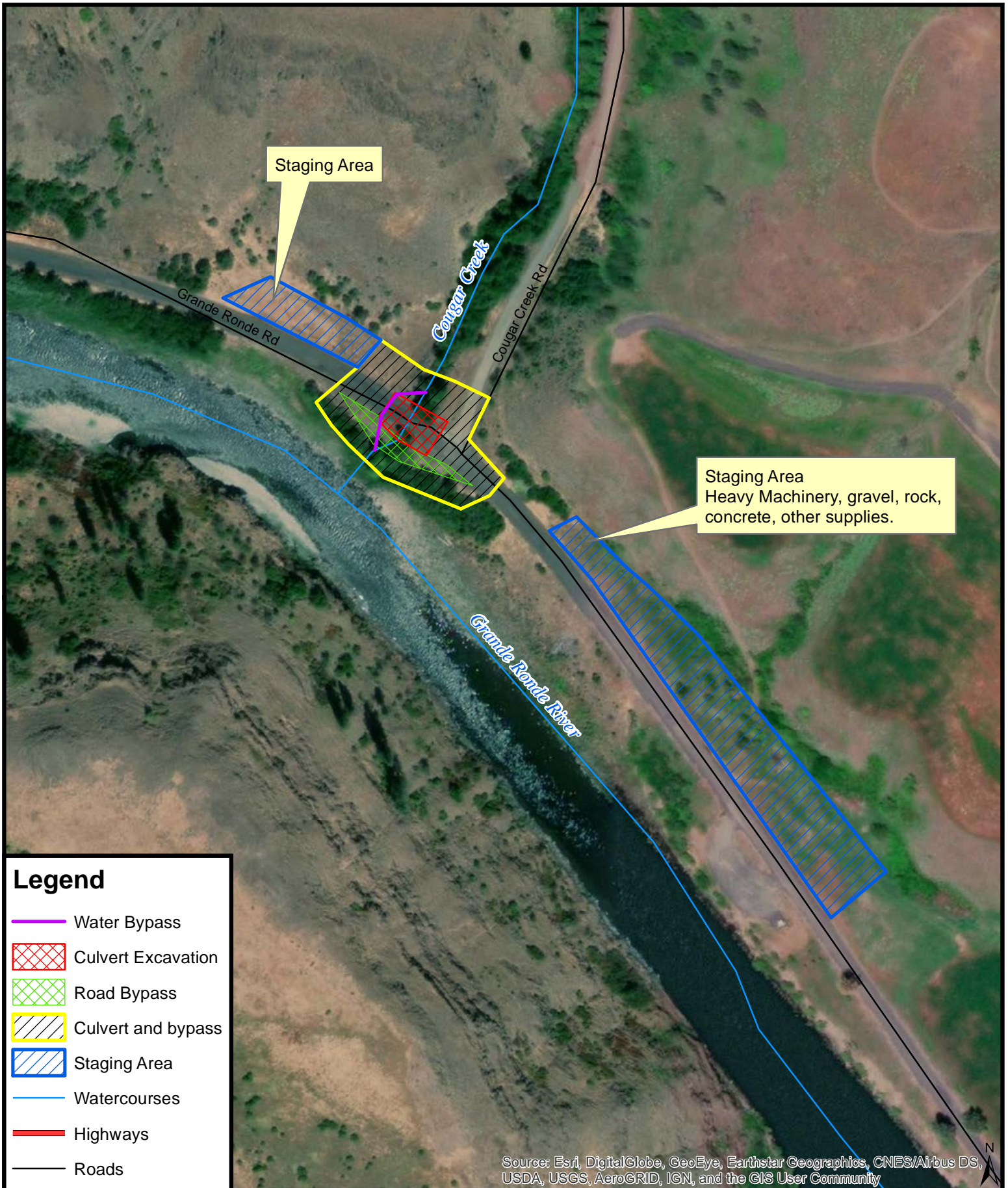
File Type	Attach Date	Attachment Type	Title
	02/08/2021	Cost Estimate	CostEstimate Cougar Construction.xlsx
	02/05/2021	Photo	Cougar Creek Photo - Site & Road.jpg
	02/05/2021	Photo	Cougar Creek Photo - Side View of Outlet.jpg
	02/05/2021	Photo	Cougar Creek Photo - Outlet View from Road.jpg
	02/05/2021	Map: Restoration Worksite	Cougar_Project2.pdf
	02/05/2021	Map: Area of Potential Effect (APE)	Cougar_APE_2021.pdf
	02/05/2021	Map: Area of Potential Effect (APE)	Cougar_APE_2021_24000.pdf
	02/05/2021	Barrier evaluation form	602000 Cougar Creek Site Report.pdf



0 0.4 0.8 Miles

Cougar Creek Culvert Replacement APE

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed August, 2019.



Staging Area

Staging Area
Heavy Machinery, gravel, rock, concrete, other supplies.

Legend

-  Water Bypass
-  Culvert Excavation
-  Road Bypass
-  Culvert and bypass
-  Staging Area
-  Watercourses
-  Highways
-  Roads

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

0 0.045 0.09 Miles

Cougar Creek Culvert Replacement



Asotin Co Conservation Dist. Cougar Creek Fish Passage Restoration (#21-1805)

Attachment#462208_Cougar Creek Photo - Outlet View from Road.jpg



Asotin Co Conservation Dist. Cougar Creek Fish Passage Restoration (#21-1605)

Attachment#482213_Cougar Creek Photo - Site & Road.jpg

RESTORATION

				OVERALL PROJECT	GRANT REQUEST	MATCH				
				<i>Budget must account for all costs to complete the project</i>	<i>Enter only the amount of the grant request</i>	<i>The Grant Request and Match should equal the total project cost and Budget Check cell should be 0. Sponsors must account for all sources and types of match need to complete the project.</i>				
				Amount	Amount	Match in PRISM	Funding not reported in PRISM	Source (Grant, Cash, Materials, Labor, Volunteers, etc)	Match Type (federal, state, local)	
Construction										
Category (choose one)	Task Description	Qty	Rate							
Construction supervision	Construction Supervision	160.00	\$ 75.00	\$ 12,000	\$ 4,000	\$ -	\$ 8,000	Grant	Federal-BPA	
Construction	Excavation - C.Y.	1,600.00	\$ 35.00	\$ 56,000	\$ 16,000	\$ 5,000	\$ 35,000	Grant	State - RCO FBRB	
Construction	Removal/Disposal - Culvert - L.F.	40.00	\$ 50.00	\$ 2,000	\$ -		\$ 2,000	Grant	State - RCO FBRB	
Construction	Bedding - C.Y.	40.00	\$ 50.00	\$ 2,000	\$ -		\$ 2,000	Grant	State - RCO FBRB	
Construction	Streambed Gravel - C.Y.	100.00	\$ 90.00	\$ 9,000	\$ 2,000		\$ 7,000	Grant	State - RCO FBRB	
Materials	Culvert - L.F.	50.00	\$ 2,000.00	\$ 100,000	\$ 25,000	\$ 25,000	\$ 50,000	Grant	State - RCO FBRB	
Construction	Culvert Installation	1.00	\$ 75,000.00	\$ 75,000	\$ 25,000		\$ 50,000	Grant	State - RCO FBRB	
Construction	Backfill, Compaction - C.Y.	1,200.00	\$ 40.00	\$ 48,000	\$ 8,000	\$ -	\$ 40,000	Grant	Federal-BPA	
Materials	Culvert Footings - L.F.	100.00	\$ 500.00	\$ 50,000	\$ 30,000	\$ 20,000	\$ -	Grant	Federal-BPA	
Materials	Temporary Bridge	1.00	\$ 50,000.00	\$ 50,000	\$ 15,000		\$ 35,000	Grant	State - RCO FBRB	
Materials	Restoration - Fence	500.00	\$ 8.00	\$ 4,000	\$ 2,000	\$ -	\$ 2,000	Grant	State - RCO FBRB	
Materials	Restoration - Seeding	1.00	\$ 4,500.00	\$ 4,500	\$ 2,000	\$ -	\$ 2,500	Grant	State - RCO FBRB	
Materials	Restoration - Planting	250.00	\$ 8.00	\$ 2,000	\$ 2,000	\$ -		Grant	State - RCO FBRB	
Materials	Road - Guardrail - L.F.	200.00	\$ 75.00	\$ 15,000	\$ -	\$ -	\$ 15,000	Grant	State - RCO FBRB	
Materials	Road - Paving - S.F.	2,500.00	\$ 20.00	\$ 50,000	\$ 5,000		\$ 45,000	Grant	State - RCO FBRB	
Mobilization	Mobilization	1.00	\$ 60,000.00	\$ 60,000	\$ 20,000		\$ 40,000	Grant	State - RCO FBRB	
Project signs	Temporary Detour - Signage, Flagging, etc	1.00	\$ 10,000.00	\$ 10,000	\$ 4,000		\$ 6,000	Grant	State - RCO FBRB	
Construction	Detour - on site	1.00	\$ 55,000.00	\$ 55,000	\$ -		\$ 55,000	Grant	State - RCO FBRB	
			\$ -	\$ -	\$ -	\$ -	\$ -			
			\$ -	\$ -	\$ -	\$ -	\$ -			
			\$ -	\$ -	\$ -	\$ -	\$ -			
			\$ -	\$ -	\$ -	\$ -	\$ -			
			\$Total	\$ 604,500	\$ 160,000	\$ 50,000	\$ 394,500			

Administrative, Architectural & Engineering										
Category	Task Description	Qty	Rate							
Administrative	Grant Management	1.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000					
Administrative	Project Management	550.00	\$ 50.00	\$ 27,500.00	\$ 15,000	\$ -	\$ 12,500	Grant	State - RCO FBRB	
Administrative	Onsite Engineering	175.00	\$ 200.00	\$ 35,000.00	\$ 10,000	\$ -	\$ 25,000	Grant	Federal-BPA, State - RCO FBRB	
Final design	As- Built Design	40.00	\$ 200.00	\$ 8,000.00	\$ 5,000	\$ -	\$ 3,000	Grant	State - RCO FBRB	
			\$ -	\$ -	\$ -	\$ -	\$ -			
			\$ -	\$ -	\$ -	\$ -	\$ -			
			\$ -	\$ -	\$ -	\$ -	\$ -			
			\$ -	\$ -	\$ -	\$ -	\$ -			
			\$ -	\$ -	\$ -	\$ -	\$ -			
			\$Total	\$ 80,500	\$ 40,000	\$ -	\$ 40,500			

AA&E Budget Check				\$ 685,000	\$ 200,000		
A&E maximum allowed in PRISM \$ 63,000.00				GTOTAL \$ 685,000	\$ 200,000	\$ 50,000	\$ 435,000
A&E validation 23,000					PRISM Project Total \$ 250,000		
				RCO Percentage Match Percentage			
				80.00%		20.00%	