

PROJECT: 21-1015 PLAN, MAINSTEM TOUCHET PROJECT AREA 01 DESIGN

Sponsor: Walla Walla Co Cons Dist Program: Salmon State Projects Status: Preapplication

Parties to the Agreement

PRIMARY SPONSOR

Walla Walla County Conservation District

Address 325 North 13th Ave Ste 101

City Walla Walla **State** WA **Zip** 99362

Org Type District-Conservation

Vendor # SWV0041502-00

UBI

Date Org created

Org Notes

[link to Organization profile](#)

Org data updated

SECONDARY SPONSORS

No records to display

LEAD ENTITY

Snake River Salmon Rec Bd LE

QUESTIONS

#1: List project partners and their role and contribution to the project.

External Systems

SPONSOR ASSIGNED INFO

Sponsor-Assigned Project Number

Sponsor-Assigned Regions

EXTERNAL SYSTEM REFERENCE

Source	Project Number	Submitter
HWS	21-1015	AFitzgerald

Project Contacts

Contact Name Primary Org	Project Role	Work Phone	Work Email
Alice Rubin Rec. and Conserv. Office	Project Manager	(360) 867-8584	alice.rubin@rco.wa.gov
Renee M. Hadley Walla Walla Co Cons Dist	Project Contact	(509) 956-3756	renee.hadley@wwccd.net
Ali Fitzgerald Snake River Salmon Rec Bd LE	Lead Entity Contact	(509) 382-4115	ali@snakeriverboard.org
Audrey Ahmann Walla Walla Co Cons Dist	Billing	(509) 956-3753	audrey.ahmann@wwcod.net

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Worksites & Properties

Worksite Name

#1 TR-MS1

Planning

Property Name

Worksite Map & Description

Worksite #1: TR-MS1

Worksite map

WORKSITE ADDRESS

Street Address

City, State, Zip

Worksite Details

Worksite #1: TR-MS1

SITE ACCESS DIRECTIONS

TARGETED ESU SPECIES

Species by ESU	Egg Present	Juvenile Present	Adult Present	Population Trend
Chinook-Middle Columbia River Spring, Not Warranted		✓	✓	Unknown
Steelhead-Middle Columbia River, Touchet River, Threatened	✓	✓	✓	Stable

Reference or source used

Upper Touchet Basin Habitat Restoration, Geomorphic Assessment and Restoration Prioritization (September 2020)

TARGETED NON-ESU SPECIES

Species by Non-ESU	Notes
Bull Trout	
Rainbow	
Lamprey	

Questions

#1: Give street address or road name and mile post for this worksite if available.

HWY 125, Walla Walla, WA 99362

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Project Location

RELATED PROJECTS

Projects in PRISM

PRISM Number	Project Name	Current Status	Relationship Type	Notes
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No related project selected

Related Project Notes

Questions

#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 project is located in the Lower Mainstem of the Touchet River between RM 41.14 and 51.33 (46.2927. -118. 3200), in the Walla Walla River Watershed, Walla Walla County, WA, WRIA 32.

#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.

According to the Snake River Salmon Recovery Plan for SE Washington (Chapter 5, pg. 158) "Reduced stream channel complexity, confinement and floodplain function caused by past channel straightening, incision, loss of historic riparian forests and loss of large wood debris source has reduced key habitats such as rearing and wintering habitat."

This project fits with the goals and objectives of the Snake River Salmon Recovery Plan for SE Washington by mitigating limiting factors for ESA listed Mid-Columbia steelhead, bull trout and reintroduced spring Chinook salmon. In the Touchet mainstem these limiting factors include "sedimentation, habitat diversity, flow, channel stability, and temperature." (p.1, GARP, October 2020)

This project addresses the six goals and restoration objectives for basin restoration including; improved floodplain connectivity, development of a high functioning riparian corridor, increased channel complexity during low flows and spring and winter peaks, increased quantity of pools, and increased temporary storage of in-channel bedload sediments.

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

Yes

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

The Touchet River Conceptual Plan identified this reach as a Tier 1 project area within a Priority Restoration Reach as defined by the SE Recovery Plan (SRSRB 2011) and Walla Walla Sub basin Plan (2004). As an identified Major Spawning Area, this is a targeted reach for restoration in overall basin recovery efforts.

#4: Is the project on State Owned Aquatic Lands? Please contact the Washington State Department of Natural Resources to make a determination. [Aquatic Districts and Managers](#)

No

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Property Details

Properties for this program and project type are optional.

Project Proposal

Project Description

The Walla Walla County Conservation District will complete an engineered design for the MS-1 project area as identified in the Touchet River Conceptual Plan (2020). The MS-1 project area is located between Prescott and Hwy 125 (46.2950, -118.3320). The engineered design will likely include a series of engineered log structures and possible levee setback along 1.0 mile to benefit mid-Columbia steelhead and bull trout habitat. The design will include multiple Hec-Ras modeling as has been requested by past RCO peer reviews.

Project 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.

The project site is characterized by an altered floodplain with levees confining the river and preventing floodplain connection and function during high water events. The channel has minimal roughness and complexity, a lack of large woody material to create pools, sediment delivery and floodplain storage and exchange. These issues have been worsened by historical practices such as vegetation removal which have left this reach with degraded instream habitat, and rapid erosion, hindering the establishment of riparian vegetation. This has resulted in poor instream habitat complexity, scarce high-flow refugia, and sub-par juvenile rearing and overwintering habitat. The reach has unused floodplain available.

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

The limiting factors according to the Touchet River Geomorphic Assessment (2020) and (SE WA Recovery Plan; SRSRB 2011) in the Touchet basin include simplified instream conditions, lack of deep pools, degraded riparian conditions, fine sediment input from agriculture and other activities, high temperatures, restricted floodplain, and low large woody debris (LWD) counts. According to the Northwest Salmon and Steelhead Recovery, Middle Columbia River Steelhead DPS Recovery Plan (Pg. 3, NOAA, 2009) "summer steelhead enter freshwater between May and October and require several months to mature before spawning". Steelhead can be anadromous or lifelong freshwater residents. Unlike most other salmonid species which typically spawn once and die, steelhead can spawn multiple times. ESU-listed Mid-Columbia summer steelhead, re-introduced Chinook salmon and bull trout are found in this stretch and all three species are identified as Species of Greatest Conservation Need under the State Wildlife Action Plan, and are Washington Department of Fish and Wildlife(WDFW) Priority Species. Chinook salmon and bull trout are ESA-listed threatened species, and the Middle Columbia River population of steelhead is ESA-listed as endangered. Construction of this project will improve local ecosystem functions and create more key habitat for salmonid populations from egg to adult via bioengineered structures and improvements to the riparian buffer.

#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 goals of this project are to improve the quantity and quality of accessible rearing, foraging and in-stream habitat for ESU listed Mid-Columbia steelhead, bull trout and reintroduced spring Chinook salmon in the Touchet basin. This project should increase juvenile survival as a result of improved instream habitat, reduced sedimentation, and temperatures. The goal will be met by overall habitat restoration and the improvement and resilience of river processes that have been altered by historic and current land use. Riparian habitat will be restored and improved on approximately 1.00 mile of the Touchet River to benefit all species that require a functioning forested riparian buffer. These restoration actions will increase the quantity and quality of accessible off-channel foraging and overwintering habitat for migrating bull trout, improve complexity of in-channel habitats, connection to off channel habitats during migration and holding of Mid-Columbia steelhead and spring Chinook salmon. When mature, the buffer will help regulate water temperature by providing shade, shelter, and eventually large woody debris. In the long run, this restoration project will connect with other projects in the basin to contribute to providing prime aquatic habitat for these important species.

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#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 objective of this project is to provide a set of engineered designs within 18 months of funding that adequately detail restoration actions. The design will include multiple Hec-Ras modeling. Based upon our understanding of the project reach we anticipate the design to incorporate these specific objectives:

- a. Add a series of Main/Side Channel bioengineered wood structures to provide instream habitat and high-flow refugia for juvenile salmonids.
- b. Reconnect historical side channels where applicable to provide off-channel/high-flow rearing, foraging and overwintering habitat for all native species and life stages. Side channels and off-channel features within the floodplain provide vital habitat to many juvenile salmonids.
- c. Plant riparian trees and shrubs at a minimum of 250 stems/acre to provide shade, reduce erosion and sedimentation, and ultimately add LWD instream as they mature. Plantings will be established in the immediate riparian area, channel migration areas and island complexes. (GARP, Index, I-21, October 2020)
- d. Allow floodplain inundation at the 2-yr. return flow interval to dissipate energy during floods and allow sediment to aggrade.
- e. Remove or set back levees to improve connection and functioning of floodplain.

#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.

Preliminary Engineered Design – Licensed Engineer (within 18th months)
Cultural Resources Review – Qualified Archaeologist (after completion of survey work)
Landowner Acknowledgements – WWCCD will submit these forms prior to developing the engineered design.

#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?

This project will not take any action on levees or land use upstream but we hope to alleviate some of their effects. Parts of the project are susceptible to extreme changes during high flows and designs will be “field fit” as river conditions change. Minor adjustments to the design may be required before implementation. These would be made in consultation with the local Snake River Salmon Recovery Funding Board team. With the involvement of multiple landowners, we may need to hold stakeholder meetings. During the design phase, we will assess the results of previous projects in the Touchet basin to know what may or may not work in that reach.

Funding constraints are always a concern and finding match for implementation can be problematic. The Walla Walla County Conservation District (WWCCD) will pursue funding for implementation from multiple sources including United States Fish and Wildlife Service (USFWS), Bonneville Power Administration and the Washington State Conservation Commission and other opportunities as they arise.

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

We hope to incorporate state technical suggestions and ideas early in the process and understand the collaborative process needed to ensure broad support. Design changes and field adjustments are not unusual which makes our strong working relationship with Washington Department of Fish and Wildlife (WDFW) and the Snake River Salmon Recovery Board a must. The existing Touchet River Mile 42.5 Habitat Enhancement project has shown us that focusing on longer reaches and the root causes are important to designing a lasting and effective project. The Geomorphic Assessment and Restoration Prioritization study completed in October 2020 has given us information for a broader scale approach to designing new projects. Remediation and adaptive management will be a part of the design.

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

Alternative practices are discussed in the Walla Walla Sub-basin Plan (NW Power Council, 2004) and bio-engineered large wood structures were determined to be the most suitable alternative for the basin. Beaver Dam Analogs are not strong enough to withstand average yearly flows at the site. Concrete armoring can have detrimental effects the functioning of the floodplain. The design for this reach will follow the prescribed process outlined in Manual 18 Appendix D-1. As part of the design process, alternatives will be developed to reach the desired goals and objectives of the project. With input from the landowners, the selected alternative will be carried to the final design. Bioengineered structures are preferred based on the most current geomorphic assessment containing the project site.

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

Landowners, CTUIR, WW and Columbia County representatives were consulted during the development of the Touchet River Conceptual Plan (2020).

#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?

Climate change will likely have complex and far-reaching effects on fluvial processes and will increase variability in timing and magnitude of flows. This project will be designed accommodate higher flows, lower low flows and changes in timing of peak events, which are observed and expected trends for this watershed. Riparian restoration will mitigate the effects of the expected increases in-stream temperatures that are predicted locally. Fluvial restoration projects focused on the recovery of focal species should counter the effects of these changes. This project aims to improve the resiliency of local ecosystem functions to the effects of climate change through restoration actions that will allow natural process such as sediment and large wood transport, floodplain connection, channel migration, and riparian growth to occur. These actions will help maintain a dynamic equilibrium that promotes more favorable habitat conditions at all levels of flow timing and magnitudes.

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

A more intact and functioning riparian area will prove to be more resilient to changes in temperatures and flows, providing habitat for aquatic and terrestrial species. Revegetating the floodplain and uplands with native grasses, trees and shrubs will help prevent invasions of invasive species, fine sediments from entering the waterways, provide long term food, habitat and shade for terrestrial and aquatic species. Planting species that can withstand changing flow timing and duration, higher temperatures and less access to water will ensure the success of the project.

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

WWCCD Past Project Examples:
Touchet River Mile 42 Restoration Project
McCaw Reach Fish Habitat Restoration Project
Canopy Cover Improvements on the Touchet River

The WWCCD has been involved in many restoration projects including riparian restoration, bank-stabilization, improving fish passage and habitat assessments. The years of experience with different site conditions have highlighted the importance of having the full support of and clear communication with involved landowners, partnering agencies, contractors and neighbors. Understanding what challenges each site might present and having flexibility to react to these challenges in real time have been part of the planning process in recent projects.

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

No

Planning Supplemental

#1: Is the project an assessment / inventory?

No

#2: Is your project a Barrier / Screening Diversion Inventory Project?

No

#3: Is this a fish passage design / screening design project?

No

#4: Will the project develop a design?

Yes

#4a: Will a licensed professional engineer design of the project?

Yes

#4b: Will you apply for permits as part of the project scope?

WWCCD will apply for permits through Walla Walla County, WDFW, and the United States Army Corps of Engineers when the final designs are completed.

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Planning Metrics

Worksite: TR-MS1 (#1)

Area Encompassed (acres) (B.0.b.1)	
Miles of Stream and/or Shoreline Affected (B.0.b.2)	1.00

DESIGN FOR SALMON RESTORATION

Preliminary design

Total cost for Preliminary design	\$88,000
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Project Identified in a Plan or Watershed Assessment. (1220) (B.1.b.11.a)

Priority in Recovery Plan (1222) (B.1.b.11.b)

AGENCY INDIRECT COSTS

Agency Indirect

Total cost for Agency Indirect	\$19,800
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Overall Project Metrics

COMPLETION DATE

Projected date of completion	03/31/2023
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SPONSOR MATCH: MONETARY FUNDING

Amount of other monetary funding (A.12)	\$0
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Source of other monetary funding (A.12.a) NA

Timing of other monetary funding NA

SPONSOR MATCH: DONATED UN-PAID LABOR (VOLUNTEERS)

Value of Donated Unpaid Labor (Volunteers) (A.13.a.2)	\$0
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Source of Donated Un-paid labor contributions (A.13.a.4) NA

SPONSOR MATCH: DONATED PAID LABOR

Value of Donated Paid Labor (A.13.b.1)	\$0
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Source of Donated Paid Contributions (A.13.b.2) NA

SPONSOR MATCH: OTHER IN-KIND CONTRIBUTIONS

Value of Other In-Kind Contributions (A.13.c.1)	\$0
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Source of Other In-Kind Contributions (A.13.c.3) NA

Description of other In-Kind contributions (A.13.c.2) NA

Metric Match Total \$0

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Planning Cost Estimates

Worksite #1: TR-MS1

Category	Work Type	Estimated Cost	Note
Agency Indirect Costs	Agency Indirect	\$19,800	
Design for Salmon restoration	Preliminary design	\$88,000	
	Subtotal:	\$107,800	
	Total Estimate For Worksite:	\$107,800	

Summary

Total Estimated Costs:	\$107,800
Total Estimated Planning Costs:	\$107,800

Cost Summary

	Estimated Cost	Project %	Admin/AA&E %
<u>Planning Costs</u>			
Planning	\$107,800		
SUBTOTAL	\$107,800	100.00 %	
Total Cost Estimate	\$107,800	100.00 %	

Funding Request and Match

FUNDING PROGRAM

Salmon State Projects	\$107,800	100.00 %
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SPONSOR MATCH

Category	Amount	Project %
Match Total:	\$0	
Total Funding Request:	\$107,800	100.00 %

Questions

#1: Explain how you determined the cost estimates

The costs will be estimated based on design projects with a similar scope that were previously completed by the Walla Walla County Conservation District. WWCCD technical staff will determine cost estimates based on published papers related to estimating restoration cost by Bonham & Stevenson (2004), Bair, EPA (1994), and Clemson University (2008). Costs from these papers will be adjusted for inflation.

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Cultural Resources

Worksite #1: TR-MS1

#1: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

Pit digging will be utilized for cultural resources review by qualified archaeologist.

#2: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

The historic land uses in this reach include agricultural activities with intermittent cottonwood groves.

#3: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

No

#4: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

Unknown

#5: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

No

#6: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

Unknown

Project Permits

Permits and Reviews	Issuing Organization	Applied Date	Received Date	Expiration Date	Permit #
No permit data available.					

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Attachments

Required Attachments

4 out of 6 done

- Applicant Resolution/Authorizations ✓
- Cost Estimate
- Map: Area of Potential Effect (APE) ✓
- Map: Planning Area ✓
- Photo ✓
- RCO Fiscal Data Collection Sheet

PHOTOS (JPG, GIF)

Photos (JPG, GIF)



461890 # 462010 # 462011

PROJECT DOCUMENTS AND PHOTOS

Project Documents and Photos

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Shared
	02/03/2021	Photo	MS-1_B.jpg	CatG	MS-1_B.jpg, 462011	✓
	02/03/2021	Photo	MS-1_A.jpg	CatG	MS-1_A.jpg, 462010	✓
	02/02/2021	Map: Planning Area	TR-MS1_Project Area Map.JPG	CatG	TR-MS1_Project Area Map.jpg, 461890	✓
	02/02/2021	Applicant Resolution/Authorizations	TRCP_MS1_20201211.pdf	CatG	TRCP_MS1_20201211.pdf, 461889	✓
	02/02/2021	Map: Area of Potential Effect (APE)	MS1_ProjectArea_Map20210128.pdf	CatG	MS1_ProjectArea_Map20210128.pdf, 461888	✓

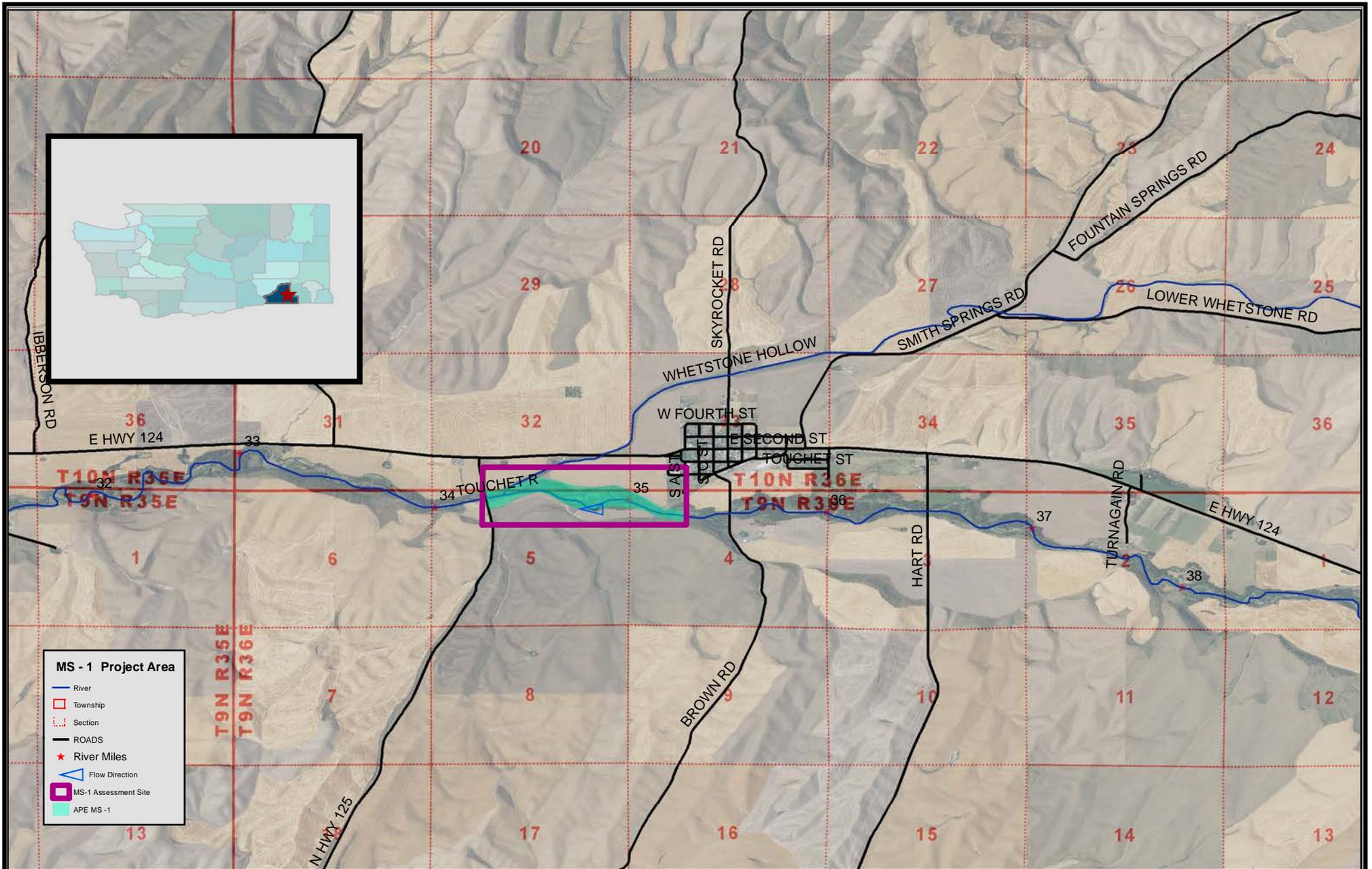
Application Status

Application Due Date: 06/28/2021

Status Name	Status Date	Submitted By	Submission Notes
Preapplication	01/15/2021		

I certify that to the best of my knowledge, the information in this application is true and correct. Further, all application requirements due on the application due date have been fully completed to the best of my ability. I understand that if this application is found to be incomplete, it will be rejected by RCO. I understand that I may be required to submit additional documents before evaluation or approval of this project and I agree to provide them.

Date of last change: 02/10/2021



MS - 1 Project Area

- River
- Township
- Section
- ROADS
- River Miles
- Flow Direction
- MS-1 Assessment Site
- APE MS-1



APE MS - 1



1:59,677



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Walla Walla Co Cons Dist; Mainstem Touchet Project Area 01 Design (#21-1015)

Attachment #461890, TR-MS1_Project Area Map.JPG



Walla Walla Co Cons Dist; Mainstem Touchet Project Area 01 Design (#21-1015)

Attachment #482011, MS-1_B.jpg



Walla Walla Co Cons Dist; Mainstem Touchet Project Area 01 Design (#21-1015)

Attachment #482010, MS-1_A.jpg

