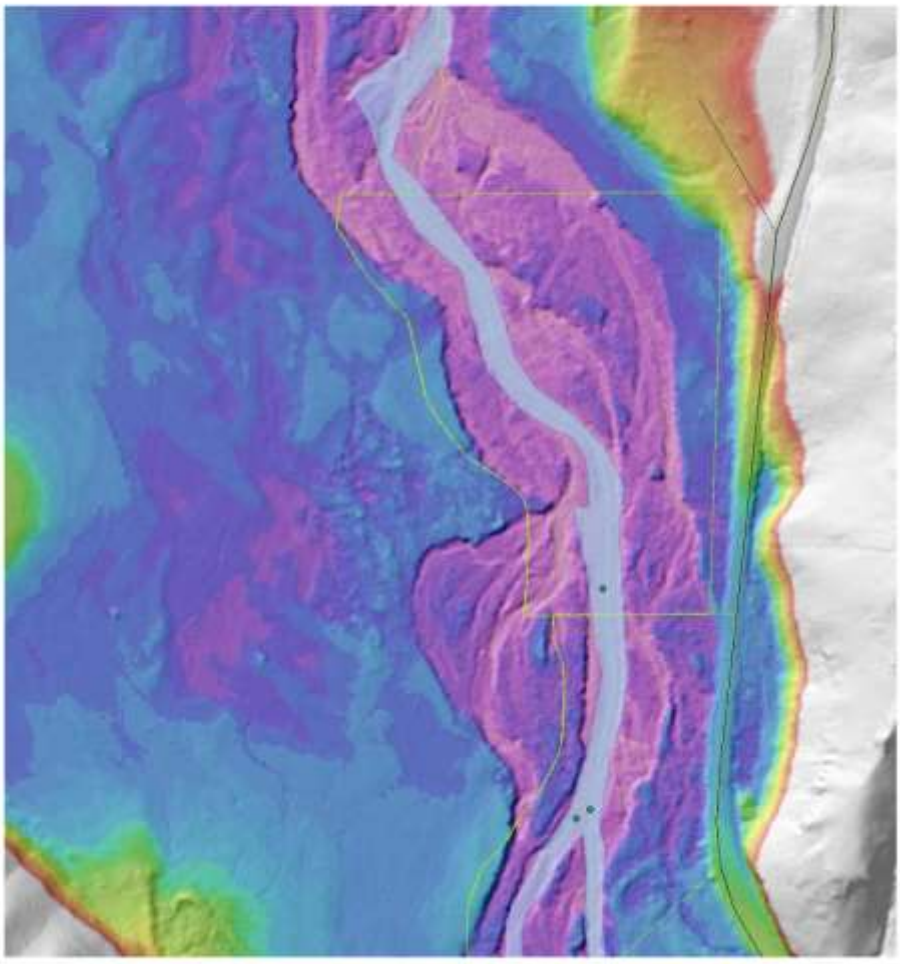
Snake River Salmon Recovery

Snake River Salmon Recovery Region Provisional 3–5 Year Work Plan



Project Categories for Priority Restoration Reaches

- Restore & Protect Floodplain & Riparian Function
- Restore Habitat Complexity
- Reduce Fine Sediments
- Remove Imminent Threats
- Maintain or Restore In-stream Flow

Project Categories for Priority Protection Reaches

- Protect Floodplain & Riparian Function
- Reduce Fine Sediments
- Remove Imminent Threats
- Maintain or Restore In-stream Flow

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SNAKE RIVER SALMON REGION – PROVISIONAL WORK PLAN 2013-2018

INTRODUCTION

The Snake River Salmon Region – Provisional Work plan is produced by the Snake River Salmon Recovery Board (SRSRB) as a guide for salmon and steelhead recovery actions within the Snake River Region. The SRSRB Regional Technical Team (RTT) has developed and prioritized the actions and projects for habitat restoration, habitat assessments, research monitoring and evaluation, hatchery and information education and policy listed in the tables provided in this document. Recovery priorities are reviewed annually and new priority projects are identified, making the work plan a living document. The SRSRB uses the work plan format to provide priority projects lists for habitat restoration, assessments, research/monitoring and evaluation, hatchery activities, information/education or regulations for those who are preparing projects and those who provide funding for salmon recovery actions. This document is structured to list both general and specific actions for restoration by priority areas in each MSA/mSA as illustrated in the Snake River Reaches Priority Reaches Map (Figure 1). The projects listed in sections 1-5 are the current priorities identified as needing attention over the next 1-3 years.

The 2013-2018 work plan has been partitioned into 2 sections categorized as follows; 1 - WRIA 32 33 & 35's Habitat Restoration & Protection, 2 – Habitat Assessments

The RTT has worked to provide general project categories for conducting habitat restoration in priority restoration and protection reaches in the Snake River Recovery Region. The guidelines are designed to aid project sponsors in developing restoration projects into beneficial salmon projects. The following General Project Category outline lists actions designed and tested for addressing regional limiting factors.

General Project Categories for Priority Restoration Reaches Include:

- Restore and Protect Floodplain and Riparian Function
    - Easements (CREP, Permanent Conservation)
    - Remove and modify river dikes that constrict floodplain function
    - Control noxious weeds that reduce riparian function
    - Riparian restoration projects (Fencing, planting, stock relocation)
    - Land use and planning
- Restore Habitat Complexity
    - Enhance stream channel complexity (wood placement, structures)
    - Extend stream length (Meander projects, & side channel construction)
    - Minimize confinement caused by channel training
- Reduce Fine Sediments
    - Upland BMPs (Direct seed, grass waterways, sediment ponds, native grass, & reforestation)
    - Fine sediment routing assessment and Implementation (Roadway maintenance, ephemeral stream, stream fords management, storm water)
- Remove Imminent Threats
    - Assess and remove / modify fish passage barriers
    - Screen and meter stream diversions
- Maintain or Restore In-stream Flow
    - Conduct water efficiency
    - Springhead inventory and protection
    - Aquifer Recharge (Currently only in WRIA 32, rural road storm water, winter flows, etc. – may need to evaluate WRIA 35)
    - Assess and enhance stream flows

General Project Categories for Priority Protection Reaches

- Protect Floodplain and Riparian Function
    - Easements (CREP & Permanent Conservation
    - Control noxious weeds that reduce riparian function
    - Riparian restoration projects (Fencing, planting, stock relocation, & alternative water developments)
- Reduce Fine Sediments
    - Upland BMPs (Direct seed, grass waterways, sediment ponds, native grass)
    - Fine sediment routing assessment and Implementation (Roadway maintenance, ephemeral stream, stream fords)
- Remove Imminent Threats
    - Assess and remove fish passage barriers
    - Screen and meter stream diversions
- Maintain or Restore In-stream Flow
    - Conduct water efficiency
    - Springhead inventory and protection
    - Assess and enhance stream flows
- Water Quality
    - Maintain or improve water quality consistent with TMDL plans

Salmon Recovery Project s are funded through a number of grant opportunities provided by state, federal, and local agencies (Table 1). Work with the Snake River Salmon Recovery Board Lead Entity to find the appropriate funding source for your project.

Table 1. The Snake River Salmon Recovery Office has listed potential grants and funding sources (For assistance in identifying grant opportunities contact the Snake River Salmon Recovery Office).

Grant Name	Funding Agency	Funding Target	Web Link
Salmon Recovery Funding Board	Washington State Recreation and conservation Office	Salmon & steelhead restoration-in-stream, riparian, barriers, irrigation screens,	www.rco.wa.gov/srfb/board/board.htm
Recreation and Conservation Funding Board	Washington State Recreation and conservation Office	Recreation and habitat conservation	www.rco.wa.gov/rcfb/board/board.htm
Conservation Reserve Enhancement Program (CREP)	U.S. Department of Agriculture (Natural Resource Conservation Service) Farm Service Agency	Riparian restoration and preservation	www.fsa.usda.gov
Conservation Reserve Program (CRP)	U.S. Department of Agriculture (Natural Resource Conservation Service) Farm Service Agency	Assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner.	http://www.nrcs.usda.gov/programs/crp/
Terry Hussman Grant	Washington Department of Ecology	Habitat restoration and protection	
Fish America Foundation	NOAA Fisheries	Funds anadromous fish habitat restoration	www.nmfs.noaa.gov/habitat/restoration/projects_programs/crp/partners/fishamerica.html
Bonneville Power Administration	BPA	Funds Salmon Restoration and Monitoring Projects	
Community Salmon Fund	National Fish & Wildlife foundation & Salmon Recovery Funding Board	Fund habitat protection and restoration projects	Discontinued in 2011
ALEA	Washinton Department of Fish and Wildlife	Funding habitat, research, education, facility development, and artificial production	http://wdfw.wa.gov/volunter/vol-7.htm
Floodplains by Design	Washignton Department of Ecology (in collaboration with The Nature Conservancy)	Integration of floodplain management with ecological function, values and benefits	http://www.floodplainsbydesign.org/
NOAA Restoration Center	NOAA Fisheries	A variety of funding opportunities in the PNW	www.restoration.noaa.gov

ACRONYMS			
ACCD	Asotin County Conservation District	WRIA	Watershed Resource Inventory Area
SRSRB	Snake River Salmon Recovery Board	WSDOT	Washington State Department of Transportation
USACE	United States Army Corps Engineers	WSUCE	WSU Cooperative Extension
USFS	United States Forest Service	WWC	Walla Walla County
AWB	Asotin Weed Board	WWCCD	Walla Walla County conservation District
BLMT	Blue Mountain Land Trust	WWWA	Walla Walla Watershed Alliance
BLC	Broughton Land Company	WWBWC	Walla Walla Basin Watershed Council
CC	Columbia County	NRCS	Natural Resources Conservation Service
CCD	Columbia Conservation District	IMW	Intensively Monitored Watershed (Research Project)
CCP	City of College Place	HWS	
CCWD	Columbia County Weed Board	TVCC	Touchet Valley Country Club
CDs	Conservation Districts	WWT	Washington Water Trust
CTUIR	Confederated Tribes of the Umatilla Indian Reservation	WDFW	Washington Department of Fish and Wildlife
CWW	City of Walla Walla	WDNR	Washington Department of Natural Resources
DB	Ditch Board	SRR	Spring Rise Restoration
EEDB	East End Ditch Board	MSA	Major Spawning Area
FFFP	Family Forest Fish Passage	mSA	Minor Spawning Area
FSA	Farm Service Agency	RFEG	Regional fisheries Enhancement Group
GFID #13	Gardena Farms Irrigation District No.13	PCD	Pomeroy Conservation District
IEAC	Inland Empire Action Coalition		
KC	Kooskooskie Commons		
LSRCP	Lower Snake River Compensation Plan		
NPCC	Northwest Power Conservation Council		
NPT	Nez Perce Tribe		
ODFW	Oregon Department of Fish and Wildlife		

SNAKE RIVER SALMON RECOVERY REGION
PROVISIONAL WORK PLAN
2013-2018

Section 1

HABITAT RESTORATION & PROTECTION

This chapter includes habitat restoration and protection projects for salmon, steelhead and bull trout recovery efforts in the Snake River Region. The section also included habitat assessments which are needed to better understand habitat for prioritizing and designing restoration projects. The following tables list habitat restoration and protection projects supported by the Snake River Salmon Recovery Board – Regional Technical Team (RTT) for the WRIA 32, 33 & 35 watersheds. The projects listed in these tables include in-stream habitat restoration, floodplain and riparian restoration & protection, upland restoration & protection, removal of imminent threats and non-capital assessment/design projects related to habitat restoration. A general project table for WRIA 32 & 35 has been developed for the purpose of demonstrating the high priorities within each WRIA.

Following Major/Minor Spawning Areas (MSA/mSA) are listed alphabetically with a description of their priority reaches and limiting factors (Note: many mSA do not have limiting factors identified). Projects that address imminent threats (fish barriers, unscreened diversions & seasonal dewatering creating significant fish passage limitations) may be conducted in areas outside those identified as priorities, when they pose an impact to recovery. The following project table is organized alphabetically by MSA/mSA and information is provided including; HWS Number (Habitat Work Schedule http://hws.ekosystem.us/), Project Name, Watershed, Status, Cost Range, and Start and End Date. The HWS Code is a code number for the Habitat Work Schedule where detailed information on proposed projects can be viewed by clicking the hyperlink in electronic copies of this document. The Project Name refers to the potential project's name. Location provides the MSA/mSA or tributary where project is being conducted. The column titled status indicates whether a project is conceptual, has been proposed for funding, has received funding or is active/be implemented. The column titled Cost Range identifies the relative cost range for the project. Project cost has been broken into three categories respectively form low cost to high; "I" will represent projects costing < $100,000, "II" from $100,000 - $500,000, and III > $500,000. The columns labeled Start Date/End Date indicate the time when the project either entered the work plan or when work is anticipated to begin and when it is anticipated for completion.

WRIA 32 General Projects for Priority Restoration & Protection Stream Reaches

The projects listed in the following table are intended to be general (Conceptual), and are to be conducted in priority stream reaches and appropriate watersheds (see SRSR Priority Reaches Map Figure 1 & the Snake River Salmon Recovery Plan 2011).

GENERAL PROJECT NAME	HWS CODE/ PROJECT TYPE	GOAL/ CONCEPT
Irrigation Efficiency	32-Irrigation Efficiency Protection	Maintain or improve in-stream flow/ Conduct projects that maintain or improve in-stream flow conditions. Projects could involve installation of delivery pipe, development of water management plans, soil moisture monitors, high efficiency delivery systems, shallow aquifer recharge project, water leases, water rights purchase, or inter-local agreements, etc.
Conserve Riparian Habitats	32-Riparian Habitats Protection	Riparian & floodplain function/ Conduct projects that work to protect and restore riparian habitats. Projects can use the available tools, including CREP or CREP like easements, CREP easement contract extensions, permanent conservation easements, zoning rule, etc.*
Noxious Weed Control	32-Noxious Weed Protection	Riparian & floodplain function/ Work to reduce the effects of noxious weeds that diminish riparian function. Projects will focus on riparian areas where negative impacts to salmon & steelhead populations have occurred or could occur. Projects will be accompanied by planting beneficial riparian species.
Implement Upland BMP's	32-Upland BMP's Protection	Reduce fine sediment/ Use upland BMPs to reduce soil loss and fine sediment routing to salmon bearing streams. Project may include conversion to direct seed/no-till agriculture, placement of sediment retention ponds, grass water-ways or other methods.
Implement Public Road Ways BMPs	32-Roadway BMP's Protection	Reduce fine sediment/ Some drainages produce large amounts of fine sediments from public road right of way. Fines are then transported through roadway ditches into salmonid bearing waterways. This project would focus on creating and implementing solutions to sediment routing problems.
Range Management	32-Range Management Protection	Reduce fine sediment/ Conduct projects that work to prevent or reduce fine sediments, originating on range lands, from routing to salmon bearing streams. Conduct weed control, range enhancement, CRP or CRP like projects, CRP contract extensions, develop grazing plans, install cross fencing, relocate or upgrade watering sites, etc.
Fire Wise Land Management	32-Firewise Protection	Reduce fine sediment/ Protect riparian forest & upland habitats through the Use of Fire Wise Land Management. This project will improve the overall health of upland forest and protect riparian habitats by minimizing catastrophic fire and the sedimentation that often accompanies fire impacts.
Livestock Management	32-Livestock Mgmt. Protection	Reduce fine sediment/ riparian & floodplain function/ Conduct projects that work to prevent or reduce fine sediment, originating in livestock feeding, watering or holding areas, from routing to salmon bearing streams. Construct cross fencing, alternative water sites, weed control, install sediment retention ponds, place riparian fencing, plant grass or forest buffer strips, & relocate stock from the riparian footprint.
Remove Fish Passage Barriers	32-Passage Barrier Imminent Threat	Imminent threat/ Work throughout the WRIA drainages to address fish passage barriers that impose a significant threat to salmon, steelhead or bull trout populations. Barrier projects will need to provide access to stream reaches significant to recovery efforts. Determination of project significance will be based on the perceived benefits to salmonids and be determined during the review process.
Install Fish Screens	32-Fish Screen Imminent Threat	Imminent threat/ This project will focus on identifying and implementing screen diversions & fish screen placements. Projects will focus on spawning and rearing stream reaches that harbor protected salmonids. Priority given on a case by case basis – early communication with the RTT during project development to discuss screen impact is critical Determination of project significance will be based on the perceived benefits to salmonids and be determined during the review process – if multiple screens are grouped into one project, screens must be in the same drainage for evaluation purposes, along with screen size and type when possible.**
Increase Habitat Complexity	32-Habitat Complexity Restoration	Increase habitat complexity/ These projects will focus on improving habitat complexity through conducting in-stream habitat enhancement. The placement of large wood, rock, or other structural material for the purpose of developing pools, winter habitat (slack water & interstitial spaces), side channels, and spawning habitat. Combinations of materials will be used as suited to stream reaches while developing the highest benefit to salmon, steelhead and bull trout.
Geomorphic Assessments & Restoration Plans	32-Assessment and Planning Restoration	Conduct geomorphic based assessments which target large river reaches or drainages. The collection of LIDAR and air based photos to describe existing condition leading to the quantification of channel confinement, disconnected low floodplain or off channel habitat is recommended. Digestion of the data collected should lead to the development of a conceptual restoration strategy.

Regional Monitoring	32-Monitoring	Address a high priority information need or data gap identified within our recovery plan and/or associated regional research, monitoring, and evaluation (RME) plan or lead entity strategy. Be consistent or compatible with data collection, analysis, and management methods and protocols being used within the region and shall to the maximum extent practicable be consistent or compatible with methods and protocols in common use throughout the state.***
Increase Steam Channel Length	32-Channel Length Restoration	Increase habitat complexity/ Many stream reaches have experienced channelization, incision, and straitening resulting in habitat loss both in complexity and length. These projects would be conducted in areas where stream channel meanders and off channel habitat could be increased producing additional stream channel habitat and reducing channel energy.
Restore Floodplain Connectivity & Function	32-Floodplain Connectivity and Function Restoration	Protect & Restore Floodplain Connectivity & Function/ Conduct projects that protect and restore floodplain connectivity and promote functioning ecosystems. Projects include dike setback, dike removal, river dike perforations, development of alternative flood protection methods (i.e. summer winter dike configurations) removing unneeded infrastructure from floodplains and preventing the needs for the creation of new dike systems.

WRIA 35 General Projects for Priority Restoration & Protection Stream Reaches

The projects listed in the following table are intended to be general (conceptual) and are to be conducted in priority stream reaches in appropriate watersheds (see SRSR Priority Reaches Map Figure 1 & the Snake River Salmon Recovery Plan 2011).

GENNERAL PROJECT NAME	HWS CODE/ PROJECT TYPE	GOAL/ CONCEPT
Irrigation Efficiency	35-Irrigation Efficiency Protection	Maintain or improve in-stream flow/ Conduct projects that maintain or improve In-stream flow conditions. Projects could involve installation of delivery pipe, development of water management plan, soil moisture monitors, high efficiency delivery systems, shallow aquifer recharge project, water leases, water rights purchase, source substitution, etc.
Conserve Riparian Habitats	35-Riparian Habitats Protection	Riparian & floodplain function/ This project will work to protect and restore riparian habitats from activities counterproductive to salmon and steelhead recovery. Projects can use the available tools, including CREP or CREP like easements, CREP easement contract extensions, permanent conservation easements, or zoning rules.*
Noxious Weed Control	35-Noxious Weed Protection	Riparian & floodplain function/ Work to reduce the effects of noxious weeds that diminish riparian function. Projects will focus on riparian areas where negative impacts to salmon & steelhead populations have occurred or could occur. Projects will be accompanied by planting beneficial riparian species.
Implement Upland BMP's	35-Upland BMP's Protection	Reduce fine sediment/ Use upland BMPs to reduce soil loss and fine sediment routing to salmon bearing streams. Projects may include conversion to direct seed no-till agriculture, placement of sediment retention ponds, grass water-ways or other methods.
Implement on Public Road Ways BMPs	35-Roadway BMP's Protection	Reduce fine sediment/ Some WRIA 35 drainages produce large amounts of fine sediments from public road right of way. Fine sediments are then routed through roadway ditches into salmonid bearing waterways. This project would focus on creating and implementing solutions to the sediment routing problems.
Range Management	35-Range Management Protection	Reduce fine sedimentation/ Conduct projects that work to prevent or reduce fine sediments, originating on range lands, from routing to salmon bearing streams. Conduct weed control, range enhancement, CRP or CRP like projects, CRP contract extensions, develop grazing plans, install cross fencing, relocate or upgrade watering sites, etc.
Fire Wise Land Management	35-Firewise Protection	Reduce fine sediment/ Protect riparian & upland forest habitats through the use of Fire Wise Land Management. This project will help improve the overall health of upland forested and riparian habitats by minimizing catastrophic fire impacts and the sedimentation that often occurs after large wild-fires.
Livestock Management	35-Livestock Mgmt. Protection	Reduce fine sedimentation & enhance riparian & floodplain function/ Conduct projects that work to prevent or reduce fine sediments from originating in live-stock feeding, watering or holding areas to salmon bearing streams. Construct cross fencing, alternative water sites, weed control, install sediment retention ponds, place riparian fencing, plant grass or forest buffer strips, & relocate stock from the riparian footprint.
Remove Fish Passage Barriers	35-Passage Barrier Imminent Threat	Imminent threat/ Work throughout the WRIA drainages to address fish passage barriers that impose a significant threat to salmon, steelhead or bull trout populations. Barrier projects will need to provide access to stream reaches significant to recovery efforts. Determination of project significance will be based on the perceived benefits to salmonids and be determined during the review process.
Install Fish Screens	35-Fish Screen Imminent Threat	Imminent threat/ This project will focus on identifying and implementing screen diversions & fish screen placements. Projects will focus on spawning and rearing stream reaches that harbor protected salmonids. Priority given on a case by case basis – early communication with the RTT during project development to discuss screen impact is critical Determination of project significance will be based on the perceived benefits to salmonids and be determined during the review process – if multiple screens are grouped into one project, screens must be in the same drainage for evaluation purposes, along with screen size and type when possible.**
Increase Habitat Complexity	35-Habitat Complexity Restoration	Increase habitat complexity/ These projects will focus on improving habitat complexity through conducting in-stream habitat enhancements. The placement of large wood, rock, or other structural material for the purpose of developing pools, side channels, winter habitat (slack water), and spawning habitat.
Geomorphic Assessments & Restoration Plans	35-Assessment and Planning Restoration	Conduct geomorphic based assessments which target large river reaches or drainages. The collection of LIDAR and air based photos to describe existing condition leading to the quantification of channel confinement, disconnected low floodplain or off channel habitat is recommended. Digestion of the data collected should lead to the development of a conceptual restoration strategy.

Regional Monitoring	35-Monitoring	Address a high priority information need or data gap identified within our recovery plan and/or associated regional research, monitoring, and evaluation (RME) plan or lead entity strategy. Be consistent or compatible with data collection, analysis, and management methods and protocols being used within the region and shall to the maximum extent practicable be consistent or compatible with methods and protocols in common use throughout the state.***
Channel Length & Sinuosity	35-Channel Length Restoration	Increase habitat complexity/ Many stream reaches have experienced channelization, incision, and straightening resulting in loss of habitat complexity and length. This project would be conducted in areas where stream channel meanders and off channel habitat could be increased.
Restore Floodplain Connectivity & Function	35-Floodplain Connectivity and Function Restoration	Riparian & floodplain function/ This project will work to conduct projects that protect and restore floodplain connectivity and promote functioning ecosystems. Projects include dike setback, dike removal, river dike perforations, development of alternative flood protection methods (i.e. summer winter dike configurations) removing unneeded infrastructure from floodplains and preventing the needs for the creation of new dike systems.

***Uplands may only be included in an easement or acquisition if the inclusion was less than or equal to the value associated with direct salmon benefits (riparian in general) or if they were used as match.*

*** Specific screen locations need to be identified in a project proposal rather than just a general action; each specific screen identified to be included in the project must have a signed landowner acknowledgement form. .*

****Monitoring may be an eligible project type, see the SRSRB application for details. Additionally, the SRSRB has requested that a project sponsor first seek Columbia River Salmon and Steelhead Endorsement funding (if eligible) before making a request for SRFB funds – see the SRSRB application for additional details.*

WRIA 32, 33, & 35 MSA/mSA Watershed Priority Reach Descriptions

The following MSA/mSA descriptions include all WRIA 32, 33 & 35 priority stream reach descriptions and when available limiting factors for salmon and steelhead survival (Figure 1 & 2). Maps illustrating regional MSA/mSA boundaries, priority reaches delineation, followed by descriptions and the habitat restoration project table.

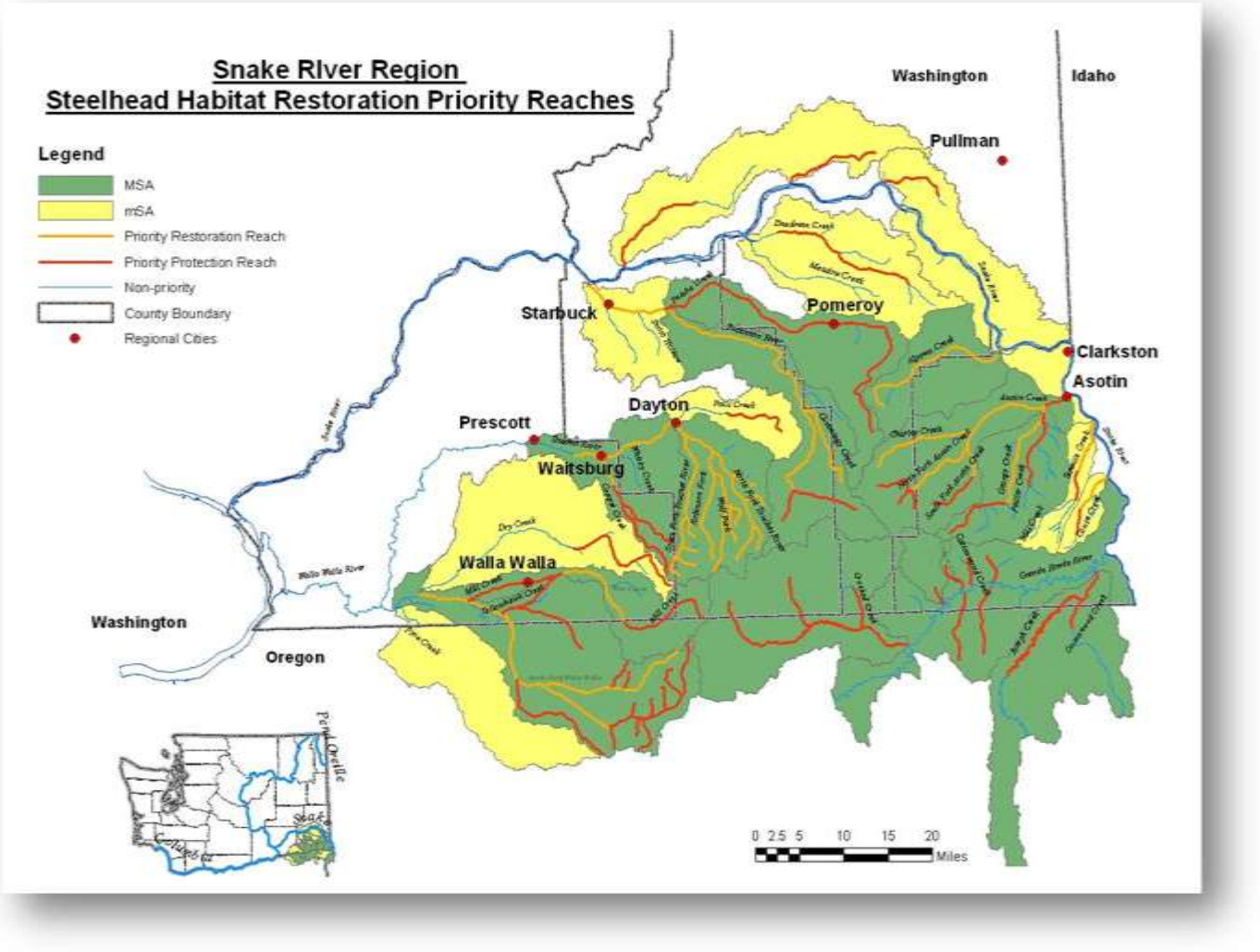

Figure 1. The Snake River Region MSA/mSA boundaries and priority reaches for Mid-Columbia and Snake River Seelhead (Snake River Salmon Recovery Plan 2005). Watersheds shaded green represent the major spawning areas (MSA) and the ones shaded yellow representing minor spawning areas (mSA) for salmon and/or steelhead. Areas of watersheds not colored are not currently considered salmonid habitat. Stream segment are colored orange, red or blue; these colors represent reaches designated as priority restoration, protection or no designation respectively.

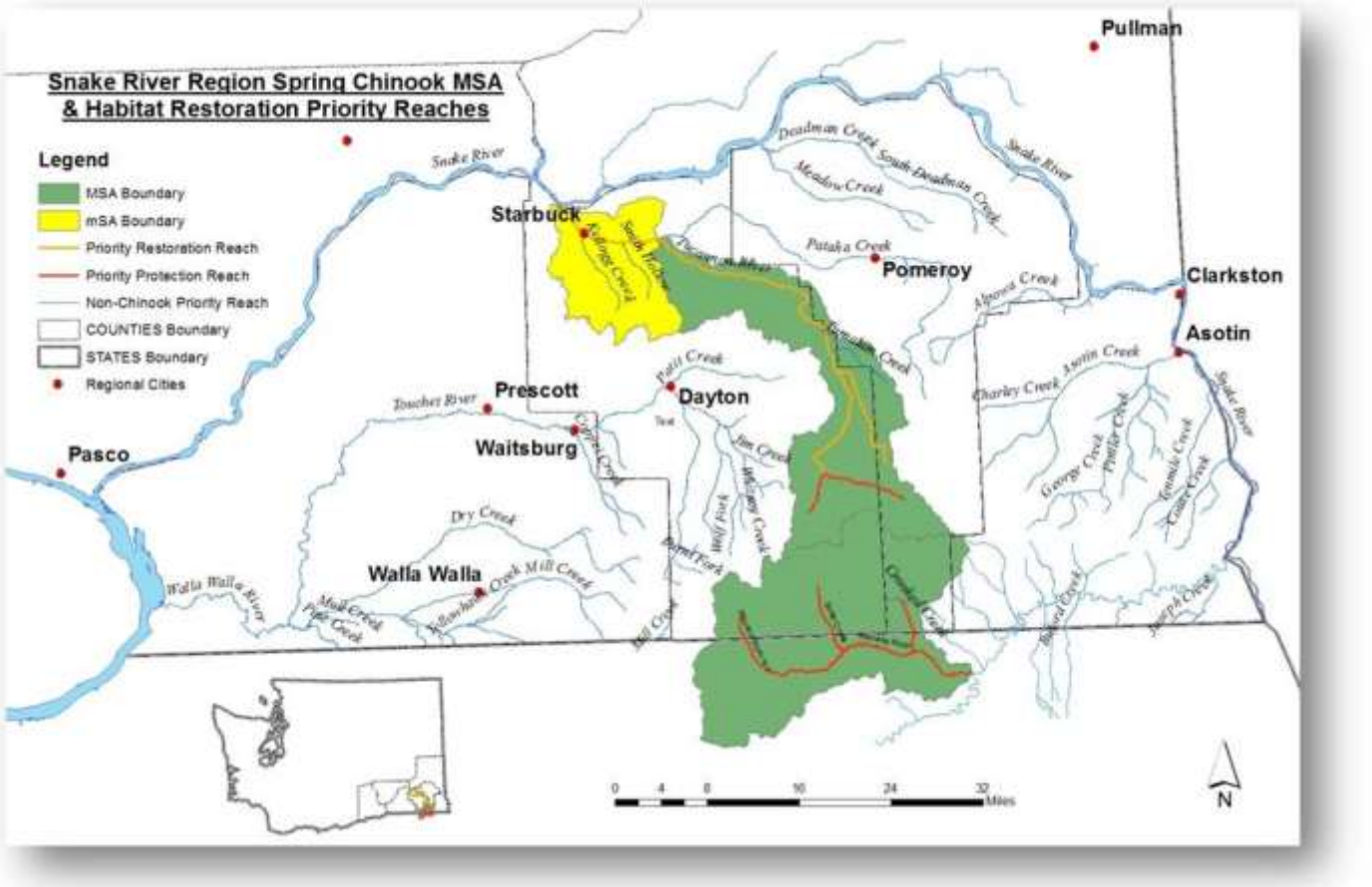

Figure 2. The Snake River Region MSA/mSA boundaries and priority reaches for Snake River spring Chinook (Snake River Salmon Recovery Plan 2005). Watersheds shaded green represent the major spawning areas (MSA) and the ones shaded yellow representing minor spawning areas (mSA) for salmon and/or steelhead. Areas of watersheds not colored are not currently considered salmonid habitat. Stream segment are colored orange, red or blue; these colors represent reaches designated as priority restoration, protection or no designation respectively.

MSA/mSA Descriptions for WRIA 32, 33 & 35

(*Alphabetical Order*)

Alkali Flat Creek mSA (Priority Protection Reach**)**

Alkali Flat mSA priority protection reach begins at its confluence with the Snake River and continues up stream to its junction with Mud Flats Creek. Limiting factors include fine sediment, low flow, habitat quality, habitat quantity, riparian function, water temperature, and obstructions.

Almota Creek mSA (Priority Protection Reach)

The Almota Creek mSA protection reach begins at its mouth on the Snake River and ends upstream at the Klemgard Road Bridge. Limiting factors include fine sediment, low flow, habitat quality, habitat quantity, poor riparian function, water temperature, and obstructions.

Alpowa Creek MSA (Priority Restoration & Protection Reach**)**

The Alpowa MSA Restoration reach extends from its confluence with the Snake River up to its head waters. Limiting factors include low stream flow, fine sediment, water temperature, key habitat quality and quantity, channel confinement, and imminent threats.

Asotin Creek MSA (Priority Restoration & Protection Reaches**)**

The Asotin Creek MSA priority restoration reach begins at the mouth of the George Creek and continues up to the U.S. National Forest Service Boundary, including all of Charley Creek. The Asotin Creek MSA priority protection reach begins at its confluence with the Snake River and extends up to the mouth of George Creek, including the North & South Fork Asotin Creek from U.S. National Forest Service Boundary to the headwaters. Limiting factors include fine sediment, channel stability, key habitat diversity, key habitat quantity, temperature, fish passage and flow.

Couse Creek mSA (Priority Restoration & Protection Reach**)**

The Couse Creek mSA begins at its confluence with the Snake River and continues up stream to Hoskins Gulch. The restoration reach includes the lower 4 miles of the drainage. The remainder of the drainage is a protection reach. Limiting factors include fine sediment, low flow, limited habitat quality, habitat quantity, large woody debris, channel confinement, riparian function, water temperature, and obstructions.

Deadman Creek mSA (Priority Protection Reach**)**

The Deadman Creek mSA priority protection reach begins at Breakdown Gulch and continues up stream into the South Fork of Deadman Creek (see Figure 1). Limiting factors include fine sediment, large wood debris, channel confinement, riparian function, habitat diversity, channel stability, habitat quality, water temperature, and In-stream flow.

Dry Creek mSA (Priority Protection Reach**)**

The Dry Creek mSA begins at its confluence with the Walla Walla River and continues up-stream to its origins. The priority protection reach begins at the Smith Road Bridge and continues up to it headwaters. Limiting factors include sediment, channel stability, riparian function, habitat quality, habitat quantity, temperature, and flow.

George Creek MSA (Priority Restoration & Protection Reaches**)**

The George Creek MSA priority restoration reach begins at its mouth and extends up to Wormell Gulch. Beyond Wormell Gulch, George Creek has a protection priority. Pintler Creek a tributary to George Creek is also designated as a priority protection reach. Limiting factors are identified as fine sediment, channel stability, key habitat quality, key habitat quantity, temperature, and flow.

Grande Ronde River MSA (Priority Protection Reaches**)**

The Grande Ronde River mSA begins at its confluence with the Snake River and continues into Oregon. Only the following Grande Ronde tributaries are designated as priority protection reaches, Grouse Creek, Cougar Creek, Bear Creek, Buford Creek, Cotton Wood Creek, and Rattle Snake Creek (see Figure 1 for detail). Limiting factors include habitat quality, habitat quantity, water temperature, fine sediment, riparian function and predation.

Joseph Creek MSA (Priority Protection Reach**)**

The Joseph Creek MSA priority protection reach begins at its confluence with the Grande Ronde River and continues up to its headwaters in Oregon. The Washington portion of the protection reach includes both the main-stem and Cottonwood Creek up stream to the Washington/Oregon state line. Limiting factors include fine sediment, water temperature, habitat structure, and predation.

Menatchee Creek mSA (Priority Protection Reach**)**

The Menatchee Creek mSA priority protection reach begins at its confluence with the Grande Ronde River and terminates at the US Forest Service Boundary. Limiting factors have not been designated for this reach, however general project guidelines apply.

Mill Creek MSA (Priority Restoration and Protection Reaches**)**

The Mill Creek MSA is designated as priority protection from its confluence with the Walla Walla River up to the Bennington Dam Diversion. Mill Creek is designated as a priority restoration reach from Bennington Dam to the Washington state line. Beyond where Mill Creek crosses the WA state line to its origins it is designated as a protection reach, including where Mill creek flows from Washington into Oregon. Limiting factors include passage, temperature, flow, habitat complexity, confinement, and channel stability.

Pataha Creek MSA (Priority Protection Reach**)**

The Pataha Creek MSA priority protection reach begins at its confluence with the Tucannon River and continues up stream beyond the U.S. Forest Service Boundary. Limiting factors include fine sediment, large wood debris, confinement, riparian function, habitat diversity, channel stability, incision, habitat quality, water temperature, and In-stream flow.

Patit Creek mSA (Priority Protection Reach**)**

The Patit Creek mSA begins at its mouth on the Touchet River main-stem and extends through the entire watershed. The priority protection reach includes only the South Fork Patit Creek with the main-stem and the North Fork being non-priority reaches. Limiting factors include channel stability, stream flow, habitat quality, fine sediment, water temperature, and key habitat quantity.

Penawawa Creek mSA (Priority Protection Reach**)**

The Penawawa Creek mSA priority protection reach begins at its mouth on the Snake River and continues up stream to Goose Creek. Limiting factors include fine sediment, low stream flow, poor habitat complexity related to LWD, poor riparian function, water temperature, and obstructions.

Pine Creek mSA (No Priority Designation**)**

The Pine Creek mSA begins at its mouth on the Walla Walla River and continues to its headwaters in Oregon. There currently is not a priority designation for Pine Creek and limiting factors were not specifically designated for Pine Creek.

Tenmile Creek mSA (Priority Restoration & Protection Reach**)**

The Tenmile Creek mSA priority restoration reach begins at its confluence with the Snake River and continues up stream for the lower 4 miles. The protection reach begins at 4 miles and continues upstream to Mill Creek. Limiting factors include fine sediment, low stream flow, lack of pool habitat, habitat diversity, large woody debris, channel confinement, poor riparian function, water temperature, and obstructions.

Touchet River, Middle MSA (Priority Restoration and Protection Reach**)**

The Touchet River MSA begins at the Highway 125 Bridge and continues up river to its confluence with Patit Creek in the City of Dayton. The priority restoration reach begins at the confluence of Coppei Creek and continues up river to the confluence with Patit Creek in the City of Dayton, including the tributary Coppei Creek up stream to McCown Road Bridge. Coppei Creek above Mc Cown Road Bridge is designated as priority protection. Limiting factors include fine sediment, water temperature, habitat quality, habitat quantity, confinement, and riparian and floodplain function.

Touchet River, Upper MSA (Priority Restoration Reach**)**

The Upper Touchet River MSA priority restoration reach begins at the confluence of Patit Creek in the City of Dayton up river to the headwaters including major tributaries (North Fork, South Fork, Wolf Fork & the tributaries of these streams). Limiting factors for the upper Touchet River MSA include

sedimentation, temperature, flow, habitat diversity, habitat quantity, confinement, and riparian function.

Tucannon River MSA (Priority Restoration & Protection Reaches**)**

The Tucannon River MSA priority restoration reach begins at its confluence with Pataha Creek and extends up river, including all of Cummings Creek, to its confluence with the Panjab Creek. Beyond the confluence with Panjab Creek, including Panjab Creek, the river is a priority protection reach. Limiting factors include fine sediment, large woody debris, confinement, riparian function, habitat diversity, channel stability, summer water temperatures, and In-stream flow.

Tucannon River mSA (Priority Restoration Reach**)**

The Tucannon River mSA begins at its confluence with the Snake River and continues up river to Pataha Creek. Limiting factors include fine sediment, large wood debris, channel confinement, poor riparian function, habitat quantity, channel stability, habitat quality, temperature, and In-stream flow.

Walla Walla River MSA (Priority Restoration and Protection Reach**)**

The Walla Walla River MSA begins at it confluence with Pine Creek and continues up river to its headwaters in Oregon, excluding Mill Creek which is a separate MSA. The priority restoration reach begins at the mouth of Dry Creek and continues up to the Washington state line. The priority protection reaches include the Yellowhawk distributaries and Cottonwood Creek. Limiting factors include fish passage, water temperature, stream flow, habitat quality, habitat quantity, channel confinement, and channel stability.

Wenaha River MSA (Priority Protection Reach**)**

The Wenaha River priority protection reach begins at its confluence with the Grande Ronde River and includes its tributaries. The Wenaha River is located in the state of Oregon with its tributaries originating in Washington. The Wenaha River drainage is nearly entirely located within the Wenaha Tucannon Wilderness and is considered a pristine salmonid habitat in Southeastern Washington; as a result few limiting factors have been identified. The limiting factor is habitat quantity.

The following table lists habitat restoration and protection projects identified and supported by the SRSRB RTT as of March 2017 updated over time since February 2011. For more information on any project click on the hyperlink under HWS Number column where a full description, map, photos, potential funding source, and other information is available.

Table Label	**Description**
HWS Number	Project number and link to complete project description
Name	Potential project name
Watershed	Location where the project would be implemented
Priority	Relative; High=1, Medium=3, Low=3
Status	Conceptual, Proposed for Funding, or Active
Project Contact	Potential project contact(s) if conceptual; actual project contact(s) if proposed or active
Sponsor	Potential project sponsor(s) if conceptual; actual project contact(s) if proposed or active
Estimated Budget	I represent projects estimated to be < $100,000, II from $100,000 - $500,000, and III > $500,000.
3-YR Priority	Projects identified that are a priority in the near term or within 3 years
3-10 YR Priority	Projects identified that for whatever reason are priorities beyond 3 years, but

Habitat Restoration Table for WRIA 32, 33, & 35

Watershed	Number	Name	Status (conceptual, proposed, or active)	Priority (1, 2 or 3)	Project Contact	Sponsor	Estimated Costs Range	3 Yr Priority (Yes or No)	3-10 Yr Priority (Yes or No)
Alkali Creek mSA	35-af	Head Cut Barrier Removal (Alkali Creek)	Conceptual	1			II	Yes	Yes
Alpowa Creek MSA	35-AL	Alpowa Creek Irrigation Efficiency Projects	Conceptual	1		ACCD, Pomeroy CD	II	Yes	Yes
Alpowa Creek MSA	35-AL	CREP Alpowa Creek Restoration and Protection Reach	Active	1	Megan Stewart; Duane Bartels	ACCD, Pomeroy CD	N/A	Yes	Yes
Alpowa Creek MSA	35-AL, 11-1576	Alpowa Creek Habitat Assessment	Completed	1	Brad Johnson	Asotin PUD	$81,534	Yes	Yes
Alpowa Creek MSA	35-AL	Alpowa Habitat Restoration and Protection	Conceptual	1	Brad Johnson, Megan Stewart, Duane Bartels	ACCD., Asotin PUD, Pomeroy CD	II	Yes	Yes
Alpowa Creek MSA	35-AL, 13-1399	Alpowa Instream Post Assisted Log Structures	Completed	1	Brad Johnson	Palouse CD, Asotin PUD	$151,555	Yes	Yes
Alpowa Creek MSA	35-AL	Alpowa Instream PALS Phase 2	Proposed	1	Brad Johnson	Palouse CD, Pomeroy Cd	$120,000	Yes	Yes
Alpowa Creek MSA	35-AL, 14-1898	Restore Alpowa Creek Fish Passage	Active	1	Heidi McRoberts	NPT	$47,100	Yes	Yes
Asotin MSA	35-00403	Dike Setback Asotin & Charley Creek WDFW Land	Conceptual	1	Megan Stewart	ACCD	II	No	Yes

Asotin MSA	35-AS-CH	Relocate Charley Creek Roadway	Conceptual	1	WDFW	WDFW	$200,000	Yes	Yes
Asotin MSA	35-AS-CH	Charley Creek Culvert Assess/Design	Conceptual	1	Asotin County Asotin Co Conservation Dist	Asotin County, ACCD	$100,000	No	Yes
Asotin MSA	35-AS 11-1573, 12-1637, 15-1321	Asotin N. S. Fork & Charley Creek Channel Complexity (IMW Restoration)	Completed	1	Dave Karl, Megan Stewart, Ecological Research Inc.	WDFW, ACCD, ELR	$467,000	Yes	Yes
Asotin MSA	35-AS	Riparian Restoration on WDFW Property in Asotin Creek	Conceptual	1	Dave Karl, Megan Stewart	ACCD, WDFW	I	No	Yes
Asotin MSA	35-AS-CH	Riparian Fencing Charley Creek	Conceptual	1	Dave Karl, Megan Stewart	ACCD, WDFW	II	Yes	Yes
Asotin MSA	35-AS	Headgate Park Habitat Complexity	Conceptual	1	Megan Stewart	ACCD	II	Yes	Yes
Asotin MSA	35-AS	Asotin Creek Upland Best Management Practices	Conceptual	1	Megan Stewart	ACCD	I	Yes	Yes
Asotin MSA	35-AS	CREP Asotin Creek Restoration and Protection Reach	Active	1	Megan Stewart	ACCD	N/A	Yes	Yes
Asotin MSA	35-AS, 12-1633	Headgate Fish Passage Final Design and Construction	Completed	1	Megan Stewart	ACCD	$286,000	Yes	Yes

Both WRIAs	WRIA 32-35	Regional Protect Expiring CRP Leases	Conceptual	1	Terry Bruegman, Duane Bartels, Renee Hadley, Megan Stewart	ACCD, CCD, Pomeroy CD, WWCCD	II	Yes	Yes
Both WRIAs	WRIA 32-35	Water Conservation Implementation WRIA 32 and 35	Conceptual	1			II	Yes	Yes
Couse Creek mSA	35-CO	Couse Creek No-till, Minimum Till and Direct Seed Farming	Active	1	Megan Stewart	ACCD	$37,261	Yes	Yes
Couse Creek mSA	35-CO	CREP Couse Creek Protection Reach	Active	1	Megan Stewart	ACCD	N/A	Yes	Yes
Couse Creek mSA	35-CO	Couse Creek Head Cut	Conceptual	1	Megan Stewart	ACCD	I	Yes	Yes
Couse Creek mSA	35-CO	Couse Creek Fish Passage (In stream Rock Structure)	Conceptual	2	Megan Stewart	ACCD	I	No	Yes
Deadman Creek mSA	35-dm	Direct Seed Program Deadman Creek (BPA)	Completed	1	Duane Bartels	Pomeroy CD	N/A	Yes	Yes
Deadman Creek mSA	35-dm	CREP Deadman Creek Protection Reach	Active	1	Duane Bartels	Pomeroy CD	N/A	yes	yes
Dry Creek mSA	32-WWB, 08-2033, 13-1407	Irrigation Fish Screens Dry Creek mSA	Completed	1	Rick Jones, Greg Kinsinger	WWCCD	I	Yes	Yes
Dry Creek mSA	32-dc	CREP Dry Creek Restoration and Protection Reach	Active	1	Renee Hadley	WWCCD	N/A	Yes	Yes

Dry Creek mSA	32-dc	Dry Creek Fish Passage at Middle Waitsburg Bridge	Conceptual	1	Walla Walla County	WWCCD, Walla Walla County, WDFW	II	Yes	Yes
Dry Creek mSA	32-dc 15-1307	Fish Passage Barrier Dry Creek Lower Waitsburg Road	Completed	1	Sean Taylor	WDFW	$182,414	Yes	Yes
Dry Creek mSA	32-dc	Stream Crossings (Fords) in Dry Creek mSA Scott Rd.	Conceptual	3	Walla Walla County	TSS, WWCCD, Walla Walla County	II	No	Yes
Dry Creek mSA	32-dc	Dry Creek Head Cut	Conceptual	1	Renee Hadley	WWCCD	I	No	Yes
Dry Creek mSA	32-dc	Dry Creek Instream Habitat Restoration	Conceptual	1	Renee Hadley	WWCCD	I	Yes	Yes
George Creek MSA	35-GE 09-1584	George Creek WDFW In-stream Habitat Restoration	Completed	1	Dave Karl, Brian Burns	WDFW, TSS	$456,000	Yes	Yes
George Creek MSA	35-GE	Ayers Gulch Sediment Retention Pilot	Conceptual	1	Dave Karl	WDFW	I	No	Yes
George Creek MSA	35-GE	South George USFS Rd Decommissioning	Active	1	Bill Dowdy	USFS	$160,000	Yes	Yes
George Creek MSA	35-GE	CREP George Creek Restoration and Protection Reach	Active	1	Megan Stewart	ACCD	N/A	Yes	Yes
Grande Ronde MSA	35-GR-BF 15-1320	Buford Creek Barrier Culvert Modification (HWY 129)	Active	1	Heidi McRoberts, Montana Pagano	NPT	III	Yes	Yes

Grande Ronde MSA	35-GR-CW	Fish Passage (Cottonwood Creek)	Conceptual	2	Sean Taylor	WDFW	II	No	Yes
Grande Ronde MSA	35-GR-RS 13-1398	Rattlesnake Creek SR 129 Culvert Replacement	Completed	1	Megan Stewart	ACCD and WSDOT	II	Yes	Yes
Grande Ronde MSA	35-GR	CREP Grande Ronde MSA Priority Protection Reaches	Active	1	Megan Stewart	ACCD	N/A	Yes	Yes
Joseph Creek MSA	35-GR-JO	Riparian Restoration (Magden)	Conceptual	2	Megan Stewart	ACCD	$40,000	No	yes
Joseph Creek MSA	35-GR-JO	Joseph Creek Irrigation Efficiency & Riparian Restoration (WDFW Land)	Conceptual	1	Dave Karl	WDFW	I	No	Yes
Joseph Creek MSA	35-GR-JO	Joseph Creek Riparian Restoration (CREP, or other)	Active	1	Megan Stewart	ACCD, WDFW	I	Yes	Yes
Mill Creek MSA	35-MC	Cold Creek Habitat Assessment/Design	Conceptual	2	Renee Hadley	WWCCD	I	No	Yes
Mill Creek MSA	32-MC	Mill Creek Reach 1 Sill Fish Passage (Implementation)	Conceptual	1	Brian Burns	TSS	$5,000,000	Yes	Yes
Mill Creek MSA	32-MC 09-1586	Mill Creek Sill Fish Passage (Construction Pilot)	Completed	1	Brian Burns	TSS	$263,200	Yes	Yes
Mill Creek MSA	32-WWB, 08-2033, 13-1407	Mill Creek Irrigation Fish Screens	Active	1	Renee Hadley, Greg Kinsinger	WWCCD	II	Yes	Yes
Mill Creek MSA	32-MC	Barrier Culvert at Mouth Titus Creek	Conceptual	1	Jerry Anhorn	WWCC	II	Yes	Yes

Mill Creek MSA	32-MC	CREP Mill Creek Restoration and Protection Reach	Active	1	Renee Hadley	WWCCD	N/A	Yes	Yes
Mill Creek MSA	32-MC 06-2203	Mill Creek Barrier Assessment	Completed	1	Brian Burns	TSS	$113,000	Yes	Yes
Mill Creek MSA	32-MC 13-1387, 14-1894, 15-1324 16-2097	Reach 3: Trapezoidal Flume Barrier Removal	Active	1	Brian Burns	TSS	III	Yes	Yes
Mill Creek MSA	32-MC	Reach 4: Trapezoidal Flume Split	Conceptual	1	Brian Burns	Tri-State Steelheaders	II	Yes	Yes
Mill Creek MSA	-	Reach 5: Flume Transition Trapezoidal to Rectangular	Conceptual	1	Brian Burns	Tri-State Steelheaders	II	Yes	Yes
Mill Creek MSA	32-MC 11-1587	Mill Creek Reach 6: (Rectangular Flume 6 ft Baffles)	Active	1	Brian Burns	TSS	$502,377	Yes	Yes
Mill Creek MSA	-	Reach 7: Rectangular Flume Split 3 ft Baffles	Conceptual	1	Brian Burns	Tri-State Steelheaders	II	Yes	Yes
Mill Creek MSA	-	Reach 8: Rectangular Double Wall Flume 10 ft Baffles	Conceptual	1	Brian Burns	Tri-State Steelheaders	III	Yes	Yes
Mill Creek MSA	-	Reach 9 & 10 Rectangular to Trapezoidal	Conceptual	1	Brian Burns	Tri-State Steelheaders	II	Yes	Yes
Mill Creek MSA	-	Reach 12 & 13: Division Dam Fishways	Conceptual	1	Brian Burns	Tri-State Steelheaders	III	Yes	Yes
Mill Creek MSA	32-00412	Bennington Diversion Dam Fish Passage	Active	1	Stan Heller	US Army Corps of Engineers	$5,000,000	Yes	Yes

Mill Creek MSA	32-00320	Habitat Restoration Bennington Diversion Dam to State Line	Conceptual	1		WDFW, TSS, CTUIR, WWCCD	III	Yes	Yes
Mill Creek MSA	32-00266	Doan Creek Culvert Project	Conceptual	1	Dave Karl, Larry Hooker, Rick Jones	WDFW, WWCCD	II	No	Yes
Mill Creek MSA	32-00233	Enhance Municipal Storm Water Practices for Aquifer Recharge (Mill Cr)	Active	1		City of Walla Walla	II	Yes	Yes
Mill Creek MSA	32-00232 11-1583	Jones Ditch - Passage/Screening and Habitat	Active	1	Greg Kinsinger	Washington Department of Fish and Wildlife, Walla Walla Co Cons Dist.	$94,297	Yes	Yes
Mill Creek MSA	32-00230	Local Pilot Projects Reduce surface diversions (Titus Creek)	Conceptual	2	Jerry Anhorn	Walla Walla Community College	II	No	Yes
Mill Creek MSA	32-00226	Mill Creek Recreation Fields (Schulke) Ditch	Conceptual	1	Larry Hooker, Rick Jones	Walla Walla Co Cons Dist.	II	No	Yes
Mill Creek MSA	32-00166	Doan Creek Habitat Work in College Place	Conceptual	2	Dave Karl, Larry Hooker, Rick Jones	Washington Department of Fish and Wildlife, Walla Walla Co Cons Dist.	I	No	Yes
Pataha Creek MSA	35-00468	Pataha Creek willow Whips	Conceptual	1	Duane Bartels	Pomeroy Conservation Dist.	I	y	y
Pataha Creek MSA	35-00438	Pataha Creek Watershed Assessment	Completed	1	Duane Bartels	Pomeroy Conservation Dist.	$17,500	Yes	Yes

Pataha Creek MSA	35-00173	Upper Pataha Restoration	Conceptual	1	Del Groat	US Forest Service	I	No	Yes
Pataha Creek MSA	35-00146	CREP Pataha Creek Restoration and Protection Reach	Active	1	Terry Bruegman, Duane Bartels	Columbia Conservation Dist., Pomeroy Conservation Dist.	N/A	Yes	Yes
Pataha Creek MSA	35-00073	Relocate Stock Water Out of Sensitive Riparian Areas in Pataha Creek	Conceptual	1	Terry Bruegman, Duane Bartels	Columbia Conservation Dist., Pomeroy Conservation Dist.	I	Yes	Yes
Pine Creek mSA	32-00516	CREP Pine Creek Non-Priority Reach	Active	1	Larry Hooker, Rick Jones, Mike Denny	Walla Walla Co Cons Dist.	N/A	Yes	Yes
Snake River MSA	35-00140	CREP Snake River mSA	Active	1	Megan Stewart	Asotin Co Conservation Dist.	N/A	Yes	Yes
Tenmile Creek mSA	35-00141	CREP Tenmile Creek Protection Reach	Active	1	Megan Stewart	Asotin Co Conservation Dist.	N/A	Yes	Yes
Touchet Lower	32-00508	Lower Touchet River CREP	Active	1	Larry Hooker, Rick Jones	Walla Walla Co Cons Dist.	N/A	Yes	Yes
Touchet Middle MSA	32-00531	Middle Touchet River Fish Screens	Active	1	Terry Bruegman, Greg Kinsinger	Columbia Conservation Dist., Walla Walla Co Cons Dist.	I	Yes	Yes
Touchet Middle MSA	32-00512	CREP Middle Touchet River Restoration and Protection Reach	Active	1	Terry Bruegman, Larry Hooker, Rick Jones	Columbia Conservation Dist., Walla Walla Co Cons Dist.	N/A	Yes	Yes

Touchet Middle MSA	32-00511 10-1826	Touchet River McCaw Reach Restoration Project, Phase A & B	Active	1	Larry Hooker, Rick Jones, Jeff Klundt	Walla Walla Co Cons Dist.	$292,800	Yes	Yes
Touchet Middle MSA	32-00586	Japanese Knotweed Control Waitsburg City Levee	Conceptual	1	Mike Denny	Walla Walla Weed Board	I	Yes	Yes
Touchet Middle MSA	32-00310	Touchet River Dike Setback Design Construct (Lindy Levee)	Conceptual	1	Dave Karl	Columbia County of, Washington Department of Fish and Wildlife	II	No	Yes
Touchet Middle MSA	32-00286	Whiskey Creek Buffer Project	Conceptual	2	Terry Bruegman, Larry Hooker	Columbia Conservation Dist., Walla Walla Co Cons Dist.	I	Yes	Yes
Touchet Middle MSA	32-00275	South Fork Coppei Creek Stream Fords	Conceptual	1	Larry Hooker, Brian Burns, Rick Jones	Tri-State Steelheaders Inc., Walla Walla Co Cons Dist.	I	No	Yes
Touchet Upper MSA	32-00247	Hearn Ditch (Touchet River)	Conceptual	1	Terry Bruegman	Columbia Conservation Dist.	I	No	Yes
Touchet Middle MSA	32-00238	Coppei Creek In-stream Habitat Complexity Projects	Conceptual	1	Larry Hooker	Walla Walla Co Cons Dist.	II	Yes	Yes
Touchet Middle MSA	32-00236	Upland BMP's Coppei Creek	Conceptual	1	Larry Hooker, Rick Jones	Walla Walla Co Cons Dist.	I	Yes	Yes
Touchet Middle MSA	32-00182	Touchet Valley Golf Course Irrigation Efficiency	Conceptual	2	Guy McCaw		II	Yes	Yes
Touchet Middle MSA	32-00168	Ephemeral Stream Sediment Reduction Projects (Touchet)	Conceptual	2	Terry Bruegman, Larry Hooker, Rick Jones	Columbia Conservation Dist., Walla Walla Co Cons Dist.	I	Yes	Yes

Touchet River Lower	32-00538	Irrigation Fish Screens Lower Touchet River	Active	1	Rick Jones, Greg Kinsinger	Walla Walla Co Cons Dist.	I	Yes	Yes
Touchet Upper MSA	32-00574	Floodplain Channel Connectivity (Rainwater South Fork Touchet)	Conceptual	1	Jerry Middel	Umatilla Confederated Tribe	II	Yes	Yes
Touchet Upper MSA	32-00241	Rainwater Stream/Flood-plain Restoration Project	Conceptual	1	Jerry Middel	Umatilla Confederated Tribe	$300,000	Yes	Yes
Touchet Upper MSA	32-00569	Touchet Forks Restoration Design and Implementation	Dead	1	Trina Cole	City of Dayton	$600,000	Yes	Yes
Touchet Upper MSA	32-00557	Upper Touchet River Fish Screen	Conceptual	1	Terry Bruegman	Columbia Conservation Dist	I	Yes	Yes
Touchet Upper MSA	32-00532	CREP Upper Touchet River Restoration and Protection Reach	Active	1	Terry Bruegman	Columbia Conservation Dist.	N/A	Yes	Yes
Touchet Upper MSA	32-00475	Upper Touchet River Levee Set-Back or Removal	Conceptual	1			II	Yes	Yes
Touchet Upper MSA	32-00474	North Fork Touchet Recreational In Channel Disturbances	Conceptual	1	Dave Karl	WDFW	II	Yes	Yes
Touchet Upper MSA	32-00472	Touchet River Riparian and Floodplain Restoration	Conceptual	1			II	Yes	Yes
Touchet Upper MSA	32-00246	Replace Stream Fords (Tamarack Trail)	Conceptual	2	Del Groat	US Fish & Wildlife Service	I	No	Yes
Touchet Upper MSA	32-00245 32-00391	Culvert Replacement Bluewood Road	Completed	1	Jerry Middel	US Forest Service	II	Yes	Yes

Touchet Upper MSA	32-00178	Reduce Point Source Inputs Into NF Touchet	Conceptual	2	Chir Hyland Terry Bruegman, Dave Karl	Columbia County of, Washington Department of Ecology, Washington Department of Fish and Wildlife	II	No	Yes
Tucannon MSA	35-00467	Project Area 11 Beaver Watson Downstream LWD	Completed	1	Dave Karl	Washington Department of Fish and Wildlife	II	Yes	Yes
Tucannon MSA	35-00466	Reach 2 Project Area 40 Through 45	Conceptual	1	Terry Bruegman	Columbia Conservation Dist.	III	Yes	Yes
Tucannon MSA	35-00462	Project Area 28 King Grade Down to RM 20	Active	1	Terry Bruegman	Columbia Conservation Dist.	II	No	y
Tucannon MSA	35-00461	Project Area 27 King Grade Bridge Levee Setback	Conceptual	1	Terry Bruegman	Columbia Conservation Dist.	II	Yes	Yes
Tucannon MSA	35-00460	Project Area 25 Protection and Restoration	Conceptual	1			II	No	Yes
Tucannon MSA	35-00459	Project Area 20 Riparian Easement	Conceptual	1		Blue Mountain Land Trust	II	No	Yes
Tucannon MSA	35-00458	Project Area 19 HWY Bridge Widening and LWD	Conceptual	1			II	Yes	Yes
Tucannon MSA	35-00457	Project Area 16 Last Resort Community	Conceptual	1			III	No	Yes
Tucannon MSA	35-00456	Project Area 9 Big Four Lake Modification and LWD	Active	1			III	No	Yes
Tucannon MSA	35-00455	Project Area 6 Camp Ground Mod & Bridge Removal	Active	1	Del Grout	USFS	II	No	Yes

Tucannon MSA	35-00454	Project Area 23 Floodplain Ramirez	Completed	1			II	Yes	Yes
Tucannon MSA	35-00453	Project Area 22 Levee Setback and Complexity	Completed	1			II	Yes	Yes
Tucannon MSA	35-00452	Project Area 21 LWD and Levee Set Back	Conceptual	1			II	Yes	Yes
Tucannon MSA	35-00451	Project Area 8 Curl Lake Levee Set Back	Active	1			II	Yes	Yes
Tucannon MSA	35-00450	Project Area 3 Little Tuc to Camp Wooten	Completed	1	Del Groat, Eric Hoverson	Umatilla Confederated Tribe, US Forest Service	II	Yes	Yes
Tucannon MSA	35-00449	Project Area 1 Panjab Bridge Downstream	Completed	1	Del Groat, Eric Hoverson	Umatilla Confederated Tribe, US Forest Service	II	Yes	Yes
Tucannon MSA	35-00448	Project Area 17 McGovern Ln LWD and Riparian and Floodplain	Conceptual	1			II	Yes	Yes
Tucannon MSA	35-00447	Project Area 15 Russell Spring Cr Reach LWD Placement	Conceptual	1			$700,000	Yes	Yes
Tucannon MSA	35-00446	Project Area 12 Deer Lake Side Channel Large Wood Augmentation	Conceptual	1		Washington Department of Fish and Wildlife	$60,000	No	y
Tucannon MSA	35-00445	Project Area 13 Rainbow Lake Reach Levees and LWD	Active	1		Washington Department of Fish and Wildlife	II	Yes	Yes

Tucannon MSA	35-00443	Project Area 5 Camp Wooten Road Relocation Floodplain Expansion Project	Conceptual	1		Washington Department of Fish and Wildlife	II	No	y
Tucannon MSA	35-00472	Project Area 13 Rainbow Lake Reconfiguration, Levee Removal and LWD	Active	1	Dave Karl	Washington Department of Fish and Wildlife	III	Yes	Yes
Tucannon MSA	35-00473	Project Area 12 Deer Lake Reconfiguration	Conceptual	1	Dave Karl	Washington Department of Fish and Wildlife	III	No	Yes
Tucannon MSA	35-00409	Tucannon River Power Line Right of Way	Conceptual	1	Dave Karl	Washington Department of Fish and Wildlife	III	Yes	Yes
Tucannon MSA	35-00292	Project Area 24 Golf Course Stream Complexity and Floodplain Conectivity	Completed	1	Terry Bruegman	Columbia Conservation Dist.	$400,000	y	y
Tucannon mSA	35-00252	Kellogg Creek Head cut (Fish Passage Barrier)	Conceptual	2		Columbia Conservation Dist., Washington Department of Fish and Wildlife	I	No	Yes
Tucannon MSA	35-00220	Project Area 14 Hatchery Bridge to Cummins Cr Complexity	Completed	1	Dave Karl	Washington Department of Fish and Wildlife	$1,300,000	Yes	Yes
Tucannon MSA	35-00191	Project Area 4 Camp Wooten River Dike Set Back	Conceptual	1		Washington Department of Fish and Wildlife	$1,000,000	No	Yes

Tucannon MSA	35-00156	Project Area 7 USFS Road Relocate Out of Floodplain	Conceptual	1	Del	USFS	$500,000	Yes	Yes
Tucannon MSA	35-00132	CREP Tucannon River Restoration and Protection Reach	Active	1	Terry Bruegman	Columbia Conservation Dist.	N/A	Yes	Yes
Tucannon MSA	35-00112	Improve Fish Migration Corridor into Tumalum Creek	Conceptual	2			II	Yes	Yes
Tucannon MSA	35-00111	Project Area 2 In stream Habitat Complexity Cow Camp	Conceptual	1		Washington Department of Fish and Wildlife	$200,000	No	Yes
Tucannon MSA	35-00110	Project Area 26 Habitat Complexity Marengo to King Grade	Conceptual	1		Columbia Conservation Dist.	$400,000	Yes	Yes
Tucannon mSA	35-00074	Smith Hollow Barrier Prevention	Conceptual	2	Terry Bruegman	Columbia Conservation Dist.	I	No	Yes
Tucannon MSA	35-00071	Small Tucannon River Tributary LWD Placement	Conceptual	1	Dave Karl, Del Groat	Washington Department of Fish and Wildlife	I	No	Yes
Tucannon MSA	35-00070	Project Area 18 Wooten (Hartsock) Floodplain & Complexity Restoration	Active	1	Kris Fischer	CTUIR	III	Yes	Yes
Tucannon MSA	-	Project Area 28 Protection Reach	Conceptual	1	Terry Bruegman	Columbia Conservation Dist.	II	No	Yes
Tucannon MSA	35-00476	Project Area 29 Floodplain and LWD Above Enrich Bridge	Conceptual	1	Terry Bruegman	Columbia Conservation Dist.	II	No	Yes

Tucannon MSA	35-00477	Project Area 30 Levee Removal and Set Back (below Enrich Bridge)	Conceptual	1	Terry Bruegman	Columbia Conservation Dist.	II	No	Yes
Tucannon MSA	35-00478	Project Area 31A Floodplain and side channel reconnection and LWD	Conceptual	1			II	No	Yes
Tucannon MSA	35-00479	Project Area 32 HWY 12 Br Upstream Levee Setback	Conceptual	2			II	No	Yes
Tucannon MSA	35-00480	Project Area 31B Floodplain and side channel reconnection and LWD	Conceptual	1			II	No	Yes
Tucannon MSA	35-00481	Project Area 33 LWD Placement HWY 12 to Territorial Rd	Conceptual	1	Eric Hoverson	CTUIR	II	Yes	Yes
Tucannon mSA	35-00482	Project Area 34 LWD and Levee Set Back Pataha Confluence	Conceptual	1			II	Yes	Yes
Tucannon mSA	35-00483	Project Area 35 LWD/Floodplain	Conceptual	1			II	No	Yes
Tucannon mSA	35-00484	Project Area 36 Protection Above RV Park	Conceptual	1		Blue Mountain Land Trust	II	No	Yes
Tucannon mSA	35-00485	Project Area 37 Levee Set Back and LWD RV Park	Conceptual	1			II	No	Yes

Tucannon mSA	35-00486	Project Area 38 Levee Set Back and LWD	Conceptual	1			III	No	Yes
Tucannon mSA	35-00487	Project Area 39 A-C Levee Set Back Starbuck	Conceptual	1			III	No	Yes
Tucannon MSA/mSA	35-00441	Protection area identified in the Assessment for Easements	Conceptual	2		Blue Mountain Land Trust	$24,950	Yes	Yes
Tucannon MSA/mSA	35-00298	Tucannon River Noxious Weed Control (Indigo Bush)	Conceptual	1		Columbia Conservation Dist., Columbia County Weed Board	$250,000	Yes	Yes
Tucannon MSA/mSA	35-00197 08-2030	Columbia County false indigo bush removal	Active	1	Lindsay Cox	Columbia County Weed Board	$112,000	Yes	Yes
Tucannon MSA/mSA	35-00163	Upland BMP Implementation Tucannon	Active	1	Terry Bruegman	Columbia Conservation Dist.	I	Yes	Yes
Tucannon MSA/mSA	35-00153	Tucannon River Irrigation Efficiency Projects	Active	1	Terry Bruegman	Columbia Conservation Dist	$1,418,108	Yes	Yes
Walla Walla Lower River	32-00525	Lower Walla Walla River Fish Screens	Active	1	Brian Burns, Rick Jones	Tri-State Steelheaders Inc., Walla Walla Co Cons Dist.	II	Yes	Yes
Walla Walla MSA	Op Main 32-00566	Locher Pit Operations	Active	1		Gardena Farms Irg Dist. #13	I	Yes	Yes
Walla Walla MSA	O&M 32-00564	SAR O&M (Hall-Wetland & Locher Pit Sites)	Active	1			I	Yes	Yes

Walla Walla MSA	32-00572	Stiller Pond Recharge Project & Local Water Plan	Active	1	Greg Kinsinger, Joel Huesby	Walla Walla Co Cons Dist.	$107,000	Yes	Yes
Walla Walla MSA	32-00558	Restoration of Mud Creek	Conceptual	2			I	No	yes
Walla Walla MSA	32-00550 10-1834	Yellowhawk Barrier Removal	Completed	1	Gerald Anhorn, Mike Pelissier	Inland Empire Action Coalition	$59,836	yes	yes
Walla Walla MSA	32-00545 10-1819 11-1588	Bridge to Bridge Levee Project	Active	1	Brian Burns	Tri-State Steelheaders Inc.	$618,234	yes	yes
Walla Walla MSA	32-00542	GFID # 13 South and North Lateral Canal Piping Project	Completed	1	Rick Jones, Stuart Durfee, Jack Myrick, Greg Kinsinger	Gardena Farms Irg Dist. #13, Walla Walla Co Cons Dist.	$3,467,500	yes	yes
Walla Walla MSA	32-00542	GFID #13 Main (Upper) Canal Piping Project	Completed	1	Rick Jones, Stuart Durfee, Jack Myrick, Greg Kinsinger	Gardena Farms Irg Dist. #13, Walla Walla Co Cons Dist.	III	yes	yes
Walla Walla MSA	32-00541	Garden City Piping Project	Completed	1	Rick Jones	Gardena Farms Irg Dist. #13, Walla Walla Co Cons Dist.	$1,437,000	yes	yes
Walla Walla MSA	32-00536	Walla Walla MSA Irrigation Fish Screens	Active	1	Rick Jones, Greg Kinsinger	Walla Walla Co Cons Dist.	II	yes	yes
Walla Walla MSA	32-00529	Creating Urban Riparian Buffers (CURB) Program	Active	1		STH	$305,957	yes	yes
Wallla Walla MSA	32-00518	CREP Walla Walla River Restoration and Protection Reach	Active	1	Larry Hooker, Rick Jones, Mike Denny	Walla Walla Co Cons Dist.	N/A	yes	Yes

Wallla Walla MSA Walla Walla River Lower	32-00507	CREP Lower Walla Walla River	Active	1	Larry Hooker, Rick Jones, Mike Denny	Walla Walla Co Cons Dist.	N/A	yes	Yes
Wallla Walla MSA	32-00447	Yellowhawk Streamkeepers	Conceptual	1	Judith Johnson	Kooskooskie Commons	I	No	Yes
Wallla Walla MSA	32-00419	Walla Walla River Spring Creek Riparian Projects	Conceptual	2		Kooskooskie Commons, Walla Walla Co Cons Dist.	$100,000	Yes	Yes
Wallla Walla MSA	32-00337	Yellowhawk Road Crossing Barrier Implementation	C	1	Gerald Anhorn, Mike Pelissier	Inland Empire Action Coalition	$65,000	Yes	Yes
Wallla Walla MSA	32-00330	Restore River Reach-Last Chance to Frog Hollow	Conceptual	1	Larry Hooker	Walla Walla Co Cons Dist.	III	Yes	Yes
Wallla Walla MSA	32-00264	Bridge to Bridge - Channel Restoration	Conceptual	1	Brian Burns	Tri-State Steelheaders Inc.	II	Yes	Yes
Wallla Walla MSA	32-00260	Walla Walla Flow Enhancement Feasibility Study	Active	1		Umatilla Confederated Tribe	II	Yes	Yes
Wallla Walla MSA	32-00224	Pipe Lowden No. 2 Canal	Conceptual	1	Larry Hooker, Rick Jones	Walla Walla Co Cons Dist.	III	Yes	Yes
Wallla Walla MSA	32-00223	Gardena Farms Irrigation District Local Water Plan (10-01)	Active	1	Matt Rajnus, Stuart Durfee	Gardena Farms Irg Dist. #13	I	Yes	Yes

Wallla Walla MSA	32-00222	Reduce Out of Stream Diversions from Cottonwood Creek	Conceptual	1	Matt Rajnus, Dave Karl, Larry Hooker, Rick Jones	Washington Department of Ecology, Washington Department of Fish and Wildlife, Walla Walla Co Cons Dist.	I	No	Yes
Wallla Walla MSA	32-00197 08-2033	Walla Walla Basin Fish Screen Projects	Active	1	Rick Jones, Greg Kinsinger	Walla Walla Co Cons Dist.	$260,000	Yes	Yes
Wallla Walla MSA	32-00177	Re-route Yellowhawk Creek Storm water Runoff	Conceptual	1			III	No	Yes
Wallla Walla MSA	32-00176	Mud Creek Reconnection to Dry Creek	Conceptual	2	Larry Hooker, Rick Jones	Walla Walla Co Cons Dist.	II	No	Yes
Wallla Walla MSA	32-00175	Bergevin-Williams/Old Lowden Ditch Irrigation Efficiency	Completed	1	Larry Hooker, Rick Jones	Walla Walla Co Cons Dist.	$2,069,000	Yes	Yes
Wallla Walla MSA	32-00167	Cottonwood Creek Habitat Improvement	Active	1	Larry Hooker, Rick Jones, Mike Denny	Inland Empire Action Coalition, Kooskooskie Commons, Tri-State Steelheaders Inc., Walla Walla Co Cons Dist.	I	No	Yes
Wallla Walla MSA	32-00093 09-1411	Gardena Farms Diversion Dam and Fish Passage Improvement Project	Completed	1	Stuart Durfee	Gardena Farms Irg Dist. #13	$270,000	Yes	Yes

Wallla Walla MSA	32-00093	Implement findings of the Gardena Farms Diversion Dam and Fish Passage Improvement	Conceptual	1			III	Yes	Yes
Wallla Walla MSA	00-00329	Walla Walla Flow Enhancement Implementation (Pump Exchange)	Conceptual	1			III	No	Yes
WRIA 32	32-00417	Pilot Local Water Management Program	Active	1	Chris Hyland	Walla Walla Watershed Management Partnership	I	yes	Yes
WRIA 32	32-00263	Irrigation Efficiency Studies Implementation	Conceptual	1		Columbia Conservation Dist., Walla Walla Co Cons Dist.	I	Yes	Yes
WRIA 32	32-00161	Palouse Prairie Protection	Conceptual	2	Dave Karl	Washington Department of Fish and Wildlife	I	No	Yes
WRIA 35	WRIA-35-00006	Riparian Fire Prevention Project	Active	1		Asotin Co Conservation Dist., Columbia Conservation Dist., Columbia County of, Pomeroy Conservation Dist.	I	Yes	Yes
WRIA 35	35-00082	CCRP Program	Conceptual	1	Terry Bruegman, Duane Bartels	Columbia Conservation Dist., Pomeroy Conservation Dist.	N/A		

WRIA 35	35-00077	WRIA 35 Relocation of Live-Stock Feed Lots out of Sensitive Riparian Areas	Conceptual	1		Asotin Co Conservation Dist., Columbia Conservation Dist., Washington Department of Ecology, Fish First	I	yes	yes

SNAKE RIVER SALMON RECOVERY REGION
PROVISIONAL WORK PLAN

Section 2

HABITAT ASSESSMENT

The following Habitat Assessment section is comprised of habitat assessment projects in WRIA 32, 33 & 35 watersheds. Projects listed assess habitat condition to better understand a level 4 uncertainties described in the Snake River Salmon Recovery Plan. The following project table is organized alphabetically by MSA/mSA and information is provided including; HWS Number (Habitat Work Schedule http://hws.ekosystem.us/), Project Name, Location, Status, Cost Range, and Start and End Date. The HWS Code is a code number for the Habitat Work Schedule where detailed information on proposed projects can be viewed by clicking the hyperlink in electronic copies of this document. The Project Name refers to the potential project's name. Location provides the MSA/mSA or tributary where project is being conducted. The column titled status indicates whether a project is conceptual, has been proposed for funding, has received funding or is actively being implemented. The column titled Cost Range identifies the relative cost range for the project. Project cost has been broken into three categories respectively form low cost to high; "I" will represent projects costing < $100,000, "II" from $100,000 - $500,000, and III > $500,000. The columns labeled Start Date/End Date indicate the time when the project entered the work plan and its anticipated to be completed. For more information regarding watershed MSA/mSA and priority reaches refer to the descriptions provided in Section 1.

WRIA 32, 33 & 35 Priority Assessments

The following table lists general WRIA wide priority assessments, along with specific actions for individual projects. To view a more detailed project description click the hyperlink under the HWS column.

Number	Name	Watershed	Priority	Status	Start Date	End Date	Project Contact	Sponsor	Estimated Budget
A00-00006	Assessment of River Confinement in Priority Areas	Both WRIAs	1	Conceptual	1/29/10	12/31/14			II
A00-00422	Aquire LIDAR and Orthographic Images to Measure Habitat Parameters	Both WRIAs	1	Conceptual	1/29/08	12/31/14			I
A32-00424	Assess The Effect of Land Development	Both WRIAs	1	Conceptual	1/3/05	12/31/14			I

A35-00169	Regionally Assess the Use of Agricultural Chemicals on Upland Areas	Both WRIAs	2	Conceptual	1/1/09	6/6/11			I
A32-00169	Assess Feasibility of Mill Creek Low Flow Channel	Mill Creek MSA	1	Conceptual	1/1/09	6/6/11		Tri-State Steelheaders Inc, Umatilla Confederated Tribe, US Army Corps of Engineers	I
A32-00551	Assess Storm Water Impacts (Mill Creek)	Mill Creek MSA	2	Conceptual	1/1/09	6/6/11			I
A32-00552	City of Walla Walla Limnology Study	Mill Creek MSA	2	Conceptual	1/1/09	6/6/11			I
A32-00553	City of Walla Walla Return Water	Mill Creek MSA	2	Conceptual	1/1/09	6/6/11			I
A35-00411	Near Shore Assessment WRIA 35	Snake River MSA	1	Conceptual	1/19/10	12/31/14			II
A32-00436	Waitsburg Instream Flow Enhancement Assessment	Touchet Middel MSA	1	Conceptual	1/1/09	6/6/11		Washington Department of Ecology, Washington Department of Fish and Wildlife, Walla Walla Co Cons Dist	I
A32-00279	Irrigation Efficiency Assessment Upper Touchet River	Touchet Upper MSA	1	Conceptual	1/31/05	12/31/14			I
A35-00047	Tucannon Cobble Embeddedness and Percent Fines Project	Tucannon MSA/mSA	1	Active	7/1/08	12/31/09	Terry Bruegman	Columbia Conservation Dist, US Forest Service	9,000
A35-00246	Tucannon River Sediment Compaction Assessment (Frozen Core Method)	Tucannon MSA/mSA	1	Conceptual	1/7/08	12/31/14			I
A35-00247	Tucannon River LWD Assessment	Tucannon MSA/mSA	1	Conceptual	1/5/09	12/31/14			I
A32-00183	WRIA 32 nutrient	WRIA 32	2	Conceptual	6/6/08	1/1/11	Brian Burns	Tri-State Steelheaders	20,000

	enhancement program							Inc	
Number	**Name**	**Watershed**	**Priority**	**Status**	**Start Date**	**End Date**	**Project Contact**	**Sponsor**	**Estimated Budget**
A32-00408	Assess stream Flow in WRIA 32	WRIA 32	1	Conceptual	1/31/05	12/31/14			I
A35-00321	Reduce Ephemeral Sources Routing Fine Sediment in WRIA 35 Streams	WRIA 35	1	Conceptual	1/3/05	12/31/14			II
A35-00349	Assess Effects of Nonnative Predators on Snake RiverMigrating Salmonids	WRIA 35	1	Conceptual	1/1/09	12/31/14			I
A35-00397	Assess Ground Water Availability for Source Substitution	WRIA 35	1	Conceptual	1/3/05	12/31/14			I
A35-00400	Stream Flow Assessment WRIA 35	WRIA 35	1	Conceptual	1/31/05	12/31/14			II
A32-TB	Touchet Conceptual Restoratoin Plan	Touchet MSA, Patit mSA	1	Conceptual			Terry Bruegman, Justin Pearson	CCD	II
Monitoring	Patit Creek PIT Array	WRIA 32	1	Proposed	1/1/16	12/31/20	Joe Bumgarner, Todd Miller	Washington Department of Fish and Wildlife	$15,000
Monitoring	NF/SF Touchet PIT Array	WRIA 32	2	Conceptual	1/1/17	12/31/20	Joe Bumgarner, Todd Miller	Washington Department of Fish and Wildlife	$45,000
Monitoring	Dayton Dam/Ladder PIT Array	WRIA 32	1	Proposed	1/1/16	12/31/20	Joe Bumgarner, Todd Miller	Washington Department of Fish and Wildlife	$20,000
Monitoring	Upper Touchet Arrays (Temp)	WRIA 32	3	Conceptual	1/1/17	12/31/20	Joe Bumgarner, Todd Miller	Washington Department of Fish and Wildlife	$20,000

Monitoring	Tucannon Mobile PIT Detection (LCM Additional Work)	WRIA 35	1	Conceptual	1/1/17	12/30/21	Jeremy Cram, Joe Bumgarner, Todd Miller	Washington Department of Fish and Wildlife	$30,000
Monitoring	Tucannon Adult Trap/Ladder PIT Array	WRIA 35	1	Conceptual	1/1/17	12/30/21	Joe Bumgarner	Washington Department of Fish and Wildlife	$75,000 first year, $7,500 O&M costs after
Monitoring	Wenaha River PIT Tag Array	??????	2	Conceptual	1/1/17	12/31/20	Joe Bumgarner, Todd Miller	Washington Department of Fish and Wildlife	85,000 first year, $10,000 O&M cost after
Monitoring	Lower Grande Ronde PIT Tag Array	WRIA 35	1	Conceptual	1/1/17	12/31/20	Joe Bumgarner, Todd Miller	Washington Department of Fish and Wildlife	135,000 first year, $10,000 O&M cost after
Monitoring	George Creek PIT Array and Juvenile Steelhead Tagging	WRIA 35	1	Conceptual	1/1/17	6/30/20	Ethan Crawford, Joe Bumgarner	Washington Department of Fish and Wildlife	45,000 first year, less after

Monitoring	Alpowa Creek PIT Array and Juvenile Steelhead Tagging	WRIA 35	2	Conceptual	1/1/17	12/31/20	Ethan Crawford, Joe Bumgarner	Washington Department of Fish and Wildlife	30,000 first year, less after
Monitoring	Dry Creek Adult Trap/Weir	WRIA 32	1	Conceptual	1/1/17	6/30/20	Jeremy Trump, Joe Bumgarner	Washington Department of Fish and Wildlife	$25,000 first year, less after
Monitoring	Tucannon Steelhead Radio Telemetry Study	WRIA 35	1	Conceptual	5/1/17	6/30/20	Jeremy Trump, Joe Bumgarner	Washington Department of Fish and Wildlife	??????
Monitoring	Asotin Telemetry	WRIA 35	2	Conceptual	9/1/17	5/30/20	Ethan Crawford, Joe Bumgarner	Washington Department of Fish and Wildlife	??????
Monitoring	Life Cycle Model of Asotin Creek Steelhead	WRIA 35	2	Conceptual	9/1/17	12/31/22	Ethan Crawford, Joe Bumgarner	Washington Department of Fish and Wildlife	$50,000

Monitoring	Life Cycle Model of Touchet River Steelhead	WRIA 32	2	Conceptual	9/1/17	12/31/22	Jeremy Trump, Joe Bumgarner	Washington Department of Fish and Wildlife	$90,000
Implementation	Salmon Carcass Analogs - Tucannon River	WRIA 35	1	Conceptual	1/1/16	12/31/20	Joe Bumgarner, Michael Gallinat	Washington Department of Fish and Wildlife	$30,000/year
Assessment	Steelhead Genetic Diverstiy Assessments	WRIA 32, 35	2	Conceptual	1/1/17	12/31/20	Joe Bumgarner	Washington Department of Fish and Wildlife	$25,000 to $50,000