Updated 2011 WRIA 35 Watershed Detailed Implementation Plan

Prepared by:
Middle Snake Watershed Planning Unit

Table of Contents

EXECUTIVE SUMMARY

This Updated 2011 Detailed Implementation Plan (DIP) will continue to guide implementation of strategies, actions, programs and management activities identified in the Watershed Resource Inventory Area (WRIA) 35 *Middle Snake Watershed Plan* (Plan), which was completed in August of 2007. This document is supplemental to the WRIA 35 DIP, which was completed in 2008.

The Middle Snake Watershed is denoted as WRIA 35 and includes approximately 2,250 square miles in southeastern Washington along the Idaho border to the east and Oregon border to the south. The Palouse Watershed (WRIA 34) lies to the north, and the Walla Walla Watershed (WRIA 32) and Lower Snake Watershed (WRIA 33) lie to the west. The Middle Snake Watershed encompasses portions of Whitman and Columbia and all of Asotin and Garfield Counties within Washington. Diamond Peak, located in the headwaters of the Tucannon River, is the highest point in the basin with an elevation of 6,380 feet, while the confluence of the Snake and Tucannon Rivers is the lowest point at approximately 540 feet. The City of Clarkston and towns of Starbuck, Pomeroy, and Asotin are also located within WRIA 35.

The WRIA 35 Middle Snake Watershed Plan was approved by the WRIA 35 Watershed Planning Unit and then adopted by the Asotin, Whitman, Garfield and Columbia County Boards of Commissioners in August 2008. Working in concert with local landowners involved in forestry, agriculture, cattle, and range practices as well as citizens and local, state, federal and tribal governments enabled us to discuss complex resource issues and come to consensus on important issues throughout the WRIA. The Planning Units efforts were guided by the following mission statement:

> "Treat water as a valuable resource through the development and implementation of a watershed plan consistent with RCW 90.82 for the beneficial management of water resources to balance the present and future needs of local rural and urban communities, agriculture and other industries, fish and wildlife, and tribal communities and treaty rights."

The WRIA 35 Plan contains obligations and recommendations that provide solutions and strategies for short-term and long-term water resource management within the WRIA. The Plan is an informed, up-to-date effort to balance water supply and demand and to provide a cooperative grass roots process for local and state agencies to continue to work together with local citizens to manage the water resources within WRIA 35. Crucial components of the Plan include:

- Setting Minimum Instream Flows for Asotin Creek and Tucannon River;
- Monitoring stream flows, assessing instream habitat, and conducting ground water studies for future instream flow and groundwater management recommendations;
- Managing water resources by balancing the instream and out-of-stream needs within the WRIA.

This Updated DIP describes a consensus based process to accomplish the strategies of the WRIA 35 Plan. It also includes status, priority, possible funding sources and proposed leads or partners for projects and programs agreed to by the Planning Unit. The Updated DIP builds upon the successful consensus based process described in the WRIA 35 Plan as well as numerous other prior planning and implementation processes that have occurred at the subwatershed level in the Asotin, Pataha and Tucannon portions of the WRIA.

The WRIA 35 Plan represents the culmination of previous and on-going planning and implementation processes. Currently there are more than three planning and implementation process that are either on-going or completed. With Bonneville Power Administration (BPA) funding there have been "Model Watershed Plans" completed and implemented in the Asotin, Pataha and Tucannon watersheds in the late 90's. Additionally, Subbasin Plans were completed for Asotin, Lower Snake and Tucannon Watersheds in 2004 and the actions and recommendations are being implemented for anadromous salmonid habitat protection and restoration with funding from Bonneville Power Administration (BPA) and other funding sources. The Salmon Recovery Funding Board (SRFB) has required regional boards to complete salmon recovery plans. The Snake River Salmon Recovery Plan was adopted in 2005 with a Summary revision completed in 2007 with updated actions and priority areas. The Snake River Salmon Recovery Plan is supported with state and federal funding. Habitat protection and restoration projects are being funded and coordinated throughout WRIA 35 with Washington's SRFB and various other funding sources. Currently the Snake River Salmon Recovery Board is working with BPA on the Tucannon River BiOP Habitat Programatic Agreement for 7 years of funding to implement projects in the Tucannon watershed for the benefit of spring Chinook salmon.

The WRIA 35 Updated DIP is focused on instream flow, water quality and quantity in accordance with the Middle Snake Watershed Plan which represents a holistic approach (ridge-top-to-ridge-top) to watershed restoration. This Updated DIP includes actions and strategies that promote protection and possible enhancement of instream flow and, water quality and quantity and builds upon restoration work that has occurred over the past 18 plus years within watersheds throughout WRIA 35.

ACKNOWLEDGEMENTS

The Updated 2011 WRIA 35 Detailed Implementation Plan (DIP) was developed following the approval and adoption of Middle Snake Watershed Plan in August of 2007 and completion of the DIP. Almost all of the original members of the WRIA 35 Watershed Planning Unit (including State, Federal and Tribal participants), citizens who voluntarily participated in the development of the Plan, continued on with their dedicated participation, to complete the Updated DIP.

The individuals listed below have committed time and energy into numerous planning and implementation processes within WRIA 35. Their dedication and patience has been appreciated. Without the "grass roots" participation this process would not have been able to achieve consensus on sensitive water resource issues within the WRIA.

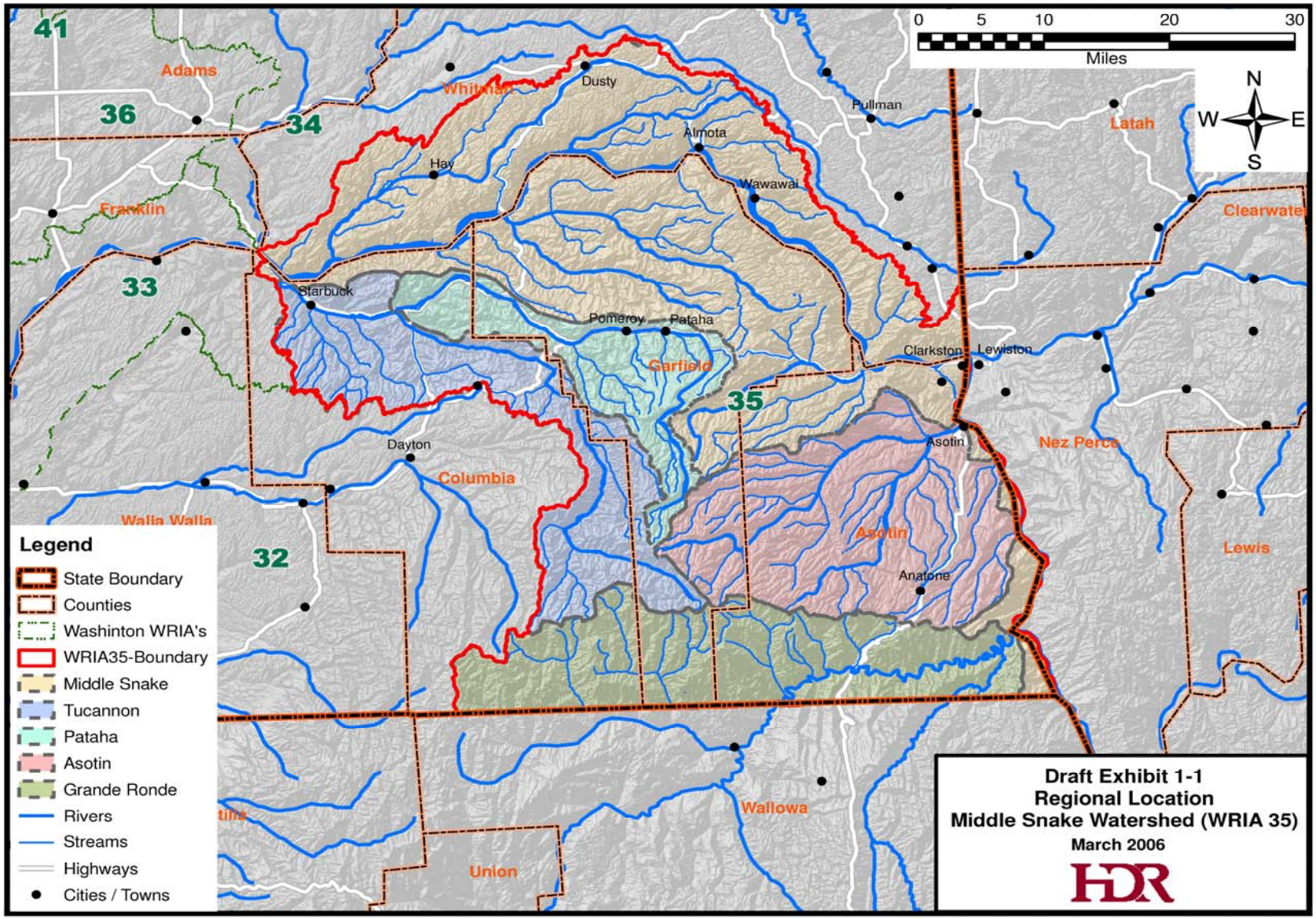
Middle Snake Watershed Planning Unit - Participation List - Phase IV and DIP Development

Don Nuxoll, Asotin PUD Commissioner - Co-Chair
Don Howard, Tucannon watershed Landowner - Co-Chair
Janet Howard, Tucannon watershed Landowner
Tim Simpson, Asotin PUD General Manager
Bradley Johnson, Asotin PUD – Watershed Planning Director
Cheryl Sonnen, Asotin County & Cities of Asotin and Clarkston Stormwater Coordinator
Sandy Cunningham, Asotin County Conservation District (ACCD)
Terry Bruegman, Columbia Conservation District (CCD)
Duane Bartels, Pomeroy Conservation District (PCD)
Keith Ausman, Asotin County Landowner
Butch Klaveano, Garfield County Landowner
Bob Johnson, Garfield County Commissioner
Dick Jones, Columbia County Commissioner
Dick Ducharme, Columbia County Landowner
Michael Largent, Whitman County Commissioner
Doug Mattoon, Asotin County Commissioner/Valley Vission
Jerry Hendrickson, Landowner – Asotin County Conservation District
Harold Thompson, Landowner – Asotin County Weed Board
Stan Wilson, Citizen – Asotin County Sportsmen Association
Joe Lemire, Asotin and Columbia County Landowner
Del Groat, US Forest Service – Pomeroy Ranger District
Bill Dowdy, US Forest Service – Pomeroy Ranger District
Kris Buelow, Snake River Salmon Recovery Board
Steve Martin, Snake River Salmon Recovery Board
Dave Karl, Washington State Department of Fish and Wildlife
Jaime Short, Washington State Department of Ecology
Emmit E. Taylor, Jr. – Nez Perce Tribe Watershed Division
Jed Volkman – Confederated Tribes of the Umatilla Indian Reservation (CTUIR)
Harold Beggs – Asotin County Commissioner

INTRODUCTION AND BACKGROUND

The Middle Snake River Basin is within the Columbia Basin and Blue Mountain ecoregions and is nearly 1.5 million acres in size. Land use is approximately 50 percent rangeland, 33 percent agriculture, 15 percent forestland and 1 percent urban. The population is less than 25,000. Population growth projections for the area are expected to reach 33,000 by 2020, which represents a low density over the extent of the geographic area, yet nonetheless represents a future need. Exhibit 1 shows the regional location of WRIA 35. Encompassing portions of Whitman and Columbia and all of Asotin and Garfield counties within southeastern Washington.

The WRIA 35 planning area includes federally-listed Threatened and Endangered Species, including fall Chinook, spring/summer Chinook, steelhead and bull trout. Known and presumed presence (including spawning, rearing and migration) for key species are indicated in the Table 1-1.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Middle Snake
Tucannon
Pataha
Asotin
Grande Ronde
Rivers
Streams
Highways
Cities / Towns
Draft Exhibit 1-1
Regional Location
Middle Snake Watershed (WRIA 35)
March 2006
HDR

Table 1-1 Listed Fish Species in WRIA 35			
Species	**Federal Status**	**State Status**	**Known and presumed presence within WRIA 35**
Snake River Spring/Summer Chinook Salmon	Threatened (Listed April 1992)	Species of concern	Tucannon River, Asotin Creek, Snake River and Grande Ronde River
Snake River Fall Chinook Salmon	Threatened (Listed April 1992)	Species of concern	Mainstem Snake River and the mouths of Tenmile Creek, Couse Creek, Tucannon River, Asotin Creek, and Grande Ronde subbasins.
Steelhead Trout	Threatened (Listed June 1998)	Species of concern	Tucannon River (*includes Pataha, Penawawa, Alkali Flat, Deadman, and Meadow creeks, Palouse River) Asotin Creek (Almota, Tenmile, Steptoe, Couse, Alpowa and Wawawai creeks), Grande Ronde River (Joseph, Rattlesnake, Cottonwood, Menachee, Wenachee Creeks)
Bull Trout	Threatened (Listed June 1998)	Species of concern	Grande Ronde, Asotin Creek, Tucannon River, mainstem Snake River

(SRSRP October 2005)

* Based on Populations for De-Listing

WRIA 35 Implementation Areas

For the purposes of watershed management, the following five distinct Implementation Areas make up WRIA 35:

- Asotin Creek Implementation Area
- Middle Snake River Implementation Area
- Pataha Creek Implementation Area
- Tucannon River Implementation Area
- Grande Ronde Subbasin Implementation Area

Implementation Areas were formed based on variations in land use, habitat, and hydrologic characteristics within the WRIA. See the Level I Technical Assessment (HDR-EES 2005), Grande Ronde Addendum (HDR-EES 2005) and WRIA 35 Middle Snake Watershed Plan (HDR 2007) http://www.asotinpud.org/msww/ms_documents.htm for more complete descriptions and maps of the Implementation Areas listed above.

WRIA 35 Watershed Plan

Funding at the watershed level, through the Watershed Plan implementation process, will be managed by the Planning Unit for Ecology funding. At this time, the following funding agencies are encouraged to utilize the local watershed process for prioritizing and ranking projects for WRIA 35 watershed planning funding:

- Washington State Department of Ecology - Phase IV and WRIA Implementation Grants

Other State and Federal agencies with mandates and interests in funding projects with dedicated WRIA 35 watershed planning funding that meet/support watershed-specific priorities will be encouraged to utilize the watershed process.

Funding Mechanisms

The WRIA 35 Planning Unit recognized that implementation is subject to funding constraints and that no entity is obligated to implement actions unless adequate funding is available. Realizing that Watershed Planning funds are limited, most of the priority actions will be completed utilizing alternative grant sources.

Phase IV Watershed Planning Implementation funding provided by the State Legislature includes $100,000 for the first three years, with the local match required at 10%. At the end of the third year, up to $50,000 is available for the fourth and fifth years of implementation, with a 10% local match.

The implementation tables in Appendix A provide a summary of WRIA 35 Middle Snake priority actions contingent upon available funding. The specific funding mechanisms provided in the tables have not all been secured, but previous and on-going planning and implementation by these entities make them the best choice for certain project types. An overview of some of the on-going and identified funding commitments includes;

1. Ecology provided Phase IV Years 1-3 funds for Implementation, $300,000 and an additional $39,000 for Watershed Planning Unit Support. $91,000 of the total was identified for on-the-ground projects and assessments (irrigation efficiencies, cobble embeddedness and instream habitat assessment projects).

2. The Snake River Salmon Recovery Board has provided $100,000 for administrative support to the WRIA 35 Planning Unit to ensure that coordination and implementation of prioritized project between plans occurs.

3. Ecology provided $300,000 for a HydroGeo Study in the Asotin, Tenmile and Alpowa Creek watersheds to better understand surface and ground water uses and interactions for future instream flow rule making exercises to the WRIA 35 Planning Unit.

4. Ecology provided $70,000 for stream flow gauging, both for continuous and staff gauges monitoring stream flow data for future instream flow setting exercises.

5. Ecology and WDFW will continue to provide technical assistance with instream flow and HydroGeo assessments for future instream flow setting and rule making exercise as staff and resources allow.

6. Conservation Districts within WRIA 35 continue to pursue/secure project funding to support and/or continue their respective on-going habitat and restoration projects. These project implementation efforts will target District Short and Long Range Planning efforts in most cases but contribute to and are consistent with Plan strategy and action implementation identified in Appendix A.

7. Other specific grants may be available through Ecology and Washington Department of Fish and Wildlife.

8. Federal funding sources for monitoring, pollution prevention and control, watershed and drinking water source protection, wetland and wildfire. These funding sources are compiled in EPA's *Catalog of Federal Funding Sources for Watershed Protection.*

9. Centennial Clean Water 319 Funds available through Ecology.

10. The Northwest Power and Conservation Council funding for habitat protection and restoration projects through the Bonneville Power Administration (BPA).

11. The Salmon Recovery Funding Board funding for habitat protection and restoration projects through the Recreation and Conservation Office (RCO).

12. Stormwater program funding from Department of Ecology for implementation of the NPDES Phase II Stormwater Permit within the permitted urbanized areas based on the 2000 census within Asotin County.

13. Stormwater competitive grants from Department of Ecology for implementation of low impact development (LID) projects and/or stormwater retrofit projects within the permitted urbanized areas based on the 2000 census within Asotin County.

APPENDIX A -- PRIORITIZED HABITAT AND POLICY STRATEGIES

WRIA 35 Prioritized Habitat and Policy Strategies from Middle Snake Watershed Plan, revaluated by Planning Unit in 2011, include updates to project status and ranking to reflect progress and changes in circumstances since adoption of the Plan in 2007.
Changes to the 2011 Updated DIP were made by consensus of the Planning Unit.
The following tables are broken into the 7 High Priority Projects, other high priority projects and Policies, followed by Medium Priority Projects and Policies and finally the Low Priority Projects and Policies.
The Planning Unit identified that instream flow and water quality projects would be the focus of their funding and efforts and instream projects that benefited ESA listed species that were a high priority but should be funded through BPA or Salmon Recovery Funding Board funds when funds are available.

Appendix A1 Habitat Projects Within WRIA 35 Implementation Areas *(TOP 7 High Priority Projects according to Planning Unit)*

Project Description	Status	Priority	Funding Source/ Partners	Comments
Establish and review a detailed funding plan for implementation, including: projects; programs; long-term monitoring; and evaluation of watershed plan implementation.	On-Going	H	DOE/ PU	On-Going
Continue instream flow gauges through permanent and seasonal gauges within WRIA 35	On-Going	H	DOE/USGS; Asotin PUD	Gauges will need to be continually evaluated for their data collection usefulness
Implement the following strategies to reduce TSS levels and erosion control for pasture, crop and forested land: 1. direct seed; 2. CRP; 3. grassed waterways; 4. sediment basins; 5. weed control; 6. grazing management; 7. cross fencing; 8. alternative water sources	On-Going	H	WCC, DOE, BPA, SRFB/ CD's; WDFW; USFS	On-Going apply accepted BMP's. PU funding not the primary funding source, maybe supplemental source where addressing specific strategy components.
Implement passive restoration projects, including Conservation Reserve Enhancement Program, riparian buffers, pilot conservation easements, and public education on use of easements.	On-Going	H	CREP, WCC, BPA, SRFB/ WDFW; CD's; NPT; CTUIR	On-Going apply accepted BMP's. PU funding not the primary funding source, maybe supplemental source where addressing specific strategy components.
Implement activities needed to meet load allocations and water quality parameters they affect as identified in Tucannon River and Pataha Creek TMDL Water Quality Improvement Report and Implementation Plan, Publication no. 10-10-019 Table 7.	On-Going	H	DOE, PU, WCC/CD's, SRFB, BPA	PU/DOE primary funding sources where addressing specific strategy components addressing actions (BMP) to improve water quality as identified in APPEXDIX B.
Implement the following strategies to reduce fecal coliform levels: 1. identify failing septic systems; repair and/or upgrade or connect to sewer if available; 2. Restore riparian buffers; 3. Manage grazing in riparian areas; 4. Manure management	On-Going	H	Ecology, DOH, County Health, SRFB, BPA, WCC/ Counties	On-Going apply accepted BMP's. PU funding not the primary funding source, maybe supplemental source where addressing specific strategy components. Fecals are identified as a limiting factor and may be included in some TMDL's in WRIA
Conduct current condition and source evaluation of water quality impacts including: 1. Determining if inputs from Pataha impact water quality in the Tucannon River; 2. Identifying sources of fecal coliform; 3. Determining natural temperature ranges for the Tucannon; 4. Collecting data in accordance with Ecology standards for use in developing state-required TMDLs	On-Going	H	Ecology, DOH, County Health/ CCD; PCD	PU funding not the primary funding source, maybe supplemental source where addressing specific strategy components

Appendix A1 Habitat Projects Within WRIA 35 Implementation Areas *(Other High Priority Projects Continued)*

Project Description	Status	Priority	Funding Source/ Partners	Comments
Support implement noxious weed control programs on private and public lands.	On-Going	H	State Legislature/ County Weed Boards	PU funding not primary funding source, maybe supplemental source where addressing specific strategy components.
Implement aquatic habitat protection plans for streams with ESA listed species for instream restoration/protection: 1. Enhancement Restoration and Protection Projects; 2. Riparian Buffers; 3. Large Woody Debris Replenishment and Replacement /Enhancement; 4. Enhancement of habitat for Fall Chinook/ steelhead; 5. control noxious weeds; 6. plant native vegetation	On-Going	H	BPA, WCC, SRFB/ WDFW; CD's; NPT; CTUIR; County Weed Boards	Instream projects are a priority in large MSA's within the Asotin and Tucannon watersheds. . PU funding not the primary funding source, maybe supplemental source where addressing specific strategy components.
Restore and enhance natural floodplain, riparian and wetland capacities, where feasible, to increase aquifer recharge, improve water quality, provide aquatic and riparian habitat, and reduce the duration and severity of flood events.	On-Going	H	DOE, WCC, BPA, SRFB/ CD's; Counties; NPT, CTUIR	PU funding not primary funding source, maybe supplemental source where addressing specific strategy components.
Identify and Implement wetland restoration, protection and enhancement projects	By 2015	H	DOE/ WDFW CD's	Important for cool water and quality.
Implement minimum control measures outlined in Stormwater Management Plan to reduce pollutants delivered to stormwater systems through source control activities	On-Going	H	DOE/Asotin Co; Cities of Asotin and Clarkston	On-Going Project. Apply accepted BMP's in urban areas of Asotin County. PU funding not the primary funding source, maybe supplemental source where addressing specific strategy components
Implement stormwater construction permit program to reduce pollutants delivered from construction sites and construction activities. Provide training and outreach materials to contractors, developers, builders, planning staff and other affected parties. Implement strategies to improve post-construction stromwater controls and promote practices that increase groundwater infiltration: 1. Detention/retention ponds; 2. Infiltration trenches; 3. Swales; 4. Dry wells, etc	On-Going	H	DOE/Asotin Co; Cities of Asotin and Clarkston	On-Going Project. Implement requirements of construction ordinance in urban areas of Asotin County. PU funding not the primary funding source, maybe supplemental source where addressing specific strategy components
Study and promote low impact development (LID) activities that increase groundwater infiltration, water reclamation/reuse and retrofit projects to reduce impervious areas. BMP's include installation of rain gardens. Bio-infiltration swales, pervious pavement/asphalt. Rain gutter disconnection, rain barrels and other Ecology approved methods	On-Going	H	DOE/Asotin Co; Cities of Asotin and Clarkston	On-Going Project. Apply accepted BMP's in urban areas of Asotin County. PU funding not the primary funding source, maybe supplemental source where addressing specific strategy components

Appendix A1 Habitat Projects Within WRIA 35 Implementation Areas *(High Priority Policies)*

Policy Description	Status	Priority	Funding Source/ Partners	Comments
Emphasize voluntary and incentive-based management solutions, including Continuous Conservation Resource Program (CCRP), Conservation Security Program (CSP), CREP, WRP, and WWRP.	On-Going	H	USDA/ NRCS; FSA; CD's; NPT, CTUIR	Goal of Plan and DIP
Maintain and enhance regional economy and provide future economic opportunities associated with the watershed hydrology, including but not limited to municipal, residential, commercial, industrial, agricultural, recreational, tourism, and instream water uses.	On-Going	H	DOE, WCC, BPA, SRFB/ CD's; WDFW; NPT; CTUIR	Goal of Plan and DIP
Support rectify fish passage obstructions identified in WDFW priority lists for WRIA 35 streams and Snake River Salmon Recovery Board Barrier Inventory Assessment project contracted by Walla Walla Community College and funded by SRFB.	On-Going	H	SRFB, DOT/ WDFW; CD's; NPT; CTUIR; USFS	Walla Walla Community College has a transportation infrastructure barrier assessment project funded by SRFB, these projects could be evaluated under this program. . PU funding not the primary funding source, maybe supplemental source where addressing specific strategy components.
Water transfer not allowed outside the PU consistent with the Columbia River Water Management Program.	On-Going	H	DOE/Planning Unit	PU is interested in supporting irrigated ag and ensuring that it is maintained throughout the WRIA
Improve certainty, timeliness and efficiency in water rights decisions.	On-Going	H	DOE	On-Going. PU supports reliable water for all resources within WRIA and making timely decisions on potential availability.
Support implementation of urban and rural land management BMPs.	On-Going	H	State Legislature, DOE, WCC, BPA, SRFB/ Counties; CD's	Goal of Plan and DIP. PU funding not the primary funding source, maybe supplemental source where addressing specific strategy components.
Propose Statutory language change (e.g. RCW 90.03.380; RCW 90.44.100) to allow for the transfer of surface water rights to basalt aquifer (source substitution) wells where such changes would not deplete aquifer or impair existing rights.	On-Going	H	DOE, SRFB/ Asotin PUD	PU supports recommendations to the legislature to allow for surface to deep aquifer well water right transfers (retaining priority dates & w/out relinquishment) when transfers benefit instream and agriculture uses while addressing water quality (TMDL's).

Appendix A1 Habitat Projects Within WRIA 35 Implementation Areas *(High Priority Policies Continued)*

Policy Description	Status	Priority	Funding Source/ Partners	Comments
Stockwater – recommend legislative changes that would allow for riparian stockwater rights to be transferred to groundwater rights and retain priority date when the purpose is to protect water quality.	On-Going	H	DOE, WCC, BPA, SRFB/ CD's; PU	PU is interested in ensuring that stockwater wells are not competing with domestic exempt wells for domestic use
Characterize surface and ground water availability and recharge/discharge balance and connectivity within the sub-basins and surrounding region to ensure adequate long term ground water resources to meet existing needs, consistent with adopted city and county land use plans.	On-Going	H	DOE/Asotin PUD	On-Going for future WRIA decisions. PU funding not primary funding source, maybe supplemental source where addressing specific strategy components.
Improve consistency in federal, state, and local water resources regulatory and management approaches, and obtain local, state, and federal and tribal buy-in and cooperation for recommended management strategies.	On-Going	H	DOE, WDFW, BPA, SRFB/ CD's; USFS; NPT; CTUIR	Goal of Plan and DIP
Review and update land use plans and regulations as necessary to be compatible with and support water resource management goals.	On-Going	H	State Legislature/ Counties; DOE; Cities	Coordination and support between county planning processes and PU to enhance consistencies and reduce potential duplication of effort.
Protect existing water rights, private property rights and tribal treaty rights by encouraging fainess in distributing costs and burdens of water resource management actions.	On-Going	H	DOE, BPA/CD's; WDFW; USFS; NPT; CTUIR	Legal Mandate and Goal of Plan and DIP
Relinquishment Statue (changes) – make a recommendation for legislative changes that allow for conservation without penalty of relinquishment.	On-Going	H	DOE/Planning Unit	PU is interested in seeing senior and junior water rights supported for domestic and irrigation purposes
Provide long-term reliable and predictable water supplies for municipal, residential, commercial, industrial, agricultural, recreational, and instream water uses.	On-Going	H	DOE/ Counties; Asotin PUD; Cities	Goal of Plan and DIP. PU Funding not primary funding source, maybe supplemental source where addressing specific strategy components.
Adopt Eastern Washington Stormwater manual and implement the following strategies to improve stormwater management in urban areas and treatment and increase groundwater infiltration:	On-Going	H	DOE/Asotin; Garfield & Columbia Co	On-Going apply accepted BMP's. PU funding not the primary funding source, maybe supplemental source where addressing specific strategy components. Stormwater program deals mainly with urban growth areas and how to reduce water quality impacts from urban activities.

Appendix A1 Habitat Projects within WRIA 35 Implementation Areas *(Medium Priority Projects)*

Project Description	Status	Priority	Funding Source/ Partners	Comments
Work with individual landowners to review pesticide and fertilizer use; and to implement the following best management practices to limit water quality impacts: 1. restore riparian areas; 2 urban/rural education program; 3 conservation tillage	On-Going	M	WCC, DOE, BPA, SRFB/CD's; WSU Ext.	On-Going apply accepted BMP's. PU funding not the primary funding source, maybe supplemental source where addressing specific strategy components.
Improve irrigation efficiencies, including conveyance and application methods; as well as updated screens and meters.	On-Going	M	DOE, WCC, BPA, SRFB/ CD's	Irrigation efficiencies high priority for water conservation and small farm applications that don't meet other program requirements.
Identify and develop opportunities to enhance available water supply, emphasizing aquifer storage and recovery, source substitution, reclamation and reuse, and urban stormwater retention.	On-Going	M	DOE/CD's	PU funding not primary funding source, maybe supplemental source where addressing specific strategy components.
Work with private and public landowners to maintain, protect and enhance pristine and other areas of the headwaters by encouraging application of riparian and instream BMPs	On-Going	M	USFS, BPA/ WDFW; CD's; NPT; CTUIR	Most of Tucannon and Asotin watershed headwaters are under USFS/WDFW and are currently roadless or roads are being addressed. PU funding not primary source, maybe supplemental source where addressing specific strategy components.
Conduct inventory and analysis of fish passage barriers	On-Going	M	SRFB/WDFW; CD's; NPT; CTUIR; USFS	Walla Walla Communtiy College has a transportation infrastructure barrier assessment. Focus on additional barriers located within WRIA 35. PU funding not primary source, maybe supplemental source for this strategy.
Prioritize post-fire (School Fire) projects on public and private lands within fire boundaries	On-Going	M	USFS, CREP, WDFW, BPA, SRFB/CCD	High priority projects funded on State/Public property completed. PU funding not the primary funding source, maybe supplemental source where addressing specific strategy component.
Design and construct sewer collection and treatment facility for Anatone	On-Going	M	DOE/Asotin County	Ecology STEP Program may be possible, funding from PU is not primary maybe supplemented.
Implement pilot project to encourage beaver activity for multi-purpose storage through dams, wetlands and water retention	On-Going	M	WDFW/CD's	Public perception of project may make it undesirable. Start in headwaters so seeding occurs downstream.

Appendix A1 Habitat Projects within WRIA 35 Implementation Areas *(Medium Priority Policies)*

Policy Description	Status	Priority	Funding Source/ Partners	Comments
Review state surface water quality standards and establish natural (system potential) temperature levels for streams and rivers that reflect conditions within the watershed.	On-Going	M	State Legislature, DOE/WDFW; CD's	Current TMDL processes may identify excedence variances to state standards. PU May elect to assess natural system potential temperature limitations and pursue alternatives.
Promote conservation and efficiency of water use, including but not limited to municipal, residential, commercial, industrial, agricultural, recreational, and instream water uses.	On-Going	M	DOE/CD's	Conservation and Efficiency are high a priority, PU recognizes other funding sources that are currently focused on this strategy. PU Funding not primary funding source, maybe supplemental source where addressing specific strategy components.
Explore opportunities for water right leases and/or acquisitions through the WDOE Trust Water Program and/or water banking.	By 2010	M	DOE, SRFB/ WDFW; CD's	Statutory infrastructure not in place to operate water bank, however Trust Water Program may be a viable in some sub-basins. Irrigated ag needs to be preserved.
Establish and maintain ongoing water resource management education and outreach, addressing topics including water use, conservation, reclamation, reuse, urban stormwater management and best management practices.	On-Going	M	DOE/ Asotin PUD; CD's; Counties	Goal of Plan and DIP
Improve scientific basis, including use of bio-assessment performance measures (e.g., indicator species) for understanding baseline conditions and measuring watershed enhancement.	On-Going	M	BPA, SRFB/ WDFW	PU Support of county weed boards to enhance consistencies and reduce duplication of effort. PU funding not primary funding source, maybe supplemental source where addressing specific strategy components.
Manage stormwater in urban areas to improve water quality, reduce flooding and enhance aquifer recharge where practicable.	On-Going	M	State Legislature, DOE, WCC/ Counties; CD's	PU Funding not primary funding source, maybe supplemental source where addressing specific strategy components.
Encourage urban stormwater and/or wastewater reclamation and reuse to satisfy other water resource needs.	On-Going	M	DOE/Counties; CD's	PU funding not primary funding source, maybe supplemental source where addressing specific strategy components.

Appendix A1 Habitat Projects within WRIA 35 Implementation Areas *(Low Priority Project and Policies)*

Project and Policy Description	Status	Priority	Funding Source/ Partners	Comments
Upgrade irrigation surface & groundwater wells to include meters	On-Going	L	DOE/CD's	Required per Chapter 90.03 RCW
Characterize ground water conditions; determine if additional ground water is needed for the City of Pomeroy	By 2015	L	City of Pomeroy	Current water right was evaluated to be sufficient for 20 year growth projection
Characterize ground water conditions to determine if an additional 81 afy withdrawal from ground water is sustainable	On-Going	L	City of Asotin	PU supports the City of Asotin during their evaluation process
Seek additional water rights to develop additional water supply of 81 afy from ground water to provide future needs of City of Asotin, if study determines withdrawal is sustainable	By 2015	L	City of Asotin	PU supports their need for identifying water availability for future growth
Conduct detailed hydrogeology study to understand basalt and alluvial ground water resources in Asotin and Alpowa subbasins and identify sustainable levels of ground water withdrawals and opportunities for future needs	Completed	--	DOE/Asotin PUD	On-Going and may be used to make future groundwater management decisions including reservations if needed in the Asotin and Alpowa Watershed. (Completed)
Sole source aquifer study	Completed	--	DOE/USGS; Asotin PUD	Lewiston Basin Aquifer - petitioned to EPA for sole source Aquifer designation in Dec 87. Official - Sept. 88. Publicizes the value of the ground water resources & provides federal water quality protection.

APPENDIX B – TUCANNON RIVER AND PATAHA CREEK TEMPERATURE TMDL

APPEXDIX B. Table 1. Implementation activities needed to meet load allocations and the water quality parameters they affect. From Tucannon/Pataha TMDL

Priority Ranking	Factors Related to Impairment	Implementation Category	General Action (BMP) to Improve Water Quality	Water Quality Outcomes	Stream Temperature	Turbidity	Nutrients and DO	Fecal Coliform	Point Source Flow	Metals	Toxics	Instream Flows
1	Shade Deficit & Microclimate Cooling	Restore Natural Function	Restore and Conserve riparian appropriate buffer widths	Increases success of new plantings, restores native ecology	☑	☑	☑	☑	☐	☑	☑	☑
			Riparian width sufficient to provide for microclimate cooling	Reduces air temp, and convective heat transfer, increases humidity	☑	☑	☑	☑	☐	☑	☑	☑
2	Animal Husbandry	Infrastructure Development	Fence riparian areas	Reduces impact on water quality and damage to riparian vegetation	☑	☑	☑	☑	☐	☐	☐	☐
			Install off-stream watering troughs away from the riparian area	Alternative to watering in streams, used in conjunction with fencing	☐	☑	☑	☑	☐	☐	☐	☐
		Resource Management Improvement	Develop and follow a riparian grazing management plan.	Protects riparian vegetation from grazing damage.	☑	☑	☑	☑	☐	☐	☐	☐
			Place salt licks in the upland areas	Controls access to surface water	☐	☐	☐	☐	☐	☐	☐	☐
3	Channel Instability	Restore Natural Function	Channel Stability/Habitat Improvement Structures	Restores floodplain connectivity and reduces channel entrenchment	☑	☑	☐	☐	☐	☐	☐	☑
				Re-established stream channel meanders increases effective shade	☑	☑	☐	☐	☐	☐	☐	☑
				Increases channel complexity, Increases inter-gravel flow, Improves fish habitat and survival	☑	☐	☐	☐	☐	☐	☐	☑
			Add riparian vegetation, build and maintain stable streambanks	Decrease stream width-to-depth ratios results in a decrease in the rate of stream heating	☑	☑	☑	☑	☐	☑	☑	☑

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4	Agriculture	Behavior Change	Shallow aquifer recharge	Protects or enhance ground water flows in gaining reaches	☑	☐	☐	☐	☐	☐	☐	☑
			Education to promote strip cropping/divided slope	Prevents runoff into streams	☑	☑	☑	☐	☐	☐	☐	☐
			Education to promote direct seeding practices	Less sediment delivered to stream	☑	☑	☑	☐	☐	☐	☐	☐
			Education to promote Livestock BMPs	Landowners restore and maintain healthy riparian areas	☑	☑	☑	☑	☐	☐	☐	☐
		Infrastructure Development	Pipe or line canals	Protects or enhances surface water flows	☑	☑	☑	☐	☐	☐	☐	☑
			Install buffer strips, field borders, filter strips	Filters and minimizes stormwater runoff	☑	☑	☑	☐	☐	☐	☐	☐
		Resource Management Improvement	Enroll in seasonal, annual or permanent trust water program	Protects or enhance surface & ground water flows	☑	☐	☐	☐	☐	☐	☐	☑
			Conversion of high water demand crops to low water demand crops	Protects or enhance surface & ground water flows	☑	☐	☐	☐	☐	☐	☐	☑
			Apply water scheduling program	Protects or enhance surface & ground water flows	☑	☐	☐	☐	☐	☐	☐	☑
			Increase efficiency of irrigation systems	Protects or enhance surface & ground water flows	☑	☐	☐	☐	☐	☐	☐	☑
5	Roads	Infrastructure Development	Decommission or relocate roads away from surface water where possible	Reduce impacts from roads, especially near surface water	☑	☑	☑	☑	☐	☑	☑	☑
			Road Maintenance BMPs	Reduce pollutant runoff from roads	☑	☑	☐	☑	☐	☑	☐	☐
			Vegetated buffers to roads adjacent to streams	Reduce impacts from roads, especially near surface water	☑	☑	☐	☐	☐	☐	☐	☐

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6	Water Conservation	Behavior Change	Low flow shower heads & toilets	Reduce residential water use thereby reducing influent to STPs	☑	☐	☐	☐	☑	☐	☐	☑
			Efficient irrigation systems; use low flow systems	Reduced need for withdrawals for irrigation	☑	☐	☐	☐	☐	☐	☐	☑
7	Stormwater	Infrastructure Development	Install swales, catch/filtration basins	Prevent run-off	☑	☑	☑	☑	☐	☑	☑	☐
			Permeable parking lots, roads & sidewalks	Allow stormwater to infiltrate	☑	☑	☑	☑	☐	☑	☑	☑