

**Walla Walla Basin
Bi-State Water Management Planning**

**US Bureau of Reclamation
WaterSMART
Cooperative Watershed Management Program
Task Area A – Grant Proposal**

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2 TECHNICAL PROPOSAL

2.1 EXECUTIVE SUMMARY

The Walla Walla Basin Watershed Council (WWBWC), in coordination with the Walla Walla Watershed Management Partnership (WWWMP) and other stakeholders, proposes to create a Bi-state Walla Walla Basin Watershed Management Group and develop a comprehensive Walla Walla Basin Water Management Plan that will enhance instream flows necessary to sustain Endangered Species Act (ESA) listed aquatic species, Tribally re-introduced spring Chinook, and vital ecosystem functions while at the same time providing water needed to sustain irrigated agriculture, residential use, and municipalities in the Walla Walla River basin. The Walla Walla River basin is located in Umatilla County, northeast Oregon and Walla Walla County and Columbia County, southeast Washington. A diverse array of stakeholders from both states convened a Bi-State Stream Flow Enhancement Study Steering Committee (steering committee) in 2014 to develop and implement the Walla Walla Basin Integrated Flow Enhancement Study (Flow Study). The Flow Study intends to solve stream flow issues while protecting the viability of current and future out-of-stream water uses. Decision-making ground rules have been developed and adopted, interim instream flow targets have been established, and Technical Work Groups are overseeing assessments and feasibility studies of potential water management projects. The steering committee needs to be formalized into a bi-state water management group that will oversee the development and implementation of a technically feasible and locally acceptable comprehensive water management plan. The Cooperative Watershed Management Program award will help fund the Walla Walla Basin's water planning at a critical time when there are increasing demands for limited water, and a diminishing supply of water as we are experiencing impacts from climate change. This proposed plan development will require two years to complete, with a final product in September of 2018.

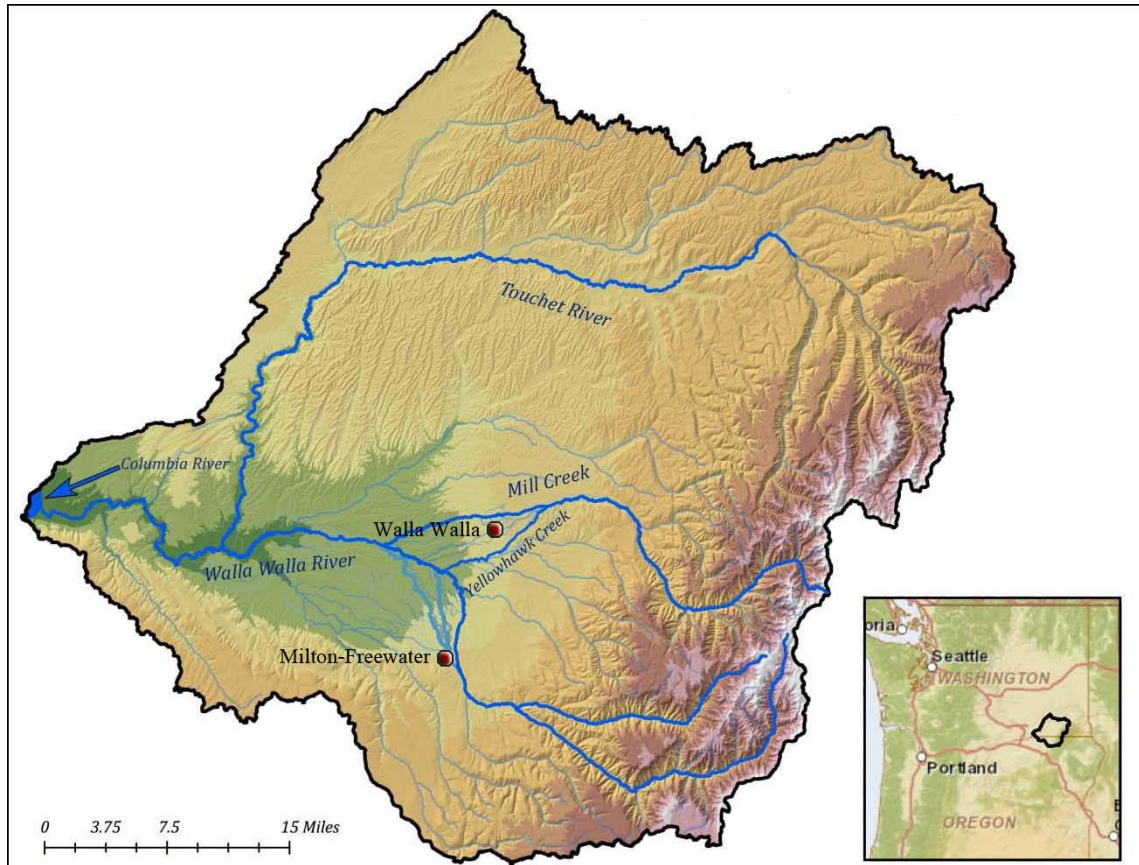
2.2 BACKGROUND DATA

2.2.1 WATERSHED DESCRIPTION

The Walla Walla Basin drains an area of 1758 square miles and has a population of over 50,000 people. The basin elevations range from 6250 feet in the mountains to 340 feet at the mouth of the Walla Walla River where it drains into the Columbia River. Annual rainfall averages 50 inches at the highest elevations and less than ten inches at the lowest elevations.

The Walla Walla Basin historically sustained permanent encampments of Native Americans subsisting on salmon runs, other aquatic species, and terrestrial wildlife, as witnessed and

documented by the U.S. military's Lewis and Clark expedition and other fur trapper and exploration accounts in the early 1800s. The valley was then settled by Euro-American settlers in the latter half of the 1800s, and became a thriving hub supplying wheat and livestock for the gold mining camps in Oregon, Idaho, and Alaska.



The Basin is still one of the larger wheat and fruit producing regions of the inland Northwest. The Walla Walla River and its tributaries currently provide irrigation water to over 40,000 acres of farmland and pastures, while also sustaining an annual run of 500-1000 wild ESA listed steelhead adults, an annual run of around 500 re-introduced spring chinook salmon, and a population of ESA listed bull trout. A tributary of the Walla Walla River, Mill Creek, provides drinking water to Walla Walla, the largest city in the valley.

There are no above ground water storage reservoirs in the basin. The city of Walla Walla has been implementing an Aquifer Storage and Recovery program in the deep basalt since 1999. The WWBWC, in cooperation with local farms and irrigation districts, has been implementing a managed aquifer recharge program since 2005, putting up to 7700 acre feet in the shallow gravel aquifer each winter. The WWBWC in Oregon, and the Walla Walla County Conservation District in Washington have brought in cost share grant funding to pipe over 20 miles of leaky irrigation district water delivery canals and assisted over 100 farms in installing more efficient

water application systems. The WWBWC and states' water monitoring programs have documented declining base flows in the river in recent decades, and groundwater level declines of up to 40 feet. Mountain snow packs in recent years have been less than average, contributing to limited water availability in recent drier, and hotter than average, growing seasons.

The Walla Walla Basin is a sub-basin of the Columbia River Basin. The Walla Walla basin is bisected by the Oregon/Washington state line. The dominant streams are the South Fork Walla Walla River, Mill Creek, and the Touchet River, all of which have pristine, or nearly pristine, headwaters in the Blue Mountains. Lower in the basin the Walla Walla River and Mill Creek flow through farms and pastures and the Communities of Walla Walla City and the town of Milton-Freewater. That portion of the basin is a wide alluvial fan of distributaries and spring creeks emerge and provide cool stream flow to the River in the summer. The Walla Walla River confluence with the Columbia River is just downstream from where the Snake River and Yakima Rivers enter the Columbia River.

2.2.2 WATER RIGHTS INVOLVED

The water rights involved in this water management planning process include some of the oldest water rights in Oregon and Washington, dating back to the 1860s. The three largest Irrigation districts in the bi-state basin, Walla Walla River Irrigation District (3212 acres), Hudson Bay District Improvement Company (8000 acres), and Gardena Farms Irrigation District (7000 acres), total approximately 425 water users. This comprises approximately 3/4 of the surface water irrigated acreage in the Walla Walla valley. Native American tribal treaty water claims held by the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), which have not been quantified, will also benefit from this water planning project. The two largest towns in the basin are participating in this flow study and water planning. One of those cities Walla Walla, uses surface water, the other Milton-Freewater uses groundwater, but has a historical claim to municipal surface water.

2.2.3 WATER ISSUES

Water resource issues in the Walla Walla River Basin include, but are not limited to, the following:

- Inadequate stream flows for ESA listed fish, CTUIR re-introduced spring Chinook, water quality, other native aquatic species, and ecosystem functions;
- Reduction of out-of-stream water supplies for irrigated farms, many of whom have already sacrificed a third of their water rights as part of an out of court settlement agreement negotiated in 2000 with USFWS for ESA listed bull trout, leaving 25 cubic feet per second (cfs) in stream in summer, and 27 cfs in stream the rest of the year;

- Inadequate flows to meet a NOAA Fisheries 49 cfs flow target for ESA listed steelhead identified during a Habitat Conservation Plan process in the 2000s;
- Inadequate water quantity and quality necessary to achieve CTUIR objectives to restore and sustain harvestable populations of native aquatic species;
- Declining shallow (gravel) aquifer water supplies;
- Declining deep (basalt) aquifer water supplies;
- Decreasing snowpack – reduction in natural storage;
- No surface water storage;
- High stream temperatures in the middle and lower reaches of the Walla Walla River
- Increasing temperatures during growing season; and
- Increasing potential for additional water conflicts.

2.3 TECHNICAL PROJECT DESCRIPTION

For the last year and a half, the WWWBWC has been the co-lead for the Walla Walla Basin Integrated Flow Enhancement Study (Flow Study) funded by the Washington State Office of Columbia River (OCR). Our Washington partner co-leading this effort is the Walla Walla Watershed Management Partnership (WWWMP). OCR funds have covered the costs of developing an initial action plan, assessing the fisheries, expanding our integrated surface water groundwater model to encompass the Washington portion of the valley, assessing the feasibility of a water exchange system, designing water delivery efficiencies, and analyzing instream flow protection options. See attached “Walla Walla Bi-state Stream Flow Enhancement Study Interim Progress Report” for more information about accomplishments to date.

The OCR funds have helped create a solid foundation but they are limited. The Bureau of Reclamation Cooperative Watershed Management Program funds will enable our bi-state partnership to diversify the participants, formalize the group, expand its capabilities to implement larger scale water development projects, and to complete a water management action plan that will describe the water management projects that will allow us to attain our water availability goals for multiple uses.

Current partners on the bi-state water planning include the CTUIR, the three largest irrigation districts in the basin (Walla Walla River Irrigation District at 3200 acres, Hudson Bay District Improvement Company at 8000 acres, and Gardena Farms Irrigation District at 7000 acres), Oregon Water Resources Department (OWRD), Washington Dept. of Ecology, Washington Office of Columbia River, Oregon Department of Fish and Wildlife (ODFW), Washington Department of Fish and Wildlife WDFW, Walla Walla County Conservation District, and the Walla Walla Water Management Partnership.

The CTUIR, ODFW, and WDFW provided input on the numerical flow targets for maintaining and improving native fish populations. The Irrigation Districts and individual irrigators will inform the process regarding their out-of-stream water needs and what water management projects are feasible. The State water agencies will inform the planning process with what is possible within state water law and providing insight gained from similar experiences in other Basins.

A governance agreement, “Flow Study Steering Committee Ground Rules,” has been developed to guide the Flow Study process. A strategic Water Management Planning process will utilize the outcomes from the Flow Study to develop a Walla Walla Basin Water Management Plan based on a suite of water development and water management projects that can achieve the goals of our bi-state steering committee.

Water Plan meetings will be openly advertised for the public to attend. The partner organizations will make decisions by consensus. Adequate information regarding projects is currently being developed by contractors working under the oversight of locally designated Technical Work Groups. The steering committee will use the information, including cost/benefit and feasibility analysis, to determine which of the proposed projects can be packaged to meet the instream and out of stream water availability goals.

The Bureau funded Water Planning will build upon the initial work completed by Flow Study (see attached Interim Progress Report, July 20, 2015). We will continue to use the Bi-state Water Study section of our WWBWC website, <http://www.wwbwc.org/assessment/57-wwflow> to communicate agendas, minutes, study reports, project data to project partners and the public. We will also use monthly board meetings, local newspapers and email networks. Updates will be provided to the Board of County Commissioners.

2.3.1 DESCRIPTION OF APPLICANT

The WWBWC has been a basin leader, heading up basin wide assessment, planning, and monitoring activities related to water management. The WWBWC does business on behalf of the Walla Walla Basin Watershed Foundation, a 501c3 organization founded in 1999. The WWBWC mission is to protect the resources of the Walla Walla watershed, deal with issues in advance of resource degradation, and enhance overall watershed health, while also protecting, as far as possible, the welfare, customs, and cultures of all citizens residing in this basin.

The Walla Walla Basin Watershed Council is one of several Oregon watershed councils formed by state statute in the 1990s. Watershed Councils are comprised of members of a community representing diverse interests who work together to identify locally acceptable solutions to natural resource issues affecting their local environment. In the Walla Walla valley, the priority

issues have been related to limited water availability for both instream and out of stream needs, and fish passage for federally protected fish species.

The Walla Walla Basin Watershed Council has brought in over \$17 million dollars of state, federal, and private grant funds over the last 20 years for projects, including water efficiency and fish passage projects, to improve watershed conditions. These funds have also been used for projects to restore groundwater levels, improve mountain roads to reduce sedimentation of streams, install upland ponds, stream habitat projects, levee setbacks, science education support for local schools, and monitoring the improvements to groundwater levels and stream flows. The WWBWC played a key role in assisting the local community restore summertime stream flows in 2002 to a reach of the Walla Walla River that had gone dry each irrigation season for over 100 years.

Five full time and two part time staff members work for the council. Board meetings are open to the public and occur the 3rd Monday of each month at 7PM at the Milton-Freewater Community Building. Many of the WWBWC board members operate local farms or businesses: John Zerba (Chair), Ray Williams, Ralph Perkins, Clark Lampson, David Close (CTUIR), Steve Irving (City of Milton-Freewater), Vern Rodighiero, Larry Widner, Ed Chesnut (City of Milton-Freewater), Malcolm Millar, Robert Waldher (Umatilla County). The Umatilla County Commissioners recognized/authorized the WWBWC to review and appoint WWBWC board members.

Projects are decided by a consensus of the WWBWC Board of Directors. Information about our completed studies and projects is available to the public via newspaper articles and our WWBWC website. The WWBWC received the national Walter C. Loudermilk award in 2006 for our science based restoration projects and outreach program. Local offices of Federal and State agencies often use the WWBWC meetings as a venue for interaction with the local community concerning natural resource management.

The WWBWC represents diverse interests and viewpoints, maintains neutrality on contentious topics, and utilizes collaborative, widely-supported processes to develop solutions for natural resource issues. The WWBWC is committed to long-term water planning and management. Some of the WWBWC Board members have been involved in public water planning since the 1970s.

The diverse water partnership in the Walla Walla Basin has demonstrated through its non-confrontational style, known as the “Walla Walla Way,” that it is capable of solving complex and contentious water issues. After successfully restoring stream flows for fish to a river that had been dried up each summer for a century, while keeping local irrigated agriculture intact, the Walla Walla Basin received national recognition. The same partners described in this proposal,

including the Walla Walla Basin Watershed Council, were selected to represent the Walla Walla Basin at the 2005 White House Conference on Cooperative Conservation in St. Louis. The WWBWC as co-lead with the WWWWMP, with guidance from our local Tribes, irrigation districts, and state agencies, are ready to create a cooperative and sustainable long term Water Management Plan to resolve local water availability issues.

2.3.2 ELIGIBILITY OF APPLICANT

The Walla Walla Basin Watershed Council is a non-regulatory, locally based organization doing business under the 501c3 Walla Walla Basin Watershed Foundation. The WWBWC has been implementing water quantity and water quality improvement and monitoring projects since its formation in 1994. Many of the projects have involved irrigation water delivery efficiency, on farm water efficiency upgrades, managed aquifer recharge, but projects have also included fish passage and fish habitat improvement projects.

The WWBWC promotes sustainable use of surface water and groundwater resources as a way to ensure water availability for competing uses including agricultural, residential, urban, and ecological. The WWBWC implements streamflow restoration, fish passage, and fish habitat projects, and water quantity and quality monitoring on the Oregon side of this bi-state basin. The WWBWC implements aquifer recharge projects and similar water monitoring work on the Washington side of the Walla Walla Basin. The WWWWMP, Flow Study co-lead, was formed in 2008 under state statute and has County Commissioners and a Walla Walla city board member on its governing board.

WWBWC water planning experience includes:

- Walla Walla stream flow Habitat Conservation Planning co-convener, 1999-2002
- Comprehensive Irrigation Management Plan, Upper Walla Walla River and Forks, 2007
- Walla Walla stream flow Habitat Conservation Planning co-convener, 1999-2002
- Comprehensive Irrigation Management Plan, Upper Walla Walla River and Forks, 2007
- Walla Walla River Temperature TMDL assessment and plan co-lead, 2005
- Co-lead on Walla Walla Subbasin Plan, completed for Bonneville Power Administration, 2004
- Walla Walla Basin Aquifer Recharge Strategic Plan, 2013
- Co-lead with WWWWMP on Walla Walla Bi-state Streamflow Enhancement Study, 2014-2016
- Local facilitation for Mid-Columbia River Basin Bull Trout Recovery Plan
- Local facilitation for Mid-Columbia River Steelhead Recovery Plan
- Watershed Assessment, Upper Walla Walla River Basin, Bureau of Reclamation, 1997

- Watershed Action Plan, Upper Walla Walla River Basin, Bureau of Reclamation, 1999

The WWBWC is a primary collector and distributor of water data in the Walla Walla Basin (stream flow levels, gravel aquifer groundwater levels, and water quality). Data is accessible via our WWBWC website www.wwbwc.org

2.3.3 GOALS

The plan seeks to accomplish the following goals:

- Instream flow targets to meet the needs of ESA listed steelhead and bull trout, and spring chinook salmon (reintroduced by the CTUIR);
- Sustained out-of-stream water use for existing irrigated agriculture totaling approximately 40,000 acres;
- Groundwater level stabilization and restoration for residential, agricultural, municipal and ecosystem functions;
- Identify water development projects and water management changes that will achieve goals;
- Develop a Bi-State Water Management Group; and
- Develop a technically feasible and locally accepted Walla Walla Basin Water Management Plan.

The steering committee agreed by consensus to interim stream flow targets for the Walla Walla River. These interim targets do not represent the interests of any individual group member; they represent interim targets that the entire committee could accept. The below table identifies the adopted target average flows, which explicitly do not include peak and ecological flow components, from the Cemetery Bridge POD to the mouth.

Time Period	Short Term Target	Long Term Target
Jul 1 – Nov 30	65 cfs	100 cfs
Apr 1 – Jun 30	100 cfs	150 cfs

2.3.4 APPROACH

It is recognized by the WWBWC board and other Basin partners that we need to expand upon the initial Flow Study and develop a comprehensive strategic plan for improving stream flows and overall water availability to meet in-stream and out of stream needs. The planned approach is to further investigate the feasibility of water development project options utilizing the secured Washington OCR funding and any additional funding secured from Oregon and Washington

grant programs. OCR and Oregon Water Development Feasibility Study funds have provided cost and feasibility information for the Columbia River Pump Exchange, expanding the Walla Walla water model, and assessing a site for Aquifer Storage and Recovery. One of the next studies will assess sites for off channel surface water storage.

The existing steering committee is being expanded to increase diversity. The steering committee intends to invite the Fruitvale Water Users Association (a smaller irrigation district), spring branch water users represented by the Little Walla Walla River working group, upriver irrigators, cities of Milton-Freewater, Walla Walla (in Washington, but has a municipal water right in Oregon), and regional agency, environmental and industry organizations.

Before developing a Walla Walla Water Management Plan, we will need a detailed analysis and assessment of water conditions and trends. The WWBWC has been collecting data for fifteen years. This data, coupled with State and Federal data, will provide the water supply, water demand, and hydrologic trend information needed to analyze the effectiveness of our proposed water projects.

The steps necessary to accomplish this approach are:

- Formal Establishment of a diverse and inclusive Bi-State Watershed Group;
- Complete assessment of river conditions, water availability and water demands;
- Complete initial study of water development project options;
- Review water projects and water management options and their ability to achieve water availability targets;
- Develop water project/water management scenarios;
- Model scenarios, including model runs with climate change projections;
- Reach consensus on a scenario of water development projects, the water strategy;
- Complete necessary outreach locally, regionally, and nationally to ensure feasibility; and
- Finalize Walla Walla Basin Water Management Plan

Technical assistance needs for the assessment phase include the following:

- Deep and shallow aquifer trends;
- Review of integrated surface water groundwater model;
- Review of winter water availability for out of stream storage (above ground or below ground) that still meets ecological needs; and
- Complete water project feasibility assessments, some of which we have begun assessing/designing with Washington OCR and Bonneville Power Administration funds).

The watershed group will need to complete the feasibility analysis of various water storage and water exchange options, coupled with irrigation efficiency and aquifer recharge. The group will need to debate and come to consensus upon a suite of approved actions to increase water availability and water quality.

Anticipated results include: a better understanding of current water conditions, what projects can resolve existing water issues, and an understanding of what projects are supported locally and regionally (including state industry groups and conservation groups). The Walla Walla Streamflow Improvement and Water Availability Strategic Action Plan will serve as a strategic plan that can assist with securing state and federal support for implementing large scale, and additional, smaller scale water management projects.

2.4 EVALUATION CRITERIA

2.4.1 WATERSHED GROUP DIVERSITY & GEOGRAPHIC SCOPE

The Bi state Walla Walla Stream Flow Enhancement Study Steering Committee is currently being expanded to encompass a broader representation of the local community. This group will become the bi-Walla Walla Bi State Watershed Management Group. Existing members and members that will be invited are as follows (potential new members are indicated by an *):

Voting Members:

- Gardena Farms Irrigation District
- Walla Walla River Irrigation District
- Hudson Bay Ditch Irrigation Company
- Bergevin/Williams & Old Lowden
- Fruitvale Water Users Association
- Confederated Tribes of Umatilla Indian Reservation
- Washington Department of Fish & Wildlife*
- Oregon Department of Fish & Wildlife*
- Tri-State Steelheaders *
- Kooskooskie Commons
- City of Walla Walla*
- City of Milton-Freewater*

Ex-Officio Members:

- Walla Walla Watershed Management Partnership
- Walla Walla County Conservation District*
- Columbia County Conservation District*
- Umatilla County Soil and Water Conservation District*
- Trout Unlimited*
- Walla Walla Basin Watershed Council
- Oregon Water Resources Department
- Washington Department of Ecology
- United States Fish and Wildlife Service*
- National Oceanic and Atmospheric Administration*
- Oregon Department of Environmental Quality*

Advisory Members

- Umatilla County Commissioners*
- Walla Walla County Commissioners*
- Columbia County Commissioners*
- The Freshwater Trust*
- Snake River Salmon Recovery Board*
- National Resources Conservation Service*
- U.S. Representative and Senate Staff*
- State Representative and Senate Staff*
WA State Department of Agriculture*
- Oregon Department of Agriculture*
- United States Corps of Engineers*
- Bureau of Reclamation*
- U.S. Forest Service*

Voting members are expected to consistently attend meetings and provide feedback and review of documents distributed, and to make deadlines for those reviews. It is up to the entity stated to name the person to represent that group (and it may change from meeting to meeting). At meetings, the representative is expected to have “active involvement”. Ex-officio members have the same expectations as voting members, except they do not have a vote. Advisory members will be kept apprised of the Flow Study and can provide input but are not expected to attend meetings

The intended membership includes representation from irrigation districts, individual farms, livestock owners, business owners, Native American Tribes with ceded territory in the Basin, local environmental organizations, county governments, city governments, and state water and fish management agencies from both Oregon and Washington.

The Walla Walla River Basin is a small to mid-sized watershed USGS 4th field hydrologic unit, # 17070102, covering 1758 square miles. This proposal seeks watershed management solutions that will benefit the entire basin. Over 40 potential reservoir sites are being considered around the Basin. The participating irrigation districts represent over 2/3rds of the irrigated lands. Eighty percent of the Basin is on private lands.

2.4.2 ADDRESSING CRITICAL WATERSHED NEEDS

Critical watershed needs have been determined by local, state and federal input on the following federal assessment and planning projects:

- Walla Walla River Temperature TMDL assessment and plan, EPA, 2005;
- Mid-Columbia River Basin Bull Trout ESA Recovery Plan, USFWS, 2003;
- Mid-Columbia River Steelhead ESA Recovery Plan, NOAA Fisheries, 2009;
- Draft Walla Walla General Investigation, US Army Corps of Engineers, 2009;

- Limited stream flows is a critical issue for in stream and out of stream uses, maintaining water quality such as water temperature; and
- Groundwater declines are also an issue and directly correlate to declines in base flows of the Walla Walla River in the summer and fall months.

2.4.3 IMPLEMENTATION & RESULTS

The Walla Walla Watershed Management Group will be formed and will complete an assessment of stream flow conditions, water availability and water demands. The Group will also complete an initial feasibility study of potential surface water storage reservoir sites, a study of a Columbia River Source exchange pump and pipe delivery system, aquifer storage and recovery, shallow aquifer recharge, irrigation delivery and on-farm efficiency, voluntary water purchase and leasing, and point of diversion source exchanges. These projects will be evaluated as potential aspects of a suite of water projects that would then be modeled for evaluating improvements and impacts to stream flows and groundwater levels. A final scenario of projects will be decided upon and a final report describing this Bi State Walla Walla Water Management Plan.

2.4.4 BUILDING RESILIENCE TO DROUGHT

Irrigation efficiency upgrades, managed aquifer recharge, potential reservoirs, and a potential source exchange with the Columbia River are all water management tools that will assist tens of thousands of acres of farms, ranches, residential well users, and municipal well users to minimize the impacts of future droughts and potential climate change trends. Along with these out of stream and out of ground water users, aquatic species such as ESA listed fish in the Walla Walla Basin will also be more resilient to drought and climate change impacts with these water development and water management projects implemented in the Walla Walla Basin.

3 LETTERS OF PROJECT SUPPORT

Letters of support from the Walla Walla Watershed Management Partnership, Hudson Bay District Improvement Company, and the Confederated Tribes of the Umatilla Indian Reservation are attached at the end of the proposal.

4 REQUIRED PERMITS & APPROVALS

No permits or approvals will be necessary at this stage of our water management planning. Permits will only be needed once we complete our planning and have designed one or more water development projects which will require construction.

5 OFFICIAL APPLICANT RESOLUTION

See attached Resolution signed by the Chair of the Walla Walla Basin Watershed Council.

6 PROJECT BUDGET

6.1 BUDGET PROPOSAL

The WWBWC has not received any other Federal funds for this project. The WWBWC does business under the Walla Walla Basin watershed Foundation, a 501c3 non-profit. Match funding from the Washington State Department of Ecology Office of Columbia River has been secured for initial planning group formation, assessment work, and initial water planning, and is available through a contract with the Walla Walla Watershed Management Partnership.

This proposal requests \$100,000 from the BOR CWMP program to match existing \$60,000 of Washington state Office of Columbia River to complete the formation of a Bi-state Walla Walla Water Management Group from the existing Walla Walla Flow Study Steering Committee, complete the Basin Assessment, evaluate potential water development projects, and complete a Bi-State Walla Walla Water Management Plan.

A	B	C	D	E	F	G
<i>Itemize projected costs under each of the following categories:</i>	Unit Number	Unit Cost	Bureau of Reclamation	Cash Match	In-Kind Match	Total Costs
	(e.g., # of hours)	(e.g., hourly rate)				(add columns D, E, F)
SALARIES, WAGES AND BENEFITS.						
Project Manager	400	60	12,750	11,250		24,000
GIS Specialist	150	40	3,000	3,000		6,000
Fiscal Technician	50	25	625	625		1,250
SUBTOTAL (1)			16,375	14,875	0	31,250
FRINGE BENEFITS.						
Project Manager	400	20	4,250	3,750		8,000
GIS Specialist	150	15	1,125	1,125		2,250
Fiscal Technician	50	15	250	250		500
SUBTOTAL (2)			5,625	5,125	0	10,750
CONTRACTED SERVICES.						
WWWMP			10,000	10,000		20,000
Facilitation Scenario Development			67,000	30,000		97,000
SUBTOTAL (3)			77,000	40,000	0	117,000
TRAVEL.						
						0
						0
SUBTOTAL (4)			0	0	0	0
MATERIALS/SUPPLIES.						
Mapping Materials			500			500
Printing			500			500
SUBTOTAL (5)			1,000	0	0	1,000
EQUIPMENT/SOFTWARE						
						0
SUBTOTAL (6)			0	0	0	0
OTHER.						
						0
SUBTOTAL (7)			0	0	0	0
INDIRECT						
						0
SUBTOTAL (8)			0	0	0	0
GRANT BUDGET TOTAL (9)			100,000	60,000	0	160,000

6.2 BUDGET NARRATIVE

Federal BOR funds will cover WWBWC staffing costs necessary for project management, facilitation, outreach, water modeling, mapping, plan development, reporting and fiscal administration. A portion of the contracted services for co-leading project management, facilitation, outreach in Washington State, and assisting with plan development will be provided by the Walla Walla Watershed Management Partnership. A larger portion of the Contracted services will fund a private contractor, to be determined through a competitive bid process, to

complete the facilitation, plan development, and plan write up. Please see the attached Plan Manager RFP for more information about contracted services.

Matching non-Federal OCR funds will fund \$20,000 of the co-Lead project management costs incurred by the WWBWC and WWWMP, and \$40,000 for contracted services for facilitation and Flow Study and Strategic Water Plan development and plan write up.

WWBWC staff that will be working on this project include the following:

- Brian Wolcott, Executive Director, will act as Program manager for this project.
- Troy Baker, Monitoring and GIS Program Manager
- Chris Sheets, Fiscal Technician

Contractor will manage the implementation of the existing Flow Study process, planning group formation, and development of the Water Management Plan and report. Specifically, the Contractor will manage a myriad of products and communication with various process participants in order to gain the necessary information to complete final reporting requirements.

The Flow Study process will involve numerous subcontracted products and TWG-developed products such as assessments, modeling, project profiles, preliminary designs, etc. that will be necessary for development of a final report. The contractor will:

1. Receive, collate, and comprehensively manage all products from Flow Study tasks;
2. Communicate with Steering Committee, Flow Study sub-contractors, technical work groups and Co-Leads as necessary to understand and document the application of each product in the final flow study report;
3. Recommend additional products or processes necessary to produce a Flow Study Report which sequentially documents a decision process including initial project identification, screening, analysis and final project recommendations; and
4. Present project and product status updates and, utilizing the Strategic Plan and Schedule working document, recommend adjustments as necessary to meet deadlines.
5. Lead the Committee through a scenario selection and modeling process.
6. Finalize scenario.
7. Develop and write Water Management Plan.

Contractor will document the process and outcomes of the Flow Study and Water Management Plan into a final Report due September 15, 2018. A project planning process which culminates in final flow project package recommendations by the steering committee will be thoroughly documented with rationale for all sequential decisions regarding project identification, screening, analysis and final recommendations. The final report shall also include an outline of recommended next steps to continue the process towards design and implementation. Contractor will complete and present a review draft of the report to the steering committee followed by a final Water Management Plan Report. Costs are based on past experience with similar bi-state planning projects.

Materials and supplies costs are determined to be \$1000 based on past experience from similar bi-state planning work the WWBWC has led in the Basin. Those costs include office costs for modeling, mapping, meeting materials, outreach materials, and printing and mailing costs for distribution of review drafts and final versions of the Water Management Report and appendices.

Attachments

Walla Walla Basin Watershed Council Resolution

Letter of Support

Assessment and Planning Schedule

Bi-state Flow Study Steering Committee Ground Rules

Water Project Initial Review Table

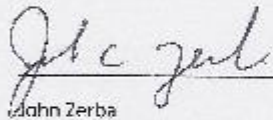


May 5th, 2016

Walla Walla Basin Watershed Council Resolution

Regarding Support of BOR Water Development Planning Proposal

The Walla Walla Basin Watershed Council resolves to support the application for funds necessary to implement the steps needed to complete a Bi-State Water Development Plan. The Walla Walla Basin Watershed Council Board members voted to support this effort at their April 18th, 2016 Board meeting.



John Zerba

Chairman, Walla Walla Basin Watershed Council



Walla Walla Watershed Management Partnership

For Fish. For Farms. For Everyone.

Dear Bureau of Reclamation:

May 3, 2016

This letter is concerning the Walla Walla Basin Watershed Council's (WWBWC) application to your agency for grant funding under the BOR's Water SMART program. We are writing in support of that application.

The WWBWC has a long history in helping to resolve water resource issues in our basin (in both states). They have shown themselves to be more than capable of tackling the large problems that face us here.

We believe having this funding will help us to identify sustainable solutions for water management adequate to support ESA and Tribal treaty water demands in the WW Basin, while also maintaining, and improving water availability for irrigated agriculture, municipalities, and residential use. This is a critical need as we have the increased demands for water from ESA fish listings and Tribal Treaty water needs, while at the same time we have been observing less water in the river, on average, in the last few decades, due to climate trends.

Additionally, these funds would complement the funding already received in this basin under the Office of Columbia River (part of the Department of Ecology, Washington's state water resource agency). These funds are being used to explore long term, big picture solutions to water issues here in the Walla Walla Basin. The WWBWC is a co-lead with our organization for this funding. However, the Office of Columbia River expenditures have not been able to provide for all of the needs here in this basin, and these WaterSMART funds would go a long way to help us get answers to some of the water resource questions that face us here.

Should you have any questions, feel free to contact the Executive Director of our organization, Mr. Chris Hyland at 509/524-5217 or at chris.hyland@wwcc.edu. Thank you.

Sincerely,



Mike Buckley, Chair
Walla Walla Watershed Management Partnership

May 5th, 2016

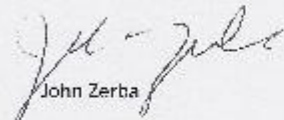
From: Hudson Bay District Improvement Company

To: Bureau of Reclamation CWMP staff

Re: Letter of Support for BOR CWMP Proposal

The Hudson Bay District Improvement Company is writing this letter of support for the B- State Walla Walla Water Planning Proposal being sent in by the Walla Walla Basin Watershed Council.

Sincerely,



John Zerba

Secretary, Hudson Bay District Improvement Company

**Confederated Tribes of the
Umatilla Indian Reservation**

Tribal Water Commission



16111 Timine Way
Pendleton, OR 97801

www.ctuir.org cticquacmpts@ctuir.org
Phone: 541 276 3165 Fax: 541 276 3075

Darren Olsen
Bureau of Reclamation
Denver Federal Center
Denver, CO 80225

Re: Support for Walla Walla Basin Watershed Council Cooperative Watershed Management Program Proposal

Dear Mr. Olsen:

On behalf of the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Department of Natural Resources (DNR), I am writing to express support for the Walla Walla Basin Watershed Council's (WWBWC) Cooperative Watershed Management Program (Program) proposal. The Bureau of Reclamation's (Bureau) WaterSMART program is consistent with the CTUIR's approach to natural resource management and the objectives of the ongoing Walla Walla River Basin Integrated Flow Enhancement Study (Study). A WaterSMART Phase I grant would complement existing funding and help ensure the Study results in a legally established diverse watershed group with a broadly supported restoration plan and scoped project concepts that offer a viable solution to our critical in-stream and out-of-stream water resource challenges.

Walla Walla River Basin water resource co-managers and stakeholders have a long and successful history of addressing sensitive challenges collaboratively. Despite significant efforts starting in the 1980s, a comprehensive and holistic water resource restoration and management plan has been difficult to achieve. While water resource improvements have been made and a strong collaborative foundation has been set, if the ongoing Study does not result in a viable restoration plan, the likelihood that existing and potentially worsening critical water resource issues lead to adversarial and single-interest approaches increases dramatically.

Comprehensive and holistic water resource planning is sensitive and difficult in any basin. As the proposal points out, the Walla Walla River Basin has many factors that magnify the sensitivity and complexity. A Bureau grant will help us explore solutions that remedy the ecosystem function impacts from over-allocation of surface and groundwater without undermining the successful agriculture sector and other values achieved from out-of-stream water uses. The CTUIR urges the Bureau to help fund our existing watershed group achieve success before cooperation turns to competition as it has throughout the West.

Sincerely,

John Barkley, Chair
CTUIR Tribal Water Commission

Cc: Brian Wolcott

Treaty June 9, 1855 ~ Cayuse, Umatilla and Walla Walla Tribes

Walla Walla Basin Steering Committee

Purpose, Structure, Ground Rules – 4/15/16 Draft

1. Purpose and Outcome

The purpose of the Walla Walla Basin Integrated Flow Enhancement Study is to determine the best package of options for increasing streamflow in the Walla Walla Basin for native fish, while maintaining the long term viability and water availability for irrigated agriculture, residential, and urban use. The primary outcome is intended to be a water management plan, based on the results of the feasibility study, with broad support for implementation to improve and protect stream flows across the Walla Walla Basin.

2. Structure

a. Steering Committee

- i. The Steering Committee strives for balanced membership and has defined that to include irrigation, tribal, local state, federal, and instream interests.

b. Technical Work Groups

- i. The Technical Work Groups help identify, analyze, and recommend products or projects for Steering Committee consideration and action.
- ii. Technical Work Groups represent broad-scale project categories including, but not limited to:
 - (1) Water Conservation and Infrastructure (Oregon)
 - (2) Water Conservation and Infrastructure (Washington)
 - (3) Managed Aquifer Recharge (MAR) and Aquifer Storage and Recovery (ASR)
 - (4) Surface to Groundwater Switch
 - (5) Surface Water Storage
 - (6) Columbia River Pump Exchange
 - (7) Water Right Transactions and Management
 - (8) Legal
 - (9) Policy Advisory

3. Representation

a. Steering Committee Members

The Walla Walla Watershed Management Partnership and the Walla Walla Basin Watershed Council will serve as the respective Washington and Oregon co-chairs of the Steering Committee. The Steering Committee is comprised of voting members, ex-officio members and advisory members. Each organization designates one person to represent it at Steering Committee meetings. A proxy can also be identified. Steering Committee members can add to this list.

Voting members are expected to consistently attend meetings and provide feedback and review of documents distributed, and to make deadlines for those reviews. It is up to the entity stated to name the person to represent that group (and it may change from meeting to meeting). At meetings, the representative is expected to have “active involvement”. Ex-officio members have the same expectations as voting members, except they do not have a vote. Advisory members will be kept apprised of the Flow Study and can provide input but are not expected to attend meetings

Voting Members:

- Gardena Farms Irrigation District
- Walla Walla River Irrigation District
- Hudson Bay Ditch Irrigation Company
- Bergevin/Williams & Old Lowden
- Fruitvale Water Users Association
- Confederated Tribes of Umatilla Indian Reservation
- Washington Department of Fish & Wildlife*
- Oregon Department of Fish & Wildlife*
- Tri-State Steelheaders *
- Kooskooskie Commons
- City of Walla Walla*
- City of Milton-Freewater*

Ex-Officio Members:

- Walla Walla Watershed Management Partnership
- Walla Walla Basin Watershed Council
- Walla Walla County Conservation District*
- Columbia County Conservation District*
- Umatilla County Soil and Water Conservation District*
- Oregon Department of Environmental Quality*
- Oregon Water Resources Department
- Washington Department of Ecology
- United States Fish and Wildlife Service*
- National Oceanic and Atmospheric Administration*
- American Rivers*
- Trout Unlimited*

Advisory Members

- Umatilla County Commissioners*
- Walla Walla County Commissioners*
- Columbia County Commissioners*
- The Freshwater Trust*
- Snake River Salmon Recovery Board*
- National Resources Conservation Service*
- U.S. Representative and Senate Staff*
- State Representative and Senate Staff*
- WA State Department of Agriculture*
- Oregon Department of Agriculture*
- United States Corps of Engineers*
- Bureau of Reclamation*

* Will be invited if approved by existing Steering Committee Members

b. Technical Work Group Members

The Steering Committee will identify, invite and designate members to each Technical Work Group. Steering Committee members may participate in Technical Work Groups. A Technical Work Group member with an affiliation outside the Steering Committee may be designated. An individual may serve on more than one Technical Work Group.

4. Decision-Making

a. Technical Work Groups

The role of the Technical Work Groups is to help provide and identify policy and project information necessary for the Steering Committee to make informed decisions. Technical Work Groups will identify, analyze, and recommend products or ultimately projects for Steering Committee consideration and decision. Each Technical Work Group will identify a Chair to coordinate meetings and report recommendations to the Steering Committee. Each Technical Work Group will inform project identification, analysis and recommendations and will develop

and recommend project screening criteria consistent with the Flow Study purpose, including but not limited to:

- i. Estimated quantity of instream flow produced
- ii. Cost of instream flow produced
- iii. Duplicity with other projects.

b. Steering Committee

The role of the Steering Committee is to make decisions with respect to all phases of the Walla Walla Basin-wide Instream Flow Enhancement Feasibility Study including its scope of work, budget, study content and recommendations. The decision-making process is intended to be open and inclusive, and to encourage diverse viewpoints. The Steering Committee operates by consensus, *and every effort will be made by group members to meet the above stated project purpose statement*. Consensus requires a minimum of two-thirds (2/3) of the Steering Committee voting members present. Each organization gets one vote.

The voting member of each organization receives one set of red, yellow, and green cards at a Steering Committee meeting. When asked by the Chair or facilitator to indicate the level of agreement for a proposal, members will hold up one of the cards. The red card indicates that the proposal is not acceptable because the member has serious concerns. The yellow card indicates that the member can accept the proposal pending additional discussion and conditions. The green card indicates the member supports the proposal.

When a member holds up a yellow or red card, the group will attempt to address the member's concerns. The member with concerns should make every effort to offer an alternative satisfactory to all members. If further discussion does not resolve the concerns expressed, the Steering Committee Policy Technical Work Group will work with the dissenter(s) to attempt to address the concerns. The Report Manager may also work, outside the meeting, with those who disagree. In both these cases, the goal is to reach agreement on a proposal for the full group to consider.

The meeting notes will reflect the concerns expressed by any member holding a yellow or red card that are unresolved by the end of the meeting.

Consensus means that after every attempt has been made to address the "yellow and/or red" concerns of all members, all members hold up a green card.

5. Roles

a. Role of Steering Committee members

Members are expected to fully participate in Steering Committee meetings and to articulate the views of their constituents. (Constituents are stakeholders, members, or board members of an organization, or colleagues, subordinates, and superiors at an agency.) They are also expected to keep their constituents informed about the deliberations and to actively seek their input. No member has the authority to make unilateral decisions for the Steering Committee. The Steering Committee members will consider Technical Work Group products and recommendations as they make decisions as described in 4b above.

b. Role of Technical Work Groups

Technical Work Groups are the technical workhorses that bring together local knowledge to develop and recommend products or actions to the SC. Members are expected to utilize existing studies, personal expertise, and coarse screening criteria to fill out project questionnaires and provide input on potential projects, flow enhancement analysis, and recommendations for Steering Committee consideration. Technical Work Groups Chairs and members are also expected to develop information necessary to draft proposal requests and contracts required by Steering Committee actions. Technical Work Groups will also review subcontracted products relating to their area of expertise and will make recommendations to the Steering Committee.

- c. Role of Steering Committee Co-Leads (ex-officio)
 - Member of the Policy/Planning Advisory Technical Work Group that updates Flow Study process documents, as necessary, and supports the Report Manager.
 - Primary outreach coordinator and point of contact with Department of Ecology regarding the Study.

- d. Role of Facilitator/Manager/Report Writer/ (Report Manager)
 - Coordinates with the Planning Advisory Work Group to develop draft and final meeting agendas.
 - Coordinates with the Steering Committee members and Technical Work Groups to identify and provide information for meetings.
 - Convenes and facilitates Steering Committee meetings.
 - Ensures, with all members, compliance with ground rules.
 - Assists in building consensus among members.
 - Assists in addressing conflict between and among Steering Committee members, during and between meetings.
 - Serves as a confidential channel of communication for members and observers who wish to express views and do not feel comfortable addressing the full group.
 - Advocates for a fair, effective, and credible process, while remaining completely neutral as to the outcome of the deliberations.
 - Keeps a “parking lot” for issues that do not reach consensus in a meeting.
 - Develops draft and, after input from Steering Committee, final meeting minutes.
 - Implements the Steering Committee adopted Flow Study process.
 - Receives, collates and manages all Flow Study products.
 - Communicates with Flow Study participants to understand and document the application of products in the final Flow Study Report.
 - Documents all process products and outcomes of the Flow Study into a final report.
 - Provide thorough documentation, with rationale, for all sequential decisions regarding project identification, screening, analysis and final recommendations.
 - Provide suggested next steps to continue towards project design and implementation.

6. Responsibilities of Steering Committee Members

Members agree to:

- a. Attend all Steering Committee meetings, or arrange for another representative of the organization to attend.
- b. Arrive at the meetings fully prepared to discuss items on the agenda. Preparation includes reviewing meeting notes and other materials sent in advance.

- c. Present their own views and those of their organization or constituents, and be willing to engage in respectful, constructive dialogue with other members.
- d. Strive to bridge gaps in understanding, seek creative resolution of differences, and commit to the goal of achieving consensus.
- e. Support any consensus decisions made by the Steering Committee, and refrain from negative comments about items that were agreed to by consensus.

7. Communication

- a. Members agree to:
 - Recognize that all members bring with them their own legitimate purposes and goals from their perspective or on behalf of their organizations.
 - Recognize the legitimacy of the goals of others, and assume that their goals will also be respected.
 - When someone says something that you disagree with, get curious instead of irritated.
 - Acknowledge and respect the stated purpose of the Walla Walla Basin Integrated Flow Enhancement Study as per #1 above in order to keep conversations and business on track and to help resolve potential differences.
 - Listen carefully; ask questions to understand and to get others' perspectives.
 - Make statements to explain or educate, and help others understand your perspective, assumptions, reasoning, and intent.
 - Share all relevant information.
 - Use specific examples and make sure everyone agrees on the meaning of important words.
 - Avoid side conversations and working on email or texting during meetings.
 - Ask for a break if needed.
 - Bring it up at a meeting, or talk privately with the Report Manager, if you are having difficulty with another member or with the process.
- b. Other communication
 - Steering Committee meeting notices and meeting notes will be sent to all Steering Committee members.
 - Draft Steering Committee meeting notes, including a list of those who attended, will be sent to all members after each meeting. Approval of the notes will occur at the following meeting, with changes made by consensus of the Steering Committee.

8. Authority

This committee has no written or expressed authorities to manage water. Implementation of the recommendations reached by this committee is contingent upon actions by the appropriate authorities.

9. News Media

Members are free to make statements to the news media regarding their own opinions, and agree not to attribute statements to others involved in the process. No member can speak for the group as a whole. Members are free to discuss consensus decisions by the Steering Committee with the media. If an article or report appears that misquotes or inaccurately represents an individual, that individual should inform the group of that occurrence as soon as possible.

Any member contacted by the news media should recommend that the reporter talk to the Steering Committee Co-Leads, provide the Lead's phone numbers, and notify the Co-Leads.

Brett Golden created this workbook on Nov 11, 2014. 3
All entries in the "descriptions" worksheet link to entries in
the "master" worksheet.

Under the "master" worksheet, all entries in the Sample
Scenario columns link to the corresponding entries in the
All Options columns. You can toggle options on or off in
the Sample Scenario by changing the value in Column N to
"Yes" or "No."

Brett

Category	Project/Program Name	Staff Rec. Priority	Additional Study Investment	Project/Program Description	Water Protectable Instream?	Pros	Cons	Staff rec.?	Steering Committee action?	Additional investments through study? (not including investments already committed through the study)	Proposed in Nov 13 2014 Sample Scenario
Settlement Agreement											
	WWRID and HBDIC Bypass / Settlement Agreement			Under the Settlement Agreement, HBDIC and WWRID agreed to maintain a flow of up to 27 cfs instream below their diversions at RM 44.5. They have continued to maintain these flows after the agreement has expired.	No	None stated	Limit district's water supplies	None stated	None	None	No
	GFID Bypass / Settlement Agreement			Under the Settlement Agreement, GFID#13 agreed to maintain a flow of up to 19 cfs instream below their diversion at RM 36.7. It has continued to maintain those flows after the agreement expired.	No	None stated	Limit district's water supplies	None stated	None	None	No
Settlement Ag											
Conveyance Efficiency											
	WWRID Little Walla Walla Piping			This project would pipe the portion of the Little Walla Walla River, currently operated as part of WWRID's delivery system. It would allocate up to 10 cfs of conserved water instream downstream from WWRID's diversion.	Yes	None stated	Legal issues with piping Little Walla Walla River... but system is screened on both sides. Completing this project would require DSL to change designation of Little Walla Walla River. It would also require associated aquifer recharge projects.	None stated	None	None	No
	HBDIC to-be-determined				Yes	None stated	None stated	None stated	None	None	No
	GFID to-be-determined				Yes	None stated	None stated	None stated	None	None	No
	Other to-be-determined				Yes	None stated	None stated	None stated	None	None	No
Point-of-Diversion Change											
	GFID downstream PODs			This project would move GFID's POD from its existing location to a location downstream of the confluence of the Walla Walla River and the Touchet River.	Yes	This would restore stream flow through approximately 20 miles of stream.	The initial costs of this project and the operations and maintenance costs are relatively high. Pumping 20 cfs would require a 580-621 horsepower pump. Piping the main part of GFID's canal would conflict with this option. Also, the reach between the upstream and downstream PODs is a losing reach. It's not clear how to account for those losses.	Due not pursue due to costs and potential losses during most years. Keep it as a drought year option, where it's already in place under the	Agree/disagree with staff recommendation?	If this was to be pursued, you would need to confirm horsepower requirements, design a new intake structure, design delivery system to existing GFID system, and come up with cost estimates.	No
	Add a WWRID downstream POD			This project would add an additional POD for WWRID downstream from the district's existing POD. The new POD would be in Washington, protecting stream flows from Milton-Freewater to the Burlingame Diversion during fish migration times.	Yes	Improves stream flow from Milton-Freewater to Burlingame Diversion during fish migration times - GFID canal and Hyline canal are close to each other north of Umapine - a portion of HBDIC users could be served with just gravity	How to account for River seepage loss, is it any worse than seepage loss in Little Walla Walla River between the headgate and the Frog? - Relies on protection of Oregon Water through Washington	None stated	Approve funding	River seepage losses, connection pipe construction cost, amount of users that could be served with just gravity delivery on Hyline pipe, may include farms on lower ends of Huffman pipe and Richartz pipe, GFID upper ditch capacity when serving its own users (may not be an issue if GFID also changes some of its withdrawal from the river to a pump near Touchet).	No
On-farm Efficiency											

Category	Project/Program Name	Staff Rec. Priority	Additional Study Investment	Project/Program Description	Water Protectable Instream?	Pros	Cons	Staff rec.?	Steering Committee action?	Additional investments through study? (not including investments already committed through the study)	Proposed in Nov 13 2014 Sample Scenario
	Junior direct diverters on-farm efficiency			This program would work with junior direct diverters in Washington to reduce their diversions through on-farm efficiency improvements. It would not protect water instream, but it would	No	Could help to maintain benefits from other projects.	Not protectable instream.	None stated	None	Evaluate potential to work with junior diverters in Washington to protect water instream.	No
Shallow Aquifer Recharge											
	WWRID shallow aquifer recharge			None stated	No	None stated	None stated	None stated	None	None	No
	GFID shallow aquifer recharge			None stated	No	None stated	None stated	None stated	None	None	No
Surface-to-Groundwater Source Switch											
	Other to-be-determined			None stated.	No	Utilizes groundwater in areas where it is abundant while leaving surface water in river	None stated	None stated	Should this be studied?	- Use mapping and water rights information to identify the locations and numbers of acreages that could experiment with this as a way to lease surface water instream and lease \$ could offset well pumping costs. - Identify groundwater mounding areas - Identify times of year that this option would be practical for farms and fish	No
Surface Water Storage - Small Scale											
	Cup Gulch Reservoir			5,000-7,000 AF of storage. 17 cfs for 6 months	No	Water could be released back into NF, or conveyed to Cemetery Bridge diversion in MF	<ul style="list-style-type: none"> Will only work with water from NF WW (otherwise will not provide enough water). Narrow Steep canyon, dam will have to be high Inlet conveyance (for gravity feed) will have to start 3-6 miles upstream Would impact NF WW steelhead population Who would pay for O&M? 	Do not pursue due to ESA issues.	Agree/disagree with staff recommendation?	ESA impacts, confirm amount of water provided, cost estimates.	No
Surface Water Storage - Large Scale***											
	Milton-Freewater foothills			This project would likely be a three-sided structure located east of Milton-Freewater. It would provide an unknown amount of water.	To be determined	<ul style="list-style-type: none"> Storage of water from SF WW Water would be released directly to irrigation system, via a pipe 	<ul style="list-style-type: none"> Would be a dam safety issue with public Would likely have to line dam, because of seepage issues Would be dependent upon diverting water from SF WW 	Do not pursue due to ESA and seepage issues.	None	None stated	No
	Milton-Freewater field			AF unknown, located west of MF. Water would be conveyed to dam using existing ditch system/ROWs as much as possible	To be determined	None stated	<ul style="list-style-type: none"> Would be a dam safety issue with public Real estate costs would be high, would displace homes (if one landowner said "no" that would likely end the effort). Dam would have to lined 	Do not pursue	None	None stated	No
Columbia River Pump Exchange*											
	Columbia River Pump Exchange - Touchet			None stated.	To be determined	None stated.	None stated.	None stated.	None	Evaluation of potential	No

*assumes protection through bi-state flow agreement

**not currently allowed by Ecology

***stored water releases can be shaped as desired across the irrigation season. 20,000 af could restore 55 cfs, 5,000 af could restore 14 cfs, and 4,000 af could restore 11 cfs if spread evenly across six months. Rates would be double if spread evenly across three months.