

# 2006 Report to the Legislature:

## Walla Walla Water Management Initiative



**January 2007**

**Publication # 07-11-001**

*printed on recycled paper*



This report is available on the Department of Ecology Web site at:  
<http://www.ecy.wa.gov/biblio/0711001.html>

For a printed copy of this report, contact:

Name: Water Resources Program Publications  
Address: PO Box 47600, Olympia WA 98504-7600  
E-mail: [WRPublications@ecy.wa.gov](mailto:WRPublications@ecy.wa.gov)  
Phone: (360) 407-6600

Refer to Publication Number 07-11-001

*If you need this publication in an alternate format, please call the Water Resources Program at (360) 407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call (877) 833-6341.*



## 2006 Report to the Legislature:

---

# Walla Walla Water Management Initiative

*By*  
*Hedia Adelsman*  
*Lynne Geller*

Department of Ecology  
PO Box 47600  
Olympia, Washington 98504-7600

January 2007

Publication No. 07-11-001

*printed on recycled paper*





## Table of Contents

	<u>Page</u>
Introduction.....	1
Current Basin Water Management Picture .....	2
The Walla Walla Water Management Initiative .....	3
Identified issues and needs to make the Initiative successful .....	4
Progress on the Water Management Initiative.....	5
Seeking Endorsement of the Initiative .....	5
Leadership and Governance.....	6
Legal and Administrative Barriers and Impediments .....	7
Water Management Options and Incentives .....	8
Instream Flow Targets .....	9
Technical Studies and Monitoring.....	9
Looking Ahead.....	10
Appendix 1: Working Draft Walla Walla Water Management Initiative.....	A-1
Appendix 2. The WallaWalla Water Management Initiative: Insights on Design and Implementation from Innovative Water Management Efforts.....	B-1



# Introduction

In 2005, Department of Ecology Director Jay Manning made a significant offer to a broad array of Walla Walla Basin interests. He proposed that Ecology use the full extent of current agency flexibility and authority to allow for the local management of water, provided that:

- Sufficient streamflows and water quality are maintained to support fish, and
- Conflicts that might arise around the new flexibility in water use are handled within the basin.

In response, basin groups expressed their willingness to create a partnership with Ecology to develop and implement an innovative water management scheme. Thus began the Walla Walla Water Management Initiative (WMI, or the Initiative). The Initiative is intended to provide local water users with flexibility in exercising their existing water rights in exchange for restoring and protecting instream flows and water quality within the basin. As part of negotiating the Initiative, Ecology may be able to use current authority or seek legislative changes to state laws to allow water users who participate in the initiative to alter their water management practices. For example, the Legislature could remove penalties for non-use of water for participants during the trial period.

A diverse group is representing basin interests in developing the Initiative. This includes:

- Water users and managers.
- The Confederated Tribes of the Umatilla Indian Reservation.
- The Walla Walla Watershed Alliance.
- Watershed planning leads.
- Local governments.
- Community and environmental organizations.
- Technical experts.

In 2006, the Legislature provided \$150,000 in the Supplemental Capital Budget to Ecology to “support the development and demonstration of water management measures in the Walla Walla Water Basin that improve and protect instream flow and water quality, and which also help sustain agricultural and economic vitality.” The Legislature required Ecology to report to the legislature any findings, conclusions, and recommendations regarding such water management measures. This report describes the Initiative as currently being discussed and provides an update of various activities supporting its development and implementation.

# Current Basin Water Management Picture

The Walla Walla Basin poses unique water management challenges. The basin as a whole covers portions of both Oregon and Washington. It is over-appropriated, that is, more water has been legally allocated than is available every year. The basin has limited water resources, and most of the summer flows in the Walla Walla have been diverted for irrigation. For many years, parts of the Walla Walla River were seasonally dried up, seriously impacting salmon and other fish. By 1999, bull trout and steelhead were listed as threatened species under the federal Endangered Species Act.

The Washington side of the basin has

- Adjudicated state water rights (but not federal or tribal reserved rights).
- An Ecology Water Master.
- A water resources management program rule adopted in 1976.
- A process for adopting instream flows consistent with the Walla Walla Watershed Plan.

Groups concerned with Walla Walla water management have recently invested heavily in collaborative, science-based conservation plans, including:

- Coordinated salmon recovery, watershed, and sub-basin plans.
- A Bi-State Habitat Conservation Plan (HCP).
- Comprehensive Irrigation District Management Plans (CIDMPs).
- A Flow Restoration Feasibility Study (U.S. Army Corps of Engineers/Confederated Tribes of the Umatilla Indian Reservation).

All of these plans identify *low stream flows* as a key limiting factor and threat to ESA-listed fish and other aquatic species. Each plan outlines measures and actions to improve and protect flows needed for fish recovery.

The basin already has achieved some initial success in addressing the need for flow improvement. Since 2000, three irrigation districts<sup>1</sup> have negotiated settlement agreements with the U.S. Fish and Wildlife Service to bypass portions of their water rights to meet minimum instream flows in critical and previously dewatered river reaches. Gardena Farms by-pass flows are protected under a temporary Trust Water Right agreement with Ecology.

---

<sup>1</sup> The Walla Walla River Irrigation District and the Hudson Bay District Improvement Company in Oregon, and the Gardena Farms Irrigation District in Washington.

Significant financial support and investment has been committed to measures aimed at improving instream flows and increasing water reliability for out-of stream users, such as:

- Shallow aquifer recharge.
- Aquifer storage and recovery.
- Water conservation and efficiencies.
- Acquisitions of water rights.

Storage, pump exchange, and other long-term flow improvements are under investigation.

## **The Walla Walla Water Management Initiative**

The purpose of the Initiative is to further advance flow restoration to help recover ESA-listed species while maintaining a healthy agricultural economy. It will provide a degree of local autonomy and responsibility for water management, giving water users greater influence over the water management in the basin, in exchange for water instream for fish.

As currently conceived, the Water Management Initiative has two primary goals:

- *Flow for Fish*: Maintain sufficient stream flows and temperature conditions in streams throughout the basin to support fish recovery. This includes protecting aquifers and the bypassed flows from Oregon as they flow through the Washington portion of the basin.
- *Flow for Flexibility*: In exchange for flows for fish, allow water users to locally and cooperatively manage water use in the basin.

The Initiative depends and builds on the products of other flow restoration efforts in the basin, while providing water management tools and strategies that can help implement those efforts. The Initiative is considered an experiment, and will be effective for a ten-year trial period. If it proves unsuccessful, water users could return to conditions prior to initiation of the Initiative.

The Initiative is a “performance-based approach,” whereby water users are given broad latitude within a defined area to meet measurable performance standards. It is an approach that gives participants great flexibility to design and implement solutions that are more efficient and environmentally effective than conventional approaches. For example, this could include creating and applying irrigated farm management techniques that both serve the needs of fish and promote the highest and best agricultural use.

## Identified issues and needs to make the Initiative successful

In designing the Initiative, the following specific issues and needs were identified. Progress on these issues is discussed in the next section.

- **Create local leadership and governance structure.** Preliminary findings show that existing organizations are not suitable to implement the Initiative and a number of innovative planned projects (e.g., aquifer recharge). There is a need for local leadership and appropriate governance structure with some legal status, recognition and/or authority.
- **Formally organize water users.** A large number of water users in the basin are not organized into irrigation districts or other entities that can legally represent water right holders. There is a need to organize and get voluntary agreement with a “critical mass” of water users. The formation or use of an entity such as irrigation district, watershed improvement district, or special purpose can make that possible.
- **Define target flows and create mechanisms to create and protect them.** Participants in the Initiative are expected to deliver sufficient flows during the ten-year trial period to recover ESA-listed species. (If the Initiative is successful, then participants will continue to support flows beyond the ten-year trial, at which time it is likely that additional water sources will also have been developed.) To meet that expectation, there is a need to define and reach agreement on flow target numbers as well as the measures that will consistently deliver and protect these flows. This includes mechanisms to protect flows bypassed in Oregon and Washington from being diverted by surface water right holders or affected by ground water withdrawals.
- **Respond to legal disincentives.** Water law contains many provisions that have unintentionally created disincentives for water users to reduce water consumption. Policy changes, incentives, and technical and financial support are needed for basin water users seeking to participate in the Initiative.
- **Set up dispute resolution mechanism.** The water users in the basin want to see Ecology’s Water Master continue to administer the adjudication decrees and deal with water disputes. However, the Initiative will require the establishment of an effective and efficient dispute resolution mechanism to ensure there is no harm to existing water uses and to protect restored instream flows.
- **Establish performance measures and tracking systems for flow improvement.** In order to give water users greater influence over the water management in the basin, measurable flow increases for fish must be delivered by the users. Data, monitoring, and measurable performances need to be established to measure and track results and ensure accountability for flow improvement.

# Progress on the Water Management Initiative

The Walla Walla Water Management Initiative is unique and unprecedented. All parties in the basin acknowledge there are many challenges and hurdles to overcome in designing and implementing the Initiative. While there are no conclusions and recommendations to report on at this time, significant progress has been made to:

1. Create greater understanding and support of the concept of the Initiative in the basin.
2. Develop organizational and governance options.
3. Identify legal and administrative hurdles.
4. Develop water management options and incentives that could give water users flexibility in managing their water supplies.
5. Define instream flow targets.
6. Develop science-based studies and monitoring.

Developments in each of these areas are reviewed below.

## Seeking Support of the Initiative

Basin leaders and Ecology discussed and endorsed the concept of the Initiative, as described in the June 15, 2006 “Working Draft Walla Walla Water Management Initiative” (see Appendix 1). Basin groups agreed to pursue an Ecology/Basin WMI partnership.

- Ecology held several workshops, in-field forums, and visits; and spoke one-on-one with water users and members of both in-basin and out-of-basin organizations. The intent was to share the vision and goals of the Initiative, as well as solicit input and commitment. We provided a variety of outreach materials and media tools (DVD, fact sheets, and so on) to water users and interests.
- The Walla Walla Watershed Alliance and Walla Walla Community College cosponsored the 11<sup>th</sup> Biennial Conference in October 2006, along with the Watershed Management Council. One day of the conference was dedicated to presenting and discussing the Initiative, in a session called “*Flow for flexibility: Whatta Vision.*”
- Leaders in Washington and in Oregon had several discussions to identify interstate issues and barriers. As a result, leaders are working together to address and resolve these issues within a reasonable time.
- The Walla Walla Watershed Alliance and Ecology jointly sponsored research with the William D. Ruckelshaus Center at the University of Washington to examine water

management efforts in other states and countries. This research provides useful insights for the design and implementation of the Initiative. A report from the Center was delivered to Ecology and the Alliance at the end of January 2007 (see Appendix 2 for the Executive Summary).

## Leadership and Governance

The Walla Walla Basin features a complex array of parties with water management interests, authorities, and knowledge, including irrigation districts, ditch companies, individual irrigators, tribes, municipalities, environmentalists, and others. The basin is also at an important juncture as it moves from planning to the implementation of recently completed plans.

The current implementing organizations (conservation districts, regional fishery enhancement groups, local government, the land trust, tribes, state and federal agencies, and so on) are well-suited for the typical protection and restoration actions. However, they are not in a position to develop and manage innovative initiatives across jurisdictional boundaries. There are also additional projects and actions that no existing organizations want to work on.

The Walla Walla Watershed Alliance, which helped to launch the Initiative, has played a key role, providing staff and financial resources. Since the Water Conference in October 2006, it has become clear that to be successful, the Initiative will require leadership and a control structure with authority.

To knit together the various entities, some in the basin currently envision three levels of organization to support, coordinate, and govern the Water Management Initiative:

- **Level 1: Agricultural water users on the Washington side of the basin:** This level seeks to coordinate with the various categories of agricultural water users, such as irrigation districts, ditch companies, individual irrigators, and senior and junior water right holders.
- **Level 2: Washington-side basin water users:** This level seeks to coordinate water management among all basin water users within Washington State, including agricultural water users (Level 1), municipalities, and self-supplied water users.
- **Level 3: Bi-state water management:** This level seeks to support coordinated basin-wide water management involving water users in both Oregon and Washington.

We have begun to explore whether there is broad support among basin leaders and water users for a “new” governance structure. Organizational structures will be developed using existing statutes (i.e., local watershed partnership, RCW 39.34.21). Ecology’s and the basin’s approval will be secured. Legislative approval will be sought, if needed. Early discussions identified the need to establish an organization for Level 2 which has sufficient authority and capacity to accomplish the following actions:

- Ensure restored instream flows remain in streams.
- Enable water transfers and other water management measures.

- Manage a water bank.
- Adopt and implement local water management policies.
- Manage agreements between water users.
- Provide dispute resolution.
- Engage in water-related economic development.
- (Possibly) have and use bonding capacity to raise funds.

This is clearly beyond the current—and future—organizational capacity in the basin.

## Legal and Administrative Barriers and Impediments

Ecology is working with basin interests, representatives from Oregon, and several legal experts to draft conceptual solutions to the legal and administrative barriers to reducing water use.

Water users have identified key policies they believe create barriers or disincentives to reducing water consumption. Among these are:

- Inability or difficulty of protecting flows bypassed in Oregon and delivered at the state line. Water entering Washington becomes waters of the state subject to state appropriation. In an over-appropriated basin that water is more likely diverted to meet existing rights.
- Inability of protecting, to the mouth of the Walla Walla River, Oregon and Washington bypass flows resulting from the Settlement Agreement,<sup>2</sup> conservation and efficiencies.
- Protecting water released from future storage or pump exchange.
- The “use it or lose it” provision. In order to protect their water right from relinquishment, water rights holders may be encouraged to use their full allocation even when unnecessary.
- The review of the validity and extent of the water right required to make water management changes (i.e., changes in point of diversion, changes in source, and transfer to the trust water right program). This review can result in the relinquishment of all or a portion of a water right.
- Inability to effectively employ conjunctive use of surface and ground water sources (e.g., switching from surface diversion to a well when stream flow is low, and back when water is abundant).

---

<sup>2</sup> Settlement Agreement between U.S. Fish & Wildlife and three irrigation districts: the Walla Walla River Irrigation District and the Hudson Bay District Improvement Company in Oregon, and the Gardena Farms Irrigation District in Washington.

## Water Management Options and Incentives

Irrigators have identified several tools and approaches to provide greater flexibility in how they may use, divert, or trade water. The intent is to achieve instream flow targets and maintain the economic benefits of their water use. Some of the tools and approaches include:

- Use of surface water and groundwater conjunctively.
- Simplify water right transfers and changes that benefit the stream and the water user.
- Share conserved water between the stream and a water user interested in spreading. (Spreading a water right is to use some method to reduce water use on existing acreage and using a portion of the saved water to irrigate additional acreage.)
- Accelerate the use of irrigation efficiency projects.
- Implement aquifer recharge projects.
- Allow and fund more trust water right leases and purchases, and develop new water sources (e.g., storage and Columbia River pump exchange).

Many of these tools and approaches are available as long as there will be “no injury or detriment to existing water rights.” Options are being developed with water users on how to organize and get voluntary agreement with enough users to reduce risks associated with flexibility and flow achievement.

Significant financial resources are available to the basin from state, federal, and local entities for:

- Infrastructure improvements (i.e., irrigation efficiencies, shallow aquifer recharge, and aquifer storage and recovery).
- Water right transactions.
- Metering.
- Feasibility studies.
- Groundwater studies.
- Surface water and groundwater monitoring.

Additional state and federal funds are proposed to accelerate implementation of irrigation efficiencies, shallow aquifer recharge, water quality improvement, and groundwater monitoring.

In addition, the Walla Walla Watershed Alliance and the Walla Walla Community College have staff and financial resources (Natural Resources Conservation Service and Ecology) dedicated to the Initiative.

## Instream Flow Targets

One of the primary goals of altering water management in the basin is to provide sufficient instream flows to support the ESA-listed species—bull trout and steelhead.

- Scientists are currently attempting to define the habitat conditions and necessary stream flows needed to recover ESA-listed species. A listed species life cycle model has been developed and is being used for both the Bi-State Habitat Conservation Plan and the Initiative. The model will help answer the questions *what flow level—and where and when—do the fish need?* Answering these questions will establish flow performance measures, and water users can design their water management to these seasonal and geographic requirements.
- In addition, temperature modeling has been completed. Preliminary results show, in addition to flow levels, that the channel width, vegetation cover, and other factors contribute to the problem of high temperatures throughout the system. Therefore, in order to recover listed species, stream flows, stream habitat, and riparian zones need to be improved concurrently.
- Ecology, in partnership with the Watershed Planning Unit, developed revisions to the 1976 rule to set forth policies governing future water allocation and protecting instream flows from further degradation. The proposed rule amendments set instream flow levels, close surface waters and gravel aquifers to future withdrawals, and allow use of high flows for projects that benefit fish populations.

## Technical Studies and Monitoring

During the exploratory development of the Initiative over the last year, Walla Walla Basin interests and Ecology have discovered performance-based water management has a number of essential data and information requirements.

- **Water right mapping.** This will guide the basin in the development of water management agreements between water users and/or water user groups to guarantee continuity of “fish flow” and to help bring all users on board.
- **Monitoring.** Monitoring is necessary to understand current conditions and historical trends, to inform adaptive management decisions, and to identify project development needs for the initiative and other basin restoration programs.
  - Ecology, in consultation with Basin interests, has contracted with the Walla Walla Watershed Council to collect, catalog, map and disseminate pertinent, available surface water and groundwater data.
  - Additional monitoring wells were drilled in the gravel aquifer to monitor ground water levels and evaluate the results of shallow aquifer recharge, irrigation efficiencies, and other flow restoration projects.

- The Washington side of the basin had no ground water monitoring program. A bi-state surface and ground water monitoring program will be in place by June 2007. The monitoring may be expanded to the basalt aquifer, if resources are available.
- **GIS mapping.** The Walla Walla Watershed Council is digitizing existing geographical maps and site-specific surface and ground water monitoring data sites into GIS format. This information is critical to analyze and prioritize projects, to support modeling, and for outreach education efforts for the Initiative and other basin efforts.

## Looking Ahead

Much has been accomplished, and much remains to be done on designing and implementing the Walla Walla Water Management Initiative. The key areas of work in the coming year will be to:

1. Design and seek administrative and legislative approval for a governance structure to carry out the tasks outlined on page 5. A water authority is one common mechanism to create a coordinated water management system for the basin.
2. Organize water users under existing structures covered in statute (e.g., irrigation districts, watershed management improvement entities). Options include incorporating individual irrigators into existing irrigation districts, combining irrigation districts, and creating a board of joint control to link irrigation districts while maintaining their independence.
3. Identify and seek legislative approval for legal mechanisms that would help provide flexibility to water users participating in the Initiative.
4. Complete the first phase of groundwater studies and monitoring. Begin more in-depth studies on the gravel and basalt aquifers.
5. Reach agreement on instream flow target numbers. A part of this is Ecology's adoption of the revisions to the existing administrative rule.
6. Secure legislative approval for Walla Walla funding included in the Governor's proposed budget.

# Appendix 1: Working Draft Walla Walla Water Management Initiative

JUNE 15, 2006

Coming together is a beginning.  
Keeping together is progress.  
Working together is success.  
Henry Ford

## I. Current Situation

The Walla Walla Basin's productive agricultural lands were among the first intensively irrigated areas in the Pacific Northwest, and by the 1880s parts of the Walla Walla River were seasonally dried up, seriously impacting salmon and other fish. The basin, which covers portions of both Oregon and Washington, has recently invested heavily in collaborative, science-based conservation plans, including coordinated salmon recovery, watershed, and sub-basin plans; a Bi-State Habitat Conservation Plan (HCP); Comprehensive Irrigation District Management Plans (CIDMPs); and a Flow Restoration Feasibility Study (US Army Corps of Engineers/Confederated Tribes of the Umatilla Indian Reservation); among others. All of these plans identify low instream flow as a key limiting factor and threat to ESA-listed fish<sup>3</sup> and other aquatic species and outline measures and actions to improve and protect flows needed for fish recovery.

The Basin has adjudicated state water rights (but not federal or tribal reserved rights), an Ecology Water Master, a water resources management program rule adopted in 1976, groundwater management studies, and a process for updating instream flows consistent with watershed plans, the Bi-State HCP, and other plans. Still, regulatory requirements associated with water rights, ESA, CWA<sup>4</sup>, and HPAs<sup>5</sup> are significant issues for many water users.

The Basin already has achieved some initial success in addressing the imperative of flow improvement. Since 2000, the Walla Walla River Irrigation District and the Hudson Bay District Improvement Company in Oregon, and the Gardena Farms Irrigation District in Washington, have negotiated settlement agreements with the U.S. Fish and Wildlife Service to bypass portions of their respective water rights to meet minimum instream flows in critical and previously dewatered river reaches. Gardena Farms by-pass flows are protected under a temporary Trust Water Right agreement with Ecology.

In addition, significant financial support and investment has been committed to such efforts as shallow aquifer recharge, aquifer storage and recovery, conservation and efficiencies, acquisitions of water rights, and other measures aimed at improving instream flows and increasing water reliability for out-of stream users. Storage, pump exchange, and other long term

---

<sup>3</sup> In 1999, bull trout and steelhead in the Walla Walla Basin were listed as "threatened" under the federal Endangered Species Act (ESA).

<sup>4</sup> Clean Water Act (CWA), especially Total Maximum Daily Loads (TMDLs), issued by the Washington State Department of Ecology (DOE) in Washington and the Oregon Department of Environmental Quality (DEQ), under delegated authority from the U.S. Department of Environmental Protection (EPA).

<sup>5</sup> Hydraulic Permit Approval (HPA), issued by the Washington State Department of Fish and Wildlife.

flow improvements are under investigation. In most cases, these flow restoration efforts have been implemented in a piecemeal approach. To provide significant benefits to instream flows, aquifers, and water quality, flow restoration efforts need to be integrated and targeted.

A broad array of Basin interests – water users and managers, tribes, watershed planning leads, local governments, community and environmental organizations, and technical experts in partnership with Ecology -- is interested in developing and implementing a bold, new “flow for flexibility” water management scheme that provides water users within a geographic area with more flexibility in the exercise of their existing water rights in exchange for restoring and protecting instream flows and water quality within that geographic area. In the summer and fall of 2005, Basin leaders and the Washington Department of Ecology agreed to jointly pursue a Walla Walla Water Management Initiative that tests and demonstrates the flow for flexibility principle.

[The Walla Walla Watershed Alliance, which helped to launch the Initiative, has provided initial leadership, personnel, and other resources to the effort. The Alliance identified the need for flexible, performance-based water management after encountering impediments in the current system that stymied progress on water transactions and CIDMPs.<sup>6</sup> The Initiative has been identified as the Alliance’s top priority and the Alliance is expected to continue to help provide broad-based, bi-state leadership and support for the Initiative.]

## **II. THE WALLA WALLA MANAGEMENT INITIATIVE**

The Water Management Initiative is part of a “new” generation of performance-based<sup>7</sup> environmental management that emphasizes flexibility, efficiency, innovative solutions, and measurable results. It’s an approach that gives producers great flexibility to design and implement solutions that are more efficient and environmentally effective than conventional approaches. In the Walla Walla Basin, the Mission and goals of the Initiative are:

### **Mission:**

The mission of the Walla Walla Water Management Initiative (WMI) is to significantly improve and to protect instream flow, aquifers, and water quality, the interests of water users, through implementation of performance-based (“flow for flexibility”) water management measures at a reach scale during a ten-year trial period, the ultimate goal of which is to establish a Basin-wide, performance-based water management system.

### **Goals:**

1. Significantly improve and protect instream flows, aquifers, and water quality;
2. Provide water management flexibility, support, and reliability for participating water

---

<sup>6</sup> The Alliance has worked with the Columbia Basin Water Transactions Program to purchase water for improved instream flow and initiated Comprehensive Irrigation District Management Plans (CIDMPs) designed to facilitate the development of ESA and Clean Water Act compliant conservation plans.

<sup>7</sup> Performance-based water management refers to a new paradigm in resource management in which water users are given broad latitude within a defined area to meet measurable performance standards or “outcomes” rather than being governed by an intricate system of external rules that may or may not improve performance. Performance-based water management requires commitment on the part of the water user and regulator to the new approach, assessment of existing (baseline) conditions, measurable goals, an action plan, and effective monitoring and accountability systems.

users; and

3. Demonstrate, evaluate, and refine performance-based water management at a reach scale or through other measures, and ultimately at a Basin-wide scale.

### **Guiding Principles**

To be successful and sustainable the Water Management Initiative should:

- Be a partnership between the Walla Walla Basin & Ecology;
- Be science-based and build on existing planning and restoration efforts;
- Be action oriented and geographically focused to improve and protect instream flow conditions;
- Benefit and not harm or impair existing water users;
- Increase opportunities to meet Endangered Species Act, Clean Water Act, and other requirements;
- Ensure accountability and measurable performance;
- Bridge the Oregon-Washington boundary with a jurisdictional water agreement;
- Support local resolution of water management conflicts by Basin entities.

### **III. PROBLEMS AND OPPORTUNITIES**

Conventional approaches to water regulation and management in Washington State can make it difficult to simultaneously address the needs of the environment, water users, and the community. Specific problems include:

- Over-appropriation of Basin waters which, until recently, resulted in the seasonal dewatering of the Walla Walla River, contributing to the listing of steelhead and bull trout under the federal Endangered Species Act;
- A “use it or lose it” policy that can have the unintended consequence, especially when combined with metering, of encouraging water right holders to use the full extent of their right even if it is not needed and could have stayed in stream;
- Fear of change in a water permit that would result in a look back and potential relinquishment of a portion of a water right can prevent water users from committing water to instream flow improvement;
- An inability to effectively employ conjunctive use of surface and ground water sources (e.g., switching from surface diversion to well when stream flow is low and back when it is abundant);
- Conserved or bypassed water left in stream can be difficult to protect, especially where it crosses the state line.
- Since Basin water rights exceed water available, it is a challenge to ensure that any gains in flows remain in the channel for instream flows and are not available for diversion by downstream water right holders, whether in Oregon or Washington.

- Despite investments and flow improvements to date, most flow restoration efforts are not strategically coordinated and have been difficult to measure and protect.

There is a timely opportunity in the Walla Walla Basin to achieve better water management outcomes by utilizing:

- The growing body of science and planning (through watershed plans, hydrogeologic analysis, fish studies) to make informed water management decisions and to move from planning to implementation;
- Innovative combinations of water management tools and strategies (conjunctive use of surface and groundwater sources, efficiency, aquifer recharge, flow protection through the Trust Water Rights program, water banking, "pulsing" agreements, and other efforts) as part of a performance-based water management system;
- Collaborative decision-making, effective coordination of various basin efforts, and broad support for innovative water management plans and measures; and
- Willingness of Ecology and Basin interests, as represented by the Alliance and other Basin entities, to establish a water management partnership; and to use the full extent of current agency flexibility and authority to help implement water management goals and objectives, with joint Basin-Ecology requests for legislation to enable implementation of specific water management plans and measures where additional authority or support is needed.

#### IV. KEY ELEMENTS OF THE INITIATIVE

The Walla Walla Water Management Initiative depends and builds on the products of many other flow and restoration efforts within the Basin; it can also provide water management tools and strategies that can help implement them. Without coordination between the WMI and the on-going Basin efforts, there will be duplication, inefficiency, and missed opportunities. On the other hand, without some distinction, the combination would be too big to handle, bogging down the overall goal of flow enhancement as well as the individual efforts.

In developing the Initiative the following key issues need to be addressed:

- **Organizing the Partnership:** how should the Water Management Initiative partnership between Basin interests and Ecology be organized?
- **Scale:** what are the right scales to develop and implement performance-based water management strategies?
- **Forming water user groups:** how should water users be organized to allocate water, make decisions, and resolve disputes?
- **Bridging the state line:** how can water management be coordinated and restored flows effectively protected, across the state line and other boundaries?
- **Full flexibility:** how much flexibility exists or can be provided for performance-based water management in a specific geographic area?
- **Flow targets and milestones:** How are performance measures established for flow, hydrology, etc. at the reach scale? Who needs to participate in this effort?
- **Support:** What are the State, and other entities, willing to do to support the Initiative?
- **Incentives:** What incentives are needed to encourage participation in the Initiative?

The WMI Strategies (Section V) and Action Plan (Section VI) are designed to address these issues and guide work on the flow for flexibility Initiative.

## V. STRATEGIES

The strategies that drive the WMI are iterative and many can be implemented concurrently. With additional information and operational experience, it may be necessary to adaptively modify the strategies and actions. The successful implementation of the strategies is dependent on:

- Commitment and support of the participants/water users to the mission and goals of the initiative;
- Technical support and assessment (baseline water management, hydrologic dynamics, limiting factors for fish, impacts of water use);
- Measurable outcomes (flow targets and milestones, recharge rates, water quality improvements, cost-effectiveness, reliability);
- An action plan that gains Basin water users support for effective instream flow protective mechanisms; guides the flexible use of a combination innovative water management tools and strategies (e.g., conjunctive use of surface and groundwater sources, recharge, efficiency, storage, pulsing flows); demonstrates ways to organize and coordinate a “critical mass” of water users, and builds toward a Basin-wide performance-based water management system; and,
- The means to measure and reward performance (monitor, evaluate, and refine Action Plan implementation; reward performance with funding for conserved water and infrastructure, regulatory flexibility and assurances, certainty).

### Application of the Strategies at various Scales

The Initiative will operate across three geographic scales, with the ultimate goal of implementing a Basin-wide, performance-based water management system. The three different scales are:

- **Area-specific/reach-scale:** The demonstration and evaluation of innovative water management tools and strategies (Strategy 4) is best done in the context of real cases at a scale that provides significant, measurable results. The WMI is seeking demonstration projects at the reach scale (district, ditch, group of individual water users, or some combination) that will test and evaluate the flexible use of a combination of innovative water management proposals (e.g., conjunctive use of surface and groundwater sources, recharge, efficiency, storage, pulsing flows) and improve and protect instream flows in the specific area.
- **River System Scale:** At the river system scale the Initiative is addressing specific water management issues, such as the need for agreements (Strategy 8) with ditches and irrigators on the lower Walla Walla River that improve flow and effectively protect by-passed flows from Oregon and Gardena Farms Irrigation District. The focus will be to identify policies that remove impediments to flow restoration and protection, identify ways to organize, coordinate and get voluntary agreements with a “critical mass” of water users within the system, and to implement performance-based (“flow for flexibility”) measures at a reach scale during a ten-year trial period.

- **Basin-wide:** The WMI goal is to improve water management Basin-wide -- guided by watershed plans, CTUIR/COE Feasibility Study, the Bi-State HCP, and results of reach and system scale actions.

**Strategy 1: Partnership** Seek agreement (through a Memorandum of Understanding) and participation of a broad array of Basin entities, the Department of Ecology, and other key interests in the Water Management Initiative, which must be coordinated with, and support implementation of, on-going Basin planning and restoration efforts.

**Strategy 2: Walla Walla River.** Develop, seek support for, and implement a bi-state strategy and action plan for the Walla Walla River system that ensures that any gains in flows remain in channel for instream flows and are not available for diversion by downstream water right holders, whether in Oregon or Washington. The strategy includes: protecting Oregon and Washington by-passed flows resulting from the USFWS Settlement Agreement<sup>8</sup>; a goal of increasing base flows by 25 cfs above the settlement flows using conservation/efficiencies, acquisition, and other near-term projects/activities; improving upstream and downstream migration in spring and fall using pulsing flows; improving summer flows, temperature, and aquifer levels through recharge of the gravel aquifer and springs, and conjunctive use of surface and groundwater sources; and pursuing long-term measures (storage, water exchange facilities, HCP and/or other methods) that dramatically improve conditions and provide additional permanent flow protection.

**Strategy 3: Touchet & Mill Creek.** Increase instream flows in other parts of the Basin (Touchet and Mill Creek systems), through conserved water, Trust Water Rights, and flow augmentation from aquifer recharge, storage, and other projects; and evaluate and implement near- and long-term means to monitor and protect restored flow.

**Strategy 4: Demonstration Projects.** Demonstrate the “flow for flexibility” principle and performance-based water management at a reach scale, where a critical mass of water users are interested in significantly improving and protecting stream flow, aquifer recharge, and water quality, in exchange for flexibility and other incentives. The focus will be on developing and selecting by the end of October 2006 one or more reach-scale WMI “flow for flexibility” proposals to test and evaluate the feasibility, cost-effectiveness, and consistency proposals<sup>9</sup> with WMI mission and goals, and to identify policy changes and financial support needed to implement WMI proposals.

**Strategy 5: Forming Water User Groups.** Identify and select methods for organizing water users in collaborative water management at various scales – from reach level to system scale to Basin-wide -- consistent with this Initiative; where additional authority or formation of a new organizational structure is needed, a joint Basin-Ecology request for legislative action will be pursued.

**Strategy 6: Support & Incentives.** Conduct hydro/geo, water use and management, and other assessments; provide technical and policy support (develop WMI proposals, project designs,

---

<sup>8</sup> U.S. Fish and Wildlife Service Settlement Agreement currently requires the two Oregon irrigation districts to by-pass 25 to 27 cfs of instream flow, measured at the Stateline, and Gardena Farms Irrigation District #13 in Washington to by-pass 18 cfs below its diversion.

<sup>9</sup> Demonstration project proposals may involve several groups of water users – districts, ditches, and/or aggregations of individual water users -- in a defined area that provide significant improvements in flow and other performance measures.

negotiate terms and assurances, and implement and monitor actions); offer incentives (financial, regulatory flexibility and assurances – ESA, TMDLs, water rights); and improve certainty to Basin water users seeking to participate in reach scale, and ultimately Basin-scale, WMI “flow for flexibility” proposals; modify existing policies, and if needed statutes.

**Strategy 7: Accountability.** Ensure measurable performance and accountability, including reach-scale flow improvement targets and milestones adjusted for wet, normal, and dry years, monitoring and evaluation systems, and adaptive modification of performance measures.

**Strategy 8: Agreements.** Execute agreements, such as a Memorandum of Understanding between Basin entities and Ecology, an Oregon-Washington flow protection agreement, rotation or pulsing agreements, Trust Water Rights, ESA conservation plans (through CIDMPs or the Bi-State HCP), or other legal instruments that help achieve the mission of the Initiative.



# THE WILLIAM D. RUCKELSHAUS CENTER

UNIVERSITY OF WASHINGTON

## **Appendix 2. The Walla Walla Water Management Initiative: Insights on Design and Implementation from Innovative Water Management Efforts**

**January 31, 2007**

# Acknowledgements

The William D. Ruckelshaus Center would like to thank the sponsors of this research—the Walla Walla Watershed Alliance and the Washington Department of Ecology—for the opportunity to provide this report. The research contained in this report has benefited from the input of a wide range of people, and we would like to thank all who offered their insights, knowledge, and suggestions, both inside and outside the Walla Walla Basin. While significant efforts were made to ensure the accuracy of this work, responsibility for any lapses rests with the Center.

This report was prepared by Dan Siemann, Project Director at the William D. Ruckelshaus Center, with assistance from Jon Brock (Co-Director), Debra Akhbari (Program Assistant) Deborah Finken (Research Assistant), and other Center staff. In addition, the report benefited from comments and suggestions of faculty and staff at Washington State University and University of Washington who provided input based on their areas of expertise.

The Ruckelshaus Center is a service of WSU Extension and the Evans School of Public Affairs at the University of Washington, and its mission is to act as a neutral resource for collaborative problem solving in the region. The Ruckelshaus Center advisory board supports the preparation of this and other independent reports produced under the Center’s auspices; however, the findings and conclusions contained herein may not reflect the views or opinions of individual Center staff, individual advisory board members or their organizations, or Washington State University or the University of Washington.

## **Suggested citation for this report:**

Ruckelshaus Center. The Walla Walla Water Management Initiative: Insights on Design and Implementation from Innovative Water Management Efforts. The William D. Ruckelshaus Center. Washington State University and University of Washington. January 2007.

## Executive Summary

The Water Management Initiative is an emerging effort to create a locally governed water management system in the Walla Walla Basin that will support fish recovery while maintaining the agricultural economy. Because the Water Management Initiative represents a new and untested alternative to current water management, those involved in the effort—irrigators, tribal leaders, municipalities, environmentalists, and others in the Walla Walla Basin, in concert with Washington Department of Ecology and others—asked the William D. Ruckelshaus Center to conduct independent research that would inform their efforts to design an effective and locally appropriate water management system to achieve instream flow targets.

This report responds to that request. It attempts to describe the purposes, goals, and components of the Water Management Initiative as currently conceived by those in the basin and to provide insights and experiences from similar efforts elsewhere. Through extensive research and consultation with a broad range of people familiar with water management, water rights, and other relevant concepts, the Center identified and examined eight innovative environmental management efforts in the United States and internationally that provide insights on specific components of the Water Management Initiative. This report describes those examples and highlights structures, mechanisms and practices that may be relevant to the goals of the Initiative.

The Water Management Initiative is the result of an unprecedented offer by the Director of Washington Department of Ecology, Jay Manning. If water users in the Walla Walla Basin can commit to delivering prescribed flows, Ecology has offered to seek the needed authority to allow water to be managed locally and more flexibly. Ecology has asked the Walla Walla Basin community to develop a proposal that:

- Defines target flows to support fish needs and other instream values. Flows would be scientifically justified to support fish recovery and could be based on precipitation (wet year, medium year, dry year).
- Devises a reliable approach to achieving these flows. This might involve locally governed decisions regarding water management that offers greater flexibility and creates environmental benefit. It would also involve managing conflicts within the basin and monitoring flows to ensure targets are met.

Since any authorities to manage water will be conferred to the basin by the state, the Water Management Initiative will not supersede tribal rights and authorities or federal authorities such as the Endangered Species Act. In addition, Ecology has stated that it does not intend to abdicate its responsibilities and that the Ecology Water Master is expected to continue in the basin. The Initiative is being attempted only in the Walla Walla Basin and water policy changes associated with the Water Management Initiative apply only to the Walla Walla Basin.

Director Manning made this offer because of the significance of water challenges in the Walla Walla Basin and the limited effectiveness of the State's existing options to remedy them. Water in the Walla Walla Basin is overallocated, instream flows are insufficient to support some native aquatic species, and the federal Endangered Species Act threatens to impose severe restrictions on agricultural and other water users. Since junior water right holders typically are not served because allocated water rights exceed divertible supply, any relinquished water would go to the

next junior water user and would not be protected in the river. Furthermore, state water law is often blamed for encouraging excessive use of water rights and hindering conservation efforts. Ecology's offer is an attempt to overcome these challenges, create public benefit, and generate real protected water in the river by creating a cooperative alternative to traditional regulatory water management approaches.

## The Water Management Initiative

As described by those in the basin, the purpose of the Water Management Initiative is to significantly contribute to the restoration and protection of streamflows, aquifers and water quality to support recovery of ESA listed species (steelhead and bull trout) while maintaining a thriving agricultural economy. It is also intended to provide a degree of local autonomy and responsibility for water management, giving those with the most at stake greater influence over their own destiny. The Water Management Initiative appears to have three primary goals:

- **Flow:** Achieve instream flow targets and temperature conditions in streams throughout the basin at specified times to support fish recovery. This includes protecting aquifers and the bypassed flows from Oregon as they flow through the Washington portion of the basin.
- **Flexibility:** Allow the basin community to govern water resources locally and provide them with flexibility in how water is withdrawn, conveyed and applied so they can optimize out-of-stream uses and achieve instream flow targets. This might involve altering water laws that inhibit reduced water usage.
- **Reduced regulatory risk:** Reduce uncertainties faced by water users under current federal and state regulations. This might involve suspending state relinquishment laws going forward. At the federal level, this might involve developing a Habitat Conservation Plan (HCP) to address Endangered Species Act requirements.

The Water Management Initiative is premised upon a “performance-based approach” to water management in which water users are given broad latitude within a defined area to meet measurable performance standards or “outcomes” rather than being governed by a traditional system of external rules. This approach is intended to give water users flexibility to design and implement solutions to instream flow problems that are more efficient and environmentally effective than conventional approaches. Many of the proposed water management options are available currently (e.g., conjunctive use of surface and groundwater or changing the point of diversion), but water right holders express a reluctance to consider them due to fear that such activities might lead to relinquishment. The Water Management Initiative is intended to make water management changes for environmental purposes easier to implement going forward and reduce the perceived and actual risks for water right holders.

## Insights from the Research

Many of those working on the Water Management Initiative view the concept as an emerging *package* of components that must eventually come together in order for it to be both acceptable and effective. Based on interviews with a range of interests who are involved in or watching the development of the Water Management Initiative, an effective package that could be acceptable

to most parties might include the following components:

- Stream flows are sufficient to recover ESA-listed species
- Irrigators are afforded flexibility to alter water management without fear of negative consequences
- The agricultural economy remains viable
- Local government interests are addressed
- The governance, monitoring, and dispute resolution mechanisms are appropriate and credible
- The approach is approved and overseen by relevant state and federal agencies and tribes
- Ecological, economic and social risks are minimized.

The research found no identical precedent operating within the context of western water law for the package of local and flexible water management currently conceived under the Water Management Initiative. However, the research did find examples of innovative environmental and agricultural management efforts from which useful ideas can be gleaned to help shape mechanisms or practices for consideration as part of the Water Management Initiative package. Some key insights from the research and case examples include:

- **Governance mechanisms:** The specific functions of the governance mechanism and its eventual form will depend on what goals, purposes, approaches, and activities are ultimately assigned to the Water Management Initiative. Some of these functions may include making water management decisions, monitoring performance measures and water management activities, enforcing water management decisions, managing projects, and resolving disputes that might arise. The case examples and research suggest that for the governance mechanism to gain credibility and legitimacy, important considerations will include how the governing body is selected (e.g., it might be appointed or otherwise endorsed by locally respected and legitimized bodies); who is involved (e.g., it might be composed of a range of relevant interests or constituency leaders); how decisions are made (e.g., many examples use consensus and base their decisions on accepted science and local knowledge); and how the governance mechanism relates to other entities with authority and influence.
- **Establishing flows and performance measures:** Many irrigators in the Basin say that if water requirements are clearly defined, they can design their water and cropping systems to benefit flows and agricultural needs. Scientific analysis is currently in progress to define streamflow conditions necessary to support recovery of ESA-listed bull trout and summer steelhead. The case examples and research suggest that to maintain trust in the system and to track performance, important considerations for establishing flows include that streamflow targets be based on accepted science, be measurable and be transparently monitored.
- **Market-based incentives:** Agricultural leaders involved in the Water Management Initiative have stated that the approach should employ incentives to achieve water management improvements. The examples demonstrate that market mechanisms such as water banking, transfers of conserved water, tiered pricing, water auctions and effluent permit trading can provide effective incentives for water conservation and water quality improvements. However, the case examples and research also illustrate that market

mechanisms can have unintended consequences. For example, selling excess water can lead to increased use, and trading from agriculture to other uses can undermine the agricultural economy. Experience from California suggests that if water trading is instituted in the Walla Walla Basin, it may be desirable to consider how much water can be traded, whether water can be traded from agriculture to other uses, and whether local zones might be appropriate to limit the geographic impact of water transfers.

- **Equitable distribution of costs and benefits:** Water management changes are likely to impose some costs for those making the changes and some potential impairment to the water availability of others. The case examples and research suggest that support for the Initiative might be enhanced if the costs of water restrictions are shared among groups rather than falling inordinately on some groups more than others (for example, irrigation districts or those on one side of the state line or the other). To mitigate the costs, a potentially helpful approach is to seek an equitable distribution of the *benefits* of water rather than the distribution of the *quantity* of water itself. Distributing water use benefits allows for positive-sum agreements, whereas dividing the water itself only allows for winners and losers.
- **Effective and efficient dispute resolution:** Water management changes are almost certain to result in some impairment of water rights at some time, and thus disputes within the Water Management Initiative are probably inevitable. The case examples and research suggest that an effective, credible and trusted governance structure can help avoid many conflicts. Incorporating a conflict resolution mechanism that builds on the overall credibility and trust of the system is also beneficial. As the case examples illustrate, one key to maintaining legitimacy and credibility is to develop an effective and efficient mechanism for resolving disputes when they do occur. Important components of such a system include 1) a definition of who makes decisions and how they are made (consensus or vote); 2) a specific, efficient, and final process to resolve disputes; and 3) mechanisms that create incentives for all parties to be more flexible and creative in trying to resolve the dispute without resorting to win-lose decisions or outcomes.

## Conclusion

Many of the individual components contemplated for the Walla Walla Water Management Initiative have proven to be effective elsewhere. This report provides examples and insights that are intended to inform and possibly guide those in the basin who are working to advance the Initiative. It is hoped that the mechanisms and ideas presented in this report will be of assistance in developing an appropriate package of management and decision-making tools for an effective, balanced and trusted Water Management Initiative.