

# RECLAMATION

*Managing Water in the West*

## **Yakima River Basin Water Enhancement Project**

## **Tributary Enhancement Program**

## **Manastash Creek Investigation Report**



U.S. Department of the Interior  
Bureau of Reclamation  
Columbia-Cascades Area Office  
Yakima, Washington

March 2013

# **Mission Statements**

## **U.S. Department of the Interior**

Protecting America's Great Outdoors and Powering Our Future

The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

## **Bureau of Reclamation**

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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# EXECUTIVE SUMMARY

This investigation report describes the measures that can be implemented to enhance water supply for fish and irrigation purposes on Manastash Creek, which is an important tributary of the upper Yakima River. Manastash Creek lies within the boundaries of the Kittitas Reclamation District in Kittitas County, Washington (Figure 1). Manastash Creek historically supported significant salmonid populations including the currently listed Mid-Columbia River steelhead. The objectives of the study were to identify effective means for providing increased instream flow in Manastash Creek for fish, increasing irrigation water use efficiency, and improving operational flexibility for agricultural water users of the Kittitas Reclamation District.



**Figure 1. Location map of Manastash Creek Enhancement Project**

The study involved Reclamation staff working with the Confederated Tribes and Bands of the Yakama Nation, State of Washington, Manastash Creek water users, and the Kittitas Reclamation District to evaluate existing data and reports. The evaluation concluded that the proposed Manastash Creek Enhancement Project, when implemented with the related Manastash Creek Restoration Project, can achieve the study objectives and will have major benefits for the fishery resources and the agricultural community of Manastash Creek. The Project involves construction of a pressurized pipeline to convey irrigation deliveries currently made using the South Branch Canal 13.8 Lateral of the Kittitas Reclamation District. The Manastash Creek Enhancement Project would be performed in conjunction with the Manastash Creek Restoration Project, which is currently being implemented by a Manastash Creek Steering Committee with assistance from the Kittitas County Conservation District.

Funding for the Manastash Creek Enhancement Project will be cost shared between the Washington State Department of Ecology and Reclamation. Reclamation will fund up to \$1 million of the total estimated project cost of \$7 million.

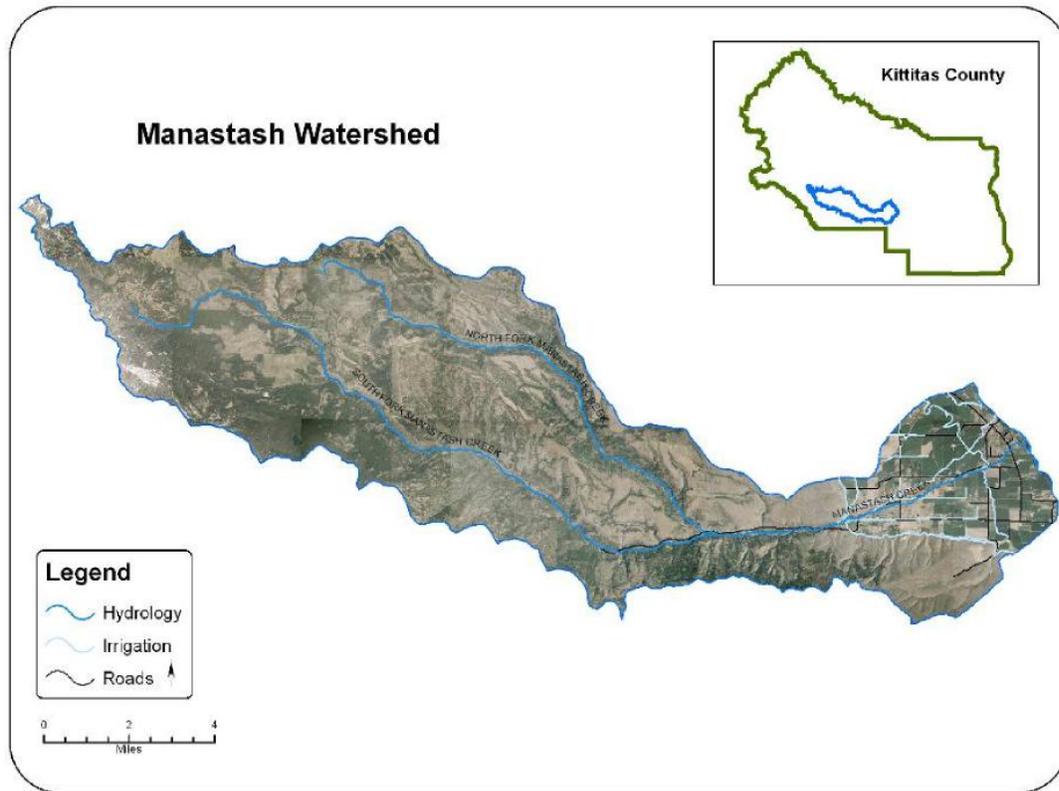
The study and implementation of its selected measures are authorized under Section 1207(d) and (e) of Title XII of the October 31, 1994, Public Law 103-434, Yakima River Basin Water Enhancement Project.

This investigation report is intended for submission to the Committee on Energy and Natural Resources of the Senate, the Committee on Natural Resources of the House of Representatives, and the Governor of the State of Washington, and to be made available to the public. Section 1207(e) of Title XII, of Public Law 103-434 requires submission of the investigation report to the congressional committees prior to appropriation of funds for the proposed tributary enhancement program.

## **BACKGROUND**

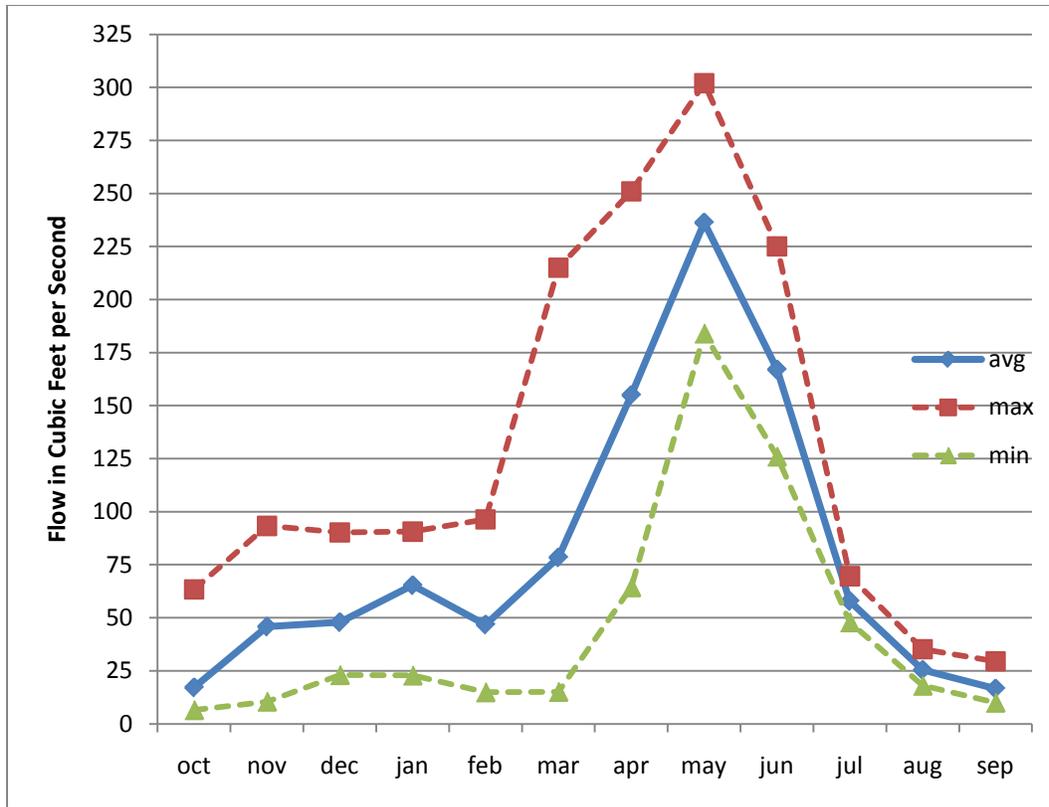
### **Manastash Creek Watershed Description**

Manastash Creek is a right (south) bank tributary to the Yakima River at river mile 154.5. Manastash Creek drains a watershed of 97 square miles ranging in elevations from 2,000 to 5,500 feet (Figure 2). The creek originates from the North Fork and the South Fork branches of Manastash Creek, with approximately 25 miles of stream habitat in the upper watershed. Once the North and South Forks join together, the creek is moderately confined within a narrow canyon until reaching a large, open alluvial plain sloping toward the Yakima River. It is primarily snowmelt fed, with the largest flows occurring in spring and early summer (MWH, 2002). The forested upper watershed is mostly public land and supports good quality habitat.



**Figure 2. Manastash Creek Watershed.**

The Manastash Creek floodplain and vicinity were developed for irrigated agriculture from 1871 through the early 1900s. Diversion dams were constructed in the creek channel, eliminating fish passage. Creek water was fully appropriated for the irrigation of agricultural crops, which dewatered the stream during late spring and summer. Typical of a snowmelt-fed system, stream flow in Manastash Creek typically peaks in late April and early May (Figure 3). It begins to decrease in late May to the point that not all irrigation water rights can be satisfied. Typically, by early- to mid-June, there is only enough water in Manastash Creek to meet the most senior irrigation water rights.



**Figure 3. Mean monthly unregulated stream flow data for Manastash Creek, along with maximum and minimum mean monthly flows for the period May 17, 2005, through May 30, 2009, for each month data was available. Data is provisional, courtesy of Washington State Department of Ecology.**

<https://fortress.wa.gov/ecy/wrx/wrx/flows/station.asp?sta=39J090#block2>

The fishery resources in Manastash Creek have been significantly impacted by irrigation development, and all anadromous species have been extirpated. At present, a 3.2-mile reach of lower Manastash Creek is seasonally dewatered by irrigation water withdrawals. Fish kills have been documented in the dewatered reach, and flow issues are known to reduce juvenile rearing capacity.

The *Yakima Basin Steelhead Recovery Plan* (YBFWRB 2009) identifies Manastash Creek as a key tributary for restoring passage in order to achieve steelhead recovery. The Recovery Plan states that the resolution of flow and passage issues in this watershed is a high priority for the Yakima basin as a whole, due to the quantity of suitable but unoccupied habitat in Manastash Creek. If fish passage and dewatering issues are properly addressed, Manastash Creek has the potential to be a productive watershed for the fishery resources of the Yakima River basin while also continuing to be a productive area of irrigated agriculture.

## Water Use

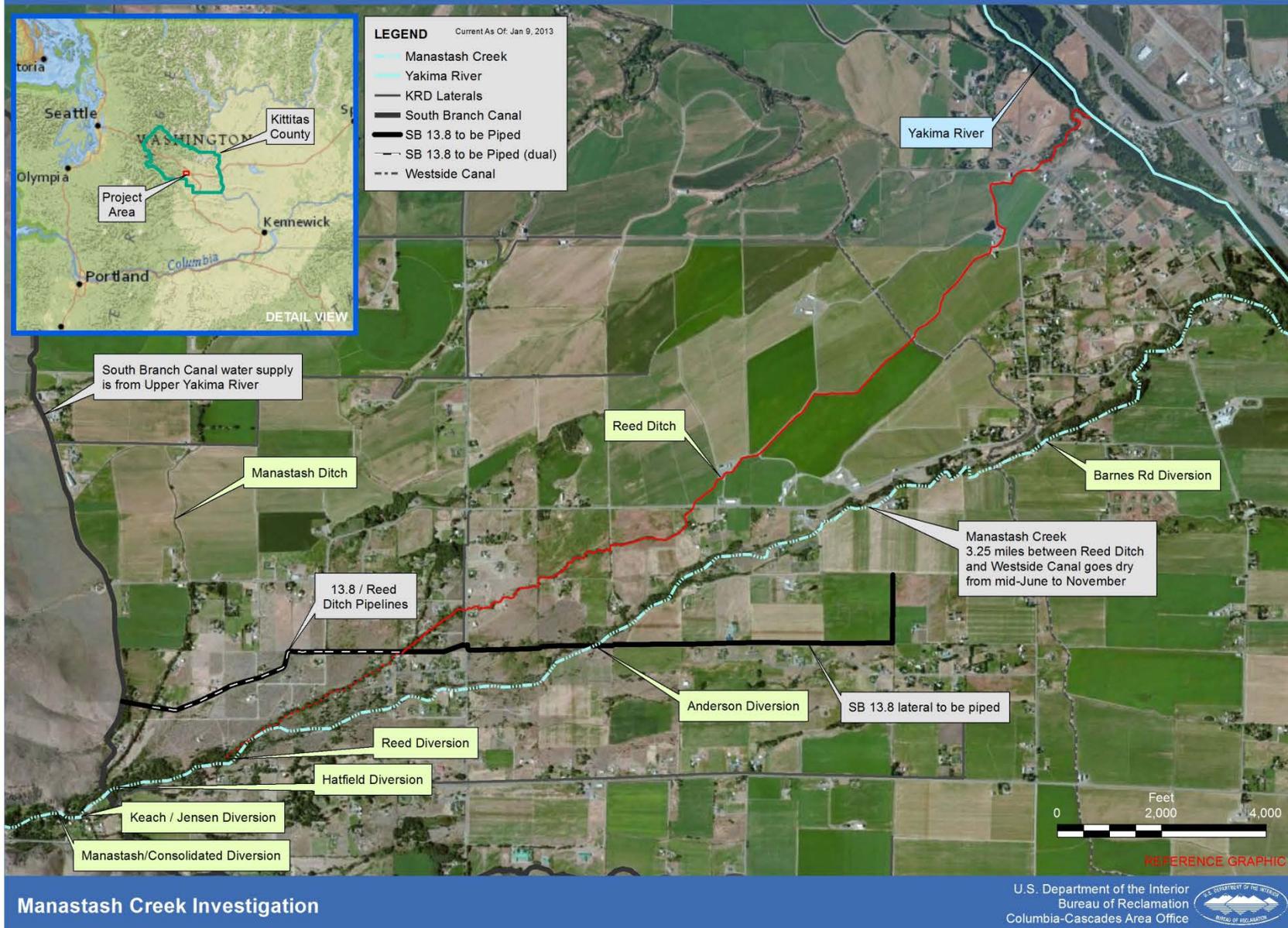
The Kittitas Reclamation District is a part of Reclamation's Yakima Project. Construction of Kittitas Reclamation District facilities began in 1926 and was completed in 1933. The Kittitas Reclamation District presently contains 59,122 acres of irrigable land including some in the Manastash Creek floodplain. The 3.2-mile long 13.8 Lateral of the South Branch Canal originates from the South Branch Canal, is currently unlined, and delivers water to approximately 1,060 acres of land. There are two operational spills into Manastash Creek. One from the South Branch Canal (stream mile 5.4) and one from the West Side Irrigating Company Canal (stream mile 1.6). These operational spills are necessary for proper operation of both canals and are not intended as means to deliver irrigation water to downstream water users by way of Manastash Creek (except for a small delivery of Westside Canal water by spill to the creek to serve the Grogan farm pump diversion). Both operational spills can vary from zero to 30 cfs on a daily basis and thus impact the natural flow regime of Manastash Creek.

There are six major points of diversion in the lower 6 miles of Manastash Creek (Figure 4). They are commonly referred to as the Manastash Ditch (stream mile 5.6), Keach-Jensen Ditch (stream mile 5.5), Hatfield Ditch (stream mile 5.3), Reed Ditch (stream mile 4.8), Anderson Diversion (stream mile 3.4) and Barnes Road Diversion (stream mile 1.4).

There are approximately 4,500 acres irrigated with Manastash Creek water. On farm, many of the landowners have enclosed delivery systems and some have extensive piping networks to convey the water to each field. The three most common methods of irrigation employed by landowners are flood, rill, and sprinkler. Flood irrigation is an irrigation method where water is delivered to a field and is allowed to flow along the ground among the crops. Approximately 15 percent of the irrigated acres using Manastash Creek are flood irrigated. Flood irrigation is typically used to irrigate livestock pastures and is typically the least-efficient irrigation method used in the Manastash Creek area.

Rill irrigation uses concrete-lined ditches and/or gated PVC pipe to apply water to fields that have rills or corrugations that direct the flow of water across the field. Approximately 55 percent of the irrigated acres using Manastash Creek water are irrigated with this method.

Sprinkler irrigation includes hand lines, wheel lines (side roll), big guns, and linear or center-pivot sprinklers. Approximately 30 percent of the irrigated acres using Manastash Creek water are irrigated with this method. Sprinkler irrigation is typically the most efficient irrigation method used in the Manastash Creek area.



**Figure 4. Kittitas Reclamation District South Branch 13.8 Lateral Piping Project.**

# Water Rights

The Manastash Ditch diversion serves the Manastash Water Ditch Association. The Manastash Water Ditch Association is the only association holding water rights on Manastash Creek; all other water rights are held by individuals who share one of the common points of diversion. The Manastash Water Ditch Association has a service area of 2,191 acres, and its water right may be used anywhere within that service area, provided that the landowner owns or leases “shares” of the Manastash Ditch Water Association water. All other water rights have a specific place of use and are controlled by the individual landowners, not a water association or company.

The surface water rights from Manastash Creek are referred to by their “class” or priority date. The classes range from 1 to 20 with priority dates from 1871 to 1896. The first-class water has the most senior priority date and must be provided ahead of all other water rights. As the instream flows in Manastash Creek decline through spring and summer, the lower priority (i.e., junior) classes are no longer served (MCRP 2007). During the beginning of the irrigation season, in April, May, and June, a maximum of 88.38 cfs of water is diverted from Manastash Creek to satisfy all irrigation water rights. As flows recede, all water diversions are cut in half as of July 1, so that approximately 44 cfs of water can be diverted for irrigation, when available (Table 1).

**Table 1. Manastash Creek Water Rights by Class as of 2008 (unpublished data from Kittitas County Conservation District)**

| Class | Flow (cfs) | Class | Cumulative Flow (cfs) |
|-------|------------|-------|-----------------------|
| 1     | 9.45       | 1     | 9.45                  |
| 2     | 37.50      | 2     | 46.95                 |
| 3     | 9.21       | 3     | 56.16                 |
| 4     | 1.17       | 4     | 57.33                 |
| 5     | 10.78      | 5     | 68.11                 |
| 6     | 3.93       | 6     | 72.04                 |
| 7     | 1.76       | 7     | 73.80                 |
| 8     | 1.40       | 8     | 75.20                 |
| 9     | 2.57       | 9     | 77.77                 |
| 10    | 0.30       | 10    | 78.07                 |
| 11    | 2.97       | 11    | 81.03                 |
| 12    | 0.16       | 12    | 81.19                 |
| 13    | 0.23       | 13    | 81.42                 |
| 14    | 0.01       | 14    | 81.43                 |
| 15    | 0.47       | 15    | 81.90                 |
| 16    | 3.29       | 16    | 85.19                 |
| 17    | 0.17       | 17    | 85.36                 |
| 18    | 2.45       | 18    | 87.81                 |
| 19    | 0.29       | 19    | 88.10                 |
| 20    | 0.28       | 20    | 88.38                 |

In addition to the surface water rights for irrigation, some parcels also retain year-round stock water rights. The Manastash Ditch Diversion and Keach-Jensen Diversion, in particular, operate year-round to provide water to livestock owners.

Manastash Creek was adjudicated through the Yakima River Basin Water Rights Adjudication (State of Washington, Department of Ecology vs. James J. Acquavella, et al.). Manastash Creek is referred to as Subbasin No. 11. The Conditional Final Order was issued June 14, 2001, 13 years after the first field investigations began. A total of three reports were issued by the Referee, the initial Report of Referee and two Supplemental Reports of Referee. The water rights confirmed through this adjudication include surface water rights from Manastash Creek, Hatfield Canyon Creek, Bull Pen Creek, Spring Creek, and various unnamed springs within the subbasin, as well as stock water rights.

Many landowners asserted rights to return flows, which were also addressed by the Acquavella adjudication. Water rights could only be granted for return flows that originated within the subbasin. Much of the return flow that has traditionally been used by irrigators is referred to as “foreign waters,” as it originates outside the subbasin (e.g. the Yakima River via Kittitas Reclamation District or West Side Irrigating Company [Yakima County Superior Court, May 9, 1994]). Consequently, return flows may be used in certain situations but no water rights to foreign return flows were confirmed in Acquavella.

The Yakama Nation holds treaty water rights for instream flow for fish and other aquatic life in the Yakima basin, as set forth in Orders of the Yakima County Superior Court in the Acquavella adjudication.

## **Manastash Creek Restoration Project**

The Manastash Creek Restoration Project is being implemented by the Manastash Creek Steering Committee with assistance from the Kittitas County Conservation District. The Manastash Creek Steering Committee was formed in 2001 and consists of representatives of the Manastash Water Ditch Association, individual irrigators from Keach Ditch, Jensen Ditch, Hatfield Ditch, Reed Ditch, Anderson Diversion, and Barnes Road Diversion, as well as Washington State Department of Ecology, Washington Department of Fish & Wildlife, Washington Environmental Council, Kittitas Reclamation District, Bonneville Power Administration, National Marine Fisheries Service, Reclamation, and the Yakama Nation.

The Manastash Creek Restoration Project was formulated to address fish passage and instream flow issues and provide for the restoration of salmon and steelhead in the creek. Much success has been achieved with the project to date. Fish screen structures have been installed and fish passage barriers corrected at these three irrigation diversions on Manastash Creek:

- In 2010, the Barnes Road diversion was reconstructed, which included a concrete fish ladder to restore upstream fish passage and the addition of computerized controls and measuring devices.

- Also in 2010, the Manastash Diversion was reconstructed and reconfigured to restore upstream fish passage and were equipped with modern fish screens, computerized controls, and measuring devices (and is now referred to as the “Manastash Ditch Water Association/Consolidated Diversion”).
- In 2011, the Keach-Jensen Ditch was reconstructed and reconfigured to restore upstream fish passage and were equipped with modern fish screens, computerized controls, and measuring devices.

Approximately \$7 million have been spent to date on the Manastash Creek Restoration Project. To date, funding has been provided by State of Washington and Bonneville Power Administration.

## **Yakima River Basin Water Enhancement Project Tributary Authority**

Title XII, of Public Law 103-434, Section 1207, Yakima River Basin Water Enhancement Project authorizes Reclamation to develop a conservation program that includes enhancement of water supplies in tributaries of the Yakima River basin. The conservation goals include:

- Protecting and enhancing fish and wildlife through improved water management, instream flows, and other means of habitat improvement; and
- Improving the reliability of the water supply for irrigation.

The Yakima River Basin Water Enhancement Project legislation states that Reclamation may implement a wide variety of measures to achieve project goals, including but not limited to:

- Water use efficiency improvements;
- Use of Yakima Project canals and facilities;
- Construction, operation, and maintenance of groundwater wells;
- Purchase of water rights from willing sellers; and
- Restoration of stream habitats.

Participation in the Yakima River Basin Water Enhancement Project tributary program is voluntary.

## **STUDY RECOMMENDATION**

A proposed enhancement program for Manastash Creek was initially advanced by the Reclamation Kittitas Irrigation District. It was subsequently identified by the Yakima River Basin Water Enhancement Project Workgroup for the proposed Yakima River Basin Integrated Plan as an important early action project for Yakima River basin habitat improvements.

Reclamation consulted on the proposed enhancement program with the Manastash Creek Steering Committee, Washington State Department of Ecology, Manastash Creek water rights owners, the Yakama Nation, the Kittitas Reclamation District, the Kittitas County Conservation District, and others. The hydrologic, environmental, engineering and economics aspects of the proposed program were evaluated. The appropriate Manastash creek water rights owners have agreed to participate. Their participation includes moving their points of diversion to the new Manastash Water Ditch Diversion/Consolidated Diversion site.

It has been determined that the enhancement program for Manastash Creek is viable and meets the criteria of Section 1207 of the Yakima River Basin Water Enhancement Project for funding and implementation. It is recommended that it be officially implemented as the Manastash Creek Enhancement Project.

The Manastash Creek Enhancement Project will:

- Replace the currently unlined 13.8 Lateral of the South Branch Canal with 3.2 miles of pipeline. The new South Branch 13.8 Lateral Pipeline will be pressurized by the gravity head resulting from piping the irrigation water from the South Branch Canal which is considerably higher in elevation than the farmlands that will be served. This pipeline will serve Kittitas Reclamation District water users.
  - An estimated 1,300 acre-feet of water will be conserved annually. The conserved water will be delivered to Manastash Creek to increase streamflow by an average of 4-5 cfs.
- Work in conjunction with the ongoing Manastash Creek Restoration Project, which will construct two additional pipelines that will begin at the Manastash Water Ditch Association/Consolidated Diversion (Figure 5). These two pipelines—Consolidated Diversion Pipeline and the Manastash Water Ditch Association Pipeline—will share a trench for the first 2,100 feet, until they intersect with the 13.8 Lateral.

At that location, the Consolidated Diversion Pipeline will turn east and follow the new South Branch 13.8 Lateral Pipeline (described above) for 5,700 feet. The Consolidated Diversion Pipeline will serve the Hatfield and Reed users.

- The first phase of installing the Consolidated Diversion Pipeline along with the new South Branch Canal 13.8 Lateral Pipeline will be constructed under the Manastash Creek Enhancement Project.

The Manastash Water Ditch Association Pipeline will continue north for another 2,850 feet to its intersection with Hanson Road and will deliver to Manastash Water Ditch Association users.

- An estimated 580 acre-feet of water will be conserved annually with construction of the Manastash Water Ditch Association Pipeline.



**Figure 5. The Manastash Water Ditch Association/Consolidated Diversion structure at stream mile 5.6 on Manastash Creek was constructed in the winter of 2009/2010. The Manastash Water Ditch Association Consolidated Pipelines project will begin at the two headgates on the left side of the photo.**

The Manastash Creek Enhancement Project, when combined with the Manastash Creek Restoration Project, will result the following:

- Concurrent construction of the Consolidated Diversion Pipeline and the new South Branch Canal 13.8 Lateral Pipeline along parts of the South Branch 13.8 Lateral Pipeline rights-of-way. Using the Kittitas Reclamation District rights-of-way and constructing both pipelines concurrently will reduce overall construction costs for both the Manastash Creek Enhancement Project and the Manastash Creek Restoration Project.
- Decommissioning of the Hatfield, Reed, and Anderson diversions (the last three unscreened irrigation diversions on Manastash Creek);
- Removal of the Reed diversion structure (the last fish passage barrier and last unscreened diversion in Manastash Creek); and
- Reduced conveyance losses in the Manastash Water Ditch Association Ditch (which is currently an open, earthen, unlined ditch that will be converted to a pipeline as indicated above).

# BENEFITS

The Manastash Creek Enhancement Project will accomplish the following:

- Facilitate the conversion of gravity irrigation methods to pressurized sprinkler irrigation.
- Provide water users the ability to be more efficient with their current water allotment.
- Conserve energy by eliminating the need for electric pumps on farm.
- Reduce maintenance costs by replacing open canal with buried pipeline.
- Reduce seepage losses and provide better water management.
- Provide a more reliable and higher base instream flow in Manastash Creek.
- Improve the extent and duration of instream flow within the seasonally dewatered reach of Manastash Creek.
- Improve the ability of both anadromous and resident fish populations to rear and migrate.

In addition, the Manastash Creek Enhancement Project, when combined with the Manastash Creek Restoration Project, will result the following benefits to Manastash Creek:

- Facilitate elimination of the last remaining fish barrier on Manastash Creek and provide access to approximately 25 miles of important habitat in Manastash Creek for steelhead, coho, bull trout, and, to a lesser degree, spring Chinook. This habitat has been inaccessible since the early 1900s.
- Increased instream flows will improve the quantity, quality, and diversity of other aquatic life, including aquatic insects and riparian vegetation.
- Screen the water diverted from Manastash Creek for irrigation to protect the juvenile fish from entrainment in the irrigation water delivery systems.
- Directly address the most significant issues impacting fisheries in the Manastash watershed—lack of access to intact headwater habitat due to diversion dam barriers and dewatering and unscreened water diversions.

By addressing these issues in this key Yakima tributary, these projects will contribute to the recovery of salmonid species in Manastash Creek and the Yakima River basin.

In summary, the two projects will have major benefits to both agricultural and fisheries resources of the Yakima River basin and demonstrate how basin stakeholders can work together to achieve benefits for both fisheries and agriculture.

## **FUTURE PROJECTS**

Manastash Creek is recognized as one of the most important tributaries in the upper Yakima River basin for its potential fishery resource value. Although these two projects combined accomplish meaningful improvements for Manastash Creek, there still remain significant opportunities to improve both the fishery and agricultural resources. Additional instream flows, stream and riparian habitat enhancement, and floodplain improvements are still needed to fully restore Manastash Creek. Future projects involving piping laterals and canals, lining canals, reregulating reservoirs, and purchasing water will increase instream flows and enhance habitat.

# REFERENCES

- MCRP 2007                      *Manastash Creek Restoration Project Instream Flow Enhancement Implementation Plan*. Final Draft October 30, 2007.
- Montgomery and  
McDonald 2002                Montgomery, Robert and Daniel McDonald. 2002. *Manastash Water Conservation Study*. Project No. 1998-93400, 114 electronic pages (BPA Report DOE/BP-00000422-1). December 2002. Portland, Oregon
- YBFWRB 2009                    Yakima Basin Steelhead Recovery Board. 2009. *2009 Yakima Steelhead Recovery Plan, Extracted from the 2005 Yakima Subbasin Salmon Recovery Plan, with Updates*. <http://ybfwrb.org/steelhead-recovery-plan/>. August 2009. Accessed 10/2012.

# **ATTACHMENT 1 – LETTERS OF SUPPORT**



March 14, 2013

Gerald Kelso  
Area Manager  
Columbia-Cascade Area Office  
U.S. Bureau of Reclamation  
1917 Marsh Road  
Yakima, WA 98901-2058

Dear Mr. Kelso,

Trout Unlimited is pleased to write this letter in support of the Bureau of Reclamation's (BOR's) Manastash Creek Enhancement Project. This project will provide construction of a pressurized pipeline for the Kittitas BOR District's (KRD) South Branch 13.8 Lateral and enhance instream flow conditions in Manastash Creek.

Trout Unlimited has been pleased to be part of the Manastash Creek Restoration Project, which consists of multiple partners who collaboratively have worked together to address fish screen, fish passage and instream flow issues in Manastash Creek. Trout Unlimited, in partnership with the Kittitas County Conservation District and irrigators, have collectively protected over 15 cfs of instream flow permanently in Manastash Creek and this project will significantly enhance those efforts. We are excited to see this project moving towards implementation.

Together, the efforts of many entities have helped provide major fishery benefits to Manastash Creek for steelhead and for other native and anadromous species and their habitats. We look forward to continuing our partnership with BOR and others on these restoration activities.

Best wishes,

Lisa Pelly, Director  
Trout Unlimited, Washington Water Project

Cc: Kittitas County Conservation District



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

U.S. Fish and Wildlife Service  
Mid-Columbia River Fishery Resource Office  
7501 Icicle Road  
Leavenworth, WA 98826



March 14, 2013

Gerald Kelso  
Area Manager, CCAO  
U.S Bureau of Reclamation  
1917 Marsh Road  
Yakima, WA 98901

Dear Mr. Kelso,

The U.S. Fish and Wildlife Service (FWS) wishes to express support for the Manastash Creek Enhancement Project. The FWS considers Manastash Creek a priority stream for restoration. The creek historically supported significant salmonid populations including Mid-Columbia River steelhead which are currently listed as threatened under the ESA. It is probable that ESA-listed bull trout were once present there as well. Unfortunately, over-appropriation of the creek's flow for irrigation and careless land use practices significantly degraded habitat conditions and fish resources in the stream.

Over the last decade however numerous partners have combined efforts to improve conditions on Manastash Creek. As one of those partners the FWS has provided resources to implement restoration actions including financial and technical assistance to remove fish passage barriers and conduct an assessment of habitat needs. But as is acknowledged by everyone involved, to fully realize the benefit of restoring passage and enhancing habitat, instream flows need to be significantly improved. Progress has been made to improve flows in Manastash Creek but additional flow augmentation is necessary to address flow depletion in the lower reaches of the creek. The Manastash Creek Enhancement Project addresses this need and will provide an essential reconnection to many miles of upstream habitat necessary for the recovery of fish populations. When combined with the related Manastash Creek Restoration Project, the two projects will produce significant and measureable benefits for Manastash Creek aquatic resources.

Sincerely,

Jim L Craig  
Project Leader



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Washington State Habitat Office  
Eastern Washington Branch  
304 South Water, Suite 201  
Ellensburg, Washington 98926

February 11, 2013

Mr. Gerald Kelso, Area Manager  
Bureau of Reclamation  
Columbia-Cascades Area Office  
1917 Marsh Road  
Yakima, Washington 98901-2058

Subject: Manastash Creek Enhancement Project

Dear Mr. Kelso:

I am writing to convey my enthusiastic support for the Manastash Creek Enhancement Project. As you may be aware, Manastash Creek was once an important producer of steelhead and coho salmon. The subject project will build on the substantial efforts by the Bonneville Power Administration, Washington Department of Ecology, Kittitas Conservation District and others to restore these species to Manastash Creek.

The Manastash Creek Enhancement Project will improve stream flows directly by enabling savings within the Kittitas Reclamation District and indirectly by enabling better water management through the consolidation of the Reed Ditch point of diversion. This latter feature may actually be more important than the former.

This is a great opportunity to show progress on an important fishery measure in a manner that benefits irrigators, as envisioned by the Yakima Basin Water Enhancement Project's Integrated Plan. I encourage the Bureau to press ahead quickly to demonstrate to potential funders how ready the basin is to implement mutually beneficial projects. Please let me know if I can provide any further information or take further action in support of this important project.

Sincerely,

F. Dale Bambrick, Chief  
Eastern Washington Branch



State of Washington

**Department of Fish and Wildlife**

*South Central Regional Office, 1701 South 24<sup>th</sup> Avenue, Yakima, WA 98902*

*Phone: (509) 457-9309, Fax (509) 575-2474*

March 12, 2013

Gerald Kelso, Area Manager  
Columbia-Cascades Area Office  
USDI Bureau of Reclamation  
1917 Marsh Road  
Yakima, WA 98901-2058

Subject: Washington Department of Fish and Wildlife Support for Bureau of Reclamation  
Manastash Creek Enhancement Project, Yakima River Basin Water Enhancement  
Program, Title XII PL 103-434, Section 1207 Tributary Enhancement

Dear Mr. Kelso:

I am writing on behalf of the Washington Department of Fish and Wildlife to express our support for the Bureau of Reclamation's proposed Manastash Creek Enhancement Project (MCEP).

The MCEP project will conserve water in a portion of the Kittitas Reclamation District (KRD) through piping and pressurizing the KRD WB13.8 lateral and furthering on-farm efficiency opportunities. The water conservation and irrigation efficiencies provided will substantially help efforts to restore stream flow in a three-mile reach of Manastash Creek. The MCEP, in addition to other collaborative restoration efforts with our partners, will help to restore coho, chinook, and steelhead access to 25 miles of historic spawning and rearing habitat.

Manastash Creek is a key tributary in the Upper Yakima River Basin for recovery of anadromous fish, including ESA listed Mid-Columbia steelhead. Beginning in the late 1800's these runs were diminished and ultimately eliminated from Manastash Creek largely by irrigation withdrawals, lack of screening, dewatered channels, and impassable diversion dams. In addition, habitat and natural stream channel processes have been substantially harmed by associated irrigation facilities, including roads, fills, under-sized bridges, canals and other facilities associated with the irrigation canal networks including the KRD.

Highly productive habitat remains for salmonids in the upper Manastash Creek Watershed that is mostly in public ownership. Reclamation is in a unique position to be able to reconnect this productive habitat to recover salmon and steelhead, because of Reclamation's expertise and authority in the basin and the water management abilities within the Yakima Project. There is

Mr. Gerald Kelso

March 12, 2013

Page 2 of 2

also a history of collaboration between Reclamation, KRD and Manastash tributary water users, many of which also receive supplemental Yakima Project water from the KRD. By implementing the proposed MCEP, Reclamation will bring water conservation benefits to KRD and creek water users, improve instream flows, help recover stream and riparian habitat, and significantly advance restoration of salmon and steelhead runs to Manastash Creek.

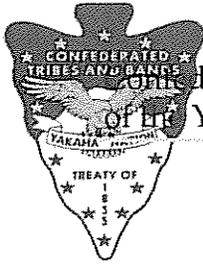
We very much support the Manastash Creek Enhancement Project proposed by Reclamation, and encourage project implementation in 2013.

Sincerely,

A handwritten signature in blue ink that reads "Mike Livingston". The signature is fluid and cursive, with the first name "Mike" and last name "Livingston" clearly legible.

Mike Livingston  
Regional Director

Cc: Perry Harvester, Regional Habitat Program Manager, WDFW  
Anna Lael, District Manager, Kittitas County Conservation District  
Ken Hasbrouck, District Manager, Kittitas Reclamation District



Confederated Tribes and Bands  
of the Yakama Nation

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Treaty of June 9, 1855

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| ACTION    |      |            |      |

March 12, 2013

Gerald Kelso  
Area Manager  
Columbia-Cascade Area Office  
U.S. Bureau of Reclamation  
1917 Marsh Road  
Yakima, WA 98901-2058

RE: Reclamation's Manastash Creek Enhancement Project

Dear Mr. Kelso,

I am writing this letter to you on behalf of the Yakama Nation (YN). The YN views the Reclamation's Manastash Creek Enhancement Project (MCEP) as a step in the right direction towards fixing and enhancing water conditions in the Manastash creek. This project will allow fish and wildlife that flourish once again. The YN gives their strong support of Reclamation's project and commitment to improve instream flow conditions in Manastash Creek and others in the future.

Sincerely,

Virgil Lewis  
Fish and Wildlife Committee Chair



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**Kittitas County Conservation District**

607 E. Mountain View Ave. - Ellensburg, WA 98926 - Phone (509) 925-8585, Ext. 4 - Fax (509) 925-8591

March 13, 2013

Gerald Kelso  
Area Manager  
Columbia-Cascade Area Office  
U.S. Bureau of Reclamation  
1917 Marsh Road  
Yakima, WA 98901-2058

RE: Reclamation's Manastash Creek Enhancement Project / Consolidated Pipeline Construction and Ownership

Dear Mr. Kelso,

I am writing this letter to you on behalf of the Manastash Creek Steering Committee. The Steering Committee includes representatives of the seven irrigation diversions on Manastash Creek, the Washington Environmental Council, the Yakama Nation, Washington Department of Ecology, Washington Department of Fish & Wildlife, Bonneville Power Administration (BPA) and Kittitas Reclamation District (KRD), along with NOAA Fisheries, which joined in 2011.

At the two most recent meetings, Steering Committee representatives discussed the Bureau of Reclamation's Manastash Creek Enhancement Project (MCEP). MCEP includes construction of a pressurized pipeline for KRD South Branch 13.8 Lateral and direct assistance to Kittitas County Conservation District (KCCD) with construction of the Consolidated Pipeline. The Steering Committee directed me to convey their strong support of Reclamation's project and commitment to improve instream flow conditions in Manastash Creek.

MCEP is closely linked to the Manastash Creek Restoration Project, an effort undertaken by the Steering Committee more than a decade ago. The Manastash Creek Restoration Project began when the Washington Environmental Council issued an invitation to work together to address fish screen, fish passage and instream flow issues, accompanied by a draft letter of intent to sue under the Endangered Species Act. The KCCD was invited in 2003 to administer the first funding obtained by the Steering Committee, a \$2.24 million grant appropriated by the Washington State Legislature through the Washington Department of Ecology.

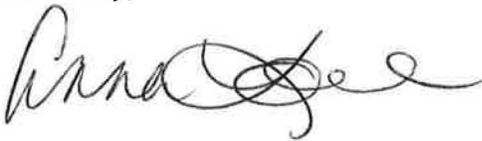
In 2007, a Memorandum of Agreement (MOA) between Steering Committee members and BPA was negotiated. The MOA was ultimately signed by representatives of the seven irrigation diversions, the Washington Environmental Council, Washington Department of Ecology, Washington Department of Fish & Wildlife, BPA and KCCD. The MOA allowed construction of the three fish screen and fish passage facilities to begin. All three, Barnes

Road Diversion, Keach-Jensen Diversion and the MWDA/Consolidated Diversion, are now operational. Construction was funded by the original Ecology grant and a grant through BPA. The remaining irrigation diversions (Hatfield, Reed and Anderson) are planned for consolidation at the MWDA/Consolidated Diversion, in order to avoid building additional fish screen facilities at these individual diversion structures in Manastash Creek. The largest remaining component is the construction of the "Consolidated Pipeline" in order to deliver water from the MWDA/Consolidated Diversion back to the individual ditches where each ditch intersects with the KRD SB Lateral 13.8. The currently planned pipeline is 1.6 miles in length, with the last mile located within the right-of-way for the KRD SB Lateral 13.8.

KCCD currently administers four additional grants from Ecology, BPA, Salmon Recovery Funding Board, and the US Fish & Wildlife Service to continue implementation of the Manastash Creek Restoration Project. In addition to the Consolidated Pipeline construction, the Hatfield, Reed and Anderson diversion structures are planned for decommissioning. The Reed Diversion represents the most substantial barrier remaining in Manastash Creek and blocking access to more than 20 miles of habitat for steelhead. Decommissioning cannot occur until the Consolidated Pipeline is constructed and functioning.

Reclamation's commitment to assist with completion of the Consolidated Pipeline by constructing the portion located in the right-of-way for the KRD SB Lateral 13.8 and owning the pipeline is critical to the completion of the Consolidated Pipeline. Together, the efforts of the Steering Committee and Reclamation will result in major fishery benefits to Manastash Creek for steelhead and potentially for other native and anadromous species, and provide improved efficiency to a portion of the KRD delivery system and Manastash Creek water users. Accordingly, the Steering Committee strongly supports Reclamation's Manastash Creek Enhancement Project.

Sincerely,

A handwritten signature in black ink, appearing to read "Anna Lael". The signature is fluid and cursive, with the first name "Anna" being more prominent than the last name "Lael".

Anna Lael  
District Manager

Cc: Manastash Creek Steering Committee

# **YAKIMA BASIN JOINT BOARD**

*A Partnership of Public Entities Promoting  
the Multiple Uses of the Yakima Valley's  
Water Supply*

## **IRRIGATION ENTITIES**

**KENNEWICK IRRIGATION DISTRICT  
KITTITAS RECLAMATION DISTRICT  
ROZA IRRIGATION DISTRICT  
SUNNYSIDE DIVISION  
YAKIMA-TIETON IRRIGATION DISTRICT**

## **MUNICIPALITIES** **CITY OF YAKIMA**

March 13<sup>th</sup>, 2013

Gerald Kelso  
Area Manager  
Columbia-Cascade Area Office  
U.S. Bureau of Reclamation  
1917 Marsh Road  
Yakima, WA 98901-2058

RE: Kittitas Reclamation District Delivery Efficiency and Conservation/Consolidated Pipeline Project, Manastash Creek

The Yakima Basin Joint Board represents various irrigation entities dependent on water from the reservoirs, rivers and creeks in the Yakima River Basin. As such, our operations are dependent on the proper management of the river system for all water resource needs.

We are writing today in support of the Bureau of Reclamation's (BOR) Manastash Creek Study: The Kittitas Reclamation District Delivery Efficiency and Conservation Project. This project is being proposed by the BOR as an action under the Yakima River Basin Water Enhancement Project. It is also a key element of the Manastash Creek Restoration Project being implemented by a group of local, state, federal, tribal and environmental interest groups, with assistance from the Kittitas County Conservation District. We understand that the objectives of the project are to provide increased instream flow in Manastash Creek and to increase water efficiency and operational flexibility to the irrigation water users.

We support this project and we encourage funding to be allotted to this cooperative and collaborative effort.

We hope these comments are helpful,



Dave Brown, Board Chair



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**Kittitas County Conservation District**

607 E. Mountain View Ave. - Ellensburg, WA 98926 - Phone (509) 925-8585, Ext. 4 - Fax (509) 925-8591

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 Yakima, Washington

March 14, 2013

Gerald Kelso  
 Area Manager  
 Columbia-Cascade Area Office  
 U.S. Bureau of Reclamation  
 1917 Marsh Road  
 Yakima, WA 98901-2058

RE: Reclamation's Manastash Creek Enhancement Project

Dear Mr. Kelso,

BUREAU OF RECLAMATION  
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| ACTION    |      |            |      |

I am writing this letter to you on behalf of the Kittitas County Conservation District (KCCD) Board of Supervisors. Our staff has been working closely with yours in order coordinate our long term work on Manastash Creek with Reclamation and the Kittitas Reclamation District (KRD's) efforts in 2012 to improve Manastash Creek instream flow through improvement of KRD's South Branch 13.8 Lateral.

Reclamation's effort is called the Manastash Creek Enhancement Project (MCEP). MCEP includes construction of a pressurized pipeline for the Kittitas Reclamation District's (KRD) South Branch 13.8 Lateral and direct assistance to KCCD with construction of the Consolidated Pipeline. The Consolidated Pipeline is a critical component of the long term effort to remove fish passage barriers and provide fish screens for irrigation diversions in order to open more than 20 miles of upstream habitat in Manastash Creek.

The KCCD has administered funding for and facilitated the Manastash Creek Restoration Project, an effort undertaken by the Manastash Creek Steering Committee more than a decade ago. The Manastash Creek Restoration Project began when the Washington Environmental Council issued an invitation to work together to address fish screen, fish passage and instream flow issues, accompanied by a draft letter of intent to sue under the Endangered Species Act. The Steering Committee includes representatives of the seven irrigation diversions on Manastash Creek, the Washington Environmental Council, the Yakama Nation, Ecology, Washington Department of Fish & Wildlife, Bonneville Power Administration and KRD. NOAA Fisheries joined the Steering Committee in 2011.

In 2007, a Memorandum of Agreement between the Steering Committee members and the Bonneville Power Administration was negotiated and signed. The agreement allowed construction of the three fish screen and fish passage facilities to begin. All three, Barnes Road Diversion, Keach-Jensen Diversion and the MWDA/Consolidated Diversion, are now operational. Construction was funded by the original Ecology grant and a grant through the Bonneville Power Administration.

The remaining irrigation diversions (Hatfield, Reed and Anderson) are planned for consolidation at the MWDA/Consolidated Diversion, in order to avoid building additional fish screen facilities at these individual diversion structures in Manastash Creek. The largest remaining component is the construction of the "Consolidated Pipeline" in order to deliver water from the MWDA/Consolidated Diversion back to the individual ditches where each ditch intersects with the KRD SB Lateral 13.8. The currently planned pipeline is 1.6 miles in length, with the last mile located within the right-of-way for the KRD SB Lateral 13.8.

In addition to the Consolidated Pipeline construction, the Hatfield, Reed and Anderson diversion structures are planned for decommissioning. The Reed Diversion represents the most substantial barrier remaining in Manastash Creek. Decommissioning cannot occur until the Consolidated Pipeline is constructed and functioning.

As a complementary effort in Manastash Creek, we are also working with both a technical committee and a landowner committee to complete the Manastash Creek Reach Assessment. This Assessment is focused on both fish habitat and flood hazards in the lower 13 miles of Manastash Creek and is slated for completion in April 2013. A current conditions report has been drafted and a priority projects are being compiled. An initial conclusion of this effort is that the flow in the lower 6 miles of Manastash Creek is vital not only for fish habitat but for flood hazard reduction. Improving instream flow in the reach between the Reed Diversion and the West Side Irrigating Company Canal will allow for riparian restoration efforts which in turn will stabilize the stream banks in reaches that suffered severe erosion in the May 2011 flood event. Reclamation's MCEP and the subsequent improvement to instream flow will be an important part of the long effort to reduce flood hazards and improve instream habitat.

Reclamation's commitment to assist with completion of the Consolidated Pipeline by constructing the portion located in the right-of-way for the KRD SB Lateral 13.8 and owning the pipeline is critical to the completion of the Consolidated Pipeline. In addition, Reclamation has committed to providing assistance with the completion of the initial 0.6 miles of the Consolidated Pipeline including, but not limited to pipeline ownership. The Board of Supervisors strongly supports Reclamation's efforts.

As the entity administering the funding for the Manastash Creek Restoration Project, we would also strongly encourage Reclamation to continue close coordination with our staff and the Manastash Creek Steering Committee. These projects are a substantial investment of public funds and every effort must be made to efficiently design and construct these projects.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Moore". The signature is fluid and cursive, written over a white background.

Mark Moore  
Chair, Board of Supervisors