Wolf Creek – Twin Lakes Storage Pilot Project FAQs

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1. Who are the WCRD and the TLAC?
2. Why is this project needed, and how will it work?
3. How is WCRD able to conserve water? How much water and when?
4. How is water delivered to Twin Lakes?
5. How does water get to the Methow River and when?
6. What is the role of the Methow Watershed Council (MWC), and how does this project fit in with watershed planning done by the MWC?
7. Why a pilot, when will it start, and how long will it last?
8. Who is paying the costs of the project?
9. Whose water rights are involved, and how?
10. What are the environmental benefits, and will there be negative impacts to the environment?
11. Will this project result in the loss of irrigated lands?
12. How will the Twin Lakes be protected from the milfoil that has been present in Paterson Lake?
13. What is the risk that project operations will cause flooding around Twin Lakes properties?
14. How is this project different from the one first proposed around 2002?
15. How will a permanent project be different from this pilot?
16. Will the project benefit the towns or other out-of-stream water users? Who decides who can get new water made available by this project?
17. Who will benefit financially from the project? What is the value of mitigation credits?

1. Who are the WCRD and the TLAC?

The Wolf Creek Reclamation District (WCRD) is a quasi-municipal corporation, and uses surface water from Wolf Creek and Little Wolf Creek to irrigate lands in the vicinity of Patterson Mountain and Twin Lakes southwest of Winthrop. The Twin Lakes Aquifer Coalition (TLAC) is a registered non-profit organization, and is dedicated to restoration and preservation of a healthy Twin Lakes aquifer.

2. Why is this project needed, and how will it work?

Since the early 2000's, the water level of the Twin Lakes, and the associated aquifer, have been mostly significantly below historical levels. This has effects on water storage; ground water inflows during the fall and winter months into the main stem Methow River; providing adequate water for domestic wells; and maintaining or enhancing water quality, recreation, wild life habitat and associated community values. In addition, downstream water users, including the towns, will be facing increased water needs in the future.

WCRD has investigated ways to conserve water in their system and their operations, and has found approximately 200 acre-feet (AF) of water per year that can be saved and used for this pilot project. This water would be conveyed to the vicinity of Twin Lakes using mostly existing WCRD pipes, with some additional pipe needed at the downstream end. Water put into Twin Lakes during the irrigation season would recharge the aquifer, resulting in year-round flow of groundwater into the mainstem of the Methow River.

3. **How is WCRD able to conserve water? How much water and when?**
   WCRD is installing an automated level control system in the screen box at the head of their pressurized water delivery pipeline. The new system will continuously adjust the valve that delivers water to the screen box, responding nearly instantaneously to changes in customer water demand. This automation eliminates the necessary water spillage that the manual system required to ensure the delivery pipe remained full. The spill occurred throughout the irrigation season, and averaged approximately 200 acre-feet each year.

4. **How is water delivered to Twin Lakes?**
   The existing pipelines that WCRD uses to deliver water to their customers will be used to deliver the water to the vicinity of Twin Lakes. Some additional pipeline will be needed, and TLAC is still investigating the best route for that line. In addition to the pipeline, the water may require some type of treatment facility to remove any milfoil or other deleterious substances. The need for and design of treatment is still under investigation by TLAC.

5. **How does water get to the Methow River and when?**
   Under the pre-project conditions, water spilled at the WCRD screen box flows into the old Lake Creek channel, where most flows to the Methow River and some is lost to evaporation and evapotranspiration by riparian vegetation. With the project in operation, this water would be conveyed to Twin Lakes and its aquifer. Some would be lost to evaporation from the lakes, but most water would discharge from the aquifer to the Methow River throughout all seasons of the year. The retiming of the water going to the Methow River is a key aspect of the project.

6. **What is the role of the Methow Watershed Council (MWC), and how does this project fit in with watershed planning done by the MWC?**
   Development of new water storage opportunities to support both instream and out-of-stream uses is a high priority action identified in the MWC's *Detailed Implementation Plan (DIP)(2009)* for the Methow River Watershed (WRIA 48). As such, the MWC, along with its funding organization, the Methow Watershed Foundation, have championed this project and led grant-funded feasibility investigations since 2015.

7. **Why a pilot, when will it start, and how long will it last?**
   The pilot project, expected to last between two and four years, gives the parties an opportunity to test assumptions about project operations, develop a legal framework, and make actual observations about conditions resulting from the operations. Results of the pilot will be used to refine lake/aquifer storage volumes and expected instream flow benefits, including quantities available for mitigation of new out-of-stream uses under permanent project development. Monitoring will be conducted during the pilot to help update calibration of a computer model that simulates surface and groundwater behavior. While the pilot project is considered essential for the success of a permanent project, it is not a certainty that a permanent project will result. WCRD's screen box automation will be installed in June 2018, and other necessary permits and infrastructure will be completed in time for the 2019 irrigation season.

8. Who is paying the costs of the project?

The Methow Watershed Council has led feasibility studies, with grant funding provided by the Washington Department of Ecology (Ecology). Ecology is also funding TLAC for investigation and, potentially, implementation work associated with elements of the project such as analyses of water quality and water delivery options. The Bureau of Reclamation is providing some design and installation services associated with the WCRD screen box automation. Once the project is in operation, the ongoing O&M costs will be allocated by agreement between WCRD and TLAC.

9. Whose water rights are involved, and how?

WCRD diverts water from Wolf Creek and Little Wolf Creek under Wolf Creek Superseding Adjudicated Certificate No. 10, issued by Ecology, and with a priority date of January 9, 1920. This certificate authorizes instantaneous diversions of 30 cubic feet per second (cfs) from October 1 through June 30, and 13 cfs from July 1 through September 30. Maximum annual diversions are limited to 3,065.6 acre-feet per year for irrigation of about 790 acres.

For the pilot project, WCRD will temporarily donate a portion of their water right (approximately 200 acre-feet per year resulting from the conservation savings) to the State of Washington Trust Water Rights Program (TWRP). The temporary donation would be structured to include terms under which the donation could be withdrawn by WCRD (e.g., during drought conditions, or with 10 days written notice). The donated portion of the water right could only be used for instream flow purposes and to benefit the Twin Lakes system, and would not allow use for mitigation for new out-of-stream uses.

10. What are the environmental benefits, and will there be negative impacts to the environment?

The pilot project is anticipated to provide the following environmental benefits:

- Restore and maintain Twin Lakes Aquifer levels
- Restore and maintain recreational trout fishing in Big and Little Twin Lakes
- Restore and maintain riparian habitat and lowland habitat for aquatic species and mammals that use Barnsley and Twin Lakes
- Water storage enhancement for increasing streamflow in the mainstem Methow River during low flow periods

No significant negative impacts are expected from the pilot project. A decrease in spilled water from the WCRD screen box may impact some vegetation along the old Lake Creek channel, though a partial drying of those areas may be welcomed by landowners and tenants. The water that currently is spilled and flows down Lake Creek into the Methow River during irrigation season will be eliminated (diverted to Twin Lakes), resulting in a reduction of the summer flow rate.

11. Will this project result in the loss of irrigated lands?

No. WCRD is implementing a water conservation project that does not diminish the amount of water currently available to its customers, but simply reduces the amount of water lost to operational inefficiencies.

12. How will the Twin Lakes be protected from the milfoil that has been present in Paterson Lake?

The strict need to protect the water quality of the Twin Lakes and the Methow River is recognized, but a final solution to that problem has not yet been developed. Some type of system involving infiltration into the ground, and/or above ground filtration of the water, will probably be used. Ecology and WDFW will need to approve the ultimate solution that TLAC proposes.

13. How is this project different from the one first proposed around 2002?

In the original concept of the project to restore the Twin Lakes aquifer, the source of water was to be from a new well located near the Methow River in the vicinity of Barnsley Lake. WCRD and its water were not involved at all. The current pilot project takes advantage of water conservation by WCRD, and the existing gravity-fed conveyance pipelines, to produce an economically and environmentally viable scheme.

14. What is the risk that project operations will cause flooding around Twin Lakes properties?

TLAC will be responsible for establishing a surface and groundwater monitoring network, and will request delivery of water to Twin Lakes only when conditions warrant it. The amount of water involved in the pilot project is considered fairly small and not likely to pose a flooding risk if carefully monitored. A key purpose of the pilot is to improve understanding and predictability of the behavior of the lakes and aquifer in order to update the hydrogeological project model and inform operations.

15. How will a permanent project be different from this pilot?

After the pilot project is completed (two to four years), WCRD and TLAC will consider whether or not to pursue a permanent project. For a permanent project, a portion of the WCRD water right would require a change to instream flow and mitigation for out-of-stream uses as purposes of use. This could allow some of the WCRD water to be used in the future by downstream users. It is also possible that a future project might incorporate other water sources, such as additional water savings from fixing leaky portions of the WCRD ditches, or water from Thompson Creek. Significant public notice and input, as well as regulatory approval, would be needed for a permanent project that involved other sources or mitigation credits.

16. Will the project benefit the towns or other out-of-stream water users? Who decides who can get new water made available by this project?

During the pilot project, the donated portion of the WCRD water right could only be used for instream flow purposes, and would not allow use for mitigation for new out-of-stream uses. If a permanent project were to be developed later, some of the WCRD water could potentially be used in that manner. Management of the trust water right, including control of mitigation to authorize new out-of-stream uses, would be governed by a trust water right agreement negotiated between Ecology and WCRD. The trust water right agreement could be structured to allow WCRD to cancel the permanent donation and revert to previously

authorized uses, less any quantities under the trust water right that have been obligated to new uses.

Applying reasonable domestic water use assumptions over the 6-month period when mitigation from the WCRD water right would be available suggests that this amount of water would be sufficient to offset consumptive use of over 3,500 residential connections over the October through March period, with additional mitigation (e.g., an irrigation season trust water right) likely required to offset April through September residential consumptive use. Note that the actual amount of mitigation water produced by this project is uncertain until the pilot project is implemented and monitored.

17. **Who will benefit financially from the project? What is the value of mitigation credits?**
During the pilot project, the donated portion of the WCRD water right could only be used for instream flow purposes, and would not allow use for mitigation for new out-of-stream uses. No mitigation credits would be created, leased or sold. If a permanent project were to be developed later, some of the WCRD water could potentially be used in that manner, and WCRD would benefit from the sale or lease of mitigation credits. The lease value of the mitigation credits will depend on local demands and conditions; a reasonable estimate is that the annual value could range from about $250 to $350 per acre-foot per year. Ecology has applied a lease rate of $275 per acre-foot per year under the drought relief program. At this assumed market rate, leasing the 60 acre-feet of mitigation available during the non-irrigation season could generate revenue for WCRD of about $16,500 per year to offset project operational costs and support maintenance of the WCRD diversion and conveyance system. Note that the actual amount of mitigation water produced by this project is uncertain until the pilot project is implemented and monitored.