

Eastern Snake Plain Aquifer Comprehensive Aquifer Management Plan

Recharge Working Group Meeting

**Draft Meeting Notes
November 23, 2009
8:30 am – 12:00 pm (IDWR and Teleconference)**

Late Season Recharge Summary

Bill Quinn reviewed the status of the late season recharge effort. As of November 19 over 10,894 acre-feet has been recharged on the Egin, Milner-Gooding, North Side and Southwest canals at cost of over \$32,000. The late season recharge effort is continuing and will conclude sometime in December (weather dependant). The total 2009 recharge accomplished is expected to be over 120 kaf.

O&M Estimates of Constructed Sites

Bill Quinn distributed a document that outlined the estimated annual operations and maintenance costs for the two constructed recharge sites. The Egin Lakes annual O &M costs are approximately \$31,500 while Mile Post 31 will cost an estimated \$47,000 (see attached handout). It was explained that the MP 31 costs are higher due to the need for fencing and weed control on BLM land. The enlargement of the Egin Lakes canal and potential right-of-way acquisition amounts were included in the capital costs versus an annual maintenance fee. Different approaches to handling the right-of-way issues were discussed. The insurance estimates were provided by Jim Peterson, insurance agent.

Great Feeder Canals System Efficiency Study

Sudhir Goyal and David Blew presented an efficiency analysis of the Great Feeder Canal system. Hal Anderson noted a number of caveats regarding the study including 1) analysis is a work in progress and 2) the analysis does not identify how individual rights may be affected through efficiency scenarios. Jonathan also mentioned that the analysis is not intended to suggest or recommend that the Great Feeder encourage such efficiency approaches but rather is an effort to inform the incidental recharge debate with technical information. In order to answer a number of the questions raised about this subject, the analysis focused on the Great Feeder because of the site specific nature of the discussions.

David outlined the scenarios for the Great Feeder study including the base case, 50% and 25% efficiency analysis (savings on current diversions). The results of the model runs should be considered as preliminary and more analysis is needed. The planning model used for this analysis is not a 'priority' model and does not indicate how the redistribution, as a result of the efficiency improvements, impacts water rights. The historic use comparison is based on supply over 26 years.

The model assumes that the 25% and 50% efficiency savings result in increased reservoir storage in dry years and reduced reach gains in the impacted area. More surface storage would be available as a result of the efficiency improvements, especially in the dry years, and that increased storage would be used to compensate for reduced reach gains. The water would be held in storage or released to meet demands downstream. Alan Wylie said there would be an impact to the aquifer since there is less water going into the aquifer during irrigation season. In the study area west of Idaho Falls area the aquifer dropped 12 feet with 25% efficiency improvements and 200 kaf projected in additional storage.

Discussion:

Q: How deep are the wells in the area around the test wells? Aren't there return flow canals that take water directly to the river? A: There are 2 drain districts and there are many shallow wells.

Q: Does a drop in aquifer levels impact domestic well users, cities etc...? A: This needs to be explored further although there are a lot of shallow wells in the area, with examples of basement flooding.

Others noted that it is hard to see the effects of efficiency improvements given the size of the aquifer.

There is value in incidental recharge; the real question is how much value. The legislature told us to recognize and encourage incidental recharge; we now have to see what that is worth in terms of aquifer and river flows.

One of the ways forward is to identify the pros/cons of encouraging incidental recharge.

Since there will be the same amount of water at Milner Dam, there is no overall modification to the aquifer or river systems but there are local impacts. Incidental recharge has the benefit of temporarily storing water in the aquifer; we need to not want to discourage this behavior.

There is water in/water out in this area with the same total amount of storage at Milner Dam but there is impact to individuals. There is more local vs. global impact from the efficiency improvements.

As water managers there is an opportunity through the efficiency improvements to purposely move water for other applications. This could create a source of water for conversions and recharge (in other areas).

Some questioned whether such efficiency improvements would extend the season (increase in storage) based on a belief that there would be a change in cropping patterns (additional analysis identified as a next step). Changes in storage would occur primarily in the dryer years. There is no additional water available since there is no additional water

projected past Milner dam and consumptive use of water within the basin does not change. The water saved from the efficiency improvements stays within the footprint of the service area and the impacts are likely to be localized. See attached PowerPoint presentation.

Lloyd Hicks said that he hoped to maintain a flood-irrigation system and provide incidental recharge that benefits the ESPA. Another member noted that the high diversion rates of the Great Feeder system have been needed to get water to the end of the system.

Next Steps

- In an effort to understand the local impacts/benefits
 - Analyze on a month by month basis discharge storage and see who uses the storage
 - Conduct a step analysis, year by year, and look more closely at the impacts on those years
 - Determine if changes in efficiency could result in more water delivered to the Great Feeder system in dry years.
- Present data to the Implementation Committee in December and discuss how to proceed.

Recommendations to the Implementation Committee

1. Continue to analyze and move toward implementation of the two constructed sites at Egin Lakes and Mile Post 31.
 - a. Set aside funds for further study and to begin project (simple headgates and later checkdam and canal)
 - b. Implement a pilot recharge project/operation in spring 2010
 - c. Identify additional constructed recharge site in the Big/Little Wood System
2. 2010 Early and Late Season Recharge Funding Request - \$300k – \$400k
 - a. Maximize canal companies capacity and seize opportunities when they exist.
 - b. Continue to retain a balance with recharge above and below American Falls; rank and prioritize the specific areas/canals to determine recharge strategies (rainbow chart); for example the emphasis on late season recharge effort is below American Falls due to retention time in the aquifer.

Next Meeting

Tuesday, December 8, 2009 at 3 pm

Attendees:

Bill Quinn
Brian Patton
Lloyd Hicks
Peter Anderson
Steve Howser
David Blew
Jim Tucker
Jonathan Bartsch
Jeff Raybould
Craig Evans
Rebecca Casper
Don Parker
Mike Webster
Barry Burnell
Linda Lemmon
Steve West
Lynn Tominaga
Sudhir Goyal
Alan Wylie