



PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
GC Scoring Subcommittee Meeting Minutes
Conference Call
August 27, 2018

Meeting Attendees

Scoring Subcommittee

State of Colorado

Jojo La – Member

Brian MacPherson

State of Wyoming

Bryan Clerkin - Member

Jeff Cowley – Alternate

State of Nebraska

Jessie Strom – Member

U.S. Fish and Wildlife Service

Tom Econopouly – Member

U.S. Bureau of Reclamation

Brock Merrill – Member

Downstream Water Users

Mike Drain – Chair

Brian Barels - Member

Jeff Shafer – Alternate

Brandi Flyr - Member

Cory Steinke

Colorado Water Users

Jon Altenhofen – Member

Luke Shawcross - Member

Upper Platte Water Users

Dennis Strauch - Member

Environmental Groups

n/a

Executive Director's Office (EDO)

Jason Farnsworth, ED

Scott Griebing

Bill Hahn (Special Advisor)

Seth Turner

Kevin Werbylo



Welcome and Administrative: *Mike Drain, 2016 Chair and Seth Turner, EDO*

Introductions were made. There were no agenda modifications. Turner noted that past Scoring Subcommittee minutes did not indicate a need to formally approve minutes of the July 26 conference call. No comments on the July 26 minutes were offered over the phone. Turner requested submittal of any comments by email by the end of the week (August 31).

Elwood Reservoir Groundwater Recharge: *Scott Griebeling and Seth Turner, EDO*

Turner introduced the revisions to the Elwood recharge score analysis, noting that the EDO would first address the specific revisions to the pumping rate and irrigation season diversions requested by the Subcommittee during the previous call on July 26, to be followed by discussion of additional issues raised during the previous call.

Discussion of Elwood pumping rate sensitivity and irrigation season diversions

Griebeling explained the EDO's approach to evaluating pumping rate sensitivity, showing Figure 2 from the revised memo. The EDO tested a range of fixed pumping rates and calculated variable pumping rates based on Elwood end-of-month storage. In nearly all cases tested, the average of variable pumping rates exceeded the 250 cfs pumping rate originally assumed for the analysis, with the exception of a diversion cap of 30,000 AF, in which case the average pumping rate dropped slightly below 250 cfs. **Drain asserted that the analysis suggested no reason to change the assumed 250 cfs pumping rate. There were no objections from the committee.**

Griebeling also explained that the analysis was revised to allow no diversions for recharge during June, July, and August, when the full capacity of the E-65 canal is used for irrigation deliveries. Slides (appended to these minutes) showing Table 4 and Figure 5 (score vs recharge capacity) from the revised Elwood score memo were presented. Score results were reduced slightly but not much.

Discussion of Elwood historical seepage effects

Griebeling explained that the EDO sought to address an issue raised by Altenhofen during the July 26 call, namely "How would the project score change if Elwood's historical seepage wasn't present in the scoring model's hydrology?" Elwood Reservoir came online in 1978; from 1978-1994, the reservoir operated at higher levels, which resulted in higher seepage and more return flows to the river (i.e., higher baseflows in the river). Drain noted that even during that period, Elwood operations were variable.

Griebeling said an underlying assumption of this analysis is that OpStudy hydrology for Grand Island has the higher seepage signal embedded, based on model representation of past Elwood operations. In contrast, the score model operates Elwood at lower levels, resulting in less seepage and lower return flows, and in turn, greater shortages at Grand Island. A figure was presented to illustrate estimated seepage under the two scenarios. The difference was subtracted from OpStudy Grand Island flows, and the modified flows were run through the score model. The greater shortages resulted in an increased score of about 900 AF (for the base scenario with a 12,000 AF recharge cap).



Griebeling noted a few considerations: (1) this approach represents a departure from previous scoring methodology; (2) other projects would potentially need to be rescored using this same methodology for consistency; and (3) changing the scoring model to account for Elwood operational changes unrelated to the Program sets a precedent for additional rescoring of all WAP projects with future operational changes.

Drain commented that the result of the analysis was surprising, with an increase of 900 AF representing roughly one-third of the estimated score. Griebeling said greater shortages inherently lead to a higher score. Drain expressed continued skepticism about making any changes based on this analysis but said that would ultimately be a policy decision for the GC to make. The analysis suggests that there is benefit to the Program to encourage actions that result in reduced baseflows, which is exactly the opposite of what we want to happen. Many other things can result in baseflow changes, such as improved irrigation efficiency (center pivots vs gated pipe, lining canals, etc.).

Barels suggested that those examples were not the same as the Elwood operational changes, since the analysis shows how Elwood will operate moving forward, which seems appropriate to consider. Drain said that Elwood operations were already changing independent of the Program; CNPPID is weaning off of Elwood, and that creates the opportunity for the Program to use the reservoir for recharge. Griebeling clarified that this historical analysis undertaken by the EDO does not reflect changing reservoir operations, but changes to the baseflow in the river. There was some discussion of OpStudy hydrology.

Econopouly asked if Program recharge operations put more water in the river relative to 1997 levels. Drain thought not, by example comparing 1993 operations vs 2023 with Program recharge. There would have been more seepage, more water going to the river in the 1990s. However, that ignores other factors such as changes in supply; historical operations relied on Lake McConaughy water, whereas current recharge operations utilize available excess flows. Econopouly noted this as another reason to score conservatively and not unnecessarily increase the score.

Altenhofen commented that the key factor is that Elwood operational changes are unrelated to the Program. Any changes to scoring would be a GC policy decision but based on recent conversations, Colorado stakeholders seem to be OK with current score policies and procedures. Altenhofen said he would be OK with a score of 3,000 AF.

Drain again asked the committee if there is a policy issue that should be raised with the GC. Drain, Merrill, Altenhofen agreed that there was no need to do so. Barels said we should not deviate from current GC policies. No committee members offered a contrary position.



Flyr inquired about the significance of a 900 AF score increase and the degree of error in the stated score numbers. There was some discussion; Turner clarified that score values are 48-year averages based on the model analyses.

La asked how the preceding discussion was to be documented. **Drain recommended documentation in these minutes, including the presentation slides, instead of a separate memo or addendum to the Elwood scoring memo. Barels suggested including a couple summary paragraphs in the score memo. There were no objections to this approach from committee members.**

Discussion of lag effects (tail wrapping)

Griebing described different scenarios considered to address lagged accretions that occur after the end of the scoring study period. Figures (see slides appended to these minutes) were shown and described, including potential scores that could result from these approaches. Other considerations were noted, since this would represent another departure from previous scoring methodologies. Drain added that this is primarily an issue due to the distance from Elwood to the river, compared to the much shorter distance from Phelps to the river, and asked if we should consider an alternative approach of calculating the score from the mid-1960s to 1994 rather than 1947-1994.

La asked if taking this approach would affect other projects, Griebing said potentially, as this would be a different approach than what was done for Phelps recharge scoring. Drain asked if the calculated results from tail wrapping would have the potential to discount future scores of proposed recapture wells. The EDO said it would. Barels said this is another policy issue, but maybe better to rely on recapture wells instead of calculations to increase score. Drain asked about the potential to revisit the score in the future; Econopouly was comfortable with that, if needed.

Drain directed the EDO to again document this discussion in these minutes, with a conclusion that we should not add in the lagged accretions occurring outside of the model study period. Barels, Econopouly, and Altenhofen agreed. There were no objections from other committee members. Drain said to continue with the score analysis as is and document this discussion in the score memo.

Discussion of score recommendation

Drain noted, based on Figure 5 in the Elwood score memo, that there are differences in the score if the cap is 12,000 AF vs half of 24,000 AF. Should the score be based on the Program considered in isolation or the Program getting half of the maximum recharge capacity collectively available to the Program, the state, and Tri-Basin NRD? Griebing said we assume the overall cap is somewhere between 28,000 AF and 32,000 AF. Farnsworth read from the WSA: excess flows are diverted, divided 50/50 between Program and other parties, Program not to be billed for more than 12,000 AF without written approval from the Program.



Steinke confirmed that after CNPPID takes its necessary space in Elwood, there is the potential for up to 30,000 AF total capacity for recharge. Drain recommended the approach of determining score based on the Program getting 50% of the 30,000 AF capacity, with the recognition that the Program would have to pay more (beyond 12,000 AF) to achieve the full score. Based on the curve in Figure 5 of the memo, a cap of 30,000 AF would result in a total score of about 5,600 AF, or 2,800 AF for the Program.

Extensive discussion followed. Strom noted that the state has a contract for up to 13,500 AF of recharge annually. Barels suggested that the contract limit of 12,000 AF needed to be taken into consideration. Drain recommended using the curve in Figure 5 as the basis for the score, providing a mechanism for the GC to make future revisions if needed. There was discussion of whether the Program might regularly get more than 50%, but Steinke said the state and Tri-Basin are likely to fully use their half of the recharge capacity. Drain offered another suggestion of splitting the difference of the scores with a total cap of 30,000 AF and a total cap of 24,000 AF, which would mean a score of 2,700 AF for the Program. The discussion continued, and Farnsworth countered that the Program doesn't want to be paying for water that isn't scored. Farnsworth recommended going ahead with the score corresponding to half of a capacity of 30,000 AF, since that's what CNPPID thinks is a reasonable expectation of the total recharge cap. The Program and CNPPID could work to amend the current WSA accordingly.

Drain made a definitive recommendation for the GC to use the Figure 5 curve for assigning score and making future adjustments if needed. EDO will revise the figure to note that the curve as shown is for all Elwood recharge users and will add a 50% curve for the Program. Econopouly clarified that this would mean a Program score corresponding to half the score for a total recharge cap of 30,000 AF. Altenhofen and Econopouly agreed with the premise of Drain's recommendation.

Barels asked if this meant 30,000 AF of excess flows were available every year. Drain and Griebeling clarified that the analysis considers both available recharge capacity and excess flow availability; more space in the reservoir can be added, but cannot create more excesses, which is why the score vs. capacity curve flattens.

With no objections, the Scoring Subcommittee recommended a score of 2,800 AF based on half of the score with a 30,000 AF cap (5,600 AF), per the score vs. capacity curve in Figure 5 of the score memo. The Scoring Subcommittee also recommends that any future changes to the Elwood recharge score should be based on Figure 5 in the score memo, with modifications as described above.

Pathfinder Municipal Account Lease: *Scott Griebeling and Seth Turner, EDO*

Griebeling explained that the original score analysis for the Pathfinder Municipal Account lease project assumed releases of 4,800 AF annually. Table 1 in the score update memo (see appended slides as well) shows that additional water has been available in most years over the 2012-2018 operational period for the project. The EDO evaluated three possible scenarios: (1) an additional



4,800 AF is available in all wet years only; (2) an additional 4,800 AF is available in all wet years and half of normal years; and (3) an additional 4,800 AF is available in all wet and normal years.

Drain asked if there is any guidance on how frequently the Program can expect to get extra water. Turner said the updated score analysis was reviewed by Wyoming, with recommendations from different personnel of either Scenario 2 or Scenario 3. Econopouly had previously inquired about the possibility of simply calculating a firm yield value to use in the score update, and there was some additional discussion of this point. Turner noted that the 9,600 AF maximum delivery is based on the firm yield for the 20,000 AF Municipal Account, as defined in earlier Program documents. Barels asked if Wyoming could contract for the full 9,600 AF; Clerkin said no because there are other obligations to Wyoming municipal water users who haven't needed the water.

Drain said that because the Program has gotten extra water in at least some normal years, that rules out Scenario 1, and since the Program is not getting the full extra 4,800 AF in all normal years, that seems to rule out Scenario 3, leaving Scenario 2 as the best approach. Committee discussion of Scenario 2 and Scenario 3 continued. Clerkin said the average account balance over 2012-2018 has been about 8,800 AF. The Program didn't take extra water in 2012, 2013, and 2016; if that had happened, the average account balance would've been reduced to about 6,400 AF. Based on further evaluation, Clerkin said Scenario 3 seems reasonable.

Drain suggested splitting the difference between Scenarios 2 and 3. Econopouly expressed a preference for a more conservative score approach. Farnsworth noted that Scenario 2 assumes all or nothing in normal years, but this year shows that is not necessarily the case since the Program is getting less than 4,800 AF additional water, but not zero. Farnsworth added that this project is notable for actually outperforming its original score.

Drain proposed averaging the mathematical scores of Scenario 2 (5,940 AF) and Scenario 3 (6,760 AF), then rounding to the next hundred. Farnsworth and Altenhofen agreed with this approach. Barels agreed with the logic of averaging Scenarios 2 and 3 but dissented from rounding up to 6,400 AF. Clerkin suggested continuing to look at the project yield every year, keeping open the option for future score revisions based on operations.

Drain and Altenhofen proposed an unrounded score of 6,350 AF. Econopouly said that was good.

With no objections from the committee, Drain recommended a score of 6,350 AF based on the mathematical average of Scenarios 2 and 3, with continued monitoring to see if the score needs to be revisited again in the future.

**Additional Business:** *Mike Drain, Chair*

None

Decisions and Action Items

- Scoring Subcommittee decisions pertaining to Elwood Reservoir groundwater recharge:
 - The assumed pumping rate of 250 cfs is appropriate.
 - The prohibition of June-July-August recharge diversions via the E-65 Canal as incorporated in the analysis is appropriate.
 - The discussion regarding Elwood Reservoir historical seepage and effects on score is to be documented by the EDO in these minutes, with slides presented during the conference call appended, and briefly summarized in the score memo. No policy consideration will be referred to the GC.
 - The discussion of “tail wrapping” to account for lagged accretions beyond the study period is to be documented by the EDO in these minutes, along with appended slides, and briefly summarized in the score memo. No further changes to the score analysis were proposed, and no policy considerations will be referred to the GC.
 - Score is to be based on the score vs. capacity curve (Figure 5 in the memo), with revisions as noted in these minutes. The score for the Program will be 50% of the total score associated with a reasonably assumed maximum recharge capacity of 30,000 AF. **The Scoring Subcommittee recommends a score of 2,800 AF for the Elwood Reservoir groundwater recharge project. The Scoring Subcommittee further recommends that the GC use Figure 5 in the Elwood scoring memo if it is necessary in the future to adjust the project score due to changes in available recharge capacity.**
- Scoring Subcommittee decisions pertaining to the Pathfinder Municipal Account lease:
 - **A revised score of 6,350 AF is recommended based on the mathematical average of scores calculated for Scenario 2 and Scenario 3, as defined in the score update memo. This is an increase of 2,350 AF over the original score of 4,000 AF.**
 - The EDO will continue to monitor operations of the Pathfinder Municipal Account lease to determine if the score should be revisited again in the future.
- The EDO will prepare meeting minutes, make necessary revisions to the two score memos, and recirculate to the Scoring Subcommittee no later than Thursday August 30. The Scoring Subcommittee will provide any final comments on the documentation, preferably by Friday September 7. However, since the Scoring Subcommittee has made formal score recommendations to the GC as noted above, it is not imperative for the documentation to be absolutely final prior to the September 11-12 GC meeting.