



**TO:** GOVERNANCE COMMITTEE  
**FROM:** SCORING SUBCOMMITTEE  
**SUBJECT:** SCORE RECOMMENDATION FOR PHELPS COUNTY CANAL  
GROUNDWATER RECHARGE PROJECT  
**DATE:** NOVEMBER 26, 2013

The Governance Committee (GC) formed an ad-hoc Scoring Subcommittee to advance discussion related to scoring of proposed Water Action Plan Projects (WAP) for the Platte River Recovery Implementation Program (Program) in 2009. The Scoring Subcommittee previously recommended a score for the J-2 Regulating Reservoir and a proposed methodology for scoring in 2010, which were accepted by the GC. The Scoring Subcommittee has been working with the Executive Director's Office (ED Office) of the Program to determine a score for the Phelps County Canal Groundwater Recharge (Phelps recharge) WAP project. The ED Office completed the technical analyses to support the Scoring Subcommittee's evaluation of scores. This memorandum provides a summary of the score analysis results and the Scoring Subcommittee's recommendations regarding a Phelps recharge score.

### **Background**

The Phelps recharge project utilizes excess flows available in the Central Nebraska Public Power and Irrigation District's (CNPPID) system during the non-irrigation season as a water supply. Excesses are diverted into the canal, infiltrate into the underlying aquifer and accrete to the Platte River to reduce shortages to target flows. Recharge operations in the Phelps County Canal commenced in 2011 and a Feasibility Study<sup>1</sup> was completed during the first year of operations. Recharge operations occurred successfully during the past two seasons (2011-2012 and 2012-2013) and commenced for a third season in September of 2013.

The Scoring Subcommittee based the Phelps recharge score recommendation presented in this memorandum on several score analyses and sensitivity analyses performed by the ED Office. The basic score model assumptions were based on similar methodology as the J-2 Regulating Reservoir, including:

- OpStudy 1947-1994 adjusted Three State hydrology
- Target flows from the Water Plan Reference Materials Appendix A-5
- Excesses and shortages calculated at Grand Island, utilizing the WMC Loss model to route project yields to Grand Island

Additional assumptions were made in the Phelps recharge score analysis to reflect operations specific to the project. The Phelps County Canal numerical model was utilized to determine the lagged accretions at the river. A portion of the Phelps recharge project accretions occur below

<sup>1</sup> "Pilot-Scale Recharge Report for Nebraska Groundwater Recharge Feasibility Study, Platte River Recovery Implementation Program" dated July 2012 by EA Engineering, Science, and Technology, Inc. and Daniel B. Stephens & Associates, Inc.



Overton and the Scoring Subcommittee agreed to apply a linear habitat adjustment for project yields that enter the river below Overton (linear reduction in score from Overton to Grand Island). For the recharge project, a habitat adjustment of approximately 4% was applied to the recharge accretions below Overton (approximately 40% of the yield accrues below Overton). There was no habitat adjustment applied to the recharge accretions that occurred above Overton. The Scoring Subcommittee agreed that a habitat adjustment is appropriate for projects that reduce target flow shortages, such as the Phelps recharge project.

The Scoring Subcommittee evaluated additional sensitivity analyses during the scoring process. Analyses were completed to evaluate the combined operations with and without the J-2 Regulating Reservoir and the Central Platte Natural Resources District's (CPNRD) canal recharge operations. These projects also utilize excess flows as a water supply. Based on the score analyses, there are generally enough excesses to provide a supply to each of the projects without significant impacts to the Program score. The Scoring Subcommittee selected a score that represents a reduction in excess flow diversions in the Phelps recharge project due to combined operations with the J-2 Regulating Reservoir. The Phelps recharge score was not sensitive to a reduction in excesses from CPNRD diversions. Sensitivity analysis score runs were also completed for various Phelps County Canal diversion rates and canal storage capacities. It was assumed recharge occurs from excess flows stored in the canal.

## Results

Based on the various analyses completed, the Phelps recharge project score ranged from **1,861 acre-feet per year (AFY) to 1,936 AFY** as an independent project, without impacts from other WAP projects. This score range represents the best-case scenario and assumes the Phelps recharge project is the diversion priority. Analyses were completed to combine the operations of the Phelps recharge project and the J-2 Regulating Reservoir, as both projects utilize excesses available in the Phelps County Canal. When combining the anticipated operations of the Phelps recharge project and the J-2 Regulating Reservoir, the Phelps recharge scores ranged from approximately **1,684 AFY to 1,869 AFY**, based on analyses using representative wet, normal and dry years<sup>2</sup>. The range of scores also incorporates different canal diversion rates and canal storage volumes. The maximum diversion rates in the canal ranged from 115 cfs to 300 cfs, based on actual delivery data during the three seasons of operations. The canal storage volume ranged from 890 AF to 1,160 AF, based on the canal geometry and the location of storage available within the canal<sup>3</sup>.

## Recommendations

**The Scoring Subcommittee recommends the GC assign a score for the Phelps recharge project of 1,800 AFY for the Program, based on the rounded<sup>4</sup> average of scores in the representative year analyses.** The recommended score of 1,800 AFY includes an impact from

<sup>2</sup> The full OpStudy simulation period was not modeled for these analyses due to time constraints. Two sets of representative years were modeled for the purpose of sensitivity evaluation with the J-2 Reservoir operations.

<sup>3</sup> The 1,160 AF capacity represents the storage capacity of the canal for the full 13.3 miles of canal with recharge operations. The 890 AF capacity represents the storage volume from the proposed J-2 Reservoir inlet to Mile Post 13.3, assuming there are times when the first section of the canal will not be available for excess flow storage.

<sup>4</sup> Rounded to nearest hundred.



combined operations with the J-2 Regulating Reservoir, since both projects utilize excess flows available in CNPPID's system. The J-2 Regulating Reservoir score was not compromised in the combined operations analysis and is intended to be the Program's first diversion priority for available excesses, although it is anticipated that both projects will be able to operate successfully together. The recharge score was reduced to account for times when the J-2 Regulating Reservoir does not allow the recharge project to maximize excess flow diversions. The score is based on several score model analyses and does not represent a single model run.

Enclosures:

Scoring Subcommittee Conference Call Minutes – October 28, 2013

Scoring Subcommittee Conference Call Minutes – November 15, 2013

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**PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM**  
**GC Scoring Subcommittee Meeting Minutes**

Conference Call  
October 28, 2013

**Meeting Attendees**

**Scoring Subcommittee**

**State of Colorado**

Suzanne Sellers – Member

**State of Nebraska**

Jesse Bradley – Member

**State of Wyoming**

Mike Besson – Member (Chair)

**U.S. Bureau of Reclamation**

Brock Merrill – Member

**Downstream Water Users**

Brian Barels – Member

Cory Steinke – Alternate for Mike Drain

Duane Woodward – Interested Party

**Executive Director's Office (ED Office)**

Jerry Kenny, Executive Director (ED)

Beorn Courtney

Sira Sartori

**Colorado Water Users**

Jon Altenhofen – Member

Alan Berryman – Member

**U.S. Fish and Wildlife Service (USFWS)**

Tom Econopouly – Member

**Environmental Groups**

Duane Hovorka – Interested Party

**Introduction**

Besson did a roll call of the meeting attendees and briefly introduced the main discussion points for the conference call.

**Habitat Scoring Adjustment**

Courtney outlined the habitat scoring adjustment question posed in the 7/22/13 preliminary Phelps County Canal score memo and the responses the ED Office received from Scoring Subcommittee members. The question was whether there should be a habitat scoring adjustment for projects that do not benefit the entire reach. The comments received before the conference call from the Subcommittee members were across the board and included yes, maybe and no.

Besson said he believed that there should be a habitat adjustment for certain projects but not for other projects, such as wet meadow projects, so it should be determined on a case-by-case basis. Altenhofen noted that there are two compliance points (top of the habitat and Grand Island) and that the standard should be to benefit the whole reach. If flow improvements are part way down the reach, the Program is only reducing shortages in a portion of the reach. Besson commented



that the Program should get a full score for Short Duration High Flow (SDFH) events and Altenhofen agreed that certain projects, such as SDHFs and wet meadows do not necessarily need to be adjusted because they have a different purpose than reducing shortages in the reach. Berryman asked if SDHF events were included in the J-2 Regulating Reservoir and Courtney said no, the J-2 Regulating Reservoir was only scored for reduction to shortages.

Econopouly stated that the USFWS still has the position that there should be a habitat adjustment, in addition to routing losses. Sellers commented that it seems somewhat counterintuitive to route losses in the reach since there are two compliance points. Sellers related it to instream flow rights in Colorado. Sellers clarified that she believes a routing loss should occur from the project location to the top of the habitat reach, but not necessarily within the reach since the travel losses are a natural occurrence. The Scoring Subcommittee thought this was a good point and there was some discussion on this topic. The group was open to thinking more about whether routing losses should be applied to scoring in the future, but not going back and revising the J-2 Regulating Reservoir score. It was noted that the Program scoring has always been conservative.

Besson asked about how the Nebraska Department of Natural Resources (NDNR) treats conveyances losses for instream flows. Bradley said they do not deal with routing losses for instream flows but losses are assigned to storage water or transferred surface water. Bradley didn't think that recharge accretions needs to be routed. If water is actively pumped to the river for instream uses, the water would be protected and would be routed under a water right.

Barels noted that when project yields are combined, the routing losses may be different than for individual projects and the Program could be overstating losses. Natural flow in the river will also share a portion of the total reach losses. He asked how the ED Office has been treating losses for projects. Courtney responded that the Program scoring has used proportional loss factors, as opposed to a set loss volume. Econopouly said he thought the Overton to Grand Island reach may be gaining, based on his observations of OpStudy data. There was discussion among the group about various loss modeling components, such as evaporation, seepage and diversions. The group was interested in learning more about how the WMC Loss Model compares to other modeling, such as in OpStudy and an HDR report. Econopouly said he would check in with the ED Office regarding his thoughts on loss modeling.

Besson asked about whether the Phelps County Canal recharge project should have a habitat adjustment, since there is only a 2% difference in the score. Members of the Subcommittee said yes, to be consistent among project scoring. The Subcommittee also agreed to use a linear approach to adjust the score for the proportion of habitat reach impacted. Besson mentioned that the group should keep in mind that it is important to accept scores before moving forward with projects and the group should not necessarily wait until more detailed information and modeling is available.



88 Main points:

- 89 • Subcommittee will think more about whether routing losses should be applied to project  
90 scoring since there are two compliance points and travel losses are natural within the  
91 reach.
- 92 • Subcommittee agreed that a habitat adjustment is justified and a linear approach is  
93 appropriate. The Phelps County Canal score should be adjusted for consistency among  
94 projects.
- 95 •

### 96 **Preferential Use of Accretions**

97 The discussion moved onto the next question raised in the 7/22/13 preliminary score memo,  
98 which was the preferential use of accretions with Program partners. Bradley said that in terms of  
99 the Nebraska New Depletions Plan (NNDP), the NDNR has historically reported annual volumes  
100 because of the accuracy of the analysis tools available. In the future, the NDNR anticipates  
101 mitigating during shortages and modeling on a shorter basis, such as monthly. The Scoring  
102 Subcommittee agreed that since the NNDP is intended to replace shortages and will be accounted  
103 for this way in the future, the Program cannot preferentially claim credit during shortages.  
104

105 There was some discussion on leasing water from project partners that may not need a full  
106 supply, such as the NDNR's portion of the J-2 Regulating Reservoir. The Program may be able  
107 to lease this in the future. Altenhofen reminded the group that scoring is based on historical  
108 hydrology, which may be different than the current and future hydrology.  
109

110 Main points:

- 111 • Scoring Subcommittee decided that the Program cannot preferentially use accretions  
112 from the Phelps recharge project during shortages with project partner, Tri-Basin Natural  
113 Resource District (TBNRD).  
114

### 115 **Scoring Multiple Projects**

116 The ED Office had asked the group whether combined operations between projects should be  
117 included in the score analyses. The Scoring Subcommittee member comments provided to the  
118 ED Office before the call included yes and maybe answers. Courtney talked about a follow-up  
119 combined operations scoring analysis completed by the ED Office in a memo dated 10/22/13.  
120

121 The ED Office assumed the J-2 Regulating Reservoir was first priority to divert excesses and  
122 then, either the Phelps County Canal or Central Platte Natural Resource District (CPNRD) had  
123 the next diversion priority. The analysis was not meant to assume the Phelps County Canal  
124 recharge or the CPNRD recharge had a certain priority over each other, as neither of the recharge  
125 permit applications have been approved by the NDNR. In general, the ED Office's preliminary  
126 analysis of the J-2 Regulating Reservoir and Phelps County Canal showed a 2% overall impact  
127 to the combined score or about a 38% reduction in the Phelps recharge score. Assuming the  
128 CPNRD has second priority and the Phelps County Canal has third priority has a minimal  
129 additional impact on the combined score. The J-2 Regulating Reservoir diversions have a much  
130



greater impact on combined operations. It was asked whether the capacity of the Phelps County Canal is a limiting factor in diverting excesses into recharge. The ED Office thought it may be a combination of both capacity and excesses that may be limiting. Steinke noted that the water coming out of the hydropower plant is about 1,700 cfs so the Phelps County Canal capacity may not be the issue. The ED Office will look at this further.

Steinke also mentioned that when there are big storm events, the stream flow can be forecasted and both projects may be able to fill without an impact. The ED Office has already looked at optimizing the projects by forecasting using a typical wet, normal and dry year but has not evaluated this for the 1947-1994 modeling period. The ED Office will look at this further. In addition, Courtney mentioned that the Program may use COHYST in the future to evaluate the impact of combined projects.

Main points:

- Scoring Subcommittee did not make a decision on whether the score should be reduced for combined operations, as the ED Office will provide additional documentation on optimizing combined operations.

### **Protection of Flows**

The group discussed whether recharge accretions can be protected under the Nebraska State Statue Section 46-252. In general, a point discharge to the river that can be measured can be protected. It was noted that guidance from the NDNR will be important on this topic. Steinke said water for the NNDP is different than Program water. NNDP water is not protected since it is for the downstream water users to prevent injury to water rights. The purpose of the Program water is to reduce shortages, not provide other users with water. Steinke also noted it will be difficult to distinguish the water in the river and returns estimated using modeling. Altenhofen commented that this issue is important to look at for each project. Barels agreed that it will be difficult to “color” the water from recharge. A couple of the Scoring Subcommittee members raised the concern that the water recharged cannot be protected because it could be pumped by irrigation wells. The question was raised whether the Phelps numerical model accounts for irrigation wells and Courtney responded that well pumping is a factor in the model but wells are not modeled individually. In general, the group felt that if water is discharged to the river, the Program can protect the flows. For other projects, such as recharge, the water is assumed to be unprotected. For the Phelps County Canal Groundwater Recharge project, the Kearney Canal is the only downstream diversion before Grand Island.

Main point:

- Scoring Subcommittee does not believe recharge accretions can be protected. Other Water Action Plan projects that discharge directly to the river can be protected from other water users.



### Other Comments from Subcommittee

Additional questions raised by the Scoring Subcommittee, submitted to the ED Office before the call, were discussed. These are included in the 9/13/13 memo to the Scoring Subcommittee outlining the group comments. Courtney addressed the comment about using an SDF method or Glover method vs. using the Phelps numerical model. Courtney said that once the score is accepted, it won't be necessary to complete monthly accounting with lagged accretion modeling, unless the project significantly changes. Modeling may be done periodically as a check. Altenhofen agreed that it doesn't make sense to recalibrate SDFs for the 9.7 to 13.3 portion of the canal so it is appropriate to use the numerical model.

A question was raised about whether the recharge season assumed in the modeling (mid-September through mid-April) is appropriate. Steinke said he believes the full season is appropriate. Econopouly expressed concern that canal maintenance may restrict diversions in some years. Typically, maintenance doesn't last very long and Steinke thinks it would have a minimal impact. Sartori noted that the preliminary score analysis for the Phelps County Canal is on the conservative side. The group seemed to agree with using the mid-September through mid-April period since CNPPID seems confident in that time frame.

To wrap up the meeting, Besson told the group that the ED Office will send out a poll for the next conference call, which is expected to be scheduled in about 2 weeks. A final score summary memo will be completed by the ED Office after the Scoring Subcommittee has come to an agreement on the score topics.

### Action Items

#### General Subcommittee

- Send additional scoring comments to Besson.
- Review combined scoring operations memo dated 10/22/13 (emailed to group on 10/25/13).
- Review additional combined operations information the ED Office will send out in the next week.

#### ED Office

- Discuss various routing methods with Econopouly after combined operations analysis is update is completed.
- Evaluate how often the Phelps County Canal capacity limits the excesses diverted in the combined scoring evaluation.
- Follow up with Woodward to confirm the CPNRD recharge assumptions in the combined scoring memo dated 10/22/13 are appropriate.
- Evaluate optimization of the J-2 Regulating Reservoir and Phelps County Canal Groundwater Recharge score model and send to the Scoring Subcommittee in the next week.
- Send out a doodle poll to schedule the next meeting.





**PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM**  
**GC Scoring Subcommittee Meeting Minutes**

Conference Call  
November 15, 2013

**Meeting Attendees**

**Scoring Subcommittee**

**State of Colorado**

Suzanne Sellers – Member

**State of Nebraska**

Jesse Bradley – Member

**State of Wyoming**

Mike Besson – Member (Chair)

**U.S. Bureau of Reclamation**

Brock Merrill – Member

**Downstream Water Users**

Jeff Shafer – Alternate for Brian Barels (Member)

Mike Drain – Member

Duane Woodward – Interested Party

**Introduction**

Besson did a roll call of the meeting attendees and briefly introduced the main discussion points for the conference call.

**Season of Recharge**

Courtney went over the memorandum provided to the Scoring Subcommittee dated 11/13/13 regarding the recharge season. The memo was in response to Econopouly's question during the 10/28/13 conference call about whether canal maintenance would impact diversions into recharge. Based on the analysis, it appears there are often days when recharge diversions are not occurring in the shoulder season and it is anticipated that canal maintenance could be scheduled during these times. Courtney noted that Cory Steinke of the Central Nebraska Public Power and Irrigation District (CNPPID) has expressed that maintenance could likely be planned around recharge activities. The Scoring Subcommittee agreed that the recharge season used in the preliminary analysis is appropriate.

Econopouly asked if Environmental Account (EA) releases from Lake McConaughy will impact diversions into recharge. Drain stated the EA water is a protected release, all the way to

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Chapman. The scoring analyses do not re-regulate EA water (the flow data used for the scoring analyses does not include EA water) and diversions into the Phelps recharge project occur during excess periods only. Courtney explained that although there isn't a score for Short Duration High Flow events, the EA Manager/USFWS can use the water in the J-2 Regulating Reservoir for this purpose without an impact to the score. The score is based on target flow reductions, but the water can be used for other Program releases.

Main points:

- Scoring Subcommittee agreed to continue using the recharge season of September 15<sup>th</sup> through April 15<sup>th</sup>, described in the 7/22/13 preliminary Phelps recharge score analysis memo.

### **WMC Loss Model**

Courtney described the WMC Loss Model and the reach gains/losses memorandum dated 11/13/13 provided to the Scoring Subcommittee. The Scoring Subcommittee had requested information on the application of the WMC Loss Model and how the reach gains/losses compare to OpStudy during the 10/28/13 conference call. The ED Office used the WMC Loss Model in the 2009 Water Action Plan update. The WMC Loss Model was used in the 1999 Water Conservation Study and the 2000 Reconnaissance-Level Water Action Plan, to route specific project yields to Grand Island. As described in the 2000 Water Action Plan, OpStudy modeling was also used in developing the final Program milestone range of 50,000 acre-feet (AF) to 70,000 AF per year.

Courtney explained that although there may be a gain in the river, the WMC Loss Model will still deduct evaporation from the Program yield on a percent per mile basis. During a loss period, the WMC Model will also deduct seepage from the Program yield on a percent per mile basis. Courtney pointed out the evaporation and seepage tables in Appendix A of the 11/13/13 memo. Drain recalled that the WMC Loss Model assumptions are similar to how the NE Department of Natural Resources (NDNR) administers water rights. Gains in the river are credited to the natural streamflow for downstream appropriators. New projects should not get additional flow from the gaining river. All users share in the evaporation losses. Drain thought the WMC Loss Model is appropriate for scoring.

The group discussed using the WMC Loss Model to apply routing losses or not applying any routing losses. Altenhofen said that not applying losses would be inconsistent with the J-2 Regulating Reservoir score model. Drain believes routing the yields to Grand Island is consistent with what was intended for the Program during the Cooperative Agreement. Econopouly agreed with routing and a habitat discount. The group discussed that the target flows are set at Grand Island and scoring at Grand Island was discussed during the Cooperative Agreement.

Altenhofen requested a brief explanation of the years used in the 11/13/13 reach gains/losses memo, as these are not the representative years used in the combined operations analysis memo dated 11/5/13. The ED Office will add a brief explanation in the memo.



Main points:

- Scoring Subcommittee agreed to continue using the WMC Loss Model as described in the 7/22/13 preliminary Phelps recharge score analysis memo.

### Score Optimization

Courtney and Sartori went over the two combined scoring memos given to the Scoring Subcommittee. The first combined scoring memo is dated 10/22/13 and includes the J-2 Regulating Reservoir, Phelps recharge and Central Platte Natural Resources District (CPNRD) canal recharge. The second memo is dated 11/5/13 and discusses the “optimization” of the J-2 Regulating Reservoir and Phelps recharge, to minimize the impact of combined operations with forecasting (note that the ED Office has subsequently identified that referencing this analysis as an “optimization” may be misleading and therefore it will be referenced as an “event-based operations” analysis herein and moving forward).

In the combined scoring analysis of the J-2 Regulating Reservoir and Phelps recharge (10/22/13), the J-2 Regulating Reservoir diversions impact the Phelps recharge diversions by 38%. The ED Office evaluated two scenarios to maximize the operation of the projects. A 3-day event-based analysis was completed, in which the Phelps recharge became the diversion priority if the J-2 Regulating Reservoir was going to fill in the following 3 days. This reduced the impact to the Phelps recharge to 32%-34%. The ED Office also looked at manually adjusting the diversions into the Phelps recharge by forecasting excesses during a representative wet, normal and dry year. The impact to the Phelps recharge project ranged from 0% to 31%. Drain stated that CNPPID will likely be able to forecast the excesses available in advance and that the representative year analysis is more reflective of future operations than the 3-day event-based operations. He also noted that previous scoring estimates have also forecasted flows. Econopouly agreed with this, as long as forecasting is operationally feasible.

Courtney also discussed that the ED Office believes a higher canal capacity may be appropriate to use in future scoring, based on the estimate to Mile Post 13.3 from Steinke at CNPPID. The score analysis includes recharge in the beginning of the canal, before the flume. Drain asked whether the first couple miles of canal are included in the storage estimate and reminded the group that water in CNPPID’s system will now be routed through the reservoir and returned to the river. The ED Office will check in with Steinke regarding the canal capacity question. Besson believes that the Program can still take credit for recharge in the early section of the canal, even if other water is diverted through this section. Altenhofen agreed that taking credit during excess periods made sense. The Scoring Subcommittee agreed with continuing to include recharge in the beginning of the canal section in the scoring analyses. Drain was uncertain about the permitting of such operations and therefore abstained from the decision.

Sartori noted that there are several factors that impact the combined operations, such as times when the J-2 Regulating Reservoir diverts all of the available excesses and quickly releases for a



score. Drain said that the reservoir will be better able to capitalize on these periods because water is already flowing in the canal and into the reservoir.

Drain proposed an approximate score of about 1,700 AF per year, based on representative year event-based analyses and a weighted average of the scores (shown in Table 2 Column L of the 11/5/13 memo) and Besson agreed with using this score. The Scoring Subcommittee decided it may be beneficial to agree upon the assumptions for the methodology and then the ED Office could update the score analysis with a higher canal capacity, if appropriate. Besson suggested that the recommended score be brought to the Governance Committee at the December 3-4, 2013 meeting. He requested the ED Office look at an additional set of representative wet, normal and dry years to see if the results are about the same, and to make the analysis more credible. Sartori pointed out that the impact to the Phelps recharge project won't be more than the impact with combined operations, so there is a general score range presented. Besson said that as long as the results of the second set of representative year analyses are about the same as the first set, the score methodology is appropriate.

The group came to a consensus to use the methodology presented in Table 2 of the 11/5/13 memo and update the analysis with the appropriate canal capacity, if needed. The methodology is to calculate the estimated score for a representative wet, normal and dry year and then calculate a weighted average based on the proportion of dry, normal and wet years during the modeling period. Besson asked if anyone had an issue with this consensus and there was no response from the group. Bradley said he agreed with the approach. The Scoring Subcommittee agreed that unless the results are significantly different, the group agrees to this methodology and resulting score.

Altenhofen requested the ED Office update the 7/22/13 preliminary score analysis memo with the final recommended score and put the additional sensitivity analyses discussed by the Scoring Subcommittee in an appendix to the memorandum. The ED Office will update the preliminary score analysis memo; however, due to time constraints with the GC meeting, the ED Office will provide a brief memo to the Scoring Subcommittee on the final recommended score beforehand. If any of the members in the group have an issue or question about the recommended score, they should contact Besson; otherwise, the Scoring Subcommittee agrees to recommend this score to the GC, based on the methodology outlined previously.

Main points:

- The Scoring Subcommittee agreed to the methodology and the resulting score (to be provided to the Scoring Subcommittee by the ED Office) to recommend to the GC at the December meeting.

### **Other Comments from Subcommittee**

Besson asked the group about whether this detailed scoring process should be completed for every future project. Besson noted that detailed scoring can become expensive and questioned whether similar requirements would be made of every sponsor bringing forward projects. Drain



said he believes scoring should be completed by the Program. Project sponsors can provide input but it is the Program's decision on how to score each project. Altenhofen noted that each project using excesses should be evaluated in comparison to the J-2 Regulating Reservoir, since there may be competition for excess flows. In future projects, Altenhofen and Drain agreed that projects using excess flows should be modeled and scored based on combined operations. The Scoring Subcommittee agreed.

### Action Items

#### General Subcommittee

- Review memo on final score to propose to GC and provide any comments to Besson. The ED Office will provide this to the Subcommittee in the next week.

#### ED Office

- Additional analyses:
  - Discuss the canal capacity with Steinke and determine if 1,160 AF is appropriate.
  - If the canal capacity changes, update the representative year event-based analyses.
  - Evaluate an additional dry, normal and wet year with event-based combined operations of both projects.
- Write up a brief memo and provide to the Scoring Subcommittee next week with the proposed score to recommend to the GC.
- Revise the following memos:
  - 7/22/15 preliminary score memo: update memo with final score recommendations for the GC, add sensitivity analyses as appendix.
  - 11/5/13 combined score memo: describe that Scenario A and Scenario B are different and the impacts are not cumulative.
  - 11/13/13 reach gains/losses: explain why the graphed years were evaluated, as they are not the same representative years as used in the combined operations memo.