PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
Water Advisory Committee Meeting Minutes
Nebraska Game and Parks Commission – Lake McConaughy Visitors Center, NE

May 11, 2010

Attendance

Cory Steinke – WAC Chair, CNPPID
Jerry Kenny – Executive Director, Headwaters Corp
Beorn Courtney – ED Office/Headwaters Corp
Laura Belanger – ED Office/Headwaters Corp
Steve Smith – ED Office/Headwaters Corp (by phone/Webex)
Doug Hallum – NDNR
Dennis Strauch – Pathfinder Irrigation District
Jeff Shafer - NPPD
Jon Altenhofen – Northern Colorado WCD
Duane Hovorka – Nebraska Wildlife Federation
Mike Besson – Wyoming Water Development Office
Mike Drain – CNPPID
Rich Holloway – Tri-Bain NRD
Pat Goltl – NDNR
Brock Merrill – Bureau of Reclamation
Jeff Runge – U.S. Fish and Wildlife Service
Duane Woodward – Central Platte NRD
Matt Hoobler – Wyoming SEO
Greg Wingfield - U.S. Fish and Wildlife Service
Kent Miller – Twin Platte NRD

Other Attendees
Kevin Prior – Olsson Associates
Karen O'Connor – Olsson Associates
Ted Tietjen – Republic River Restoration Partners
Eric Dove – Olsson Associates (by phone)
John Engel – HDR (by phone)
Tom Riley – Flatwater Group
Marc Groff – Flatwater Group
Dean Eisenhauer – University of Nebraska at Lincoln

Welcome and Administrative

Introductions were made. There were no agenda modifications. **The February WAC Minutes were approved with no modifications.**

Federal Depletions Plan Update

Jeff Runge referred to federal depletions plans referral packet that had been provided, noting that several agreements have been signed regarding how depletions associated with federal water-related activities may be addressed in Colorado. Matt Hoobler provided an update on Wyoming's work with the Fish and Wildlife Service (FWS) toward a similar agreement in Wyoming. Wyoming has provided comments and intend to have a signed agreement by the June Governance Committee (GC) meeting. Runge said that Nebraska hasn't done an update as there are currently no federal projects impacted in the state. Runge also noted that by the end of the year the FWS will probably be working with Nebraska to allow for federal depletions. He said that there shouldn't be any conflict between state and federal depletions plans.

Colorado Depletions Plan Update

Jon Altenhofen provided a handout and referred to Colorado's annual depletions report that had been sent out with the meeting materials. He explained that the state uses State Demographer data regarding population estimates to develop Colorado's plan for future depletions. Altenhofen said Colorado' update includes a few changes in assumptions that were previously approved by the WAC and the GC. He then provided an overview of the State's calculations and South Platte Water Related Activities Program (SPWRAP) which will fund Colorado's depletion plan. Altenhofen also said that the state has been meeting their depletions plan obligations.

Wyoming Depletions Plan Update

Matt Hoobler referred to Wyoming's 2009 Depletions Report which was sent out with the meeting materials. He went over data the state has collected and reviewed. He noted that 14 federal projects and 7 wetlands projects were examined for their impact on depletions. Wyoming met all their requirements as documented in the report. In response to a question, Hoobler clarified that the State Engineer's Office (SEO) isn't currently permitting any new irrigation applications for new lands except in non-hydrologically connected areas or for supplemental supply to existing lands. They are monitoring uses as measured against their settlement decree and may consider allowing new irrigation permits at some point in the future.

Nebraska Depletions Plan Update

Doug Hallum explained that Nebraska's Depletion Plan is not yet complete. He reviewed progress the state has made towards steps outlined in their 2008 report. Nebraska anticipates having a completed depletions plan by December 2010. At this time the state and natural resource districts (NRDs) intend to offset all depletions to state protected flows. Hallum also noted that since 2005 (when the moratorium went into place) any "new" approved uses are really transfers or different use/locations, so are not a new depletion. Duane Hovorka noted that trying to offset new depletions resulting from new permits prior to offsetting existing depletions increases competition for and cost of water.

WAP Scoring Case Study Update

Beorn Courtney reminded the group that the GC formed a Scoring Subcommittee in December. This was prompted in order to review the various target flows and their use in scoring. John

Lawson is the chair. The subcommittee used the CNPPID Reregulating Reservoir (the project we currently know that most about) as a case study to evaluate how it would be scored. The pre-feasibility study design parameters for the J-2 Alternative 2, Areas 1 and 2 were used. Scoring was done using a continuous daily simulation in Excel of the OPStudy 48 year period with OPStudy hydrology, attempting to be consistent where possible with the OPStudy model. The score was based solely on target flow operations, though the reservoir was designed around the ability to augment a short duration high flow (SDHF). Courtney provided an overview of sensitivities analyses completed, including: reregulating or not reregulating Environmental Account (EA) flows released from Lake McConaughy, use of various target flows, and the gage used to calculate excess flows and shortages. Potential adjustments to score for SDHF or other uses were also discussed with the decision that for this case study no scoring adjustment would be proposed. The main finding of this work was that, for the CNPPID reregulating reservoir, the yield is most sensitive to the design capacity of the reservoir. The preliminary project score is about 40,000 acre-feet for the pre-feasibility level design. The subcommittee believes using a similar approach and going through a sensitivity analysis is sound for use with other projects, although specific analyses may be different. As the feasibility study for this project is complete, the score can be updated. Though a daily analysis was appropriate for this case study, that may not be the case for all WAP projects. Courtney also gave the WAC a heads up that a few items were put on a short list of things that may possibly come in front of the WAC to be investigated later.

CNPPID Reregulating Reservoir Scoping

Courtney told the group that since the last WAC meeting the GC approved of the field work contract with Olsson Associates (Olsson). Boring samples were collected in the areas of interest (J-2 Alternative 2, Areas 1 & 2) and cross sections of Phelps County Canal were surveyed. Olsson has also started incorporating LiDAR data into AutoCAD. Wetland work will be completed this week and a report provided by end of this month. The full geotechnical report won't be completed until the next phase of this project is approved. Courtney told the group that we were unable to get permission from the land owner for one of the three parcels that constitute Area 2. Plum Creek also runs through this section of Area 2. For now we are moving forward assuming this area is unavailable. Mike Drain said that unless we know this parcel is off the table, it might be better to slow down the schedule for this project rather than to lose the potential yield associated with this area. He said we shouldn't let the lack of access for field work this year remove this area from consideration. Courtney said we are going to update the storage and yield now that we have better data and potentially consider a new area to the south of Area 1. Eric Dove noted that pre-feasibility storage was based on gravity feed so it may be possible to increase J-2 storage even with the decrease in surface area by pumping to fill a reservoir with higher embankments. Courtney reminded the group that the pre-feasibility study normal year yield at Overton for this alternative was 47,480 acre-feet. Using the same assumptions, the continuous simulation showed an average yield at Overton of 47,621 acre-feet and a routed yield at Grand Island of 42,181 acre-feet. This shows that the representative normal year used in the pre-feasibility study provided good information.

The ED Office has been working with Olsson to scope the next phase of the J-2 Reregulating Reservoir Feasibility Study. We are hoping to get this work started by the end of the month and would like the WAC to recommend the scope to the Finance Committee (FC). The scope is within the budget limits for the project so it doesn't need to go back to the GC. The FC meeting hasn't been scheduled yet.

Altenhofen pointed out that in the draft scope the final report is scheduled for January of 2011. He asked how final will the design be at this time. Jerry Kenny said that the scope is designed so that we will be confident of the cost of the reservoir and associated facilities within 25%. The design may not necessarily be at this percentage level nor would the design be at a level to sufficient to release plans and specifications except possibly to a design/build contractor. Mike Besson said that the Army Corps of Engineers is going to want good information on the design. Altenhofen recommended that including an operating manual would be helpful. Kenny noted that this level of detail is probably for the next phase. The budget is still being discussed but is between $300,000 and $350,000. He also said the scope will be an amendment to the field work contract rather than a new contract. **The WAC scheduled a follow-up conference call on May 20, 2010 at 9:00 AM mountain time to discuss this. The group should get comments to the ED Office by noon on the 19th, though sooner is preferable so the ED Office can forward any significant issues to the group. If a call is not necessary the ED Office will let the group know on the 19th.** Cory Steinke told the group that unless the ED Office receives comments that someone is opposed to the scope being approved, we will assume everyone is supportive and it will be recommended to the FC.

Courtney discussed some of the analyses that would be completed under the contract as well as the phasing, including evaluating the potential use of the project for hydrocycling mitigation.

Water Management Incentives Pre-Feasibility Study

Kenny reminded the group that the Water Management Incentives WAP project looks at projects that could reduce consumptive use and result in additional river flows. Kenny, NDNR, Tri-basin, and Central Platte NRD (CPNRD) have been working with Flatwater and the University of Nebraska at Lincoln (UNL). Tom Riley reviewed a feasibility study scope the group has developed to evaluate existing knowledge and identify practices to increase returns flows, considering temporal and spatial impacts. Runge asked if there were enough quick response areas, considering the Program's first increment, for Nebraska and Program needs. Kenny said that they are planning on looking at areas that would have timely impacts to the river. He stressed that the first phase of the project is designed to gain information so we don't know what the findings will be. Some longer response time projects could end up being of interest. Riley confirmed that both surface water and ground water irrigation would be examined. They will examine anything that impacts consumptive use. Kenny said that he is hoping for consensus from the group in support of the scope. Brock Merrill asked if there was any potential for cost-sharing from the State or the natural resource districts (NRDs). Kenny said that for this phase the Program intends to pay for it though there is a lot of interest in the results so cost-sharing could be possible for future phases.

Drain said this project looks almost like it's at design level, though we haven't yet done enough feasibility level analysis to determine if this project is appropriate for the Program. Altenhofen stated that this shouldn't turn into a research program, noting that we have the conjunctive management tool and COHYST. We don't want to reinvent these tools that already exist. He said Task 1 is important so we could review existing practices and put some economics on it. UNL and other universities have been doing research regarding on-farm deficit irrigation. We shouldn't be doing that. Kenny explained that existed tools were the starting place, but that modifications might be needed. Further, the research items were potential options in subsequent phases, not the initial phase. Information had been included so that the cost of such research was before the group to understand the cost implications of pursuing that option. Drain asked if the proposed budget was a reasonable amount of money to putting towards the level of investigation currently needed. Kenny reviewed pre-feasibility level costs for other projects, noting that they are similar. Drain commented that he's not sure the deliverables match the price but he knows Flatwater does good work so that made him more comfortable. He suggested additional detail on the deliverables be provided. Drain also suggested that the WAC be given more time to review things such as this so that the group has more than one meeting to discuss an item with such a large budget prior to it being recommended to the GC or FC. He suggested that it would be useful to expect that more than one meeting would be needed. If something needs to move faster, a subcommittee could be formed. He also recognized the Program's tight schedule.

Altenhofen said that he would like to see a lot more detail in the scope tasks to understand how the COHYST model will be used specifically. He suggested we first do the literature review, then think about the next phase focusing on specific practices that look promising. Besson had similar concerns regarding how this relates to other things going on. Drain told the group that conjunctive management components have been added to COHYST and Duane Woodward summarized the current status and capabilities of the model. Altenhofen expressed concern about the Phase II schedule starting in August 2010. Wingfield expressed support of moving forward on "new water" projects in addition to reregulated water projects, but he also wondered if there could be a more preliminary investigation first. The group asked for more details in a scope. **Kenny said that in response to WAC comments, the scope will be adjusted to be more phased and will contain additional detail.** Ted Tietjen suggested that the group look at issues at a watershed level, noting that there can be a lot of unintended consequences to actions if this is not done.

Elm Creek Pre-Feasibility Update

Kenny reminded the group that the Olsson team has been looking at various aspects of an Elm Creek reservoir project. CPNRD is in the lead on this project, which is now being considered for its potential to provide additional benefits for the Program. Kevin Prior told the group that flooding has been a problem in the village of Elm Creek (downstream of the proposed Elm Creek reservoir) so the project was started for flood control. He reviewed preliminary specifications which have since been updated to improve the cost-benefit ratio for Nebraska Resources Development Fund (NRDF) funding to include recreation and Program uses. The reservoir is

located at the end of the 42 mile long Dawson County Canal. There has been concern about potential ground water impact resulting from the reservoir. Karen O'Connor reviewed findings of a ground water model Olsson developed, noting that there would be mounding and in an area just south of the reservoir water would come up to the surface. In Elm Creek the model shows that the depth to groundwater would typically rise (by < 2 feet) to 7 to 10 feet. Dewatering wells were modeled and shown to draw down ground water enough to alleviate major issues.

Since the prefeasibility study, Olsson has compiled LiDAR data and updated stage storage curves. The current study looks at inlet and outlet channel capacities among other items. The current beneficial storage (what could be available to the Program) estimate is 19,850 acre-feet. The principal spillway outlet could be costly if sized to provide 2,000 cfs of SDHF augmentation flows. Preliminary data suggests that providing 1,000 cfs would require significantly less outlet channel capacity improvements. Prior reviewed dam and upstream impacts. Olsson has completed preliminary geotechnical work which has driven initial design estimates. They now need to update the water budget to understand how an operational plan, including Program use, can be developed to optimize cost-benefits.

O'Connor reviewed ground water model enhancements that include an expanded model area (to the Platte River) as well as the larger Elm Creek reservoir. Prior reviewed water supply options being considered including the Dawson County Canal (which can't be used in the winter), a Platte River Pump Station and/or a Kearney Canal Pump Station. He reminded the group that pump station options, that could likely be operated in the winter, are below the J-2 Return to the river. He also reviewed outlet options. Olsson will be developing probable costs and cost-benefits to screen potential alternatives. Action items specific to the Program were discussed. Prior said they would like to return with additional information, and hopefully a draft report, by the August WAC meeting. He also noted that the costs he gave the WAC today are not for the larger reservoir size and don't include the pump stations. He said the pumping station from the river could be either groundwater or surface water and is this open for discussion. The ED Office discussed the work they have been doing with Olsson to evaluate alternatives using an analysis and spreadsheets very similar to what is being done for the J-2 Reregulating Reservoir.

Altenhofen asked about impacted landowners and if it's looking like they would be willing to sell. He noted that, though CPNRD can condemn land, the Program needs to be careful about this. Prior said that there are 5 houses in the reservoir area and 30 parcels, though likely fewer than 30 landowners. Hallum asked about the ground water modeling period and if stability was reached. O'Connor noted that they are looking at expanding the current 8 year period to 10 years or possibly 20 years, including both wet and dry periods. She also said that the aquifer properties in the model are based on COHYST data.

Ground Water Recharge/Management Pre-Feasibility Update

Steve Smith provided a brief update on the Ground Water Recharge/Management WAP project. He anticipates wrapping up the pre-feasibility study project this fall. He reminded the WAC that integrating both ground water recharge and ground water management components optimizes the

project yield. He reviewed project components and configurations that were considered. Detailed cost and yield analyses are being completed for a short list of five projects that emerged after applying screening criteria: Phelps 9.7, Thirty Mile, Gothenburg Canal (south of golf course), B1 Reservoir, and pumping high ground water southwest of Overton. A draft report should go out to the workgroup next week and then hopefully a draft report will go out to the WAC.

Water Evaluations

Kenny told the group that the Program is in negotiations with two sets of owners for permanent purchase/permanent lease of water. One is for a ground water well near the J-2 Return which has a yield of about 40 acre-feet to the river (calculated using CPNRD's methods). No purchase cost for this water has been agreed to yet. The other is two land owners with surface water right from the Dawson County Canal. The ED Office and NPPD is meeting with DNR next week to discuss the permitting process.

Drain cautioned that for any potential acquisition of existing surface water uses, consideration should be given to priority dates and whether or not the use would be acquired through a transfer or some other process that provides protection. For example, Kearney Canal has a very senior water right, often in priority over other junior appropriators. If such senior water were acquired by transfer of the appropriation, that same water could be protected in the river from diversion by others. If this water were retired without a formal transfer of the right, the water would then be available to be diverted by junior appropriators, potentially with no benefit to the Program. Likewise, when a more junior natural flow appropriation is retired, it may not have always been in priority to divert, and so retiring the use may not always produce water, regardless of whether or not protection is sought Jeff Schafer said that in the summer most of what the Kearney Canal diverts gets returned to the river. The return is about 20 miles from the diversion. Drain also stated that NPPD's storage water is used to supplement natural flow and that CNPPID's believes their current agreement with NPPD may require CNPPID's permission of any transfer of NPPD's natural flow appropriations. Drain acknowledged that NPPD may not agree with this, but he felt that it was important that the Program be aware of CNPPID's position in this matter. Altenhofen asked about Nebraska water law and if the supplemental well will continue to be pumped whether there will be a net benefit to the river by retiring the surface water portion. The Program needs to think about if this is a net benefit in the long term, not just the short term.

Additional Business

There was no additional business. The next WAC meeting was scheduled for August 17. **The WAC agreed to move the meeting to August 10, 2010 from 9:30 a.m. to 3:00 p.m. in Ogallala.** Various WAP study updates (J-2 reregulating reservoir, Elm Creek Reregulating Reservoir, Ground Water Recharge/Management, Water Management Incentives, and Water Leasing) will be discussed. The meeting was adjourned.

Action Items

General WAC

- WAC members should be any comments on the J-2 Reregulating Reservoir Draft Scope to the ED Office by noon on the 19th, though sooner is preferable
- Potential conference call to discuss J-2 Reregulating Reservoir Scope on May 20, 2010 at 9:00 AM mountain time

ED Office

- Compile J-2 Reregulating Reservoir Draft Scope and forward significant comments to the WAC
- Potential conference call to discuss J-2 Reregulating Reservoir Scope on May 20, 2010 at 9:00 AM mountain time
- Work with the Water Management Incentives team to adjust the draft scope so that it is more phased and contains additional detail (Kenny)