# Water Advisory Committee Meeting Minutes

**Conference Call**  
**February 6, 2018**

## Meeting Attendees

### Water Advisory Committee (WAC)
- State of Colorado
  - Jason Farnsworth
  - Chad Smith
  - Scott Griebling
  - Cary Smith
  - Bill Hahn (Special Advisor)

### Executive Director’s Office (EDO)
- Catherine Smith
- Seth Turner
- Kevin Werbylo
- Courtney Black
- Bill Hahn (Special Advisor)

### Contractors
- Jim Cannia – Aqua Geo Frameworks

### State of Wyoming
- Bryan Clerkin – Member
- Jeff Cowley - Alternate

### State of Nebraska
- Jessie Strom – Member
- Jesse Bradley – Alternate

### U.S. Fish and Wildlife Service
- Tom Econopouly - Member
- Jeff Runge – Alternate

### U.S. Bureau of Reclamation
- Brock Merrill – Alternate

### Downstream Water Users
- Cory Steinke – Chair
- Jeff Shafer – Member
- Brandi Flyr - Member
- Mike Drain - Alternate
- Tyler Thulin
- Tracy Zayac
- Nolan Little

### Colorado Water Users
- Jon Altenhofen – Member

### Upper Platte Water Users
- Dennis Strauch - Member

### Environmental Groups
- Jacob Fritton – Member
- Rich Walters
Welcome and Administrative: Cory Steinke, WAC Chair

Introductions were made. A minor edit to the attendees list of the October 2017 meeting minutes was noted. Motion to approve minutes was made by Shafer, seconded by Clerkin, unanimously approved.

Shafer made a motion to nominate Steinke to continue as WAC Chair, Altenhofen seconded, unanimously approved.

Farnsworth thanked the committee members for their support in the wake of PRRIP Executive Director Jerry Kenny’s death. Farnsworth reported that the EDO is working on both internal and external options for taking over Jerry’s duties as ED. Proposals will be presented to the signatories on February 14 and to the GC in March. For now, the EDO will continue to move forward business as usual, with Jerry’s duties being split between Farnsworth and Smith.

WAP Projects and Other Brief Water Updates

Lakeside Gravel Pit: Kevin Werbylo, EDO

Werbylo reported that the Program acquired an existing gravel pit near I-80 Exit 257. A consultant was hired to design the slurry wall, inlet/outlet works, and other features of the project. Currently in the very early stages of design, focused on information gathering. Consultant is finishing a site survey and borehole drilling (to get depth to an impermeable layer and other geotechnical properties) as the basis for design of the slurry wall. More information will be available after the collected data is assessed, likely by the time of the May WAC meeting.

CPNRD Water Leasing: Brandi Flyr, CPNRD

Flyr reported that the 2017 leasing/recharge operations at the Thirty Mile, Cozad, and Orchard-Alfalfa canals had concluded. CPNRD is currently working to simplify accounting processes, making it easier to track the water going through the canals, seepage losses, etc.

NPPD Water Leasing: Jeff Shafer, NPPD

Shafer reported that NPPD plans to make diversions for recharge in the spring if excess flows are available.

CNPPID Water Leasing (Phelps, Elwood, Irrigators): Cory Steinke, CNPPID

Steinke reported that CNPPID continues to deliver recharge water to the Phelps County Canal and Elwood Reservoir, even with ice. Diversions will continue if there are excesses but they will need to shut off by mid-February or earlier.

Enrollment for the third year of the irrigator leasing pilot program resulted in 2,055 acres signed up. The water leasing agreement was amended to increase maximum enrolled area from 2,000 acres to 2,100 acres. Turner asked if there had been any discussion of moving the irrigator leasing beyond pilot status to something more permanent. Steinke said this is up for discussion; the leasing can only occur during full-allocation years, and any decision would need to be approved by the CNPPID Board of Directors.
Acquire & Retire Project: Seth Turner, EDO

Turner reported on activities related to the Program’s irrigated property near Bayard, Nebraska. New fencing and gates were installed in December. A concrete check structure will be installed in early spring to improve the effectiveness of the flood irrigation; the Program will pay for the labor and materials, expected to be around $1,500. The Alliance Irrigation District is preparing a schedule for irrigation deliveries. Irrigation on the Program property is presently scheduled for April 13, May 28, and September 13; EDO staff plan to be on site to take flow measurements in the ditch.

Project Scoring: Courtney Black & Seth Turner, EDO

Turner reported on the status of scoring analyses for Elwood Reservoir recharge and the CPNRD surface water transfer/groundwater recharge project. For Elwood, a groundwater model was developed, to be described in detail by Griebling and Hahn later in the meeting. This model is a pre-cursor to the actual score analysis. The tentative plan is to engage the scoring subcommittee in early spring and have the score analysis ready to present to the GC in June.

For the CPNRD project, the EDO is reviewing methods and calculations, coordinating with Brandi Flyr at CPNRD as needed. A call with CPNRD is scheduled for February 8 to discuss various questions. To help with this effort, the EDO is bringing on Sira Sartori (formerly of Headwaters and EDO staff) as a temporary Special Advisor, with a meeting scheduled for February 14. The time frame for analysis is similar to Elwood but could be pushed back to September for presentation to the GC.

Wet Meadows: Scott Griebling, EDO

Griebling reported that the EDO is still monitoring wet meadows sites and collecting data and will continue to do so through 2019. EDO is also continuing data analysis to answer questions from the outset of the wet meadows study. The wet meadows analysis is lower priority at this time (due to an increased focus on project scoring) but is expected to ramp back up in the spring and summer.

Cottonwood Ranch Broad-Scale Recharge Update: Kevin Werbylo, EDO

Werbylo reported on the status of the broad-scale recharge project. Several items are coming together for presentation/approval at the GC in March: the final design plans and bid documents (HDR, with help from EDO); the WSA with CNPPID to build and deliver water through the pipeline from Phelps County Canal; and the land agreement with NPPD. The EDO is also working on operations criteria and modeling.

Project permitting is critical path. The PCN (404) was submitted to the Corps, expect to have permit by May or June 2018. EDO is also coordinating with Nebraska DNR. The plan is to permit the project as aquifer storage and recovery. DNR will also need to grant a dam safety exemption, as the project involves low berms, not dams.
Project schedule, assuming permitting proceeds as planned: construction of berms in summer 2018; pipeline installed after the irrigation season; project operational in late 2018 or early 2019.

Werbylo showed a map of the site layout (pipeline, berms, ponded areas, borrow areas) as well as typical berm sections and typical flume and outlet structures. Right now, the total recharge (i.e., ponded) area is about 470 acres, of which 267 acres will be considered crane habitat with ponded depth of 12 inches or less. Estimated volume of recharge ponds is about 575 acre-feet. These finished areas and volumes are expected to decrease slightly but final numbers are still coming together. Average annual diversions to the project are expected to be on the order of 20,000 acre-feet, of which 13,000 acre-feet will be recharged and about 5,000 acre-feet per year reach the river during times of shortage. Volumes are based on recharge and groundwater accretions to river only and do not include direct surface releases or recapture wells. It was noted that the volume at the river, or yield, is not the same as the score after project water is routed to Grand Island.

There were questions and discussions of the collector pipes under the berms and potential flow metering, downstream recapture wells, and the possibility of direct surface water releases to the river.

The most recent construction cost estimates are $3-3.5M for on-site infrastructure and $1M for pipeline. The Program is responsible for the up-front capital cost of pipeline, but CNPPID will buy it back through delivery of water. Responding to a question from Clerkin, Thulin said pipeline costs are currently less than in fall 2017; CNPPID will prepare revised cost estimate for the pipeline. Costs do not include recapture wells, but those are minor costs compared to other project infrastructure. Overall, it is expected to be within budget.

**Elwood Recharge Modeling:** Scott Griebling, EDO & Bill Hahn, Hahn Water Resources

Griebling gave an overview of Elwood Reservoir, which is owned by CNPPID and located south of Johnson Reservoir, near the divide between the Platte and Republican river basins. Water is delivered into Elwood via the E65 Canal and a pumpstation. The reservoir is unlined and seeps 30-100+ acre-feet per day. It is used by the PRRIP and others for intentional recharge. Elwood Reservoir does not drain directly into tributaries to the Platte River, nor does it collect any significant tributary inflow. Plum Creek is northeast of Elwood and can intercept seepage water.

Along with the surface divide between basins, there is an underlying groundwater divide. Key questions for scoring include: Where does the water go (Platte or Republican)? What is the timing and location of returns? The past assumption was a 50/50 split of recharge flows to the Platte and Republican basins.

To model Elwood seepage as part of scoring analyses, there were several options: analytical approach, COHYST model, standalone groundwater model. Hahn presented an overview of the groundwater model and methods, which are a localized application of the COHYST model. To develop the Elwood model, minor localized modifications were made to the groundwater model.
component of COHYST to improve model calibration near Elwood Reservoir. No changes were
made to the watershed or surface water models, and the full integrated COHYST model was not
run for this analysis. The local changes implemented to improve calibration did not have
impacts on the larger COHYST model.

Griebling and Hahn worked with Hayden Strickland at ERC to develop this model. There are 2
model runs: a baseline run (historic conditions) and an impact run (assumes 10 cfs continuous
recharge from Elwood Reservoir). The model results were extended from the 26-year study
period of the COHYST model to the 48 years used in the OPSTUDY model that serves as the
basis for all scoring analyses.

Results show that eventually about 20% of water goes to the Republican basin, 80% to the Platte.
Bradley confirmed this is consistent with results seen by Nebraska DNR. These results also
make Elwood more appealing to the Program, with more returns to Platte than previously
assumed. Model results also show that significant recharged water remains in storage beneath
Elwood for a long time. The Program could use recapture wells to pump into Plum Creek. In
response to question from Runge, Griebling clarified that the model results show Program
recharge only.

The EDO plans to score the Elwood project as recharge without recapture wells, then update
later if/when recapture wells are added. Steinke added that CNPPID is trying to make more
space available in Elwood for recharge, reducing irrigation demands by improving efficiencies,
etc. This year has the least amount ever stored in Elwood for irrigation.

Project Site Screening: Seth Turner & Kevin Werbylo, EDO

Turner reported on efforts by the EDO, working in collaboration with Hahn Water Resources
and CPNRA, to identify viable sites for future broad-scale recharge or slurry wall gravel pit
projects. What started as a more general exploration was narrowed to focus on potential
recharge sites for re-timing the surface water leased from Thirty Mile, Cozad, and Orchard-
Alfalfa canals. A draft memo with an annotated long-list of 24 sites was prepared by Hahn in
July 2017. Ten sites requiring delivery through CNPPID or NPPD canals were eliminated,
leaving a list of 14 sites to which water could be delivered through CPNRA canals that were
looked at more closely. From that list, 8 sites were eliminated as too small or too far from the
river for successful broad-scale recharge beneficial to the Program. Moving forward, a short list
including 6 large sites from the original list (ranging from 740 acres to 2,200 acres) will be
prioritized for further evaluation in 2018. The EDO also plans to assess the feasibility of surface
storage in a group of dry canyons located between the Thirty Mile Canal and the Tri-County
Supply Canal.

Project Status & Scores Update: Seth Turner, EDO

Turner presented an overall update on the status of Water Action Plan (WAP) projects. The
Cottonwood Ranch broad-scale recharge and Lakeside gravel pit projects are underway and
anticipated to be operational in early 2019 and early 2020, respectively. Two additional slurry
Projects with combined scores totaling 40,000 acre-feet or more are expected to be in place by 2025. Current approved project scores total 7,120 acre-feet, excluding the J-2 Reservoirs. Scoring analyses for Elwood recharge and CPNRD leasing/recharge are expected to be completed in 2018. NPPD recharge is likely to be the next project scored.

WY 2018 forecasts of May-June-July flows developed by Special Advisor Dmitry Smirnov of Dewberry were shown. Based on January 15 forecasts, most locations are forecast to have average to below average flows. Committee members expressed interest in maintaining forecasts for future years. There was discussion of comparing actual flows to forecasts to determine if any revisions to forecast methodology are needed.

Central Platte AEM Survey: Jim Cannia, Aqua Geo Frameworks & Kevin Werbylo, EDO
Cannia reported on an Airborne ElectroMagnetic (AEM) survey of the central Platte that was conducted to assess subsurface geologic conditions. Survey flights took place in summer 2016, and data analysis and documentation were completed in the time since then; a report is now available for review. Results of the study can be used to help assess recharge potential as well as the depth and extent of the low-permeability layer needed to develop slurry wall gravel pits.

Additional Business: Cory Steinke, WAC Chair
The next WAC meeting is scheduled for May 1, 2018 at the Lake McConaughy Visitors Center.

Turner proposed a tour of Program water projects to follow the May WAC meeting, the first such tour since 2015. Committee members were interested. The EDO will put together a draft schedule/agenda for the tour and will get back to the WAC to finalize details.

Econopouly reported that USFWS looking into late winter releases from the Lake McConaughy EA, waiting for ice to clear. The EAC-RCC meeting will occur sometime around March 6. USFWS would like to improve communications around EA releases. Whooping crane release begins March 23.
Action Items

General WAC
- CNPPID to prepare revised cost estimate for pipeline to deliver water from Phelps County Canal to Cottonwood Ranch.
- CNPPID, CPNRD, and NPPD to send email to EDO staff (Farnsworth, Beck, Turner) notifying of the start or end (and rates) of excess flow diversions for recharge or surface water transfers.
- USFWS to provide written documentation regarding interest in power interference.

ED Office
- EDO to develop itinerary for tour of Program water projects on May 1-2, following the next WAC meeting.