



1                                   **PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM**  
2                                   **Water Advisory Committee Meeting Minutes**  
3                                   Nebraska Game and Parks Commission – Lake McConaughy Visitors Center  
4                                   October 20, 2015

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7                                   **Meeting Attendees**  
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9                   **Water Advisory Committee (WAC)**

10           **State of Colorado**

11           Suzanne Sellers – Member

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13           **State of Wyoming**

14           Bryan Clerkin – Member

15           Philip Stuckert

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17           **State of Nebraska**

18           Jessie Weitjes

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20           **U.S. Fish and Wildlife Service**

21           Tom Econopouly – Member

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23           **U.S. Bureau of Reclamation**

24           Brock Merrill – Alternate

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26           **Downstream Water Users**

27           Cory Steinke – Chair

28           Duane Woodward – Member

29           Jeff Shafer – Member

30           Landon Shaw – Member

31           Nolan Little

32           Tyler Thulin

33           Mike Drain

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35           **Colorado Water Users**

36           Jon Altenhofen – Member

37           Luke Shawcross

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39           **Upper Platte Water Users**

40           Dennis Strauch – Member

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42           **Environmental Groups**

43           Duane Hovorka – Member

44           Bill Taddicken – Member

45           Jacob Fritton



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**Welcome and Administrative:** *Cory Steinke, WAC Chair*

Introductions were made. There were no agenda modifications. Steinke reported no changes to the August 2015 WAC meeting minutes. Motion to approve was made by Sellers, seconded by Shafer, unanimously approved.

**WAP Project and Water Updates**

***Phelps Groundwater Recharge Recapture Project: Jerry Kenny, ED***

Kenny reported that additional analyses are being completed to show that depletive effects will not increase as a result of adding a pumping well to this project. Vote for approval by Tri-Basin NRD expected in November. There will be a couple conditions to the permit: (1) if associated land leaves Program ownership, well has to be abandoned or new owner must apply for a new permit to continue operating; (2) Tri-Basin NRD can count the water added to the river by the Program as part of the water that counts toward moving the designation of their area from fully- to over-appropriated (basically accounting measure for the state, doesn't affect the Program). Drain asked for clarification that water is not being double counted in accounting measures, and Kenny confirmed.

***CPNRD Water Leasing: Duane Woodward, CPNRD***

Woodward reported that the transfer of surface water for all three canals was completed by late August or early September. Totals were about 9,300 AF back to river for Cozad; 3,000 for Orchard Alfalfa; 5,500 back for Thirty Mile, all values somewhat less after factoring in depletions. Now evaluating effects of pumped water on irrigated lands.

Excess flows became available 9/8/15, at which time the CPNRD started diverting excess flows into all three canals. Cozad diverted 2,073 AF from 9/8-9/30, after which excesses were no longer available. Estimated recharge was 1,383 AF based on what left the wasteways. Other related analyses are in progress, as the data just became available. Orchard-Alfalfa filled 9/8-9/17. Next opportunity for excess flows probably November 11, after target flows drop from 2,400 cfs again.

The CPNRD worked with the NDNR on accounting for surface water transfers. Surface water operations for the year were based on temporary transfers filed in April-May 2015, so this year served as a pilot project. Additional discussion of water protection, whether other canals could immediately re-divert returns.

Altenhofen asked for clarification of leasing agreements. Kenny explained that there are two components: surface water and groundwater recharge. The Program is paying \$40/AF in 2015. With 40-50% efficiency on groundwater recharge (percent that comes back during times of shortage), this translates to roughly \$80/AF for recharge. Program pays for surface water returns whether they occur during shortage or not.



90 Kenny reported that EDO is making progress on scoring the CPNRD leases, with the intention of  
91 presenting to the scoring subcommittee in January. This assumes NDNR approvals of the surface  
92 water transfers. Additional discussion regarding timeliness of NDNR approvals followed. It  
93 was noted that if a project ends up quite different in implementation than at time of scoring  
94 analysis, it will probably need to be revisited by GC.

95

96 ***NPPD Water Leasing: Jeff Shafer, NPPD, and Jerry Kenny, ED***

97 Kenny reported on issues outstanding –

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- 99 1. Price and insights that may be provided by water market mechanisms being tested this  
100 fall, e.g., surface water leasing (CNPPID market) and the NDNR/CPNRD groundwater  
101 market. Woodward reported that the groundwater market will likely be approved by the  
102 CPNRD board, just working to get mechanism up and running, probably by January.
- 103 2. Surface water relinquished accompanied by groundwater pumping instead. Discussion of  
104 who is responsible for depletions. Kenny working to get meeting scheduled with NDNR  
105 to discuss the issue, hopefully in December.

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107 ***CNPPID Water Leasing: Jerry Kenny, ED***

108 Kenny reported that the water service agreement (WSA) was approved by the GC in September  
109 2015, and approved by the CNPPID's board as well. Solicitations for surface water are  
110 underway. Associated land will be required to go dryland; anticipated to be pivot corners and  
111 similar, and the land needs to have actually been irrigated in recent years. Program is looking for  
112 2,000 AF, and will pay \$220/AF (plus small administration fee to the CNPPID); this is expensive  
113 water, but it's a one-year pilot and the Program didn't want to lowball and have it backfire with  
114 no interest in participation. Report from the CNPPID irrigation manager is that there appears to  
115 be strong interest. Water would be transferred to EA in October 2016, and payment would occur  
116 at that time.

117

118 In response to Altenhofen question, Kenny and Drain clarify that all operations are within the  
119 bounds of EA agreements, etc. Strauch and Altenhofen asked whether return flows from on-  
120 farm application are accounted for. Kenny says this was ignored for small-scale pilot. If this  
121 expanded into a larger project, probably need some sort of augmentation plan. Drain reported  
122 that total deliveries to the CNPPID surface water users are about 12 inches/acre, of which 9  
123 inches/acre is consumed (thus about 3 inches of return flows).

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125 ***Other Brief Water Updates (Wet Meadows, COHYST): Scott Griebing, EDO***

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127 Wet Meadows—

128 Griebing reported that wet meadows monitoring has been continuous since 2013, and peer  
129 review of monitoring practices is in progress. The Program is replacing stage gages damaged in  
130 recent high flows; it has been hard to maintain stage gages on a sand-bed river. EDO is finalizing  
131 internal responses to peer review questions, and a call to discuss is being scheduled (likely 11/2).



132 Once the workgroup approves, the results of the peer review will likely be presented to the GC in  
133 March 2016.

134  
135 Kenny added that wet meadows were discussed at the AMP reporting session on October 13-14.  
136 One big issue was the measurement of ET. The Program is estimating ET several ways, but not  
137 actually measuring presently. The peer reviewers were critical of that approach and suggest it  
138 will not produce research quality data. Response is that the Program is doing this work for  
139 guiding management decisions, not intending to publish in tech journals, therefore not worth the  
140 expense of measurement devices. This approach was widely supported by WAC. There was also  
141 discussion of the groundwater modeling approach used by EDO staff for wet meadows.

142  
143 COHYST—

144 Griebeling reported that work on the graphical user interface (GUI) is progressing, and that initial  
145 results are promising. The GUI facilitates an integrated model: groundwater, surface water, and  
146 watershed models. So far the GUI is working well to run them together rather than having to  
147 hand off between several consultants. Looking to be able to add Program features and so forth to  
148 the model(s).

149

150 **J-2 Regulating Reservoir(s) Options:** *Cory Steinke, CNPPID and Jerry Kenny, ED*

151 Steinke reported that the CNPPID paused land acquisition after the August updates. Consultant  
152 RJH is looking at alternatives, what can be achieved with existing budget. The storage vs. score  
153 curve prepared by the EDO was shown, which indicates that with storage of about 7,000 AF, can  
154 potentially still achieve 20,000 AF Program score (plus 25% for DNR).

155

156 Target costs for a reconfigured J-2 regulating reservoir(s) are \$63M for construction, \$75M with  
157 land acquisition, the numbers used in association with the original concept. This will require  
158 balancing of budget and yield of various projects to re-align WAP budget and yield targets (50-  
159 70,000 AF).

160

161 Kenny reported that Ed Toms (URS/AECOM) was brought on as civil design special advisor.  
162 Toms will be reviewing RJH work. His expertise is dams and large hydraulic structures, with 30  
163 years' experience on projects throughout the west. The plan is to also be looking at alternative  
164 liner concepts, synthetic versus clay, leaking a little, perimeter wall versus liner, etc., but the  
165 present focus of RJH work is on dollars versus storage.

166

167 Sellers inquired whether EDO would be reevaluating other reservoirs such as Elm Creek. High  
168 costs from 2011 seem a lot cheaper compared to where J-2 is now. Review should be completed  
169 as a matter of due diligence. Kenny agreed that it would be good to get such a review on paper  
170 at some point; but it is still reasonable to get rid of Elm Creek (many of the J2 cost issues would  
171 apply to Elm Creek, further into the habitat, on a live stream, residences impacted, issues with  
172 getting water into the reservoir—pump from Platte during excess or massive improvements to  
173 Dawson County Canal to get water there). Discussion continued regarding competency of  
174 consultants.



175  
176 Once the GC settles on a new configuration for J-2, will proceed to reevaluate water service  
177 agreement with the CNPPID (is there a Reservoir 2, do they still get benefit for hydrocycling  
178 and/or irrigation and power efficiency, etc.). Hovorka asked whether NDNR is looking at other  
179 options to make up the depletions shortfall a smaller J-2 would leave for them, Kenny responded  
180 that Program continues to assume that the State is in for 25% of the total project yield. If NDNR  
181 is looking at other options, he was not aware of their efforts in that regard. Initial revised J-2  
182 concepts will likely be presented to GC in December.

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184 **Broad-Scale Recharge Concepts:** *EDO Staff and Bill Hahn, EDO Special Advisor*  
185 Kenny reported that given issues of time within the remainder of First Increment, there is  
186 potential to get the broad-scale recharge concept underway sooner, on an incremental basis.  
187 Unlike a reservoir project, don't have to build everything at once.

188  
189 Accounting for approximately 20,000 AF from J-2, other leasing projects, etc., something on the  
190 order of 20,000 AF from the broad-scale recharge project closes the loop on the water milestone.  
191 This could largely be achieved using re-timed water.

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193 EDO staff taking a broad look, basically the reach from Gothenburg to Odessa. There have  
194 already been some talks with the CPNRD regarding Thirty Mile, Cozad, and Orchard-Alfalfa.  
195 Dawson County Canal likely to be involved as well, but haven't really talked with the NPPD yet.  
196 Analysis of broad-scale recharge was mostly a paper exercise to this point. It appears that most  
197 excesses available in the CNPPID system (at Phelps).

198  
199 Lands near the river are great for recharge, primarily in the range of 1,000-5,000 feet from the  
200 river (1/4 mile to a mile). Program owns land in the area at Cottonwood Ranch, including the  
201 Morse Tract. In addition, if the Program applied water to neighboring lands in the spring/fall,  
202 neighbors amenable to using for water fowl hunting. Initial budget was assuming purchase of  
203 2,000 acres for recharge, may need considerably less (perhaps only about 500 acres) with what  
204 Program already owns, plus willing neighbors.

205  
206 Water added to recharge sites during the fall could reach river during time of shortage during late  
207 spring. Likewise, water put in around March could reach the river during July-August. Further  
208 from the river, the amount that returns during periods of shortage would be reduced. With a  
209 target score of about 20,000 AF, would need to recharge about 50,000 AF, assuming 40% score  
210 efficiency. Preliminary analyses are not emphasizing the potential habitat aspect of the recharge  
211 sites, but there could be incidental habitat available in spring/fall.

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213 Sellers asked if seepage from J-2 could be scored (assuming leakier liner). Kenny said it could  
214 potentially be considered.

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218 **Funk Lagoon WAP Feasibility:** *Scott Griebling, EDO*

219 Griebling reported that Funk Lagoon has long been a potential WAP project. The project concept  
220 has evolved from retiming of irrigation return flows (e.g., Boyle Recon-Level WAP in 2000) to  
221 groundwater management by pumping the mound and returning through North Dry Creek cutoff  
222 (WAP Update in 2009) to retimed excesses from the CNPPID system via Phelps Canal (surface  
223 water storage and/or groundwater recharge – present concepts).  
224

225 The Funk Lagoon is located in a natural depression on property owned by Rainwater Basin, and  
226 the Program would lease. Phelps County Canal circles around south side of lagoon. Lost Creek  
227 and North Dry Creek drain the area. Via the North Dry Creek cutoff, return of water from Funk  
228 Lagoon would benefit about 60% of associated habitat reach (40% reduction of full score).  
229

230 Monitoring to assess WAP project feasibility:

- 231 • Gather data to approximate seepage, evaporation, direction of groundwater flow, impact  
232 of seepage on Funk and Axtell groundwater levels.
- 233 • Multiple partners in monitoring effort: CNPPID, Program, Tri-Basin NRD, HPRCC  
234 (High Plains Regional Climate Center), USFWS  
235

236 Results:

- 237 • Monitoring shows groundwater gradients east and southeast, away from the Platte River.  
238 Groundwater flow is away from town of Funk, in the direction of Axtell. No visible  
239 groundwater mounding around Funk Lagoon, it's unlikely to have any effect on  
240 groundwater levels around Axtell (more likely just influenced by regional groundwater  
241 levels).
- 242 • There were extensive monitoring challenges. Funk Lagoon is subdivided into three main  
243 pools, with multiple management areas within each pool. There are multiple potential  
244 surface and groundwater delivery points. Site layout made it difficult to estimate volumes  
245 and seepage rates, etc.
- 246 • Water budget analyses. Goal from calculation is to get seepage. Bulk of water delivered  
247 to the lagoon is lost to seepage (small amount to evaporation).  
248

249 Conclusion: Funk Lagoon is not a good option for either water storage or groundwater recharge.  
250 Too much seeps out for storage, would have additional transit losses to river. Seeps too fast for  
251 groundwater recharge, and the groundwater gradient is not towards Platte.  
252

253 **Motion from Sellers, with second from Econopouly, to send the Funk Lagoon report to the**  
254 **GC for review strongly in favor of not pursuing this project further. The WAC does not**  
255 **recommended Funk Lagoon as a WAP project. Unanimous approval.**  
256

257 **High Flow Report Summary:** *Scott Griebling, EDO*

258 Griebling presented a summary of the high flows report prepared by the EDO.  
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261 Document purpose:

- 262 (1) Summarize and compare high flow events, 2007-2015  
263 (2) Evaluate high flows in light of SDHF criteria  
264 (3) Separate memos for each event  
265 (4) Update with each new high flow event.

266

267 The report assessed peak flows, return periods, durations, flow volumes, type of hydrologic year,  
268 etc.

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270 **Interim Hydrologic Conditions and Excess Flow Availability:** *Scott Griebing, EDO*

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272 Interim Hydrologic Condition—

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274 Griebing reported on refined analysis since the presentation at the August WAC meeting.

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276 Conclusion:

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- 277 • Ignore presentation from last WAC meeting
- 278 • EDO calculated hydrologic condition using weekly PDSI from 1992-2015
- 279 • Only 5 of the 119 periods were changed by using weekly PDSI (<5%)
- 280 • 3 actual hydrologic conditions were drier, 2 were wetter
- 281 • Oct-Nov 2015 designation: shifted from NORMAL to WET
- 282 • Moving forward: Recommend using weekly PDSI for interim hydrologic condition
- 283 values. WAC members agreed.

284

285 Excess flow availability—

286 Griebing reported on analyses to determine if there have been less winter excesses during 2007-  
287 2014 than in the 1947-1994 scoring period. The answer is yes. Analysis was completed using  
288 actual river hydrology for Jan-Feb-Mar and Dec, as well as OPSTUDY hydrology, with similar  
289 results. There is a great deal of variability in the availability of excess flows from year to year.

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291 Conclusions:

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- 292 (1) Average winter excess during 2007-2014 is less but within standard deviation
- 293 (2) Many years at or below 25% quartile of excess
- 294 (3) Wet year/month excesses mask low excesses in dry months when looking only at the  
295 average.

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297 **Chokepoint Update:** *Jerry Kenny, ED*

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299 Kenny reported that permitting and mitigation issues have been worked out with the Corps  
300 regarding the wetland disturbance associated with the State Channel Project. The Corps wants  
301 4:1 mitigation, and will accept new wetlands in the associated habitat reach. This will be about  
302 10 acres of new wetlands for 2 acres of disturbance.



303 The new wetlands are proposed to be constructed on the Spiedell Property, which was land  
304 acquired from The Nature Conservancy. Some of these lands were originally paid for using  
305 NAWQA funds. NAWQA covered about 500 acres of the property, but the Program purchased  
306 700 acres. The Program sent a letter to NAWQA requesting agreement that the 10 or so acres  
307 needed for mitigation are in the 200 acres not funded by NAWQA. If that agreement is not  
308 reached, Program will need to pay back grant funds to get rid of designation (~\$30,000). Plans  
309 and specs are in place for new wetlands design. Program is waiting for a response from  
310 NAWQA to confirm plans to Corps. Hopefully issues resolved by end of October. Thus, it is  
311 highly unlikely that the flood reduction project (State Channel Project) will proceed during the  
312 current season, and it will most likely pushed into 2016. The Project could happen during  
313 January-March depending on weather. The project is minimal in terms of earthmoving, but  
314 permitting hoops and cost have been excessive.

315

316 Additionally, Kenny reported that there is a potential emerging opportunity to engage with the  
317 Corps on a proposal to build levees in North Platte through choke point reach. The project would  
318 involve a couple miles of levees on either side of the river, upstream and downstream of bridge,  
319 but the primary focus is on south side of river, permanent levees. The project could result in a  
320 flood stage of 7 feet, which would have a capacity of about 3,500 cfs. The 6.5 feet flood stage  
321 the Program intends to achieve with the State Channel Project results in a capacity of 2,400 cfs.

322

323 **2016 Draft Water Plan Budget:** *Jerry Kenny, ED*

324 Kenny presented a spreadsheet with draft budgets for various water-related line items for 2016  
325 and beyond, towards the end of the First Increment. Highlights include the following:

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- 327 • CNPPID system groundwater projects include continued recharge at Elwood Reservoir.
- 328 • Broad-scale recharge in 2016 potentially includes building some berms on Program land,  
329 or pipes to deliver from CNPPID system, etc. Anticipated budget of around \$3M.
- 330 • Continue various leasing projects—both surface water and groundwater—with CPNRD,  
331 NPPD, CNPPID, etc.
- 332 • CNPPID leasing-storage is basically NCCW with a new name and approach.
- 333 • NPNRD leasing not likely to happen, probably eliminate from budget. Reducing budget  
334 for broad-scale recharge by using Program lands (along with no NPNRD) gets us close to  
335 actual budget constraints.
- 336 • Management tool = COHYST GUI. There will likely be a bit of consultant work.
- 337 • Water Plan Special Advisors: Bill Hahn (groundwater and well design), Ed Toms (civil  
338 design), and George Oamek (economics).
- 339 • Misc. Water Resources Studies: Dewberry hydroclimate studies. Kenny reported out on  
340 Dewberry studies for North Platte and South Platte that were completed in 2015.

341

342 Kenny stated that comments on the budget are welcome, that it's a work in progress. EDO needs  
343 to refine numbers and backup behind them. Total budget for the Water Action Plan





344 implementation is \$93M in 2005 dollars. Indexed to present, actual budget is about \$99M, but  
345 Program continues to work in context of 2005 numbers to have a bit of a buffer.

346

347 **Additional Business:** *Cory Steinke, WAC Chair*

348 Steinke presented the upcoming meeting schedule. Next WAC meeting is February 2, 2016,  
349 then May 3, 2016.

350

351 **Action Items**

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353 General WAC

354 n/a

355

356 ED Office

357 Refine and finalize budget.