

10/30/2024

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM Water Advisory Committee Meeting Minutes

Virtual Meeting – Microsoft Teams

August 6, 2024

PRRIP Water Advisory Committee Meeting Attendees			
Name	Affiliation	Member or Alternate	
Department of the Interior (DOI)			
Brock Merrill	U.S. Bureau of Reclamation	Member	
Matt Rabbe	U.S. Fish and Wildlife Service (USFWS)	Alternate	
State of Wyoming			
Jeff Cowley	Wyoming State Engineer's Office (WY SEO)	Member	
George Moser	Wyoming Water Development Office (WWDO)	Alternate	
Michelle Hubbard	WY SEO		
State of Colorado			
Kara Scheel	Colorado Water Conservation Board (CWCB)	Member	
		2024 WAC Vice Chair	
Don Baggus	Colorado Parks and Wildlife (CPW)		
State of Nebraska			
Jennifer Schellpeper	Nebraska Department of Natural Resources (NeDNR)	Member	
Jesse Bradley	NeDNR	Alternate	
Kari Burgert	NeDNR	Alternate	
Avery Dresser	NeDNR		
Ryan Kelly	NeDNR		
Caitlin Kingsley	NeDNR		
Jim Ostdiek	NeDNR		
Mike Archer	Nebraska Game and Parks Commission (NGPC)		
Upper Platte Water Users			
Dennis Strauch	Pathfinder Irrigation District	Member	
Colorado Water Users			
Jon Altenhofen	Northern Water	Member	
Kyle Whitaker	Northern Water	Member	
Joe Frank	Lower South Platte Water Conservancy District	Alternate	
Rich Belt	South Platte Water Related Activities Program		
Jason Marks	Denver Water		



PRRIP Water Advisory Committee Meeting Attendees			
Downstream Water Users			
Cory Steinke	Central Nebraska Public Power and Irrigation District	Member	
	(CNPPID)	2024 WAC Chair	
Brandi Flyr	Central Platte Natural Resources District (CPNRD)	Member	
Jeff Shafer	Nebraska Public Power District (NPPD)	Member	
Mike Drain	CNPPID	Alternate	
Nick Lee	NPPD		
Nolan Little	Tri-Basin Natural Resources District (TBNRD)		
Travis Preston	North Platte Natural Resources District		
Randy Zach	NPPD		
Environmental Entities			
Jacob Fritton	The Nature Conservancy (TNC)	Member	
Abraham Kanz	The Crane Trust	Member	
Rich Walters	TNC	Alternate	
Executive Director's Office (EDO)			
Justin Brei	Engineering/Colorado Coordinator		
Libby Casavant	Hydraulic Engineer		
Jason Farnsworth	Executive Director		
Nicole Fijman	Geospatial Analyst		
Quinn Lewis	River Scientist		
Seth Turner	Water Plan Coordinator		
Other Participants			
Matt McConville	HDR		
Mark Mitisek	LRE Water		
Jon Mohr	LRE Water		

6

7 Welcome and Administrative: Kara Scheel, CWCB – 2024 WAC Vice Chair

8 Meeting participants were shown in Teams. Turner requested permission to record the meeting 9 to assist with the minutes; there were no objections. Steinke noted issues with securing a venue

10 for an in person meeting. Turner said the EDO elected to have a virtual-only meeting so that

11 everyone would be in the same virtual space rather than split between in person and virtual. It

12 was hoped this would facilitate better discussion of the Expanded Recapture Reconnaissance

- 13 Study to be presented by LRE Water.
- 14

15 Turner noted a change in the order of presentation for the Brief Water Updates (Wyoming

- 16 Property flow split would be first) and that he planned to include an overview of 2022-2023
- 17 Program water projects accounting following the discussion of recent water projects operations.
- 18 Turner also said a break would likely be added after the LRE Water presentation and discussion.
- 19
- 20 Two versions of the February 2024 WAC meeting minutes were put forth for consideration, the
- 21 original March 6 version prior to any committee edits (document 1a) and a May 14 version
- 22 incorporating changes proposed during the May 2024 WAC meeting (document 1b). The latter



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- version moved the entire Perkins County Canal discussion to the end of the minutes with
 language added to state that there were committee disagreements over content and therefore that
 section would not be considered part of the formal meeting minutes. Committee members
- 26 continued to voice various concerns and perspectives on what should and should not be included
- in meeting minutes. Several people noted that minutes should just be a record of what was said,regardless of whether there is agreement on those statements. Scheel made a motion to approve
- 20 regardless of whether there is agreement on those statements. Scheel made a motion to approve 29 the May 14 (document 1b) version, second by Marks. No objections, February minutes
- approved.
- 31

There were no edits to the original draft of the May 2024 WAC meeting minutes. Flyr made a motion to approve, second by Strauch. No objections, May minutes approved.

34

35 Expanded Recapture Reconnaissance Study: Jonathan Mohr and Mark Mitisek, LRE Water 36 To provide context for this study, Turner explained that the Program has 3 recharge projects in the CNPPID system: Phelps County Canal, Elwood Reservoir, and Cottonwood Ranch. Absent 37 controllable elements, these projects are inefficient at reducing deficits to target flows at Grand 38 39 Island because roughly half of the accretions (return flows) occur during periods of excess. 40 Recapture wells can accelerate the return of water to the river and pump specifically during 41 periods of shortage when the water is needed in the river. The Program has 8 existing recapture 42 wells, including the Cook well that was installed in 2016 and 7 newer wells near Cottonwood 43 Ranch. The Program has an agreement with Tri-Basin NRD for the operation and maintenance 44 of these wells. Additionally, the Program has agreements with CNPPID and has pre-paid for 45 more than 200,000 AF of excess flow diversions into the 3 recharge projects.¹ The team led by LRE Water has been working on the Expanded Recapture Reconnaissance Study for the last year 46 47 to find ways to optimize the benefit that the Program can generate for the Platte River through 48 these projects. Turner added that the NeDNR contributed funding to the study, so the analyses 49 also included potential recapture well options for the State of Nebraska. 50 51 Mohr and Mitisek of LRE Water presented on the study. Their team also includes Inter-fluve 52 and RJH. Key elements of the study include an assessment of conveyance capacity in Plum 53 Creek and potential mitigation required to accommodate higher flows; evaluation of gravity

- 54 outlet options to convey water from Elwood Reservoir to Plum Creek; potential siting and
- 55 quantities of new recapture wells; and tradeoffs between Elwood outlet concepts and additional

56 recapture wells to maximize the potential score in terms of reductions to target flow deficits at

- 57 Grand Island. Mohr recapped specific questions the study sought to address for the Program and
- 58 for NeDNR.

¹ In Water Service Agreement (WSA) between the Program and CNPPID dated December 7, 2022, the Program prepaid \$9,154,956.24 for excess flow diversions totaling 50,000 AF into Phelps County Canal at \$35.92/AF and 134,927.7 AF into Elwood Reservoir at \$54.54/AF. The initial term of the agreement is through December 31, 2032 but can be extended through successive one-year agreements for up to another 10 years or until the full volume of water is delivered (whichever is sooner). There is a separate WSA concerning excess flow deliveries to Cottonwood Ranch, with an estimated 28,000 AF to be delivered based on the remaining pipeline cost balance and a term through December 31, 2032.



- 59 Plum Creek
- 60

61 The Plum Creek assessment was completed by Inter-fluve and included analysis of gage data,

- field surveys, 1D HEC-RAS modeling, risk assessment, and planning level costs. Inter-fluve
 surveyed more than 40 cross-sections across 4 representative reaches of Plum Creek. Baseflow
- 64 in Plum Creek was determined to be about 12 cfs and the ordinary high water line is at about 50
- 65 cfs. The risk of impacts such as bank sloughing and erosion increases with duration and
- 66 magnitude of flow, particularly above 100 cfs. Inter-fluve estimated mitigation costs for the
- 67 surveyed sub-reaches based on proposed Elwood outlet capacities of 50 cfs or 100 cfs and
- 68 extrapolated to the more than 28 miles of creek between Elwood Reservoir and the Platte River.
- 69 At least 2 public and 11 private stream crossings would need to be upgraded to accommodate 70 additional flows for the Program.
- 71
- 72 Elwood Outlet
- 73

74 RJH developed both open channel and pipeline alternatives for the Elwood Reservoir gravity

- outlet. At the request of the EDO, these were designed to convey either 50 cfs or 100 cfs. The
- 76 presentation and Executive Summary memo provided to the WAC include maps showing the
- proposed outlet alignments. The open channel option would utilize the existing 42-inch
- 78 emergency evacuation pipeline from Elwood Reservoir and discharge to a 5,900 ft riprap lined
- channel through a natural drainage to a culvert crossing at Hwy 283. This may require 404
- 80 permitting and would potentially impact 3 private property owners.
- 81

The pipeline option would involve construction of a new control structure and turnout in the existing E65 Canal between the pump station and the outlet of siphon 3. From the turnout, a

4 500 ft ningling would convey water to the culvert crossing at Huy 82. Diff attention and the

4,500 ft pipeline would convey water to the culvert crossing at Hwy 83. RJH estimated costs for
 both steel and PVC pipe, both of which are more expensive than the open channel option. There

by boun steel and PVC pipe, both of which are more expensive than the open channel option. There are 2 private property owners along the proposed nincling alignment. Conversion of Dragons

are 2 private property owners along the proposed pipeline alignment. Conveyance of Program

- water to the pipeline turnout via the E65 Canal could be a potential issue during periods of highirrigation demand.
- 00 89

90 The current outlet designs are considered feasibility-level and cost estimates include 30%

- 90 The current outlet designs are considered reasonity-rever and cost estimates include 50%91 contingency (excluding permitting land Ω M and conveyance from the Hyper 83 culturer to
- 91 contingency (excluding permitting, land, O&M, and conveyance from the Hwy 83 culvert to
- 92 Plum Creek). Costs range from \$2.8 million for a 50 cfs open channel to nearly \$9.5 million for
- a 100 cfs steel pipe.
- 94
- 95 Recapture Wells
- 96
- 97 Mitisek described the various elements of the recapture well assessment, which included
- 98 completion of hydrogeologic cross-sections; evaluation of the potential to utilize natural
- 99 conveyance or drains to return water to the river; defining recapture zones and conceptual
- 100 recapture well areas based on COHYST stream-depletion factor (SDF) zones and proximity to
- 101 the Platte River (maps were included in the presentation and memo); determination of well and



pipeline capacities and infrastructure requirements; and estimation of costs. In general, wells
 close to the river are shallower, require less conveyance, and are therefore less expensive. Wells
 more distant from the river are deeper, have greater conveyance requirements, and are more
 expensive. However because of the timing of depletive effects from recapture well pumping,
 wells closer to the river produce less net benefit (i.e., score) than those wells farther away.

- 107
- 108 Trade-Offs and Cost Estimates
- 109

110 For the trade-off analysis, LRE Water developed a GoldSim model that closely replicated the

111 EDO's spreadsheet score models. There are 3 main components of the GoldSim model: an

112 Elwood storage balance (inflows from excesses, outflows as seepage or gravity release) with

separate accounts for the Program and NeDNR; an aquifer storage balance (inflows from

- recharge, outflows as accretions or recapture pumping); and a score model that routes net river
- returns to Grand Island to determine reductions to target flow deficits. The model uses the
- 116 Program's actual recharge/recapture data through 2023 to define antecedent conditions, includes
- 117 the standard 1947-1994 model period used for score analyses, and adds the 1995-2023 period to
- 118 get an idea of project performance under more recent hydrology. For the Program, the GoldSim
- 119 model was used to simulate a baseline scenario (existing recharge/recapture operations), 3
- scenarios with no Elwood outlet and new recapture wells in different zones, and both 50 cfs and
- 121 100 cfs gravity outlets from Elwood Reservoir with no new recapture wells. Model runs for
- 122 NeDNR included a recharge-only baseline and 3 recapture well scenarios.
- 123

124 The Program's baseline score of 6,800 AF includes Phelps recharge (approved 2,700 AF),

- 125 Elwood Recharge (approved 2,800 AF), and the 8 existing recapture wells (estimated 1,300 AF).
- 126 Incremental scores of a new Elwood outlet or additional recapture wells were estimated by
- subtracting 6,800 AF from a new total score with existing and proposed recharge/recapture
- 128 projects. For the Program, a 100 cfs gravity outlet with existing recapture wells results in the
- highest incremental score increase (5,009 AF based on the 1947-1994 period). For both the
- Program and NeDNR, new recapture wells in Zone 3 south of Phelps County Canal wouldgenerate the highest incremental score increase.
- 132

The cost analysis considered both initial capital costs and 50-year lifecycle O&M costs. Total costs were calculated and divided by 50-year deficit reductions to estimate unit costs per AF of score. The 50 cfs Elwood outlet has unit costs as low as \$33/AF for the open channel option.

- 136 Total 50-year life cycle cost for this scenario was estimated at around \$7.4 million. The lowest
- unit cost for recapture wells would be in Zone 3, ranging from 141/AF to 167/AF depending
- 138 on conveyance pipeline material (PVC or steel). Life cycle costs exceed \$25 million. Wells
- 139 closer to the river have lower life cycle costs but higher unit costs due to reduced net benefits to
- 140 the river in terms of deficit reductions.
- 141
- 142 The presentation concluded by summarizing responses to the key questions that were identified
- 143 at the start (see presentation and Executive Summary memo, both available on the meeting

- website). LRE Water also identified a few important considerations for potential future phasesof this study.
- 146
- 147 WAC Discussion
- 148

149 Turner said the EDO is looking for direction on what to do next. The presentation was a

- summary of what was evaluated and potential infrastructure projects to consider. Substantial
- 151 infrastructure costs are involved, is this something to pursue further? The EDO is not seeking a 152 specific motion from the WAC, but feedback is needed to inform discussion with the GC in
- specific motion from the WAC, but feedback is needed to inform discussion with the GC in
 September. The Executive Summary memo provided to the WAC will be expanded to a full
- report over the next month, with expected distribution prior to discussion at the September GC
- 155 meeting.
- 156
- 157 Rabbe asked for clarification regarding controllable project elements. Turner said the idea
- behind the gravity outlet or recapture wells is that they are entirely controllable and can be
- 159 operated when needed to reduce deficits. A gravity outlet from Elwood would release 50 cfs or
- 160 100 cfs to the Platte River via Plum Creek. With 8 existing recapture wells running, the Program
- 161 can deliver 10-12 cfs to the river, so adding 6 more wells might get us near 20 cfs.
- 162
- 163 Steinke noted that with the proposed new E65 gravity inlet to Elwood Reservoir, there would be
- 164 less need for CNPPID to hold water in storage for irrigation. That would free up space for
- 165 storage of excess flows and allow the Program to better capitalize on big flow events. Steinke
- 166 later added that he is 90% sure CNPPID will proceed with construction of the new inlet, and that
- 167 will allow more efficient operation of Elwood for the Program. Mitisek said that having a
- 168 gravity outlet reduces the need for Program recapture wells because the volume of ongoing
- 169 recharge (as Elwood seepage) is reduced.
- 170
- 171 Strauch suggested that the unit costs per AF should include the initial costs of excess flow
- 172 diversions for comparison to other water projects. Turner agreed that should be considered and
- 173 confirmed that the unit costs shown by LRE Water in the presentation and memo account for the
- 174 capital costs of new infrastructure, 50-year life cycle O&M costs, and 50-year score contribution.
- 175 Farnsworth later added that since the Program has already pre-paid CNPPID for a large volume
- 176 of excess flow diversions, caution would need to be taken to make sure those costs are
- 177 incorporated in a useful way.
- 178
- 179 Altenhofen asked if there would be competition between projects for excess flow deliveries.
- 180 Turner said the modeling for this study, which was based on the original Elwood recharge score
- 181 model, includes partitioning of available excess flows so that all recharge projects within the
- 182 CNPPID system can receive water. This partitioning was based on examples included in the
- 183 Cottonwood Ranch water service agreement.
- 184
- 185 Drain asked if the scoring subcommittee would be convened to review the analyses, or if the GC 186 would just use the scores as currently presented. Turner said these reconnaissance-level analyses



187 will need to be refined before presenting to the scoring subcommittee for formal review, and that

- is not expected soon. In response to a question from Altenhofen, Turner reiterated that the score
- estimates developed by LRE Water represent the potential incremental gain above the 6,800 AF
 baseline score for the existing recharge/recapture projects that would be integrated with an
- baseline score for the existing recharge/recapture projects that would be integrated with an
 Expanded Recapture project. That includes 2,700 AF for Phelps recharge, 2,800 AF for Elwood
- recharge, and 1,300 AF for the 8 existing recapture wells based on 160 AF score for the Cook
- 193 well extrapolated to 8 similar wells.
- 194

195 There was some additional discussion of the unit costs per AF of score increase. Farnsworth

- stated the intent to pursue a project such as this during the Extension as part of ongoing efforts to
- 197 achieve the First Increment Water Objective (120,000 AF per year average reduction to target
- 198 flow deficits at Grand Island). Altenhofen asked if this would fit within the existing Water Plan
- 199 budget or if other items would need to be trimmed. Farnsworth said it likely fits in the budget
- and has been contemplated as part of the Water Action Plan, but it would also depend on the
- 201 final mix of Elwood outlet and/or recapture wells.
- 202

203 Steinke made additional points about the advantages an Elwood outlet would provide for the

- Program because of operational flexibility and quicker timing for making releases back to the
- river during shortages then refilling the reservoir during excesses. There was a question about
- the effects of different operations by the Program and NeDNR. Turner said that all inflows of excesses were split 50/50 in the model. The availability of excess flows (capped at 30,000 AF
- annually) and finite capacity of the reservoir (around 37,800 AF) were more significant limiting
- factors than operational differences. The Program would be able to make gravity outlet releases
- 210 until the reservoir reached dead pool level (about 12,000 AF), below which any remaining
- 211 Program water could continue to seep from the reservoir as groundwater recharge.
- 212

The discussion turned to Plum Creek and Inter-fluve's conclusion of limited erosive impacts

- from 50 cfs releases. Mitisek again noted the significance of the frequency and duration of flow
- 215 releases in terms of causing potential channel impacts. Turner emphasized that for this
- reconnaissance-level study, the objective was to get a sense of whether it was even reasonable to
- 217 consider using Plum Creek for conveyance from Elwood Reservoir to the Platte River and to get
- insights as to what should be studied in greater depth. If the GC recommends moving forward
- with this project concept, it is expected that the next phase would include a more refined study ofPlum Creek.
- 220 221
- Further discussion returned to the low unit costs, particular for the Elwood outlet options, the importance of controllable water, and the ability to much more efficiently convert divertible
- 224 excess flows into deficit reductions during shortages at Grand Island. Farnsworth noted that
- making a formal or informal recommendation or otherwise advising the GC about this project
- was at the discretion of the WAC. Several committee members made or agreed with
- 227 recommendations to move forward with a similar presentation to the GC in September.
- 228



- 230 **Brief Water Updates:** *Libby Casavant and Seth Turner, EDO*
- 231

232 Wyoming Property Flow Split:

- 233 Casavant presented a recap of the purpose and history of this project on Program land
- downstream of Kearney. Around 2019, a narrow strip of land separating the middle and north
- channels of the Platte River washed out. This resulted in a loss of flow from the middle channel
- to the north channel and a decrease in flows through Rowe Sanctuary, particularly during dry
- 237 periods. The project purpose was to restore the separation between channels.
- 238
- A wetland delineation was completed in August 2023, followed by issuance of a permit in March
- 240 2024, bid selection in April 2024, and construction in May-June 2024. The winning bid was less
- than the engineer's estimate. Casavant showed several photos of the construction progress. A
- berm was built using sand from the river channel, stabilized with trees and rootwads. Trees were
- sourced from the west end of the Wyoming Property at the request of a neighbor; this was a
- 244 different location than shown on the original design plans. Seeding of the berm is expected to be
- completed during wetter conditions in winter 2024. Analyses indicate that middle channel flow
- through Rowe Sanctuary should be about 35% higher than without the restored berm.
- 247

248 Platte Basin Hydrology:

- 249 Turner presented a year-to-date flow summary for the Grand Island gage, which has been below
- 250 the USFWS target flows for most of the year except for brief periods of excess flows in early
- 251 February and early July. The real-time hydrologic condition was normal from January through
- July but switched to dry for the August-September period. This was despite 4-7 inches of
- rainfall in July across much of the central Platte valley from west of Lexington to east of Grand
- Island. The on-site weather station at the Program's Cottonwood Ranch property recorded more
- than 9 inches of rain from July 1-16. Overall the prevalence of abnormally dry to severe drought conditions across the Platte Basin increased from April 30 to July 30. Although much of central
- 257 Nebraska remains largely drought-free, drought has expanded across far western Nebraska,
- southeastern Wyoming, and along the Front Range of Colorado. Some of the driest areas in
- 236 southeastern wyoming, and along the Front Kange of Colorado. Some of the dri259 northern Colorado experienced recent wildfires.
- 260

261 Leasing, Recharge, and Recapture Projects:

- 262 The Program was able to take deliveries of excess flows totaling about 250 AF at Cottonwood 263 Ranch from July 2-7, bringing total 2024 deliveries to nearly 800 AF. Storm-related damages 264 knocked out the controls for the north outlet valve, and repairs are in progress. Most of the 265 recapture wells ran from mid-February to early July, with 2024 cumulative pumping now at 266 2,440 AF. The GC once again approved 1-year lease agreements with CPNRD (max 15,000 AF) 267 and NPPD (max 3,306 AF) at \$90/AF. The GC is expected to discuss approaches to longer-term agreements in September. Both the Pathfinder Municipal Account and Pathfinder Environmental 268 269 Account filled in early June. The Program is leasing 9,600 AF from the Municipal Account at 270 \$65/AF and will receive all remaining EA water after deducting summer evaporation losses. 271 Deliveries of water from Pathfinder to Lake McConaughy are expected in September.
- 272



273 2022-2023 Water Projects Accounting:

- 274 Turner explained the purpose of Program water projects accounting and how it differs from
- 275 scoring. Accounting is an assessment of deficit reductions at Grand Island based on real
- operations data; doing so is specified in the Program Document. Accounting for 2007-2018 was
- first completed in 2019, followed by updates in November 2021 to include 2019-2020 and in
- February 2023 to include 2021 operations. New updates for 2022-2023 include Lake
- 279 McConaughy EA accruals and releases and integrated accounting of Phelps recharge, Elwood
- recharge, and the Program's 8 existing recapture wells. At this time, the Program has no means of evaluating accretions from NPPD recharge (252 AF in 2023) and Cottonwood Ranch recharge
- $282 \quad (2,750 \text{ AF in } 2022-2023).$
- 283
- 284 The Program has 7 sources of water that contribute to the Lake McConaughy EA: 10% of
- 285 October-April Storable Natural Inflows (SNI, an in-kind contribution from the State of
- 286 Nebraska), the Pathfinder EA (in-kind contribution from the State of Wyoming), No-Cost Net
- 287 Controllable Conserved Water (314 AF annually), the Pathfinder Municipal Account Lease,
- 288 CNPPID irrigator lease, and CPNRD and NPPD surface water leases. Contributions totaled
- about 76,700 AF in 2022 and 92,200 AF in 2023, with the largest volumes by far coming from
- 290 SNI and the Pathfinder EA.
- 291
- Releases from the Lake McConaughy EA totaled 79,359 AF in 2022 and 49,870 AF in 2023;
- both releases were made for germination suppression. Deficit reductions from EA releases are
- 294 calculated but are ultimately incidental to the scientific or species-related purpose of the release.
- 295 Calculated deficit reductions at Grand Island were much smaller than the volume of EA water
- released in both years because the target flow for germination suppression (1,500 cfs) was much
- higher than the USFWS target flows at the time (800 cfs because of dry real-time hydrologic
- conditions). Only the EA water up to the 800 cfs target flow counted as deficit reduction.
- Altenhofen emphasized this point that the EA is operated for specific purposes that are different
- from the way it was evaluated during the development of the Program (i.e., for deficit
- reductions) but that doesn't mean anything needs to change. Turner added that with a 3,400 cfs
- 302 target flow at Grand Island during the first 3 weeks of June, much more of this year's EA release
- 303 will count as deficit reductions.
- 304

For the first time, the EDO completed a fully-integrated accounting of the Phelps and Elwood recharge projects and the 8 existing recapture wells. All are located within the CNPPID system

- 307 south of the Platte River. Diversions of excess flows into both projects were limited in 2022-
- 308 2023 due to both hydrology (limited excess flows, including for only about 48 hours in 2022)
- 309 and operational factors (ongoing design and construction of a seepage control system at Elwood
- Reservoir). The Program added 7 new recapture wells in the spring of 2022, and all 8 wells were
- 311 pumped extensively due to dry conditions and persistent shortages throughout 2022-2023.
- 312
- Total invoiced diversions for the two recharge projects totaled 101,300 AF through 2023, with
- recharge totaling 97,200 AF. The total volume of recapture pumping since the Cook well was
- installed in 2016 is 6,140 AF, with more than 80% of that occurring during 2022-2023. Total



- 316 river returns from both recharge accretions and recapture pumping were about 52,000 AF
- through 2023, leaving the Program with about 45,200 AF of intentionally recharge groundwater
- still in the aquifer as of December 31, 2023. Despite this volume remaining in the aquifer,
- 319 accretion rates from the recharge projects have declined in recent years as the volume of new 320 recharge has declined. The Program's pool of excess flow water stored in Elwood Reservoir was
- 321 1,440 AF as of the end of 2023 and is likely zero as of August 2024 with no new diversions this
- 322 year. Given the close proximity of the Program's recapture wells to the Platte River, the net
- benefit of water added to the river is only 1,989 AF from 6,140 AF of pumping.
- 324

325 North Platte Chokepoint Study:

- 326 The Chokepoint geomorphology report was distributed to the WAC and the North Platte
- 327 Chokepoint Planning Workgroup in early June. Comments received by the EDO were returned
- 328 to the project team to address and finalize the report. The EDO has also developed a
- 329 supplemental memo supporting the conclusions of the geomorphology study.
- 330

331 Alternatives analysis is underway, with a conceptual design and cost assessment for a bypass

- 332 canal concept nearly complete. The team led by Anderson Consulting Engineers is working on
- 333 1D hydraulic and sediment transport modeling of several in-channel alternatives, including a no
- action scenario, dredging, and modification of the Tri-County Diversion Dam. At least 1
- alternative will be evaluated further with more refined 2D modeling. A permitting assessment
- 336 focused on potential impacts to wetlands is also in progress. Altenhofen asked whether a South
- Platte storage alternative will be concluded. Turner said it's been discussed and will be included
- in the report, but the concept is not expected to move forward.
- 339

340 The alternatives report is expected to be distributed prior to the WAC meeting, followed by a

- 341 modeling report in November or December. The Anderson team will present the alternatives
- analysis to the WAC in October and the GC in December.
- 343

344 **EA Release for Germination Suppression**: Seth Turner, EDO

345 This year was the 5th consecutive year for a release from the Lake McConaughy EA for

- 346 germination suppression, with the goal of achieving 1,500 cfs at Grand Island for 30 days from
- June 1-30. The release was made from May 22-June 23 and totaled 77,950 AF at an average
- release rate of 1,191 cfs including ramp up/down. The EA release was held at 1,300 cfs for 23
- 349 straight days in June. Average flow at Grand Island for June 1-30 was just under 1,800 cfs
- 350 (USGS keeps making slight adjustments to the provisional data), with about 28 days exceeding
- 351 1,500 cfs. Turner showed comparative plots of the 2022, 2023, and 2024 EA releases for
- 352 germination suppression to emphasize how different the hydrology has been from year to year.
- 353
- 354 Turner also showed a figure to illustrate the routing of EA water through the Sutherland Canal
- 355 versus down the North Platte River during the EA release. Overall, less than 20% of this year's
- 356 EA release for germination suppression was released down the North Platte River (and through
- 357 the North Platte Chokepoint). During the extended period of 1,300 cfs release, 1,150 cfs was
- 358 routed through the Sutherland Canal with only 150 cfs going to the North Platte River. For this



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- 359 EA release, the North Platte Chokepoint was a non-factor. In 5 years of germination suppression
- releases between late May and early July, there have been only about 10 days (all in 2022) in
- 361 which the North Platte Chokepoint has been a constraint on the EA release. Altenhofen asked if
- this means the Chokepoint may not be an issue for germination suppression in the future. Turner said Chokepoint constraints on the EA release have been limited to date. Rabbe said his
- 364 perspective is that the historical record indicates that the Chokepoint is a big issue and will
- 365 remain that way because the most capacity is needed during drier times.
- 366
- 367 Turner thanked USFWS, CNPPID, NPPD, and NeDNR for their help in coordinating and
- 368 managing another successful EA release for germination suppression.
- 369

370 Elwood Reservoir Seepage Repair Update: Cory Steinke, CNPPID

- 371 Steinke said the seepage project is about 75% complete, with some weighted filter blankets still
- to be installed over the next few weeks. Substantial completion of the project is to be on
- 373 September 14, with a final walk-through on October 1. At this point in the process, limitations
- on Elwood operations are probably gone if there were to be excess flows available.

376 Additional Business: Kara Scheel, CWCB – 2024 WAC Vice Chair

- The next WAC meeting will be on October 29. A presentation on the North Platte Chokepoint
 Study alternatives analysis and modeling is planned, so this meeting will most likely be in person
- at the Lake McConaughy Visitor Center. Details will be confirmed as the meeting approaches.
- **381** Action Items
- 382
- 383 General WAC
- 384 N/A

385

- 386 <u>ED Office</u>
- 387 N/A
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