PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
Water Advisory Committee Meeting Minutes
Virtual Meeting – Microsoft Teams
February 2, 2021

Meeting Attendees

Water Advisory Committee (WAC)

State of Colorado
Jojo La – Member
Erik Skeie - Alternate

State of Wyoming
Bryan Clerkin – Member
Jeff Cowley - Alternate

State of Nebraska
Kari Burgert – Alternate 1
Jesse Bradley – Alternate 2
Justin Ahern
Michelle Koch

U.S. Fish and Wildlife Service
Tom Econopouly – Member
Matt Rabbe

U.S. Bureau of Reclamation
Brock Merrill – Member

Downstream Water Users
Cory Steinke – Chair
Jeff Shafer – Member
Brandi Flyr – Member
Tyler Thulin
John Berge
Barb Hoehn

Colorado Water Users
Jon Altenhofen – Member
Luke Shawcross
Jason Marks

Upper Platte Water Users
Dennis Strauch – Member

Water Advisory Committee (WAC)

Environmental Groups
Jacob Fritton - Member
Melissa Mosier - Member
Josh Wiese - Member
Rich Walters - Alternate
Andrew Caven - Alternate

Executive Director's Office (EDO)
Jason Farnsworth, ED
Justin Brei
Julia Grabowski
Scott Griebling
Tom Smrdel
Seth Turner
Kevin Werbylo

Contractors

Welcome and Administrative: *Cory Steinke, WAC Chair*
Meeting participants were identified from the Microsoft Teams display panel. There were no agenda modifications. Econopouly motioned to approve October WAC meeting minutes, second by Clerkin, no objections were made, Steinke declared the minutes approved. Altenhofen nominated Steinke to continue as WAC Chair, second by Merrill, no objections, Steinke to continue as WAC Chair.

WAP Projects and Other Brief Water Updates

Leasing and Recharge Projects: *Seth Turner, EDO*
Referencing a memo provided to the WAC, Turner noted that there was not a lot of project activity in the late fall and early winter. There was some recharge at Dawson County Canal and Phelps County Canal in November-December and again in January. Turner said updated info from Steinke showed that Phelps diversions in January were 737 AF, an increase from the 595 AF shown in the memo. Econopouly asked if it would be possible to include comparative statistics (e.g., mean, median, etc.) in future leasing and recharge projects memos. Turner said that should be possible for projects with adequate data.

Turner also noted that the unit cost for the CNPPID irrigator lease was reduced from $220/acre to $100/acre (effectively $133/AF). Final enrollment in the CNPPID irrigator lease for 2021 was 1,030 acres, a decline of about 2/3 from 2020. La asked if there was a reason for the large drop in enrollment, and Turner said it was most likely due to the reduction in unit cost paid by the Program. Farnsworth added that there has been a significant rebound in commodity prices in the past couple months, which was also likely a factor. Fritton asked about the plan for the project moving forward. Farnsworth said it will be a policy question for discussion, and that the $133/AF is still higher than what the Program is paying for most other water.

Platte Basin Hydrology Update*: Scott Griebling, EDO*
Griebling presented an update on Grand Island flows. Conditions in 2020 started out wet but ended up much drier; however, the total annual flow of 1,450,575 AF just exceeded the threshold to qualify as a wet year overall. Flows were more in line with normal to dry conditions for the second half of the year and remained at or below the median for much of fall 2020. The instantaneous peak of 12,200 cfs was greater than a 5-year flow. Current snowpack is well below average across the North Platte basin in Wyoming and the South Platte basin in Colorado, with the entire area in moderate to extreme drought.

The Lake McConaughy EA began 2020 with a volume of 164,807 AF and ended the year at 153,040 AF. Releases totaled 109,307 AF during the spring and summer, for whooping cranes, vegetation inundation, and the North Platte chokepoint test. Accruals totaled 110,172 AF (split evenly between storable natural inflows and accruals from other Program water projects) and 12,632 AF were lost to evaporation and seepage. Lake McConaughy EA volumes since 2007 were also reviewed. Altenhofen requested that future versions of the chart subdivide the EA accruals into the individual projects.

Cottonwood Ranch BSR Project*: Kevin Werbylo, EDO*

Werbylo said a summary report on last summer's test fills of the Cottonwood Ranch broad-scale recharge project was included in the meeting documents and requested that WAC members submit any comments to him by Friday February 19.

Much of the information in the report was discussed at previous meetings, but this is the formal documentation. Topics covered in the report include infrastructure, deliveries and routing through recharge cells, attenuation from one cell to another, accounting of deliveries, a water balance, and estimation of infiltration rates. There is also discussion of the extensive surface and groundwater monitoring in the project area. Plans moving forward are to use excess flows this year, if available, beginning in the spring. Monitoring will continue during future operations to collect data that will inform score analyses and project models.

Steinke, Werbylo, and Brei engaged in discussion of the cavitation that was observed in some of the pipeline valves during the test fills. Operating parameters were established during the test fills to avoid the issue, but the next steps will be to see if the cavitation still occurs when the north and south pipeline outlets are operating simultaneously. The EDO will monitor this closely and will consult with the pipeline engineer if the problem persists. Steinke noted that there needs to be flexibility with the operations to accommodate the rates of available excess flows, as we don't want to be stuck operating with just high or low pipeline flows.

WAP Update Report: *Seth Turner, EDO*

Turner provided an overview of the WAP Update Report and the status of Water Action Plan activities. The draft report was included in the meeting documents, and it was requested that any comments from WAC members be submitted by Friday February 12. The report is intended to reflect conditions at the end of the First Increment in late 2019.

Each of the five report sections (Introduction, WAP Timeline, Status of Program Water Projects, Lessons Learned, and Next Steps) was summarized. The Addendum to the Program Document maintains that the Program is still committed to achieving target flow reductions of at least 130,000 AFY. During the Extension, projects are to be implemented to reach 120,000 AFY "as quickly as possible," after which science experiments are to be conducted to determine if the costs for the next 10,000 AFY are justified. For the WAP Timeline, the 13 years of the First Increment were divided into five phases that were each dominated by specific water project development activities. The report documents the key decisions and events in each year.

As of late 2019, there were 11 active WAP projects, almost all of which could be characterized as Nebraska groundwater recharge or water leasing. Six projects have approved scores totaling 14,170 AFY, five projects have estimated scores of 19,950 AFY, and the overall estimate of score from active WAP projects is 34,120 AFY. Turner also discussed the shift late in the First Increment to focus on controllable water supplies; about 80 percent of all Program water is controllable, mostly in the Lake McConaughy EA. Some of the lessons learned from water

project development efforts were characterized, and these are described in greater detail in Section 4 of the report.

It is estimated that just under 6,000 AFY more is needed to reach the goal of 120,000 AFY. Some combination of recapture wells, leases from North Platte irrigation districts, and/or a CNPPID storage water lease represents the most likely path to achieve this. The potential score from these three projects exceeds 17,000 AFY if all were fully developed, providing flexibility if any active WAP projects are terminated or estimated scores don't work out as expected. The Nebraska grand water bargain is a proposed mechanism by which long-term funding would be established for many of the recharge and storage water (leasing) projects. If successfully implemented, 120,000 AFY would be reached immediately, but it may take some additional time to actually bring all the projects online and complete score analyses. Decisions made this year (2021) will be critical to determining how long it will take to achieve the Program's water plan objectives.

Recapture Wells Pilot Project: *Kevin Werbylo, EDO*

The Program has been working with Tri-Basin NRD and Nebraska DNR for more than a year to develop plans for expanding recapture well capacity. Phase I will be a pilot-scale "network" of wells, expanding the project concept from the single existing recapture well on the Program's Cook property, and Phase II would be a larger regional recapture network to be developed later. The project does not mine groundwater but recaptures water that was intentionally put into the aquifer through the Phelps, Elwood, and now Cottonwood Ranch recharge projects. Recapture wells also add flexibility and control to recharge projects, otherwise accretions to the river are completely uncontrolled. Other benefits include the ability to dewater areas of high groundwater and support for rural fire departments by allowing well hookups to fill firetrucks.

The pilot project will mostly be located on the downstream side of the Cottonwood Ranch broad-scale recharge project. It will include seven wells and about 1.5 miles of pipeline. The approved budget is about $1 million. The current cost estimate is about $580,000 excluding new power connections. The estimated score from the 7-well pilot network is about 1,500 AFY. A scaled-up regional network would likely need 40 or more wells to achieve a total score of 8,000 AFY.

Program Special Advisor Bill Hahn did most of the irrigation well and pipeline design. Two bid packages have been developed, one for well drilling and installation and the other for pipeline installation. Some of the wells will be located on private property, so Tri-Basin NRD must be the project owner and operator. A WSA for the Program to pay for operations costs was approved by the Program's GC and the Tri-Basin NRD board. Land easements will be presented to the GC for approval in March. A nationwide permit from the Corps of Engineers will be required; this is not expected to be a significant roadblock, but it will likely delay construction of the pilot project until summer.

Werbylo and Farnsworth explained that there will be easements with three landowners for four of the wells. Payment is generally less than $3,000/yr and these will be long-term agreements

with automatic renewal options. Six of the pilot project wells will be on the north and east sides of Cottonwood Ranch, with 8- to 16-inch diameter pipes to the river. Each well will have a capacity of 1,000-1,250 gpm. The seventh well will be located away from the rest of the network, on private property to the west of Cottonwood Ranch. Tri-Basin NRD hired a local engineer for construction administration, and they will work closely with Bill Hahn during that process.

Werbylo showed a project map and design drawings of the well pads and pipelines. The pipelines are intended to be mostly self-draining, except for a small portion of the network where water is pumped uphill several feet and will be buried about 3 ft deep to minimize the risk of freezing. Altenhofen asked if the wells will be used for irrigation (no) or augmentation of irrigation (no). Farnsworth added that the landowners will be able to use the wells for mitigation of high groundwater, but Tri-Basin NRD will not use the pilot project wells for meeting any of its own obligations. Altenhofen asked if the wells are submersible and if so, why? Farnsworth said that there is a general trend towards using submersible wells. Most Program wells, including the Cook recapture well, are submersible; this minimizes the risk of interference in areas where there is public access.

The anticipated 2021 project schedule is as follows:

- February: Permitting submittal to Corps
- March-April: Bid
- May: Permit from Corps
- May-August: Construction
- Fall: Begin operations

Altenhofen asked if the EDO has looked into how much excess flow will need to be diverted into recharge projects to sustain the recapture well projects at the expected levels. Werbylo said not specifically, and Turner added that there is estimated to be at least 36,000 AF in the aquifer from prior recharge diversions at Phelps and Elwood (based on accounting of operations through 2018) that have not yet returned to the Platte River.

Reach-Wide Monitoring: *Julia Grabowski, EDO*

Farnsworth introduced Julia Grabowski, who joined the EDO last summer and is working with Tom Smrdel in the Fort Collins office.

Grabowski gave an overview of the reach-wide monitoring project, including background information, the contents of a report in development, and the future of the project. Goals of reach-wide monitoring are as follows: (1) document spatial and temporal trends in channel morphology and vegetation, (2) evaluate relationships between the changes and natural drivers such as flow, (3) serve as effectiveness monitoring for PRRIP management actions, and (4) serve as a resource for evaluating PRRIP hypotheses. The intent is to document the effort in an annual report in order to help the community determine what is working and what is not.

From 2010-2016, the underlying data was collected through extensive field work. Surveys were conducted at 40 sites at 5-mile intervals along the Platte River. The Program began using remote sensing methods in 2017. The field work generally took crews the entire summer to complete, but the necessary data can be collected in just a few days with remote sensing. Types of remote sensing data used include 3-ft resolution aerial imagery and 1-ft resolution LiDAR across the full 90-mile associated habitat reach. Flights are expected to be conducted every year. Other tools include 2D hydraulic modeling and topobathymetric elevation differencing. There was extensive discussion of errors in the LiDAR data. Consultant Quantum always provides deliverables that are in spec, but artificial errors such as unexpected changes in aggradation/degradation are observed when doing year-to-year comparisons. The EDO is working closely with Quantum to resolve these issues.

A preliminary reach-wide monitoring report has been completed but will be updated when the reprocessed (error-corrected) data is available from Quantum in the next couple months. Section 1 reports various flow metrics using exceedance plots. Section 2 presents management actions data based on a database maintained by Tim Tunnell of the EDO. This includes activities such as phragmites spraying, disking, tree clearing, etc., presented as land areas. Section 3 covers channel morphology and hydraulics and involves 2D modeling using LiDAR data. Whooping cranes prefer wide shallow channels, so the objective of this effort is to examine the metrics needed to achieve those river conditions. Section 4 documents the in-channel vegetation cover analysis used to calculate total and maximum unobstructed width. Section 5 presents the volume change analysis, which classifies changes by type: aggradation (> 0 ft), degradation (0 to -2 ft), and lateral erosion (< -2 ft, basically representing bank slumping on the margins of the channel). Preliminary results so far are interesting, but this analysis is the most likely to be affected by errors in the LiDAR data. Section 6 looks at whooping crane habitat metrics, including suitable roosting area as defined by maximum unobstructed channel width > 650 ft and water depth < 1 ft. Section 7 includes analysis of in-channel vegetation drivers.

For now, the EDO is reviewing and revising methods for reach-wide monitoring and seeking input from stakeholders. The preliminary analyses will be updated with revised LiDAR, and the EDO is developing the means to present results online using an ArcGIS application. Altenhofen asked if the best habitat for whooping cranes (~1,000 cfs) is in sync with target flows, and whether this analysis can be used to inform target flows. Farnsworth noted that spring target flows for whooping cranes are higher and that future work will be looking at tradeoffs for how Program water is used.

2021 Lake McConaughy EA AOP: *Tom Econopouly, USFWS*

Econopouly, the EA Manager for the USFWS, described plans for EA operations this year. Expectations are that storable natural inflows will be less than the median. Drought conditions are anticipated through the spring, but some forecasts are showing improving prospects for precipitation later in the year. Areas of the Platte River are currently frozen, and flows of about 1,000 cfs at Overton are below median values. Lake McConaughy is presently at about 70

percent of capacity; the EA had about 153,000 AF at the end of December 2020, which means there is plenty of water to make releases.

Two releases will be prioritized this year. The spring whooping crane release is scheduled to start March 23, but releases from the EA will likely begin on March 19 so that the water reaches the associated habitat reach on March 23. The target for this release under wet/normal conditions is 2,400 cfs (1,700 cfs under dry conditions. The second priority release will be the late spring pulse beginning May 20; this release would typically end on June 20 but will likely be extended into mid-July for germination suppression. Targets for the May-June release are 3,400 cfs during wet/normal conditions and 800 cfs during dry conditions. Table 1 in the AOP shows that the target would drop to 1,200 cfs on June 21, but this release may be maintained at 2,000 cfs into July. It is expected that at least 100,000 AF will be released this year. There were no comments from the WAC taking issue with any of these proposed operations.

2021 Water Plan Tasks: *Seth Turner, EDO*

Turner summarized planned next steps for the North Platte chokepoint to build on momentum from the flow test last summer. The Chokepoint Planning Workgroup will be reconvened, probably in late February or early March, to review the potential next steps that were presented at the end of the Chokepoint Test Report (distributed in December 2020). The goal is for that group to provide guidance and direction for the continued pursuit of 3,000 cfs at the chokepoint. Any specific actions will then be discussed with the WAC and GC. The Program budget for 2021 already includes up to $10,000 that could be used for vegetation control measures.

Turner also showed a list of the various water-related tasks that EDO staff will be working on throughout 2021 as a preview of what will likely be discussed at future WAC meetings.

Additional Business: *Cory Steinke, WAC Chair*

The next WAC meeting is scheduled for May 4.

Action Items

General WAC

- Provide comments on the draft WAP Update Report to the EDO (Turner) by Friday February 12.
- Provide comments on the draft Cottonwood Ranch Summer 2020 Test Fills Report to the EDO (Werbylo) by Friday February 19.
- Nebraska DNR and Environmental Groups to identify representatives to participate in the Chokepoint Planning Workgroup.

ED Office

- Post PDF of the WAC meeting presentations to the website.