

**PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM (PRRIP -or- Program)****Technical Advisory Committee (TAC) Virtual Meeting**

Wednesday, February 13, 2022; 1:00-4:00 PM CST

*Meeting held in-person at PRRIP ED Office and virtual via MS Teams***Technical Advisory Committee (TAC)****State of Wyoming**

Barry Lawrence – Member

Jeremy Manley – Alternate

Michelle Gess - Alternate

**Bureau of Reclamation (Reclamation)**

Brock Merrill - Member

**State of Colorado****U.S. Fish and Wildlife Service (Service)**

Matt Rabbe - Member

**State of Nebraska**

Elizabeth Esseks - Member

**Environmental Entities**

Rich Walters – Member

Andy Caven - Member

Melissa Mosier - Alternate

**Upper Platte Water Users**

n/a

**Colorado Water Users**

Jason Marks - Member

**Downstream Water Users**

Jim Jenniges – Member

Dave Zorn – Member

Brandi Flyr - Member

**Executive Director's Office (EDO)**

Jason Farnsworth, ED

Chad Smith

Malinda Henry

Tim Tunnell

Patrick Farrell

Mallory Jaymes

Kaley Keldsen

Kari Mohlman

Jon Wentz

Malia Volke

Justin Brei

Ed Weschler

**Other Participants**

Kara Scheel – CWCB

Jeff Runge – USFWS

Jean Eichhorst – Ne DNR

Caitlin Kingsley – Ne DNR

Michelle Koch – NGPC

Joel Jorgensen – NGPC

Melissa Marinovich – NGPC

Bethany Ostrom – Crane Trust

**WELCOME & ADMINISTRATIVE**

Merrill called the meeting to order at 1:00 PM Central Time.

**AGENDA MODIFICATIONS**

Henry presented the Geomorphology/Vegetation Monitoring Report in the absence of Julia Grabowski. No other modifications offered.

[04-13-2022 PRRIP TAC Meeting Agenda](#)

**MINUTES**

Zorn and Esseks offered typographical corrections to the January TAC minutes prior to the meeting that have been corrected by the EDO.

**TAC MOTION:** *Rabbe moved and Jenniges seconded to approve the January 12, 2022 TAC Meeting minutes. Minutes approved.*

[01-12-22 PRRIP TAC Meeting Minutes APPROVED](#)

**LAND MANAGEMENT*****Grassland Monitoring Surveys***

Tim Tunnel provided an update on the process for selecting consultants for 2022 Grassland Monitoring Surveys. The EDO received 3 proposals in response to the Grassland Monitoring RFP: 1) Prairie Legacy, Inc. (Lincoln, NE), 2) SWCA Environmental Consultants (Broomfield, CO), and 3) EA Engineering, Science, and Technology, Inc. (Lincoln, NE). Given that the GC did not appoint a selection panel at the March meeting, Executive Director Farnsworth appointed a panel consisting of Rabbe, Zorn, Tunnell, and Henry to review the proposals, rank them according to the criteria provided in the RFP, and make a selection. Each member of the panel will rank the proposals independently, then meet on April 18<sup>th</sup> to review the rankings and make a selection.

**PIPING PLOVER AND LEAST TERN*****2022 Plover and Tern Monitoring and Predator Management Plan***

Keldsen gave a brief presentation providing an overview of 2021 management actions, productivity outcomes, and broad takeaways from predator monitoring and management. The EDO will continue plover and tern monitoring and predator management and monitoring in 2022 following the same methods used in 2021. Emphasis was placed on the value of having multiple years of information from multiple sites without changes each year in management actions for evaluating the impact of predation and our effectiveness at mitigating those impacts.

Zorn asked about the effort to reorganize the order of segments sampled during river survey and how well the established schedule was followed? Keldsen said she spent time to get the logistics of implementation over the reach to work with distributing sampling of river segments over different hours of the day. They were able to do this within 30 minutes of scheduled time blocks. Weather and boat issues were the biggest issues. Henry said that sampling distribution was reviewed at the end of the year, and this effort succeeded in distributing multiple days of sampling of the same river segment over morning, mid-day, and afternoon. Farnsworth provided some context for why the EDO engaged in this effort in the first place. The EDO had



received criticism from stakeholders about the way river surveys were being implemented. Distribution of sampling effort throughout the day is part of how this concern is being addressed.

Tunnell asked about the presence of predator exclusion fencing at Leaman OCSW site. Keldsen said Leaman does not have a predator exclusion fence that completely surrounds the site. Deterrent lighting is used at Leaman. Kearney-Broadfoot South has an internal fence on the inside of the moat. Newark West has an external fence along the property boundary.

Jenniges asked if the EDO had any plans for nest caging for 2022? Keldsen said no.

EDO Presentation: [03 2022 LTPP Predator Monitoring plan](#)

### **WHOOPING CRANE**

#### *Spring 2022 WC Monitoring Update*

Jaymes presented a mid-season update for the Spring 2022 whooping crane migratory season. The group discussed a single whooping crane that was spotted near Hwy 281 near Bosselman's south of Grand Island.

Jenniges asked if most of the WC had already moved through Nebraska. Rabbe said he doesn't have the telemetry data, but there haven't been any new sightings recently from TX, OK, KS from the public. Caven said most of the WC have moved through NE. 25% of the telemetry birds are in the center of a blizzard in the Dakotas.

EDO Presentation: [04 2022 Spring WC Update](#)

### **PALLID STURGEON**

#### *Pallid Sturgeon Habitat, Spawning, and Genetic Research*

Henry gave an update on PS research on the Platte. UNL/NGPC crews began working at the confluence mid-March. To date UNL crews have caught and tagged 9 pallids; 5 juveniles, 2 adult females, and 2 adult males. One adult male may potentially be a wild caught individual. Others are hatchery or previously caught fish. An additional potentially reproductive female was handed off from NGPC as it entered the Platte at the beginning of the season. So far 9 passive telemetry stations have been installed from the Elkhorn down to the confluence. The crews are struggling with and troubleshooting problems caused by shifting sand and low water levels that have impeded passive receiver station installations. Active tracking will ramp up as temperatures increase. UNL/SIU/PRRIP are working on a data sharing agreement to facilitate and formalize transfer of pallid information between the Missouri and Platte programs. SIU has finished PS linkage map and is working on selecting best SNP markers for separating pallids from hybrids and shovelnose. Once markers are chosen, GT-seq consultant will design primers, troubleshoot GT-seq specific process for these markers, and validate process using 96 samples previously genotyped with SNPs.

Jenniges asked if the hatchery fish were released in the Platte or at the confluence. Henry said she does not have that information for the specific fish caught, but stocking has typically been done at the confluence.



Rabbe asked about genetic sampling of the wild caught male. Henry said all fish captured have been sampled for genetic analyses, but that male should be a priority. For this year we will need to rely on the older method for genotyping, until get the GT-seq process up and running. No samples have been sent to SIU yet.

### **GEOMORPHOLOGY AND VEGETATION**

Henry presented a brief overview of the System-Scale Geomorphology and Vegetation Monitoring Report for 2017-2020. She provided an introduction to the report format and purpose for the report, including its role in summarizing on-channel management actions and quantifying channel response in terms of geomorphology and vegetation. Information provided in this report will be utilized during formal evaluations of germination suppression performance, Phragmites management, and to evaluate changes in WC habitat availability over time.

Zorn asked whether the data presented on sediment volume change were averages over the entire Associated Habitat Reach. Farnsworth said they are an average from Overton downstream. Farnsworth pointed out that net sediment balance remained non-significantly different from zero over 2017-2020 with error bars crossing zero each year. Farnsworth added that this figure demonstrates a change made according to ISAC recommendation to exclude lateral erosion from the net volume change calculation since it does not apply to bed lowering or incision.

Zorn asked about the plan for sediment augmentation moving forward. Farnsworth said an evaluation of performance after 5 years of implementation is planned for 2022. EDO new hire, Sarah Hinshaw, will work on a plan for evaluating the performance of sediment augmentation and come back to the TAC on this.

Rabbe asked about the time lag for using the information in this report to help make annual EA release decisions. Farnsworth pointed out that flights are flown in November. LiDAR data are available in March or April the following year. From there all the analyses that go into the report still need to be done. So, there will be a year lag. Imagery is available earlier, so maybe the EDO could do some kind of a rough-cut overlap of a 2-D hydraulic model over the imagery to provide rough guidance on germination suppression implementation. Rabbe noticed a shift to a greater proportion of vegetation at 2-6 ft in height compared to previous years. Farnsworth said these remote sensing tools will also be used to evaluate Phrag expansion.

Rabbe asked how the error for these remote sensing methods compares to that of previous analyses. Farnsworth said that the older field transect based methods collected a lot of geomorphological information for transects but had much larger error around change estimates without 2-D modeling. This is why the ISAC pushed for remote sensing. LiDAR is very precise but can have systematic error that can be problematic. Current thought is that we work to eliminate as much systematic error as possible. Once that is done, we apply a methodology that is different from the current thresholding we are using. More recent work suggests we do not need to eliminate large amounts of data based upon error thresholds. Rabbe asked about the potential for peer-reviewed publication. Farnsworth said that is being considered. Being at the bleeding edge of science there are not a lot of folks in the field with the expertise to review. Our scale of analysis is much larger than any other work being done in the field. We would look for the few in the field with whom we could collaborate/review to get the best of both worlds.



EDO Document: [05 Geomorph Veg Monitoring Report](#)  
EDO Document: [06 Geomorph Veg Monitoring Report Appendix](#)  
EDO Presentation: [07 Geomorph Veg Presentation](#)

#### *Corrections to the report:*

Grammatical/typographical/formatting errors were pointed out by Esseks via email following the meeting. These corrections will be made by the EDO prior to forwarding the document for GC review.

**TAC MOTION:** *Rabbe moved and Zorn seconded to recommend the System-Scale Geomorphology and Vegetation Monitoring Report be forwarded to the GC for review. Motion approved.*

#### **PHRAGMITES**

Volke reviewed plans for a 2022 Phragmites field study for which control sites without herbicide application (no spray zones) are necessary. Volke asked for TAC feedback on the exclusion of these control sites from herbicide application and to hear TAC guidance on where to locate these no spray zones.

Rabbe asked how long these no spray zones would be in effect. Volke said 3-6 years. Zorn pointed out the significance of the Kearney canal and the limitations imposed on herbicide application above the canal during irrigation. Cannot spray above the Kearney canal until September, so there is a short window for spraying this area before frost in the fall. Potential to work with the Kearney Golf club to open a wider time window and reduce the chance of affecting them negatively. He also pointed out differences in the north and south channel at the Plum Creek Complex and between the Plum Creek and Cottonwood Ranch complexes. River morphology and hydrology are so different between these two complexes that he suggested study sites be placed in both complexes. Rabbe said that no spray zones on the Stall tract would be less likely to impact WC use as this area is not used frequently. Zorn asked what the study design or blocking would look like. Farnsworth and Volke explained that time in the field is necessary to nail down the study design and will depend on what the channel looks like and where Phrag patches are located. Rabbe suggested these no spray zones be located at one end or the other of managed complexes where the habitat usually is already transitioning into less favorable habitat for WC rather than putting a no spray zone in the middle of good habitat. Jenniges mentioned that the 0.5 miles of channel furthest downstream on Cottonwood Ranch is not heavily managed and might be a good option. Rabbe asked if disking would be excluded from these zones as well? Volke repeated the need for control sites without any form of Phragmites management outside of river flow (germination suppression flow releases). Rabbe suggested we overlay WC use data over suggested locations to avoid conflict. Zorn said something about not spraying just seems wrong given efforts to manage, but if we are going to learn something from it we may need more than just 3 sites to detect any effect of flow. Farnsworth said we wanted to nail down 3 sites initially in this year's pilot study but may need to add sites as we move forward. Walters noted that in late May Phrag is either still dormant or dead from previous year's spraying. Zorn said would need to do the field reconnaissance in mid-June to detect Phrag. Walters also cautioned that we need to be careful and develop an approach to marketing this idea publicly. We will need to work with the County Weed Commissioners, the Department of Agriculture, and the PVWMA on this. Farnsworth suggested after an initial field visit to scope sites, the EDO get back together with a smaller group including Zorn, Rabbe, Jenniges, Walters to make ultimate site selection decisions. Jenniges asked if Phrag has shown any resistance to Imazapyr. We may want to



consider developing other control options. Tunnell said we would need to establish some criteria for deciding when to pull the trigger and return to spraying these zones. Farnsworth mentioned GC priority for learning about the power of water to control Phrag. Tunnell asked Walters if there were any advantage for implementing this on Program managed properties in terms of getting Dept. of Agriculture permission. Walters said yes, easier to demonstrate monitoring effort and ability to prevent Phrag getting out of control. Walters suggested the Program look at the Lower Platte where flows are higher to gain more information on what water is able to do to control Phrag. Jenniges asked about the 2022 plan for germination suppression releases. Rabbe said the current target is 1500 cfs at Grand Island, but that this would be the major topic at the EA-RCC meeting in early May.

Next steps include an early May field visit to scope sites followed by a meeting with EDO and selected TAC members to nail down sites and finalize study design. Henry asked what the deadline is for getting no spray zones communicated to pilots to avoid June spraying? Walters/Tunnell said by the end of May. He suggested we focus on the downstream complexes first since those above the Kearney canal won't get sprayed in June.

EDO Document: [08 Phrag Pilot Study Memo](#)

### **EXTENSION SCIENCE PLAN UPDATE**

#### *Extension Science Plan*

Henry reviewed the changes to the Science Plan to reflect GC guidance at the March GC meeting. Revisions included changes to Attachment #1 to replace quantitative reassessment triggers with check in monitoring activities. In addition, the wording of Extension Big Questions #4 and #5 was changed to encompass a broader range of factors that may play a role in WC behavior.

Caven asked where the 16 km radius as a habitat buffer came from as the scale for evaluating the effect of landcover on WC stopovers and stay length. Henry said that came from the Habitat Synthesis Chapters and Baasch et al. 2019 publications. Rabbe said it was originally deemed the distance a WC could see while in flight. Caven said those publications used 1 mile as the buffer not 10 miles (or 16 km). Henry/Farnsworth/Farrell agreed the wording is unclear. Farnsworth suggested we take out the specific distance here and work with the TAC to choose most appropriate scale. Farnsworth and Farrell said the EDO is currently working on defining that buffer using telemetry data to let WC behavior tell us what scale to use. Caven suggested we replace 16 km with some biologically relevant radius.

Zorn asked to be reminded of Wyoming's comments on the Science Plan from the March GC meeting. Farnsworth said the issue was with the wording of the Big Questions that only focused on water/flow.

Mosier suggested that the "thumbs up/down" icons used in Attachment #1 to indicate Big Question assessment status be modified to be more inclusive. Farnsworth said it would be modified.

EDO Document: [09 Revised Science Plan](#)

Corrections to the plan:

Caven suggested the wording of the 3<sup>rd</sup> alternative hypothesis listed under Extension Big Question #4 be changed as follows:



Original: The probability of WC stopping over is a function of land cover or habitat suitability within a **16 km** radius of flyover location.


Correction: The probability of WC stopping over is a function of land cover or habitat suitability within a **biologically relevant** radius of flyover location.

Caven suggested the wording of the 4<sup>th</sup> alternative hypothesis listed under Extension Big Question #5 be changed as follows:

Original: WC stopover length is a function of land cover or habitat suitability within a **16 km** radius of use location.

Correction: WC stopover length is a function of land cover or habitat suitability within a **biologically relevant** radius of use location.

Modification to the “thumbs up/down” icons used in Attachment #1:

Original:  Correction: 

**TAC MOTION:** *Jenniges moved and Rabbe seconded to recommend the Extension Science Plan be forwarded to the GC for review following corrections made as listed above. Motion approved.*

#### **NON-TARGET LISTED AND NON-LISTED SPECIES OF CONCERN**

##### ***NT/NL Species of Concern***

Henry gave an update on potential management actions for the 4 new action species on the updated other species of concern list including regal fritillary, monarch, plains topminnow, and Platte River caddisfly. The EDO will need to talk with the Service to obtain information on potential consequences of listing.

Jenniges said that milkweed will probably require some change to cattle grazing for success following overseeding.

Jenniges said that in Nebraska remnant population of the plains topminnow are found in isolated wetlands. Connected sloughs have competitors like mosquito fish. Rabbe said cattle grazing in sloughs changes habitat conditions to favor mosquito fish. Caven said the most recent literature suggests that the topminnow can exist in periodically connected backwaters. Topminnow at Shoemaker and Mormon Island have been able to survive even after connections to the river occur. The fish community changes, but topminnow have persisted in the right habitat/conditions. Cattle increase turbidity and temperature that increases the number of mosquito fish in these sloughs. Caven suggested we contact Keith Koupal for more information on plains topminnow distribution. Caven provided a link to Keith Koupal's research on distribution of plains topminnow via the chat:

[https://www.researchgate.net/publication/279411539\\_Changes\\_in\\_range-wide\\_distribution\\_of\\_plains\\_topminnow\\_Fundulus\\_sciadicus](https://www.researchgate.net/publication/279411539_Changes_in_range-wide_distribution_of_plains_topminnow_Fundulus_sciadicus)

Jenniges asked about sturgeon chub being considered for listing. Henry said it is one of the species on the updated Other Species of Concern list, but the work group decided it is one of those fish species for which Program water releases already provide benefits.

Farnsworth noted that the EDO has shifted other species of concern down in priority for now to allow more time to focus on the upcoming 2022 field season and new science being put on the ground for the





first time. We will come back to the TAC in July on this with the intention of bringing options back to the GC in September.

#### [10 Other Species of Concern Short List](#)

### **TAC MEETING REVIEW & WRAP-UP**

#### *Action Items:*

EDO will make the indicated corrections to the System-Scale Geomorphology and Vegetation Monitoring Report and forward to the GC for review at their June GC meeting.

EDO will work together with selected members of the TAC after a field survey of potential no-spray zones to make decisions on “no spray” locations for Phrag pilot study.

EDO will make the indicated corrections to the Extension Science Plan and forward to the GC for review at their June GC meeting.

#### *Future calendar events:*

**July 13<sup>th</sup>, 2022** TAC Quarterly Meeting

**October 12<sup>th</sup>, 2022** TAC Quarterly Meeting

### **TAC MEETING END**

The TAC meeting concluded at 3:15 PM Central Time.