



1 **PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM (PRRIP -or- Program)**

2 **Technical Advisory Committee (TAC) Virtual Meeting**

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

4 *Meeting held in-person at PRRIP ED Office and virtual via MS Teams*

6 **Technical Advisory Committee (TAC)**

7 **State of Wyoming**

8 Barry Lawrence – Member

9 Jeremy Manley – Alternate

10 Michelle Gess - Alternate

12 **State of Colorado**

13 Kara Scheel – Member

15 **State of Nebraska**

16 Elizabeth Esseks - Member

20 **Upper Platte Water Users**

21 n/a

23 **Downstream Water Users**

24 Jim Jenniges – Member

25 Dave Zorn – Member

26 Brandi Flyr - Member

28 **Executive Director’s Office (EDO)**

29 Jason Farnsworth, ED

30 Chad Smith

31 Malinda Henry

32 Tim Tunnell

33 Patrick Farrell

34 Mallory Jaymes

35 Kaley Keldsen

36 Kari Mohlman

37 Jon Wentz

38 Malia Volke

39 Justin Brei

40 Ed Weschler

**Bureau of Reclamation (Reclamation)**

Brock Merrill - Member

**U.S. Fish and Wildlife Service (Service)**

Matt Rabbe - Member

**Environmental Entities**

Rich Walters – Member

Andy Caven - Member

Melissa Mosier - Alternate

**Colorado Water Users**

Jason Marks - Member

**Other Participants**

Jeff Runge – USFWS

Jean Eichhorst – Ne DNR

Caitlin Kingsley – Ne DNR

Michelle Koch – NGPC

Joel Jorgensen – NGPC

Melissa Marinovich – NGPC

Bethany Ostrom – Crane Trust



41 **WELCOME & ADMINISTRATIVE**

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

43  
44 **AGENDA MODIFICATIONS**

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

47  
48 [04-13-2022 PRRIP TAC Meeting Agenda](#)

49  
50 **MINUTES**

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

53  
54 **TAC MOTION:** *Rabbe moved and Jenniges seconded to approve the January 12, 2022 TAC Meeting*  
55 *minutes. Minutes approved.*

56  
57 [01-12-22 PRRIP TAC Meeting Minutes APPROVED](#)

58  
59 **LAND MANAGEMENT**

60 *Grassland Monitoring Surveys*

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

69  
70 **PIPING PLOVER AND LEAST TERN**

71 *2022 Plover and Tern Monitoring and Predator Management Plan*

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

78  
79 Zorn asked about the effort to reorganize the order of segments sampled during river survey and how well  
80 the established schedule was followed? Keldsen said she spent time to get the logistics of implementation  
81 over the reach to work with distributing sampling of river segments over different hours of the day. They  
82 were able to do this within 30 minutes of scheduled time blocks. Weather and boat issues were the biggest  
83 issues. Henry said that sampling distribution was reviewed at the end of the year, and this effort succeeded in  
84 distributing multiple days of sampling of the same river segment over morning, mid-day, and afternoon.  
85 Farnsworth provided some context for why the EDO engaged in this effort in the first place. The EDO had



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

88  
89 Tunnell asked about the presence of predator exclusion fencing at Leaman OCSW site. Keldsen said Leaman  
90 does not have a predator exclusion fence that completely surrounds the site. Deterrent lighting is used at  
91 Leaman. Kearney-Broadfoot South has an internal fence on the inside of the moat. Newark West has an  
92 external fence along the property boundary.

93  
94 Jenniges asked if the EDO had any plans for nest caging for 2022? Keldsen said no.

95  
96 EDO Presentation: [03 2022 LTPP Predator Monitoring plan](#)

### 97 98 **WHOOPING CRANE**

#### 99 *Spring 2022 WC Monitoring Update*

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

103  
104 Jenniges asked if most of the WC had already moved through Nebraska. Rabbe said he doesn't have the  
105 telemetry data, but there haven't been any new sightings recently from TX, OK, KS from the public.  
106 Caven said most of the WC have moved through NE. 25% of the telemetry birds are in the center of a  
107 blizzard in the Dakotas.

108  
109 EDO Presentation: [04 2022 Spring WC Update](#)

### 110 111 **PALLID STURGEON**

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

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

126  
127 Jenniges asked if the hatchery fish were released in the Platte or at the confluence. Henry said she does  
128 not have that information for the specific fish caught, but stocking has typically been done at the  
129 confluence.



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

135

### 136 **GEOMORPHOLOGY AND VEGETATION**

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

143

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

150

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

155

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

164

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



177

178 EDO Document: [05 Geomorph Veg Monitoring Report](#)179 EDO Document: [06 Geomorph Veg Monitoring Report Appendix](#)180 EDO Presentation: [07 Geomorph Veg Presentation](#)

181

182 *Corrections to the report:*183 Grammatical/typographical/formatting errors were pointed out by Esseks via email following the  
184 meeting. These corrections will be made by the EDO prior to forwarding the document for GC review.

185

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

188

189 **PHRAGMITES**190 Volke reviewed plans for a 2022 Phragmites field study for which control sites without herbicide  
191 application (no spray zones) are necessary. Volke asked for TAC feedback on the exclusion of these  
192 control sites from herbicide application and to hear TAC guidance on where to locate these no spray  
193 zones.

194

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



223 consider developing other control options. Tunnell said we would need to establish some criteria for  
224 deciding when to pull the trigger and return to spraying these zones. Farnsworth mentioned GC priority  
225 for learning about the power of water to control Phrag. Tunnell asked Walters if there were any  
226 advantage for implementing this on Program managed properties in terms of getting Dept. of  
227 Agriculture permission. Walters said yes, easier to demonstrate monitoring effort and ability to prevent  
228 Phrag getting out of control. Walters suggested the Program look at the Lower Platte where flows are  
229 higher to gain more information on what water is able to do to control Phrag. Jenniges asked about the  
230 2022 plan for germination suppression releases. Rabbe said the current target is 1500 cfs at Grand  
231 Island, but that this would be the major topic at the EA-RCC meeting in early May.

232  
233 Next steps include an early May field visit to scope sites followed by a meeting with EDO and selected  
234 TAC members to nail down sites and finalize study design. Henry asked what the deadline is for getting  
235 no spray zones communicated to pilots to avoid June spraying? Walters/Tunnell said by the end of May.  
236 He suggested we focus on the downstream complexes first since those above the Kearney canal won't  
237 get sprayed in June.

238

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

240

#### 241 **EXTENSION SCIENCE PLAN UPDATE**

##### 242 *Extension Science Plan*

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

247

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

256

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

259

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

262

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

264

265 Corrections to the plan:

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



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

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

272

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

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

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

279

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

281 Original:  Correction: 

282

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

285

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

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

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

292

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

295

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

305 [https://www.researchgate.net/publication/279411539 Changes in range-](https://www.researchgate.net/publication/279411539_Changes_in_range-wide_distribution_of_plains_topminnow_Fundulus_sciadicus)  
306 [wide distribution of plains topminnow Fundulus sciadicus](https://www.researchgate.net/publication/279411539_Changes_in_range-wide_distribution_of_plains_topminnow_Fundulus_sciadicus)

307

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

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



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

315

316 [10 Other Species of Concern Short List](#)

317

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

319 *Action Items:*

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

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

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

326

327 *Future calendar events:*

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

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

330

331 **TAC MEETING END**

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