**PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM**

**Technical Advisory Committee Meeting Minutes**

**EDO Conference Room**

**May 10, 2018**

**Meeting Participants**

**Technical Advisory Committee (TAC) Table State of Colorado**

Jojo La – Member

Carlee Brown – Alternate (via phone)

**State of Wyoming**

Barry Lawrence – Member

Liberty Blain – Alternate

**State of Nebraska**

Carol Flaute – Alternate

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

Matt Rabbe – Member

Tom Econopouly – Alternate (via phone)

**Bureau of Reclamation (BOR)**

**Environmental Entities**

Rich Walters – Member

**Upper Platte Water Users**

**Colorado Water Users**

Kevin Urie – Member (via phone)

Jason Marks – Alternate (via phone)

**Downstream Water Users**

Dave Zorn – Member

Jim Jenniges – Member

Mark Czaplewski – Member**Executive Director’s Office (EDO)**

Jason Farnsworth ED

Chad Smith DED

Dave Baasch

Patrick Farrell

Justin Brie

Tom Smrdel

Tim Tunnell

**Other Participants**

Brian Harmon – Nebraska DNR

John Shadle – NPPD (via phone)

Jeff Runge – FWS (via phone)

Phillip Halteman – Compass (via phone)

**Welcome and Administrative**

Baasch called the meeting to order, informed the TAC the revised version of the Whooping Crane Diurnal Habitat Selection report would be discussed, and asked for any additional agenda modifications; no additional agenda modifications offered.

**TAC Chair**

Baasch asked the group if there were any volunteers or nominations for the 2018 TAC Chair. Jenniges nominated Brock Merrill for TAC Chair; all supported the motion.

**TAC Minutes**

Baasch asked the group if there were any suggested changes for the January 29, 2018 TAC Minutes. **Walters moved to approve the January 29, 2018 TAC minutes; Rabbe seconded the motion; all supported the motion.**

**Fall 2017 Whooping Crane Monitoring Report**

Baasch mentioned Flaute and La submitted edits prior to the meeting that had been forwarded to the Program contractor, Ecological Services. Flaute’s edit was to add a description to Table 1 describing the color scheme. La’s comments were largely editorial. Jenniges asked if the 2018 FWS population estimate was available yet; Baasch said he reached out to Wade Harrell but has not received a response and that the fall monitoring report would not be posted on the Program website until that information is available and included in the report. **La moved to approve the fall whooping crane report as final with the edits provided by Flaute and La and discussed during the TAC meeting; Jenniges seconded the motion; all supported the motion.**

**Fall 2017 Sediment Augmentation Update and 2018 Plans**

Smrdel presented information on 2017 sediment augmentation efforts and stated Joe Jeffery appears to be happy with the efforts that now allows his pivot to make a full swing. Augmented approximately 76,000 tons of sediment in 2017 largely through cutting a channel to straighten the channel near the J-2 Return and allowing the channel to pick up sediment and widen the channel.

2018 plans include augmenting sediment from the next point bar downstream of the initial site. Future augmentation efforts will target 60,000 tons, but we will respond to water year types by increasing and decreasing augmentation amounts. Rabbe asked what the cost of sediment augmentation will be in the future; Farnsworth said future costs should be around $100,000 annually. Jenniges asked what portion of the sediment was of the size we want; Farnsworth said about 60-70% was the right size; Smrdel said the gravel helps armor the bottom of the channel so it doesn’t keep incising. Waters expressed concern about straightening the channel too much; Smrdel agreed and said we won’t completely straighten the channel. Farnsworth said one of the objectives is to shorten the channel to increase slope and sediment transport capacity. Econopouly asked if this section of the channel freezes and how that might change in the future; Jenniges said this portion of the channel doesn’t freeze and that it is rare to get much ice above the Overton Bridge.

Smrdel said there currently is a supply of sediment coming through a channel crossing Jeffery Island; Zorn said CNPPID is working on getting permits to install a weir so that the channel only flows during periods of high flow.

La asked what the long-term plans were for sediment augmentation; Farnsworth said the current plan is to augment sediment the next 5-6 years so incision doesn’t continue to move downstream and then assess results so the GC can decide if they want to continue augmentation activities long term.

**PRRIP Publications**

Baasch asked the TAC to provide any feedback they had on the Pearse et al. Migration strategies publication soon as it will be submitted for publication in the next few weeks. La asked what implications the manuscript had for the Program; Baasch said it appears it would have little or no implication for the Program. Baasch provided background information on the telemetry project and stopover study for the new TAC members. Baasch also provided a little information on a new tracking project being implemented by USGS, FWS, and Canadian Wildlife Service and said he would send the study plan to the TAC when it is available.

Baasch discussed the Sandhill Crane report and the potential implications for FWS target flow releases from the EA. La mentioned a downfall of generalized additive models (GAM) is one can’t test for interaction effects; Farrell agreed and stated a benefit of GAMs is they allow more flexibility in fitting models to the data rather than forcing a fit of a model. Walters suggested removing the sentence on line 323 regarding re-timing flow releases for sandhill cranes to maintain channel widths through inundation; Baasch said that sentence would be removed. Rabbe stated an objective of early spring and late fall pulse releases is to recharged wet meadows for cranes rather than increasing species use; Baasch said we are collecting data to assess the effects of increased flows on wet meadows and those reports will be written in the upcoming year or so. Farnsworth said it appears that pulse flows during crane migration seasons actually reduces habitat availability; Rabbe agreed and said the Trust had mentioned that 2-3 years ago as well. **Czaplewski moved to recommend GC approval to publish the Sandhill Crane report with edits made as discussed; Jenniges seconded the motion; all supported the motion.**

Farnsworth discussed publishing Whooping Crane Synthesis Chapter 4 and said several edits had been made to format it for publication. Jenniges suggested adding information pertaining to the fact one of the major components of the FSM management strategy was flow consolidation and the Program has decided not to pursue this component because of the apparent limited benefits and permitting constraints; information will be added. Jenniges asked if we incorporated analyses to assess the influence of phragmites spraying 3-4 years later; Farnsworth said we tried to look at this, but there is so much variability in the data it is hard to parse this information out and that even the best model was only able to capture 42% of this variability. Jenniges suggested adding information regarding the fact flow does little towards removing phragmites and that phragmites was not in the channel when the FSM management strategy was developed; information will be added. Walters suggested removing “eradicate” from line 211; change will be made. Rabbe suggested we change line 401 to read “increase frequency of 5,000-8,000 flows”; change will be made. Rabbe suggested adding information related to an implication of protecting peak flows appears to be important; information will be added. **The TAC decided to wait on requesting GC approval to publish this chapter until the edits discussed were made.**

Baasch discussed publishing the Whooping Crane Diurnal Habitat Selection report and said the original analysis did not fit the data well so we added a quadratic effect in the model set and now the model now fits the data much better and the results make biological sense. Jenniges said whooping cranes use landcover classes for different reasons (i.e., cornfields for corn) and landcover classes such as wetlands provide many more resources (security, food, etc.). Rabbe asked how sloughs and wetlands within lowland grassland for example were handled; Baasch said all classifications were made from the road so those fine-scale classifications were not possible. Walters asked if grassland structure was classified and evaluated; Baasch said we did not have technicians classify grasslands by structure (i.e., tall versus short grasslands). Harmon asked if we considered hierarchical models; Farrell said we hadn’t and wasn’t sure if would was possible in a discrete-choice framework. **Jenniges moved to recommend GC approval to publish the Whooping Crane Diurnal Habitat Selection report; Czaplewski seconded the motion; all supported the motion.**

**Dippel Off-channel Sand and Water Design**

Farnsworth discussed the GC’s decision to create an additional 60 acres of off-channel tern and plover nesting habitat and part of the discussion the Program had when purchasing the Dippel Tract was constructing an off-channel nesting site on the cropland portion of the Tract. Farnsworth said the proposed design are based on findings from the Program’s tern and plover nest site selection and tern and plover nest and brood survival analyses. La asked if the slurry-wall sites could be used as a nesting area; Farnsworth said it isn’t really feasible given operating the site for a water project would likely result in nest inundation and terns and plovers usually nest on peninsula type habitat on the central Platte River rather than shorelines; however, if the Program should ever abandon the slurry-wall approach the site could be developed into nesting habitat.

Rabbe said the design and location of creating an off-channel nesting site was what he would prefer if a nesting area was to be created on the site; however, he questioned whether a nesting site should be created on the Dippel Tract given the GC’s decision to count 120 acres of the tract towards the 1,500 “plus-up” acres for the second increment; Farnsworth said that was more of a GC/policy type of discussion; Rabbe agreed. Jenniges expressed concern of constructing a site that would be as tall as proposed (~20 feet); Brei said this site wouldn’t be as tall as Cottonwood Ranch OCSW since there would be a 2:1 sand to water ratio. Czaplewski said it would be nice to incorporate areas with less slope if possible; Farnsworth said slope shouldn’t be an issue, but elevation above water could be. Jenniges said we could look for ways to get rid of the top soil; Brei said ideally we would get rid of the top soil like we did at Leaman, but that those opportunities don’t exist very often. Zorn asked if we considered slope in our nest site selection analysis; Baasch said we tried to, but that reasonable estimates of slope and aspect were difficult to calculate based available data and do not appear to be important given terns and plovers currently nest on all available slopes; albeit some slopes more successfully than others. Farnworth said the EDO would think hard about potential ways to lower the site.

Farnsworth asked if there was concern with having all 60 acres at one location; Czaplewski said given the uncertainty with sites like Broadfoot South there could be opportunities to add sites in other locations in the future and expressed support of potentially to committing all 60 acres at the Dippel site.

**Program Website Update**

Brei showed the TAC examples of what the new Program website will look like and said the contractor has been doing a good job and that the site should be available in August. La asked it would be possible to include links to State-specific information; Farnsworth said we could include links to the various state and other organization websites; La said she would be interested in assisting with this process.

**Program Land Management Plan**

Tunnell discussed the Land Management Plan and the new direction the EDO proposes the Program take and asked the TAC if there were thoughts on the design and content of the new Land Management Plan. Farnsworth described some differences in previous plans and the new layout and said the EDO would continue to develop Annual Work Plans for each tract of land. Rabbe suggested we include the general strategy of maintaining Program grasslands; Farnsworth said we will add that information. Rabbe suggested we set the whooping crane unobstructed channel width at 650 feet in the plan rather than 600-700 feet; no one opposed this approach. Rabbe suggested we include a paragraph in the Section 7 Consultation section for the FWS to reference when fulfilling the Section 7 requirements; Farnsworth agreed. La asked how often the plan would be updated; Farnsworth said we would shoot for 5 years, but the plan can be updated more frequently based on the adaptive management process if needed. Czaplewski and Jenniges suggested we recommend the GC update the Program Document to reflect the change to the Land Management Plan document(s).

**Yellow Flag Iris**

Tunnell discussed the yellow flag iris infestation in the wooded ‘caddisfly slough’ on south Binfield tract and suggested the Program conduct understory tree clearing to allow access for equipment to apply herbicide to control the infestation. The TAC discussed other control options (grazing, fire, etc.) and generally agreed herbicide is the best approach for controlling the iris. The TAC didn’t express any concerns with doing understory clearing to control the yellow flag iris.

**Pallid Sturgeon Discussion**

Smith led the discussion and provided back ground information what has happened with the pallid sturgeon process to date and on the memo/white paper the EDO put together. Smith indicated the FWS requested the “critique” be shared with researchers from UNL who authored recent publications about pallid sturgeon in the Platte River (Hamel et al.). Smith said the white paper was not a critique, but rather a draft of an informational document for the GC and that the GC may be interested in peer reviewing the document before making it a final Program document. Farnsworth said the analyses the EDO conducted were based on all available data, was not intended to be a critique, but rather a different way at looking at the same data as others have in ways that are important for the Program. Runge suggested providing a courtesy copy to UNL researchers and allow researchers the opportunity to provide input on why there may be differences in conclusions. The TAC discussed this topic at length and agreed we should pursue ways to minimize a ‘tit-for-tat’ among parties over interpretation of results. Smith stated engaging researchers from UNL and other pallid sturgeon experts through an elicitation process would be one way to move the discussion forward in a productive manner.

Baasch added that following the Pallid Sturgeon Working Group meeting Shadle asked for more information on additional spawning events in the lower Platte River and about where and when the 4 fish were recaptured after spawning. Baasch said Aaron Delonay (USGS) said there have been no documented spawning events in the lower Platte River or Missouri River since the flood in 2015, but that that may be because most research has been on the ‘skinny fish’ problem noted after the flood. All fish documented to have spawned were captured in or very near the Platte River and most were captured within 24-48 hours of spawning.

Czaplewski said the white paper did a good job of summarizing a lot information and will be helpful for the GC when deciding how to move forward with pallid sturgeon research during the Extension of the First Increment. Runge said there seems to be a lack of clarity in the scope and direction the GC wants to pursue for pallid sturgeon learning. Farnsworth said the GC committed to doing something about pallid sturgeon learning to reduce uncertainty about pallid sturgeon use of the lower Platte River before we look at potential Program impacts on the lower Platte River so the EDO conducted the analyses presented in the white paper to evaluate what could be learned through data collected to date and through implementation of future research efforts. Conceptually it seems like an exert elicitation approach may be as valuable as spending a lot of money on research; Jenniges said that a potential problem with an expert elicitation approach is that the opinions will all be based on 8 spawning events and that the Program has a very limited ability to influence any of the metrics that were evaluated in the white paper. La asked how the Program’s Stage Change Study played into the recommendations in the white paper and is there a plan to implement another Stage Change Study. Farnsworth said the Program has budgeted money to expand the Stage Change Study in the future, but the GC directed us to wait on conducting additional physical habitat research until we knew more about pallid sturgeon habitat needs. Farnsworth said we could possibly collect Bathymetric LiDAR data on the lower Platte to develop a good 2-D model. Halteman said page 4 of the notes from the GC’s September 2017 meeting contains a good summary of the order of operations they want to seen done which indicates we should put on hold the research of Program impacts until we learn more about the importance of the lower Platte River for pallid sturgeon.

Shadle said he doesn’t have a strong feeling for any of the approaches the EDO laid out but appreciated having information in the document about what could be learned from each of the approaches. Urie said the document lays out the Program’s ability to reduce uncertainties for various dollar expenditures and that the GC’s decision will likely be a policy decision so unless there were any strong feelings or recommendations the TAC should move the document forward to the GC. Jenniges suggested we consider including additional options (i.e., another stage change study, 2-D modelling, etc.) to evaluate what physical processes the Program can influence on the lower Platte River and then have an expert elicitation to see if those influences are likely to affect pallid sturgeon. Runge agreed that it would be important to understand the full extent of Program withdrawals and releases to help focus the discussion during a potential elicitation process. Czaplewski asked if taking this approach would get the Program a Biological Opinion because that is what the GC will want to know. Runge said the biological conclusion for the Program’s Biological Opinion was non-jeopardy for pallid sturgeon so conducting research or monitoring would not change the conclusion. Smith said we are trying to provide the decision makers information to use during Second Increment discussions to continue to have a Non-jeopardy Opinion and there is also the factor of money for pallid sturgeon versus water. La asked it there was interest in adding research options as discussed by Jenniges; Smith said we could include additional options for the GC to consider. Brown suggested we include information from page 4 of the September GC Meeting in the front of the white paper so the GC understands the options currently in the white paper are to get at bullet point 1 and to provide context for additional options relevant to bullet points 2 and 3 in the notes. Halteman suggested we discuss the white paper options with the GC and their intent and discuss options for bullet points 2 and 3 also. Smith said the EDO would put together a cover memo that provides a discussion template for the GC in June.

**Summary of Decisions from the May 2018 TAC Meeting**

Baasch said we would likely have another TAC meeting in July to discuss the GC’s decision regarding pallid sturgeon, but that would be coordinated via email and Doodle Poll.

**Summary of Decisions from the May 2018 TAC Meeting**

1. **The TAC nominated Brock Merrill to be the TAC Chair for 2018**
2. **The TAC approved the January 29, 2018 TAC Meeting Minutes as Final**
3. **The TAC approved the Fall 2017 Whooping Crane Monitoring Report**
4. **The TAC recommended the GC approve publication of the Sandhill Crane report with edits discussed during the meeting.**
5. **The TAC decided to wait on requesting GC approval to publish Whooping Crane Synthesis Chapter 4 until the edits discussed were made.**
6. **The TAC recommended the GC approve publication of the Whooping Crane Diurnal Habitat Selection report.**