



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

Technical Advisory Committee (TAC) Virtual Meeting

Meeting held virtually via Microsoft TEAMS

Day #1: Tuesday, April 29, 2025; 1:00 PM – 4:15 PM CT

Technical Advisory Committee (TAC)

State of Wyoming

Jeremy Manley – Alternate

Michelle Hubbard – Alternate

Cheyenne Love – Alternate

Bureau of Reclamation (Reclamation)

Brock Merrill – Member

State of Colorado

Kara Scheel – Member

U.S. Fish and Wildlife Service (Service)

Matt Rabbe – Member

State of Nebraska

Caitlin Kingsley – Member

Environmental Entities

Rich Walters – Member

Amanda Hegg – Member

Melissa Mosier – Alternate

Upper Platte Water Users

n/a

Colorado Water Users

Jason Marks

Downstream Water Users

Jim Jenniges – Member

Brandi Flyr – Member

Dave Zorn – Member

Executive Director's Office (EDO)

Jason Farnsworth, ED

Chad Smith

Malinda Henry

Tim Tunnell

Seth Turner

Patrick Farrell

Tyler Matrangos

Quinn Lewis

Jonathan Wentz

Alyx Vogel

Ethan Ideus

Nicole Fijman

Ed Weschler

Libby Casavant

Other Participants

Abe Kanz – Crane Trust

Melissa Marinovich – NGPC

Mike Archer - NGPC

Jack Mensinger – NE DNR

Shuhai Zheng – NE DNR

Richard Belt – SPWRAP

Terence Stroh – USBR

Steven Labay – USFWS

**WELCOME & ADMINISTRATIVE**

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

AGENDA MODIFICATIONS

No modifications to the agenda were offered.

Document: [01 – PRRIP TAC Quarterly Meeting Agenda April 2025](#)

MINUTES

Henry reviewed a few edits made by the TAC to the February TAC minutes.

TAC MOTION: *Rabbe moved, and Merrill seconded a motion to approve the February 2025 TAC Meeting minutes with the reviewed edits accepted. Minutes approved.*

DRAFT Document: [02 Feb 2025 TAC Minutes TAC revisions](#)

FINAL Document: [2-04 and 05-2025 PRRIP TAC Meeting Minutes FINAL](#)

SPECIES MONITORING**2024 FALL WHOOPING CRANE MONITORING REPORT**

Ideus summarized monitoring efforts and results from the fall 2024 monitoring season. The Program observed 65 individual whooping cranes in 19 unique groups in fall of 2024. The fall report includes WC performance metrics (proportion of AWB population observed on the AHR and crane use days) from 2001-2024. Those figures include the evaluation and annotation of whether or not 2001-2006 survey periods encompassed the 5-95th percentile dates of WC arrivals in Nebraska for the associated 10-year period. Ideus said the proportion of the population is based upon the population estimate from 2022-2023, since we the estimate from the 2024-2025 winter survey is not yet available. The report also summarizes habitat conditions associated with observed use locations. Rabbe said June is when the FWS anticipates an update on the Aransas-Wood Buffalo population estimate from the winter 2024-2025 survey. Walters asked how the TAC wants to deal with non-final numbers in the report. Does the TAC want to approve assuming those final numbers will be pasted in, or does the TAC want to see final numbers before approve? Rabbe and Scheel were ok with the TAC recommending to GC, but Rabbe wants the GC to approve with final numbers. Rabbe said the alternative could be to take an electronic vote after final numbers are in. Jenniges said we could wait until July TAC with final numbers and send report to GC in September. Scheel asked if the timing of the population estimate was normal. Rabbe said usually closer to April/May. Maybe because more birds outside of usual areas may be taking longer to wrap up. Scheel said ok with recommending for approval and updating number for the GC. Henry said just depends on whether TAC wants to see it again after numbers are final. TAC supported reviewing again in July and recommending for GC at that time. Report would then go to the GC in September.

EDO ACTION ITEMS:

- Finalize proportion of population and discharge metrics contained within the report when available
- Bring back to the July TAC for a recommendation to the GC

NO TAC MOTION at this time.



Document: [03 Implementation of the Whooping Crane Monitoring Protocol -Fall 2024 Report TAC DRAFT](#)

Presentation: [04 2024 Fall WC Report Presentation](#)

BAT MONITORING EFFORTS

Wentz provided information on an EDO pilot study performing acoustic surveys for Northern Long-eared Bats (NLEB) and Tricolored Bats (TCB) on four Program complexes in 2024. This early effort documented no NLEB or TCB at the survey locations. Calls collected were identified as Big Brown Bat, Eastern Red Bat, Evening Bat, Hoary Bat, and Silver Haired Bat. Walters asked if survey methods line up with USFWS survey guidelines? Wentz said yes. Rabbe asked if EDO submitted a survey plan for this study prior to implementation? Henry said not for 2024 as that was not available on FWS site at the time, but plan for 2025 will be submitted. Rabbe suggested the EDO submit data that met minimum survey requirements via NA Bat. Those data would then go into the Service's database. Henry pointed out that the survey guidelines were developed for the Indiana bat with stringent weather requirements that are difficult to meet in this area (wind specifically). She asked if there are any plans to review or revise those guidelines to make them more attainable for this region and reduce loss of effort and data? Rabbe agreed and suggested Wentz ask that question of Mitch Renteria at USFWS to see if the Service has any plans to revise. Wentz said placing more detectors in a location might help. Henry said we have made changes to our protocol for 2025 to address the loss of detector nights due to weather conditions. She also asked what to do with the data collected on nights that did not meet minimum requirements. In 2024 we analyzed all the data regardless of weather conditions. Those data are in Table 2 (they have not been filtered to include data only from valid detector nights). Why spend the time to analyze if not going to count? She is unclear from reading the guidelines what to do with these data. Rabbe asked if filtering the data to include only valid detector nights would have resulted in a change in the species detected (ex. silver haired bat might not have been detected)? Henry said we don't know but can find out for 2024 data. For next year though we may not analyze data from non-valid detector nights at all. Wentz said silver haired bats are very similar to big brown bats in their call structure, so might have been why they show up at all on this list.

Scheel asked whether this was something we have to do every year going forward? Wentz said no, results are good for 5 years. Should not have to repeat on same property every year. Wentz/Henry said the idea is to get presence/probable absence as baseline information for Program properties across the AHR. This information can help inform and revise species consultation range. Rabbe said the impetus for this goes back to non-target, listed species and the Program's role to reduce the regulatory burden. Scheel asked if FWS is doing any similar surveys to update their maps, or is NGPC? Rabbe didn't know, said usually project based. Surveys are being done by folks with projects undergoing consultation. Marinovich said NGPC is doing a few surveys looking for hibernacula, but no standardized surveys going on in this portion of the country. Rabbe asked what type and level of effort is anticipated moving forward. Wentz reviewed plans to survey Cottonwood Ranch, Pawnee, Dipple, and Binfield. Biologists will check equipment and valid detector nights before moving detectors to ensure they meet minimum requirements for a section. Estimate is about 152 hours over the survey period, data analysis, and reporting. Wentz asked for feedback on survey sites, methods, reporting for 2025. Rabbe said we don't need anything more than the memo presented today: quick update, numbers, any NLEB or TCB. Scheel's broader overall question is what are we signing up for, for how long, and is that reasonable? Is this an annual decision? Is it dependent on what we find out there and what projects we have coming up? Farnsworth said it depends on the bat species coming down the pike and distribution of bats that are



listed. Trying to get us up to speed to have the capacity and information as a baseline. Going into 2026 may have better handle on what long term obligations might be, then decide how to move forward. Not sure yet how big of a deal this will be and don't want to get behind the curve. Need to be prepared if need to do surveys to get management done. Season for tree clearing limited to late fall/winter. Scheel asked if did tree clearing outside bat activity period, is FWS generally okay with that? Rabbe said this changes rapidly as we continue to learn and bats are uplisted. Farnsworth said strategy is do minimal amount, finger on pulse, and check in until we have more information. Walters summarized by saying we will do what is necessary to meet management obligations, but not interested in operationalizing surveys to help define ranges of species.

EDO ACTION ITEMS:

- Filter Table 2 for valid detector nights to see if any species fall from the list
- Talk with Renteria at USFWS about weather requirements and data collected under poor weather conditions
- Submit study plan for 2025
- Proceed with proposed acoustic surveys for 2025
- Report effort and results in a summary memo similar to the one reviewed today
- Enter data from valid detector nights into NA Bat to contribute to FWS database

Document: [05_Bat_Monitoring_2024-2025_April_2025_TAC](#)

SCIENCE PLAN

WHOOPING CRANE STOPOVER VS. FLYOVER UPDATE

Farrell updated the TAC on the progress made by the TAC work group on data analysis to address Extension Big Question #4: What factors influence whooping crane decision to stop or fly over the AHR? Farrell summarized steps to acquiring satellite imagery to best represent on-channel metrics under both low and high flow conditions during WC migration seasons for the Niobrara, Loup, and Platte systems. He summarized efforts to quantify on-channel landcover types using unsupervised classification and presented evaluations of the accuracy of these classifications in deriving unvegetated and wetted widths. He presented next steps and a timeline for checking back in with the TAC in July.

Farrell also gave a quick update on the status of the WC Roost Site Selection Report. The ISAC suggestion to evaluate the contributions made by the Program to unobstructed channel widths used and available for WC roosting on the Platte River requires spatial information on property ownership over time. Farrell said the EDO now has land ownership polygons with associated purchase dates from conservation entities to integrate into the analysis.

EDO ACTION ITEMS:

- Process imagery and landcover for each river and migratory seas throughout study period
- Derive on-channel variables for each stopover and flyover
- Add on-channel variables to non-habitat variables to perform analysis
- Report back to Work Group - July 15 – review and discuss addition of off-channel variables
- Update full TAC - July 22-23 TAC meeting

Document: [07_WC_Stopover_vs_Flyover_Update](#)



Presentation: [08 WC Stopover vs Flyover Update Presentation](#)

NO SEDIMENT AUGMENTATION MONITORING PLAN

As part of the No Sediment Augmentation Monitoring Plan, the EDO set up two annual check-ins with the TAC to review channel conditions in the J-2 return channel and downstream of the Overton bridge. The April TAC meeting was set as an early status review utilizing newly acquired LiDAR results to look at general patterns of channel change and incision in areas of interest. Lewis presented the results of this early check-in on the J-2 return channel and downstream of the Overton bridge. Changes from 2023 to 2024 were small with no significant downstream progression of depth classes. Most changes were identified as lateral erosion and normal shifting of thalweg over time. The EDO will develop a more detailed report for the July TAC meeting. Labay asked about the data presented on Lidar Area Calculations slide. He said Lewis had explained this slide by saying these were not changes from year to year, rather changes from a geomorphic grade line. Labay asked Lewis to define this datum. What is meant by a change from a geomorphic grade line? Lewis said this is the difference of the channel itself from the reference elevation. Farnsworth said it is an idealized floodplain surface as a reference (floodplain slope or geomorphic grade line). Labay asked which year the grade line based on. Lewis said he wasn't sure which year exactly, but it is relatively recent, since we began to acquire topobathymetric LiDAR. Labay asked about water quality measurements from sediment samples. Lewis said we are not looking at water quality or sampling suspended sediment in the water column. We are sampling bed material from both banks of the river and the thalweg. Rabbe mentioned previous finding that active augmentation may have offset bed incision by about 50% and that lateral erosion made up the rest. Rabbe asked if we had seen any sign that lateral erosion has increased due to lack of mechanical augmentation. Lewis said we haven't don't that yet, but looking at sediment volume change and separating out bed erosion from lateral erosion will be part of what we do in full report. Farnsworth said the 50% was an average over both dry and wet years. This was a relatively dry year so would not see the type of sediment movement and transitions would see in a wet year. Rabbe said we might need multiple years to see changes. Zorn appreciates initial check in to alleviate concerns.

EDO ACTION ITEMS:

- Continue to evaluate incisional classes in areas of interest and sediment volume change for development of more detailed report for July TAC meeting

Presentation: [09 No Sed Aug Early Check In April 2025 TAC](#)

LPR HYDRODYNAMIC MODEL

Farnsworth provided the TAC with a status update on the lower Platte River hydrodynamic model. Purpose was to get information on how flow might impact habitat variables, specifically how changes in central Platte flows might provide benefits or potential impact pallid habitat in the lower Platte River. Need was identified for a hydraulic model that wasn't focused on flood flows, large high flows, and provided a less coarse look at channel topography. GC approved the development of this model from the Loup down to the Missouri River. HDR worked on the model for about a year, providing a draft, calibrated model to the EDO about three months ago. For some locations the topobathymetric LiDAR information was very good. In other places the water was too turbid to get good LiDAR returns and good topography. HDR was to come up with a process to fill in the blanks to create topography for model purposes. Upon review, those gap filling methods did not produce good topography or modeled water surfaces. EDO worked to improve methodology to fill gaps in bathymetry based on high resolution



satellite imagery. EDO provided bathymetry back to HDR. HDR recalibrated the model. It calibrates well. Limitations: There are still chunks of the model with synthetic topography underneath that makes looking at depth distributions less accurate – not a good representation of real-world conditions at a given discharge. Farnsworth suggested as next steps to chop the model up into reaches with good LiDAR coverage versus poor LiDAR coverage (relies on synthetic topography). Reaches with a lot of synthetic topography need to have caveats established for how to use model results. EDO will work with UNL on how they use the model in a way that reflects those caveats. Admiral at UNL is working on a project to improve the topography dataset. He has submitted a grant to develop a more structured way to fill in the gaps that integrates a hydraulic component and UAB data. If funded, a year or so from now, it might be a way to make sequential improvement in the topography and to improve modeling results. Farnsworth said from a pallid perspective we need to evaluate whether we will have enough resolution with this model to see differences among reaches in habitat metrics as fish are transitioning or have confidence that the differences we are seeing are real or a function of model geometry (especially at low flows). May need to bring ISAC in to see if what we have is good enough or do we keep working on it. Henry emphasized that there will be more uncertainty at very low flows because under those conditions water will be confined to the deeper areas for which you have less information. Farnsworth said the EDO has the revised model and the report if anyone is interested. Mosier asked if UNL collaborators are able to use this version of the model. Henry said current analyses on factors impacting immigration, emigration, and movement through different segments of the lower Platte do not currently integrate any variables from a hydrodynamic model. UNL has used discharge and variability in discharge from USGS gages at this point. However, Ruoss' PhD project has a chapter on how habitat availability and connectivity changes at different flows in the lower Platte River. That is where the model comes in for her work.

EDO ACTION ITEM:

- Break model down into sections depending on amount of synthetic topography to set up some caveats for interpretation that are appropriate
- Have ISAC review model to provide feedback

WEST/ECOTOPE PUBLICATION OUTLINE

Walters summarized where we left off with the TAC at the February TAC meeting which led to the publication outline put together by the EDO. Henry provided an overview of the publication outline and its focus on the process the Program has undergone to better understand different science outcomes regarding whooping crane use of wet meadows on the central Platte River. She asked for TAC input on the publication and feedback on content, direction, and target journals for publication to make the publication more valuable to the Program. Rabbe said within the Program it is important to document the process, but was not sure a publication is the appropriate place to relay that type of information in a public setting. Publishing this goes back to FWS stating that publication is a way to push grey literature into the “best available scientific and commercial data” category. This pivots more to a policy paper. He is uncomfortable with that because policy changes. He envisions this publication as a science paper forming a piece of the best available science for consideration. Publishing the original WEST work and comparing it to Ecotope with results would form a piece of that puzzle for writing the Biological Opinion. Rabbe reiterated from his email that there was not collaboration by all Ecotope authors or equal contributions. Not going to get participation from everyone. He recommends the Program develop this from a research perspective to follow original intent when TAC supported for publication. Kanz suggested dividing this publication outline into multiple publications to cover the broad array of topics.



It might be easier to get published that way. Kanz asked why not publishing WEST on its own, and why not taking the more traditional channel of a research publication. Henry said she considered why the TAC and GC recommended we do this and why the Program does science which is to inform decision making on policy and management. She wanted to put the pieces together; to set up the issue of non-aligned science results, illustrate the unique process the Program underwent to understand it, and to demonstrate what we did with it. She thinks putting the pieces together is more valuable than non-linked pieces. Kanz suggested we construct the pieces first, then put them together. Henry said she favors one synthesis document rather than multiple where the reader has to look around across multiple publications to put the pieces together. Rabbe said Program is unique in the diversity of stakeholders, so even when policies are changed there may not be 100% agreement across the board because tradeoffs are involved. It is fine to document those decisions internally, but a whole different realm to do so publicly. Scheel asked for more clarity from Rabbe on the problem with publishing policy that has been agreed upon. To her it documents the process but does not tie everyone to those outcomes forever, as science and research change. Rabbe said the originally agreed upon purpose for this was to contribute to best available science. Never has the Service pushed for resources and dollars to be spent to publish policy. This implicates all Ecotope authors in a way the Program should be sensitive to, though some were not involved. Scheel asked how it was decided who was involved. Rabbe asked if EDO reached out to all co-authors. Henry said it was left to Baasch as primary author to invite his coauthors. Rabbe said he is unaware how Baasch handled that but doesn't think Jorgensen was ever contacted. Rabbe said Caven participated in the first meeting and made suggestions for a broader approach that was turned down because not of interest to the Program, thus did not participate further. Rabbe deferred to Baasch on a lot, having a better modeling background, so Baasch took the lead. Henry mentioned different phases of this that involved TAC, GC, ISAC, and culminated in a collaboratively written GC policy recommendation, stating the intent has always been collaborative. Rabbe said he sees the sharing of the data and the methods so the Program could move forward as collaborative, and agrees it merits publication. The publication should also pull in findings from existing literature like Baasch et al. 2019. Scheel summarized stating she hears Rabbe is uncomfortable with the "Agreed upon conclusions" and asked if Rabbe was uncomfortable with the Management Implications that came out of the GC policy memo? Rabbe mentioned the Remaining Uncertainties (in Supplemental Information of the publication outline) and said he doesn't want to go down the rabbit hole again about agreeing on science. Rabbe has no problem with comparing methods and results for publication. Hegg asked how common this collaborative approach is for resolving science disagreement? Farnsworth said this is more common in social science but not common in natural sciences. Farnsworth said there are a couple parts to this that he is hearing. 1) There is discomfort with talking about the policy the GC adopted because there is not consensus on that policy, so some folks may not want that policy in the literature. This is a GC issue to deal with if not agreement. 2) Criticism of EDO for not being collaborative or encouraging external science. This process is an example to the contrary that has worked to move Program forward. If this is also not collaborative, what do we do moving forward? Kanz said he thinks there is a way forward to collaboratively collect and analyze data from the start similar to what Caven suggested as a way to move forward to consensus. Kanz asked about the wet meadow hydrology publication. Henry clarified that the Wet Meadow Hydrology Study would be a second publication separate from the outline proposed here as part of a two-part publication strategy reviewed at the February TAC. Rabbe said TAC and GC have agreed to shift management practices and publication as a science paper supports that. He asked why the EDO is opposed to publishing in this manner to backfill with the analysis that was done? Farnsworth said most Program publications have a management section. His assumption is that it is to the Program's benefit to place our science into the context of the management decisions we make



to create a record that the things the GC does are based on science to cover the Program as we move into a Second Increment. Trying to bring all the threads together on what we are doing and the decisions we make. Farnsworth asked what is the risk of not doing that? Rabbe thinks its cleaner to separate the two so do not have to republish because we changed a policy. Farnsworth and Smith expressed the utility to other Programs of a published example of using science to make changes to management. Most Programs do the science, but the pile never gets utilized. Farnsworth said the compelling parts of the story are to work collaboratively instead of against each other to figure out why two studies came to different results and what you do with it. Alternative is a response type article. Henry said that is the format we were trying to avoid. Rabbe said without 100% buy in it puts you in a weird place. Farnsworth asked what the rationale is from Ecotope authors for not getting involved? Rabbe said there are biases in the way data are collected that make earlier efforts obsolete. Telemetry dataset is a better way to do the analysis. Rabbe said we don't need another analysis to do the management. But he cannot guarantee that someone might not do this type of analyses with Phase 2 data. We would then use that information and adapt as necessary. Henry asked if anyone else on the call saw value in keeping the science and policy together in this publication? Jenniges said we need to be careful about publishing to direct policy. Policy is each individual entities' decision-making process. You are going to alienate somebody. You have a publishable technical paper about how choosing your dataset and analysis can affect results. The policy is what you do with these lands. We have already resolved that. It is important to go ahead and publish your technical paper. It will be out there, and everyone can interpret it on their own. Farnsworth asked Jenniges why we now have a problem publishing policy? Jenniges said you published results of monitoring but used SDM to get to policy decision. Farnsworth said that decision then went to the end of tern and plover publications. Scheel said she doesn't think this pushes policy, it simply documents the process that was new to Program with intent of collaboration (not perfect) and tried to come up with decision from differing results, and we did. That is the part that is interesting – how Program came up with a management decision from all that. Walters agreed it has value for other Programs as well. He asked if there is a way to reduce the detail on the policy portion so everyone is comfortable? Rabbe said risk might be to move backward and put everyone back to their own corners. Kanz said the technical process is of interest. Jenniges said you can include why you did it in the introduction, just don't try to direct policy with your conclusions. Scheel said the outline says nothing that hasn't already been agreed upon, so what is the publication actually directing policy wise? Jenniges suggested just write it without Rabbe as a co-author and see how the TAC reacts. Farnsworth said maybe more concern about what it might be. Belt asked if all concern comes from Section V Policy and Management Implications. If eliminated that section or just summarized it more generally would that move us forward? Smith made a case for the instructive value of a discussion of how the Program overcame dueling science to come out with an agreed upon management shift. He thinks it would be of value to other similar Programs and in the general scientific literature. He understands the concerns about opening old wounds and backing up the bus. It might be easier to see a fully formed document. Smith said there will need to be a conversation at the GC level about today's discussion to get their take on this. Ultimately, it is the GC that will make the decision on whether they daylight this process or not. It will be done carefully and respectfully. Rabbe said he would do this differently if he could. Project developed over COVID and during a period when there was less collaboration than under normal circumstances. Science isn't black and white and neither are definitions, and our management was able to move forward in light of that. If the process had come to a completely different result on WC use, we may still have gotten to the same place on our management decision. And there is value in that. Despite disagreement, we got to a place of common ground in an area that may remain grey in the science world. Walters summarized what he heard from the TAC discussion. TAC supports publication. It matters



a lot how it is written, wording matters. Henry should reach out to the TAC for volunteers to help provide early and often feedback as a draft is put together. They will participate as TAC members, not as co-authors.

EDO ACTION ITEMS:

- Write up a draft publication following the reviewed outline but providing a more general overview of where the Program landed on policy and management implications (Section V. Program Science and Management Implications)
- Reach out to TAC members and Ecotope authors with request to participate in drafting

TAC ACTION ITEMS:

- TAC members volunteer to participate by providing early feedback
- TAC will review and provide feedback on a fully-formed draft at a future meeting

Document: [10 WEST/ECOTOPE Publication Outline April 2025 TAC](#)

TAC MEETING REVIEW & WRAP-UP

MOTIONS

- February 2025 TAC Meeting minutes approved.

2025 TAC Meeting Schedule

- July 22-23, Colorado. TAC settled on a finding a location near the Denver airport.
- September 22-24, Kearney, NE, joint GC/ISAC/TAC Fall Science Meeting
- October 21-22, Kearney, NE

TAC MEETING END

The TAC meeting adjourned at 4:15 PM CT.