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

**Adaptive Management Working Group (AMWG) Virtual Meeting**

December 03, 2020

**Attendees** –**Jim Jenniges**, NPPD; **Dave Zorn**, CNPPID; **Andy Caven**, Crane Trust; **Tom Econopouly**, USFWS; **Mike Drain,** CNPPID; **Brock Merrill,** USBR; **Jojo La**, State of Colorado; **Jason Farnsworth, Malinda Henry, Patrick Farrell, Chad Smith** – Executive Director’s Office (EDO)

EDO Power Point presentation slides attached as PDF ( [03 December 2020 AMWG Presentation](https://platteriverprogram.org/system/files/2020-12/03%20December%202020%20AMWG%20Presentation.pdf))

Menti results attached as PDFs (links provided below)

**Welcome & Administrative**

* Henry welcomed the group and noted the short agenda for today. There were no modifications.
* Henry provided the progress update she had given to the GC on Dec. 2nd.

**Whooping Cranes: Management Objective**

Henry read Mentimeter responses for “Is PRRIP meeting its management objective for whooping cranes?” ([3 Dec 2020 Mentimeter Whooping Crane Management Objective](https://platteriverprogram.org/system/files/2020-12/3%20Dec%202020%20Mentimeter%20Whooping%20Crane%20Management%20Objective.pdf)).

* Reponses were grouped into yes, no, and maybe with their accompanying explanations for why or why not.
* Henry asked if EDO understanding of responses was correct.
* Asking a yes/no question may be the wrong way to go about it. Where can Program do better for whooping cranes/species objectives? may be a better question. EDO was asked, what has been going well and what could be improved?
  + Farnsworth: Tried to change management objective at one point but GC decided to leave as is. Tried to link species objective to Program controllable metrics. Settled on proportion of population using the Platte River and crane usage on managed lands. Can say that proportions have generally increased overtime and usage has increased on Program properties. Performance indicators are things Program has some control over.

**Whooping Cranes: Performance Indicators**

Group went on to discuss “How do we know, how do we measure it?”

* + Based upon group responses to Menti poll
  + Based upon performance indicators used by the Program to present to the GC
  + Based upon whooping crane use factors and habitat metrics included in the CEM
  + Any other suggestions to consider?
* Meeting Program habitat objectives is the primary way to “meet” objective.
  + Early on in Program, we could never answer this species objective and do not know if birds using Platte during stopover are better off.
  + Cannot answer this species objective anywhere along the flyway. Providing adequate habitat is a good thing and within Program control.
  + Generally, need to agree better crane habitat is better for cranes.
  + Another consideration for performance metric is crane use days. Given that migration is limited to a certain number of days, having a large proportion of those days spent at Platte could also indicate importance. Duration or cumulative crane use days could be considered.
    - Henry: Showed performance indicators used to present progress toward WC objective to GC: proportion of population detected along AHR (annual and trends over time) and most recent WC conceptual model. High annual variability was pointed out in WC proportional use.
  + Why do plots only go back to 2007?
    - A change in monitoring protocol in 2007 may have led to this choice to use 2007 onward.
    - Farnsworth: Program has data back to 2001 that could be included.
  + Error inherent in WC counts/population estimate make the proportion of the population misleading as a performance indicator. Habitat may be better.
    - Farnsworth: Habitat availability higher than actual proportion of use. Higher values for metrics we can control for whooping cranes are important.
  + Using moving averages for 5 years may be more informational.
  + Platte River provides resilience when other regional habitats are not available. Important to consider the regional landscape when evaluating WC use. WC choices for surrounding areas may impact use of AHR.

Mentimeter poll: “Which performance indicators are more appropriate for measuring Program contribution to WC survival?” ([3 Dec 2020 Mentimeter Performance Indicators Prioritize Big Questions](https://platteriverprogram.org/system/files/2020-12/3%20Dec%202020%20Mentimeter%20Performance%20Indicators%20Prioritize%20Big%20Questions.pdf))

* + Should read acres of total habitat not just PRRIP managed habitat to include other conservation lands that contribute to WC use.
  + Should consider including the words suitable or quality in qualifying habitat metrics
  + Report distribution of channel widths as metrics
    - Could report proportion of channels with widths >600ft
    - Avoid very narrow channels.
    - Important thing to report is increased channel widths over former conditions.
* MS TEAMS CHAT: Observed that all these metrics scored quite low on average, except for acres of habitat.
  + Off-channel definition: does not matter if day use or roosting.
    - Farnsworth: TAC or AMWG should considered how palustrine wetlands are to be managed going forward within the Program.
      * Pumping wetlands was originally part of AMP experimentation comparing river vs. wetland use by cranes (the on- vs. off-channel equivalent of what was done for LT and PP).
      * Farnsworth: Referring to non-complex palustrine wetlands like Deboer and Lieh’s. They have not been used. Don’t know if a question for AMWG or TAC, but at some point the Program will need to decide if we want to continue to spend time and money to maintain them or get rid of them.
      * AMWG thinks this is a GC decision. We already know they haven’t been used.
    - Asked why responses to the appropriateness of “Spatial distribution” was so starkly distributed at low/high ends.
      * Studies have already validated increased usage in western AHR since Program implementations.
      * Uneven distribution of WC use may indicate where habitat is in better shape.
      * Didn’t think this metric was valid because there should be a habitat complex in every bridge segment so usage not inherently important.
      * Variability in complex size and quality, speaks to spatial importance as metric.
    - Pointed out two metrics about whether WC reach their destination and reproduce successfully.
      * May want to eliminate “reach their destination” from these indicators as we don’t know exactly where that is and may not be able to measure it.
      * Downgraded importance of these metrics due to ability to observe correct data.
      * Metrics that get at WC fitness may be important if we can measure and expand our data collection beyond the Platte. But they do speak more directly to the objective of survival.

**Whooping Cranes: Big Questions**

Henry presented the Mentimeter responses for “What don’t we know about Whooping Cranes that we need to know to contribute to their survival?” ([3 Dec 2020 Mentimeter Whooping Crane BIG QUESTIONS](https://platteriverprogram.org/system/files/2020-12/3%20Dec%202020%20Mentimeter%20Whooping%20Crane%20BIG%20QUESTIONS.pdf))

* Henry grouped knowledge gaps into (1) Habitat selection, (2) Minimum habitat requirements, (3) Use of water to create habitat, (4) Setting water operations priorities, and (5) seasonal patterns in WC use. Asked if any responses were misunderstood or mischaracterized.
* No responses.

Henry then had the Working Group participate in a Mentimeter poll “How would you rank these in terms of importance to WC survival?” ([3 Dec 2020 Mentimeter Performance Indicators Prioritize Big Questions](https://platteriverprogram.org/system/files/2020-12/3%20Dec%202020%20Mentimeter%20Performance%20Indicators%20Prioritize%20Big%20Questions.pdf), scroll through responses) Here all posed questions are ranked against one another for prioritization.

* The goal is to discuss questions posed by AMWG members in order of this group’s ranking of importance to WC.
* The group asked for clarification as needed, discussed questions, and commented on results as they appeared.
* Questions investigating the relationship between flow, habitat creation and WC selection for use ranked the highest in this category.
  + Farnsworth: Some knowledge gaps are management questions after you answer primary research questions.
  + There may be reach specific, flow specific, and other specific effects to suppress germination. Have thresholds for different vegetations guilds (cottonwoods, phrag, other annuals).
* MS TEAMS CHAT: Published estimates of seedling germination under suppression flows vary:
  + Karlinger et al. (1981) - 3,800 cfs for 16 days, Simon and Associates (2000) - 2,500-3,000 cfs (mid-May through early July), Johnson (1994, 1997) - 2,650-3,000 cfs, and Currier (1997) - >990 cfs
  + Lots of uncertainty regarding this question.
  + ​MS TEAMS CHAT: Flooding and Phragmites:
    - Galatowitsch, S. M., D. L. Larson, and J. L. Larson. 2016. Factors affecting post-control reinvasion by seed of an invasive species, *Phragmites australis*, in the central Platte River, Nebraska. Biological Invasions 18(9):2505-2516.
  + It was noted that many ranked items have already been covered by Program learning.

Henry asked in Mentipoll “How important is it to WC to answer this question”. ([3 Dec 2020 Mentimeter Performance Indicators Prioritize Big Questions](https://platteriverprogram.org/system/files/2020-12/3%20Dec%202020%20Mentimeter%20Performance%20Indicators%20Prioritize%20Big%20Questions.pdf), scroll through responses) Here questions are kept within previously defined categories for comparison purposes, but each is ranked from low to high importance individually. This type of poll gives more information on the distribution of participant interest in the question.

*Habitat Selection, Minimum Habitat Requirements, and Water to Create Habitat*

* The group asked for clarification as needed, discussed questions, and commented on results as they appeared.
* Questions investigating the relationship between flow, habitat creation and WC selection for use ranked the highest in this category.
  + Regarding conditions associated with stopovers vs. flyovers:
    - Telemetry data show that before 3:30 p.m., birds don’t stop as they encounter the   
      AHR.
    - There isn’t a lot of variability in flow to choose from at the instance when the birds encounter the Platte. It is what it is at that point. Is there evidence that after 3:30 birds are flying up and down the river looking for better habitat?
    - Haven’t looked specifically for these patterns, but don’t recall evidence of this in the dataset.
    - May want to consider regional conditions beyond just AHR. Ex. PDSI (drought index) or how wet the basins are to the south compared to around the Platte River, may not have same variability.
    - Distance traveled and time of day both importance considerations.
  + Question was posed regarding how to define or quantify minimum habitat requirements for survival/recovery.

*Setting Water Operations Priorities*

* + Question was posed regarding the interpretation of “Scenarios when Program water plus base flows meet management objectives vs. when no effective or efficient to use water?”.
    - Interpreted to mean that we need more information on how to determine when the use of Program water is appropriate for habitat management for WC vs. when it is not.
    - This question is repetitive with that about how to maximize existing Program water for WC use.
    - Farnsworth: GC perspective – There will likely be a range of water determined by the GC that the Program can work with. Working group needs to help prioritize usage of water for decision making.
  + Farnsworth: Does not see path forward for fish/flow questions. Must be relatable to benefits to WC to justify water use for this purpose.
    - Henry: What is the contribution of fish to the WC diet while on the Platte? Is it significant?
    - Have not previously considered the importance of fish for whooping cranes, but fish kills are likely important for whooping cranes.
    - Recent efforts have documented juvenile channel catfish eaten; 3 species of fish cranes observed eating.
    - MS TEAMS CHAT: Fish to consider: Cypriniformes, Percidae, Ictalurus punctatus were recorded as being eaten by WHCRs.
    - Farnsworth asked for more specific information regarding how common this occurrence is.
    - Healthy fisheries could create other foraging options for whooping cranes.
    - May or may not be PRRIP priority.
    - The idea is to maintain enough water in the river to avoid large fish kills (lack of water or high temps), but these levels are below that required for other Program objectives.
    - Some disagreement expressed about fish considerations. Talking about fish is low priority and echoes questions addressed 25 years ago.
    - Releasing water for fish is difficult in the summer.

*Fitness Benefits of Platte Stopovers, Seasonality of Use, Value of Wet Meadows*

* + Questions regarding fitness and the factors associated with longer stays on the Platte scored highest in this category.

**Preparation for Next Meeting**

* AMWG members were asked to provide a list of information that would be helpful to have when discussing the questions outlined today? To assess uncertainty and control?
* The EDO will synthesize the information provided by the group in this meeting and produce a condensed list of Priority Big Questions for further discussion.
* The group will be asked whether there is a hypothesis we need to test around each of these questions.

**Meeting Review & Wrap-Up**

* Henry thanked everyone for the active participation in online polls and today’s contribution of ideas and willingness to discuss.
* **Next meeting** – January 12th; 1:00-5:00 PM Central Time.

Meeting adjourned at 3:08 PM Central Time.