Platte River Recovery Implementation Program

TAC Meeting Notes – SDM Workshop

February 10-11

EDO Conference Centre, Kearney, NE

Meeting Summary

On Day 1, the TAC reviewed the preliminary decision objectives, performance measures (PMs), alternatives and models developed by EDO/Compass. Modeling and PM changes proposed on Day 1 were completed for Day 2. A subgroup was formed to address outstanding issues; the subgroup met after the close of the meeting on Day 2. Key outcomes include:

- The TAC supports the use of the Tern and Plover habitat model (with described changes) for estimating Tern and Plover population outcomes and management costs associated with various management alternatives.
- The TAC supports the use of the Performance Measures developed by EDO and Compass, and feels that they accurately reflect the differences between alternatives.
- The TAC provided direction for the GC meeting, including a revised set of alternatives for GC consideration in March.

Action Items

#	Description	When
1	**Compass/EDO will run the revised alternatives and prepare pre-read package**	Prior to March 1
2	**Compass / EDO will distribute the GC pre-read package by March 1**	Prior to March 1
3	**Matt will prepare a summary of learning objectives for GC consideration**	Prior to GC meeting (March 8)
4	**Matt/Eliza will seek clarification on USFWS concerns with respect to the treatment of pallid sturgeon in this decision process**	Prior to GC meeting (March 8)
5	**Jason will modify the tern/plover model to incorporate input from the TAC meeting and subsequent subgroup work**	*Done*

Participants:

TAC Members	Other
TAC Members	**Other Observers**
Mike Drain – Downstream Water Users (CNPPID)	Eliza Hines – USFWS (Day 2 only)
Mark Peyton – Downstream Water Users (CNPPID)	John Shadle – NPPD (Day 2 only)
Jim Jenniges – Downstream Water Users (NPPD)	Jesse Winter- State of Nebraska
Mark Czaplewski – Downstream Water Users (CNNRD)	
Matt Rabbe – U.S. Fish and Wildlife Service	**Compass**
Jeff Runge – U.S. Fish and Wildlife Service	Lee Failing
Tom Econopouly – U.S. Fish and Wildlife Service	Philip Halteman
Kevin Urie – Colorado Water Users (Denver Water)	
Jason Marks – Colorado Water Users (Denver Water)	**EDO**
Jeff Geyer – State of Wyoming	Jerry Kenny
Brock Merrill – Bureau of Reclamation	Chad Smith
Rich Walters – Environmental Entities (TNC)	Jason Farnsworth
Suzanne Sellers – State of Colorado	Dave Baasch
Andrew Pierson – Environmental Entities (Audubon-Rowe Sanctuary)	Patrick Farrell
Jennifer Schellpeper – State of Nebraska	

Day 1 Summary/Outcome of Discussions

TOPIC	DESCRIPTION	ACTION
TERN AND PLOVER MODEL	**The TAC supports the use of the T&P Model,** with the following comments and changes.	
Habitat Loss Function	- TAC agrees that the habitat loss function is appropriate for managed habitat. - It will overstate longevity of naturally formed habitat. However this naturally formed habitat will be formed only rarely, so modeled PMs are not sensitive to it. - Refining this is a low priority.	None required.
Habitat Utilization Curve	- The TAC agrees that there is likely a relationship, but has questions about the data/assumptions underlying the curve. - Productivity results are sensitive to it. - The TAC would like to see it refined.	Refine habitat utilization curve with TAC input ***(Done - see Post-meeting subgroup work below)***
Incubation (brood rearing) flow relationship	- The relationship is unknown. - With existing data we are unable to support an assumption that a base flow would improve productivity. - The TAC accepts the assumption that there is no relationship for this decision.	None required
Fledge Ratio	- **The TAC supports the use of the current estimates of on-channel fledge ratio** (D. Baasch estimates) - While productivity is sensitive to fledge ratio, the effect of on-channel fledge ratio is dwarfed by off-channel for any alternatives that have an off-channel habitat component. - On-channel fledge ratio is strongly dependent on island height. - Refining on-channel fledge ratio is a low priority at this time. - Revisit this if GC considers the use of either a) alternatives that are all on-channel (no off) or b) alternatives that build low islands.	Distribute Fledge Ratio technical memo, as part of GC pre-read ***(see Action #2 below)***
MSIC	- **Support the use of 10% MSIC for all the Tern/Plover and Cost PMs as a starting point**; could be refined if required.	
TERN AND PLOVER PMs	**Support with the following changes** - Drop # PRRIP fledglings (redundant with BPs). - Include the AHR #s for BPs and FR (for information/context). - Add a new PM for the cumulative # fledglings to capture the long term global benefits of alternatives that add habitat early. - Use of long term average over the simulation period is appropriate.	Adjust PMs and model ***(Done)***
MGMT COST MODEL	**Support with the following changes to habitat cost assumptions:** - The assumed cost for off-channel habitat is very high; the assumptions are based on the worst case experience; it may be an overstatement. - The assumed cost of on-channel habitat may be low; it does not consider situations where the channel needs to be widened for example. - Consider an exercise to explore min plausible, max plausible and best guess - Need to be consistent in the treatment of off and on-channel costs.	Refine habitat cost assumptions with TAC input ***(Done - see Post-meeting subgroup work below)***

TOPIC	DESCRIPTION	ACTION
MGMT COST PMs	**Support with the following comments and changes:** - Keep wet, dry and normal years as proportion of water budget. - Add acre-feet per year, averaged over all water years.	Adjust the Management Cost PMs and model (***Done)***
WHOOPING CRANE PM	**Support, with the following comments:** - Alternative ways of creating tern and plover habitat affect habitat suitability differently. - The PM provides a reasonable description of relative differences - The differences are small. - The relationship between habitat suitability and use is unknown; the PM does not say anything about use. - Scores for some alternatives were adjusted (done).	None required
SEDIMENT	**Support, with the following comments:** - Alternatives that include flow might have some benefit for sediment (if water comes down the river) but also could be negative (if water comes through the canal system). In either case the magnitude is very small and the TAC agreed to ignore it for the purposes of this decision. - Alternative ways of creating tern and plover habitat affect sediment differently. - The PM provides a reasonable description of the relative differences. - In the context of the AHR, the differences are very small. - The value of sediment contributions decreases the further downstream they occur, although the magnitude of this effect is unknown. - The relationship between the PM and broader ecological benefits is unknown. - After some discussion, the TAC supported the originally assigned scores.	None required
PALLID STURGEON	**Support, with the exception of the USFWS who abstained from comment.** The TAC (excepting the USFWS) provided the following comments: - They support the way the PM is defined ("yes" doesn't mean there is an impact, it means investigate further; a "no" means it is reasonable to conclude there is negligible impact). - They support the conclusion that all the alternatives score "no".	None required
IMPLEMENT-ATION	**Support as is**	None required
LEARNING	**Support with changes and comments as follows:** - Modified scores for alternatives with flow (they do not necessarily have higher learning potential, although they could). - TAC supports the PM for now but notes that it will likely need refinement later. - Need to identify specific learning objectives and link the scoring to them (e.g., extent to which an alternative supports specific learning objectives related to tern or plover hypotheses).	None required at this time.

DAY 2 Summary/Outcome of Discussions

TOPIC	DISCUSSION	ACTION
RECAP	- Reviewed actions and key messages from Day 1. Established a subgroup to work on the Habitat Utilization Curve and Habitat Costs (Jim Jenniges, Matt Rabbe, Mark Peyton, Mark Czaplewski, Rich Walters, Jason Farnsworth).	Convene subgroup to refine prior to GC meeting ***(Done – see Post Meeting Subgroup Work below)***
ALTERNATIVES	- The TAC reviewed the alternatives and their consequences in detail (with revisions from Day 1 incorporated). Key points of discussion are summarized below.	
Modify MCA	- TAC members discussed the rationale for continuing to consider on-channel habitat given its low contribution to tern and plover productivity, but agreed the PMs capture both the advantages and disadvantages. - Based on USFWS preferences, the TAC agreed to modify the MCA alternatives so that existing vegetated islands are de-vegetated but NOT raised. Modeling will assume a mix of heights, and therefore (per earlier discussions) use a blended fledge ratio (0.6).	Develop new alternative ***(Done)***
Nest Initiation Flow	- Consider a nest initiation flow for plovers only**.** This would significantly reduce the amount of water required, particularly in June, and would result in little change in terns. (Do not replace the existing nest initiation flow; just consider adding this as an option for future consideration).	None at this time, but consider this as a possible future refinement if the GC wishes to consider flow options in detail
Accounting for productivity fluctuation	- Some TAC members questioned the logic of creating islands and then not providing flows, but were reminded that: a) islands would be naturally moated in many years, even without flow releases, b) the model incorporates productivity fluctuations over years, including years when it is zero, and the PM reports the long term average. It was agreed that the PM therefore accurately captures the reduced productivity of alternatives without flow releases.	None required.
Distribution of habitat	- Discussed the importance of spatial distribution of habitat, which is not captured in the model. - Proposed that a good approach would be to make a high-level decision about broad approach (what combination of on- and off-channel habitat) and then treat spatial distribution as a “detailed design” issue.	None at this time, but consider this as a possible future refinement
Alternatives designed to reach specific productivity objectives	- The TAC noted that there is no agreement that the Program should adopt any particular productivity objectives (e.g., Lutey or other). However, the TAC supports the idea of presenting alternatives with stretch targets for terns and plovers for the GC’s consideration, and suggested alternatives designed to achieve a doubling of plover breeding pairs relative to current (from 25 to 50).	See Action #1 below

TOPIC	DISCUSSION	ACTION
Round 2 Alternatives to present to GC	After reviewing the Round 1 alternatives, the TAC was asked to provide input on the alternatives to present to the GC. Recognizing the importance of limiting the set to a reasonable number, the TAC recommends: - Do not include on-channel only alternatives (due to low productivity). - Include off-channel only and combo alternatives. - Include nest initiation flows but not brood rearing flows. - Include alternatives that use the "MCA" approach to on-channel habitat, as modified today. - Distinguish between alternatives that are achievable with existing Program lands only and alternatives that require the acquisition of new land (in order to achieve more ambitious productivity outcomes). - Ensure the alternatives can be readily compared to each other (minimize the number of things that vary across the alternatives). The proposed alternatives therefore include (note new numbering): **A. Alternatives that are achievable with existing Program land** 1. Stay the course, or continuation of existing activities into the future. 2. Same as #A1, but expand to use all available Program land for both off-channel and on-channel. 3. Same as #A2 for off-channel, but replace its on-channel component with MCA. 4. Same as #A3 but add a nest initiation flow. **B. Alternatives that double Plover BPs** 1. Off channel only, add habitat options so that plover BP doubles in 20 years. 2. Same as #B1 but add on-channel habitat using MCA. 3. Same as #B2 but add nest initiation flow.	**1. Compass/EDO will run the revised alternatives and prepare pre-read package**
PREP FOR GC	Pre-read for the GC meeting will include: - Summary document, as for TAC but revised to be more stand-alone (acronyms, etc.). - PM Infosheets, as optional reading. - Technical memos on fledge ratio, habitat utilization, and habitat costs. - TAC meeting summary notes.	**2. Compass / EDO will distribute GC pre-read package by March 1**
Learning	USFWS to prepare a summary of potential specific learning objectives for on-channel actions (in order to help people better understand the benefit of higher Learning score for alternatives with more on-channel habitat).	**3. Matt will prepare a summary of learning objectives for GC consideration**
Pallids	USFWS was asked to clarify the issues related to the treatment of pallid sturgeon in this decision process that led to their abstaining from commenting on the PM (above), as this could represent a significant challenge for the SDM process. They agreed to seek (but could not commit to delivering) clarification on this for the March GC meeting.	**4. Matt/Eliza will seek clarification on USFWS concerns about the treatment of pallid sturgeon prior to the March GC meeting**

POST MEETING SUB-GROUP MEETING

TOPIC	DISCUSSION	ACTION
POST MEETING SUBGROUP WORK	The subgroup met immediately after the close of the TAC meeting to address the assigned tasks.	**5. Jason will modify the tern/plover model to incorporate TAC input**
Habitat utilization curve	Reviewed data and assumptions underlying the habitat utilization curve. The TAC agreed on a modified curve to use in the model.	As above
Habitat Costs	Reviewed data and assumptions for different methods/sites for creating on-channel and off-channel habitat. Developed low-cost and high-cost scenarios (sets of assumptions). Defined minimum, maximum and best guess estimates for cost / acre. Agreed to use the best guess as the average value in the model.	As above