Adaptive Management on the Platte River – Linking Science to Decision-Making

National Conference on Ecosystem Restoration
Los Angeles, CA
July 23, 2009
First Increment
13 years (2007-2019)

Protect or restore 10,000 acres
of habitat in central Platte

Reduce central Platte flow shortages by
130,000 – 150,000 acre-feet of water/yr

Program Document Footnote #7 – “The states have not agreed that these recommendations are biologically or hydrologically necessary to benefit or recover the target species.”

Credit: Brian Lehmann/UNK

11/08/2007
1) Improve production of interior least tern and piping plover from the central Platte River
   - Increase nesting pairs
   - Increase fledge ratios
   - Decrease adult mortality by reducing predation

2) Improve survival of whooping cranes during migration
   - Increase habitat availability on central Platte River (area of suitable roosting habitat and foraging habitat, proportion of population, crane use days)

3) Avoid adverse impacts from Program actions on pallid sturgeon populations
   - No indicators identified; further research needed

4) Within overall objectives 1-3, provide benefits to non-target listed species and non-listed species of concern and reduce likelihood of future listings
   - Increase habitat availability on central Platte River
Figure 6. Least tern and piping plover conceptual ecological model (including example locations for current hypotheses).
TP 1. There is an interaction of river and sandpit habitat.

As river habitat increases, additional birds will 1) move into the region, and birds will continue to use the sandpits at current number or 2) move from sandpits to the river.

The relationship between use and location (river, sandpit) may indicate a relative preference for nesting location.
1) **Flow-Sediment-Mechanical (FSM)**
   “Clear/Level/Pulse”

2) **Mechanical Creation/Maintenance**
   “Clear/Level/Plow”
Platte River Recovery Implementation Program

Independent Science Review (ISR)

Independent Scientific Advisory Committee (ISAC)

- Philip Dixon, Iowa State University
- David Galat, USGS Co-op Unit
- Robb Jacobson, USGS
- Kent Loftin, HydroPlan, LLC
- Dave Marmorek, ESSA Technologies
- John Nestler, Env. & Fisheries Serv.

Peer Review

- Four monitoring protocols:
  - Geomorphology/In-Channel Vegetation
  - Terns/Plovers
  - Forage Fish
  - Water Quality
Species recovery program, not ecosystem “restoration”

Program provides sideboards – can we make conditions birds will use?

How does the Platte fit in the life history of terns, plovers, and whooping cranes? – issues of meta-populations

Focus on what we can do