Biology Committee Meeting
Discussion on Recovery Goals for Razorback Sucker and Bonytail Chub
May 3, 2000
FWS, Grand Junction, CO

Attendees: Matthew Anderson, Kevin Christopherson, Tim Modde, Tom Chart, Tom Pitts, Rich Valdez, Art Roybal, Paul Dey, Tom Nesler, Tom Czapla, Chris Keleher, Mike Hudson, Jerry Roehm, Chuck McAda, Keith Rose, Bob Muth, Henry Maddux, Tom Pruitt, Steve Peterson, Loyal Mehrhoff, John Wullschleger, and Ron Ryel, Dave Soker, Frank Pfeifer, Ray Tenney.

Rich Valdez presented a new set of summary tables (dated May 1, 2000) which incorporated comments from the Management Committee and other's since the last version dated April 5, 2000. Comment period on pikeminnow and humpback is now, next will be in the Federal Register.

Razorback sucker: Concept for razorback sucker is, being aware of the Lake Mohave fish as the most genetically diverse, that population has been declining since the early 90's, from 30-40,000 down to 9,500 wild (not including those that have been stocked). Efforts to maintain the population have been ongoing - a longitudinal component to the genetic diversity. Lower basin will not be able to reclaim river reaches, they can repatriate riverside ponds. The Cibola area contains stocked ponds with 2-3 year classes which have been naturally produced.

This is not a recovery plan, site-specific management actions are necessary to address the threats (ESA $4). Water management in the lower basin is less flexible than in the upper basin.

Green River Subbasin

Flow recommendations are already out in some form. Western commented on removing the designation of the specific tributaries without an approved tributary report. Unless there is compelling evidence that says we should not include these based on the years of biological evidence the tributaries will be included. Other tributaries not included could also be listed as important.

A caveat related to these recovery goals - they will be updated and reviewed every 5 years to give the room or flexibility needed for the adaptive management that this program uses.

Regulate nonnative releases, etc. through agreements. [Green river subbasin: 3: changed to: Control nonnative fish releases and escapement into the main river, floodplain, and tributaries as needed, to recover the razorback sucker.] Changed to control - regulate implies more of state legal influence. Lower basin main river is probably not likely to be part of the recovery of the species.

Use number 6 under delisting to number 5. Investigations are covered under "as determined."

Colorado Subbasin

#1. Other tributaries deemed important.

Added site-specific management actions: Procure and/or protect habitats necessary to recover the razorback sucker, including flooded bottomlands. To be placed in the Green and Colorado river subbasins, not the others. [Text to include and modify to improve habitats, e.g., levee removal.]

#2. Tusher wash is not identified because the committee has not approved on its need and is also in the middle of the range and does not appear to be impeding to passage. Those identified are to increase the range. And expand the range, see page 3 at top pikeminnow #2.

San Juan: Implement/provide passage over on diversion structures as necessary to recover razorback sucker

Minimize entrainment in canals, as necessary, in Green, Colorado, San Juan river subbasins. Do not identify in summary, but exemplify in the text. (Green River: Green River Canal; San Juan: powerplants).

Change as in Green River #3.

First paragraph include "necessary to recover the razorback sucker" and drop from subbasins so additions of "as necessary" stand out more.

#6. Is an investigation necessary to recovery. Delete this item and change the first paragraph to include site-specific if legally necessary but broaden to include site-specific management actions are identified and addressed under various programs such as RIPRAP, these programs use adaptive management and are revised based on new information.

#2. Maintain unimpeded fish passage within occupied habitats; and expand range by insuring passage over Grand Valley Diversion, Price-Stubb Dam, and Government Highline, and continued passage over Redlands Diversion.

San Juan Subbasin

#1. Same
#2. Provide passage over diversion structures as necessary.
#3. Control nonnative fish releases and escapement into the main river, flood plain, and tributaries as needed. See upper basin that defines control, see Tyus and Saunders "Nonnative Fish Control Strategies."
#4. Same
#5. Minimize entrainment in canals as necessary.

Gila River Subbasin
During the 80's, approximately 14,000 small razorback sucker were stocked in Salt and Verde rivers, a few of those still exist and other activities of stocking 12" fish continues. Losses are attributed to flathead catfish. A problem may be that at recovery (delisting) is that commitments and agreements in place to maintain the Lake Mohave population.

Maintain these refuge populations through self-sustaining populations or active management.

Language should return to refugia populations in the lower basin.

Delete Gila River subbasin.
Lower Colorado River Subbasin
#2. Add "into these habitats."
#3. Add "into these habitats."
Identify and maintain current genetic diversity in Lake Mohave.

Lake Mohave:
#1. Maintain existing genetic viability for five years.

Discussion of General Table-1

Interim Management Objectives had a pikeminnow 4.5:1. Recovery goals use 3:1. Discussion revolved around previous IMO meetings and personnel that were more conservative in their approach, but in fact there is limited information that range from 1:1 to 59:1. Went with 1:1 when there was agreement; went 3:1 when there was controversy and to be conservative. Long-lived species, with high survival and multiple generations. Made an estimate of the historic population genetic diversity.

500 is used because its used in all other recovery packages.

Green River Subbasin

Pitts believes that the 95% confidence interval is too conservative. Some assurance we are above the criteria. If we got precise estimates, the actual population estimator may have to be as high as 7,500. Ongoing review of the information that is being developed on population estimates, in addition, the Program needs to consider annual population estimates.

Minimal estimated population of the lower 95% confidence interval of an estimated population of adults exceeds 5,800 for a period of 5 years. Suggest not using a number but say the MVP (minimum viable population).
b
#1c. Aging is becoming a requirement. Perhaps include parenthetically '(as determined by size range).' Show recurrence over a longer period of time because razorback may be more like the pikeminnow where they pulse in production. A five year estimate may be required, where 2 years are above some minimum. A proportion of age 3 fish that is not significantly lower than replacement levels (25% of the adult population for a five year period).

There are probably 2 spawning stocks, however, we are not going to break them out as separate populations. However, demographically, we may consider 2 stocks with specific target number and the younger ages may not meet the demographic criteria. Rich suggested razorback package will remain as is. Kevin Christopherson worries that these recovery goals are taking us in a different direction from other plans we have been developing, such as stocking plans.

1 Stock	vs.	2 Stock which would have separate criteria (not genetically different):
Roybal		Modde
Pitts		Chart
Dey		Anderson/Christopherson
Abstained		
Nesler		

This may change depending on if two stocks are determined in the future. It's a reproduction issue, that there is a chance we lose the lower green spawning population/site.

Add a management action that determines a viable population estimate for razorback sucker. For pikeminnow, an estimate of 200 adults based on biomass/bioenergetics modeling efforts by Vince Lamarra and Bill Miller.

Gila/Lower River.
(see discussion above)
Maintaining 2 refugia; control of nonnatives in habitats; remove the flow protection.

Delisting
Upper Colorado/San Juan River Subbasin.
Tom Pitts doesn't like the link between the two, their position is to separate the San Juan and Colorado River.

Gila/Lower Colorado River Subbasins.
(see above)

Monitoring Time: Fifteen year period of monitoring based on 2 generation times, because of the uncertainty of the populations establishing themselves. This will include the 5 year period of downlisting. Tom Pitts says the 15 years is too long a period to wait.

Bonytail

Changes we made to razorback sucker will carry over into the bonytail.

Lake Mohave or Lake Havasu? Check with lower basin folks.

Green River Subbasin:

Change #2 to "inaccordance with stocking plans (Nesler 1998 and Hudson 1999)."

Upper Colorado River Subbasin:

#1. Delete. In the text, identify under the genetics, that there is an existing protocol in place.
#2. Consistency, either use stock or establish populations

Gila River:

Transport any suspected bonytail from sampling efforts based on protocol.

Next Meeting: June 27 (10am) to June 28th (4pm), Salt Lake City, Utah - UDWR meeting room.
(Matt will make arrangements for meeting room)