

## **PALLID STURGEON/FISH AND WILDLIFE TECHNICAL WORKING GROUP (PS/FWG)**

**June 10<sup>th</sup>, 2005**

*Use and Meaning of the Meeting Notes: Plenary and Technical Working Group meeting notes are intended to be a general summary of key issues raised and discussed by participants at meetings. The presentation of issues or items discussed is not designed to be totally comprehensive, or reflect the breadth or depth of discussions. However, it is intended to record the gist of conversations and conclusions.*

*Where a consensus or other agreement was reached, it will be so noted. Where ideas are comments are from only one or several participants, or where a brainstormed list is presented the content of which was not agreed to by all group members, the recorders will to the best of their abilities note these qualifiers. When participants raise comments about the meeting notes, or make other suggestions or comments following meetings which are more than “corrections,” we will add these in a section at the end of the meeting notes captioned “Post Script”.*

The PS/FWG met during the morning and afternoon of June 9<sup>th</sup> to define its goals and identify tasks to achieve them.

### **Attendees:**

Bill Beacom	Gerald Mestl	Nick Stas
Brian Cannaday	Jane Ledwin	Patrick Cassidy
Craig Flemming	Jason Skold	Steve Wilson
David Galat	Karen Rouse	Tom Graves
Doug Latka	Mark Drobish	Tom Huntley
Gene Zuerlein	Michael Mac	

### **The initial goal of the PS/FWG is to:**

*Determine how Spring Rises below Gavins Point Dam affect pallid sturgeon spawning and recruitment. This includes how different patterns of releases impact spawning, rearing, maximization of floodplain connectivity, forage production and shallow water habitat.*

### **To achieve above goals:**

The PS/FWG brainstormed a list of possible hypotheses to be tested. These include:

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1. Does magnitude, duration, of SR, and duration of ascend and descend limbs affect spawning and nursery development?
2. Do temperature, photosensitivity and SR flows have to be linked (synchronicity) to have successful spawning?
3. Does first pulse stimulate movement? At a range of temperatures?
4. Does first pulse plow or prepare spawning beds?
5. Does pulse flow stimulate spawning?
6. On what part of the pulse does spawning occur? Before? After? Middle?
7. Will a single rise promote a successful spawn?
8. Does pulse flow stimulate reproductive hormones or egg maturation?
9. If there is successful spawning, but you can't catch larvae, how can we determine what has happened to eggs once they have been spawned? (Predators, fungus, what?)
10. Does pulse provide suitable dispersal conditions?
11. Do post-pulse flows affect larval dispersal?
12. Does a SR enhance nursery environment in Gavins Point reach?
13. Will SR encourage PS to use reaches where they have not previously been found?
14. Do hatchery fish respond to pulse flows in same way as wild PS do?
15. Does a SR hydrograph have affects on over-winter survival of PS at various stages of their lives?
16. Does the SR influence the spatial distribution of larva?
17. Does the SR influence nutrient availability?
18. Does a SR positively benefit other species that could adversely impact the PS - habitat, food, etc.?
19. Do high summer flows put more predators into nursery habitats?
20. How many PS does there have to be before it can be de-listed?
21. How can we evaluate whether a spring rise is most important in the main channel or the tributaries for spawning?

### **Analysis and Refinement of Hypotheses**

The hypotheses listed above will be submitted to Gerald Mestl's NGPC Pallid Sturgeon Team to:

- ◆ Categorize and arrange by periods in the PS life cycle;
- ◆ Gain additional input and refinement;
- ◆ Determine how hypotheses fit with what has been, currently is, or needs to be studied;
- ◆ Determine what can and cannot be measured;
- ◆ Frame hypotheses in testable forms; and
- ◆ Make recommendations regarding priorities for study.

Gerald will bring this information to a meeting of biologists – Gerald, Craig, Jane and others - for discussion. The meeting will be held at Columbia, MO on June 14<sup>th</sup> and 15<sup>th</sup>.

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Results of this meeting will be sent to Gerald's Team for review by the 20<sup>th</sup>. Comments from the Team are expected to be received by the 23<sup>rd</sup>. Results of this work will be sent to all members of the PS/FWG by the 24<sup>th</sup> for their review before the next Technical Group Meeting on the 28<sup>th</sup> in Bismarck ND.

**Data Needs.** The PS/FW Technical Working Group also identified the need to develop a data base on what is known or being studied regarding the PS. Members want information so that they can identify what data is missing or needs to be added to, and determine the most critical information to obtain before making recommendations to the Plenary Group. They especially want to get information collected by the Bureau of Reclamation on the Platte and Yellowstone Rivers.

However, the Technical working group acknowledged that it would be impossible to assemble a complete data base during the limited time when it was in operation. As an alternative, the group determined that the real need was to get an understanding of all the work that is currently going on to give us an idea of what is being done and perhaps what needs to be added to capture the hydrologic and biologic responses to the proposed rise.

Groups and individuals to be contacted to obtain the information identified above include:

- ◆ The Upper Basin Pallid Sturgeon Work Group
- ◆ Steve Krenz-USFWS, Bismarck, ND
- ◆ Wayne Stancil-USFWS, Pierre, SD
- ◆ Herb Bollig-USFWS, Gavins Point National Fish Hatchery, Yankton, SD
- ◆ Pat Braaten-USGS, CERC-Fort Peck, MT
- ◆ Mike Ruggles-Montana FWP, Fort Peck, MT
- ◆ Tracy Hill-USFWS, Columbia, MO
- ◆ Wyatt Doyle-USFWS, Columbia, MO
- ◆ Aaron Delonay-USGS, CERC, Columbia, MO
- ◆ Sue Camp (BOR), Billings, MT
- ◆ Dave Fuller-Montana FWP, Fort Peck, MT
- ◆ Geo. Jordan-USFWS, Billings, MT
- ◆ Vince Travnichek-Missouri (MDC), St. Joseph, MO
- ◆ Andy Starostka-USFWS, Columbia, MO
- ◆ Dave Herzog-Missouri (MDC), Jackson, MO
- ◆ Ed Peters-Retired from University of Nebraska
- ◆ Rob Klumb-USFWS, Pierre, SD
- ◆ Bill Gardner-Montana FWP, Lewiston, MT

Craig will put together a description of what studies have or are being done, and will e-mail it out to PS/FWG members.

### **Next Steps.**

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Once the PS/FWG determines which hypotheses it will recommend be tested, its members will:

- ◆ Clarify biological meaningful start points
- ◆ ID monitoring & measures to define how to measure progress/success
- ◆ ID measures to assess how fish are responding
- ◆ ID people/groups/agencies who will monitor, check, measure
- ◆ ID what would be measures of significance
- ◆ Discuss an adaptive management program
- ◆ Recommend funding to achieve the above

### **Further Discussion**

The PS/FWG also discussed whether:

- ◆ there are enough PS to conduct meaningful studies;
- ◆ surrogate species – such as the Blue Sucker, Shovelnose sturgeon or Paddlefish – which respond to similar environmental and hydrological conditions as the PS could be used;
- ◆ surrogate species might be used for study in the reach below Gavins Point,
- ◆ tagged hatchery PS could be used both for experimentation and for further use in hatcheries to produce eggs (Ed Peterson’s study indicates that this may be possible); and
- ◆ hatchery fish could be moved into the Gavins Point area for study (and concluded probably not).

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