Meeting Minutes: SD Pallid Sturgeon Management Team
Date: December 14, 2004
Attendees: Carol Aron, Herb Bollig, Steve Chipps, Rick Cordes, Eileen Dowd-Stukel, George Jordan, Rob Klumb, Scott Larson, John Lott, Gerald Mestl, Wayne Nelson-Stastny, Mark Rath, Jim Riis, Jeff Shearer, Dane Shuman, Jason Sorensen, Wayne Stancill, Dennis Unkenholz, Gerry Wickstrom, Steve Wilson (on phone for morning)

Comments included from Mark Drobish (Corps) who was not able to attend due to a conflicting meeting.

Next Meeting: Conference Call, March 15, 2005, 10:00 Central Time

Team Composition and Outreach:
The group discussed the team's composition. No Corps representative was present, and the Corps is an obvious player who should participate in the process. Note: Mark Drobish has stated his intention of participating in the future (he had a conflicting meeting this time). General Strock was very knowledgeable in the Missouri River when he had a position relating to it, but has since moved on to a new position. He would be a good person to keep informed. Also, Casey Kruse, John Remus and Ken Stark should be kept informed. The tribes should also be involved in the process.

The team is primarily composed of fish experts; it might also be useful to have input from a hydrologist and a habitat specialist. Jack Erickson, SDGFP, would be a good person to participate (Note: Jack does not have time for much engagement at this time; he might have some more time in a few months, in the meantime we will keep him informed). The Missouri River Futures group is interested in buying land or easements from riverfront landowners and would also be a good group to include.

Population Monitoring:
Nebraska Game and Parks is monitoring from around the Platte River to Kansas City. They have started working in some of the more difficult sections of the river recently, and have been catching pallids, and also chubs, a benthic species thought to be associated with pallids. The FWS is monitoring below Fort Randall, and SDGFP just started monitoring below Gavins Point Dam. Ideally, all of the data collection rangewide will be standardized and compiled in one place. The Missouri Department of Conservation has discussed serving as a data repository for native fish data on the Missouri River. It is important to remember that pallids often occur in greatly altered habitats, which is where most of the data are currently being collected. This habitat type may not represent their optimal or preferred habitat compared to a more natural system.

Note: Mark Drobish reports that the Pallid Sturgeon Population Assessment Program is now fully implemented from Fort Randall Dam to the mouth near St. Louis.
Segments 5 & 6 are being covering by the FWS (Stancill's Crew)-Fort Randall Reach
Segment 7 covered by the SDGF&P-Gavins Point Dam to Ponca
Segments 8 & 9 covered by the Nebraska Game and Parks Commission (NGPC)-Ponca to the Platte and the Platte to the Kansas River
*Segments 10, 11 & 12 covered by Missouri Department of Conservation (MDC)-lower Kansas River and the Missouri River from the Kansas to the Grand River and the Grand to Glascow.

Segments 13 & 14 covered by the FWS (Columbia, Missouri Fishery Resources Office (FRO)-Tracy Hill)-Glasgow to the Osage and the Osage to the mouth.

*MDC is currently under contract with the Corps to handle the data entry, QA/QC, database management and conduct basic analysis for all segments for the program.

Segments 1-4 (Fort Peck Reach) is currently not implemented. Mark has still not been able to work things out regarding a contract with the Montana Department of Fish, Wildlife and Parks (MTFWP). FWS (Krentz) will cover segment 4-confluence of the Yellowstone River to the headwaters of Lake Sakakawea beginning in the spring of 05 if Mark can find the resources to make this happen.

The program underwent an Independent Science Review conducted by Sustainable Ecosystems Institute and the recommendations were consolidated into a report. The Pallid Sturgeon Population Assessment Team will meet in January (25-27) to incorporate the recommendations and to continue to develop the program (e.g. standardized reporting, Independent Science Review recommendations, etc.)

Flow Test Monitoring:
A flow test is scheduled for Fort Randall/Gavins Point in 2006. It is critical to have testing evaluations ready to try to link pallid sturgeon response to flow changes. That is likely the only way to get the Corps' attention at a high enough level to make a difference. Note: Mark Drobish reports that Doug Latka is working with the USGS (Columbia Environmental Research Center) on this effort. In conjunction with the Scaphirhynchus Conference in St. Louis on January 10th, Doug and the USGS will be providing an overview of this effort. Mark Drobish, Craig Fleming, and Casey Kruse are encouraging this effort to be opened up for input from the biological/science community to develop this along the same lines that the Population Assessment Program and Shallow Water Habitat (SWH) Monitoring Program have been developed.

Bank Stabilization:
The Park Service inventoried the bankline to determine the amount of bank stabilization from Fort Randall to Ponca (excluding the stretch from Running Water to Gavins Point which is not part of their jurisdiction). A report will be ready soon.

Plan Approach:
Dennis noted that the state had developed a strategic plan some years ago which is relevant to the current effort. This effort seems to fit in well with the goals developed for the strategic plan, and we should keep the state's overall strategy in mind. The plan should focus on habitat, rather than just on the pallid.

The river no longer has access to the high cut banks along most of the riverine stretches, and Wayne Stancil suggested that especially with the infrastructure there, it is not going to be possible to ever reconnect the river to its old floodplain. However, the form and function might be restored somewhat if the river could be reconnected to part of the floodplain and allowed some degree of overbank flow. Using old photographs, it would be possible to identify the old river floodplain and purchase land or easements there to erode into the river and create new terraces. Additional research on amount of sediment and the temperature regime necessary to bring back the functionality of the river would also be useful. We are never going to go back to a bluff to bluff scenario, but it might be possible to restore some of the river's functionality with some lesser amount of floodplain.

Propagation and stocking:
The Gavins Point National Fish Hatchery has developed a repository of fishes from all crosses made since the inception of the propagation program for future broodstock use. They currently have 64 families representing eight year classes. The Pallid Sturgeon Propagation Committee is about to come out with an updated propagation plan. This is a guidance document, not a set of mandates for propagation and stocking. It addresses such issues as zebra mussels, whose larval form was sampled below Gavins Point and Fort Randall Dams during 2003. To ensure that stocked fish do not carry them, fish will be treated with potassium chloride, a solution which has been shown to kill all veligers.

The group discussed whether SDGFP would issue a contingency permit that would allow incidentally-caught pallids to immediately be taken to Gavins Point NFH to be kept until they reach better condition and then be stocked in the lower Missouri River in South Dakota/Nebraska. This could be done with a permit application that follows SDGFP's procedure.

The Corps' 2003 Biological Assessment identified expanding hatchery capabilities to meet the propagation/population augmentation needs of the species relative to recovery. The Corps recognizes that stocking is not a solution to recovery but merely a necessary step to augment a population whose numbers have dropped below the critical threshold for recovery based on natural reproduction.

Currently the entire stocking program relies on the few fish collected in North Dakota in the Yellowstone River and confluence area. These are old fish that will likely not be available for the duration necessary to meet the population augmentation needs of the species. The existing programs (i.e., Population Assessment Crews, Mitigation Monitoring Crews, future SWH monitoring crews) as well as specific focused efforts are needed to capitalize on the opportunities to include wild pallid sturgeon throughout the Missouri River system into the propagation program to maximize the genetics of the progeny that will represent the future of the species. This was a major portion of the justification for making the Gavins Point National Fish Hatchery (NFH) expansion become a reality. These are all pieces of the puzzle and all of the pieces are critical to a successful end result.

More work needs to be done on the long-term effects of irridovirus on fish that survive the initial outbreak, both stocked and those that remain in the hatchery. There have been outbreaks at both the Gavins Point and the Garrison fish hatcheries, but it seems to be worse at Garrison. The disease is transmitted vertically.

Upper Basin Meeting:
The Upper Basin Workgroup met at the beginning of December in Montana. As defined in the Recovery Plan, the stretch below Fort Randall Dam is considered to be in the upper basin, while the Gavins Point stretch is in the Middle Basin, so South Dakota is included in this group. It would be good if South Dakota sent a representative/had more involvement in that group.

Threats:
The plan should include a threats section, including such topics as: the walleye predation issue, non-natives, zebra mussels, contaminants, and Asian carp.

Plan Components:

The team discussed items that should be included in the plan. Members agreed to develop a draft write-up about various components as per their expertise. Please e-mail these drafts to me/the team by **February 28, 2005** so that the team has time to read them before the next meeting. Identified tasks and people to work on them are below. Thanks!

1. *Habitat - all*
   -The plan should define what is necessary for the sturgeon and other native benthic fish.
   -What was the pre-dam temperature regime, is temperature important as a cue for reproduction?
   -There doesn't seem to be enough turbidity for reproduction. There is more turbidity below some of the tributaries. How much is necessary?
   -How much shallow water habitat is necessary? The BO called for 20-25 acres/river mile, which will be evaluated to determine if it is sufficient.
   -We are not going to be able to re-create pre-dam conditions, so we should work towards incremental changes and monitor to determine what is required for natural reproduction and recruitment (there is evidence that there has been some recruitment below Gavins Point Dam). Paddlefish are spawning near Verdel, and this may also provide appropriate habitat for pallids.
2. Tributaries - *Dane*
   -Are tributaries important for pallids or for food production?
   -Would more tracking studies of pallids help?
3. Bank stabilization/floodplain habitat - *Steve Wilson, Gerald Mestl, Mark Rath*
   -Evaluate historic photographs of the Missouri River and its floodplain
   -Define and delineate an area along the river that could be flooded regularly (annually, every 5 years etc.) to restore some floodplain to the river. If elevations of existing structures are available, that might provide more information about what areas to exclude.
   -Work with funding source and landowners to purchase land or easements to allow erosion.
   -Nebraska Game and Parks is already working on this to some extent, but needs the images. The Park Service would also be interested.
4. *Hatchery - Jim, George, Rick, Herb*
   -The existing federal hatcheries are short on space every year. Gavins Point just did some major renovations, but they will continue to be short on space, especially as they keep some fish from every cross and don't want to overcrowd fish because of the increased risk of irridovirus. Other states (Missouri and Montana) are participating in raising pallids at hatcheries, and it may be helpful if South Dakota would raise pallids in state hatcheries (Blue Dog). Dennis Unkenholz had previously expressed concern about the state taking on this federal responsibility. Jim Riis will discuss the possibility with Dennis and Blue Dog Fish Hatchery staff and raise the issue of pallid sturgeon rearing at Blue Dog as an agenda item at the Winter Fisheries Meeting in February. Blue dog just underwent some major renovations and has provisions for future expansion with the purchase of more equipment.

   Note: Mark Drobish comments " I would caution everyone before bringing additional facilities on board to rear pallid sturgeon. In 1998 only 750 fish were stocked in RPMA 2 based on the stocking plan at that time. I would say that the majority of folks working on this effort feel that these numbers were too conservative. Over the past 3 years, the stocking plan numbers have changed each year and today many feel that it is merely a numbers game and is not based on credible science. The FWS (Stancill) recently has taken the lead on putting together a Missouri River Stocking Plan. When completed, this plan should provide the target numbers to be stocked. This target should be compared

with the capabilities of the 6 facilities already rearing pallids before adding more hatcheries to the list. The Corps obviously has an interest and concern here. Last year, we put over $5 million into hatchery facility improvements and I've since been hammered because there isn't a stocking plan that provides the solid target numbers. If once the stocking plan is completed and blessed by the Service, we need more space or facilities to rear the fish, I'll have solid justification to fight for additional resources."

5. *Iridovirus - Rick, Herb*
   -There are many research questions associated with this disease. There is circumstantial evidence to indicate that the virus may be transmitted vertically (parent to progeny via gametes), but there are many variables to substantiate the evidence nor has there been the development of sensitive screening techniques to verify vertical transmission of the virus. It is still a fish health management goal to eliminate the virus in propagated populations. Fish that tested positive are surviving, but we don't know the long-term effects.
   -To our knowledge, it only affects pallids and shovelnose, the closely related paddlefish doesn't seem to be affected.
   -South Dakota has a fish health management plan. This plan may include the plan as an appendix, or parameters from it explaining the criteria for accepting or rejecting fish.
6. *Public Outreach - Chuck Schlueter and Larry Gigliotti*
   -The first year class of pallids released (1997) had dangler tags primarily to alert anglers to release any captured pallids. That seemed to work well - there was a lot of awareness among anglers in Nebraska.
   -It would be a good idea to keep the public informed and interested in pallid issues. This could include ceremonial stocking events, radio and television pieces. FWS has done some segments with Tony Dean.
   -Boat ramps have signs telling anglers to release all sturgeon. The Corps, coordinating with Steve Krentz, has put together informative signs for boat ramps throughout the Omaha District regarding the Terns, Plovers and Pallids. These signs include the toll free number to report pallid catches (1-888-203-9577).
   -We need to make sure that we get the word out that there is not a conflict between pallids and gamefish. A habitat approach should benefit both. This could be addressed annually in the Corp's Annual Operating Procedure (AOP) letter, which should also include specific flow recommendations that will benefit pallid sturgeon. At present, this information is not included in South Dakota's AOP letter, mainly because we don't know what specific recommendations to make.
7. Sediment Transfer - Wayne Stancill
   -South Dakota should get more involved in the ongoing discussions. Because of the delta forming in association with the Niobrara River, Lewis and Clark Lake is not functioning like a river. A flushing event would cause a short-term decline in the Lewis and Clark fisheries, but it would likely have long-term benefits for hundred of miles downstream as well as delayed local effects. A flushing experiment in Lake Sharpe several years ago did not appear to accomplish what was promised, but there may not have been a drastic enough flow. In 1997, there was great paddlefish reproduction, presumably as a result of the high flows.
   -Wayne Stancill pointed out that we need to think of the river as a unit, and less like a series of impoundments. Fish are already going through Gavins Point Dam (i.e, moving between segments), and we need to recognize this in our management activities.
   -The importance of sediment on pallids is not known, and should be studied.
8. Interagency Coordination - everyone, especially Scott

-Missouri River Recovery Implementation Committee (MR RIC) - Scott mentioned that it would be good to have more South Dakota involvement in river-wide issues, including MR RIC, when this group is formed.
-To be effective, we must identify and interact with key people within the Corps, including resource personnel like Casey Kruse, people in key positions, such as the ecosystem recovery coordinator, and the leadership in Omaha.
-Other groups which should be kept informed - Missouri River Natural Resource Council (MRNRC), Mississippi Interstate Cooperative Resource Association (MICRA), Missouri River Basin (MRBA), Bank Stabilization Coalition, sedimentation group, others?

Miscellaneous Information:
Wayne Stancil will be going to school this January through May. Dane Shuman will be taking his place on the team during that time.