

**Sturgeon PWT Meeting**  
July 21, 2010  
3500 Industrial Blvd., Room 106  
West Sacramento, CA 95691  
10:00 a.m. – 3:00 p.m.

1) *Yolo Bypass White Sturgeon (Kevin Reece)*

- a) A 17' x 10' fyke is used for sampling the Toe Drain upstream of Lisbon Weir. No gear efficiency tests have been ran but it samples ~10% of the channel. To date, 97 sturgeon is the highest number caught during one 24-hour sampling period. Sturgeon may arrive in early February depending on flows. Generally arrive in April with or without a flow pulse. Normally sampled in large numbers; only the tail-ends of the catch have one to a few fish.
- b) No juvenile sturgeon and only one egg in really poor condition have been sampled. No green sturgeon detected in Yolo Bypass studies but one was reported caught in the 2009 CDFG Creel Report.
- c) Discussions with wardens suggest that Liberty and Cache may be staging areas. Mike P. pointed out that staging does not necessarily mean spawning. However, the 67 sturgeon caught last season were all running milt.
- d) Fremont Weir is an area of concern for passage and for poaching of migrating sturgeon. Report from CDFG says ~25% of the sturgeon heading upstream to the Sacramento River use the Bypass while other data indicates the number to be around 33%.
- e) Andrea S. indicated of the need to know whether the fish are staying in the Bypass or heading back into the Sacramento River. Recruitment is known to be major issue in other sturgeon populations. Kohlhorst (1976) does suggest that white sturgeon may spawn over muddy and sandy areas in the Sacramento River although he acknowledges this is not typical for sturgeons. Another white sturgeon population that spawns over sandy substrates is the endangered Kootenai River population which has experienced recruitment collapse for over 20 years (and poor substrate due to sedimentation after impoundment of the KR is thought to be an important factor in recruitment problems)
- f) Other points discussed related to presentation
  - i) Melia N. will assist in tagging 120 sturgeon this fall with CDFG.
    - (1) Blood samples will also be taken to gather steroid data.
    - (2) Joel V.E. cautioned that environmental factors can influence steroid results.
    - (3) Initially, biopsies will be performed to confirm steroid data.

2) *Viability of Green Sturgeon in the Sacramento River - A Preliminary Model (Jan Hoover & Nick Friedenberg)*

- a) The Sacramento River Bank Protection Project wants a population index to determine possible effects of revetment. Using Population Viability Analysis

- (PVA) is a good way to look at benefits and impacts. They will also utilize telemetry, DIDSON, and pectoral ray aging to gather information.
- b) Model uses stage info from Beamesderfer et al. 2007 (i.e., juvenile, marine, subadult, adult in slot, adult). Based on an 80,000 foot project and assumes a 10% 3-year acute mortality each pass (upstream and down).
  - c) Preliminary runs
    - i) Low annual survival = 10%
    - ii) High annual fecundity = 50%
    - iii) 10,000 iterations using same random numbers to stabilize
    - iv) 50 year simulation
    - v) Chronic low – 0.5% mortality; baseline decreases 0.6% per year
      - (1) Acute 12.7%
      - (2) Chronic 13.0%
      - (3) Combo 24%
    - vi) Probability of losing 25%; baseline 0.5
      - (1) Acute 94%
      - (2) Chronic 94%
      - (3) Combo 100%
  - d) Appears larval survival is likely to be the major issue; WE NEED TO KNOW THIS NUMBER!
  - e) Overall outcome – if the population only declines 0.6% per year than improvements to any lifestage would be an improvement to the overall population.
  - f) Other points discussed related to presentation
    - i) Bill P. indicated that larval nets are only efficient for smaller fish; all larvae sampled using this methodology were about 26 mm while they collected fish up to 80 mm in the rotary screw traps.
    - ii) Josh I. asked if the model could be fitted using larvae instead of adults. Nick F. said yes but there is a need to know the driving factors for that lifestage and didn't think that was understood at this time.
    - iii) Pete K. gave an update from Ethan M. that a number of fish are being detected at Antelope Creek and China Rapids at the wall. Currently he is guessing that there are about 75-100 sturgeon in the Sacramento River. Others working on the river think that number is likely higher.
    - iv) Bill P. also mentioned that the redistribution of the adults downstream during the summer correlates with his egg surveys. Adult redistribution appears to correlate with the period following the last egg collections.

### 3) *BDCP Effects Analysis Results Concerning White and Green Sturgeon (Josh Israel)*

- a) Wanted to let the group know that it is being worked on.
- b) Very interested in the PVA because it will be needed for future BiOps.

### 4) *Items of Interest*

- a) David W. presented Matt M. with an Environmental Stewardship Award for his efforts to protect sturgeon on the Sacramento River.

b) *Law Enforcement*

- i) David W. noticed while looking at telemetry data that some fish just disappeared so he got in contact with Don T of NMFS's Office of Law Enforcement. If we have **any information about potential illegal activity or issues, please contact Don at (916) 930-3658.**
- ii) Don T. has been proactive in having a YouTube video removed from the web that shows an individual harassing a sturgeon in the surf at the mouth of the Big Sur River. Nothing more can be done because the timing of the incident occurred before regulations were in place.

c) *List of Sturgeon Study Projects* – See separate Excel file (2010 Sturgeon Studies List) if interested.

5) *Update on the Finalized 4(d) for Green Sturgeon and What It Means to You (Jeff Jahn)*

- a) Jeff is currently working on both the 4(d) and Section 10(a)(1)(A). The 4(d) process will help minimize the Section 10 workload. Stressed that Incidental Take in **Section 7 doesn't mean you have coverage** even if it is required in a BiOp – you need to **confirm coverage with NMFS.**
- b) Interim exceptions exist for current research if it follows certain parameters. If you think the project meets the exception criteria, contact Jeff so he can send you the details for all the elements needed in the project description. This description needs to be sent to the Long Beach office by August 31, 2010.
- c) Recommends all green sturgeon research should try for an exemption through the 4(d) program (except hatchery or rearing projects which need a Section 10). Contact Mary Nicholl if you want to be notified at [mary.nicholl@noaa.gov](mailto:mary.nicholl@noaa.gov).
  - i) The 2011 research 4(d) application window is open September 15-October 18, 2010 through “*Authorizations and Permits for Protected Species (APPS)*” at <https://apps.nmfs.noaa.gov/>.
    - (1) You can start the 4(d) application now; you don't need to wait until September.
    - (2) Chapter 3 of the on-line application instructions provides detailed information regarding each section of the application.
    - (3) Attach an Excel spreadsheet to the application of all field crew that will be working on the project that includes the person's name, Scientific Collecting Permit (SCP) #, and SCP expiration date. They will be considered Co-investigators.
    - (4) If working with someone in a federal office, include name and contact information within the Federal Information section of the application.
    - (5) If updating curriculum vitae, upload the new one and delete the old one if it gets pulled up. Contact them if the old one can't be deleted.
    - (6) Entities and Responsible Party are optional for 4(d).
    - (7) If someone has problems logging into APPS, it is likely because he/she was a past co-investigator on a project and never was assigned a password. Contact Mary Nicholl for a temporary password.

- ii) If NMFS does not receive an application by October 18, 2010, you will be liable for any and all take after that.
- iii) If you are unsure how your activities are covered, make sure to consult with the appropriate key contacts:
  - (1) David Woodbury, Recovery Coordinator, North Central Coast Office
  - (2) Shirley Witalis, Section 10(a)(1)(A), Central Valley Office
  - (3) Doug Hampton, Research related to OCAP BiOp, Central Valley Office
  - (4) Jeff Jahn, 4(d) , North Central Coast Office
  - (5) Russ Bellmer, CDFG Fisheries Branch, SCP and 4(d)
  - (6) Eloise Tavares, CDFG Fisheries Branch, SCP and 4(d)
- d) If a project is approved for inclusion to the 4(d) program then the activities are exempt from Section 9.
  - i) Annual reports are due January 31 of each year.
  - ii) Projects will apply annually allowing for annual updates to the projects
  - iii) NMFS conducts a section 7 consultation on approving the 4(d) research program annually.
- e) OCAP, FERC, and USACE BiOps that include required monitoring need to be confirmed on a project by project basis.
  - i) If uncertain, then you should follow up with the NMFS lead for the section 7, or for OCAP contact Doug Hampton, or you can apply for the 4(d) research program and NMFS will have adequate project information to confirm if the activities are covered under section 7 coverage or not
    - (1) There is a section that asks questions regarding federal information and allows for better connection between the States and Feds
    - (2) If Section 7 is coverage is confirmed, then 4(d) will not needed and the application will be withdrawn.
    - (3) This process is also beneficial because it provides definitive confirmation of coverage.
- f) **Summary of important dates**
  - i) **Exceptions → August 31**
  - ii) **Exemptions → September 15 – October 18**
  - iii) **Section 10(a)(1)(A) → submit application on the APPS website no later than November 29**
- g) Suggested that 4(d) permittee applicants get together in November for a special session meeting to troubleshoot any permitting concerns.

6) *A Protocol for Use of Shortnose, Atlantic, Gulf, and Green Sturgeons (Jeff Jahn)*

- a) The final protocol document will be provided to the PWT as soon as it is published which, according to Headquarters should be very soon.
- b) At this point it is unknown if these are guidelines or requirements.
- c) Waiting for delegated authority for 10(a)(1)(A) from Headquarters.
- d) Researchers should adhere to the guidelines/protocols as much as possible. However, if protocols will not be followed then the project description needs to explain and justify why not (i.e., Guidelines will be followed except this study will not be using MS-222 because of concern that fish might be eaten).

## 7) Study Updates

- a) Bill Poytress: Sampling 6 sites. Collecting more eggs in higher reaches than lower. Larvae have been collected at RBDD and Tehama Bridge.
- b) Robert Chase: VPS is up and running. Twenty-three larvae are currently being reared at the lab; believe they can hold 60. Has tagged 3 adult fish.
- c) Aric Lester: Rotary screw traps put in at Moulton Weir (about a month ago) and another one mile upstream of Tisdale.
- d) Alicia Seesholtz: USFWS (Bill & Josh) used a video camera in four potential spawning areas to view substrates and assess habitat value. Two somewhat favorable. Egg mats deployed by DWR near Thermalito Afterbay Outlet from April - June. No sturgeon eggs collected. The second site (the most favorable) not sampled because low flows made it unreachable by boat. DIDSON surveys getting great fish footage but no sturgeon detected yet. Collaborating with USBR sturgeon tagging on the Sacramento River; to date one DWR tag deployed.
- e) Dennis Cocherell: Currently conducting screen trials. Next month will begin will focus on salinity. Also, will conduct strobe and vibration studies to determine if they are deterrents.
- f) Javier Miranda: No sturgeon have been salvage at the Pumps so at this point, there are no sturgeon to tag and monitor.
- g) David Grant: Working with Ethan Mora to determine a population estimate for green sturgeon on the Sacramento River using the DIDSON. He is estimating ~100-200 adult based on current surveys.
- h) Pete Coombe: Recently got a SonTek ADCP
- i) Alex Hearn: Downloading Bay receivers starting tomorrow. Put in RAP system at Antelope; will be looking at flow and spawning. Current data shows sturgeon appear to have a preference for the area along the thalweg in Antelope Creek.

Figure 1. Preliminary data using the RAP system (labels A, B, and C) shows a track in the Sacramento River near Antelope Creek for one sturgeon with a depth sensor tag.



- j) Mike Thomas: Tagged 6 fish this spring; lower in the river due to high spring flows. Interesting data – aggregate moving; found new location which was confirmed with the DIDSON. Fish are very mobile; new gate configuration at RBDD appears to help.
- k) Melia Nafus: Looking at CA Fish Tracking Consortium data to assess distribution and movement to see how levee repairs may be affecting the. She will be tagging sturgeon in August and September with DFG.
- l) Jason Dubois: Getting ready for DFG's Sturgeon Study.
- m) Andrea Schreier: Data collection in progress.
- n) Joel Van Eenennaam: Spawned Northern DPS greens
- o) David Woodbury & Zac Jackson shared a discussion they had with Marty Gingras: Five green sturgeon caught in the San Joaquin River upstream of the Tuolumne near Laird Park (RM ~80-90). The angler reported they were about 24-31 and mature (running milt)?!
- p) David Woodbury: A VEMCO array will be going in near Eureka.

**Attendees:**

Full Name	Affiliation
Brown, Josh	DWR
Conrad, Louise	DWR
Chase, Robert	USBR
Cocherell, Dennis	UCD
Coombe, Peter	DWR
Coulston, Pat*	DFG
DuBois, Jason	DFG
Friedenberg, Nicholas	Applied Biomathematics (USACE)
Grant, David	DWR
Gruber, Josh	USFWS
Hampton, Doug	NMFS
Hearn, Alex	UCD
Herbold, Bruce	EPA
Hoover, Jan	USACE (MS)
Israel, Josh	UCD
Jackson, Zac	USFWS
Jahn, Jeffrey	NMFS
Johnson, Michele	DWR
Klimley, Pete	UCD
LaCivita, Peter	USACE
Lester, Aric	DWR
Liu, Qinqin*	DWR
Manuel, Matt	PSMFC
Miranda, Javier	DWR
Mulvey, Brian	USACE
Nafus, Melia	UCD
Nicholl, Mary	NMFS
Parsley, Mike*	USGS (WA)
Poytress, Bill	USFWS
Reece, Kevin	DWR
Schreier, Andrea	UCD
Schreier, Brian	DWR
Seesholtz, Alicia	DWR
Tanner, Don	NMFS/OLE
Tavares, Eloise	DFG
Thomas, Mike	UCD
Van Eenennaam, Joel	UCD
Wikert, JD	USFWS
Witalis, Shirley	NMFS
Woodbury, David	NMFS

*\*Called in*