

**Vessel Strikes Working Group Discussion**  
**February 11, 2011**  
**NMFS Sturgeon workshop; Alexandria, VA**

**Summary of General Discussion:**

**Location/Timing/Magnitude/Monitoring**

James River, VA—used to see 7-10 Atlantic sturgeon per year that were believed to have been struck by vessels. There seem to be fewer strikes now although there is no formal reporting network. Shipping traffic has gone down quite a bit on the James – the port is looking to promote an increase in barge traffic versus container ship (the river cannot accommodate the larger-size container ships that the industry is going to). In terms of monitoring – reports are ad hoc. There is an informal network of people who report (e.g., National Park Service staff, fishermen, general public). The primary spot for vessel strikes is believed to be in a stretch of the river where the control depth is 25' and the channel (a man-made cut) is very narrow. Also, there is a turn so large vessels often have to power-up to navigate the turn. They know sturgeon occur in that particular area of the channel since telemetry tracked fish have been recorded to be there. Sturgeon carcasses are sampled, whenever possible. The samples are sent to Albert Spells (USFWS) and he disperse the samples (e.g., a subsample is sent to Tim King for genetics analysis).

A few studies have been attempted to acquire additional information. Live sturgeon were put into the path of a vessel moving through the channel to look at behavior of the fish. All of the sturgeon moved away from the oncoming vessel (were not struck). Matt Balazik tagged and tracked dead sturgeon to see where dead sturgeon may be drifting and whether they were observed and reported (see Matt's work for further information). A study using tracked sturgeon was also conducted to investigate how the sturgeon moved around an operating dredge.

The local ACOE office, particularly Sarah Cameron and Steve Powell, are very interested in addressing the issue of vessel strikes for Atlantic sturgeon on the James River.

Hudson River, NY – hear about a sliced sturgeon once in a while but it doesn't appear to be a major issue. There is a lot of deepwater habitat and the channel is deep. For example, at Haverstraw Bay, water depth is 40' and the channel is wide.

Delaware River, DE – This is a heavily trafficked area with ~3,000 vessels (*from notetaker – believe he meant commercial*) moving back and forth each year. Get reports from everywhere so don't really know where strikes are occurring. There is a peak of sturgeon reports in springtime and a smaller peak in the fall but reports occur all through the summer as well. Carcasses are in various stages of decomposition. Persistence of the carcass depends on the time of year and the position on the shore (above or below the wrack). Most reports come from the public. The fishing guide (since 2009) asks the public to report sturgeon carcasses to DNREC. Have seen an increase in reporting since the information was included in the fishing guide. However, the reporting rate is unknown. He (Matt F., DNREC) uses his own protocol for estimating length of the carcass when only a partial carcass is found. All of the information collected on (apparent) vessel struck sturgeon goes into the Delaware compliance report to the ASMFC (note that this information is not required per the ASMFC Sturgeon FMP).

Maryland – Receive 1-2 reports a year, almost exclusively from the west end of the C&D Canal. There is public information out for reporting sightings. Usually, if a report is received, call USFWS and their staff may go out and take some (limited) data.

### **What is a vessel struck sturgeon – what to look for?**

- Damage to scutes, e.g., cut, broken, both;
- Fish cut completely into 2 pieces; across the body or behind the head; and,
- Hash marks across the fish (presumed to be from propeller(s) of smaller vessels).

How can a vessel strike be identified as pre- or post-mortem? Also, there still are questions from the public and/or shipping industry on whether sturgeon (or as many as reported) are being struck by vessels. For example, people mention that we don't see the carcasses of other vessel struck fish in the same areas.

#### Suggested follow-up and Comments

- For marine mammals (e.g., right whales) veterinarians have attempted to answer the question of whether a strike occurred pre- or post-mortem – perhaps advice can be provided for sturgeon as well;
- Notes for an observed carcass should include whether the injuries appear to be manmade; and,
- Photographs of broken scutes can help to support a determination that this was a vessel strike.

### **Brainstorming ideas – How to acquire needed information and reduce vessel strikes:**

- Slowing down – being used now in areas to address right whale vessel strikes, so commercial traffic already accommodating schedule changes for that species. In areas where sturgeon movement is restricted (e.g., narrow, shallow channels), slowing down may still not provide enough time for the sturgeon to get out of the way of a large ship and, in some areas, vessels need to power-up to navigate so may not be able to slow down sufficiently throughout the area affected.
- Propeller guards – theoretically possible but may not be feasible depending on the size of the vessel and amount of “trash” encountered in the waterway.
- Avoidance – use some sort of sound to deter sturgeon from an area where vessel strikes are more likely to occur– but what if area is critical to the life history of the sturgeon.
- Sturgeon behavior – could the sturgeon be following a vessel because the prop-wash stirs up prey items? Perhaps but doesn't seem to fit with all cases of vessel strikes. The sturgeon use different water depth when moving (e.g., Sept./Oct. in the Delaware) versus feeding. So, behavior at certain times of year and in certain areas can place the sturgeon at greater risk of being struck.

### **Action Items**

- Need to address data gaps, including estimates of the number of vessel struck sturgeon
- Identify critical areas where vessel strikes occur
- Identify whether slowing down would help to reduce vessel strikes
- Involve the Port Authority in finding a solution (perhaps also the ACOE, depending on area and ACOE interest/involvement)
- Standardize the data collection form and submit to the ASMFC as part of the compliance report and/or to a centralized location so it is easier to find (search on ) the information (Kim D-R suggest the NMFS stranding/salvage database could be a repository for the information)
- Put information into each state fishing guide about whom to contact (make sure this is accurate and direct) and what to report

- Design a study (perhaps starting with the James River because of information currently available) to better assess sturgeon strikes in the wake of vessels (e.g., by trawling behind)
- Design a study to better assess reporting rates (e.g., use of sturgeon replicates, aka “rubber sturgeon”).