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Atlantic Sturgeon Update

May 23, 2013

Outline

- Brief background
- Update on information available for Atlantic sturgeon
- Overview of draft batched fisheries Biological Opinion (BiOp)
- Next steps

ESA Listing

- 5 distinct population segments (DPS) of Atlantic sturgeon listed in April 2012
- Incidental catch in commercial fisheries determined to be one of the primary threats
- All incidental catch illegal unless covered by a section 7 incidental take statement or section 10 permit

Formal Section 7 Consultation on NER Fisheries

- NEFSC bycatch analysis (April 2011) identifies fisheries and gears which have been observed to interact with Atlantic sturgeon
- Incidental catch in sink gillnet and otter trawl gear, not possible to determine which specific fishery takes occur
- Batch consultation includes:
 - Groundfish
 - Monkfish
 - Dogfish
 - Skate
 - Squid/mackerel/butterfish
 - Bluefish
 - Summer flounder/scup/black sea bass

Jeopardy Analysis

- The jeopardy analysis examines the “future” with and without the action under consideration to determine if the proposed action is likely to appreciably reduce the species likelihood of survival and recovery

Effects Analysis for sturgeon

- Determine the effect of the 7 fisheries, as they currently operate, on each DPS of Atlantic sturgeon
- Estimate the number of Atlantic sturgeon likely to be captured/injured/killed per DPS
- Determine if that annual loss is likely to appreciably reduce the likelihood of survival and recovery

Best available information

- Originally, no population estimates available for Atlantic sturgeon
- At the time the BiOp was initiated (February 2012), there was significant concern regarding possibly recommending major changes to fisheries without data to support need
- This April, NEFSC completed a new method for estimating ocean population

Atlantic Sturgeon Population Index (ASPI)

Based on

- Fishery bycatch estimates (NEFSC 2011)
- Data from USFWS tagging database
- Estimates of life history parameters from literature

ASPI

- Risk analysis model –inputs include encounter rate and mortality rate
- Estimates ocean abundance only in area sampled by NEFOP
- Estimates range from 165,381-744,597 (mean = 417,934)
- Internally peer reviewed
- Will be reviewed and considered by the Atlantic sturgeon stock assessment committee

NEAMAP

- NEFSC also calculated minimum swept area biomass from NEAMAP survey
- Trawl surveys in coastal areas from Cape Cod to Cape Hatteras in nearshore waters up to 18.3 m.
- Fall 2007-present, Spring 2008-present
- Atlantic sturgeon frequently sampled
- Net efficiency of sturgeon capture in survey not known
- Using 50% catchability, ocean estimate of Atlantic sturgeon is approximately 67,776

Draft BiOp Overview

May adversely affect, but is not likely to jeopardize, the continued existence of North Atlantic right whales, humpback whales, fin whales, and sei whales, or loggerhead (specifically, the NWA DPS), leatherback, Kemp's ridley, and green sea turtles, any of the five DPSs of Atlantic sturgeon, or GOM DPS Atlantic salmon.

ITS – Sea turtles

- loggerhead sea turtles from the NWA DPS
 - 269 individuals/year over a 5 year average in gillnet gear (156/year may be lethal);
 - 204 individuals over a 4 year average in bottom trawl gear (96/year may be lethal);
 - 1 individual in trap/pot gear, which may be lethal or non-lethal;
- leatherback sea turtles
 - 4 individuals/year in gillnet gear (3/year may be lethal);
 - 4 individuals/year in bottom trawl gear (2/year may be lethal);
 - 4 individuals/year in trap/pot gear, which may be lethal or non-lethal;
- Kemp's ridley sea turtles
 - 3 individuals/year in gillnet gear (2/year may be lethal);
 - 3 individuals/year in bottom trawl gear (2/year may be lethal);
- green sea turtles
 - 4 individuals/year in gillnet gear (3/year may be lethal);
 - 3 individuals/year in bottom trawl gear (2/year may be lethal).

ITS – Atlantic sturgeon

- GOM DPS
 - 137 individuals/year over a 5 year average in gillnet gear (lethal 17 adult equivalents/year)
 - 148 individuals/year over a 5 year average in bottom trawl gear (lethal 5 adult equiv/year)
- NYB DPS
 - 632 individuals/year over a 5 year average in gillnet gear (lethal 79 adult equiv/year)
 - 685 individuals/year over a 5 year average in bottom trawl gear (lethal 21 adult equiv/year)
- CB DPS
 - 162 individuals over a 5 year average in gillnet gear (lethal 21 adult equiv/year)
 - 175 individuals/year over a 5 year average in bottom trawl gear (lethal 6 adult equiv/year)
- Carolina DPS
 - 25 individuals/year over a five-year average in gillnet gear (lethal 4 adult equiv/year)
 - 27 individuals/year over a five-year average in bottom trawl gear (lethal one adult equiv/year)
- SA DPS
 - 273 individuals/year over a five-year average in gillnet gear (lethal 34 adult equiv/year)
 - 296 individuals/year over a five-year average in bottom trawl gear (lethal 9 adult equiv/year)

ITS – Atlantic salmon

- 1 GOM DPS Atlantic salmon/year on average in gillnet gear, of which a lethal take may occur once every 3 years;
- 1 GOM DPS Atlantic salmon on average annually in bottom trawl gear, of which a lethal take may occur once every 2 years.
- The anticipated level of incidental take of Atlantic sturgeon and Atlantic salmon for the recreational components of the seven fisheries cannot be estimated at this time.
- The ITS includes four Reasonable and Prudent Measures (RPMs) and ten implementing Terms and Conditions.

Proposed RPMs

1. NMFS must ensure that any sea turtles, Atlantic sturgeon, and Atlantic salmon incidentally taken in gears used in these fisheries (e.g., gillnet, bottom trawl, trap/pot, and hook and line gear) are handled in a way as to minimize stress to the animal and increase its survival rate.
2. NMFS must continue to investigate and implement, within a reasonable time frame following the completion of ongoing and future research, modifications to gears used in these fisheries to reduce incidental takes of sea turtles, Atlantic sturgeon, and Atlantic salmon and the severity of the interactions that occur.
3. NMFS must continue to review available data to determine whether there are areas or conditions within the action area where sea turtle, Atlantic sturgeon, and Atlantic salmon interactions with fishing gears used in these fisheries are more likely to occur.
4. NMFS must ensure that monitoring and reporting of any sea turtles, Atlantic sturgeon, and Atlantic salmon encountered in fishing gear utilized in the seven fisheries: (1) detects any adverse effects such as serious injury or mortality; (2) detects whether the anticipated level of take has occurred or been exceeded; and (3) collects data from individual encounters.

Review of Draft BiOp

- Draft BiOp posted on our website – <http://www.nero.noaa.gov/mediacenter/index.html>
- Available for review for **60 days**
- Comments will go to our Sustainable Fisheries Division for consideration
- The email address to submit comments is nmfs.ner.batchfmpbiop@noaa.gov
- SFD will provide substantive comments to Protected Resources Division for consideration in final BiOp
- PRD will revise the BiOp as necessary and finalize it for signature, expected to be signed in the fall of 2013

Section 10(a)(1)(B)

- NMFS is continuing to work with states on section 10 applications to address takes in state waters.
- Section 10 permit issued in December to Georgia for takes of shortnose and Atlantic sturgeon in the commercial shad fishery.
- NMFS recently sent a draft of an implementing agreement to NC for monitoring and adaptive management. We are close to having a complete application, and we will start processing it soon.

Next steps for sturgeon

- New ocean estimates will be reviewed and considered for inclusion in the ASMFC benchmark stock assessment
- Stock assessment expected to be completed in 2014 or early 2015
- Results of the stock assessment will help to determine if a new status review is necessary
- If new status review initiated, NMFS will draw from the work of the stock assessment committee and focus on just those areas necessary to address information gaps to help inform a listing determination (similar to river herring)



*Working towards healthy, self-sustaining populations
for all Atlantic coast fish species or successful
restoration well in progress by 2015*

Atlantic Sturgeon FMP Review





Status of the Fishery

- Complete Atlantic states moratorium since 1997.
- EEZ harvest prohibited in 1998.
- Will remain in effect until stocks exhibit a minimum of 20 protected yearclasses of spawning females





Bycatch

- In 2011, a total of 429 Atlantic sturgeon were reported as bycaught in various fisheries on the Atlantic Coast.
- Majority occurred in the DE River gillnet fishery (153) and the SC Winyah Bay American shad gillnet fishery (181).
 - 8 of the 9 ATS caught in the RI anchored gillnet fishery were dead.
- Underreporting concern





Ship Strikes

- In 2011 there were 21 Atlantic sturgeon carcasses reported from the Delaware Estuary, of which 17 had external injuries that were most likely the result of being struck by a ship propeller.
- An additional adult sized male Atlantic sturgeon carcass with signs of vessel strike was reported in the Nanticoke River.





Status of the Stock

- ASMFC Stock Assessment – 1998
- Status Review - 2007
- ESA Listing Endangered/Threatened – 2012
- New benchmark assessment initiated in 2013 and expected to be peer reviewed in early 2015.





Ongoing Research

- Sturgeons in the mid-Atlantic region: a multi-state collaboration on research and conservation (2010 through 2013) – CT DEP, NY DEC, DDFW, and NJDEP
- Reducing sturgeon interactions in striped bass anchored gill nets – VIMS
 - Use of raised footlines often aided in reduced ATS bycatch, while not greatly affecting the SB fishery
 - Some mesh sizes in float nets only resulted in a 10% reduction of striped bass catch.





Ongoing Research

- Research and Management of Endangered and Threatened Species in the Southeast: Riverine Movements of Shortnose and Atlantic Sturgeon” - NCDMF, SCDNR, University of Georgia, NCSU
- In 2011, the University of Georgia completed it’s 10th year of an ongoing study focusing on the Atlantic sturgeon population of the Altamaha River.
 - Total juvenile biomass (for age-1 and age-2) reached the highest point on record in 2011.





Habitat

- One dam removed on Penobscot R. in 2012 and another scheduled for removal in 2013
- Ongoing consultation with NY DEC on proposed high voltage power transmission line in the Hudson River.
- In 2011 Virginia Commonwealth University and its partners, constructed two Atlantic sturgeon spawning reefs in the tidal James River in 2010 and 2011.





Compliance

- States are required to submit information on:
 - Results of bycatch monitoring for Atlantic sturgeon in other fisheries;
 - Monitoring results
 - Habitat status
 - Aquaculture operations status
- The PRT finds all states in compliance with the FMP.





Recommendations

- States are requested to:
 - Further improve understanding of critical habitat utilization and population estimation.
 - Specify when no ATS are encountered in gear that typically encounters sturgeon.
 - Continue to educate fishing communities on identification techniques to distinguish shortnose and Atlantic sturgeon.
 - Expand programs to estimate sturgeon bycatch in their fisheries.

