

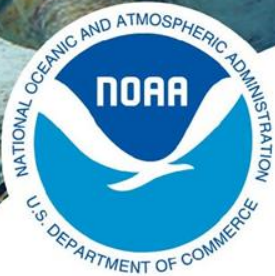


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Biological Opinion Update Scallop FMP

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ESA Section 7 Overview

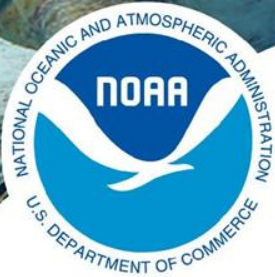
- Under the ESA, NMFS is required to review our actions to determine whether they may affect endangered or threatened species or critical habitat
- For the Scallop FMP, we determined that the fishery is likely to adversely affect sea turtles
- This determination was made as part of the formal consultation process



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ESA Section 7 Overview

- NMFS issued the most recent biological opinion in 2012
- In the opinion, we estimated the number of sea turtles that may be incidentally taken as a result of the scallop fishery
- We determined that the take of sea turtles in the fishery would not jeopardize the continued existence of sea turtles and issued an incidental take statement



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ESA Section 7 Overview

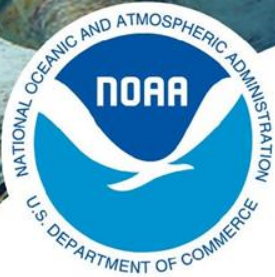
- The incidental take statement contains reasonable and prudent measures and terms and conditions designed to reduce the impact of the expected take of sea turtles
- Scallop effort (dredge hours) are used as a way to monitor sea turtle takes
- Currently under litigation



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Why Use Effort to Monitor Turtle Takes?

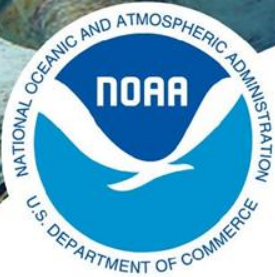
- The use of TDDs and chain mat gear has reduced the number of observed sea turtle takes
- Dredge hours are used as a proxy to monitor the take of sea turtles that would otherwise likely go unnoticed under the water's surface
- Positive relationship (correlation) between fishing effort and estimated sea turtle interactions



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When is Turtle Take Exceeded?

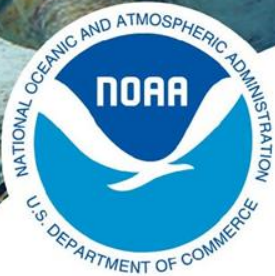
- Effort is monitored from May-November in the Mid-Atlantic (NMFS stat areas generally south of Cape Cod)
- We assume the incidental take statement for sea turtles has been exceeded if, over any future two-year period, the average number of estimated dredge hours exceeds 359,797 hours



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How Did We Estimate the Number of Dredge Hours?

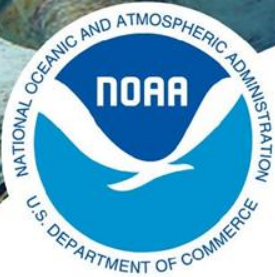
- In the 2012 opinion, we considered Murray (2011) paper as the best available info on sea turtle interactions in the dredge fishery
- The incidental take statement for sea turtles is based on the take estimates in Murray's paper for the 2007-2008 time period (first two years following chain mat requirements)
- The two-year average was 359,797 dredge hours for the 2007-2008 period



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How Did We Estimate the Number of Dredge Hours?

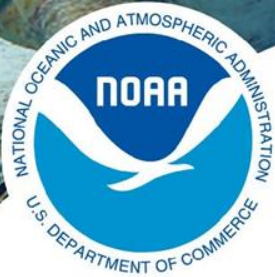
- To account for inter-annual variability in fishing effort and environmental conditions, we set the Mid-Atlantic dredge hour proxy as a two-year running average
- Dredge hours are a reliable proxy because effort data are well-documented and available by location and season
- The dredge hour calculation excludes time during which the vessel is not actively fishing (avoids errors that would be introduced by including time in which turtle-gear interactions cannot occur)



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How did we miss the overage? Why the sudden increase in effort?

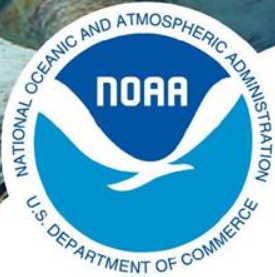
- In 2019, we discovered that two gear codes for turtle deflector dredges had not been included when we counted the number of dredge hours
- When those gear codes were included, the number of hours increased
- This led to the discovery that the dredge effort proxy had been exceeded twice—first in 2015-2016 and again in 2016-2017



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How did we miss the overage? Why the sudden increase in effort?

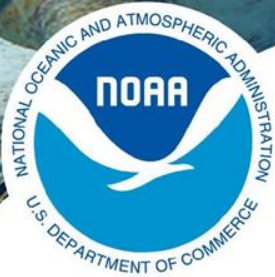
- An unusual increase in Mid-Atlantic dredge effort in 2016 was the driver for the two exceedance events
- Result of several factors
 - All rotational areas on GB, plus the southern flank of GB, were closed; this pushed effort into the Mid-Atlantic
 - Areas with high scallop density were closed, increasing tow-times in less dense areas
 - Additional DAS were allocated
 - Presence of nematodes led to discards and additional effort



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How Can We Be Sure This Won't Happen Again?

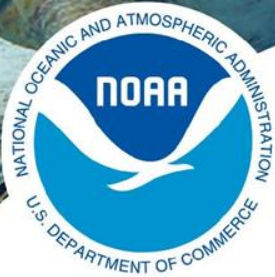
- Which data are used?
 - May-November Mid-Atlantic dredge effort
 - VTR based
 - Includes limited access & general category
- As of 2019, all four gear types accounted for:
 - Scallop dredge w/ no gear mods (i.e., standard dredge)
 - Scallop dredge w/ chain mats
 - Scallop dredge w/ turtle deflector
 - Scallop dredge w/ chain mats and turtle deflector



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How Can We Be Sure This Won't Happen Again?

- Perform regular QA/QC checks on Dealer and Vessel Trip Reports
- Perform a suite of audits to detect problems:
 - Missing catch records
 - Mismatched records
 - Data out of range
 - Exceeded thresholds, etc.
- Improved communications among staff to ensure we account for all gear codes/changes



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How Can We Be Sure This Won't Happen Again?

- Exploring various options
- The SAMS model could be used to project dredge hours in the Mid-Atlantic based on different specifications alternatives
- This information would then be used to alert the Council of alternatives that may exceed the dredge hours



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Timeline for the new Biological Opinion

- Formal consultation was reinitiated on February 14, 2020, due to the confirmed exceedance of the incidental take statement
- While consultation is ongoing, the fishery can continue to operate provided we follow the measures contained in the 2012 opinion and the fishery does not exceed the level of fishing effort anticipated in Framework 32 for the 2020 fishing year
- Intend to complete new biological opinion prior to the start of 2021 scallop fishing year (April 1, 2021)



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Questions?