

Occurrence of Commercially Important and Endangered Fishes in Delaware Wind Energy Areas Using Acoustic Telemetry

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Prior to offshore wind development, baseline information is needed on endangered species such as the Atlantic sturgeon. Between 2017–2019, an extensive acoustic telemetry project monitored the timing and location of Atlantic sturgeon, winter skate, and other acoustically telemetered species in the Delaware Wind Energy Area. This study was conducted to better understand the potential of encountering these species during future development in the area, as well as address potential impacts to commercial fisheries (e.g., winter skate). Environmentally driven models of Atlantic sturgeon and winter skate were developed. Between Feb 2017 and Feb 2019, receivers recorded 43,620 detections of 360 individual Atlantic sturgeon. Acoustic detections from all receivers in the array documented the presence of 26 different marine fish and mammals, which creates a baseline to inform future monitoring efforts.

Images | (left) collecting metadata for Atlantic sturgeon | (center) map of study area and telemetry stations | (right) collecting metadata for Winter skate

Findings

- Atlantic sturgeon were observed during all months of the period but occurred most frequently in the late fall/early winter.
- Atlantic sturgeon were also most concentrated in the northern portion of the study region, except in the late fall/early winter, when they were detected throughout the entire array.
- Winter skate occurred less commonly and were concentrated in the shallowest portion of the study region.
- Both species appear to be related to bottom type and topography, which is most distinctive in the northern portion of the Delaware Wind Energy Area.

How BOEM will use this information

- Baseline information for environmental assessments of offshore wind development
- Improve future post-construction telemetry studies of fish

Additional information

- Final report: https://espis.boem.gov/final%20reports/BOEM_2020-020.pdf

