

Appendix B. List of Preparers and Reviewers, References Cited, and Glossary

B.1. List of Preparers and Reviewers

Table B-1 Bureau of Ocean Energy Management Contributors

Name	Role/Resource Area
National Environmental Policy Act (NEPA) Coordinator	
Landers, Lisa	Environmental Protection Specialist
Resource Scientists and Contributors	
Ajilore, Ololade (Lola)	Navigation and Vessel Traffic
Baker, Arianna	Navigation and Vessel Traffic
Bigger, David	Birds; Bats; Coastal Habitat and Fauna
Boatman, Mary	Other Uses
Brune, Genevieve	Land Use and Coastal Infrastructure
Bucatari, Jennifer	Other Uses – Marine Minerals
Chaiken, Emma	Demographics, Employment, and Economics; Recreation and Tourism; Commercial Fisheries and For-Hire Recreational Fishing
Cody, Mary	Marine Mammals; Sea Turtles
Conrad, Alexander	Marine Mammals; Sea Turtles
Dobbs, Kerby	Other Uses – Marine Minerals
Draher, Jennifer	Water Quality
Fulling, Gregory	Marine Mammals; Sea Turtles
Heinze, Martin	Demographics, Employment, and Economics
Hesse, Jeffrey T.	Other Uses
Horrell, Christopher	Cultural Resources
Howson, Ursula	Benthic Resources; Coastal Habitat and Fauna; Commercial Fisheries and For-Hire Recreational Fishing; Finfish, Invertebrates, and Essential Fish Habitat; Other Uses; Recreation and Tourism; Wetlands
Jensen, Mark	Demographics, Employment, and Economics
Renick, Hillary	Tribal Liaison
McCarty, John	Visual Resources; Recreation and Tourism
McCoy, Angel	Meteorologist, Technical Design Elements
Miller, Jennifer	Other Uses
Moshier, Marissa	Cultural Resources
Schnitzer, Laura (LK)	Cultural Resources
Shanahan, Amy	Cultural Resources
Slayton, Ian	Air Quality
Stokely, Sarah	Cultural Resources
Waskes, Will	Project Coordinator
Wolf, Jacob	Air Quality

Table B-2 Reviewers

Name	Title	Agency
Brown, William Y.	Chief Environmental Officer	BOEM
Baker, Karen	Chief, Office of Renewable Energy	BOEM
Morin, Michelle	Chief, Environment Branch for Renewable Energy	BOEM
Stromberg, Jessica	Acting Chief, Environment Branch for Renewable Energy	BOEM
Ottman, Noel	Solicitor	DOI
Vorkoper, Stephen	Solicitor	DOI
Heckman, Andrea	Lead Environmental Protection Specialist	BSEE
Sample, Steven	Executive Director, DOD Siting Clearinghouse	DOD
Austin, Mark	Strategic Programs, Environmental Review Team Lead	USEPA Region 2
Nolan, Katie	Team Leader for Renewable Energy & Offshore Wind, Team Leader of Redevelopment & Restoration	NJDEP
McLean, Laura	Ocean and Lakes Policy Analyst	NYSDOS
Krueger, Mary	Energy Specialist	NPS Interior Region 1, North Atlantic - Appalachian
Tuxbury, Susan	Wind Program Coordinator, GARFO Habitat and Ecosystems Division	NMFS
Crocker, Julie	Endangered Fish Branch Chief, GARFO Protected Resources Division	NMFS
Keith Hanson	Marine Habitat Resource Specialist, GARFO Habitat and Ecosystem Services Division	NMFS
Anthony, Brian	Biologist	USACE Philadelphia District
Creelman, Matthew	Marine Transportation Specialist	USCG District 5
Ciappi, Michael	Senior Fish and Wildlife Biologist	USFWS

DOI = Department of the Interior; GARFO = Greater Atlantic Regional Fisheries Office; NPS = National Park Service

Table B-3 Consultants

Name	Company	Role/Resource Area
Baer, Sarah	ICF	Demographics, Employment, and Economics; Environmental Justice
Byram, Saadia	ICF	Editor
Copeland, Tanya	ICF	Project Manager
Diller, Elizabeth	ICF	Project Director
Ernst, David	ICF	Air Quality/Climate
Gleaton, Soniya	ICF	Comment Processing
Johnson, David	ICF	Bats; Birds; Coastal Habitat; Water Quality; Wetlands
Jost, Rebecca	ICF	Other Uses; Recreation and Tourism; Land Use and Coastal Infrastructure
Lentz, Corey	ICF	Cultural Resources and Section 106 Support
Mendoza, Tiffany	ICF	Public Involvement

Name	Company	Role/Resource Area
Munaretto, Claire	ICF	Demographics, Employment, and Economics; Environmental Justice
Paulson, Merlyn	ICF	Scenic and Visual Resources
Read, Brent	ICF	Geographic Information Systems
Schanel, Pam	ICF	Public Involvement
Tavel, January	ICF	Cultural Resources and Section 106 Lead
Valley, Nathalie	ICF	Navigation and Vessel Traffic
Wheaton, Jenna	ICF	Section 106 Support; Comment Processing
Winslow, Anne	ICF	Deputy Project Manager
Latham, Pam	RPI	Benthic Resources; Finfish, Invertebrates, and Essential Fish Habitat
Butwin, Matt	Prospect Hill Consulting	Commercial Fisheries and For-Hire Recreational Fishing
Baigas, Phil	WSP	Sea Turtles
Mathies, Noelle	WSP	Marine Mammals
Zottenberg, Katelyn	WSP	Marine Mammals

QA/QC = quality assurance/quality control; RPI = Research Planning, Inc.

B.2. References Cited

B.2.1 Chapter 1, Introduction

Bureau of Ocean Energy Management (BOEM). 2012. *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore New Jersey, Delaware, Maryland, and Virginia Final Environmental Assessment*. (OCS EIS/EA BOEM 2012-003). January. Available: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/Smart_from_the_Start/Mid-Atlantic_Final_EA_012012.pdf.

Bureau of Ocean Energy Management (BOEM). 2021a. Commercial Wind Leasing Offshore New Jersey. Available: <https://www.boem.gov/commercial-wind-leasing-offshore-new-jersey>. Accessed: September 14.

Bureau of Ocean Energy Management (BOEM). 2021b. Ocean Wind. Available: <https://www.boem.gov/renewable-energy/state-activities/ocean-wind-1>. Accessed: September 14.

Bureau of Ocean Energy Management (BOEM). 2021c. *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2021-0012. Available: <https://www.boem.gov/vineyard-wind>.

Bureau of Ocean Energy Management (BOEM). 2021d. *South Fork Wind Farm and South Fork Export Cable Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2020-057. Available: <https://www.boem.gov/renewable-energy/state-activities/sfwf-feis>.

Bureau of Ocean Energy Management (BOEM). 2022a. *Ocean Wind 1 Offshore Wind Farm Biological Assessment for the United States Fish and Wildlife Service*. November.

Bureau of Ocean Energy Management (BOEM). 2022b. *Ocean Wind 1 Offshore Wind Farm Biological Assessment for National Marine Fisheries Service*. September.

Bureau of Ocean Energy Management (BOEM). 2022c. *Ocean Wind 1 Offshore Wind Farm Essential Fish Habitat Assessment for National Marine Fisheries Service*. November.

Minerals Management Service (MMS). 2007. *Final Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf*. (OCS EIS/EA MMS 2007-046). October. Available: <https://www.boem.gov/renewable-energy/guide-ocs-alternative-energy-final-programmatic-environmental-impact-statement-eis>.

B.2.2 Chapter 2, Alternatives Including the Proposed Action

Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.

U.S. Army Corps of Engineers (USACE). 2020a. *Final Environmental Assessment, National Regional Sediment Management (RSM) Program, WRDA 2016 Section 1122 Beneficial Use Pilot Project: Barnegat Inlet, Ocean County, New Jersey*. July. Available: <https://www.nap.usace.army.mil/Portals/39/docs/Civil/Reports/Final-EA-Barn-Inlet-Section-1122.pdf?ver=5ZCXRjPZrKroezSsUb6Lww%3d%3d>.

U.S. Army Corps of Engineers (USACE). 2020b. *Final Environmental Assessment, National Regional Sediment Management (RSM) Program, WRDA 2016 Section 1122 Beneficial Use Pilot Project: Oyster Creek Channel, Barnegat Inlet Federal Navigation Project, Ocean County, New Jersey*. November. Available: <https://www.nap.usace.army.mil/Portals/39/docs/Civil/Reports/Final-EA-Barn-Inlet-Section-1122-Oyster-Creek-November-2020.pdf?ver=5ZCXRjPZrKroezSsUb6Lww%3d%3d>.

B.2.3 Chapter 3, Affected Environment and Environmental Consequences

B.2.3.1 Section 3.1, Impact-Producing Factors

Bureau of Ocean Energy Management (BOEM). 2017. *Evaluating Benefits of Offshore Wind Energy Projects in NEPA*. July. BOEM 2017-048. Available: <https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/Final-Version-Offshore-Benefits-White-Paper.pdf>.

Bureau of Ocean Energy Management (BOEM). 2019. *National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Outer Continental Shelf*. May. OCS Study BOEM 2019-036. Available: <https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/IPFs-in-the-Offshore-Wind-Cumulative-Impacts-Scenario-on-the-N-OCS.pdf>.

B.2.3.2 Section 3.2, Mitigation Identified for Analysis in the Environmental Impact Statement

None.

B.2.3.3. Section 3.3, Definition of Impact Levels

None.

B.2.3.4. Section 3.4, Air Quality

Barthelmie, R. J. and S. C. Pryor. 2021. “Climate Change Mitigation Potential of Wind Energy.” *Climate* 9(9):136. Available: <https://www.mdpi.com/2225-1154/9/9/136>. Accessed: November 5, 2021.

Buonocore, J. J., P. Luckow, J. Fisher, W. Kempton, and J. I. Levy. 2016. “Health and Climate Benefits of Offshore Wind Facilities in the Mid-Atlantic United States,” *Environmental Research Letters* 11 (2016) 074019. DOI:10.1088/1748-9326/11/7/074019.

Bureau of Ocean Energy Management (BOEM). 2017. *BOEM Offshore Wind Energy Facilities Emission Estimating Tool, User’s Guide*. Available: <https://www.boem.gov/Wind-Power-User-Guide/>. Accessed: November 5, 2021.

Council on Environmental Quality (CEQ). 2016. *Final Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change*. Available: https://ceq.doe.gov/guidance/ceq_guidance_nepa-ghg.html. Accessed: November 5, 2022.

Council on Environmental Quality (CEQ). 2023. *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*. Available: <https://www.federalregister.gov/d/2023-00158>. Accessed: March 2023.

Dolan, Stacey L., and Garvin A. Heath. *Life Cycle Greenhouse Gas Emissions of Utility-Scale Wind Power*. *Journal of Industrial Ecology* 16(S1):S136–54. Available <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1530-9290.2012.00464.x>. Accessed: January 31, 2023.

Ebi, K. L., and G. McGregor. 2008. Climate change, tropospheric ozone and particulate matter, and health impacts. *Environ Health Perspect.* 116(11):1449–1455. DOI: 10.1289/ehp.11463.

Exponent Engineering and Scientific Consulting (Exponent). 2000. *A User’s Guide for the CALPUFF Dispersion Model (Version 5)*. Available: http://www.src.com/calpuff/download/CALPUFF_UsersGuide.pdf. Accessed: November 15, 2022.

Federal Land Managers’ Air Quality Related Values Work Group (FLAG). 2010. *Phase I Report—Revised (2010)*. Natural Resource Report NPS/NRPC/NRR—2010/232. U.S. Forest Service, National Park Service, and U.S. Fish and Wildlife Service. Available: <https://irma.nps.gov/DataStore/DownloadFile/568936>. Accessed: September 20, 2022.

Ferraz de Paula, L., and B. S. Carmo. 2022. Environmental Impact Assessment and Life Cycle Assessment for a DeepWater Floating OffshoreWind Turbine on the Brazilian Continental Shelf. *Wind* (2):495–512. Available: <https://doi.org/10.3390/wind2030027>.

Hogrefe, C., K. Civerolo, J-Y. Ku, B. Lynn, J. Rosenthal, K. Knowlton, B. Solecki, J. Cox, C. Small, S. Gaffin, R. Goldberg, C. Rosenzweig, and P. L. Kinney. 2004. *Modeling the Air Quality Impacts of Climate and Land Use Change in the New York City Metropolitan Area*. Models-3 Users’ Workshop, 18–20 October 2004. Research Triangle Park, NC.

- Interagency Working Group on Social Cost of Greenhouse Gases (IWG). 2021. *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide – Interim Estimates under Executive Order 13990*. Available: https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf. Accessed: November 2, 2022.
- Katzenstein, W., and J. Apt. 2009. Air Emissions Due to Wind and Solar Power. *Environmental Science and Technology* 43(2):253–258. Available: <https://pubs.acs.org/doi/abs/10.1021/es801437t>.
- Kempton, W., J. Firestone, J. Lilley, T. Rouleau, and P. Whitaker. 2005. “The Offshore Wind Power Debate: Views from Cape Cod.” *Coastal Management Journal* 33(2):119–149. DOI: 10.1080/08920750590917530.
- Monitoring Analytics. 2021. *2020 State of the Market Report for PJM*. Available: <https://www.pjm.com/-/media/committees-groups/committees/mc/2021/20210329-special/20210329-state-of-the-market-report-for-pjm-2020.ashx>. Accessed: November 8, 2021.
- National Oceanographic and Atmospheric Administration (NOAA). 2006. *Small Diesel Spills (500–5000 gallons)*. Available: https://dec.alaska.gov/spar/ppr/response/sum_fy10/100111201/NOAAFactsheet_Diesel.pdf. Accessed: November 2, 2021.
- National Renewable Energy Laboratory (NREL). 2021. *Life Cycle Assessment Harmonization*. Available: <https://www.nrel.gov/analysis/life-cycle-assessment.html>. Accessed: January 31, 2023.
- New Jersey Board of Public Utilities. 2019. *2019 New Jersey Energy Master Plan*. Available: https://nj.gov/emp/docs/pdf/2020_NJBPU_EMP.pdf. Accessed: November 5, 2021.
- New Jersey Department of Environmental Protection (NJDEP). 2019. *New Jersey 2019 IEP Technical Appendix*. Prepared by Evolved Energy research. Available: https://nj.gov/emp/pdf/New_Jersey_2019_IEP_Technical_Appendix.pdf. Accessed: November 5, 2021.
- Ocean Wind LLC (Ocean Wind). 2022. *Ocean Wind Offshore Wind Farm OCS Air Permit Application*. September 30.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- O’Donoughue, Patrick R., Garvin A. Heath, Stacey L. Dolan, and Martin Vorum. 2014. *Life Cycle Greenhouse Gas Emissions of Electricity Generated from Conventionally Produced Natural Gas: Systematic Review and Harmonization*. *Journal of Industrial Ecology* 18(1):125–144. <https://doi.org/10.1111/jiec.12084>. Accessed: January 31, 2023.
- Rueda-Bayona, J. G., J. J. Cabello Eras, and T. R. Chaparro. 2022. Impacts generated by the materials used in offshore wind technology on Human Health, Natural Environment and Resources. *Energy* 261, Part A:125223. Available: <https://doi.org/10.1016/j.energy.2022.125223>.
- Shoaib, Nawal. 2022. “A Study on Wind Farms in New Jersey : Life Cycle Assessment and Acceptance of Wind Farms by the Tourists.” *Theses, Dissertations and Culminating Projects* 1114. Available: <https://digitalcommons.montclair.edu/etd/1114>.

- U.S. Energy Information Administration. 2014. *Oil Tanker Sizes Range from General Purpose to Ultra-Large Crude Carriers on AFRA Scale*. September 16, 2014. Available: <https://www.eia.gov/todayinenergy/detail.php?id=17991>. Accessed September 12, 2021.
- U.S. Energy Information Administration. 2022. Coal will account for 85% of U.S. electric generating capacity retirements in 2022. Website. Available: <https://www.eia.gov/todayinenergy/detail.php?id=50838>. Accessed April 4, 2023.
- U.S. Environmental Protection Agency (USEPA). 1992. Memo from John S. Seitz, Director, Office of Air Quality Planning and Standards, to regional air quality directors. October 19, 1992. <https://www.epa.gov/sites/default/files/2015-07/documents/class1.pdf>. Accessed: April 29, 2022.
- U.S. Environmental Protection Agency (USEPA). 1997. *User's Guide for Offshore and Coastal Dispersion (OCD) Model, Version 5*. Available: <https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/ocd/ocdug.pdf>. Accessed: November 11, 2022.
- U.S. Environmental Protection Agency (USEPA). 2019. *Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM2.5 under the PSD Permitting Program*. <https://www.epa.gov/sites/default/files/2019-05/documents/merps2019.pdf>. Accessed: November 11, 2022.
- U.S. Environmental Protection Agency (USEPA). 2020a. CO-Benefits Risk Assessment (COBRA) Health Impacts Screening and Mapping Tool. Available: <https://www.epa.gov/statelocalenergy/co-benefits-risk-assessment-cobra-health-impacts-screening-and-mapping-tool>. Accessed: September 16, 2021.
- U.S. Environmental Protection Agency (USEPA). 2020b. *User's Manual for the CO-Benefits Risk Assessment Health Impacts Screening and Mapping Tool (COBRA)*. Available: https://www.epa.gov/sites/default/files/2020-06/documents/cobra_user_manual_june_2020.pdf. Accessed: September 16, 2021.
- U.S. Environmental Protection Agency (USEPA). 2020c. *Greenhouse Gases Equivalencies Calculator—Calculations and References*. Available: <https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references#vehicles>. Accessed: September 16, 2021.
- U.S. Environmental Protection Agency (USEPA). 2021. Nonattainment Areas for Criteria Pollutants (Green Book). Available: <https://www.epa.gov/green-book>. Accessed: September 13, 2021.
- U.S. Environmental Protection Agency (USEPA). 2022. 2017 National Emissions Inventory. Tier 1 Summaries. Available: <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>. Data file: https://gaftp.epa.gov/air/nei/2017/tier_summaries/tier1_summary_2017nei.accdb. Accessed: September 12, 2022.

B.2.3.5. Section 3.5, Bats

- Ahlen, I., L. Bach, H. J. Baagoe, and J. Petersson. 2007. Bats and offshore wind turbines studied in southern Scandinavia. Report 5571. Naturvardsverket. Swedish Environmental Protection Agency, Stockholm, Sweden. Available: <https://docs.wind-watch.org/SE-EPA-bats-offshore-wind.pdf>. Accessed: January 13, 2023.

- Arnett, E. B., K. Brown, W. P. Erickson, J. Fiedler, B. L. Hamilton, T. H. Henry, A. Jain, G. D. Johnson, J. Kerns, R. R. Kolford, C. P. Nicholson, T. O'Connell, M. Piorkowski, and R. Tankersley, Jr. 2008. Patterns of Bat Fatalities at Wind Energy Facilities in North America. *Journal of Wildlife Management* 72:61–78.
- Atlantic Shores Offshore Wind (Atlantic Shores). 2021. *Construction and Operations Plan, Atlantic Shores Offshore Wind*. Volume I. September. Available: <https://www.boem.gov/renewable-energy/state-activities/atlantic-shores-offshore-wind-construction-and-operations-plan>.
- Baerwald, E. F., and R. M. R. Barclay. 2009. Geographic Variation in Activity and Fatality of Migratory Bats at Wind Energy Facilities. *Journal of Mammalogy* 90:1341–1349.
- Brabant, R., Y. Laurent, B. Jonge Poerink, and S. Degraer. 2021. The Relation between Migratory Activity of *Pipistrellus* Bats at Sea and Weather Conditions Offers Possibilities to Reduce Offshore Wind Farm Effects. *Animals* 2021(11):3457.
- Bureau of Ocean Energy Management (BOEM). 2015. *Virginia Offshore Wind Technology Advancement Project on the Atlantic Outer Continental Shelf Offshore Virginia: Revised Environmental Assessment*. Office of Renewable Energy Programs. OCS EIS/EA BOEM 2015-031. Accessed: September 1, 2020. Available: <https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/VA/VOWTAP-EA.pdf>.
- Bureau of Ocean Energy Management (BOEM). 2019. *National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Continental Shelf*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Sterling, VA. OCS Study BOEM 2019- 036. May 2019.
- Bureau of Ocean Energy Management (BOEM). 2021a. *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2021-0012. Available: <https://www.boem.gov/vineyard-wind>. Accessed August 2021.
- Bureau of Ocean Energy Management (BOEM). 2022. *Ocean Wind Offshore Wind Farm Biological Assessment for the United States Fish and Wildlife Service*. May.
- Choi, D. Y., T. W. Wittig, and B. M. Kluever. 2020. An Evaluation of Bird and Bat Mortality at Wind Turbines in the Northeastern United States. *PLOS ONE* 15(8): e0238034. Available: <https://doi.org/10.1371/journal.pone.0238034>.
- Cryan P. M., M. Gorresen, C. D. Hein, M. R. Schirmacher, R. H. Diehd, M. M. Husoe, D. T. S. Hayman, P. D. Fricker, F. J. Bonaccorso, D. H. Johnson, K. Heist, and D. C. Dalton. 2014. Behavior of Bats at Wind Turbine. *Proceedings of the National Academy of Sciences* 11(42): 15126–15131.
- Cryan, P. M. 2007. Mating Behavior as a Possible Cause of Bat Fatalities at Wind Turbines. *Journal of Wildlife Management* 72(3):845–849; 2008) DOI: 10.2193/2007-37.
- Cryan, P. M., and A. C. Brown. 2007. Migration of Bats Past a Remote Island Offers Clues Toward the Problem of Bat Fatalities at Wind Turbines. *Biological Conservation* 139:1–11.
- Cryan, P. M., and R. M. R. Barclay. 2009. Causes of Bat Fatalities at Wind Turbines: Hypotheses and Predictions. *Journal of Mammalogy* 90:1330–1340.

- Dowling, Z., P. R. Sievert, E. Baldwin, L. Johnson, S. von Oettingen, and J. Reichard. 2017. *Flight Activity and Offshore Movements of Nano-Tagged Bats on Martha's Vineyard, MA*: Final Report. OCS Study BOEM 2017-054. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Sterling, Virginia. June. Available: <https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/Flight-Activity-and-Offshore-Movements-of-Nano-Tagged-Bats-on-Martha%27s-Vineyard%2C-MA.pdf>.
- Erickson, W. P., G. D. Johnson, M. D. Strickland, D. P. Young, Jr., K. J. Sernka, R. E. Good, M. Bourassa, K. Bay, and K. Sernka. 2002. *Synthesis and Comparison of Baseline Avian and Bat Use, Raptor Nesting and Mortality Information from Proposed and existing Wind Developments*. Bonneville Power Administration, Portland, Oregon, USA.
- Fiedler, Jenny K. 2004. "Assessment of Bat Mortality and Activity at Buffalo Mountain Windfarm, Eastern Tennessee." Master's Thesis, University of Tennessee, 2004. Available: https://trace.tennessee.edu/cgi/viewcontent.cgi?article=3488&context=utk_gradthes. Accessed: September 1, 2020.
- Haddaway, L., and L. P. McGuire. 2022. Seasonal and nightly activity patterns of migrating silver-haired bats (*Lasionycteris noctivagans*) compared to non-migrating big brown bats (*Eptesicus fuscus*) at a fall migration stopover site. *Acta Chiropterologica* 24:83–90.
- Hamilton, R. M. 2012. *Spatial and Temporal Activity of Migratory Bats at Landscape Features*. Electronic Thesis and Dissertation Repository. 886.
- Hann, Z. A., M. J. Hosler, and P. R. Mooseman, Jr. 2017. Roosting Habits of Two *Lasiurus borealis* (eastern red bat) in the Blue Ridge Mountains of Virginia. *Northeastern Naturalist* 24 (2): N15–N18.
- Hatch, S. K., E. E. Connelly, T. J. Divoll, I. J. Stenhouse, and K. A. Williams. 2013. Offshore observations of eastern red bats (*Lasiurus borealis*) in the mid-Atlantic United States using multiple survey methods. *PLOS ONE* 8(12):e83803. DOI:10.1371/journal.pone.0083803.
- Hein, C., K. A. Williams, and E. Jenkins. 2021. *Bat Workgroup Report for the State of the Science Workshop on Wildlife and Offshore Wind Energy 2020: Cumulative Impacts*. Report to the New York State Energy Research and Development Authority (NYSERDA). Albany, NY. 21 pp. Available: <https://tethys.pnnl.gov/sites/default/files/publications/Bat-Workgroup-Report.pdf>. Accessed: March 25, 2022.
- Johnson J. B., J. E. Gates, and N. P. Zegre. 2011. Monitoring seasonal bat activity on a coastal barrier island in Maryland, USA. *Environmental Monitoring and Assessment* 173:685–699.
- Johnson, L., and A. Ostroski. 2022. *Acoustic Bat Surveying at Oyster Creek in Waretown, Ocean Township, Ocean City, NJ and B.L. England in Marmora, Upper Township, Cape May County, NJ*. Prepared for Ocean Wind by Environmental Consulting Services, Inc.
- Kerns, J., W. P. Erickson, and E. B. Arnett. 2005. "Bat and bird fatality at wind energy facilities in Pennsylvania and West Virginia." Pages 24–95 in B. Arnett, editor, *Relationships Between Bats and Wind Turbines in Pennsylvania and West Virginia: An Assessment of Bat Fatality Search Protocols, Patterns of Fatality, and Behavioral Interactions with Wind Turbines*. A final report submitted to the Bats and Wind Energy Cooperative, pp 24–95. Bat Conservation International, Austin, Texas, USA. Available: <http://centrostudinataura.it/public2/documenti/687-50647.pdf>. Accessed: October 19, 2020.

- Kunz, T. H., E. B. Arnett, W. P. Erickson, A. R. Hoar, G. D. Johnson, R. P. Larkin, M. D. Strickland, R. W. Thresher, and M. D. Tuttle. 2007. Ecological Impacts of Wind Energy Development on Bats: Questions, Research Needs, and Hypotheses. *Frontiers in Ecology and the Environment* 5:315–324.
- Maine Department of Inland Fisheries and Wildlife. 2021. “Bats.” Available: <https://www.maine.gov/ifw/fish-wildlife/wildlife/species-information/mammals/bats.html>. Accessed: August 27, 2021.
- New Hampshire Fish and Game. No date. “Bats of New Hampshire.” Available: <https://wildlife.state.nh.us/nongame/bats-nh.html>. Accessed: August 27, 2021.
- New Jersey Department of Environmental Protection (NJDEP). 2010. NJDEP Digital Data Downloads in Personal Geo-Database Format (version 9.3.1): Ocean/Wind Power Baseline Ecological Studies Data Downloads. Available: <https://www.nj.gov/dep/gis/windpower.html>. Accessed: September 16, 2021.
- New Jersey Department of Environmental Protection (NJDEP). 2013. Special Status Review of Terrestrial Mammals. Presented to the NJ Endangered Nongame Species Advisory Committee on September 26, 2012, and March 20, 2013. Available: https://www.nj.gov/dep/fgw/ensp/pdf/mammal_status_rprt.pdf. Accessed: June 2, 2022.
- New Jersey Division of Fish and Wildlife. 2019. *Nuisance Wildlife Control Guidelines for Bats*. Endangered and Nongame Species Program. Available: https://www.njfishandwildlife.org/ensp/pdf/bat_control.pdf. Accessed: August 27, 2021.
- North Carolina Wildlife Resources Commission. 2017. Bats of North Carolina. Available: https://www.ncwildlife.org/Portals/0/Conserving/documents/Bats_Species_Profile.pdf. Accessed: August 27, 2021.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Pelletier, S. K., K. Omland, K. S. Watrous, and T. S. Peterson. 2013. *Information Synthesis on the Potential for Bat Interactions with Offshore Wind Facilities*—Final Report. U.S. Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM No. 2013-01163. Available: https://tethys.pnnl.gov/sites/default/files/publications/BOEM_Bat_Wind_2013.pdf. Accessed: September 1, 2020.
- Rhode Island Department of Environmental Management. No date. *Bats of Rhode Island*. Available: <http://www.dem.ri.gov/programs/bnatres/fishwild/pdf/bat.pdf>. Accessed: August 27, 2021.
- Schaub, A., J. Ostwald, and B. M. Siemers. 2008. Foraging Bats Avoid Noise. *Journal of Experimental Biology* 211:3147–3180.
- Simmons, A. M., K. N. Horn, M. Warnecke, and J. A. Simmons. 2016. Broadband Noise Exposure Does Not Affect Hearing Sensitivity in Big Brown Bats (*Eptesicus fuscus*). *Journal of Experimental Biology* 219:1031–1040.
- Sjollema, A. L., J. E. Gates, R. H. Hilderbrand, and J. Sherwell. 2014. Offshore Activity of Bats along the Mid-Atlantic Coast. *Northeastern Naturalist* 21(2):154–163.

- Smith, A., and S. McWilliams. 2016. Bat Activity During Autumn Relates to Atmospheric Conditions: Implications for Coastal Wind Energy Development. *Journal of Mammalogy*, 97(6):1565–1577.
- Stantec Consulting Services (Stantec). 2016. *Long-Term Bat Monitoring on Islands, Offshore Structures, and Coastal Sites in the Gulf of Maine, Mid-Atlantic, and Great Lakes*—Final Report. Prepared for the U.S. Department of Energy. Available: <https://tethys.pnnl.gov/sites/default/files/publications/Stantec-2016-Bat-Monitoring.pdf>. Accessed: October 30, 2018.
- Stantec Consulting Services (Stantec). 2020. *Avian and Bat Acoustic Survey Final Post-Construction Monitoring Report, 2017–2020; Block Island Wind Farm, Rhode Island*. November 25.
- True, M. C., R. J. Reynolds, and W. M. Ford. 2021. Monitoring and Modeling Tree Bat (Genera: *Lasiurus*, *Lasionycteris*) Occurrence Using Acoustics on Structures off the Mid-Atlantic Coast – Implications for Offshore Wind Development. *Animals* 11(11):31416. November.
- U.S. Fish and Wildlife Service (USFWS). 2015. *White Nose Syndrome: The devastating disease of hibernating bats in North America*. Available: <https://www.fws.gov/mountain-prairie/pressrel/2015/WNS%20Fact%20Sheet%20Updated%2007012015.pdf>. Accessed: September 20, 2021.
- U.S. Fish and Wildlife Service (USFWS). 2021a. Information for Planning and Consultation (IPaC): list of federally listed threatened, endangered, and proposed species in the Ocean Wind offshore and onshore project components. List generated on July 1.
- U.S. Fish and Wildlife Service (USFWS). 2021b. “Midwest Species on the National Listing Work Plan 2021 to 2025. April 26.” Available: <https://www.fws.gov/midwest/Endangered/listing/MidwestNLP.html>. Accessed: August 25, 2021.
- Virginia Department of Wildlife Resources. 2021. “Bats.” Available: <https://dwr.virginia.gov/wildlife/nuisance/bats/>. Accessed: August 27, 2021.
- Voigt, C., K. Schneeberger, S. Voigt-Heucke, and D. Lewanzik. 2011. Rain Increases the Energy Cost of Bat Flight. *Biology Letters* 7(5). May. Available: <https://royalsocietypublishing.org/doi/10.1098/rsbl.2011.0313>. Accessed: January 13, 2023.
- Whitaker, J. O., Jr. 1998. Life History and Roost Switching in Six Summer Colonies of Eastern Pipistrelles in Buildings. *Journal of Mammalogy* 79(2):651–659.
- Whitenosesyndrom.org. 2021. “Where is WNS Now?” Available: <https://www.whitenosesyndrome.org/where-is-wns>. Accessed: August 27, 2021.

B.2.3.6. Section 3.6, Benthic Resources

- Adams, T., R. G. Miller, D. Aleynik, and M. T. Burrows. 2014. Offshore marine renewable energy devices as stepping stones across biogeographical boundaries. *Journal of Applied Ecology* 51:330–338.
- Albert, L., F. Deschamps, A. Jolivet, F. Olivier, L. Chauvaud, and S. Chauvaud. 2020. A current synthesis on the effects of electric and magnetic fields emitted by submarine power cables on invertebrates. *Marine Environmental Research* 159:104958. DOI: 10.1016/j.marenvres.2020.104958.

- Almeda, R., C. Hyatt, and E. Buskey. 2014a. Toxicity of dispersant Corexit 9500A and crude oil to marine microzooplankton. *Ecotoxicology and environmental safety*. 106C. 76–85. 10.1016/j.ecoenv.2014.04.028.
- Almeda, R., S. Bona, C. R. Foster, and E. J. Buskey. 2014b. Dispersant Corexit 9500A and chemically dispersed crude oil decreases the growth rates of meroplanktonic barnacle nauplii (*Amphibalanus improvisus*) and tornaria larvae (*Schizocardium* sp.). *Marine Environmental Research* 99:212–217.
- Arveson, P., and D. Vendittis. 2000. Radiated noise characteristics of a modern cargo ship. *Journal of the Acoustical Society of America* 2000(107):118–129.
- Barnegat Bay Partnership. 2021. *2021 Comprehensive Conservation and Management Plan for the Barnegat Bay-Little Egg Harbor Estuary*. Available: <https://www.barnegatbaypartnership.org/wp-content/uploads/2021/12/BBP-CCMP-Updated-Dec-2021-forScreens.pdf>.
- Beatrice Offshore Windfarm. 2016. UXO Clearance Marine License – Environmental Report. 89 pages. Available: <https://marine.gov.scot/sites/default/files/00506118.pdf>.
- Bejarano, Adriana, Jacqueline Michel, Jill Rowe, Zhengkai Li, Deborah French McCay, and Dagmar Schmidt Etkin. 2013. *Environmental Risks, Fate, and Effects of Chemicals Associated with Wind Turbines on the Atlantic Outer Continental Shelf*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Herndon, VA. OCS Study BOEM 2013-213. Available: <https://espis.boem.gov/final%20reports/5330.pdf>. Accessed: October 11, 2021.
- Berry, W. J., N. I. Rubinstein, E. K. Hinchey, G. Klein-MacPhee, and D. G. Clarke. 2011. Assessment of Dredging-Induced Sedimentation Effects on Winter Flounder (*Pseudopleuronectes americanus*) Hatching Success: Results of Laboratory Investigations. Proceedings of the Western Dredging Association Technical Conference and Texas A&M Dredging Seminar, Nashville, Tennessee, June 5–8, 2011.
- Bilinski, J. 2021. *Review of the Impacts to Marine Fauna from Electromagnetic Frequencies (EMF) Generated by Energy Transmitted through Undersea Electric Transmission Cables*. NJDEP – Division of Science and Research. Available: <https://www.nj.gov/dep/offshorewind/docs/njdep-marine-fauna-review-impacts-from-emf.pdf>. Accessed: April 8, 2022.
- Bologna, Paul A. X., and Michael S. Sinnema. 2012. Restoration of Seagrass Habitat in New Jersey, United States. *Journal of Coastal Research*. January.
- Boyd, S. E., D. S. Limpenny, H. L. Rees, and K. M. Cooper. 2005. “The Effects of Marine Sand and Gravel Extraction on the Macrobenthos at a Commercial Dredging Site (Results 6 Years Post-dredging).” *ICES Journal of Marine Science* 62:145–162.
- Bray, L., D. Kassis, and J. M. Hall-Spencer. 2017. Assessing larval connectivity for marine spatial planning in the Adriatic. *Marine Environmental Research* 125:73–81.
- Brand, A. R., and U. A. W. Wilson. 1996. *Seismic surveys and scallop fisheries: A report on the impact of a seismic survey on the 1994 Isle of Man queen scallop fishery*. Report to a consortium of oil companies by Port Erin Marine Laboratory, University of Liverpool, Port Erin, Isle of Man.

- Brooks, R., C. N. Purdy, S. S. Bell, and K. J. Sulak. 2005. *The benthic community of the eastern US continental shelf: A literature synopsis of benthic faunal resources*. USGS Staff – Published Research. 1051. Available: <http://digitalcommons.unl.edu/usgsstaffpub/1051>.
- Brothers, C. J., J. Harianto, J. B. McClintock, and M. Byrne. 2016. “Sea Urchins in a High-CO₂ World: The Influence of Acclimation on the Immune Response to Ocean Warming and Acidification.” *Proceeding of the Royal Society B* 283:20161501. Available: <http://dx.doi.org/10.1098/rspb.2016.1501>. Accessed: October 11, 2021.
- Bureau of Ocean Energy Management (BOEM). 2014. *FINDING OF NO SIGNIFICANT IMPACT for Proposed Geological and Geophysical Activities in the Atlantic OCS to Identify Sand Resources and Borrow Areas*. 5 pages. Available: <https://www.boem.gov/sites/default/files/non-energy-minerals/Finding-of-No-Significant-Impact.pdf>.
- Bureau of Ocean Energy Management (BOEM). 2015. *Virginia Offshore Wind Technology Advancement Project on the Atlantic Outer Continental Shelf Offshore Virginia: Revised Environmental Assessment*. OCS EIS/EA BOEM 2015-031. Available: <https://www.boem.gov/VOWTAP-EA/>. Accessed: October 11, 2021.
- Bureau of Ocean Energy Management (BOEM). 2018. *Data Collection and Site Survey Activities for Renewable Energy on the Atlantic Outer Continental Shelf Biological Assessment*. 152 pages. Available: <https://www.boem.gov/sites/default/files/documents/renewable-energy/OREP-Data-Collection-BA-Final.pdf>.
- Bureau of Ocean Energy Management (BOEM). 2019. Office of Renewable Energy Programs. *Guidelines for Providing Benthic Habitat Survey Information for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585*. June 2019.
- Bureau of Ocean Energy Management (BOEM). 2020a. Office of Renewable Energy Programs. *Guidelines for Providing Geophysical, Geotechnical, and Geohazard Information Pursuant to 30 CFR Part 585*. May 27, 2020.
- Bureau of Ocean Energy Management (BOEM). 2020b. Comparison of Environmental Effects from Different Offshore Wind Turbine Foundations. Office of Renewable Energy Programs. OCS Study BOEM 2020-041. 53 pages.
- Byrnes, M. R., R. M. Hammer, B. A. Vittor, J. S. Ramsey, D. B. Snyder, J. D. Wood, K. F. Bosma, T. D. Thibaut, and N. W. Phillips. 2000. *Environmental Survey of Potential Sand Resource Sites: Offshore New Jersey*. U.S. Dept. of the Interior, Minerals Management Service, International Activities and Marine Minerals Division (INTERMAR). Herndon, VA. OCS Report MMS 2000-052. Vol I: 380 pp., Vol II: Appendices 291 pp.
- Byrnes, M. R., R. M. Hammer, T. D. Thibaut, and D. B. Snyder. 2004. Effects of sand mining on physical processes and biological communities offshore New Jersey, USA. *Journal of Coastal Research* 20(1):25–43.
- Carman, M., and D. Grunden. 2019. preliminary assessment of crab predation on epifaunal fouling organisms attached to eelgrass at Martha’s Vineyard, Massachusetts, USA. *Management of Biological Invasions* 10(4):626–640.

- Carpenter, J. R., L. Merckelbach, U. Callies, S. Clark, L. Gaslikova, and B. Baschek. 2016. Potential impacts of offshore wind farms on North Sea stratification. *PLOS ONE* 11(8), e0160830.
- Carroll, A. G., R. Przeslawski, A. Duncan, M. Gunning, and B. Bruce. 2017. A critical review of the potential impacts of marine seismic surveys on fish & invertebrates. *Marine Pollution Bulletin* 114:9–24.
- Causon, P. D., and A. B. Gill. 2018. Linking ecosystem services with epibenthic biodiversity change following installation of offshore wind farms. *Environmental Science and Policy* 89:340–347.
- Cazenave, P. W., R. Torres, and J. I. Alen. 2016. Unstructured grid modelling of offshore wind farm impacts on seasonally stratified shelf seas. *Progress in Oceanography* 145(2016):25–41.
- Chen, C. 2021. *Assessing Potential Impacts of Offshore Wind Facilities on Regional Sea Scallop Laval and Early Juvenile Transports*. NOAA Grant Number: NA19NMF450023. 19 pages.
- Christiansen, Nils, Ute Daewel, Bughsin Djath, and Corinna Schrum. 2022. Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes. *Frontiers in Marine Science* 9. DOI: 10.3389/fmars.2022.818501.
- Colarusso, P., and A. Verkade. 2016. *Submerged Aquatic Vegetation Survey Guidance for the New England Region*. Joint Federal Agency Publication including NOAA, EPA, and USACE.
- CSA Ocean Sciences, Inc. and Exponent. 2019. *Evaluation of Potential EMF Effects on Fish Species of Commercial or Recreational Fishing Importance in Southern New England*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Headquarters, Sterling, VA. OCS Study BOEM 2019-049.
- Dacanay, K. 2015. *Inventory of New Jersey’s Estuarine Shellfish Resources: Hard Clam Stock Assessment Barnegat Bay (Survey Year 2012)*. New Jersey Department of Environmental Protection. 54 pp.
- Daewel, U., N. Akhtar, N. Christiansen, et al. 2022. Offshore wind farms are projected to impact primary production and bottom water deoxygenation in the North Sea. *Commun Earth Environ* 3:292. Available: <https://doi.org/10.1038/s43247-022-00625-0>.
- Daigle, S. T. 2011. “What is the Importance of Oil and Gas Platforms in the Community Structure and Diet of Benthic and Demersal Communities in the Gulf of Mexico?” Master’s Thesis, Louisiana State University. Available: <https://core.ac.uk/reader/217380300>. Accessed: October 11, 2021.
- Dannheim, J., L. Bergström, S. N. R. Birchenough, R. Brzana, A. R. Boon, J. W. P. Coolen, J.-C. Dauvin, I. De Mesel, J. Derweduwen, A. B. Gill, Z. L. Hutchison, A. C. Jackson, U. Janas, G. Martin, A. Raoux, J. Reubens, L. Rostin, J. Vanaverbeke, T. A. Wilding, D. Wilhelmsson, and S. Degraer. 2019. Benthic effects of offshore renewables: identification of knowledge gaps and urgently needed research. *ICES Journal of Marine Science* 77:1092–1108.
- Dernie, K. M., M. J. Kaiser, E. A. Richardson, and R. M. Warwick. 2003. “Recovery Rates of Benthic Communities Following Physical Disturbance.” *Journal of Animal Ecology* 72:1043–1056.

- Dorrell, R. M., C. J. Lloyd, B. J. Lincoln, T. P. Rippeth, J. R. Taylor, C. P. Caulfield, J. Sharples, J. A. Polton, B. D. Scannell, D. M. Greaves, R. A. Hall, and J. H. Simpson. 2022. Anthropogenic mixing in seasonally stratified shelf seas by offshore wind farm infrastructure. *Frontiers in Marine Science* 9:830927.
- Duarte, M. 2002. The future of seagrass meadows. *Environmental Conservation* 29(2):192–206. Foundation for Environmental Conservation.
- Duarte, C. M., J. J. Middelburg, and N. Caraco. 2005. Major role of marine vegetation on the oceanic carbon cycle. *Biogeosciences* 2:1–8.
- Duarte, C., T. Sintes, and N. Marba. 2013. Assessing the CO₂ capture potential of seagrass restoration projects. *Journal of Applied Ecology* 50:1341–1349.
- Duarte, C. M., and D. Krause-Jensen. 2017. Export from seagrass meadows contributes to marine carbon sequestration. *Frontiers in Marine Science* 4:13.
- English, P. A., T. I. Mason, J. T. Backstrom, B. J. Tibbles, A. A. Mackay, M. J. Smith, and T. Mitchell. 2017. *Improving Efficiencies of National Environmental Policy Act Documentation for Offshore Wind Facilities Case Studies Report*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. OCS Study BOEM 2017-026. Available: <https://tethys.pnnl.gov/sites/default/files/publications/English-et-al-2017-BOEM.pdf>. Accessed: October 11, 2021.
- Essink, K. 1999. “Ecological Effects of Dumping of Dredged Sediments; Options for Management.” *Journal of Coastal Conservation* 5:69–80.
- Exponent Engineering, P.C. (Exponent). 2018. *Deepwater Wind South Fork Wind Farm. Offshore Electric and Magnetic Field Assessment*. May 24.
- Field, C., M. Behrenfeld, J. Randerson, and P. Falkowski. 1998. Primary Production of the Biosphere: Integrating Terrestrial and Oceanic Components. *Science* 281:237–240.
- Floeter, J., T. Pohlmann, A. Harmer, and C. Mollmann. 2022. Chasing the offshore wind farm wind-wake-induced upwelling/downwelling dipole. *Frontiers in Marine Science* 9:884943.
- Ford, S. E. 1997. History and Present Status of Molluscan Shellfisheries from Barnegat Bay to Delaware Bay. In: *The History, Present Condition, and Future of the Molluscan Fisheries of North and Central American and Europe*. NOAA Technical Report NMFS 127; September 1997. 499p.
- Gilbert, P. M., C. J. Madden, W. Boynton, D. Flemer, C. Heil, and J. Sharp. 2010. *Nutrients in Estuaries: A Summary Report of the National Estuarine Experts Workgroup 2005–2007*.
- Gill, A. B. and M. Desender. 2020. Risk to Animals from Electromagnetic Fields Emitted by Electric Cables and Marine Renewable Energy Devices. In A.E. Copping and L.G. Hemery (Eds.), *OES-Environmental 2020 State of the Science Report: Environmental Effects of Marine Renewable Energy Development Around the World*. Report for Ocean Energy Systems (OES). (pp. 86–103). DOI:10.2172/1633088.

- Graham, O. J., L. R. Aoki, T. Stephens, J. Stokes, S. Dayal, B. Rappazzo, C. P. Gomes, and C. D. Harvell. 2021. Effects of seagrass wasting disease on eelgrass growth and belowground sugar in natural meadows. *Frontiers in Marine Science* 8:768668.
- Greene, J. K., M. G. Anderson, J. Odell, and N. Steinberg, eds. 2010. *The Northwest Atlantic Marine Ecoregional Assessment: Species, Habitats and Ecosystems. Phase One*. The Nature Conservancy, Eastern U.S. Division, Boston, MA.
- Guida, V., A. Drohan, H. Welch, J. McHenry, D. Johnson, V. Kentner, J. Brink, D. Timmons, and E. Estela-Gomez. 2017. *Habitat Mapping and Assessment of Northeast Wind Energy Areas*. U.S. Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2017-088.
- Harsanyi, P., K. Scott, B. A. A. Easton, G. de la Cruz Ortiz, E. C. N. Chapman, A. J. R. Piper, C. M. V. Rochas, and A. R. Lyndon. 2022. The effects of anthropogenic electromagnetic fields (EMF) on the early development of two commercially important crustaceans, European Lobster, *Homarus gammarus* (L.) and Edible Crab, *Cancer pagurus* (L.). 2022. *Journal of Marine Science and Engineering* 10:564.
- Hawkins, A., R. Hazelwood, and A. Popper et al. 2021. Substrate vibrations and their potential effects upon fishes and invertebrates. *The Journal of the Acoustical Society of America* 149:2782. DOI: 10.1121/10.0004773.
- Henderson, D., B. Hu, and E. Bielefeld. 2008. Patterns and mechanisms of noise-induced cochlear pathology. Pp. 195–217 in: National Marine Fisheries Service (NMFS). 2018. 2018 Revisions to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts. National Oceanic and Atmospheric Administration Technical Memorandum NMFS-OPR-59. U.S. Department of Commerce, National Oceanographic and Atmospheric Administration.
- Howard, J., A. Sutton-Grier, D. Herr, J. Kleypas, E. Landis, E. Mcleod, E. Pidgeon, and S. Simpson. 2017. Clarifying the role of coastal and marine systems in climate mitigation. *Frontiers in Ecology and Environment* 15(1):1–9.
- Hutchison, Z. L., D. H. Secor, and A. B. Gill. 2020. The interaction between resource species and electromagnetic fields associated with electricity production by offshore wind farms. *Oceanography* 33(4):96–107.
- Hutchison, Z. L., P. Sigray, H. He, A. B. Gill, J. King, and C. Gibson. 2018. *Electromagnetic Field (EMF) Impacts on Elasmobranch (Shark, Rays, and Skates) and American Lobster Movement and Migration from Direct Current Cables*. U.S. Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2018-003.
- Inspire Environmental (Inspire). 2021. *Ocean Wind Offshore Wind Farm Benthic Habitat Mapping and Benthic Assessment to Support Essential Fish Habitat Consultation*. Prepared for HDR Engineering. June 2021. Ocean Wind COP Appendix E Supplement.
- Inspire Environmental (Inspire). 2022a. *Ocean Wind Offshore Wind Farm Benthic Habitat Mapping and Benthic Assessment to Support Essential Fish Habitat Consultation*. Prepared for HDR Engineering.

- Inspire Environmental (Inspire). 2022b. *Ocean Wind Offshore Wind Farm Submerged Aquatic Vegetation Monitoring Plan*. Prepared for Ocean Wind, Ørsted US. Submitted by Inspire Environmental. June 15, 2022.
- Jakubowska, M., B. Urban-Malinga, Z. Otremba, and E. Andrulowicz. 2019. Effect of low frequency electromagnetic field on the behavior and bioenergetics of the polychaete *Hediste diversicolor*. *Marine Environmental Research* 150:104766.
- Johnson, T., J. van Berkel, L. Mortensen, M. Bell, I. Tiong, B. Hernandez, D. Snyder, F. Thomsen, and O. Petersen. 2021. *Hydrodynamic modeling, particle tracking, and agent-based modeling of larvae in the U.S. mid-Atlantic bight*. OCS Study BOEM 2021-049. Prepared under 140M120C0004 By DHI Water & Environment, Inc. Lakewood, Colorado 80235 USA.
- Kennish, M. J., S. B. Bricker, W. C. Dennison, P. M. Glibert, R. J. Livingston, K. A. Moore, R. T. Noble, H. W. Paerl, J. M. Ramstack, S. Seitzinger, D. A. Tomasko, and I. Valiela. 2007. Barnegat Bay–Little Egg Harbor Estuary: case study of a highly eutrophic coastal bay system. *Ecological Applications* 17(sp5):S3–S16.
- Kennish, M. J., and V. N. de Jonge. 2011. Chemical introductions to the systems: Diffuse and nonpoint source pollution from chemicals (nutrients: eutrophication). In: M. J. Kennish and M. Elliott, eds., *Treatise on Estuarine and Coastal Science*, Vol. 8, Human-induced Problems (Uses and Abuses). *Treatise on Estuarine and Coastal Science*, Elsevier, Oxford, England, pp. 113-148.
- Kirchgeorg, T., I. Weinberg, M. Hornig, R. Baier, M. J. Schmid, and B. Brockmeyer. 2018. Emissions from corrosion protection systems of offshore wind farms: evaluation of the potential impact on the marine environment. *Marine Pollution Bulletin* 136:257–268.
- Kurihara, H. 2008. Effects of CO₂-driven ocean acidification on the early developmental stages of invertebrates. *Marine Ecology Progress Series* 373:275–284.
- Küsel, E., M. Werathmueller, K. Zammit, M. Reeve, S. Dufault, K. Limpert, and D. Zeddies. 2021. *Underwater Acoustic Analysis and Exposure Modeling Revolution Wind: Impact Pile Driving during Foundation Installation*. Prepared by JASCO Applied Sciences, Inc. for Revolution Wind. 169 pages. Available: https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/App_P3%20Underwater%20Acoustic%20Modeling%20Report.pdf.
- Langhamer, O., H. Holand, and G. Rosenqvist. 2016. Effects of an Offshore Wind Farm (OWF) on the Common Shore Crab *Carcinus maenas*: Tagging Pilot Experiments in the Lillgrund Offshore Wind Farm (Sweden). *PLOS ONE* 11(10): e0165096. DOI:10.1371/journal.pone.0165096.
- Lathrop, R. G., and S. Haag. 2011. *Assessment of Seagrass Status in the Barnegat Bay-Little Egg Harbor Estuary System: 2003–2009*. CRSSA Technical Report, Rutgers University, New Brunswick, NJ, 56 pp. Available: <http://crssa.rutgers.edu/projects/coastal/sav/downloads.htm>.
- Lefaible, N., L. Colson, U. Braeckman, and T. Moens. 2019. “Evaluation of Turbine-Related Impacts on Macrobenthic Communities Within Two Offshore Wind Farms During the Operational Phase.” In *Memoirs on the Marine Environment: Environmental Impacts of Offshore Wind Farms in the Belgian Part of the North Sea*. S. Degraer, R. Brabant, B. Rumes, and L. Vigin, eds. 73–84. Brussels: Royal Belgian Institute of Natural Sciences, OD Natural Environment, Marine Ecology and Management. Available: https://odnature.naturalsciences.be/downloads/mumm/windfarms/winmon_report_2019_final.pdf. Accessed: October 11, 2021.

- Lefcheck, J. S., B. B. Hughes, A. J. Johnson, B. W. Pfirrmann, D. B. Rasher, A. R. Smyth, B. L. Williams, M. W. Beck, and R. J. Orth. 2019. Are coastal habitats important nurseries? A meta-analysis. *Conservation Letters* 12(4):e12645.
- Lewis, L. J., J. Davenport, and T. C. Kelly. 2002. "A Study of the Impact of a Pipeline Construction on Estuarine Benthic Invertebrate Communities." *Estuarine Coastal and Shelf Science* 55(2):213–221.
- Lewis III, R. R. R., and P. L. Erftemeijer. 2006. Environmental impacts of dredging on seagrasses: a review. *Marine Pollution Bulletin* 52(12):1553–1572.
- Lloret, J., A. Turiel, J. Sole, E. Berdalet, A. Sabates, A. Olivares, J. Gili, J. Vila-Subiros, and R. Sarda. 2022. Unravelling the ecological impacts of large-scale offshore wind farms in the Mediterranean Sea. *Science of the Total Environment* 824:153803.
- Love, M. S., M. M. Nishimoto, S. Clark, M. McCrea, and A. S. Bull. 2017. Assessing potential impacts of energized submarine power cables on crab harvests. *Continental Shelf Research* 151:23–29. DOI:10.1016/j.csr.2017.10.002.
- Macreadie, P. I., A. Anton, J. A. Raven, N. Beaumont, R. M. Connolly, D. A. Friess, J. J. Kelleway, H. Kennedy, T. Kuwae, P. S. Lavery, C. E. Lovelock, D. A. Smale, E. T. Apostolaki, T. B. Atwood, J. Baldock, T. S. Bianchi, G. L. Chmura, B. D. Eyre, J. W. Fourqurean, J. M. Hall-Spencer, M. Huxham, I. E. Hendriks, D. Krause-Jensen, D. Laffoley, T. Luisetti, N. Marba, P. Masque, K. J. McGlathery, J. P. Megonigal, D. Murdiyarso, B. D. Russell, R. Santos, O. Serrano, B. R. Silliman, K. Watanabe, and C. M. Duarte. 2019. The future of Blue Carbon science. *Nature Communications* 10:3998. Available: <https://doi.org/10.1038/s41467-019-11693-w>.
- Meleod, E., G. L. Chmura, S. Bouillon, R. Salm, M. Bjork, et al. 2011. A blueprint for blue carbon: toward an improved understanding of the role of vegetated coastal habitats in sequestering CO₂. *Front Ecol Environ* 9:552–560. DOI: <https://doi.org/10.1890/110004>.
- Merson, R. R., and H. L. Pratt. 2007. Sandbar shark nurseries in New Jersey and New York: evidence of northern pupping grounds along the United States east coast. In *American Fisheries Society Symposium* (50):35.
- Minerals Management Service (MMS). 2009. *Cape Wind Energy Project Final Environmental Impact Statement*. January 2009. U.S. Department of the Interior. OCS Publication No. 2008-040. Available: https://www.energy.gov/sites/prod/files/DOE-EIS-0470-Cape_Wind_FEIS_2012.pdf. Accessed: October 11, 2021.
- Nascimento, F. J. A., M. Dahl, D. Deyanova, L. D. Lyimo, H. M. Bik, T. Schuelke, T. J. Pereira, M. Björk, S. Creer, and M. Gullström. 2019. Above-below surface interactions mediate effects of seagrass disturbance on meiobenthic diversity, nematode and polychaete trophic structure. *Communications Biology* 2:362.
- National Oceanic and Atmospheric Administration (NOAA). 2022. *2022 State of the Ecosystem Mid-Atlantic*. NOAA Fisheries. Available: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/ecosystems/state-ecosystem-reports-northeast-us-shelf>. Accessed: April 6, 2022.

- Neckles, Hilary A., Angela D. Brewer, John W. Sowles, Seth Barker, Curtis C. Bohlen, Matthew Craig, Michael Doan, and Sandra Lary. 2015. "Update on a Continuing Saga: Eelgrass and Green Crabs in Casco Bay, Maine (Poster)." *Graphics, Maps, and Posters* 36. Available: <https://digitalcommons.usm.maine.edu/cbep-graphics-maps-posters/36>.
- New Jersey Department of Environmental Protection (NJDEP). 1979. Submerged Aquatic Vegetation Distribution Map 040 – Marmora. Available: https://www.nj.gov/dep/landuse/download/map_040.jpg.
- New Jersey Department of Environmental Protection (NJDEP). 1986. Submerged Aquatic Vegetation Distribution Map 024 – Island Beach. Available: https://www.nj.gov/dep/landuse/download/map_024.pdf.
- New Jersey Department of Environmental Protection (NJDEP). 2012. *Hard clam distribution for central Barnegat Bay, 2012*. Available: <https://www.nj.gov/dep/landuse/shellfish.html>.
- New York State Energy Research and Development Authority (NYSERDA). 2019. *Geotechnical and Geophysical Desktop Study to Support Offshore Wind Energy Development in the New York Bight Final Report*. Report Number 19-19. NYSERDA Contract 135752. 70 pages.
- Normandeau Associates, Inc., Exponent, Inc., T. Tricas, and A. Gill. 2011. *Effects of EMFs from Undersea Power Cables on Elasmobranchs and Other Marine Species*. Final Report. U.S. Department of the Interior, Bureau of Ocean Energy Management, Regulation and Enforcement, Pacific OCS Region, Camarillo, CA. OCS Study BOEMRE 2011-09. Available: <https://epis.boem.gov/final%20reports/5115.pdf>. Accessed: October 11, 2021.
- Novak, A. B., M. C. Pelletier, P. Colarusso, J. Simpson, M. N. Guitierrez, A. Arias-Ortiz, M. Charpentier, P. Masque, and P. Vella. 2020. Factors influencing carbon stocks and accumulation rates in eelgrass meadows across New England, USA. *Estuaries and Coasts* 43:2076–2091.
- Ocean Wind LLC (Ocean Wind). 2022. *Ocean Wind Submerged Aquatic Vegetation Preliminary Mitigation Plan*. December 2022.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Orth, R. J., J. S. Lefcheck, and D. J. Wilcox. 2017. Boat propeller scarring of seagrass beds in lower Chesapeake Bay, USA: Patterns, causes, recovery, and management. *Estuaries and Coasts* 40(6):1666–1676.
- Pendleton, L., D. C. Donato, B. C. Murray, S. Crooks, W. A. Jenkins, S. Sifleet, C. Craft, J. W. Fourqurean, J. B. Kauffman, N. Marba, P. Megonigal, E. Pidgeon, D. Herr, D. Gordon, and A. Baldera. 2012. Estimating global "Blue Carbon" emissions from conversion and degradation of vegetated coastal ecosystems. *PLOS ONE* 7(9):e43542. DOI:10.1371/journal.pone.0043542.
- Pezy, J. P., A. Raoux, J. C. Dauvin, and S. Degraer. 2018. "An Ecosystem Approach for Studying the Impact of Offshore Wind Farms: A French Case Study." *ICES Journal of Marine Science*, fsy125, September 12, 2018. Available: <https://academic.oup.com/icesjms/article-abstract/77/3/1238/5096674>. Accessed: October 11, 2021.

- Pickens, B. A., J. C. Taylor, and D. Hansen. 2020. Volume 1: Fish habitat associations and the potential effects of dredging on the Atlantic and Gulf of Mexico Outer Continental Shelf, literature synthesis and gap analysis. In: Pickens, B. A., and J. C. Taylor, editors. *Regional Essential Fish Habitat geospatial assessment and framework for offshore sand features*. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2020-002 and NOAA NCCOS Technical Memorandum 270. Available: <https://doi.org/10.25923/akzd-8556>.
- Popper, A. N., L. Hice-Dunton, and E. Jenkins. 2022. Offshore wind energy development: Research priorities for sound and vibration effects on fishes and aquatic invertebrates. *Journal of the Acoustical Society of America* 151:205–215.
- Popper, A. N., A. D. Hawkins, R. R. Fay, D. Mann, S. Bartol, T. Carlson, S. Coombs, W. T. Ellison, R. Gentry, M. B. Halvorsen, S. Løkkeborg, P. Rogers, B. L. Southall, D. Zeddies, and W. N. Tavolga. 2014. *Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report prepared by ANSI-Accredited Standards Committee S3/SC1 and registered with ANSI*. Springer Briefs in Oceanography, Springer International Publishing, and ASA Press, Cham, Switzerland.
- Raoux, A., S. Tecchio, J. P. Pezy, G. Lassalle, S. Degraer, S. Wilhelmsson, M. Cachera, B. Ernande, C. Le Guen, M. Haraldsson, K. Grangeré, F. Le Loc’h, J. C. Dauvin, and N. Niquil. 2017. “Benthic and Fish Aggregation Inside an Offshore Wind Farm: Which Effects on the Trophic Web Functioning?” *Ecological Indicators* 72, January 2017:33–46. Available: <https://hal.archives-ouvertes.fr/hal-01398550/document>. Accessed: October 11, 2021.
- Rico-Martínez, R., T. W. Snell, and T. L. Shearer. 2012. Synergistic toxicity of Macondo crude oil and dispersant Corexit 9500A® to the *Brachionus plicatilis* species complex (Rotifera). *Environmental Pollution* 173:5–10. Available: <https://doi.org/10.1016/j.envpol.2012.09.024>.
- Roberts, L., H. R. Harding, I. Voellmy, R. Brintjes, S. D. Simpson, A. N. Radford, T. Breithaupt, and M. Elliott. 2016. Exposure of benthic invertebrates to sediment vibration: From laboratory experiments to outdoor simulated pile-driving. *Proceedings of Meetings on Acoustics* 27:010029.
- Rutecki, D., T. Dellapenna, E. Nestler, F. Scharf, J. Rooker, C. Glass, and A. Pembroke. 2014. *Understanding the Habitat Value and Function of Shoals and Shoal Complexes to Fish and Fisheries on the Atlantic and Gulf of Mexico Outer Continental Shelf*. Literature Synthesis and Gap Analysis. Prepared for the U.S. Department of the Interior, Bureau of Ocean Energy Management. Contract # M12PS00009. BOEM 2015-012.
- Salo, T., and M. Pedersen. 2014. Synergistic Effects of Altered Salinity and Temperature on Estuarine Eelgrass (*Zostera marina*) Seedlings and Clonal Shoots. *J. Exp. Mar. Biol. Ecol.* 457:143–150. DOI: 10.1016/j.jembe.2014.04.008.
- Schultz, I. R., D. L. Woodruff, K. E. Marshall, W. J. Pratt, and G. Roesijadi. 2010. *Effects of Electromagnetic Fields on Fish and Invertebrates*. Task 2.1. 3: Effects on Aquatic Organisms-Fiscal Year 2010 Progress Report- Environmental Effects of Marine and Hydrokinetic Energy (No. PNNL-19883 Final). Pacific Northwest National Laboratory, Richland, Washington.
- Segtnan, O. H., and K. Christakos. 2015. Effect of offshore wind farm design on the vertical motion of the ocean. In *Proceedings of the 12th Deep Sea Offshore Wind R&D Conference, EERA DeepWind 2015*. *Energy Procedia* 80:213–222.

- Short, Frederick T. 2016. *Eelgrass Distribution and Biomass in the Great Bay Estuary for 2015*. PREP Reports & Publications. 354. Available: <https://scholars.unh.edu/prep/354>.
- Siddagangaiah, S., C.-F. Chen, W.-C. Hu, and N. Pieretti. 2022. Impact of pile-driving and offshore windfarm operational noise on fish chorusing. *Remote Sens Ecol Conserv* 8:119–134. Available: <https://doi.org/10.1002/rse2.231>.
- Slacum, H. W., W. H. Burton, E. T. Methratta, E. D. Weber, R. J. Llanso, and J. Dew-Baxter. 2010. Assemblage structure in shoal and flat-bottom habitats on the inner continental shelf of the Middle Atlantic Bight, USA. *Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science* 2:277–298.
- Snyder, D. B., W. H. Bailey, K. Palmquist, B. R. T. Cotts, and K. R. Olsen. 2019. Evaluation of Potential EMF Effects on Fish Species of Commercial or Recreational Fishing Importance in Southern New England. BOEM report 2019-049. Available: https://espis.boem.gov/final%20reports/BOEM_2019-049.pdf.
- Taghon, G. L., P. A. Ramey, C. M. Fuller, R. F. Petrecca, J. P. Grassle, and T. J. Belton. 2017. Benthic invertebrate community composition and sediment properties in Barnegat Bay, New Jersey, 1965–2014. In: Buchanan, G. A., T. J. Belton, and B. Paudel (eds.), *A Comprehensive Assessment of Barnegat Bay–Little Egg Harbor, New Jersey*. *Journal of Coastal Research*, Special Issue No. 78, pp. 169–183. Coconut Creek (Florida), ISSN 0749-0208.
- Tagliabue, A., L. Kwiatkowski, L. Bopp, M. Butenschon, W. Cheung, M. Lengaigne, and J. Vialard. 2021. Persistent uncertainties in ocean net primary production climate change projections at regional scales raise challenges for assessing impacts on ecosystem services. *Frontiers in Climate* 3:738224.
- Taormina B., J. Bald, A. Want, G. Thouzeau, M. Lejart, N. Desroy, and A. Carlier. 2018. “A Review of Potential Impacts of Submarine Cables on the Marine Environment: Knowledge Gaps, Recommendations, and Future Directions.” *Renewable and Sustainable Energy Reviews* 96:380–391. Available: <https://hal.archives-ouvertes.fr/hal-02405630/document>. Accessed: October 11, 2021.
- Tougaard, J., L. Hermannsen, and P. T. Madsen. 2020. How loud is the underwater noise from operating offshore wind turbines? *Journal of the Acoustical Society of America* 148(5):2885–2893.
- U.S. Environmental Protection Agency (USEPA). 2009. National Estuary Program Booklet. Available: <https://www.epa.gov/nep/national-estuary-program-booklet>.
- U.S. Offshore Wind Synthesis of Environmental Effects Research (SEER). 2022. Benthic Disturbance from Offshore Wind Foundations, Anchors, and Cables.
- Van Dalfsen, J. A., and K. Essink. 2001. “Benthic Community Response to Sand Dredging and Shoreface Nourishment in Dutch Coastal Waters.” *Senckenbergiana Maritima* 31(2):329–332.
- van der Molen, J., H. C. M. Smith, P. Lepper, S. Limpenny, and J. Rees. 2014. Predicting the large-scale consequences of offshore wind turbine array development on a North Sea ecosystem. *Cont. Shelf Res.* 85:60–72.
- Vasslides, J., and K. Able. 2008. Importance of shoreface sand ridges as habitat for fishes off the northeast coast of the United States. *Fishery Bulletin* 106:93–107.

- Veirs, S., V. Veirs, and J. D. Wood. 2016. Ship noise extends to frequencies used for echolocation by endangered killer whales. *PeerJ* 4:e1657. Available: <https://doi.org/10.7717/peerj.1657>.
- Virginia Institute of Marine Science (VIMS). 2000. *Environmental survey of potential sand resources sites, offshore Delaware and Maryland*: Final Report. OCS Study 2000-05. Virginia Institute of Marine Science, College of William and Mary. Available: <http://dx.doi.org/doi:10.21220/m2-mtx7-mn42>.
- Waycott, M., C. Duarte, T. Carruthers, R. Orth, et al. 2009. Accelerating loss of seagrasses across the globe threatens coastal ecosystems. *Proceedings of the National Academy of Sciences* 106:12377–12381.
- Wilber, D. H., and D. G. Clarke. 2007. Defining and Assessing Benthic Recovery Following Dredging and Dredged Material Disposal. Presentation from the 2007 WODCON XVIII Conference in Lake Buena Vista, FL. Available: https://www.westerndredging.org/phocadownload/ConferencePresentations/2007_WODA_Florida/Session3D-EnvironmentalAspectsOfDredging/3%20-%20Wilber%20-%20Defining%20Assessing%20Benthic%20Recovery%20Following%20Dredged%20Material%20Disposal.pdf. Accessed: October 11, 2021.
- Wilding, T. A., A. B. Gill, A. Boon, E. Sheehan, J. Dauvin, J. Pezy, F. O’Beirn, U. Janas, L. Rostin, and I. De Mesel. 2017. Turning of the DRIP (‘Data-rich, information-poor’) – rationalizing monitoring with a focus on marine renewable energy developments and the benthos. *Renewable and Sustainable Energy Reviews* 74:848–859.
- Wong, M., and B. Vercaemer. 2012. Effects of invasive colonial tunicates and a native sponge on the growth, survival, and light attenuation of eelgrass (*Zostera marina*) *Aquatic Invasions* 7(3):315–326. DOI: <http://dx.doi.org/10.3391/ai.2012.7.3.003>.
- Woodruff, D. L., I. R. Schultz, K. E. Marshall, J. A. Ward, and V. Cullinan. 2012. *Effects of Electromagnetic Fields on Fish and Invertebrates*. Task 2.1.3: Effects on Aquatic Organisms – Fiscal Year 2011 Progress Report. PNNL-20813, Pacific Northwest National Laboratory, Richland, Washington.
- Woodruff, D. L., I. R. Schultz, K. E. Marshall, J. A. Ward, and V. I. Cullinan. 2013. *Effects of Electromagnetic Fields on Fish and Invertebrates*: Task 2.1.3: Effects on Aquatic Organisms-Fiscal Year 2011 Progress Report- Environmental Effects of Marine and Hydrokinetic Energy (No. PNNL-20813 Final). Pacific Northwest National Laboratory, Richland, Washington.
- B.2.3.7. Section 3.7, Birds**
- Abdulle, S. A., and K. C. Fraser. 2018. Does wind speed and direction influence timing and route of a trans-hemispheric migratory songbird (purple martin) at a migration barrier? *Animal Migration* 5(1):49–58.
- Ainley, D. G., E. Porzig, D. Zajanc, and L. B. Spear. 2015. Seabird flight behavior in response to altered wind strength and direction. *Marine Ornithology* 43:25–36.
- Avian Power Line Interaction Committee (APLIC). 2012. *Reducing Avian Collisions with Power Lines: The State of the Art in 2012*. Edison Electric Institute and APLIC. Washington D.C. Available: http://www.aplic.org/uploads/files/15518/Reducing_Avian_Collisions_2012watermarkLR.pdf. Accessed: October 20, 2021.

- Bayne, E. M., L. Habib, and S. Boutin. 2008. Impacts of Chronic Anthropogenic Noise from Energy-sector Activity on Abundance of Songbirds in the Boreal Forest. *Conservation Biology* 22(5):1186–1193.
- Bloch, R., and B. Bruderer. 1982. The Air Speed of Migrating Birds and Its Relationship to the Wind. *Behavioral Ecology and Sociobiology* 11:19–24.
- Briggs, K. T., M. E. Gershwin, and D. W. Anderson. 1997. Consequences of petrochemical ingestion and stress on the immune system of seabirds. *ICES Journal of Marine Science* 54:718–725.
- Bruderer, B., and A. Boldt. 2001. Flight characteristics of birds. *International Journal of Avian Science* 143:178–204.
- Bureau of Ocean Energy Management (BOEM). 2012. *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Massachusetts: Environmental Assessment*. OCS EIS/EA BOEM 2012-087. Available: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/BOEM_Newsroom/Library/Publications/2012/BOEM-2012-087.pdf. Accessed: September 1, 2020.
- Bureau of Ocean Energy Management (BOEM). 2014a. *Atlantic OCS Proposed Geological and Geophysical Activities: Mid-Atlantic and South Atlantic Planning Areas Final Programmatic Environmental Impact Statement*. Office of Renewable Energy Programs. OCS EIS/EA BOEM 2014-001. February 2014. Available: <https://www.boem.gov/oil-gas-energy/atlantic-geological-and-geophysical-gg-activities-programmatic-environmental-impact>. Accessed: October 19, 2020.
- Bureau of Ocean Energy Management (BOEM). 2014b. *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Massachusetts: Revised Environmental Assessment*. Office of Renewable Energy Programs. OCS EIS/EA BOEM 2014-603. Available: <https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/MA/Revised-MA-EA-2014.pdf>. Accessed: September 1, 2020.
- Bureau of Ocean Energy Management (BOEM). 2016. *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore New York: Environmental Assessment*. Office of Renewable Energy Programs. OCS EIS/EA BOEM 2016-042. June 2016. Available: <https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/NY/NY-Public-EA-June-2016.pdf>. Accessed: September 1, 2020.
- Bureau of Ocean Energy Management (BOEM). 2018. *Vineyard Wind Offshore Wind Energy Project Draft Environmental Impact Statement*. OCS EIS/EA BOEM 2018-060. Available: <https://www.boem.gov/Vineyard-Wind-EIS/>. Accessed: September 21, 2021.
- Bureau of Ocean Energy Management (BOEM). 2021a. *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2021-0012. Available: <https://www.boem.gov/vineyard-wind>. Accessed: August 2021.
- Bureau of Ocean Energy Management (BOEM). 2021c. *Guidelines for Lighting and Marking of Structures Supporting Renewable Energy Development*. April 2021.
- Bureau of Ocean Energy Management (BOEM). 2022. *Ocean Wind Offshore Wind Farm Biological Assessment for the United States Fish and Wildlife Service*. May.

- Causon, Paul D., and Andrew B. Gill. 2018. Linking Ecosystem Services with Epibenthic Biodiversity Change Following Installation of Offshore Wind Farms. *Environmental Science and Policy* 89:340–347.
- Chapman, J. W., C. Nilsson, K. S. Lim, J. Backman, D. R. Reynolds, and T. Alerstam. 2016. Adaptive Strategies in nocturnally migrating insects and songbirds: contrasting responses to wind. *Journal of Animal Ecology* 85(1):115–124. DOI: 10.1111/1365-2656.12420. Epub 2015 Aug 17. PMID: 26147535.
- Choi, D. Y., T. W. Wittig, and B. M. Kluever. 2020. An Evaluation of Bird and Bat Mortality at Wind Turbines in the Northeastern United States. *PLOS ONE* 15(8): e0238034. Available: <https://doi.org/10.1371/journal.pone.0238034>.
- Cook, A. S. C. P., and N. H. K. Burton. 2010. A Review of Potential Impacts of Marine Aggregate Extraction on Seabirds. Marine Environment Protection Fund Project 09/P130. Available: https://www.bto.org/sites/default/files/shared_documents/publications/research-reports/2010/rr563.pdf. Accessed: February 25, 2020.
- Cornell University. 2019. “Golden Eagle Identification.” Available: https://www.allaboutbirds.org/guide/Golden_Eagle/id. Accessed: August 19, 2021.
- Desholm, M., and J. Kahlert. 2005. “Avian Collision Risk at an Offshore Wind Farm.” *Biology Letters* 1 (3):296–298. DOI:10.1098/rsbl.2005.0336.
- Dierschke, V., R. W. Furness, and S. Garthe. 2016. Seabirds and Offshore Wind Farms in European Waters: Avoidance and Attraction. *Biological Conservation* 202:59–68.
- Dolbeer, R. A., M. J. Begier, P. R. Miller, J. R. Weller, and A. L. Anderson. 2019. *Wildlife Strikes to Civil Aircraft in the United States, 1990–2018*. Federal Aviation Administration National Wildlife Strike Database Serial Report Number 25. 95 pp. + Appendices.
- Drewitt, Allan L., and Rowena H. W. Langston. 2006. “Assessing the Impacts of Wind Farms on Birds.” *Ibis* 148:29–42. Available: <https://doi.org/10.1111/j.1474-919X.2006.00516.x>.
- English, P. A., T. I. Mason, J. T. Backstrom, B. J. Tibbles, A. A. Mackay, M. J. Smith, and T. Mitchell. 2017. *Improving Efficiencies of National Environmental Policy Act Documentation for Offshore Wind Facilities Case Studies Report*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. OCS Study BOEM 2017-026.
- Fox, A. D., Mark Desholm, Johnny Kahlert, Thomas Kjaer Christensen, and Ib Krag Peterson. 2006. “Information Needs to Support Environmental Impact Assessment of the Effects of European Marine Offshore Wind Farms on Birds.” *Ibis* 148:129–144.
- Furness, B., and H. Wade. 2012. *Vulnerability of Scottish Seabirds to Offshore Wind Turbines*. Marine Scotland Report. Available: <https://tethys.pnnl.gov/sites/default/files/publications/Furness%20and%20Wade%202012.pdf>. Accessed: September 23, 2020.
- Furness, R. W., H. M. Wade, and E. Masden. 2013. Assessing Vulnerability of Marine Bird Populations to Offshore Wind Farms. *Journal of Environmental Management* 119:56–66.

- Garthe, S., and O. Hüppop. 2004. Scaling Possible Adverse Effects of Marine Wind Farms on Seabirds: Developing and Applying a Vulnerability Index. *Journal of Applied Ecology* 41:724–734.
- Goodale, M. Wing, and Anita Millman. 2016. “Cumulative Adverse Effects of Offshore Wind Energy Development on Wildlife.” *Journal of Environmental Planning and Management* 59(1):1–29. DOI: 10.1080/09640568.2014.973483.
- Goodwin, S. E., and W. G. Shriver. 2010. Effects of Traffic Noise on Occupancy Patterns of Forest Birds. *Conservation Biology* 25(2):406–411.
- Haney, J. C., P. G. R. Jodice, W. A. Montevecchi, and D. C. Evers. 2017. Challenges to Oil Spill Assessments for Seabirds in the Deep Ocean. Archives of *Environmental Contamination and Toxicology* 73:33–39.
- Hatch, J. M. 2017. Comprehensive Estimates of Seabird-Fishery Interactions for the U.S. Northeast and Mid-Atlantic. *Aquatic Conservation: Marine and Freshwater Ecosystems* 28(1):182–193.
- Hodos, W. 2003. *Minimization of Motion Smear: Reducing Avian Collisions with Wind Turbines*. Prepared for the National Renewable Energy Laboratory. NREL/SR-500-33249. Golden, CO.
- Hüppop, O., J. Dierschke, K. Exo, E. Frerich, and R. Hill. 2006. Bird Migration and Potential Collision Risk with Offshore Wind Turbines. *Ibis* 148:90–109.
- Johnston, A., A. S. C. P. Cook, L. J. Wright, E. M. Humphreys, and N. H. K. Burton. 2014. Modeling Flight Heights of Marine Birds to More Accurately Assess Collision Risk with Offshore Wind Turbines. *Journal of Applied Ecology* 51:31–41.
- Kerlinger, P. 1985. Water-crossing behavior of raptors during migration. *Wilson Bulletin* 97:109–113.
- Kerlinger, P., J. L. Gehring, W. P. Erickson, R. Curry, A. Jain, and J. Guarnaccia. 2010. Night Migrant Fatalities and Obstruction Lighting at Wind Turbines in North America. *The Wilson Journal of Ornithology* 122(4):744–754.
- Leopold, M. F., E. M. Dijkman, and L. Teal. 2011. *Local Birds in and around the Offshore Wind Farm Egmond aan Zee (OWEZ) (T-0 & T-1, 2002-2010)*. Report C187/11. IMARES Wageningen UR, Texel, the Netherlands. Appendices.
- Leopold, M. F., R. S. A. van Bemmelen, and A. F. Zuur. 2013. *Responses of Local Birds to the Offshore Wind Farms PAWP and OWEZ off the Dutch mainland coast*. Report C151/12. IMARES Wageningen UR, Texel, the Netherlands.
- Lindeboom, H. J., H. J. Kouwenhoven, M. J. N. Bergman, S. Bouma, S. Brasseur, R. Daan, R. C. Fijn, D. de Haan, S. Dirksen, R. van Hal, R. Hille Ris Lambers, R. ter Hofstede, K. L. Krijgsveld, M. Leopold, and M. Scheidat. 2011. Short-term Ecological Effects of an Offshore Wind Farm in the Dutch Coastal Zone; a compilation. *Environmental Research Letters* 6:1–13.
- Madsen, A. M., R. Reeve, M. Desholm, A. D. Fox, R. W. Furness, and D. T. Haydon. Assessing the Impact of Marine Wind Farms on Birds Through Movement Modelling. *Journal of the Royal Society Interface*. May 2.

- Maggini, I., L. V. Kennedy, A. Macmillan, K. H. Elliot, K. Dean, and C. G. Guglielmo. 2017. Light Oiling of Feathers Increases Flight Energy Expenditure in a Migratory Shorebird. *Journal of Experimental Biology* 220:2372–2379.
- McLaughlin, K. E., and H. P. Kunc. 2013. Experimentally Increased Noise Levels Change Spatial and Singing Behavior. *Biology Letters* 9:20120771.
- National Audubon Society (Audubon). 2019. “Survival by Degrees: 389 Species on the Brink.” Available: <https://www.audubon.org/climate/survivalbydegrees>.
- New Jersey Audubon Society. Undated. Avalon Seawatch. Available: <https://njudubon.org/watches/avalon-seawatch/>. Accessed: January 17, 2023.
- New Jersey Bureau of GIS. 2018. “Landscape 3.3 Regions of New Jersey.” Available: <https://njogis-newjersey.opendata.arcgis.com/datasets/njdep::landscape-3-3-regions-of-new-jersey/explore?location=39.344761%2C-74.511322%2C11.60>. Accessed: August 19, 2021.
- New Jersey Department of Environmental Protection (NJDEP). 2018. *New Jersey’s Wildlife Action Plan*. Division of Fish and Wildlife. March. Available: https://www.nj.gov/dep/fgw/ensp/wap/pdf/wap_plan18.pdf. Accessed: July 8, 2021.
- North American Bird Conservation Initiative (NABCI), U.S. Committee. 2016. *The State of the Birds 2016: Report on Public Lands and Waters*. U.S. Department of the Interior. Washington, DC. Available: <https://www.stateofthebirds.org/2016/wpcontent/uploads/2016/05/SoNAB-ENGLISH-web.pdf>. Accessed: September 1, 2020.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Orr, Terry L., Susan M. Herz, and Darrell L. Oakley. 2013. *Evaluation of Lighting Schemes for Offshore Wind Facilities and Impacts to Local Environments*. Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Herndon, VA. OCS Study BOEM 2013-0116. Available: <https://espi.boem.gov/final%20reports/5298.pdf>. Accessed: September 1, 2020.
- Ørsted Wind Power North America, LLC (Ørsted). 2022. Personal communications. Email providing information on WTG cut-in speed and rotations per minute.
- Paleczny, M., E. Hammill, V. Karpouzi, and D. Pauly. 2015. Population Trend of the World’s Monitored Seabirds, 1950–2010. *PLOS ONE* 10(6): e0129342. Available: <https://doi.org/10.1371/journal.pone.0129342>.
- Panuccio, M., G. Dell’Omo, G. Bogliani, C. Catoni, and N. Sapir. 2019. “Migrating Birds Avoid Flying Through Fog and Low Clouds.” *International Journal of Biometeorology* 63:231–239. January 28, 2019. Available: <https://doi.org/10.1007/s00484-018-01656-z>.
- Paruk, J. D., E. M. Adams, H. Uher-Koch, K. A. Kovach, D. Long, IV, C. Perkins, N. Schoch, and D. C. Evers. 2016. Polycyclic Aromatic Hydrocarbons in Blood Related to Lower Body Mass in Common Loons. *Science of the Total Environment* 565:360–368.

- Percival, S. 2010. *Kentish Flats Offshore Wind Farm: Diver Surveys 2009–2010*. Ecology Consulting Report to Vattenfall Wind Energy.
- Petersen, Ib Krag, Thomas Kjær Christensen, Johnny Kahlert, Mark Desholm, and Anthony D. Fox. 2006. *Final Results of Bird Studies at the Offshore Wind Farms at Nysted and Horns Rev, Denmark*. National Environmental Research Institute, Ministry of the Environment, Denmark. Available: https://tethys.pnnl.gov/sites/default/files/publications/NERI_Bird_Studies.pdf. Accessed: September 1, 2020.
- Pettersson, J. 2005. *The Impact of Offshore Wind Farms on Bird Life in Southern Kalmar Sound, Sweden: a Final Report Based on Studies 1999–2003*. Report for the Swedish Energy Agency, Lund University, Lund, Sweden.
- Pezy, J. P., A. Raoux, J. C. Dauvin, and Steven Degraer. 2018. “An Ecosystem Approach for Studying the Impact of Offshore Wind Farms: A French Case Study.” *ICES Journal of Marine Science*, fsy125, September 12, 2018.
- Plonczkier, P., and I. C. Simms. 2012. Radar Monitoring of Migrating Pink-footed Geese: Behavioral Responses to Offshore Wind Farm Development. *Journal of Applied Ecology* 49:1187–1194.
- Raoux, A., S. Tecchio, J. P. Pezy, G. Lassalle, S. Degraer, S. Wilhelmsson, M. Cachera, B. Ernande, C. Le Guen, M. Haraldsson, K. Grangere, F. Le Loc'h, J. C. Dauvin, and N. Niquil. 2017. Benthic and Fish Aggregation Inside an Offshore Wind Farm: Which Effects on the Trophic Web Functioning? *Ecological Indicators* 72:33–46.
- Regular, P., W. Montevecchi, A. Hedd, G. Roberson, and S. Wilhelm. 2013. “Canadian Fisheries Closure Provides a Large-scale Test of the Impact of Gillnet Bycatch on Seabird Populations.” *Biology Letters* 9(4): 20130088. Available: <https://royalsocietypublishing.org/doi/pdf/10.1098/rsbl.2013.0088>. Accessed: September 1, 2020.
- Roberts, A. J. 2019. *Atlantic Flyway Harvest and Population Survey Data Book*. U.S. Fish and Wildlife Service, Laurel, MD.
- Robinson Willmott, J., and G. Forcey. 2014. *Acoustic Monitoring of Temporal and Spatial Abundance of Birds near Outer Continental Shelf Structures: Synthesis Report*. U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Herndon, VA. BOEM 2014-004. 172 pp. Available: <https://espis.boem.gov/final%20reports/5349.pdf>. Accessed: September 7, 2020.
- Robinson Willmott, J., G. Forcey, and A. Kent. 2013. *The Relative Vulnerability of Migratory Bird Species to Offshore Wind Energy Projects on the Atlantic Outer Continental Shelf: An Assessment Method Database*. Final report to the U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. OCS Study BOEM 2013-207. Available: <https://espis.boem.gov/final%20reports/5319.pdf>. Accessed: September 7, 2020.
- Roman, L., B. D. Hardesty, M. A. Hindell, and C. Wilcox. 2019. A Quantitative Analysis Linking Seabird Mortality and Marine Debris Ingestion. *Scientific Reports* 9(1):1–7.
- Sigourney, D. B., C. D. Orphanides, and J. M. Hatch. 2019. *Estimates of Seabird Bycatch in Commercial Fisheries off the East Coast of the United States from 2015-2016*. NOAA Technical Memorandum NMFS-NE-252. Woods Hole, Massachusetts. 27 pp.

- Skov, H., S. Heinanen, T. Norman, R. M. Ward, S. Mendez-Roldan, and I. Ellis. 2018. *ORJIP Bird Collision and Avoidance Study*. Final report. The Carbon Trust. United Kingdom. April 2018.
- Stabile, Frank A., Gregory J. Watkins-Colwell, Jon A. Moore, Michael Vecchione, and Edward H. Burt Jr. 2017. "Observations of Passerines and a Falcon from a Research Vessel in the Western North Atlantic Ocean." *The Wilson Journal of Ornithology* 129(2):349–353.
- U.S. Fish and Wildlife Service (USFWS). 2018. "Wind Turbines." Available: <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/wind-turbines.php>. Accessed: August 20, 2021.
- U.S. Fish and Wildlife Service (USFWS). 2021a. Information for Planning and Consultation (IPaC): list of federally listed threatened, endangered, and proposed species in the Ocean Wind offshore and onshore project components. List generated on July 1.
- U.S. Fish and Wildlife Service (USFWS). 2021b. Birds of Conservation Concern 2021, Migratory Bird Program. Available: <https://www.fws.gov/sites/default/files/documents/birds-of-conservation-concern-2021.pdf>. Accessed: March 21, 2022.
- U.S. Fish and Wildlife Service (USFWS). 2021c. "Threats to Birds: Migratory Bird Mortality – Questions and Answers." Available: <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>. Accessed: August 20, 2021.
- Vattenfall. 2023. *AOWFL-Resolving Key Uncertainties of Seabird Flight and Avoidance Behaviours at Offshore Wind Farms*. Final report for the study period 2020–2021. Prepared by RPS. February 20.
- Vilela, R., C. Burger, A. Diederichs, F. E. Bachl, L. Szostek, A. Freund, A. Braasch, J. Bellebaum, B. Beckers, W. Piper, and G. Nehls. 2021. Use of an INLA Latent Gaussian Modeling Approach to Assess Bird Population Changes Due to the Development of Offshore Wind Farms. *Front. Mar. Sci.* 8:701332. DOI: 10.3389/fmars.2021.701332.
- Wang, J., X. Zou, W. Yu, D. Zhang, and T. Wang. 2019. Effects of Established Offshore Wind Farms on Energy Flow of Coastal Ecosystems: A Case Study of the Rudong Offshore Wind Farms in China. *Ocean & Coastal Management* 171:111–118.
- Watts, Bryan D. 2010. *Wind and Waterbirds: Establishing Sustainable Mortality Limits within the Atlantic Flyway*. Center for Conservation Biology Technical Report Series, CCBTR-10-15. College of William and Mary/Virginia Commonwealth University, Williamsburg, VA. 43 pp. Available: https://www.ccbbirds.org/wp-content/uploads/2013/12/ccbtr-10-05_Watts-Wind-and-waterbirds-Establishing-sustainable-mortality-limits-within-the-Atlantic-Flyway.pdf. Accessed: September 1, 2020.
- Winship, A. J., B. P. Kinlan, T. P. White, J. B. Leirness, and J. Christensen. 2018. Modeling At-Sea Density of Marine Birds to Support Atlantic Marine Renewable Energy Planning: Final Report. OCS Study BOEM 2018-010. Sterling, VA. 67 pp. Available: https://coastalscience.noaa.gov/data_reports/modeling-at-sea-density-of-marine-birds-to-support-atlantic-marine-renewable-energy-planning-final-report/. Accessed: September 7, 2020.

B.2.3.8. Section 3.8, Coastal Habitat and Fauna

- Atlantic Shores Offshore Wind (Atlantic Shores). 2021. *Construction and Operations Plan, Atlantic Shores Offshore Wind*. Volume I. September. Available: <https://www.boem.gov/renewable-energy/state-activities/atlantic-shores-offshore-wind-construction-and-operations-plan>.
- Bureau of Ocean Energy Management. 2022. *Ocean Wind Offshore Wind Farm Biological Assessment for the United States Fish and Wildlife Service*. May.
- Carroll, R. P. 2019. Direct and indirect effects of anthropogenic land use on bobcats (*Lynx rufus*) in New England. University of New Hampshire, Durham. Available: <https://scholars.unh.edu/cgi/viewcontent.cgi?article=3438&context=dissertation>. Accessed: November 24, 2021.
- City of Ocean City. 2016. *City of Ocean City Beach Management Plan For the Protection of Federally and State-Listed Species*. January.
- Conserve Wildlife Foundation of New Jersey. 2019. *Major Increase of Endangered Seabeach Amaranth South of Sandy Hook*. December 26, 2019. Available: <http://www.conservewildlifenj.org/blog/2019/12/26/major-increase-of-endangered-seabeach-amaranth-plants-south-of-sandy-hook/>.
- Conserve Wildlife Foundation of New Jersey. 2021. *New Jersey Endangered and Threatened Species Field Guide*. Available: <http://www.conservewildlifenj.org/species/fieldguide/>.
- Island Beach State Park. 2017. *Island Beach State Park Beach Management Plan For the Protection of Federally and State-Listed Species*. February.
- Kennish, M. J., editor. No date. *The Scientific Characterization of the Barnegat Bay—Little Egg Harbor Estuary and Watershed*. Available: <https://www.barnegatbaypartnership.org/wp-content/uploads/wpallimport/files/The%20Scientific%20Characterization%20of%20the%20Barnegat%20Bay-Little%20Egg%20Harbor%20Watershed.pdf>. Accessed: October 6, 2021.
- New Jersey Department of Environmental Protection (NJDEP). 2020. *New Jersey Scientific Report on Climate Change*, Version 1.0. (Eds. R. Hill, M. M. Rutkowski, L. A. Lester, H. Genievich, N. A. Procopio). Trenton, NJ. 184 pp.
- New Jersey Division of Fish and Wildlife (NJDFW). 2017a. NJDEP Species Based Habitat, Atlantic Coastal Region, Version 3.3. New Jersey Department of Environmental Protection, Division of Fish and Wildlife, Division of Information Technology, Bureau of Geographic Information Systems. Published online at *NJDEP Landscape 3.3 Viewer*. Available: <https://www.arcgis.com/apps/webappviewer/index.html?id=0e6a44098c524ed99bf739953cb4d4c7>. Accessed: November 22, 2021.
- New Jersey Division of Fish and Wildlife (NJDFW). 2017b. NJDEP Species Based Habitat, Pinelands Region, Version 3.3. New Jersey Department of Environmental Protection, Division of Fish and Wildlife, Division of Information Technology, Bureau of Geographic Information Systems. Published online at *NJDEP Landscape 3.3 Viewer*. Available: <https://www.arcgis.com/apps/webappviewer/index.html?id=0e6a44098c524ed99bf739953cb4d4c7>. Accessed: November 22, 2021.
- New Jersey Sea Grant Consortium. No date. *Dune Manual*. Available: <https://njseagrant.org/wp-content/uploads/2016/07/Dune-Manual-Pgs-compressed.pdf>. Accessed: September 9, 2021.

- Ocean County Planning Department. 1976. *Natural Resource Inventory for Long Beach Island, Ocean County, New Jersey*. Revised May 1976.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Ocean Wind LLC (Ocean Wind). 2023. Citing Atlantic County. 1973. *Atlantic County Environmental Inventory*. Prepared by John G. Reutters Associates.
- Sacatelli, R., R. G. Lathrop, and M. Kaplan. 2020. Impacts of Climate Change on Coastal Forests in the Northeast US. Rutgers Climate Institute, Rutgers University, New Brunswick, NJ. 48 p. DOI: <https://doi.org/doi:10.7282/t3-n4tn-ah53>. Available: https://www.sas.rutgers.edu/cms/climate/images/Impacts_of_Climate_Change_on_Coastal_Forests_in_the_Northeast_US_Sacatelli_R_Lathrop_R.G_and_Kaplan_M_2020_December_FINAL.pdf. Accessed: November 22, 2021.
- Save Barnegat Bay. 2019. “Herbarium and Janet’s Garden.” Available: <https://www.savebarnegatbay.org/educate/herbarium-and-janets-garden/>. Accessed: October 6, 2021.
- Sordello, R., R. Ophélie, F. F. De Lachapelle, C. Leger, A. Dambry, and S. Vanpeene. 2020. *Environmental Evidence* 9(20). Available: <https://environmentalevidencejournal.biomedcentral.com/track/pdf/10.1186/s13750-020-00202-y.pdf>. Accessed: November 23, 2019
- State of New Jersey Pinelands Commission. 2021. Pinelands Interactive Map. Available: <https://njpines.maps.arcgis.com/apps/webappviewer/index.html?id=28ef313eb49f4e8f96ca249d871d06fe>.
- U.S. Department of Agriculture, Natural Resources Conservation Service (USDA NRCS). 2006. *Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin*. U.S. Department of Agriculture Handbook 296.
- U.S. Fish and Wildlife Service (USFWS). 2023. New Jersey Field Office. Featured Species, Federally Listed and Candidate Species Occurring in New Jersey.
- Wootton, L., J. Miller, C. Miller, M. Peek, A. Williams, and P. Rowe. 2016. *New Jersey Sea Grant Consortium Dune Manual*. Available: <https://secureservercdn.net/198.71.233.83/bge.b67.myftpupload.com/wp-content/uploads/2016/07/Dune-Manual-Pgs-compressed.pdf>. Accessed: October 22, 2021.

B.2.3.9. Section 3.9, Commercial Fisheries and For-Hire Recreational Fishing

- Andersson, M. H., E. Dock-Åkerman, R. Ubral-Hedenberg, M.C. Öhman, and P. Sigray. 2007. Swimming behavior of roach (*Rutilus rutilus*) and three-spined stickleback (*Gasterosteus aculeatus*) in response to wind power noise and single-tone frequencies. *AMBIO* 36(8):636–638.
- Atlantic States Marine Fisheries Commission (ASMFC). 2021. Fisheries Management. Available: <http://www.asmfc.org/fisheries-management/program-overview>.
- Atlantic States Marine Fisheries Commission (ASMFC). 2023. Atlantic Menhaden. Available: <http://www.asmfc.org/species/atlantic-menhaden>. Accessed: January 6, 2023.

- Bald, J., C. Hernández, A. Uriarte, J. A. Castillo, P. Ruiz, N. Ortega, Y. T. Enciso, and D. Marina. 2015. Acoustic Characterization of Submarine Cable Installation in the Biscay Marine Energy Platform (BIMEP). [Presentation]. Presented at Bilbao Marine Energy Week, Bilbao, Spain.
- Barange, M., T. Bahri, M. Beveridge, K. Cochrane, S. Funge-Smith, and F. Poulain. 2018. *Impacts of Climate Change on Fisheries and Aquaculture: Synthesis of Current Knowledge, Adaptation and Mitigation Options*. FAO Fisheries and Aquaculture Technical Paper 627. Rome, Italy.
- Barton, B. A. 2002. Stress in fishes: A diversity of responses with particular reference to changes in circulating corticosteroids. *Integrative and Comparative Biology* 42:517–525.
- Bureau of Ocean Energy Management (BOEM). 2018. Commercial Fishing Frequently Asked Questions. Wind Energy on the Outer Continental Shelf. Available: <https://www.boem.gov/sites/default/files/uploadedFiles/BOEM-Fishing%20FAQs.pdf>.
- Bureau of Ocean Energy Management (BOEM). 2019. *National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Outer Continental Shelf*. OCS Study BOEM 2019-036. May 2019. 201 pp. Available: <https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/IPFs-in-the-Offshore-Wind-Cumulative-Impacts-Scenario-on-the-N-OCS.pdf>. Accessed: October 8, 2021.
- Bureau of Ocean Energy Management (BOEM). 2021a. *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2021-0012. Available: <https://www.boem.gov/vineyard-wind>. Accessed: August 2021.
- Bureau of Ocean Energy Management (BOEM). 2021b. *South Fork Wind Farm and South Fork Export Cable Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2020-057. Available: <https://www.boem.gov/renewable-energy/state-activities/sfwf-feis>.
- Bureau of Ocean Energy Management (BOEM). 2022. Revenue exposure analysis results for Ocean Wind 1 No Action Alternative. Personal communication between Ursula Howson (BOEM) and Spence Smith (WSP). May 8.
- Claesson, S., R. Robertson, and M. Hall-Arber. 2006. Fishing Heritage Festivals, Tourism, and Community Development in the Gulf of Maine. *Proceedings of the 2005 Northeastern Recreation Research Symposium*. GTR-NE-341.
- Clay, P. M., and Colburn, L. L. 2020. *A Practitioner's Handbook for Fisheries Social Impact Assessment*. U.S. Department of Commerce – National Oceanic and Atmospheric Administration – National Marine Fisheries Service. NOAA Technical Memorandum NMFS-F-SPO-212. December. Available: <https://spo.nmfs.noaa.gov/content/tech-memo/practitioners-handbook-fisheries-social-impact-assessment>.
- Colburn, L. L., M. Jepson, C. Weng, T. Seara, J. Weiss, and J. A. Hare. 2016. Indicators of climate change and social vulnerability in fishing dependent communities along the eastern and Gulf Coasts of the United States. *Marine Policy* 74 (December):323–333.
- Curtis, T. 2023. Personal communication between T. Curtis with NMFS and Ursula Howson with BOEM. January 2023.

- Debusschere, E., K. Hostens, D. Adriaens, B. Ampre, D. Botteldooren, G. De Boeck, A. De Muynck, A. Kumar Sinha, S. Vandendriessche, L. Van Hoorebeke, M. Vincx, and S. Degraer. 2016. Acoustic stress responses in juvenile sea bass *Dicentrarchus labrax* induced by offshore pile driving. *Environmental Pollution* 208:747–757.
- Denes, S. L., D. G. Zeddies, and M. M. Weirathmueller. 2021. *Turbine Foundation and Cable Installation at South Fork Wind Farm: Underwater Acoustic Modeling of Construction Noise*. Appendix J1 in Construction and Operations Plan South Fork Wind Farm. Silver Spring, Maryland: JASCO Applied Sciences.
- DNV-GL. 2021. *South Fork Wind Farm Navigation Safety Risk Assessment*. Appendix M in Construction and Operations Plan South Fork Wind Farm. Prepared for Deepwater Wind, LLC. Document No. 10057311-HOU-R-01. Medford, Massachusetts: DNV-GL.
- Elliot, J., A. A. Khan, Ying-Tsong, L., T. Mason, J. H. Miller, A. E. Newhall, G. R. Potty, and K. J. Vigness-Raposa. 2019. *Field Observations during Wind Turbine Operations at the Block Island Wind Farm, Rhode Island*. Final Report to the U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. OCS Study BOEM 2019-028.
- English, P. A., T. I. Mason, J. T. Backstrom, B. J. Tibbles, A. A. Mackay, M. J. Smith, and T. Mitchell. 2017. *Improving Efficiencies of National Environmental Policy Act Documentation for Offshore Wind Facilities Case Studies Report*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. OCS Study BOEM 2017-026.
- Fabrizio, M. C., J. P. Manderson, and J. P. Pessutti. 2014. “Home Range and Seasonal Movements of Black Sea Bass (*Centropristis striata*) During their Inshore Residency at a Reef in the Mid-Atlantic Bight.” *Fishery Bulletin* 112:82–97 (2014). DOI: 10.7755/FB.112.1.5.
- Hall-Arber, M., C. Dyer, J. Poggie, J. McNally, and R. Gagne. 2001. *New England’s Fishing Communities*. MIT Sea Grant College Program (MITSG 01-15). January.
- Hare, J. A., W. E. Morrison, M. W. Nelson, M. M. Stachura, E. J. Teeters, R. B. Griffis, M. A. Alexander, J. D. Scott, L. Alade, and R. J. Bell. 2016. *A vulnerability assessment of fish and invertebrates to climate change on the Northeast US Continental Shelf*. *PLOS ONE* 11(2):e0146756.
- Hastings, M., and A. Popper. 2005. *Effects of Sound on Fish*. Final Report # CA05-0537 – Project P476 Noise Thresholds for Endangered Fish. California Department of Transportation. January 28, 2005 (August 23, 2005 [Revised Appendix B]).
- Hicks, C. C., A. Levine, A. Agrawal, X. Basurto, S. J. Breslow, C. Carothers, S. Charnley, S. Coulthard, N. Dolsak, J. Donatuto, C. Garcia-Quijano, M. B. Mascia, K. Norman, M. B. Poe, T. Satterfield, K. St. Martin, and P. S. Levin. 2016. Social Science and Sustainability: “Engage key social concepts for sustainability – Social indicators, both mature and emerging, are underused.” Published by the American Association for the Advancement of Science (AAAS). *Science* 352(6281).
- Hiddink, J. G., S. Jennings, M. Sciberras, C. L. Szosteka, K. M. Hughes, N. Ellis, A. D. Rijnsdorpe, R. A. McConnaughey, T. Mazord, R. Hilborn, J. S. Collie, C. R. Pitcher, R. O. Amoroso, A. M. Parmai, P. Suuronen, and M. J. Kaisera. 2017. Global analysis of depletion and recovery of seabed biota after bottom trawling disturbance. *Proceedings of the National Academy of Sciences*, 114, 8301–8306. Available: <https://doi.org/10.1073/pnas.1618858114>.

- Jepson, M., and L. L. Colburn. 2013. *Development of Social Indicators of Fishing Community Vulnerability and Resilience in the U.S. Southeast and Northeast Regions*. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service. NOAA Technical Memorandum NMFS-F/SPO-129. April.
- Jones, I. T., J. A. Stanley, and T. A. Mooney. 2020. Impulsive pile driving noise elicits alarm responses in squid (*Doryteuthis pealeii*). *Marine Pollution Bulletin* 150:110792. DOI:10.1016/j.marpolbul.2019.110792.
- Kirkpatrick, A. J., S. Benjamin, G. S. DePiper, S. S. T. Murphy, and C. Demarest. 2017. *Socio-Economic Impact of Outer Continental Shelf Wind Energy Development on Fisheries in the U.S. Atlantic*. Vol. II—Appendices. U.S. Department of the Interior, Bureau of Ocean Energy Management, Atlantic OCS Region. Washington, D.C.
- Küsel, E. T., M. J. Weirathmueller, K. E. Zammit, S. J. Welch, K. E. Limpert, and D. G. Zeddies. 2022. *Underwater Acoustic and Exposure Modeling*. Document 02109, Version 1.0 DRAFT. Technical report by JASCO Applied Sciences for Ocean Wind LLC.
- Madsen, P. T., M. Wahlberg, J. Tougaard, K. Lucke, and P. Tyack. 2006. Wind turbine underwater noise and marine mammals: implications of current knowledge and data needs. *Marine Ecology Progress Series* 309:279–295.
- McCauley, R. D., J. Fewtrell, A. J. Duncan, C. Jenner, M. N. Jenner, J. Penrose, R. I. T. Prince, A. Adhitya, J. Murdoch, and K. McCabe. 2000. Marine seismic surveys – a study of environmental implications. *Australian Petroleum Production Exploration Association Journal* 40:692–708.
- McClenachan, L., J. Grabowski, M. Marra, C. S. McKeon, B. P. Neal, N. R. Record, and S. B. Scyphers. 2019. Shifting perceptions of rapid temperature changes’ effects on marine fisheries, 1945–2017. *Fish and Fisheries* 2019(00):1–13. DOI: 10.1111/faf.12400.
- McCreary, S., and B. Brooks. 2019. Atlantic Large Whale Take Reduction Team Meeting: Key Outcomes Meeting. April 23–26, 2019. Providence, Rhode Island. Available: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-mammal-protection/atlantic-large-whale-take-reduction-plan>.
- Mid-Atlantic Fishery Management Council (MAFMC). 2021. Fishery Management Plans and Amendments. Available: <https://www.mafmc.org/fishery-management-plans>.
- Moser, J., and G. R. Shepherd. 2009. “Seasonal Distribution and Movement of Black Sea Bass (*Centropristis striata*) in the Northwest Atlantic as Determined from a Mark-Recapture Experiment.” *J. Northw. Atl. Fish. Sci.* 40:17–28. DOI:10.2960/J.v40.m638.
- Mueller-Blenkle, C., P. K. McGregor, A. B. Gill, M. H. Andersson, J. Metcalfe, V. Bendall, P. Sigray, D. T. Wood, and F. Thomsen. 2010. *Effects of Pile-driving Noise on the Behaviour of Marine Fish*. COWRIE Ref: Fish 06-08; Cefas Ref: C3371. 62 p.
- Murray, G., T. Johnson, B. J. McCay, M. Danko, K. St. Martin, and S. Takahashi. 2010. Creeping enclosure, cumulative effects and the marine commons of New Jersey. *International Journal of the Commons* 4(1):367–389.
- National Academies of Sciences, Engineering, and Medicine 2022. *Wind Turbine Generator Impacts to Marine Vessel Radar*. Washington, DC: The National Academies Press.

- National Marine Fisheries Service (NMFS). 2006. *Consolidated Atlantic Highly Migratory Species Management Plan*. Available: <https://www.fisheries.noaa.gov/management-plan/consolidated-atlantic-highly-migratory-species-management-plan>. Accessed: January 24, 2023.
- National Marine Fisheries Service (NMFS). 2019. Vessel Activity by Vessel Speed and VMS Activity by Course, OCS-A-0498, Ocean Wind, January 2014 to August 2019.
- National Marine Fisheries Service (NMFS). 2020. The Economic Importance of Seafood. Available: <https://www.fisheries.noaa.gov/feature-story/economic-importance-seafood>. Accessed: November 5, 2020.
- National Marine Fisheries Service (NMFS). 2021a. Commercial Fisheries Statistics. Available: <https://www.fisheries.noaa.gov/national/sustainable-fisheries/commercial-fisheries-landings>. Accessed: November 2021.
- National Marine Fisheries Service (NMFS). 2021b. *Descriptions of Selected Fishery Landings and Estimates of Vessel Revenue from Areas: A Planning-level Assessment*. Ocean Wind 1. July 6, 2021. Available: https://www.greateratlantic.fisheries.noaa.gov/ro/fso/reports/WIND/WIND_AREA_REPORTS/Ocean_Wind_1.html. Accessed October 9, 2021.
- National Marine Fisheries Service (NMFS). 2021c. Consolidated Atlantic Highly Migratory Species Management Plan. Available: <https://www.fisheries.noaa.gov/management-plan/consolidated-atlantic-highly-migratory-species-management-plan>. Accessed October 15, 2021.
- National Marine Fisheries Service (NMFS). 2021d. Program Glossary. Available: <https://www.st.nmfs.noaa.gov/st1/recreational/overview/glossary.html>.
- National Marine Fisheries Service (NMFS). 2021e. *Socioeconomic Impacts of Atlantic Offshore Wind Development*. Available: <https://www.fisheries.noaa.gov/resource/data/socioeconomic-impacts-atlantic-offshore-wind-development>.
- National Marine Fisheries Service (NMFS). 2022a. Commercial Fisheries Statistics. Available: <https://www.fisheries.noaa.gov/national/sustainable-fisheries/commercial-fisheries-landings>. Accessed: December 2022.
- National Marine Fisheries Service (NMFS). 2022b. *Descriptions of Selected Fisher Landings and Estimates of Vessel Revenue from Areas: A Planning-level Assessment*. Ocean Wind (OCS-A 0498). November 28, 2022. Available: <https://www.fisheries.noaa.gov/resource/data/socioeconomic-impacts-atlantic-offshore-wind-development>. Accessed: January 26, 2023.
- National Oceanic and Atmospheric Administration (NOAA) Fisheries Office of Science and Technology. 2021. NOAA Fisheries Social Indicators for Coastal Communities. (last updated August 19, 2021). Available: <https://www.fisheries.noaa.gov/national/socioeconomics/social-indicators-fishing-communities>. Accessed: December 11, 2021.
- Nedwell, J., and D. Howell. 2004. *A Review of Offshore Windfarm Related Underwater Noise Sources*. Final Report submitted to COWRIE (Collective Offshore Wind Energy Research into the Environment). 57 pp.
- New England Fishery Management Council (NEFMC). 2021. Management Plans. Available: <https://www.nefmc.org/management-plans>.

- New Jersey Department of Environmental Protection (NJDEP). 2010. *Ocean/Wind Power Ecological Baseline Studies January 2008–December 2009*. Final Report. Prepared for New Jersey Department of Environmental Protection Office of Science by Geo-Marine, Inc., Plano, Texas. Available: <https://tethys.pnnl.gov/sites/default/files/publications/Ocean-Wind-Power-Baseline-Volume1.pdf>.
- Northeast Ocean Data. 2023. Vessel Activity for Scallop, Surfclam, and Ocean Quahog (2015 to 2019). Available: <https://www.northeastoceandata.org/data-explorer/?commercial-fishing/vessel-activity>.
- O’Farrell, S., I. Chollett, J. N. Sanchirico, and L. Perruso. 2019. Classifying fishing behavioral diversity using high-frequency movement data. *Proceedings of the National Academy of Sciences of the United States of America* 116(34):16811–16816.
- Ocean Wind LLC (Ocean Wind). 2021. *Ocean Wind Offshore Wind Farm, Supplemental COP Information*. November.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Ocean Wind LLC (Ocean Wind). 2023. Citing National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries). No date. Commercial Fisheries Statistics. Office of Science and Technology. Available: <https://www.st.nmfs.noaa.gov/commercial-fisheries/commercial-landings/annual-landings-with-group-subtotals/index>.
- Ocean Wind LLC (Ocean Wind). 2023. Citing New Jersey Department of Fish and Wildlife (NJDFW). No date. Blue Claws: Crabbing in New Jersey. Available: <https://www.njfishandwildlife.com/blueclaw.htm>.
- Papaioannou, E. A., R. L. Selden, J. Olson, B. J. McCay, M. L. Pinsky, and K. St. Martin. 2021. Not All Those Who Wander Are Lost – Responses of Fishers’ Communities to Shifts in the Distribution and Abundance of Fish. *Frontiers in Marine Science* 8 (July):1–25.
- Popper, A. N., and M. C. Hastings. 2009. The effects of anthropogenic sources of sound on fishes. *Journal of Fish Biology* 75:455–489.
- Purser, J., and A. N. Radford. 2011. Acoustic noise induces attention shifts and reduces foraging performance in three-spined sticklebacks (*Gasterosteus aculeatus*). *PLOS ONE* 6(2):e17478.
- Responsible Offshore Development Alliance (RODA). 2021. Comment letter RE: Notice of intent to prepare an Environmental Impact Statement for Ocean Wind, LLC’s Proposed Wind Energy Facility Offshore New Jersey; Docket No. BOEM-2021-0652. Dated April 29, 2021.
- Roberts, L. and M. Elliott. 2017. Good or bad vibrations? Impacts of anthropogenic vibration on the marine epibenthos. *Science of the Total Environment* 595:255–268.
- Rogers, L. A., R. Griffin, T. Young, E. Fuller, K. S. Martin, and M. L. Pinsky. 2019. Shifting habitats expose fishing communities to risk under climate change. *Nature Climate Change* 9 (7):512–516.
- Scyphers, S. B., J. S. Picou, and J. H. Grabowski. 2019. Chronic social disruption following a systemic fishery failure. *PNAS* 116(46):22912–22914. November 12.

- Secor, D. H., F. Zhang, M. H. P. O'Brien, and M. Li. 2018. "Ocean Destratification and Fish Evacuation Caused by a Mid-Atlantic Tropical Storm." *ICES Journal of Marine Science* 76(2):573–584. Available: <https://doi.org/10.1093/icesjms/fsx241>.
- Shelley, K., B. Phelan, J. Stanley, and H. Soulen. 2018. *Could Offshore Wind Energy Construction Affect Black Sea Bass Behavior?*
- Siddagangaiah, S., C.-F. Chen, W.-C. Hu, R. Danovaro, and N. Pieretti. 2021. Silent winters and rock-and-roll summers: The long-term effects of changing oceans on marine fish vocalization. *Ecological Indicators* 125:107456.
- Silva, A., L. E. Gentile, M. J. Cutler, and L. L. Colburn. 2021. *A Comparison of Waves I (2012/2013) and II (2018/2019) of the Survey on the Socio-Economic Aspects of Commercial Fishing Crew in the Northeast U.S.* U.S. Department of Commerce – National Oceanic and Atmospheric Administration. NOAA Technical Memorandum NMFS-NE-274. October.
- Skalski, J. R., W. H. Pearson, and C. I. Malme. 1992. Effects of Sound from a Geophysical Survey Device on Catch-Per-Unit-Effort in a Hook-and-Line Fishery for Rockfish (*Sebastes* spp.). *Canadian Journal of Fisheries and Aquatic Sciences* 49:1357–1365.
- Slabbekoorn, H., N. Bouton, I. van Opzeeland, A. Coers, C. Ten Cate, and A. N. Popper. 2010. A noisy spring: the impact of globally rising underwater sound levels on fish. *Trends in Ecology and Evolution* 25:419–427.
- Steinback, S., and A. Brinson. 2013. The Economics of the Recreational For-hire Fishing Industry in the Northeast United States. US Dept. Commerce, Northeast Fisheries Science Center, Ref Doc. 13-03; 49 p. Available: https://www.savingseafood.org/images/recreational_econ.pdf.
- Stöber, U., and F. Thomsen. 2021. How could operational underwater sound from future offshore wind turbines impact marine life? *The Journal of the Acoustical Society of America* 149:1791–1795.
- Taormina B., J. Bald, A. Want, G. Thouzeau, M. Lejart, N. Desroy, and A. Carlier. 2018. A Review of Potential Impacts of Submarine Cables on the Marine Environment: Knowledge Gaps, Recommendations, and Future Directions. *Renewable and Sustainable Energy Reviews* 96:380–391.
- ten Brink, T. S., and T. Dalton. 2018. Perceptions of Commercial and Recreational Fishers on the Potential Ecological Impacts of the Block Island Wind Farm (US). *Frontiers in Marine Science* 5 (November):1–13.
- Thompson, C., T. Johnson, and S. Hanes. 2016. Vulnerability of Fishing Communities Undergoing Gentrification. *Journal of Rural Studies* 45:165–174.
- Van Holt, T., W. Weisman, J. C. Johnson, S. Käll, J. Whalen, B. Spear, and P. Sousa. 2016. A Social Wellbeing in Fisheries Tool (SWIFT) to Help Improve Fisheries Performance. *MDPI – Sustainability*. Published 25 July 2016.
- Wahlberg, M., and H. Westerberg. 2005. Hearing in fish and their reactions to sounds from offshore wind farms. *Marine Ecology Progress Series* 288:295–309.
- Wilson, Alissa. 2022. New Jersey Department of Environmental Protection. Personal communication transmitted via cooperating agency review comments on the Ocean Wind 1 Preliminary Draft EIS.

Wysocki, L. E., S. Amoser, and F. Ladich. 2007. Diversity in ambient noise in European freshwater habitats: Noise levels, spectral profiles, and impact on fishes. *Journal of the Acoustical Society of America* 121(5):2559–2566.

B.2.3.10. Section 3.10, Cultural Resources

Bureau of Ocean Energy Management (BOEM). 2012. *Inventory and analysis of archaeological site occurrence on the Atlantic outer continental shelf*. Prepared by TRC Environmental Corporation for the U.S. Dept. of the Interior, Bureau of Ocean Energy, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study BOEM 2012-008. 324 pp.

Bureau of Ocean and Energy Management (BOEM). 2020. *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585*. May 27. Available: <https://www.boem.gov/sites/default/files/documents/about-boem/Archaeology%20and%20Historic%20Property%20Guidelines.pdf>. Accessed: November 7, 2021.

Bureau of Ocean Energy Management (BOEM). 2023. *Cumulative Historic Resources Visual Effects Analysis*. February.

Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.

B.2.3.11. Section 3.11, Demographics, Employment, and Economics

American Wind Energy Association (AWEA). 2020. U.S. Offshore Wind Power Economic Impact Assessment. Accessed September 30, 2021. Available: https://supportoffshorewind.org/wp-content/uploads/sites/6/2020/03/AWEA_Offshore-Wind-Economic-ImpactsV3.pdf.

Bureau of Ocean Energy Management (BOEM). 2017. *Socio-Economic Impact of Outer Continental Shelf Wind Energy Development on Fisheries in the U.S. Atlantic*. Volume I—Report Narrative. Available: <https://espis.boem.gov/final%20reports/5580.pdf>.

Bureau of Ocean Energy Management (BOEM). 2021a. *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2021-0012. Available: <https://www.boem.gov/vineyard-wind>. Accessed: August 2021.

BVG Associates Limited. 2017. U.S. *Job Creation in Offshore Wind: A Report for the Roadmap Project for Multi-State Cooperation on Offshore Wind*. Final Report. Report No. 17-22. Report for New York State Energy Research and Development Authority (NYSERDA). Available: <https://tethys.pnnl.gov/sites/default/files/publications/NYSERDA-Report-2017-OSW-Jobs.pdf>. Accessed: October 7, 2021.

Cape May County. 2005. *Cape May County Comprehensive Plan 2005*. Available: <https://capemaycountynj.gov/DocumentCenter/View/422/Comprehensive-Plan-2002-PDF?bidId>.

Cape May County. 2013. Summer Population Estimate: 2013. Available: <https://capemaycountynj.gov/DocumentCenter/View/441/Summer-Populations-2013-PDF>.

E2. 2018. *Offshore Wind: Generating Economic Benefits on the East Coast*. Prepared by BW Research. August. Available: <https://www.e2.org/wp-content/uploads/2018/08/E2-OCS-Report-Final-8.30.18.pdf>.

- Georgetown Economic Services, LLC. 2020. *Potential Employment Impact from Offshore Wind in the United States: The Mid-Atlantic and New England Region*. July 27, 2020.
- Gould, Ross, and Eliot Cresswell. 2017. *New York State and the Jobs of Offshore Wind Energy*. Workforce Development Institute, New York.
- Hoagland, P., T. M. Dalton, D. Jin, and J. B. Dwyer. 2015. An Approach for Analyzing the Spatial Welfare and Distributional Effects of Ocean Wind Power Siting: The Rhode Island/Massachusetts Area of Mutual Interest. *Marine Policy* (58):51–59. ISSN 0308-597X. Available: <https://doi.org/10.1016/j.marpol.2015.04.010>.
- Moser, S. C., M. A. Davidson, P. Kirshen, P. Mulvaney, J. F. Murley, J. E. Neumann, L. Petes, and D. Reed. 2014. Ch. 25: *Coastal Zone Development and Ecosystems*. *Climate Change Impacts in the United States: The Third National Climate Assessment*. J. M. Melillo, Terese (T. C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 579–618. DOI:10.7930/J0MS3QNW. Available: https://nca2014.globalchange.gov/downloads/low/NCA3_Full_Report_25_Coasts_LowRes.pdf.
- National Oceanic and Atmospheric Administration (NOAA). 2021a. Quick Report Tool of Socioeconomic Data: Ocean Economy (Employment data). Available: <https://coast.noaa.gov/quickreport/#/index.html>. Accessed: September 14, 2021.
- National Oceanic and Atmospheric Administration (NOAA). 2021b. “NOAA Report on the U.S. Marine Economy.” Charleston, SC: NOAA Office for Coastal Management. Available: <http://coast.noaa.gov/digitalcoast/training/econreport.html>.
- National Renewable Energy Laboratory (NREL). 2022. U.S. Offshore Wind Workforce Assessment. Available: <https://www.nrel.gov/docs/fy23osti/81798.pdf>. Accessed: November 11, 2022.
- New Jersey Office of the Governor. 2019. New Jersey Board of Public Utilities Awards Historic 1,100 MW Offshore Wind Solicitation to Ørsted’s Ocean Wind Project. Available: <https://www.nj.gov/governor/news/news/562019/20190621d.shtml>. Accessed: November 11, 2021.
- Ocean Wind LLC (Ocean Wind). 2021. Response to the Bureau of Ocean Energy Management, Request for Information #8, Ocean Wind Construction and Operations Plan. September 17.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Parsons, George, and Jeremy Firestone. 2018. *Atlantic Offshore Wind Energy Development: Values and Implications for Recreation and Tourism*. U.S. Department of the Interior, Bureau of Ocean Energy Management. Available: <https://www.semanticscholar.org/paper/Atlantic-Offshore-Wind-Energy-Development%3A-Values-Parsons-Firestone/91b0ede146b8701cb44d72c58f09b29533df3cdf>.
- Parsons, G., J. Firestone, L. Yan, and J. Toussaint. 2020. The effect of offshore wind power projects on recreational beach use on the east coast of the United States: Evidence from contingent-behavior data. *Energy Policy* 144:111659.

- The White House. 2021. FACT SHEET: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs. Available: <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/>. Accessed: October 5, 2022.
- U.S. Bureau of Economic Analysis. 2021. Current-Dollar Gross Domestic Product (GDP) by State and Region, 2020. Available: <https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1&acrdrn=1>. Accessed: September 30, 2021.
- U.S. Bureau of Labor Statistics. 2019. Quarterly Census of Employment and wages. Available: https://data.bls.gov/cew/apps/data_views/data_views.htm#tab=Tables. Accessed: April 1, 2022.
- U.S. Bureau of Labor Statistics. 2021. Local Area Unemployment Statistics. Available: <https://www.bls.gov/lau/#tables>. Accessed: September 13, 2021.
- U.S. Census Bureau. 2021a. ACS People and Population Estimates. 2015–2019 American Community Survey 5-Year Estimates. Available: <https://data.census.gov/cedsci/all?q=&t=Populations%20and%20People>. Accessed: September 15, 2021.
- U.S. Census Bureau. 2021b. ACS Income and Earnings Estimates. 2015–2019 American Community Survey 5-Year Estimates. Available: <https://data.census.gov/cedsci/all?q=&t=Income%20and%20Earnings%3AIncome%20and%20Poverty>. Accessed: September 15, 2021.
- U.S. Census Bureau. 2021c. ACS Housing Estimates. 2015–2019 American Community Survey 5-Year Estimates. Available: <https://data.census.gov/cedsci/advanced?t=Housing>. Accessed: September 15, 2021.
- U.S. Census Bureau. 2021d. ACS Industry Estimates. 2015–2019 American Community Survey 5-Year Estimates. Available: <https://data.census.gov/cedsci/all?q=&t=Industry>. Accessed: September 15, 2021.
- U.S. Census Bureau. 2021e. ACS Employment and Industry Estimates. 2015–2019 American Community Survey 5-Year Estimates. Available: <https://data.census.gov/cedsci/advanced?text=at-place%20employment&t=Industry>. Accessed: September 15, 2021.
- U.S. Census Bureau. 2021f. ACS Age and Sex Estimates. 2015-2019 American Community Survey 5-Year Estimates. Available: <https://data.census.gov/cedsci/all?q=&t=Age%20and%20Sex>. Accessed: September 15, 2021.
- U.S. Census Bureau. 2022a. ACS Employment Status Estimates. 2015-2019 American Community Survey 5-Year Estimates. Available: https://data.census.gov/cedsci/table?q=s2301&g=0400000US34,45,51_0500000US34001,34009,34011,34015,34029,34033,45019,51710&tid=ACSST5Y2019.S2301. Accessed: March 23, 2022.
- U.S. Census Bureau. 2022b. ACS Selected Economic Characteristics. 2015-2019 American Community Survey 5-Year Estimates. Available: https://data.census.gov/cedsci/table?q=dp03&g=0400000US34,45,51_0500000US34001,34009,34011,34015,34029,34033,45019,51710&tid=ACSDP5Y2019.DP03. Accessed: April 13, 2022.
- University of Delaware. 2021. *Supply Chain Contracting Forecast for U.S. Offshore Wind Power*. Special Initiative on Offshore Wind. October 2021.

B.2.3.12. Section 3.12, Environmental Justice

- Buonocore, Jonathan J., Patrick Luckow, Jeremy Fisher, Willett Kempton, and Jonathan L. Levy. 2016. "Health and Climate Benefits of Offshore Wind Facilities in the Mid-Atlantic United States." *Environmental Research Letters* 11 074019. July 14, 2016. Available: <https://iopscience.iop.org/article/10.1088/1748-9326/11/7/074019/pdf>. Accessed: November 2021.
- Chesapeake Bay Program. 2021. "Indigenous Peoples of the Chesapeake." Available: https://www.chesapeakebay.net/discover/history/archaeology_and_native_americans. Accessed: October 21, 2021.
- Council on Environmental Quality (CEQ). 1997. *Environmental Justice: Guidance Under the National Environmental Policy Act*. Available: https://www.epa.gov/sites/default/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf. Accessed: September 20, 2021.
- Jimenez, R. 2021. Social Indicators of Gentrification Pressure: How Gentrification is Affecting 29 Fishing Communities in the Northeast United States. Available: https://storymaps.arcgis.com/stories/56781eb366f1485e8ffd7c96b16f133f?utm_medium=email&utm_source=govdelivery. Accessed: August 17, 2021.
- Nansemond Indian Nation. No date. "History." Available: <https://nansemond.org/history/>. Accessed: October 21, 2021.
- National Oceanic and Atmospheric Administration (NOAA). 2022a. *Social Indicators for Coastal Communities*. Available: <https://www.fisheries.noaa.gov/national/socioeconomics/social-indicators-coastal-communities>. Accessed: April 1, 2022.
- National Oceanic and Atmospheric Administration (NOAA). 2022b. Marine Recreational Information Program. Available: <https://www.st.nmfs.noaa.gov/msd/html/siteRegister.jsp>. Accessed: September 26, 2022.
- New Jersey Department of Environmental Protection (NJDEP). 2021. "Environmental Justice Overburdened Communities." Available: <https://www.nj.gov/dep/ej/communities.html>. Accessed: 2021-09-20.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Salem County. 2021. "Native Americans in Salem County." Available: <https://visitsalemcountynj.com/about-salem-county/salem-county-history-project/native-americans-in-salem-county/>. Accessed: October 21, 2021.
- Silva, A., L. E. Gentile, M. J. Cutler, and L. L. Colburn. 2021. *Comparison of Waves I (2012/2013) and II (2018/2019) of the Survey on the Socio-Economic Aspects of Commercial Fishing Crew in the Northeast U.S.* NOAA Technical Memorandum NMFS-NE-274. Woods Hole, Massachusetts: National Marine Fisheries Service Northeast Fisheries Science Center. October.
- South Carolina Commission for Minority Affairs. 2021. "South Carolina's Recognized Native American Indian Entities." Available: <https://cma.sc.gov/minority-population-initiatives/native-american-affairs/south-carolinas-recognized-native-american-indian-entities>. Accessed: October 21, 2021.

State of New Jersey. 2021. Department of State. “New Jersey Commission on American Indian Affairs.” Available: <https://www.nj.gov/state/njcaia.shtml>. Accessed: October 21, 2021.

Thind, Maninder P.S., Christopher W. Tessum, Ines L. Azevedo, and Julian D. Marshall. 2019. Fine Particulate Air Pollution from Electricity Generation in the US: Health Impacts by Race, Income, and Geography. *Environmental Science & Technology*. DOI: 10.1021/acs.est.9b02527. Available: https://depts.washington.edu/airqual/Marshall_117.pdf. Accessed: November 7, 2021.

U.S. Census Bureau (USCB). 2000a. 2000 Decennial Census, Summary File 1. Table ID: P004. HISPANIC OR LATINO, AND NOT HISPANIC OR LATINO BY RACE [73]. Available: <https://data.census.gov/cedsci/>. Accessed: September 21, 2021.

U.S. Census Bureau (USCB). 2000b. 2000 Decennial Census, Summary File 3. Available: <https://data.census.gov/cedsci/>. Accessed: September 20, 2021.

U.S. Census Bureau (USCB). 2010. Table S1701: POVERTY STATUS IN THE PAST 12 MONTHS. 2010: ACS 1-year Estimates Subject Table. Available: <https://data.census.gov/cedsci/>.

U.S. Census Bureau (USCB). 2019. Table S1701: POVERTY STATUS IN THE PAST 12 MONTHS. 2019: ACS 5-year Estimates Subject Table. Available: <https://data.census.gov/cedsci/>.

U.S. Department of Transportation. 2021. National Transportation Statistics 2021. Available: <https://www.bts.gov/sites/bts.dot.gov/files/2021-12/NTS-50th-complete-11-30-2021.pdf>.

U.S. Environmental Protection Agency (USEPA). 2016. *Promising Practices for EJ Methodologies in NEPA Reviews: Report for the Federal Interagency Working Group on Environmental Justice & NEPA Committee*. Available: https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf. Accessed: September 20, 2021.

U.S. Environmental Protection Agency (USEPA). 2021a. EJS SCREEN: Environmental Justice Screening and Mapping Tool. Available: <https://www.epa.gov/ejscreen/download-ejscreen-data>. Accessed: August 27, 2021.

U.S. Environmental Protection Agency (USEPA). 2021b. “Federally-Recognized Tribes in EPA’s Mid-Atlantic Region.” Available: <https://www.epa.gov/tribal/federally-recognized-tribes-epas-mid-atlantic-region>. Accessed: October 21, 2021.

Wang, Y., I. Kloog, B. A. Coull, A. Kosheleva, A. Zanobetti, and J. D. Schwartz. 2016. Estimating causal effects of long-term PM_{2.5} exposure on mortality in New Jersey. *Environ Health Perspect*. 124:1182–1188. Available: <https://ehp.niehs.nih.gov/doi/pdf/10.1289/ehp.1409671>. Accessed: November 2021.

Wassamasaw Tribe of Varnertown Indians. 2016. “Community.” Available: <http://www.wassamasawtribe.com/community/>. Accessed: October 21, 2021.

B.2.3.13. Section 3.13, Finfish, Invertebrates, and Essential Fish Habitat

Able, K. W., J. M. Smith, and J. F. Caridad. 2015. American eel supply to an estuary and its tributaries: spatial variation in Barnegat Bay, New Jersey. *Northeastern Naturalist* 22(1):53–68.

Adair, R. K. 1998. Extremely Low Frequency Electromagnetic Fields Do Not Interact Directly with DNA. *Bioelectromagnetics* 19:136–137. Available: [http://dx.doi.org/10.1002/\(SICI\)1521-186X\(1998\)19:2<136::AID-BEM14>3.0.CO;2-O](http://dx.doi.org/10.1002/(SICI)1521-186X(1998)19:2<136::AID-BEM14>3.0.CO;2-O).

- Aimon, C., S. D. Simpson, R. A. Hazelwood, R. Bruintjes, and M. A. Urbina. 2021. Anthropogenic underwater vibrations are sensed and stressful for the shore crab *Carcinus maenas*. *Environmental Pollution* 285:117148.
- Albert, L., F. Deschamps, A. Jolivet, F. Olivier, L. Chauvaud, and S. Chauvaud. 2020. A current synthesis on the effects of electric and magnetic fields emitted by submarine power cables on invertebrates. *Marine Environmental Research* 159:104958. DOI: 10.1016/j.marenvres.2020.104958.
- Almeda, R., E. Buskey, and C. J. Hyatt. 2014. Toxicity of dispersant Corexit 9500A and crude oil to marine microzooplankton. *Ecotoxicology and Environmental Safety*. DOI: 10.1016/j.ecoserv.2014.008.
- Alzieu, C., J. Sanjuan, J. P. Deltreil, and B. Borel. 1986. Tin contamination in Aareachon Bay: effects on oyster shell anomalies. *Marine Pollution Bulletin* 17:494–498.
- Atlantic States Marine Fisheries Commission (ASMFC). 1997. Atlantic Coastal Submerged Aquatic Vegetation: A Review of its Ecological Role, Anthropogenic Impacts, State Regulation, and Value to Atlantic Coastal Fish Stocks. ASMFC Habitat Management Series #1. Available: <http://www.asmfc.org/uploads/file/sav.pdf#page=15>.
- Atlantic States Marine Fisheries Commission (ASMFC). 2012. *Habitat Addendum IV to Amendment I to the Interstate Fishery Management Plan for Atlantic Sturgeon*. 16 pp. Available: http://www.asmfc.org/uploads/file/sturgeonHabitatAddendumIV_Sept2012.pdf.
- Atlantic States Marine Fisheries Commission (ASMFC). 2022. Stock Assessments. Available: <http://www.asmfc.org/fisheries-science/stock-assessments#Documents>. Accessed: April 2022.
- Atlantic Sturgeon Status Review Team (ASSRT). 2007. Status Review of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*). Report to National Marine Fisheries Service, Northeast Regional Office. February 23, 2007. 174 pp.
- Armstrong, J. D., D. C. Hunter, R. J. Fryer, P. Rycroft, and J. E. Orpwood. 2015. Behavioural responses of Atlantic salmon to mains frequency magnetic fields. *Scottish Marine and Freshwater Science* 6(9):67.
- Bachman, M., and J. Coutour. 2022. Habitat Committee report. Staff presentation to the New England Fishery Management Council. June 30, 2022. Portland, Maine.
- Balazik, M., K. Reine, A. Spells, C. Fredrickson, M. Fine, G. Garman, and S. McIninch. 2012. The Potential for Vessel Interactions with Adult Atlantic Sturgeon in the James River, Virginia. *North American Journal of Fisheries Management* 32(6):1062–1069.
- Balazik, M., M. Barber, S. Altman, K. Reine, A. Katzenmeyer, A. Bunch, and G. Garman. 2020. Dredging activity and associated sound have negligible effects on adult Atlantic sturgeon migration to spawning habitat in a large coastal river. *PLOS ONE* 15(3):e0230029. DOI: 10.1371/journal.pone.0230029. PMID: 32142543; PMCID: PMC7059921.
- Basov, B. M. 1999. Behavior of sterlet *Acipenser ruthenus* and Russian sturgeon *A. gueldenstaedtii* in low-frequency electric fields. *J Ichthyol* 39(9):782–787.

- Beatrice Offshore Windfarm. 2016. *UXO Clearance Marine License* – Environmental Report. 89 pages. Available: <https://marine.gov.scot/sites/default/files/00506118.pdf>
- Bejarano, A., J. Michel, J. Rowe, Z. Li, D. French McCay, and D. Schmidt Etkin. 2013. *Environmental Risks, Fate, and Effects of Chemicals Associated with Wind Turbines on the Atlantic Outer Continental Shelf*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Herndon, VA. OCS Study BOEM 2013-213. Available: <https://espis.boem.gov/final%20reports/5330.pdf>. Accessed: October 11, 2021.
- Bellmann M. A., J. Brinkmann. A. May, T. Wendt, S. Gerlach, and P. Remmers. 2020. *Underwater noise during percussive pile driving: Influencing factors on pile-driving noise and technical possibilities to comply with noise mitigation values*. Supported by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit (BMU)), FKZ UM16 881500. Commissioned and managed by the Federal Maritime and Hydrographic Agency (Bundesamt für Seeschifffahrt und Hydrographie (BSH)), Order No. 10036866. Edited by the itap GmbH. Available: https://www.itap.de/media/experience_report_underwater_era-report.pdf.
- Bevelhimer, M. S., G. F. Cada, A. M. Fortner, P. E. Schweizer, and K. Riemer. 2013. Behavioral Responses of Representative Freshwater Fish Species to Electromagnetic Fields. *Transactions of the American Fisheries Society* 142(3):802–813.
- Bilinski, J. 2021. *Review of the Impacts to Marine Fauna from Electromagnetic Frequencies (EMF) Generated by Energy Transmitted through Undersea Electric Transmission Cables*. NJDEP Division of Science and Research. Available: <https://www.nj.gov/dep/offshorewind/docs/njdep-marine-fauna-review-impacts-from-emf.pdf>. Accessed: April 2021.
- Bologna, P. A. X., J. J. Gaynor, C. L. Barry, and D. J. Restaino. 2017. Top-down impacts of sea nettles (*Chrysaora quinquecirrha*) on pelagic community structure in Barnegat Bay, New Jersey, U.S.A. In: Buchanan, G. A., T. J. Belton, and B. Paudel (eds.), *A Comprehensive Assessment of Barnegat Bay–Little Egg Harbor, New Jersey. Journal of Coastal Research*, Special Issue No. 78:193–204. Coconut Creek (Florida), ISSN 0749-0208.
- Bricelj, V. M., J. N. Kraeuter, and G. Flimlin. 2017. Status and trends of hard clam, *Mercenaria mercenaria*, populations in a coastal lagoon ecosystem, Barnegat Bay–Little Egg Harbor, New Jersey. In: Buchanan, G. A., T. J. Belton, and B. Paudel (eds.), *A Comprehensive Assessment of Barnegat Bay–Little Egg Harbor, New Jersey. Journal of Coastal Research*, Special Issue No. 78:193–204. Coconut Creek (Florida), ISSN 0749-0208.
- Brouard, D., C. Harvey, D. Goulet, T. Nguyen, R. Champagne, and P. Dubs. 1996. Technical Notes: Evaluation of potential effects of stray voltage generated by alternating current on hatchery raised rainbow trout. *The Progressive Fish-culturist* 58:47–51.
- Brown, J. J., and G. W. Murphy. 2010. Atlantic Sturgeon Vessel-Strike Mortalities in the Delaware Estuary. *Fisheries* 35:72–83.
- Bruchet, A., et al. 2014. “Leaching of bisphenol A and F from new and old epoxy coatings: Laboratory and field studies.” *Water Science and Technology: Water Supply* 14.3:383–389.

- Bureau of Ocean Energy Management (BOEM). 2012. *Effects of Noise on Fish, Fisheries, and Invertebrates in the U.S. Atlantic and Arctic from Energy Industry Sound-Generating Activities*. Prepared under BOEM contract M11PC00031.
- Bureau of Ocean Energy Management (BOEM). 2014. *Finding of No Significant Impact: Proposed Geological and Geophysical Activities in the Atlantic OCS to Identify Sand Resources and Borrow Areas*. Available: <https://www.boem.gov/sites/default/files/non-energy-minerals/Finding-of-No-Significant-Impact.pdf>.
- Bureau of Ocean Energy Management (BOEM). 2015. *Virginia Offshore Wind Technology Advancement Project on the Atlantic Outer Continental Shelf Offshore Virginia: Revised Environmental Assessment*. OCS EIS/EA BOEM 2015-031. Available: <https://www.boem.gov/VOWTAP-EA/>. Accessed: October 11, 2021.
- Bureau of Ocean Energy Management (BOEM). 2018. *Electromagnetic Field (EMF) Impacts on Elasmobranch (Shark, Rays, and Skates) and American Lobster Movement and Migration from Direct Current Cables*. OCS Study BOEM 2018-003. Prepared by Hutchison, Z. L., P. Sigray, H. He, A. B. Gill, J. King, and C. Gibson. Available: <https://espis.boem.gov/final%20reports/5659.pdf>.
- Bureau of Ocean Energy Management (BOEM). 2021. *South Fork Wind Farm and South Fork Export Cable Project Biological Assessment*. Prepared for the National Marine Fisheries Service. U.S. Department of the Interior Bureau of Ocean Energy Management, Office of Renewable Energy Programs. Washington, D.C.
- Bureau of Ocean Energy Management (BOEM). 2022a. *Ocean Wind Offshore Wind Farm Essential Fish Habitat Assessment for National Marine Fisheries Service*. [Month].
- Bureau of Ocean Energy Management. 2022b. *Ocean Wind Offshore Wind Farm Biological Assessment for National Marine Fisheries Service*. [Month].
- Byrnes, M. R., R. M. Hammer, B. A. Vittor, J. S. Ramsey, D. B. Snyder, J. D. Wood, K. F. Bosma, T. D. Thibaut, and N. W. Phillips. 2000. *Environmental Survey of Potential Sand Resource Sites: Offshore New Jersey*. U.S. Dept. of the Interior, Minerals Management Service, International Activities and Marine Minerals Division (INTERMAR). Herndon, VA. OCS Report MMS 2000-052. Vol I: 380 pp., Vol II: Appendices 291.
- Cameron, I. L., K. R. Hunter, and W. D. Winters. 1985. Retardation of embryogenesis by extremely low frequency 60 Hz electromagnetic fields. *Physiol. Chem. Phys. Med.* NMR 17:135–138.
- Carpenter, J. R., L. Merckelbach, U. Callies, S. Clark, L. Gaslikova, and B. Baschek. 2016. Potential impacts of offshore wind farms on North Sea stratification. *PLOS ONE* 11(8):e0160830. DOI:10.1371/journal.pone.0160830.
- Carreno, A., and J. Lloret. 2021. Environmental impacts of increasing leisure boating activity in Mediterranean coastal waters. *Ocean and Coastal Management* 209:1. Available: <https://www.sciencedirect.com/science/article/pii/S0964569121001770#:~:text=Major%20or%20high%20impacts%20include%20anchoring%20impacts%20on,waters%2C%20air%20pollution%2C%20and%20fuel%20and%20oil%20leaks>. Accessed: April 2022.
- Cazenave, P. W., R. Torres, and J. I. Allen. 2016. Unstructured grid modelling of offshore wind farm impacts on seasonally stratified shelf seas. *Progress in Oceanography* 145:25–41.

- Chen, Z. 2018. *Dynamics and spatio-temporal variability of the mid-Atlantic bight cold pool*. Ph.D. dissertation, Rutgers, The State University of New Jersey, Oceanography. Available: <https://rucore.libraries.rutgers.edu/rutgers-lib/58963/PDF/1/play/>. Accessed: November 2021.
- Christiansen, Nils, Ute Daewel, Bughsin Djath, and Corinna Schrum. 2022. Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes. *Frontiers in Marine Science* 9. DOI: 10.3389/fmars.2022.818501.
- Collins, M. R., T. I. J. Smith, W. C. Post, and O. Pashuk. 2000. Habitat utilization and biological characteristics of adult Atlantic sturgeon in two South Carolina rivers. *Transactions of the American Fisheries Society* 129:982–988.
- Copping, A., N. Sather, L. Hanna, J. Whiting, G. Zydlewski, G. Staines, A. Gill, I. Hutchison, A. O’Hagan, T. Simas, J. Bald, C. Sparling, J. Wood, and E. Masden. 2016. *Annex IV 2016 State of the Science Report: Environmental Effects of Marine Renewable Energy Development Around the World*.
- CSA Ocean Sciences, Inc. and Exponent. 2019. *Evaluation of Potential EMF Effects on Fish Species of Commercial or Recreational Fishing Importance in Southern New England*. OCS Study BOEM 2019-049. Sterling, Virginia: U.S. Department of the Interior, Bureau of Ocean Energy Management.
- Cutter, G. R. Jr., and R. J. Diaz. 2000. Benthic resource mapping and resource evaluation of potential sand mining areas, 1998–1999. In *Environmental survey of potential sand resource sites offshore Delaware and Maryland*, part 1. Final Report to the Minerals Management Service, International Activities and Marine Minerals Division, contract 1435-01-97-CT-30853, Herdon, Virginia. Available: <http://gomr.mms.gov/homepg/espis/espismaster.asp?appid=-1>. Accessed: November 2021.
- Dadswell, M. J. 2006. A review of the status of Atlantic sturgeon in Canada, with comparisons to populations in the United States and Europe. *Fisheries* 31:218–229.
- Daewel, U., N. Akhtar, N. Christiansen, et al. 2022. Offshore wind farms are projected to impact primary production and bottom water deoxygenation in the North Sea. *Commun Earth Environ* 3:292. <https://doi.org/10.1038/s43247-022-00625-0>.
- Dannheim, J., L. Bergström, S. N. R. Birchenough, R. Brzana, A. R. Boon, J. W. P. Coolen, J. Dauvin, I. De Mesel, J. Derweduwien, A. B. Gill, Z. L. Hutchison, A. C. Jackson, U. Janas, G. Martin, A. Raoux, J. Reubens, L. Rostin, J. Vanaverbeke, T. A. Wilding, D. Wilhelmsson, and S. Degraer. 2020. Benthic effects of offshore renewables: identification of knowledge gaps and urgently needed research. *ICES Journal of Marine Science* 77:1092–1108.
- Dawe, E., L. Hendrickson, E. Colbourne, K. Drinkwater, and M. Showell. 2007. Ocean climate effects on the relative abundance of short-finned (*Illex illecebrosus*) and long-finned (*Loligo ealeii*) squid in the northwest Atlantic Ocean. *Fisheries Oceanography* 16(4):303–316.
- Degraer, S., D. Carey, J. Coolen, Z. Hutchison, F. Kerckhof, B. Rumes, and J. Vanaverbeke. 2020. Offshore Wind Farm Artificial Reefs Affect Ecosystem Structure and Functioning: A Synthesis. *Oceanography* 33(4):48–57.
- Donahue, M. J., A. Nichols, C. A. Santamaria, P. E. League-Pike, C. J. Krediet, K. O. Perez, and M. J. Shulman. 2009. Predation risk, prey abundance, and the vertical distribution of three Brachyuran crabs on Gulf of Maine shores. *Journal of Crustacean Biology* 29:523–531.

- Dorrell, R. M., C. J. Lloyd, B. J. Lincoln, T. P. Rippeth, J. R. Taylor, C. P. Caulfield, J. Sharples, J. A. Polton, B. D. Scannell, D. M. Greaves, R. A. Hall, and J. H. Simpson. 2022. Anthropogenic mixing in seasonally stratified shelf seas by offshore wind farm infrastructure. *Frontiers in Marine Science* 9:830927.
- Duarte, C. M. 2002. The future of seagrass meadows. *Environmental Conservation* 29:192–206.
- Dunton, K. J., A. Jordaan, K. A. McKown, D. O. Conover, and M. G. Frisk. 2010. Abundance and distribution of Atlantic sturgeon (*Acipenser oxyrinchus*) within the Northwest Atlantic Ocean, determined from five fishery-independent surveys. *Fisheries Bulletin* 108:450–465.
- Ecosystem Assessment Program. 2012. *Ecosystem Status Report for the Northeast Shelf Large Marine Ecosystem - 2011*. Northeast Fisheries Science Center Reference Document 12-07.
- Erickson, D. L., A. Kahnle, M. J. Millard, E. A. Mora, M. Bryja, A. Higgs, J. Mohler, M. DuFour, G. Kenney, J. Sweka, and E. K. Pikitch. 2011. Use of pop-up satellite archival tags to identify oceanic-migratory patterns for adult Atlantic Sturgeon, *Acipenser oxyrinchus* Mitchell, 1815. *Journal of Applied Ichthyology* 27:356–365.
- Essink, K. 1999. “Ecological Effects of Dumping of Dredged Sediments; Options for Management.” *Journal of Coastal Conservation* 5:69–80.
- Eyler, S., M. Mangold, and S. Minkkien. 2009. *Atlantic coast sturgeon tagging database*. U.S. Fish and Wildlife Service, Maryland Fishery Resources Office, Summary Report, Annapolis, Maryland.
- Fantasia, R. L., V. M. Bricelj, and L. Ren. 2017. Phytoplankton community structure based on photopigment markers in a mid-Atlantic U.S. coastal lagoon: Significance for hard-clam production. In: Buchanan, G. A., T. J. Belton, and B. Paudel (eds.), *A Comprehensive Assessment of Barnegat Bay–Little Egg Harbor, New Jersey*. *Journal of Coastal Research*, Special Issue No. 78:193–204. Coconut Creek (Florida), ISSN 0749-0208.
- Farr, E. R., M. R. Johnson, M. W. Nelson, J. A. Hare, W. E. Morrison, M. D. Lettrich, B. Vogt, C. Meaney, U. A. Howson, P. J. Auster, and F. A. Borsuk. 2021. *An assessment of marine, estuarine, and riverine habitat vulnerability to climate change in the Northeast U.S.* *PLOS ONE* 9; 16(12): e0260654.
- Field, C. B., M. J. Behrenfeld, J. T. Randerson, and P. Falkowski. 1998. Primary production to the biosphere: Integrating terrestrial and oceanic components. *Science* 281:237–240.
- Fisheries Hydroacoustic Working Group (FHWG). 2008. *Agreement in principle for interim criteria for injury to fish from pile driving activities*. Prepared for FHWG Agreement in Principle Technical/Policy Meeting, June 11, 2008, Vancouver, WA. Available: http://www.dot.ca.gov/hq/env/bio/files/fhwgcriteria_agree.pdf.
- Floeter, J., J. E. E. van Beusekom, D. Auch, U. Callies, J. Carpenter, T. Dudeck, S. Eberle, A. Eckhardt, D. Gloe, K. Hänselmann, M. Hufnagl, S. Janßen, H. Lenhart, K. O. Möller, R. P. North, T. Pohlmann, R. Riethmüller, S. Schulz, S. Spreizenbarth, A. Temming, B. Walter, O. Zielinski, and C. Möllmann. 2017. Pelagic effects of offshore wind farm foundations in the stratified North Sea. *Progress in Oceanography* 156:154–173.

- Fromentin, J. M. and B. Planque. 1996. *Calanus* and environment in the eastern North Atlantic. II. Influence of the North Atlantic Oscillation on *C. finmarchicus* and *C. helgolandicus*. *Marine Ecology Progress Series* 134:111–118.
- Gill, A. B. and M. Desender. 2020. Risk to Animals from Electromagnetic Fields Emitted by Electric Cables and Marine Renewable Energy Devices. In A.E. Copping and L.G. Hemery (Eds.), *OES-Environmental 2020 State of the Science Report: Environmental Effects of Marine Renewable Energy Development Around the World*. Report for Ocean Energy Systems (OES). (pp. 86–103). DOI:10.2172/1633088.
- Greene, J. K., M. G. Anderson, J. Odell, and N. Steinberg, eds. 2010. *The Northwest Atlantic Marine Ecoregional Assessment: Species, Habitats and Ecosystems*. Phase One. The Nature Conservancy, Eastern U.S. Division, Boston, MA. Available: <https://www.conservaiongateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/Documents/namera-phase1-fullreport.pdf>.
- Guida, V., A. Drohan, H. Welch, J. McHenry, D. Johnson, V. Kentner, J. Brink, D. Timmons, and E. Estela-Gomez. 2017. *Habitat Mapping and Assessment of Northeast Wind Energy Areas*. U.S. Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2017-088. November 1, 2013. Prepared in Collaboration between Gulf of Maine Research Institute and University of Maine.
- Hannay, D. E., and M. Zykov. 2022. *Underwater Acoustic Modeling of Detonations of Unexploded Ordnance (UXO) for Orsted Wind Farm Construction, US East Coast*. Document 02604, Version 4.4. Report by JASCO Applied Sciences for Ørsted.
- Hare, J. A., W. E. Morrison, M. W. Nelson, M. M. Stachura, E. J. Teeters, R. B. Griffis, M. A. Alexander, J. D. Scott, L. Alade, R. J. Bell, A. S. Chute, K. L. Curti, T. H. Curtis, and C. A. Griswold. 2016. A vulnerability assessment of fish and invertebrates to climate change on the northeast U.S. Continental Shelf. *PLOS ONE* 11(2):e0146756.
- Hastings, M. C., and A. N. Popper. 2005. *Effects of Sound on Fish*. California Department of Transportation Contract 43A0139.
- Hawkins, Anthony D. 2020. The Potential Impact of Offshore Wind Farms on Fishes and Invertebrates. *Ad Oceanogr & Marine Biol.* 2(3). AOMB.MS.ID.000539. DOI: 10.33552/AOMB.2020.02.000539.
- Hemery, L. G. 2020. Changes in Benthic and Pelagic Habitats Caused by Marine Renewable Energy Devices. *OES – Environmental 2020 State of the Science Report: Environmental Effects of Marine Renewable Energy Development Around the World*. Report for Ocean Energy Systems (OES).
- Howson, U. A., G. A. Buchanan, and J. A. Nickels. 2017. Zooplankton community dynamics in a western mid-Atlantic lagoonal estuary. In: Buchanan, G. A., T. J. Belton, and B. Paudel (eds.), A Comprehensive Assessment of Barnegat Bay–Little Egg Harbor, New Jersey. *Journal of Coastal Research*, Special Issue No. 78:193–204. Coconut Creek (Florida), ISSN 0749-0208.
- Hutchison, Z. L., A. B. Gill, P. Sigray, H. He, and J. W. King. 2020. Anthropogenic electromagnetic fields (EMF) influence the behaviour of bottom-dwelling marine species. *Scientific Reports* 10(1):4219. DOI:10.1038/s41598-020-60793-x. Available: <https://www.nature.com/articles/s41598-020-60793-x.pdf>.

- Ingram, E. C., R. M. Cerrato, K. J. Dunton, and M. G. Frisk. 2019. Endangered Atlantic sturgeon in the New York Wind Energy Area: Implications for future development in an offshore wind energy site. *Scientific Reports*,(2019)9:12432. Available: <https://doi.org/10.1038/s41598-019-48818-6>.
- Inspire Environmental (Inspire). 2021. *Ocean Wind Offshore Wind Farm Benthic Habitat Mapping and Benthic Assessment to Support Essential Fish Habitat Consultation*. Prepared for HDR Engineering. June 2021. Ocean Wind COP Appendix E Supplement.
- Inspire Environmental (Inspire). 2022a. *Ocean Wind Offshore Wind Farm Benthic Habitat Mapping and Benthic Assessment to Support Essential Fish Habitat Consultation*. Prepared for HDR Engineering.
- Inspire Environmental (Inspire). 2022b. *Ocean Wind Offshore Wind Farm Submerged Aquatic Vegetation Monitoring Plan*. Prepared for Ocean Wind, Ørsted US. Submitted by Inspire Environmental. June 15, 2022.
- Jakubowska, M., B. Urban-Malinga, Z. Otremba, and E. Andrulowicz. 2019. Effect of low frequency electromagnetic field on the behavior and bioenergetics of the polychaete *Hediste diversicolor*. *Marine environmental research* 150:104766.
- Jézéquel, Y, I. T. Jones, J. Bonnel, L. Chauvaud, J. Atema, and T. A. Mooney. 2021. Sound detection by the American lobster (*Homarus americanus*). *Journal of Experimental Biology* 224, jeb240747. DOI:10.1242/jeb.240747.
- Jivoff, P. R., L. Moritzen, J. Kels, J. McCarthy, A. Young, A. Barton, P. Ferdinando, F. Pandolfo, and C. Tighe. 2017. The relative importance of the Sedge Island Marine Conservation Zone for adult blue crabs in Barnegat Bay, New Jersey. In: Buchanan, G. A., T. J. Belton, and B. Paudel (eds.), A Comprehensive Assessment of Barnegat Bay–Little Egg Harbor, New Jersey. *Journal of Coastal Research*, Special Issue No. 78:193–204. Coconut Creek (Florida), ISSN 0749-0208.
- Johnson, J. H., D. S. Dropkin, B. E. Warkentine, J. W. Rachlin, and W. D. Andrews. 1997. Food habits of Atlantic sturgeon off the Central New Jersey Coast. *Trans. Am. Fish. Soc.* 126:166–170.
- Jones, I. T., J. A. Stanley, and T. A. Mooney. 2020. Impulsive pile driving noise elicits alarm responses in squid (*Doryteuthis pealeii*). *Marine Pollution Bulletin* 150:110792. doi.org/10.1016/j.marpolbul.2019.110792.
- Jones, I. T., J. F. Peyla, H. Clark, Z. Song, J. A. Stanley, and T. A. Mooney. 2021. Changes in Feeding Behavior of Longfin Squid (*Doryteuthis pealeii*) during Laboratory Exposure to Pile Driving Noise. *Marine Environmental Research* 165:105250.
- Kahnle, A. W., K. A. Hattala, and K. McKown. 2007. Status of Atlantic Sturgeon of the Hudson River estuary, New York, USA. Page 347–363 in J. Munro, D. Hatin, J. E. Hightower, K. McKown, K. J. Sulak, A. W. Kahnle, and F. Caron, editors. *Anadromous sturgeons: habitats, threats, and management*. American Fisheries Society, Symposium 56, Bethesda, Maryland. Available: https://hero.epa.gov/hero/index.cfm/reference/details/reference_id/7253621.
- Katranitsas, A., J. Castritsi-Catharios, and G. Persoone. 2003. “The effects of a copper-based antifouling paint on mortality and enzymatic activity of a non-target marine organism.” *Marine Pollution Bulletin* 46.11:1491–1494.

- Kirchgeorg, T., I. Weinberg, M. Hornig, R. Baier, M. J. Schmid, and B. Brockmeyer. 2018. Emissions from corrosion protection systems of offshore wind farms: evaluation of the potential impact on the marine environment. *Marine Pollution Bulletin* 136:257–268.
- Küsel, E. T., M. J. Weirathmueller, K. E. Zammit, S. J. Welch, K. E. Limpert, and D. G. Zeddies. 2021. *Underwater Acoustic and Exposure Modeling*. Document 02109, Version 1.0 DRAFT. Technical report by JASCO Applied Sciences for Ocean Wind LLC.
- Küsel, E. T., M. J. Weirathmueller, K. E. Zammit, S. J. Welch, K. E. Limpert, and D. G. Zeddies. 2022. *Underwater Acoustic and Exposure Modeling*. Document 02109, Version 1.0 DRAFT. Technical report by JASCO Applied Sciences for Ocean Wind LLC.
- Lefcheck, J. S., B. B. Hughes, A. J. Johnson, B. W. Pfirrmann, D. B. Rasher, A. R. Smyth, B. L. Williams, M. W. Beck, and R. J. Orth. 2019. Are coastal habitats important nurseries? A meta-analysis. *Conservation Letters* 12(4):e12645.
- Lentz, S. J. 2017. Seasonal warming of the Middle Atlantic Bight Cold Pool. *Journal of Geophysical Research – Ocean* 122(2):941–954.
- Li, X., L. Chi, X. Chen, Y. Ren, and S. Lehner. 2014. SAR observation and numerical modeling of tidal current wakes at the East China Sea offshore wind farm. *Journal of Geophysical Research: Oceans* 119(8):4958–4971.
- Lloret, J., A. Turiel, J. Sole, E. Berdalet, A. Sabates, A. Olivares, J. Gili, J. Vila-Subiros, and R. Sarda. 2022. Unravelling the ecological impacts of large-scale offshore wind farms in the Mediterranean Sea. *Science of the Total Environment* 824:153803.
- Long Island Sound Study. 2003. *Sound Health. A Report on Status and Trends in the Health of the Long Island Sound*. Available: https://longislandsoundstudy.net/wp-content/uploads/2010/03/sound_health_2003.pdf.
- Longcore, T. and C. Rich. 2004. Ecological light pollution. *Front Ecol Environ.* 2:191–198.
- Love, M. S., M. M. Nishimoto, S. Clark, M. McCrea, and A. S. Bull. 2017. Assessing potential impacts of energized submarine power cables on crab harvests. *Continental Shelf Research* 151:23–29. DOI:10.1016/j.csr.2017.10.002.
- Lovell, J. M., M. M. Findlay, R. M. Moate, J. R. Nedwell, and M. A. Pegg. 2005. The inner ear morphology and hearing abilities of the paddlefish (*Polyodon spathula*) and the lake sturgeon (*Acipenser fulvescens*). *Comparative Biochemistry and Physiology Part A: Molecular Integrative Physiology* 142:286–289.
- Lyon, Stuart B., R. Bingham, and Douglas J. Mills. 2017. “Advances in corrosion protection by organic coatings: What we know and what we would like to know.” *Progress in Organic Coatings* 102:2–7.
- Marchesan, M., M. Spoto, L. Verginella, and E. A. Ferrero. 2005. Behavioral effects of artificial light on fish species of commercial interest. *Fisheries Research* 73 (1 and 2):171–185.
- Mesel, I. D., F. Kerckhof, A. Norro, and B. Rumes. 2015. Succession and seasonal dynamics of the epifauna community on offshore wind farm foundations and their role as stepping stones for non-indigenous species. *Hydrobiologia* 756(1). DOI: 10.1007/210750-014-2157-1.

- Meyer, M., R. R. Fay, and A. N. Popper. 2010. Frequency tuning and intensity coding of sound in the auditory periphery of the lake sturgeon, *Acipenser fulvescens*. *Journal of Experimental Biology* 213:1567–1578.
- Michel, P., and B. Averty. 1999. Contamination of French coastal waters by organotin compounds: 1997 update. *Marine Pollution Bulletin* 38:268–275.
- Mid-Atlantic Fishery Management Council (MAFMC). 2016. *Regional use of the habitat area of particular concern (HAPC) designation*. Prepared by the Fisheries Leadership & Sustainability Forum for the MAFMC. 1–43.
- Mid-Atlantic Fishery Management Council (MAFMC). 2020. *Fishery Management Plans and Amendments*. Available: <https://www.mafmc.org/fishery-management-plans>. Accessed October 4, 2021.
- Miller, T., and G. Shepard. 2011. *Summary of Discard Estimates for Atlantic sturgeon, August 19, 2011*. Northeast Fisheries Science Center, Population Dynamics Branch.
- Minerals Management Service (MMS). 2009. Cape Wind Farm Energy Project Final Environmental Impact Statement. OCS Publication No. 2008-040. U.S. Department of the Interior, Bureau of Ocean Energy Management. Available: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/Studies/Cape%20Wind%20Energy%20Project%20FEIS.pdf. Accessed: September 2021.
- Mooney T. A., M. H. Andersson, and J. Stanley. 2020. Acoustic impacts of offshore wind energy on fishery resources. An evolving source and varied effects across a wind farm’s lifetime. *Oceanography* 33:82–95. Available: <https://doi.org/10.5670/oceanog.2020.408>.
- Morley, J. W., R. L. Selden, R. J. Latour, T. L. Frolicher, R. J. Seagraves, and M. L. Pinsky. 2018. *Projecting shifts in thermal habitat for 686 species on the North American continental shelf*. *PLOS ONE* 13(5): e0196127.
- Moser, M. L., and S. W. Ross. 1995. Habitat use and movements of shortnose and Atlantic sturgeons in the lower Cape Fear River, North Carolina. *Transactions of the American Fisheries Society* 24:225–234.
- Moser, M. L., M. Bain, M. R. Collins, N. Haley, B. Kynard, J. C. O’Herron II, G. Rogers, and T. S. Squiers. 2000. *A Protocol for Use of Shortnose and Atlantic Sturgeons*. NOAA Technical Memorandum-NMFS-PR-18.
- Nascimento, J. A., M. Dahl, D. Deyanova, L. D. Lyimo, H. M. Bik, T. Schuelke, T. J. Pereira, M. Bjork, S. Creer, and M. Gullstrom. 2019. Above-below surface interactions mediate effects of seagrass disturbance on meiobenthic diversity, nematode and polychate trophic structure. *Communications Biology* 2:362.
- National Marine Fisheries Service (NMFS). 2014. *Draft Programmatic Environmental Assessment for Fisheries Research Conducted and Funded by the Northeast Fisheries Science Center*. December 2014. Prepared by URS Group, Anchorage, Alaska. 657 pp.

- National Marine Fisheries Service (NMFS). 2016. Endangered Species Act Section 7 Consultation on the Continued Prosecution of Fisheries and Ecosystem Research Conducted and Funded by the Northeast Fisheries Science Center and the Issuance of a Letter of Authorization under the Marine Mammal Protection Act for the Incidental Take of Marine Mammals Pursuant to those Research Activities PCTS ID: NER-2015-12532. Available: https://media.fisheries.noaa.gov/dam-migration/nefsc_rule2016_biop.pdf.
- National Marine Fisheries Service (NMFS). 2021a. Endangered Species Act Section 7 Consultation: Biological Opinion for Construction, Operation, Maintenance, and Decommissioning of the South Fork Offshore Energy Project. October. Available: https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/SF-BiOp-Final_0.pdf.
- National Marine Fisheries Service (NMFS). 2021b. *Atlantic HMS Fishery Management Plans and Amendments*. Last updated by Office of Sustainable Fisheries on 08/19/2021. Available: <https://www.fisheries.noaa.gov/atlantic-highly-migratory-species/atlantic-hms-fishery-management-plans-and-amendments>. Accessed: November 23, 2021.
- National Marine Fisheries Service (NMFS). 2021c. Essential Fish Habitat Mapper: New England / Mid-Atlantic. Available: https://www.habitat.noaa.gov/apps/efhmapper/?page=page_3. Accessed: November 23, 2021.
- National Marine Fisheries Service (NMFS). 2021d. Letter of Concurrence for Offshore Wind Site Assessment Programmatic ESA Consultation. Silver Springs, Maryland. Available: https://media.fisheries.noaa.gov/2021-12/OSW%20surveys_NLAA%20programmatic_rev%202021-09-30%20%28508%29.pdf.
- National Marine Fisheries Service (NMFS). 2022. Chesapeake Bay Distinct Population Segment of Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*) 5-Year Review: Summary and Evaluation. Silver Spring, Maryland: National Marine Fisheries Service. Available: https://media.fisheries.noaa.gov/2022-02/Atlantic%20sturgeon%20CB%205-year%20review_FINAL%20SIGNED.pdf.
- National Oceanic and Atmospheric Administration (NOAA). 2004. *Essential Fish Habitat Consultation Guidance*, Version 1.1. Silver Spring, Maryland: National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Habitat Conservation. Available: <https://repository.library.noaa.gov/view/noaa/4187>. Accessed: October 4, 2021.
- National Oceanic and Atmospheric Administration (NOAA). 2009. *Ecosystem status report for the Northeast U.S. Continental Shelf large marine ecosystem*. Available: <https://www.st.nmfs.noaa.gov/Assets/iea/documents/NEFSC-ESR-2009.pdf>. Accessed: November 2021.
- National Oceanic and Atmospheric Administration (NOAA). 2013. *Guide to Essential Fish Habitat Designations in the Northeastern United States*. Available: <https://www.nrc.gov/docs/ML1409/ML14090A199.pdf>. Accessed: October 5, 2021.
- National Oceanic and Atmospheric Administration (NOAA). 2019. *U.S. National Bycatch Report First Edition Update 3*. Available: https://media.fisheries.noaa.gov/dam-migration/nbr_update_3.pdf. Accessed: October 2021.
- National Oceanic and Atmospheric Administration (NOAA). 2021. *2021 State of the Ecosystem Mid-Atlantic*. April 2021.

- National Oceanic and Atmospheric Administration (NOAA). 2022. *2021 State of the Ecosystem Mid-Atlantic*. April 2022.
- Nedwell, J. R., A. W. H. Turnpenny, J. Lovell, S. J. Parvin, R. Workman, J. A. L. Spings, and D. Howell. 2007. *A validation of the dBht as a measure of the behavioural and auditory effects of underwater noise*. Subacoustech Report No. 534R1231. Available: <https://tethys.pnnl.gov/sites/default/files/publications/Nedwell-et-al-2007.pdf>. Accessed: April 2022.
- New England Fishery Management Council (NEFMC). 2021. *Fishery Management Plans and Amendments*. Available: <https://www.nefmc.org/management-plans>. Accessed: October 4, 2021.
- New England Fishery Management Council (NEFMC). 2022a. Southern New England Habitat Area of Particular Concern Framework, Northeast Multispecies Fishery Management Plan Framework Adjustment 64, Atlantic Sea Scallop Fishery Management Plan Framework Adjustment 35, Monkfish Fishery Management Plan Framework Adjustment 14, Northeast Skate Complex Fishery Management Plan Framework Adjustment 10, Atlantic Herring Fishery Management Plan Framework Adjustment 10. Draft. Prepared by the New England Fishery Management Council and the National Marine Fisheries Service. March.
- New England Fishery Management Council (NEFMC). 2022b. Council Approves HAPC for Southern New England; Previews Northeast Regional Habitat Assessment Data Explorer. Press Release. 18 July. Press contact: J. Plante/ jplante@nefmc.org.
- New Jersey Department of Environmental Protection (NJDEP). 2010. *Ocean/Wind Power Ecological Baseline Studies. January 2008–December 2009*. Volume I: Overview Summary, and Application; Volume IV: Fish and Fisheries Studies. Final Report. Prepared by Geo-Marine Inc.
- New York State Energy Research and Development Authority (NYSERDA). 2019. *Geotechnical and Geophysical Desktop Study to Support Offshore Wind Energy Development in the New York Bight*. April. NYSERDA Report 19-19. Available: <https://www.nyserdera.ny.gov/-/media/Project/Nyserda/Files/Programs/Offshore-Wind/19-19-Geotechnical-and-Geophysical-Desktop-Study-to-Support-Offshore-Wind-Energy-Development.pdf>.
- Newcombe, C. P. and D. D. Macdonald. 1991. Effects of Suspended Sediments on Aquatic Ecosystems. *North American Journal of Fisheries Management* 11:72–82.
- Normandeau Associates, Inc., Exponent, Inc., T. Tricas, and A. Gill. 2011. *Effects of EMFs from Undersea Power Cables on Elasmobranchs and Other Marine Species*. Final Report. U.S. Department of the Interior, Bureau of Ocean Energy Management, Regulation and Enforcement, Pacific OCS Region, Camarillo, CA. OCS Study BOEMRE 2011-09. Available: <https://espis.boem.gov/final%20reports/5115.pdf>. Accessed: October 11, 2021.
- Northeast Fisheries Science Center (NEFSC). 2021. Stock Assessment Review Index (SARI) Search. Available: https://apps-nefsc.fisheries.noaa.gov/saw/reviews_report_options.php.
- Northeast Regional Planning Body. 2016. *Northeast Ocean Plan: Full Plan*. Available: https://neoceanplanning.org/wp-content/uploads/2018/01/Northeast-Ocean-Plan_Full.pdf. Accessed: September 2021.

- Novak, A., A. Carlson, C. Wheeler, G. wippenhauser, and J. Sulikowski. 2017. Critical Foraging Habitat of Atlantic Sturgeon Based on Feeding Habits, Prey Distribution, and Movement Patterns in the Saco River Estuary, Maine. *Transactions of the American Fisheries Society* 146(2):308–317. Available: <https://doi.org/10.1080/00028487.2016.1264472>.
- Ocean Wind LLC (Ocean Wind). 2022. *Ocean Wind Submerged Aquatic Vegetation Preliminary Mitigation Plan*. December 2022.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Orpwood, J. E., R. J. Fryer, P. Rycroft, and J. D. Armstrong. 2015. Effects of AC magnetic fields (MFs) on swimming activity in European eels *Anguilla anguilla*. *Scottish Marine and Freshwater Science* 6(8):1–22.
- Orr, M. A. 2016. *The Potential Impacts of Submarine Power Cables on Benthic Elasmobranchs*. PhD Thesis. Institute of Marine Science. University of Auckland, New Zealand. 180 pages.
- Pederson, J. R. Bullock, J. T. Carlton, J. Dijkstra, N. Dobroski, P. Dyrinda, R. Fishers, L. Harris, N. Hobbs, G. Lambert, E. Lazo-Wasem, A. Mathieson, M. Miglietta, J. Smith, J. Smith III, and M. Tyrrell. 2005. Marine invaders in the northeast: Rapid assessment survey of non-native and naïve marine species of floating dock communities. Publication No. 05-03. Cambridge: Massachusetts Institute of Technology, Sea Grant College Program, 40 pp.
- Pickens, B. A., J. C. Taylor, and D. Hansen. 2020. Volume 1: Fish habitat associations and the potential effects of dredging on the Atlantic and Gulf of Mexico Outer Continental Shelf, literature synthesis and gap analysis. In: Pickens, B. A., and J. C. Taylor, editors. *Regional Essential Fish Habitat geospatial assessment and framework for offshore sand features*. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2020-002 and NOAA NCCOS Technical Memorandum 270. Available: <https://doi.org/10.25923/akzd-8556>.
- Plante, J. 2022. Council Approves HAPC for Southern New England; Previews Northeast Regional Habitat Assessment Data Explorer. Press release. New England Fishery Management Council. July 18. Available: <https://www.nefmc.org/news>. Accessed: July 25, 2022.
- Popper, A., L. Hiice-Dunton, E. Jenkins, et al. 2022. Offshore wind energy development: Research priorities for sound and vibration effects on fishes and aquatic invertebrates. *The Journal of the Acoustical Society of America* 151:205–215. Available: <https://doi.org/10.1121/10.0009237>.
- Popper, A. N., A. D. Hawkins, R. R. Fay, D. Mann, S. Bartol, T. H. Carlson, S. Coombs, W. T. Ellison, R. Gentry, M. B. Halvorsen, S. Løkkeborg, P. Rogers, B. L. Southall, D. G. Zeddies, and W. N. Tavolga. 2014. *Sound Exposure Guidelines for Fishes and Sea Turtles*. A Technical Report prepared by ANSI-Accredited Standards Committee S3/SC1 and registered with ANSI.
- Popper, A. N., and A. Hawkins. 2018. The importance of particle motion to fishes and invertebrates. *Journal of the Acoustical Society of America* 143:470.
- Popper, A. N., M. Salmon, and K. W. Horch. 2001. Acoustic detection and communication by decapod crustaceans. *Journal of Comparative Physiology* 187:83–89.

- Price, Seth J., and Rita B. Figueira. 2017. "Corrosion protection systems and fatigue corrosion in offshore wind structures: current status and future perspectives." *Coatings* 7.2:25.
- Radford, A. N., E. Kerridge, and S. D. Simpson. 2014. Acoustic communication in a noisy world: can fish compete with anthropogenic noise? *Behavioral Ecology* 25(5):1022–1030.
- Rajasärkkä, Johanna, et al. 2016. "Drinking water contaminants from epoxy resin-coated pipes: A field study." *Water research* 103:133–140.
- Reine, K., D. Dickerson, and D. Clarke. 1998. "Environmental windows associated with dredging operations in aquatic systems." Technical Note DOER-E2, U.S. Army Corps of Engineers, Environmental Laboratory, Vicksburg, MS. Available: <https://erdc-library.erdcdren.mil/jspui/bitstream/11681/8735/1/TN-DOER-E2.pdf>.
- Rezek, R., B. Furman, R. Jung, M. Hall, and S. Bell. 2019. Long-term performance of seagrass restoration projects in Florida, USA. *Nature* 9:15514. <https://doi.org/10.1038/s41598-019-51856-9>.
- Rheuban, J. E., M. T. Kavanaugh, and S. C. Doney. 2017. Implications of future northwest Atlantic bottom temperatures on the American Lobster (*Homarus americanus*) fishery. *Journal of Geophysical Research: Oceans* 122: 9387–9398. DOI: 10.1002/2017JC012949.
- Rico-Martinez, R., T. W. Snell, and T. L. Shearer. 2013. Synergistic toxicity of Macondo crude oil and dispersant Corexit 9500A to the *Brachionus plicatilis* species complex (Rotifera). *Environmental Pollution* 173:5–10.
- Roberts, L., and M. Elliott. 2017. Good or bad vibrations? Impacts of anthropogenic vibration on the marine epibenthos. *Science of the Total Environment* 595 (2017):255–268.
- Russel, D. J. F., S. M. J. M. Brasseur, D. Thompson, G. D. Hastie, V. M. Janik, G. Aarts, B. T. McClintock, J. Matthiopoulos, S. E. W. Moss, and B. McConnell. 2014. Marine mammals trace anthropogenic structures at sea. *Current Biology* 24(14):R638–R639.
- Rutecki, D., T. Dellapenna, E. Nestler, F. Scharf, J. Rooker, C. Glass, and A. Pembroke. 2014. *Understanding the Habitat Value and Function of Shoals and Shoal Complexes to Fish and Fisheries on the Atlantic and Gulf of Mexico Outer Continental Shelf*. Literature Synthesis and Gap Analysis. Prepared for the U.S. Department of the Interior, Bureau of Ocean Energy Management. Contract # M12PS00009. BOEM 2015-012.
- Savarese, M. No date. Habitats: Southwest Florida Shelf Coastal Marine Ecosystem – Habitats; Inshore Flats. Available: https://www.aoml.noaa.gov/ocd/ocdweb/docs/MARES/MARES_SWFS_ICEM_20130913_Appendix_InshoreFlats.pdf. Accessed: April 2022.
- Schultz, I. R., D. L. Woodruff, K. E. Marshall, W. J. Pratt, and G. Roesijadi. 2010. *Effects of Electromagnetic Fields on Fish and Invertebrates*. Task 2.1. 3: Effects on Aquatic Organisms-Fiscal Year 2010 Progress Report- Environmental Effects of Marine and Hydrokinetic Energy (No. PNNL-19883 Final). Pacific Northwest National Laboratory, Richland, Washington.
- Schultze, L. K. P., L. M. Merckelbach, J. Horstmann, S. Raasch, and J. R. Carpenter. 2020. Increased mixing and turbulence in the wake of offshore wind farm foundations. *Journal of Geophysical Research: Oceans* 125(8).

- Siddagangaiah, S., C.-F. Chen, W.-C. Hu, and N. Pieretti. 2021. Impact of pile-driving and offshore windfarm operational noise on fish chorusing. *Remote Sensing in Ecology and Conservation* 8:1–16. Available: https://www.researchgate.net/publication/353472018_Impact_of_pile-driving_and_offshore_windfarm_operational_noise_on_fish_chorusing.
- Sigray, P., and M. H. Andersson. 2011. Particle motion measured at an operational wind turbine in relation to hearing sensitivity in fish. *J Acoust Soc Am.* 130(1):200–207. DOI: 10.1121/1.3596464. PMID: 21786890.
- Slacum, H. W., W. H. Burton, E. T. Methratta, E. D. Weber, R. J. Llanso, and J. Dew-Baxter. 2010. Assemblage Structure in Shoal and Flat-Bottom Habitats on the Inner Continental Shelf of the Middle Atlantic Bight, USA. *Marine and Coastal Fisheries* 2:1, 277–298. DOI: 10.1577/C09-012.1.
- Smith, T. I. J. 1985. The fishery, biology, and management of Atlantic sturgeon, *Acipenser oxyrinchus*, in North America. *Environ. Biol. Fishes* 14:61–72.
- Snyder, D. B., W. H. Bailey, K. Palmquist, B. R. T. Cotts, and K. R. Olsen. 2019. *Evaluation of Potential EMF Effects on Fish Species of Commercial or Recreational Fishing Importance in Southern New England*. BOEM report 2019-049. Available: https://espi.boem.gov/final%20reports/BOEM_2019-049.pdf.
- Solé, M., S. De Vreese, J. Fortuño, M. Schaar, A. Sánchez, and M. André. 2022. Commercial cuttlefish exposed to noise from offshore windmill construction show short-range acoustic trauma. *Environmental Pollution* 312:119853. ISSN 0269-7491. Available: <https://doi.org/10.1016/j.envpol.2022.119853>.
- Stanley, J. A., P. E. Caiger, B. Phelan, K. Shelledy, T. A. Mooney, and S. M. Van Parijs. 2020. Ontogenetic variation in the auditory sensitivity of black sea bass (*Centropristis striata*) and the implications of anthropogenic sound on behavior and communication. *The Journal of Experimental Biology* 223.
- Staudinger, M. D., H. Goyert, J. J. Suca, K. Coleman, L. Welch, J. K. Llopiz, D. Wiley, I. Altman, A. Applegate, P. Auster, H. Baumann, J. Beaty, D. Boelke, L. Kaufman, P. Loring, J. Moxley, S. Paton, K. Powers, D. Richardson, J. Robbins, J. Runge, B. Smith, C. Spiegel, and H. Steinmetz. 2020. The role of sand lances (*Ammodytes* sp.) in the Northwest Atlantic Ecosystem: A synthesis of current knowledge with implications for conservation and management. *Fish and Fisheries* 21(3):522–556. DOI 10.1111/faf.12445.
- Stein, B. S., K. D. Friedland, and M. R. Sutherland. 2004. Atlantic sturgeon marine distribution and habitat use along the northeastern coast of the United States. *Transactions of the American Fisheries Society* 133:527–537.
- Stöber, U., and F. Thomsen. 2021. How could operational underwater sound from future offshore wind turbines impact marine life? *Journal of the Acoustical Society of America* 149(3):1791–1795.
- Tagliabue, A., L. Kwiatkowski, L. Bopp, M. Butenschon, W. Cheung, M. Lengaigne, and J. Vialard. 2021. Persistent uncertainties in ocean net primary production climate change projections at regional scales raise challenges for assessing impacts on ecosystem services. *Frontiers in Climate* 3:738224.

- Tamsett, A., K. B. Heinonen, and P. J. Auster. 2010. *Dynamics of hard substratum communities inside and outside of a fisheries habitat closed area in Stellwagen Bank National Marine Sanctuary (Gulf of Maine, NW Atlantic)*. U.S. Department of Commerce, NOAA. Available: <https://nmssanctuaries.blob.core.windows.net/sanctuaries-prod/media/archive/science/conservation/pdfs/tamsett.pdf>. Accessed: April 2022.
- Taormina B., J. Bald, A. Want, G. Thouzeau, M. Lejart, N. Desroy, and A. Carlier. 2018. “A Review of Potential Impacts of Submarine Cables on the Marine Environment: Knowledge Gaps, Recommendations, and Future Directions.” *Renewable and Sustainable Energy Reviews* 96:380–391. Available: <https://hal.archives-ouvertes.fr/hal-02405630/document>. Accessed: October 11, 2021.
- Taylor, A. H. and J. A. Stephens. 1998. The North Atlantic Oscillation and the latitude of the Gulf Stream. *Tellus* 50A:134–142.
- Thomsen, F., A. B. Gill, M. Kosecka, M. Andersson, M. André, S. Degraer, T. Folegot, J. Gabriel, A. Judd, T. Neumann, A. Norro, D. Risch, P. Sigray, D. Wood, and B. Wilson. 2015. “MaRVEN—Environmental Impacts of Noise, Vibrations and Electromagnetic Emissions from Marine Renewable Energy.” DOI:10.2777/272281. Luxembourg: Publications Office of the European Union, 2015. Available: https://www.researchgate.net/publication/301296662_MaRVEN_-_Environmental_Impacts_of_Noise_Vibrations_and_Electromagnetic_Emissions_from_Marine_Renewable_Energy. Accessed: October 11, 2021.
- Tougaard, J., L. Hermannsen, and P. T. Madsen. 2020. How loud is the underwater noise from operating offshore wind turbines? *Journal of the Acoustical Society of America* 148(5):2885–2893.
- U.S. Army Corps of Engineers (USACE). 2015. New York and New Jersey Harbor Deepening Project. *Dredge Plume Dynamics in New York/New Jersey Harbor*. Summary of Suspended Sediment Plume Surveys Performed During Harbor Deepening. April 2015. New York.
- U.S. Army Corps of Engineers (USACE). 2020. *South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States*. 646 pp. Available: https://media.fisheries.noaa.gov/dam-migration/sarbo_acoustic_revision_6-2020-opinion_final.pdf. Accessed: November 16, 2021.
- U.S. Environmental Protection Agency (USEPA). 2003. Brayton Point Station Fact Sheet: Final National Pollutant Discharge Elimination System (NPDES) Permit.
- U.S. Offshore Wind Synthesis of Environmental Effects Research (SEER). 2022. *Benthic Disturbance from Offshore Wind Foundations, Anchors, and Cables*.
- Valenti, J. L., T. M. Grothues, and K. W. Able. 2017. Estuarine Fish Communities along a Spatial Urbanization Gradient. *Journal of Coastal Research* SI 78:254–268.
- van Berkel, J., H. Burchard, A. Christensen, L. O. Mortensen, O. S. Petersen, and F. Thomsen. 2020. The effects of offshore wind farms on hydrodynamics and implications for fishes. *Oceanography* 33(4):108–117.
- van der Molen, J., H. C. M. Smith, P. Lepper, S. Limpenny, and J. Rees. 2014. Predicting the large-scale consequences of offshore wind turbine array development on a North Sea ecosystem. *Cont. Shelf Res.* 85:60–72.

- Vanhellemont, Q., and K. Ruddick. 2014. Turbid wakes associated with offshore wind turbines observed with Landsat 8. *Remote Sensing of Environment* 145:105–115.
- Vasslides, J. M. 2007. *Fish assemblages and habitat use across a shoreface sand ridge in southern New Jersey*. M.S. thesis, 106 pp. Rutgers University, New Brunswick, NJ.
- Vasslides, J. M., and K. W. Able. 2008. Importance of shoreface sand ridges as habitat for fishes off the northeast coast of the United States. *Fish Bull.* 106:93–107.
- Virginia Institute of Marine Science (VIMS). 2000. *Environmental survey of potential sand resources sites, offshore Delaware and Maryland*: Final Report. OCS Study 2000-05. Virginia Institute of Marine Science, College of William and Mary. Available: <http://dx.doi.org/doi:10.21220/m2-mtx7-mn42>.
- Washington State Department of Transportation (WSDOT). 2020. Construction noise impact assessment. In *Biological Assessment Preparation Manual*. August. Available: https://wsdot.wa.gov/sites/default/files/2021-10/Env-FW-BA_ManualCH07.pdf.
- Waycott, M., C. M. Duarte, T. J. B. Carruthers, R. J. Orth, W. C. Dennison, S. Olyarnik, A. Calladine, J. W. Fourqurean, K. L. Heck, Jr., R. Hughes, G. A. Kendrick, W. J. Kenworthy, F. T. Short, and S. L. Williams. 2022. Accelerated loss of seagrasses across the globe threatens coastal ecosystems. *PNAS* 106(30):12377–12381.
- Weilgart, L. 2018. *The Impact of Ocean Noise Pollution on Fish and Invertebrates*. Oceancare and Dalhousie University. Available: https://www.oceancare.org/wp-content/uploads/2017/10/OceanNoise_FishInvertebrates_May2018.pdf. Accessed: September 2021.
- Wilber, D. H., and D. G. Clarke. 2007. Defining and Assessing Benthic Recovery Following Dredging and Dredged Material Disposal. Presentation from the 2007 WODCON XVIII Conference in Lake Buena Vista, FL. Available: https://www.westerndredging.org/phocadownload/ConferencePresentations/2007_WODA_Florida/Session3D-EnvironmentalAspectsOfDredging/3%20-%20Wilber%20-%20Defining%20Assessing%20Benthic%20Recovery%20Following%20Dredged%20Material%20Disposal.pdf. Accessed: October 11, 2021.
- Woodruff, D. L., I. R. Schultz, K. E. Marshall, J. A. Ward, and V. Cullinan. 2012. *Effects of Electromagnetic Fields on Fish and Invertebrates*. Task 2.1.3: Effects on Aquatic Organisms – Fiscal Year 2011 Progress Report. PNNL-20813, Pacific Northwest National Laboratory, Richland, Washington.
- Woodruff, D. L., I. R. Schultz, K. E. Marshall, J. A. Ward, and V. I. Cullinan. 2013. *Effects of Electromagnetic Fields on Fish and Invertebrates*: Task 2.1. 3: Effects on Aquatic Organisms-Fiscal Year 2011 Progress Report- Environmental Effects of Marine and Hydrokinetic Energy (No. PNNL-20813 Final). Pacific Northwest National Laboratory, Richland, Washington.
- Zhang, X., H. Guo, J. Chen, K. Xu, J. Lin, and S. Zhang. 2021. Potential effects of underwater noise from wind turbines on the marbled rockfish (*Sebasticus marmoratus*). *J Appl Ichthyol.* 2021(00):1–9. <https://doi.org/10.1111/jai.14198>.

B.2.3.14. Section 3.14, Land Use and Coastal Infrastructure

- Atlantic City. 2006. Atlantic City Municipal Zoning Boundaries, Atlantic City, NJ. Available: https://www.atlantic-county.org/gis/pdfs/SmartGrowth/ATC_ZoneBuildout.pdf.
- Atlantic Shores Offshore Wind (Atlantic Shores). 2021. *Construction and Operations Plan, Atlantic Shores Offshore Wind*. Volume I. September. Available: <https://www.boem.gov/renewable-energy/state-activities/atlantic-shores-offshore-wind-construction-and-operations-plan>.
- Borough of Paulsboro. 2010. Zoning Map, Borough of Paulsboro. Available: https://taxmaps.info/docs/zoning/0814_Zoning_Map.pdf.
- City of Charleston. 2012. Interactive Zoning Map. Available: <https://gis.charleston-sc.gov/interactive/zoning/>.
- City of Elizabeth. 2000. Zone Map. Available: <https://elizabethnj.org/DocumentCenter/View/1351/Elizabeth-Zoning-Map-?bidId=>.
- City of Norfolk. 2021. Zoning Ordinance. Available: <https://www.norfolk.gov/DocumentCenter/View/35581/Adopted-Zoning-Ordinance?bidId=>.
- Kleiner, A. 2021. Island Beach State Park and Sea Level Rise. December 19. Available: <https://storymaps.arcgis.com/stories/b02bf0aaef62464ab17b5d8621d7497c>. Accessed: October 7, 2022.
- New Jersey Department of Environmental Protection (NJDEP). 2015. Land Use/Land Cover 2012 Update (Generalized), Edition 20150217 (Land_lu_2012_gen). Available: <https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=02251e521d97454aabadfd8cf168e44d>. Accessed: March 30, 2022.
- New Jersey Pinelands Commission. 2021. Pinelands Interactive Map. Available: <https://njpines.maps.arcgis.com/apps/webappviewer/index.html?id=28ef313eb49f4e8f96ca249d871d06fe>. Accessed: October 18, 2021.
- New Jersey Pinelands Commission. 2022. Pinelands Comprehensive Management Plan. Available: <https://www.nj.gov/pinelands/cmp/CMP.pdf>.
- New Jersey Wind Port. 2021. “About the New Jersey Wind Port.” Available: <https://nj.gov/windport/about/index.shtml>. Accessed: July 16, 2021.
- Ocean City. 2014. Zoning Map. Available: https://imageserv11.team-logic.com/mediaLibrary/242/Zoning_Map_eff_10_15_14.pdf.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Parsons, George, and Jeremy Firestone. 2018. *Atlantic Offshore Wind Energy Development: Values and Implications for Recreation and Tourism*. U.S. Department of the Interior, Bureau of Ocean Energy Management. Available: <https://www.semanticscholar.org/paper/Atlantic-Offshore-Wind-Energy-Development%3A-Values-Parsons-Firestone/91b0ede146b8701cb44d72c58f09b29533df3cdf>.

- State of New Jersey. 2020. Governor Murphy Announces \$250 Million Total Investment in State-of-the-Art Manufacturing Facility to Build Wind Turbine Components to Serve Entire U.S. Offshore Wind Industry. December 21. Available: <https://www.nj.gov/governor/news/news/562020/20201222a.shtml>. Accessed: July 22, 2021.
- Township of Lacey. 2009. Part II, General Legislation / Zoning: Article IX: Zone Regulations. § 335-65.1 M-100 Industrial Zone. Added 12-22-2009 by Ord. No. 2009-23. Available: <https://ecode360.com/14253903>.
- Township of Lower Alloways Creek. 2014. Zoning Map. Available: https://www.lowerallowayscreek-nj.gov/sites/g/files/vyhlf3381/f/uploads/p_28000-28499_28081.00_cadd_dwg_28081.00_zoning_map_color_1.pdf.
- Township of Upper. 2020. Chapter 20: Zoning. § 20-4.22 “WTC” Waterfront Town Center. Added 5-26-2020 by Ord. No. 005-2020. Available: <https://ecode360.com/36660451>.
- Township of Upper. 2021. Zoning Map. Available: <https://uppertownship.com/wp-content/uploads/2021/08/UT-Zoning-Map-2021.pdf>.
- U.S. Army Corps of Engineers (USACE). No date. Charleston District. Charleston Harbor Post 45 Overview. Available: <https://www.sac.usace.army.mil/Missions/Civil-Works/Charleston-Harbor-Post-45/>
- U.S. Army Corps of Engineers (USACE). 2021. *Newark Bay, New Jersey Federal Navigation Project Maintenance Dredging*. Public Notice No. Newark Bay, NJ FY21. May.
- U.S. Fish and Wildlife Service (USFWS). 2014. John H. Chafee Coastal Barrier Resources System, Island Beach Unit NJ-05P. Available: <https://www.fws.gov/cbra/maps/effective/34-006A.pdf>. Accessed: March 30, 2022.
- U.S. Fish and Wildlife Service (USFWS). 2021. FWS National Realty Approved Acquisition Boundaries. Available: <https://www.arcgis.com/home/item.html?id=dae48a3dcd654e7ea09d386cae052eab>. Accessed: March 30, 2022.
- U.S. National Park Service (USNPS). 2016. Great Egg Harbor River. Available: <https://www.nps.gov/greg/index.htm>. Accessed: April 1, 2022.
- Virginia Port Authority. 2021. Dredging to Make Virginia the East Coast’s Deepest Port is Underway. Port of Virginia Press Release. Contact Joseph D. Harris. Available: <https://www.portofvirginia.com/who-we-are/newsroom/dredging-to-make-virginia-the-east-coasts-deepest-port-is-underway/>. Accessed: July 22, 2021.
- B.2.3.15. Section 3.15, Marine Mammals**
- Allen, M. C., A. J. Read, J. Gaudet, and L. S. Sayigh. 2001. Fine-scale habitat selection of foraging bottlenose dolphins *Tursiops truncatus* near Clearwater, Florida. *Marine Ecology Progress Series* 222:253–264.
- Arveson, P., and D. Vendittis. 2000. Radiated noise characteristics of a modern cargo ship. *Journal of the Acoustical Society of America* 2000(107):118–129.

- Atlantic Shores Offshore Wind (Atlantic Shores). 2021. *Construction and Operations Plan, Atlantic Shores Offshore Wind*. Volume I. September. Available: <https://www.boem.gov/renewable-energy/state-activities/atlantic-shores-offshore-wind-construction-and-operations-plan>.
- Atlantic Shores Offshore Wind (Atlantic Shores). 2022. *Application for Marine Mammal Protection Act (MMPA) Rulemaking and Letter of Authorization*. September.
- Au, W. W. L., and M. C. Hastings. 2008. *Principles of Marine Bioacoustics*. New York: Springer.
- Austin, M. E., D. E. Hannay, and K. C. Bröker. 2018. Acoustic characterization of exploration drilling in the Chukchi and Beaufort seas. *Journal of the Acoustical Society of America* 144:115–123. DOI: 10.1121/1.5044417.
- Azzara, A., W. M. von Zharen, and J. Newcomb. 2013. Mixed-methods analytic approach for determining potential impacts of vessel noise on sperm whale click behavior. *Journal of the Acoustical Society of America*. 2013(136):4566–4574. October.
- Balcomb, K. C., and D. E. Claridge. 2001. A mass stranding of cetaceans caused by naval sonar in the Bahamas. *Bahamas J. Sci.* 8:1–12.
- Baulch, S., and C. Perry. 2014. Evaluating the impacts of marine debris on cetaceans. *Marine Pollution Bulletin* 80:210–221.
- Bejarano, Adriana, Jacqueline Michel, Jill Rowe, Zhengkai Li, Deborah French McCay, and Dagmar Schmidt Etkin. 2013. *Environmental Risks, Fate, and Effects of Chemicals Associated with Wind Turbines on the Atlantic Outer Continental Shelf*. OCS Study BOEM 2013-213.
- Bellmann, M. A., A. May, T. Wendt, S. Gerlach, P. Remmers, and J. Brinkmann. 2020. *Underwater noise during percussive pile driving: Influencing factors on pile-driving noise and technical possibilities to comply with noise mitigation values*. Supported by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit (BMU)), FKZ UM16 881500. Commissioned and managed by the Federal Maritime and Hydrographic Agency (Bundesamt für Seeschifffahrt und Hydrographie (BSH)), Order No. 10036866. Edited by the itap GmbH. Available: https://www.itap.de/media/experience_report_underwater_era-report.pdf.
- Benhemma-Le Gall, A., I. Graham, N. Merchant, and P. Thompson. 2021. Broad-Scale Responses of Harbor Porpoises to Pile-Driving and Vessel Activities During Offshore Windfarm Construction. *Frontiers in Marine Science* 8:664724. DOI: 10.3389/fmars.2021.664724.
- Benjamins, S., V. Harnois, H. C. M. Smith, L. Johanning, L. Greenhill, C. Carter, and B. Wilson. 2014. *Understanding the potential for marine megafauna entanglement risk from marine renewable energy developments*. Scottish Natural Heritage Commissioned Report No. 791.
- Bilinski, J. 2021. *Review of the Impacts to Marine Fauna from Electromagnetic Frequencies (EMF) Generated by Energy Transmitted through Undersea Electric Transmission Cables*. NJDEP Division of Science and Research. Available: <https://www.nj.gov/dep/offshorewind/docs/njdep-marine-fauna-review-impacts-from-emf.pdf>.

- Blackwell, S. B., C. S. Nations, A. M. Thode, M. E. Kauffman, A. S. Conrad, R. G. Norman, and K. H. Kim. 2017. Effects of tones associated with drilling activities on bowhead whale calling rates. *PLOS ONE* 12(11):e0188459. Available: <https://doi.org/10.1371/journal.pone.0188459>.
- Blackwell, S. B., C. S. Nations, T. L. McDonald, C. R. Greene, A. M. Thode, M. Guerra, and A. M. Macrander. 2013. Effects of airgun sounds on bowhead whale calling rates in the Alaskan Beaufort Sea. *Marine Mammal Science* 29(4):E342-E365. DOI:10.1111/mms.12001.
- Blackwell, S. B., C. S. Nations, T. L. McDonald, A. M. Thode, D. Mathias, K. H. Kim, C. R. Greene, and A. M. Macrander. 2015. Effects of Airgun Sounds on Bowhead Whale Calling Rates: Evidence for Two Behavioral Thresholds. *PLOS ONE* 10(6): e0125720. DOI:10.1371/journal.pone.0125720.
- Brandt, M. J., A. Diederichs, K. Betke, and G. Nehls. 2011. Responses of harbour porpoises to pile driving at the Horns Rev II offshore wind farm in the Danish North Sea. *Marine Ecology Progress Series* 421(2011):205–216.
- Brandt, M. J., A. Dragon, A. Diederichs, A. Schubert, V. Kosarev, G. Nehls, V. Wahl, A. Michalik, A. Braasch, C. Hinz, C. Ketzer, D. Todeskino, M. Gauger, M. Laczny, and W. Piper. 2016. *Effects of offshore pile driving on harbour porpoise abundance in the German Bight: Assessment of Noise Effects Final Report*. Prepared for Offshore Forum Windenergie. June.
- Branstetter, B. K., V. F. Bowman, and D. S. Houser. 2018. Effects of Vibratory pile driver noise on echolocation and vigilance in bottlenose dolphins (*Tursiops truncatus*). *The Journal of Acoustical Society of America* 143:429. DOI: 10.1121/1.5021555.
- Broström, G. 2008. On the influence of large wind farms on the upper ocean circulation. *J. Mar. Syst.* 74:585–591. DOI: 10.1016/j.jmarsys.2008.05.001.
- Brown, D. M., P. L. Sieswerda, and E. C. M. Parsons. 2019. Potential encounters between humpback whales (*Megaptera novaeangliae*) and vessels in the New York Bight apex, USA. *Marine Policy* 106:103527.
- Browne, M. A., A. J. Underwood, M. G. Chapman, R. Williams, R. C. Thompson, and J. A. van Franeker. 2015. “Linking Effects of Anthropogenic Debris to Ecological Impacts.” *Proceedings of the Royal Society B* 282:20142929.
- Bryant P. J., C. M. Lafferty, and S. K. Lafferty. 1984. 15 - Reoccupation of Laguna Guerrero Negro, Baja California, Mexico, by Gray Whales. In: Mary Lou Jones, Steven L. Swartz, Stephen Leatherwood (eds.), *The Gray Whale: Eschrichtius Robustus*, Academic Press. Pages 375–387. Available: <https://doi.org/10.1016/B978-0-08-092372-7.50021-2>.
- Buckstaff, Kara. 2004. Effects of Watercraft Noise on the Acoustic Behavior of Bottlenose Dolphins, *Tursiops truncatus*, in Sarasota Bay, Florida. *Marine Mammal Science* 20(4):709–725.
- Bureau of Ocean Energy Management (BOEM). 2014. *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Massachusetts: Revised Environmental Assessment*. Office of Renewable Energy Programs. OCS EIS/EA BOEM 2014-603. Available: <https://www.boem.gov/sites/default/files/renewable-energyprogram/State-Activities/MA/Revised-MA-EA-2014.pdf>.

- Bureau of Ocean Energy Management (BOEM). 2021a. *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement, Volume 1*. OCS EIS/EA BOEM 2021-0012.
- Bureau of Ocean Energy Management (BOEM). 2021b. *South Fork Wind Farm and South Fork Export Cable Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2020-057. Available: <https://www.boem.gov/renewable-energy/state-activities/sfwf-feis>.
- Bureau of Ocean Energy Management (BOEM). 2021c. *Project Design Criteria and Best Management Practices for Protected Species Associated with Offshore Wind Data Collection*. Revised November 22, 2021. Available: <https://www.boem.gov/sites/default/files/documents/PDCs%20and%20BMPs%20for%20Atlantic%20Data%20Collection%2011222021.pdf>.
- Carpenter, J. R., L. Merckelbach, U. Callies, S. Clark, L. Gaslikova, and B. Baschek. 2016. *Potential Impacts of Offshore Wind Farms on North Sea Stratification*. *PLOS ONE* 11:e0160830. DOI: 10.1371/journal.pone.0160830.
- Castellote, M., C. W. Clark, and M. O. Lammers. 2012. Acoustic and behavioral changes by fin whales (*Balaenoptera physalus*) in response to shipping and airgun noise. *Biological Conservation* 157:115–122. DOI: 10.1016/j.biocon.2011.12.021.
- Cerchio, S., S. Strindberg, T. Collins, C. Bennett, and H. Rosenbaum. 2014. Seismic surveys negatively affect humpback whale singing activity off northern Angola. *PLOS ONE* 9(3):e86464. DOI:10.1371/journal.pone.0086464.
- Cholewiak, D., A. I. DeAngelis, D. Palka, P. J. Corkeron, and S. M. Van Parijs. 2017. “Beaked Whales Demonstrate a Marked Acoustic Response to the Use of Shipboard Echosounders.” *R Soc Open Sci* 4(12):170940. DOI: <https://doi.org/10.1098/rsos.170940>. Available: <https://www.ncbi.nlm.nih.gov/pubmed/29308236>.
- Christiansen, N., U. Daewel, B. Djath, and C. Schrum. 2022. Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes. *Front. Mar. Sci.* 9:818501. DOI: 10.3389/fmars.2022.818501.
- Clark, C. W., W. T. Ellison, B. L. Southall, L. Hatch, S. M. Van Parijs, A. Frankel, and D. Ponirakis. 2009. Acoustic masking in marine ecosystems: institutions, analysis, and implication. *Marine Ecology Progress Series* 395:201–222. DOI: 10.3354/meps08402.
- Conn, P. B., and G. K. Silber. 2013. Vessel speed restrictions reduce risk of collision mortality for North Atlantic right whales. *Ecosphere* 4.4 (2013):1–16.
- Conserve Wildlife Foundation of New Jersey (CWF). 2023. Harbor Seals in New Jersey. Available: <https://conservewildlife.maps.arcgis.com/apps/MapJournal/index.html?appid=d2266f32c36449e0b9630453e56c3888&webmap=564588c5cff04fa990aab644400475f9>.
- Corkeron, P., P. Hamilton, J. Bannister, P. Best, C. Charlton, K. R. Groch, K. Findlay, V. Rowntree, E. Vermeulen, and R. M. Pace. 2018. The recovery of North Atlantic right whales, *Eubalaena glacialis*, has been constrained by human-caused mortality. *Royal Society Open Science* 5:180892.

- Costello, C., L. Cao, S. Gelcich, M. A. Cisneros-Mata, C. M. Free, H. E. Froehlich, C. D. Golden, G. Ishimura, J. Maier, I. Macadam-Somer, T. Mangin, M. C. Melnychuk, M. Miyahara, C. L. de Moor, R. Naylor, L. Nøstbakken, E. Ojea, E. O'Reilly, A. M. Parma, A. J. Plantinga, S. H. Thilsted, and J. Lubchenco. 2020. The future of food from the sea. *Nature*. 588:95–100.
- Cox, T. M., T. J. Ragen, A. J. Read, E. Vos, R. W. Baird, K. Balcomb, J. Barlow, J. Caldwell, T. Cranford, L. Crum, A. D'Amico, G. D'Spain, A. Fernández, J. Finneran, R. Gentry, W. Gerth, F. Gulland, J. Hildebrand, D. Houser, T. Hullar, P. D. Jepson, D. Ketten, C. D. MacLeod, P. Miller, S. Moore, D. Mountain, D. Palka, P. Ponganis, S. Rommel, T. Rowles, B. Taylor, P. Tyack, D. Wartzok, R. Gisiner, J. Mead, and L. Benner. 2006. Understanding the impacts of anthropogenic sound on beaked whales. *J. Cetacean Res. Manage.* 7(3):177–187.
- Cranford, T. W., and P. Krysl. 2015. Fin Whale Sound Reception Mechanisms: Skull Vibration Enables Low-Frequency Hearing. *PLOS ONE* 10(1): e0116222.
- Crocker, S. E., and F. D. Fratantonio. 2016. *Characteristics of Sounds Emitted During High-Resolution Marine Geophysical Surveys*. NUWC-NPT Technical Report 12,203. Report by Naval Undersea Warfare Center Division, Newport, RI, USA. 266 p. Available: <https://apps.dtic.mil/dtic/tr/fulltext/u2/1007504.pdf>.
- CSA Ocean Sciences, Inc. 2021. *Assessment of Impacts to Marine Mammals, Sea Turtles, and Sturgeon*. Appendix P1 in Construction and Operations Plan South Fork Wind Farm. Stuart, Florida.
- D'Amico, A. D., R. C. Gisiner, D. R. Ketten, J. A. Hammock, C. Johnson, P. L. Tyack, and J. Mead. 2009. Beaked whale strandings and naval exercises. *Aquatic Mammals* 35:452–472.
- Dahlheim, M. E., and D. K. Ljungblad. 1990. Preliminary hearing study on gray whales (*Eschrichtius robustus*) in the field. In: J. A. Thomas, editor; and R. A. Kastelein, editor, *Sensory Abilities of Cetaceans/Laboratory and Field Evidence*. Plenum, New York. pp. 335–346.
- Dahne, M., J. Tougaard, J. Carstensen, A. Rose, and J. Nabe-Nielsen. 2017. Bubble curtains attenuate noise from offshore wind farm construction and reduce temporary habitat loss for harbour porpoises. *Marine Ecology Progress Series* 580:221–237. Available: <https://doi.org/10.3354/meps12257>.
- Dam, M., and D. Bloch. 2000. Screening of mercury and persistent organochlorine pollutants in long-finned pilot whale (*Globicephala melas*) in the Faroe Islands. *Marine Pollution Bulletin* 40(12):1090–1099.
- Davis, G. E., M. F. Baumgartner, J. M. Bonnell, J. Bell, C. Berchok, J. B. Thornton, S. Brault, G. Buchanan, R. A. Charif, D. Cholewiak, and C. W. Clark. 2017. Long-term passive acoustic recordings track the changing distribution of North Atlantic right whales (*Eubalaena glacialis*) from 2004 to 2014. *Scientific Reports* 7:13460.
- Davis, G. E., M. F. Baumgartner, P. J. Corkeron. 2020. Exploring movement patterns and changing distributions of baleen whales in the western North Atlantic using a decade of passive acoustic data. *Global Change Biology* 26:4812–4840.
- Degraer, S., D. Carey, J. Coolen, Z. Hutchison, F. Kerckhof, B. Rumes, and J. Vanaverbeke. 2020. Offshore Wind Farm Artificial Reefs Affect Ecosystem Structure and Functioning: A Synthesis. *Oceanography* 33(4):48–57.

- Denes, S. L., D. G. Zeddies, and M. M. Weirathmueller. 2021. *Turbine Foundation and Cable Installation at South Fork Wind Farm: Underwater Acoustic Modeling of Construction Noise*. Appendix J1 in Construction and Operations Plan South Fork Wind Farm. Silver Spring, Maryland: JASCO Applied Sciences.
- Di Iorio, L., and C. W. Clark. 2010. Exposure to seismic survey alters blue whale acoustic communication. *Biology Letters* 6(1):51–54.
- Diederichs, A., M. Brandt, and G. Nehls. 2010. Does sand extraction near Sylt affect harbour porpoises? *Wadden Sea Ecosystem* 26:199–203.
- Discovery of Sound in the Sea (DOSITS). 2019. Homepage. Available: <https://dosits.org/>.
- Dolman, S. J., E. Pinna, R. J. Reid, J. P. Barleya, R. Deaville, P. D. Jepson, M. O’Connell, S. Berrow, R. S. Penrose, P. T. Stevick, S. Calderan, K. P. Robinson, R. A. Brownell, Jr., M. P. and Simmonds. 2010. A note on the unprecedented strandings of 56 deep-diving whales along the UK and Irish coast. *Marine Biodiversity Records* 3:e16.
- Dolman, S., V. Williams-Grey, R. Asmutis-Silvia, and S. Isaac. 2006. *Vessel collisions and cetaceans: what happens when they don’t miss the boat*. A WDCS Science Report.
- Dominion Energy. 2022a. *Coastal Virginia Offshore Wind Commercial Project, Request for Rulemaking and Letter of Authorization for Taking of Marine Mammals Incidental to Construction Activities on the Outer Continental Shelf within Lease OCS-A 0483 and the Associated Offshore Export Cable Route Corridor*.
- Dominion Energy. 2022b. *Coastal Virginia Offshore Wind Commercial Project, Construction and Operations Plan*. May. Available: https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Public_Sec%201-3.pdf.
- Dorrell, R. M., C. J. Lloyd, B. J. Lincoln, T. P. Rippeth, J. R. Taylor, C. C. P. Caulfield, J. Sharples, J. A. Polton, B. D. Scannell, D. M. Greaves, R. A. Hall, and J. H. Simpson. 2022. Anthropogenic Mixing in Seasonally Stratified Shelf Seas by Offshore Wind Farm Infrastructure. *Front. Mar. Sci.* 9:830927. DOI: 10.3389/fmars.2022.830927.
- Dunlop, R. A., M. J. Noad, R. D. McCauley, L. Scott-Hayward, E. Kniest, R. Slade, D. Paton, and D. H. Cato. 2017. Determining the behavioural dose-response relationship of marine mammals to air gun noise and source proximity. *Journal of Experimental Biology* 220(16):2878–2886. Available: <https://doi.org/10.1242/jeb.160192>.
- Elliot, J., K. Smith, D. R. Gallien, and A. Khan. 2017. *Observing Cable Laying and Particle Settlement During the Construction of the Block Island Wind Farm*. Final Report to the U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. OCS Study BOEM 2017-027. 225 pp. Available: <https://tethys.pnnl.gov/sites/default/files/publications/Elliot-et-al-2017.pdf>. Accessed: August 28, 2020.
- Elliott, J., A. A. Khan, L. Ying-Tsong, T. Mason, J. H. Miller, A. E. Newhall, G. R. Potty, and K. J. Vigness-Raposa. 2019. *Field Observations during Wind Turbine Operations at the Block Island Wind Farm, Rhode Island*. Final Report to the U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. OCS Study BOEM 2019-028. Available: https://espi.boem.gov/final%20reports/BOEM_2019-028.pdf.

- Empire Offshore Wind, LLC (Empire). 2022. *Empire Offshore Wind: Empire Wind Project (EW1 and EW2), Construction and Operations Plan*. May. Available: <https://www.boem.gov/renewable-energy/empire-wind-construction-and-operations-plan>.
- Erbe, C. 2013. International Regulation of Underwater Noise. *Acoustics Australia* 41(1):12–19. Available: <https://search.ebscohost.com/login.aspx?direct=true&db=asx&AN=90475142&site=eds-live>.
- Erbe, C., A. MacGillivray, and R. Williams. 2012. Mapping cumulative noise from shipping to inform marine spatial planning. *The Journal of the Acoustical Society of America* 132:EL423–EL428.
- Erbe, C., C. Reichmuth, K. Cunningham, K. Lucke, and R. Dooling. 2016. Communication masking in marine mammals: A review and research strategy. *Marine Pollution Bulletin* 103:15–38.
- Erbe, C., S. A. Marley, R. P. Schoeman, J. N. Smith, L. E. Trigg, and C. B. Embling. 2019. The Effects of Ship Noise on Marine Mammals—A Review. *Frontiers in Marine Science* 6:606. DOI: 10.3389/fmars.2019.00606.
- Evans, P. G., and A. Bjørge. 2013. Impacts of climate change on marine mammals. *Marine Climate Change Impacts Partnership Science Review* 2013:134–148.
- Evans, P., and J. Waggitt. 2020. Impacts of climate change on marine mammals, relevant to the coastal and marine environment around the UK. *Marine Climate Change Impacts Partnership Science Review* 2020:421–455. DOI: 10.14465/2020.arc19.mmm.
- Exponent Engineering, P.C. 2018. *Deepwater Wind South Fork Wind Farm Onshore Electric and Magnetic Field Assessment*. Appendix K2 in Construction and Operations Plan South Fork Wind Farm. New York, New York: Exponent Engineering, P.C.
- Fernández, A., J. F. Edwards, F. Rodríguez, A. Espinosa de los Monteros, P. Herráez, P. Castro, J. R. Jaber, V. Martín, and M. Arbelo. 2005. ‘Gas and fat embolic syndrome’ involving a mass stranding of beaked whales (family Ziphiidae) exposed to anthropogenic sonar signals. *Vet. Pathol.* 42:446–457.
- Finley, K. J. 1990. *The Impacts of Vessel Traffic on the Behavior of Belugas*. International Forum for the Future of the Beluga. pgs. 113–140.
- Finneran, J. J. 2015. Noise-induced hearing loss in marine mammals: A review of temporary threshold shift studies from 1996–2015. *The Journal of the Acoustical Society of America* 138(3):1702–1726.
- Gerstein, E., J. Blue, and S. Forsythe. 2006. Ship strike acoustics: A paradox and parametric solution. *Journal of the Acoustical Society of America* 119(5):3289–3289.
- Gill, A. B., I. Gloyne-Phillips, K. J. Neal, and J. A. Kimber. 2005. *The Potential Effects of Electromagnetic Fields Generated by Sub-Sea Power Cables Associated with Offshore Wind Farm Developments on Electrically and Magnetically Sensitive Marine Organisms – A Review*. Report No. COWRIE-EM FIELD 2-06-2004. Final report. Prepared for Collaborative Offshore Wind Energy Research Into the Environment. Cranfield University and the Centre for Marine and Coastal Studies Ltd.

- Graham, I. M., E. Pirotta, N. D. Merchant, A. Farcas, T. R. Barton, B. Cheney, G. D. Hastie, and P. M. Thompson. 2017. Responses of bottlenose dolphins and harbor porpoises to impact and vibration piling noise during harbor construction. *Ecosphere* 8(5):e01793. DOI: 10.1002/ecs2.1793.
- Grashorn, S., and E. V. Stanev. 2016. Kármán vortex and turbulent wake generation by wind park piles. *Ocean Dyn.* 66:1543–1557. DOI: 10.1007/s10236-016-0995-2.
- Gray, L., and D. Greeley. 1980. Source level model for propeller blade rate radiation for the world's merchant fleet. *Journal of the Acoustical Society of America* 67:516–522.
- Guerra, M., S. M. Dawson, T. E. Brough, and W. J. Rayment. 2014. Effects of boats on the surface of an endangered population of bottlenose dolphins. *Endangered Species Research* 24:221–236. DOI: 10.3354/esr00598.
- Hall, A. J., B. J. McConnell, L. H. Schwacke, G. M. Ylitalo, R. Williams, and T. K. Rowles. 2018. Predicting the effects of polychlorinated biphenyls on cetacean populations through impacts on immunity and calf survival. *Environmental Pollution* 233:407–418.
- Hannay, D., and M. Zykov. 2022. *Underwater acoustic modeling of detonations of unexploded ordnance (UXO) for Ørsted wind farm construction, US East Coast*. Document 02604, Version 3.0. Report by JASCO Applied Sciences for Ørsted.
- Harnois, V., H. C. Smith, S. Benjamins, and L. Johanning. 2015. Assessment of entanglement risk to marine megafauna due to offshore renewable energy mooring systems. *International Journal of Marine Energy* 11:27–49.
- Hastie, G., B. Wilson, and L. Tufft. 2003. Bottlenose Dolphins Increase Breathing Synchrony in Response to Boat Traffic. *Marine Mammal Science* 19(1):74–84.
- Hayes, S. A., E. Josephson, K. Maze-Foley, and P. E. Rosel. 2020. *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments – 2019*. NOAA Tech Memo NMFS-NE 264.
- Hayes, S. A., E. Josephson, K. Maze-Foley, P. E. Rosel, and J. Turek. 2021. *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments – 2020*. NOAA Tech Memo NMFS-NE 271.
- Hayes, S. A., E. Josephson, K. Maze-Foley, P. E. Rosel, and J. Wallace. 2022a. *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments – 2021*. NOAA Tech Memo NMFS-NE 288. May 2022.
- Hayes, S. A., E. Josephson, K. Maze-Foley, P. E. Rosel, and J. Wallace. 2022b. *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments – 2022. Draft*. June 2022.
- Heinis, F., C. de Jong, M. Ainslie, W. Borst, and T. Vellinga. 2013. Monitoring programme for the Maasvlakte 2, Part III - The effects of underwater sound. *Terra et Aqua* 132:2132.
- Hoffman, Christopher A. 2012. Mitigating Impacts of Underwater Noise From Dredging on Beluga Whales in Cook Inlet, Alaska. *Adv Exp Med Biol.* 2012;730:617–619. DOI: 10.1007/978-1-4419-7311-5_140. PMID: 22278577.
- Holt, M. M., D. P. Noren, V. Veirs, C. K. Emmons, and S. Veirs. 2009. Speaking up: Killer whales (*Orcinus orca*) increase their call amplitude in response to vessel noise. *The Journal of the Acoustical Society of America* 125(1):EL27–EL32. Available: <https://doi.org/10.1121/1.3040028>.

- Holt, M. M., J. B. Tennessen, M. Bradley Hanson, C. K. Emmons, D. A. Giles, J. T. Hogan, and M. J. Ford. 2021. Vessels and their sounds reduce prey capture effort by endangered killer whales (*Orcinus orca*). *Marine Environmental Research* 170 (2021):105429. Available: <https://doi.org/10.1016/j.marenvres.2021.105429>.
- Houser D. S., R. Howard, and S. Ridgway. 2001. Can diving-induced tissue nitrogen supersaturation increase the chance of acoustically driven bubble growth in marine mammals? *Journal of Theoretical Biology* 213:183–195.
- Inspire Environmental (Inspire). 2019. *Sediment Profile and Plan View Imaging Benthic Assessment Survey in Support of the South Fork Wind Farm Site Assessment*. Appendix N in Construction and Operations Plan South Fork Wind Farm. Newport, Rhode Island: Inspire Environmental.
- Jansen, E., and C. de Jong. 2016. Underwater noise measurements in the North Sea in and near the Princess Amalia Wind Farm in operation. 45th International Congress and Exposition on Noise Control Engineering: Towards a Quieter Future, INTER-NOISE 2016. 21 August 2016 through 24 August 2016, 7846–7857.
- JASCO Applied Sciences (JASCO). 2011. *Underwater Acoustics: Noise and the Effects on Marine Mammals*. A Pocket Handbook, 3rd Ed. Available: <http://oalib.hlsresearch.com/PocketBook%203rd%20ed.pdf>.
- JASCO Applied Sciences Inc. (JASCO). 2022a. *Distance to behavioral threshold for vibratory pile driving of sheet piles*. Technical Memorandum by JASCO Applied Sciences for Ocean Wind LLC. March 21.
- JASCO Applied Sciences Inc. (JASCO). 2022b. New England Wind Offshore Wind Farm Application for Marine Mammal Protection Act (MMPA) Rulemaking and Letter of Authorization. July. Available: https://media.fisheries.noaa.gov/2022-08/NewEnglandWind_2023LOA_App_OPR1_508.pdf.
- Jensen, A. S., G. K. Silber, and J. Calambokidis. 2003. Large whale ship strike database. U.S. Department of Commerce (p. 37). NOAA Technical Memorandum. NMFS-ORP. Available: https://repository.library.noaa.gov/view/noaa/23127/noaa_23127_DS1.pdf.
- Jepson, P. D., M. Arbelo, R. Deaville, I. A. P. Patterson, P. Castro, J. R. Baker, E. Degollada, H. M. Ross, P. Herraéz, A. M. Pocknell, F. Rodriguez, F. E. Howie, A. Espinosa, R. J. Reid, J. R. Jaber, V. Martin, A. A. Cunningham, and A. Fernández. 2003. Gas-bubble lesions in stranded cetaceans. *Nature* 425:575–576.
- Jepson, P. D., R. Deaville, L. J. Barber, A. Aguilar, A. Borrell, S. Murphy, J. Barry, A. Brownlow, J. Barnett, S. Berrow, and A. A. Cunningham. 2016. PCB pollution continues to impact populations of orcas and other dolphins in European waters. *Scientific reports* 6(1):1–17.
- Johansson T., and M. Andersson. 2012. *FOI Ambient Underwater Noise Levels at Norra Midsjöbanken during Construction of the Nord Stream Pipeline*. FOI Report.
- Johnson, A., G. Salvador, J. Kenney, J. Robbins, S. Kraus, S. Landry, and P. Clapham. 2005. “Fishing Gear Involved in Entanglement of Right and Humpback Whales.” *Marine Mammal Science* 21(4):635–645.

- Johnson, S. R., W. J. Richardson, S. B. Yazvenko, S. A. Blokhin, G. Gailey, M. R. Jenkerson, S. K. Meier, H. R. Melton, M. W. Newcomer, A. S. Perlov, S. A. Rutenko, B. Wursig, C. R. Martin, and D. E. Egging. 2007. A western gray whale mitigation and monitoring program for a 3-D seismic survey, Sakhalin Island, Russia. *Environ Monit Assess* 134:1–19. DOI 10.1007/s10661-007-9813-0.
- Josephson, E., F. Wenzel, and M. C. Lyssikatos. 2021. *Serious injury determinations for small cetaceans and pinnipeds caught in commercial fisheries off the Northeast US coast, 2014–2018*. US Department of Commerce, Northeast Fisheries Science Center Reference Document 21-04. Washington, DC: US Department of Commerce.
- Kastelein, R. A., L. A. E. Huijser, S. Cornelisse, L. Helder-Hoek, N. Jennings, and C. A. F. de Jong. 2019. Effect of Pile-Driving Playback Sound Level on Fish-Catching Efficiency in Harbor Porpoises (*Phocoena phocoena*). *Aquatic Mammals* 45(4):398–410. DOI 10.1578/AM.45.4.2019.398.
- Kates Varghese, H., J. Miksis-Olds, N. DiMarzio, K. Lowell, E. Linder, L. Mayer, and D. Moretti. 2020. “The Effect of Two 12 Khz Multibeam Mapping Surveys on the Foraging Behavior of Cuvier's Beaked Whales Off of Southern California.” *J Acoust Soc Am* 147(6):3849. DOI: <https://doi.org/10.1121/10.0001385>. Available: <https://www.ncbi.nlm.nih.gov/pubmed/32611139>.
- Kates Varghese, Hilary, Kim Lowell, Jennifer Miksis-Olds, Nancy DiMarzio, David Moretti, and Larry Mayer. 2021. “Spatial Analysis of Beaked Whale Foraging During Two 12 Khz Multibeam Echosounder Surveys.” *Frontiers in Marine Science* 8. DOI: <https://doi.org/10.3389/fmars.2021.654184>.
- Kellar, N. M., T. R. Speakman, C. R. Smith, S. M. Lane, B. C. Balmer, M. L. Trego, K. N. Catelani, M. N. Robbins, C. D. Allen, R. S. Wells, E. S. Zolman, T. K. Rowles, and L. H. Schwacke. 2017. “Low Reproductive Success Rates of Common Bottlenose Dolphins *Tursiops truncatus* in the Northern Gulf of Mexico Following the Deepwater Horizon Disaster (2010–2015).” *Endangered Species Research* 33:143–158.
- Ketten, D. R. 1991. The marine mammal ear: specializations for aquatic audition and echolocation. Pp. 717–750 in: Webster, D., R. Fay, and A. Popper (Eds), *The Biology of Hearing*. Berlin: Springer-Verlag.
- Ketten, D. R. 1998. *Marine Mammal Auditory Systems: A Summary of Audiometric and Anatomical Data and its Implications for Underwater Acoustic Impacts*. NOAA Tech Memo NMFS: NOAA-TM-NMFS-SWFSC-256.
- Ketten, D. R. and D. C. Mountain. 2011. *Final Report: Hearing in Minke Whales*. Joint Industry Program. 26 pp.
- Ketten, D. R., and D. C. Mountain. 2014. Inner ear frequency maps: First stage audiograms of low to infrasonic hearing in mysticetes. Presentation at ESOMM 2014, Amsterdam, Netherlands in Southall, B. L., J. J. Finneran, C. Reichmuth, P. E. Nachtigall, D. R. Ketten, A. E. Bowles, W. T. Ellison, D. P. Nowacek, and P. L. Tyack. 2019. Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects. *Aquatic Mammals* 2019, 45(2):125–232. DOI 10.1578/AM.45.2.2019.125.
- Kilfoyle, A. K., R. F. Jermain, M. R. Dhanak, J. P. Huston, and R. E. Speiler. 2018. Effects of EMF emissions from undersea electric cables on coral reef fish. *Bioelectromagnetics* 39:35–52.

- Knowlton, A. R., P. K. Hamilton, M. K. Marx, H. P. Pettis, and S. D. Kraus. 2012. Monitoring North Atlantic right whale *Eubalaena glacialis* entanglement rates: A 30 year retrospective. *Marine Ecology Progress Series* 466:293–302.
- Küsel, E. T., M. J. Weirathmueller, K. E. Zammit, S. J. Welch, K. E. Limpert, and D. G. Zeddies. 2022. *Underwater Acoustic and Exposure Modeling*. Document 02109, Version 1.0 DRAFT. Technical report by JASCO Applied Sciences for Ocean Wind LLC.
- Laist D. W., A. R. Knowlton, and D. Pendleton. 2014. Effectiveness of mandatory vessel speed limits for protecting North Atlantic Right whales. *Endangered Species Research* 23:133–147.
- Laist, D. W., A. R. Knowlton, J. G. Mead, A. S. Collet, and M. Podesta. 2001. Collisions between ships and whales. *Marine Mammal Science* 17(1):35–75.
- Learmonth, J. A., C. D. MacLeod, M. B. Santos, G. J. Pierce, H. Q. P. Crick, and R. A. Robinson. 2006. Potential effects of climate change on marine mammals. *Oceanography and Marine Biology: An Annual Review* 44:431–464.
- Lefcheck, J. S., B. B. Hughes, A. J. Johnson, B. W. Pfirmann, D. B. Rasher, A. R. Smyth, B. L. Williams, M. W. Beck, and R. J. Orth. 2019. Are coastal habitats important nurseries? A meta-analysis. *Conservation Letters* 12(4):e12645.
- Lesage, V., C. Barrette, M. C. S. Kingsley, and B. Sjare. 1999. The effect of vessel noise on the vocal behavior of belugas in the St. Lawrence River estuary, Canada. *Marine Mammal Science* 15(1):65–84. DOI:10.1111/j.1748-7692.1999.tb00782.x.
- Lewiston, R. L., L. B. Crowder, B. P. Wallace, J. E. Moore, T. Cox, R. Zydels, S. McDonald, A. DiMatteo, D. C. Dunn, C. Y. Kot, R. Bjorkland, S. Kelez, C. Soykan, K. R. Stewart, M. Sims, A. Boustany, A. J. Read, P. Halpin, W. J. Nichols, and C. Safina. 2014. “Global Patterns of Marine Mammal, Seabird, and Marine Mammal Bycatch Reveal Taxa-Specific and Cumulative Megafauna Hotspots.” *Proceeding of the National Academy of Sciences of the United States of America* 111(14):5271–8276. Available: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3986184/pdf/pnas.201318960.pdf>.
- Ljungblad, D. K., B. Wursig, S. L. Swartz, and J. M. Keene. 1988. Observations on the Behavioral Responses of Bowhead Whales (*Balaena mysticetus*) to Active Geophysical Vessels in the Alaskan Beaufort Sea. *Arctic* 41(3):183–194.
- Long, C. 2017. *Analysis of the Possible Displacement of Bird and Marine Mammal Species Related to the Installation and Operation of Marine Energy Conversion Systems*. Scottish Natural Heritage Commissioned Report No. 947.
- Love, M., A. Baldera, C. Young, and C. Robbins. 2013. *The GoM Ecosystem: A Coastal and Marine Atlas*. New Orleans, LA: Ocean Conservancy, Gulf Restoration Center.
- Lucke, K., P. A. Lepper, B. Hoeve, E. Everaarts, N. van Elk, and U. Siebert. 2007. Perception of Low-Frequency Acoustic Signals by a Harbour porpoise (*Phocoena phocoena*) in the Presence of Simulated Offshore Wind Turbine Noise. *Aquatic Mammals* 33 (1):55–68.
- Ludewig, E. 2015. *On the Effect of Offshore Wind Farms on the Atmosphere and Ocean Dynamics*. Cham: Springer International Publishing.

- Lyssikatos, M. C. 2015. *Estimates of cetacean and pinniped bycatch in Northeast and Mid-Atlantic bottom Trawl Fisheries, 2008–2013*. Woods Hole, Massachusetts, U.S. Department of Commerce. Northeast Fisheries Science Center Reference Document 15-19.
- Madsen, P. T., M. Wahlberg, J. Tougaard, K. Lucke, and P. Tyack. 2006. “Wind Turbine Underwater Noise and Marine Mammals: Implications of Current Knowledge and Data Needs.” *Marine Ecology Progress Series*, Vol. 309:279–295. Available: https://www.researchgate.net/publication/236156710_Wind_turbine_underwater_noise_and_marine_mammals_Implications_of_current_knowledge_and_data_needs.
- Malme, C. I., B. Würsig, J. E. Bird, and P. Tyack. 1986. *Behavioral responses of gray whales to industrial noise: feeding observations and predictive modeling*. BBN Rep. 6265. OCS Study MMS 88-0048. Outer Contin. Shelf Environ. Assess. Progr., Final Rep. Princ. Invest., NOAA, Anchorage 56(1988):393–600. NTIS PB88-249008.
- Martin, J., Q. Sabatier, T. A. Gowan, C. Giraud, E. Gurarie, C. S. Calleson, J. G. Ortega-Ortiz, C. J. Deutsch, A. Rycyk, and S. M. Koslovsky. 2016. A quantitative framework for investigating risk of deadly collisions between marine wildlife and boats. *Methods in Ecology and Evolution* 7(1):42–50.
- Martins, M. C. I., L. Sette, E. Josephson, A. Bogomolni, K. Rose, S. M. Sharp, M. Niemeyer, and M. Moore. 2019. Unoccupied aerial system assessment of entanglement in Northwest Atlantic gray seals (*Halichoerus grypus*). *Marine Mammal Science* 35(4):1613–1624.
- Mazet, J. A. K., I. A. Gardner, D. A. Jessup, and L. J. Lowenstine. 2001. “Effects of Petroleum on Mink Applied as a Model for Reproductive Success in Sea Otters.” *Journal of Wildlife Diseases* 37(4):686–692.
- McCauley, R. 1998. *Radiated Underwater Noise Measured from the Drilling Rig Ocean General, Rig Tenders Pacific Ariki and Pacific Frontier, Fishing Vessel Reef Venture and Natural Sources in the Timor Sea, Northern Australia*. Prepared for Shell Australia. Project Centre for Marine Science and Technology Report C98-20.
- McIntosh, R. R., R. Kirkwood, D. R. Sutherland, and P. Dann. 2015. Drivers and annual estimates of marine wildlife entanglement rates: a long-term case study with Australian fur seals. *Marine Pollution Bulletin* 101(2):716–725.
- McMahon, K., P. Lavery, and M. Mulligan. 2011. Recovery from the impact of light reduction on the seagrass *Amphibolis griffithii*, insights for dredging management. *Marine Pollution Bulletin* 62(2):270–283.
- Methratta, E. T., and W. R. Dardick. 2019. Meta-Analysis of Finfish Abundance at Offshore Wind Farms. *Reviews in Fisheries Science & Aquaculture* 27:2:242–260.
- Mid-Atlantic Fishery Management Council (MAFMC). 2023. *Mid-Atlantic Artificial Reefs*. Available: <https://www.mafmc.org/artificial-reefs>. Accessed: March 3, 2023.
- Mikkelsen, L., M. Johnson, D. M. Wisniewska, A. van Neer, U. Siebert, P. T. Madsen, and J. Teilmann. 2019. Long-term sound and movement recording tags to study natural behavior and reaction to ship noise of seals. *Ecology and Evolution* 9:2588–2601. DOI: 10.1002/ece3.4923

- Miller, J. H., and G. R. Potty. 2017. "Overview of Underwater Acoustic and Seismic Measurements of the Construction and Operation of the Block Island Wind Farm." *Journal of the Acoustical Society of America* 141(5):3993. DOI:10.1121/1.4989144. Available: <https://asa.scitation.org/doi/10.1121/1.4989144>.
- Mitson, R. B. 1995. *Underwater noise of research vessels – review and recommendations*. Cooperative Research Report. 209. ACOUSTEC, prepared for the International Council for the Exploration of the Sea. Copenhagen, Denmark.
- Mohr, F. C., B. Lasely, and S. Bursian. 2008. "Chronic Oral Exposure to Bunker C Fuel Oil Causes Adrenal Insufficiency in Ranch Mink." *Archive of Environmental Contamination and Toxicology* 54:337–347.
- Moore, M. J., and J. M. van der Hoop. 2012. "The Painful Side of Trap and Fixed Net Fisheries: Chronic Entanglement of Large Whales." *Journal of Marine Biology* 2012. Article 230653, 4 pp.
- Moore, M. J., J. van de Hoop, S. G. Barco, et al. 2013. Criteria and case definitions for serious injury and death of pinnipeds and cetaceans caused by anthropogenic trauma. *Diseases of Aquatic Organisms* 103:229–264.
- Moulton, V. D., W. J. Richardson, M. T. Williams, and S. B. Blackwell. 2003. Ringed seal densities and noise near an icebound artificial island with construction and drilling. *Acoustics Research Letters Online* 4:112–117. DOI: 10.1121/1.1605091.
- Muir, D. C. G., R. Wagemann, N. P. Grift, R. J. Norstrom, M. A. Simon, and J. Lien. 1988. Organochlorine chemical and heavy metal contaminants in white-beaked dolphins (*Lagenorhynchus albirostris*) and pilot whales (*Globicephala melaena*) from the coast of Newfoundland, Canada. *Archives of Environmental Contamination and Toxicology* 17(5):613–629.
- Murphy, S., R. J. Law, R. Deaville, J. Barnett, M. W. Perkins, A. Brownlow, R. Penrose, N. J. Davison, J. L. Barber, and P. D. Jepson. 2018. Organochlorine contaminants and reproductive implication in cetaceans: a case study of the common dolphin. *Marine Mammal Ecotoxicology* 3-38.
- Nabe-Nielsen, J., J. Tougaard, J. Teilmann, and S. Sveegaard. 2011. *Effects of Wind Farms on Harbour Porpoise Behavior and Population Dynamics*. Report commissioned by the Environmental Group under the Danish Environmental Monitoring Programme. Scientific Report from Danish Centre for Environment and Energy No. 1. Denmark: Aarhus University. September.
- National Aeronautics and Space Administration (NASA). 2019. *The Effects of Climate Change*. Available: <https://climate.nasa.gov/effects/>. Accessed: November 2021.
- National Marine Fisheries Service (NMFS). 2016. Endangered Species Act Section 7 Consultation on the Continued Prosecution of Fisheries and Ecosystem Research Conducted and Funded by the Northeast Fisheries Science Center and the Issuance of a Letter of Authorization under the Marine Mammal Protection Act for the Incidental Take of Marine Mammals Pursuant to those Research Activities PCTS ID: NER-2015-12532. Available: https://media.fisheries.noaa.gov/dam-migration/nefsc_rule2016_biop.pdf.

- National Marine Fisheries Service (NMFS). 2018a. *2018 Revisions to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts*. National Oceanic and Atmospheric Administration Technical Memorandum NMFS-OPR-59. U.S. Department of Commerce, National Oceanographic and Atmospheric Administration.
- National Marine Fisheries Service (NMFS). 2018b. Greater Atlantic Regional Fisheries Office: Section 7 Pile Driving Acoustics Tool. Updated 09/14/2020. Available: <http://www.greateratlantic.fisheries.noaa.gov/protected/section7/guidance/consultation/index.html>. Accessed: February 2021.
- National Marine Fisheries Service (NMFS). 2018c. NOAA Fisheries' User Spreadsheet tool. Available: <https://www.fisheries.noaa.gov/action/user-manual-optional-spreadsheet-tool-2018-acoustic-technical-guidance>. Accessed: September 2019.
- National Marine Fisheries Service (NMFS). 2020. North Atlantic Right Whale (*Eubalaena glacialis*) Vessel Speed Rule Assessment. June 2002. Available: https://media.fisheries.noaa.gov/2021-01/FINAL_NARW_Vessel_Speed_Rule_Report_Jun_2020.pdf?null. Accessed: April 2023.
- National Marine Fisheries Service (NMFS). 2021a. *Endangered Species Act Section 7 Consultation Biological Opinion for the Construction, Operation, Maintenance, and Decommissioning of the South Fork Offshore Energy Project (Lease OCS-A 0517)* GARFO-2021-00353 – [Corrected]. Available: https://media.fisheries.noaa.gov/2021-12/SFW_BiOp_OPR1.pdf.
- National Marine Fisheries Service (NMFS). 2021b. *Endangered Species Act Section 7 Consultation Biological Opinion for the Construction, Operation, Maintenance, and Decommissioning of the Vineyard Wind Offshore Energy Project (Lease OCS-A 0501)* GARFO-2021-01265 – [Corrected]. Available: https://www.boem.gov/sites/default/files/documents/renewable-energy/2021-Vineyard-Wind-1-BiOp-Final_0.pdf.
- National Oceanic and Atmospheric Administration (NOAA). 2013. *Draft guidance for assessing the effects of anthropogenic sound on marine mammals: Acoustic threshold levels for onset of permanent and temporary threshold shifts*. December 2013, 76 pp. Silver Spring, Maryland: NMFS Office of Protected Resources. Available: http://www.nmfs.noaa.gov/pr/acoustics/draft_acoustic_guidance_2013.pdf.
- National Oceanic and Atmospheric Administration (NOAA). 2020a. *North Atlantic Right Whale (Eubalaena glacialis) Vessel Speed Rule Assessment*. June. NOAA Fisheries, Office of Protected Resources. Available: https://media.fisheries.noaa.gov/2021-01/FINAL_NARW_Vessel_Speed_Rule_Report_Jun_2020.pdf?null.
- National Oceanic and Atmospheric Administration (NOAA). 2020b. *Draft Environmental Impact Statement, Regulatory Impact Review, and Initial Regulatory Flexibility Analysis for Amending the Atlantic Large Whale Take Reduction Plan: Risk Reduction Rule*. Vol. 1. Available at: https://www.greateratlantic.fisheries.noaa.gov/public/nema/PRD/DEIS_RIR_ALWTRP_RiskReductionRule_VolumeI.pdf.
- National Oceanic and Atmospheric Administration (NOAA). 2022. 2017–2022 North Atlantic Right Whale Unusual Mortality Event. Available: <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2022-north-atlantic-right-whale-unusual-mortality-event>.

- National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2020. *2018–2020 Pinniped Unusual Mortality Event along the Northeast Coast*. National Oceanic and Atmospheric Administration. Available: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-lifedistress/2018-2020-pinniped-unusual-mortality-event-along>. Accessed: April 11, 2022.
- National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2022a. *2016–2022 Humpback Whale Unusual Mortality Event along the Atlantic Coast*. National Oceanic and Atmospheric Administration. Available: <https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2022-humpback-whale-unusual-mortality-event-along-atlantic-coast>. Accessed: April 11, 2021.
- National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2022b. *2017–2022 Minke Whale Unusual Mortality Event along the Atlantic Coast*. National Oceanic and Atmospheric Administration. Available: <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2022-minke-whale-unusual-mortality-event-along-atlantic-coast>. Accessed: April 11, 2022.
- National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2022c. *Rule to Amend the North Atlantic Right Whale Vessel Speed Regulations Closed for Comment*. National Oceanic and Atmospheric Administration. Updated November 7, 2022. Available: <https://www.fisheries.noaa.gov/feature-story/rule-amend-north-atlantic-right-whale-vessel-speed-regulations-closed-comment>. Accessed: January 13, 2023.
- National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2022d. *Ecology of the Northeast Continental Shelf*. Available: http://archive.nefmc.org/ecosystems/eco_northeast_shelf.pdf.
- National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2023a. *2017–2023 North Atlantic Right Whale Unusual Mortality Event*. National Oceanic and Atmospheric Administration. Updated January 10, 2023. Available: <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2022-north-atlantic-right-whale-unusual-mortality-event>. Accessed: January 11, 2023.
- National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2023b. *2022 Pinniped Unusual Mortality Event along the Main Coast*. National Oceanic and Atmospheric Administration. Updated December 21, 2022. Available: <https://www.fisheries.noaa.gov/2022-2023-pinniped-unusual-mortality-event-along-maine-coast>. Accessed: January 12, 2023.
- Nedwell J., J. Langworthy, and D. Howell. 2003. *Assessment of Sub-Sea Acoustic Noise and Vibration from Offshore Wind Turbines and its Impact on Marine Wildlife; Initial Measurements of Underwater Noise during Construction of Offshore Windfarms, and Comparison with Background Noise* (Report No. 544 R 0424). Report by Subacoustech Ltd. Report for The Crown Estate.
- New England Wind. 2022. *New England Wind Offshore Wind Farm, Application for Marine Mammal Protection Act Rulemaking and Letter of Authorization*. July.
- New Jersey Department of Environmental Protection (NJDEP). 2010. *Ocean/Wind Power Ecological Baseline Studies* January 2008–December 2009. Final Report. July 2010. Prepared for New Jersey Department of Environmental Protection Office of Science by Geo-Marine, Inc., Plano, Texas. Available: <http://www.nj.gov/dep/dsr/ocean-wind/report.htm>.
- Nielsen, J. B., F. Nielsen, P. J. Jørgensen, and P. Grandjean. 2000. Toxic metals and selenium in blood from pilot whales (*Globicephala melas*) and sperm whales (*Physeter catodon*). *Marine Pollution Bulletin* 40(4):348–351.

- Normandeau, Exponent, T. Tricas, and A. Gill. 2011. *Effects of EMFs from Undersea Power Cables on Elasmobranchs and Other Marine Species*. OCS Study BOEMRE 2011-09. Camarillo, California: U.S. Department of the Interior, Bureau of Ocean Energy Management, Regulation, and Enforcement, Pacific OCS Region.
- Northeast Fisheries Science Center (NEFSC) and Southeast Fisheries Science Center (SEFSC). 2011. *2010 Annual Report to the Inter-Agency Agreement M10PG00075/0001: A Comprehensive Assessment of Marine Mammal, Marine Turtle, and Seabird Abundance and Spatial Distribution in US Waters of the Western North Atlantic Ocean*. Prepared by NMFS-NEFSC, Woods Hole, Massachusetts and NMFS-SEFSC, Miami, Florida.
- Northeast Fisheries Science Center (NEFSC) and Southeast Fisheries Science Center (SEFSC). 2012. *2011 Annual Report to the Inter-Agency Agreement M10PG00075/0001: A Comprehensive Assessment of Marine Mammal, Marine Turtle, and Seabird Abundance and Spatial Distribution in US Waters of the Western North Atlantic Ocean*. Prepared by NMFS-NEFSC, Woods Hole, Massachusetts and NMFS-SEFSC, Miami, Florida.
- Northeast Fisheries Science Center (NEFSC) and Southeast Fisheries Science Center (SEFSC). 2013. *2012 Annual Report of a Comprehensive Assessment of Marine Mammal, Marine Turtle, and Seabird Abundance and Spatial Distribution in US Waters of the Western North Atlantic Ocean*. Prepared by NMFS-NEFSC, Woods Hole, Massachusetts and NMFS-SEFSC, Miami, Florida.
- Northeast Fisheries Science Center (NEFSC) and Southeast Fisheries Science Center (SEFSC). 2014. *2013 Annual Report of a Comprehensive Assessment of Marine Mammal, Marine Turtle, and Seabird Abundance and Spatial Distribution in US Waters of the Western North Atlantic Ocean*. Prepared by NMFS-NEFSC, Woods Hole, Massachusetts and NMFS-SEFSC, Miami, Florida.
- Northeast Fisheries Science Center (NEFSC) and Southeast Fisheries Science Center (SEFSC). 2015. *2014 Annual Report of a Comprehensive Assessment of Marine Mammal, Marine Turtle, and Seabird Abundance and Spatial Distribution in US Waters of the Western North Atlantic Ocean*. Prepared by NMFS-NEFSC, Woods Hole, Massachusetts and NMFS-SEFSC, Miami, Florida.
- Northeast Fisheries Science Center (NEFSC) and Southeast Fisheries Science Center (SEFSC). 2016. *2016 Annual Report of a Comprehensive Assessment of Marine Mammal, Marine Turtle, and Seabird Abundance and Spatial Distribution in US Waters of the Western North Atlantic Ocean - AMAPPS II*. Prepared by NMFS-NEFSC, Woods Hole, Massachusetts and NMFS-SEFSC, Miami, Florida.
- Northeast Fisheries Science Center (NEFSC) and Southeast Fisheries Science Center (SEFSC). 2018. *2017 Annual Report of a Comprehensive Assessment of Marine Mammal, Marine Turtle, and Seabird Abundance and Spatial Distribution in US Waters of the Western North Atlantic Ocean - AMAPPS II*. Prepared by NMFS-NEFSC, Woods Hole, Massachusetts and NMFS-SEFSC, Miami, Florida.
- Northeast Fisheries Science Center (NEFSC) and Southeast Fisheries Science Center (SEFSC). 2020. *2019 Annual Report of a Comprehensive Assessment of Marine Mammal, Marine Turtle, and Seabird Abundance and Spatial Distribution in US Waters of the Western North Atlantic Ocean - AMAPPS II*. Prepared by NMFS-NEFSC, Woods Hole, Massachusetts and NMFS-SEFSC, Miami, Florida.
- Northeast Fisheries Science Center (NEFSC) and Southeast Fisheries Science Center (SEFSC). 2022. *2021 Annual Report of a Comprehensive Assessment of Marine Mammal, Marine Turtle, and Seabird Abundance and Spatial Distribution in US Waters of the Western North Atlantic Ocean - AMAPPS III*. Prepared by NMFS-NEFSC, Woods Hole, Massachusetts and NMFS-SEFSC, Miami, Florida.

- Nowacek, S. M., R. S. Wells, and A. R. Solow. 2001. Short-term Effects of Boat Traffic on Bottlenose Dolphins, *Tursiops Truncatus*, in Sarasota Bay, Florida. *Marine Mammal Science* 17(4):673–688.
- Nowacek, D., M. P. Johnson, and P. L. Tyack. 2004. North Atlantic right whales (*Eubalaena glacialis*) ignore ships but respond to alerting stimuli. Proceedings of the Royal Society of London. *Series B, Biological Sciences* 271:227–231.
- Ocean Wind LLC (Ocean Wind). 2019. *Aerial Seal Haul-Out Survey: Ocean Wind Offshore Windfarm*. Prepared by Normandeau Associates, Inc. and APEM Ltd. July 16, 2019.
- Ocean Wind LLC (Ocean Wind). 2022. *Application for Marine Mammal Protection Act (MMPA) Rulemaking and Letter of Authorization: DRAFT*. Prepared by HDR. February.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Olson, J. K., D. M. Lambourn, J. L. Huggins, S. Raverty, A. A. Scott, and J. K. Gaydos. 2021. Trends in propeller strike-induced mortality in harbor seals (*Phoca vitulina*) of the Salish Sea. *Journal of Wildlife Diseases* 57(3):689–693.
- Orphanides, C. D. 2020. *Estimates of Cetacean and Pinniped Bycatch in the 2017 New England Sink and Mid-Atlantic Gillnet Fisheries*. Northeast Fisheries Science Center Reference Document 20-03. Available: <https://repository.library.noaa.gov/view/noaa/23650>.
- Orr, T., S. Herz, and D. Oakley. 2013. *Evaluation of Lighting Schemes for Offshore Wind Facilities and Impacts to Local Environments*. OCS Study BOEM 2013-0116. Herndon, Virginia: U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs.
- Osiecka, A. N., O. Jones, and M. Wahlberg. 2020. The diel pattern in harbour porpoise clicking behavior is not a response to prey activity. *Nature Scientific Reports* 10:14876. Available: <https://doi.org/10.1038/s41598-020-71957-0>.
- OSPAR Commission. 2009. *Overview of the impacts of anthropogenic underwater sound in the marine environment*. London, UK: OSPAR Commission.
- Pace, R. M. 2021. *Revisions and Further Evaluations of the Right Whale Abundance Model: Improvements for Hypothesis Testing*. NOAA Technical Memorandum NMFS-NE 269. Available: <https://apps-nefsc.fisheries.noaa.gov/rcb/publications/tm269.pdf>.
- Pace, R. M. III, R. Williams, S. D. Kraus, A. R. Knowlton, and H. M. Pettis. 2021. Cryptic mortality of North Atlantic right whales. *Conservation Science and Practice* 2021(3):e346. Available: <https://doi.org/10.1111/csp2.346>.
- Pace, R. M., and G. K. Silber. 2005. Simple Analysis of Ship and Large Whale Collisions: Does Speed Kill? Presentation at the Sixteenth Biennial Conference on the Biology of Marine Mammals, San Diego, CA, December 2005.
- Pacific Marine Environmental Laboratory (PMEL). 2020. Ocean Acidification: The Other Carbon Dioxide Problem. Available: <https://www.pmel.noaa.gov/CO2/story/Ocean+Acidification>. Accessed: February 11, 2020.

- Palka, D. L., S. Chavez-Rosales, E. Josephson, D. Cholewiak, H. L. Haas, L. Garrison, M. Jones, D. Sigourney, G. Waring, M. Jech, E. Broughton, M. Soldevilla, G. Davis, A. DeAngelis, C. R. Sasso, M. V. Winton, R. J. Smolowitz, G. Fay, E. LaBrecque, J. B. Leiness, K. Dettloff, M. Warden, K. Murray, and C. Orphanides. 2017. *Atlantic Marine Assessment Program for Protected Species: 2010–2014*. OCS Study BOEM 2017-071. Bureau of Ocean Energy Management, Washington, DC. Available: <https://espis.boem.gov/final%20reports/5638.pdf>.
- Parks, S. E., C. W. Clark, and P. L. Tyack. 2007. Short- and long-term changes in right whale calling behavior: the potential effects of noise on acoustic communication. *Journal of the Acoustical Society of America* 122(6):3725–3731. DOI:10.1121/1.2799904.
- Parsons, E. C. M., D. Dolman, A. J. Wright, N. A. Rose, and W. C. G. Burns. 2008. Navy sonar and cetaceans: just how much does the gun need to smoke before we act? *Mar. Pollut. Bull.* 56:1248–1257.
- Paskyabi, M. B., I. and Fer. 2012. “Upper Ocean Response to Large Wind Farm Effect in the Presence of Surface Gravity Waves,” in Selected papers from Deep Sea Offshore Wind R&D Conference, Vol. 24, (Trondheim):45–254. DOI: 10.1016/j.egypro.2012.06.106.
- Patenaude, N. J., W. J. Richardson, M. A. Smultea, W. R. Koski, G. W. Miller, B. Würsig, and C. R. Greene, Jr. 2002. Aircraft sound and disturbance to bowhead and beluga whales during spring migration in the alaskan Beaufort sea. *Marine Mammal Science* 18(2):309–335. Available: <https://doi.org/10.1111/j.1748-7692.2002.tb01040.x>.
- Pfleger, M., P. Mustain, M. Valentine, E. Gee, W. Webber, and B. Fenty. 2021. Vessel Strikes Threaten North Atlantic Right Whales. *Oceana*. DOI: 10.5281/zenodo.5120727.
- Pierce, G. J., M. B. Santos, S. Murphy, J. A. Learmonth, A. F. Zuur, E. Rogan, P. Bustamante, F. Caurant, V. Lahaye, V. Ridoux, and B. N. Zegers. 2008. Bioaccumulation of persistent organic pollutants in female common dolphins (*Delphinus delphis*) and harbour porpoises (*Phocoena phocoena*) from western European seas: Geographical trends, causal factors and effects on reproduction and mortality. *Environmental Pollution* 153(2):401–415.
- Pirotta E., B. V. Laesser, A. Hardaker, N. Riddoch, and M. Marcoux. 2013. Dredging displaces bottlenose dolphins from an urbanized foraging patch. *Marine Pollution Bulletin* 74(1):396–402. SSN 0025-326X. Available: <https://doi.org/10.1016/j.marpolbul.2013.06.020>.
- Putland, R. L., N. D. Merchant, A. Farcas, and C. A. Radford. 2017. Vessel noise cuts down commercial space for vocalizing fish and marine mammals. *Glob Change Biol.* 2017:1–14. DOI: 10.1111/gcb.13996.
- Quick, Nicola, Lindsay Scott-Hayward, Dina Sadykova, Doug Nowacek, and Andrew Read. 2017. “Effects of a Scientific Echo Sounder on the Behavior of Short-Finned Pilot Whales (*Globicephala macrorhynchus*).” *Canadian Journal of Fisheries and Aquatic Sciences* 74(5):716–726. DOI: <https://doi.org/10.1139/cjfas-2016-0293>.
- Raoux, A., S. Tecchio, J.-P. Pezy, G. Lassalle, S. Degraer, D. Wilhelmsson, M. Cachera, B. Ernande, C. Le Guen, M. Haraldsson, K. Grangeré, F. Le Loc’h, J.-C. Dauvin, and N. Niquil. 2017. Benthic and fish aggregation inside an offshore wind farm: Which effects on the trophic web functioning? *Ecological Indicators* 72:33–46.

- Read A. J., P. Drinker, and S. Northridge. 2006. "Bycatch of Marine Mammals in U.S. and Global Fisheries." *Conservation Biology* 20(1):163–169. Available: <https://conbio.onlinelibrary.wiley.com/doi/abs/10.1111/j.1523-1739.2006.00338.x?sid=nlm%3Apubmed>.
- Rees, D. R., D. V. Jones, and B. A. Bartlett. 2016. *Haul-out Counts and Photo-Identification of Pinnipeds in Chesapeake Bay, Virginia: 2015/16 Annual Progress Report*. Final Report. Prepared for U.S. Fleet Forces Command, Norfolk, Virginia. November 2016.
- Reichmuth, C. 2007. Assessing the hearing capabilities of mysticete whales. A proposed research strategy for the Joint Industry Programme on Sound and Marine Life on 12 September. Available: <http://www.soundandmarinelife.org/Site/Products/MysticeteHearingWhitePaper-Reichmuth.pdf>.
- Revolution Wind LLC (Revolution Wind). 2022a. *Petition for Incidental Take Regulations for the Construction and Operation of the Revolution Wind Offshore Wind Farm*. February.
- Revolution Wind LLC (Revolution Wind). 2022b. *Construction and Operations Plan, Revolution Wind Farm Project*. July. Available: <https://www.boem.gov/renewable-energy/state-activities/revolution-wind-farm-construction-and-operations-plan>.
- Richardson, W. J., B. Würsig, and C. R. Greene, Jr. 1990. Reactions of bowhead whales, *Balaena mysticetus*, to drilling and dredging noise in the Canadian Beaufort Sea. *Marine Environmental Research* 29(2):135–160. Available: [https://doi.org/10.1016/0141-1136\(90\)90032-J](https://doi.org/10.1016/0141-1136(90)90032-J).
- Richardson, W. J., C. R. Greene, Jr., C. I. Malme, and D. H. Thomson. 1995. *Marine Mammals and Noise*. San Diego, CA: Academy Press. Available: <https://www.elsevier.com/books/marine-mammals-and-noise/richardson/978-0-08-057303-8>. Accessed: September 9, 2020.
- Richardson, W. J., B. Wursig, and C. R. Greene. 1986. Reactions of bowhead whales, *Balaena mysticetus*, to seismic exploration in the Canadian Beaufort Sea. *J. Acoust. Soc. Am.* 79(4):1117–1128. DOI: 0001-4966 / 86 / 041117-12500.80.
- Richardson, W. J., G. W. Miller, and C. R. Greene. 1999. Displacement of migrating bowhead whales by sounds from seismic surveys in shallow waters of the Beaufort Sea. *J. Acoust. Soc. Am.* 106:2281. Available: <http://dx.doi.org/10.1121/1.427801>.
- Ridgway, S. H., and D. A. Carder. 2001. Assessing hearing and sound production in cetaceans not available for behavioural audiograms: Experiences with sperm, pygmy sperm, and gray whales. *Aquatic Mammals* 27:267–276.
- Robbins, J. 2012. *Scar-based inference into Gulf of Maine Humpback whale entanglement: 2010*. Report to the Northeast Fisheries Science Center, National Marine Fisheries Service, Woods Hole, Massachusetts. Available: <http://www.nefsc.noaa.gov/psb/docs/HUWHScarring%28Robbins2012%29.pdf>.
- Robbins, J., and D. K. Mattila. 2001. *Monitoring entanglements of humpback whales (Megaptera novaeangliae) in the Gulf of Maine on the basis of caudal peduncle scarring*. Scientific Committee meeting document SC/53/NAH25. International Whaling Commission, Cambridge, UK.

- Roberts, J. J., and P. N. Halpin. 2022. *Habitat-based cetacean density models for the U.S. Atlantic and Gulf of Mexico*. Available: <https://seamap.env.duke.edu/models/Duke/EC/> in HDR Inc. 2022. Ocean Wind 1 Offshore Wind Farm Updates to the Application for Marine Mammal Protection Act (MMPA) Rulemaking and Letter of Authorization – Provided in Attachment J-1 of Appendix J.
- Roberts J. J., R. S. Schick, and P. N. Halpin. 2020. *Final Project Report: Marine Species Density Data Gap Assessments and Update for the AFTT Study Area, 2018–2020 (Option Year 3)*. Document version 1.4. Report prepared for Naval Facilities Engineering Command, Atlantic by the Duke University Marine Geospatial Ecology Lab, Durham, NC.
- Roberts, J. J., B. D. Best, L. Mannocci, E. Fujioka, P. N. Halpin, D. L. Palka, L. P. Garrison, K. D. Mullin, T. V. Cole, C. B. Khan, and W. A. McLellan. 2016a. Habitat-based cetacean density models for the U.S. Atlantic and Gulf of Mexico. *Scientific Reports* 6:22615.
- Roberts, J. J., L. Mannocci, and P. N. Halpin. 2016b. *Final Project Report: Marine Species Density Data Gap Assessments and Update for the AFTT Study Area, 2015–2016 (Base Year)*. Version 1.0. Report by the Duke University Marine Geospatial Ecology Lab for Naval Facilities Engineering Command, Atlantic Durham, NC.
- Roberts, J. J., L. Mannocci, and P. N. Halpin. 2017. *Final Project Report: Marine Species Density Data Gap Assessments and Update for the AFTT Study Area, 2016–2017 (Opt. Year 1)*. Document version 1.4. Report prepared for Naval Facilities Engineering Command, Atlantic by the Duke University Marine Geospatial Ecology Lab, Durham, NC.
- Roberts, J. J., L. Mannocci, R. S. Schick, and P. N. Halpin. 2018. *Final Project Report: Marine Species Density Data Gap Assessments and Update for the AFTT Study Area, 2017–2018 (Opt. Year 2)*. Document version 1.2 - 2018-09-21. Report prepared for Naval Facilities Engineering Command, Atlantic by the Duke University Marine Geospatial Ecology Lab, Durham, NC.
- Roberts, J. J., R. S. Schick, and P. N. Halpin. 2021a. *Final Project Report: Marine Species Density Data Gap Assessments and Update for the AFTT Study Area, 2020 (Option Year 4)*. Report prepared for Naval Facilities Engineering Command, Atlantic by the Duke University Marine Geospatial Ecology Lab, Durham, NC.
- Roberts, J. J., B. McKenna, L. Ganley, and C. Mayo. 2021b. *Right Whale Abundance Estimates for Cape Cod Bay in December*. Document version 3. Duke University Marine Geospatial Ecology Lab, Durham, NC.
- Rolland, R. M., S. E. Parks, K. E. Hunt, M. Castellote, P. J. Corkeron, D. P. Nowacek, S. K. Wasser, and S. D. Kraus. 2012. Evidence that ship noise increases stress in right whales. *Proc. R. Soc. B*. DOI: 10.1098/rspb.2011.2429.
- Ruppel, C. D., T. C. Weber, E. R. Staaterman, S. J. Labak, and P. E. Hart. 2022. Categorizing Active Marine Acoustic Sources Based on Their Potential to Affect Marine Animals. *J. Mar. Sci. Eng.* 10:1278. Available: <https://doi.org/10.3390/jmse10091278>.
- Russel, D. J. F., S. M. J. M. Brasseur, D. Thompson, G. D. Hastie, V. M. Janik, G. Aarts, B. T. McClintock, J. Matthiopoulos, S. E. W. Moss, and B. McConnel. 2014. Marine mammals trace anthropogenic structures at sea. *Current Biology* 24(14):R638–R639.

- Russell, D. J. F., G. D. Hastie, D. Thompson, V. M. Janik, P. S. Hammond, L. A. S. Scott-Hayward, J. Matthiopoulos, E. L. Jones, and B. J. McConnell. 2016. Avoidance of wind farms by harbour seals is limited to pile driving activities. *Journal of Applied Ecology* DOI:10.1111/1365-2664.12678.
- Schakner, Z. A., and D. T. Blumstein. 2013. Behavior biology of marine mammal deterrents: A review and prospectus. *Biological Conservation* 167: 380–389. Available: <http://dx.doi.org/10.1016/j.biocon.2013.08.024>.
- Scheifele, P. M., S. Andrew, R. A. Cooper, M. Darre, F. E. Musiek, and L. Max. 2004. Indication of a Lombard vocal response in the St. Lawrence River beluga. *Journal of the Acoustical Society of America* 117:1486–1492. DOI:10.1121/1.1835508.
- Schofield, O., R. Chant, B. Cahill, R. Castelo, D. Gong, A. Kahl, J. Kohut, M. Montes-Hugo, R. Ramadurai, P. Ramey, X. Yi, and S. Glenn. 2008. The Decadal View of the Mid-Atlantic Bight from the COOLroom: Is Our Coastal System Changing? *Oceanography* 21(4):108–117.
- Schultze, L. K. P., L. M. Merkelbach, J. Horstmann, S. Raasch, and J. R. Carpenter. 2020. Increased Mixing and Turbulence in the Wake of Offshore Wind Farm Foundations. *J. Geophys. Res. Oceans* 125:e2019JC015858. DOI: 10.1029/2019JC015858.
- Slocum, C. J., A. Ferland, N. Furina, and S. Evert. 2005. What do harbor seals eat in New Jersey? A first report from the Mid-Atlantic region (USA). Page 262 in Abstracts, 16th Biennial Conference on the Biology of Marine Mammals. San Diego, CA, 12–16 December 2005.
- Smith, C. R., T. K. Rowles, L. B. Hart, F. I. Townsend, R. S. Wells, E. S. Zolman, B. C. Balmer, B. Quigley, M. Ivnic, W. McKercher, M. C. Tumlin, K. D. Mullin, J. D. Adams, Q. Wu, W. McFee, T. K. Collier, and L. H. Schwacke. 2017. “Slow Recovery of Barataria Bay Dolphin Health Following the Deepwater Horizon Oil Spill (2013–2014) with Evidence of Persistent Lung Disease and Impaired Stress Response.” *Endangered Species Research* 33:127–142.
- Southall, B. L., A. E. Bowles, W. T. Ellison, J. J. Finneran, R. L. Gentry, C. R. Greene, Jr., D. Kastak, D. R. Ketten, J. H. Miller, P. E. Nachtigall, W. J. Richardson, J. A. Thomas, and P. L. Tyack. 2007. Marine mammal noise exposure criteria: Initial scientific recommendations. *Aquatic Mammals* 33(4):411–521.
- Southall, B. L., D. P. Nowacek, A. E. Bowles, V. Senigaglia, L. Bejder, and P. L. Tyack. 2021. Marine Mammal Noise Exposure Criteria: Assessing the Severity of Marine Mammal Behavioral Responses to Human Noise. *Aquatic Mammals* 47(5):421–464.
- Southall, B. L., J. J. Finneran, C. Reichmuth, P. E. Nachtigall, D. R. Ketten, A. E. Bowles, W. T. Ellison, D. P. Nowacek, and P. L. Tyack. 2019. Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects. *Aquatic Mammals* 45(2):125–232.
- Sprogis, K. R., S. Videsen, and P. T. Madsen. 2020. Vessel noise levels drive behavioural response of humpback whales with implications for whale-watching. *eLife*. Available: <https://doi.org/10.7554/eLife.5676>.
- Stöber, U. and F. Thomsen. 2021. How could operational underwater sound from future offshore wind turbines impact marine life? *Journal of the Acoustical Society of America* 149(3):1791–1795.

- Sullivan, L., T. Brosnan, T. K. Rowles, L. Schwacke, C. Simeone, and T. K. Collier. 2019. *Guidelines for Assessing Exposure and Impacts of Oil Spills on Marine Mammals*. NOAA Tech. Memo. NMFS-OPR62, 82 pp.
- Sunrise Wind LLC (Sunrise Wind). 2022a. *Petition for Incidental Take Regulations for the Construction and Operation of the Sunrise Wind Offshore Wind Farm*. May.
- Sunrise Wind LLC (Sunrise Wind). 2022b. *Construction and Operations Plan, Sunrise Wind Farm Project*. August. Available: https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/SRW01_COP_Rev3_2022-08-19_508_0.pdf.
- Takeshita, R., L. Sullivan, C. Smith, T. Collier, A. Hall, T. Brosnan, T. Rowles, and L. Schwacke. 2017. “The Deepwater Horizon Oil Spill Marine Mammal Injury Assessment.” *Endangered Species Research* 33:96–106.
- Taormina, B., J. Bald, A. Want, G. Thouzeau, M. Lejart, N. Desroy, and A. Carlier. 2018. A review of potential impacts of submarine power cables on the marine environment: Knowledge gaps, recommendations and future directions. *Renewable and Sustainable Energy Reviews*, Elsevier, 2018, 96, pp. 380–391. 10.1016/j.rser.2018.07.026. hal-02405630.
- Taruski, A. G., C. E. Olney, and H. E. Winn. 1975. Chlorinated hydrocarbons in cetaceans. *Journal of the Fisheries Board of Canada* 32(11):2205–2209. In Hayes, S. A., E. Josephson, K. Maze-Foley, and P. E. Rosel. 2020. *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments – 2019*. NOAA Tech Memo NMFS-NE 264.
- Teilmann, J., and J. Cartensen. 2012. “Negative Long-term Effects on Harbour Porpoises from a Large Scale Offshore Wind Farm in the Baltic—Evidence of Slow Recovery.” *Environmental Resource Letters* 7(4):045101.
- Todd, V. L. G., I. B. Todd, J. C. Gardiner, E. C. N. Morrin, N. A. MacPherson, N. A. DiMarzio, and F. Thomsen. 2015. A review of direct and indirect impacts of marine dredging activities on marine mammals. *ICES Journal of Marine Science* 72(2):328–340. Available: <https://doi.org/10.1093/icesjms/fsu187>.
- Todd, V. L. G., L. D. Williamson, J. Jiang, S. E. Cox, I. B. Todd, and M. Ruffert. 2020. Proximate underwater soundscape of a North Sea offshore petroleum exploration jack-up drilling rig in the Dogger Bank. *Journal of the Acoustical Society of America* 148:3971. DOI: 10.1121/10.0002958.
- Todd, V. L. G., W. D. Pearse, N. C. Tregenza, P. A. Lepper, and I. B. Todd. 2009. Diel echolocation activity of harbour porpoises (*Phocoena phocoena*) around North Sea offshore gas installations. *ICES Journal of Marine Science* 66:734–745.
- Tougaard, J., J. Carstensen, J. Teilmann, H. Skov, and P. Rasmussen. 2009b. Pile driving zone of responsiveness extends beyond 20 km for harbour porpoises (*Phocoena phocoena*). *Journal of the Acoustical Society of America* 126:11–14.
- Tougaard, J., L. Hermannsen, and P. T. Madsen. 2020. How loud is the underwater noise from operating offshore wind turbines? *Journal of the Acoustical Society of America* 148(5):2885–2893.

- Tougaard, J., O. D. Henriksen, and Lee A. Miller. 2009a. Underwater noise from three types of offshore wind turbines: Estimation of impact zones for harbor porpoises and harbor seals. *Journal of the Acoustical Society of America* 125(6):3766–3773. DOI:10.1121/1.3117444.
- Tricas, T., and A. Gill. 2011. *Effects of EMFs from Undersea Power Cables on Elasmobranchs and Other Marine Species*. Normandeau Associates, Inc. and Exponent Inc., Final Report submitted to the U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Regulation, and Enforcement, Pacific OCS Region, Camarillo, CA. OCS Study BOEMRE 2011-09. 426 pp.
- Tsujii, K., T. Akamatsu, R. Okamoto, K. Mori, Y. Mitani, N. Umeda. 2018. Change in singing behavior of humpback whales cause by shipping noise. *PLOS ONE* 13(10): e0204112. Available: <https://doi.org/10.1371/journal.pone.0204112>.
- Urick, R. J. 1983. *Principles of underwater sound* (3rd ed.). Los Altos Hills (CA): Peninsula Publishing.
- U.S. Army Corps of Engineers (USACE). 2020. *Final Environmental Assessment National Regional Sediment Management (RSM) Program, WRDA 2016 Section 1122 Beneficial Use Pilot Project: Oyster Creek Channel Barnegat Inlet Federal Navigation Project Ocean County, New Jersey*. November. Available: <https://www.nap.usace.army.mil/Portals/39/docs/Civil/Reports/Final-EA-Barnegat-Inlet-Section-1122-Oyster-Creek-November-2020.pdf?ver=SrZ2PrKeCtXGydSRoGZKzw%3d%3d>. Accessed November 10, 2022.
- U.S. Army Corps of Engineers (USACE). 2021. *Newark Bay, New Jersey Federal Navigation Project Maintenance Dredging*. Public Notice No. Newark Bay, NJ FY21. May.
- U.S. Department of the Navy (Navy). 2017. *Technical Report: Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III)*. San Diego, California: SSC Pacific. Available: https://www.nwtteis.com/portals/nwtteis/files/technical_reports/Criteria_and_Thresholds_for_U.S._Navy_Acoustic_and_Explosive_Effects_Analysis_June2017.pdf.
- U.S. Environmental Protection Agency (USEPA). 2016. *Climate Change Indicators: Oceans*. Available online: <https://www.epa.gov/climate-indicators/oceans>. Accessed: November 2021.
- Vallejo, G. C., K. Grellier, E. J. Nelson, R. M. McGregor, S. J. Canning, F. M. Caryl, and N. McLean. 2017. Responses of two marine top predators to an offshore wind farm. *Ecology and Evolution* 7(21):8698–8708. doi.org/10.1002/ece3.3389.
- van Berkel, J., H. Burchard, A. Christensen, L. O. Mortensen, O. S. Petersen, and F. Thomsen. 2020. The effects of offshore wind farms on hydrodynamics and implications for fishes. *Oceanography* 33(4):108–117.
- van der Hoop, J., A. Vanderlaan, and C. Taggart. 2012. Absolute probability estimates of lethal vessel strikes to North Atlantic right whales in Roseway Basin, Scotian Shelf. *Ecological applications: a publication of the Ecological Society of America* 22:2021–2033. 10.2307/41723112.
- Van Parjiss, S. M., C. Curtice, and M. C. Ferguson. 2015. Biologically Important Areas for Cetaceans within U.S. Waters. *Aquatic Mammals* (Special Issue), 41(1).
- Van Waerebeek, K., A. Baker, F. Felix, J. Gedamke, M. Iniguez, G. P. Sanino, E. D. Secchi, D. Sutaria, A. N. van Helden, and Y. Wang. 2007. Vessel Collisions with Small Cetaceans Worldwide and with Large Whales in the Southern Hemisphere, an Initial Assessment. *LAJAM* 6(1):43–49.

- Vanderlaan, A. S. M., and C. T. Taggart. 2007. Vessel Collisions with Whales: The Probability of Lethal Injury Based on Vessel Speed. *Marine Mammal Science* 23(1):144–156. Available: https://www.phys.ocean.dal.ca/~taggart/Publications/Vanderlaan_Taggart_MarMamSci23_2007.pdf.
- Veirs, S., V. Veirs, and J. D. Wood. 2016. Ship noise extends to frequencies used for echolocation by endangered killer whales. *PeerJ* 4:e1657; DOI 10.7717/peerj.1657.
- Vires, G. 2011. *Echosounder Effects on Beaked Whales in the Tongue of the Ocean, Bahamas*. Masters of Environmental Management, Duke University.
- Wang, J. W., and S. C. Yang. 2006. Unusual stranding events of Taiwan in 2004 and 2005. *J. Cetacean Res. Manage.* 8(3):283–292.
- Waring, G. T., E. Josephson, K. Maze-Foley, and P. E. Rosel (eds.). 2011. *US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2010*. NOAA Technical Memorandum NMFS-NE-219. National Marine Fisheries Service, Northeast Fisheries Science Center, Woods Hole, MA.
- Waring, G. T., E. Josephson, K. Maze-Foley, and P. E. Rosel (Editors). 2015. *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments-2014*. NOAA Technical Memorandum NMFS-NE-231, Northeast Fisheries Science Center, Woods Hole, MA.
- Wartzok, D., and D. R. Ketten. 1999. “Marine mammal sensory systems,” in *Biology of Marine Mammals*, J. Reynolds and S. Rommel (Eds). Washington, DC: Smithsonian Institution Press. Pp. 117–175.
- Weilgart, L. S. 2007. “The Impacts of Anthropogenic Ocean Noise on Cetaceans and Implications for Management.” *Canadian Journal of Zoology* 85:1091–1116. Available: <http://whitelab.biology.dal.ca/lw/publications/Weilgart%202007%20CJZ%20noise%20review.pdf>.
- Weisbrod, A. V., D. Shea, M. J. Moore, and J. J. Stegeman. 2000. Bioaccumulation patterns of polychlorinated biphenyls and chlorinated pesticides in northwest Atlantic pilot whales. *Environmental Toxicology and Chemistry: An International Journal* 19(3):667–677.
- Wells, R. S., and M. D. Scott. 1997. Seasonal Incidence of Boat Strikes on Bottlenose Dolphins Near Sarasota, Florida. *Marine Mammal Science* 3:475–480.
- Werner, S., A. Budziak, J. van Franeker, F. Galgani, G. Hanke, T. Maes, M. Matiddi, P. Nilsson, L. Oosterbaan, E. Priestland, R. Thompson, J. Veiga, and T. Vlachogianni. 2016. *Harm Caused by Marine Litter*. MSFD GES TG Marine Litter - Thematic Report; JRC Technical report; EUR 28317 EN. DOI:10.2788/690366.
- Wilber, D. H., and D. G. Clarke. 2001. Biological effects of suspended sediments: A review of suspended sediment impacts on fish and shellfish with relation to dredging activities in estuaries. *North American Journal of Fisheries Management* 21:855–875.
- Williams, T. M., S. B. Blackwell, O. Tervo, E. Garde, M. S. Sinding, B. Richter, and M. P. Heide-Jorgensen. 2022. Physiological responses of narwhals to anthropogenic noise: A case study with seismic airguns and vessel traffic in the Arctic. *Functional Ecology* 2022;00:1–16. DOI: 10.1111/1365-2435.14119.

Wisehart, L. A., B. R. Dumbauld, J. L. Reusink, and S. D. Hacker. 2007. Importance of eelgrass early life history stages in response to aquaculture disturbance. *Marine Ecology Progress Series* 344:71–80. August 23, 2007.

Wisniewska, D. M., M. Johnson, J. Teilmann, U. Siebert, A. Galatius, R. Dietz, and P. T. Madsen. 2018. High rates of vessel noise disrupt foraging in wild harbour porpoises (*Phocoena phocoena*). *Proc. R. Soc. B* 285:20172314. Available: <http://dx.doi.org/10.1098/rspb.2017.2314>.

Würsig, B., C. R. Greene Jr., and T. A. Jefferson. 2000. Development of an air bubble curtain to reduce underwater noise of percussive piling. *Marine Environmental Research* 49(1):79–93.

Wynne, K., and M. Schwartz. 1999. *Guide to Marine Mammals & Turtles of the U.S. Atlantic & Gulf of Mexico*. Fairbanks: University of Alaska Press.

B.2.3.16. Section 3.16, Navigation and Vessel Traffic

Atlantic Shores Offshore Wind (Atlantic Shores). 2021. *Construction and Operations Plan, Atlantic Shores Offshore Wind*. Volume I. September. Available: <https://www.boem.gov/renewable-energy/state-activities/atlantic-shores-offshore-wind-construction-and-operations-plan>.

Bureau of Ocean Energy Management (BOEM). 2022. Ocean Wind Memo to File: Calculation for New Jersey Inter-array Buffer Distance. April 18.

Mid-Atlantic Regional Council of the Ocean (MARCO). 2020. Mid-Atlantic Ocean Data Portal [MARCO]. Available: <http://portal.midatlanticocean.org/visualize/#x=-73.24&y=38.93&z=7&logo=true&controls=true&basemap=Ocean&tab=data&legends=false&layers=true>. Accessed: January 17, 2019.

National Academies of Sciences, Engineering, and Medicine 2022. *Wind Turbine Generator Impacts to Marine Vessel Radar*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26430>.

National Oceanic and Atmospheric Administration (NOAA). 2023. *Coast Pilot Volume 2, Chapter 11, New York Harbor and Approaches – 52nd Edition*. January 15.

Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.

Ocean Wind LLC (Ocean Wind). 2023. citing MarineTraffic. 2020. Automatic Identification System data acquired from MarineTraffic, Historical AIS-T data (vessel positions) for TIMESTAMP between ‘2019-03-01 00:00’ and ‘2020-02-29 23:59’ UTC, LAT between 38.0 and 40.0 and LON between -75.2 and -73.0.

Sharples, Malcolm. 2011. *Offshore Electrical Cable Burial for Offshore Wind Farms on the OCS*. Prepared for Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) by Risk & Technology Consulting, Inc. November. Available: <https://www.bsee.gov/sites/bsee.gov/files/tap-technical-assessment-program/final-report-offshore-electrical-cable-burial-for-wind-farms.pdf>.

- U.S. Coast Guard (USCG). 2016. *Atlantic Coast Port Access Route Study*. USCG-2011-0351. February 2016. Available: <https://www.navcen.uscg.gov/?pageName=PARSReports>. Accessed: October 12, 2021.
- U.S. Coast Guard (USCG). 2019. *Navigation and Vessel Inspection Circular 01-19*. Available: <https://www.mafmc.org/s/190801-Nav-Vess-Insp-Circ-01-19.pdf>. Accessed: August 1, 2019.
- U.S. Coast Guard (USCG). 2020a. Proposed Rule: “Shipping Safety Fairways Along the Atlantic Coast” 85 Federal Register 37034-37040 published Friday, June 19. Available: <https://www.regulations.gov/document/USCG-2019-0279-0001>. Accessed: October 11, 2022.
- U.S. Coast Guard (USCG). 2020b. *The Areas Offshore of Massachusetts and Rhode Island Port Access Route Study*. USCG 2019-0131. May 14. Available: https://www.navcen.uscg.gov/pdf/PARS/FINAL_REPORT_PARS_May_14_2020.pdf. Accessed: October 13, 2021.
- U.S. Coast Guard (USCG). 2021a. Draft *Port Access Route Study: Seacoast of New Jersey Including Offshore Approaches to the Delaware Bay, Delaware*. USCG-2020-0172. Available: <https://downloads.regulations.gov/USCG-2020-0172-0044/content.pdf>. Accessed: October 12, 2021.
- U.S. Coast Guard (USCG). 2021b. U.S. Coast Guard Scoping Comments for the Ocean Wind Notice of Intent to Prepare an Environmental Impact Statement. Docket No. BOEM-2021-0024. May 6.
- U.S. Coast Guard (USCG). 2021c. Search and Rescue Operations Near Offshore Wind Energy Projects. Fiscal Year 2020 Report to Congress. June 16.
- U.S. Coast Guard (USCG). 2022a. Final *Port Access Route Study: Seacoast of New Jersey Including Offshore Approaches to the Delaware Bay, Delaware*. USCG-2020-0172. Available: <https://www.federalregister.gov/documents/2022/03/24/2022-06228/port-access-route-study-seacoast-of-new-jersey-including-offshore-approaches-to-the-delaware-bay>. Accessed: April 29, 2022.
- U.S. Coast Guard (USCG). 2022b. *Consolidated Port Approaches and International Entry and Departure Transit Areas Port Access Route Studies (PARS) Integral to Efficiency of Possible Atlantic Coast Fairways*. USCG-2022-19546. Available: <https://www.regulations.gov/document/USCG-2011-0351-0173>. Accessed: November 13, 2022.
- West, Stephen. 2022. Commander, USCG. Marine Transportation Specialist, Navigation Standards Division (CG-NAV-2), Office of Navigation Systems (CG-NAV). Emailed communication to Arianna Baker, Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Environment Branch for Renewable Energy. March 29.

B.2.3.17. Section 3.17, Other Uses (Marine Minerals, Military Use, Aviation)

- Bureau of Ocean Energy Management (BOEM). 2020. *Radar Interference Analysis for Renewable Energy Facilities on the Atlantic Outer Continental Shelf*. OCS Study BOEM 2020-039. Available: https://www.boem.gov/sites/default/files/documents/environment/Radar-Interference-Atlantic-Offshore-Wind_0.pdf.
- Bureau of Ocean Energy Management (BOEM). 2021a. *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2021-0012. Available: <https://www.boem.gov/vineyard-wind>. Accessed: August 2021.

Cresitello, Donald E. 2020. Senior Coastal Planner, Planning and Policy Division, U.S. Army Corps of Engineers – North Atlantic Division. Emailed transmittal of unpublished NAD Sediment Needs Analysis to Jeffrey Waldner, P.G., Physical Scientist/Oceanographer, Bureau of Ocean Energy Management, Marine Minerals Division on September 1, 2020.

Hare, J. A., J. B. Blythe, K. H. Ford, S. Godfrey-McKee, B. R. Hooker, B. M. Jensen, A. Lipsky, C. Nachman, L. Pfeiffer, M. Rasser, and K. Renshaw. 2022. *NOAA Fisheries and BOEM Federal Survey Mitigation Strategy – Northeast U.S. Region*. NOAA Technical Memorandum NMFS-NE-292. Available: <https://www.fisheries.noaa.gov/resource/document/federal-survey-mitigation-strategy-northeast-us-region>. Accessed: December 13, 2022.

Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.

Ocean Wind LLC (Ocean Wind). 2023. Citing Westslope Consulting, LLC. 2019. Ocean Wind Project Basic Radar Line-of-Sight Study. Norman. November 6.

Patch. 2022. “County to Pay for Part of Berkeley Beach Replenishment.” Reporting by Veronica Flesher. Available: <https://patch.com/new-jersey/berkeley-nj/county-pay-part-berkeley-beach-replenishment>. Accessed: September 19, 2022.

Press of Atlantic City. 2022. “Dune erosion causes beach access closure in Strathmere.” Reporting by Bill Barlow. Available: https://pressofatlanticcity.com/news/local/dune-erosion-causes-beach-access-closure-in-strathmere/article_b8b4f8ec-0216-11ed-9734-937540d59342.html. Accessed: September 19, 2022.

Sample, Steven J. 2021. Executive Director, Military Aviation and Installation Assurance Siting Clearinghouse. Letter regarding results of Department of Defense review of the Ocean Wind COP sent to David MacDuffee, Chief, Projects and Coordination Branch, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. October 20, 2021.

B.2.3.18. Section 3.18, Recreation and Tourism

Atlantic Shores Offshore Wind (Atlantic Shores). 2021. *Construction and Operations Plan, Atlantic Shores Offshore Wind*. Volume I. September. Available: <https://www.boem.gov/renewable-energy/state-activities/atlantic-shores-offshore-wind-construction-and-operations-plan>.

Bureau of Ocean Energy Management (BOEM). 2012a. *Atlantic Region Wind Energy Development: Recreation and Tourism Economic Baseline Development Impacts of Offshore Wind on Tourism and Recreation Economies*. BOEM 2012-085. Available: <https://epis.boem.gov/final%20reports/5228.pdf>.

Bureau of Ocean Energy Management (BOEM). 2021a. *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2021-0012.

Bureau of Ocean Energy Management (BOEM). 2021b. *South Fork Wind Farm and South Fork Export Cable Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2021-0012. Page 3-189.

Burlington County. No date. Parks Interactive Map. Available: <https://www.co.burlington.nj.us/552/Parks-Interactive-Map>.

- Cape May County. No date. Department of Tourism. Tourism Impacts in Cape May County. Available: <https://capemaycountynj.gov/DocumentCenter/View/79/Tourism-Impacts-in-Cape-May-County-PDF>.
- Carr-Harris, A. and C. Lang. 2019. Sustainability and Tourism: The Effect of the United States' First Offshore Wind Farm on the Vacation Rental Market. *Resource and Energy Economics* 57:51–67. Available: <https://www.sciencedirect.com/science/article/abs/pii/S0928765518302902#sec0060%20study>.
- CSA Ocean Sciences, Inc. and Exponent. 2019. *Evaluation of Potential EMF Effects on Fish Species of Commercial or Recreational Fishing Importance in Southern New England*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Headquarters, Sterling, VA. OCS Study BOEM 2019-049.
- Cumberland County. 2021. Tourism and Recreation. Available: <http://www.co.cumberland.nj.us/Tourism>.
- Haughton, J., D. Giuffre, and J. Barrett. 2003. *Blowing in the Wind: Offshore Wind and the Cape Cod Economy*. The Beacon Hill Institute. Available: <https://www.beaconhill.org/BHISTudies/BHIWindFarmStudy102803a.pdf>. Accessed: October 7, 2022.
- Kirkpatrick, A. J., S. Benjamin, G. S. DePiper, T. Murphy, S. Steinback, and C. Demarest. 2017. *Socio-Economic Impact of Outer Continental Shelf Wind Energy Development on Fisheries in the U.S. Atlantic*. Volume I—Report Narrative. U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Atlantic OCS Region, Washington, D.C. OCS Study BOEM 2017-012. 150 pp. Available: <https://espis.boem.gov/final%20reports/5580.pdf>. Accessed October 22, 2021.
- Lutzeyer, S., D. J. Phaneuf, and L. O. Taylor. 2017. *The Amenity Costs of Offshore Windfarms: Evidence from a Choice Experiment*. (CEnREP Working Paper No. 17-017). Raleigh, NC: Center for Environmental and Resource Economic Policy. August 2017.
- Mid-Atlantic Regional Council on the Ocean (MARCO). 2018. Data Portal. Recreational Boating Survey. Available: <http://midatlanticocean.org/data-portal/>.
- National Oceanic and Atmospheric Administration (NOAA). No date. Fisheries One Stop Shop (FOSS). Available: <https://www.fisheries.noaa.gov/foss/f?p=215:200:13647185114733:Mail:NO>. Accessed March 23, 2022.
- National Oceanic and Atmospheric Administration (NOAA). 2022a. Marine Recreational Information Program (MRIP) Survey Directories. Available: <https://www.st.nmfs.noaa.gov/msd/html/siteRegister.jsp>. Accessed: April 13, 2022.
- National Oceanic and Atmospheric Administration (NOAA). 2022b. *Social Indicators for Coastal Communities*. Available: <https://www.fisheries.noaa.gov/national/socioeconomics/social-indicators-coastal-communities>. Accessed: April 1, 2022.
- National Oceanic and Atmospheric Administration (NOAA). 2022c. *Fisheries Economics of the United States 2019*. Economics and Sociocultural Status and Trends Series. NOAA Technical Memorandum NMFS-F/SPO-229A. Available: https://media.fisheries.noaa.gov/2022-07/FEUS-2019-final-v3_0.pdf. Accessed: September 19, 2022.

- National Park Service (NPS). 2021. *Land and Water Conservation Fund State Assistance Program*. Federal Financial Assistance Manual Volume 71. Available: <https://www.nps.gov/subjects/lwcf/upload/LWCF-FA-Manual-Vol-71-3-11-2021-final.pdf>.
- New Jersey Casino Reinvestment Development Authority (NJCRDA). 2012. *Atlantic City: Tourism District Master Plan*. Volume 1. Available: <https://njcrda.com/wp-content/uploads/documents/2021/06/Tourism-District-Master-Plan-Vol.1.pdf>.
- New Jersey Department of Environmental Protection (NJDEP). 2018a. *2018–2022 New Jersey Statewide Comprehensive Outdoor Recreation Plan*. Green Acres Program. September. Available: <https://www.state.nj.us/gsp/pdf/Reports/DEPComprehensiveOutdoorRecreationPlan.pdf>.
- New Jersey Department of Environmental Protection (NJDEP). 2018b. *Blue Claws: Crabbing in New Jersey*. Available: <https://www.state.nj.us/dep/fgw/blueclaw.htm>.
- New Jersey Department of Environmental Protection (NJDEP). 2018c. Division of Fish and Wildlife. *Tuckahoe WMA Impoundment Management*. Available: https://www.state.nj.us/dep/fgw/news/2018/tuckahoe_improvements18-2.htm.
- New Jersey Department of Environmental Protection (NJDEP). 2021a. Division of Fish and Wildlife. *Wildlife Management Areas*. Available: <https://www.state.nj.us/dep/fgw/wmland.htm>.
- New Jersey Department of Environmental Protection (NJDEP). 2021b. *Parks by Location*. Available: <https://www.njparksandforests.org/map.html>.
- New Jersey Department of State. 2021a. Division of Travel and Tourism. *Surfing New Jersey*. Available: <https://www.visitnj.org/article/surfing-new-jersey>.
- New Jersey Department of State. 2021b. Division of Travel and Tourism. *New Jersey Sailing Center*. Available: <https://www.visitnj.org/nj-charter-boats/new-jersey-sailing-center>.
- New Jersey Department of State. 2021c. Division of Travel and Tourism. *Edwin B. Forsythe National Wildlife Refuge*. Available: <https://visitnj.org/nj-hiking/edwin-b-forsythe-national-wildlife-refuge>.
- New Jersey Department of State. 2021d. Division of Travel and Tourism. *Barnegat Lighthouse State Park*. Available: <https://www.visitnj.org/nj-lighthouses/barnegat-lighthouse-state-park>.
- Ocean County. 2021. Department of Parks and Recreation. *Ocean County Parks*. Available: <http://www.oceancountyparks.org/>.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Orr, Terry L., Susan M. Herz, and Darrell L. Oakley. 2013. *Evaluation of Lighting Schemes for Offshore Wind Facilities and Impacts to Local Environments*. Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Herndon, VA. OCS Study BOEM 2013-0116. Available: <https://espi.boem.gov/final%20reports/5298.pdf>.

- Parsons, George, and Jeremy Firestone. 2018. *Atlantic Offshore Wind Energy Development: Values and Implications for Recreation and Tourism*. U.S. Department of the Interior, Bureau of Ocean Energy Management. Available: <https://www.semanticscholar.org/paper/Atlantic-Offshore-Wind-Energy-Development%3A-Values-Parsons-Firestone/91b0ede146b8701cb44d72c58f09b29533df3cdf>.
- Parsons, G., J. Firestone, L. Yan, J. Toussaint. 2020. The Effect of Offshore Wind Power Projects on Recreational Beach Use on the East Coast of the United States: Evidence from Contingent-Behavior Data. *Energy Policy* 144:111659. Available: <https://www.sciencedirect.com/science/article/abs/pii/S030142152030389X>.
- Smythe, T., H. Smith, A. Moore, D. Bidwell, and J. McCann. 2018. *Analysis of the Effects of Block Island Wind Farm (BIWF) on Rhode Island Recreation and Tourism Activities*. U.S. Department of the Interior, Bureau of Ocean Energy Management. Sterling, Virginia. OCS Study BOEM 2018-068. Available: https://espis.boem.gov/final%20reports/BOEM_2018-068.pdf.
- Tourism Economics. 2021. Economic Impact of Tourism in New Jersey, 2021. Available: https://visitnj.org/sites/default/files/Economic_Impact_of_Tourism_in_New_Jersey_2021_Final.pdf?tag=itinerary.
- U.S. Census Bureau. 2021a. ACS Business and Economy Estimates. 2015–2019 American Community Survey 5-Year Estimates. Available: <https://data.census.gov/cedsci/all?q=&text=at-place%20employment&t=Business%20and%20Economy>. Accessed: September 15, 2021.
- U.S. Census Bureau. 2021b. ACS Employment and Payroll Estimates. 2015–2019 American Community Survey 5-Year Estimates. Available: <https://data.census.gov/cedsci/all?q=&text=at-place%20employment&t=Payroll>. Accessed: September 15, 2021.
- B.2.3.19. Section 3.19, Sea Turtles**
- Alpine Ocean Seismic Survey, Inc. (Alpine). 2017. *Ocean Wind High Resolution Geophysical and Geotechnical Survey, Protected Species Observer Report*. Survey Report for Alpine Ocean Seismic Survey Inc. on behalf of Ocean Wind LLC.
- Bailey, H., S. R. Benson, G. L. Shillinger, S. J. Bograd, P. H. Dutton, S. A. Eckert, S. J. Morreale, F. V. Paladino, T. Eguchi, D. G. Foley, B. A. Block, R. Piedra, C. Hitipeuw, R. F. Tapilatu, and J. R. Spotila. 2012. Identification of distinct movement patterns in Pacific leatherback turtle populations influenced by ocean conditions. *Ecological Applications* 22(3):735–747.
- Barkaszi, M. J., M. Fonseca, T. Foster, A. Malhotra, and K. Olsen. 2021. *Risk Assessment to Model Encounter Rates between Large Whales and Sea Turtles and Vessel Traffic from Offshore Wind Energy on the Atlantic OCS*. OCS Study BOEM 2021-034. April 2021. Available: https://espis.boem.gov/final%20reports/BOEM_2021-034.pdf. Accessed: November 7, 2022.
- Barnette, M. C. 2017. *Potential impacts of artificial reef development on sea turtle conservation in Florida*. NNMFS Southeast Regional Office, St. Petersburg, FL. January 2017. NOAA Technical Memorandum. NMFS-SER5. Available: <https://tethys.pnnl.gov/sites/default/files/publications/NOAA-2017-SeaTurtle.pdf>. Accessed: November 16, 2021.
- Bartol, S. M., and D. R. Ketten. 2006. “Turtle and Tuna Hearing.” In *Sea Turtle and Pelagic Fish Sensory Biology: Developing Techniques to Reduce Sea Turtle Bycatch in Longline Fisheries*, edited by Y. Swimmer and R. Brill, 98-105. NOAA Technical Memorandum. NMFS-PIFSC-7.

- Bartol, S. M., and I. K. Bartol. 2011. Hearing Capabilities of Loggerhead Sea Turtles (*Caretta caretta*) Throughout Ontogeny: an Integrative Approach Involving Behavioral and Electrophysical Techniques. Final Report submitted to the Joint Industries Programme. 35 pp.
- Bartol, S. M., J. A. Musick, and M. L. Lenhardt. 1999. Auditory evoked potentials of the loggerhead sea turtle (*Caretta caretta*). *Copeia* 1999(3):836–840.
- Bejarano, A. C., J. Michel, J. Rowe, Z. Li, D. French McCay, L. McStay and D. S. Etkin. 2013. *Environmental Risks, Fate and Effects of Chemicals Associated with Wind Turbines on the Atlantic Outer Continental Shelf*. US Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. OCS Study BOEM 2013-213.
- Berreiros J. P., and V. S. Raykov. 2014. Lethal lesions and amputation caused by plastic debris and fishing gear on the loggerhead turtle *Caretta* (Linnaeus, 1758). Three case reports from Terceira Island, Azores (NE Atlantic). *Marine Pollution Bulletin* 86:518–522.
- Bolten, A. B., L. B. Crowder, M. G. Dodd, A. M. Lauritsen, J. A. Musick, B. A. Schroeder, and B. E. Witherington. 2019. Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (*Caretta caretta*) Second Revision (2008): Assessment of progress for recovery. December 2019. 21 pp. Available: https://media.fisheries.noaa.gov/dam-migration/final_nw_atl_cc_recovery_team_progress_review_report_508.pdf. Accessed November 7, 2022.
- Borcuk, J. R., G. H. Mitchell, S. L. Watwood, T. E. Moll, E. M. Oliveira, and E. R. Robinson. 2017. *Dive distribution and group size parameters for marine species occurring in the U.S. Navy's Atlantic and Hawaii-Southern California training and testing study areas*. Naval Undersea Warfare Center Division. Newport, Rhode Island. NUWC-NPT Technical Report 12,243. June 2017. Available: <https://apps.dtic.mil/sti/pdfs/AD1046608.pdf>. Accessed: June 28, 2022.
- Brazner, J. C., and J. McMillan. 2008. Loggerhead turtle (*Caretta caretta*) bycatch in Canadian pelagic longline fisheries: relative importance in the western North Atlantic and opportunities for mitigation. *Fisheries Research* 91(2–3):310–324.
- Bugoni, L., L. Krause, and M. V. Petry. 2001. Marine debris and human impacts on sea turtles in southern Brazil. *Marine Pollution Bulletin* 42(12):1330–1334.
- Bureau of Ocean Energy Management (BOEM). 2012. *Atlantic OCS Proposed Geological and Geophysical Activities: Final Programmatic Environmental Impact Statement*. Mid-Atlantic and South Atlantic Planning Areas. Office of Renewable Energy Programs. OCS EIS/EA BOEM 2014-001. March 2012. Available: <https://www.boem.gov/oil-gas-energy/atlantic-geological-and-geophysical-gg-activities-programmatic-environmental-impact>. Accessed: August 20, 2021.
- Bureau of Ocean Energy Management (BOEM). 2018. *Biological Assessment: Data Collection and Site Survey Activities for Renewable Energy of the Atlantic Outer Continental Shelf*. U.S. Department of the Interior Bureau of Ocean Energy Management, Office of Renewable Energy Programs.
- Bureau of Ocean Energy Management (BOEM). 2021a. *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2021-0012. Available: <https://www.boem.gov/vineyard-wind>.

- Bureau of Ocean Energy Management (BOEM). 2021b. *South Fork Wind Farm and South Fork Export Cable Project Final Environmental Impact Statement*. OCS EIS/EA BOEM 2020-057. Available: <https://www.boem.gov/renewable-energy/state-activities/sfwf-feis>.
- Bureau of Ocean Energy Management (BOEM). 2022. *Ocean Wind Offshore Wind Farm Biological Assessment for National Marine Fisheries Service*. [Month].
- Burke, V. J., E. A. Standora, and S. J. Morreale. 1993. Diet of juvenile Kemp's ridley and loggerhead sea turtles from Long Island, New York. *Copeia* 1993(4):1176–1180.
- Burke V., S. Morreale, and E. Standora. 1994. Diet of the Kemp's ridley sea turtle, *Lepidochelys kempii*, in New York waters. *Fishery Bulletin* 92:26–32.
- Byles, R. A. 1988. *The Behavior and Ecology of Sea Turtles in Virginia*. Unpublished Ph.D. dissertation, Virginia Institute of Marine Science, College of William and Mary, Gloucester Point, VA.
- Carr, A., and D. Caldwell. 1956. The ecology and migrations of Sea Turtles, I. Results of field work in Florida, 1955. *American Museum Novitates* 1793:1–23.
- Ceriani, S. A., J. D. Roth, C. R. Sasso, C. M. McClellan, M. C. James, H. L. Haas, R. J. Smolowitz, D. R. Evans, D. S. Addison, D. A. Bagley, and L. M. Ehrhart. 2014. Modeling and mapping isotopic patterns in the Northwest Atlantic derived from loggerhead sea turtles. *Ecosphere* 5(9)1–24.
- Conserve Wildlife Foundation of New Jersey. 2021. *New Jersey Endangered and Threatened Species Field Guide*. Available: <http://www.conservewildlifenj.org/species/fieldguide/>. Accessed: August 20, 2021.
- Degraer, S., D. Carey, J. Coolen, Z. Hutchison, F. Kerckhof, B. Rumes, and J. Vanaverbeke. 2020. Offshore Wind Farm Artificial Reefs Affect Ecosystem Structure and Functioning: A Synthesis. *Oceanography* 33(4):48–57.
- Denes, S. L., D. G. Zeddies, and M. M. Weirathmueller. 2021. *Turbine Foundation and Cable Installation at South Fork Wind Farm: Underwater Acoustic Modeling of Construction Noise*. Appendix J1 in *Construction and Operations Plan South Fork Wind Farm*. Silver Spring, Maryland: JASCO Applied Sciences.
- DeRuiter, S. L., and K. L. Doukara. 2012. Loggerhead turtles dive in response to airgun sound exposure. Loggerhead turtles dive in response to airgun sound exposure. *Endangered Species Research* 16: 55–63. Available: https://www.seaturtles911.org/research/publications/DeRuiter_2012_Loggerhead_turtles_dive_in_response_to_airgun_sound_exposure.pdf. Accessed: April 1, 2022.
- Dickerson, D., M. S. Wolters, C. Theriot, and C. Slay. 2004. September. Dredging impacts on sea turtles in the Southeastern USA: a historical review of protection. In *Proceedings of World Dredging Congress XVII, Dredging in a Sensitive Environment* (Vol. 27).
- Eastman, C. B., J. A. Farrell, L. Whitmore, D. R. Rollinson Ramia, R. S. Thomas, J. Prine, S. F. Eastman, T. Z. Osborne, M. Q. Martindale, and D. J. Duffy. 2020. Plastic ingestion in post-hatchling sea turtles: Assessing a major threat in Florida near shore waters. *Frontiers in Marine Science* 25, August 2020.

- Eckert, K. L., B. P. Wallace, J. G. Frazier, S. A. Eckert, and P. C. H. Pritchard. 2012. *Synopsis of the Biological Data on Leatherback Sea Turtles (Dermochelys coriacea)*. US. Department of the Interior, Fish and Wildlife Service, Biological Technical Publication BTP-R4015-2012, Washington D.C. Available: http://seaturtle.org/library/EckertKL_2012_USFWSTechReport.pdf. Accessed: April 1, 2022.
- Edmonds, N. J., C. J. Firmin, D. Goldsmith, R. C. Faulkner, and D. T. Wood. 2016. A review of crustacean sensitivity to high amplitude underwater noise: Data needs for effective risk assessment in relation to UK commercial species. *Marine Pollution Bulletin* 108(1):5–11.
- Epperly, S., L. Avens, L. Garrison, T. Henwood, W. Hoggard, J. Mitchell, J. Nance, J. Poffenberger, C. Sasso, E. Scott-Denton, and C. Yeung. 2002. *Analysis of Sea Turtle Bycatch in the Commercial Shrimp Fisheries of Southeast U.S. Waters and the Gulf of Mexico*. NOAA Technical Memorandum NMFS-SEFSC-490:1–88.
- Excelon Generation. 2012. *Annual sea turtle incidental take report – 2012*. Oyster Creek Nuclear Generating Station report submitted to NMFS. Prepared by M. Browne, K. Voishnis, and J. Kerr. December 2012. Available: <https://www.nrc.gov/docs/ML1236/ML12361A025.pdf>. Accessed: November 16, 2021.
- Finkbeiner, E. M., B. P. Wallace, J. E. Moore, R. L. Lewison, L. B. Crowder, and A. J. Read. 2011. Cumulative estimates of sea turtle bycatch and mortality in USA fisheries between 1990 and 2007. *Biological Conservation* 144(11):2719–2727.
- Finneran, J., E. Henderson, D. Houser, K. Jenkins, S. Kotecki, and J. Mulsow. 2017. *Criteria and Thresholds for US Navy Acoustic and Explosive Effects Analysis (Phase III)*. Technical report by Space and Naval Warfare Systems Center Pacific (SSC Pacific). 183 pp.
- Foley, A. M., B. A. Stacy, R. F. Hardy, C. P. Shea, K. E. Minch, and B. A. Schroeder. 2019. Characterizing Watercraft-Related Mortality of Sea Turtles in Florida. *The Journal of Wildlife Management* 83(5):1057–1072. Available: <https://wildlife.onlinelibrary.wiley.com/doi/pdf/10.1002/jwmg.21665>. Accessed: April 1, 2022.
- Foley, A. M., K. Singel, R. Hardy, R. Bailey, K. Sonderman, and S. Schaf. 2008. *Distributions, relative abundances, and mortality factors for sea turtles in Florida from 1980 through 2007 as determined from strandings*. Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute, Jacksonville Field Laboratory. Available: <https://georgehbalazs.com/wp-content/uploads/2020/03/Stranding-Report-2007.pdf>. Accessed: November 16, 2021.
- Gitschlag, G. R., and B. A. Herczeg. 1994. Sea Turtle Observations at Explosive Removals of Energy Structures. *Marine Fisheries Review* 56(2):1–8.
- Greater Atlantic Regional Fisheries Office (GARFO). 2021. Master ESA Species Table - Sea Turtles. Available: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-species-presence-table-sea-turtles-greater>.
- Gregory, M. R. 2009. Environmental implications of plastic debris in marine settings – Entanglement, ingestion, smothering, hangers-on, hitch-hiking, and alien invasion. *Philosophical Transactions of the Royal Society B* 364:2013–2025.

- Hastings, R. W., L. H. Ogren, and M. T. Marbry. 1976. Observations of Fish Fauna Associated with Offshore Platforms in the Northeastern Gulf of Mexico. *Fisheries Bulletin* 74(2):387–402.
- Hazel, J., I. Lawler, H. Marsh, and S. Robson. 2007. Vessel speed increases collision risk for the green turtle *Chelonia mydas*. *Endangered Species Research* 3:105–113.
- Heithaus, M. R., J. J. McLash, A. Frid, L. W. Dill, and G. J. Marshall. 2002. Novel insights into green sea turtle behavior using animal-borne video cameras. *Journal of the Marine Biological Association of the UK* 82(06):1049–1050.
- Henwood, T. A., and W. E. Stuntz. 1987. Analysis of sea turtle captures and mortalities during commercial shrimp trawling. *Fisheries Bulletin* 85(4):814–817.
- Hoarau, L., L. Ainley, C. Jean, and S. Ciccione. 2014. Ingestion and defecation of marine debris by loggerhead sea turtles, from by-catches in the south-west Indian Ocean. *Marine Pollution Bulletin* 84:90–96.
- Hochscheid, S. 2014. Why we mind sea turtles' underwater business: A review on the study of diving behavior. *Journal of Experimental Marine Biology and Ecology*, 450:118–136.
- Hutchison, Z. L., M. L. Bartley, S. Degraer, P. English, A. Khan, J. Livermore, B. Rumes, and J. W. King. 2020. Offshore wind energy and benthic habitat changes: Lessons from Block Island Wind Farm. *Oceanography* 33(4):58–69.
- James, M. C., S. A. Sherrill-Mix, K. Martin, and R. A. Myers. 2006. Canadian waters provide critical foraging habitat for leatherback sea turtles. *Biological Conservation* 133:347–357.
- Janßen, H., C. B. Augustin, H. H. Hinrichsen, and S. Kube. 2013. Impact of secondary hard substrate on the distribution and abundance of *Aurelia aurita* in the western Baltic Sea. *Marine Pollution Bulletin* 75: 224–234.
- Johnson, A. 2018. *The effects of turbidity and suspended sediments on ESA-listed species from projects occurring in the Greater Atlantic Region*. Greater Atlantic Region Policy Series 18-02. NOAA Fisheries Greater Atlantic Regional Fisheries Office. 106 pp. Available: <https://www.greateratlantic.fisheries.noaa.gov/policyseries/index.php/GARPS/article/view/8/8>. Accessed: April 1, 2022.
- Ketten, D. R., and S. M. Bartol. 2006. *Functional measures of sea turtle hearing*. Woods Hole Oceanographic Institution, Woods Hole, Massachusetts. Available: www.ntis.gov.
- Kraus, S. D., S. Leiter, K. Stone, B. Wikgren, C. Mayo, P. Hughes, R. D. Kenney, C. W. Clark, A. N. Rice, B. Estabrook and J. Tielens. 2016. *Northeast Large Pelagic Survey Collaborative Aerial and Acoustic Surveys for Large Whales and Sea Turtles*. OCS Study BOEM 2016-054. Sterling, Virginia: U.S. Department of the Interior, Bureau of Ocean Energy Management.
- Lavender, A. L., S. M. Bartol, and I. K. Bartol. 2014. Ontogenetic investigation of underwater hearing capabilities in loggerhead sea turtles (*Caretta caretta*) using a dual testing approach. *Journal of Experimental Biology* 217:2580–2589.
- Lazell, J. D., Jr. 1980. New England waters: Critical habitat for marine turtles. *Copeia* 1980(2):290–295.

- Lohmann, K. J., N. F. Putman, and C. M. F. Lohmann. 2008. Geomagnetic Imprinting: a Unifying Hypothesis of Long-Distance Natal Homing in Salmon and Sea Turtles. *Proceedings of the National Academy of Sciences* 105(49):19096–190101.
- Luschi, P., S. Benhamou, C. Girard, S. Ciccione, D. Roos, J. Sudre, and S. Benvenuti. 2007. Marine Turtles use Geomagnetic Cues during Open Sea Homing. *Current Biology* 17:126–133. Available: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.572.8884&rep=rep1&type=pdf>. Accessed: April 1, 2022.
- Lutcavage, M. E., and P. L. Lutz. 1997. Diving physiology. In: Lutz P. L, Musick J. A, editors. *The biology of sea turtles*. CRC Press; Boca Raton, FL: pp. 277–296.
- Martin, K. J., S. C. Alessi, J. C. Gaspard, A. D. Tucker, G. B. Bauer, and D. A. Mann. 2012. Underwater hearing on the loggerhead turtle (*Caretta caretta*): A comparison of behavioral and auditory evoked potential audiograms. *Journal of Experimental Biology* 215(17):3001–3009.
- Mavraki, N., S. Degraer, J. Vanaverbeke, and U. Braeckman. 2020. Organic matter assimilation by hard substrate fauna in an offshore wind farm area: a pulse-chase study. *ICES Journal of Marine Science* 77:2681–2693.
- Mazor, T., N. Levin, H. P. Possingham, Y. Levy, D. Rocchini, A. J. Richardson, et al. 2013. Can satellite-based night lights be used for conservation? The case of nesting sea turtles in the Mediterranean. *Biological Conservation* 159:63–72. Available: <https://karkgroup.org/wp-content/uploads/Mazor-et-al-2013-sea-turtles.pdf>. Accessed: April 8, 2022.
- McCauley, R. D., J. Fewtrell, A. J. Duncan, C. Jenner, M.-N. Jenner, J. D. Penrose, R. I. T. Prince, A. Adhitya, J. Murdoch, and K. McCabe. 2000. Marine seismic surveys: a study of environmental implications. *The APPEA Journal* 40:692–708.
- McKenna, M. F., D. Ross, S. M. Wiggins, and J. A. Hildebrand. 2012. Underwater radiated noise from modern commercial ships. *Journal of the Acoustical Society of America* 131(1):92–103. Available: <https://www.cetus.ucsd.edu/docs/publications/McKennaJASA2012.pdf>. Accessed: April 6, 2022.
- Methratta, E. T., and W. R. Dardick. 2019. Meta-Analysis of Finfish Abundance at Offshore Wind Farms. *Reviews in Fisheries Science & Aquaculture* 27(2):242–260.
- Meylan, A. 1995. Sea turtle migration: Evidence from tag returns. In *Biology and Conservation of Sea Turtles* (revised), edited by K. A. Bjorndal, pp. 91–100. Washington, D.C.: Smithsonian Institution Press.
- Michel, J. A., C. Bejarano, C. H. Peterson, and C. Voss. 2013. *Review of biological and biophysical impacts from dredging and handling of offshore sand*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Herndon, VA. OCS Study BOEM 2013-0119. 258 pp. Available: <https://espis.boem.gov/final%20reports/5268.pdf>. Accessed: November 16, 2021.
- Miller, J. H., and G. R. Potty. 2017. Overview of underwater acoustic and seismic measurements of the construction and operation of the Block Island Wind Farm. *Journal of the Acoustical Society of America* 141(5):3993. DOI:10.1121/1.4989144. Available: <https://asa.scitation.org/doi/10.1121/1.4989144>. Accessed: April 1, 2022.

- Minerals Management Service (MMS). 2007. *Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf*. Available: <https://www.boem.gov/Guide-To-EIS/>. Accessed: January 1, 2019.
- Moein, S. E., J. A. Musick, J. A. Keinath, D. E. Barnard, M. Lenhardt, and R. George. 1994. *Evaluation of seismic sources for repelling sea turtles from hopper dredges*. Final report submitted to the U.S. Army Corps of Engineers Waterways Experimental Station by the Virginia Institute of Marine Science, College of William and Mary. Gloucester Point, VA.
- National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 1991. Recovery Plan for U.S. Population of the Atlantic Green Turtle (*Chelonia mydas*). Washington, D.C.
- National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 1992. Recovery Plan for Leatherback Turtles (*Dermochelys coriacea*) in the U.S. Caribbean, Atlantic and Gulf of Mexico. Silver Spring, Maryland: National Marine Fisheries Service.
- National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 2007a. Kemp's Ridley Sea Turtle (*Lepidochelys kempii*) 5-Year Review: Summary and Evaluation. Silver Spring, Maryland: National Marine Fisheries Service, Office of Protected Resources; Albuquerque, New Mexico: U.S. Fish and Wildlife Service, Southwest Region.
- National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 2007b. Green Sea Turtle (*Chelonia mydas*) 5-Year Review: Summary and Evaluation. August.
- National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 2007c. Loggerhead Sea Turtle (*Caretta caretta*) 5-Year Review: Summary and Evaluation. National Fisheries Service, Washington, D.C.
- National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 2013. Leatherback Sea Turtle (*Dermochelys coriacea*) 5-Year Review: Summary and Evaluation. Silver Spring, Maryland, and Jacksonville, Florida. November.
- National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 2015a. Kemp's Ridley Sea Turtle (*Lepidochelys kempii*) 5-Year Review: Summary and Evaluation. Silver Spring, Maryland, and Albuquerque, New Mexico. July.
- National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 2015b. Green Turtle (*Chelonia mydas*) Status Review under the U.S. Endangered Species Act. Report of the Green Turtle Status Review Team.
- National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 2020. Endangered Species Act Status Review of the Leatherback Turtle (*Dermochelys coriacea*). Report to the National Marine Fisheries Service Office of Protected Resources and U.S. Fish and Wildlife Service.
- National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), and Secretariat of Environment and Natural Resources. 2011. Bi-National Recovery Plan for the Kemp's Ridley Sea Turtle (*Lepidochelys kempii*). Second revision. Silver Spring, Maryland: National Marine Fisheries Service, U.S. Fish and Wildlife Service, and Secretariat of Environment and Natural Resources.

- National Marine Fisheries Service (NMFS). 2016. Endangered Species Act Section 7 Consultation on the Continued Prosecution of Fisheries and Ecosystem Research Conducted and Funded by the Northeast Fisheries Science Center and the Issuance of a Letter of Authorization under the Marine Mammal Protection Act for the Incidental Take of Marine Mammals Pursuant to those Research Activities PCTS ID: NER-2015-12532. Available: https://media.fisheries.noaa.gov/dam-migration/nefsc_rule2016_biop.pdf. Accessed: April 1, 2022.
- National Marine Fisheries Service (NMFS). 2019. Kemp's Ridley Turtle *Lepidochelys kempii*. Species Directory. Available: <https://www.fisheries.noaa.gov/species/kemps-ridley-turtle>. Accessed: December 7, 2020.
- National Marine Fisheries Service (NMFS). 2020. *Section 7 Effect Analysis: Turbidity in the Greater Atlantic Region: Guidance for action agencies to address turbidity in their Effects Analysis*. NOAA Greater Atlantic Regional Fisheries Office. Available: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-effect-analysis-turbidity-greater-atlantic-region>. Accessed: November 16, 2021.
- National Marine Fisheries Service (NMFS). 2021a. Sea Turtle Stranding and Salvage Network Public. Annual data reports for Zone 39, in New Jersey. Available: <https://grunt.sefsc.noaa.gov/stssnrep/SeaTurtleReportI.do?action=reportquery>. Accessed: September 21, 2021.
- National Marine Fisheries Service (NMFS). 2021b. Section 7 Consultation with GARFO - Effects of certain site assessment and site characterization activities to be carried out to support the siting of offshore wind energy development projects off the U.S. Atlantic coast.
- National Oceanic and Atmospheric Administration (NOAA). 2013. *Draft Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammals: Acoustic threshold levels for onset of permanent and temporary threshold shifts*. December 2013, 76 pp. Silver Spring, Maryland: NMFS Office of Protected Resources. Available: http://www.nmfs.noaa.gov/pr/acoustics/draft_acoustic_guidance_2013.pdf.
- National Park Service (NPS). 2021. Review of the Sea Turtle Science and Recovery Program at Padre Island National Seashore. Approved June 8, 2020; Amended May 7, 2021. Available: https://www.nps.gov/pais/learn/management/upload/PAIS-STSR-Review-Report_20210507_FINALamended_508.pdf.
- National Research Council. 1990. *Decline of the Sea Turtles: Causes and Prevention*. Washington, D.C.: National Academy Press. 280 pp. Available: <https://nap.nationalacademies.org/catalog/1536/decline-of-the-sea-turtles-causes-and-prevention>. Accessed: March 28, 2002.
- National Science Foundation (NSF) and U.S. Geological Survey (USGS). 2011. *Final Programmatic Environmental Impact Statement/Overseas Environmental Impact Statement for Marine Seismic Research*. Available: https://www.nsf.gov/geo/oce/envcomp/usgs-nsf-marine-seismic-research/nsf-usgs-final-eis-oeis_3june2011.pdf. Accessed: August 20, 2021.
- Nelms, S. E., E. M. Duncan, A. C. Broderick, T. S. Galloway, M. H. Godfrey, M. Hamann, P. K. Lindeque, and B. J. Godley. 2016. Plastic and marine turtles: A review and call for research. *ICES Journal of Marine Science* 73(2):165–181.

- New Jersey Department of Environmental Protection (NJDEP). 2006. New Jersey Marine Mammal and Sea Turtle Conservation Workshop Proceedings. Endangered and Nongame Species Program Division of Fish and Wildlife. April 17-19, 2006. Available: https://www.state.nj.us/dep/fgw/ensp/pdf/marinemammal_seaturtle_workshop06.pdf. Accessed: September 21, 2021.
- New Jersey Department of Environmental Protection (NJDEP). 2010. *Ocean/Wind Power Ecological Baseline Studies January 2008–December 2009*. Final Report. Prepared for New Jersey Department of Environmental Protection Office of Science by Geo-Marine, Inc., Plano, Texas. Available: <https://dspace.njstatelib.org/xmlui/handle/10929/68435>. Accessed: July 2010.
- New Jersey Department of Environmental Protection (NJDEP). 2010. Citing Mrosovsky, N. 1980. Thermal biology of sea turtles. *American Zoologist* 20(3):531–547.
- Normandeau Associates, Inc. (Normandeau), Exponent, Inc., T. Tricas, and A. Gill. 2011. *Effects of EMFs from Undersea Power Cables on Elasmobranchs and Other Marine Species*. Final Report. U.S. Department of the Interior, Bureau of Ocean Energy Management, Regulation and Enforcement, Pacific OCS Region, Camarillo, CA. OCS Study BOEMRE 2011-09. Available: <https://espis.boem.gov/final%20reports/5115.pdf>.
- Normandeau Associates, Inc. and APEM Inc. 2018a. *Digital aerial baseline survey of marine wildlife in support of offshore wind energy: Summer 2018 taxonomic analysis summary report*. Prepared for New York State Energy Research and Development Authority. Available: https://remote.normandeau.com/docs/NYSERDA_Summer_2018_Taxonomic_Analysis_Summary_Report.pdf.
- Normandeau Associates, Inc. and APEM Inc. 2018b. *Digital aerial baseline survey of marine wildlife in support of Offshore Wind Energy: Spring 2018 taxonomic analysis summary report*. Prepared for New York State Energy Research and Development Authority. Available: https://remote.normandeau.com/docs/NYSERDA_Spring_2018_Taxonomic_Analysis_Summary_Report.pdf.
- Normandeau Associates, Inc. and APEM Inc. 2019a. *Digital aerial baseline survey of marine wildlife in support of offshore wind energy: Spring 2019 taxonomic analysis summary report*. Prepared for New York State Energy Research and Development Authority. Available: https://remote.normandeau.com/docs/NYSERDA_Spring_2019_Taxonomic_Analysis_Summary_Report.pdf.
- Normandeau Associates, Inc. and APEM Inc. 2019b. *Digital aerial baseline survey of marine wildlife in support of offshore wind energy: Fall 2018 taxonomic analysis summary report*. Prepared for New York State Energy Research and Development Authority. Available: https://remote.normandeau.com/docs/NYSERDA_Fall_2018_Taxonomic_Analysis_Summary_Report.pdf.
- Normandeau Associates, Inc. and APEM Inc. 2020. *Digital aerial baseline survey of marine wildlife in support of offshore wind energy: Winter 2018-2019 taxonomic analysis summary report*. Prepared for New York State Energy Research and Development Authority. Available: https://remote.normandeau.com/docs/NYSERDA_Winter_2018_19_Taxonomic_Analysis_Summary_Report.pdf.
- Northeast Fisheries Science Center and Southeast Fisheries Science Center (NEFSC and SEFSC). 2011. *Preliminary Summer 2010 Regional Abundance Estimate of Loggerhead Turtles (Caretta caretta) in Northwestern Atlantic Ocean Continental Shelf Waters*. Northeast Fisheries Science Center Reference Document 11-03. On file, National Marine Fisheries Service, Woods Hole, Massachusetts. April.

- Northeast Regional Ocean Council (NROC). 2023. Northeast Ocean Data Portal. Log density of tagged loggerhead sea turtles – annual percent predicted density in each grid cell. Available: <https://www.northeastoceandata.org/data-explorer/>. Accessed: January 23, 2023.
- O’Hara, J., and J. R. Wilcox. 1990. Responses of loggerhead sea turtles, *Caretta caretta*, to low frequency sound. *Copeia* 199:564–567.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Orr, T. L., S. M. Herz, and D. L. Oakley. 2013. *Evaluation of Lighting Schemes for Offshore Wind Facilities and Impacts to Local Environments*. Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Herndon, VA. OCS Study BOEM 2013-0116. 429 pp. Available: <https://espis.boem.gov/final%20reports/5298.pdf>. Accessed November 18, 2021.
- Palka, D. L., S. Chavez-Rosales, E. Josephson, D. Cholewiak, H. L. Haas, L. Garrison, M. Jones, D. Sigourney, G. Waring (retired), M. Jech, E. Broughton, M. Soldevilla, G. Davis, A. DeAngelis, C. R. Sasso, M. V. Winton, R. J. Smolowitz, G. Fay, E. LaBrecque, J. B. Leiness, K. Dettloff, M. Warden, K. Murray, and C. Orphanides. 2017. *Atlantic Marine Assessment Program for Protected Species: 2010–2014*. OCS Study BOEM 2017-071. Washington, D.C.: U.S. Department of the Interior, Bureau of Ocean Energy Management, Atlantic OCS Region. Available: <https://espis.boem.gov/final%20reports/5638.pdf>.
- Palka, D., L. Aichinger Dias, E. Broughton, E. Chavez-Rosales, D. Cholewiak, G. Davis, A. DeAngelis, L. Garrison, H. Haas, J. Hatch, K. Hyde, M. Jech, E. Josephson, L. Mueller-Brennan, C. Orphanides, N. Pegg, C. Sasso, D. Sigourney, M. Soldevilla, and H. Walsh. 2021. *Atlantic Marine Assessment Program for Protected Species: FY15 – FY19*. OCS Study BOEM 2021-051. Washington DC: US Department of the Interior, Bureau of Ocean Energy Management. Available: https://espis.boem.gov/Final%20reports/BOEM_2021-051.pdf.
- Patel, S. H., M. V. Winton, J. M. Hatch, H. L. Haas, V. S. Saba, G. Fay, and R. J. Smolowitz. 2021. Projected shifts in loggerhead sea turtle thermal habitat in the Northwest Atlantic Ocean due to climate change. *Scientific Reports* 11:8850.
- Pezy, J. P., A. Raoux, and J. C. Dauvin. 2018. An ecosystem approach for studying the impact of offshore wind farms: A French case study. *ICES Journal of Marine Science* 77(3):1238–1246.
- Piniak, W. E. D., D. A. Mann, C. A. Harms, T. T. Jones, and S. A. Eckert. 2016. *Hearing in the juvenile green sea turtle (Chelonia mydas): A comparison of underwater and aerial hearing using auditory evoked potentials*. *PLOS ONE* 11(10):e0159711.
- Piniak, W. E. D., D. A. Mann, S. A. Eckert, and C. A. Harms. 2012a. Amphibious hearing in sea turtles. p. 83–88. In: A.N. Popper and A. Hawkins (eds.) *The Effects of Noise on Aquatic Life*. Springer, New York. 695 p.
- Piniak, W. E. D., S. A. Eckert, C. A. Harms, and E. M. Stringer. 2012b. *Underwater Hearing Sensitivity of the Leatherback Sea Turtle (Dermochelys coriacea): Assessing the Potential Effect of Anthropogenic Noise*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Headquarters, Herndon, VA. OCS Study BOEM 2012-01156. 35 p.

- Plotkin, P. T., M. K. Wicksten, and A. F. Amos. 1993. Feeding ecology of the loggerhead sea turtle, *Caretta*, in the northwestern Gulf of Mexico. *Marine Biology* 115(1):1–15.
- Poloczanska, E. S., C. J. Limpus, and G. C. Hays. 2009. “Vulnerability of Marine Turtles to Climate Change.” Chapter 2 in D. W. Sims (editor) *Advances in Marine Biology* 56:151–211. Available: http://seaturtle.org/PDF/PoloczanskaES_2009_InAdvancesinMarineBiology_p151-211.pdf.
- Popper, A. N., A. D. Hawkins, R. R. Fay, D. A. Mann, S. Bartol, T. J. Carlson, S. Coombs, W. T. Ellison, R. L. Gentry, M. B. Halvorsen, S. Løkkeborg, P. H. Rogers, B. L. Southall, D. G. Zeddies, and W. N. Tavolga. 2014. *Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report* prepared by ANSI-Accredited Standards Committee S3/SC1 and registered with ANSI. ASA S3/SC1.4 TR-2014. Technical report.
- Ramirez, A, C. Y. Kot, and D. Piatkowski. 2017. *Review of sea turtle entrainment risk by trailing suction hopper dredges in the US Atlantic and Gulf of Mexico and the development of the ASTER decision support tool*. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2017-084. 275 pp.
- Raoux, A., S. Tecchio, J. P. Pezy, G. Lassalle, S. Degraer, S. Wilhelmsson, M. Cachera, B. Ernande, C. Le Guen, M. Haraldsson, K. Grangere, F. Le Loc’h, J. C. Dauvin, and N. Niquil. 2017. Benthic and fish aggregation inside an offshore wind farm: Which effects on the trophic web functioning? *Ecological Indicators* 72:33–46.
- Reine, K. J., and D. G. Clarke. 1998. *Entrainment by hydraulic dredges – A review of potential impacts, Technical Note DOER-E1* (pp. 1–14). U.S. Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, MS.
- Ridgway S. H., E. G. Wever, J. G. McCormick, J. Palin, and J. H. Anderson. 1969. Hearing in the giant sea turtle, *Chelonia mydas*. *Proceedings of the National Academy of Science US* 64(2):884–890.
- Ruckdeschel, C. A., and C. R. Shoop. 1988. Gut contents of loggerheads: Findings, problems and new questions. In *Proceedings of the Eighth Annual Workshop on Sea Turtle Biology and Conservation*, 97-98, 146 pp. Edited by B. A. Schroeder. NOAA Technical Memorandum NMFS-SEFC-214.
- Salmon, M., and J. Wyneken. 1990. Do swimming loggerhead sea turtles (*Caretta caretta* L.) use light cues for offshore orientation? *Marine Behaviour and Physiology* 17(4):233–246.
- Samuel, Y., S. J. Morreale, C. W. Clark, C. H. Greene, and M. E. Richmond. 2005. Underwater, Low-frequency Noise in a Coastal Sea Turtle Habitat. *Journal of the Acoustical Society of America* 117(3):1465–1472.
- Sasso, C. R. and S. P. Epperly. 2006. Seasonal sea turtle mortality risk from forced submergence in bottom trawls. *Fisheries Research* 81:86–88.
- Schmid, J. R. 1998. Marine turtle populations on the west-central coast of Florida: Results of tagging studies at the Cedar Keys, Florida, 1986–1995. *Fishery Bulletin* 96:589–602.
- Schultze, L., L. Merckelbach, J. Horstmann, S. Raasch, and J. Carpenter: 2020. Increased mixing and turbulence in the wake of offshore wind farms. *Journal of Geophysical Research: Oceans* 125. *Journal of Geophysical Research: Oceans*, 125, e2019JC015858. <https://doi.org/10.1029/2019JC015858>. Accessed April 1, 2022.

- Schuyler, Q. A., C. Wilcox, K. Townsend, B. D. Hardesty, and N. J. Marshall. 2014. Mistaken identity? Visual similarities of marine debris to natural prey items of sea turtles. *BMC Ecology* 14(14). DOI:10.1186/1472-6785-14-14.
- Seminoff, J. A., C. D. Allen, G. H. Balazs, P. H. Dutton, T. Eguchi, H. L. Haas, S. A. Hargrove, M. P. Jensen, D. L. Klemm, A. M. Lauritsen, S. L. MacPherson, P. Opay, E. E. Possardt, S. L. Pultz, E. E. Seney, K. S. Van Houtan, and R. S. Waples. 2015. Status Review of the Green Turtle (*Chelonia mydas*) Under the U.S. Endangered Species Act. NOAA Technical Memorandum, NOAA/NMFS-SWFSC-539.
- Seney, E. E., and J. A. Musick. 2007. Historical diet analysis of loggerhead sea turtles (*Caretta caretta*) in Virginia. *Copeia* 2007(2):478–489.
- Shaver D. J., B. A. Schroeder, R. A. Byles, P. M. Burchfield, J. Peña, and R. Márquez. 2005. Movements and home ranges of adult male Kemp’s ridley sea turtles (*Lepidochelys kempii*) in the Gulf of Mexico investigated by satellite telemetry. *Chelonian Conservation and Biology* 4(4):817–827.
- Shaver, D., and C. Rubio. 2008. Post-nesting movement of wild and head-started Kemp’s ridley sea turtles *Lepidochelys kempii* in the Gulf of Mexico. *Endangered Species Research* 4:43–55.
- Shigenaka, G., S. Milton, P. Lutz, R. Hoff, R. Yender, and A. Mearns. 2010. *Oil and Sea Turtles: Biology, Planning, and Response*. NOAA Office of Restoration and Response Publication. 116 pp. Available: https://www.widecast.org/Resources/Docs/Shigenaka_et_al_2021.pdf. Accessed: April 8, 2022.
- Shoop, C. R., and R. D. Kenney. 1992. Seasonal distribution and abundances of loggerhead and leatherback sea turtles in waters of the northeastern United States. *Herpetological Monograph* 6:43–67.
- Smultea Environmental Sciences. 2018. Protected Species Observer Technical Report OCW01 Geotechnical 1A Survey New Jersey (2017). Prepared for Fugro Marine GeoServices, Inc., Norfolk, Virginia, and DONG Energy Wind Power (US) LLC, Boston, Massachusetts, by Smultea Environmental Sciences, Preston, Washington.
- Snoek, R., R. de Swart, K. Didden, W. Lengkeek, and M. Teunis. 2016. *Potential effects of electromagnetic fields in the Dutch North Sea*. Final report submitted to Rijkswaterstaat Water, Verkeer en Leefomgeving. 95 pp. Available: https://www.buwa.nl/fileadmin/buwa_upload/Bureau_Waardenburg_rapporten/16-101_BuWareport_potential_effects_of_electromagnetic_fields_in_the_dutch_north_sea.pdf. Accessed: April 1, 2022.
- Snyder, R. 2017. Monitoring nesting sea turtles using a thermal camera. *ECO Magazine* January/February 2017:36–41. Available: <https://www.seiche.com/wp-content/uploads/2020/01/Eco-Magazine-JanFeb-2017new.pdf>. Accessed: November 7, 2022.
- Southall, B. L., A. E. Bowles, W. T. Ellison, J. J. Finneran, R. L. Gentry, C. R. Greene, Jr., D. Kastak, D. R. Ketten, J. H. Miller, P. E. Nachtigall, W. J. Richardson, J. A. Thomas, and P. L. Tyack. 2007. Marine mammal noise exposure criteria: Initial scientific recommendations. *Aquatic Mammals* 33(4):411–521.
- Stöber, U., and F. Thomsen. 2021. How could operational underwater sound from future offshore wind turbines impact marine life? *Journal of the Acoustical Society of America* 149(3):1791–1795.

- Thomás, J., R. Guitart, R. Mateo, and J. A. Raga. 2002. Marine debris ingestion in loggerhead turtles, *Caretta caretta*, from the Western Mediterranean. *Marine Pollution Bulletin* 44:211–216.
- Tougaard, J., L. Hermannsen, and P. T. Madsen. 2020. How loud is the underwater noise from operating offshore wind turbines? *Journal of the Acoustical Society of America* 148(5):2885–2893.
- Tougaard, J., O. D. Henriksen, and Lee A. Miller. 2009. Underwater noise from three types of offshore wind turbines: Estimation of impact zones for harbor porpoises and harbor seals. *Journal of the Acoustical Society of America* 125(6):3766–3773. DOI:10.1121/1.3117444.
- Turtle Expert Working Group (TEWG). 2007. *An Assessment of the Leatherback Turtles Population in the Atlantic Ocean*. NOAA Technical Memorandum NMFS-SEFSC-555. A Report of the Turtle Expert Working Group. U.S. Department of Commerce. April 2007.
- Turtle Expert Working Group (TEWG). 2009. *An Assessment of the Loggerhead Turtle Population in the Western North Atlantic Ocean*. NOAA Technical Memorandum NMFS-SEFSC-575. U.S. Department of Commerce.
- U.S. Army Corps of Engineers (USACE). 2020. *South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States*. 646 pp. Available: https://media.fisheries.noaa.gov/dam-migration/sarbo_acoustic_revision_6-2020-opinion_final.pdf. Accessed: November 16, 2021.
- U.S. Department of the Navy (Navy). 2007. Navy OPAREA Density Estimate (NODE) for the Northeast OPAREAS for the Northeast OPAREAS: Boston, Narragansett Bay, and Atlantic City. Prepared for the Department of the Navy, U.S. Fleet Forces Command, Norfolk, Virginia. Contract #N62470-02-D-9997, Task Order 045. Prepared by Geo-Marine, Inc., Hampton, Virginia. Available: <https://seamap.env.duke.edu/downloads/resources/serdp/Northeast%20NODE%20Final%20Report.pdf>.
- U.S. Department of the Navy (Navy). 2017. *Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III)*. Technical report. June 2017. Available: https://nwtteis.com/portals/nwtteis/files/technical_reports/Criteria_and_Thresholds_for_U.S._Navy_Acoustic_and_Explosive_Effects_Analysis_June2017.pdf. Accessed: March 31, 2022.
- U.S. Department of the Navy (Navy). 2018. *Hawaii-Southern California Training and Testing EIS/OEIS*. Available: https://www.hstteis.com/portals/hstteis/files/hstteis_p3/feis/section/HSTT_FEIS_3.08_Reptiles_October_2018.pdf. Accessed: September 3, 2020.
- Wang, J., X. Zou, W. Yu, D. Zhang, and T. Wang. 2019. Effects of established offshore wind farms on energy flow of coastal ecosystems: A case study of the Rudong offshore wind farms in China. *Ocean & Coastal Management* 171:111–118.
- Watwood, S. L., and D. M. Buonantony. 2012. *Dive distribution and group size parameters for marine species occurring in Navy training and testing areas in the North Atlantic and North Pacific oceans*. Newport, Rhode Island. NUWC-NPT Technical Document 12,085. March 2012. Available: <https://apps.dtic.mil/sti/pdfs/ADA560975.pdf>. Accessed: June 28, 2022.
- Weishampel, Z. A., W-H. Cheng, and J. F. Weishampel. 2016. Sea turtle nesting patterns in Florida vis-a-vis satellite-derived measures of artificial lighting. *Remote Sensing in Ecology and Conservation* 2(1):59–72.

Wibbels, T., and E. Bevan. 2019. Kemp's Ridley, *Lepidochelys kempii*. The IUCN Red List of Threatened Species in 2019: e.T11533A142050590. Available: <https://www.iucnredlist.org/species/11533/142050590>.

Winton, M. V, G. Fay, H. L. Haas, M. Arendt, S. Barco, M. C. James, C. Sasso, and R. Smolowitz. 2018. Estimating the distribution and relative density of satellite-tagged loggerhead sea turtles using geostatistical mixed effects models. *Marine Ecology Progress Series* 586:217–232.

Witzell, W. N., and J. R. Schmid. 2005. Diet of immature Kemp's ridley turtles (*Lepidochelys kempi*) from Gullivan Bay, Ten Thousand Islands, southwest Florida. *Bulletin of Marine Science* 77(2):191–199.

B.2.3.20. Section 3.20, Scenic and Visual Resources

Atlantic Shores Offshore Wind (Atlantic Shores). 2021. *Construction and Operations Plan, Atlantic Shores Offshore Wind*. Volume I. September. Available: <https://www.boem.gov/renewable-energy/state-activities/atlantic-shores-offshore-wind-construction-and-operations-plan>.

Bureau of Ocean Energy Management (BOEM). 2021c. *Assessment of Seascape, Landscape, and Visual Impacts of Offshore Wind Energy Developments on the Outer Continental Shelf of the United States*. OCS Study BOEM 2021-032. April.

Bureau of Ocean Energy Management (BOEM). 2022. *Ocean Wind Cumulative Historic Resources Visual Effects Analysis*. June.

Capitol Airspace Group. Ocean Wind Project Aircraft Detection Lighting System (ADLS) Efficacy Analysis. April 16.

Landscape Institute and Institute of Environmental Management and Assessment. 2016. *Guidelines for Landscape and Visual Assessment 3rd Edition*. Spon Press.

New Jersey Department of Environmental Protection (NJDEP). 2006. Public Access in New Jersey: The Public Trust Doctrine and Practical Steps to Enhance Public Access. Handbook prepared by the Coastal Management Office of New Jersey.

Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.

B.2.3.21. Section 3.21, Water Quality

Bejarano, A. C., J. Michel, J. Rowe, Z. Li, D. French McCay, L. McStay, and D. S. Etkin. 2013. *Environmental Risks, Fate and Effects of Chemicals Associated with Wind Turbines on the Atlantic Outer Continental Shelf*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Herndon, VA. OCS Study BOEM 2013-213.

Bureau of Ocean Energy Management (BOEM). 2016. *Use of Finite-Volume Modeling and the Northeast Coastal Ocean Forecast System in Offshore Wind Energy Resource Planning*. BOEM 2016-050. July. Available: <https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/NE-Ocean-Forecast-Model-Final-Report.pdf>. Accessed: September 21, 2022.

- Bureau of Ocean Energy Management (BOEM). 2019. *National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Continental Shelf*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Sterling, VA. OCS Study BOEM 2019- 036. May 2019.
- Bureau of Ocean and Energy Management (BOEM). 2021c. Hydrodynamic Modeling, Particle Tracking and Agent-Based Modeling of Larvae in the U.S. Mid-Atlantic Bight. OCE Study, BOEM 2021-049. Available: https://espis.boem.gov/final%20reports/BOEM_2021-049.pdf. Accessed: October 29, 2021.
- Carpenter, J. R., L. Merckelbach, U. Callies, S. Clark, L. Gaslikova, and B. Baschek. 2016. "Potential Impacts of Offshore Wind Farms on North Sea Stratification." *PLOS ONE* 11(8): e0160830. Available: <https://doi.org/10.1371/journal.pone.0160830>.
- Cazenave, Pierre William, Ricardo Torres, and J. Icarus Alen. 2016. "Unstructured Grid Modelling of Offshore Wind Farm Impacts on Seasonally Stratified Shelf Seas." *Progress in Oceanography* 145(2016) 25–41.
- Center for Coastal Studies (CCS). 2017. *Water Quality Parameters*. Available: <http://coastalstudies.org/cape-cod-bay-monitoring-program/monitoring-stations/>. Accessed: June 18, 2018.
- Connell, B. 2010. Nutrient Monitoring in NJ's Coastal Waters. Retrieved from NJDEP - Water Monitoring & Standards Marine Water Monitoring. Available: <http://www.nj.gov/dep/wms/NJDEP%20MW%20Nutrients.pdf>. Accessed: April 1, 2022
- Department of Energy (DOE). 2014. *Assessment of Ports for Offshore Wind Development in the United States*. March 2014. 700694-USPO-R-03.
- Harris, J., R. Whitehouse, and J. Sutherland. 2011. "Marine Scour and Offshore Wind: Lessons Learnt and Future Challenges. Proceedings of the International Conference on Offshore Mechanics and Arctic Engineering" OMAE. 5. 10.1115/OMAE2011-50117.
- Kaplan, B., ed. 2011. *Literature Synthesis for the North and Central Atlantic Ocean*. U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Regulation and Enforcement, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study BOEMRE 2011-012. Available: <https://www.boem.gov/ESPIS/5/5139.pdf>. Accessed: October 30, 2018.
- Kirchgeorg, T., I. Weingberg, M. Hornig, R. Baier, M. J. Schmid, and B. Brockmeyer. 2018. Emissions from Corrosion Protection Systems of Offshore Wind Farms: Evaluation of the Potential Impact on the Marine Environment. *Marine Pollution Bulletin* 136:257–268.
- Latham, Pam, Whitney Fiore, Michael Bauman, and Jennifer Weaver. 2017. *Effects Matrix for Evaluating Potential Impacts of Offshore Wind Energy Development on U.S. Atlantic Coastal Habitats*. Final Report to the U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. OCS Study BOEM 2017-014. Available: <https://www.boem.gov/Effects-Matrix-Evaluating-Potential-Impacts-of-Offshore-Wind-Energy-Development-on-US-Atlantic-Coastal-Habitats/>. Accessed: October 30, 2018.
- National Oceanic and Atmospheric Administration (NOAA). 2018. NOAA Deep Sea Coral Data Portal. Available: <http://deepseacoraldata.noaa.gov>. Accessed: August 2, 2018.

- New Jersey Department of Environmental Protection (NJDEP). 2018. Digital Geodata Series – DGS02-1 Well Head Protection Areas for Public Community Water Supply Wells in New Jersey. April 4. Available: <https://www.state.nj.us/dep/njgs/geodata/dgs02-2.htm#image>. Accessed: September 8, 2021.
- Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.
- Ocean Wind LLC (Ocean Wind). 2023. Citing Normandeau Associates Inc. 2015. *Modeling sediment dispersion from cable burial for the Seacoast Reliability Project, Little Bay, New Hampshire*.
- South Carolina Department of Health and Environmental Control. 2018. SC Watershed Atlas: Impaired Waters – 303(d) 2018. Available: <https://gis.dhec.sc.gov/watersheds/>. Accessed: November 22, 2021.
- U.S. Environmental Protection Agency (USEPA). 2000. *Ambient Aquatic Life Water Quality Criteria for Dissolved Oxygen (Saltwater): Cape Cod to Cape Hatteras*. Office of Water. EPA-822-R-00-012. Available: <https://nepis.epa.gov/Exe/ZyPDF.cgi/20003HYA.PDF?Dockkey=20003HYA.PDF>. Accessed: November 8, 2018.
- U.S. Environmental Protection Agency (USEPA). 2012. *National Coastal Condition Report IV*. September. Available: https://www.epa.gov/sites/default/files/201410/documents/0_nccr_4_report_508_bookmarks.pdf. Accessed: September 8, 2021.
- U.S. Environmental Protection Agency (USEPA). 2015. *National Coastal Condition Assessment 2010*. Office of Water and Office of Research and Development. EPA 841-R-15-006. Available: https://www.epa.gov/sites/production/files/2016-01/documents/ncca_2010_report.pdf. Accessed: October 30, 2018.
- U.S. Environmental Protection Agency (USEPA). 2020. NEPAAssist Mapping Layer Descriptions – Impaired Water Points, Impaired Streams, Impaired Water Bodies. EPA Office of Water ATTAINS Geospatial Data.

B.2.3.22. Section 3.22, Wetlands

- Atlantic Shores Offshore Wind (Atlantic Shores). 2021. *Construction and Operations Plan, Atlantic Shores Offshore Wind*. Volume I. September. Available: <https://www.boem.gov/renewable-energy/state-activities/atlantic-shores-offshore-wind-construction-and-operations-plan>.
- New Jersey Department of Environmental Protection (NJDEP). 2015. Wetlands of New Jersey GIS. Available: <https://gisdata-njdep.opendata.arcgis.com/datasets/wetlands-of-new-jersey-from-land-use-land-cover-2012-update/explore?location=40.143284%2C-74.755600%2C8.71>. Accessed: October 7, 2021.
- New Jersey Department of Environmental Protection (NJDEP). 2020. *Final Report: The Status and Future of Tidal Marshes in New Jersey Faced with Sea Level Rise*. NJDEP Science Advisory Board. Prepared by SAB Work Group. August. Available: <https://www.nj.gov/dep/sab/sab-salt-marsh.pdf>. Accessed: April 1, 2022.

New Jersey Department of Environmental Protection (NJDEP). 2021. Barnegat Bay. Phase Two: Moving Science into Action. Available: <https://www.nj.gov/dep/barnegatbay/wetlands.html>. Accessed: October 27, 2021.

Ocean Wind LLC (Ocean Wind). 2023. *Construction and Operations Plan, Ocean Wind Offshore Wind Farm*. Volumes I–III. May. Available: <https://www.boem.gov/ocean-wind-construction-and-operations-plan/>.

B.3. Glossary

Term	Definition
affected environment	Environment as it exists today that could be potentially affected by the proposed Project
algal blooms	Rapid growth of the population of algae, also known as algae bloom
allision	A moving ship running into a stationary ship
anthropogenic	Generated by human activity
archaeological resource	Historical place, site, building, shipwreck, or other archaeological site on the landscape
below grade	Below ground level
benthic	Related to the bottom of a body of water
benthic resources	The seafloor surface, the substrate itself, and the communities of bottom-dwelling organisms that live within these habitats
Cetacea	Order of aquatic mammals made up of whales, dolphins, porpoises, and related lifeforms
coastal habitat	Coastal areas where flora and fauna live, including salt marshes and aquatic habitats
coastal waters	Waters in nearshore areas where bottom depth is less than 98.4 feet (30 meters)
coastal zone	The lands and waters starting at 3 nm from the land and ending at the first major land transportation route
commercial fisheries	Areas or entities raising and catching fish for commercial profit
commercial-scale wind energy facility	Wind energy facility usually greater than 1 MW that sells the produced electricity
criteria pollutant	One of six common air pollutants for which USEPA sets NAAQS: CO, lead, NO ₂ , ozone, particulate matter, or SO ₂
critical habitat	Geographic area containing features essential to the conservation of threatened or endangered species
cultural resource	Historical districts, objects, places, sites, buildings, shipwrecks, and archaeological sites on the American landscape, as well as sites of traditional, religious, or cultural significance to cultural groups, including Native American tribes
culvert	structure, usually a tunnel, allowing water to flow under an obstruction (e.g., road, trail)
cumulative impacts	Impacts that could result from the incremental impact of a specific action, such as the proposed Project, when combined with other past, present, or reasonably foreseeable future actions or other projects; can occur from individually minor, but collectively significant actions that take place over time
demersal	Living close to the ocean floor
design envelope	The range of proposed Project characteristics defined by the applicant and used by BOEM for purposes of environmental review and permitting
dredging	Removal of sediments and debris from the bottom of lakes, rivers, harbors, and other waterbodies
duct bank	Underground structure that houses the onshore export cables, which consists of polyvinyl chloride pipes encased in concrete

Term	Definition
ecosystem	Community of interacting living organisms and nonliving components (such as air, water, soil)
electromagnetic field	A field of force produced by electrically charged objects and containing both electric and magnetic components
embayment	Recessed part of a shoreline
endangered species	A species that is in danger of extinction in all or a significant portion of its range
Endangered Species Act-listed species	Species listed under the ESA of 1973 (as amended)
environmental protection measure	Measure proposed to avoid or minimize potential impacts
ensonification	The process of filling with sound
environmental consequences	The potential direct, indirect, and cumulative impacts that the construction, O&M, and decommissioning of the proposed Project would have on the environment
environmental justice communities	Minority and low-income populations affected by the proposed Project
epifauna	Fauna that lives on the surface of a seabed (or riverbed), or is attached to underwater objects or aquatic plants or animals
essential fish habitat	“Those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” (50 CFR 600)
export cables	Cables connecting the wind facility to the onshore electrical grid power
export cable corridor	Area identified for routing the entire length of the onshore and offshore export cables
federal aids to navigation	Visual references operated and maintained by USCG, including radar transponders, lights, sound signals, buoys, and lighthouses, that support safe maritime navigation
finfish	Vertebrate and cartilaginous fishery species, not including crustaceans, cephalopods, or other mollusks
for-hire commercial fishing	Commercial fishing on a for-hire vessel (i.e., a vessel on which the passengers make a contribution to a person having an interest in the vessel in exchange for carriage)
for-hire recreational fishing	Fishing from a vessel carrying a passenger for hire who is engaged in recreational fishing
foundation	The bases to which the WTGs and OSS are installed on the seabed. Three types of foundations have been considered and reviewed for the Project: jacket, monopile, or gravity-based structure.
geomagnetic	Relating to the magnetism of the Earth
hard-bottom habitat	Benthic habitats composed of hard-bottom (e.g., cobble, rock, and ledge) substrates
historic property	Prehistoric or historic district, site, building, structure, or object that is eligible for or already listed in the NRHP; also includes any artifacts, records, and remains (surface or subsurface) related to and located within such a resource
historical resource	Prehistoric or historic district, site, building, structure, or object that is eligible for or already listed in the NRHP; also includes any artifacts, records, and remains (surface or subsurface) related to and located within such a resource

Term	Definition
horizontal directional drilling	Trenchless technique for installing underground cables, pipes, and conduits using a surface-launched drilling rig
hull	Watertight frame or body of a ship
infauna	Fauna living in the sediments of the ocean floor (or river or lake beds)
inter-array cables	Cables connecting the wind turbine generators to the electrical service platforms
interconnection facility	Substation connecting the proposed Project to the existing bulk power grid system
inter-link cables	Cables connecting the electrical service platforms to one another
invertebrate	Animal with no backbone
jacket foundation	Latticed steel frame with three or four supporting piles driven into the seabed
jack-up vessel	Mobile and self-elevating platform with buoyant hull
jet excavation	Process of moving or removing soil with a jet
jet plowing	Plowing in which the jet plow, with an adjustable blade, or plow rests on the seafloor and is towed by a surface vessel; the jet plow creates a narrow trench at the designated depth, while water jets fluidize the sediment within the trench; in the case of the proposed Project, the cables would then be feed through the plow and laid into the trench as it moves forward; the fluidized sediments then settle back down into the trench and bury the cable
knot	Unit of speed equaling 1 nm per hour
landfall site	The shoreline landing site at which the offshore cable transitions to onshore
marine mammal	Aquatic vertebrate distinguished by the presence of mammary glands, hair, three middle ear bones, and a neocortex (a region of the brain)
marine waters	Waters in offshore areas where bottom depth is more than 98.4 feet (30 meters)
mechanical cutter	Method of submarine cable installation equipment that involves a cutting wheel or excavation chain to cut a narrow trench into the seabed allowing the cable to sink under its own weight or be pushed to the bottom of the trench via a cable depressor
mechanical plow	Method of submarine cable installation equipment that involves pulling a plow along the cable route to lay and bury the cable. The plow's share cuts into the soil, opening a temporary trench, which is held open by the side walls of the share, while the cable is lowered to the base of the trench via a depressor. Some plows may use additional jets to fluidize the soil in front of the share.
monopile or monopile foundation	A long steel tube driven into the seabed that supports a tower
nautical mile	A unit used to measure sea distances and equivalent to approximately 1.15 miles (1.85 kilometers)
offshore substation	The interconnection point between the WTGs and the export cable; the necessary electrical equipment needed to connect the inter-array cables to the offshore export cables
onshore substation	Substation connecting the proposed Project to the existing bulk power grid system

Term	Definition
operations and maintenance facilities	Would include offices, control rooms, warehouses, shop space, and pier space
Outer Continental Shelf	All submerged land, subsoil, and seabed belonging to the United States but outside of states' jurisdiction
pile	A type a foundation akin to a pole
pile driving	Installing foundation piles by driving them into the seafloor
pinnipeds	Carnivorous, semiaquatic marine mammals with fins, also known as seals
pin pile	Small-diameter pipe driven into the ground as foundation support
plume	Column of fluid moving through another fluid
private aids to navigation	Visual references on structures positioned in or near navigable WOTUS, including radar transponders, lights, sound signals, buoys, and lighthouses, that support safe maritime navigation; permits for the aids are administered by USCG
Project area	The combined onshore and offshore area where proposed Project components would be located
protected species	Endangered or threatened species that receive federal protection under the ESA of 1973 (as amended)
scour protection	Protection consisting of rock and stone that would be placed around all foundations to stabilize the seabed near the foundations as well as the foundations themselves
scrublands	Plant community dominated by shrubs and often also including grasses and herbs
sessile	Attached directly by the base
silt substrate	Substrate made of a granular material originating from quartz and feldspar, and whose size is between sand and clay
soft-bottom habitat	Benthic habitats include soft-bottom (i.e., unconsolidated sediments) and hard-bottom (e.g., cobble, rock, ledge) substrates, as well as biogenic habitat (e.g., eelgrass, mussel beds, worm tubes) created by structure-forming species
substrate	Earthy material at the bottom of a marine habitat; the natural environment that an organism lives in
suspended sediments	Very fine soil particles that remain in suspension in water for a considerable period of time without contact with the bottom; such material remains in suspension due to the upward components of turbulence and currents, or by suspension
threatened species	A species that is likely to become endangered within the foreseeable future
tidal energy project	Project related to the conversion of the energy of tides into usable energy, usually electricity
tidal flushing	Replacement of water in an estuary or bay because of tidal flow
trawl	A large fishing net dragged by a vessel at the bottom or in the middle of sea or lake water
turbidity	A measure of water clarity
utility right-of-way	Registered easement on private land that allows utility companies to access the utilities or services located there
vibracore	Technology/technique for collecting core samples of underwater sediments and wetland soils

Term	Definition
viewshed	Area visible from a specific location
visual resource	The visible physical features on a landscape, including natural elements such as topography, landforms, water, vegetation, and manmade structures
wetland	Land saturated with water; marshes; swamps
wind energy	Electricity from naturally occurring wind
wind energy area	Areas with significant wind energy potential and defined by BOEM
wind turbine generator	Component that puts out electricity in a structure that converts kinetic energy from wind into electricity

NAAQS = National Ambient Air Quality Standards; NO₂ = nitrogen dioxide

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