Appendix C. References Cited and Glossary

C.1. References Cited

C.1.1 Executive Summary

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

C.1.2 Chapter 1, Introduction

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

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.* January. Available: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/Smart_from_the_Start/Mid-Atlantic_Final_EA_012012.pdf.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

C.1.3 Chapter 2, Alternatives Including the Proposed Action

Bureau of Ocean Energy Management (BOEM). 2022. *Process for Identifying Alternatives for Environmental Reviews of Offshore Wind Construction and Operations Plans Pursuant to the National Environmental Policy Act (NEPA).* Available: https://www.boem.gov/sites/default/files/documents/renewable-energy/BOEM%20COP%20EIS%20Alternatives-2022-06-22.pdf. Accessed: September 10, 2022.

Bureau of Ocean Energy Management (BOEM) and Dominion Energy. 2022. Revised Project Design Information Submitted to BOEM.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

C.1.4 Chapter 3, Affected Environment and Environmental Consequences

C.1.4.1. 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.

C.1.4.2. Section 3.2, Mitigation Identified for Analysis in the Environmental Impact Statement

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

C.1.4.3. Section 3.3, Definition of Impact Levels

No references cited.

C.1.4.4. 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.

Dominion Energy, Inc. (Dominion Energy). 2020. *Virginia Electric and Power Company's Report of Its Integrated Resource Plan*. Available: https://www.dominionenergy.com/-/media/pdfs/global/2020-va-integrated-resource-plan.pdf?la=en&rev=fca793dd8eae4ebea4ee42f5642c9509. Accessed: March 1, 2022.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

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.

Kitty Hawk Wind North. 2021. *Kitty Hawk Offshore Construction and Operations Plan*. Prepared by Tetra Tech, Inc. November.

Kitty Hawk Wind South. 2022. *Kitty Hawk South Offshore Wind Project Construction and Operations Plan.* Prepared by Tetra Tech, Inc. April.

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.

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. Environmental Protection Agency (USEPA). 2020a. *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). 2020b. 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). 2021a. *Nonattainment Areas for Criteria Pollutants (Green Book)*. Available: https://www.epa.gov/green-book. Accessed: September 13, 2021.

U.S. Environmental Protection Agency (USEPA). 2021b. *Avoided Emissions and Generation Tool (AVERT)*, Web Edition. Available: https://www.epa.gov/avert/avert-web-edition. Accessed: November 23, 2021.

U.S. Environmental Protection Agency (USEPA). 2021c. *User's Manual for the CO-Benefits Risk Assessment Health Impacts Screening and Mapping Tool (COBRA)*. Available: https://www.epa.gov/system/files/documents/2021-11/cobra-user-manual-nov-2021_4.1_0.pdf. Accessed: March 3, 2022.

U.S. Global Change Research Program. 2018. *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment*. Volume II, Chapter 19: Southeast. Available: https://nca2018.globalchange.gov/chapter/southeast. Accessed: March 1, 2022.

C.1.4.5. Section 3.5, Bats

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.

Barclay, R.M.R., E.F. Baerwald, and J.C. Gruver. 2007. Variation in Bat and Bird Fatalities at Wind Energy Facilities: Assessing the Effects of Rotor Size and Tower Height. *Canadian Journal of Zoology* 85:381–387.

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*. 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*. OCS EIS/EA BOEM 2015-031. 239 pp.

Bureau of Ocean Energy Management (BOEM). 2022. *Coastal Virginia Offshore Wind Commercial Biological Assessment for the United States Fish and Wildlife Service*. September.

Bureau of Ocean Energy Management (BOEM) and Dominion Energy. 2022. Revised Project Design Information Submitted to BOEM.

Cheng, T.L., J.D. Reichard, J.T.H. Coleman, T.J. Weller, W.E. Thogmartin, B.E. Reichert, A.B. Bennett, H.G. Broders, J. Campbell, K. Etchison, D.J. Feller, R. Geboy, T. Hemberger, C. Herzog, A.C. Hicks, S. Houghton, J. Humber, J.A. Kath, R.A. King, S.C. Loeb, A. Massé, K.M. Morris, H. Niederriter, G. Nordquist, R.W. Perry, R.J. Reynolds, D.B. Sasse, M.R. Scafini, R.C. Stark, C.W. Stihler, S.C. Thomas, G.G. Turner, S. Webb, B.J. Westrich, and W.F. Frick. 2021. The Scope and Severity of White-Nose Syndrome on Hibernating Bats in North America. *The Society for Conservation Biology* 35:1586–1597.

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.

Cryan, P.M. 2003. Seasonal Distribution of Migratory Tree Bats (*Lasiurus and Lasionycteris*) in North America. *Journal of Mammalogy* 84:579–593.

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.

De La Cruz, J.L. 2020. *Occupancy and Roost Ecology of the Northern Long-Eared Bat and Indiana Bat on the Coastal Plain of Virginia and North Carolina.* Virginia Department of Game and Inland Fisheries Project EP2858740.

Deepwater Wind Block Island, LLC (Deepwater Wind). 2020. *Avian and Bat Acoustic Survey Final Post-Construction Monitoring Report, 2017-2020.* November. Prepared by Stantec Consulting Services, Inc.

Dominion Energy, Inc. (Dominion Energy). 2022a. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Dominion Energy. 2022b. *CVOW Pilot Project Post Construction Monitoring, February 2022 Monthly Report*, RAPR 4.3.3.1. 8 pp.

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*. OCS Study BOEM 2017-054. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Sterling, Virginia. 39 pp.

Fiedler, J.K. 2004. *Assessment of Bat Mortality and Activity at Buffalo Mountain Windfarm, Eastern Tennessee.* Masters Thesis, University of Tennessee. Available: https://trace.tennessee.edu/utk_gradthes/2137.

Georgiakakis, P., E. Kret, B. Carcamo, B. Doutau, A. Kafkaletou-Diez, D. Vasilakis, and E. Papadatou. 2012. Bat Fatalities at Wind Farms in North-Eastern Greece. *Acta Chiropterologica* 14(2):459–468.

Hamilton, R.M. 2012. *Spatial and Temporal Activity of Migratory Bats at Landscape Features*. Electronic Thesis and Dissertation Repository. 886. 90 pp.

Hann, Z.A., M.J. Hosler, and P.R. Moosman. 2017. Roosting Habits of Two *Lasiurus borealis* (eastern red bat) in the Blue Ridge Mountains of Virginia. *Northeastern Naturalist* 24(2).

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:e83803.

Maslo, B., and K. Leu. 2013. *The Facts about Bats in New Jersey*. Rutgers New Jersey Agricultural Experiment Station. Available: https://njaes.rutgers.edu/fs1207/. Accessed: November 12, 2021.

Pelletier, S.K., K.S. Omland, K.S. Watrous, and T.S. Peterson. 2013. *Information Synthesis on the Potential for Bat Interactions with Offshore Wind Facilities: Final Repor*t. U.S. Dept of the Interior, Bureau of Ocean Energy Management, Headquarters, Herndon, VA. OCS Study BOEM 2013-01163. 119 pp.

Petersen, T.S. 2016. *Long-Term Bat Monitoring on Islands, Offshore Structures, and Coastal Sites in the Gulf Of Maine, Mid-Atlantic, and Great Lakes.* Final Report. Report by Stantec Consulting Services Inc. to U.S. Department of Energy. 171 pp.

Reynolds, R. 2021. *Mixed News for Virginia's Bats After 10 Years of White-Nose Syndrome*. Virginia Department of Wildlife Resources blog. Available: https://dwr.virginia.gov/blog/mixed-news-for-virginias-bats-after-10-years-of-white-nose-syndrome/. Accessed: November 15, 2021.

Schaub, A., J. Ostwald, and B.M. Siemers. 2008. Foraging Bats Avoid Noise. *Journal of Experimental Biology* 211:3174–80. Erratum in: *J Exp Biol.* 2009. 212:3036.

Silvis, A., S.E. Sweeten, and A.B. Kniowski. 2017. *Distribution of Indiana Bats (Myotis odalist) and Northern Long-Eared Bats (*M. septentrionalis*) in Virginia.* Virginia Polytechnic Institute and State University and USGS Virginia Cooperative Fish and Wildlife Research Unit.

Simmons, A.M., K.N. Hom, M. Warnecke, and J.A. Simmons. 2016. Broadband Noise Exposure Does Not Affect Hearing Sensitivity in Big Brown Bats (*Eptesicus fuscus*). *Journal of Exploratory Biology* 219:1031–40.

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.

Smallwood, K.S. 2020. USA Wind Energy-Caused Bat Fatalities Increase with Shorter Fatality Search Intervals. *Diversity* 12(3):98.

Smith, A.D., and S.R. McWilliams. 2016. Bat Activity During Autumn Relates to Atmospheric Conditions: Implications for Coastal Wind Energy Development. *Journal of Mammalogy* 97(6):1565–1577.

Solick, D.I. and C.M. Newman. 2021. Oceanic Records of North American Bats and Implications for Offshore Wind Energy Development in the United States. *Ecology and Evolution*. 11:14433–14447.

St. Germain, M.J., A.B. Kniowski, A. Silvis, and W.M. Ford. 2017. Who knew? First *Myotis odalist* (Indiana bat) Maternity Colony in the Coastal Plain of Virginia. *Northeastern Naturalist* 24(1):N5–N10.

Timpone, J., K.E. Francl, D. Sparks, V. Brack, and J. Beverly. 2011. Bats of the Cumberland Plateau and Ridge and Valley Provinces, Virginia. *Southeastern Naturalist* 10(3):515–528.

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* 11:3146.

Udell, B.J., B.R. Straw, T. Cheng, K.D. Enns, F. Winfred, B.S. Gotthold, K.M. Irvine, C. Lausen, S. Loeb, J. Reichard, T. Rodhouse, D.A. Smith, C. Stratton, W.E. Thogmartin, A.M. Wiens, B.E. Reichert. 2022. *Status and Trends of North American Bats Summer Occupancy Analysis 2010-2019* Data Release: U.S. Geological Survey data release. Available: https://doi.org/10.5066/P92JGACB.

Virginia Department of Wildlife Resources (VDWR). 2021. *Threatened and Endangered Faunal Species*. Virginia Department of Wildlife Resources, Special Status Faunal Species in Virginia. 24 pp. Available: https://dwr.virginia.gov/wp-content/uploads/media/virginia-threatened-endangered-species.pdf.

Whitaker, J.O. Jr., 1998. Life History and Roost Switching in Six Summer Colonies of Eastern Pipistrelles in Buildings. *Journal of Mammalogy* 79:651–659.

C.1.4.6. Section 3.6, Benthic Resources

Albert, L., O. Maire, F. Olivier, C. Lambert, A.Romero-Ramirez, A. Jolivet, L. Chauvaud, and S. Chauvaud. 2022. Can Artificial Magnetic Fields Alter the Functional Role of the Blue Mussel, *Mytilus edulis*? *Marine Biology* 169:75. Available: https://doi.org/10.1007/s00227-022-04065-4.

Avanti Corporation, Industrial Economics Inc. 2019. *National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Continental Shelf.* Sterling (VA): U.S. Department of the Interior, Bureau of Ocean Energy Management. Report No. OCS Study BOEM 2019-036. 201 pp.

Bakker, P, Schmittner, A, Lenaerts, JTM. 2016. Fate of the Atlantic Meridional Overturning Circulation: Strong Decline Under Continued Warming and Greenland Melting. *Geophysical Research Letters* 43: 12252–12260.

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*. January. Available: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/Smart_from_the_Start/Mid-Atlantic_Final_EA_012012.pdf. Accessed: November 15, 2021.

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. 239 pp.

Bureau of Ocean Energy Management (BOEM). 2019. *Guidelines for Providing Benthic Habitat Survey Information for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585*. Available: https://www.boem.gov/sites/default/files/renewable-energy-program/Regulatory-Information/BOEM-Renewable-Benthic-Habitat-Guidelines.pdf. Accessed: November 22, 2021.

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.

Brooks, R.A., C.N. Purdy, S.S. Bell, and K.J. Sulak. The Benthic Community of the Eastern US Continental Shelf: A Literature Synopsis of Benthic Faunal Resources. *Continental Shelf Research* 26(6):804–818.

Brothers, C.J., J. Harianto, J.B. McClintock, and M. Byrne. 2016. Sea Urchins in a High-CO_2 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.

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(1) 9:24. Available: https://doi.org/10.1016/j.marpolbul.2016.11.038.

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.

Coates, D.A., Y. Deschutter, M. Vincx, and J. Vanaverbeke. 2014. Enrichment and Shifts in Macrobenthic Assemblages in an Offshore Wind Farm Area in the Belgian Part of the North Sea. *Marine Environmental Research* 95:1–12.

Colden, A.M., and R.N. Lipcius. 2015. Lethal and Sublethal Effects of Sediment Burial on the Eastern Oyster *Crassostrea virginica*. *Marine Ecology Progress Series* 527:105–117. Available: https://www.int-res.com/articles/meps_oa/m527p105.pdf. Accessed: January 25, 2020.

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.* Available: https://tethys.pnnl.gov/sites/default/files/publications/Annex-IV-2016-State-of-the-Science-Report_LR.pdf. Accessed: December 3, 2021.

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. Dept. of the Interior, Bureau of Ocean Energy Management, Headquarters, Sterling, VA. OCS Study BOEM 2019-049. 59 pp.

Dannheim J., L. Bergström, S.N.R. Birchenough, R. Brzana, A.R. Boon, J.W.P. Coolen, J. 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. 2020. Benthic Effects of Offshore Renewables: Identification of Knowledge Gaps and Urgently Needed Research. *ICES Journal of Marine Science* 77(3):1092–1108.

De Mesel, I, F. Kerckhof, A. Norro, B. Rumes, and S. Degraer. 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. doi:10.1007/s10750-014-2157-1.

Degrear, S., D.A. Carey, J.W.P. Coolen, Z.L. 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. Available: https://doi.org/10.5670/oceanog.2020.405.

Dernie, K.M., M.J. Kaiser, and R.M. Warwick. 2003. Recovery Rates of Benthic Communities Following Physical Disturbance. *Journal of Animal Ecology* (72):1043–1056.

Dima, M. D. Nichita, G. Lohmann, M. Ionita, and M. Voiculescu. 2021. Early-Onset of Atlantic Meridional Overturning Circulation Weakening in Response to Atmospheric CO_2 Concentration. *npj | Climate and Atmospheric Science* 4.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

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.

Essink, K. 1999. Ecological Effects of Dumping of Dredged Sediments; Options for Management. *Journal of Coastal Conservation* 5:69–80. Available: https://doi.org/10.1007/BF02802741. Accessed: January 25, 2020.

Fautin, D., P. Dalton, L.S. Incze, J.-A.C. Leong, C. Pautzke, A. Rosenberg, P. Sandifer, G. Sedberry, J.W. Tunnell, Jr., I. Abbott, R.E. Brainard, M. Brodeur, L.G. Eldredge, M. Feldman, F. Moretzsohn, P.S. Vroom, M. Wainstein, and N. Wolff. 2010. An Overview of Marine Biodiversity in United States Waters. *PLOS ONE* 5(8): e11914. Doi:10.1371/journal.pone.0011914.

Good, P., J. Bamber, K. Halladay, A.B, Harper, L.C. Jackson, G. Kay, B. Kruijt, J.A. Lowe, O.L. Phillips, J. Ridley, M. Srokosz, C. Turley, and P. Williamson. 2018. Recent Progress in Understanding Climate Thresholds: Ice Sheets, the Atlantic Meridional Overturning Circulation, Tropical Forests and Responses to Ocean Acidification. *Progress in Physical Geography: Earth and Environment*. 2018;42(1):24–60.

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.

Hale, S.S., H.W. Buffum, J.A. Kiddon, M.M. Hughes. 2017. Subtidal Benthic Invertebrates Shifting Northward Along the US Atlantic Coast. *Estuaries and Coasts* (40):1744–1756.

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.). *J. Mar. Sci. Eng.* 10:564. Available: https://doi.org/10.1007/s00227-022-04065-4.

Hawkins, A.D., and A.N. Popper. 2014. Assessing the Impact of Underwater Sounds on Fishes and Other Forms of Marine Life. *Acoustics Today* (Spring 2014):30–41.

HDR 2020. *Seafloor Disturbance and Recovery Monitoring at the Block Island Wind Farm, Rhode Island – Summary Report*. OCS Study BOEM 2020-019. Final report. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. Available: https://espis.boem.gov/final%20reports/BOEM_2020-019.pdf. Accessed: December 3, 2021.

Hendrick, V.J., Z.L. Hutchison, and K.S. Last. 2016. Sediment Burial Intolerance of Marine Macroinvertebrates. *PLOS ONE* 11(2):e0149114. Available: https://doi.org/10.1371/journal.pone.0149114. Accessed: January 25, 2022.

Hoegh-Guldberg, O., and J.F. Bruno. 2010. The Impact of Climate Change on the World's Marine Ecosystems. *Science* 328(5985):1523–1528. doi: 10.1126/science.1189930. June 18, 2010.

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*. Sterling (VA): U.S. Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2018-003.

ICF. 2021. *Comparison of Environmental Effects from Different Offshore Wind Turbine Foundations*. U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Headquarters, Sterling, VA. OCS Study BOEM 2021-053. 48 pp.

Jumars, P.A., K.M. Dorgan, and S.M. Lindsay. 2015. An Update of Polychaete Feeding Guilds. *Annual Review of Marine Science* 7:497–520.

Kerckhof, F., B. Rumes, and S. Degraer. 2019. About "Mytilisation" and "Slimeification": A Decade of Succession of the Fouling Assemblages on Wind Turbines off the Belgian Coast. Chapter 7, pages 73–84 in S. Degraer, R. Brabant, B. Rumes, and L. Vigin (eds.), *Environmental Impacts of Offshore Wind Farms in the Belgian Part of the North Sea: Marking a Decade of Monitoring, Research and Innovation*. Brussels: Royal Belgian Institute of Natural Sciences, OD Natural Environment, Marine Ecology and Management.

Kraus, C., and L. Carter. 2018. Seabed Recovery Following Protective Burial of Subsea Cables – Observations from the Continental Margin. *Ocean Engineering* 4:251–261.

Lucy, J. 1983. *Development of Virginia's Artificial Fishing Reefs: A Historical Outline (1959–1977)*. Sea Grant Marine Advisory Service, Virginia Institute of Marine Science Marine Resource Report No. 83-6. Available: https://www.vims.edu/GreyLit/VIMS/mrr83-6ocr.pdfdf. Accessed: November 22, 2021.

Mavraki, N., S. Degraer, and J. Vanaverbeke. 2021. Offshore Wind Farms and the Attraction–Production Hypothesis: Insights from a Combination of Stomach Content and Stable Isotope Analyses. *Hydrobiologia* (2021) 848:1639–1657.

McCormick, M., T. Manley, D. Beletsky, A. Foley III, and G. Fahnenstiel. 2008. *Tracking the Surface Flow in Lake Champlain.* Available: http://www.glerl.noaa.gov/pubs/fulltext/2008/20080053.pdf. Accessed: December 4, 2021.

Mid-Atlantic Regional Council on the Ocean (MARCO). n.d. Mid-Atlantic Ocean Data Portal. Available: http://portal.midatlanticocean.org. Accessed: March 8, 2022.

National Oceanic and Atmospheric Administration (NOAA) Fisheries Office of Science and Technology. 2022. DisMAP Data Records. Available: https://apps-st.fisheries.noaa.gov/dismap/DisMAP.html Accessed: May 24, 2022.

Nilsson, H., and R. Rosenberg. 2003. Effects on Marine Sedimentary Habitats of Experimental Trawling Analysed by Sediment Profile Imagery. *Journal of Experimental Marine Biology and Ecology* 285–286:453–463.

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.

Pohle, G.W., and M.L.H. Thomas. 2001. *Marine Biodiversity Monitoring. Monitoring Protocol for Marine Benthos: Intertidal and Subtidal Macrofauna.* A Report by the Marine Biodiversity Monitoring Committee (Atlantic Maritime Ecological Science Cooperative, Huntsman Marine Science Centre) to the Ecological Monitoring and Assessment Network of Environment Canada.

Powell, E.N., A.M. Ewing, and K.M. Kuykendall. 2020. Ocean Quahogs (*Arctica islandica*) and Atlantic Surfclams (*Spisula solidissima*) on the Mid-Atlantic Bight Continental Shelf and Georges Bank: The Death Assemblage as a Recorder of Climate Change and the Reorganization of the Continental Shelf Benthos. *Palaeogeography, Palaeoclimatology, Palaeoecology* 537. doi: 10.1016/j.palaeo.2019.05.027.

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.

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. *Proct. Mtgs. Acoust*. 27 (1).

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. Dept. of the Interior, Bureau of Ocean Energy Management. Contract # M12PS00009. BOEM 2015-012. 176 pp.

Schmittner, A. 2005. Decline of the Marine Ecosystem Caused by a Reduction in the Atlantic Overturning Circulation. *Nature* 434, 628–633. Available: https://doi.org/10.1038/nature03476.

Sciberras, M., R. Parker, C. Powell, C. Robertson, S. Kröger, S. Bolam, and J. Geert Hiddink. 2016. Impacts of Bottom Fishing on the Sediment Infaunal Community and Biogeochemistry of Cohesive and Non-Cohesive Sediments. *Limnology and Oceanography* 61(6):2076–2089.

Slacum, H.W., W.H. Burton, E.T. Methratte, E.D. Weber, R.J. Llanso, and J. Drew-Baxter. 2011. *Assemblage Structure in Shoal and flat-Bottom Habitats on the Inner Continental Shelf of the Middle Atlantic Bight, USA*. U.S. Minerals Management Services. Ecological Sciences and Applications. Grant Number: MMS 1435-01-00-CT-85060. January 9, 2011. Available: https://doi.org/10.1577/C09-012.1

Smit, M.G.D., R.G. Jak, H. Rye, T.K. Frost, I. Singsaas, and C.C. Karman. 2008. Assessment of Environmental Risks from Toxic and Nontoxic Stressors; A Proposed Concept for a Risk-Based Management Tool for Offshore Drilling Discharges. *Integrated Environmental Assessment Management* 4:177–183. Available: https://doi.org/10.1897/IEAM_2007-036.1.

Stevenson, D., L. Chiarella, D. Stephan, R. Reid, K. Wilhelm, J. McCarthy, and M. Pentony. 2004. *Characterization of the Fishing Practices and Marine Benthic Ecosystems of the Northeast US Shelf, and an Evaluation of the Potential Effects of Fishing on Essential Fish Habitat*. NOAA Technical Memorandum NMFS-NE-181.

Thieler, E.R., D.S. Foster, E.A. Himlestoss, and D.J. Mallinson. 2014. Geologic Framework of the Northern North Carolina, USA Inner Continental Shelf and its Influence on Coastal Evolution. *Marine Geology* 348:113–130. Available: https://doi.org/10.1016/j.margeo.2013.11.011.

Thomsen, Frank, A.B. Gill, Monica Kosecka, Mathias Andersson, Michel André, Steven Degraer, Thomas Folegot, Joachim Gabriel, Adrian Judd, Thomas Neumann, Alain Norro, Denise Risch, Peter Sigray, Daniel Wood, and Ben Wilson, 2016. *MaRVEN – Environmental Impacts of Noise, Vibrations and Electromagnetic Emissions from Marine Renewable Energy.* 10.2777/272281.

Trannum, H.C., H.C. Nilsson, M.T. Schaanning, and S. Øxnevad. 2010. Effects of Sedimentation from Water-Based Drill Cuttings and Natural Sediment on Benthic Macrofaunal Community Structure and Ecosystem Processes. *Journal of Experimental Marine Biology and Ecology* 383:111–121.

U.S. Army Corps of Engineers (USACE). 2020. *South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States.*

United States Coast Guard, 2021. *Part Access Route Study (PARS): Approaches to the Chesapeake Bay, VA.* Draft Report. USCG-2019-0862. Available: https://www.regulations.gov/document/USCG-2019-0862-0019.

U.S. Environmental Protection Agency (USEPA). 2009. *Site Management and Monitoring Plan for the Dam Neck Ocean Disposal Site (DNODS).* Available: https://www.epa.gov/sites/default/files/2015-10/documents/r3_dam_neck_smmp_final_signed.pdf. Accessed: December 2, 2021.

U.S. Environmental Protection Agency (USEPA). 2019. *A Site Management and Monitoring Plan (SMMP) for the Dam Neck Ocean disposal Site, VA*. Available: https://www.epa.gov/sites/default/files/2019-09/documents/2019_dam_neck_ocean_disposal_site_smmp.pdf. Accessed: November 8, 2022.

U.S. Geological Survey (USGS). n.d. East-Coast Sediment Texture Database. Available: http://woodshole.er.usgs.gov/project-pages/sediment/. Accessed: March 8, 2022.

Virginia Marine Resources Commission (VMRC). 2020. *Artificial Reefs Map*. Available: https://www.mrc.virginia.gov/vsrfdf/reef.shtm. Accessed: November 22, 2021.

Wilding, T.A. 2014. Effects of Man-Made Structures on Sedimentary Oxygenation: Extent, Seasonality and Implications for Offshore Renewables. *Marine Environmental Research* 97:39–47.

Williams, S., M. Arsenault, B. Buczowski, J. Reid, J. Flocks, M. Kulp, S. Penland, and C. Jenkins. 2006. *Surficial Sediment Character of the Louisiana Offshore Continental Shelf Region: a GIS Compilation*. U.S. Geological Survey Open-File Report 2006-1195. Available: https://pubs.usgs.gov/of/2006/1195/htmldocs/images/pdf/report.pdf. Accessed: November 22, 2021.

Zhang, Z., Capinha, C., Karger, D.N., Turon, X., MacIsaac, H.J. and Zhan, A. 2020. Impacts of Climate Change on Geographical Distributions of Invasive Ascidians. *Marine Environmental Research* 159:104993.

C.1.4.7. Section 3.7, Birds

Ainley, D.G., E. Porzig, D. Zajanc, and L.B. Spear. 2015. Seabird Flight Behavior and Height in Response to Altered Wind Strength and Direction. *Marine Ornithology* 43:25–36.

Amélineau, F., B. Merkel, A. Tarroux, S. Descamps, T. Anker-Nilssen, O. Bjørnstad, V.S. Bråthen, O. Chastel, S. Christensen-Dalsgaard, J. Danielsen, F. Daunt, N. Dehnhard, M. Ekker, K.E. Erikstad, A. Ezhov, P. Fauchald, M. Gavrilo, G.T. Hallgrimsson, E.S. Hansen, M.P. Harris, M. Helberg, H.H. Helgason, M.K. Johansen, J.E. Jónsson, Y. Kolbeinsson, Y. Krasnov, M. Langset, S.H. Lorentsen, E. Lorentzen, M.V. Melnikov, B. Moe, M.A. Newell, B. Olsen, T. Reiertsen, G.H. Systad, P. Thompson, T.L. Thórarinsson, E. Tolmacheva, S. Wanless, K. Wojczulanis-Jakubas, J. Åström, H. Strøm. 2021. Six Pelagic Seabird Species of the North Atlantic Engage in a Fly-and-Forage Strategy During Their Migratory Movements. *Marine Ecology Progress Series* 676:127–144.

Andersen D.E., J.R. Orrin, and R.M. William. 1986. The Behavioral Response of a Red-Tailed Hawk to Military Training Activity. *Raptor Research* 20(2):65–68.

Andres, B.A, P.A. Smith, R.I. Guy Morrison, C.L. Gratto-Trevor, S.C. Brown, and C.A. Friis. 2012. Population Estimates of North American Shorebirds, 2012. *Wader Study Group Bulletin* 19(3):178–194.

Barclay R.M.R., E.F. Baerwalk, and J.C. Gruver. 2007. Variation in Bat and Bird Fatalities at Wind Energy Facilities: Assessing the Effects of Rotor Size and Tower Height. *Canadian Journal of Zoology* 85:381–387.

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.

Black B., M.W. Collopy, H.F. Percival, A.A Tiller, and P.G. Bohall. 1984. *Effects of Low Level Military Training Flights on Wading Bird Colonies in Florida.* Florida Coop. Fish and Wild1. Res. Unit, Sch. For. Res. and Conserv., Univ. of Florida. Tech. Rept. No.7.

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.

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 BOEMRE 2012-003. 366 pp.

Bureau of Ocean Energy Management (BOEM). 2014. *Atlantic OCS Proposed Geological and Geophysical Activities, Mid-Atlantic and South Atlantic Planning Areas, Final Programmatic Environmental Impact Statement*. Volumes I, II, and III; http://www.boem.gov/Atlantic-G-G-PEIS/#Final PEIS.

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. 239 pp.

Bureau of Ocean Energy Management (BOEM). 2021a. *Guidelines for Lighting and Marking of Structures Supporting Renewable Energy Development.* 9 pp.

Bureau of Ocean Energy Management (BOEM). 2021b. *South Fork Wind Farm and South Fork Export Cable Project Final Environmental Impact Statement.* 1317 pp. Report No.: OCS EIS/EA BOEM 2020-057.

Bureau of Ocean Energy Management (BOEM). 2021c. *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement*. 4 vols. 2,422 pp. Report No.: OCS EIS/EA BOEM 2021-0012.

Bureau of Ocean Energy Management (BOEM). 2022. *Coastal Virginia Offshore Wind Commercial Biological Assessment for the United States Fish and Wildlife Service*. September.

Bureau of Ocean Energy Management (BOEM) and Dominion Energy. 2022. *Revised Project Design Information Submitted to BOEM*.

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.

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.

Conomy J.T., J.A. Dubovsky, J.A. Collazo, and W.J. Fleming. 1998. Do Black Ducks and Wood Ducks Habituate to Aircraft Disturbance? *Journal of Wildlife Management* 62(3):1135–1142.

Cook A.S.C.P., and N.H.K. Burton. 2010. *A Review of the Potential Impacts of Marine Aggregate Extraction on Seabirds.* Marine Environment Protection Fund (MEPF) Project 09/P130. 114 pp.

Cook A.S.C.P., E.M. Humphreys, F. Bennet, E.A. Masden, N.H.K. Burton. 2018. Quantifying Avian Avoidance of Offshore Wind Turbines: Current Evidence and Key Knowledge Gaps. M*arine Environmental Research* 140:278–288.

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.

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. 2021. W*ildlife Strikes to Civil Aircraft in the United States, 1990- 2020.* Federal Aviation Administration, National Wildlife Strike Database, Serial Report Number 27. 141 pp.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Dooling R.J., and A.N. Popper. 2007. *The Effects of Highway Noise on Birds*. 74 pp.

Dooling, R.J., D. Buehler, M.R. Leek, and A.N. Popper. 2019. The Impact of Urban and Traffic Noise on Birds. *Acoustical Society of America* 15(3):19–27.

Drewitt A.L., and R.H.W. Langston. 2006. Assessing the Impacts of Wind Farms on Birds. *International Journal of Avian Science* 148(s1):29–42.

Dunn, E.H. 1993. Bird Mortality from Striking Residential Windows in Winter. *Journal of Field Ornithology* 64(3):302–309.

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*. OCS Study BOEM 2017-026. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs.

Erickson W.P., G.D. Johnson, and D.P. Young, Jr. 2005. A Summary and Comparison of Bird Mortality from Anthropogenic Causes with an Emphasis on Collisions. Pages 1029–1042 in C. John Ralph, and T.D. Rich (eds.), *Bird Conservation Implementation and Integration in the Americas: Proceedings of the Third International Partners in Flight Conference*. 2002 March 20-24; Asilomar, California, Volume 2 Gen. Tech. Rep. PSW-GTR-191. Albany, CA: U.S. Dept. of Agriculture, Forest Service, Pacific Southwest Research Station.

Fox A.D., and I.B.K. Petersen. 2019. Offshore Wind Farms and Their Effects on Birds. *Journal of the Danish Ornithological Society* 113: 86–101.

Fox A.D., M. Desholm, J. Kahlert, T.K. Christensen, and I.B.K. Petersen. 2006. Information Needs to Support Environmental Impact Assessment of the Effects of European Marine Offshore Wind Farms on Birds. *Ibis*, 148:129–144.

González-Solís J, A. Felicísimo, J.W. Fox, V. Afanasyev, Y. Kolbeinsson, and J. Muñoz. 2009. Influence of Sea Surface Winds on Shearwater Migration Detours. *Marine Ecology Progress Series* 391(221).

Goodale, M., and A. Millman. 2016. Cumulative Adverse Effects of Offshore Wind Energy Development on Wildlife. *Journal of Environmental Planning and Management* 59(1):1–29.

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 Assessment for Seabirds in the Deep Ocean. *Archives of Environmental Contamination and Toxicology* 73(1):33–39.

Hatch, J.M. 2018. Comprehensive Estimates of Seabird-Fishery Interactions for the US Northeast and Mid-Atlantic. *Aquatic Conservation: Marine and Freshwater Ecosystems* 28:182–193.

Hüppop O., J. Dierschke, K.M. Exo, E. Fredrich, and R. Hill. 2006. Bird Migration Studies and Potential Collision Risk with Offshore Wind Turbines. *Ibis* 148:90–109.

Huso, M., T. Conkling, D. Dalthorp, M. Davis, H. Smith, A. Fesnock, and T. Ktzner. 2021. Relative Energy Production Determines Effect of Repowering on Wildlife Mortality at Wind Energy Facilities. *Journal of Applied Ecology* 58(6):1284–1290.

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., 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.

Klem D., Jr. 1989. Bird-Window Collisions. *The Wilson Bulletin* 101(4):606–620.

Klem, D., Jr. 1990. Collisions Between Birds and Windows: Mortality and Prevention. *Journal of Field Ornithology* 61(1):120–128.

Longcore T., c. Rich, P. Mineau, B. MacDonald, D.G. Bert, L.M. Sullivan, E. Mutrie, S.A. Gauthreaux, Jr., M.L. Avery, R.L. Crawford, A.M. Manville II, E.R. Travis, and D. Drake. 2013. *Avian Mortality at Communication Towers in the United States and Canada: Which Species, How Many, and Where?* USDA National Wildlife Research Center - Staff Publications. Paper 1162. 12 pp.

Loss S.R., T. Will, and P.P. Marra. 2013a. Estimates of Bird Collision Mortality at Wind Facilities in the Contiguous United States. *Biological Conservation* 168:201–209.

Loss S.R., T. Will, and P.P. Marra. 2013b. The Impact of free-Ranging Domestic Cats on Wildlife of the United States. *Nature Communications* 4:1396.

Loss S.R., T. Will, and P.P. Marra. 2015. Direct Mortality of Birds from Anthropogenic Causes. *Annual Review of Ecology, Evolution, and Systematics* 46:99–120.

Maggini I., L.V. Kennedy, A. Macmillan, K.H. Elliott, K. Dean, and C.G. Guglielmo. 2017. Light Oiling of Feathers Increases Flight Energy Expenditure in a Migratory Shorebird. *Journal of Explanatory 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.

Minerals Management Service (MMS) and U.S. Fish and Wildlife Service (USFWS). 2009. *Memorandum of Understanding Between the Department of the Interior U.S. Minerals Management Service and the Department of the Interior U.S. Fish and Wildlife Service Regarding Implementation of Executive Order 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds."* 17 pp.

Mizrahi, D., R. Fogg, T. Magarian, V. Elia, P. Hodgetts, and D. La Puma. 2010. *Radar Monitoring of Bird and Bat Movement Patterns on Block Island and its Coastal Waters*. Final Report. Submitted to University of Rhode Island. Prepared by New Jersey Audubon. 53 pp.

Mizrahi, D.S., A. Leppold, R. Fogg, and T. Magarian. 2013. *Radar Monitoring of Bird and Bat Movement Patterns on Monhegan Island, Maine and its Coastal Waters*. Final Report. Submitted to University of Maine DeepC Wind Consortium. New Jersey Audubon Society. 219 pp.

National Audubon Society. 2019. *Survival by Degrees: 389 Bird Species on the Brink*. Virginia. 20 pp.

New Jersey Department of Environmental Quality (NJDEP). 2010. Ocean/Wind Power Ecological Baseline Studies Final Report, January 2008–December 2009. New Jersey Department of Environmental Protection, Office of Science, Trenton, NJ. 259 pp.

Newton, I. 2007. Weather-Related Mass-Mortality Events in Migrants. *Ibis* 149:453-467.

Nisbet, I.C.T., R.R. Veit, S.A. Auer, and T.P. White. 2013. *Marine Birds of the Eastern United States and the Bay of Fundy: Distribution, Numbers, Trends, Threats, and Management*. Nuttall Ornithological Monographs No. 29. Nuttall Ornithological Club, Cambridge, MA.

Normandeau Associates, Inc. 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.

North American Bird Conservation Initiative (NABCI). 2016. *The State of North America's Birds 2016.* Environment and Climate Change Canada: Ottawa, Ontario. 8pp.

North American Bird Conservation Initiative (NABCI). 2019. *The State of the Birds 2019 United States of America, America's Birds in Crisis But Conservation Works.* 5pp.

Northeast Regional Ocean Council. 2021. *Northeast Ocean Data: Birds, Total Abundance*. Available: https://www.northeast oceandata.org/data-explorer/?birds|stressor-groups. Accessed: November 14, 2021.

Orr, T., S. Herz, and D. Oakley. 2013. *Evaluation of Lighting Schemes for Offshore Wind Facilities and Impacts to Local Environments*. U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Herndon, VA. OCS Study BOEM 2013-0116. 429 pp.

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.

Panuccio, M., G. Dell'Omo, G. Bogliani, C. Catoni, and N. Sapir. 2019. Migrating Birds Avoid Flying Through Fog and Low Clouds. *International Journal Biometeorology* 63:231–239.

Paruk, J.D., E.M. Adams, H. Uher-Koch, K.A. Kovach, and D. Long. 4th, Perkins C., Schoch N., Evers D.C. 2016. Polycyclic Aromatic Hydrocarbons in Blood Related to Lower Body Mass in Common Loons. *Science of the Total Environment* 565:360-–368.

Paton, P., K. Winiarski, C. Trocki, and S. McWilliams. 2010. *Spatial Distribution, Abundance, and Flight Ecology of Birds in Nearshore and Offshore Waters of Rhode Island*. Interim technical report for the Rhode Island Ocean Special Area Management Plan 2010. University of Rhode Island, technical report #11. 239 pp.

Petersen, I.K., T.K. Christensen, J. Kahlert, M. Denholme, and A.D. Fox. 2006. *Final Results of Bird Studies at the Offshore Wind Farms at Nysted and Horns Reef, Denmark*. Commissioned report to Elsam Engineering and Energy E2 (DONG Energy). 166 pp.

Plonczikier, 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.

Regular P., W. Montevecchi, A. Hedd, G. Robertson, and S. Wilhelm. 2013. Canadian Fishery Closures Provide a Large-Scale Test of the Impact of Gillnet Bycatch on Seabird Populations. *Biology Letter* 9(4):20130088.

Research Activities Plan (RAP). 2015. *Virginia Offshore Wind Technology Advancement Project*. Prepared by Tetra Tech. Submitted December 2013. Revised February and October 2014, and April 2015. Available: http://www.boem.gov/Research-Activities-Plan/ Accessed: November 14, 2021.

Roberts A.J. 2021. *Atlantic Flyway Harvest and Population Survey Data Book*. U.S. Fish and Wildlife Service, Laurel, MD. 37 pp.

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.

Roman L., B.D. Hardesty, M.A. Hindell, and C. Wilcox. 2019. A Quantitative Analysis Linking Seabird Mortality and Marine Debris Ingestion. *Scientific Reports* 9:3202.

Rosenberg K.V., A.M. Dokter, P.J. Blancher, J.R. Sauer, A.C. Smith, P.A. Smith, J.C. Stanton, A. Panjabi, L. Helft, M. Parr, and P.P. Marra. 2019. Decline of the North American Avifauna. *Science* 366:120–124.

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 to 2016.* NOAA Technical Memorandum NMFS-NE-252. 30 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. 248 pp.

Slavik, K., C. Lemmen, W. Zhang, O. Kerimoglu, K. Klingbeil, and K.W. Wirtz. 2019. The Large-Scale Impact of Offshore Wind Farm Structures on Pelagic Primary Productivity in the Southern North Sea. *Hydrobiologia* 845:35–53.

Steinkamp M. 2008. *New England/Mid-Atlantic Coast Bird Conservation Region (BCR 30) Implementation Plan.* 251 pp.

Tetra Tech, Inc. 2012. *Appendix O: Pre-construction Avian and Bat Assessment: 2009-2011*. Block Island Wind Farm, Rhode Island State Waters. Prepared for Deepwater Wind, LLC. Providence, RI.

Thaxter C.B., G.M. Buchanan, J. Carr, S.H.M. Butchart, T. Newbold, R.E. Green, J.A. Tobias, W.B. Foden, S. O'Brien, and J.W. Pearce-Higgins. 2017. Bird and Bat Species' Global Vulnerability to Collision Mortality at Wind Farms Revealed Through a Trait-Based Assessment. *Proceeds of the Royal Society B: Biological Sciences* 284: 20170829.

Turnpenny A.W.H., and J.R. Nedwell. 1994. *The Effects on Marine Fish, Diving Mammals and Birds of Underwater Sound Generated by Seismic Surveys*. Fawley Aquatic Research laboratories Ltd. FCR 089/94. October 1994. 40 pp.

Watts, B.D. 2010. *Wind and Waterbirds: Establishing Sustainable Mortality Limits Within the Atlantic Flyway.* Center for Conservation Biology Technical Report Series, CCBTR-10-05. College of William and Mary/Virginia Commonwealth University, Williamsburg, VA. 43 pp.

Welcker J., and G. Nehls. 2016. Displacement of Seabirds by an Offshore Wind Farm in the North Sea. *Marine Ecology Progress Series* 554:173–182.

Williams K.A., E.E. Connelly, S.M. Johnson, and I.J. Stenhouse. 2015. *Wildlife Densities and Habitat Use Across Temporal and Spatial Scales on the Mid-Atlantic Outer Continental Shelf: Final Report to the Department of Energy EERE Wind & Water Power Technologies Office*. Award Number: DE-EE0005362. Report BRI 2015-11. Biodiversity Research Institute, Portland, Maine. 814 pp.

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.* U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs, Sterling, VA. OCS Study BOEM 2018-010. x+67 pp. and Appendices.

C.1.4.8. Section 3.8, Coastal Habitat and Fauna

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.

Bayraktarov, E., Saunders, M.I., Abdullah, S., Mills, M., Beher, J., Possingham, H.P., Mumby, P.J. and Lovelock, C.E. 2016. The Cost and Feasibility of Marine Coastal Restoration. *Ecol Appl* 26: 1055-1074. https://doi.org/10.1890/15-1077.

Bilkovic, D.M., M.M. Mitchell, K.J. Havens, and C.H. Hershner. 2019. Chesapeake Bay. Pages 379–404 in *World Seas: An Environmental Evaluation, Volume I: Europe, The Americas and West Africa*, Second Edition. Academic Press, Elsevier Limited.

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.

Bureau of Ocean Energy Management (BOEM). 2021. *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement.* 4 vols. 2,422 pp. Report No.: OCS EIS/EA BOEM 2021-0012.

Bureau of Ocean Energy Management (BOEM). 2022. *Coastal Virginia Offshore Wind Commercial Biological Assessment for the United States Fish and Wildlife Service*. September.

Bureau of Ocean Energy Management (BOEM) and Dominion Energy. 2022. Revised Project Design Information Submitted to BOEM.

Cassotta, S., Derkesen, C., Ekaykin, A., Hollowed, A., Kofinas, G., Mackintosh, A., Melbourne-Thomas, J., Muelbert, M.M.C., Ottersen, G., Pritchard, H., and Schuur, E.A.G. 2019. Polar Regions. Chapter 3 in H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, M. Nicolai, A. Okem, J. Petzold, B. Rama, and N. Weyer (eds.), *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*. Available: https://www.ipcc.ch/site/assets/uploads/sites/3/2019/11/SROCC_FinalDraft_Chapter3.pdf.

Chesapeake Bay Program. 2020. *Climate Change | Chesapeake Bay Program*. Available: https://www.chesapeakebay.net/issues/climate_change#:~:text=How%20rapidly%20is%20sea%20level,through%20a%20process%20called%20subsidence. Accessed: March 4, 2022.

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. Dept. of the Interior, Bureau of Ocean Energy Management, Headquarters, Sterling, VA. OCS Study BOEM 2019-049. 59 pp.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Dooling, R.J., D. Buehler, M.R. Leek, A.N. Popper. 2019. The Impact of Urban and Traffic Noise on Birds. *Acoustical Society of America* 15(3):19–27.

Erbe, C., and C. McPherson. 2017. Underwater Noise from Geotechnical Drilling and Standard Penetration Testing. *The Journal of the Acoustical Society of America* 142, EL281-EL285 (2017) https://doi.org/10.1121/1.5003328.

Glick, P, Staudt, A, Nunley, B. 2008. *Sea-Level Rise and Coastal Habitats of the Chesapeake Bay: A Summary*. National Wildlife Federation. 11pp.

Goodwin, S.E., and W.G. Shriver. 2010. Effects of Traffic Noise on Occupancy Patterns of Forest Birds. *Conservation Biology* 25(2):406–411.

Hobbs, C.H., D.E. Krantz, and G.L. Wikel. 2008. Coastal Processes and Offshore Geology. Pages 1–44 in C. Bailey (ed.), *The Geology of Virginia.* College of William and Mary.

Kitty Hawk Wind North. 2021. *Kitty Hawk Offshore Construction and Operations Plan*. Prepared by Tetra Tech, Inc. November.

Kitty Hawk Wind South. 2022. *Kitty Hawk South Offshore Wind Project Construction and Operations Plan.* Prepared by Tetra Tech, Inc. April.

McCormick, M., T. Manley, D. Beletsky, A. Foley III, and G. Fahnenstiel. 2008. *Tracking the Surface Flow in Lake Champlain*. Available: http://www.glerl.noaa.gov/pubs/fulltext/2008/20080053.pdf. Accessed: December 4, 2021.

McLaughlin, K.E., and H.P. Kunc. 2013. Experimentally Increased Noise Levels Change Spatial and Singing Behavior. *Biology Letters 9*: 20120771.

Mineral Management Service. 2007. *Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternative Use of Facilities on the Outer Continental Shelf. Final Environmental Impact Statement.* October 2007. Volume II: Chapter 5. OCS EIS/EA, MMS 2007-046. 342 pp.

Parker, S. 2020. *Loggerhead Sea Turtles Are Nesting in Virginia Beach*. Available: https://www.pilotonline.com/life/wildlife-nature/vp-nw-sea-turle-nest-0709-20200709-apv3xoqlbnd6ppvtd5h27hu53q-story.html. Accessed: December 1, 2021.

Roberts, C., M. Palmer, and D. McNeall. 2015. Quantifying the Likelihood of a Continued Hiatus in Global Warming. *Nature Climate Change* 5:337–342. Available: https://www.nature.com/articles/nclimate2531.

Sacatelli, Lathrop, R., & Kaplan, M. B. 2020. *Impacts of Climate Change on Coastal Forests in the Northeast US*. Rutgers University. Available: https://doi.org/10.7282/t3-n4tn-ah53.

Sivle, L.D., P.H. Kvadsheim and M.A. Ainslie. 2014. Potential for Population-Level Disturbance by Active Sonar in Herring. *ICES Journal of Marine Science*. DOI:10.1093/icesjms/fsu154. 10 pp.

Steimle, F., and C. Zetlin. 2000. Reef Habitats in the Middle Atlantic Bight: Abundance, Distribution, Associated Biological Communities, and Fishery Resource Use. *Marine Fisheries Review* 62:24–42.

U.S. Environmental Protection Agency (USEPA). 2009. *U.S. Climate Change Science Program; Final Report, Synthesis and Assessment Product 4.1. Coastal Sensitivity to Sea Level Rise: A Focus on the Mid-Atlantic Region*. A report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research (Synthesis and Assessment Product 4.1). Available: http://downloads.globalchange.gov/sap/sap4-1/sap4-1-final-report-all.pdf. Accessed: November 22, 2021.

Virginia Department of Conservation and Recreation, Division of Natural Heritage (VDCR-DNH). 2018a. *Virginia Natural Landscape Assessment*. Virginia Department of Conservation and Recreation, Division of Natural Heritage. Available: https://www.dcr.virginia.gov/naturalheritage/vaconvisvnla#ref. Accessed: October 13, 2020.

Virginia Department of Conservation and Recreation, Division of Natural Heritage (VDCR-DNH). 2018b. *Element Occurrences of Virginia*. Available: https://www.dcr.virginia.gov/natural-heritage/document/summapeos17.pdf. Accessed: October 8, 2020.

Wilber, D.H., and Clarke, D. G. 2007. *Defining and Assessing Benthic Recovery Following Dredging and Dredged Material Disposal.* Presentation from the 2007 WODCON XVIII Conference in Lake Buena Vista, FL.

C.1.4.9. Section 3.9, Commercial Fisheries and For-Hire Recreational Fishing

Atlantic States Marine Fisheries Commission (ASMFC). No Date. *Fisheries Resource Surveys*. Available: http://www.asmfc.org/fisheries-science/surveys. Accessed: January 4, 2022.

Bureau of Ocean Energy Management (BOEM). 2021a. *Final Environmental Impact Statement: Vineyard Wind 1 Offshore Wind Energy Project*. Available: https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Vineyard-Wind-1-FEIS-Volume-1.pdf. Accessed: November 16, 2021.

Bureau of Ocean Energy Management (BOEM). 2021b. *Final Environmental Impact Statement: South Fork Wind Farm and South Fork Export Cable Project.* Available: https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/SFWF%20FEIS.pdf. Accessed: November 16, 2021.

Claisse, J.T., D.J. Pondella, M. Love, L.A. Zahn, C.M. Williams, J.P. Williams, and A.S. Bull. 2014. Oil Platforms Off California Are Among the Most Productive Marine Fish Habitats Globally. *Proceedings of the National Academy of Sciences* 111(43):15462–15467.

Colburn, L.L., M. Jepson, C. Weng, T. Seara, J. Weiss, and J.A. Hare, J.A., 2016. Indicators of Climate Change and Social Vulnerability in Fishing Dependent Communities Along the Eastern and Gulf Coasts of the United States. *Marine Policy*, 74:323–333.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Eigaard, O.R., F. Bastardie, M. Breen, G.E. Dinesen, N.T. Hintzen, P. Laffargue, L.O. Mortensen, J.R. Nielsen, H.C. Nilsson, F.G. O'Neill, and H. Polet. 2016. Estimating Seabed Pressure from Demersal Trawls, Seines, and Dredges Based on Gear Design and Dimensions. *ICES Journal of Marine Science* 73(suppl_1):i27–i43.

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, Sterling. OCS Study BOEM 2017-026. Available: https://tethys.pnnl.gov/sites/default/files/publications/English-et-al-2017-BOEM.pdf.

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.

Fayram, A.H., and A. De Risi. 2007. The Potential Compatibility of Offshore Wind Power and Fisheries: An Example Using Bluefin Tuna in the Adriatic Sea. *Ocean & Coastal Management* 50(8):597–605.

Grabowski, J., and S. Scyphers. 2020. *Impacts to New England's Commercial Fisheries. COVID-19 Special Investigation Report.* GRI Whitepaper Series 2020-9. Available: https://globalresilience.northeastern.edu/publications-whitepaperseries-covid-19-special-i6vestigation-report-2020-9/.

Hare, J.A., W.E. Morrison, M.W. Nelson, M. Stachura, E.J. Teeters, R.B. Griffis, M.A. Alexander, J.D. Scott, L. Alade, R.J. Bell, and A.S. Chute. 2016. A Vulnerability Assessment of Fish and Invertebrates to Climate Change on the Northeast US Continental Shelf. *PLOS ONE* 11(2):e0146756.

Hopkins TE, and J.J. Cech. 2003. The Influence of Environmental Variables on the Distribution and Abundance of Three Elasmobranchs in Tomales Bay, California. *Environmental Biology of Fishes* 66(3):279–291.

Hutt, C. and G. Silva. 2019. *Economic Contributions of Atlantic Highly Migratory Species Anglers and Tournaments, 2016*. NOAA Technical Memorandum NMFS-OSF-8. Available: https://repository.library.noaa.gov/view/noaa/22420. Accessed: September 16, 2020.

Keppel, E.A., R.A. Scrosati, and S.C. Courtenay. 2012. Ocean Acidification Decreases Growth and Development in American lobster (*Homarus americanus*) Larvae. *Journal of Northwest Atlantic Fishery Science* 44:61–66.

King, D.M. 2017. *Economics of Mid-Atlantic Fisheries in the Year 2030* (Discussion Paper). Available: https://www.monmouth.edu/uci/documents/2019/11/economics-of-mid-atlantic-fisheries-in-the-year-2030.pdf/.

Kirkpatrick, J. 2014. *Who Fishes There? Establishing a Baseline of Spatial Fishing Revenue Along the Atlantic Coast.* Available: http://www.mafmc.org/briefing/april-2014. Accessed: October 12, 2020.

Kuriyama, P.T., D.S. Holland, L.A. Barnett, T.A. Branch, R.L. Hicks, and K.E. Schnie. 2019. Catch Shares Drive Fleet Consolidation and Increased Targeting But Not Spatial Effort Concentration Nor Changes in Location Choice in a Multispecies Trawl Fishery. *Canadian Journal of Fisheries and Aquatic Sciences* 76(12):2377–2389.

Langhamer, O. 2012. Artificial Reef Effect in Relation to Offshore Renewable Energy Conversion: State of the Art. *The Scientific World Journal 2012*.

Linley, E.A.S., T.A. Wilding, K. Black, A.J.S. Hawkins, and S. Mangi. 2007. *Review of the Reef Effects of Offshore Wind Farm Structures and Their Potential for Enhancement and Mitigation.* Report PML Applications Ltd. and Scottish Association for Marine Science to BERR. Available: https://tethys.pnnl.gov/sites/default/files/publications/Potential_for_Enhancement_and_Mitigation.pdf.

McCreary, S., and B. Brooks. 2019. *Atlantic Large Whale Take Reduction Team Meeting: Key Outcomes Meeting. April 23-26, 2019.*

National Marine Fisheries Service (NMFS). 2021a. *Fisheries of the United States, 2019*. U.S. Department of Commerce, NOAA Current Fishery Statistics No. 2019. Available: https://www.fisheries.noaa.gov/national/sustainable-fisheries/ fisheries-united-states.

National Marine Fisheries Service (NMFS). 2021b. *Descriptions of Selected Fishery Landings and Estimates of Vessel Revenue from Areas: A Planning Level Assessment*. Available: https://www.greateratlantic.fisheries.noaa.gov/ro/fso/reports/WIND/WIND_AREA_REPORTS/Dominion_Wind.html.

National Marine Fisheries Service (NMFS). 2021c. *Fisheries Economics of the United States, 2018.* U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-225, 246 pp.

National Marine Fisheries Service (NMFS). 2021d. *Landing and Revenue Data for Wind Energy Areas, 2008–2019*. Available: https://www.greateratlantic.fisheries.noaa.gov/ro/fso/reports/WIND/ALL_WEA_BY_AREA_DATA.html.

National Marine Fisheries Service (NMFS). 2022. *NOAA Fisheries DisMAP Data Records*. Available: https://apps-st.fisheries.noaa.gov/dismap/DisMAP.html. Accessed: May 24, 2022.

National Oceanic and Atmospheric Administration (NOAA). 2021a. *Commercial Fisheries Statistics*. Available: https://www.fisheries.noaa.gov/foss/f?p=215:200:7354399263191::NO:RP. Accessed: November 15, 2021.

National Oceanic and Atmospheric Administration (NOAA). 2021b. *Covid-19 Impact Assessment.* Available: https://media.fisheries.noaa.gov/2021-02/Updated-COVID-19-Impact-Assessment-webready.pdf.

National Oceanic and Atmospheric Administration (NOAA) Fisheries Office of Science and Technology. 2022. *DisMAP Data Records*. Available: https://apps-st.fisheries.noaa.gov/dismap/DisMAP.html. Accessed: May 24, 2022.

Popper, A., A. Hawkins, R. Fay, D. Mann, and D. Bartol. 2014. Sound Exposure Guidelines. Pages 33–51 in *Sound Exposure Guidelines for Fish and Sea Turtles: A Technical Report.* Prepared by ANSI Accredited Standards Committee S3/SC1 and registered with ANSI. ASA S3/SC14 TR-2014.

Popper, A.N., and M.C. Hastings. 2009. The Effects of Human-Generated Sound on Fish. *Integrative Zoology* 4(1):43–52.

Reid, R.N., F.P. Almeida, and C.A. Zetlin. 1999. *Essential Fish Habitat Source Document. Fishery-Independent Surveys, Data Sources, and Methods*. NOAA Technical Memorandum NMFS-NE-122. Available: https://repository.library.noaa.gov/view/noaa/3097. Accessed: January 4, 2022.

Rogers, L.A., R. Griffin, T. Young, E. Fuller, K.S. Martin, and M.L. Pinsk. 2019. Shifting Habitats Expose Fishing Communities to Risk Under Climate Change. *Nature Climate Change* 9(7):512–516.

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,

Sims, D.W., M.J. Genner, A.J. Southward, and S.J. Hawkins, 2001. Timing of Squid Migration Reflects North Atlantic Climate Variability. *Proceedings of the Royal Society of London. Series B: Biological Sciences* 268(1485):2607–2611.

Smith J., M. Lowry, C. Champion, and I. Suthers. 2016. A Designed Artificial Reef is Among the Most Productive Marine Fish Habitats: New Metrics to Address 'Production Versus Attraction.' *Marine Biology* 163(18). Available: https://doi.org/10.1007/s00227-016-2967-y.

Stevens, B.G., C. Schweitzer, and A. Price. 2019. *Hab in the MAB: Characterizing Black Sea Bass Habitat in the Mid-Atlantic Bight*. Available: https://tethys.pnnl.gov/sites/default/files/publications/Potential_for_Enhancement_and_Mitigation.pdf.

Talmage, S.C., and C.J. Gobler. 2010. Effects of Past, Present, and Future Ocean Carbon Dioxide Concentrations on the Growth and Survival of Larval Shellfish. *Proceedings of the National Academy of Sciences* 107(40):17246–17251.

U.S. Coast Guard (USCG). 2006. *Commercial Fishing Vessel Count by State/Jurisdiction and Federally Documented by the U.S. Coast*. Accessed: https://homeport.uscg.mil/Lists/Content/Attachments/939/2006%20CFV%20by%20State.pdf.

Virginia Marine Resources Commission (VMRC). No Date. *Virginia Saltwater Anglers Guide*. Available: https://mrc.virginia.gov/vswft/angler_guide/angler_web.pdf. Accessed: November 11, 2021.

Young W. No Date. *Virginia Triangle Reef: Tarav's Square Triangle*. Available: https://fishtalkmag.com/blog/virginia-triangle-reef-taravs-square-triangle. Accessed: November 22, 2021.

C.1.4.10. 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.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Kitty Hawk Wind North. 2021. *Kitty Hawk Offshore Construction and Operations Plan*. Prepared by Tetra Tech, Inc. November.

Kitty Hawk Wind South. 2022. *Kitty Hawk South Offshore Wind Project Construction and Operations Plan.* Prepared by Tetra Tech, Inc. April.

C.1.4.11. Section 3.11, Demographics, Employment, and Economics

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

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.

City of Virginia Beach. 2017.*VB Geofacts & Information.* Available: https://www.vbgov.com/government/departments/communications-info-tech/maps/pages/vb-geo-facts-and-information.aspx. Accessed: December 1, 2021.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

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. Available: https://wdiny.org/Portals/0/New%20York%20State%20and%20The%20Jobs%20Of%20Offshore%20Wind%20Energy_%20WDI2017.pdf?ver=2017-05-03-150746-023. Accessed: May 16, 2022.

National Oceanic and Atmospheric Administration (NOAA). 2021. *Quick Report Tool of Socioeconomic Data: Ocean Economy (Employment data)*. Available: https://coast.noaa.gov/quickreport/#/index.html. Accessed: September 14, 2021.

University of Delaware. 2021. *Supply Chain Contracting Forecast for U.S. Offshore Wind Power*. Special Initiative on Offshore Wind. October 2021.

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&acrdn=1. Accessed: September 30, 2021.

U.S. Census Bureau. 2021a. Table DP05: *ACS Demographic and Housing Estimates, 2019 American Community Survey 5-Year Estimates*. Available: https://data.census.gov/cedsci/all?q=&t=Populations%20and%20People. Accessed: November 19, 2021.

U.S. Census Bureau. 2021b. Table DP05: *ACS Demographic and Housing Estimates, 2010 American Community Survey 5-Year Estimate*s. Available: https://data.census.gov/cedsci/all?q=&t=Populations%20and%20People. Accessed: November 19, 2021.

U.S. Census Bureau. 2021c. Table DP03: A*CS Selected Economic Characteristics. 2015–2019 American Community Survey 5-Year Estimates*. Available: https://data.census.gov/cedsci/. Accessed: November 29, 2021.

U.S. Census Bureau. 2021d. 2019 Gazetteer Files, Virginia. Available: https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2019_Gazetteer/2019_gaz_place_51.txt. Accessed: November 29, 2021.

U.S. Census Bureau. 2022e. Table DP04: *ACS Selected Housing Characteristics. 2015–2019 American Community Survey 5-Year Estimates*. Available: https://data.census.gov/cedsci/. Accessed: May 16, 2022.

U.S. Census Bureau. 2022f. Table B25004: *ACS Vacancy Status. 2015–2019 American Community Survey 5-Year Estimates*. Available: https://data.census.gov/cedsci/. Accessed: May 16, 2022.

U.S. Census Bureau. 2021g. Table CB1900CBP: All Sectors: County Business Patterns, including ZIP Code Business Patterns, by Legal Form of Organization and Employment Size Class for the U.S., States, and Selected Geographies: 2019. Economic Surveys. Available: https://data.census.gov/cedsci/advanced?text=at-place%20employment&t=Industry. Accessed: November 29, 2021.

C.1.4.12. Section 3.12, Environmental Justice

Buonocore, J.J., P. Luckow, J. Fisher, W. Kempton, and J.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.

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.* January. Available: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/Smart_from_the_Start/Mid-Atlantic_Final_EA_012012.pdf.

Council on Environmental Quality. 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: November 17, 2021.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Kitty Hawk Wind North. 2021. *Kitty Hawk Offshore Construction and Operations Plan*. Prepared by Tetra Tech, Inc. November.

Kitty Hawk Wind South. 2022. *Kitty Hawk South Offshore Wind Project Construction and Operations Plan.* Prepared by Tetra Tech, Inc. April.

Nansemond Indian Nation. N.d. *Nansemond Indian Nation, History*. Available: https://nansemond.org/history/. Accessed: November 17, 2021.

National Guestworker Alliance. 2016. *Raising the Floor for Supply Chain Workers: Perspective from U.S. Seafood Supply Chains*. New Orleans, LA.

National Oceanic and Atmospheric Administration (NOAA). 2018. Economics: National Ocean Watch (ENOW). Available: https://coast.noaa.gov/digitalcoast/data/enow.html. Accessed: December 27, 2021.

National Oceanic and Atmospheric Administration (NOAA). 2022. *Social Indicators for Coastal Communities.* Available: https://www.fisheries.noaa.gov/national/socioeconomics/social-indicators-coastal-communities. Accessed: September 1, 2022.

Thind, M.P.S., C.W. Tessum, I.L. Azevedo, and J.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 1, 2022.

U.S. Census Bureau (USCB). 2000b. 2000 Decennial Census, Summary File 3. Available: https://data.census.gov/cedsci/. Accessed: September 1, 2022.

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/. Accessed: September 1, 2022.

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/. Accessed: September 1, 2022.

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: November 17, 2021.

C.1.4.13. Section 3.13, Finfish, Invertebrates, and Essential Fish Habitat

Alves, D., M.C.P. Amorim, and P.J. Fonseca. 2017. Boat Noise Reduces Acoustic Active Space in the Lusitanian Toadfish *Halobatrachus didactylus*. *Proceedings of Meetings on Acoustics* 27:919933. doi:10.1121/2.0000325.

Andres, M. 2016. On the Recent Destabilization of the Gulf Stream Path Downstream of Cape Hatteras. *Geophysical Research Letters* 43(18):9836–9842.Available: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2016GL069966. Accessed: November 22, 2021.

Baker, K., and U. Howson. 2021. *Data Collection and Site Survey Activities for Renewable Energy on the Atlantic Outer Continental Shelf. Biological Assessment*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. October 2018, Revised February 2021.

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://OSSis.boem.gov/final%20reports/5330.pdf. Accessed: November 24, 2021.

Boyd, S. E., Limpenny, D. S., Rees, H. L., and Cooper, K. M. 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.

Bullard, S.G., G. Lambert, M.R. Carman, J. Byrnes, R.B. Whitlatch, G. Ruiz, R.J. Miller, L. Harris, P.C. Valentine, J.S. Collie, J. Pederson, D.C. McNaught, A.N. Cohen, R.G. Asch, J. Dijkstra, and K. Heinonen. 2007. The Colonial Ascidian *Didemnum* sp. A: Current Distribution, Basic Biology, and Potential Threat to Marine Communities of the Northeast and West Coasts of North America. *Journal of Experimental Marine Biology and Ecology* 342(1):99–108. Available: https://doi.org/10.1016/j.jembe.2006.10.020. Accessed: November 1, 2022.

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.* 366 pp. Report No.: OCS EIS/EA BOEM 2012-003.

Bureau of Ocean Energy Management (BOEM). 2014a. *Programmatic Environmental Impact Statement for Atlantic OCS Proposed Geological and Geophysical Activities in the Mid-Atlantic and South Atlantic Planning Areas*. Office of Renewable Energy Programs. OCS EIS/EA BOEM 2014-001.

Bureau of Ocean Energy Management (BOEM). 2014b. *Virginia Offshore Wind Technology Advancement Project on the Atlantic Outer Continental Shelf*. Revised Environmental Assessment. 240 pp. Report No.: OCS EIS/EA BOEM 2015-031.

Bureau of Ocean Energy Management (BOEM). 2021a. *Guidelines for Lighting and Marking of Structures Supporting Renewable Energy Development*. April 28, 2021. 9 pp.

Bureau of Ocean Energy Management (BOEM). 2021b. *Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement Volume I*. Available: https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Vineyard-Wind-1-FEIS-Volume-1.pdf. Accessed: November 22, 2021.

Bureau of Ocean Energy Management (BOEM). 2022a. *Draft Coastal Virginia Offshore Wind Commercial Project Essential Fish Habitat Assessmen*t. September 2022.

Bureau of Ocean Energy Management (BOEM). 2022b. *Draft Coastal Virginia Offshore Wind Commercial Project Biological Assessment*. September 2022. 147 pp.

Burkill, Peter H., and Chris Reid. 2010. *Plankton Biodiversity of the North Atlantic: Changing Patterns Revealed by the Continuous Plankton Recorder Survey.* December. DOI:10.5270/OceanObs09.pp.09.

Carlton. J., D.M. Reid, and H. van Leeuwen. 1995. *The Role of Shipping in the Introduction of Nonindigenous Aquatic Organisms to the Coastal Waters of the United States (Other than the Great Lakes) and an Analysis of Control Options*. Report to US Coast Guard, Washington DC.

Casper, B.M., P.S. Lobel, and H.Y. Yan. 2013. Effects of Exposure to Pile Driving Sounds on Fish Inner Ear Tissues. *Comparative Biochemistry and Physiology, Part A* 166 (2013):352–360.

Claisse, J.T., D.J. Pondella II, M. Love, L.A. Zahn, C.M. Williams, J.P. Williams, and A.S. Bull. 2014. Oil Platforms Off California are among the Most Productive Marine Fish Habitats Globally. *Proceedings of the National Academy of Sciences of the United States of America* 111 (43):15462–15467. October 28, 2014. First published October 13, 2014. Available: https://www.pnas.org/content/pnas/111/43/15462.full.pdf. Accessed: November, 28, 2021.

Coen, L.D., R.E. Grizzle, J.L. Lowery, and K.T. Paynter Jr. 2007. *The Importance of Habitat Created by Molluscan Shellfish to Managed Species along the Atlantic Coast of the United States*. ASMFC Habitat Management Series #8. Atlantic States Marine Fisheries Commission. 115 pp.

Crocker, S.E., and F.D. Fratantonio. 2016. *Characteristics of Sounds Emitted During High-Resolution Marine Geophysical Surveys*. Naval Undersea Warfare Center Division, Newport, RI. For U.S. Department of the Interior, Bureau of Ocean Energy Management, Environmental Assessment Division and U.S. Geological Survey. OCS Study BOEM 2016-044. NUWC-NPT Technical Report 12,203, 24 March 2016. 266 pp.

Crocker, S.E., F.D. Fratantonio, P.E. Hart, D.S. Foster, T.F. O'Brien, and S. Labak. 2019. Measurements of Sounds Emitted by Certain High-Resolution Geophysical Survey Systems. *IEEE Journal of Oceanic Engineering* 4(3):796–813.

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.

Cutter, G., and R. Diaz. 1998. Part I: Benthic Habitats and Biological Resources Off the Virginia Coast 1996 and 1997. In *Environmental Studies Relative to Potential Sand Mining in the Vicinity of the City of Virginia Beach, Virginia.* Virginia Institute of Marine Science, College of William and Mary. Available: http://dx.doi.org/doi:10.21220/m2-mx15-9c77. Accessed: September 22, 2022.

Degraer, S., R. Brabant, B. Rumes, and L. Vigin. 2018. *Environmental Impacts of Offshore Wind Farms in the Belgian Part of the North Sea, Assessing and Managing Effect Spheres of Influence.* Brussels: Royal Belgian Institute of Natural Sciences, OD Natural Environment, Marine Ecology and Management, 136 pp.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Drake, L.A. 2015. Review of "Global Maritime Transport and Ballast Water Management" by M. David and S. Gollasch, eds. *Biological Invasions* 17:3063–3065.

Eklund, A.M., and T.E. Targett. 1991. Seasonality of Fish Catch Rates and Species Composition from the Hard Bottom Trap Fishery in the Middle Atlantic Bight (US East Coast). *Fish. Res*. 12:1–22.

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: November 28, 2021.

Epifanio, C.E. 2013. Invasion Biology of the Asian Shore Crab *Hemigrapsus sanguineus*: A Review. *Journal of Experimental Marine Biology and Ecology* 441 (2013):33–49. Available: http://www.edc.uri.edu/nrs/classes/nrs555/assets/readings_2017/Epifanio_AsianShoreCrab_JEMBE_2013.pdf. Accessed: November 24, 2021.

Fabrizio, M.C., J.P. Manderson, 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.

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, F.A. Borsuk, D.C. Brady, M.J. Cashman, P. Colarusso, J.H. Grabowski, J.P. Hawkes, R. Mercaldo-Allen, D.B. Packer, and D.K. Stevenson. 2021. An Assessment of Marine, Estuarine, and Riverine Habitat Vulnerability to Climate Change in the Northeast U.S. *PLOS ONE* 16(12): e0260654. doi:10.1371/journal.pone.0260654.

Fisheries Hydroacoustic Working Group (FHWG). 2008. *Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities*. Memorandum to Applicable Agency Staff. 12 June 2008. 4 pp.

Glasby, T.M., Connell, S.D., Holloway, M.G. and Hewitt, C.L. 2007. Nonindigenous Biota on Artificial Structures: Could Habitat Creation Facilitate Biological Invasions? *Marine Biology* 151(3):887–895.

Greater Atlantic Region Fisheries Office (GARFO). 2021. *Section 7: Consultation Technical Guidance in the Greater Atlantic Region: List of Resources to Help Action Agencies Draft Their Biological Assessments*. Available: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultation-technical-guidance-greater-atlantic. Accessed: December 10, 2021.

Guida, V., A. Drohan, H. Welch, J. McHenry, D. Johnson, V. Kentner, J. Brink, D. Timmons, and E. Estlea-Gomez. 2017. *Habitat Mapping and Assessment of Northeast Wind Energy Areas. December 2017.* Sterling, VA: US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2017-088. Available: https://espis.boem.gov/final%20reports/5647.pdf. Accessed: November 22, 2021.

Hare, J.A., W.E. Morrison, M.W. Nelson, 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, D. Kircheis, J.F. Kocik, S.M. Lucey, C.T. McCandless, L.M. Milke, D.E. Richardson, E. Robillard, H.J. Walsh, M.C. McManus, K.E. Marancik, and C.A. Griswold. 2016. A Vulnerability Assessment of Fish and Invertebrates to Climate Change on the Northeast US Continental Shelf. *PLOS ONE* 11(2):e0146756.

Hawkins, A.D., and A.D.F. Johnstone. 1978. The Hearing of the Atlantic Salmon, *Salmo salar*. *Journal of Fish Biology* 13(6):655–673.

Hawkins, A.D., and A.N. Popper. 2017. A Sound Approach to Assessing the Impact of Underwater Noise on Marine Fishes and Invertebrates. *ICES Journal of Marine Science* 74(3):635–651. doi:10.1093/icesjms/fsw205.

HDR. 2020. *Benthic and Epifaunal Monitoring During Wind Turbine Installation and Operation at the Block Island Wind Farm, Rhode Island – Project Report*. Final Report to the U.S. Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2020-044. 2 vols. Accessed: 2 November, 2022.Available: https://espis.boem.gov/final%20reports/BOEM_2020-044.pdf.

Hopkins T.E, and J.J. Cech. 2003. The Influence of Environmental Variables on the Distribution and Abundance of Three Elasmobranchs in Tomales Bay, California. *Environmental Biology of Fishes* 66(3):279–291.

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*. Sterling (VA): U.S. Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2018-003. 254 pp.

Johnson, T.L., J.J. van Berkel, L.O. Mortensen, M.A. Bell, I. Tiong, B. Hernandez, D.B. Snyder, F. Thomsen, and O.S. Petersen. 2021. *Hydrodynamic Modeling, Particle Tracking and Agent-Based Modeling of Larvae in the U.S. Mid-Atlantic Bight.* OCS Study BOEM 2021-049. 232 pp.

Kane, J. (2011) Inter-Decadal Variability of Zooplankton Abundance in the Middle Atlantic Bight. *Journal of Northwest Atlantic Fishery Science* 43:81–92. doi: 10.2960/J.v43.m674.

Kohut, J. and J. Brodie. 2019. *Offshore Wind and the Mid-Atlantic Cold Pool*. Workshop Proceedings and White Paper. Available: https://rucool.marine.rutgers.edu/wp-content/uploads/2020/10/PartnersWorkshop_WhitePaper_Final.pdf. Accessed: March 7, 2022.

Kraus, C., and L. Carter. 2018. Seabed Recovery Following Protective Burial of Subsea Cables-Observations from the Continental Margin. *Ocean Engineering* 157:251–261.

Kritzer, J.P., M. DeLucia, E. Greene, C. Shumway, M.F. Topolski, J. Thomas-Blate, L.A. Chiarella, K.B. Davy, and K. Smith. 2016. The Importance of Benthic Habitats for Coastal Fisheries. *BioScience* 66(4):274–284. Available: https://doi.org/10.1093/biosci/biw014. Accessed: December 8, 2021.

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(3):286–296.

Malatesta, R.J., and P.J. Auster. 1999. The Importance of Habitat Features in Low-Relief Continental Shelf Environments. *Oceanologica Acta* 22(6):623–626.

Mid-Atlantic Regional Council on the Ocean (MARCO). n.d. Mid-Atlantic Ocean Data Portal. Available: http://portal.midatlanticocean.org. Accessed: March 8, 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, Final Environmental Impact Statement*. Four volumes. Report No.: OCS EIS/EA MMS 2007-046.

Mohan Mahanty, M., G. Latha, M.C. Sanjana, and A. Thirunavukarasu. 2017. Passive Acoustic Observations in the Shallow Waters of Northwest Bay of Bengal to Study the Effects of Impact Pile Driving on Fish Chorus. *Marine Technology Society Journal* 51(1):23–31.

Mooney, T., R. Hanlon, J. Christensen-Dalsgaard, P. Madsen, D. Ketten, and P. Nachtigall. 2010. Sound Detection by the Longfin Squid (*Loligo pealeii*) Studied with Auditory Evoked Potentials: Sensitivity to Low-Frequency Particle Motion and Not Pressure. *The Journal of Experimental Biology* 213:3748–3759. Available: https://doi.org/10.1242/jeb.048348. Accessed: December 10, 2021.

Moser, J. and G. R. Shepard. 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.

National Marine Fisheries Service (NMFS). 2006. *Final Consolidated Atlantic Highly Migratory Species Fishery Management Plan*. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD. Public Document. 1,600 pp.

National Marine Fisheries Service (NMFS). 2017. *Final Amendment 10 to the 2006 Consolidated Atlantic Highly Migratory Species Fishery Management Plan: Essential Fish Habitat and Environmental Assessment*. Silver Spring, MD. 442 pp.

National Oceanic Atmospheric Administration (NOAA). 2021b. *State of the Ecosystem Mid-Atlantic*. Available: https://apps-nefsc.fisheries.noaa.gov/rcb/publications/soe/SOE_MAFMC_2021_Final-revised.pdf. Accessed: December 5, 2021.

National Oceanic Atmospheric Administration (NOAA). 2021a. *Status of Stocks 2020.* Annual Report to Congress on the Status of U.S. Fisheries. 11 pp. Available: https://media.fisheries.noaa.gov/2021-05/2020%20Status%20of%20Stocks%20RtC_5-18-21_FINAL.pdf?null.

National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2022a. *Species Directory: Scalloped Hammerhead Shark*. Available: https://www.fisheries.noaa.gov/species/scalloped-hammerhead-shark. Accessed: October 21, 2022.

National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2022b. *Species Directory, Oceanic Whitetip Shark* Carcharhinus longimanus. Available: https://www.fisheries.noaa.gov/species/oceanic-whitetip-shark. Accessed: October 21, 2022.

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: November 9, 2021.

Pacific Marine Environmental Laboratory (PMEL). 2020. *Strategic Plan 2021-2030.* U.S. Department of Commerce, National Oceanic and Atmospheric Administration. 33 pp.

Pederson, J. (ed). 2005. *Marine Bioinvasions: First International Conference*. MIT Sea Grant College Program, Cambridge, Massachusetts. Available: https://www.buzzardsbay.org/download/marine_invaders_in_the_northeast_2003.pdf. Accessed: November 24, 2021.

Pinsky, M., B. Worm, M. Fogarty, J. Sarmiento, and S. Levin. 2013. Marine Taxa Track Local Climate Velocities. *Science* 341(6151):1239–1242. Available: https://doi.org/10.1126/science.1239352. Accessed: December 9, 2020.

Popper, A.N., and M.C. Hastings. 2009. The Effects of Anthropogenic Sources of Sound on Fishes. *Journal of Fish Biology* 75(3):455–489.

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. Pages 33–51 in *ASA S3/SC1.4 TR-2014 Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report prepared by ANSI-Accredited Standards Committee S3/SC1 and Registered with ANSI.*

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.

Robins, C.R., and G.C. Ray. 1986. *A Field Guide to the Atlantic Coast Fishes. Peterson Field Guide Series.* Houghton Mifflin, New York. 942 pp.

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. Dept. of the Interior, Bureau of Ocean Energy Management. Contract # M12PS00009. BOEM 2015-012. 176 pp.

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.

Sims, D.W., M.J. Genner, A.J. Southward, and S.J. Hawkins. 2001. Timing of Squid Migration Reflects North Atlantic Climate Variability. *Proceedings of the Royal Society of London. Series B: Biological Sciences* 268(1485):2607–2611.

Smith, J. A., M. B. Lowry, C. Champion, I. M. Suthers. 2016. A Designed Artificial Reef is Among the Most Productive Marine Fish Habitats: New Metrics to Address 'Production Versus Attraction.' *Mar. Biol.* 163:188.

Stevenson, D., L. Chiarella, D. Stepha, R. Reid, K. Wilhelm, J. McCarthy, and M. Pentony. 2004. *Characterization of the Fishing Practices and Marine Benthic Ecosystems of the Northeast US Shelf, and an Evaluation of the Potential Effects of Fishing on Essential Fish Habitat*. NOAA Technical Memorandum NMFS-NE-181. Available: http://roa.midatlanticocean.org/wp-content/uploads/2016/01/stevenson-et-al-2004.pdf.

Solé, M., M. Lenoir, M. Durfort, M. Lopez-Bejar, A. Lombarte, and M. Adré. 2013. Ultrastructural Damage of *Loligo vulgaris* and *Illex coindetii* Statocysts After Low Frequency Sound Exposure. *PLOS ONE*, 8(10):e78825. Available: https://doi.org/10.1371/journal.pone.0078825. Accessed: December 10, 2020.

Tetra Tech, Inc. 2015. *Virginia Offshore Wind Technology Advancement Project (VOWTAP) Research Activities Plan*. Prepared by Tetra Tech for Dominion and Virginia Department of Mines, Minerals, and Energy. Available: https://www.nao.usace.army.mil/Portals/31/docs/regulatory/publicnotices/2014/July/NAO-2013-0418_RAP_FINAL_Rev_2.pdf?ver=guEU6KOo5u1qZHd7DG5i4Q%3D%3D. Accessed: November 22, 2021.

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: November 24, 2021

U.S. Geological Survey (USGS). n.d. East-Coast Sediment Texture Database. Available: http://woodshole.er.usgs.gov/project-pages/sediment/. Accessed: March 8, 2022.

Weilgart, L. 2018. *The Impact of Ocean Noise Pollution on Fish and Invertebrates*. Report for OceanCare, Switzerland. 34 pp.

Welch, H., J. McHenry, and V. Kentner. 2018. Habitat Mapping and Assessment of Northeast Wind Energy Areas. 10.13140/RG.2.2.18064.51209.

C.1.4.14. Section 3.14, Land Use and Coastal Infrastructure

Bureau of Ocean Energy Management (BOEM) and Dominion Energy. 2022. Revised Project Design Information Submitted to BOEM.

City of Virginia Beach. 2008. Zoning Grid Reference Maps in PDF Format. Grid M8 and K7. Available: https://www.vbgov.com/government/departments/planning/maps/Documents/zoning-grid-reference-map.pdf. Accessed: May 27, 2022.

City of Virginia Beach. 2017. *Zoning Districts – General Description and Purpose*. Available: https://www.vbgov.com/government/departments/planning/Documents/zoningdistricts.pdf. GIS data available: https://gisapps.vbgov.com/map/. Accessed: May 27, 2022.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Kitty Hawk Wind North. 2021. *Kitty Hawk Wind Offshore Construction and Operations Plan*. Prepared by Tetra Tech, Inc. November.

Kitty Hawk Wind South. 2022. *Kitty Hawk South Offshore Wind Construction and Operations Plan*. Prepared by Tetra Tech, Inc. April.

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. Accessed: May 27, 2022.

Virginia Port Authority. 2019. *Virginia Begins First Phase of 55-Foot Dredging Project Ahead of Schedule*. News Release. October 31, 2019. Available: https://www.portofvirginia.com/who-we-are/newsroom/virginias-path-to-55-feet-is-set-first-phase-of-dredging-to-begin-by-january-2020/. Accessed: May 27, 2022.

C.1.4.15. Section 3.15, Marine Mammals

Bailey, H., K.L. Brookes, and P.M. Thompson. 2014. Assessing Environmental Impacts of Offshore Wind Farms: Lessons Learned and Recommendations for the Future. *Aquatic Biosystems* 10(1):1–13.

Baker, K., and U. Howsen. 2021. *Data Collection and Site Survey Activities for Renewable Energy on the Atlantic Outer Continental Shelf. Biological Assessment*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. October 2018, Revised February 2021.

Barkaszi, M.J., M. Fonseca, T. Foster, A. Malhotra, and K. Olsen. 2021. *Risk Assessment to Model Encounter Rates between Large Whales and Vessel Traffic from Offshore Wind Energy on the Atlantic OCS.* Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM, 34. 54 pp.

Baulch, S., and C. Perry. 2014. Evaluating the Impacts of Marine Debris on Cetaceans. *Marine Pollution Bulletin* 80:210–221.

Benaka L.R., D. Bullock, A.L. Hoover, and N.A. Olsen. 2019. *U.S. National Bycatch Report First Edition Update 3.* Silver Spring (MD): U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service. Report No. NOAA Technical Memorandum NMFS-F/SPO-19. 95 pp.

Branstetter, B.K., V.F. Bowman, D.S. Houser, M. Tormey, P. Banks, J.J. Finneran, and K. Jenkins. 2018. Effects of Vibratory Pile Driver Noise on Echolocation and Vigilance in Bottlenose Dolphins (*Tursiops truncatus*). *The Journal of the Acoustical Society of America* 143(1):429–439.

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* B282:20142929.

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. 239 pp.

Bureau of Ocean Energy Management (BOEM). 2019a. *Guidelines for Providing Information on Marine Mammals and Sea Turtles for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585.* Sterling (VA): U.S. Department of the Interior, Bureau of Ocean Energy Management. 15 pp.

Bureau of Ocean Energy Management (BOEM). 2019b. *National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Outer Continental Shelf*. 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: November 15, 2021.

Burge, C.A., C. Mark Eakin, C.S. Friedman, B. Froelich, P.K. Hershberger, E.E. Hofmann, L.E. Petes, K.C. Prager, E. Weil, B.L. Willis, and S.E. Ford. 2014. Climate Change Influences on Marine Infectious Diseases: Implications for Management and Society. *Annual Review of Marine Science* 6:249–277.

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.

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.

Christiansen, N., U. Daewel, B. Djath, and C. Schrum. 2022. *Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes.* Frontiers in Marine Science. 64 pp.

Crocker, S.E., and F.D. Fratantonio. 2016. *Characteristics of Sounds Emitted During High-Resolution Marine Geophysical Surveys. Naval Undersea Warfare Center Division, Newport, RI*. For U.S. Department of the Interior, Bureau of Ocean Energy Management, Environmental Assessment Division and U.S. Geological Survey. OCS Study BOEM 2016-044. NUWC-NPT Technical Report 12,203, 24 March 2016. 266 pp.

Crocker, S.E., F.D. Fratantonio, P.E. Hart, D.S. Foster, T.F. O'Brien, and S. Labak. 2019. Measurements of Sounds Emitted by Certain High-Resolution Geophysical Survey Systems. *IEEE Journal of Oceanic Engineering* 4(3):796–813.

Degraer, S., D.A. Carey, J.W. Coolen, Z.L. Hutchison, F. Kerckhof, B. Rumes, and J. Vanaverbeke. 2020. Offshore Wind Farm Artificial Reefs Affect Ecosystem Structure and Functioning. *Oceanography* 33(4):48–57.

Department for Business Enterprise and Regulatory Reform (BERR). 2008. *Review of Cabling Techniques and Environmental Effects Applicable to the Offshore Wind Energy Industry*. Technical Report, January 2008. Available: https://tethys.pnnl.gov/sites/default/files/publications/Cabling_Techniques_and_Environmental_Effects.pdf. Accessed: February 20, 2022.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

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 Experiment Biology* 220(16):2878-2886.

Ellison, W.T., B.L. Southall, C.W. Clark, and A.S. Frankel. 2012. A New Context-Based Approach to Assess Marine Mammal Behavioral Responses to Anthropogenic Sounds. *Conservation Biology* 26(1):21–28.

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.

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*. Collaborative Offshore Wind Research into the Environment (COWRIE), Ltd, UK.

Golbazi, M., C.L. Archer, and S. Alessandrini. 2022. Surface Impacts of Large Offshore Wind Farms. *Environmental Research Letters* 17(2022):064021.

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.

Gubbins, C. 2002. Use of Home Ranges by Resident Bottlenose Dolphins (*Tursiops truncatus*) in a South Carolina Estuary. *Journal of Mammalogy* 83(1):178–187.

Hayes, S.A., E. Josephson, K. Maze-Foley, and P.E. Rosel (eds.). 2019. *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments – 2018.* Woods Hole (MA): U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Northeast Fisheries Science Center. Report No. NOAA Technical Memorandum NMFS-NE-258. 306 pp.

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.* Woods Hole (MA): U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Northeast Fisheries Science Center. Report No. NOAA Technical Memorandum NMFS-NE-264. 479 pp.

Hayes, S.A., E. Josephson, K. Maze-Foley, P.E. Rosel, and J. Turek. 2021. *US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments 2020*. Woods Hole (MA): U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Northeast Fisheries Science Center. Report No. NOAA Technical Memorandum NMFS-NE-271. 403 pp.

Illingworth & Rodkin, Inc. 2017. *Pile-Driving Noise Measurements at Atlantic Fleet Naval Installations: 28 May 2013 - 28 April 2016*. Prepared for Naval Facilities Engineering Command Atlantic under HDR Environmental, Operations and Construction, Inc. Contract No. N62470-10-D-3011, Task Order CTO33. 152 pp.

Jensen, J.H., L. Bejder, M. Wahlberg, N. Aguilar Solo, M. Johnson, and P.T. Madsen. 2009. Vessel Noise Effects on Delphinid Communication. *Marine Ecology Progress Series* 395:161–175.

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* 33:1432–158.

Kellison, R.G.T., and G.R. Sedberry. 1998. The Effects of Artificial Reef Vertical Profile and Hole Diameter on Fishes Off South Carolina. *Bulletin of Marine Sciences* 62(3):763–780.

Kirschvink, J.L. 1990. Geomagnetic Sensitivity in Cetaceans an Update with Live Strandings Recorded in the US. In J. Thomas and R. Kastelein (eds.), *Sensory Abilities of Cetaceans*. Plenum Press, NY.

Kite-Powell, H.L., A. Knowlton, and M. Brown. 2007. *Modeling the Effect of Vessel Speed on Right Whale Ship Strike Risk*. Unpublished Report for NOAA/NMFS Project NA04NMF47202394. 8 pp.

Knowlton, A.R., P.K. Hamilton, M.K. Marx, H.P. Pettis, and S.D. Kraus. 2012.Monitoring North Atlantic Right Whale *Eubalaena galcialis* Entanglement Rates: A 30-Year Retrospective. *Marine Ecology Progress Series* 466:293–302.

Kraus, S.D., M.W. Brown, H. Caswell, C.W. Clark, M. Fujiwara, P.H. Hamilton, R.D. Kenney, A.R. Knowlton, S. Landry, C.A. Mayo, W.A. McLellan, M.J. Moore, D.P. Nowacek, D.A. Pabst, A.J. Read, and R.M. Rolland. 2005. North Atlantic Right Whales in Crisis. *Science* 309:561–562.

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. Final report. Sterling, Virginia: U.S. Department of the Interior, Bureau of Ocean Energy Management.

LaBrecque, E., C. Curtice, J. Harrison, S.M. Van Parijs, and P.N. Halpin. 2015. Biologically Important Areas for Cetaceans Within US Waters-East Coast Region. *Aquatic Mammals* 41(1):17.

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.

Lewison, R.L., L.B. Crowder, B.P. Wallace, J.E. Moore, T. Cox, R. Zydelis, S. McDonald, A. DiMatteo, D.C. Dunn, and C.Y. Kot. 2014. Global Patterns of Marine Mammal, Seabird, and Sea Turtle Bycatch Reveal Taxa-Specific and Cumulative Megafauna Hotspots. *Proceedings of the National Academy of Sciences* 111(14):5271.

Madsen, P.T., M. Wahlberg, J. Tougaard, K. Lucke, P. Tyack. 2006. Wind Turbine Underwater Noise and Marine Mammals: Implications of Current Knowledge and Data Needs. *Marine Ecology Progress Series* 309:279–295.

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.

McConnell, B.J., M.A. Fedak, P. Lovell, and P.S. Hammond. 1999. Movements and Foraging Areas of Grey Seals in the North Sea. *Journal of Applied Ecology* 36:573–590.

Meyer-Gutbrod, E.L., C.H. Greene, P.J. Sullivan, and A. J. Pershing. 2015. Climate-Associated Changes in Prey Availability Drive Reproductive Dynamics of the North Atlantic Right Whale Population. *Marine Ecology Progress Series* 535:243–258.

Miller, J.H., and G.R. Potty. 2017. Measurements of Underwater Sound Radiated from an Offshore Wind Turbine. *The Journal of the Acoustical Society of America* 142(4):2699.

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.

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*. U.S. Department of Commerce, National Oceanic and Atmospheric Administration. NOAA Technical Memorandum NMFS-OPR-59. 167 pp.

National Marine Fisheries Service (NMFS). 2021. *Draft U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessment 2021*. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service. Draft published 25 October 2021, 86 FR 58887. 329 pp.

National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2020. *Fin whale (*Balaenoptera physalus*) 5-Year Review: Summary and Evaluation*. NMFS Office of Protected Resources, Silver Spring, MD. 23 pp.

National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2022a. *2017–2022 North Atlantic Right Whale Unusual Mortality Event*. U.S. Department of Commerce, National Oceanic and Atmospheric Administration. Available: https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2022-north-atlantic-right-whale-unusual-mortality-event. Accessed: May 19, 2022.

National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2022b. *2016–2022 Humpback Whale Unusual Mortality Event along the Atlantic Coast.* Available: https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2022-humpback-whale-unusual-mortality-event-along-atlantic-coast. Accessed: May 19, 2022.

National Oceanic and Atmospheric Administration (NOAA) Fisheries. n.d. Marine Mammal Protection Act, 1972 (as amended in 1994). Available: https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-protection-act.

National Science Foundation and U.S. Geological Survey (NSF and USGS). 2011. *Final Programmatic Environmental Impact Statement/Overseas Environmental Impact Statement for Marine Seismic Research Funded by the National Science Foundation or Conducted by the U.S. Geological Survey.* Prepared for National Science Foundation and U.S. Geological Survey. June 2011. 514 pp.

Navy Marine Species Monitoring. 2018. *Pinniped Tagging and Tracking in Southeast Virginia*. Available: https://www.navymarinespeciesmonitoring.us/reading-room/project-profiles/pinniped-tagging-and-tracking-southeast-virginia/.

Newby, T.C., F.M. Hart, and R.A. Arnold. 1970. Weight and Blindness of Harbor Seals. *Journal of Mammalogy* 51(1):152.

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.

Ocean Biodiversity Information System (OBIS). 2020. OBIS 2.0 Database. Available: http://obis.org. Accessed: December 10, 2021.

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.

Pace, R.M. 2021. *Revisions and Further Evaluations of the Right Whale Abundance Model: Improvements for Hypothesis Testing.* Woods Hole (MA): U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Northeast Fisheries Science Center. Report No. NOAA Technical Memorandum NMFS-NE-269. 54 pp.

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.

Patenaude, N.J., W.J. Richardson, M.A. Smultea, W.R. Koski, and G.W. Miller. 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.

Pettis H.M., R.M. Pace, III, and P.K. Hamilton. 2021. *North Atlantic Right Whale Consortium 2020 Annual Report Card*. Report to North Atlantic Right Whale Consortium. NARWC, Boston, MA

Pettis, H.M., R.M. Pace, and P.K. Hamilton. 2022. *North Atlantic Right Whale Consortium 2021 Annual Report Card. Report to North Atlantic Right Whale Consortium*. Boston, MA: NARWC. 25 pp. Available: https://www.narwc.org/uploads/1/1/6/6/116623219/2021report_cardfinal.pdf. Accessed: April 4, 2022.

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* 77(3):1238–1246.

Raghukumar, K., C. Chartrand, G. Chang, L. Cheung, and J. Roberts. 2022. Effect of Floating Offshore Wind Turbines on Atmospheric Circulation in California. *Frontiers in Energy Research* 10:1–14.

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* 7233–7246.

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.

Reeves, R.R., K. McClellan, and T.B. Werner. 2013. Marine Mammal Bycatch in Gillnet and Other Entangling Net Fisheries, 1990 to 2011. *Endangered Species Research*. 20(1):71–97.

Reygondeau G, and G. Beaugrand. 2011. Future Climate-Driven Shifts in Distribution of *Calanus finmarchicus*. *Global Change Biology* 17:756−766.

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 1.0. 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. 2020. *Final Project Report: Marine Species Density Data Gap Assessments and Update for the AFTT Study Area, 2018-2020 (Opt. Year 3).* Document version 1.4. Report prepared for Naval Facilities Engineering Command, Atlantic by the Duke University Marine Geospatial Ecology Lab, Durham, NC. 142 pp.

Roberts, J., T. Yack, and P. Halpin. 2022. *Habitat-Based Marine Mammal Density Models for the U.S. Atlantic: Latest Versions.* Available: https://seamap.env.duke.edu/models/Duke/EC/. Accessed: October 25, 2022.

Russell, D.J.F., S.M.J.M. Brasseur, D. Thompson, G.D. Hastie, V.M. Janik, and G. Aarts. 2014. Marine Mammals Trace Anthropogenic Structures at Sea. *Current Biology* 24(14):R638–R639.

Salisbury, D.P.,C.W. Clark, and A.N. Rice. 2016. Right Whale Occurrence in the Coastal Waters of Virginia, USA: Endangered Species Presence in a Rapidly Developing Energy Market. *Marine Mammal Science* 32(2):508–519.

Salisbury, D.P., B.J. Estabrook, H. Klinck, and A.N. Rice. 2018. *Understanding Marine Mammal Presence in the Virginia Offshore Wind Energy Area*. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2019-007. 103 pp.

Scheidat, M., J. Tougaard, S. Brasseur, J. Carstensen, T. van Polanen Petel, J. Teilmann, and P. Reijnders. 2011. Harbour Porpoises (*Phocoena phocoena*) and Wind Farms: A Case Study in the Dutch North Sea. *Environmental Research Letters 6:*025102. doi:10.1088/1748-9326/6/2/025102.

Schoeman, R.P., C. Patterson-Abrolat, and S. Plön. 2020. A Global Review of Vessel Collisions with Marine Animals. *Frontiers in Marine Science* 7:292.

Schultze, L., L. Merckelbach, S. Raasch, N. Christiansen, U. Daewel, C. Schrum, and J. Carpenter. 2020. *Turbulence in the Wake of Offshore Wind Farm Foundations and Its Potential Effects on Mixing of Stratified Tidal Shelf Seas* [Presentation]. Presented at Ocean Sciences Meeting 2020, San Diego, CA, USA.

Slavik, K., C. Lemmen, W. Zhang, O. Kerimoglu, K. Klingbell, and K.W. Wirtz. 2019. The Large-Scale Impact of Offshore Wind Farm Structures on Pelagic Primary Productivity in the Southern North Sea. *Hydrobiologia* 845:35–53.

Smith, C.R., T.K. Rowles, L.B. Hart, F.I. Townsend, R.S. Wells, E.S. Zolman, B.C. Balmer, B. Quigley, M. Ivnacic, 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.

South Fork Wind. 2021. *South Fork Wind Farm Constructions and Operations Plan*. May.

Southall, B.J., 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(44):411–521.

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.

Southall, B.L., D.P. Nowacek, A.E. Bowles, V. Senigaglia, L. Bejder, and P.L. Tyack. 2021. Marine Mammal Noise Exposure Criteria: Assessing Severity of Marine Mammal Behavioral Responses to Human Noise. *Aquatic Mammals* 47(5):421–464.

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. doi:10.1121/10.0003760.

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-OPR-62, 82 pp.

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.

Tetra Tech, Inc. 2022. *Dominion Energy Coastal Virginia Offshore Wind Commercial Project Request for Rule Making and Letter of Authorization (LOA) for Taking of Marine Mammals Incidental to Construction Activities on the Outer Continental Shelf (OCS) within Lease OCS-A 0483 and the Associated Offshore Export Cable Route Corridor: Roberts et al. 2022 Revision Addendum*. Prepared for Dominion Energy by Tetra Tech, Inc. Submitted to NOAA National Marine Fisheries Service September 2022. 88 pp.

Thomas, P.O., R.R. Reeves, and R.L. Brownell Jr. 2016. Status of the World's Baleen Whales. *Marine Mammal Science* 32(2):682–734.

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.

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 Impacts on Marine Dredging Activities on Marine Mammals. *ICES Journal of Marine Science* 72(2):328–340.

Tougaard, J., and O.D. Henriksen. 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.

Tougaard, J., L. Hermannsen, and P.T. Madsen. 2020. How Loud is the Underwater Noise from Operating Offshore Wind Turbines? *The Journal of Acoustical Society of America* 145:2885–2893. doi:10.1121/10.0002453.

Tournadre, J. 2014. Anthropogenic Pressure on the Open Ocean: The Growth of Ship Traffic Revealed by Altimeter Data Analysis. *Geophysical Research Letters* 41(22):7924–7932.

Tyack, P.L., and E.H. Miller. 2002. Vocal Anatomy, Acoustic Communication and Echolocation. Pages 142–184 in A.R. Hoetzel (ed.), *Marine Mammal Biology: An Evolutionary Approach*. Oxford, UK: Blackwell Science Ltd.

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.

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.

Virginia Department of Wildlife Resources (VDWR). *Special Status Faunal Species in Virginia*. Updated July 9, 2020.

Walker, M.M., C.E. Diebel, and J.L. Kirschvink. 2003. Detection and Use of the Earth's Magnetic Field by Aquatic Vertebrates. Pages 53–74 in S.P. Collin and N.J. Marshall (eds.), *Sensory Processing in Aquatic Environments*. Spriner-Verlag, New York.

Wang, T., W. Yu, X. Zou, D. Zhang, B. Li, J. Wang, and H. Zhang. 2017. Zooplankton Community Responses and the Relation to Environmental Factors from Established Offshore Wind Farms Within the Rudong Coastal Area of China. *Journal of Coastal Research* 34(4):1–14.

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.

Waring, G.T., E. Josephson, C.P. Fairfield-Walsh, K. Maze-Foley, D. Belden, T.V.N. Cole, L.P. Garrison, K. Mullin, C. Orphanides, R.M. Pace, D.L. Palka, M.C. Rossman, and F.W. Wenzel. 2007. *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments – 2007*. NOAA Technical Memorandum NMFS-NE-205. U.S. Department of Commerce, National Oceanic and Atmospheric Administration.

Waring, G.T., E. Josephson, K. Maze-Foley, and P.E. Rosel. Editors. 2009. *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments – 2009*. NOAA Tech Memo NOAA Fisheries NE 213.

Waring, G.T., S. A. Wood, and E. Josephson. 2012. *Literature Search and Data Synthesis for Marine Mammals and Sea Turtles in the U.S. Atlantic from Maine to the Florida Keys*. BOEM, Gulf of Mexico OCS Region, OCS Study BOEM 2012-109.

Waring, G.T., E. Josephson, K. Maze-Foley, and P.E. Rosel, editors. 2013. *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2012*. NOAA Tech Memo NMFS NE 223.

Weilgart, L.S. 2007. A Brief Review of Known Effects of Noise on Marine Mammals. *International Journal of Comparative Psychology* 20:159–168.

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.

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

C.1.4.16. Section 3.16, Navigation and Vessel Traffic

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 2019-036.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Mid-Atlantic Regional Council on the Ocean (MARCO). 2016. Mid-Atlantic Ocean Data Portal. Available: http://portal.midatlanticocean.org. Accessed: 14 April 2019.

U.S. Army Corps of Engineers (USACE). 2018. *Final Waterborne Commerce Statistics for Calendar Year 2017: Waterborne Commerce National Totals and Selected Inland Waterways for Multiple Years*. Available: https://usace.contentdm.oclc.org/digital/api/collection/p16021coll2/id/3002/page/0/inline/p16021coll2_3002_0. Accessed: December 8, 2020.

U.S. Army Corps of Engineers (USACE). 2019. *Federal Register* Vol. 84. Washington, D.C.: U.S. Government Publishing Office.

U.S. Coast Guard (USCG). 2016. *Atlantic Coast Port Access Route Study*. USCG-2011-0351. March 14. Available: https://www.federalregister.gov/documents/2016/03/14/2016-05706/port-access-route-study-the-atlantic-coast-from-maine-to-florida

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). 2020. *The Areas Offshore of Massachusetts and Rhode Island Port Access Route Study, Final Report.* Docket Number USCG-2019-0131. Available: https://www.navcen.uscg.gov/pdf/PARS/FINAL_REPORT_PARS_May_14_2020.pdf. Accessed: September 21, 2020.

U.S Coast Guard (USCG). 2021. *Search and Rescue Operations Near Offshore Wind Energy Project*s. Fiscal Year 2020 Report to Congress. June 16.

Virginia Port Authority. 2021. *Portsmouth Marine Terminal*. Port of Virginia 2021. Available: https://www.portofvirginia.com/facilities/portsmouth-marine-terminal-pmt/. Accessed: August 11, 2021

C.1.4.17. Section 3.17, Other Uses (Marine Minerals, Military Use, Aviation)

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/sites/default/files/renewable-energy-program/State-Activities/VA/VOWTAP-EA.pdf

Bureau of Ocean Energy Management (BOEM). 2020. *Real-time Opportunity for Development Environmental Observations (RODEO) (AT-14-01)*. Available: https://www.boem.gov/sites/default/files/documents/environment/environmental-studies/RODEO.pdf. Accessed: December 9, 2020.

Bureau of Ocean Energy Management (BOEM). 2021. *Final Environmental Impact Statement: Vineyard Wind 1 Offshore Wind Energy Project.* Available: https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Vineyard-Wind-1-FEIS-Volume-1.pdf.

Dominion Energy, Inc. (Dominion Energy). 2018. Amendment to the Coastal Virginia Offshore Wind Project (CVOW, formerly the Virginia Offshore Wind Technology Advancement Project or VOWTAP) Research Activities Plan (RAP) and Response to Comments. May 21. Available: https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/VA/CVOW_RAP_Amendment_Memo.pdf

Dominion Energy, Inc. (Dominion Energy). 2022a. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Dominion Energy, Inc. (Dominion Energy). 2022b. Response to Request for Information #3. October 3.

National Oceanic and Atmospheric Administration (NOAA). 2020a. *2019 Fall Bottom Trawl Survey Completed in Northeast*. Available: https://www.fisheries.noaa.gov/feature-story/2019-fall-bottom-trawl-survey-completed-northeast. Accessed: June 8, 2022.

National Oceanic and Atmospheric Administration (NOAA). 2020b. *Marine Recreational Information Program*. Available: https://www.fisheries.noaa.gov/insight/marine-recreational-information-program#:~:text=NOAA%20Fisheries'%20Marine%20Recreational%20Information%20Program%20is%20the%20state%2Dregional,number%20of%20fish%20they%20catch Accessed: June 8, 2022.

National Oceanic and Atmospheric Administration (NOAA). 2020c. *Types of Recreational Fishing Surveys: Large Pelagics Survey*. Available: https://www.fisheries.noaa.gov/recreational-fishing-data/types-recreational-fishing-surveys#large-pelagics-survey. Accessed: June 8, 2022.

Norfolk Airport Authority. 2021. *ORF Master Plan*. Available: http://orfmasterplan.com/resources/documents/ORF-Executive-Summary-27-op.pdf.

Virginia Institute of Marine Science (VIMS). 2020a. *VIMS Longline Survey*. Available: https://www.vims.edu/research/departments/fisheries/programs/sharks/programs/longline/index.php. Accessed: June 8, 2022.

Virginia Institute of Marine Science (VIMS). 2020b. *What is NEAMAP?* Available: https://www.vims.edu/research/departments/fisheries/programs/multispecies_fisheries_research/neamap/index.php. Accessed: June 8, 2022.

C.1.4.18. Section 3.18, Recreation and Tourism

Accomack County. 2021. *About the County*. Available: https://www.co.accomack.va.us/about-us/about-the-county. Accessed: November 2021.

Bureau of Ocean Energy Management (BOEM). 2012. *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://espis.boem.gov/final%20reports/5228.pdf. Accessed: November 2021.

Bureau of Ocean Energy Management (BOEM). 2021. *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.

Cape Charles Harbor. 2020. *Visit Virginia's Eastern Shore*. Available: https://capecharlesharbor.com/. Accessed: November 2021.

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. doi:10.1016/j.reseneeco.2019.04.003.

Chincoteague Chamber of Commerce. 2021. *Things To Do In Chincoteague*. Available: https://www.chincoteaguechamber.com/visit/. Accessed: November 2021.

City of Chesapeake. 2021. *History of Chesapeake.* Available: https://www.cityofchesapeake.net/Visitors/history.htm. Accessed: November 2021.

City of Norfolk. 2021. *Facts About Norfolk*. Available: https://www.norfolk.gov/430/Facts-About-Norfolk. Accessed: November 2021.

City of Virginia Beach. 2017. *VB Geofacts & Information*. Available: https://www.vbgov.com/government/departments/communications-info-tech/maps/Pages/VB-Geo-Facts-and-Information.aspx. Accessed: November 2021.

Currituck County. 2021. *Visit Currituck*. Available: https://www.visitcurrituck.com/. Accessed: November 2021.

Currituck County Tourism. 2021. *Currituck County Tourism*. Available: https://www.currituck.com/currituck-county-tourism.html. Accessed: November 2021.

Dare County. 2021. *About Dare County*. Available: https://www.darenc.com/about/. Accessed: November 2021.https://www.darenc.com/about

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Glarou, M., M. Zrust, and J.C. Svendsen. 2020. Using Artificial-Reef Knowledge to Enhance the Ecological Function of Offshore Wind Turbine Foundations: Implications for Fish Abundance and Diversity. *Journal of Marine Science and Engineering* 8(5):332.

Kitty Hawk Wind North. 2021. *Kitty Hawk Offshore Construction and Operations Plan*. Prepared by Tetra Tech, Inc. November.

Kitty Hawk Wind South. 2022. *Kitty Hawk South Offshore Wind Project Construction and Operations Plan.* Prepared by Tetra Tech, Inc. April.

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: November 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.

Northampton County. 2019. *Welcome To Northampton County*. Available: https://www.co.northampton.va.us/. Accessed November 2021.

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://espis.boem.gov/final%20reports/5298.pdf.

Outer Banks. 2021. *Your Guide to Dare County Tourism*. Available: https://www.outerbanks.org/partners/did-you-know-dare-county-tourism/. Accessed: November 2021.

Parsons, G., and J. 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. Accessed: November 2021.

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. Accessed: November 2021.

U.S. Census Bureau. 2010. *2010 Census: Population and Housing Unit Counts*. Available: https://www.census.gov/library/publications/2012/dec/cph-2.html. Accessed: November 2021.

Visit Chesapeake. 2021. *Chesapeake Parks and Trails*. Available: https://www.visitchesapeake.com/things-to-do/parks-trails/. Accessed: November 2021.

Visit Norfolk. n.d. *Get To Know Norfolk, VA*. Available: https://www.visitnorfolk.com/. Accessed: November 2021.

Visit Virginia Beach. 2021. *You Deserve a Virginia Beach Vacation*. Available: https://www.visitvirginiabeach.com/. Accessed: November 2021.

C.1.4.19. Section 3.19, Sea Turtles

Bailey, H., K.L. Brookes, and P.M. Thompson. 2014. Assessing Environmental Impacts of Offshore Wind Farms: Lessons Learned and Recommendations for the Future. *Aquatic Biosystems* 10(8). doi:10.1186/2046-9063-10-8.

Baker, K., and U. Howsen. 2021. *Data Collection and Site Survey Activities for Renewable Energy on the Atlantic Outer Continental Shelf.* Biological Assessment. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. October 2018, Revised February 2021.

Barco, S., M. Law, B. Drummond, H. Koopman, C. Trapani, S. Reinheimer, S. Rose, M. Swingle, and A. Williard. 2016. Loggerhead Turtles Killed by Vessel and Fishery Interaction in Virginia, USA, Are Healthy Prior to Death. *Marine Ecology Progress Series* 555:221–234.

Barnette, M.C. 2017. *Potential Impacts of Artificial Reef Development on Sea Turtle Conservation in Florida*. National Oceanic and Atmospheric Administration, Technical Memorandum NMFS-SER-5. 36 pp.

Bartol, S.M., and I.K. Bartol. 2012. *Hearing Capabilities of Loggerhead Sea Turtles (Caretta caretta) throughout Ontogeny: An Integrative Approach involving Behavioral and Electrophysiological Techniques*. Final Report E&P & Marine Life Programme. Prepared by Virginia Wesleyan College and Old Dominion University. JIP Grant No. 22 07-14. 37 pp.

Bartol, S.M., and D.R. Ketten. 2006. *Turtle and Tuna Hearing. In: Y Swimmer, R Brill (Eds.), Sea turtle and Pelagic Fish Sensory Biology: Developing Techniques to Reduce Sea Turtle Bycatch in Longline Fisheries.* U.S. Department of Commerce, National Oceanographic and Atmospheric Administration: Technical Memorandum NMFS-PIFSC-7. 8 pp.

Bartol, S.M., J.A. Music, and M. Lenhardt. 1999. Auditory Evoked Potentials of the Loggerhead Sea Turtle (*Caretta caretta*). *Copeia* 3:836–840.

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.

Bevan, E., S. Whiting, T. Tucker, M. Guinea, A. Raith, and R. Douglass. 2018. Measuring Behavioral Responses of Sea Turtles, Saltwater Crocodiles, and Crested Terns to Drone Disturbance to Define Ethical Operating Thresholds. *PLOS ONE*. doi:0.1371/journal.pone.0194460.

Bies, J. 2018. *Rare Delaware Sea Turtle Nest Has DNREC, Marine Biologists Intrigued*. Available: https://www.delawareonline.com/story/news/2018/10/26/rare-delaware-sea-turtle-nest-could-sign-climate-changed/1759869002/. Accessed: November 15, 2021.

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. *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore New Jersey, Delaware, Maryland, and Virginia Final Environmental Assessment*. January. Available: https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/Smart_from_the_Start/Mid-Atlantic_Final_EA_012012.pdf. Accessed: November 15, 2021.

Bureau of Ocean Energy Management (BOEM). 2014. A*tlantic OCS Proposed Geological and Geophysical Activities. Mid-Atlantic and South Atlantic Planning Areas*. Final Programmatic Environmental Impact Statement. OCS EIS/EA BOEM 2014-001. Available: https://www.boem.gov/sites/default/files/oil-and-gas-energy-program/GOMR/BOEM-2014-001-v1.pdf. Accessed: November 15, 2021.

Bureau of Ocean Energy Management (BOEM). 2017. *Gulf of Mexico OCS Oil and Gas Lease Sales 2017-2022 Gulf of Mexico Lease Sales 249, 250, 251, 252, 253, 254, 256, 257, 259, and 261 Final Multisale Environmental Impact Statemen*t. Available: https://www.boem.gov/2017-2022-gulf-mexico-multisale-environmental-impact-statement. Accessed: November 15, 2021.

Bureau of Ocean Energy Management (BOEM). 2019. N*ational Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Outer Continental Shelf*. 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: November 15, 2021.

Bureau of Ocean Energy Management (BOEM). 2021. *South Fork Wind Farm and South Fork Export Cable Biological Assessment. Submitted to the National Marine Fisheries Service*. U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs.

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.

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.

Ceriani S.A., P. Casale, M. Brost, E. Leone, B. Witherington. 2019. Conservation Implications of Sea Turtle Nesting Trends: Elusive Recovery of a Globally Important Loggerhead Population. *Ecosphere*. 10(11):e02936.

Croatan Civic League. 2021. *Turtles Nesting on Croatan Beach*. Available: https://www.croatanbeach.org/turtles-nesting-on-croatan-beach/. Accessed: November 1, 2022.

Crocker, S.E., and F.D. Fratantonio. 2016. *Characteristics of Sounds Emitted During High-Resolution Marine Geophysical Surveys. Naval Undersea Warfare Center Division, Newport, RI.* For U.S. Department of the Interior, Bureau of Ocean Energy Management, Environmental Assessment Division and U.S. Geological Survey. OCS Study BOEM 2016-044. NUWC-NPT Technical Report 12,203, 24 March 2016. 266 pp.

Crocker, S.E., F.D. Fratantonio, P.E. Hart, D.S. Foster, T.F. O'Brien, and S. Labak. 2019. Measurements of Sounds Emitted by Certain High-Resolution Geophysical Survey Systems. *IEEE Journal of Oceanic Engineering* 4(3):796-813.

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.

Dodge, K.L., B. Galuardi, T.J. Miller, and M.E. Lutcavage. 2014. Leatherback Turtle Movements, Dive Behavior, and Habitat Characteristics in Ecoregions of the Northwest Atlantic Ocean. *PLOS ONE* 9(3):e91726.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Dow Piniak, W.E., S.A. Eckert, C.A. Harms, and E.M. Stringer. 2012a. *Underwater Hearing Sensitivity of the Leatherback Sea Turtle (Dermochelys coriacea): Assessing the Potential Effect of Anthropogenic Noise*. Headquarters, Herndon, VA: U.S. Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2012-01156. 35 pp.

Dow Piniak, W.E., D.A. Mann, S.A. Eckert, and C.A. Harms. 2012b. Amphibious Hearing in Sea Turtles. Pages 83–87 in A.N Popper and A Hawkins (eds.), *The Effects of Noise on Aquatic Life*. Advances in Experimental Medicine and Biology. New York, NY: Springer.

Duncan E, Botterell Z, Broderick A, Galloway T, Lindeque P, Nuno A, Godley B. 2017. A Global Review of Marine Turtle Entanglement in Anthropogenic Debris: A Baseline for Further Action. *Endangered Species Research*. 34:431-448.

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*. Sterling, Virginia: OCS Study BOEM 2017-026. 217 pp.

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.J., E.E. Henderson, D.S. Houser, K. Jenkins, S. Kotecki, and J. Mulsow. 2017. *Criteria and Thresholds for U.S. 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.

Freitas, C., R. Caldeira, and T. Dellinger. 2019. Surface Behavior of Pelagic Juvenile Loggerhead Sea Turtles in the Eastern North Atlantic. *Journal of Experimental Marine Biology and Ecology* 510:73–80.

Gall, S.C., and R.C. Thompson. 2015. The Impact of Marine Debris on Marine Life. *Marine Pollution Bulletin* 92:170–179.

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.

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.

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.

HDR. 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. 281 pp.

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.

Illingworth & Rodkin, Inc. 2017. *Pile-Driving Noise Measurements at Atlantic Fleet Naval installations: 28 May 2013 - 28 April 2016*. Prepared for Naval Facilities Engineering Command Atlantic under HDR Environmental, Operations and Construction, Inc. Contract No. N62470-10-D-3011, Task Order CTO33. 152 pp.

Ketten, D.R., and S.M. Bartol. 2006. *Functional Measures of Sea Turtle Hearing*. Woods Hole, Massachusetts: Woods Hole Oceanographic Institution.

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.

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. Final report. Sterling, Virginia: U.S. Department of the Interior, Bureau of Ocean Energy Management.

Langhamer, O. 2012. Artificial Reef Effect in Relation to Offshore Renewable Energy Conversion: State of the Art. *Scientific World Journal*. Article ID 386713. doi:10.1100/2012/386713.

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. *The Journal of Experimental Biology* 217(14):2580–2589.

Lindeboom, H.J., H.J. Kouwenhove, 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(3):035101.

Lutcavage, M.E., P.T. Plotkin, B. Witherington, P.L. Lutz, and J.A. Musick. 1997. *The Biology of Sea Turtles. Human Impacts on Sea Turtle Survival*. Boca Raton, Florida: CRC Press. 387–409 pp.

Mineral Management Service. 2007. Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternative Use of Facilities on the Outer Continental Shelf. Final Environmental Impact Statement. October 2007. Volume II: Chapter 5. OCS EIS/EA, MMS 2007-046. pp 342.

Martin, K.J., S.C. Alessi, J.C. Gaspard, A.D. Tucker, G.B. Bauer, and D.A. Mann. 2012. Underwater Hearing in the Loggerhead Turtle (*Caretta caretta*): A Comparison of Behavioral and Auditory Evoked Potential Audiograms. *Journal of Experiment Biology* 215(17):3001–3009.

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*. OCS Study BOEM 2013-0119. Herndon, Virginia: U.S. Department of the Interior, Bureau of Ocean Energy Management.

Miller, J.H., and G.R. Potty. 2017. Measurements of Underwater Sound Radiated from an Offshore Wind Turbine. *The Journal of the Acoustical Society of America* 142(4):2699.

Mineral Management Service (MMS). 2007. *Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternative Use of Facilities on the Outer Continental Shelf*. Final Environmental Impact Statement. October 2007. Volume II: Chapter 5. OCS EIS/EA, MMS 2007-046. pp 342.

National Marine Fisheries Service (NMFS). 2016. *Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing, Underwater Acoustic Thresholds for Onset of Permanent and Temporary Threshold Shifts*. U.S. Department of Commerce, National Oceanic and Atmospheric Administration. NOAA Technical Memorandum.

National Marine Fisheries Service (NMFS). 2021. *Sea Turtle Species Directory*. Available: https://www.fisheries.noaa.gov/sea-turtles#by-species. Accessed: November 15, 2021.

National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 2007. *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). 2013. *Leatherback Sea Turtle (*Dermochelys coriacea*) 5-Year Review: Summary and Evaluation*. National Marine Fisheries Service, Office Of Protected Resources, Silver Spring, MD, and U.S. Fish And Wildlife Service, Southeast Region, Jacksonville Ecological Services Office, Jacksonville, FL. November 2013. 93 pp.

National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 2015. *Kemp's Ridley Sea Turtle (*Lepidochelys Kempii*) 5-Year Review: Summary and Evaluation*. Silver Spring (MD) and Albuquerque (NM): U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service and U.S. Department of the Interior, U.S. Fish and Wildlife Service. 53 pp.

National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 2019. *Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (*Caretta caretta*)*. Second revision (2008). Assessment of progress toward recovery. Washington (DC): U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service and U.S. Department of the Interior, U.S. Fish and Wildlife Service. 21 pp.

National Oceanic and Atmospheric Administration (NOAA). 2020. *National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion. Construction, Operation, Maintenance and Decommissioning of the Vineyard Wind Offshore Energy Project (Lease OCSA 0501*). Greater Atlantic Regional Fisheries Office consultation ID GARFO-2019-00343.

National Oceanic and Atmospheric Administration (NOAA). 2021. *Section 7 Effect Analysis: Turbidity in the Greater Atlantic Region*. 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: December 9, 2021.

National Research Council. 1990. *Decline of the Sea Turtles: Causes and Prevention*. Washington, DC: The National Academies Press. doi:10.17226/1536.

National Science Foundation (NSF) and U.S. Geological Survey (USGS). 2011. *Final Programmatic Environmental Impact Statement/Overseas Environmental Impact Statement for Marine Seismic Research Funded by the National Science Foundation or Conducted by the U.S. Geological Survey. Prepared for National Science Foundation and U.S. Geological Survey*. June 2011. 514 pp.

Nelms, S.E., W.E.D. Piniak, C.R. Weir, and B.J. Godley. 2016. Seismic Surveys and Marine Turtles: An Underestimated Global Threat? *Biological Conservation* 193:49–65.

Normandeau Associates Inc. (Normandeau). 2011. *Effects of EMFs from Undersea Power Cables on Elasmobranch and Other Marine Species*. Camarillo, CA: U.S. Department of the Interior, Bureau of Ocean Energy Management, Regulation, and Enforcement, Pacific OCS Region. OCS Study BOEMRE 2011-09.

Northwest Atlantic Leatherback Working Group. 2018. *Northwest Atlantic Leatherback Turtle* (Dermochelys coriacea) *Status Assessment* (Bryan Wallace and Karen Eckert, compilers and editors). Godfrey (IL): Conservation Science Partners and the Wider Caribbean Sea Turtle Conservation Network (WIDECAST). Report No. WIDECAST Technical Report No. 16. 36 pp

Ocean Biodiversity Information System (OBIS). 2021. *OBIS Spatial Ecological Analysis of Megavertebrate Populations (SEAMAP)*. Available: https://seamap.env.duke.edu/. Accessed: November 15, 2021.

Parker, S. 2020. *Loggerhead Sea Turtles Are Nesting in Virginia Beach*. Available: https://www.pilotonline.com/life/wildlife-nature/vp-nw-sea-turtle-nest-0709-20200709-apv3xoqlbnd6ppvtd5h27hu53q-story.html. Accessed: November 15, 2021.

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* 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.

Pomeroy, C. 2020. *3 Loggerhead Clutches Hatch on Assateague in Rare Instances of North-of-Virginia Nesting*. Available: https://wjla.com/news/local/third-final-sea-turtle-clutch-hatches-assateague-island. Accessed: November 15, 2021.

Popper, A., A. Hawkins, R. Fay, D. Mann, and D. Bartol. 2014. Sound Exposure Guidelines. Pages 33–51 in *ASA S3/SC14 TR-2014 Sound Exposure Guidelines for Fish and Sea Turtles: A Technical Report prepared by ANSI Accredited Standards Committee S3/SC1 and Registered with ANSI.*

Ramirez, A., C.Y. Kot, Piatkowski, D. 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, 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.

RPS. 2021. Dominion Energy Geophysical Survey 2020-2021 *IHA Protected Species Observer Report*. Prepared for Dominion Energy by RPS. 18 November 2021. 802 pp.

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.

Sapsford, C.W., and M. van der Riet. 1979. Uptake of Solar Radiation by the Sea Turtle, *Caretta caretta*, During Voluntary Surface Basking. *Comparative Biochemistry and Physiology Part A: Physiology*,63(4):471–474.

Schultze, L., L. Merckelbach, S. Raasch, N. Christiansen, U. Daewel, C. Schrum, and J. Carpenter. 2020. *Turbulence in the Wake of Offshore Wind Farm Foundations and Its Potential Effects on Mixing of Stratified Tidal Shelf Seas*. Presented at Ocean Sciences Meeting 2020, San Diego, CA.

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. Haas, S.A. Hargrove, M.P. Jensen, D.L. Klemm, and A.M. Lauritsen, et al. 2015. *Status Review of the Green Turtle (*Chelonia mydas*) Under the Endangered Species Act.* La Jolla (CA). Report No. NOAA-TM-NMFS-SWFSC 539. 599 pp.

Shigenaka, G., S. Milton, P. Lutz, R. Hoff, R. Yender, and A. Mearns. 2010. *Oil and Sea Turtles: Biology, Planning, and Response*. Originally published 2003. National Oceanic and Atmospheric Administration Office of Restoration and Response Publication.

Slavik, K., C. Lemmen, W. Zhang, O. Kerimoglu, K. Klingbell, and K.W. Wirtz. 2019. The Large-Scale Impact of Offshore Wind Farm Structures on Pelagic Primary Productivity in the Southern North Sea. *Hydrobiologia* 845:35–53. doi:10.1007/s10750-018-3653-5.

Snoek, R., R. de Swart, K. Didderen, W. Lengkeek, and M. Teunis. 2016. *Potential Effects of Electromagnetic Fields in the Dutch North Sea*. Final report. Submitted to Rijkswaterstaat Water, Verkeer en Leefmgeving.

South Fork Wind. 2021. *South Fork Wind Farm Constructions and Operations Plan*. May.

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* 96:380–391.

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*. Final study report prepared for the European Commission, Directorate General for Research and Innovation. September 2015. 82 pp.doi:10.2777/272281.

Tomás, J., R. Guitart, R. Mateo, and J.A. Raga. 2002. Marine Debris Ingestion in Loggerhead Sea Turtles, Caretta, from the Western Mediterranean. *Marine Pollution Bulletin* 44(2002):211–216.

Tougaard, J., O.D. Henriksen, and L.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.

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* 148:2885–2892.

Turtle Expert Working Group (TWEG). 2007. *An Assessment of the Leatherback Turtle Population in the Atlantic Ocean.* A report of the Turtle Expert Working Group, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Fisheries Science Center. April 2007. 124 pp.

U.S. Army Corps of Engineers (USACE). 2020. *South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States*. Available: https://www.fisheries.noaa.gov/content/endangered-species-act-section-7-biological-opinions-southeast. Accessed: November 15, 2021.

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 November 15, 2021.

U.S. Fish and Wildlife Service (USFWS). 2021. *IPac Information for Planning and Consultation*. Available: https://ecos.fws.gov/ipac/. Accessed: November 15, 2021.

Vegter, A.C., M. Barletta, C. Beck, J. Borrero, H. Burton, M.L. Campbell, M.F. Costa, M. Eriksen, C. Eriksson, A. Estrades, K.V.K. Gilardi, B.D. Hardesty, J.A. Ivar do Sul, J.L. Lavers, B. Lazar, L. Lebreton, W.J. Nichols, C.A. Ribic, P.G. Ryan, Q.A. Schuyler, S.D.A. Smith, H. Takada, K.A. Townsend, C.C.C. Wabnitz, C. Wilcox, L.C. Young, and M. Hamann. 2014. Global Research Priorities to Mitigate Plastic Pollution Impacts on Marine Wildlife. *Endangered Species Research* 25:225–247.

Virginia Department of Conservation and Recreation. 2021. *Department of Conservation and Recreation's Virginia Natural Heritage Data Explorer*. Available: https://www.dcr.virginia.gov/natural-heritage/nhdeinfo. Accessed: November 15, 2021.

Virginia Department of Wildlife Resources. 2021a. *Sea Turtles in Virginia*. Available: https://dwr.virginia.gov/blog/sea-turtles-in-virginia/. Accessed: 15 November 2021.

Virginia Department of Wildlife Resources. 2021b. *Special Status Faunal Species in Virginia*. Available: https://dwr.virginia.gov/wp-content/uploads/media/virginia-threatened-endangered-species.pdf. Accessed: November 15, 2021.

Virginia Institute of Marine Science. 2021. *Virginia's Sea Turtles*. Available: https://www.vims.edu/research/units/legacy/sea_turtle/va_sea_turtles/index.php. Accessed: November 15, 2021.

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 and Coastal Management* 171:111–118.

C.1.4.20. Section 3.20, Scenic and Visual Resources

Bureau of Ocean Energy Management (BOEM). 2021a. *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.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

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

C.1.4.21. 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 and Energy Management. (BOEM). 2018. *Field Observations During Wind Turbine Foundation Installation at the Block Island Wind Farm, Rhode Island*. Bureau of Ocean Energy Management.

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). 2021. *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.

Bureau of Ocean Energy Management (BOEM) and Dominion Energy. 2022. Revised Project Design Information Submitted to BOEM.

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.

Castelao, R., S. Glenn, and O. Schofield. 2010. Temperature, Salinity, and Density Variability in the Central Middle Atlantic Bight. *Journal of Geophysical Research* 115:C10005. Available: https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2009JC006082. Accessed: December 8, 2020.

Center for Coastal Studies (CCS). 2017. *Water Quality Parameters.* Available: http://coastalstudies.org/cape-cod-bay-monitoring-program/monitoring-stations/. Accessed: June 18, 2018.

City of Chesapeake. 2007. *Map Showing Master Drainage 2005*. November 7. Available: https://www.cityofchesapeake.net/Assets/documents/departments/public_works/watershed/pdf/MasterDrainageMap-11-7-07.pdf. Accessed: December 8, 2020.

City of Virginia Beach. 2018. *Water Resources in the Southern Watershed of Virginia Beach*. VB SeaLevel Wise: A Vibrant Future for Virginia Beach. 127 pp. Available: https://www.vbgov.com/government/departments/public-works/comp-sea-level-rise/Documents/water-resources-south-wshed-4-2-18-a.pdf. Accessed: November 24, 2020

Csanady, G.T., and P. Hamilton. 1988. Circulation of Slopewater. *Continental Shelf Research* 8(5-7):565–624.

Department of Energy (DOE). 2014. *Assessment of Ports for Offshore Wind Development in the United States*. March 2014. 700694-USPO-R-03.

DNV GL. 2016. *Support Structures for Wind Turbines*. DNVGL-ST-0126. April 2016.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Epsilon Associates, Inc. 2018. *Draft Construction and Operations Plan Vineyard Wind Farm Appendix Volume III-K Scour Potential Evaluation at Vineyard Wind*. Submitted to BOEM. October 22.

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*. Sterling, VA. US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2017-088. December 2017. Available: https://tethys.pnnl.gov/publications/habitat-mapping-assessment-northeast-wind-energy-areas. Accessed: December 8, 2020.

Harris, J.M., R.J.S. Whitehouse, and J. Sutherland. 2011. *Marine Scour and Offshore Wind – Lessons Learnt and Future Challenges.* In Proceedings of the AMSE 2011 20th International Conference of Ocean, Offshore and Arctic Engineering, OMAE2011, June 19-24, 2011, Rotterdam, The Netherlands.

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.

Kitty Hawk Wind. 2021. *Kitty Hawk Offshore Construction and Operations Plan*. Prepared by Tetra Tech, Inc. November. Available: https://www.boem.gov/renewable-energy/state-activities/kitty-hawk-wind-construction-and-operation-plan-commercial-lease. Accessed: March 3, 2022.

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.

National Oceanic and Atmospheric Administration. (NOAA). n.d. *NWA Regional Climatology*. National Oceanic and Atmospheric Administration, National Centers for Environmental Information. Available: https://www.nodc.noaa.gov/OC5/regional_climate/nwa-climate/. Accessed: September 22, 2020.

National Water Quality Monitoring Council. (NWQMC). 2020a. *Camp Pendleton (VA514504) Site Data in the Water Quality Portal.* Available: https://www.waterqualitydata.us/portal/#siteid=21VABCH-VA514504&mimeType=csv. Accessed: October 2, 2020.

Nielsen, A.W., B.M. Sumer, and T.U. Peterson. 2014. Sinking of Scour Protections at Horns Rev 1 Offshore Wind Farm. *Coastal Engineering Proceedings* 1(34):67. Available: https://doi.org/10.9753/icce.v34.sediment.67. Accessed: December 8, 2020.

Peterson, T.U. 2014. *Scour around Offshore Wind Turbine Foundations.* Technical University of Denmark. Department of Mechanical Engineering.

Siudyla, E.A., A. May, and D. Hawthorne. 1981. *Groundwater Resources of the Four Cities Area, Virginia*. Planning Bulletin 331. Commonwealth of Virginia State Water Control Board Bureau of Water Control Management.

Stevenson D., L. Chiarella, D. Stephan, R. Reid, K. Wilhelm, J. McCarthy, and M. Pentony. 2004. *Characterization of the Fishing Practices and Marine Benthic Ecosystems of the Northeast US Shelf and an Evaluation of the Potential Effects of Fishing on Essential Habitat*. NOAA Tech Memo NMFS NE 181; 179 pp.

Tempel, J., M.B. Zaaijer, and H. Subroto. 2004. *The Effects of Scour on the Design of Offshore Wind Turbines.* Delft University of Technology, The Netherlands.

Tetra Tech, Inc. 2010. *Final Site Inspection for the Battlefield Golf Club Site City of Chesapeake, Virginia.*

Tetra Tech, Inc. 2015a. *Stream and Pond Assessment Surveys for Naval Air Station Oceana (NASO). Final Report.* Prepared for NAVFAC Mid-Atlantic. 102 pp.

Tetra Tech, Inc. 2015b. *Stream Assessment Surveys for Naval Auxiliary Landing Field Fentress (NALFF). Final Report*. Prepared for NAVFAC Mid-Atlantic. 206 pp.

URS Corporation. 2009. *Battlefield Golf Water Project. Water Supply Feasibility Study*.

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?Dockey=20003HYA.PDF. Accessed: November 8, 2018.

U.S. Environmental Protection Agency (USEPA). 2012. *National Coastal Condition Report IV. EPA842-R-10-003*. United States Environmental Protection Agency, Washington, D.C. 368 pp. Available: https://www.epa.gov/sites/production/files/2016-01/documents/ncca_2010_technical_report_20160127.pdf. Accessed: December 8, 2020.

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). 2016. *National Coastal Condition Assessment 2010* (data and metadata files). National Aquatic Resource Surveys. United States Environmental Protection Agency, Washington, D.C. Available: https://www.epa.gov/national-aquatic-resource-surveys/data-national-aquatic-resource-surveys. Accessed: October 6, 2020.

Virginia Department of Environmental Quality (VDEQ). 2020a. *Annual Water Quality Monitoring Plan.* Virginia Department of Environmental Quality. Available: https://www.deq.virginia.gov/programs/water/waterqualityinformationtmdls/waterqualitymonitoring/annualwaterqualitymonitoringplan.aspx. Accessed: October 6, 2020.

Virginia Department of Environmental Quality (VDEQ). 2020b. *Bacteria Criteria for the Protection of Recreational Uses – 2019.* Virginia Department of Environmental Quality Available: https://www.deq.virginia.gov/programs/water/waterqualityinformationtmdls.

Virginia Department of Environmental Quality (VDEQ). 2020c. 2020 305(b)/303(d) *Water Quality Assessment Integrated Report*. Virginia Department of Environmental Quality. Available: https://www.deq.virginia.gov/water/water-quality/assessments/integrated-report. Accessed: October 5, 2021.

Virginia Department of Environmental Quality (VDEQ). 2021. *Rivers, Reservoirs, Estuaries: 2020 Final WQA IR Assessment GIS Data*.

Virginia Department of Health. (VDH). 2020a. *Monitoring and Advisory Data by Year - 2019 Monitoring Data*. Virginia Department of Health. Available: https://www.vdh.virginia.gov/environmental-epidemiology/beach-monitoring/monitoring-and-advisory-data-by-year/. Accessed: October 5, 2020.

Whitehouse, R.J.S, J.M. Harris, J. Sutherland, and J. Rees. 2011. The Nature of Scour Development and Scour Protection at Offshore Windfarm Foundations. *Marine Pollution Bulletin* 62(1):73–88.

Wilkin, J.L., and E.J. Hunter. 2013. An Assessment of the Skill of Real-Time Models of Mid-Atlantic Bight Continental Shelf Circulation. *Journal of Geophysical Research: Oceans* 118(6):2919–2933.

C.1.4.22. Section 3.22, Wetlands

Bureau of Ocean Energy Management (BOEM) and Dominion Energy. 2022. Revised Project Design Information Submitted to BOEM.

Dominion Energy, Inc. (Dominion Energy). 2022. *Construction and Operations Plan, Coastal Virginia Offshore Wind Commercial Project*. Prepared by Tetra Tech, Inc. May.

Kitty Hawk Wind North. 2021. *Kitty Hawk Offshore Construction and Operations Plan*. Prepared by Tetra Tech, Inc. November.

U.S. Fish and Wildlife Service (USFWS). 2021. *National Wetlands Inventory*. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Updated May 3, 2021. Available: http://www.fws.gov/wetlands/. Accessed: December 1, 2021.

Virginia Department of Conservation and Recreation (VDCR). 2022. *Rare Species and Natural Communities*. Virginia Department of Conservation and Recreation, Division of Natural Heritage. Available: https://www.dcr.virginia.gov/natural-heritage/rare-species-com. Accessed: March 5, 2022.

C.2. Glossary

Term	Definition
affected environment	Environment as it exists today that could be 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
Applicant Proposed Measure (APM)	Applicant proposed measures to avoid, minimize, and mitigate potential impacts
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
cable landing location	Location where the offshore export cable transitions to the onshore export cable
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 nautical miles 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 threated 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	A 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

Term	Definition
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
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 Earth
hard-bottom habitat	Benthic habitats composed of hard-bottom (e.g., cobble, rock, and ledge) substrates

Term	Definition
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
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 cables	Cables connecting from the switching station to the onshore substation; interconnection cables would be installed as either all overhead or a combination of overhead and underground (hybrid)
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
jointing bay	Provides a clean dry environmental for jointing the offshore and onshore cables and provides protection to the cable jointing during operation
knot	Unit of speed equaling 1 nm per hour
landfall site	The shoreline landing site at which the offshore cable transitions to onshore
Lease Area	Commercial Lease of Submerged Lands for Renewable Energy Development on the OCS Offshore Virginia, Lease number OCS-A-0483 Approximately 112,799 acres. Approximately 27 statute miles (23.75 nautical miles) off Virginia Beach.
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

Term	Definition
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 export cable	Cables that transfer electricity from the offshore substations to the cable landing location
offshore infrastructure	Turbines, offshore substations, and inter-array and offshore export cables
offshore Project area	Lease Area and offshore export cable corridors
offshore substation (OSS)	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 export cable	Underground cables that transfer electricity from the cable landing location to the onshore substation
onshore Project area	Onshore Project components including cable landing locations, onshore export cable corridors, onshore substation, switching station, and interconnection cables and cable routes
onshore substation	Substation connecting the proposed Project to the existing bulk power grid system
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 waters of the United States, 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
Project Design Envelope (PDE)	The PDE identifies a reasonable range of design parameters for proposed components and installation techniques for the Project
protected species	Endangered or threatened species that receive federal protection under the ESA of 1973 (as amended)
SCADA system	Supervisory Control and Data Acquisition system
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

Term	Definition
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
switching station	Aboveground onshore facility that collects power and converts an underground onshore export cable configuration to an overhead interconnection cable configuration
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
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 (WTG)	Component that puts out electricity in a structure that converts kinetic energy from wind into electricity

This page intentionally left blank.