

REFERENCES

- Ahroon, W.A., R.P. Hamernik, and S.-F., Lei. 1996. The effects of reverberant blast waves on the auditory system. *Journal of the Acoustical Society of America* 100:2247-2257.
- American National Standards Institute (ANSI). 1986. *Methods of measurement for impulse noise 3 (ANSI S12.7-1986)*. Acoustical Society of America, Woodbury, NY.
- American National Standards Institute (ANSI). 1994. *Bioacoustical Terminology (ANSI S3.20-1995)*. Acoustical Society of America, Woodbury, NY.
- American National Standards Institute (ANSI). 1995. *Bioacoustical Terminology (ANSI S3.20-1995)*. Acoustical Society of America, Woodbury, NY.
- American National Standards Institute (ANSI). 2013. *Performance and Calibration of Reference Sound Sources*. Acoustical Society of America, Woodbury, NY.
- Ampela, K., M. DeAngelis, R. DiGiovanni, Jr., and G. Lockhart. 2019. Seal Tagging and Tracking in Virginia, 2017-2018. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract No. N62470-15-8006, Task Order 17F4058, issued to HDR, Inc., Virginia Beach, Virginia. March 2019.
- Archer, F.I., S.L. Mesnick, and A.C. Allen. 2010. Variation and predictors of vessel response behavior in a tropical dolphin community. NOAA Technical Memorandum NMFS-SWFSC-457, National Marine Fisheries Service, 60 p.
- Aschettino, J., A. Engelhaupt, and D. Engelhaupt. 2015. Mid-Atlantic Humpback Whale Monitoring, Virginia Beach, VA: 2014/15 Annual Progress Report. Final Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract No. N62470-10-3011, Task Order 054, issued to HDR Inc., Virginia Beach, Virginia. June 2015.
- Aschettino, J.M., D. Engelhaupt, A. Engelhaupt, and M. Richlen. 2016. Mid-Atlantic Humpback Whale Monitoring, Virginia Beach, Virginia: 2015/16 Annual Progress Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract Nos. N62470-10-3011, Task Orders 03 and 54, and N62470-15-8006, Task Order 13, issued to HDR Inc., Virginia Beach, Virginia. August 2016.
- Aschettino, J.M., D. Engelhaupt, A. Engelhaupt, and M. Richlen. 2017a. Mid-Atlantic Humpback Whale Monitoring, Virginia Beach, Virginia: 2016/17 Annual Progress Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract N62470-15-8006, Task Order 33, issued to HDR, Inc., Virginia Beach, Virginia. August 2017.

Aschettino, J.M., D. Engelhaupt, A. Engelhaupt, M. Richlen, and A. DiMatteo. 2018. Mid-Atlantic Humpback Whale Monitoring, Virginia Beach, Virginia: 2017/18 Annual Progress Report. Final Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract N62470-15-8006, Task Order 17F4013, issued to HDR, Inc., Virginia Beach, Virginia. June 2018.

Aschettino, J.M., D. Engelhaupt, A. Engelhaupt, M. Richlen, and A. DiMatteo. 2019. Mid-Atlantic Humpback Whale Monitoring, Virginia Beach, Virginia: 2018/19 Annual Progress Report. Final Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract N62470-15-8006, Task Order 17F4013, issued to HDR, Inc., Virginia Beach, Virginia. July 2019.

Aschettino, J.M., D. Engelhaupt, A. Engelhaupt, M. Richlen, and M. Cotter. 2020b. Mid-Atlantic Humpback Whale Monitoring, Virginia Beach, Virginia: 2019/20 Annual Progress Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract N62470-15-8006, Task Order 20F4011, issued to HDR, Inc., Virginia Beach, Virginia. May 2020. Bailey, J.W. 1948. The finback whale in Virginia waters. *Journal of Mammalogy* 29(2):183–184.

Aschettino, J.M., D. Engelhaupt, A. Engelhaupt, M.F. Richlen, and J.T. Bell. 2017b. Humpback whale affinity for shipping channels near the mouth of the Chesapeake Bay can be lethal. Poster Presentation, 6th International Bio-logging Science Symposium. 25-29 September 2017. Konstanz, Germany.

Aschettino, J.M., D.T. Engelhaupt, A.G. Engelhaupt, A. DiMatteo, T. Pusser, M.F. Richlen, and J.T. Bell. 2020a. Satellite telemetry reveals spatial overlap between vessel high-traffic areas and humpback whales (*Megaptera novaeangliae*) near the mouth of the Chesapeake Bay. *Frontiers in Science* 7:121.

Au, W.W.L. and M. Hastings. 2008. *Principles of Marine Bioacoustics*. Springer-Verlag, New York.

Barco, S. 2013. Virginia Aquarium Marine Mammal Strandings 1988-2008. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/502>) on 2019-04-10.

Barco, S. 2014. Virginia and Maryland Sea Turtle Research and Conservation Initiative Aerial Survey Sightings, May 2011 through July 2013. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1201>) on 2019-04-10.

Barco, S., and W.M. Swingle. 2014. Marine mammal species likely to be encountered in the coastal waters of Virginia from analysis of stranding data VAQF Scientific Report # 2014-07a. Prepared for the Virginia Department of Mines, Minerals and Energy by Virginia Aquarium and Marine Science Center Foundation.

Barco, S.G., W.A. McLellan, J.M. Allen, R.A. Asmutis-Silvia, R. Mallon-Day, E.M. Meagher, D.A. Pabst, J. Robbins, R.E. Seton, W.M. Swingle, M.T. Weinrich, and P.J. Clapham. 2002. Population identity of humpback whales (*Megaptera novaeangliae*) in the waters of the U.S. mid-Atlantic states. *Journal of Cetacean Research and Management* 4(2):135–141.

Bettridge, S., C.S. Baker, J. Barlow, P.J. Clapham, M. Ford, D. Gouveia, D. Mattila, R.M. Pace III, P.E. Rosel, G.K. Silber, and P.R. Wade. 2015. Status Review of the Humpback Whale (*Megaptera novaeangliae*) Under the Endangered Species Act. NOAA Technical Memorandum NMFS-SWFSC-540. National Marine Fisheries Service, La Jolla, California. 263 pp.

Blecha, F. 2000. Immune system response to stress. Pages 111-122 in G.P. Moberg and J.A. Mench, eds. *The Biology of Animal Stress: Basic Principles and Implications for Animal Welfare*. CABI Publishing, Oxon, United Kingdom.

California Department of Transportation (Caltrans). 2015. Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish. Prepared by ICF Jones & Stokes and Illingworth and Rodkin. Sacramento, California. November 2015.

Carlson, T.J., D.L. Woodruff, G.E. Johnson, N.P. Kohn, G.R. Ploskey, M.A. Weiland, et al. 2005. Hydroacoustic measurements during pile driving at the Hood Canal Bridge, September through November 2004. PNWD-3621, Prepared by Battelle Marine Sciences Laboratory for the Washington State Department of Transportation: 165 pp.

Casper Brandon M., Michael E. Smith, Michele B. Halvorsen, Huifang Sun, Thomas J. Carlson, Arthur N. Popper, Effects of exposure to pile driving sounds on fish inner ear tissues, *Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology*, Volume 166, Issue 2, 2013, Pages 352-360

Cetacean and Turtle Assessment Program (CeTAP). 1981. A characterization of marine mammals and turtles in the mid- and north-Atlantic areas of the U.S. outer continental shelf. Cetacean and Turtle Assessment Program, University of Rhode Island. Annual Report for 1979 # AA551-CT8-48 to the Bureau of Land Management, Washington, DC. 77 pp.

Cetacean and Turtle Assessment Program (CeTAP). 1982. A characterization of marine mammals and turtles in the mid- and North Atlantic areas of the U.S. outer continental shelf. Cetacean and Turtle Assessment Program, University of Rhode Island. Final Report #AA551-CT8-48 to the Bureau of Land Management, Washington, DC. 538 pp.

Chesapeake Tunnel Joint Venture. 2018. Request for an Incidental Harassment Authorization Parallel Thimble Shoal Tunnel Project Virginia Beach, Virginia. Prepared by Chesapeake Tunnel Joint Venture, Virginia Beach, Virginia. Submitted to National Marine Fisheries Service, Silver Spring, Maryland.

- Calambokidis, J., G. H. Steiger, J. M. Straley, L. M. Herman, S. Cerchio, D. R. Salden, J. Urban R., J. K. Jacobsen, O. Von Ziegesar, K. C. Balcomb, C. M. Gabriele, M. E. Dahlheim, S. Uchida, G. Ellis, Y. Miyamura, P. Ladrón De Guevara P., M. Yamaguchi, F. Sato, S. A. Mizroch, L. Schlender, K. Rasmussen, J. Barlow And T. J. Quinn II. 2001. Movements and population structure of humpback whales in the North Pacific. *Marine Mammal Science* 17:769–794.
- Clapham, P.J., S.B. Young, and R.L. Brownell, Jr. 1999. Baleen whales: conservation issues and the status of the most endangered populations. *Mammal Review* 29(1):35–60.
- Costidis, A.M., K.M. Phillips, S.G. Barco, and R. Boettcher. 2017. Introduction to the Virginia Marine Mammal Conservation Plan. Final Report to the Virginia Coastal Zone Management Program, NOAA CZM Grant # NA15NOS4190164, Virginia Department of Game and Inland Fisheries contract # EP2494049. VAQF Scientific Report 2017-02. Virginia Beach, Virginia. 72 pp.
- Costidis, A.M., W.M. Swingle, S.G. Barco, E.B. Bates, S.D. Mallette, S.A. Rose, and A.L. Epple. 2019. Virginia Sea Turtle and Marine Mammal Stranding Network 2018 Grant Report. Final Report to the Virginia Coastal Zone Management Program, NOAA CZM Grant NA17NOS4190152, Task 49. VAQF Scientific Report 2019-01, Virginia Beach, Virginia, 57 pp.
- Cott P.A., Mann D.A., Higgs D.M., Johnston T.A., Gunn J.M. (2012) Assessing Disturbance From Under-Ice Noise on Fishes in Boreal Lakes. In: Popper A.N., Hawkins A. (eds) *The Effects of Noise on Aquatic Life*. *Advances in Experimental Medicine and Biology*, vol 730. Springer, New York, NY
- Cotter, M.P. 2019. Aerial Surveys for Protected Marine Species in the Norfolk Canyon Region: 2018 Annual Progress Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract No. N62470-15-D-8006 Task Order 18F4019, issued to HDR, Inc., Virginia Beach, Virginia. March 2019.
- Croll, D.A., C.W. Clark, J. Calambokidis, W.T. Ellison, and B.R. Tershy. 2001. Effect of anthropogenic low-frequency noise on the foraging ecology of Balaenoptera whales. *Animal Conservation* 4(1):13-27.
- Curry B. E. Smith J.. 1997. Phylogeographic structure of the bottlenose dolphin (*Tursiops truncatus*): stock identification and implications for management. *The Society for Marine Mammalogy, Special Publication* 3:227–247.
- Denes, S. L., G.J. Warner, M.E. Austin, and A.O. MacGillivray. 2016. Hydroacoustic Pile Driving Noise Study – Comprehensive Report. Document 001285, Version 1.0. Technical report by JASCO Applied Sciences for Alaska Department of Transportation & Public Facilities. Department of the Navy (DoN). 2008. Marine Resources Assessment Update for the Virginia Capes Operating Area. Department of the Navy, U.S. Fleet Forces Command, Norfolk, Virginia. Contract #N62470-02-D-9997, CTO 0056. Prepared by Geo-Marine, Inc., Hampton, Virginia.

Denes, S., J. Vallarta, and D. Zeddies. 2019. Sound Source Characterization of Down-the-Hole Hammering: Thimble Shoal, Virginia. Document 001888, Version 1.0. Technical report by JASCO Applied Sciences for Chesapeake Tunnel Joint Venture.

Department of the Navy (DoN). 2009. Marine Resources Assessment for the Chesapeake Bay. Department of the Navy, U.S. Fleet Forces Command, Norfolk, Virginia. Contract #N62470-02-D-9997, CTO 0127. Prepared by Geo-Marine, Inc., Hampton, Virginia.

DiGiovanni Jr., R.A., A. DePerte, H. Winslow, and K. Durham. 2018. Gray seals (*Halichoerus grypus*) and Harbor Seals (*Phoca vitulina*) in the endless winter. Presented at the Northwest Atlantic Seal Research Consortium Meeting, New Bedford, Massachusetts. April 2018.

DiGiovanni R, Wood SA, Waring GT, Chaillet A, Josphson E. 2011. Trends in harbor and gray seal counts and habitat use at southern New England and Long 118 Island index sites. 19th Biennial Conference on the Biology of Marine Mammals. Tampa Bay, FL; 2011.

T.F. Duffield, S. LeBlanc, R. Bagg, K.E. Leslie, J. Ten Hag, P. Dick. 2003. Effect of a monensin controlled release capsule on metabolic parameters in transition dairy cows. *J. Dairy Sci.*, 86 (2003), pp. 1171-1176

Duffield DA. Investigation of the genetic variability in stocks of the bottlenose dolphin (*Tursiops truncatus*). 1986. Final report to NMFS/SEFC, Contract No. NA83-GA-C-00036. 1986.

Ellison, W.T., B. 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.

Engelhaupt, A., J. Aschettino, T.A. Jefferson, D. Engelhaupt, and M. Richlen. 2016. Occurrence, Distribution, and Density of Marine Mammals Near Naval Station Norfolk and Virginia Beach, Virginia: 2016 Final Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract No. N62470-10-3011, Task Orders 03 and 043, issued to HDR Inc., Virginia Beach, Virginia. October 2016.

Engelhaupt, A., J. Aschettino, T.A. Jefferson, M. Richlen, and D. Engelhaupt. 2015. Occurrence, Distribution, and Density of Marine Mammals Near Naval Station Norfolk & Virginia Beach, VA: Annual Progress Report. Final Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract No. N62470-10-3011, Task Orders 031 and 043, issued to HDR Inc., Virginia Beach, Virginia. August 2015.

Engelhaupt, A., J.M. Aschettino, and D. Engelhaupt. 2017. VACAPES Outer Continental Shelf Cetacean Study, Virginia Beach, Virginia: 2016 Annual Progress Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract Nos. N62470-10-3011, Task Orders 03 and 54, and N62470-15-8006, Task Order 35, issued to HDR Inc., Virginia Beach, Virginia. August 2017.

Engelhaupt, A., J.M. Aschettino, and D. Engelhaupt. 2018. VACAPES Outer Continental Shelf Cetacean Study, Virginia Beach, Virginia: 2017 Annual Progress Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract No. N62470-15-8006, Task Order 35, issued to HDR Inc., Virginia Beach, Virginia. May 2018.

Engelhaupt, A., M. Richlen, T.A. Jefferson, and D. Engelhaupt. 2014. Occurrence, Distribution, and Density of Marine Mammals Near Naval Station Norfolk & Virginia Beach, VA: Annual Progress Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command (NAVFAC) Atlantic, Norfolk, Virginia, under Contract No. N62470-10-3011, Task Orders 031 and 043, issued to HDR Inc., Norfolk, Virginia. July 2014.

Everitt, R.D., C.H. Fiscus, and R.L. DeLong. 1980. Northern Puget Sound marine mammals. Interagency Energy/Environment R&D Program Report EPA-600/7-80-139, Prepared by National Marine Fisheries Service for Environmental Protection Agency 150pp.

Fair, P.A., Becker, P.R. Review of stress in marine mammals. 2000. *Journal of Aquatic Ecosystem Stress and Recovery* 7, 335–354

Fay, Richard. (2009). Soundscape and the sense of hearing of fishes. *Integrative zoology*. 4. 26-32.

Finneran, J.J. 2016. Auditory Weighting Functions and TTS/PTS Exposure Functions for Marine Mammals Exposed to Underwater Noise, Technical Report 3026, December 2016. Systems Center Pacific, San Diego, California.

Finneran, J.J. 2015. Noise-induced hearing loss in marine mammals: A review of temporary threshold shift studies from 1996 to 2015. *Journal of the Acoustical Society of America* 138:1702-1726.

Finneran, J.J. and A.K. Jenkins. 2012. Criteria and thresholds for U.S. Navy acoustic and explosive effects analysis. Technical Report, Space and Naval Warfare Systems Center Pacific, U.S. Navy: 64.

Finneran, J.J., C.E. Schlundt, D.A. Carder, J.A. Clark, J.A. Young, J.B. Gaspin, and S.H. Ridgway. 2000. Auditory and behavioral responses of bottlenose dolphins (*Tursiops truncatus*) and a beluga whale (*Delphinapterus leucas*) to impulsive sounds resembling distant signatures of underwater explosions. *Journal of the Acoustical Society of America* 108:417-431.

Finneran, J.J., C.E. Schlundt, R. Dear, D.A. Carder, and S.H. Ridgway. 2002. Temporary shift in masked hearing thresholds in odontocetes after exposure to single underwater impulses from a seismic watergun. *Journal of the Acoustical Society of America* 111:2929-2940.

Gaskin, D.E. 1984. The harbor porpoise *Phocoena phocoena* (L.): regional populations, status, and information on direct and indirect catches. *Reports of the International Whaling Committee* 34:569–586.

- Halvorsen, Michele & Casper, Brandon & Matthews, Frazer & Carlson, Thomas & Popper, Arthur. (2012). Effects of exposure to pile-driving sounds on the lake sturgeon, Nile tilapia and hogchoker. Proceedings. Biological sciences / The Royal Society. 279.
- Hammill, M. O., G. B. Stenson, R. A. Myers, And W. T. Stobo. 1998. Pup production and population trends of the grey seal (*Halichoerus grypus*) in the Gulf of St. Lawrence, Canada. *Can. J. Fish. Aquat. Sci.*, 55: 423–430
- Hampton Roads Connector Partners (HRCP). 2020a. Request for an Incidental Harassment Authorization Hampton Roads Bridge-Tunnel Expansion Project Hampton-Norfolk, Virginia. Prepared by HDR, Inc., Norfolk, Virginia, for HRCP, Norfolk, Virginia. Submitted to National Marine Fisheries Service, Silver Spring, Maryland.
- Hastings, M.C., and A.N. Popper. 2005. Effects of sound on fish. Technical report for Jones and Stokes to California Department of Transportation.
- Hayes, S.A., E. Josephson, K. Maze-Foley, and P.E. Rosel. 2020. U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2019. NOAA Tech Memo NMFS-NE 264; 479 pp.
- Henderson, D., B. Hu, and E. Bielefeld. 2008. Patterns and mechanisms of noise-induced cochlear pathology. pp. 195-217 In Schacht, J., A.N. Popper, and R.R Fay (Eds.) *Auditory Trauma, Protection, and Repair*. New York: Springer.
- Hemilä, S., Nummela, S., Berta, A., & Reuter, T. (2006). High-frequency hearing in phocid and otariid pinnipeds: An interpretation based on inertial and cochlear constraints. *Journal of the Acoustical Society of America*, **120**, 3463– 3466.
- Hood, L.C., P.D. Boersma, and J.C. Wingfield. 1998. The adrenocortical response to stress in incubating Magellanic penguins (*Spheniscus magellanicus*). *Auk* 115 (1):76-84.
- Hyrenbach, D., F. Huettmann, and J. Chardine. 2012. PIROP Northwest Atlantic 1965-1992. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/280>) on 2019-04-11.
- Illingworth and Rodkin, Inc. 2017. Pile-Driving Noise Measurements at Atlantic Fleet Naval Installations: 28 May 2013–28 April 2016. Prepared by Illingworth & Rodkin, Petaluma, CA, for Naval Facilities Engineering Command Atlantic, U.S. Fleet Forces Command, Norfolk, Virginia. January 2017.
- Jensen, A.S., and G.K. Silber. 2003. Large whale ship strike database. NOAA Technical Memorandum NMFS-OPR-25:1–37.
- Jessop, T.S., A.D. Tucker, C.J. Limpus, and J.M. Whittier. 2003. Interactions between ecology, demography, capture stress, and profiles of corticosterone and glucose in a freelifving population of Australian freshwater crocodiles. *General and Comparative Endocrinology* 132 (1):161-170.

Jones, D.V., and D.R. Rees. 2020. Haul-out Counts and Photo-Identification of Pinnipeds in Chesapeake Bay and Eastern Shore, Virginia: 2018/2019 Annual Progress Report. Final Report. Prepared for U.S. Fleet Forces Command, Norfolk, Virginia. March 2020.

Jones, D.V., D.R. Rees, and B.A Bartlett. 2018. Haul-out Counts and Photo-Identification of Pinnipeds in Chesapeake Bay and Eastern Shore, Virginia: 2017/2018 Annual Progress Report. Final Report. Prepared for U.S. Fleet Forces Command, Norfolk, Virginia. December 2018.

Jorgenson JK, Gyselman EC. 2009. Hydroacoustic measurements of the behavioral response of arctic riverine fishes to seismic airguns. *J Acoust Soc Am*. 2009 Sep;126(3):1598-606.

Kastak, David & Mulsow, Jason & Ghaul Bergman, Asila & Reichmuth, Colleen. (2008). Noise-induced permanent threshold shift in a harbor seal. *The Journal of the Acoustical Society of America*. 123. 2986. 10.1121/1.2932514.

Kastelein, R.A., P. Wensveen, L. Hoek, and J.M. Terhune. 2009. Underwater hearing sensitivity of harbor seals (*Phoca vitulina*) for narrow noise bands between 0.2 and 80 kHz. *Journal of the Acoustical Society of America* 126(1):476-483.

Kenney, R. D. 1990. Bottlenose dolphins off the northeastern United States. Pages 369-386 in S. Leatherwood and R. R. Reeves, eds. *The bottlenose dolphin*. Academic Press, Inc., San Diego, California.

Knowlton, A.R., J.B. Ring, and B. Russell. 2002. Right whale sightings and survey effort in the mid-Atlantic region: migratory corridor, time frame, and proximity to port entrances. Report to the NMFS Ship Strike Working Group, Silver Spring, Maryland.

Krausman, P.R., L.K. Harris, C.L. Blasch, K.K.G. Koenen, and J. Francine. 2004. Effects of military operations on behavior and hearing of endangered Sonoran pronghorn. *Wildlife Monographs* 157:1-41.

LaBrecque, Erin, et al. "3. Biologically important areas for cetaceans within U.S. waters--Gulf of Mexico region." *Aquatic Mammals*, vol. 41, no. 1, 2015, p. 30

Lankford, S.E., T.E. Adams, R.A. Miller, and J.J. Cech. 2005. The cost of chronic stress: Impacts of a nonhabituating stress response on metabolic variables and swimming performance in sturgeon. *Physiological and Biochemical Zoology* 78:599-609.

Lusseau, D. and L. Bejder. 2007. The long-term consequences of short-term responses to disturbance experiences from whale watching impact assessment. *International Journal of Comparative Psychology* 201(2-3):228-236.

MacGillivray, A., E. Ziegler, and J. Laughlin. 2007. Underwater acoustic measurements from Washington State Ferries 2006 Mukilteo ferry terminal test pile project. JASCO Research, Ltd, Victoria, British Columbia.

Madsen, P.T., M. Wahlberg, J. Tougaard, K. Lucke, and P. Tyack. 2006. Wind turbine underwater noise and marine mammals: implications of current knowledge and data needs. *Marine Ecology Progress Series* 309:279–295.

Mallette S.D., G.G. Lockhart, R.J. McAlarney, E.W. Cummings, D.A. Pabst, W.A. McLellan, and S.G. Barco. 2014. Documenting Whale Migration off Virginia's Coast for Use in Marine Spatial Planning: Aerial and Vessel Surveys in the Proximity of the Virginia Wind Energy Area (VA WEA). VAQF Scientific Report 2014-08.

Mallette S.D., G.G. Lockhart, R.J. McAlarney, E.W. Cummings, D.A. Pabst, W.A. McLellan, and S.G. Barco. 2016a. Offshore energy planning for Marine Protected Species off of Virginia's coast: A synthesis of aerial surveys in the proximity of the Virginia wind energy area, 2012-2015. VAQF Scientific Report 2016-04.

Mallette, S.D., G.G. Lockhart, R.J. McAlarney, E.W. Cummings, D.A. Pabst, W.A. McLellan, and S.G. Barco. 2016b. Aerial Survey Baseline Monitoring in the Continental Shelf Region of the VACAPES OPAREA: 2015 Annual Progress Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract No. N62470-15-D-8006, Task Order 05, issued to HDR, Inc., Virginia Beach, Virginia. March 2016.

Mallette, S.D., M.L. Burt, L. Thomas, R.J. McAlarney, G.G. Lockhart, E.W. Cummings, W.A. McLellan, D.A. Pabst, and S.G. Barco. 2018a. Occurrence of Baleen Whales along the Continental Shelf Region of the VACAPES OPAREA off southern Virginia: Final Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract No. N62470-15-D-8006, Task Order 48, issued to HDR, Inc., Virginia Beach, Virginia. July 2018.

Mallette, S.D., N.H. Mathies, and S.G. Barco. 2018b. Development of a Web-based Mid-Atlantic Humpback Whale Catalog: 2017 Annual Progress Report. Final Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract No. N62470-15-8006, Task Order 17F4031, issued to HDR Inc., Virginia Beach, Virginia. March 2018.

Mallette, S.D., R.J. McAlarney, G.G. Lockhart, E.W. Cummings, D.A. Pabst, W.A. McLellan, and S.G. Barco. 2017. Aerial Survey Baseline Monitoring in the Continental Shelf Region of the VACAPES OPAREA: 2016 Annual Progress Report. Prepared for U.S. Fleet Forces Command. Submitted to Naval Facilities Engineering Command Atlantic, Norfolk, Virginia, under Contract No. N62470-15-D-8006, Task Order 05, issued to HDR, Inc., Virginia Beach, Virginia. July 2017.

McLellan, W. 2011a. UNCW Marine Mammal Aerial Surveys 2006-2007. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/400>) on 2019-04-10.

McLellan, W. 2011b. UNCW Right Whale Aerial Survey 05-06. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/360>) on 2019-04-11.

McLellan, W. 2013. UNCW Right Whale Aerial Surveys 2008. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/464>) on 2019-04-11.

McLellan, W. 2017. UNCW Norfolk Canyon Aerial Survey - Left side - 2016. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1479>) on 2019-05-06.

Mead, James G. and Potter, Charles W. 1995. "Recognizing Two Populations off the Bottlenose Dolphin (*Tursiops truncatus*) of the Atlantic Coast of North America - Morphologic and Ecologic Considerations." *International Marine Biology Research Institute: IBI Reports*. 31–44.

Miller, J.D. 1974. Effects of noise on people. *Journal of the Acoustical Society of America* 56:729-764.

Moberg, G.P. 2000. Biological response to stress: Implications for animal welfare. Pages 1-21 in G.P. Moberg and J.A. Mench, eds. *The Biology of Animal Stress: Basic Principles and Implications for Animal Welfare*. CABI Publishing, Oxon, United Kingdom

Moberg GP. Problems in defining stress and distress in animals. *J Am Vet Med Assoc*. 1987 Nov 15;191(10):1207-11.

Morgan, L.W., J.A. Musick, and C.W. Potter. 2002. Temporal and geographic occurrences of cetacean strandings and manatee sightings in Virginia, with notes on adverse human-cetacean interactions, from 1983-1989. *Journal of the North Carolina Academy of Science* 118(1):12–26.

Movebank. 2020. Movebank for Animal Tracking Data. Accessed 1 May 2020.
<https://www.movebank.org/>

National Marine Fisheries Service (NMFS). 2018a. 2018 Revision 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, NOAA. NOAA Technical Memorandum NMFS-OPR-59.

National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2019a. 2016-2019 Humpback Whale Unusual Mortality Event along the Atlantic Coast. National Oceanic and Atmospheric Administration. Accessed 16 May 2019.
<https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2019-humpback-whale-unusual-mortality-event-along-atlantic-coast>

National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2019b. 2017-2019 North Atlantic Right Whale Unusual Mortality Event. National Oceanic and Atmospheric Administration. Accessed 16 May 2019. <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2019-north-atlantic-right-whale-unusual-mortality-event>

National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2019c. 2018-2019 Pinniped Unusual Mortality Event along the Northeast Coast. National Oceanic and Atmospheric Administration. Accessed 16 May 2019. <https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-life-distress/2018-2019-pinniped-unusual-mortality-event-along>

National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2019d. 2017–2019 Minke Whale Unusual Mortality Event along the Atlantic Coast. National Oceanic and Atmospheric

Administration. Accessed 16 September 2019. <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2019-minke-whale-unusual-mortality-event-along-atlantic-coast>

National Research Council (NRC). 2003. Ocean Noise and Marine Mammals. National Academy Press, Washington, DC.

National Research Council (NRC). 2005. Marine mammal populations and ocean noise: Determining when noise causes biologically significant effects. National Academy of Sciences: 142 pp.

Nedwell, J. and B. Edwards. 2002. Measurements of underwater noise in the Arun River during piling at County Wharf, Li.

Niemeyer, M., T.V.N. Cole, C.L. Christman, P. Duley, and A.H. Glass. 2008. North Atlantic Right Whale Sighting Survey (NARWSS) and Right Whale Sighting Advisory System (RWSAS) 2007 results summary. U.S. Department of Commerce, Northeast Fisheries Science Center Reference Document 08-06; 6 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, Massachusetts.

National Institute for Occupational Safety and Health (NIOSH). 1998. Criteria for a recommended standard: Occupational noise exposure. United States Department of Health and Human Services, Cincinnati, OH.

Nowacek, D.P., M.P. Johnson, and P.L. Tyack. 2004. North Atlantic right whales (*Eubalaena glacialis*) ignore ships but respond to alerting stimuli. *Proceedings of the Royal Society of London B: Biological Sciences* 271(1536):227-231.

Nowacek, DP, LH Thorne, D.W. Johnston, And PL Tyack. 2007. Responses of cetaceans to anthropogenic noise. *Mammal Rev.* 37(2):81–115.

Oestman, R., D. Buehler, J. Reyff, and R. Rodkin. 2009. Technical guidance for assessment and mitigation of the hydroacoustic effects of pile driving on fish. Prepared by ICF Jones & Stokes and Illingworth & Rodkin, Inc. for the California Department of Transportation: 298 pp.

Palka, D.L., S. Chavez-Rosales, E. Josephson, D. Cholewiak, H.L. Haas, L. Garrison, M. Jones, D. Sigourney, G. Waring (retired), M. Jech, E. Broughton, M. Soldevilla, G. Davis, A. DeAngelis, C.R. Sasso, M.V. Winton, R.J. Smolowitz, G. Fay, E. LaBrecque, J.B. Leiness, Dettloff, M. Warden, K. Murray, and C. Orphanides. 2017. Atlantic Marine Assessment Program for Protected Species: 2010-2014. US Dept. of the Interior, Bureau of Ocean Energy Management, Atlantic OCS Region, Washington, DC. OCS Study BOEM 2017-071. 211 pp.

Paxton, Avery J. Christopher Taylor, Douglas P. Nowacek, Julian Dale, Elijah Cole, Christine M. Voss, Charles H. Peterson. 2017. Seismic survey noise disrupted fish use of a temperate reef, *Marine Policy*, Volume 78, Pages 68-73.

Pearson, W.H., J.R. Skalski, and C.I. Malme. 1992. Effects of sounds from a geophysical survey device on behavior of captive rockfish (*Sebastes* spp.). *Canadian Journal of Fisheries and Aquatic Sciences* 49:1343-1356.

Reichmuth, C., Holt, M.M., Mulsow, J. *et al.* Comparative assessment of amphibious hearing in pinnipeds. *J Comp Physiol A* **199**, 491–507 (2013)

Reyff, J., and C. Heyvaert. 2019. White Pass & Yukon Railroad Mooring Dolphin Installation Pile Driving and Drilling Sound Source Verification: Skagway, Alaska. Illingworth & Rodkin, Inc., Cotati, California. 94 pp.

Reyff, J.A. 2020. Review of Down-the-Hole Rock Socket Drilling Acoustic Data Measured for White Pass & Yukon Route (WP&YR) Mooring Dolphins. Prepared by Illingworth & Rodkin, Inc.

Romano, T.A., M.J. Keogh, C. Kelly, P. Feng, L. Berk, C.R. Schlundt, *et al.* 2004. Anthropogenic sound and marine mammal health: Measures of the nervous and immune systems before and after intense sound exposure. *Canadian Journal of Fisheries and Aquatic Sciences* 61:1124- 1134

Richardson, W.J., C.R. Greene, C.I. Malme, and D.H. Thomson. 1995. *Marine Mammals and Noise*. Academic Press, Inc., San Diego, California.

Rolland, R.M., S.E. Parks, K.E. Hunt, M. Castellote, P.J. Corkeron, D.P. Nowacek, *et al.* 2012. Evidence that ship noise increases stress in right whales. *Proceedings of the Royal Society of London Series B Biological Sciences* 279 (1737):2363-2368.

Rosel, P.E., France, S.C., Wang, J.Y. and Kocher, T.D. (1999), Genetic structure of harbour porpoise *Phocoena phocoena* populations in the northwest Atlantic based on mitochondrial and nuclear markers. *Molecular Ecology*, 8: S41-S54

Salisbury, D.P., C.W. Clark, and A.N. Rice. 2016. Right whale occurrence in the coastal waters of Virginia, U.S.A.: implications of endangered species presence in a rapidly developing energy market. *Marine Mammal Science* 32(2):509–519.

A Santulli, A Modica, C Messina, L Ceffa, A Curatolo, G Rivas, G Fabi, V D'Amelio, 1999. Biochemical Responses of European Sea Bass (*Dicentrarchus labrax* L.) to the Stress Induced by Off Shore Experimental Seismic Prospecting, *Marine Pollution Bulletin*, Volume 38, Issue 12, 1999, Pages 1105-1114

Schlundt, C.E., J.J. Finneran, D.A. Carder, and S.H. Ridgway. 2000. Temporary shift in masked hearing thresholds of bottlenose dolphins, *Tursiops truncatus*, and white whales, *Delphinapterus leucas*, after exposure to intense tones. *Journal of the Acoustical Society of America* 107:3496-3508.

Seyle, H. 1950. Stress and the general adaptation syndrome. *British Medical Journal* June 17:1383-1392.

Skalski, J.R., W.H. Pearson, and C.I. Malme. 1992. Effects of sounds from a geophysical survey device on catch-per-unit-effort in a hook-and-line fishery for rockfish (*Sebastes spp.*). *Canadian Journal of Fisheries and Aquatic Sciences* 49(7):1357-1365.

Smith T.D., Allen J., Clapham P.J., Hammond P.S., Katona S., Larsen F., Lien J., Mattila D., Palsbøll P.J., Sigurjo´nsson J., Stevick P.T. and Øien N. (1999) An ocean-basin-wide mark-recapture study of the North Atlantic humpback whale (*Megaptera novaeangliae*). *Marine Mammal Science* 15, 1–32

Southall, B.L., A.E. Bowles, W.T. Ellison, J.J. Finneran, R.L. Gentry, C.R. Greene, Jr., D. Kastak, D.R. Ketten, J.H. Miller, P.E. Nachtigall, W.J. Richardson, J.A. Thomas, and P.L. Tyack. 2007. Marine mammal noise exposure criteria: Initial scientific recommendations. *Aquatic Mammals* 33(4):411–497.

Stevick P.T., Allen J., Be´rube M., Clapham P.J., Katona S.K., Larsen F., Lien J., Mattila D.K., Palsbøll P.J., Robbins J., Sigurjo´nsson J., Smith T.D., Øien N. and Hammond P.S. (2003) Segregation of migration by feeding ground origin in North Atlantic humpback whales (*Megaptera novaeangliae*). *Journal of Zoology, London* 259, 231–237

Stevick, P., N. Øien, and D.K. Mattila. 1998. Migration of a humpback whale between Norway and the West Indies. *Marine Mammal Science* 14:162–166.

Straley, J. M. "Fall and winter occurrence of humpback whales." *Megaptera no* (1990).

Swingle, W.M., C.M. Trapani, L.R. D’Eri, and M.C. Lynott. 2013. Marine Mammal and Sea Turtle Stranding Response 2012 Grant Report. Final Report to the Virginia Coastal Zone Management Program, NOAA CZM Grant #NA11NOS4190122, Task 49. VAQF Scientific Report 2013-01. Virginia Beach, Virginia. 35 pp.

Swingle, W.M., M.C. Lynott, E.B. Bates, G.G. Lockhart, K.M. Phillips, K.R. Rodrigue, S.A. Rose, and K.M. Williams. 2015. Virginia Sea Turtle and Marine Mammal Stranding Network 2014 Grant Report. Final Report to the Virginia Coastal Zone Management Program, NOAA CZM Grant #NA13NOS4190135, Task 49. VAQF Scientific Report 2015-01. Virginia Beach, Virginia. 40 pp.

Swingle, W.M., S.G. Barco, T.D. Pitchford, W.A. McLellan, and D.A. Pabst. 1993. Appearance of juvenile humpback whales feeding in the nearshore waters of Virginia. *Marine Mammal Science* 9(3):309–315.

Thorson, P. and J.A. Reyff. 2006. San Francisco-Oakland Bay Bridge East Span Seismic Safety Project: marine mammal and acoustic monitoring for the marine foundations at piers E2 and T1, January-September 2006. Prepared by SRS Technologies and Illingworth & Rodkin, Inc. for the California Department of Transportation, 51 p.

Ward, W.D. 1960. Recovery from high values of temporary threshold shift. *Journal of the Acoustical Society of America* 32:497-500.

Ward, W.D., A. Glorig, and D.L. Sklar. 1958. Dependence of temporary threshold shift at 4 kc on intensity and time. *Journal of the Acoustical Society of America* 30:944-954.

- Ward, W.D., A. Glorig, and D.L. Sklar. 1959. Temporary threshold shift from octave-band noise: Application to damage-risk criteria. *Journal of the Acoustical Society of America* 31:522-528.
- Wardle, C.S., T.J. Carter, G.G. Urquhart, A.D. F. Johnstone, A.M. Ziolkowski, G. Hampson and D. Mackie. 2001. Effects of seismic air guns on marine fish. *Continental Shelf Research* 21:1005-1027
- Waring, G.T., E. Josephson, K. Maze-Foley, and P.E. Rosel. 2016. U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2015. (NOAA Technical Memorandum NMFS-NE-238). Woods Hole, MA: U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), Northeast Fisheries Science Center. 501 pp.
- Wartzok, D., A.N. Popper, J. Gordon, and J. Merrill. 2003. Factors affecting the responses of marine mammals to acoustic disturbance. *Marine Technology Society Journal* 37(4):6-15.
- Wartzok, D., and D.R. Ketten. 1999. Marine mammal sensory systems. pp 117-175 In J.E. Reynolds II & S.A. Rommel (Eds.), *Biology of Marine Mammals*. Washington, DC: Smithsonian Institution Press.
- Watts, Peter, and David E. Gaskin. "Habitat Index Analysis of the Harbor Porpoise (*Phocoena phocoena*) in the Southern Coastal Bay of Fundy, Canada." *Journal of Mammalogy*, vol. 66, no. 4, 1985, pp. 733–744. *JSTOR*,
- Weilgart, L.S. 2007. A brief review of known effects of noise on marine mammals. *International Journal of Comparative Psychology* 201(2-3):159-168.
- Wells, R.S., and M.D. Scott. 1999. Bottlenose dolphin *Tursiops truncatus* (Montagu, 1821). Pages 137-182 in S.H. Ridgway and R.H. Harrison (eds). *Handbook of marine mammals – Volume 6*. Academic Press, London, United Kingdom.
- Whitt, A.D., J.A. Powell, A.G. Richardson, and J.R. Bosyk. 2015. Abundance and distribution of marine mammals in nearshore waters off New Jersey, USA. *Journal of Cetacean Research and Management* 15:45–59.
- Yazvenko, S.B., T.L. McDonald, S.A. Blokhin, S.R. Johnson, H.R. Melton, M.W. Newcomer, et al. 2007. Feeding of western gray whales during a seismic survey near Sakhalin Island, Russia. *Environmental Monitoring and Assessment* 134(1-3):93-106.
- Zelick, R., Mann, D. and Popper, A. N. (1999). Acoustic communication in fishes and frogs. In *Comparative Hearing: Fish and Amphibians* (ed. R. R. Fay and A. N. Popper), pp.363 -411. New York: Springer-Verlag