

Navy New London Pier Extension IHA 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). 2005. *Measurement of Sound Pressure Levels in Air (ANSI S1.13-2005)*. New York: Acoustical Society of America.
- ANSI. 1995. *Bioacoustical Terminology (ANSI S3.20-1995)*. Acoustical Society of America, Woodbury, NY.
- ANSI. 1986. *Methods of measurement for impulse noise 3 (ANSI S12.7-1986)*. Acoustical Society of America, Woodbury, NY.
- 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.
- Au, W.W.L. and M. Hastings. 2008. *Principles of Marine Bioacoustics*. Springer-Verlag, New York.
- Blecha, F. 2000. Immune system response to stress. In *The biology of animal stress: basic principles and implications for animal welfare*. (pp. 111-121). Wallingford UK: CABI Publishing.
- Burns, J.J. 2009. Harbor seal and spotted seal (*Phoca vitulina* and *P. largha*). Pages 533-542 in: W.F. Perrin, B. Wursig, and J.G.M. Thewissen (eds.) *Encyclopedia of marine mammals*, second edition. Academic Press, San Diego, CA.
- California Department of Transportation (CDOT). 2015. *Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish*. Available online at: http://www.dot.ca.gov/hq/env/bio/fisheries_bioacoustics.htm. 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.
- Casper, B.M., Halvorsen, M.B., Carlson, T.J., Popper, A.N., 2017. Onset of barotrauma injuries related to number of pile driving strike exposures in hybrid striped bass. *The Journal of the Acoustical Society of America* 141, 4380-4387.
- Casper, B.M., M.B. Halvorsen, F. Matthews, T.J. Carlson, and A.N. Popper. 2013. Recovery of barotrauma injuries resulting from exposure to pile driving sound in two sizes of hybrid striped bass. *PLoS ONE* 8 (9):e73844.

- Cott, P.A., A.N. Popper, D.A. Mann, J.K. Jorgenson, and B.W. Hanna. 2012. Impacts of riverbased air gun seismic activity on northern fishes. *Advances in Experimental Medicine and Biology* 730:367-369.
- 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.
- Dazey, E., McIntosh, B., Brown, S., and Dudzinski, K. 2012. Assessment of Underwater Anthropogenic Noise Associated with Construction Activities in Bechers Bay, Santa Rosa Island, California. *Journal of Environmental Protection*, 03 (10) 1286-1294.
- 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.
- 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 150p. 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.
- Fair, P.A. and P.R. Becker. 2000. Review of stress in marine mammals. *Journal of Aquatic Ecosystem Stress and Recovery* 7 (4):335-354.
- Fay, R.R. 2009. Soundscapes and the sense of hearing of fishes. *Integrative Zoology* 4: 26-32.
- Fay, R.R., A.N. Popper, and J.F. Webb. 2008. Introduction to fish bioacoustics. In: Webb, J.F., R.R. Fay, and A.N. Popper, eds. *Fish Bioacoustics*. Springer Handbook of Auditory Research 32:1-15.
- Fewtrell, J.L., and R.D. McCauley. 2012. Impact of air gun noise on the behavior of marine fish and squid. *Marine Pollution Bulletin* 64: 984-993.
- Finneran, J.J. 2015. Auditory weighting functions and TTS/PTS exposure functions for marine mammals exposed to underwater noise. Technical Report. San Diego: SPAWAR.
- Finneran, J.J., Schlundt, C.E., 2013. Effects of fatiguing tone frequency on temporary threshold shift in bottlenose dolphins (*Tursiops truncatus*). *The Journal of the Acoustical Society of America* 133, 1819-1826. 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., Carder, D.A., Schlundt, C.E., Dear, R.L., 2010. Growth and recovery of temporary threshold shift at 3 kHz in bottlenose dolphins: Experimental data and mathematical models. *The Journal of the Acoustical Society of America* 127, 3256-3266. 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.
- 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.
- Grigg, E. K., S. G. Allen, D. E. Craven-Green, A. P. Klimley, H. Markowitz, D. L. Elliott-Fisk. 2012. Foraging distribution of Pacific harbor seals (*Phoca vitulina richardii*) in a highly impacted estuary. *Journal of Mammalogy* 93: 282–293.
- Halvorsen, M.B., D.G. Zeddies, W.T. Ellison, D.R. Chicoine, and A.N. Popper. 2012a. Effects of midfrequency active sonar on hearing in fish. *Journal of the Acoustical Society of America* 131 (1):599-607.
- Halvorsen, M.B., B.M. Casper, C.M. Woodley, T.J. Carlson, and A.N. Popper. 2012b. Threshold for onset of injury in chinook salmon from exposure to impulsive pile driving sounds. *PLoS ONE* 7 (6).
- Harris, D.E., B. Lelli, and G. Jakush. 2002. Harp Seal Records from the Southeastern Gulf of Maine: 1997-2001. *Northeastern Naturalist*. 9(3): 331-340.
- Harvey, J.T. and D. Goley. 2011. Determining a correction factor for aerial surveys of harbor seals in California. *Marine Mammal Science* 27 (4): 719-735.
<https://doi.org/10.1111/j.17487692.2010.00446.x>
- 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., Josephson, E., Maze-Foley, K., Rosel, P.E., and Wallace, J., Eds. 2022. US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2021. NOAA Tech Memo NMFS NE-288; 387 p.
- Hayes, S.A., Josephson, E., Maze-Foley, K., Rosel, P.E., and Wallace, J., Eds. 2019. US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2018. NOAA Tech Memo NMFS NE-288; 258 p.
- Hemilä, S., S. Nummela, A. Berta, and T. Reuter. 2006. High-frequency hearing in phocid and otariid pinnipeds: An interpretation based on inertial and cochlear constraints (L). *Journal of the Acoustical Society of America* 120(6):3463-3466.
- 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.

- Holberton, R.L., Helmuth, B. and Wingfield, J.C., 1996. The corticosterone stress response in gentoo and king penguins during the non-fasting period. *Condor*, pp.850-854.
- Huber, H. R., S. J. Jeffries, R. F. Brown, R. L. DeLong, and G. Vanblaricom. 2001. Correcting aerial survey counts of harbor seals (*Phoca vitulina richardsi*) in Washington and Oregon. *Marine Mammal Science* 17(2):276–295.
- Hood, L.C., Boersma, P.D. and Wingfield, J.C., 1998. The adrenocortical response to stress in incubating Magellanic penguins (*Spheniscus magellanicus*). *The Auk*, 115(1), pp.76-84.
- Illingworth and Rodkin. 2017. Pile Driving Noise Measurements at Atlantic Fleet Naval Installations: 28 May 2013–28 April 2016.
- International Organization for Standardization (ISO), 2017. 1996 - 2:2017 Acoustics - Description, measurement, and assessment of environmental noise - Part 2: Determination of sound pressure levels, International Organization for Standardization.
- Jessop, T.S., Tucker, A.D., Limpus, C.J. and Whittier, J.M., 2003. Interactions between ecology, demography, capture stress, and profiles of corticosterone and glucose in a free-living population of Australian freshwater crocodiles. *General and comparative endocrinology*, 132(1), pp.161-170.
- Jorgenson, J.K. and Gyselman, E.C., 2009. Hydroacoustic measurements of the behavioral response of arctic riverine fishes to seismic airguns. *The Journal of the Acoustical Society of America*, 126(3), pp.1598-1606.
- Kastak, D., J. Mulsow, A. Ghaul, and C. Reichmuth. 2008. Noise-induced permanent threshold shift in a harbor seal: Abstract. *Journal of the Acoustical Society of America* 123:2986.
- Kastak, D., Reichmuth, C., Holt, M.M., Mulsow, J., Southall, B.L., Schusterman, R.J., 2007. Onset, growth, and recovery of in-air temporary threshold shift in a California sea lion (*Zalophus californianus*). *The Journal of the Acoustical Society of America* 122, 2916-2924.
- Kastak, D., Schusterman, R., 1999. In-air and underwater hearing sensitivity of a northern elephant seal (*Mirounga angustirostris*). *Canadian Journal of Zoology* 77, 1751-1758.
- Kastelein, R.A., Helder-Hoek, L., Defiliet, L.N., Acoleyen, L.V., Huijser, L.A., Terhune, J.M., 2022. Temporary Hearing Threshold Shift in California Sea Lions (*Zalophus californianus*) Due to One-Sixth-Octave Noise Bands Centered at 0.6 and 1 kHz. *Aquatic Mammals* 48.
- Kastelein, R.A., Helder-Hoek, L., Defiliet, L.N., Kuiphof, F., Huijser, L.A., Terhune, J.M., 2022. Temporary Hearing Threshold Shift in California Sea Lions (*Zalophus californianus*) Due to One-Sixth-Octave Noise Bands Centered at 8 and 16 kHz: Effect of Duty Cycle and Testing the Equal-Energy Hypothesis. *Aquatic Mammals* 48.
- Kastelein, R.A., Helder-Hoek, L., Defiliet, L.N., Huijser, L.A., Terhune, J.M., Gransier, R., 2021. Temporary Hearing Threshold Shift in California Sea Lions (*Zalophus californianus*) Due to

One-Sixth-Octave Noise Bands Centered at 2 and 4 kHz: Effect of Duty Cycle and Testing the Equal-Energy Hypothesis. *Aquatic Mammals* 47.

- Kastelein, R.A., Helder-Hoek, L., Cornelisse, S., Huijser, L.A., Gransier, R., 2019. Temporary hearing threshold shift in harbor porpoises (*Phocoena phocoena*) due to one-sixth-octave noise band at 32 kHz. *Aquatic Mammals* 45, 549-562.
- Kastelein, R.A., Helder-Hoek, L., Cornelisse, S., Huijser, L.A., Terhune, J.M., 2019. Temporary hearing threshold shift in harbor seals (*Phoca vitulina*) due to a one-sixth-octave noise band centered at 16 kHz. *The Journal of the Acoustical Society of America* 146, 3113-3122.
- Kastelein, R.A., Helder-Hoek, L., Gransier, R., 2019. Frequency of greatest temporary hearing threshold shift in harbor seals (*Phoca vitulina*) depends on fatiguing sound level. *The Journal of the Acoustical Society of America* 145, 1353-1362.
- Kastelein, R.A., Gransier, R., Schop, J., Hoek, L., 2015. Effects of exposure to intermittent and continuous 6–7 kHz sonar sweeps on harbor porpoise (*Phocoena phocoena*) hearing. *The Journal of the Acoustical Society of America* 137, 1623-1633.
- Kastelein, R.A., J. Schop, R. Gransier, and L. Hoek. 2014. Frequency of greatest temporary hearing threshold shift in harbor porpoise (*Phocoena phocoena*) depends on the noise level. *Journal of the Acoustical Society of America* 136:1410-1418.
- 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.
- Ketten, D.R., Simmons, J.A., Riquimaroux, H., Simmons, A.M., 2021. Functional analyses of peripheral auditory system adaptations for echolocation in air vs. water. *Frontiers in Ecology and Evolution* 9, 661216.
- 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.
- Kryter, K.D., W.D. Ward, J.D. Miller, and D.H. Eldredge. 1966. Hazardous exposure to intermittent and steady-state noise. *Journal of the Acoustical Society of America* 39:451-464.
- 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.
- London J. M., M. M. Lance, and S. J. Jeffries. 2001. Observations of harbor seal predation on Hood Canal salmonids from 1998 to 2000. Final Report: Studies of expanding pinniped populations. NOAA Grant No. NA17FX1630, WDFW, PSMFC Contract No. 02-15. 20 p.

- 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.
- Madsen, P.T., M. Johnson, P.J.O. Miller, N.A. Soto, J. Lynch, and P. Tyack. 2006. Quantitative measures of air-gun pulses recorded on sperm whales (*Physeter macrocephalus*) using acoustic tags during controlled exposure experiments. *Journal of the Acoustical Society of America* 120(4):2366-2379.
- Manugian, S. C., Greig, D., Lee, D., Becker, B. H., Allen, S., Lowry, M. S., & Harvey, J. T. 2017. Survival probabilities and movements of harbor seals in central California. *Marine Mammal Science*, 33(1), 154-171. <https://doi.org/10.1111/mms.12350>
- Medic, Heather. (2005). Connecticut Department of Energy and Environmental Protection. Seal Season Is Approaching in Long Island Sound. Connecticut Wildlife. November/December 2005.
- Miller, J.D. 1974. Effects of noise on people. *Journal of the Acoustical Society of America* 56:729-764.
- Moberg, G.P., 1987. A model for assessing the impact of behavioral stress on domestic animals. *Journal of Animal Science*, 65(5), pp.1228-1235.
- Mooney, T.A., Nachtigall, P.E. and Vlachos, S., 2009. Sonar-induced temporary hearing loss in dolphins. *Biology letters*, 5(4), pp.565-567.
- Moberg, Gary P. "Biological response to stress: implications for animal welfare." In *The biology of animal stress: Basic principles and implications for animal welfare.*, pp. 1-21. Wallingford UK: CABI publishing, 2000.
- Mooney, T.A., Nachtigall, P.E., Breese, M., Vlachos, S., Au, W.W., 2009. Predicting temporary threshold shifts in a bottlenose dolphin (*Tursiops truncatus*): The effects of noise level and duration. *The Journal of the Acoustical Society of America* 125, 1816-1826.
- 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.
- National Marine Fisheries Service (NMFS). 2023a. Guidelines for Preparing Stock Assessment Reports Pursuant to the Marine Mammal Protection Act. Protected Resources Policy Directive 02-204-01. Available online:<https://www.fisheries.noaa.gov/s3/2023-05/02-204-01-Final-GAMMS-IV-Revisionsclean-1-kdr.pdf>.
- NMFS. 2023b. Recommendations on average group size for Atlantic white-sided dolphins and common dolphins, and suggested Level A takes for harbor seal and gray seal. Email from NMFS, Rachel Wachtendonk, December 21, 2023.
- NMFS. 2018. 2018 Revisions to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Acoustic Thresholds for Onset of

Permanent and Temporary Threshold Shifts. U.S. Department of Commerce, NOAA. NOAA Technical Memorandum NMFS-OPR-59, 169 p.

Nachtigall, P.E., Supin, A.Y., Pacini, A.F., Kastelein, R.A., 2018. Four odontocete species change hearing levels when warned of impending loud sound. *Integrative zoology* 13, 160-165. National Research Council (NRC). 2005. Marine mammal populations and ocean noise: Determining when noise causes biologically significant effects. National Academy of Sciences: 142.

NRC. 2003. Ocean noise and marine mammals. Washington, DC: National Research Council Committee on Potential Impacts of Ambient Noise in the Ocean on Marine Mammals; The National Academies Press.

Navy. (2019a). Email from Ashley Kelly to Kathy Hall for UEMMS and DCS Revised Takes regarding approval from Jessica Bassi and OPNAV to use same approach as PNSY Dry Dock 1 for harp seals with one take per month for each month seals are expected to occur. November 14.

Navy. (2019b). Request for Authorization for The Incidental Harassment Of Marine Mammals Resulting From Modification, Expansion, And Future Operations Of Dry Dock 1 At Portsmouth Naval Shipyard, Kittery, Maine October 1, 2019, through September 30, 2020. March.

Navy. (2018). Final Environmental Assessment and Finding of No Significant Impact for Demolition/Replacement of Pier 32 / Demolition of Pier 10 (P-898) at United States Naval Submarine Base New London, Groton, CT.

Navy. (2017). U.S. Navy Marine Species Density Database Phase III for the Atlantic Fleet Training and Testing Study Area. Naval Facilities Engineering Command Atlantic Final Technical Report. Naval Facilities Engineering Command Atlantic, Norfolk, VA. 281 pp.

Nedwell, J. and B. Edwards. 2002. Measurements of underwater noise in the Arun River during piling at County Wharf, Littlehampton. Report by Subacoustech, Ltd. to David Wilson Homes Ltd (2002).

Northeast Ocean Data. 2023. <https://www.northeastoceandata.org/>. Accessed April 2023.

Northridge, S., M. Tasker, A. Webb, K. Camphuysen and M. Leopold 1997. White-beaked *Lagenorhynchus albirostris* and Atlantic white-sided dolphin *L. acutus* distributions in northwest European and U.S. North Atlantic waters. *Rep. Int. Whal. Comm.* 47:797-805.

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.

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.

- Orians, G. E. and N. E. Pearson. 1979. On the theory of central-place foraging. In *Analysis of Ecological Systems*. D. J. Horn, R. D. Mitchell, and G. R. Stairs (eds.). Pgs. 155–177.
- Palka, D., L.A. Dias, E. Broughton, S. Chavez-Rosales, D. Cholewiak, G. Davis, A. DeAngelis, L. Garrison, H. Haas, J. Hatch, K. Hyde, M. Jech, E. Josephson, L. Mueller-Brennan, C. Orphanides, N. Pegg, C. Sasso, D. Sigourney, M. Soldevilla, and H. Walsh. 2021. Atlantic Marine Assessment Program for Protected Species: FY15 – FY19. Washington DC: US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2021-051.
- Palka, D.L., Chavez-Rosales, S., Josephson, E., Cholewiak, D., Haas, H.L., Garrison, L., Jones, M., Sigourney, D., Waring, G. (retired), Jech, M., Broughton, E., Soldevilla, M., Davis, G., DeAngelis, A., Sasso, C.R., Winton, M.V., Smolowitz, R.J., Fay, G., LaBrecque, E., Leiness, J.B., Warden, D.M., Murray, K. and Orphanides, C. 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.
- Patterson, J., & Acevedo-Gutiérrez, A. 2008. Tidal influence on the haul-out behavior of harbor seals (*Phoca vitulina*) at a site available at all tide levels. *Northwestern Naturalist*, 89, 17-23. doi:10.1898/10511733(2008)89[17:TIOHTB]2.0.CO;2
- Paxton, A.B., J.C. Taylor, D.P. Nowacek, J. Dale, E. Cole, C.M. Voss, and C.H. Peterson. 2017. Seismic survey noise disrupted fish use of a temperate reef. *Marine Policy* 78: 68-73.
- Payne, M., D.W. Heinemann, and L.A. Selzer. 1990. A distributional assessment of cetaceans in the shelf/shelf edge and adjacent slope waters of the northeastern United States based on aerial and shipboard surveys, 1978-1988. Report to NOAA NMFS NEFSC, 166 Water St., Woods Hole, Massachusetts 02543
- 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.
- Pena, H., N.O. Handegard, and E. Ona. 2013. Feeding herring schools do not react to seismic air gun surveys. *ICES Journal of Marine Science* 70 (6):1174-1180.
- 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.
- Reichmuth, C., Sills, J.M., Mulsow, J., Ghoul, A., 2019. Long-term evidence of noise-induced permanent threshold shift in a harbor seal (*Phoca vitulina*). *The Journal of the Acoustical Society of America* 146, 2552-2561.
- Reichmuth, C., A. Ghoul, J.M. Sillis, A. Rouse, and B.L. Southall. 2016. Low-frequency temporary threshold shift not observed in spotted or ringed seals exposed to single air gun impulses. *Journal of the Acoustical Society of America* 140:2648-2658.

- Reichmuth, C. and M.M. Holt. 2013. Comparative assessment of amphibious hearing in pinnipeds. *Journal of Comparative Physiology A: Neuroethology, Sensory, Neural and Behavioral Physiology* 199(6):491-507.
- Richardson, W.J., C.R. Greene, C.I. Malme, and D.H. Thomson. 1995. *Marine Mammals and Noise*. Academic Press, Inc., San Diego, CA.
- 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.
- 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.
- Romano, T., M. Keogh, and K. Danil. 2002a. Investigation of the effects of repeated chase and encirclement on the immune system of spotted dolphins (*Stenella attenuata*) in the eastern tropical Pacific. *Administrative Report LJ-02-35C*, National Marine Fisheries Service: 37.
- Romano, T.A., D.L. Felten, S.Y. Stevens, J.A. Olschowka, V. Quaranta, and S.H. Ridgway. 2002b. Immune response, stress, and environment: Implications for cetaceans. Pages 253-279 in C.J. Pfeiffer, ed. *Molecular and Cell Biology of Marine Mammals*. Krieger Publishing Co., Malabar, Florida.
- Santulli, A., A. Modica, C. Messina, L. Ceffa, A. Curatolo, G. Rivas, et al. 1999. Biochemical responses of European sea bass (*Dicentrarchus labrax* L.) to the stress induced by offshore experimental seismic prospecting. *Marine Pollution Bulletin* 38 (12):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.
- Scholik, A. R. and H. Y. Yan. 2002. The effects of noise on the auditory sensitivity of the bluegill sunfish, *Lepomis macrochirus*. *Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology* 133, 43-52.
- Scholik, A.R. and H.Y. Yan. 2001. The effects of underwater noise on auditory sensitivity of fish. *Proceedings of the Institute of Acoustics* 23(4):27.
- Seyle, H. 1950. Stress and the general adaptation syndrome. *J Brit Med* 1:1383–1392.
- Sills, J.M., Ruscher, B., Nichols, R., Southall, B.L., Reichmuth, C., 2020. Evaluating temporary threshold shift onset levels for impulsive noise in seals. *The Journal of the Acoustical Society of America* 148, 2973-2986. 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.

- Southall, B. L., D.P. Nowacek, A.E. Bowles, V. Senigaglia, L. Bejder, P.L. Tayak. 2021. Marine mammal noise exposure criteria: Assessing the severity of marine mammal behavioral responses to human noise. *Aquatic Mammals* 47(5): 421–464.
- Southall B L, Finneran J J, Reichmuth C, Nachtigall P E, Ketten D R, Bowles A E, Ellison W T, Nowacek D P, Tyack P L. 2019. Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects. *Aquatic Mammals* 2019, 45(2), 125-232, DOI 10.1578/AM.45.2.2019.125.
- Southall, B.L., A.E. Bowles, W.T. Ellison, J.J. Finneran, R.L. Gentry, C.R. Greene, et al. 2007. Marine mammal noise exposure criteria: initial scientific recommendations. *Aquatic Mammals* 33(4):411-521.
- Stewart, B. S., and P. K. Yochem. 1994. Ecology of Harbor Seals in the Southern California Bight. In: *The Fourth California Islands Symposium: Update on the Status of Resources*, W. L. Halverson and G. J. Maender (editors), 123–134. Santa Barbara, CA: Santa Barbara Museum of Natural History.
- Suryan, R. M., & Harvey, J. T. 1998. Tracking harbor seals (*Phoca vitulina richardsi*) to determine dive behavior, foraging activity, and haul-out site use. *Marine Mammal Science*, 14(2), 361–372.
- Tetra Tech, Inc. 2019. Technical Memorandum 2018 Nearshore Marine Mammal Surveys Naval Submarine Base New London. Prepared for Naval Facilities Engineering Command Mid-Atlantic, Norfolk, Virginia. Final, April.
- Thompson, P. M. A. Mackay, D. J. Tollit, S. Enderby, and P. S. Hammond. 1998. The influence of body size and sex on the characteristics of harbour seal foraging trips. *Canadian Journal of Zoology* 76: 1044–1053.
- 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. 1997. Effects of high intensity sound, Pp, 1497-1507 in *Encyclopedia of Acoustics*, MJ Crocker, ed, New York: J. Wiley and Sons, Inc.
- 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. 1959. Temporary threshold shift from octave-band noise: Application to damage-risk criteria. *Journal of the Acoustical Society of America* 31:522-528.
- 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.

- 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* 21:10051027.
- Wartzok D., A.N. Popper, J. Gordon J., and J.J. Merrill. 2004. Factors affecting the responses of marine mammals to acoustic disturbance. *Marine Technology Society Journal* 37:6-15.
- 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.
- 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.
- Westgate, A.J., A.J. Read, T.M. Cox, T.D. Schofield, B.R. Whitaker and K.E. Anderson 1998. Monitoring a rehabilitated harbor porpoise using satellite telemetry. *Mar. Mamm. Sci.* 14(3): 599-604.
- Wisniewska, D. M., M. Johnson, J. Teilman, L. Rojano-Doñate, J. Shearer, S. Sveegaard, L. A. Miller, U. Siebert, and P. Teglberg Madsen. 2016. Ultra-High Foraging Rates of Harbor Porpoises Make Them Vulnerable to Anthropogenic Disturbance. *Current Biology* 26: 14411446.
- 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.
- Yochem, P. K., B.S. Stewart, R.L. DeLong, D.P. DeMaster. 1987. Diel haul-out patterns and site fidelity of harbor seals (*Phoca vitulina richardsi*) on San Miguel Island, California, in Autumn. *Marine Mammal Science* 3(4):323-332.
- Zelick, R., and D.A. Mann. 1999. Acoustic communication in fishes and frogs. In: Fay, R.R. and A.N. Popper, eds. *Comparative hearing: Fishes and amphibians*. Springer-Verlag, New York.