

References

- Au, W.L.L., and Hastings, M.C. 2008. Principles of Marine Bioacoustics. Springer, New York, NY.
- Allen, B.M. and R.P. Angliss. 2014. Alaska marine mammal stock assessments, 2013. U.S. Department of Commerce, NOAA Technical Memorandum. NMFS-AFSC-277, 294 p.
- Allen, B. M., and R. P. Angliss. 2015. Alaska marine mammal stock assessments, 2014. U.S. Department of Commerce, NOAA Technical Memorandum. NMFS AFSC-301, 304 p. doi:10.7289/V5NS0RTS.
- Awbrey, F.T., J.A. Thomas, and R.A. Kasetelein. 1988. Low frequency underwater hearing sensitivity in belugas, *Delphinapterus leucas*. Journal of the Acoustical Society of America 84:2273-2275.
- Barlow, J., J. Calambokidis, E. A. Falcone, C. S. Baker, A. M. Burdin, P. J. Clapham, J. K. B. Ford, C. M. Gabriele, R. LeDuc, D. K. Mattila, T. J. Quinn II, L. Rojas-Bracho, J. M. Straley, B. L. Taylor, J. Urbán R., P. Wade, D. Weller, B. H. Witteveen, and M. Yamaguchi. 2011. Humpback whale abundance in the North Pacific estimated by photographic capture-recapture with bias correction from simulation studies. Mar. Mammal Sci. 27:793-818.
- Blackwell, S. B. 2005. Underwater measurements of pile-driving sounds during the Port MacKenzie dock modifications, 13-16 August 2004. Prepared for Knik Arm Bridge and Toll Authority by Greeneridge Sciences, Inc. and LGL Alaska Research Associates, Inc., at the request of HDR Alaska, Inc. Goleta, CA.
- Blackwell, S.B. and C.R. Greene, Jr., 2003. Acoustic measurements in Cook Inlet, Alaska, during August 2001. Greeneridge Rep. 271-2. Revised June 2003. Prepared by Greeneridge Sciences, Inc., Santa Barbara, Calif., for National Marine Fisheries Service, Anchorage.
- Blaxter, J., Gray, J., and Denton, E. 1981. Sound and the startle response in herring shoals. J. Mar. Biol. Assoc. U.K. 61:851-869.
- Brueggeman, J. J., M. Smultea, H. Goldstein, S. McFarland, and D. J. Blatchford. 2007a. 2007 spring marine mammal monitoring program for the ConocoPhillips Beluga River seismic operations in Cook Inlet Alaska: 90-day report. Prepared by Canyon Creek Consulting for ConocoPhillips Alaska, Inc.
- Brueggeman, J. J., M. Smultea, K. Lomac-MacNair, D. J. Blatchford, and R. Dimmick. 2007b. 2007 fall marine mammal monitoring program for the Union Oil Company of California Granite Point seismic operations in Cook Inlet Alaska: 90-day report. Prepared by Canyon Creek Consulting for Union Oil Company of California.

- Calambokidis, J., E. A. Falcone, T. J. Quinn, A. M. Burdin, P. J. Clapham, J. K. B. Ford, C. M. Gabriele, R. LeDuc, D. Mattila, L. Rojas-Bracho, J. M. Straley, B. L. Taylor, J. Urbán R., D. Weller, B. H. Witteveen, M. Yamaguchi, A. Bendlin, D. Camacho, K. Flynn, A. Havron, J. Huggins, and N. Maloney. 2008. SPLASH: Structure of Populations, Levels of Abundance and Status of Humpback Whales in the North Pacific. Final Report for Contract AB133F-03-RP-00078, U.S. Dep. Commer., Western Administrative Center, Seattle, WA. Available online: <http://www.cascadiaresearch.org/files/publications/SPLASH-contract-Report-May08.pdf> . Accessed December 2017.
- Calambokidis, J., J.L. Laake, and A. Pérez. 2014. Updated analysis of abundance and population structure of seasonal gray whales in the Pacific Northwest, 1996-2012. Document submitted to the Range-Wide Workshop on Gray Whale Stock Structure, April 8-11, 2014 in La Jolla, CA. 75p.
- California Department of Transportation (Caltrans). 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.
- Calkins D.G. 1989. Status of beluga whales in Cook Inlet. Pp. 109-112 in Jarvela L.E., Thorsteinson L.K. (eds) Proceedings of the Gulf of Alaska, Cook Inlet, and North Aleutian Basin Information Update Meeting, Anchorage, AK, Feb. 7-8. U.S. Dept. Commerce, NOAA, OCSEAP, Anchorage, AK.
- Clapham, P. J., and J. G. Mead. 1999. Megaptera novaeangliae. Mamm. Species 604:1-9.
- Clark, C.W., Ellison, W.T., Southall, B.L., Hatch, L., Van Parijs, S.M., Frankel, A., Ponirakis, D., 2009. Acoustic masking in marine ecosystems: intuitions, analysis, and implication. Marine Ecology Progress Series 395, 201–222.
- Committee on Taxonomy. 2016. List of marine mammal species and subspecies. Society for Marine Mammalogy, www.marinemammalscience.org, accessed on November 21, 2017.
- Dahlheim, M., A. York, R. Towell, J. Waite, and J. Breiwick. 2000. Harbor porpoise (*Phocoena phocoena*) abundance in Alaska: Bristol Bay to Southeast Alaska, 1991-1993. Marine Mammal Science 16:28-45.
- Darling, J. D. 1984. Gray whales off Vancouver Island, British Columbia. Pp. 267-287 In M. L. Jones, S. L. Swartz, and S. Leatherwood (eds.), The Gray Whale, *Eschrichtius robustus*. Academic Press, Inc., Orlando.xxiv + 600 pp.
- Ellison, W.T., Southall, B.L., Clark, C.W., and Frankel, A.S., 2012. A new context-based approach to assess marine mammal behavioral responses to anthropogenic sounds. Conservation Biol. 1:21-28.
- Engås, A., S. Løkkeborg, E. Ona and A.V. Soldal. 1996. Effects of seismic shooting on local abundance and catch rates of cod (*Gadus morhua*) and haddock (*Melanogrammus aeglefinus*). Canadian Journal of Fish and Aquatic Science 53:2238-2249.

- Finneran, J.J., C.E. Schlundt, R. Dear, D.A. Carder, and S.H. Ridgway. 2002. Temporary shift in masked hearing thresholds (MTTS) 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., D.A. Carder, C.E. Schlundt, and S.H. Ridgway. 2005. Temporary threshold shift in bottlenose dolphins (*Tursiops truncatus*) exposed to mid-frequency tones. *J. Acoust. Soc. Am.* 118(4):2696-2705.
- Finneran, J.J., D. A. Carder, R. Dear, T. Belting, J. McBain, L. Dalton, and S. H. Ridgway. 2005. Pure tone audiograms and possible aminoglycoside-induced hearing loss in belugas (*Delphinapterus leucas*). *Journal of Acoustical Society of America* 117:3936-3943.
- Foote, A.D., R.W. Osborne, and A.R. Hoelzel. 2004. Whale call response to masking boat noise. *Nature* 428:910.
- Goetz, K.T., P.W. Robinson, R.C. Hobbs, K.L. Laidre, L.A. Huckstadt, and K.E.W. Shelden. 2012. Movement and dive behavior of beluga whales in Cook Inlet, Alaska. AFSC Processed Rep. 2012-03, 40 p. Alaska Fish. Sci. Cent., NOAA, Natl. Mar. Fish. Serv., 7600 Sand Point Way NE, Seattle WA 98115.
- Gosho, M., P. Gearin, R. Jenkinson, J. Laake, L. Mazzuca, D. Kubiak, J. Calambokidis, W. Megill, B. Gisborne, D. Goley, C. Tombach, J. Darling, and V. Deecke. 2011. Movements and diet of gray whales (*Eschrichtius robustus*) off Kodiak Island, Alaska, 2002 – 2005. Paper SC/M11/AWMP2 presented to the International Whaling Commission AWMP workshop 28 March-1 April 2011.
- 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. *J Acoust Soc Am* 120:3463–3466
- Hansen, D.J., and J.D. Hubbard. 1999. Distribution of Cook Inlet beluga whales (*Delphinapterus leucas*) in winter. Final Rep. OCS Study. MMS 99-0024. U.S. Department of the Interior, Minerals Management Service. Alaska OCS Region, Anchorage, AK.
- Hawkins, A.D. (1981). "The hearing abilities of fish," in *Hearing and Sound Communication in Fishes*, eds W. N. Tavolga, A. N. Popper, and R. R. Fay (New York, NY: Springer-Verlag), 109–133.
- Hildebrand, J.A. 2009. Anthropogenic and natural sources of ambient noise in the ocean. *Marine Ecology-Progress Series*. 395:5-20.
- Hobbs, R.C. and J.M. Waite. 2010. Abundance of harbor porpoise (*Phocoena phocoena*) in three Alaskan regions, corrected for observer errors due to perception bias and species misidentification, and corrected for animals submerged from view. *Fishery Bulletin* 108:251-267.

- Hobbs, R. C., K. E. W. Sheldon, D. J. Rugh, and S. A. Norman. 2008. 2008 status review and extinction risk assessment of Cook Inlet belugas. AFSC Processed Report 2008-02, 116 p. Alaska Fisheries Science Center, NOAA, National Marine Fisheries Service. 7600 Sand Point Way NE, Seattle, WA 98115.
- Holt M.M., Noren D.P., Veirs V., Emmons C., Veirs S. 2009. Speaking up: killer whales (*Orcinus orca*) increase their call amplitude in response to vessel noise. *J. Acoust. Soc. Am.* 125:EL27–EL32
- Hobbs, R.C., K.L. Laidre, D.J. Vos, B.A. Mahoney, and M. Eagleton. 2005. Movements and Area Use of Belugas, *Delphinapterus leucas*, in a Subarctic Alaskan Estuary. *Arctic* 58(4), 331-340.
- Johnson, J. H., and A. A. Wolman. 1984. The humpback whale, *Megaptera novaeangliae*. *Mar. Fish. Rev.* 46(4):30-37.
- Jones, M.L. 1990. Reproductive cycle in gray whales based on photographic resightings of females on the breeding grounds from 1977-1982. Report of the International Whaling Commission (Special Issue 12): SC/A88/ID38.
- Kastak, D., Schusterman, R. J., Southall, B. L., and Reichmuth, C. J. (1999). “Underwater temporary threshold shift induced by octave-band noise in three species of pinniped,” *J. Acoust. Soc. Am.* 106, 1142–1148.
- Kastak, D., B.L. Southall, R.J. Schusterman and C. Reichmuth Kastak. 2005. Underwater temporary threshold shift in pinnipeds: effects of noise level and duration. *J. Acoust. Soc. Am.* 118(5):3154-3163.
- Kastelein, R. A., Wensveen, P. J., Hoek, L., Au, W. W. L., Terhune, J. M., de Jong, C. A. F. (2009). “Critical ratios in harbor porpoises (*Phocoena phocoena*) for tonal signals between 0.315 and 150 kHz in random Gaussian white noise”, *J. Acoust. Soc. Am.* 126, 1588-1597.
- Kastelein, R. A., Gransier, R., Hoek, L., Macleod, A., and Terhune, J. M. (2012). “Hearing threshold shifts and recovery in harbor seals (*Phoca vitulina*) after octave-band noise exposure at 4 kHz,” *J. Acoust. Soc. Am.* 132, 2745–2761.
- Kendall, L.S., K. Lomac-MacNair, G. Campbell, S. Wisdom, and N. Wolf. 2015. SAExploration 2015 Cook Inlet 3D Seismic Surveys Marine Mammal Monitoring and Mitigation Report. Prepared for National Marine Fisheries Service Permits and Conservation Division Office of Protected Resources 1315 East-West Highway Silver Spring, MD 20910, National Marine Fisheries Service, Alaska Region Protected Resources Division 222 W. 7th Ave, #43, Anchorage, AK 99513, and U.S. Fish and Wildlife Service 1011 East Tudor Rd. Anchorage, AK 99503. Prepared by Fairweather Science 301 Calista Court, Anchorage, AK 99518. 12.18.2015.
- Laidre, K. L., K. E. W. Sheldon, D. J. Rugh, and B. Mahoney. 2000. Beluga, *Delphinapterus leucas*, distribution and survey effort in the Gulf of Alaska. *Mar. Fish. Rev.* 62(3):27-36.

- Lomac-MacNair, K., M.A. Smultea and G. Campbell. 2014. Draft NMFS 90-Day Report for Marine Mammal Monitoring and Mitigation during Apache's Cook Inlet 2014 Seismic Survey, 2 April – 27 June 2014. Prepared for Apache Alaska Corporation, 510 L Street #310, Anchorage AK 99501. Prepared by Smultea Environmental Sciences (SES), P.O. Box 256, Preston, WA 98050.
- Lucke, K., U. Siebert, P.A. Lepper, and M.-A. Blanchet. 2009. Temporary shift in masked hearing thresholds in a harbor porpoise (*Phocoena phocoena*) after exposure to seismic airgun stimuli. *Journal of the Acoustical Society of America* 125(6):4060-4070.
- McCauley, R.D., Duncan, A.J., Penrose, J.D., et al. 2000. Marine seismic surveys – a study of environmental implications. *APPEA J* 40: 692–706.
- Montgomery, R.A., J.M. Ver Hoef, and P.L. Boveng. 2007. Spatial modeling of haul-out site use by harbor seals in Cook Inlet, Alaska. *Mar. Ecol. Progr. Ser.* 341:257-264.
- Moore, S. E., K. M. Stafford, M. E. Dahlheim, C. G. Fox, H. W. Braham, J. J. Polovina, and D. E. Bain. 1998. Seasonal variation in reception of fin whale calls at five geographic areas in the North Pacific. *Mar. Mammal Sci.* 14(3):617-627.
- Moore, S. E., K. M. Stafford, D. K. Mellinger, and C. G. Hildebrand. 2006. Listening for large whales in the offshore waters of Alaska. *BioScience* 56(1):49-55.
- Morton, A.B. and H. K. Symonds. 2002. Displacement of *Orcinus orca* (L.) by high amplitude sound in British Columbia, Canada. *Jour. of. Mar. Sci.* 59:71-80.
- Moulton, L.L. 1997. Early marine residence, growth, and feeding by juvenile salmon in northern Cook Inlet, Alaska. *Alaska Fisheries Research Bulletin* 4: 154-177.
- Moulton, V.D. and G.W. Miller. 2005. Marine mammal monitoring of a seismic survey on the Scotian Slope, 2003. p. 29-40 in K. Lee, H. Bain and G.V. Hurley, eds. 2005. *Acoustic Monitoring and Marine Mammal Surveys in the Gully and Outer Scotian Shelf before and during Active Seismic Programs*. Environmental Studies Research Funds Report. No. 151. 154 p.
- Muto, M.M., Helker, V.T., Angliss, R.P., Allen, B.A., Boveng, P.L., Breiwick, J.M., Cameron, M.F., Clapham, P.J., Dahle, S.P., Dahlheim, M.E., Fadely, B.S., Ferguson, M.C., Fritz, L.W., Hobbs, R.C., Ivashchenko, Y.V., Kennedy, A.S., London, J.M., Mizroch, S.A., Ream, R.R., Richmond, E.L., Shelden, K.E.W., Towell, R.G., Wade, P.R., Waite, J.M., and Zerbini, A.N. 2017. *Alaska Marine Mammal Stock Assessments, 2016*. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-355, 366 p.
- Muto, M.M., Helker, V.T., Angliss, R.P., Allen, B.A., Boveng, P.L., Breiwick, J.M., Cameron, M.F., Clapham, P.J., Dahle, S.P., Dahlheim, M.E., Fadely, B.S., Ferguson, M.C., Fritz, L.W., Hobbs, R.C., Ivashchenko, Y.V., Kennedy, A.S., London, J.M., Mizroch, S.A., Ream, R.R., Richmond, E.L., Shelden, K.E.W., Towell, R.G., Wade, P.R., Waite, J.M.,

- and Zerbini, A.N. 2018. Alaska Marine Mammal Stock Assessments, 2017. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-378, 382 p.
- Nemoto, T. 1957. Foods of baleen whales in the northern Pacific. Sci. Rep. Whales Res. Inst. Tokyo 12:33-89.
- Nemoto, T. 1959. Food of baleen whales with reference to whale movements. Sci. Rep. Whales Res. Inst. 14:149-290.
- NMFS. 2016a. Recovery Plan for the Cook Inlet Beluga Whale (*Delphinapterus leucas*). National Marine Fisheries Service, Alaska Region, Protected Resources Division, Juneau, AK. https://alaskafisheries.noaa.gov/sites/default/files/cib_recovery_plan_final.pdf.
- NMFS. 2016b. 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, NOAA. NOAA Technical Memorandum NMFS-OPR-55, 178 p. http://www.nmfs.noaa.gov/pr/acoustics/Acoustic%20Guidance%20Files/opr-55_acoustic_guidance_tech_memo.pdf.
- NMFS. 2018. 2018 revision to: Technical guidance for assessing the effects of anthropogenic sound on marine mammal hearing (Version 2.0). NOAA Technical Memorandum NMFS-OPR-59, National Marine Fisheries Service: 178.c
- O'Corry-Crowe, G.M., R.S. Suydam, A. Rosenberg, K.J. Frost, and A.E. Dizon. 1997. Phylogeography, population structure and dispersal patterns of the beluga whale *Delphinapterus leucas* in the western Nearctic revealed by mitochondrial DNA. Molecular Ecology 6: 955-970.
- Ona, E. 1988. Observations of Cod Reaction to Trawling Noise. ICES FAST WG-meeting, Oostende, 20-22.
- Owl Ridge Natural Resource Consultants. 2014. Cosmopolitan State 2013 Drilling Program Marine Mammal Monitoring and Mitigation 90-day Report. Prepared for BlueCrest Alaska Operating LLC. 74 pp.
- Reichmuth, C., Holt, M. M., Mulsow, J., Sills, J. M., and Southall, B. L. (2013). "Comparative assessment of amphibious hearing in pinnipeds," J. Comp. Physiol. A 199, 491–507.
- Rice, D. W. 1998. Marine Mammals of the World: Systematics and Distribution. Soc. Mar. Mammal. Spec. Publ. No. 4.
- Richardson, W.J., C.R. Greene, Jr., C.I. Malme, and D.H. Thomson. 1995. Marine mammals and noise. San Diego, CA: Academic Press, Inc. 576 pp.
- Rugh, D. J., B. A. Mahoney, and B. K. Smith. 2004. Aerial surveys of beluga whales in Cook Inlet, Alaska, between June 2001 and June 2002. U.S. Department of Commerce. NOAA Tech. Memo. NMFS-AFSC-145.

- Rugh, D.J., K.E.W. Shelden, C.L. Sims, B.A. Mahoney, B.K. Smith, L.K. (Litzky) Hoberecht, and R.C. Hobbs. 2005. Aerial surveys of belugas in Cook Inlet, Alaska, June 2001, 2002, 2003, and 2004. NOAA Technical Memorandum NMFS-AFSC-149. 71 pp.
- Rugh D. J., K.E.W. Shelden, R. C. Hobbs. 2010. Range contraction in a beluga whale population. *Endangered Species Research* 12:69-75.
- Shelden, K.E.W., C.L. Sims, L. Vate Brattström, K.T. Goetz, and R.C. Hobbs. 2015. Aerial surveys of beluga whales (*Delphinapterus leucas*) in Cook Inlet, Alaska, June 2014. AFSC Processed Rep. 2015-03, 55 p. Alaska Fish. Sci. Cent., NOAA, Natl. Mar. Fish. Serv., 7600 Sand Point Way NE, Seattle WA 98115.
- Shelden, K.E.W., D.J. Rugh, B.A. Mahoney, and M.E. Dahlheim. 2003. Killer whale predation on belugas in Cook Inlet, Alaska: implications for a depleted population. *Marine Mammal Science* 19:529-544.
- Shelden, K.E.W., D.J. Rugh, K.T. Goetz, C.L. Sims, L. Vate Brattström, J.A. Mocklin, B.A. Mahoney, B.K. Smith, and R.C. Hobbs. 2013. Aerial surveys of beluga whales, *Delphinapterus leucas*, in Cook Inlet, Alaska, June 2005 to 2012. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-AFSC-263, 122 p. <https://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-263.pdf>
- Shelden, K.E.W., R.C. Hobbs, C.L. Sims, L. Vate Brattström, J.A. Mocklin, C. Boyd, and B.A. Mahoney, 2017. Aerial surveys, abundance, and distribution of beluga whales (*Delphinapterus leucas*) in Cook Inlet, Alaska, June 2016.
- Širović, A., L. N. Williams, S. M. Kerosky, S. M. Wiggins, and J. A. Hildebrand. 2013. Temporal separation of two fin whale call types across the eastern North Pacific. *Mar. Biol.* 160:47-57.
- Širović, A., A. Rice, E. Chou, J. A. Hildebrand, S. M. Wiggins, and M. A. Roch. 2015. Seven years of blue and fin whale call abundance in the Southern California Bight. *Endang. Species Res.* 28:61-76.
- Soule, D. C., and W. S. D. Wilcock. 2013. Fin whale tracks recorded by a seismic network on the Juan de Fuca Ridge, Northeast Pacific Ocean. *J. Acoust. Soc. Am.* 133(3):1751-1761.
- Southall, B.L., A.E. Bowles, W.T. Ellison, J.J. Finneran, R.L. Gentry, C.R. Greene Jr., D. Kastak, D.K. 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. *Special Issue of Aquatic Mammals*, 33(4): 412-522.
- Stafford, K. M., D. K. Mellinger, S. E. Moore, and C. G. Fox. 2007. Seasonal variability and detection range modeling of baleen whale calls in the Gulf of Alaska, 1999-2002. *J. Acoust. Soc. Amer.* 122(6):3378-3390.

- Stanek, R. T. 1994. The subsistence use of beluga whale in Cook Inlet by Alaska Natives. 1993. Draft Final Report for year two, subsistence study and monitoring system No.50ABNF200055. Technical Paper No. 232. ADF&G, Juneau, Alaska. 23-pp.
- Tavolga, W.N. 1981. Marine Bio-acoustics. Pergamon Press. New York, NY.
- Tomlin, A. G. 1967. Mammals of the USSR and adjacent countries. Vol. 9. Cetacea. Israel Program for Scientific Translations No. 1124, Natl. Tech. Info. Serv. TT 65-50086. Springfield, VA. 717 p. (Translation of Russian text published in 1957.)
- Wartzok, D. and D.R. Ketten. 1999. Marine mammal sensory systems. Pages 117-148 in J.E. Reynolds III and S.A. Rommel (eds), *Biology of Marine Mammals*. Washington D.C.: Smithsonian Institution Press.
- Watkins, W. A., M. A. Daher, G. M. Reppucci, J. E. George, D. L. Martin, N. A. DiMarzio, and D. P. Gannon. 2000. Seasonality and distribution of whale calls in the North Pacific. *Oceanography* 13(1):62-67.
- Wilson B, and Dill L.M. Herring respond to simulated odontocete echolocation sounds. *Can. J. Fish. Aquat. Sci.* 2002;59:543–553.
- Zenkovich, B. A. 1954. *Vokrug sveta za kitami*, Vol. Gosudarstvennoe Izdatel'stvo Geograficheskoi Literatury, Moscow.