

Important Areas (IAs) were identified for grey, sperm and humpback whales in 2006 by interviewing experts and considering relevant literature during the process of establishing Ecologically and Biologically Significant Areas (EBSAs) in PNCIMA.¹ These large cetacean species range over extensive ocean areas, with the two baleen whale species (grey, humpback) breeding in warmer low latitudes and moving northward to feed in mid- to high-latitude areas. Canada's Pacific waters, including the areas within PNCIMA, represent feeding areas for these species.^{1,2}

Grey whale

The Eastern North Pacific grey whale (*Eschrichtius robustus*) had an estimated population of 18,800 in 2005. While the Pacific grey whale population has generally recovered from the effects of exploitation, the Eastern North Pacific population is listed as Special Concern under the *Species at Risk Act* (SARA)^{2,3} and by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).⁴

Grey whales frequent PNCIMA during their 15,000 to 20,000 km round trip migration from breeding areas in Baja California, Mexico to foraging areas in the Bering Sea. The grey whale forages in shallow nearshore habitats, particularly in areas of soft sediment where they feed on benthic invertebrates. In nearshore habitats, grey whales also feed on dense aggregations of prey such as herring roe, shrimp or crab larvae.²

Most grey whales migrate north from February to May, traveling and feeding along the west coast of Vancouver Island, and along the west and east coasts of Haida Gwaii.⁵ From December to January, whales return to their breeding grounds. Some northbound animals stop to forage en route. Feeding aggregations of grey whales, representing approximately one percent of the population, remain throughout the summer in nearshore habitat from northern California to southeast Alaska. Along the BC coast, feeding grey whales are encountered along the north and west coast of Vancouver Island, the central coast area around Cape Caution and Skidegate Inlet.²

Sperm whale

There are no reliable population estimates for sperm whales (*Physeter macrocephalus*) in the northeast Pacific Ocean. There is a minimum population estimate of 885 whales in the waters off California, Oregon and Washington based on surveys conducted in 1996 and 2001.² Sperm whales were relatively abundant within PNCIMA during the commercial whaling era. Though less common now, they continue to be found in the same areas that they frequented prior to commercial whaling, such as the continental shelf and slope.¹ Globally, sperm whales are listed as Vulnerable by the International Union for Conservation of Nature (IUCN), but they are not listed by COSEWIC or under SARA.^{2,3,4}

Sperm whales typically occupy deep waters (>1000 m depths) where they feed on deep diving prey such as giant squid and colossal squid. Males tend to move further inshore during summer months to feed.¹ Calving may occur in offshore waters where females and juveniles reside.²



Grey whale. Illustration: A. Denbigh



Sperm whale. Illustration: A. Denbigh



Humpback whale. Illustration: A. Denbigh

Humpback whale

Humpback whales (*Megaptera novaeangliae*) have an estimated population of 18,302 throughout the North Pacific based on data obtained between 2004 and 2008.⁶ A local population of 1,970 to 2,331 humpback whales has been estimated to occur in BC waters.⁷ Following the cessation of whaling, humpback sightings began to increase slowly along the BC coast. The humpback whale's North Pacific population is currently listed as Threatened under SARA and by COSEWIC.^{2,3,4}

Humpbacks can be found year-round within PNCIMA, with peak abundance between May and October, after which most whales migrate to low-latitude breeding areas, for example Hawaii and Mexico.^{1,2} Historical whaling records and recent sighting data indicate that humpback whales make extensive use of much of PNCIMA, particularly Dixon Entrance and nearshore areas of the central coast and Haida Gwaii.² Cape St. James was identified through historical whaling records as an IA; its Haida eddies and concentrated areas of plankton make it attractive to feeding humpbacks. The Shelf Break in Queen Charlotte Sound was also identified as an important feeding area.⁵

These large cetacean species range over extensive ocean areas

1 Clarke, C.L. and Jamieson, G.S. 2006. Identification of ecologically and biologically significant areas in the Pacific North Coast Integrated Management Area: Phase I – identification of important areas. Can. Tech. Rep. Fish. Aquat. Sci. 2678: vi + 89 p.
 2 Heise, K., Ford, J. and Olesiuk, P. 2007. Appendix J: Marine mammals and turtles. In Ecosystem overview: Pacific North Coast Integrated Management Area (PNCIMA). Edited by Lucas, B.G., Verrin, S. and Brown, R. Can. Tech. Rep. Fish. Aquat. Sci. 2667: iv + 35 p.
 3 The Species at Risk Act was created to protect species under threat of extinction. Species are assessed by the Committee on the Status of Endangered Wildlife in Canada, then by the federal government, based upon scientific information and consultations, to determine whether those species receive legal protection under SARA.
 4 COSEWIC. 2011. Wildlife species search. http://www.cosewic.gc.ca/eng/sct1/searchform_e.cfm (Accessed February 2011).
 5 Clarke, C.L., and Jamieson, G.S. 2006. Identification of ecologically and biologically significant areas in the Pacific North Coast Integrated Management Area: Phase II – final report. Can. Tech. Rep. Fish. Aquat. Sci. 2686: v + 25 p.
 6 Calambokidis, J., Falcone, E.A., Quinn, T.J., Burdin, A.M., Clapham, P.J., Ford, J.K.B., Gabriele, C.M., LeDuc, R., Mattila, D., Rojas-Bracho, L., Straley, J.M., Taylor, B.L., Urbán R., J., Weller, D., Witteveen, B.H., Yamaguchi, M., Bendlin, A., Camacho, D., Flynn, K., Havron, A., Huggins, J., Maloney, N., Barlow, J. and Wade, P.R. 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. Dept. of Commerce. 57 pp.
 7 Rambeau, A. L. 2008. Determining abundance and stock structure for a widespread, migratory animal: the case of humpback whales (*Megaptera novaeangliae*) in British Columbia, Canada. MSc, University of British Columbia, Vancouver, BC.

