

Killer Whales

Three populations or ecotypes of killer whales (*Orcinus orca*) are known: resident, transient and offshore. Resident killer whales in BC are further divided into northern residents and southern residents, with estimated populations of 205 and 85 respectively.¹ The northern resident population is found year round in the coastal waters of PNCIMA. The transient population of killer whales is estimated at 220 individuals. This population can be found throughout PNCIMA, but unlike resident killer whales, its distribution is unpredictable. Offshore killer whales are encountered relatively infrequently and have an estimated population of 250 individuals.² As its name indicates, this population spends most of its time along the outer continental shelf and in offshore waters throughout PNCIMA.^{2,3}

All three populations of killer whales found in PNCIMA have been listed under the *Species at Risk Act* (SARA) because of their small sizes, recently declining population trends, and the vulnerability of their habitat and food supply to human-caused impacts.⁴ Transients and northern residents are listed as Threatened and offshore are listed as Special Concern under SARA.⁵ All three populations are listed as Threatened by the Committee on the Status of Endangered Wildlife in Canada.⁶

Important Areas

Important Areas (IAs) were identified for northern resident killer whales in 2006 through interviewing experts and considering relevant literature during the process of establishing Ecologically and Biologically Significant Areas (EBSAs) in PNCIMA.³ Northern resident killer whales inhabit waters from northern Vancouver Island to Dixon Entrance. Johnstone Strait, Caamano Sound, Fitz Hugh Sound, Chatham Sound, the north coast of Haida Gwaii and Queen Charlotte Strait are identified as IAs for this population. The remainder of the coastal waters along the north and central coasts are

identified as moderately important areas. Lack of information about the transient and offshore populations have resulted in no IAs identified for those populations at the time of writing.^{3,5}

Critical Habitat

A recommendation of critical habitat for northern residents was made based on analyses of information on killer whale movement patterns and habitat. Critical habitat areas coincide with the migration route of chinook salmon, the preferred prey species of resident killer whales, and contain locations used by these whales for resting, socializing, mating and beach rubbing.⁴

The critical habitat covers approximately 905 km² and is centred in Johnstone Strait where 90 percent of northern resident whale observations have been recorded.⁴ In 2009, protection of this critical habitat came into law as a regulatory order under SARA.⁷ Three additional areas were identified as potential critical habitat, but there was insufficient information to meet SARA requirements. These areas are Chatham Sound, Caamano Sound and Fitz Hugh Sound, where northern residents congregate seasonally.⁴

PNCIMA contains critical habitat for killer whales

1 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.
 2 The Species at Risk Act (SARA) was created to protect species under threat of extinction. Species are assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), then by the federal government, based upon scientific information and consultations, to determine whether those species receive legal protection under SARA.
 3 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.
 4 Ford, J. 2006. An assessment of critical habitats of resident killer whales in waters off the Pacific coast of Canada. Canadian Science Advisory Secretariat Research Document 2006/072.
 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 COSEWIC. 2011. Wildlife species search. http://www.cosewic.gc.ca/eng/sct1/searchform_e.cfm (Accessed February 2011).
 7 Government of Canada. 2009. Critical habitats of the Northeast Pacific northern and southern resident populations of the killer whale (*Orcinus orca*) Order. Canada Gazette 143(5).



Above: Orca at Lucy Island. Photo: Jacob Joslin



Right: Killer whale. Photo: John Ford



Killer whales, Queen Charlotte Strait. Photo: John Ford

