

TRACKING MARINE SPECIES AT RISK IN THE GEORGIA BASIN PUGET SOUND: VALUE OF AN ECOSYSTEM-BASED APPROACH. JOSEPH K GAYDOS, NICHOLAS A BROWN, *The SeaDoc Society, UC Davis Wildlife Health Center—Orcas Island Office, 1016 Deer Harbor Rd., Eastsound, WA 98245*; KIRSTEN V K GILARDI, *The SeaDoc Society, UC Davis Wildlife Health Center, 1 Shields Avenue, Davis, CA 95616*; jkgaydos@ucdavis.edu.

Within the Georgia Basin Puget Sound marine ecosystem, four governmental jurisdictions list species at risk of extinction: the Province of British Columbia, the State of Washington, the Canadian Federal Government, and the United States Federal Government. Since September 2002, the SeaDoc Society has tracked marine species in this ecosystem that are listed by one or more jurisdiction as threatened, endangered, species of concern or candidates for listing. An ecosystem-based list of marine species at risk serves as a crude indicator of ecosystem health, permits cross checking of species of concern between jurisdictions, suggests where more research is needed, and highlights where transboundary approaches could benefit species recovery. Since 2002 the number of species at risk has slowly advanced from 60 species in 2002, to 63 in 2004 to 64 species in 2006. As expected, all jurisdictions underestimate the total number of species at risk within the ecosystem; however the percentage of total species listed by each jurisdiction has not altered significantly from year to year. Using unpublished data on species richness for the ecosystem, approximately 0.1% of invertebrates (3/3000), 12% of fishes (27/219), 19% of birds (24/128) and 45% (9/20) of mammals that use the Georgia Basin Puget Sound marine waters are at risk. This is concerning and suggests what we really have is an ecosystem at risk. Efforts need to be enhanced to more rapidly address regional species declines and to institute multi-species ecosystem-based solutions where possible.