

Reducing Marine Debris: Derelict Fishing Gear Removal Programs in Hawaii, Washington, and California

Kirsten Gilardi,^{1*} Russell Brainard,² Tom Cowan,³ Mary Donohue,⁴ and Jeff June⁵

1 SeaDoc Society, UC Davis Wildlife Health Center, 1 Shields Ave, Davis, CA 95616

2 Pacific Islands Fisheries Science Center, NMFS, 1125-B Ala Moana Blvd, Honolulu, HI, 96814

3 Northwest Straits Commission, 10441 Bayview-Edison Rd., Mt. Vernon, WA 98273

4 University of Hawaii Sea Grant College Program, 2525 Correa Rd., Honolulu, HI 96822

5 Natural Resources Consultants, Inc. 1900 West Nickerson St., Suite 200, Seattle, WA 98119-1650

* Presenting Author: T: 530-752-4896; kvgilardi@ucdavis.edu

Derelict fishing gear is lost or abandoned commercial and recreational fishing nets, lines, pots, and traps that sits on the seafloor, gets caught on rocky and coral reefs, or floats on the ocean surface. Because the majority of fishing gear is made of synthetic materials, it can remain in the marine environment for decades and negatively impacts the marine environment in several ways: by entangling and trapping marine organisms; by damaging habitat upon which it snares; by posing a navigational hazard for mariners; and by similarly endangering humans, especially divers.

The impacts of derelict fishing gear on marine wildlife are dramatic. In Hawaii, derelict fishing gear is the most serious human-related threat to the fragile coral reefs of the Northwestern Hawaiian Islands where it abrades, enshrouds, encrusts and breaks corals. It also injures and kills wildlife, including the endangered Hawaiian monk seal and protected sea turtles and cetaceans: between 1982 and 2000, over 200 Hawaiian monk seals were entangled in derelict nets (Boland and Donohue, 2003). In Washington State's Puget Sound and Northwest Straits region, hundreds of derelict crab pots and gill nets have been documented on the seafloor. Divers observed 1 to 3 foot deep accumulations of bird bones under just one derelict net off the San Juan Islands, where presumably bones had drifted down from decomposing carcasses, likely for years (NRC 2004).

Through public-private partnerships, both Hawaii and Washington have successfully removed significant amounts of derelict fishing gear from their marine waters. Since 1998 the NOAA Fisheries Service and 16 other state and federal agencies and organizations have removed 495 tons of derelict gear from the coral reef habitats of the Northwestern Hawaiian Islands, utilizing scientific surveys and skilled divers. Since 2002, the Northwest Straits Commission, working with Natural Resources Consultants, Inc. (Seattle, WA), the Washington Department of Fish and Wildlife, and commercial harvest divers, has removed 265 nets and over 750 pots and traps weighing over 30 tons from inland marine waters in Washington (NWSC 2005). With seed funding provided by the Laurel Foundation, the California State Coastal Conservancy and the SeaDoc Society (UC Davis Wildlife Health Center) are partnering to establish a derelict fishing gear removal program in California. In the pilot year, the focus is on locating and removing derelict fishing gear from state marine waters at specific sites off the Humboldt, Monterey and San Luis Obispo County coasts, and around Santa Catalina Island.

The following websites provide information regarding Hawaii, Washington, and California's derelict fishing gear removal programs, including program background, protocols, and reports:

For Hawaii: <http://www.nmfs.noaa.gov/habitat/ead/dfgissues.htm>

For Washington: <http://www.nwstraits.org> and <http://wdfw.wa.gov/fish/derelict>

For California: <http://www.seadocsociety.org>

References Cited

Boland, R.C., and M.J. Donohue. 2003. Marine debris accumulation in the nearshore marine habitat of the endangered Hawaiian monk seal, *Monachus schauinslandi* 1999-2001. *Marine Pollution Bulletin* 46: 1385-1394;

NRC (Natural Resources Consultants), Inc. 2004. Northwest Straits Commission/Foundation Derelict Fishing Gear Removal Program. Report prepared by Natural Resources Consultants, Inc., Seattle, WA.

NWSC (Northwest Straits Commission). 2005. Removing lost and abandoned fishing gear from the waters of the Northwest Straits. Report prepared by the Northwest Straits Commission, Mt. Vernon, WA.

