

# Marine Debris

## PACIFIC

### *Derelict Fishing Gear in Puget Sound: Prioritizing removal, preventing recruitment, and parameterizing efforts to model biological impacts*

Derelict fishing gear (lost or abandoned commercial and recreational fishing nets, lines, pots, and traps) captures and kills marine wildlife throughout Puget Sound due to its unique topography and long legacy of commercial fishing. Since 2002, a derelict gear removal program has removed over 600 derelict fishing nets, restored 120 acres of marine habitat, and documented the entanglement of almost 20,000 marine mammals, birds, fish, and invertebrates, many of which are of conservation and commercial concern. NOAA Fisheries is involved in analyses to identify “hotspots” for derelict gear recruitment in Puget Sound and estimate the impacts of derelict fishing gear on local marine wildlife.



Dead cormorant in derelict gillnet. Photo courtesy of Natural Resources Consultants, Inc.

This project is assessing the potential for fishing gear to become derelict due to underwater obstructions and topographical features of the seafloor. Potential “hotspots” will be identified by overlaying geo-referenced data layers of commercial fishing effort throughout Puget Sound with seafloor topography and locations of derelict vessels and other underwater obstructions using a geographic information systems (GIS) framework. As data collected during gear recovery is just a snapshot of its impact on marine wildlife, this project is also conducting field and laboratory experiments to determine degradation rates of marine birds to help estimate per capita mortality rates for derelict fishing nets in Puget Sound.

## WHAT IS MARINE DEBRIS?

*Marine debris is any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment or the Great Lakes.*

## MARINE DEBRIS SOURCES

*Sources of marine debris include land-based sources, such as littering, dumping, and industrial losses. Ocean-based debris can come from fishing vessels, cargo ships, stationary platforms, and other vessels.*

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### MANDATES

Mandates supporting NOAA's marine debris efforts include the following:

- Marine Debris Research, Prevention, and Reduction Act of 2006, 33 U.S.C. §§ 1951 et seq.
- U.S. Ocean Action Plan
- Coral Reef Conservation Act
- Marine Plastic Pollution Research and Control Act, 33 U.S.C. §§ 1901 et seq.
- Marine Protection, Research, and Sanctuaries Act, (Title II) 33 U.S.C. §§ 1401 et seq.
- Clean Water Act, 33 U.S.C. §§ 1251 et seq.

### CURRENT PARTNERS

- Northwest Straits Commission
- Natural Resources Consultants, Inc.
- Seattle Aquarium
- COASST (Coastal Observation and Seabird Survey Team)

### BENEFITS OF THE PROJECT

- Facilitates modeling of derelict fishing net impacts on taxa of conservation concern.
- Identifies potential hotspots for derelict fishing gear recruitment in Puget Sound.
- Helps prioritize derelict gear removal.
- Ultimately, reduces and prevents new derelict fishing gear.

### CONTACTS

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Lingcod in derelict net. *Photo courtesy of Greg Williams, NOAA Fisheries.*

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