

1 APPENDIX - NEARSHORE SPECIES

2 NEARSHORE SPECIES OF GREATEST CONSERVATION NEED (SGCN)

3 Development of the 2025 SGCN list began with a review of the list of SGCN developed in
4 2015. The species that were still recognized as species of concern, at risk, important, or a
5 priority by federal or state agencies, stakeholders, experts, non-government organizations,
6 scientific researchers, tribes or other conservation processes were included on the revised
7 list. In addition, a comprehensive list of species that occur in the nearshore was evaluated
8 for potential new additions to the SGCN list. To maintain a Nearshore ecoregion focus,
9 attention was concentrated on both harvested and non-harvested species that occur
10 within Oregon's nearshore environment.

11 To assist with the identification of SGCN, the following information was compiled from
12 published literature (see **Appendix - Nearshore References**), available online data,
13 scientific databases, and personal communication from experts, for each species on the
14 list:

- 15 • taxonomic information
- 16 • distribution, including species geographic range and depth
- 17 • harvest/collection information, including sector(s) (commercial, sport, aquarium
18 trade, and/or scientific/medical research) and whether targeted or incidental catch
- 19 • life history information, including mode of reproduction, fecundity, timing of
20 reproduction, timing of egg/larval/juvenile stages, longevity, age at maturity, and
21 migratory behavior or seasonal distribution
- 22 • habitat use for each life history stage
- 23 • trophic interactions, including prey, predators, and competition
- 24 • population status information, including whether a population assessment has been
25 conducted, listed as overharvested, listed as a threatened or endangered species,
26 whether species has experienced a population decline, whether the species is rare,
27 has small range or is endemic, if species has specialized habitat requirements, and if
28 the species has low productivity.

29 This information was used to help examine the conservation needs of each species and if it
30 fit the criteria for being included on the sensitive species list given in OAR 635-100-0040.
31 There are many other species whose conservation needs were determined to best be met
32 through existing management affecting habitats or communities of organisms and were
33 separated from the list.

34 SPECIES OF GREATEST INFORMATION NEED

35 Several species evaluated did not have enough information available to determine if they
36 would meet the criteria for SGCN designation. Eleven species, three birds, nine fish and
37 one invertebrate were found to need additional information about their population status
38 and trend. These included: Brandt's Cormorant, Clark's Grebe, Forster's Tern, grass
39 rockfish, pile perch, redtail surfperch, rock greenling, shiner perch, starry flounder, striped
40 perch, tiger rockfish, topsmelt, and the Pacific giant octopus. In addition to the animal
41 species above, several sub-canopy alga species were determined to be SGIN: stalked kelp,
42 broad-rib kelp and split blade kelp. There were several nearshore species that did not meet
43 criteria for SGCN or SGIN but were determined to be important to consider based on
44 potential future management needs.

45 NEARSHORE WATCH LIST

46 ODFW identified a handful of species from the comprehensive species list to be placed on
47 a Watch List for Nearshore species. Watch List Species (Table 1) were determined to be
48 important nearshore species that do not require immediate management action but may in
49 the future. Managers should be aware of conservation needs and potential factors that
50 could affect these species and consider them for future SGCN status if sufficient data can
51 be gathered to support the change. Examples of future information that may warrant status
52 change include a change in harvest status, or the occurrence of an anthropogenic or
53 natural event (water pollution, climatic event, etc.).

54 **Table 1.** Nearshore Watch List Species

WATCH LIST: BIRDS	COMMENTS
Common Murre <i>Uria aalge</i>	Utilizes rocky cliffs and islands for nesting. Forages in nearshore habitats. Sensitive to environmental change. Has been considered a sentinel seabird species because its population is large enough to provide a strong signal when die offs of other seabirds occur.
Pelagic Cormorant <i>Phalacrocorax pelagicus</i>	Utilizes rocky cliffs and islands for nesting. Forages in nearshore habitats. Sensitive to environmental change
Pigeon Guillemot <i>Cephus columba</i>	Population potentially declining, data inadequate. Vulnerable to ground predators, oil spills and environmental change. Breeding attempts may fail during climatic shifts (e.g., climate change).

Sanderling <i>Calidris alba</i>	Highly dependent on specific nearshore feeding areas during migration. Susceptible to coastal habitat disturbance, degradation and destruction. Current population size unknown. Populations highly variable among years. Potential for long term declines.
WATCH LIST: FISHES	
Black rockfish <i>Sebastes melanops</i>	Low to moderate productivity. Commercial and recreational harvest. Periodic recruitment dependent on favorable oceanic conditions.
Black-and-yellow rockfish <i>Sebastes chrysomelas</i>	Low to moderate productivity. Commercial harvest. Periodic recruitment depends on favorable oceanic conditions. OR northern extent of range.
Blue rockfish <i>Sebastes mysinus</i>	Low to moderate productivity. Commercial and recreational harvest. Periodic recruitment dependent on favorable oceanic conditions.
Blue shark <i>Prionace glauca</i>	Global concern regarding shark harvest and management. Low productivity. Lack of scientific knowledge.
Bocaccio <i>Sebastes paucispinis</i>	Low productivity. Northern stock population abundance unknown.
Brown Irish lord <i>Hemilepidotus spinosus</i>	Recreational harvest. May be getting reported as Red Irish lord. Little known about abundance.
Brown smoothhound <i>Mustelus henlei</i>	Global concern regarding shark harvest and management. Low productivity. Lack of scientific knowledge.
Buffalo sculpin <i>Enophrys bison</i>	Recreational harvest. Little known about abundance.
Butter sole <i>Isopsetta isolepis</i>	Commercial and recreational harvest. Population status unknown.
California halibut <i>Paralichthys californicus</i>	Certain years found and caught on OR's south coast. Population status unknown.
Canary rockfish <i>Sebastes pinniger</i>	Low to moderate productivity. Commercial and recreational harvest. Periodic recruitment depends on favorable oceanic conditions. Was previously declared overfished but has recovered.
California skate <i>Raja inornata</i>	Late maturation, longevity, and low productivity. Inadequate population status information.

Common thresher <i>Alopias vulpinus</i>	Global concern regarding shark harvest and management. Low productivity. Lack of scientific knowledge.
Canary rockfish <i>Sebastes pinniger</i>	Low to moderate productivity. Commercial and recreational harvest. Periodic recruitment depends on favorable oceanic conditions.
China rockfish <i>Sebastes nebulosus</i>	Low to moderate productivity. Commercial and recreational harvest. Periodic recruitment depends on favorable oceanic conditions.
Copper rockfish <i>Sebastes caurinus</i>	Low to moderate productivity. Commercial and recreational harvest. Periodic recruitment depends on favorable oceanic conditions.
Curlfin turbot (sole) <i>Pleuronichthys decurrens</i>	Commercial harvest. Population status unknown.
Deacon rockfish <i>Sebastes diaconus</i>	Low to moderate productivity. Commercial and recreational harvest. Periodic recruitment depends on favorable oceanic conditions.
English sole <i>Pleuronectes vetulus</i>	Sport and commercial harvest. Stock assessment last conducted in 2013.
Flathead sole <i>Hippoglossoides elassodon</i>	Commercial harvest. Population status unknown.
Giant wrymouth <i>Cryptacanthodes giganteus</i>	Concerns that they're being caught and reported/confused with Monkeyface pricklebacks. Inadequate population status information.
Gopher rockfish <i>Sebastes carnatus</i>	Low productivity with periodic recruitment depends on favorable oceanic conditions. Inadequate population status information.
Kelp greenling <i>Hexagrammos decagrammus</i>	Commercial and recreational harvest. Females lay eggs on bottom in "nests" guarded by males.
Leopard shark <i>Triakis semifasciata</i>	Global concern regarding shark harvest and management. Low productivity. Lack of scientific knowledge. Collected for public aquarium display.
Lingcod <i>Ophiodon elongatus</i>	Commercial and recreational harvest. Females lay eggs in nest that is guarded by males. Previously declared overfished but has recovered.
Monkeyface prickleback <i>Cebidichthys violaceus</i>	Concerns regarding potential of increased harvest in OR (actively harvested in CA).

Pacific angel shark <i>Squatina californica</i>	Global concern regarding shark harvest and management. Low productivity. Lack of scientific knowledge.
Pacific herring <i>Clupea pallasii</i>	Important forage fish species that spawns in estuaries. A hearing specialist that can be disturbed by noise.
Pacific sanddab <i>Citharichthys sordidus</i>	Commercial and recreational harvest.
Pacific sandfish <i>Trichodon trichodon</i>	Forage fish. Population status unknown and life history information limited.
Pacific sardine <i>Sardinops sagax</i>	Forage fish known to have large population fluctuations thought to be linked to environmental change, but mechanisms not understood. Target of commercial fisheries.
Pacific staghorn sculpin <i>Leptocottus armatus</i>	Recreational catch. Little known about abundance.
Red Irish Lord <i>Hemilepidotus hemilepidotus</i>	Minor commercial and recreational harvest. Collected for public aquarium display. Population status unknown.
Rock sole <i>Lepidopsetta bilineata</i>	Commercial and recreational harvest. Population status unknown.
Salmon shark <i>Lamna ditropis</i>	Global concern regarding shark harvest and management. Low productivity. Lack of scientific knowledge.
Sand sole <i>Psettichthys melanostictus</i>	Commercial and recreational harvest. Population status unknown.
Shortfin mako shark (Bonito shark) <i>Isurus oxyrinchus</i>	Global concern regarding shark harvest and management. Low productivity. Lack of scientific knowledge.
Spiny dogfish <i>Squalus/ suckleyi</i>	Global concern regarding shark harvest and management. Low productivity. Lack of scientific knowledge.
Quillback rockfish <i>Sebastodes maliger</i>	Low to moderate productivity. Late maturing long lived species. Commercial and recreational harvest. Periodic recruitment depends on favorable oceanic conditions.
Spotted ratfish <i>Hydrolagus colliei</i>	Low productivity.

Vermillion rockfish <i>Sebastes miniatus</i>	Low to moderate productivity. Commercial and recreational harvest. Periodic recruitment depends on favorable oceanic conditions.
White shark <i>Carcharodon carcharias</i>	Global concern regarding shark harvest and management. Low productivity. Lack of scientific knowledge regarding movements, spawning season, spawning grounds, and fecundity of females, population abundance.
Yellowtail rockfish <i>Sebastes flavidus</i>	Low to moderate productivity. Commercial and recreational harvest. Periodic recruitment depends on favorable oceanic conditions.
WATCH LIST: INVERTEBRATES	
Butter clam <i>Saxidomus gigantea</i>	Important commercial and recreational species. Subtidal broodstock unknown. Limited information on essential habitat.
California sea cucumber <i>Parastichopus californicus</i>	May be important agents of bioturbation; during feeding and reworking of surface sediments, they can alter the structure of soft-bottom benthic communities.
Cockle clam <i>Clinocardium nuttallii</i>	Important commercial and recreational species. Subtidal broodstock unknown. Limited information on essential habitat.
Coonstripe or Dock shrimp <i>Pandalus danae</i>	Population status in Oregon unknown. Target of commercial fishery in CA.
Fat gaper clam <i>Tresus capax</i>	Important commercial and recreational species. Subtidal broodstock unknown. Limited information on essential habitat.
Flat-tipped piddock <i>Penitella penita</i>	Habitat engineer; important contributor to biological erosion of coastal shale along the Pacific coast of North America north of CA. Harvest techniques may be detrimental to habitat.
Market squid <i>Doryteuthis opalescens</i>	Important prey. Used in medical research. Commercial and recreational harvest.
Oregon triton <i>Fusitriton oregonensis</i>	Potential for extended planktonic larval duration up to 4.5 years. Commercial harvest of all snails prohibited. Oregon state seashell.
Pacific sand (mole) crab <i>Emerita analoga</i>	Has served as indicator of DDT residues in CA coastal waters and found to ingest microplastics. Used in scientific/medical research. Information on population trends lacking.

Purple urchin <i>Strongylocentrotus purpuratus</i>	Period recruitment depends on favorable ocean conditions for this long lived species.
Red rock crab <i>Cancer productus</i>	Potential for harvest concerns. Not actively managed but has regulations in place. Population status and trend information lacking.
WATCH LIST: MARINE MAMMALS	COMMENTS
Blue whale <i>Balaenoptera musculus</i>	Blue whales are found off the Oregon coast, but usually outside the Nearshore waters. They face entanglement and ship strike risks and are on the Endangered Species list.
Fin whale <i>Balaenoptera physalus</i>	Fin whales are found off the Oregon coast, but usually outside the Nearshore waters. They face entanglement and ship strike risks and are on the Endangered Species list.

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56 OTHER COMMONLY ASSOCIATED SPECIES

57 Some species which did not meet criteria to be included in the Nearshore SGCN, SGIN or
 58 nearshore Watch Lists were identified to be important to nearshore ecosystems. These
 59 species were included on the list of commonly associated species (Table 2). The
 60 conservation needs of these species will most likely be met through habitat management
 61 or management of communities of organisms. For additional information on habitat
 62 associations for specific life history stages of SGCN see Species Habitat Association in
 63 **Appendix – Marine Habitat Classifications.**

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Table 2. Commonly associated species and habitats found in Oregon's nearshore environment.

Species	Habitat							Comments	
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom	Neritic	Estuarine	Unknown		
Birds									
California gull <i>Larus californicus</i>									
				X	X				
Glaucous-winged gull <i>Larus glaucescens</i>	X	X		X	X			Colonial nester.	
Pacific loon <i>Gavia pacifica</i>				X	X			Winters near coastal waters.	
Red-necked phalarope <i>Phalaropus lobatus</i>				X				Concentrates around oceanic upwellings and edges of kelp beds.	
Red throated loon <i>Gavia stellata</i>				X	X			Winters near coastal waters.	
Sooty shearwater <i>Puffinus griseus</i>				X				Concentrates around oceanic upwellings and over the continental shelf.	
Surf scoter <i>Melanitta perspicillata</i>				X	X				
Western gull <i>Larus occidentalis</i>	X	X		X	X			Colonial nester.	
Western grebe <i>Aechmophorus occidentalis</i>					X				
White-winged scoter <i>Melanitta fusca</i>				X	X	X		Common in shallow water over shellfish beds.	
Fishes									
Bald sculpin <i>Clinocottus recalvus</i>	X		X					Tidepools. Shallow subtidal. Brookings, OR is northern extent of range	
Bat ray <i>Myliobatis californica</i>		X	X	X	X			Low intertidal.	

Species	Habitat							Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom	Neritic	Estuarine	Unknown	
Black pricklyback <i>Xiphister atropurpureus</i>	X		X					Under rocks, in gravel areas. Shallow subtidal
Bonehead sculpin <i>Artedius notospilotus</i>	X		X					
Calico sculpin <i>Clinocottus embryum</i>	X							Mid to low intertidal.
Calico surfperch <i>Amphistichus koelzi</i>		X		X				Shallow subtidal.
Coralline sculpin <i>Artedius corallinus</i>	X		X					Shallow subtidal.
Crescent gunnel <i>Pholis laeta</i>	X		X					Tidepools.
Decorated warbonnet <i>Chiroplophis decoratus</i>			X					Usually among algae.
Fluffy sculpin <i>Oligocottus snyderi</i>	X		X					Tidepools. Shallow subtidal. Often in algae.
Grunt sculpin <i>Rhamphocottus richardsonii</i>	X		X	X				Tidepools.
High cockscomb <i>Anoplarchus purpurescens</i>	X		X					Usually intertidal.
Jacksmelt <i>Atherinopsis californiensis</i>			X		X	X		Yaquina Bay, OR is northern extent of range.
Kelp poacher <i>Agonomalus mozinoi</i>			X					Shallow subtidal.
Kelp surfperch <i>Brachyistius frenatus</i>			X					

Species	Habitat							Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom	Neritic	Estuarine	Unknown	
Longfin gunnel <i>Pholis clemensi</i>			X					
Longfin sculpin <i>Jordania zonope</i>	X		X					
Lumptail searobin <i>Prionotus stephanophrys</i>				X				Deep subtidal.
Manacled sculpin <i>Synchirus gilli</i>	X		X					Tidepools.
Mosshead sculpin <i>Clinocottus globiceps</i>	X		X					Tidepools. Shallow subtidal.
Mosshead warbonnet <i>Chirolophis nugator</i>			X					
Night smelt <i>Spirinchus starksii</i>		X			X			Spawn on beaches.
Northern clingfish <i>Gobiesox maeandricus</i>	X		X					Shallow subtidal.
Pacific electric ray <i>Torpedo californica</i>			X	X				
Pacific hooker (Hookhorn) sculpin <i>Artediellus pacificus</i>				X				
Padded sculpin <i>Artedius fenestratus</i>	X		X					Shallow subtidal.
Painted greenling <i>Oxylebius pictus</i>	X		X					Shallow subtidal.
Penpoint gunnel <i>Apodichthys flavidus</i>	X							Tidepools and in algae.

Species	Habitat							Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom	Neritic	Estuarine	Unknown	
Pricklebreast poacher <i>Stellerina xyosterna</i>				X				
Puget Sound sculpin <i>Ruscarius meanyi</i>	X		X					
Pygmy poacher <i>Odontopyxis trispinosa</i>				X				
Red brotula <i>Brosmophycis marginata</i>				X				
Red gunnel <i>Pholis schultzii</i>	X		X					Shallow subtidal. Exposed surge areas.
Ribbon pricklyback <i>Phytichthys chirus</i>	X		X					Shallow subtidal.
Rock pricklyback <i>Xiphister mucosus</i>	X		X					Intertidal, found among algae. Shallow subtidal.
Rockhead <i>Bothragonus swanii</i>	X		X					Shallow subtidal.
Rockweed gunnel <i>Apodichthys fucorum</i>	X		X					Common among algae in tidepools and shallow subtidal.
Rosy lip sculpin <i>Ascelichthys rhodorus</i>	X		X					Tidepools.
Roughback sculpin <i>Chitonotus pugetensis</i>		X		X				
Saddleback gunnel <i>Pholis ornata</i>				X				
Saddleback sculpin <i>Oligocottus rimensis</i>	X		X					Tidepools in low intertidal.
Sailfin sculpin <i>Nautichthys oculofasciatus</i>			X	X				Pilings. Soft bottoms near rubble.

Species	Habitat							Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom	Neritic	Estuarine	Unknown	
Tubenose poacher <i>Pallasina barbata</i>	X		X					Often among algae.
Tubesnout <i>Aulorhynchus flavidus</i>			X	X				
Walleye surfperch <i>Hyperprosopon argenteum</i>			X	X	X			Shallow subtidal. Artificial reefs and pilings.
White surfperch <i>Phanerodon furcatus</i>			X	X	X	X		Artificial reefs, pilings, and docks.
Whitebait smelt <i>Allosmerus elongatus</i>					X	X		
Wolf eel <i>Anarrhichthys ocellatus</i>	X		X					Intertidal to deep subtidal.
Y-prickleback <i>Lumpenopsis hypochroma</i>							X	
Marine Mammals								
California sea lion <i>Zalophus californianus</i>	X	X	X	X	X	X		
Pacific harbor seal <i>Phoca vitulina</i>	X	X	X	X	X	X		
Invertebrates								
Acorn barnacle <i>Sessilia spp.</i>	X							Low intertidal.
Aggregating anemone <i>Anthopleura elegantissima</i>	X				X			Mid intertidal.
Barnacle <i>Chthamalus spp.</i>	X							High and mid intertidal. Common on rocks and pier pilings.

Species	Habitat							Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom	Neritic	Estuarine	Unknown	
Black katy chiton <i>Katharina tunicata</i>	X							Mid to low intertidal. Areas of strong wave action.
Brown rock crab <i>Cancer antennarius</i>	X		X	X				Low intertidal. Soft bottom; gravel.
Channeled dog winkle (Whelk) <i>Nucella canaliculata</i>	X							Mid intertidal. Common on rocks and in mussel beds.
Cockle clam <i>Clinocardium nuttallii</i>		X		X		X		Low intertidal.
Fingered limpet <i>Lottia digitalis</i>	X							High intertidal.
Giant green anemone <i>Anthopleura xanthogrammica</i>	X		X			X		Low intertidal.
Gooseneck barnacle <i>Pollicipes polymerus</i>	X							Mid intertidal. Sometimes mixed with California mussels (<i>Mytilus californianus</i>)
Gumboot chiton <i>Cryptochiton stelleri</i>	X		X					Low intertidal.
Hermit crabs <i>Pagurus spp.</i>	X		X	X				High and low intertidal. Tidepools. Rock and gravel bottoms subtidally.
Kelp crab <i>Pugettia producta</i>	X		X					Low intertidal of protected outer coast.
Keyhole limpet <i>Diodora aspera</i>	X							Low intertidal.
Newcomb's littorine snail <i>Littorina subrotunda</i> (<i>Algamorda newcomiana</i>)	X							High intertidal.
Nudibranchs <i>Nudibranchia</i>	X		X					Low intertidal.

Species	Habitat							Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom	Neritic	Estuarine	Unknown	
Pacific sand dollar <i>Dendraster excentricus</i>				X		X		
Pinto (Northern) abalone <i>Haliotis kamtschatkana</i>	X		X					Low intertidal.
Porcelain crab <i>Petrolisthes cinctipes</i>	X							Mid to low intertidal.
Purple shore crab <i>Hemigrapsus nudus</i>	X					X		Mid to low intertidal.
Rock dwelling purple whelk <i>Nucella emarginata</i>	X							High to mid intertidal. Often among mussel beds and barnacles.
Sabellid worm <i>Myxicola infundibulum</i>				X		X		
Shield limpet <i>Lottia pelta</i>	X		X					Mid to low intertidal.
Sponges Porifera	X		X					
Spot prawn <i>Pandalus platyceros</i>	X		X	X	X			Low intertidal to 487 m. Larvae are planktonic.
Tube worm <i>Neosabellaria cementarium</i>	X		X					Low intertidal.
Turban snails <i>Tegula spp.</i>	X		X					Low intertidal.
Upper intertidal barnacle <i>Balanus glandula</i>	X					X		High to mid intertidal.
Wrinkled amphissa <i>Amphissa columbiana</i>	X		X					Low intertidal.

Species	Habitat							Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom	Neritic	Estuarine	Unknown	
Wrinkled purple whelk <i>Nucella lamellosa</i>	X							Low intertidal.
Plants and Algae								
Agarophytes & Carrageenophytes <i>Gelidium</i>	X		X					Shallow subtidal.
Agarophytes & Carrageenophytes <i>Gracilaria</i>	X		X			X		Low intertidal.
Agarophytes & Carrageenophytes	X		X			X		Low intertidal.
Agarophytes & Carrageenophytes	X							High to mid intertidal.
Agarophytes & Carrageenophytes <i>Mazzaella</i>	X							
Agarophytes & Carrageenophytes	X		X					Low intertidal, shallow subtidal.
Agarophytes & Carrageenophytes	X		X					Low intertidal. Subtidal on rocks near sandy habitats.
Coralline red algae <i>Bossiella</i> spp.	X		X					Low intertidal.
Coralline red algae <i>Calliarthron</i> sp.	X		X					Low intertidal.
Coralline red algae <i>Corallina</i> spp.	X		X					Mid to low intertidal.
Coralline red algae <i>Lithothamnium</i> spp.	X							Mid intertidal. Tidepools.
Costaria <i>Costaria</i> sp.	X		X					Low intertidal and shallow subtidal.

Species	Habitat							Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom	Neritic	Estuarine	Unknown	
Dilsea <i>Dilsea californica</i>	X		X					Low intertidal.
Dwarf rockweed <i>Pelvetiopsis limitata</i>	X							High intertidal.
Endocladia <i>Endocladia muricata</i>	X							High intertidal.
Feather boa kelp <i>Egregia menziesii</i>	X		X					Low intertidal, shallow subtidal.
Filamentous greens <i>Enteromorpha</i> -type	X							High intertidal.
Fucus (Rockweed) <i>Fucus</i> spp.	X							Mid to low intertidal.
Giant kelp <i>Macrocystis pyrifera</i>			X					
Hedophyllum <i>Hedophyllum sessile</i>	X							Mid to low intertidal.
Setchell's Kelp <i>Laminaria setchellii</i>	X		X					Low to mid intertidal
Lessoniopsis <i>Lessoniopsis littoralis</i>	X							Low intertidal in areas exposed to high surf action.
Odonthalia <i>Odonthalia</i> spp.	X							
Pleurophycus <i>Pleurophycus</i> sp.	X		X					Low intertidal and shallow subtidal.

Species	Habitat							Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom	Neritic	Estuarine	Unknown	
Porphyra <i>Porphyra</i> spp.	X		X					Intertidal and shallow subtidal.
Prionitis <i>Prionitis</i> spp.	X		X					Intertidal and shallow subtidal.
Sea fern <i>Cystoseira osmundacea</i>	X		X					Low intertidal and shallow subtidal. Tidepools and on rocks.
Southern sea palm <i>Eisenia arborea</i>	X		X					Low intertidal.
Stalked kelp <i>Pterygophora californica</i>			X					
Ulvoids <i>Ulva</i> spp.	X		X					Mid to low intertidal and shallow subtidal.
Winged kelp <i>Alaria marginata</i>	X		X					Low intertidal and shallow subtidal.

67 NON-NATIVE SPECIES

68 Non-native and invasive species can alter and degrade habitats, increase threats to native
69 species, and in some cases impact local economies or cause extensive problems for
70 marine coastal systems of Oregon. Non-native species can be transported locally,
71 regionally, or around the world and introduced to Oregon's nearshore systems by way of
72 several mechanisms such as, hitch-hiking in ballast water or in ocean currents. Once a
73 species has been introduced it can affect food sources, alter habitats, expose native
74 communities to diseases or toxins, or act as parasites of juvenile and adult members of
75 coastal fisheries species. For many introduced species, the severity of the potential
76 ecological threat is not yet known. Many of these species could be deemed invasive in the
77 future, but further efforts to assess impacts are needed. These efforts are a priority for
78 conservation of natural systems because invasions become more complicated to address
79 over time and management measures that respond to the first arriving individuals are most
80 effective.

81 Efforts have begun to assess available data regarding existing or potential future threats to
82 Oregon's nearshore and estuarine communities. The Oregon Department of Fish and
83 Wildlife's Marine Resources Program reviewed available online data and consulted with
84 experts at Oregon State University, the Environmental Protection Agency Western Ecology
85 Division, United States Geological Survey Western Fisheries Research Center, and
86 Williams College in 2012 and updated this information in 2015 and 2025. Based on
87 information gleaned from these sources, a list of non-native species known to occur in the
88 nearshore waters of Oregon and neighboring states was developed (Table 3). For each
89 species, habitat information was collected and species were identified as being primarily
90 associated with nearshore marine and/or estuarine systems.

91 **Table 3.** Non-native species known to occur in the nearshore waters of Oregon and neighboring
92 states was developed.

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non- invasive	3: WA or CA
Bony Fishes					
American shad <i>Alosa sapidissima</i>	X		X		
Amur goby <i>Rhinogobius bungeus</i>	X	X		X	

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
Atlantic salmon	X				X
<i>Salmo salar</i>					
Brown trout	X				X
<i>Salmo trutta</i>					
Chameleon goby		X			X
<i>Tridentiger trigonocephalus</i>					
Inland silverside		X			X
<i>Menidia beryllina</i>					
Rainwater killifish		X		X	
<i>Lucania parva</i>					
Shimofuri goby		X			X
<i>Tridentiger bifasciatus</i>					
Shokifaze goby		X			X
<i>Tridentiger barbatus</i>					
Striped bass	X		X		
<i>Morone saxatilis</i>					
Threadfin shad	X			X	
<i>Dorosoma petenense</i>					
Western mosquito fish		X		X	
<i>Gambusia affinis</i>					
Yellowfin goby		X			X
<i>Acanthogobius flavimanus</i>					
Invertebrates					
Acorn barnacle	X	X		X	
<i>Amphibalanus improvisus</i>					

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
Ambiguous bryozoan		X			X
<i>Anguinella palmata</i>					
American Atlantic sponge		X			X
<i>Prosuberites sp.</i>					
Amethyst gem clam		X			X
<i>Gemma gemma</i>					
Amphipod		X			X
<i>Ampelisca abdita</i>					
Amphipod	X	X		X	
<i>Ampithoe lacertosa</i>					
Amphipod		X		X	
<i>Ampithoe valida</i>					
Amphipod	X				X
<i>Chelura terebrans</i>					
Amphipod		X			X
<i>Corophium alienense</i>					
Amphipod		X		X	
<i>Eobrolgus spinosus</i>					
Amphipod		X		X	
<i>Ericthonius brasiliensis</i>					
Amphipod		X		X	
<i>Gammarus daiberi</i>					
Amphipod	X	X		X	
<i>Grandidierella japonica</i>					
Amphipod	X			X	

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
<i>Incisocalliope derzhavini</i>					
Amphipod		X			X
<i>Leucothoe sp.</i>					
Amphipod		X		X	
<i>Melita nitida</i>					
Amphipod		X			X
<i>Melita sp.</i>					
Amphipod		X			X
<i>Microdeutopus gryllotalpa</i>					
Amphipod	X	X		X	
<i>Monocorophium acherusicum</i>					
Amphipod	X	X			X
<i>Monocorophium insidiosum</i>					
Amphipod		X			X
<i>Monocorophium uenoi</i>					
Amphipod		X			X
<i>Paradexamine sp.</i>					
Amphipod		X		X	
<i>Parapleustes derzhavini</i>					
Amphipod		X		X	
<i>Ptilohyale littoralis</i>					
Amphipod					X
<i>Sinocorophium heteroceratum</i>					
Amphipod		X			X
<i>Stenothoe valida</i>					

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
Amphipod					X
<i>Transorchestia enigmatica</i>					
Amur River clam					X
<i>Corbula amurensis</i>					
Asian calanoid copepod		X		X	
<i>Pseudodiaptomus inopinus</i>					
Asian calanoid copepod		X		X	
<i>Sinocalanus doerrii</i>					
Asian clam		X	X		
<i>Corbicula fluminea</i>					
Asian copepod		X			X
<i>Acartiella sinensis</i>					
Asian copepod		X		X	
<i>Limnoithona sinensis</i>					
Asian copepod		X			X
<i>Tortanus dextrilobatus</i>					
Asian cumacean		X		X	
<i>Nippoleucon hinumensis</i>					
Asian lanternshell		X			X
<i>Laternula marilina</i>					
Asian sea-squirt		X	X		
<i>Styela clava</i>					
Asian semele		X			X
<i>Theora lubrica</i>					
Atlantic oyster		X			X

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
<i>Crassostrea virginica</i>					
Atlantic oyster drill		X			X
<i>Urosalpinx cinerea</i>					
Australasian burrowing isopod		X	X		
<i>Sphaeroma quoianum</i>					
Australian spotted jellyfish	X				X
<i>Phyllorhiza punctata</i>					
Australian tubeworm		X			X
<i>Ficopomatus enigmaticus</i>					
Baltic clam		X			X
<i>Macoma petalum</i>					
Bamboo worm		X			X
<i>Sabaco elongatus</i>					
Black Sea jellyfish		X		X	
<i>Blackfordia virginica</i>					
Black Sea jellyfish		X			X
<i>Maeotias marginata</i>					
Blacktip shipworm		X			X
<i>Lyrodus pedicellatus</i>					
Blue mussel	X				X
<i>Mytilus complex</i>					
Bonnet limpit	X			X	
<i>Sabia conica</i>					
Brackish water snail		X		X	
<i>Assiminea parasitologica</i>					

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
Brown bryozoan		X		X	
<i>Bugula neritina</i>					
Bryozoan		X			X
<i>Bugula stolonifera</i>					
Bryozoan	X	X		X	
<i>Cryptosula pallasiana</i>					
Bryozoan		X			X
<i>Victorella pavidula</i>					
Bryozoan		X			X
<i>Watersipora arcuata</i>					
Bryozoan		X		X	
<i>Watersipora subtorquata</i>					
Bryozoan		X			X
<i>Zoobotryon verticillatum</i>					
Capitellid worm		X		X	
<i>Capitella telata</i>					
Channeled whelk		X			X
<i>Busycon canaliculatum</i>					
Chinese mitten crab		X			X
<i>Eriocheir sinensis</i>					
Ciliate		X			X
<i>Mirofolliculina limnoriae</i>					
Colonial tunicate		X	X		
<i>Didemnum vexillum</i>					
Common Atlantic slippersnail	X				X

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
<i>Crepidula fornicata</i>					
Common sea grape		X		X	
<i>Molgula manhattensis</i>					
Convex slippersnail		X			X
<i>Crepidula convexa</i>					
Copepod		X			X
<i>Amphiascus parvus</i>					
Copepod		X		X	
<i>Corycaeus anglicus</i>					
Copepod		X		X	
<i>Coullana canadensis</i>					
Copepod		X		X	
<i>Limnoithona tetraspina</i>					
Copepod		X		X	
<i>Oithona davisae</i>					
Copepod		X		X	
<i>Oithona similis</i>					
Copepod		X			X
<i>Pseudodiaptomus forbesi</i>					
Copepod		X			X
<i>Pseudodiaptomus marinus</i>					
Copepod		X			X
<i>Pseudomyicola spinosus</i>					
Copepod		X			X
<i>Stephos pacificus</i>					

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
Copepod		X			X
<i>Tortanus sp.</i>					
Creeping bryozoan	X	X		X	
<i>Bowerbankia "gracilis"</i>					
Crumb-of-bread sponge	X	X		X	
<i>Halichondria bowerbanki</i>					
Crustacean		X			X
<i>Deltamysis holmquistae</i>					
Crustacean		X			X
<i>Eochelidium sp.</i>					
Crustacean		X			X
<i>Eusarsiella zostericola</i>					
Crustacean		X			X
<i>Hyperacanthomysis longirostris</i>					
Crustacean		X		X	
<i>Sinelobus sp.</i>					
Delphaeid planthopper		X			X
<i>Prokelsia marginata</i>					
Eastern mudsnail		X			X
<i>Ilyanassa obsoleta</i>					
Eastern white slipper shell		X			X
<i>Crepidula plana</i>					
European green shore crab	X			X	
<i>Carcinus maenas</i>					
False anglewing		X			X

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
<i>Petricolaria pholadiformis</i>					
Flat okenia		X			X
<i>Okenia plana</i>					
Flatworm		X			X
<i>Koinostylochus ostreophagus</i>					
Foolish mussel		X			X
<i>Mytilus (trossulus x galloprovincialis)</i>					
Foram		X			X
<i>Trochammina hadai</i>					
Freshwater hydroid		X		X	
<i>Cordylophora caspia</i>					
Golden star tunicate		X		X	
<i>Botryllus schlosseri</i>					
Griffen's isopod	X	X	X		
<i>Orthione griffenii</i>					
Hard shell clam		X			X
<i>Mercenaria mercenaria</i>					
Harris mud crab		X		X	
<i>Rhithropanopeus harrisii</i>					
Hydroid		X			X
<i>Moerisia sp.</i>					
Hydroid		X			X
<i>Corymorphidae sp.</i>					
Isopod		X			X
<i>Dynoides dentisinus</i>					

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
Isopod					
<i>Eurylana arcuata</i>	X				X
Isopod		X		X	
<i>Iais californica</i>					
Isopod		X			X
<i>Paranthura sp.</i>					
Isopod		X		X	
<i>Pseudosphaeroma sp.</i>					
Spharoma quoianum		X	X	X	
Isopod		X			X
<i>Synidotea laevidorsalis</i>					
Japanese clam		X			X
<i>Neotrapezium liratum</i>					
Japanese false cerith		X			X
<i>Batillaria attramentaria</i>					
Japanese littleneck clam	X	X		X	
<i>Venerupis philippinarum</i>					
Japanese mussel		X			X
<i>Musculista senhousia</i>					
Japanese nassa		X			X
<i>Hima fratercula</i>					
Japanese oyster drill		X	X		
<i>Ocinebrellus inornatus</i>					
Japanese skeleton shrimp		X		X	
<i>Caprella mutica</i>					

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
Lacy crust bryozoan		X		X	
<i>Conopeum tenuissimum</i>					
Lagoon sea slug		X		X	
<i>Tenellia adspersa</i>					
Lake Merritt cuthona		X			X
<i>Cuthona perca</i>					
Manchurian cecina		X			X
<i>Cecina manchurica</i>					
Marsh snail		X		X	
<i>Myosotella myosotis</i>					
Mediterranean blue mussel	X				X
<i>Mytilus galloprovincialis</i>					
Misaki balloon aeolis		X			X
<i>Eubranchus misakiensis</i>					
Moon jelly	X	X			X
<i>Aurelia sp.</i>					
Mysid		X			X
<i>Orientomysis aspera</i>					
Naval shipworm		X		X	
<i>Teredo navalis</i>					
New Zealand amphipod		X			X
<i>Paracorophium sp.</i>					
New Zealand mudsnail		X	X		
<i>Potamopyrgus antipodarum</i>					
New Zealand sea slug	X	X		X	

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
<i>Philine auriformis</i>					
Nodding head		X		X	
<i>Barentsia benedeni</i>					
Orange anemone		X			X
<i>Diadumene cincta</i>					
Orange-striped green anemone		X		X	
<i>Diadumene lineata</i>					
Oriental shrimp		X		X	
<i>Palaemon macrodactylus</i>					
Oyster redworm		X		X	
<i>Mytilicola orientalis</i>					
Pacific oyster		X		X	
<i>Crassostrea gigas</i>					
Pacific transparent sea squirt		X		X	
<i>Ciona savignyi</i>					
Pile worm		X		X	
<i>Neanthes succinea</i>					
Pink mouth hydroid		X		X	
<i>Ectopleura crocea</i>					
Polychaete worm		X		X	
<i>Boccardia claparedrei</i>					
Polychaete worm	X			X	
<i>Boccardiella hamata</i>					
Polychaete worm		X			X
<i>Boccardiella ligerica</i>					

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
Polychaete worm					
<i>Dipolydora quadrilobata</i>	X		X		
Polychaete worm		X		X	
<i>Eumida sanguinea</i>					
Polychaete worm		X		X	
<i>Eusyllis japonica</i>					
Polychaete worm	X		X		
<i>Heteromastus filiformis</i>					
Polychaete worm		X		X	
<i>Hobsonia florida</i>					
Polychaete worm		X		X	
<i>Manayunkia aestuarina</i>					
Polychaete worm		X		X	
<i>Polydora cornuta</i>					
Polychaete worm		X		X	
<i>Polydora limicola</i>					
Polychaete worm		X		X	
<i>Polydora neocaeca</i>					
Polychaete worm		X		X	
<i>Proceraea okadai</i>					
Polychaete worm		X		X	
<i>Pseudopolydora bassarginensis</i>					
Polychaete worm		X		X	
<i>Pseudopolydora kempfi</i>					
Polychaete worm		X		X	

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
<i>Pseudopolydora paucibranchiata</i>					
Polychaete worm		X		X	
<i>Rhynchospio foliosa</i>					
Polychaete worm		X		X	
<i>Streblospio benedicti</i>					
Polychaete worm		X		X	
<i>Syllis cornuta</i>					
Polyp aeolis		X		X	
<i>Cumanotus sp.</i>					X
Purple acorn barnacle		X			
<i>Amphibalanus amphitrite</i>					
Purple varnish clam	X	X	X		
<i>Nuttallia obscurata</i>					
Red beard sponge		X			X
<i>Clathria prolifera</i>					
Red-gilled Marphysa		X			X
<i>Marphysa sanguinea</i>					
Red-gilled mud worm		X			X
<i>Marenzelleria viridis</i>					
Ribbed mussel		X			X
<i>Geukensia demissa</i>					
Root-arm medusa		X			X
<i>Cladonema radiatum</i>					
Rope grass hydroid		X		X	
<i>Garveia franciscana</i>					

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
Rough periwinkle		X			X
<i>Littorina saxatilis</i>					
San Francisco anemone		X			X
<i>Diadumene franciscana</i>					
Sea grape		X		X	
<i>Molgula citrina</i>					
Sea squirt		X		X	
<i>Diplosoma listerianum</i>					
Sessile hydrozoan		X		X	
<i>Gonothyraea loveni</i>					
Single horn bryozoan		X		X	
<i>Schizoporella japonica</i>					
Skeleton shrimp		X		X	
<i>Caprella drepanochir</i>					
Starlet sea anemone		X		X	
<i>Nematostella vectensis</i>					
Steamer clam		X		X	
<i>Mya arenaria</i>					
Transparent sea squirt		X			X
<i>Ciona intestinalis</i>					
Tube amphipod	X			X	
<i>Jassa marmorata</i>					
Tubificid worm		X			X
<i>Limnodriloides monothecus</i>					
Tubificid worm		X		X	

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
<i>Tubificoides brownae</i>					
Tubificid worm		X		X	
<i>Tubificoides diazi</i>					
Tubificid worm	X				X
<i>Tubificoides wasselli</i>					
Tunicate		X			X
<i>Ascidia zara</i>					
Tunicate		X			X
<i>Botrylloides perspicuum</i>					
Tunicate		X		X	
<i>Botryllus schlosseri</i>					
Tunicate	X				X
<i>Ciona savignyi</i>					
Tunicate		X	X		
<i>Didemnum vexillum</i>					
Tunicate	X	X		X	
<i>Diplosoma listerianum</i>					
Tunicate		X			X
<i>Perophora japonica</i>					
Tunicate		X		X	
<i>Styela clava</i>					
Two-groove odostome		X			X
<i>Odetta bisuturalis</i>					
Violet tunicate		X		X	
<i>Botrylloides violaceus</i>					

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
White anemone		X		X	
<i>Diadumene leucolena</i>					
White-tentacled japanese aeolis		X			X
<i>Sakuraeolis enosimensis</i>					
Wood boring gribble	X	X			X
<i>Limnoria quadripunctata</i>					
Wood boring gribble	X	X		X	
<i>Limnoria tripunctata</i>					
Plants and Algae					
American sea rocket		X		X	
<i>Cakile edentula</i>					
Awosa		X		X	
<i>Ulva pertusa</i>					
Banded red seaweed	X			X	
<i>Campylaephora kondoi</i>					
Brass buttons		X		X	
<i>Cotula coronopifolia</i>					
Brodie's siphon weed	X				X
<i>Leptosiphonia brodiei</i>					
Brown alga (no common name)		X		X	
<i>Botrytella parva</i>					
Brown turf	X			X	
<i>Scytothamnus sp.</i>					
Caulerpa seaweed		X		X	
<i>Caulerpa taxifolia</i>					

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
Coast barbgrass		X		X	
<i>Parapholis incurva</i>					
Common cordgrass		X			X
<i>Spartina anglica</i>					
Dead man's fingers		X			X
<i>Codium fragile</i> subsp. <i>fragile</i>					
Dense-flowered cordgrass		X		X	
<i>Spartina densiflora</i>					
English cordgrass		X		X	
<i>Spartina anglica</i>					
Eurasian water-milfoil		X		X	
<i>Myriophyllum spicatum</i>					
European sand spurry		X		X	
<i>Spergularia salina</i>					
European sea rocket		X		X	
<i>Cakile maritime</i>					
Killer alga	X				X
<i>Caulerpa taxifolia</i>					
Hakodate sea tangle	X			X	
<i>Yendoa hakodatensis</i>					
Invasive ogo	X			X	
<i>Gracilaria vermiculophylla</i>					
Lacy sea lettuce		X			X
<i>Ulva australis</i>					
Japanese eelgrass	X	X			

Non-Native Species

	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-	3: WA or CA
<i>Zostera japonica</i>					
Japanese kelp	X				X
<i>Undaria pinnatifida</i>					
Japanese wireweed	X		X		
<i>Sargassum muticum</i>					
Marsh fleabane		X			X
<i>Pluchea odorata odorata</i>					
Pom-pom weed	X				X
<i>Caulacanthus okamurae</i>					
Red algae	X				X
<i>Caulacanthus ustulatus</i>					
Red algae		X		X	
<i>Ceramium kondoi</i>					
Red algae	X				X
<i>Lomentaria hakodatensis</i>					
Red algae		X		X	
<i>Polysiphonia brodiei</i>					
Redtop		X		X	
<i>Agrostis stolonifera</i>					
Salt meadow cordgrass		X		X	
<i>Spartina patens</i>					
Saltmarsh rush		X		X	
<i>Juncus gerardi</i>					
Sargassum	X				X
<i>Sargassum muticum</i>					

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non- ^d	3: WA or CA ^e
Siphoned feather weed <i>Dasysiphonia sessilis</i>	X	X		X	
Smooth cordgrass <i>Spartina alterniflora</i>		X		X	
Spiny naiad <i>Najas marina</i>			X		X
Surf diatom <i>Attheya armatum</i>	X			X	
Wakame <i>Undaria pinnatifida</i>	X				X
^a Nearshore = species is primarily associated with the nearshore marine habitat, between the high tide line and the 30-fathom depth contour.					
^b Estuarine = species is primarily associated with estuarine habitat.					
^c 1: OR Invasive = non-native species is present in Oregon and is considered invasive for posing a threat to native species.					
^d 2: OR Non-native = non-native species is present in Oregon and the threat to native species is unknown					
^e 3: WA or CA Invasive = species is present in states adjacent to Oregon and is considered invasive.					
Species listed here are associated with nearshore and estuarine west coast habitats, as determined by analysis of data and expert review provided by James T. Carlton, Williams College; John Chapman, Oregon State University; Debbie Reusser, U.S. Geological Survey – Western Fisheries Research Center; Henry Lee, U.S. Environmental Protection Agency – Western Ecology Division; and Gayle Hansen, Oregon State University.					

DRAFT