Data considered in the ecological atlas- abstracts and references

Data ID	Abstract
Habitat	
1	This dataset is updated from version 3 to include new seafloor data for Oregon state waters acquired during mapping surveys in 2009 and 2010. Seafloor types are classified according to Greene et. al. (1999) deep-water marine benthic habitat scheme. Seafloor feature interpretation was performed by West Coast geologic mapping experts as a synthesis of various source data sets, including side-scan sonar, bottom samples, seismic data, and multibeam bathymetry. This version covers Oregon state waters only and does not extend into federal waters.
2	This is the file that will modify v3.6
3	100m grid based on all recent data available
4	Rocky shoreline as depicted in color-infrared vertical aerial photographs shot at minus tide consistently along the Oregon coast. Rocky shoreline was either hand drawn or digitized directly from the photo at an enlarged scale.
5	Sandy shoreline as depicted in color-infrared vertical aerial photographs shot at minus tide consistently along the Oregon coast. Sandy shoreline was either hand drawn or digitized directly from the photo at an enlarged scale.
6	Derived from 3
7	Derived from 3
8	Derived from 14
9	These data are part of a shoreline habitat classification and mapping project based on the “Shorezone” mapping protocol used extensively in Washington, Alaska, and British Columbia (Harper, et al. 2011). A complete coastline aerial photography and video survey was completed in June 2011, and interpretive database and mapping products will be complete by fall of 2012.
10	Planned for 2012 (ODFW)
11	This dataset is a classification of benthic habitats off the coast of Oregon and Washington. We defined benthic habitats using three components: depth classes, geomorphology and lithology. The three components were combined spatially to create patches representing unique habitats.
12	No data
13	These data, developed to support implementation of NMFS' Final Rule implementing amendment 19 to the Pacific Coast Groundfish Fishery Management Plan (FMP), depict Essential Fish Habitat (EFH) conservation areas off Oregon. The coordinate locations are from NMFS' Final Rule to implement Amendment 19 to the Pacific Coast Groundfish Fishery Management Plan (71 FR 27408; May 11, 2006).
Algae	
14	This layer was created to show the extent of kelp (*Nereocystis lutkeana)* surveys for 6 years of aerial surveys. This includes a coastwide survey (1990) and five years of regional surveys in southern Oregn (1996-1999, 2010).
15	Kelp (*Nereocystis leutkeana*) aerial surveys: entire Oregon coast in 1990; 5 selected reefs off southern Oregon during the fall of 1996-1999; and Oregon coast south of Cape Arago in 2010.
16	Distribution of kelp canopy was captured from geo-referenced historic NOS Survey "Smooth Sheets" in the vicinity of the Oregon Territorial Sea from the period 1868-1958. Data was captured to help improve knowledge of habitat characteristics within the Oregon Territorial Sea

Invertebrates	
17	Various datasets, no abstract available
18	Bottom Trawl stock assessment survey data on continental shelf for west coast US for the purpose of estimating fishery population abundance and conducting stock assessments for fishery regulations and management.
19	Various datasets, no abstract available
20	This is a BOEMRE-funded study entitled “Survey of Benthic Communities near Potential Renewable Energy Sites Offshore the Pacific Northwest” (P.I.: Dr. George Boehlert). The objective of this study is to understand species-habitat relationships and develop predictive capabilities of where benthic invertebrate species of interest and unique communities occur. The study is scheduled for completion in 2014..
21	This dataset is the Oregon commercial shrimp trawl logbook data of the shrimp fishery. This dataset is based on a large subsample of the available logbooks from each port of landing. The shrimp fishery occurs primarily in federal waters. Commercial shrimpers are required by law to report the volume and locations of retained shrimp catch of each trawl. Shrimpers are not required to report catch of any species other than pink shrimp so this dataset includes only pink shrimp. This dataset includes the estimated weight ("hailed") of shrimp, "adjusted" weight of shrimp, duration of each trawl, and the X-Y locations of the start of each trawl. The major caveats associated with this dataset are described in the metadata. This dataset is the Oregon Commercial Razor clam fishery logbook data for 2002-2009. Commercial fishers record estimated weight of clams harvested, the harvest locations and other information into an ODFW logbook for each day of harvest. The true weight (landing weight) of the harvest is obtained upon delivery to an ODFW licensed processor and is included in the logbook database. This dataset is the Oregon Red Sea Urchin Fishery logbook data. The fishery began in 1986 and quickly peaked in 1990. By 1996 the virgin stock was vastly reduced. At the same time, market demand plummeted. Consequently in the years that followed, harvest effort decreased and it has not returned to mid 1990 levels. The Urchin logbook data lacks consistency in the scale at which harvest locations have been reported and only recently report harvest using a standardized, 1 minute grid. The primary data recorded are estimated pounds of red urchins, location, hours underwater and depth.
22	This dataset is fishermen's logbook data for the Oregon commercial Dungeness crab fishery during the 2007-2008 and 2009-2010 crab seasons. The fishery occurs statewide in both state and federal waters. Beginning in 2007, fishermen were required to keep complete logbooks. Each year’s dataset represent approximately 56% of the individual landings and 68% of the total pounds landed for the season. Non-compliance with the logbook program by some fishers and poor data quality were contributing factors to this data set representing less than 100% of the landings. The fishery occurs statewide in both state and federal waters. This dataset includes crab pounds landed per crab pot, apportioned by the crabbers estimated weight per pot; pot soak time, X-Y location of start and end of crab pot string. The fishery is managed by pot limits, season, weekly landing limits, size and sex of crab.

23	Derived from 22
24	This dataset is the annual monitoring assessment of the razor clam population on Clatsop beach by the Oregon Department of Fish and Wildlife (ODFW). The assessment tracks population abundance, with emphasis on the young of the year age class. Oregon's assessment data are compared to Washington's razor clam assessment data to examine long term trends in the regional razor clam population. This dataset includes razor clam density by transect and harvest area by day.
FISH	
25	Bottom Trawl stock assessment survey data on continental shelf for west coast US for the purpose of estimating fishery population abundance and conducting stock assessments for fishery regulations and management.
26	Bottom Trawl stock assessment survey data on continental shelf for west coast US for the purpose of estimating fishery population abundance and conducting stock assessments for fishery regulations and management.
27	No abstract available
28	Estimates of biomass of groundfish species on shelf and upper continental slope.
29- 35	Spatial predictive models for six fish assemblage metrics were developed for waters offshore of Oregon. A machine-learning "Random Forests" analysis was completed using regional fishery-independent trawl datasets, which included National Marine Fisheries Service triennial and annual trawl datasets and an ODFW flatfish trawl dataset. An accuracy assessment using 20% of data removed prior to analysis was completed to assess the validity of model results in nearshore (<3nm) and offshore areas (>3nm). Predictive Model were developed for: 1. All species – biomass 2. All species – count / abundance 3. All species – number of species / species richness 4. All species – diversity 5. Nearshore species – biomass 6. Nearshore species –count / abundance All models provide reasonably reliable results, except for diversity. The diversity model should NOT be used for further analyses. Overall accuracy ranged from 64% to 87%. Nearshore Group included: Sand Sole, English Sole, Pacfic Sanddab, Speckled Sanddab, Petrale Sole, Starry Flounder, Butter Sole. Models used 8 distinct spatial layers to derive 42 environmental predictors.
36	This is a dataset includes fish catches from beam trawl studies conducted by OSU from 1977 – 1979 (see Krygier and Pearcy 1986). The sampling extended from the Umpqua River to Tillamook Bay and includes many samples in water shallower than 20 m. The data exist in hard copy datasheets only.
37	This dataset is from an OSU study of demersal fishes which sampled at transects off Netarts Bay, Cape Foulweather and Heceta Head using a commercial shrimp trawl. The sampling was conducted from 1989 – 1994 at a depth range of 50 m – 400 m.
38	International Pacific Halibut Commission survey data 2007-2009, long line gear used for stock assesment.
39	This dataset is the Oregon commercial groundfish trawl logbook data of the groundfish trawl fishery. The fishery occurs statewide in both state and federal waters. Fishermen are required by law to report the volume and locations of retained catch of each trawl. This dataset includes species, estimated weight ("hailed") of each species, "adjusted" weight, duration of each trawl, and the X-Y locations of the start and end of each trawl. The major caveats associated with this dataset are described in the

	metadata.
40	Derived from 39
41	This dataset is the Oregon Commercial Nearshore Fishery Logbook data of the Nearshore fishery. It consists of logbook data from the inception of the logbook program in 2004 through the end of the 2009 commercial season. The Nearshore fishery occurs primarily in state waters and to a lesser extent in the nearshore portion of federal waters. Commercial fishers are required by law to report the volume and locations of retained and discarded catch. The dataset includes species retained and released, start and end location of catch reported to 1-nautical mile grid cell, gear type, depth. Fishing trips may consist of a single "set" or a series of sets with multiple locations. This dataset is the Oregon Commercial Fixed Gear Fishery logbook data for 2007-2010. This fishery occurs primarily in federal waters off Oregon. The primary data they record are species catch, depth, and start/end XY location of the fishing gear. The gear types typically used in the fixed-gear fishery are longline, fish pots, and fish barrels. There are three distinct fishing sectors in the fixed gear fishery; 1) the federal limited entry vessels targeting sablefish, 2) the open access vessels targeting sablefish, and 3) the open access vessels targeting hagfish. Logbooks are completed by both the limited entry and open access sablefish-targeting sectors. This dataset is the fisher's logbook data for the Oregon sardine fishery. The logbook data included here are the fishermen's estimates of sardine catch. It does not include their estimates of other species caught. The fishery occurs primarily north of Tillamook Head, and primarily off WA.
42	Various datasets, no abstract available
43	Observer data on ground fish trawl trips in the 1980s. Pikitch
44	This data set represents the marine waters designated as Endangered Species Act (ESA) Critical Habitat for the Southern Distinct Population Segment (DPS) of Green Sturgeon. These areas include coastal U.S. marine waters within 60 fathoms depth.
45	No abstract. Erickson and Hightower 2007- decided not to use b/c results based on only 7 individuals from Rogue River
46	A series of GIS data layers that delineate habitat suitability probability (HSP) were developed for 80 species of west coast groundfish and one to four lifestages (adult, juvenile, larva, egg). These data were generated from merged habitat GIS data, and a Bayesian Network model that incorporates information about species' habitat preferences from National Marine Fisheries Service's trawl surveys and Habitat Use Database (HUD). HSP for a total of 168 species/lifestage combinations were modeled. These data were developed for National Marine Fisheries Service Northwest Region and the Pacific Fishery Management Council in support of an Environmental Impact Statement (EIS) to consider the designation and conservation of Essential Fish Habitat (EFH) for Pacific Coast Groundfish. These data were consolidated and integrated in a GIS format to support spatially explicit groundfish habitat modelling and impacts assessment on a coastwide scale. Detailed information about the development of the data and analytical procedures used for habitat suitability analysis are described in the document: Pacific States Marine Fisheries Commission. 2004. Risk Assessment for the Pacific Groundfish FMP, which is included as Appendix A to the FEIS. Additionally, Appendix D includes a "Report on Updates Made to the Production of Essential Fish Habitat Suitability Probability Maps". Online_Linkage: http://www.nwr.noaa.gov/Groundfish-Halibut/Groundfish-Fishery-Management/NEPA-Documents/EFH-Final-EIS.cfm

47	Data gap
48	Data gap
49	Data gap
Seabirds	
50	A shapefile that represents point locations for all of Oregon's seabird colonies.
51-53	Three rasters summarizing seabird foraging hotspot (1) abundance, (2) importance, and (3) persistence over all species (n=16), years (1997-2008), and seasons. Rasters values terminate 1-2 naut miles offshore, excluding areas where turbidity and sedimentation confounded interpretation of chlorophyll from satellite imagery. Rasters are outputs from analysis published as: 'Nur, N., et al. 2011. Where the Wild Things Are:Predicting Hotspots of Seabird Aggregations in the California Current System. Ecological Applications.'
54	In developing the predictive seabird abundance models, PRBO used six seabird surveys, in combination extending for 1997 - 2008 (See Nur, et al. 2010)
55	The Crescent Coastal Research (CCR) data set covering the Oregon coast during summer (May – August) from 1992 to 2007 comprises the largest, most consistently delimited and standardized source. CCR data are contributed by Craig S. Strong.Mapped data: summary density data are summarized to average densities for each species, or species group, over years within each polygonal 'bin' of ocean surface. Washington Dept. of Fish and Wildlife (WDFW) data for the southern Washington coast from 2000 to 2005 were collected with a similar sampling design as the CCR data, but differ in strip width, vessel size, and omission of gull species in some years. WDFW data were contributed courtesy of Dr. Scott Pearson and Monique Lance of the WDFW Wildlife Program, Wildlife Research Division.Mapped data: summary density data are summarized to average densities for each species, or species group, over years within each polygonal 'bin' of ocean surface.
56	The GLOBEC data set includes offshore transects of southern and central Oregon in 2000 and 2002, and provides the only data on mid and outer shelf waters in the CCR report. Seabird data from the GLOBEC cruises were contributed courtesy of Dr. David Ainley of H.T. Harvey & Associates. Mapped data: summary density data are summarized to average densities for each species, or species group, over years within each polygonal 'bin' of ocean surface.
57	This is an OWET-funded project of seabird strip transects collected from NOAA ships in 2008 (Zamon 2008).
58	These data depict critical habitat identified for the threatened Western Snowy Plover.
59	(PIs: G. A. Green, Ebasco Environmental, Bellevue, WA, M. L. Bonnell and K. T. Briggs, Ecological Consulting, Inc., Portland, OR)
60	Data gap
Mammals	
61	(PIs: G. A. Green, Ebasco Environmental, Bellevue, WA, M. L. Bonnell and K. T. Briggs, Ecological Consulting, Inc., Portland, OR)
62	This dataset was created to document haulout/rookery locations in Oregon and facilitate population status and trend monitoring by ODFW staff.
63	This data set depicts Designated Critical Habitat for Stellar Sea Lion in Oregon. It is meant as a general locational reference for these designated areas, delineated at a 3,000 foot feet (0.9 km) buffer around the 3 islands or rocks where specified rookeries are located.
64	No abstract available.

65	No abstract, see Strong (2009) for methods
66	Data gap
67	Data gap
68	To meet the information needs of the Navy and other users of the marine environment, cetacean density is modeled as a continuous function of oceanopgraphic variables for 12 species in the California Current Ecosystem (CCE) and 15 species in the Eastern Tropical Pacific (ETP) based on line-transect surveys conducted from 1986 to 2003. Models are validated with new survey data from 2005& 2006. To evaluate effects on models, different modeling approaches, difference sampling scales, different interpolation methods, and different sources of habitat information were explored. The effect of seasonal chances in cetacean density was also investigated. Final models for all years were incorporated into a software system that will allow users to estimate density for all cetaceans in any user-defined areas within the CCE and ETP study areas. Stratified density estimates are also included in the software system for those species for which density modeling was not possible. Our models and associated software will greatly improve the ability to estimate the density of cetaceans within these study areas.
69	No abstract available. See reference for 68.
70	No abstract available. Literature reference: Ortega-Ortiz and Mate (2008); Green, et al. (1995); Zerzing and Mate (1984)
71	Resident gray whale siting data from the Crescent Coastal Research CCR nearshore seabird surveys. The CCR data set covering the Oregon coast during summer (May – August) from 1992 to 2007 comprises the largest, most consistently delimited and standardized source. CCR data are contributed by Craig S. Strong.Mapped data: summary density data are summarized to average densities for each species, or species group, over years within each polygonal 'bin' of ocean surface.
72	No abstract available.
73	No data available
Apex Predators	
74	Predictive modeling results of marine apex predator distribution. (Block, et al. 2011).
75	Map of proposed ESA Critical Habitat Designation off of the U.S. West Coast, published in 50 CFR Part 226 by NMFS on Jan. 5, 2010.
Oceanography	
76	This dataset was developed by TNC to be used int he Pac NW Marine Ecoregional Analysis. We used SeaWiFS satellite imagery to detect chlorophyll-a concentrations off the west coast of the US, from Cape Mendocino, CA north to the international border with Canada. We collected, filtered by cloud-free images, mosaiced, then classified by standard deviation 1.1km resolution monthly composites of chlorophyll-a from NOAA's CoastWatch West Coast Regional node for the summer months (June-Sept) from 1998-2005.
77	This dataset was developed by TNC to be used int he Pacific NW Marine Ecoregional Analysis. We used AVHRR satellite imagery to detect sea surface temperatures (SST) off the west coast of the US, from Cape Mendocino, CA north to the international border with Canada. We collected, filtered by cloud-free images, mosaiced, then classified by standard deviation 1.1km resolution monthly composites of SST from NOAA's CoastWatch West Coast Regional node for the summer months (June-Sept) from 1998-2004.
78	No abstract available.
79	No abstract available.
80	No abstract available.

81	No abstract available. National Ocean Data Center's World Ocean Database 2009; compiled