

Habitat & Species Atlas

Marine Life Protection Act Initiative

The North Coast Study Region (California/Oregon border to Alder Creek near Point Arena in Mendocino County) is the fourth Marine Life Protection Act (MLPA) study region to undergo the regional marine protected area (MPA) planning and re-design process.

North Coast Study Region

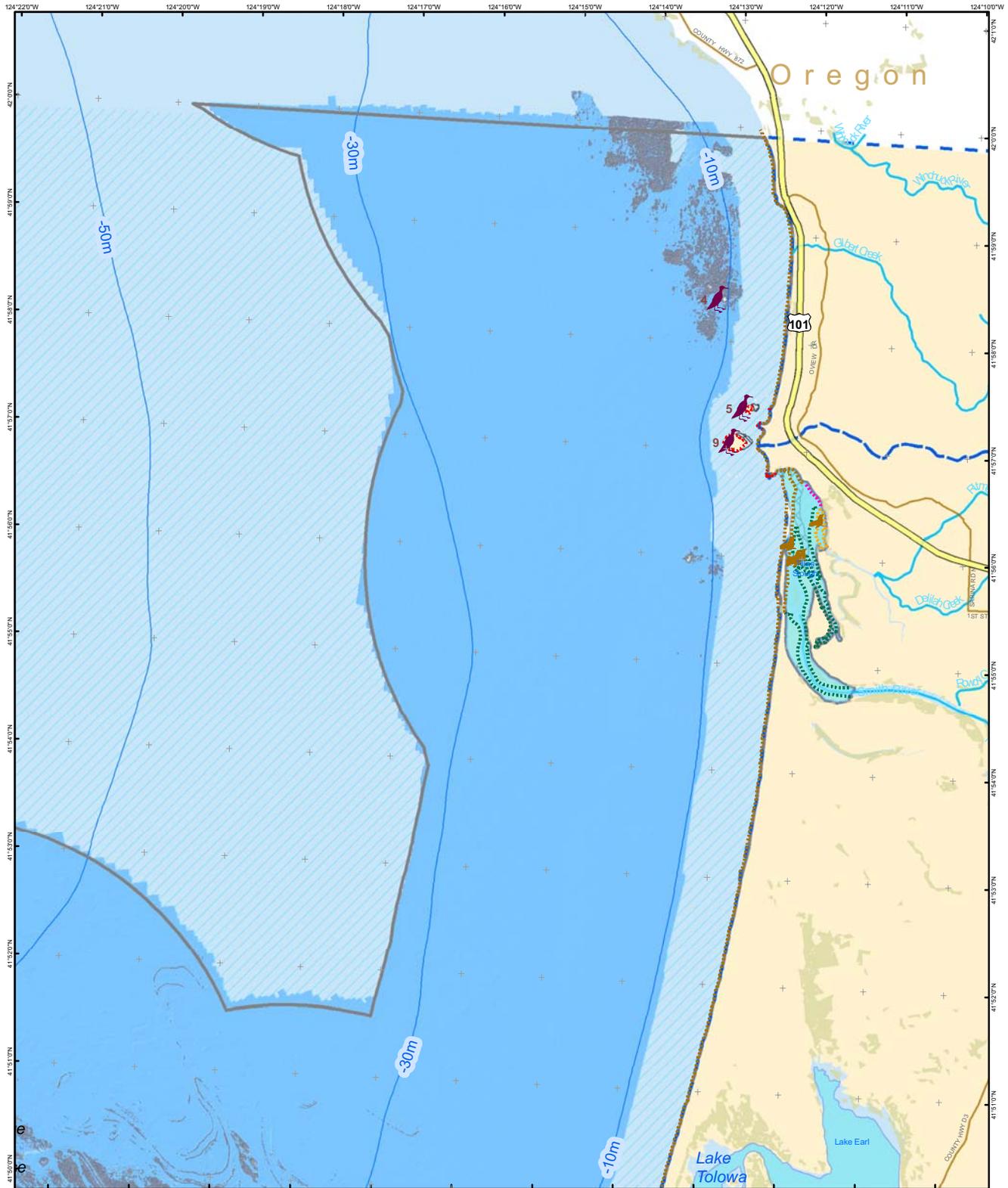


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Disclaimer
 The data available on these maps or map series have been tested for accuracy, and every effort has been taken to ensure that these data are timely, accurate and reliable. However no guarantee or warranty to their accuracy as to labeling, dimensions, or placement, or location of any features contained herein. **ALL DATA ARE EXPRESSLY PROVIDED AS IS AND WITH ALL FAULTS.** These maps are intended for informational purposes only and should not be considered authoritative for biological, navigational, legal and other site-specific uses.

Data Sources
 Data represented on this map have been acquired from various data sources, for full descriptions of data source and additional notes for individual layers refer to the "Appendix A - Metadata"

Frequency of update
 Data layers included in these maps are considered final at time of mapping. Every effort will be made to include revisions to data in successive versions of these maps. For most up to date layers please visit <http://northcoast.marinemap.org/mainemap/>



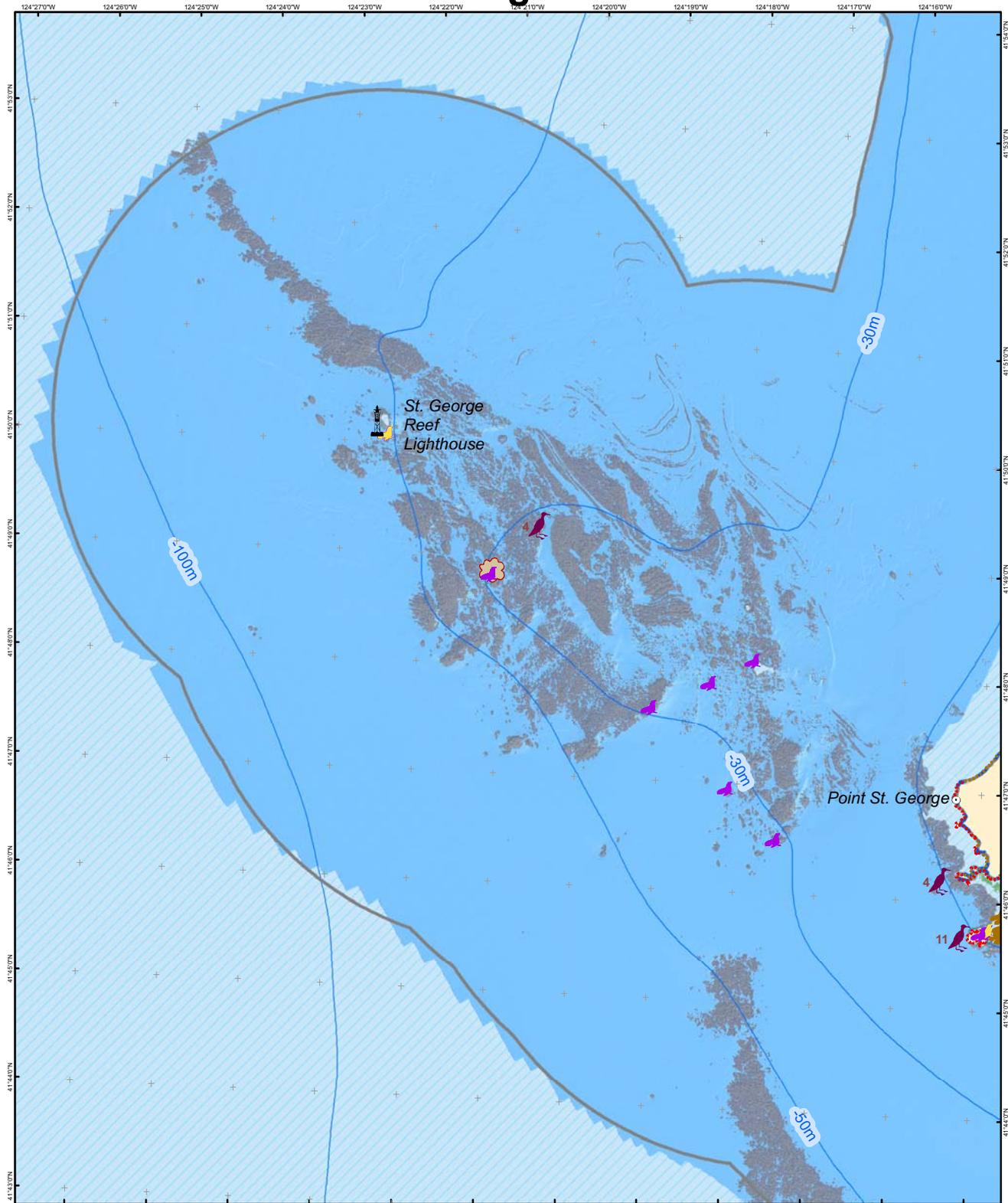
			Predicted substrate (Fine Scale)
Landmarks			
	Pinnipeds Haulouts		
			Course Scale Substrate
	Shore Types		Roads

California Locality

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0 0.5 1 2 Nautical Miles
0 0.5 1 2 Statute Miles
0 0.5 1 2 Kilometers

1:63,360
1 in = 1 Statute Mile



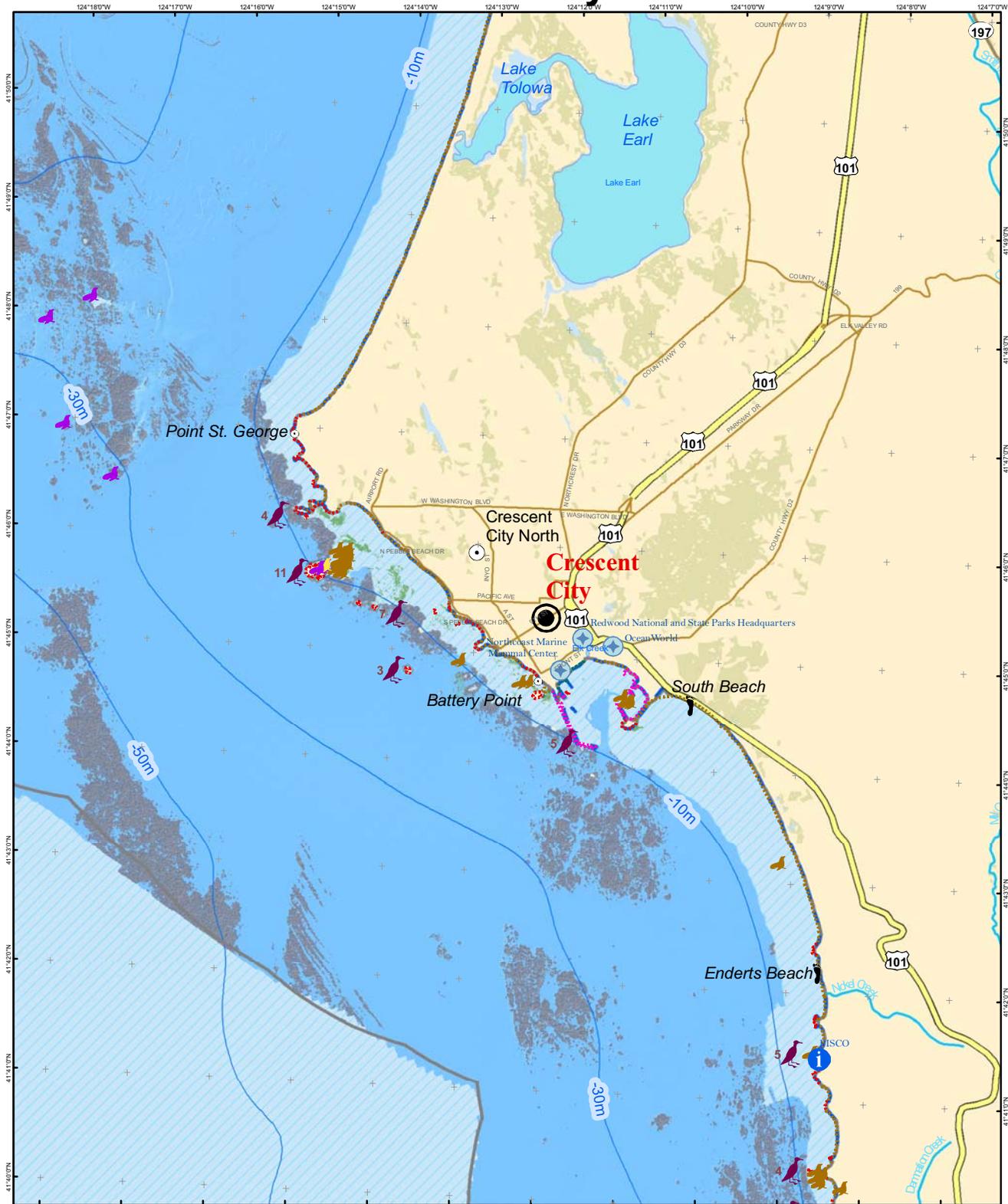
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Landmarks	Pinnipeds Haulouts	Coastal Salt Marsh	Course Scale Substrate
Airport	California sea lion	Kelp Beds	Soft
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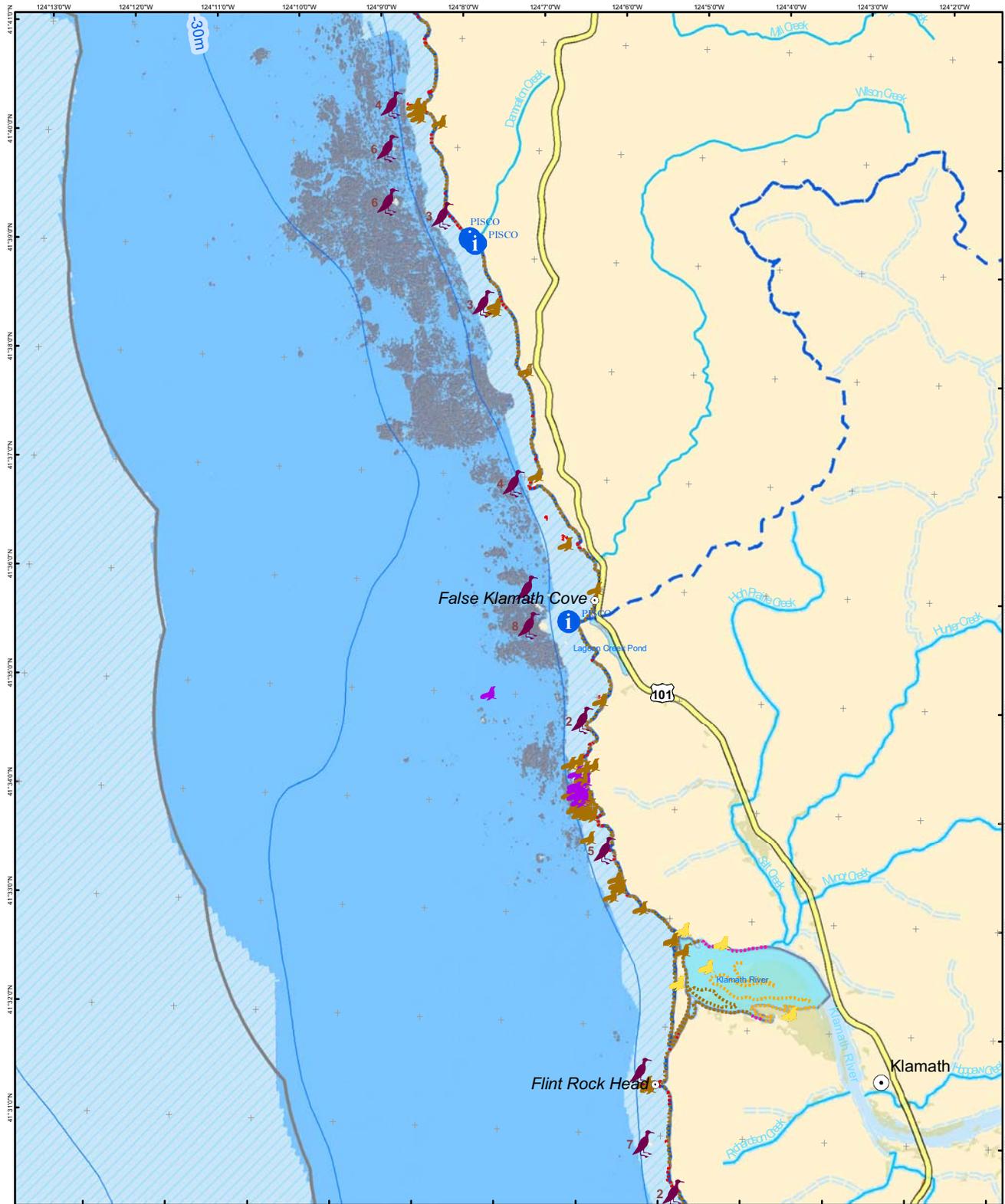
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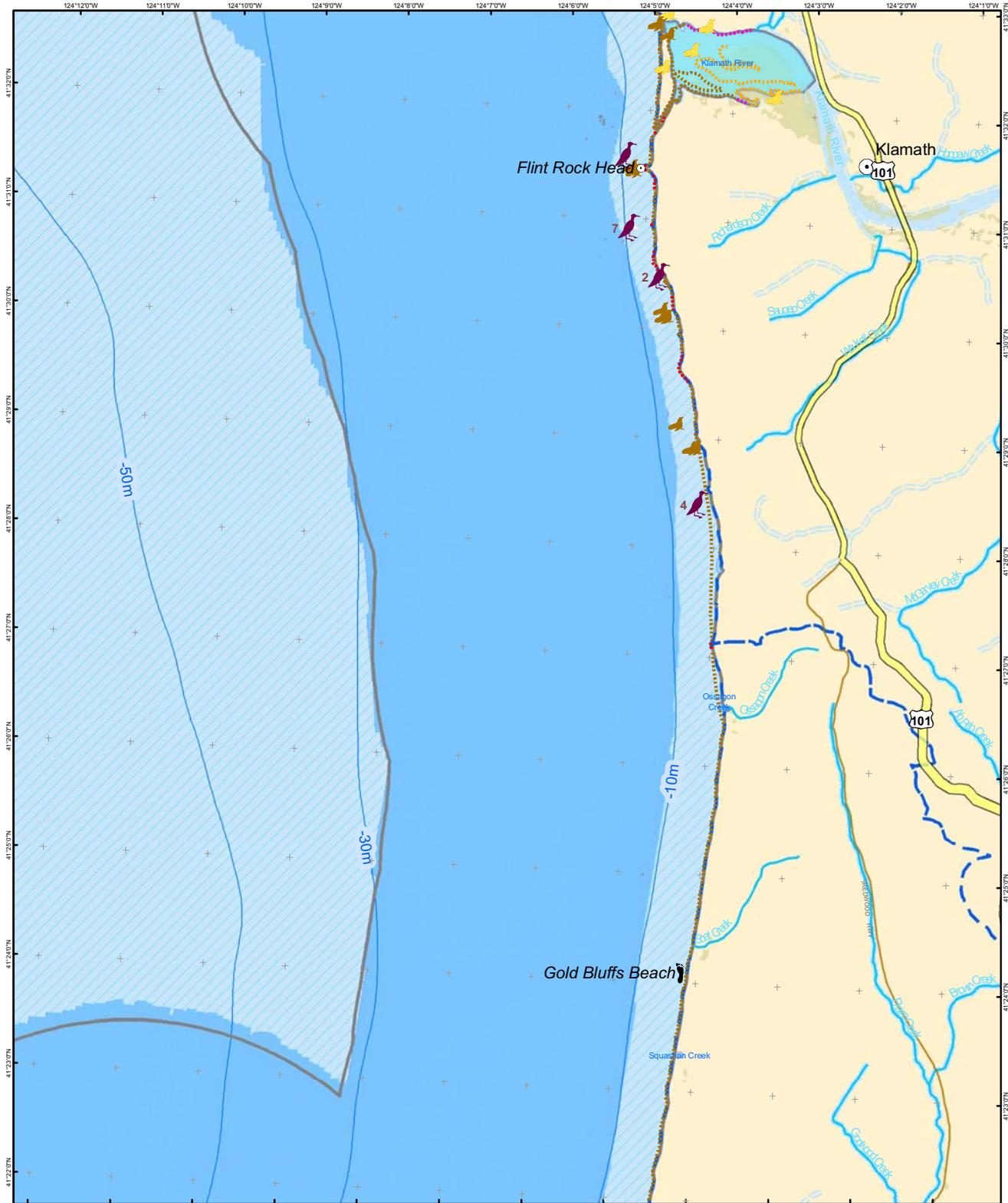
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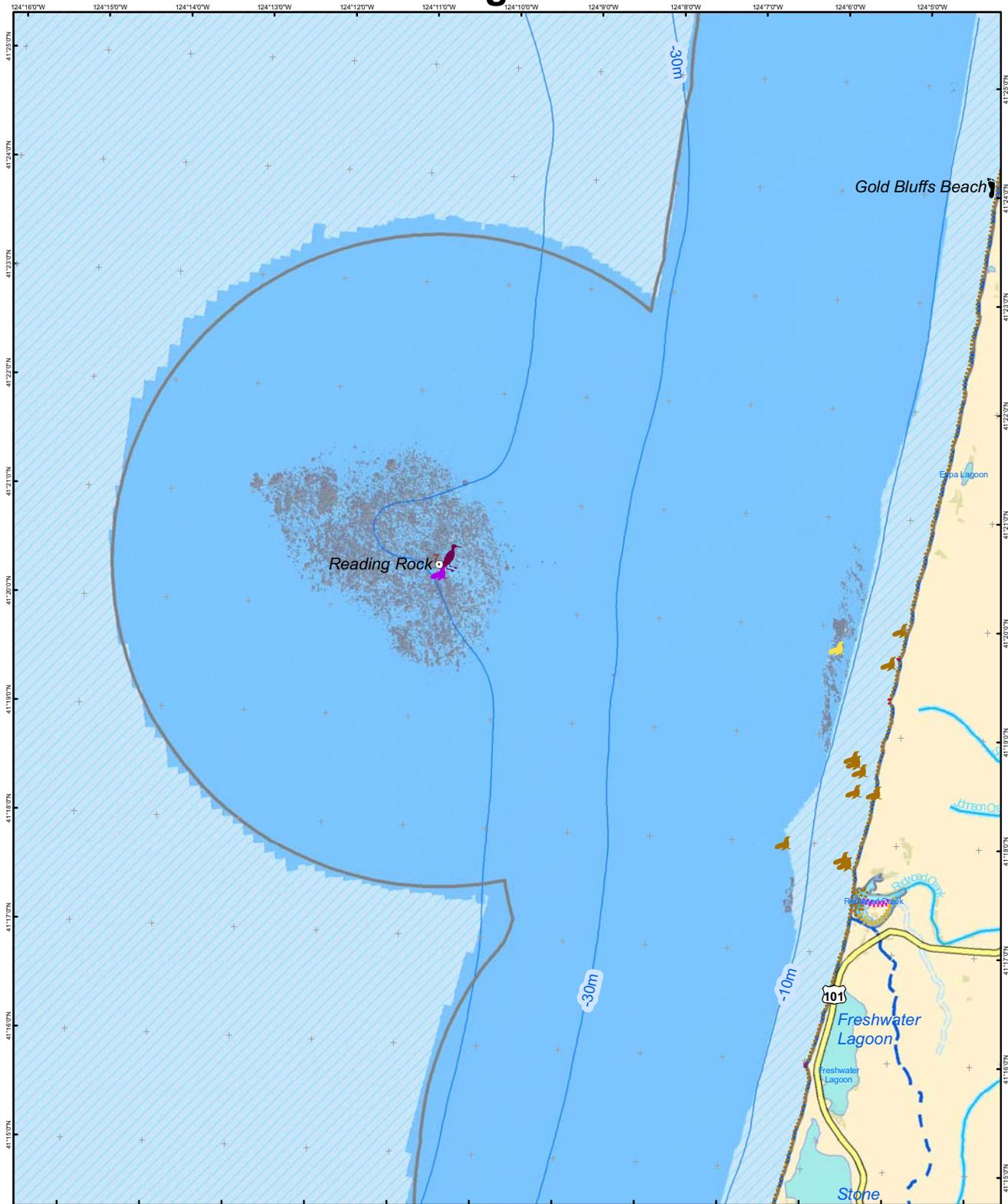
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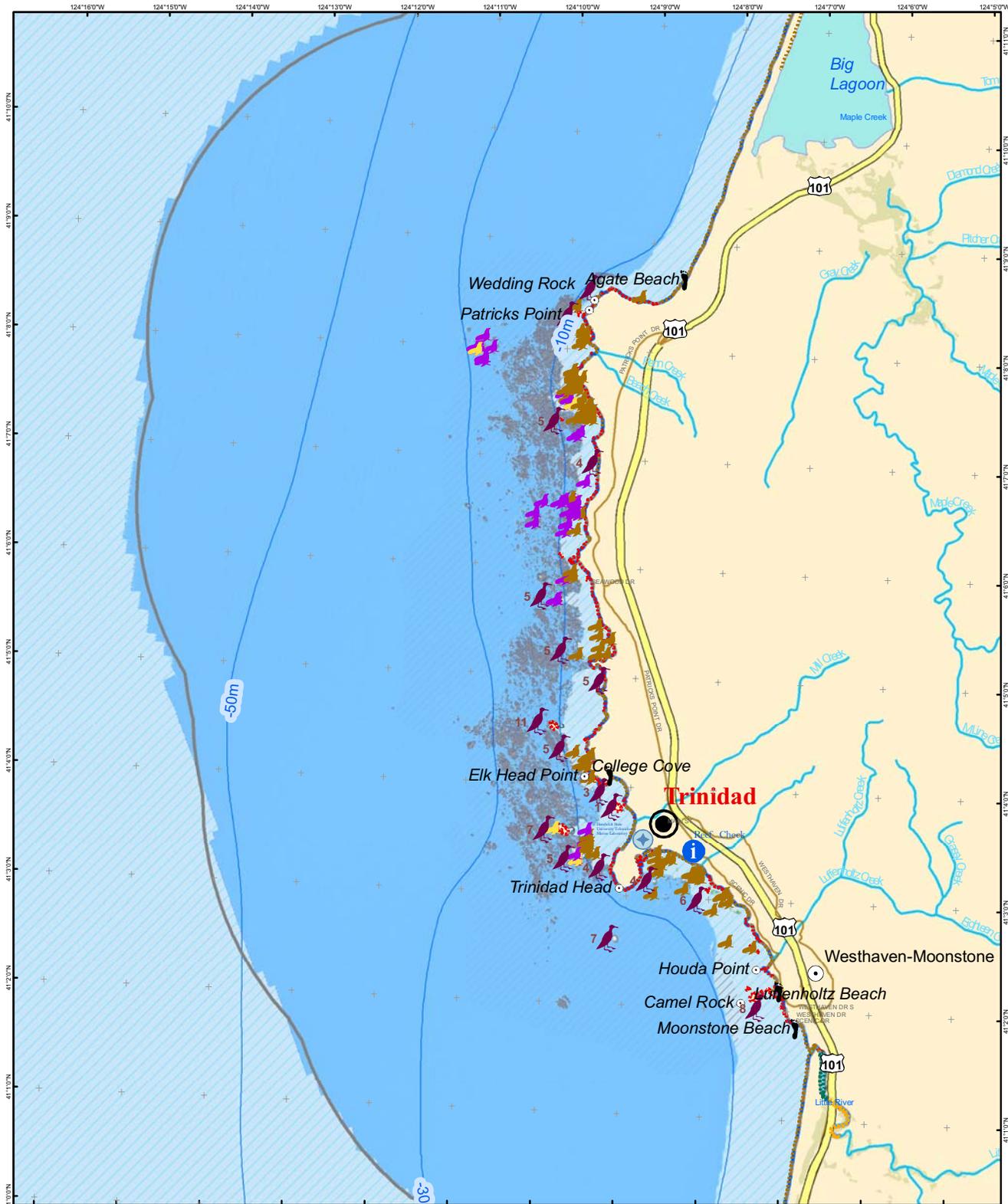
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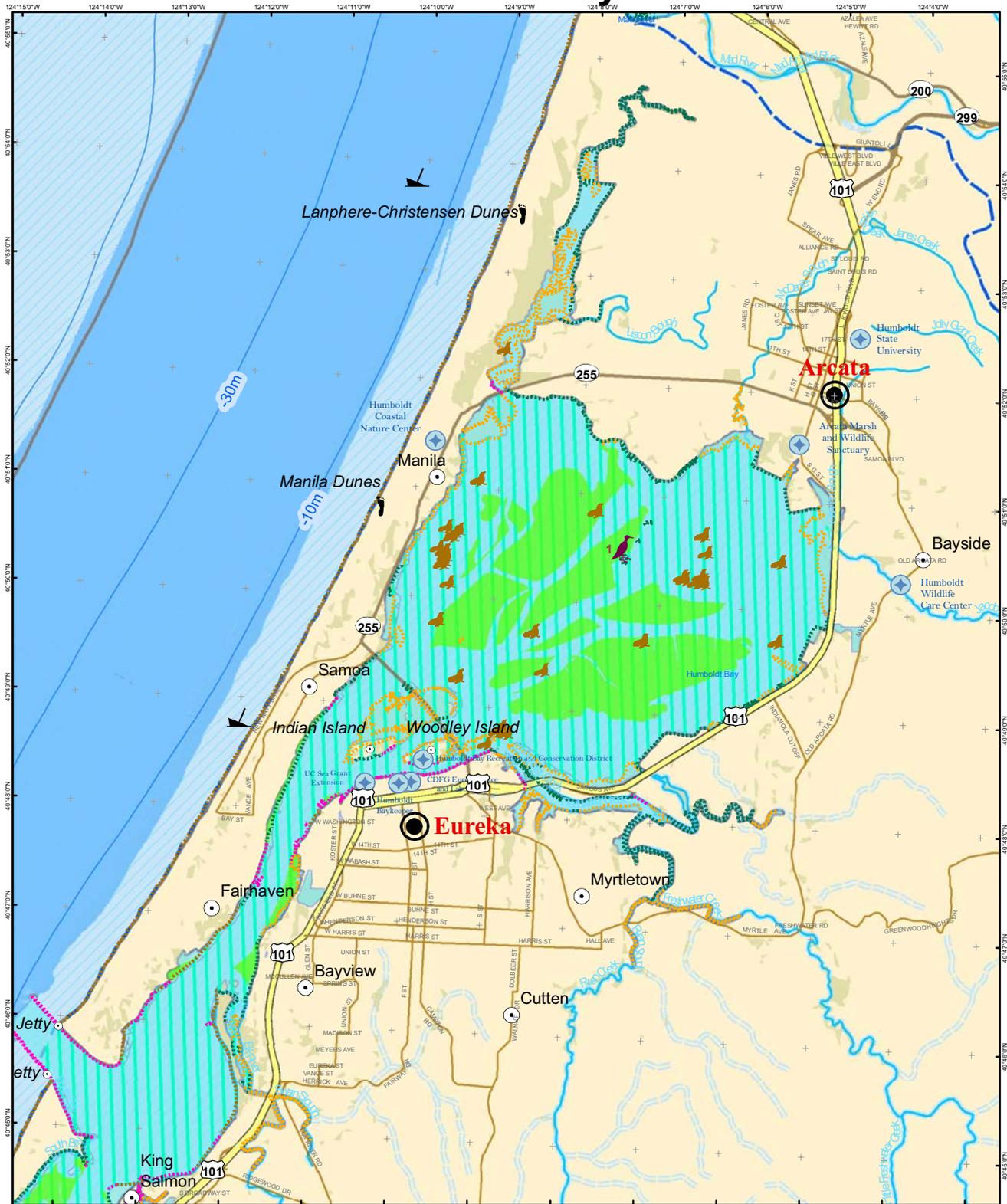
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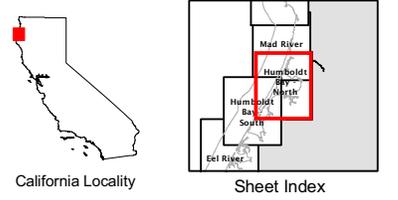
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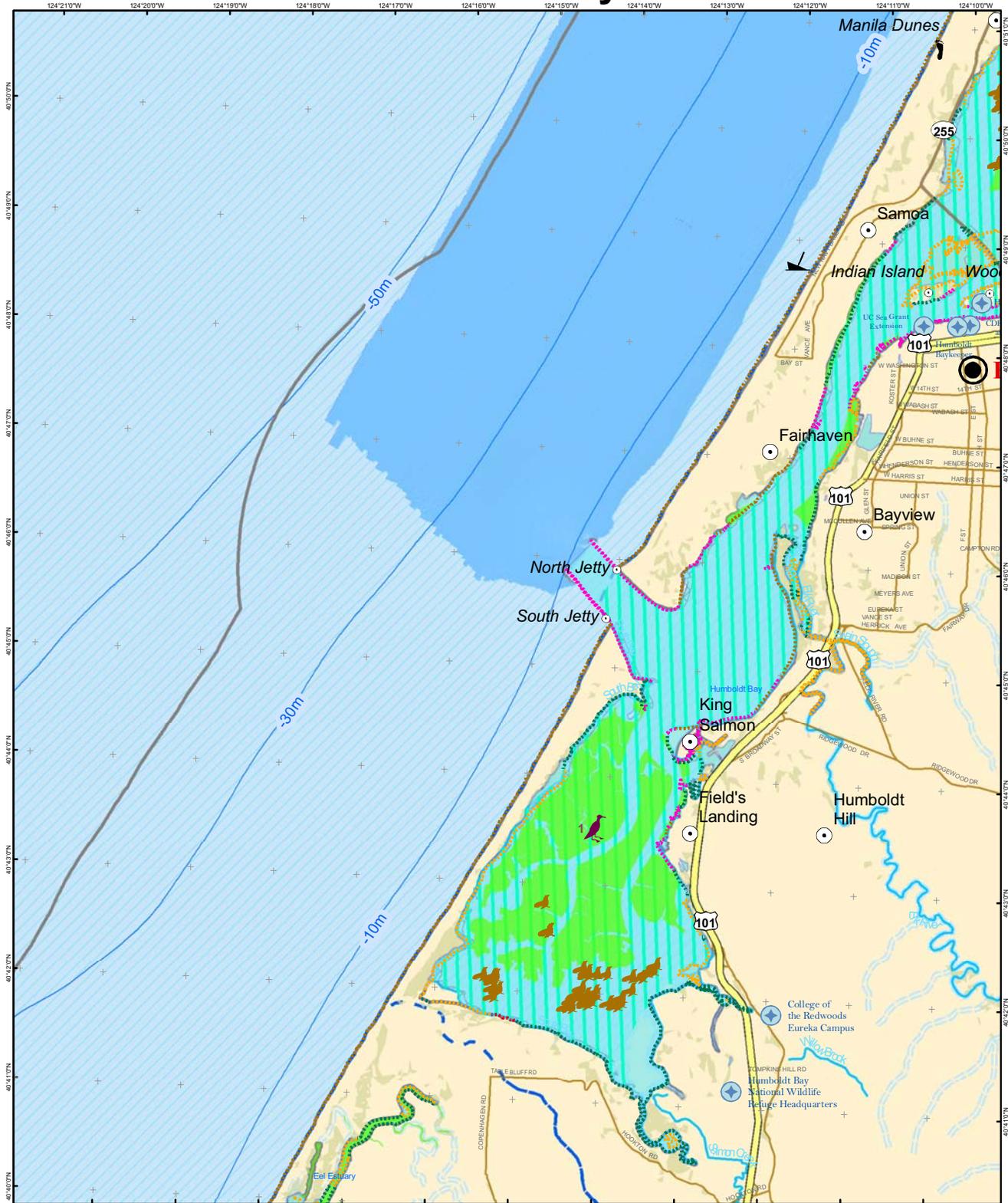


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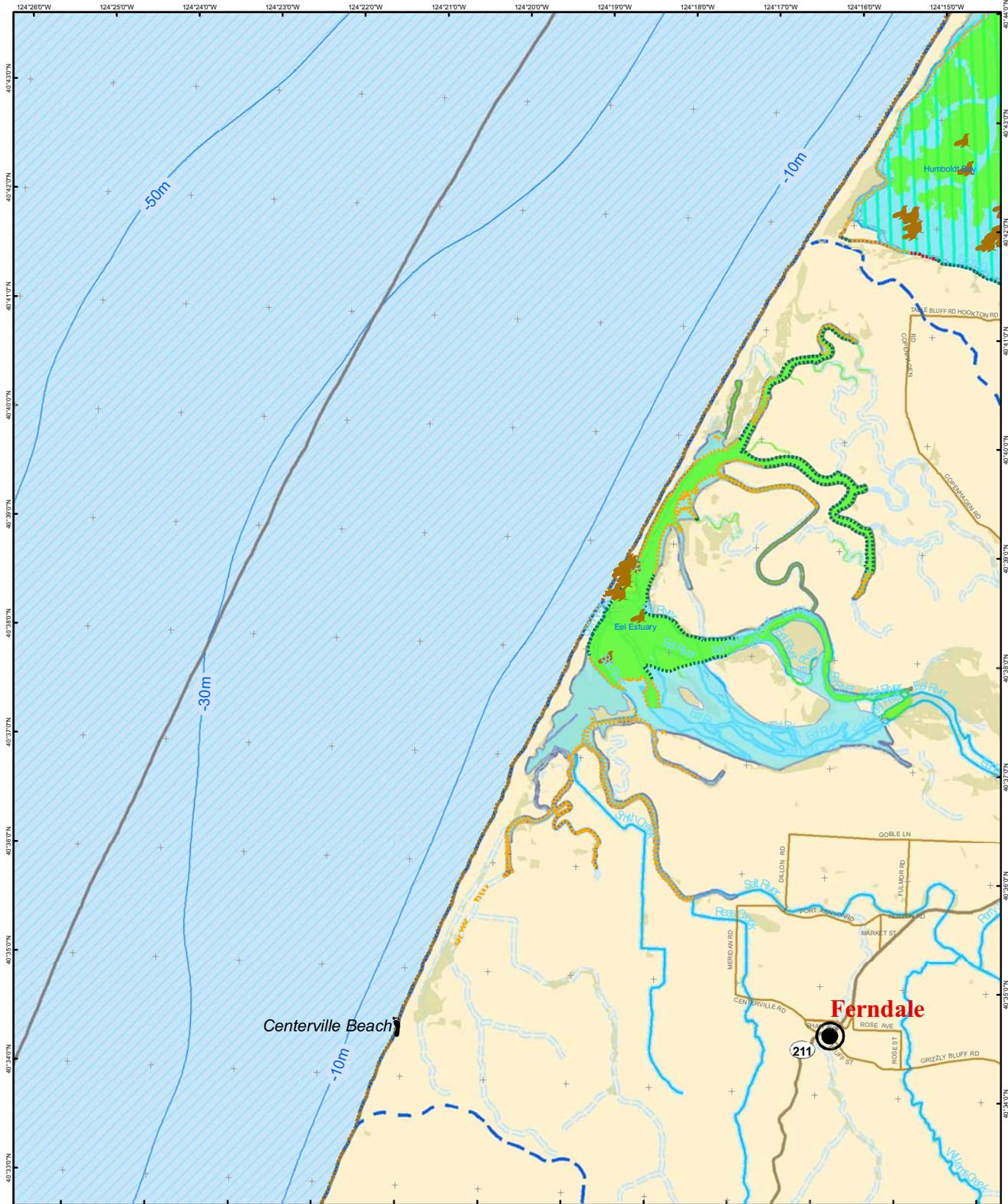
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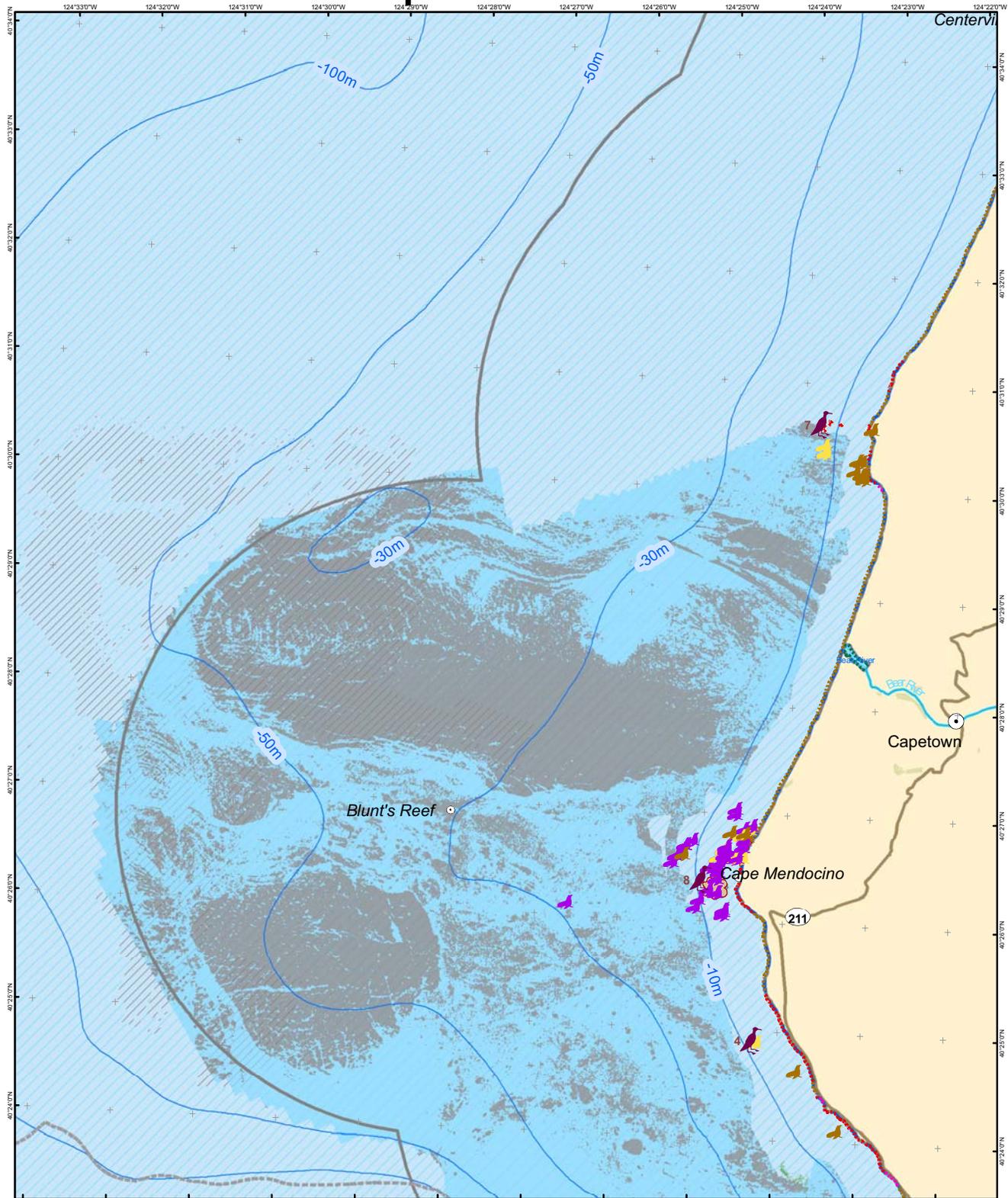
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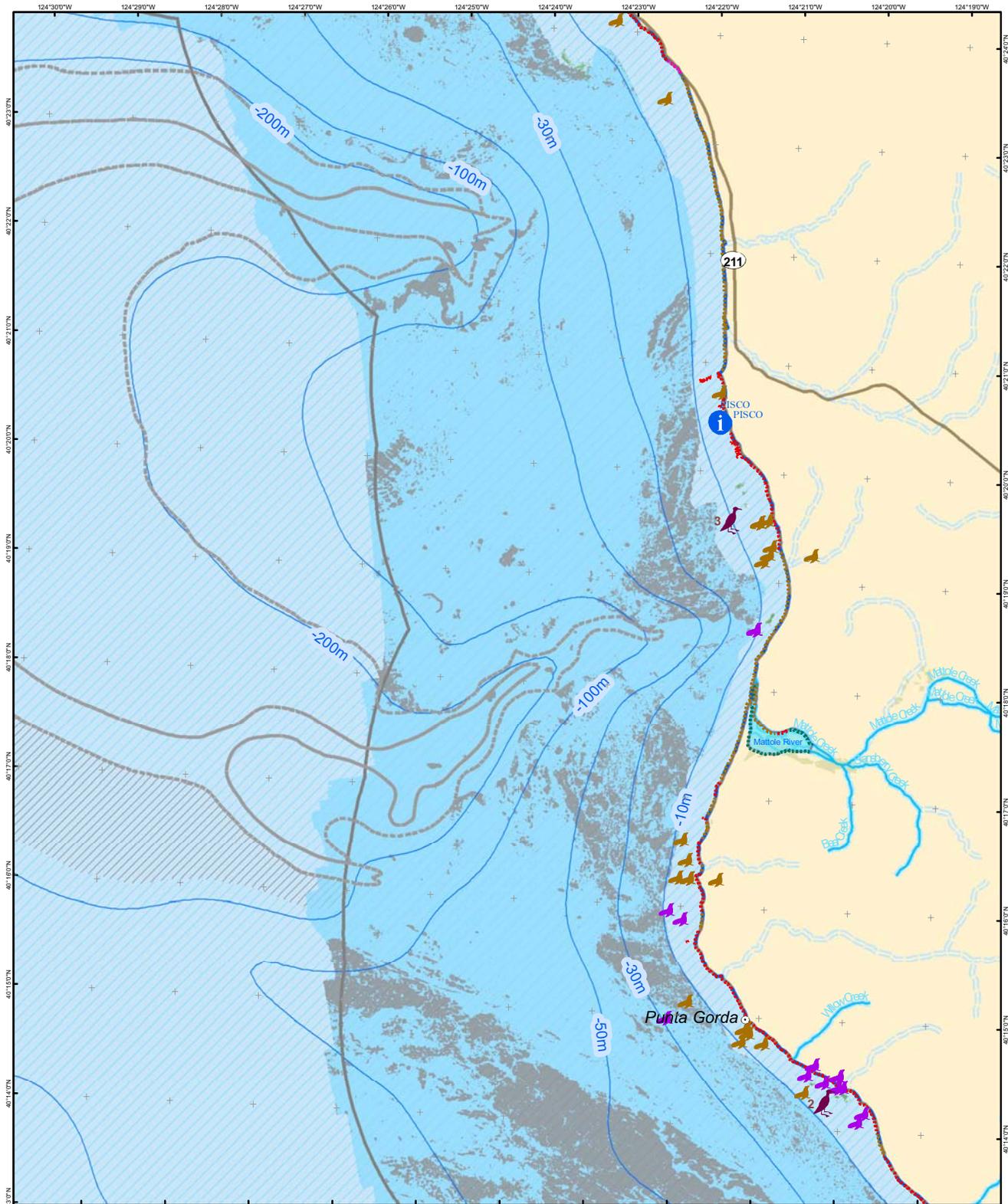
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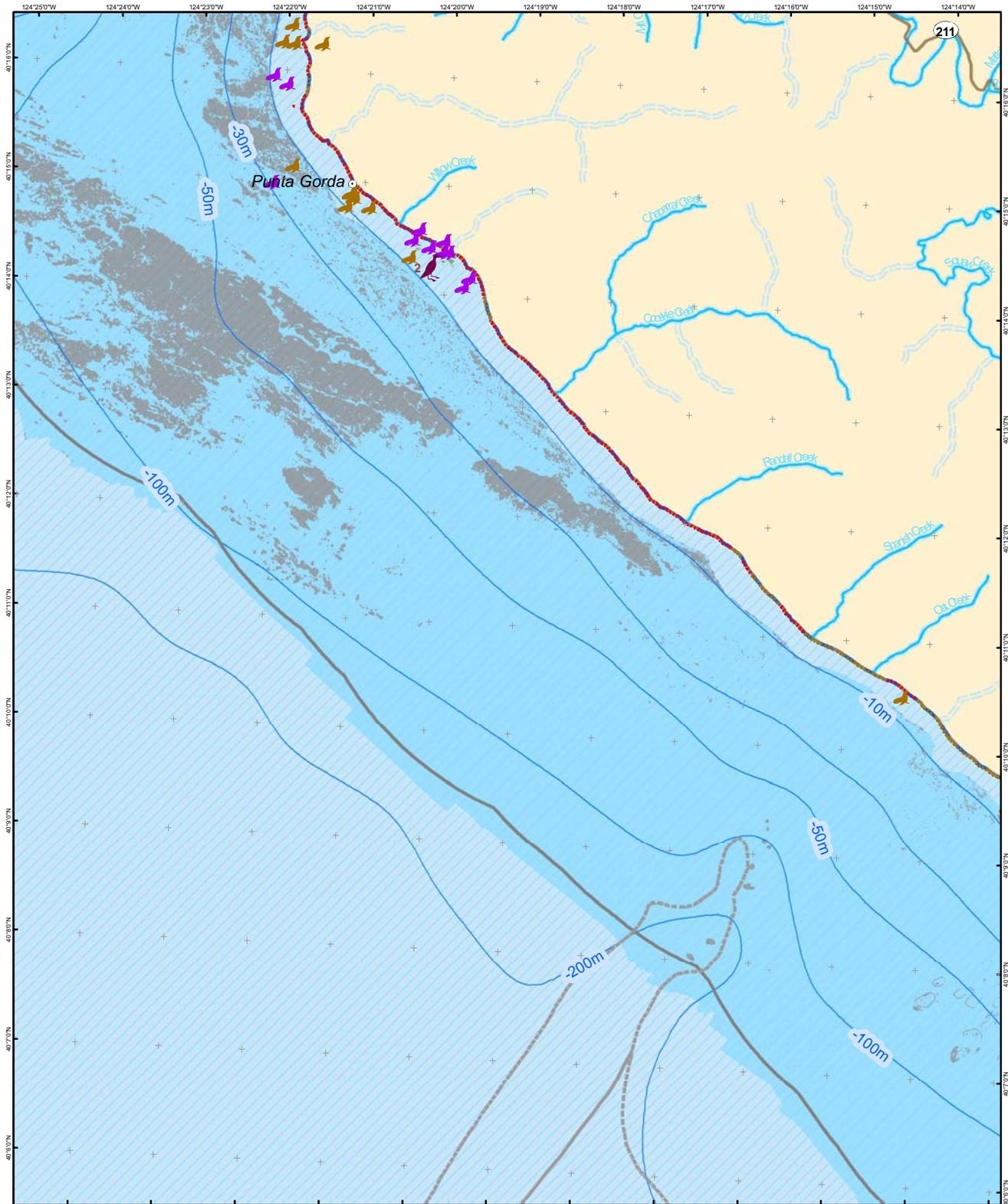
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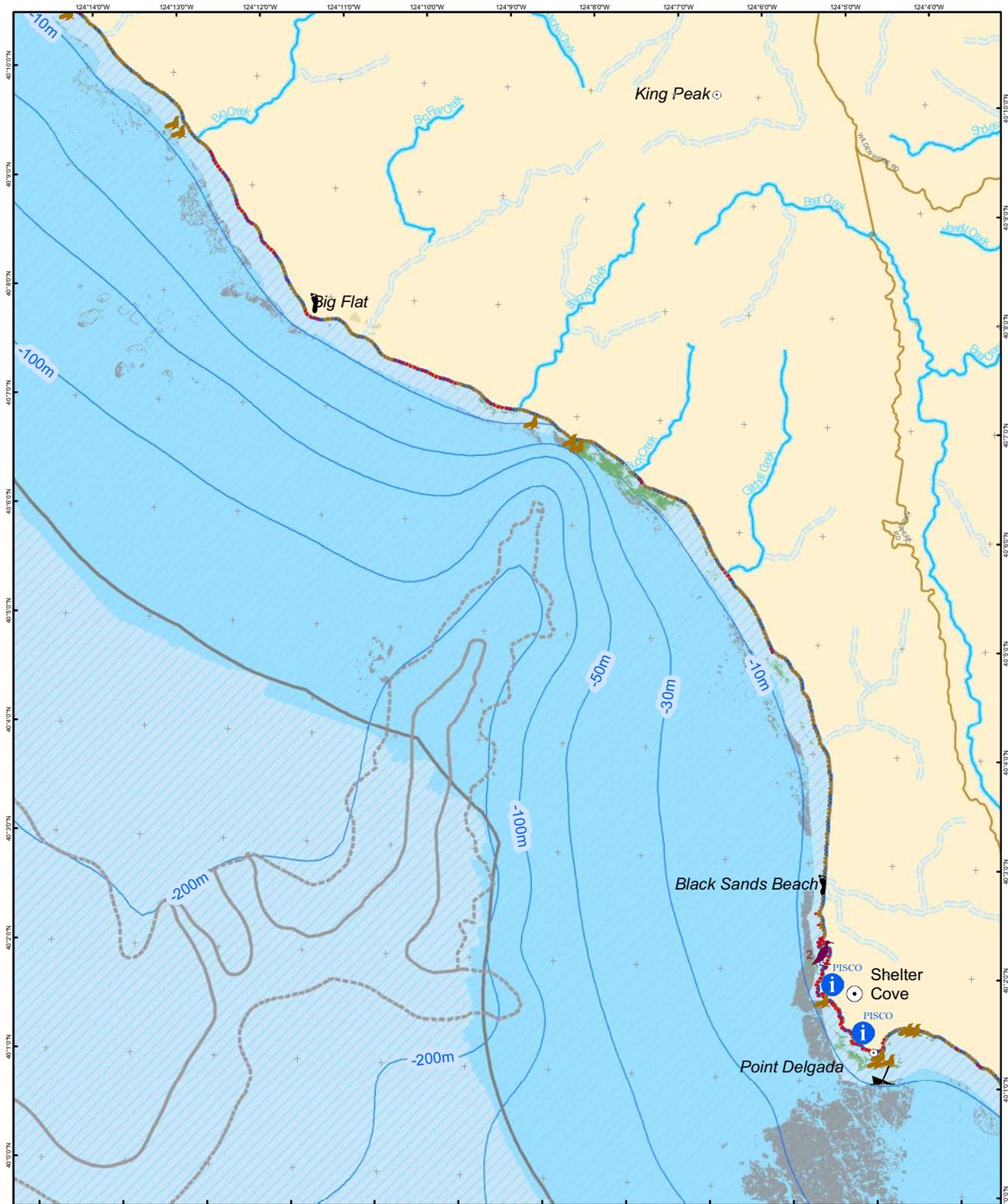
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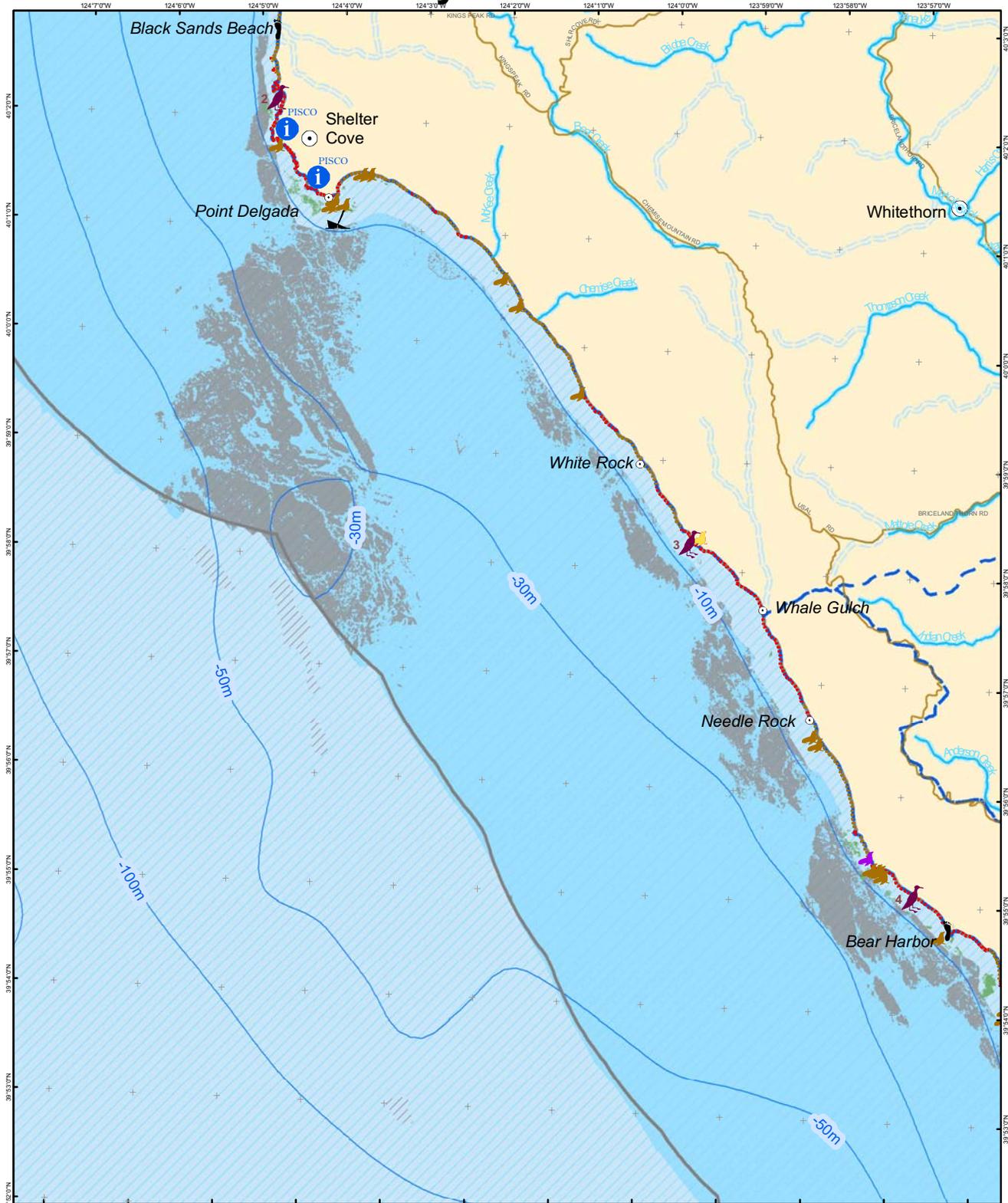
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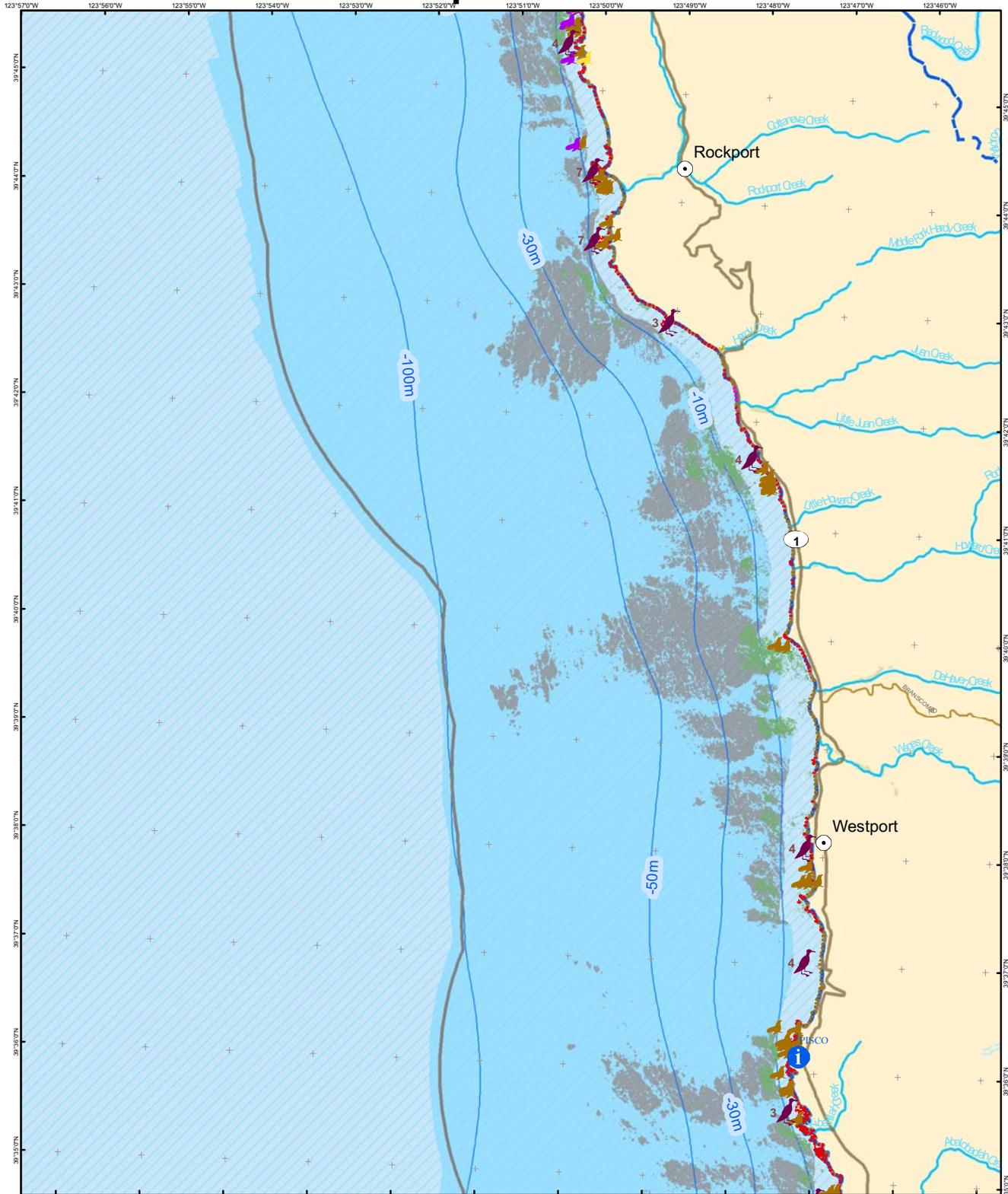
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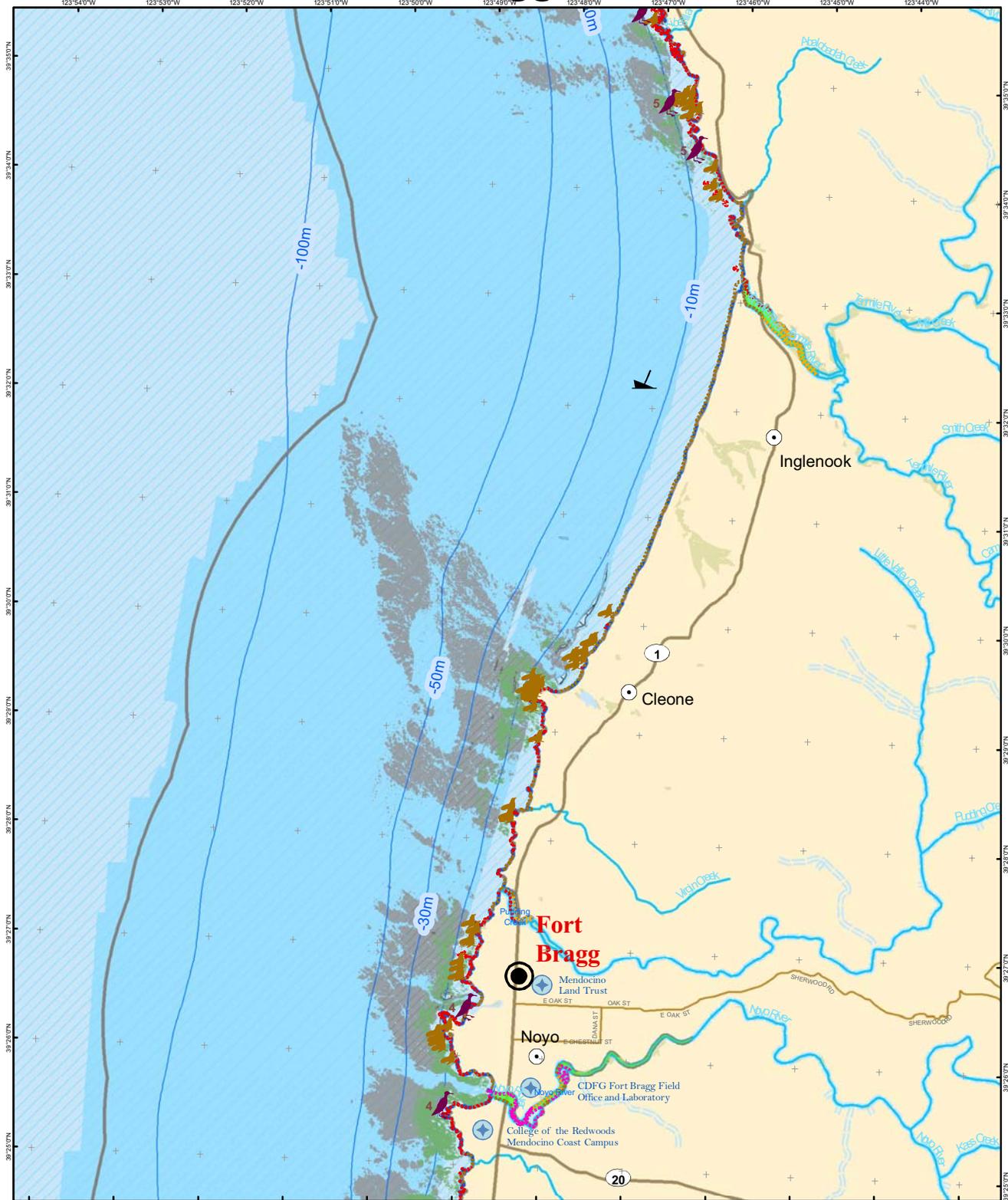
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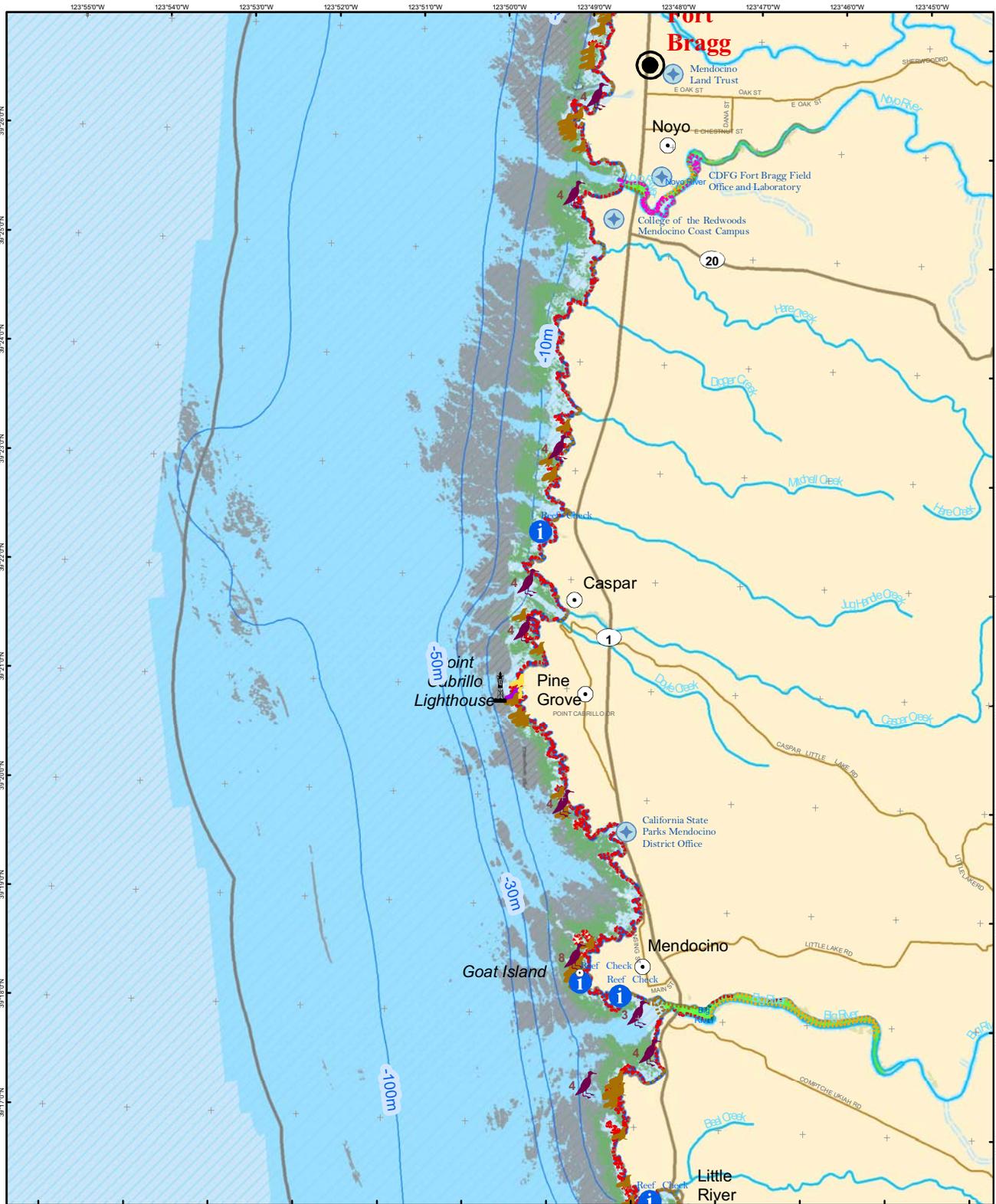
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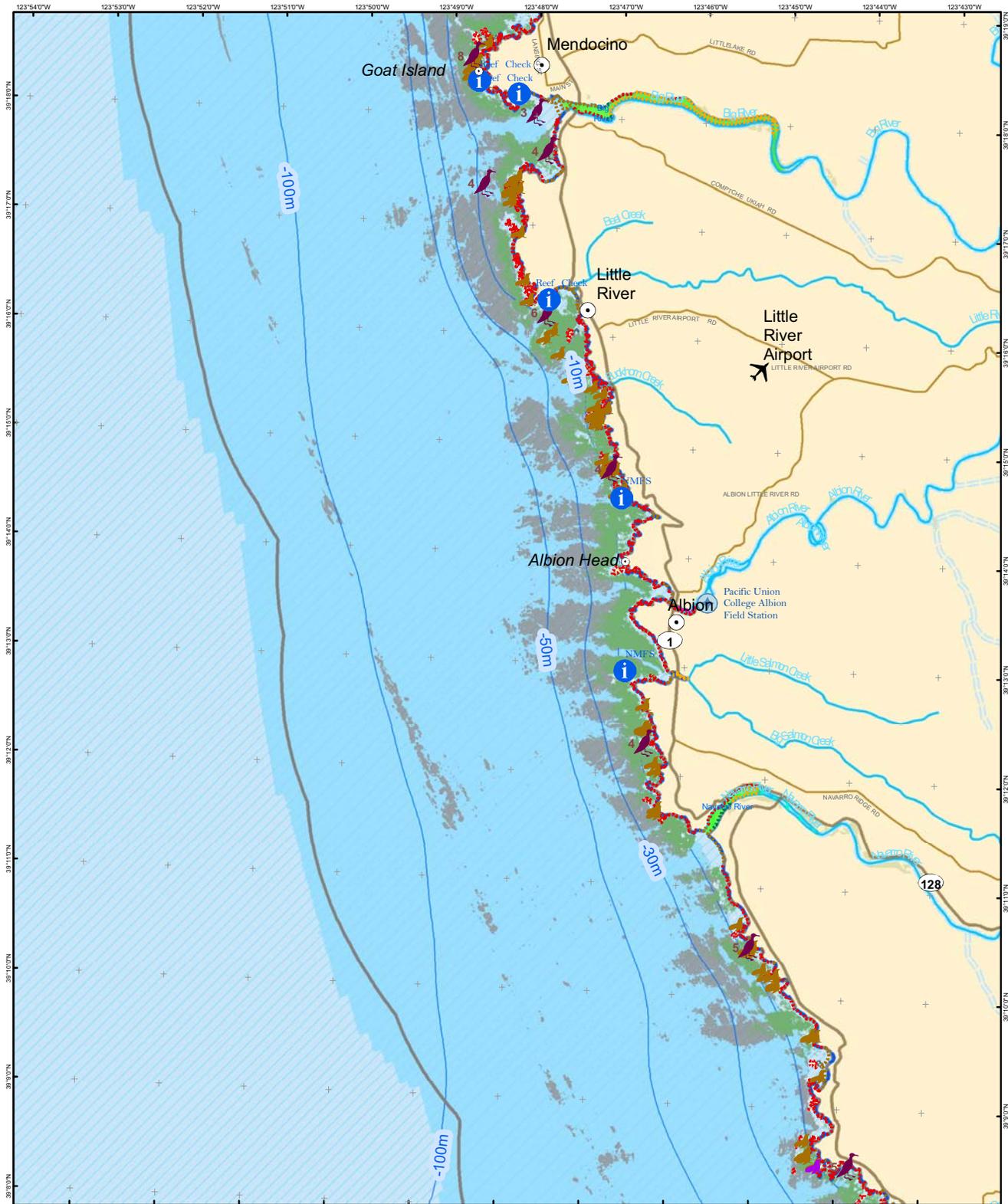
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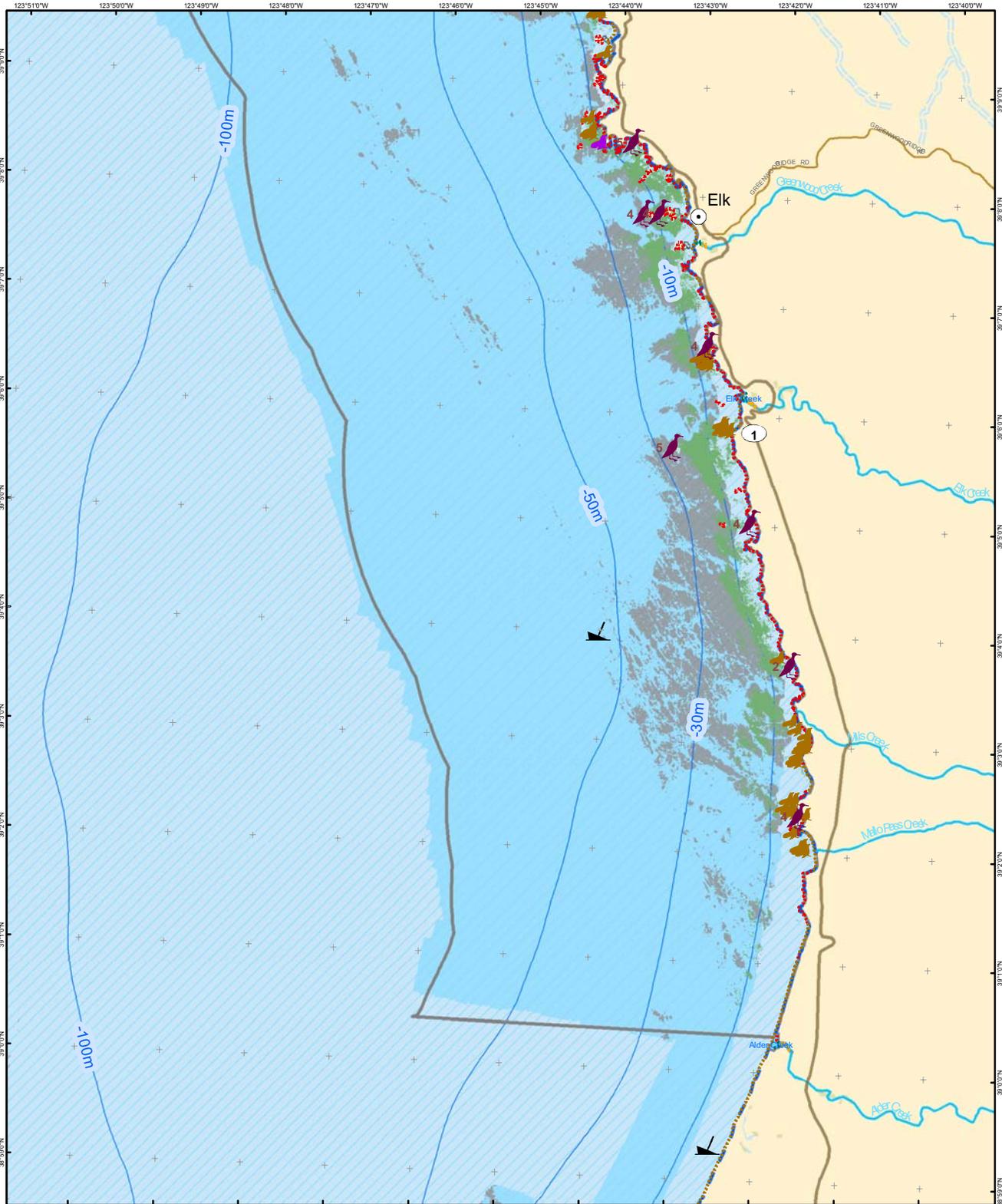
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Appendix to Habitat and Species Atlas: Metadata

Layer	Metadata/Disclaimer	Source
Study Region Boundary		
Coastal Salt Marsh	It represents wetland areas in the MLPA South Coast Study Region vicinity.	NOAA CCAP
Depth Zones		NOAA, DFG bathymetric data
Eelgrass	To show eelgrass distribution on the central California coast.	Minerals Management Service and Eric VanDyke
Estuaries	Shows the location of coastal estuaries.	U.S. Fish and Wildlife Service - National Wetlands Inventory, NOAA - ESI
Kelp Beds	To display the maximum extent of kelp in California. The distribution of kelp represented on this map is derived from data collected by aerial surveys conducted by CDFG in 1989, 1999, 2002-2005, and 2008. Kelp distribution on this map represents the largest possible extent of kelp canopy and subsurface kelp based on these data, which represent the best readily available information.	California Department of Fish and Game
Educational Institutions	This layer depicts point locations of Research Institutions in the Marine Life Protection Act's North Coast Study Region.	CADFG Marine Region GIS Lab
Monitoring Sites	This dataset contains monitoring sites obtained from PISCO, Reef Check, and the National Marine Fisheries Service.	PISCO, Reef Check, NMFS
Pinniped Haulouts	This map depicts the locations of pinniped haulouts in the study region. In general, the positional precision of these data is low. The data were collected from 1999 to 2005.	Mammal Haulouts and Rookies - National Marine Fisheries Service http://swr.nmfs.noaa.gov/psd/rookeryhaulouts/index.htm
Pinniped Rookeries	This map depicts the locations of pinniped rookeries in the study region. In general, the positional precision of these data is low. The data were collected from 1999 to 2005.	Mammal Haulouts and Rookies - National Marine Fisheries Service http://swr.nmfs.noaa.gov/psd/rookeryhaulouts/index.htm
Predicted Substrate Fine Scale	Fine-scale substrate data displayed on this map represent a union of data collected by Seafloor Mapping Lab at California State University Monterey Bay, Moss Landing in Marine Labs, and Fugro Pelagos. Additional data for the southern part of the study region is in progress and should be available soon. Gaps in the fine-scale data exist, shallower than approximately 20 meters.	SFML, Fugro Pelagos
Coarse Scale Substrate	Hard and Soft bottom habitats for California coast, including areas defined as sub-marine canyons. This is a summarized data set, it has been dissolved on the Induration attribute to produce a simpler file for analysis.	Pacific States Marine Fisheries Commission, National Marine Fisheries Service, Northwest Fisheries Science Center, Southwest Fisheries Science Center, Northwest Region, and Southwest Region
Research Institutions	This dataset corresponds to the locations listed in Table 6.2-1 of the MLPA North Coast Study Region Profile.	MLPA NCSR Profile
Shipwrecks		NOAA Electronic Navigational Charts
Shore types	This data set comprises the Environmental Sensitivity Index (ESI) maps for the shoreline of northern California. ESI data characterize coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats; sensitive biological resources; and human-use resources	NOAA, Coastal Change Analysis Program (C-CAP)
Submarine Canyons	This data set delineates geological seafloor characteristics of the continental margin of the United States West Coast. 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. The Active Tectonics and Seafloor Mapping Lab, College of Oceanic and Atmospheric Sciences, Oregon State University developed the data for Oregon and Washington. The Center for Habitat Studies, Moss Landing Marine Laboratories developed the data for California. The level of detail in seafloor type boundary delineation varies across the data set, based on the quantity and quality of original data sources.	Active Tectonics and Seafloor Mapping Lab, College of Oceanic and Atmospheric Sciences, Oregon State University (data development, Oregon and Washington), Center for Habitat Studies, Moss Landing Marine Labs
Seabird Colonies		Bird Colonies - NOAA/USF&W seabird colony database, The Nature Conservancy, The Nature Conservancy
Surf Grass	This data set is a subset of the larger data set which covers Washington, Oregon, and California. This data set has records selected which fall within the Central Coast MLPA study region northern and southern boundaries, extending westward beyond the 3 mile state limit.	NOAA, Environmental Sensitivity Index (ESI)
Watersheds	The California Interagency Watershed Map of 1999 (updated May 2004, "calw221") is the State of California's working definition of watershed boundaries. At all levels, a total of 7035 polygons represent the State's watersheds.	California Interagency Watershed Mapping Committee, California Department of Forestry and Fire Protection, Tierra Data Systems, California, Department of Water Resources, State Water Resources Control Board, California Department of Fish and Game, State of California Stephen P. Teale Data Center GIS Solutions Group
Draft Predicted Substrate South		
Impaired Rivers	This dataset contains California's 2006 Clean Water Act Section 303(d) list which is submitted by the California State Water Resources Control Board. The layer has been merged from 9 regional datasets. These GIS representations of the areal extent of affected waters are only an estimate, and should not be considered authoritative for the development of TMDLs or other regulatory actions.	State Water Resources Control Board (STWCB) and Regional Water Quality Control Boards (RWQCB)
Rivers	This hydrography layers consists of flowing waters (rivers and streams), standing waters (lakes and ponds), and wetlands – both natural and manmade. Two separate feature types are represented: polygons (areas) and lines. Polygon features have attribute codes that identify water bodies such as lakes, wide river segments, or swamps. Line features have attribute codes that represent streams or shorelines.	U.S. Geological Survey, Teale Data Center GIS Solutions Group, U.S. Environmental Protection Agency, California Department of Fish and Game
Impaired Waterbodies	This dataset contains California's 2006 Clean Water Act Section 303(d) list which is submitted by the California State Water Resources Control Board. The layer has been merged from 9 regional datasets. These GIS representations of the areal extent of affected waters are estimated and should not be considered authoritative for the development of TMDLs (Total Maximum Daily Load) or other regulatory actions. The TMDL effort may ultimately address more or less areal extent than shown in these GIS files.	State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCB)