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(2) Primary prey species consisting of four species of Pacific salmon (Chinook, sockeye, chum, and coho), Pacific eulachon, Pacific cod, walleye pollock, saffron cod, and yellowfin sole.

(3) Waters free of toxins or other agents of a type and amount harmful to Cook Inlet beluga whales.

(4) Unrestricted passage within or between the critical habitat areas.

(5) Waters with in-water noise below levels resulting in the abandonment of critical habitat areas by Cook Inlet beluga whales.

(d) *Sites owned or controlled by the Department of Defense, or of interest to national security*. Critical habitat does not include the following areas owned by the Department of Defense or for which the Secretary has determined to exclude for reasons of national security:

(1) All property and overlying waters of Joint Base Elmendorf-Richardson between Mean Higher High Water and Mean High Water; and

(2) All waters off the Port of Anchorage which are east of a line connecting Cairn Point (61°15.4′ N., 149°52.8′ W.) and Point MacKenzie (61°14.3′ N., 149°59.2′ W.) and north of a line connecting Point MacKenzie and the north bank of the mouth of Ship Creek (61°13.6′ N., 149°53.8′ W.).

[76 FR 20212, Apr. 11, 2011]

§ 226.221 Critical habitat for black abalone (Haliotis cracherodii).

Critical habitat is designated for black abalone as described in this section. The textual descriptions of critical habitat in this section are the definitive source for determining the critical habitat boundaries. The overview maps are provided for general guidance purposes only and not as a definitive source for determining critical habitat boundaries.

(a) *Critical habitat boundaries*—(1) *Coastal Marine Areas:* The critical habitat designation for black abalone within each coastal marine area below along the California coast is defined by four latitude and longitude coordinates that set the northern and southern boundaries, as well as by bathymetric specifications that set the shoreward and seaward boundaries. The northern boundary is the straight line between the northern coordinates and the southern boundary is the straight line between the southern coordinates, extending out as far as the seaward boundary, defined by the −6 m depth bathymetry line (relative to mean lower low water (MLLW)), and the shoreward boundary, defined by the line that marks mean higher high water (MHHW). Critical habitat only includes rocky intertidal and subtidal habitats within these areas from the MHHW line to a depth of −6 m relative to MLLW, as well as the marine waters above the rocky habitats.

(i) *Del Mar Landing Ecological Reserve in Sonoma County to Point Bonita in Marin County, California:* northern coordinates: 38°44′25.04″ N, 123°30′52.067″ W and 38°44′25.948″ N, 123°30′19.175″ W; southern coordinates: 37°49′3.404″ N, 122°31′56.339″ W and 37°49′3.082″ N, 122°31′50.549″ W.

(ii) *South of San Francisco Bay in San Francisco County to Natural Bridges State Beach in Santa Cruz County, California:* northern coordinates: 37°47′17.078″ N, 122°31′13.59″ W and 37°47′17.524″ N, 122°30′21.458″ W; southern coordinates: 36°57′11.547″ N, 121°58′36.276″ W and 36°57′15.208″ N, 121°58′31.424″ W.

(iii) *Pacific Grove in Monterey County to Cayucos in San Luis Obispo County, California:* northern coordinates: 36°36′41.16″ N, 121°53′30.453″ W and 36°36′41.616″ N, 121°53′47.763″ W; southern coordinates: 35°26′22.887″ N, 120°54′6.264″ W and 35°26′23.708″ N, 120°53′39.427″ W.

(iv) *Montaña de Oro State Park in San Luis Obispo County, California to just south of Government Point in Santa Barbara County, California:* northern coordinates: 35°17′15.72″ N, 120°53′30.537″ W and 35°17′15.965″ N, 120°52′59.583″ W; southern coordinates: 34°27′12.95″ N, 120°22′10.341″ W and 34°27′25.11″ N, 120°22′3.731″ W.

(v) *Palos Verdes Peninsula extending from the Palos Verdes/Torrance border to Los Angeles Harbor in southwestern Los Angeles County, California:* northern coordinates: 33°48′22.604″ N, 118°24′3.534″ W and 33°48′22.268″ N, 118°23′35.504″ W; southern coordinates: 33°42′10.303″ N, 118°16′50.17″ W and 33°42′25.816″ N, 118°16′41.059″ W.

(2) *Coastal Offshore Islands:* The black abalone critical habitat areas surrounding the coastal offshore islands listed below are defined by a seaward

boundary that extends offshore to the −6m depth bathymetry line (relative to MLLW), and a shoreward boundary that is the line marking MHHW. Critical habitat only includes rocky intertidal and subtidal habitats from MHHW to a depth of −6 m relative to MLLW, including the marine waters above the rocky substrate.

(i) *Farallon Islands, San Francisco County, California.*

(ii)*Año Nuevo Island, San Mateo County, California.*

(iii) *San Miguel Island, Santa Barbara County, California.*

(iv) *Santa Rosa Island, Santa Barbara County, California.*

(v) *Santa Cruz Island, Santa Barbara County, California.*

(vi) *Anacapa Island, Ventura County, California.*

(vii) *Santa Barbara Island, Santa Barbara County, California.*

(viii) *Santa Catalina Island, Los Angeles County, California.*

(b) *Primary constituent elements.* The primary constituent elements essential for the conservation of the black abalone are:

(1) *Rocky substrate.* Suitable rocky substrate includes rocky benches formed from consolidated rock of various geological origins (e.g., igneous, metamorphic, and sedimentary) that contain channels with macro- and micro-crevices or large boulders (greater than or equal to 1 m in diameter) and occur from MHHW to a depth of −6 m relative to MLLW. All types of relief (high, medium and low; 0.5 to greater than 2 m vertical relief) support black abalone.

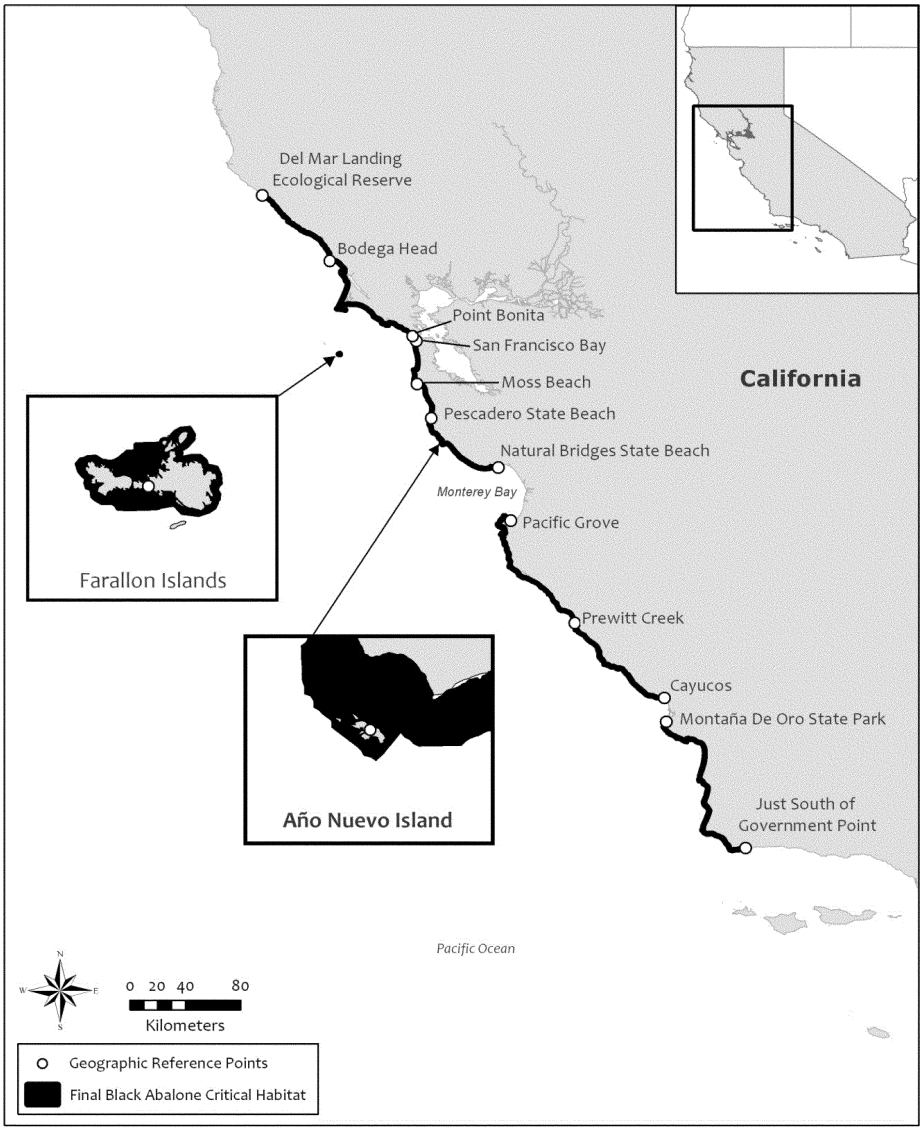
(2) *Food resources.* Abundant food resources including bacterial and diatom films, crustose coralline algae, and a source of detrital macroalgae, are required for growth and survival of all stages of black abalone. The primary macroalgae consumed by juvenile and adult black abalone are giant kelp (*Macrocystis pyrifera)* and feather boa kelp (*Egregia menziesii)* in southern California (*i.e.*, south of Point Conception) habitats, and bull kelp (*Nereocystis leutkeana)* in central and northern California habitats (*i.e.*, north of Santa Cruz), although *Macrocystis* and *Egregia* may be more prominent in the habitat and diet in areas south of Santa Cruz. Southern sea palm (*Eisenia arborea)*, elk kelp (*Pelagophycus porra)*, stalked kelp (*Pterygophora californica)*, and other brown kelps (*Laminaria sp.*) may also be consumed by black abalone.

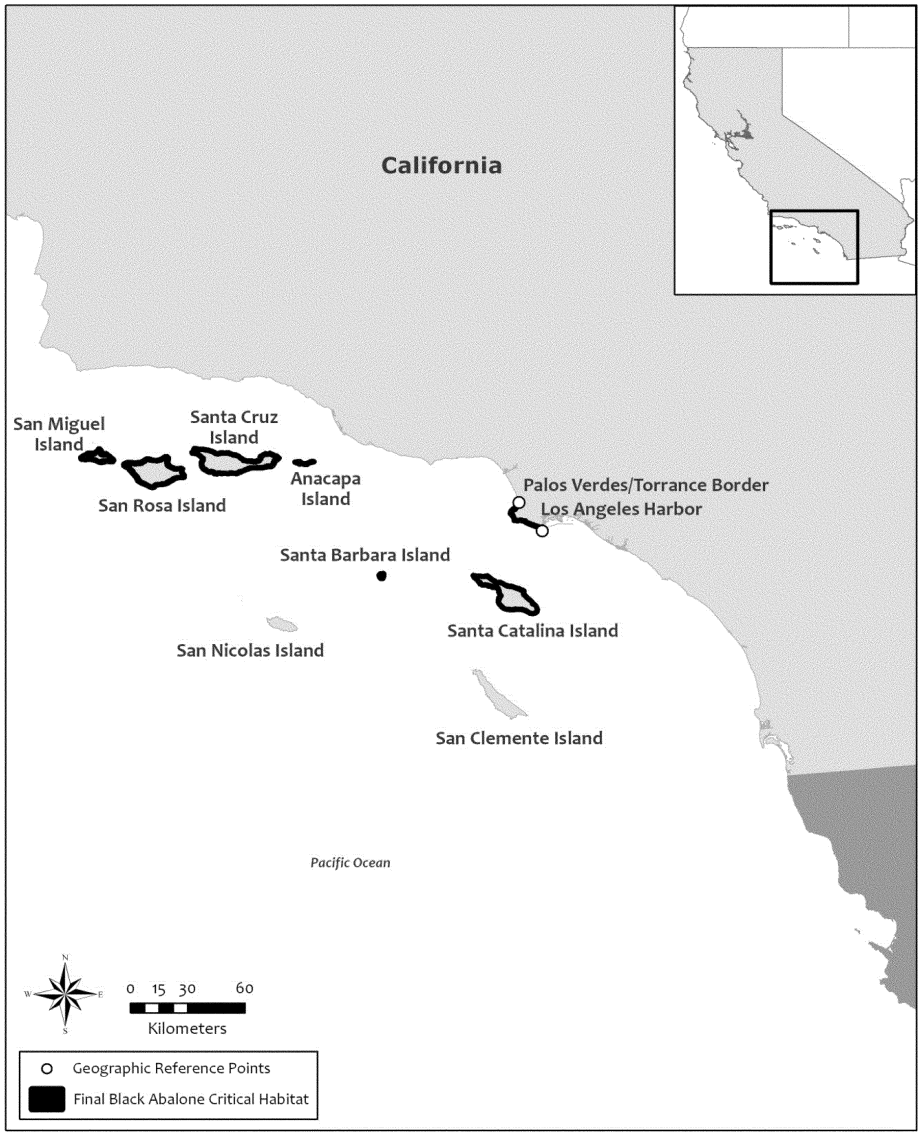
(3) *Juvenile settlement habitat.* Rocky intertidal and subtidal habitat containing crustose coralline algae and crevices or cryptic biogenic structures (e.g., urchins, mussels, chiton holes, conspecifics, anemones) is important for successful larval recruitment and juvenile growth and survival of black abalone less than approximately 25 mm shell length. Adult abalone may facilitate larval settlement and metamorphosis by grazing down algal competitors and thereby promoting the maintenance of substantial substratum cover by crustose coralline algae, outcompeting encrusting sessile invertebrates (e.g. tube worms and tube snails) for space and thereby promoting the maintenance of substantial substratum cover by crustose coralline algae as well as creating space for settling abalone, and emitting chemical cues that may induce settlement of abalone larvae.

(4) *Suitable water quality.* Suitable water quality includes temperature (*i.e.*, tolerance range: 12 to 25 °C; optimal range: 18 to 22 °C), salinity (*i.e.*, 30 to 35 ppt), pH (*i.e.*, 7.5 to 8.5), and other chemical characteristics necessary for normal settlement, growth, behavior, and viability of black abalone.

(5) *Suitable nearshore circulation patterns.* Suitable circulation patterns are those that retain eggs, sperm, fertilized eggs, and ready-to-settle larvae within 100 km from shore so that successful fertilization and settlement to shallow intertidal habitat can take place.

(c) Overview maps of black abalone critical habitat follow:


Del Mar Landing
Ecological Reserve
Bodega Head
Point Bonita
San Francisco Bay
Moss Beach
Pescadero State Beach
Natural Bridges State Beach
Monterey Bay
Pacific Grove
Prewitt Creek
Cayucos
Montaña De Oro State Park
Just South of
Government Point
California
Farallon Islands
Año Nuevo Island
Pacific Ocean
0 20 40 80
Kilometers
Geographic Reference Points
Final Black Abalone Critical Habitat



[76 FR 66841, Oct. 27, 2011]

§ 226.222 Critical habitat for the southern Distinct Population Segment of eulachon (Thaleichthys pacificus).

Critical habitat is designated for the southern Distinct Population Segment of eulachon (southern DPS) as described in this section. The textual descriptions of critical habitat in this section are the definitive source for determining the critical habitat boundaries. The overview maps are provided for general guidance only and not as a definitive source for determining critical habitat boundaries. In freshwater areas, critical habitat includes the stream channel and a lateral extent as