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STAFF REPORT: REGULAR CALENDAR

Consistency Determination No.: **CD-0006-16**

Federal Agency: **Department of the Navy**

Location: Point Mugu Sea Range, San Nicolas Island, Santa Cruz Island, and Naval Base Ventura County/Point Mugu, in Ventura and Santa Barbara Counties (**Exhibits 1 and 2**)

Project Description: Replacement of existing Fiber Optic Communications Undersea System (FOCUS) cables with four new interlinked fiber optic cables on the ocean floor in state and federal waters; new onshore landings at Point Mugu, San Nicolas Island, and Santa Cruz Island using horizontal directional drilling; new onshore cables on San Nicolas Island and Santa Cruz Island; and a new water line on Santa Cruz Island.

Staff Recommendation: Concurrence

SUMMARY OF STAFF RECOMMENDATION

The Department of the Navy ("Navy") has submitted a consistency determination for the replacement of the existing Fiber Optic Communications Undersea System ("FOCUS") with four

new interlinked fiber optic cables located at Naval Base Ventura County/Point Mugu, San Nicolas Island, Santa Cruz Island, and the submerged lands within the Point Mugu Sea Range. The existing FOCUS-I system was installed in 1993 and 1994, includes two cables connecting Point Mugu and San Nicolas Island, supports testing and training activities on the Sea Range, has exceeded its 20-year design life, and is starting to experience signal degradation.

The proposed FOCUS-II system includes installation of two fiber optic cables between Point Mugu and San Nicolas Island, one cable between Point Mugu and Santa Cruz Island, and one cable between San Nicolas Island and Santa Cruz Island. Approximately 175.5 miles of cable will be buried in the sandy seafloor out to a water depth of 3,280 feet; the remaining 58.5 miles of cable will lie on the seafloor in deep water. The project includes the use of underground horizontal directional drilling (HDD) technology to bring the cables ashore and avoid environmentally sensitive nearshore habitat. Once ashore the new cables will be trenched through currently developed areas and connected to existing communications buildings. The current planned start date for FOCUS-II construction is calendar year 2018 or later.

The project is an allowable use under Coastal Act Section 30233(a)(4), similar to determinations the Commission has made with respect to other Navy fiber optic cable projects in ocean waters off southern California. There are no feasible less environmentally damaging alternatives, and the project incorporates avoidance, conservation, and mitigation measures to minimize adverse impacts to coastal resources, including cable alignments that avoid offshore hard-bottom habitat and environmentally and culturally sensitive nearshore and terrestrial habitats. The staff therefore recommends that the Commission find the project consistent with the dredge and fill policy of the Coastal Act (Section 30233(a)).

Construction and installation of the offshore components of the FOCUS-II project would lead to only temporary and minor adverse effects on marine resources and water quality, primarily due to the short-term nature of project installation, a construction schedule during the time of year that minimizes potential impacts on marine wildlife, and cable alignments that avoid rare and valuable hard-bottom habitat. The use of HDD technology to install cables avoids environmentally sensitive shoreline and nearshore habitats, and incorporates water quality protection and monitoring measures. The staff therefore recommends that the Commission find the project consistent with the marine resources and water quality policies of the Coastal Act (Sections 30230, 30231 and 30232). The project includes an extensive list of conservation measures, construction best management practices, and a construction schedule that the Navy will implement to protect environmentally sensitive terrestrial habitat areas and listed species. The HDD sites, staging areas, and trenching corridors connecting landing sites to existing communications buildings at Point Mugu, San Nicolas Island, and Santa Cruz Island would be situated within previously disturbed and/or currently developed areas. The staff therefore recommends that the Commission find that the project consistent with the environmentally sensitive habitat policy of the Coastal Act (Section 30240).

The project includes an elevated cable tray for an approximately 1,150-foot-long segment of the conduit and waterline alignment on Santa Cruz Island to avoid trenching through a known archaeological site. The project includes provisions for monitoring of ground-disturbing activities in those areas where cultural resources are known to exist, and procedures to follow in

the event that previously unknown resources are discovered. The staff recommends that the Commission find the project consistent with the cultural resource policy of the Coastal Act (Section 30244). In addition, the staff also recommends that the Commission find that the project is consistent with the commercial and recreational fishing, public access and recreation, and hazard minimization policies of the Coastal Act (Sections 30234.5, 30210, 30212, 30220, and 30253(2)).

The staff therefore recommends that the Commission **concur** with the Navy's consistency determination CD-0006-16. The motion and resolution are on Page 5 of this report. The standard of review for this consistency determination is the Chapter 3 policies of the Coastal Act.

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I. FEDERAL AGENCY'S CONSISTENCY DETERMINATION

The Navy has determined the project consistent with the California Coastal Management Program.

II. MOTION AND RESOLUTION

Motion:

*I move that the Commission **concur** with consistency determination CD-0006-16.*

Staff recommends a **YES** vote on the motion. Passage of this motion will result in a concurrence in the determination of consistency and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution:

*The Commission hereby **concurs** with consistency determination CD-0006-16 by the Navy on the grounds that the project is fully consistent, and thus consistent to the maximum extent practicable, with the enforceable policies of the California Coastal Management Program.*

III. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

Location

The Navy's proposed Fiber Optic Communications Undersea System ("FOCUS-II") would be located at Naval Base Ventura County ("NBVC") Point Mugu, NBVC San Nicolas Island, Santa Cruz Island, and the submerged lands within the Point Mugu Sea Range ("Sea Range")(**Exhibits 1 and 2**). NBVC is located on the shoreline between the City of Oxnard and Point Mugu State Park. The Sea Range is a 36,000 square-mile test range extending more than 200 miles seaward from the shoreline off San Luis Obispo, Santa Barbara, Ventura, and Los Angeles counties. The Sea Range is the world's largest instrumented over-water range and provides extensive test and training capabilities for the U.S. Navy and allied forces. San Nicolas Island, located 65 miles south of NBVC Point Mugu, is owned by the Navy. Santa Cruz Island, located 30 miles west of NBVC Point Mugu is owned in part by the National Park Service ("NPS") and The Nature Conservancy ("TNC"). A small inholding, within the NPS portion of the island and retained by TNC, is leased to the Navy for a microwave radar facility which supports Sea Range operations.

Much of the proposed project would take place on Navy property (Point Mugu and San Nicolas Island), on National Park Service property (Santa Cruz Island), or on land under exclusive use to the Navy (the Navy Site leased from The Nature Conservancy on Santa Cruz Island). These sites are federal property and excluded from the coastal zone, as are the open ocean portions of cable segments located beyond the coastal zone (i.e., outside the 3 nautical mile limit of state waters).

The Navy has analyzed all project components, whether within or excluded from the coastal zone, for potential spillover impacts on coastal resources.

Background, Purpose, and Need

The existing FOCUS-I system was installed in 1993 and 1994 and includes two 80-mile-long fiber optic cables connecting NBVC Point Mugu and San Nicolas Island, and a microwave communications systems link between Point Mugu and Santa Cruz Island (**Exhibit 3**). The Commission concurred with installation of the FOCUS-I system in November 1989 (CD-045-89). The undersea cables and the microwave system are used to transmit and receive data signals between the three locations to track, control, and communicate with air and sea traffic on the Sea Range, and to support testing and training activities on the Range (operated by the Naval Air Warfare Center Weapons Division at Point Mugu). The Navy states that the FOCUS-I cables have a design life of 20 years. In July 2003 the Commission concurred with CD-050-03 for repairs to sections of the FOCUS-I cables at the San Nicolas Island landing site, and this work was completed in 2006. The Navy reports that the FOCUS-I cables are now experiencing signal degradation and are expected to further degrade in the coming years. Cable failure would prevent completion of mission-essential research, development, testing, evaluation, and training on the Sea Range.[1]

The aging microwave system that connects Point Mugu and Santa Cruz Island cannot be upgraded to handle telemetry, time-space-position information, and video, due to the lack of system support by the original equipment manufacturer and the lack of necessary parts needed to upgrade the system. As a result, the Navy proposes to install fiber optic cables connecting Point Mugu with San Nicolas Island Santa Cruz Island, and connecting Santa Cruz and San Nicolas Islands.

The existing 7-mile-long water line on Santa Cruz Island that connects a well near Prisoners Harbor and the Navy microwave facility in the interior of the island was originally installed in 1951 and is leaking water at many locations. Failure of the water line would require water to be trucked from the well to the microwave facility. The Navy is concerned that inadequate water for personnel and equipment at the site would lead to an inability to continuously support Sea Range operations.

Project Description

The proposed FOCUS-II system is comprised of four interlinked fiber optic cables connecting NBVC Point Mugu, San Nicolas Island, and Santa Cruz Island. FOCUS-I will operate and be maintained until FOCUS-II is installed and its operational status verified. Following FOCUS-II installation, FOCUS-I would continue to operate and would provide a second level of redundancy until the cables degrade beyond the level of service required. The Navy states that "Removal of non-functioning equipment and evaluation of how best to remove this equipment would be conducted, if required, in the future and is not part of the proposed action."

[1] In addition to the installation and repair of the FOCUS-I cables, the Commission has concurred with other Navy undersea cable projects (both installation and repair projects) off shore of San Nicolas, Santa Cruz, and San Clemente Islands which support Navy operations and training activities on the Point Mugu Sea Range and the Southern California Offshore Range (ND-107-92, ND-092-94, CD-020-95, CD-015-05, and ND-049-11).

The proposed installation of FOCUS-II includes the following actions:

Onshore Activities

- Installation of new onshore cable landings at three locations: two sites at Point Mugu near Building 811 and near Charlie Pad (**Exhibit 4**), one site on San Nicolas Island near the Coast Guard jetty (**Exhibit 5**), and one site on Santa Cruz Island near Prisoners Harbor (**Exhibit 6**). Onshore landings will use horizontal directional drilling (HDD) technology to transition under sensitive nearshore coastal habitat.

- Use of existing underground infrastructure and installation of new buried cable at Point Mugu, connecting the onshore landing sites to the existing Building 531 cable termination site.

- Installation of approximately 500 feet of new buried cable on San Nicolas Island connecting the onshore HDD landing site to an existing concrete bunker. From the bunker, existing underground infrastructure will be used to connect to the existing Building 127 cable termination site (**Exhibit 7**).

- Installation of approximately 7.49 miles of new cable (7.28 miles buried and 0.21 miles placed in an elevated cable tray) within the Navy Road footprint on Santa Cruz Island connecting the onshore HDD landing site to the Building 4 cable termination site (currently the existing Navy microwave facility; **Exhibits 8 and 9**). Trenching is expected to take approximately three months.

- Installation of approximately 7.3 miles of new 3-inch diameter PVC water line between the well site and the Navy microwave facility on Santa Cruz Island, using the same trench and cable trays used for the fiber optic cables.

- Installation of between 20 and 80 buried concrete vaults along the Santa Cruz Island cable alignment.

- Cable pulling to connect the HDD landings and the communications buildings is expected to take approximately two days at each of the four landing sites.

- Periodic inspection and maintenance of the onshore cable alignments to ensure uninterrupted operation of the FOCUS-II communications system.

Horizontal Directional Drilling (HDD) Operations

- The project includes four HDD sites: two at Point Mugu at Building 811 and Charlie Pad, one on San Nicolas Island near the Coast Guard jetty, and one on Santa Cruz Island near Prisoners Harbor. HDD bore holes will exit the seafloor at depths of approximately 85 feet. Approximate distances from the onshore HDD sites to the exit sites offshore from Point Mugu, San Nicolas Island, and Santa Cruz Island are 4,990 feet, 2,960 feet, and 1,249 feet, respectively.

- The HDD process involves drilling and horizontal placement of piping into the ground to create an 8-inch diameter HDD bore hole. Drilling mud consists of water and bentonite clay, which powers the rotating drill head through the soil beneath the ocean floor. Drilling mud and cuttings return through a section of the bore hole back to a catch basin at the onshore HDD site. The drilling fluid will be switched to fresh or salt water approximately 150 feet from the bore exit point to minimize the potential for an escape of bentonite drilling fluid into the ocean.

- There are adequate freshwater supplies for HDD operations at Point Mugu. Freshwater will be transported to and stored in existing or additional bladders near the HDD site on San Nicolas Island. Seawater will be used in HDD operations on Santa Cruz Island due to water supply and storage constraints and the lack of infrastructure needed to import and store fresh water. Seawater will be pumped from a location 50 feet offshore through a screened 5-inch-diameter hose, equipped with a velocity cap such that intake velocities will not exceed 0.5 feet per second.

- Upon completion of HDD operations, all drilling fluids and solids will be transported to an approved treatment, storage, and disposal site, in coordination with the Regional Water Quality Control Board.

- Drilling equipment and facilities would be removed upon completion of HDD and all HDD pads would be returned to their original condition.

- Onshore HDD activity would occur for approximately four weeks at each of the four HDD sites.

<u>Offshore Activities</u>

- Installation of cabling offshore would commence following HDD operations and involves an installation vessel and an ocean construction dive team laying out fiber optic cables on the seafloor between the HDD exit sites.

- The Navy estimates that 234 nautical miles (NM) of cable would be installed to complete the FOCUS-II project, and that approximately 175.5 NM of the cable system (75%) would be trenched into and buried within the seafloor.

- For each of the four FOCUS cables, a trunk cable will extend from the onshore termination points, through the HDD bore tubes, and out to the offshore exit points, where the trunk cable will be connected to the main seafloor cable.

- The installation vessel will slowly navigate a defined route while laying out each cable, using conventional cable laying machinery to provide a gradual, controlled rate of descent to minimize risk of damage to the cable as it lands on the seafloor.

- The four cable routes were determined based on data collected during a high-resolution multi-beam hydrographic survey of the FOCUS-II area conducted for each of the proposed routes.

- The HDD exit sites are located in soft sediments and a minimum of 100 yards from known kelp and seagrass areas, and the cable route will primarily traverse sandy seafloor areas.

- Prior to the start of offshore cable burial, pre-lay grapnel operations would occur in order to clear the seabed of debris (e.g., discarded fishing gear) along the cable route. Any debris recovered would be collected on board the vessel and later disposed at an appropriate upland location.

- The cable would then be plowed into the sandy seafloor using a towed seaplow buried three feet deep out to a water depth location of 3,280 feet. Beyond this water depth the cable would lie directly on the seafloor, to a maximum depth of 4,920 feet. The Navy estimates that approximately 175.5 miles of cable would be buried and 58.5 miles of cable would lie on the seafloor.

- Each of the four cable routes have been designed to avoid hard-bottom habitat from the HDD exit sites out to the edge of the continental shelf.

- Post-lay inspection and burial will occur during or very soon after the cable lay operation and is performed to attempt retro-burial of any cable that could not be buried with the seaplow and/or to inspect select cable sections. Post-lay inspection and burial is typically performed with a remotely operated vehicle (ROV). The final cable routes will be denoted on NOAA's nautical chart of the area.

- Periodic maintenance activities of the new and existing FOCUS cables would occur to ensure uninterrupted operation of the system. Maintenance, including visual inspections and repairs, would likely occur annually. Typical activities would occur near the HDD exit sites, but occasionally may involve pulling the cable to a surface vessel for repairs and then returning the cable to the seafloor for burial using divers or a ROV.

- The Navy estimates that offshore cable installation is expected to take approximately 1-2 weeks for each of the four cables.

The Navy reports that the current planned start date for FOCUS-II construction is calendar year 2018 or later.

B. PRIOR FIBER OPTIC CABLE PROJECTS APPROVED BY COASTAL COMMISSION

The Commission has concurred with numerous consistency and negative determinations for undersea cable projects proposed by the Navy offshore of southern California:

- CD-045-89, Construction of the Fiber Optics Communication Undersea System (FOCUS) between Naval Base Ventura County/Point Mugu and San Nicolas Island.

- ND-107-92, Test of Fiber Reinforced Plastic Cable at San Nicolas Island.

- ND-092-94, Shore Cable Installation on Santa Cruz Island.
- CD-020-95, Cable Placement at San Clemente Island.
- CD-050-03, Partial Replacement of FOCUS Cable at San Nicolas Island.
- CD-015-05, Repair and Replacement of Cables and Projectors for the Anti-Submarine Warfare Range at San Nicolas Island.
- ND-049-11, Cable and Hydrophone Installation offshore of San Clemente Island.

The Commission has concurred with other federal consistency determinations, negative determinations, and consistency certifications for submarine fiber optic cable-related projects in other areas of the state by the Navy, Coast Guard, Federal Aviation Administration, MCI WorldCom, AT&T, Global West, and Tyco Networks (US) (some of the private company projects listed in this paragraph were combined with CDPs for the state water cables listed below).

The Commission has also approved numerous coastal development permits for fiber optic cable projects in state offshore waters:

- 4-91-61, Installation of cable and conduits offshore of Montana de Oro State Park.
- 4-91-61-A1, Installation of two additional cables offshore of Montana de Oro State Park.
- E-99-011, Installation of two fiber optic cables and five conduits offshore of Montana de Oro State Park.
- E-98-029, Installation of two fiber optic cables offshore of Montana de Oro State Park.
- E-98-27, Installation of three fiber optic cables and three conduits at Grove Beach.
- E-00-004, Installation of one fiber optic cable and five conduits at Manchester State Beach and one cable off of Montana de Oro State Park.
- E-00-008, Installation of a fiber optic cable along the California coastline and landing onshore at Morro Bay, Santa Barbara, Manhattan Beach, and Mission Beach.
- E-01-029, Installation of two fiber optic cables landing in Hermosa Beach.
- E-05-007, Installation of a research fiber optic cable from Moss Landing to Smooth Ridge in Monterey Bay.
- E-08-021, Installation of two fiber optic cables offshore of Montana de Oro State Park.
- 9-16-0160, Installation of one fiber optic cable offshore of Hermosa Beach.

C. OTHER AGENCY APPROVALS AND CONSULTATIONS

U.S. ARMY CORPS OF ENGINEERS

The Navy will submit permit applications to the Corps in compliance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act, under Nationwide Permit 12 (Utility Line Activities).

CHANNEL ISLANDS NATIONAL PARK

The Navy will submit a Transportation and Utility Systems and Facilities on Federal Lands application to the National Park Service for work on Santa Cruz Island in Channel Islands National Park.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

The Navy will undertake consultation with NOAA regarding that part of the project located within the Channel Islands National Marine Sanctuary.

NATIONAL MARINE FISHERIES SERVICE

The Navy will undertake consultation with NMFS as required by the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act, the Marine Mammal Protection Act, the Endangered Species Act, and the Fish and Wildlife Conservation Act.

NATIVE AMERICAN TRIBAL CONSULTATION

The Navy is undertaking consultation with Native American tribal representatives regarding protection of cultural resources within the project area.

REGIONAL WATER QUALITY CONTROL BOARDS – LOS ANGELES REGION AND CENTRAL COAST REGION

The Navy will submit applications with the Los Angeles and Central Coast Regional Water Quality Control Boards for Clean Water Act Section 401 Certifications for discharges into state waters in the project area.

STATE WATER RESOURCES CONTROL BOARD

The Navy will submit a Stormwater Pollution Prevention Plan to the SWRCB.

CALIFORNIA STATE HISTORIC PRESERVATION OFFICE

The Navy will undertake National Historic Preservation Act Section 106 consultation with SHPO.

D. DREDGING AND PLACEMENT OF FILL IN COASTAL WATERS

Section 30233(a) of the Coastal Act states:

> *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division where there is no feasible less environmentally damaging alternative,*

and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged depths on existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource dependent activities.

The proposed FOCUS-II cable project involves filling within coastal waters and therefore triggers the three-part test of Section 30233(a): (1) the project must be one of the seven enumerated allowable uses; (2) the project must be the least environmentally damaging feasible alternative; and (3) the project must include feasible mitigation measures to minimize adverse environmental impacts. With regard to the first test, the proposed cable replacement project is an incidental public service and allowable use under Section 30233(a)(4), similar to determinations the Commission has made with respect to other Navy fiber optic cable projects in ocean waters off southern California.

The second test required by Section 30233(a) centers on project alternatives. As previously described in **Section III.A** of this report, the Navy determined that the aging and degrading FOCUS-I system must be replaced with the proposed FOCUS-II system. Therefore, the alternative analysis prepared by the Navy in the project *Draft Environmental Assessment* (DEA) centers on alternative HDD landing sites and onshore and offshore cable alignments.

The DEA states that potential horizontal directional drilling (HDD) site alternatives were developed based on the following operational requirements and environmental factors:

- Drilling sites should be placed as close as possible to the shoreline to minimize the length of drilling required;

- Elevation of the drill entry should be as low as possible to minimize the angle of drilling;

- Depth of drill exit points should be maximized to as close to 85 ft (26 m) water depth as possible so that cable segment exposure to nearshore currents and wave actions is minimized and divers using conventional air diving methods can install and maintain cable;

- There should be a relatively level cleared area for the HDD pad, particularly for the bentonite recycling system;

- The drilling site should, to the extent possible, be located in a previously disturbed area to minimize environmental disruption;

- The drilling site, to the extent possible, should be situated on level compacted soil; and

- NBVC Point Mugu landing sites should be at least 1 mile (1.6 km) apart to avoid both cables being damaged by a single event (e.g., anchor drag of bottom fishing activities).

The proposed HDD landing sites at Point Mugu (Building 811 and Charlie Pad), San Nicolas Island (Coast Guard Jetty), and Santa Cruz Island (Prisoners Harbor) were selected due to their locations in existing developed areas adjacent to existing infrastructure (e.g., existing cable landing sites, manholes, conduits, communications buildings), that meet the aforementioned HDD operational requirements, and that minimize environmental impacts. The Commission has approved numerous projects that employed HDD technology to bring submarine fiber optic cables onshore, and has generally found it to be the environmentally superior method for landing cables onshore, as underground HDD cables eliminate the need for construction activity on beaches, in surf zones, and through environmentally sensitive nearshore habitats. The Commission finds that there are no feasible less environmentally damaging alternatives to the proposed cable landing sites and to the use of HDD technology for landing the cables at Point Mugu, San Nicolas Island, and Santa Cruz Island.

The DEA states that development of alternative onshore cable alignments considered the following factors:

- The onshore cable alignment should use existing infrastructure to the maximum extent possible to minimize costs and potential environmental impacts;

- Trenching alignments should be designed in a manner that avoids impacts to natural and cultural resources to the maximum extent possible; and

- Where necessary, above-ground cable alignments will be designed to minimize impacts to cultural and visual resources and provide continued access to land areas to the extent possible.

The two onshore cable alignments selected for Point Mugu extend from the HDD sites, are routed through adjacent and existing underground conduits, and terminate at the Range Communications Building. All installation work would occur in existing developed areas. The selected onshore cable route on San Nicolas Island entails approximately 500 feet of trenching between the HDD site and an existing concrete vault currently housing the FOCUS-I cable. At this vault the two new cables would be spliced into an existing underground cable which terminates at Building 127 in the interior of the island. On Santa Cruz Island, the onshore cable route alternatives require more new construction compared to Point Mugu and San Nicolas Island. The selected alternative includes a combination of new trenching along existing roads and a 0.21-mile-long stretch of conduit elevated 1.6 feet above ground, connecting the HDD site, the existing water well, and Building 4 at the Navy Site in the interior of the island. The Commission finds that the onshore cable routes selected by the Navy minimize adverse effects on environmentally sensitive habitat and recreational and cultural resources (described below in **Sections III.F, H, and I**). The Commission finds that there are no feasible less environmentally damaging alternatives to the proposed onshore cable alignments at Point Mugu, San Nicolas Island, and Santa Cruz Island.

The DEA states that the following factors were considered in developing offshore cable alignment alternatives:

- Offshore cable alignments should to the extent possible avoid rocky bottom areas that provide habitat to sensitive fish and invertebrates and increase potential wear and tear on the cables;

- Offshore cable alignments should avoid known underwater cultural resources;

- Offshore cable alignments should avoid areas with steep offshore slope or large rocky outcroppings that increase stress on the fiber optic cable;

- Offshore cable alignments should be parallel to the prevailing wave and current direction wherever possible to reduce the stress from strong ocean currents and wave action; and,

- Offshore FOCUS-II cable alignments should avoid crossing FOCUS-I cables in the nearshore environment and existing oil and gas pipelines on the ocean floor.

Selection of the four proposed offshore cable routes was based on the results of data collected by the Navy during a high resolution multi-beam hydrographic survey of the FOCUS-II project area (**Exhibit 10**). The Navy states that:

> *Cable routes were selected to avoid steep bathymetry since these features could create unnecessary cable strain or wear and tear. The spreading out or turning of cables is planned to occur at a constant depth to avoid placing any cables at angles to the downward slope. The installation of cables parallel to the steep slope of canyons will also be avoided.*

The four offshore cable routes selected by the Navy meet the above factors and avoid all areas of hard-bottom habitat between the HDD exit sites and the edge of the continental shelf (**Exhibits 11-13**). In addition, the selected routes avoid pipelines and cables connecting oil and gas production platforms to the mainland (**Exhibit 14**). As discussed further in **Section III.E** of this report, the selected cable route alignments minimize adverse effects on marine resources. Therefore, the Commission finds that there are no feasible less environmentally damaging alternatives to the proposed offshore cable routes connecting Point Mugu, San Nicolas Island, and Santa Cruz Island and meets the alternatives test of Coastal Act Section 30233(a).

The final requirement of Section 30233(a) is that dredging and filling of coastal waters may be permitted if feasible mitigation measures are provided to minimize any adverse effects on coastal resources. **Sections III.E through J** of this report include analysis of the avoidance, conservation, and mitigation measures that the Navy has incorporated into the FOCUS-II project to minimize adverse environmental impacts. With these measures the Commission finds that the mitigation test of Coastal Act Section 30233(a) has been met.

E. MARINE RESOURCES AND WATER QUALITY

Section 30230 of the Coastal Act states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30232 of the Coastal Act states:

> *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

Marine Resources. The offshore waters in the project area are considered essential fish habitat (EFH) for Pacific Coast Groundfish (PCG), Coastal Pelagic Species (CPS), and Highly Migratory Species (HMS). There are three areas designated by the state as Areas of Special Biological Significance (ASBS) in the project area: Latino Point to Mugu Lagoon, waters surrounding San Nicolas Island and waters surrounding Santa Cruz Island (**Exhibit 15**). The Channel Islands National Marine Sanctuary encompasses, in part, the waters within six nautical miles of Santa Cruz Island, and the Scorpion State and Federal Marine Reserve is located off the northeast shore of Santa Cruz Island (**Exhibit 16**).

The *Draft Environmental Assessment* (DEA) for the proposed project describes the marine habitats and resources adjacent to the offshore HDD exit sites at Point Mugu, San Nicolas Island and Santa Cruz Island, and in the offshore waters transited by the four FOCUS-II cables. The nearshore continental shelf seaward of the two HDD exit points at Point Mugu supports numerous species of marine invertebrates and fisheries. Nearshore marine habitats at San Nicolas Island and Santa Cruz Island include offshore rocks, rocky reefs, kelp forests, eelgrass beds, and sandy bottom habitat, and support a wide diversity of invertebrates and fisheries.

The DEA states that the majority of the cable sea route is located in deepwater, soft bottom areas:

> *In general, these offshore areas are characterized by a diversity of habitats, primarily muddy (silt-clay) to sandy shelf and muddy slope environments, but also include areas of deep basins, submarine canyons, shelf-slope break, and near-island habitats. A few areas near the northern Channel Islands have more extensive hard-bottom features, but these areas would be avoided by the cable route.*
>
> *Little to no offshore algae or vegetation is present along the cable route. HDD technology will be used at the landing sites to drill offshore below and past the kelp beds and vegetated areas.*
>
> *Most of the biological resources that occur commonly along the sea route are found throughout much of southern California, especially at depths below about 650 ft (200 m), where many species tend to be relatively cosmopolitan in distribution along the California coast (SAIC 2000).*

The DEA also describes the marine mammals and special species that are present within the project area adjacent to Point Mugu, San Nicolas Island, and Santa Cruz Island:

> *Sandy beaches within Point Mugu, including near the landing sites, are used as an occasional haul out area for individual pinnipeds, including juvenile elephant seals and California sea lions (Navy 2013).*
>
> *Three species of pinnipeds are regularly observed in the vicinity of or nearshore at SNI: California sea lion, northern elephant seal, and Pacific harbor seal (Figure 3.2-8). SNI and the surrounding waters provide important foraging, breeding, and haul out areas for these pinnipeds.*

> *The CINMS [including Santa Cruz Island] provides vital habitat for pinnipeds, offering important feeding areas, breeding sites, and haulouts . . . the most common pinniped in the region is the California sea lion. No pinniped haulout areas are located at or near the proposed landing site.*

Marine mammals and special species are also present in the offshore waters transited by the four proposed cables:

> *Marine mammals reported within the Santa Barbara Channel are represented by more than 40 species, all of which are protected by the MMPA [Marine Mammal Protection Act]; these include 34 species of cetaceans (whales, dolphins, and porpoises) and six species of pinnipeds (seals and sea lions) . . . the southern sea otter is also found in the waters surrounding SNI. Six species of cetaceans are federally listed as endangered, while two species of pinnipeds and the southern sea otter are listed as threatened under the federal ESA [Endangered Species Act].*

The DEA reports that while a total of eight species of baleen whales occur in the Southern California Bight, including the proposed offshore cable routes, only four species are commonly sighted: California gray whale, humpback whale, blue whale, and fin whale. In addition, several dolphin and porpoise species are commonly observed in offshore waters along the cable routes. Four pinniped species are year-round residents in the offshore waters of the project area: northern fur seals, harbor seals, northern elephant seals, and California sea lions, the latter being the most abundant.

Project Impacts. The Navy's consistency determination first examines the potential adverse effects on marine habitat and fisheries in the project area from construction of the HDD cable tube exit sites and offshore cable laying and burial (Project-related impacts to recreational and commercial fishing are found in **Section III.G** of this report):

> *There are no estuaries in the proposed project area and canopy kelp is absent in depths greater than 85 ft in any of the exit locations. Seagrass is present nearby the SCrI HDD exit point, though the closest bed is approximately 400 ft inshore of the HDD exit point. Rocky substrate will be avoided though the potential exists to cross limited rocky outcroppings in deeper water. The cable route north of SCrI will likely cross the offshore portion of two areas specified in the federal waters of the CINMS* [Channel Islands National Marine Sanctuary]. *Environmentally sound engineering practices would be used during cable installation and operating activities to minimize the influence of the cable on EFH. Therefore, it is unlikely that cable-laying activities would have any long term impacts on PCG, CPS, and HMS, their spawning, feeding, or fishing activities for these species. If any disruption did occur, it would be temporary and reversible. An EFH consultation describing potential impacts to PCG, CPS, and HMS has been prepared by the Navy and submitted to NMFS.*

The consistency determination next examines potential impacts on marine mammals in the project area:

> *Drilling activities would occur during the non-breeding season for all pinnipeds potentially present in the project areas so noise from HDD operation would not impact these communities in the vicinity of the project sites. Conservation measures such as those found in Figure 13 would require that all HDD and onshore construction activities on SNI* [and Santa Cruz Island] *occur between September 15 and December 15, outside sensitive bird breeding and nesting periods as well as marine mammal breeding season. Given the distance between the SNI sea otter populations and the project sites, the proposed action would have no effect on sea otters on SNI. No population of special status marine species would be adversely affected due to the general avoidance of these resources by the sea route and/or low abundance of these organisms in the general vicinity.*
>
> . . .
>
> *The proposed cable installation has low potential for collision with or entanglement of marine mammals and sea turtles from project vessels or cables. The larger project vessels would move very slowly during cable installment activities (0 to 2 knots), and would not pose a collision threat to marine species that may be present. Entanglement of marine species is not likely because the rigidity of the cable is designed to lie extended on or be buried underneath the sea floor. Anchor and cable lines would be taut, posing no risk of entanglement or interaction with marine species that may be swimming in the area. Once installed on the seabed, the new cables would be equivalent to other hard structures on the seabed, again posing no risk of adverse effect on marine species. There are no documented incidents of sea turtle entanglement in a submarine cable during the past 50 years (Norman and Lopez 2002). The project vessels would abide by all appropriate Navy regulations regarding marine species sighting and reporting.*

The Navy provided the following list of existing measures and protocols that will be implemented during offshore cable laying operations in order to minimize and avoid adverse effects on marine mammals:

- *Ship Safety Manual & Ship Standard Operating Manual*
- *U.S. Navy Afloat Environmental Compliance Manual (ex. OPNAV M-5090)*
- *Vessel Safety SOP (ex. Section C.1.1, CD-008-13, HSTT)*
- *Notice to Mariners (ex. Section 3.12, of the HSTT EIS/OEIS)*
- *Protective Measures Assessment Protocol (ex. Section C.2.2., CD-008-13, HSTT)*
- *Lookout Procedures (ex. Section C.3.1, CD-008-13, HSTT)*
- *Marine Species Awareness Training (ex. Section 3.1.1.1.1, CD-008-13, HSTT)*
- *Stranding Response Plan for SOCAL Range Complex*
- *Stranding Protocol, OPNAVINST 3100.6H*
- *US Navy/NMFS Marine Mammal Stranding MOU dtd 2011*

The Navy states that HDD technology would be used to install fiber optic cable beneath the sandy beach and out to approximately 85 ft water depth. This technology would avoid (by drilling the cables underneath) all sensitive nearshore habitats (**Exhibits 4-6**). Some temporary impacts (e.g., burial, crushing, and/or displacement) would occur to invertebrates in soft-bottom areas as a result of cable-laying activities; however seafloor mapping has confirmed that hard-bottom habitats will be avoided by all four cables from the HDD exit points out to the edge of the continental shelf. The Navy confirmed this after analyzing the bathymetric data collected in the May 2016 hydrographic survey of the offshore cable routes in the FOCUS-II project area (**Exhibits 11-13**). Cable laying in deepwater areas beyond the edge of the continental shelf could potentially cross areas of hard-bottom habitat. However, any potential impact to coastal resources would be de minimus due to: (1) the distance between hard-bottom habitat in these deepwater areas and state waters within the coastal zone, and (2) the difficulty in quantifying potential impacts arising from a cable crossing hard-bottom habitat in these deepwater areas. The Commission has not previously required mitigation for such cable impacts occurring beyond the edge of the shelf (as documented most recently in CC-0001-16/CDP 9-16-0160 (MC Global BP4, Inc.)

The consistency determination notes that:

> *Soft bottom habitats are not considered sensitive habitats, and generally support lower biological diversity than hard substrate habitats. Soft bottom organisms are also generally opportunistic and would be expected to rapidly re-colonize the disturbed areas. Temporary displacement of some fishes from the immediate vicinity (e.g., tens of feet) of the cable route would occur during short-term passage of cable installation equipment. The fish are anticipated to return almost immediately to normal behaviors following the passage of equipment. Suspended solids are expected in a plume resulting from cable burial by the seaplow; potential impacts to soft-bottom species from turbidity would be localized and short term with temporary (e.g., hours) and localized (occurring over a very discrete area). Once the cable is buried by the plow, or settles onto the bottom in deep water, the soft sediment would rapidly return to a normal state.*

The Navy states that any marine debris (e.g., discarded nets or other fishing gear) encountered during the pre-lay grapnel run prior to cable burial will be removed from the ocean floor and disposed at an appropriate upland location. Project Conservation Measure No. 3 states that, "To avoid marine mammal and listed bird breeding seasons, HDD and construction activities will only occur between September 15 and January 31 at Point Mugu, and between September 15 and December 15 at San Nicolas Island and Santa Cruz Island." This schedule also protects spring and summer grunion runs at Point Mugu near the HDD landing sites. In addition, the Navy reports that it will implement:

> *. . . significant BMPs for vessel safety, lookout and watch stander standards, and extensive marine mammal observer and marine species awareness training and reporting requirements. All personnel conducting cable-laying operations, to include vessel handling operations and lookouts, will be either DON personnel or contracted with the Navy and appropriate training completed.*

The Navy also reports that any additional marine resource protection measures arising from Navy consultations with NOAA/Channel Islands National Marine Sanctuary and the National Marine Fisheries Service will be incorporated into the project.

Disposition of Abandoned/Unused Cables. In previous Commission concurrences with submarine cable installation projects, the Commission has raised the issue of the final disposition of abandoned or unused fiber optic cables on the seafloor. In CD-050-03 (Navy) for replacement of two short, nearshore sections of FOCUS-I cables immediately offshore of San Nicolas Island, the Commission conditioned its concurrence to require removal of the degraded cable segments. (The CD for the original installation of the FOCUS-I cables (CD-045-89) did not analyze the issue of cable removal after the cables were no longer in use.) The Navy did not agree to this condition and the cable segments remain on the seafloor. After additional discussion with the Navy, the Commission agreed that for the replacement cable segments, the Navy could: (1) submit materials to the Commission which document that leaving the replacement cable segments on the seafloor when they are no longer in service would be less harmful to the marine environment than removing them; and (2) request at that time that the Commission eliminate the condition seeking removal of the replacement cable segments when they are no longer used by the Navy.

At the present time: (1) the FOCUS-I replacement cable segments are still in use (as is the entire FOCUS-I system); (2) the Navy has submitted materials to the Commission in support of its determination that leaving the replacement cable segments in place is the environmentally preferred option; and (3) the Navy and the Commission have agreed to essentially delay final resolution of this issue until the Navy no longer uses the cables. For the FOCUS-II cable project, the Navy re-states that while it does not make any commitment over removal of these cables when they are no longer in service, the Navy will re-engage with the Commission at such time that the cables are taken out of service to discuss cable disposition. The Navy intends to continue using the FOCUS-I cables as a back-up system after the FOCUS-II cables are placed into service. Therefore, discussions with the Navy on the disposition of FOCUS-I and FOCUS-II cables will occur at future dates, and disposition is not an element of the subject consistency determination. The Commission believes this approach is warranted in this situation and at this time under several procedures available under the federal consistency regulations: (1) through procedures encouraging and allowing “phased review” for federal agency decisions made in phases (15 CFR § 930.36(d)); and/or (2) through continuing review under the federal consistency “reopener” provision (15 CFR § 930.45).

Water Quality. The DEA includes a description of water quality in the ocean waters of the project area and is summarized briefly here. Water quality in the nearshore area of Point Mugu is affected by the presence of particulates and contaminants in the outflow from Mugu Lagoon and by discharges from offshore oil and gas development. The water quality of ocean water in the vicinity of San Nicolas Island is relatively pristine. Water quality offshore of Santa Cruz Island is generally good due to its isolated location, but oil and tar deposition from natural seeps and ship traffic is chronic. In the offshore waters of the Sea Range, the distance from both the mainland and oil and gas development, combined with the large diluting volume of the ocean and the shelves and basins near the mainland where many pollutants settle, ensures high water quality.

HDD activities, accidental discharge from project vessels, upland construction runoff, and turbidity increases from cable laying hold the potential to adversely affect ocean water quality in the project area. The consistency determination addresses these potential effects and the measures incorporated into the project to minimize and avoid adverse effects on water quality.

Regarding proposed HDD activities:

> *The three ASBSs* [Areas of Special Biological Significance] *in the project area are: Latigo Point to Mugu Lagoon, SNI and Begg Rock, and Santa Cruz Island. The proposed project activities would not result in long-term changes to water chemistry (e.g., the pH, temperature, and dissolved oxygen levels), turbidity, or the amount of light in the water column within the project areas, including the ASBSs. Upon completion of drilling operations, an unavoidable release of drilling fluid would occur by seepage through fractures in the seabed and by pressure discharge when the drill bit penetrates the exit point. The drill pipe has an internal diameter of five inches, so the volume of material that could be released offshore due to hydrostatic pressure is up to 442 gal per HDD site. In the unlikely event that the drill pipe fractures (a mechanical failure) at or near the lowest point in its trajectory and the drilling was near completion, the volume of mud contained in the HDD bore hole could migrate into the surrounding formation. This volume of material represents a worst-case release of up to 7,443 gal per HDD site into the surrounding geology. However, the drilling fluid would remain contained within the subsurface formation and would be unlikely to migrate to the surface or be released offshore. This volume would include approximately 27 cubic feet of cuttings. Since the drilling fluid consists of water-based bentonite clay mixture and cuttings from the seabed, it would be non-toxic to nearshore marine organisms or marine water quality. In addition, every reasonable effort would be made to minimize the unavoidable discharge of drilling fluid. The drilling fluid would be switched to fresh or salt water at the bore exit to mitigate a bentonite discharge. This switch would be approximately 151 ft before the bore exit. The driller and surveyor will know when the drill head assembly exits the seafloor by a dramatic change of the drill trajectory inclination angle. If the drilling fluid had not been switched to water, it would be done so immediately. All procedures in the project-specific spill prevention plan would be followed. Prior to HDD activities, the Navy will coordinate with the California State Water Resources Control Board to determine whether the Navy will need to apply for an exception of the California Ocean Plan prohibition against direct discharges of waste to an ASBS.*

The consistency determination next examines potential impacts from vessel discharges:

> *All equipment to be used for installation of the cables would be properly maintained and monitored for leakage of fuel, oil, or other hazardous materials. Vessels and equipment used for cable deployment and installation would comply with regulatory requirements and best management practices (BMPs) for minimizing the inadvertent discharge of potential marine contaminants. Cable materials (e.g., glass, plastic, nylon, over-armor) would not leach contaminants into the water or sediments. Based*

> *on observations of existing cable arrays, the cable materials would become encrusted with benthic organisms.*

Potential impacts to water quality from upland construction activities are next examined:

> *Any potential fuel or oil spill at the construction sites would be cleaned up in accordance with standard procedures for similar activities at Navy sites and all procedures would be included in a project-specific spill prevention plan. Excess drilling fluid (drilling mud and cuttings) not recycled into the HDD borehole would be temporarily stored in catch basins and disposed at offsite locations. The drilling fluid is non-toxic and would not affect water quality if it were to spill out. The NBVC Point Mugu project areas are also located within the 100-year floodplain of Calleguas Creek; therefore there is the potential for impacts to the floodplain. Those impacts would be reduced as would any effects to the marine waters through implementation of standard construction BMPs; low impact development design measures; National Pollutant Discharge Elimination System (NPDES) permits; construction Storm Water Pollution Prevention Plan; Erosion Control Plans; and the use of catch devices and sheeting designed to minimize water quality degradation. The project would not affect the current on-site or off-site drainage or any existing drainage structures nor require modification of existing drainage structures.*

Construction at the HDD exit points and cable laying may affect ocean turbidity levels:

> *There would be a temporary increase in turbidity in the water columns near the exit points. The turbidity would be expected to settle and dissipate in a short amount of time. Only minimal sediment disturbance would occur along the sandy-bottom areas of the offshore cable alignment while the cable is lowered from the marine vessel and during plowing operations, and the disturbed sediments would quickly settle back to the bottom. No permanent source of turbidity would be associated with the proposed project.*

The Navy has incorporated numerous conservation measures into the FOCUS-II project, many of which are designed to prevent adverse impacts to water quality during construction and installation of the project (**Exhibit 17**). In addition, the Navy will implement a Spill Prevention, Control, and Countermeasure Plan, HDD Frac-Out Contingency Plan, Environmental Compliance Afloat Plan, Stormwater Pollution Prevention Plan, and the Navy's standard construction best management practices. The latter will include HDD installation monitoring to ensure that drilling of the four HDD trunk cable tubes does not lead to adverse effects on water quality and marine resources. The Navy has committed to inform the Commission of any accidental releases of drilling fluids during HDD installation work.

In conclusion, the Commission finds that construction and installation of the terrestrial and offshore components of the FOCUS-II project would lead to only temporary and minor adverse effects on marine resources and water quality, primarily due to the short-term nature of project installation, a construction schedule during the time of year that minimizes potential impacts on

terrestrial and marine wildlife, the location of upland development in existing developed areas, cable alignments that avoid rare and valuable hard-bottom habitat, and the use of HDD technology to avoid installing cables in environmentally sensitive shoreline and nearshore habitats. With the above-described marine resource and water quality protection measures incorporated into the FOCUS-II project, the Commission finds that the project will be implemented in a manner that protects marine resources and habitats, and sustains the biological productivity and quality of coastal waters. The Commission finds that the proposed project is consistent with the marine resources and water quality policies of the Coastal Act (Sections 30230, 30231 and 30232).

F. ENVIRONMENTALLY SENSITIVE HABITAT

Section 30240 of the Coastal Act states:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

The Navy states that it manages and protects the natural resources at Point Mugu and San Nicolas Island with *Integrated Natural Resource Management Plans*, and that Channel Islands National Park similarly manages the natural resources under its control on Santa Cruz Island through its *General Management Plan*. The consistency determination describes the sensitive wildlife species and the environmentally sensitive habitat areas at these locations and the potential impacts from the FOCUS-II project:

> *Construction activities associated with the proposed action would be implemented near concentrations of sensitive wildlife species. In order to protect these species, wildlife conservation measures, as listed in Figure 13, would be required during construction activities depending on the type of activity, location of the activity, and the time of year. Personnel would be required to stay off sites when construction activities are not being conducted. Western snowy plovers, Ridgway's rails, least terns, and saltmarsh bird's beak are present at Point Mugu on the beaches and marsh adjacent to the Building 811 and Charlie Pad project sites. However, the terns will be avoided by implementing the seasonal restrictions listed in Figure 13. Western snowy plovers and island foxes are located on the beach adjacent to the drilling site on SNI* [San Nicolas Island]. *At the SCrI* [Santa Cruz Island] *project sites, the SCrI fox is present, and bald eagles are, at times, found in the Prisoners Harbor area. Marine mammals (northern elephant seals, harbor seals, and California sea lions) are present on the beaches and/or in the nearshore waters adjacent to the SNI drilling site. A harbor seal haulout is located within the estuary at Point Mugu, west of the mouth of Mugu Lagoon.*

Regarding resources at Point Mugu:

> *At NBVC Point Mugu, the HDD drill sites at Bldg 811 and Charlie Pad would be located within previously disturbed areas devoid of vegetation. Implementation of BMPs such as restricting project vehicles and equipment to previously disturbed areas & graded surfaces and treating areas for invasive weeds and flagging all wetlands would ensure no impacts to wetlands. Although there are populations of salt marsh bird's beak, a listed plant species, adjacent to the HDD sites, a qualified biologist will survey the area to confirm absence at the time of construction operations, thus no effects on salt marsh bird's beak is anticipated. Of the other special status bird species, Ridgway's rail, California least tern, and western snowy plover, by implementing seasonal conservation measures, proposed construction activities would have no effect on these species.*

Regarding resources at San Nicolas Island:

> *At SNI, the HDD drill site at Coast Guard jetty, staging area and trenching corridor would be located within previously disturbed areas with sparse vegetation and no sensitive plant species. To reduce the potential introduction of ecologically harmful non-native flora or fauna, all barge and aircraft shipments to SNI will be conducted in accordance with NBVC Instruction 5090.14, Biological Resources Security Requirements for Air and Barge Transport of All Cargo to San Nicolas Island. Of the special status species located on SNI, seasonal avoidance will ensure no effects to western snowy plover. Although there are high density populations of island night lizards (a recently de-listed species) in the vicinity of the water bladder staging area, the area would be surveyed within seven days prior to use of the water bladders and any ground disturbance to minimize effects to the night lizards. Likewise, implementation of conservation measures such as daily trash and rubbish removal; securely sealing all trash receptacles; covering pits deep enough to trap foxes and capping all pipe ends from 2 to 6 inches in diameter would provide protection for the inquisitive San Nicolas Island foxes.*

Regarding resources at Santa Cruz Island:

> *At SCrI, the HDD drill site at Prisoners Harbor, staging areas, and trenching corridor would be located in previously disturbed areas devoid of vegetation, including no presence of island bedstraw and rush rose. Soils excavation during trenching operations would be kept within the Navy Road footprint, minimizing impacts to Prisoners Harbor wetlands. All barge and aircraft shipments to SCrI will be conducted in accordance with CINP Biosecurity Protocols. Noise from construction activities may generate avoidance reactions by bald eagles at SCrI and although the immediate project area is located within normal bald eagle foraging areas, it is within areas of existing human activity and would be short-term in addition to the fact that an equally valuable foraging area is located farther north along the Canada del Puerto. Construction noise and increased human activity may temporarily displace SCrI foxes but this is similar to existing conditions and similar*

> *conservation measures used for the SNI foxes would be implemented on SCrI to minimize effects.*

The consistency determination also includes an extensive list of conservation measures that the Navy will implement to protect environmentally sensitive habitat areas and listed species during construction of the FOCUS-II project terrestrial components (**Exhibit 17**). Additional measures arising from the NEPA process or consultation with the National Park Service and other federal agencies will be incorporated into the project. The HDD sites, staging areas, and trenching corridors connecting landing sites to existing communications buildings at Point Mugu, San Nicolas Island, and Santa Cruz Island would be situated within previously disturbed and/or currently developed areas. The above-ground elevated channel carrying the fiber optic cable and water line on Santa Cruz Island would follow a path along previously disturbed oak woodland and grassland. The Commission agrees that the design of project components, the conservation measures incorporated into the project, construction best management practices, and the temporary nature of construction activities will ensure that the project will not adversely affect sensitive habitat and species at Point Mugu, San Nicolas Island, and Santa Cruz Island. Therefore, the Commission finds that the proposed project is consistent with the environmentally sensitive habitat policy of the Coastal Act (Section 30240).

G. COMMERCIAL AND RECREATIONAL FISHING

Section 30234.5 of the Coastal Act states:

> *The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.*

The *Draft Environmental Analysis* (DEA) describes the commercial and recreational fishery activities that occur in the project area offshore of Point Mugu, San Nicolas Island, and Santa Cruz Island, and in the larger offshore area encompassing the alignments of the four submarine cables:

> *The Point Mugu [cable] landing sites are located within the California Recreational Fishing Survey (CRFS) Channel Sampling District (RecFin, 2016) . . . recreational fishing by the general public does not occur in the project area due to access restrictions.*
>
> *The San Nicolas Island landing site is located within CDFW commercial catch block 813 (Figure 3.2-7)*[**Exhibit 18**] *. . . Red sea urchin had the highest overall catch of over 500,000 lb (227,000 kg), followed by warty sea cucumber, California spiny lobster, spot prawn, and white seabass . . . California spiny lobster, spot prawn, warty sea cucumber, red sea urchin, and white seabass had the highest total commercial value . . . The SNI landing site is located within the CRFS South Sampling District . . . Chub (Pacific) mackerel were caught in the highest number by recreational anglers, followed by Pacific sardine, kelp bass, California lizardfish, and barred surfperch.*

> *The Prisoners Harbor [Santa Cruz Island] landing site is located within CDFW commercial catch block 686 (Figure 3.2-7)*[**Exhibit 18**] *. . . Market squid had the highest overall catch of over 19 million pounds, followed by Pacific sardine, red sea urchin, Pacific mackerel, and Pacific bonito . . . Market squid, California spiny lobster, red sea urchin, spot prawn, and California halibut had the highest total commercial value . . . Recreational catches for SCrI are included in the same CRFS sampling district as Point Mugu . . . barred surfperch were caught in the highest number by recreational fishermen, followed by Pacific sardine, chub (Pacific) mackerel, jacksmelt, and walleye surfperch.*
>
> *The Offshore Route is located within CDFW commercial catch blocks 683-685, 706, 707, 726, 747, 748, 767, and 813 (Figure 3.2-7)*[**Exhibit 18**] *. . . Market squid had the highest overall catch of over 125 million pounds, followed by Pacific sardine, northern anchovy, Pacific mackerel, and red sea urchin . . . Market squid, California spiny lobster, spot prawn, California halibut, and white seabass had the highest total commercial value. The offshore route overlaps both the South and the Channel CRFS Sampling Districts (RecFin, 2016). In the South District . . . California scorpionfish were caught in the highest number by recreational fishermen, followed by Pacific sanddab, barred sandbass, vermilion rockfish, and bocacciio . . . In the Channel District . . . vermilion rockfish were caught in the highest number by recreational fishermen, followed by bocaccio, Pacific sanddab, greenspotted rockfish, and rockfish genus (unspecified).*

The consistency determination notes the presence of commercial and recreational fisheries in the project area and examines the potential project-related impacts on commercial and recreational fishing from installation and operation of the FOCUS-II cable system:

> *Types of commercial fishing gear used in the vicinity of the landing sites or offshore route include drift gillnets, longline gear, troll gear, trawls, seining and traps or pots. Commercial and recreational fishing is limited in the vicinity of the HDD landing sites. Short-term and temporary impacts on commercial or recreational fisheries could occur from preclusion of fishing during cable installation, operation, repair, and removal activities from the proposed project. The presence of the cable installation vessel and equipment could preclude fishing within a limited area (~1 mi) for a temporary period (a few hours to several days based on location). However, advance notice would be given via a Notice to Mariners (NOTMARs). There is potential for commercial fisheries that use equipment that contacts the bottom, such as otter trawls, to snag unburied portions of the cable causing damage to or loss of fishing gear or damage to the cable. Since the cable is expected to be buried three feet below the surface in soft-bottom areas to a water depth of 3,280 ft, the likelihood of snagging cables is remote and not expected.*

Installation of the four FOCUS-II cables in offshore waters is expected to take between four and eight weeks. The Commission agrees with the Navy that while cable installation will preclude commercial and recreational fishing in the immediate vicinity of the cable vessel, this restriction does not represent a significant adverse effect due to the limited geographic area and duration of

the installation activity as the cable vessel transits along the cable alignment. Military security designations in the waters immediately offshore of Point Mugu and San Nicolas Island currently restrict commercial and recreational fishing and this condition would not change with the installation of the FOCUS-II cables. The offshore cables will be buried to a depth of three feet in the ocean floor out to a water depth of 3,280 feet, will avoid hard-bottom habitat out to the edge of the continental shelf, and the cable alignments will be denoted on NOAA's nautical chart for the area. These measures will further ensure that the FOCUS-II cables would not adversely affect commercial and recreational fishing in the project area. The Navy also reports that to the best of its knowledge the existing FOCUS-I cables between Point Mugu and San Nicolas Island have not caused adverse effects to commercial and recreational fishing along and adjacent to the cable alignments. With the above measures, the Commission finds that the installation and location of the proposed FOCUS-II cables will not adversely affect commercial or recreational fishing in the offshore waters of the project area, and that the project is consistent with Section 30234.5 of the Coastal Act.

H. PUBLIC ACCESS AND RECREATION

Section 30210 of the Coastal Act states:

> *In carrying out the requirements of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Section 30212 of the Coastal Act states in part:

> *(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources . . . .*

Section 30220 of the Coastal Act states:

> *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

The Navy states in its consistency determination that:

> *During normal operation of FOCUS-II cables, there would be no effects to public access or recreation. In fact, reliable communications for Sea Range operations provides improved safety for the public and recreational activities within those waters. During installation of the project, there may be temporary effects to public access and/or recreation depending upon the location and timing of installation activities as described below.*

The Commission agrees that presence and operation of the four FOCUS-II submarine cables would not affect public access and recreation.

Two of the three proposed HDD cable landing sites would occur within the boundaries of NBVC, at Point Mugu and San Nicolas Island, where access is controlled and restricted to military and Department of Defense personnel, authorized contractors, and official visitors. The Navy states that:

> *For safety purposes, a restricted area has been established for the waters surrounding SNI out to three nautical miles from the shoreline which also inhibits public access and recreation. This restricted area is divided into three sections whose boundaries were amended in May 2014 and are periodically closed during operations. Boats must remain at least 300 yards from the shoreline of SNI at all times and no boats are allowed to anchor within 300 yards or land on SNI except in an emergency. There are no opportunities for public access or recreation located near these HDD sites, lay-down areas or the associated trenching routes connecting the HDD site to the communications buildings* [at Point Mugu and San Nicolas Island].

The Commission agrees that the installation of FOCUS-II components (e.g., cable landings at HDD sites, conduit connections) at Point Mugu and on San Nicolas Island will not affect public access and recreation due to their locations on military reservations and restricted waters closed to public access and use.

The third HDD cable landing site occurs on Santa Cruz Island (SCrI) in a location owned by the National Park Service as an element of Channel Islands National Park (CINP). The consistency determination states that:

> *The HDD site would be located adjacent to Prisoners Harbor pier, a public access point of entry for CINP on SCrI. The cabling and waterline route would primarily occur alongside Navy Road which connects Prisoners Harbor to the Navy Site (deviations of the route away from Navy Road are illustrated in Figure 10). Navy Road, a paved road, is also a public access trail within CINP and comprises 10.6 of the 20.2 miles of roads on SCrI. CINP is a public recreation resource located on five of the Channel Islands and includes all submerged lands, waters, rocks and islets surrounding those islands out to a distance of one nautical mile. Common activities on CINP include marine mammal and bird watching, photography, hiking and camping in designated locations. According to the CINP 2015 General Management Plan, population of Prisoners Harbor is planned for no more than 100 visitors per day. There is currently no visitor contact station in the Prisoners Harbor area though the General Management Plan does anticipate one in the future.*
>
> *Construction activities associated with the HDD site and cable/waterline route would temporarily affect the visitor experience to CINP at SCrI, but would not have an adverse effect to public access and recreation. Public access and recreational uses of the Prisoners Harbor Pier would be temporarily disrupted, but not*

> *eliminated, during the drilling operations for approximately 30 days. Road traffic would not be disrupted by drilling operations at this site and recreational visitors would still be allowed access to the Prisoners Harbor Pier, but the area west of the pier would be not be available for recreational use. Public access to SCrI would still be available via the pier at Scorpion Anchorage for recreational users as are all the other beaches on the SCrI. In discussions with NPS, the Navy understands there are plans to replace the Scorpion pier. Schedules for construction have not been set for either project. The Navy will work with NPS to ensure disruptions to visitor access are minimized. The Navy will coordinate with NPS and the public concessionaire to schedule such operations outside normal public access schedules and at no time will the pier be closed to public access while other NPS piers are closed. During trenching operations, temporary daily closure of portions of Navy Road to non-authorized vehicles may be required for the three months duration, with the trenches excavated and covered in segments to maximize road availability. Vehicles will be allowed to pass through the construction areas when active work is not underway. There are secondary routes allowing access to all SCrI sites whenever vehicle passing the trenching operations is not possible. The installation of the elevated channel system to the well site may divert travel to other routes. These closures would be temporary in nature and would not lead to permanent land use changes, and alternative public access or recreation areas would be available in the immediate vicinity.*

As described previously in the project description (**Section III.A**), HDD work at the Santa Cruz Island landing site is expected to take approximately four weeks, and installation of the fiber optic cable and water line (in the same trench to be excavated within Navy Road) is expected to take three months. Under its Conservation Measure #3, the Navy has stated that HDD and construction activities will only occur between September 15 and December 15 on Santa Cruz Island. Conservation Measure #25 states that the Navy "will coordinate with the National Park Service to develop a plan to help avoid limitations on public pedestrian access to the Navy Road during installation of the buried cable." The Navy has committed to inform the Commission of decisions made regarding public access protection measures along Navy Road during the construction period. Given that project construction on Santa Cruz Island would not occur during the peak summer recreation season and with the conservation measures to be implemented, the Commission agrees that the installation of FOCUS-II cable landing at the HDD site, and the installation of the cable and water line within the Navy Road corridor on Santa Cruz Island, will result in only temporary and minimal impacts to public access and recreation on the island.

The project also has the potential to affect public access and recreation in ocean waters offshore of Point Mugu, San Nicolas Island, and Santa Cruz Island during cable laying operations and cable connection work at the HDD exit points. The consistency determination states that:

> *The offshore cable routes between all three drill exit sites occur in the Pacific Ocean within the boundaries of the Point Mugu Sea Range which is used primarily by the Navy for testing of military weapon systems and also accessible by the public for commercial and recreational activities. A portion of the offshore cable route transits the Channel Islands National Marine Sanctuary (CINMS), a program administered*

> *by the National Oceanographic and Atmospheric Administration. Recreational activities that occur within the offshore routes include sport fishing, sailing, boating, whale-watching, and diving. Commercial uses include fishing, tourism, and marine transportation. These areas also are used by the public for scientific research and education.*
>
> . . .
>
> *Construction activities may temporarily affect recreational activities in the immediate vicinity of the drill exit sites, the cable laying vessel, and any dive operations associated with cable installation. The proposed cable laying activity is generally compatible with concurrent recreational activities and any restriction of recreational use of the waters would be temporary. For example, recreational use of the waters off the Prisoners Harbor site would be restricted, but not eliminated, during drilling and cable installation operations. However, this would be temporary in nature. All other waters around the eastern end of the island* [Santa Cruz Island]*, including Scorpion Anchorage and Smugglers Cove, would remain open to recreational use (See Figure 12). As stated above, the Navy will implement procedures to efficiently inform the public about the construction activities and any temporary restrictions. A Notice to Mariners (NOTMARs) would be issued to allow mariners and commercial and recreational services (e.g., dive charters) to select alternate locations for their activities and the restrictions would only extend through the duration of the construction activity. Although the Navy would temporarily limit access to an area, the availability of the littoral ocean area is greater than the aggregate demand for this resource.*

Cable laying operations are expected to last approximately 1-2 weeks for each of the four cables, for a total offshore construction period of one month. This activity may result in short-term disruption to recreational boaters in the immediate vicinity of cable laying operations. However, exclusion zones around the cable installation vessel would be temporary and in constant motion as cables are placed into the ocean. The public would continue to have substantial access to existing offshore recreational areas and project-related impacts would be temporary and minor in nature.

The Commission notes that the Navy has long conducted training and testing operations in the Point Mugu Sea Range without apparent significant conflicts with public recreational uses of these waters. Previous cable laying and repair activities have also taken place without adversely affecting public recreation in the Sea Range. The short duration of proposed FOCUS-II cable installation work in ocean waters and on Santa Cruz Island will ensure that any project-related impacts to public access and recreation will be minimal and temporary. The Commission therefore concludes that the proposed project is consistent with the public access and recreation policies of the Coastal Act (Sections 30210, 30211, 30212, and 30220).

I. CULTURAL RESOURCES

Section 30244 of the Coastal Act states:

> *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

Cultural resources are places or objects that possess cultural, archaeological, or paleontological significance and include sites, structures, or objects significantly associated with, or representative of, earlier people, cultures, and human activities. Project-related activities have the potential to disturb or damage Native American artifacts and shipwrecks of potential cultural resources value. The Navy states in its consistency determination that the FOCUS-II project area has a diverse history of human occupation and that HDD work and cable installation could affect cultural resources. The consistency determination first includes analysis of potential impacts at Point Mugu and San Nicolas Island (SNI):

> *At NBVC Point Mugu, a review of the Integrated Cultural Resources Management Plan indicates that there are no resources within the area of potential effect for the HDD drill sites at Charlie Pad and Bldg 811 and the trenching corridor.*
>
> *On SNI, because the project site is within a previously disturbed area and there are no NRHP* [National Register of Historic Places] *listed or eligible properties within the area of potential effect and there are no known archeological sites within the area of potential effect. Therefore, the project would result in no historic properties affected.*

The consistency determination next examined potential impacts on Santa Cruz Island:

> *On SCrI, the entire project site exists within the Santa Cruz Ranching District, a cultural landscape eligible for listing in the National Register of Historic Places (NRHP). The Prisoners Harbor HDD site and parts of the road are part of the Prisoners Harbor Cluster while Navy Road, as an integral part of historic ranching operations and as a contributor to the Cold War operations on the island, are contributing elements of district. In addition, the area of potential effect for SCrI crosses five documented archeological sites whose eligibility for NRHP has not been determined but is assumed eligible. There is a presumption that a finding of no adverse effects to four of the five archeological sites (CA-SCrI-96, 464, 465, and 466) will be recommended due to the fact that all archeological deposits have been physically removed during the 60 years that the road has been used and maintained. To ensure avoidance of off-road archeological sites, stakes will be placed around the five documented site boundaries prior to construction at SCrI. These stakes will mark the presence of a resource and Native American and archeological monitors would be present for all installation and maintenance work conducted within the boundaries of the five sites and within a 50-meter buffer for each site. The 50-meter*

> *buffer is necessary because the precise site boundaries are not known confidently in all directions.*

Regarding the fifth archaeological site, the consistency determination states that:

> *. . . site (CA-SCrI-240/439) has the potential for intact deposits and thus the reason for the elevated cable tray for approximately 1,150 ft of the conduit and waterline alignment. The Navy has prepared a subsurface testing plan to determine the character of effects from the entire alignment. The Navy, with approval and oversight by NPS, will consult with SHPO* [State Historic Preservation Office] *on the effects determination. If the testing results indicate the presence of intact, significant archeological deposits that will be directly impacted by the project the Navy will work with SHPO and NPS to avoid or minimize the potential for adverse effects. If adverse effects are unavoidable, the Navy will develop a memorandum of agreement to comply with 36 CFR 800.*

The Navy also documented in the project DEA the consultation it is undertaking with the National Park Service, SHPO, the Santa Ynez Band of Chumash Indians, and other individuals and groups that are associated with cultural resource sites on Santa Cruz Island in the area of potential effects from the FOCUS-II project. The archaeological testing program on the island will be authorized by the NPS and monitored by a tribal cultural monitor approved by the Santa Ynez Band of Chumash Indians.

Regarding the potential for cultural resources in the offshore waters portion of the project area, the Navy states in the consistency determination that:

> *No offshore cultural resource surveys were conducted specifically for the HDD exist [SIC] sites or cable alignments due to the depth of the exit sites and cable alignments (79 ft [24m] or greater) and lack of evidence that sensitive resources exist at the locations. The cable alignments were developed in a manner that avoids known locations of shipwrecks and plane crashes; therefore, no known historic properties are located within the offshore APE* [area of potential effect].

The cultural resources analysis concludes as follows:

> *As with any Navy project, if potential subsurface archeological deposits are detected during construction, all work in the discovery area would cease until an archeologist could provide input regarding the significance of the resource. The NBVC Cultural Resources Manager would evaluate the resource against eligibility criteria for inclusion in the NRHP and if it is found eligible, a treatment plan detailing either preservation in-place or mitigation of impacts through data recovery would be developed and implemented in consultation with SHPO.*

The Commission agrees with the Navy that the proposed upland and in-water construction activities associated with the FOCUS-II project are unlikely to adversely affect cultural resources. The project includes an elevated cable tray for approximately 1,150-foot-long segment of the conduit and waterline alignment to avoid trenching through a known archaeological site.

The project includes provisions for monitoring of ground-disturbing activities in those areas where cultural resources are known to exist, and procedures to follow in the event that previously unknown resources are discovered. Therefore, the Commission finds that the project is consistent with the cultural resource policy of the Coastal Act (Section 30244).

J. HAZARDS

Section 30253(2) of the Coastal Act states:

> *New development shall:*
>
> *(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

The project *Draft Environmental Analysis* (DEA) describes the geologic conditions at the project sites at Point Mugu, San Nicolas Island (SNI), Santa Cruz Island (SCrI), and the seafloor where the FOCUS-II cables will transit, which are predominated by a range of sandy beaches and nearshore areas, marine terraces, and offshore marine canyons.

The DEA examined the development that is proposed at Point Mugu, San Nicolas Island, and Santa Cruz Island and concluded that the short-term nature of ground disturbing activities, along with the erosion control measures that would be implemented, would not lead to significant impacts to geological resources and soils. The DEA also concluded that impacts on geological resources along the offshore cable alignments would not be significant.

The consistency determination also described the measures to be implemented to minimize any project-related adverse impacts to geologic stability and soils in onshore and offshore project areas:

> *The proposed project involves installing fiber optic cabling underground so a majority of the construction consists of some ground disturbing activity which has the potential to affect soils and the surrounding geology. However, the project is designed to use existing infrastructure as much as possible and would implement erosion control measures to minimize effects. In addition, drilling operations would be temporary, lasting approximately 30 days at each site. At all the HDD sites, anchor holes and catch basins would be backfilled with original soils and standard erosion control measures would be implemented. At SCrI, trenching along Navy Road would include areas of steep slope which would require additional erosion control measures and BMPs, including the requirement that backfill trenches be compacted to conditions as close to original state as possible. In addition, all manholes and vaults along the trenching route will be installed using BMPs such as silt screens and barriers to minimize erosion. Given this, the project would not contribute significantly to erosion, geologic instability and or require substantial alterations of natural landforms along the coast.*

For the offshore cable alignments, the subsurface geology at the HDD exit sites is unknown but is likely sedimentary bedrock similar to the nearshore portion of the existing FOCUS onshore landing sites. While the cable alignment along the seafloor consists primarily of sandy bottom, there may be an occasional rock outcropping along the route. The construction crew would closely monitor the pressure during drilling, especially at the exit point to ensure that drilling ceases as quickly as possible after the exit point has been penetrated to minimize affects to marine sediments by the discharges occurring during or upon completion of drilling activities.

While effects of coastal flooding and storm surge can be significant, sea level rise has an even greater potential to impact facilities on NBVC Point Mugu, SNI and SCrI by exacerbating flooding. For example, sea level rise may expose some of the trench-buried fiber optic cables. However, the cable would be armored and would not be affected by exposure to the elements. Exposure of the fiber optic cables would not affect existing infrastructure and utilities at the project sites and no other methods to accommodate for predicted sea level rise exist for underground/seafloor fiber optic cabling.

The Commission agrees with the Navy that project construction activities are of the type and duration such that adverse effects on geologic stability at HDD sites and along cable alignments are unlikely to occur. Cable alignments have been selected to avoid hazardous topography and bathymetry to the greatest extent feasible. In addition, design and implementation of best management practices will minimize the potential for project-related adverse effects on terrestrial and offshore landscape features during and after construction. Therefore, the Commission finds that the proposed project is consistent with the hazard minimization policy of the Coastal Act (Section 30253(2)).

APPENDIX A

Substantive File Documents

1. CD-0006-16 (Navy, FOCUS-II, Point Mugu Sea Range).
2. Draft Environmental Assessment - FOCUS Replacement. Point Mugu Sea Range, Department of the Navy, September 2016.
3. Benthic Classification of the Seafloor in Support of the FOCUS II Program. Naval Undersea Warfare Center Detachment, Atlantic Undersea Test and Evaluation Center, 2016.
4. CD-049-89 (Navy, FOCUS-I, Point Mugu Sea Range).
5. CD-050-03 (Navy, FOCUS-I Repairs, San Nicolas Island).
6. ND-107-92 (Navy, San Clemente Island Offshore Cable Testing).
7. ND-092-94 (Navy, Santa Cruz Island Offshore Cable Installation).
8. CD-020-95 (Navy, San Clemente Island Offshore Cable Placement).
9. CD-015-05 (Navy, San Nicolas Island Offshore Cable Repair and Replacement).
10. ND-049-11 (Navy, San Clemente Island Offshore Cable and Hydrophone Installation).
11. CC-0001-16 and CDP 9-16-0160 (MC Global BP4, Inc., Fiber optic cable line installation between Hermosa Beach and Asia).

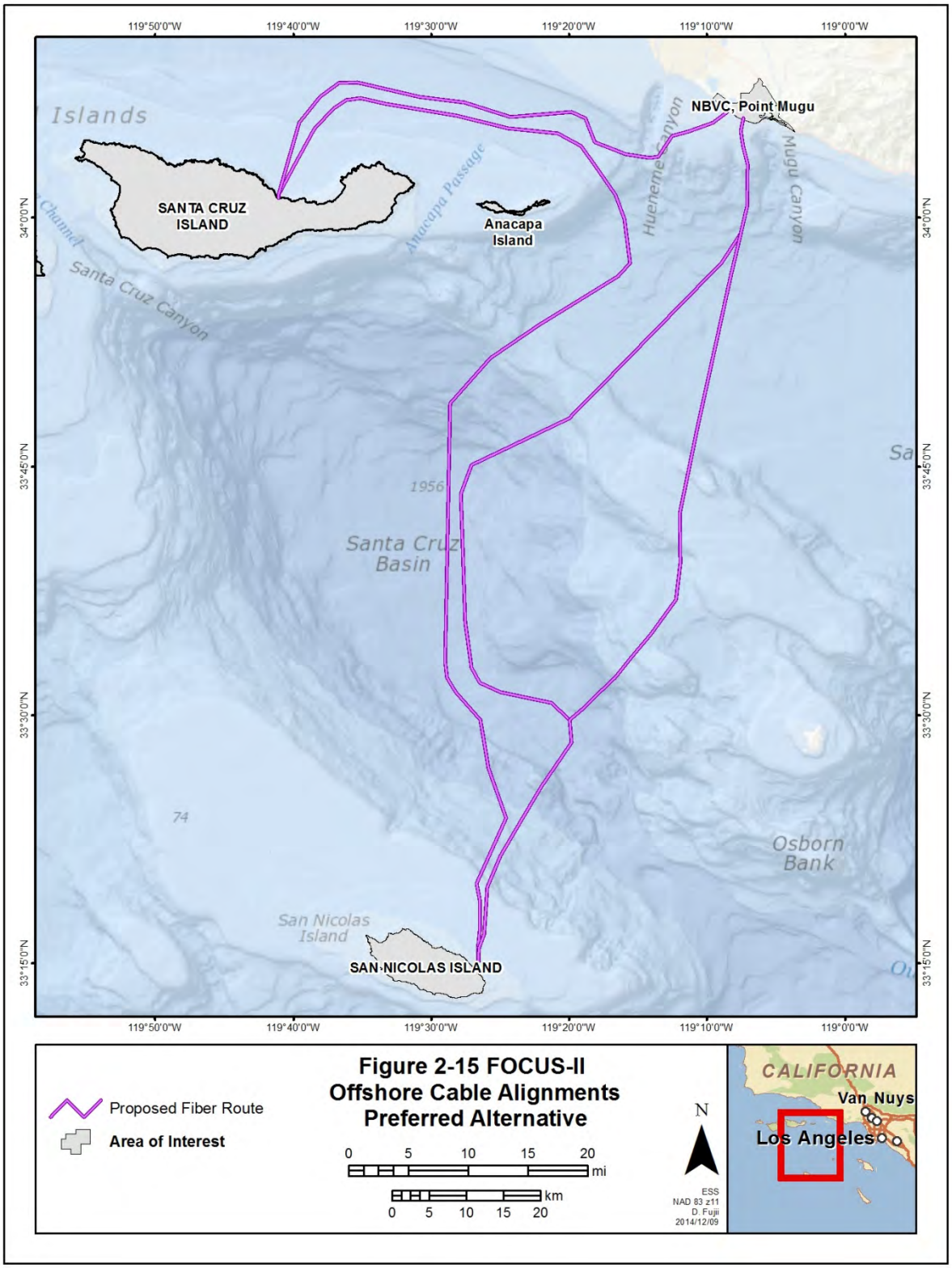
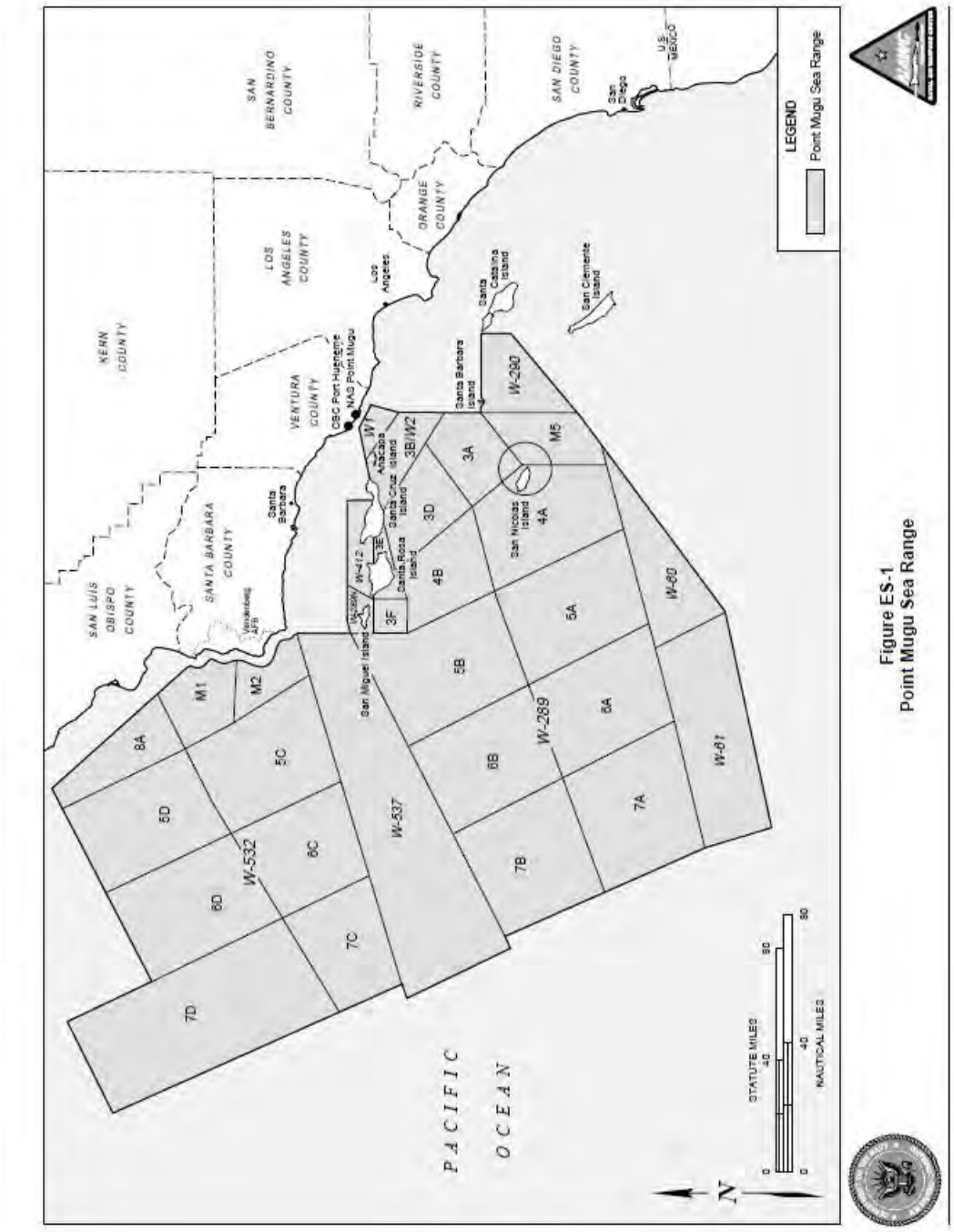


Exhibit 1
CD-0006-16

Exhibit 2
CD-0006-16

Figure 2 – Point Mugu Sea Range



ES-2

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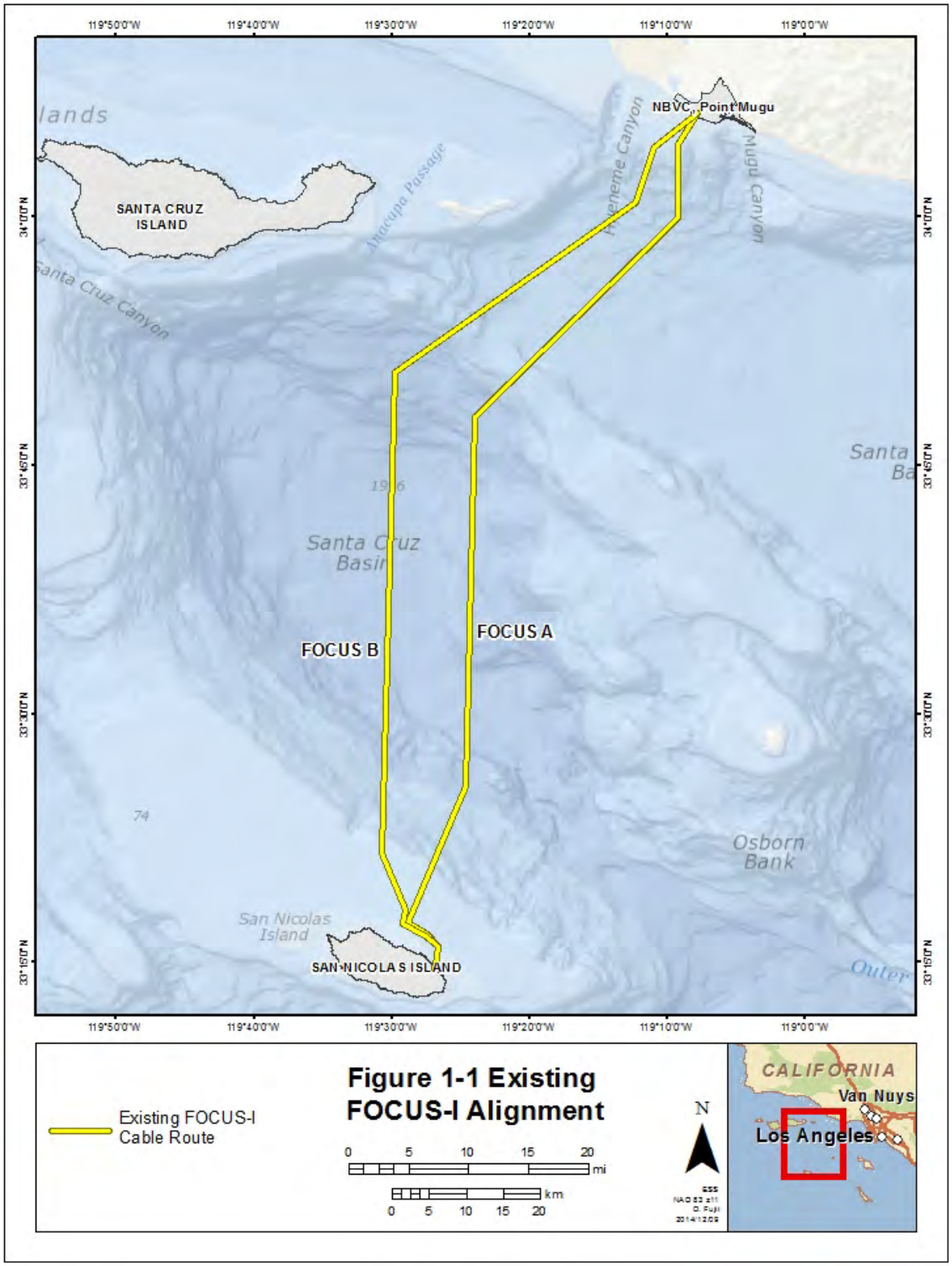

Exhibit 3
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Exhibit 4
CD-0006-16

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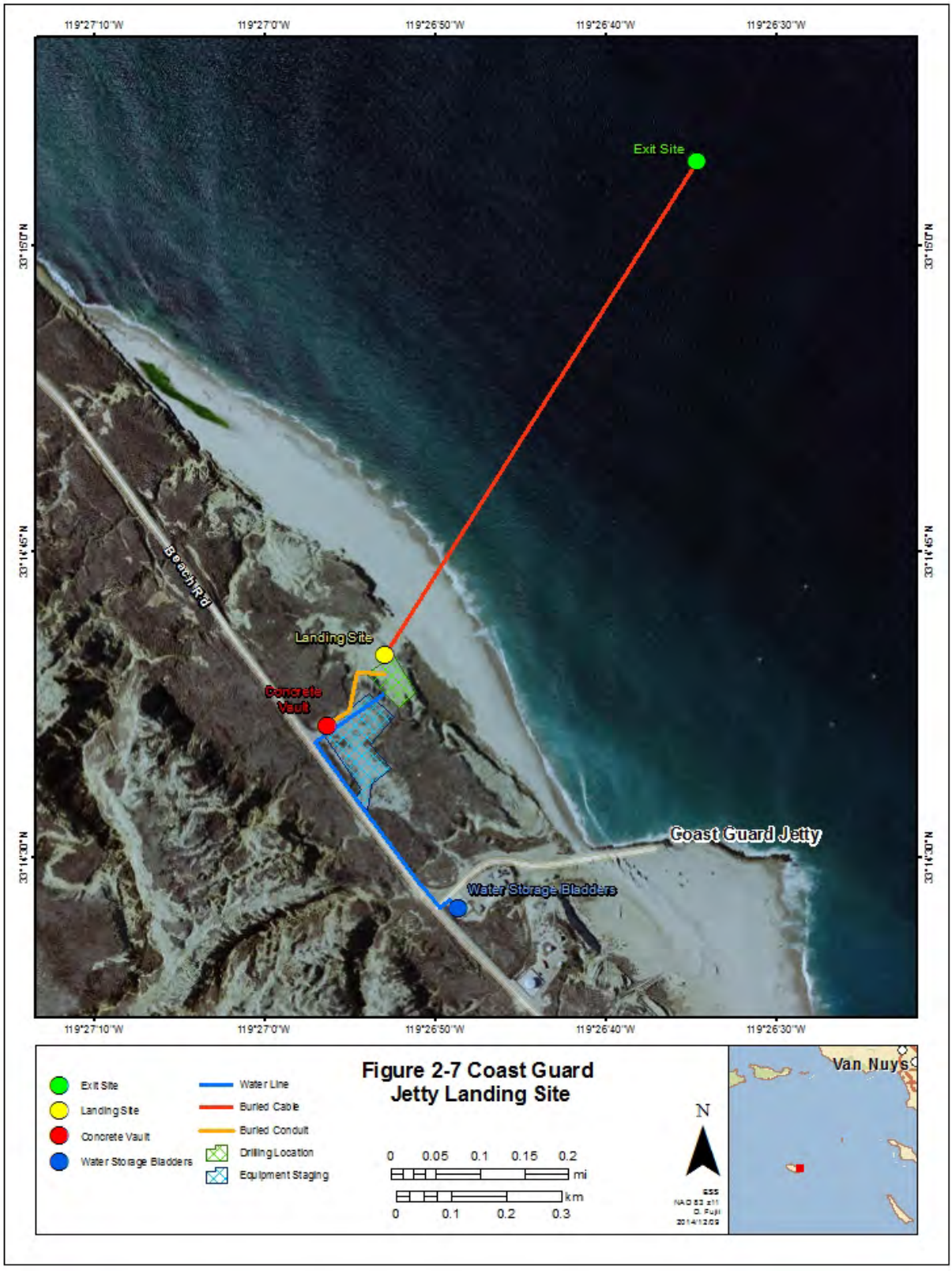

Figure 2-7 Coast Guard Jetty Landing Site

San Nicolas Island

Exhibit 5
CD-0006-16

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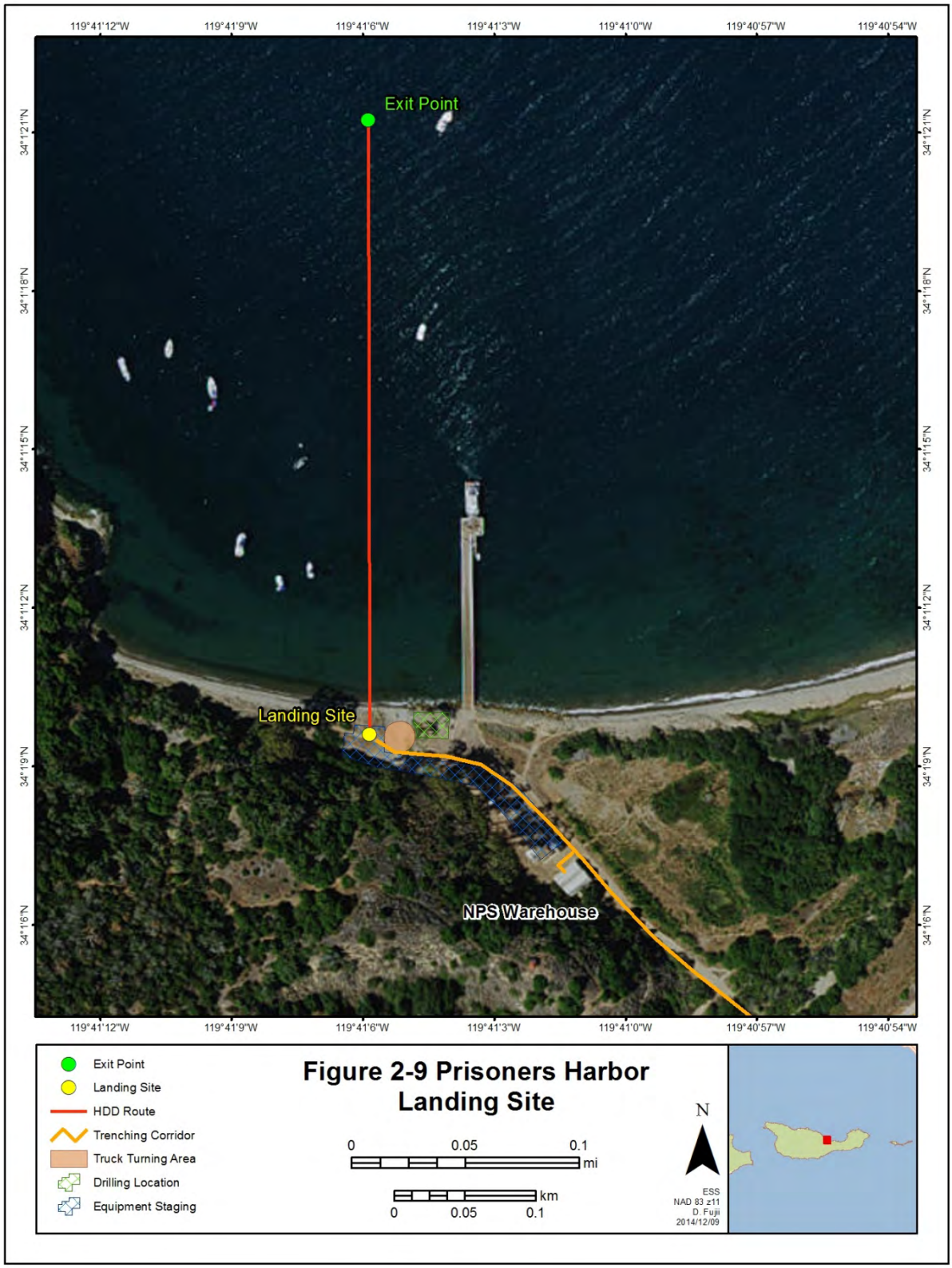


Santa Cruz Island

Exhibit 6
CD-0006-16

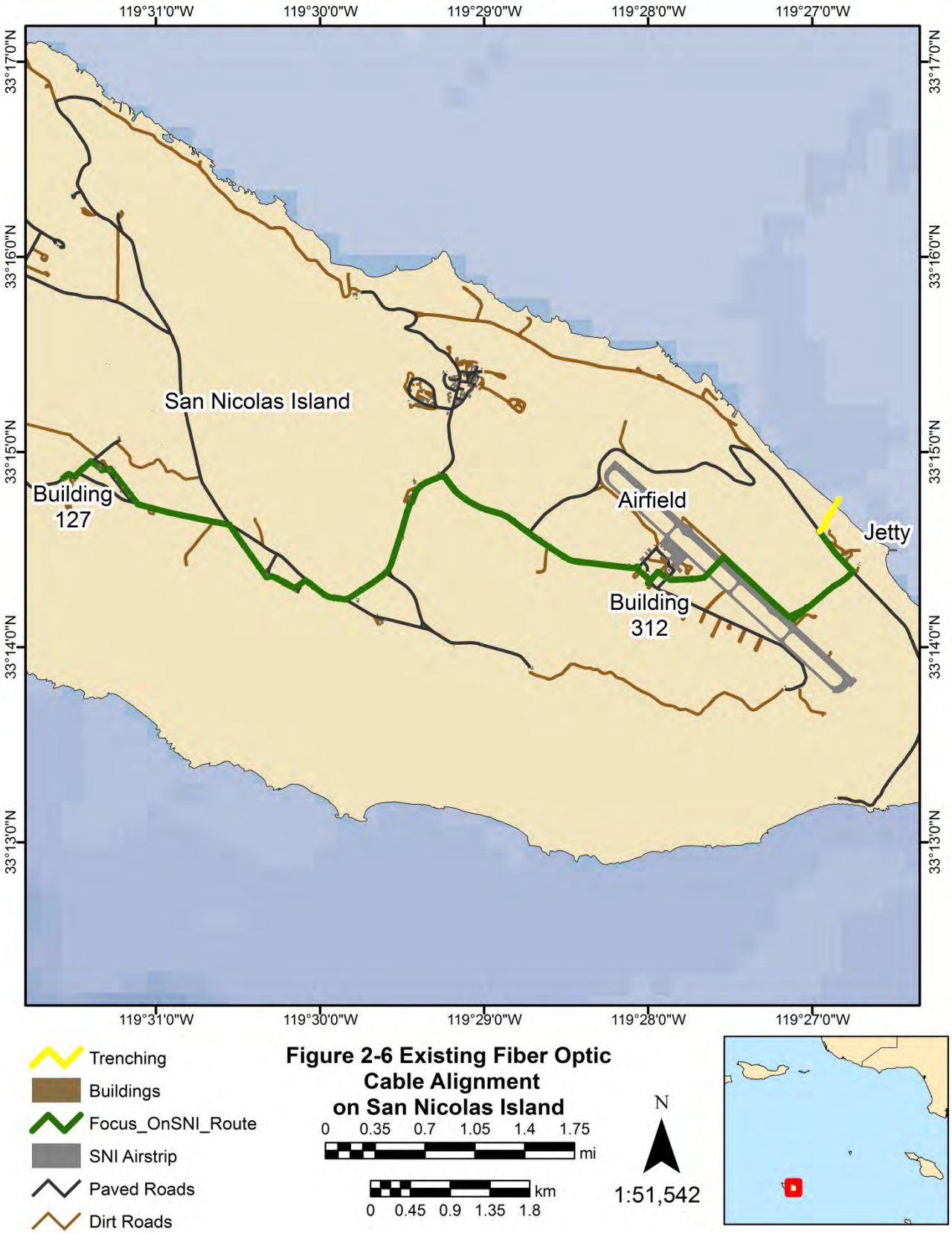


Figure 2-6 Existing Fiber Optic Cable Alignment on San Nicolas Island

Exhibit 7
CD-0006-16

Figure 2-14 Santa Cruz Island Onshore Cable Alignment

Exhibit 8
CD-0006-16

Figure 2-12. Example of Typical Elevated Channel System

Between CV-3 and the Navy Site, the FOCUS-II cable and 3-in (8-cm) water line would be installed in a trench with widths ranging from 12 to 20 in (30 to 51 cm) and depth up to 40 in (102 cm). This trench would extend approximately 6.9 mi (11.1 km) to the Navy Site, running through the middle of Navy Road. Manholes and vaults will be placed at intervals of between 100 ft (30.5 m) and 2,500 ft (762 m) to provide for cable pulling stations, strain relief, backflow preventers, and air vacuum release stations. The total number of manholes and vaults will be between 20 and 80, depending on the engineering needs yet to be determined. Trenching will take approximately three months. Trenching equipment and other materials would be staged at turnout locations and parking areas along Navy Road. Portions of the road would be closed to vehicle traffic during trenching operations, with the trenches excavated and covered in segments to maximize road availability. Vehicles will be allowed to pass through the construction areas when active work is not underway. Figure 2-13 provides an overview of the typical SCrI trench cross section. Figure 2-14 provides an overview of the entire SCrI onshore alignment.

To accommodate the mobilization to the Prisoners Harbor, a barge with 4,000 ft^2 (372 m^2) deck space (triple stack capability) will be used to deliver the equipment and supplies needed to initiate the drilling and trenching operations. Subsequent shipments to and from SCrI will be conducted via barge shipments and a landing craft utility (LCU) vehicle operated by the NPS. This vessel has a capacity of approximately one semi-truck load with dimensions of 14 ft x 40 ft (4.3 m x 12.2 m). Upon completion of drilling and trenching operations, construction equipment and materials will be taken off SCrI via the LCU and barge shipments for the large equipment such as a crane and a semi-truck.

Exhibit 9
CD-0006-16

FOCUS II Survey Area

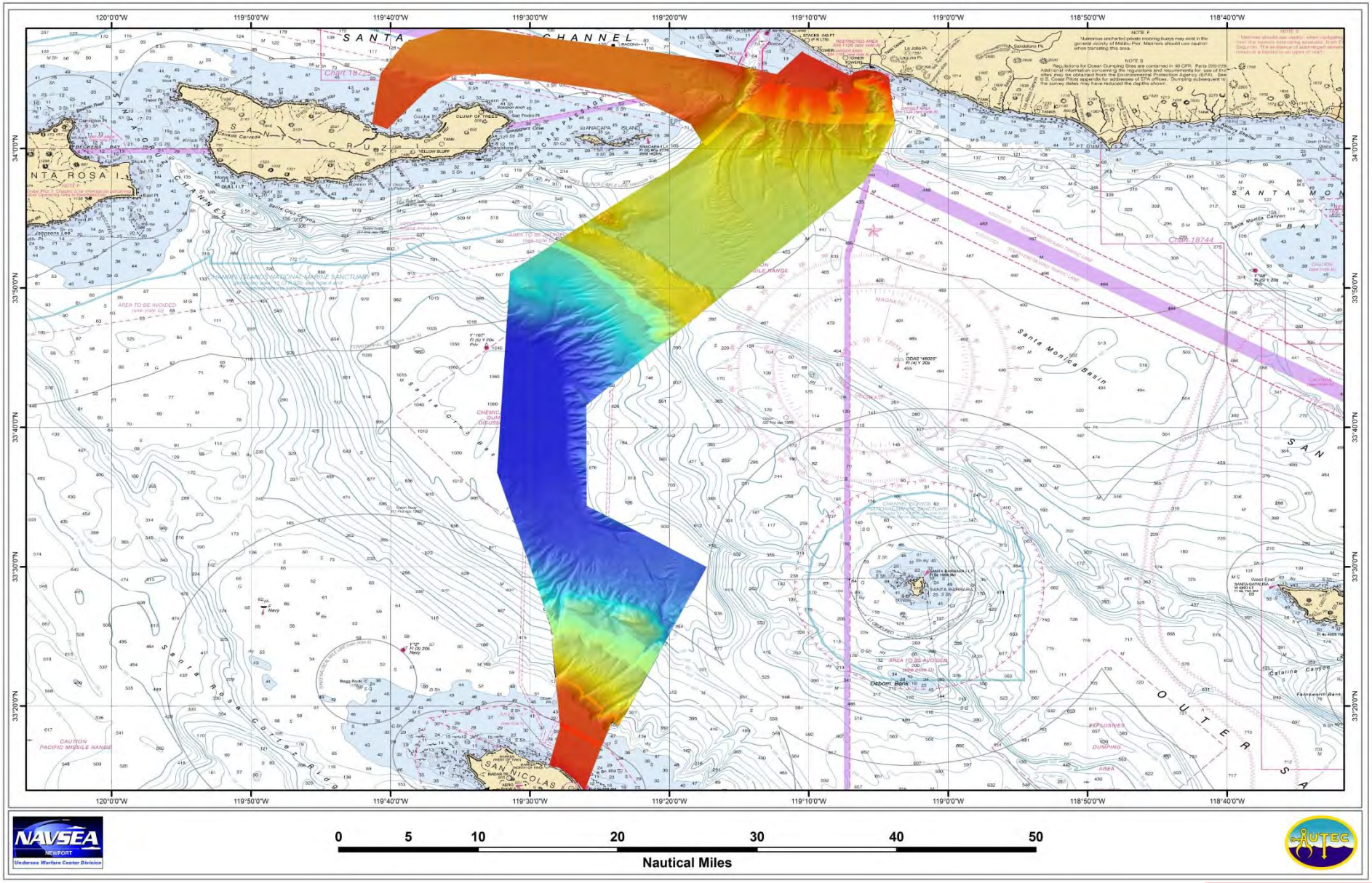
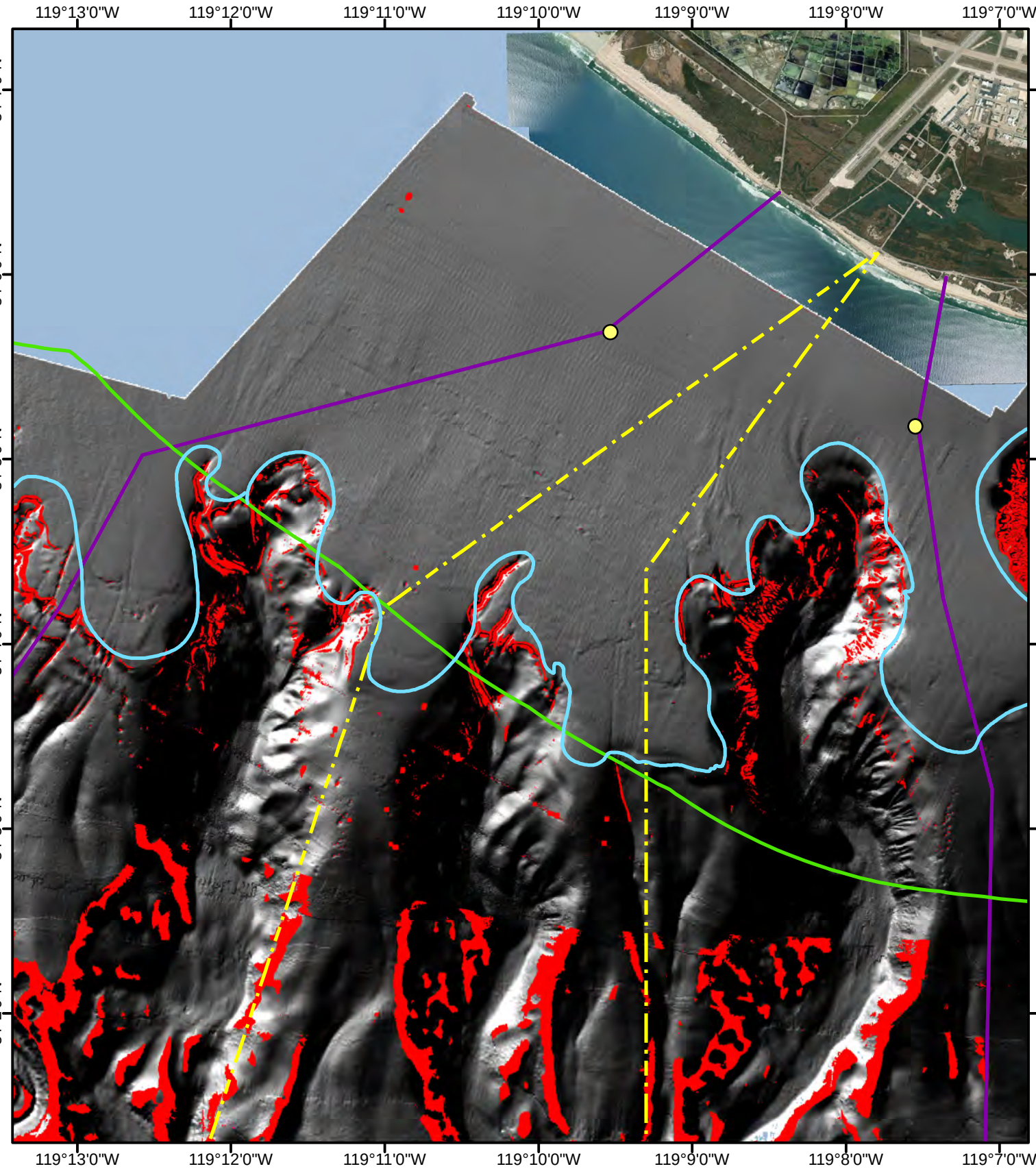


Exhibit 10
CD-0006-16



State Waters Boundary
Continental Shelf Edge
FOCUS I - Existing Cables
FOCUS II - Proposed
HDD Exit Point
Potentially Hard Substrate

FOCUS II Project
Point Mugu
Benthic Habitat Mapping

0 0.4 0.8 1.2 1.6 2 mi

0 0.5 1 1.5 2 km

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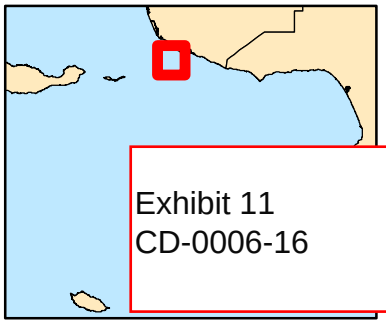

Exhibit 11
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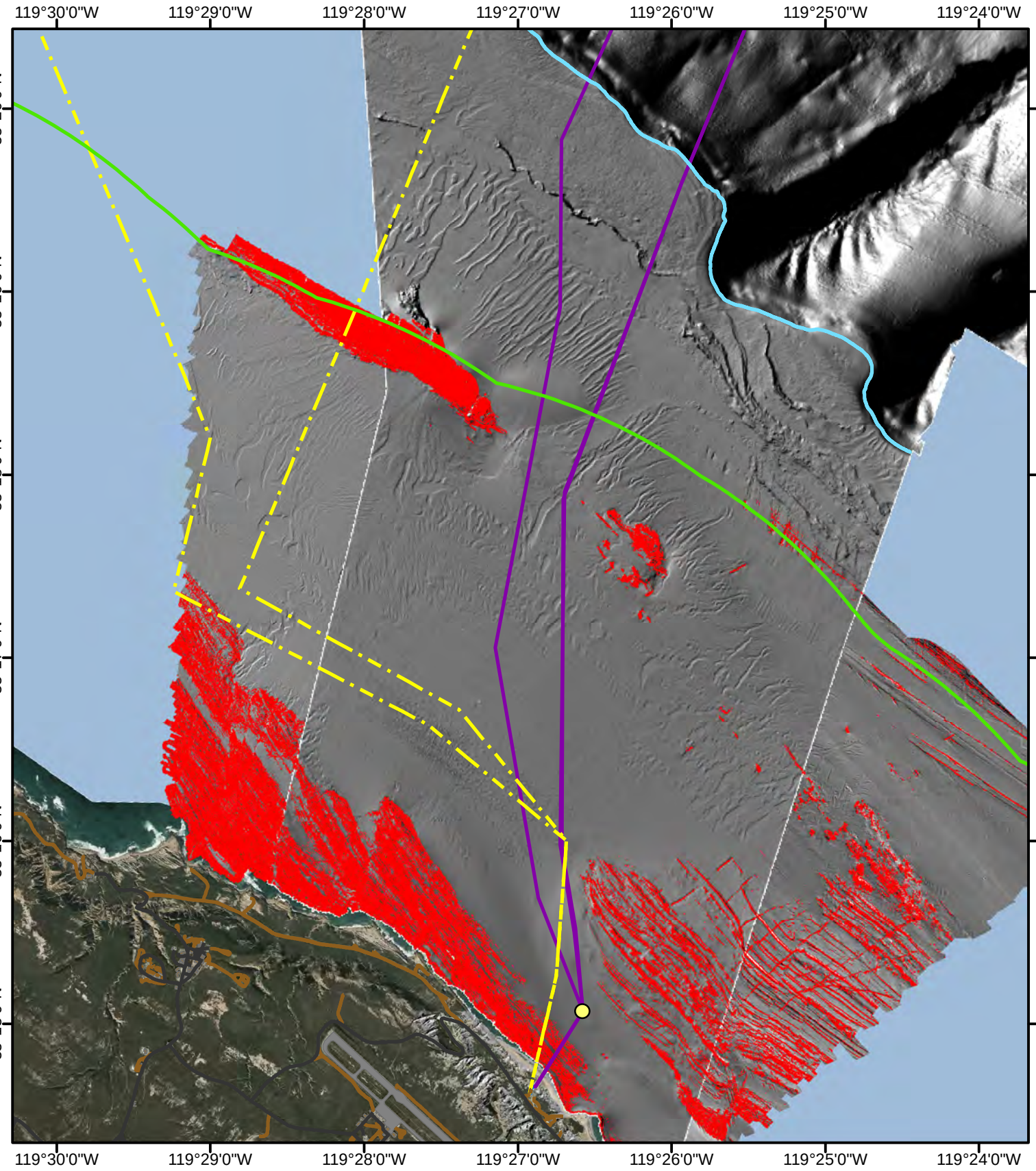

State Waters Boundary
Continental Shelf Edge
FOCUS I - Existing Cables
FOCUS II - Proposed
HDD Exit Point
Potentially Hard Substrate

FOCUS II Project
San Nicolas Island
Benthic Habitat Mapping

0 0.4 0.8 1.2 1.6 2 mi

0 0.5 1 1.5 2 km

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1:62,500

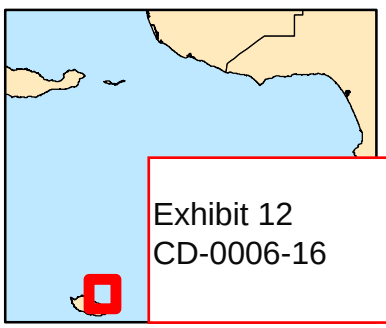
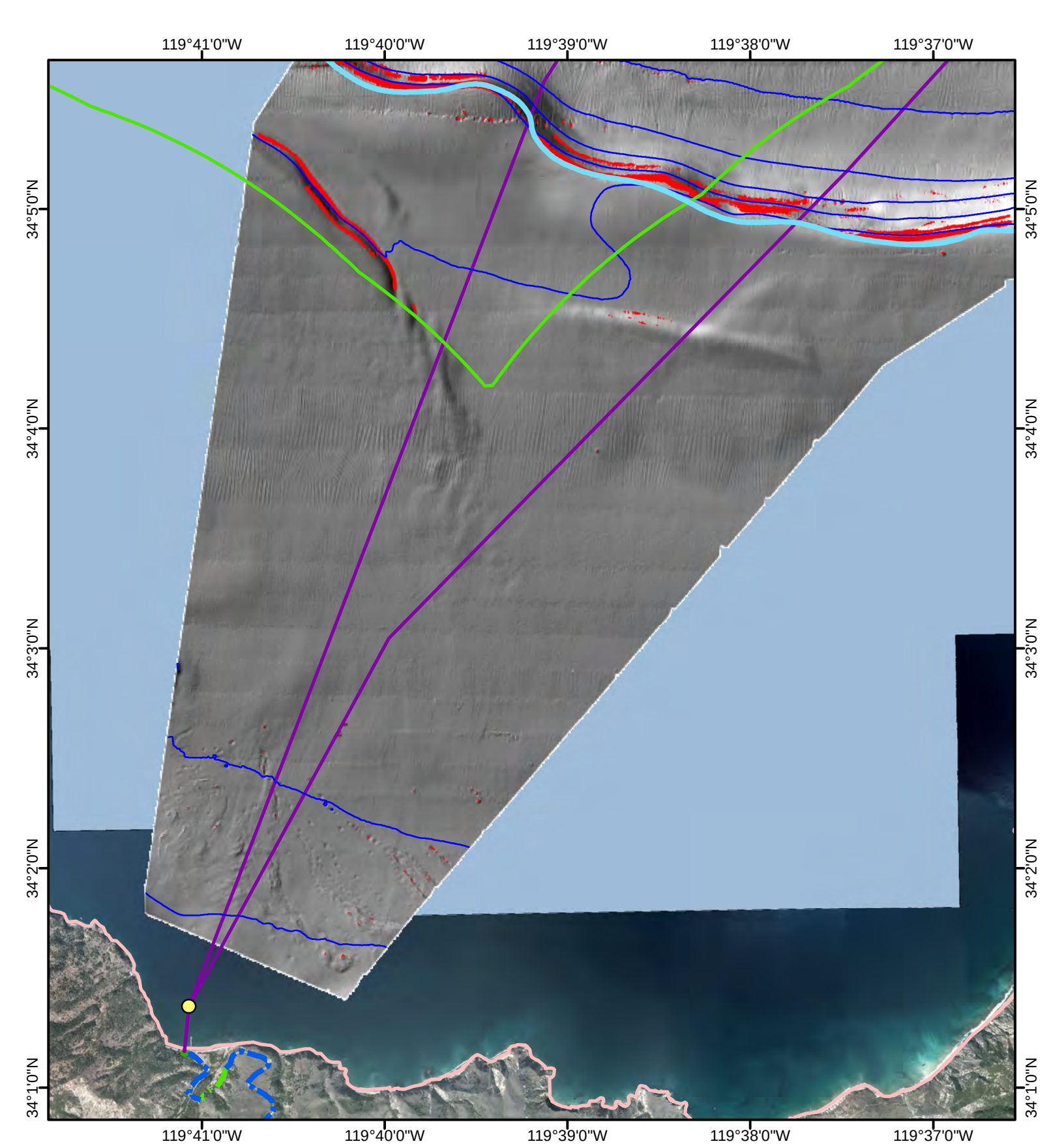


Exhibit 12
CD-0006-16



State Waters Boundary
Continental Shelf Edge
FOCUS I - Existing Cables
FOCUS II Proposed
HDD Exit Point
Potentially Hard Substrate

FOCUS II Project
Santa Cruz Island
Benthic Habitat Mapping

0 0.3 0.6 0.9 1.2 1.5 mi

0 0.5 1 1.5 2 km

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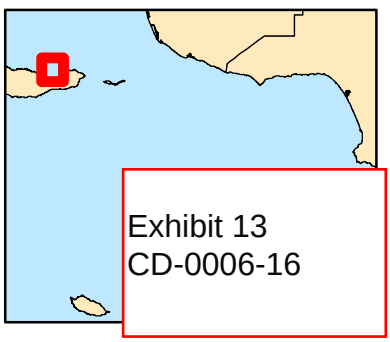

Exhibit 13
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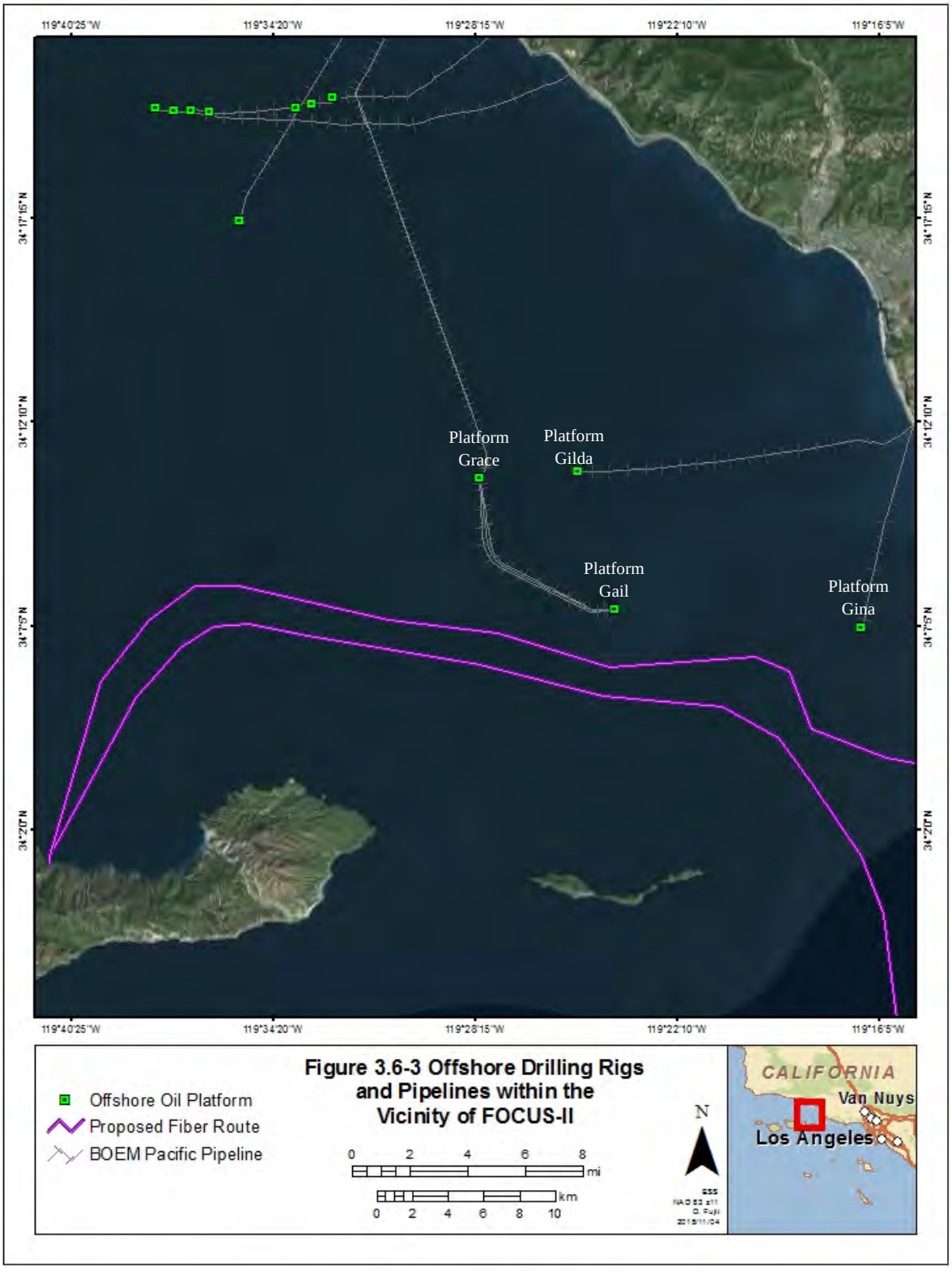
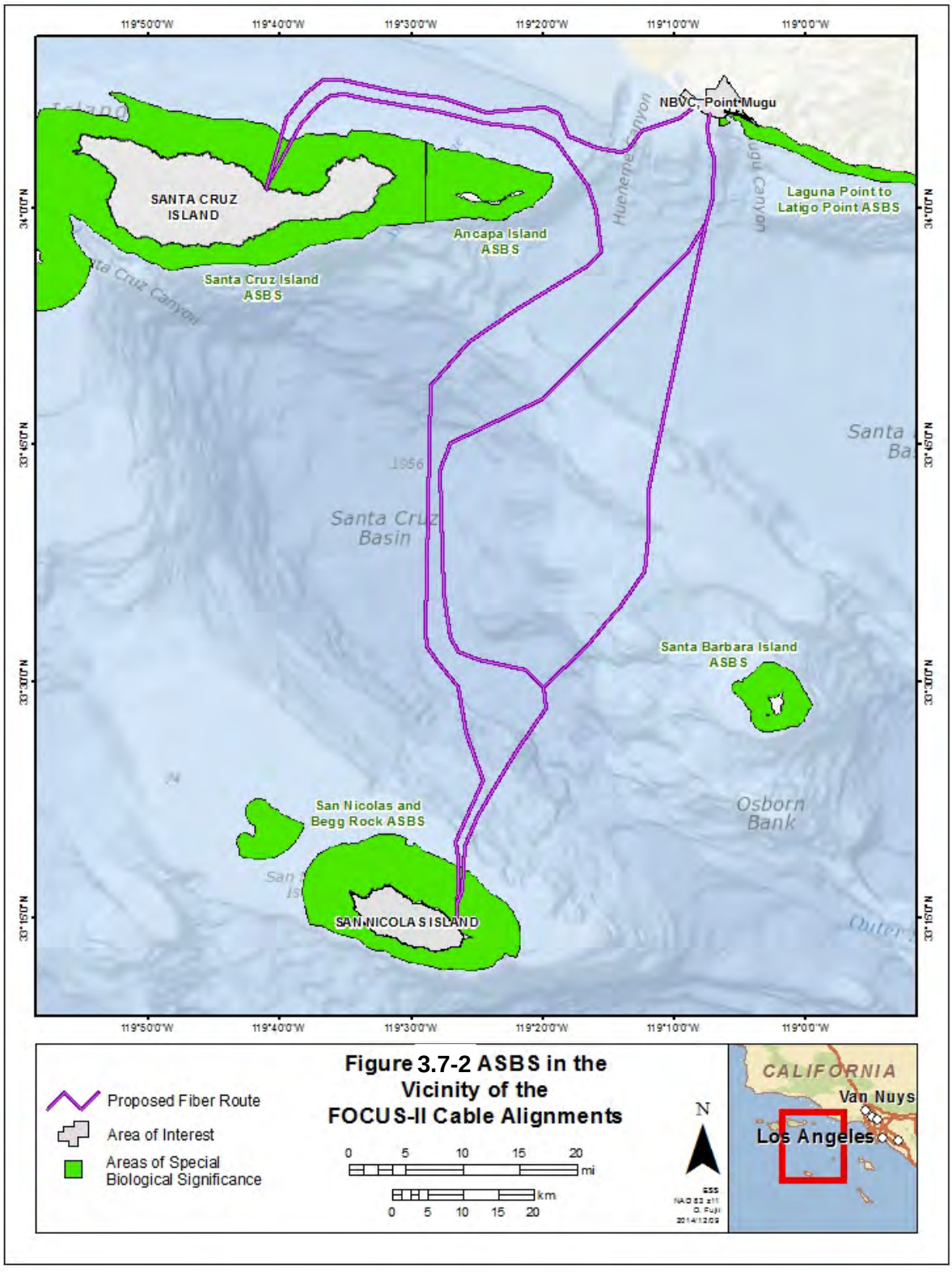


Figure 3.6-3 Offshore Drilling Rigs and Pipelines within the Vicinity of FOCUS-II

Exhibit 14
CD-0006-16



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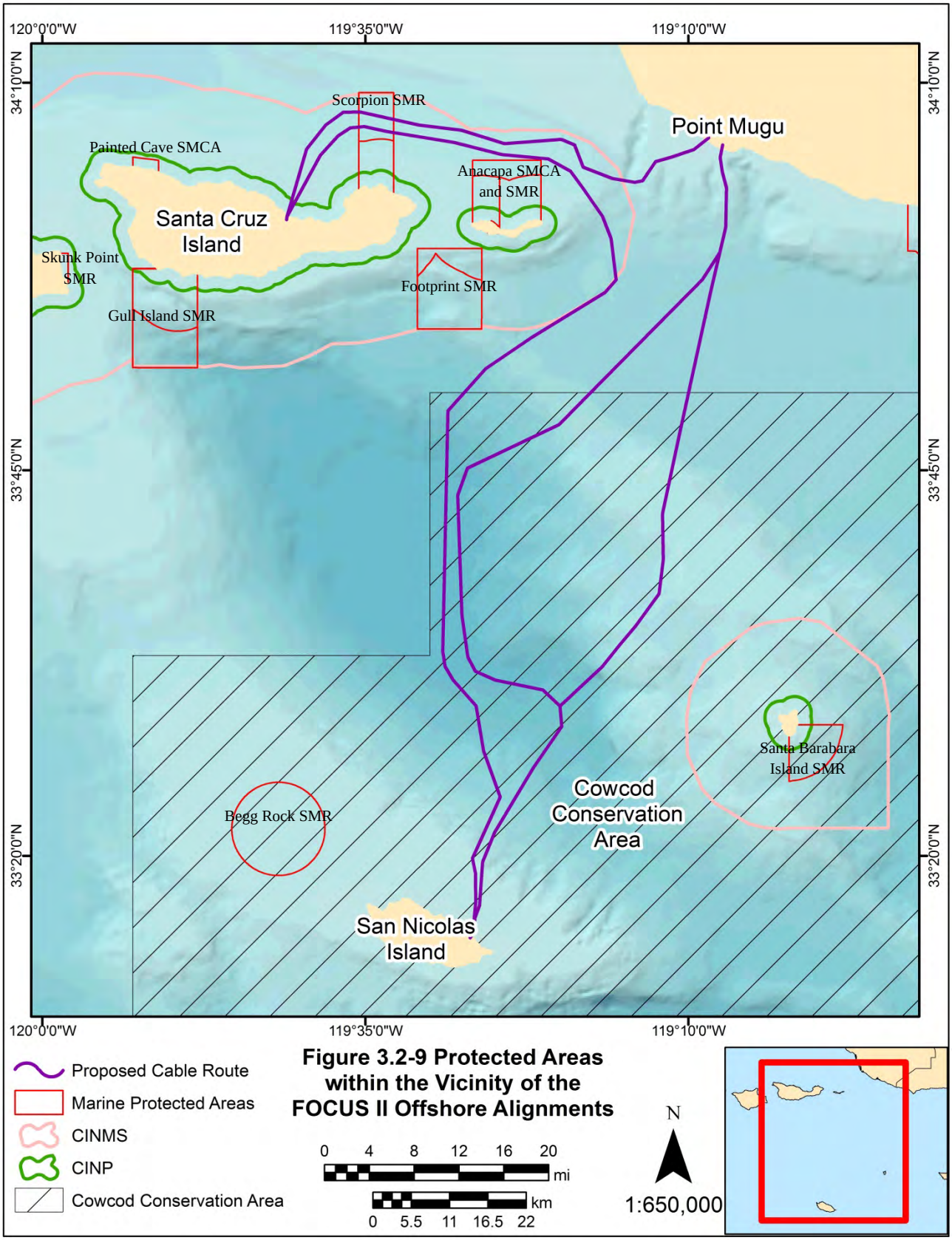

Figure 3.2-9 Protected Areas within the Vicinity of the FOCUS II Offshore Alignments

Exhibit 16
CD-0006-16

Figure 13 – Conservation Measures

The following conservation measures are proposed to protect air quality and sensitive terrestrial and marine species, including federally-listed terrestrial species:

1) Dependent upon the dryness of soil and wind conditions, ground disturbance areas may be watered to minimize fugitive dust generation.

2) Internal combustion engines will be turned off when not in use to minimize emissions of criteria air pollutants.

3) To avoid marine mammal and listed bird breeding seasons, HDD and construction activities will only occur between September 15 and January 31 at Point Mugu and between September 15 and 3 December 15 at SNI and SCrI.

4) Project vehicles and equipment will be restricted to existing concrete pads, leveled surfaces, HDD areas, and paved or dirt access roads.

5) NBVC Environmental Division will be made aware of any aircraft or barge shipments of equipment to SNI or SCrI to allow for needed biosecurity inspections, as specified in NBVC Instruction 5090.14.

6) All heavy equipment, vehicles, and waste containers will be power-washed prior to delivery to SNI or SCrI. Waste containers and dumpsters will be treated with disinfectant before leaving the mainland.

7) All materials being shipped to SNI and SCrI will be closely inspected and monitored to ensure that no soil, other seed-carrying matrix, insects, or other animals are delivered to the islands.

8) Pre-construction surveys and treatments for invasive weeds will be conducted at the Point Mugu, SNI, and SCrI project sites.

9) Once onshore FOCUS-II installation activities are completed, invasive weed surveys and treatments will be conducted at Point Mugu, SNI, and SCrI. These surveys and treatments will be applied after three weeks following the first rain event of the post-construction rainy season.

10) Shipments to SCrI will adhere to protocols described in the Channel Islands National Park (CINP) Biosecurity Protocols (CINP 2014a).

11) All personnel working on SNI or SCrI and people involved in delivery of project cargo will review biosecurity instructions and will adhere to all biosecurity measures.

12) Vessels delivering equipment and personnel to SNI and SCrI shall have armed bait boxes that are checked monthly. Also, sticky traps should be deployed on every boat and changed monthly.

13) Vessel decks will be washed clean between cargo runs. No soil or other debris should remain on a vessel.

14) If night-time operations are necessary, outdoor lighting will include shielding designs to ensure light entering adjacent nesting habitat is minimized.

15) Trash collection containers will be closed and tightly sealed to reduce attracting island fox and other wildlife.

16) Prior to commencing work on SCrI, a waste management and disposal plan will be developed by the construction contractor and submitted to the Navy and NPS for review.

17) Construction personnel will receive training regarding wildlife conservation measures to be applied at the project sites, including the importance of not feeding wildlife such as the island fox.

18) Open pits deep enough to trap island fox will be covered whenever construction operations are not underway.

19) Pipe ends between 2 and 6 in (5 and 15 cm) in diameter will be capped to ensure that island fox cannot be unintentionally trapped.

20) A Spill Prevention, Control, and Countermeasure Plan, developed by the construction contractor, will be in place to minimize the potential for an oil or hazardous substance spill, to prevent any spill from leaving the confines of the area and impacting listed species habitat, and to ensure that the cause of any spill is corrected.

21) Unless operationally necessary, personnel will not occupy the Charlie Pad, Coast Guard Jetty, or Prisoners Harbor construction areas between dusk and dawn and the area will remain dark (no artificial lighting) to reduce the potential for adverse impacts to listed species in adjacent natural habitat.

22) Erosion control best management practices (BMPs) (e.g., silt screens or other barriers) will be placed along Navy Road and offroad work areas on SCrI to protect sensitive biological resources including the island bedstraw (*Galium buxifolium*), the island manzanita (*Artostaphylos insularis*), and the Channel Island sweat bee (*Lasioglossum channelense*).

23) Prior to construction on SCrI, biologists will survey along Navy Road and offroad work areas for the island bedstraw, the island manzanita, and the Channel Island sweat bee and mark any known populations to ensure there is no take.

24) A qualified biologist will be required to monitor construction areas that have listed species with potential to be adversely affected in the immediate vicinity to ensure no impacts occur. If listed species are encountered, work will cease until it is ensured that no effect will result.

25) The Navy will coordinate with NPS to develop a plan to help avoid limitations on public pedestrian access to the Navy road during installation of the buried cable.

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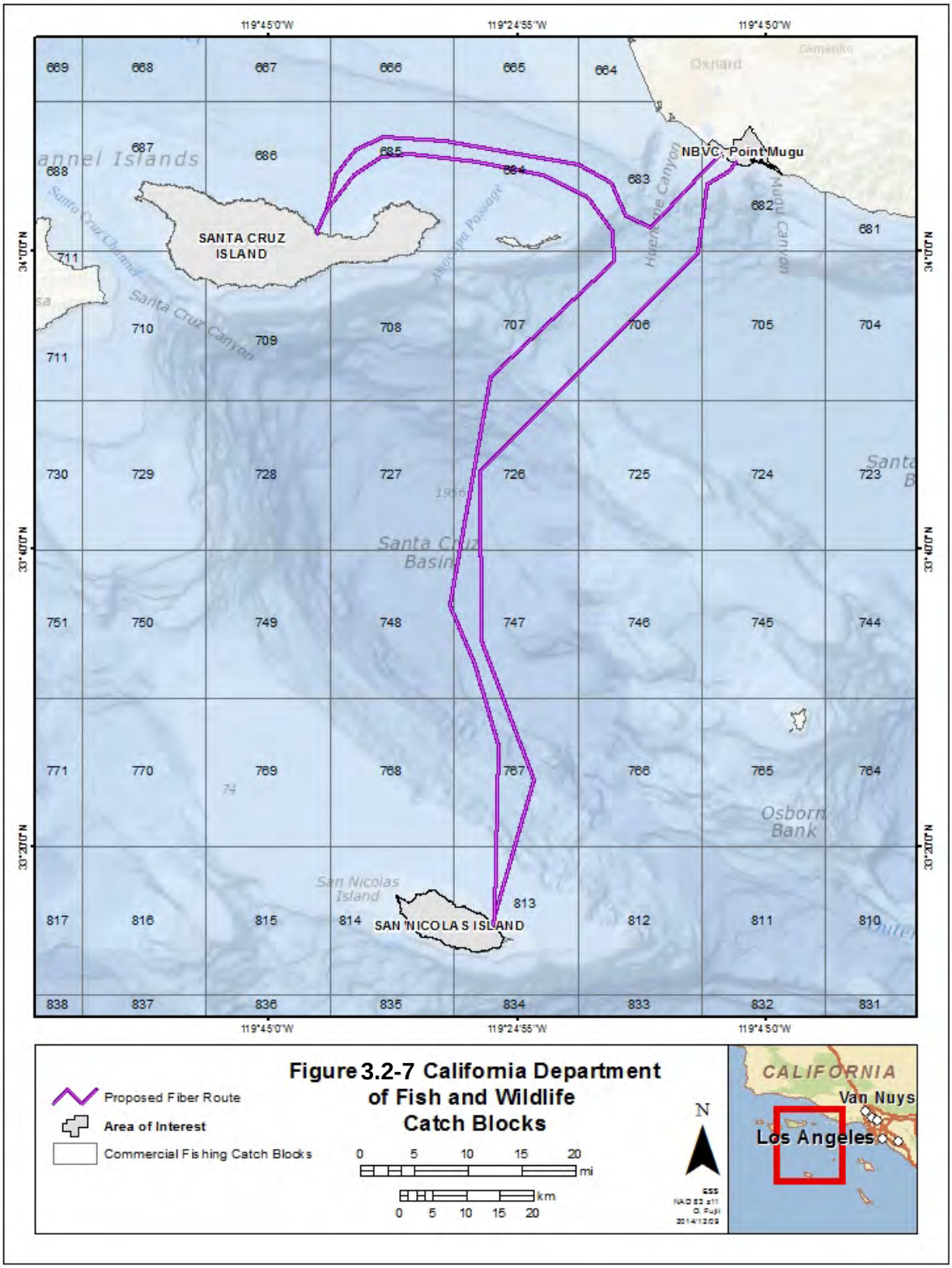

Figure 3.2-7 California Department of Fish and Wildlife Catch Blocks

Exhibit 18
CD-0006-16