CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105- 2219
VOICE (415) 904- 5200
FAX (415) 904- 5400
TDD (415) 597-5885

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STAFF RECOMMENDATION

ON CONSISTENCY DETERMINATION

Consistency Determination No.	CD-026-10
Staff:	LJS-SF
File Date:	4/28/2010
60th Day:	6/27/2010
75th Day:	7/12/2010
Commission Meeting:	6/11/2010

FEDERAL AGENCY: **National Park Service**

PROJECT LOCATION: Abbott's Lagoon, Point Reyes National Seashore, Marin Co. (**Exhibits 1 and 2**).

PROJECT DESCRIPTION: Restoration of coastal sand dunes by mechanical and hand removal of up to 133 acres of European beachgrass and iceplant from within a 300-acre project area along the shoreline south of Abbott's Lagoon.

SUBSTANTIVE FILE DOCUMENTS: See Page 17

STAFF RECOMMENDATION: Concurrence. Motion is on Page 7

EXECUTIVE SUMMARY

The National Park Service (NPS) has submitted a consistency determination for restoration of a 300-acre coastal sand dune complex located along the shoreline south of Abbott's Lagoon in Point Reyes National Seashore. Restoration is scheduled to occur between August 2010 and December 2011. This dune habitat is seriously threatened by encroachment of two invasive, non-native plant species – European beachgrass and iceplant. Over 70% (1,000 acres) of the Seashore's dune habitat is dominated by these species and they are rapidly spreading to other dune areas. Dense European beachgrass and iceplant patches preclude native plants from becoming established in the dunes, and alter sand dune structure and function by slowing sand movement, changing deposition patterns, and over-stabilizing the dunes. This in turn makes the dunes and the sensitive habitats and plant and animal species they support more susceptible to loss from sea level rise and erosion due to the inability to migrate naturally in response to changing environmental conditions along the shoreline.

The NPS proposes to remove approximately 130 acres of invasive plants from the project area using excavators and bulldozers and four alternative mechanical removal methods: horizon flipping, valley filling, dune pushing, and screening. In all these methods, plant materials would be excavated, buried, and capped with clean sand. Afterwards, most treatment areas would be roughly graded back to near pre-existing contours. Approximately 684,000 cubic yards of sand material would be moved during the mechanical removal of invasive vegetation and associated recontouring. Hand removal of invasive vegetation would take place where it is found in sensitive resource areas and will encompass approximately three acres of land. Ten follow-up treatments using a combination of hand removal and spot herbicide applications would occur over the following 18 months. Vehicle and equipment access to the project area will use existing dirt ranch roads. Minor grading and placement of gravel to stabilize sections of roads may occur; upon project completion, all gravel will be removed and pre-existing topography restored. Secondary access routes within the project area will be located to the maximum extent practicable in European beachgrass-dominated areas and away from sensitive habitat areas.

The restoration project is an allowable use in wetlands, is the least environmentally damaging alternative, and includes sufficient minimization, resource protection, and mitigation measures to ensure protection of wetland habitat found in the coastal dune complex. The project is consistent with the wetlands policy of the California Coastal Management Program (CCMP; Coastal Act Section 30233). The project is an allowable use under Section 30240 as a use dependent on environmentally sensitive habitat areas (ESHA). The project would restore ESHA and the form and function of coastal dunes along the shoreline south of Abbott's Lagoon. Although some elements of the restoration work hold the potential to cause short-term adverse effects on ESHA and listed plant and animal species, the project includes avoidance, protection, and mitigation measures that will minimize these effects. The project is consistent with the ESHA policy of the CCMP (Coastal Act Section 30240). The project includes construction methods and mitigation measures to protect water quality in and adjacent to the coastal dune complex, and the project is consistent with the water quality protection policy of the CCMP (Coastal Act Section 30231).

No public access would be allowed in the project area during restoration activities due to public safety concerns. However, because the areas targeted for mechanical removal of invasive vegetation are only infrequently visited due to the impenetrable nature of the European beachgrass monoculture, restoration work within the dunes will not adversely affect public access or recreation in this part of the Seashore. The restoration project may cause occasional and temporary restrictions on lateral access along the shoreline adjacent to the project area when mechanical equipment is working in the adjacent foredune. The project is consistent with the public access and recreation policies of the CCMP (Coastal Act Sections 30210, 30211, 30212(a), 30214(a), and 30220).

The project includes adequate provisions to protect any cultural resources that may be present in the project area or discovered during excavation and restoration activities, and as a result the restoration project would not adversely affect cultural resources within the Seashore. The project is consistent with the cultural resource protection policy of the CCMP (Coastal Act Section 30244). The proposed project includes coordination with adjacent ranch operators during and after restoration activities, and provisions for assessing the impact on cattle grazing from dune restoration and the potential future movement of dunes into grazing areas. The project is consistent with the agricultural land protection policies of the CCMP (Coastal Act Sections 30241 and 30242).

STAFF SUMMARY AND RECOMMENDATION

I. PROJECT DESCRIPTION. The National Park Service (NPS) proposes to restore coastal sand dunes along the shoreline south of Abbott's Lagoon in Point Reyes National Seashore (**Exhibits 1 - 3**). The 300-acre project area is bounded by the Pacific Ocean to the west, the G and Evans/AT&T Ranches to the east, the Evans Ranch and former AT&T communications facility to the south, and Abbott's Lagoon to the north. The NPS states that:

> *The Seashore preserves some of the last remaining high quality coastal dune habitat in the United States. However, this habitat is seriously threatened by the rapid encroachment of two invasive, non-native plant species, European beachgrass (Ammophila arenaria) and iceplant (Carpobrotus spp.). Over 70 % (1,000 acres) of the park's dune habitat is dominated by these species, and they are rapidly spreading to other areas.*
>
> *European beachgrass is particularly problematic at the Seashore. It was introduced to California in the late 1800s to help stabilize blowing sand dunes, which it does by spreading vegetatively by rhizomes. Iceplant . . . was introduced to California in the late 1800s also to stabilize dunes. This succulent spreads both vegetatively and by seed and is now found growing along the entire coast of California (NPS 2003).*

The Seashore's dunes provide habitat for eleven federally listed and several non-listed plant and animal species, and contain large expanses of two rare native foredune habitat types – American dunegrass and beach pea. These rare species and habitat types are threatened by displacement from the presence and spread of European beachgrass and iceplant, and from environmental

changes that will be exacerbated by these invasive plant species. The NPS reports that the dense beachgrass and iceplant patches:

> *. . . preclude native plants from becoming established and alter sand dune structure and function by slowing sand movement and changing deposition patterns. Rather than the natural pattern of free-moving dunes that form perpendicular to the beach, dunes dominated by European beachgrass or iceplant are large, stable, and form ridges parallel to the beach.*
>
> *This configuration prohibits sand movement and movement of animal species or seeds of native plants between fore and reardunes, reducing the amount of and quality of habitat available for native plants, dune beetles, plovers, and other native species. Altered foredunes effectively restrict breeding snowy plovers to a narrow strip of habitat between the high tide line and the lower edge of the dunes, the same narrow area of the beach used by visitors and dogs. Besides making nesting and chick rearing difficult, these densely vegetated dunes provide cover for predatory species that feed on plover eggs and chicks, as well as deer mice that eat the seed of Tidestrom's lupine. These impacts are some of the reasons that removal of European beachgrass and iceplant from dune habitat in the Seashore is part of the recovery plan for federally listed species occurring in these areas (U.S. Fish and Wildlife Service 1998a).*

The NPS also cites the susceptibility of the over-stabilized dunes at the Seashore to the effects of climate change, in particular sea-level rise, and the need to restore natural dune habitat and function to offset those effects:

> *With rising sea levels, there will be more frequent and more serious flooding of low-lying coastal areas by extreme tides, storm surges, and wave effects. Coastal dunes offer a buffer against extreme tides and storm surges. This buffering capacity, however, is minimized and potentially eliminated when dunes are over-stabilized by invasive plant species or other alterations. Over-stabilization makes dunes more susceptible to loss from erosion by not enabling them to move or migrate naturally in response to sea level rise and changes in erosional patterns. By removing invasive plant species, natural dune migration processes are restored, enabling dune systems to move and change in response to changes in sediment supply and sea level. This restoration effort helps to preserve these fragile and valuable ecosystems in the face of climate change and ultimately benefits many rare animals and plants, as well as humans.*

In November 2009 the Executive Director concurred with negative determination ND-070-09 for a 15-acre pilot dune restoration project at Abbott's Lagoon. The NPS successfully employed the same invasive species removal techniques in the pilot project that are proposed in the subject consistency determination. In addition, the Executive Director has previously concurred with other negative determinations at Point Reyes National Seashore for removal of European beachgrass and iceplant using mechanical and hand removal techniques and herbicide treatment (ND-031-08, ND-006-04). Given the existing condition of the coastal dunes south of Abbott's Lagoon, the adverse impacts from invasive plant species, and the success of the recent pilot dune restoration project, the NPS now proposes to remove up to 133 acres of European beachgrass and

iceplant from the 300-acre restoration project area. Mechanical removal using excavators and bulldozers of European beachgrass in approximately 130 acres of the project area would include the following methods:

- Horizon Flipping. Excavate the aboveground biomass, root crown, and rhizome-contaminated sand (total excavation of six feet in foredunes and three feet in backdunes) and burying these materials below a three-foot-thick cap of excavated clean sand at an adjacent site or a central burial location.

- Valley Filling. Push aboveground biomass and rhizome-contaminated sand down dune faces into existing swales or topographic depressions in the central and southern backdunes, and cap with four to six feet of clean sand taken from adjacent dunes. This method would reduce the exaggerated heights of European beachgrass stabilized backdunes while maintaining natural topographic low points between foredunes and backdunes.

- Dune Pushing. Push the aboveground biomass and rhizome-contaminated sand up and over the front face of a foredune and deposit as a uniform layer on the back side of the dune, followed by moving enough clean sand from the front face of the dune to create a three-foot-thick cap over the "dirty" sand and biomass.

- Screening. Use mobile or stationary equipment to screen the densest rhizome-contaminated sand. Through screening, the overall depth of excavation required to generate cap material is reduced due to the reduced volume of contaminated sand.

The NPS states that once mechanical removal is completed, treatment areas would be roughly graded back to near pre-existing contours, with some exceptions:

> *Lower-elevation foredune and higher-elevation backdune areas will be created in the same general location as they occur currently: the existing interdunal swale – or valley or low topographic area between foredune and backdune systems – would be left intact. Final grading of treated areas would aim to leave dunes and valleys such that they fall generally within the range of existing contours (e.g., Horizon Flip and Screening methods) or within the general range of elevations from lowest elevations (valleys, swales) to highest elevations (ridges) found in natural dune areas in the northern end of the Project Area or just north of Abbott's Lagoon outlet (e.g., Dune push and Valley Fill methods). Any slopes in treated foredunes and backdunes would be graded at no steeper than a 3:1 slope.*
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> *At least three to four partial blow-out areas would be created by creating holes or open areas in the foredune ridge that extend backwards towards the backdune system. Rough grading that leaves treated foredune and backdune elevations such that they fall within the range of natural elevations for that portion of the system is appropriate, even if the exact location of ridges and non-wetland swales is relocated (see Dune Push).*

The NPS states that there would be no removal of sand or soil from the project area and that total cut and fill operations would be balanced. The design engineers estimate that approximately 684,000 cubic yards of sand material would be moved during the aforementioned mechanical removal of invasive vegetation and associated recontouring of the dunes.

Hand removal of European beachgrass and iceplant would take place where they are found in sensitive resource areas (wetlands, native dune mat/scrub communities, designated rare plant areas) or within a 10-foot buffer surrounding mapped federally endangered plants. Hand-removed vegetation would be bagged and hauled to adjacent mechanical removal burial locations. No final grading would be required in hand-removal work areas, which will total approximately three acres.

After initial mechanical and hand removal work is completed, treated areas would be re-treated for approximately 18 months through a combination of spot herbicide treatment and hand removal, with only hand removal allowed in sensitive resource areas. Ten follow-up treatments would be performed at specified intervals with the first occurring six months after the initial treatment, followed thereafter by treatments every six to eight weeks. In hand removal areas, all plant materials would be bagged and disposed off-site in an approved disposal facility. In certain circumstances, the Seashore may consider burning the hand-removed materials under appropriate climatic conditions and if a burn plan was approved by the Seashore, Marin County, and the Bay Area Air Quality Management District.

Project management, jobsite trailers, parking, and materials storage would be located at the Seashore's North District Operations Center (NDOC) off of Sir Francis Drake Boulevard south of Abbott's Lagoon. The primary access route to the project area is an unimproved "two-track" road that starts near the NDOC facility and heads roughly west for one mile across flat grassland. Minor grading and gravel placement may be required in sections of this road to convey equipment to the project area. Where the road intersects the project area, a fenced quarter-acre staging area would be located for overnight parking of construction equipment, refueling work, materials storage, and construction crew parking. Minor grading and placement of gravel may occur at this site. Upon completion of the project, all materials would be removed from the staging areas and all access routes and staging areas will be restored through removal of gravel and re-establishment of pre-existing topography.

Within the project area, secondary access routes would be required for equipment access to specific restoration sites. One set of routes would traverse the project area running north to south along the backdune area, and other routes would provide access to foredune areas. All secondary access routes will be sited to avoid sensitive resource areas and wildlife restriction zones. For these reasons, secondary routes will be located to the maximum extent possible in European beachgrass-dominated areas, would not be improved but simply delineated with flagging until repeated use has made the routes obvious. Upon completion of the restoration project, these routes would be reclaimed to match surrounding conditions.

Restoration activities are scheduled to start in August 2010 and extend through December 2011. Work would occur between 7:00 AM and 6:00 PM Monday through Friday, with weekend work

permissible only under additional authorization by the NPS. The NPS undertook pre-restoration vegetation monitoring in the project area and adjacent native dune areas, and will follow-up with post-restoration vegetation monitoring. The monitoring effort focuses on success in removing invasive non-native plants, success in reestablishing native dune plant communities, and changes in sediment transport. In addition, the NPS will monitor the restoration of wetlands temporarily affected by enhancements to sections of existing dirt roads that provide access to the project area. The NPS will provide the Commission with results of the post-restoration monitoring work.

II. FEDERAL AGENCY'S CONSISTENCY DETERMINATION. The National Park Service has determined the project consistent to the maximum extent practicable with the California Coastal Management Program (CCMP).

III. STAFF RECOMMENDATION.

The staff recommends that the Commission adopt the following motion:

Motion: I move that the Commission **concur** with consistency determination CD-026-10 that the project described therein is fully consistent, and thus is consistent to the maximum extent practicable, with the enforceable policies of the California Coastal Management Program (CCMP).

Staff Recommendation:

The staff recommends a **YES** vote on the motion. Passage of this motion will result in an agreement with the determination 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 to Concur with Consistency Determination:

The Commission hereby **concurs** with the consistency determination by the National Park Service, on the grounds that the project described therein is fully consistent, and thus is consistent to the maximum extent practicable, with the enforceable policies of the CCMP.

IV. FINDINGS AND DECLARATIONS:

The Commission finds and declares as follows:

A. Wetlands, Environmentally Sensitive Habitat, and Water Quality. The Coastal Act provides the following:

Section 30233(a). 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:

. . .

(6) Restoration purposes.

. . .

Section 30231. The biological productivity 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 30240.

(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.

1. Wetlands. As described earlier in this report, the 300-acre restoration project area is comprised of rare, high quality coastal dune habitat that supports numerous listed plant and animal species. During the early 2000s, fencing was established on the inland (eastern) perimeter of the project area to keep grazing cattle from adjacent ranching operations out of the environmentally sensitive dunes and dune swale wetlands located within the project area (**Exhibit 6**). As part of the baseline environmental studies for the proposed project, the NPS conducted a wetland delineation to identify and map Coastal Act wetlands present in the project area. Based on the original delineation, and the verifications conducted in 2009 and 2010, the NPS determined that:

. . . approximately 44.2 acres of the Project Area and areas used for accessing the Project Area would qualify as . . . wetlands under the Coastal Act. Within the actual treatment area, there are approximately 11.3 acres of potential jurisdictional areas, with another 32.2 acres of potential CCC wetlands in the Project Area that are directly adjacent to the treatment area, but that will not be treated. These 32.2 acres would not be directly impacted by the proposed project through either treatment or access. Approximately 0.64 acres of potential CCC wetlands occur near or on the proposed access routes . . .

> *Because of the mesic climate within the Point Reyes region, many of the inter-dunal swales or valleys in the Project Area support hydrophytic vegetation and would, therefore, appear to qualify under the one-parameter criterion established by the CCC as areas potentially subject to oversight by the CCC as wetlands (Figure 4). However, some of these areas may not function as wetlands, because they lack natural wetland hydrology and/or hydric soils. A substantial amount of these "drier" areas were inter-dunal swales dominated by rush (Juncus leseurii), but which also supported species such as European beachgrass (NL), sedge (Carex dudleyi;NL), and coyote brush (NL). For the purpose of this analysis, all areas that support hydrophytic vegetation were considered areas subject to potential oversight by the CCC as wetlands under the Coastal Act.*

The NPS states that the primary purpose of the proposed project is to restore natural dune processes and functions:

> *As dunes that are not stabilized by species such as European beachgrass or iceplant are prone to episodic periods of mass sediment transport, it is likely that some of the current wetlands would be filled naturally over time. However, these wetlands would likely regenerate in new locations in areas where sand movement leaves new basins or inter-dunal swales. These wetlands would continue to provide habitat for wildlife, as well as filtering localized waters from precipitation and groundwater flow, although most of these wetlands are sustained through saturation of soils and a high groundwater table, not perching of surface water flows or precipitation that would lead to surface inundation.*

The consistency determination examines the expected impacts, both temporary and permanent, to wetlands located in the project area:

> *The proposed project would not involve excavation or permanent fill in coastal waters and wetlands. There could potentially be some temporary impacts associated with construction of access roads to the southern portion of the Project Area, as the existing two-track ranch road crosses through two wetland areas, and these areas may need to be temporarily stabilized for use by construction equipment accessing the southernmost foredune areas and backdune areas (Figure 5)* **(Exhibit 4)**. *Temporary fill would not be expected to exceed 0.38 acres and would be required to be removed completely at the end of construction. Contractors would be encouraged to stockpile and stage from upland areas to the maximum extent practicable and to avoid temporary fill, if at all possible. Impacts to this area have already been minimized by excluding it from consideration as the primary access route and slightly rerouting the alignment to avoid habitat of federally endangered plant species and other wetlands.*
>
> *. . . movement of dunes once European beachgrass and iceplant are removed could cause indirect fill and loss of existing dune swale wetlands, although these are expected to be replaced to some degree by creation of new "basins" or inter-dunal swales where soil saturation or depth to groundwater is sufficient to promote establishment of areas subject to oversight by the CCC as wetlands.*

As the proposed restoration project includes excavation and fill of coastal waters and wetlands, the project must pass the three-part test of Coastal Act Section 30233(a): it must be an allowable use, it must be the least environmentally damaging feasible alternative, and it must include mitigation measures to minimize environmental effects. The purpose of the project is to remove restore coastal dune habitat and function along a shoreline segment in Point Reyes National Seashore. The Commission finds that the project is therefore an allowable use under Section 30233(a)(6).

The NPS has determined that removal of invasive, non-native vegetation is required in order to restore coastal dune ecosystem function and form. The NPS recently carried out a successful pilot restoration project in the project area to test the effectiveness of vegetation removal techniques (ND-070-09). Based in part on that pilot project, and on other invasive plant removal projects at Point Reyes National Seashore (ND-031-08 and ND-006-04), the NPS proposes using several mechanical vegetation removal alternatives in the project area. Implementation of each alternative will be guided by the type and location of dune (e.g., foredune, backdune), the height and slope of the dune, presence of wetlands and listed species, and the objective to minimize adverse effects to adjacent sensitive habitat and species. The Commission agrees with the NPS that the proposed restoration plan is the least environmentally damaging alternative to restore coastal dune form and function. Concerning the mitigation test, the Commission finds that the proposed project meets this test because it includes sufficient minimization and mitigation measures (described in Section A.3 below) to restore and protect wetland habitat in the project area, including the restoration of all temporarily impacted wetland areas along project access routes and the avoidance of permanent wetland impacts during mechanical removal of invasive vegetation. Therefore, no additional mitigation measures are required.

2. Environmentally Sensitive Habitat. In addition to wetland habitat, the project area is an environmentally sensitive habitat area given that it is a rare coastal sand dune ecosystem (**Exhibit 5**). The NPS states that no permanent development would occur in the habitats of rare or endangered species or unique plant communities, but that certain restoration actions would occur in habitats of special status species. The NPS completed formal Section 7 consultation under the Endangered Species Act with the U.S. Fish and Wildlife Service for the proposed dune restoration project. The consistency determination provides a description of the plant and animal species that are supported by this dune system:

> *The Project Area supports a number of federally and non federally listed animal and plant species, most notably, the federally threatened western snowy plover, the federally endangered Myrtle's silverspot butterfly, two federally endangered plant species (Tidestrom's lupine and beach layia), and numerous plant species listed by the CNPS. The federally threatened California red-legged frog and the federally endangered Sonoma alopecurus technically occur more on the perimeter of the Project Area within wetlands in grazed pastures, although some non-breeding habitat for the former may occur in the Project Area directly.*

> *Snowy plovers nest all along the Point Reyes Great Beach, including within the nearshore habitats just oceanward of the foredunes. Myrtle's silverspot butterfly has been documented to occur within the Project Area, as well. Tidestrom's lupine and beach layia occur in dune mat vegetation communities between the foredunes and backdunes and in other isolated pockets within the Project Area, along with a sizeable number of other CNPS-listed species such as San Francisco spineflower and curly leaved monardella. Additional CNPS-listed species occur in the grasslands bordering the Project Area, including Point Reyes horkelia, Point Reyes blennosperma, rose leptosiphon, large-flowered leptosiphon, blue coast gilia, dark-eyed gilia, and short-leaved evax. Grassland areas also support western dog violet, one of the primary larval host plants for the Myrtle's silverspot butterfly.*

The consistency determination next explains how the proposed project will benefit the environmentally sensitive habitat and the sensitive plant and animal species present in the project area:

> *Ultimately, the proposed project would significantly benefit most, if not all of, these species. European beachgrass directly displaces habitat for species such as Tidestrom's lupine, beach layia, and other rare plants and, to a lesser degree, snowy plover. In addition to direct impacts, it has substantial indirect impacts by creating habitat for predators of plover and of lupine seed: ravens and deer mice both use European beachgrass for cover. It also limits the extent of dune mat vegetation communities, many of which represent important nectar sources for Myrtle's silverspot butterfly. European beachgrass also decreases the quality of non-breeding habitat for California red-legged frog and foraging habitat for snowy plovers, because it limits or eliminates blow-outs used by plovers for foraging. While the project itself may have no direct benefits to grassland rare plant species, extensive measures undertaken to ensure that access and staging areas avoid rare plants, wetlands, and western dog violet occurrences – and that construction traffic does not inadvertently cross through these areas through flagging and fencing – would minimize potential impacts during construction.*

The proposed restoration project is an allowable use under Coastal Act Section 30240 as the on-site coastal dune restoration activity is a use dependent on the resources of this environmentally sensitive habitat area. The project would restore ESHA by eliminating invasive, non-native vegetation and restore coastal dune function and form, thereby providing more natural habitats for the numerous listed plant and animal species present in the project area. Although some elements of the restoration work may have short-term adverse effects, the project includes avoidance and protection measures that will minimize any significant adverse effects.

3. Avoidance and Protection Measures. The NPS has incorporated into the restoration project numerous measures designed to avoid and minimize impacts to wetlands and other environmentally sensitive habitat, plant and animal species, and water quality in and adjacent to the project area, including the following:

- Sequencing of construction activities would be subject to limitations imposed by requirements of the NPS's Biological Opinion with the U.S. Fish and Wildlife Service.

Construction, including hand removal, cannot be conducted: (1) in the foredunes or beach area between March 1 and September 15; (2) within the 100-foot buffer of California red-legged frog habitat before July 31 and after December 31; (3) in the designated rare plant secondary access route area after the first season of construction; (4) within 500 feet of an active snowy plover nest; 100 feet of nesting or breeding birds between March 15 and August 1; and 25 feet of observed butterflies.

- Wildlife Restriction Zones would be designated with lathe and flagging or fencing to maintain them as off-limits to construction equipment. When construction equipment moves near these areas, lathe and flagging would be replaced by construction fencing, except near the California red-legged frog habitat where trenched and buried silt fence would be used instead to minimize movement of frogs into the project area.

- Certain task elements would require performance of pre-construction clearance surveys and, in some cases, daily monitoring for special status species by qualified biologists. The last survey shall occur no more than one week prior to the start of construction in that area; California red-legged frog surveys must occur within 48 hours of construction start. In addition to established Wildlife Restriction Zones for western snowy plovers and red-legged frogs based on historic occurrences, should any special status species be found during these surveys, additional areas may require construction restrictions, including the establishment of buffers in which no work can be conducted until the end of the construction avoidance period.

- Sensitive resource areas (e.g., wetlands, rare plant areas, dune mat areas) would be off-limits to all mechanical equipment with the exception of one crossing area to allow access to the northern portion of the backdune area, and only during the first construction season. The only activity that can occur in sensitive resource areas is hand removal of European beachgrass and iceplant. When mechanical work is occurring adjacent to sensitive resource areas, silt fencing will be installed to ensure that soils do not move into these areas.

- Rare plants, including federally endangered species and those with a higher priority listing by CNPS or the Seashore, require a 10-foot buffer in which no mechanical removal is allowed. Rare plant mapping of the project area was updated in 2009 and 2010 to better locate sensitive resource areas, buffers, and primary and secondary access roads. Grassland areas east of the treatment areas were surveyed in spring 2010 so that the primary access route and staging areas would avoid rare plants and wetlands.

- No herbicide treatment can be conducted within 10 feet of rare plant and dune mat communities, within 25 feet of wetlands and Myrtle's silverspot butterfly larval habitat (e.g., primarily patches of western dog violet), and within 25 feet of any adjacent grasslands managed as organic pastures, including the G Ranch and the Evans/AT&T Ranches. Herbicide application would not be performed when maximum wind speed exceeds 10 mph, when rain has occurred within the past 24 hours or is anticipated to

occur within the next 24 hours, or when temperature exceeds 90 degrees Fahrenheit. Backpack sprayers would be used with directed, calibrated nozzles.

- Between June 15 and August 31, all construction traffic must maintain a 10 mph speed limit on all primary and secondary access routes to minimize impacts to adult Myrtle's silverspot butterfly.

- The contractor will develop and maintain an NPS-approved Spill Prevention and Response Plan. At a minimum, this plan will require that staging, storage, and refueling areas and any equipment repair or similar activity take place when equipment is at least 100 feet from any sensitive resource area or creek, pond, ocean, lagoon, or other waterbody or area subject to restriction due to special status wildlife. Refueling would only occur in areas approved by the NPS. Staging and storage areas would only occur in designated areas.

4. Conclusion. The Commission finds the restoration project is an allowable use in wetlands, is the least environmentally damaging alternative, and includes sufficient minimization, resource protection, and mitigation measures to ensure protection of wetland habitat found in the coastal dune complex. Therefore, the Commission finds that the project is consistent with the wetlands policy of the California Coastal Management Program (CCMP; Coastal Act Section 30233). The Commission finds the project is an allowable use under Section 30240 as a use dependent on environmentally sensitive habitat areas (ESHA). The project would restore ESHA and the form and function of coastal dunes along the shoreline south of Abbott's Lagoon. Although some elements of the restoration work hold the potential to cause short-term adverse effects on ESHA and listed plant and animal species, the project includes avoidance, protection, and mitigation measures that will minimize these effects. The Commission determines that this project is consistent with the ESHA policy of the CCMP (Coastal Act Section 30240). The project includes construction methods and mitigation measures to protect water quality in and adjacent to the coastal dune complex, and the Commission finds that the project is consistent with the water quality protection policy of the CCMP (Coastal Act Section 30231).

B. Public Access and Recreation. The Coastal Act provides the following:

Section 30210. In carrying out the requirement 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 form overuse.

Section 30211. Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212(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, (2) adequate access exists nearby . . . .*
>
> Section 30214(a). *The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:*
>
> *(1) Topographic and geologic site characteristics.*
>
> *(2) The capacity of the site to sustain use and at what level of intensity.*
>
> *(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.*
>
> Section 30220. *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

The consistency determination states that the primary public access available within or adjacent to the restoration project area is at Abbott's Lagoon and along the Great Beach (**Exhibit 2**):

> *The Seashore encourages responsible public access as long as it does not impact natural resources. To that end, the Seashore has undertaken or is undertaking efforts to improve sections of the Abbott's Lagoon Trail to reduce impacts to wetlands and potential rare plant habitats* (ND-029-08). *It also conducts a docent program during snowy plover nesting season to educate visitors about potential impacts from trampling around plover nests during the nesting season and illegal presence of dogs, which might harass adult and juvenile plovers. Because of the difficulty of walking in European beachgrass-dominated dunes, public access is minimal in the Project Area and is not encouraged in adjacent ranching operation areas . . . .*

The NPS states that no public access would be allowed in the project area during restoration activities due to public safety concerns. The NPS also reported that because the areas targeted for mechanical removal of invasive vegetation are only infrequently visited due to the impenetrable nature of the European beachgrass monoculture, it concluded that restoration work within the dunes will not adversely affect public access or recreation in this part of the Seashore. The only constraints on public access would potentially involve temporary restriction of foot traffic if construction equipment is working along the beach while restoring the foredune. The Seashore already restricts foot traffic along the shoreline in this area during snowy plover nesting season (March 1 – September 15) to some degree through a request that visitors limit impacts to nesting snowy plovers from trampling and illegal dog use. During restoration work, access to the shoreline via the Abbott's Lagoon Trail would remain available to the public as would the ability to walk along the shoreline south of the lagoon, except possibly in this latter location during time periods when heavy equipment is working in the adjacent foredune. The

Commission agrees with the NPS that the proposed coastal dune restoration project would lead to only occasional and temporary restrictions on lateral access along the shoreline adjacent to the project area, and that these restrictions are appropriate under Coastal Act Section 30214(a). The Commission therefore finds that the proposed restoration project is consistent with the public access and recreation policies of the CCMP (Coastal Act Sections 30210, 30211, 30212(a), 30214(a), and 30220).

C. Cultural Resources. The Coastal Act provides the following:

> *Section 30244. Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

The consistency determination reports that archaeologically significant resource areas are present in the project area. The NPS has consulted with the State Historic Preservation Office regarding the proposed restoration project and the measures required to protect cultural resources. The consistency determination states that:

> *The NPS would provide contractor education on cultural resource restrictions prior to construction start. Archaeological monitoring during the construction period would also be conducted. A representative of the Federated Indians of Graton Rancheria (FIGR) or another cultural resource specialist acceptable to FIGR and the NPS would periodically inspect (once a week) ongoing excavation areas throughout construction. Certain areas within the Project Area have been designated as Archaeologically Significant Resource Areas (Figure 3). Particular care would be taken during excavation in these areas. If any items of potential cultural or archeological significance are encountered during excavation operations, construction within this area would be halted immediately, and the contractor would notify the construction manager or NPS representatives, who would contact Gordon White, Chief of Cultural Resources for the Park Service.*

The consistency determination includes information that identifies two areas within the restoration project area that are of archaeological significance – in the extreme southwest corner near the shoreline and in the northeast corner near Abbott's Lagoon (**Exhibit 5**). The proposed project includes adequate provisions to protect any cultural resources that may be present in the project area or discovered during excavation and restoration activities. The Commission agrees with the NPS that that the proposed coastal dune restoration project would not adversely affect cultural resources within the Seashore. The Commission therefore finds that the proposed restoration project is consistent with the cultural resource protection policy of the CCMP (Coastal Act Section 30244).

D. Agricultural Resources. The Coastal Act provides the following:

> *Section 30241. The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the area's agricultural economy . . .*

> *Section 30242. All other lands suitable for agricultural uses shall not be converted to nonagricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.*

The consistency determination reports that the Seashore and the Golden Gate National Recreation Area (GGNRA) share a *General Management Plan* (NPS 1980) which uses three zoning designations to guide Seashore and GGNRA management – Natural Resource Zone, Historic Zone, and Special Use Zone. The Natural Resource Zone covers pastoral lands, natural landscape areas, sensitive resources, designated wilderness and marine reserves. The Natural Resource Zone contains two management zones that are pertinent to the proposed coastal dune restoration project – the Pastoral Landscape Management Zone and Special Protection Zone. Approximately 19,000 acres of the northern Point Reyes Peninsula of the Seashore have been retained in agricultural production within the pastoral zone that supports beef and dairy production.

The consistency determination also states that:

> *The current GMP indicates that, at a minimum, agricultural buildings and open grasslands will be retained in these areas, and, where feasible, livestock grazing will continue within the limits of carefully monitored range capacities (NPS 1980). This plan acknowledged, however, that future resource management studies could significantly alter the configuration of this zone. Some of these studies could indicate that continuation of agricultural production on certain lands may not be compatible with resource protection . . .*

The NPS reports that the restoration project area is located in coastal sand dunes which are no longer used for cattle grazing but that two beef cattle grazing ranches border on the project area: G Ranch and Evans/AT&T Ranches (**Exhibit 6**). The consistency determination examines potential impacts from dune restoration construction activities on adjacent agricultural operations:

> *Primary access routes and staging areas would be sited in areas grazed by cattle, but displacement of cattle is expected to be temporary, and every effort would be made by the Park Service to restore the area to previous grazing conditions once the project is complete. The contractor would be required to install and maintain fencing and gates to keep cattle out of the Project Area during and after construction, as well as to maintain and repair gates at Sir Francis Drake Boulevard. Based on discussions with the County of Marin and the ranchers, a 25-foot buffer would be established between areas where spot applications of herbicide is used to re-treat European beachgrass removal areas and adjacent organic pastures. Within these buffers, only mechanical or hand removal would be used during either initial or follow-up treatment.*

The consistency determination also examines potential long-term impacts on grazing operations should dune restoration lead to expansion or movement of dunes:

> *Under the approved EA and FONI, the Park Service proposed as part of its mitigation program to monitor accumulation of sands at the landward edge of the dune system to determine whether European beachgrass removal causes accelerated transgression of sands or dune formations into adjacent grazing lands. Any impact to the grazing value of adjacent lands from increased mobility of dunes would be taken into account during the permitting process conducted every five (5) years. Most of these adjacent areas already support sparse grass cover and forage due to the very sandy nature of the soils and are often dominated by shrubs such as coyote brush and lupine . . . .*

The NPS concluded that the proposed restoration project would have no or minimal effect on adjacent agricultural uses, and that while the proposed project could result in some encroachment of dunes into areas currently open to grazing (albeit sparsely grazed), the Seashore is committed to continuation of its historic agricultural landscape. The proposed project includes coordination with adjacent ranch operators during and after restoration activities, and provisions for assessing the impact on cattle grazing from dune restoration and the potential future movement of dunes into grazing areas. The Commission agrees with the NPS that the proposed coastal dune restoration project would not adversely affect the viability of existing ranching operations on lands bordering the project area or on other agricultural lands within the Seashore, the adjacent GGNRA, or privately-owned agricultural lands within the coastal zone in Marin County. The Commission therefore finds that the proposed restoration project is consistent with the agricultural land protection policies of the CCMP (Coastal Act Sections 30241 and 30242).

SUBSTANTIVE FILE DOCUMENTS:

1. Negative Determination ND-070-09 (Pilot Dune Restoration Project south of Abbott's Lagoon, Point Reyes National Seashore, Marin Co.)
2. Negative Determination ND-031-08 (Iceplant removal, Point Reyes National Seashore, Marin Co.)
3. Negative Determination ND-029-08 (Repair of Abbott's Lagoon Trail, Point Reyes National Seashore, Marin Co.)
4. Negative Determination ND-006-04 (European beachgrass removal, Point Reyes National Seashore, Marin Co.)

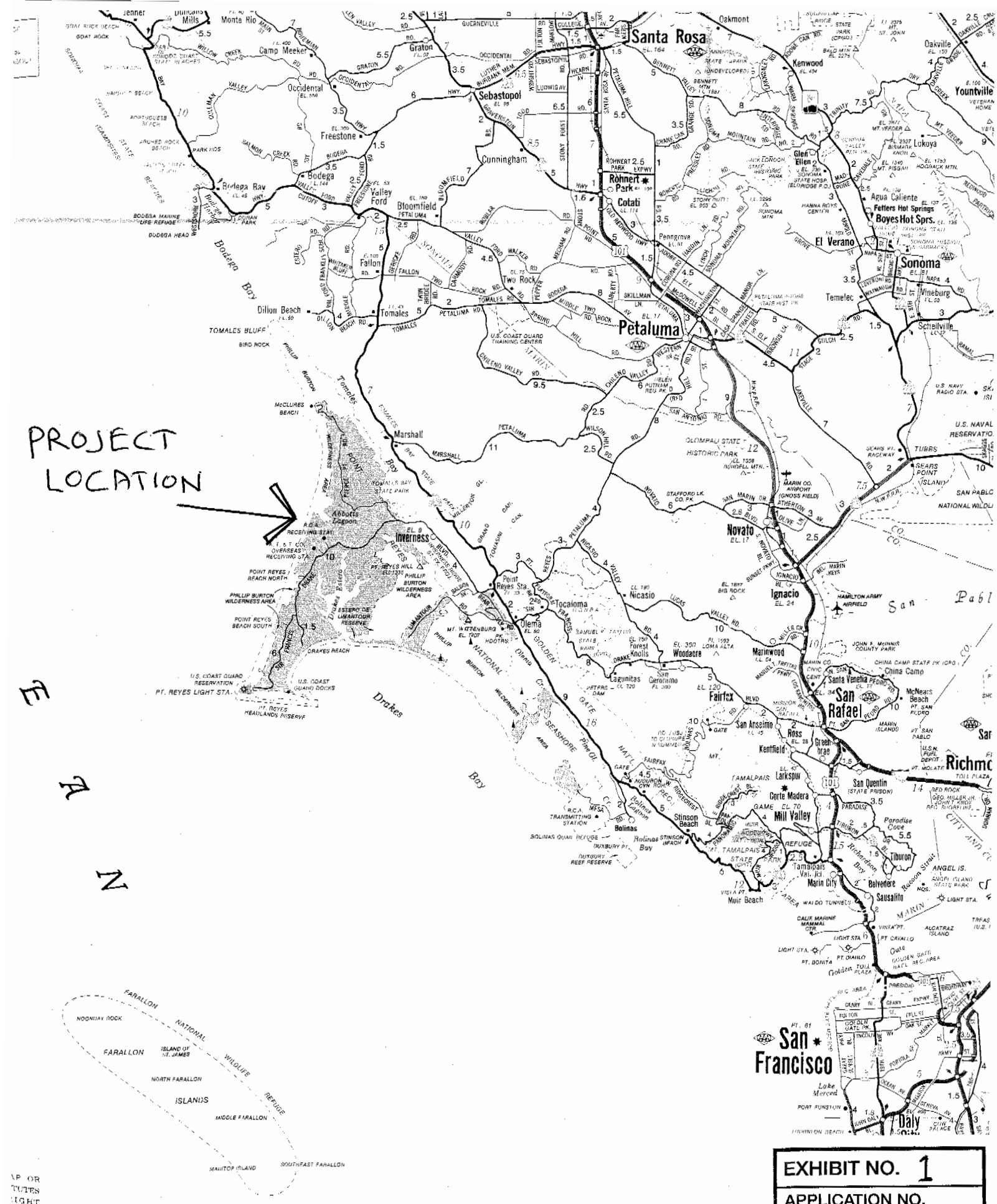
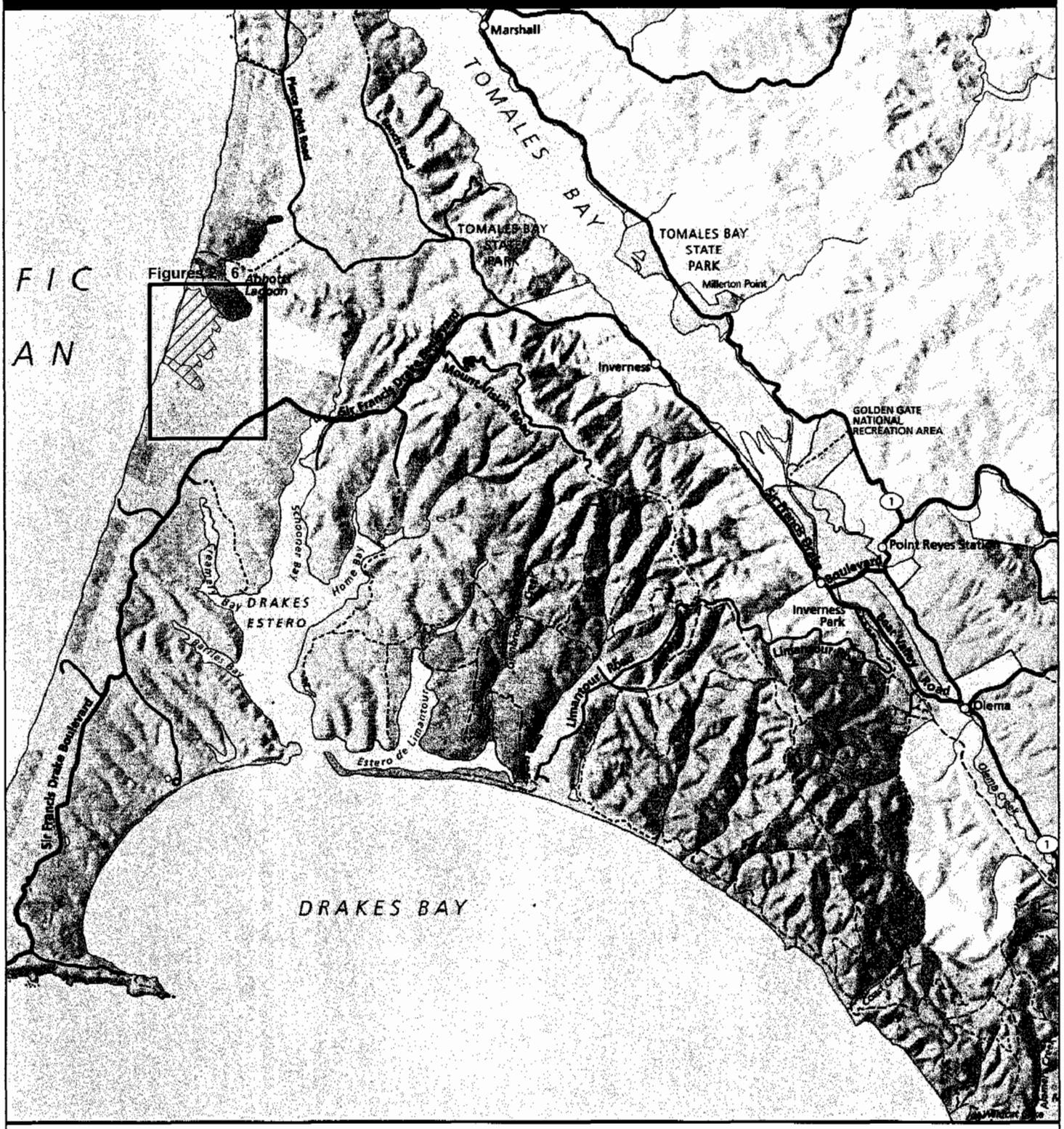


EXHIBIT NO. 1
APPLICATION NO.
CD-026-10

FOR ADJOINING AREA SEE PENINSULA POINTS MAP

Restore Critical Dune Habitat to Protect Threatened and Endangered Species
Pt. Reyes National Seashore



National Park Service
Point Reyes National Seashore
Marin County, CA

Miles
0 0.75 1.5 2.25 3 3.75

N

Figure 1. Project Area

Legend
Project Area

EXHIBIT NO. 2
APPLICATION NO.
CD-026-10

S:\GIS\projects1\Dune_restoration\Wetland Delineation 2009\CCC Graphics\Fig1_Locality_Map.mxd
For submission to California Coastal Commission

Restore Critical Dune Habitat to Protect Threatened and Endangere

Point Reyes National Seashore

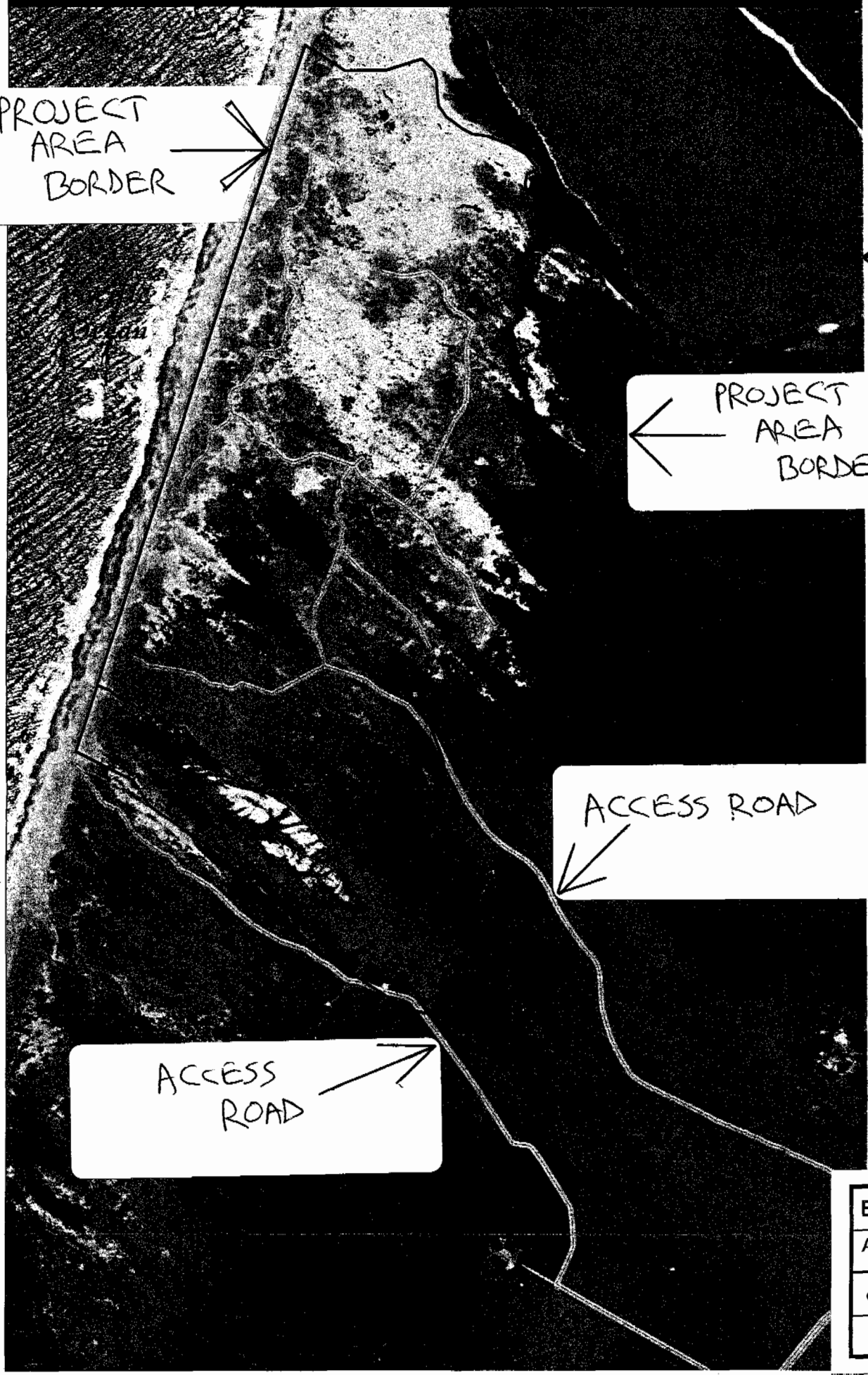
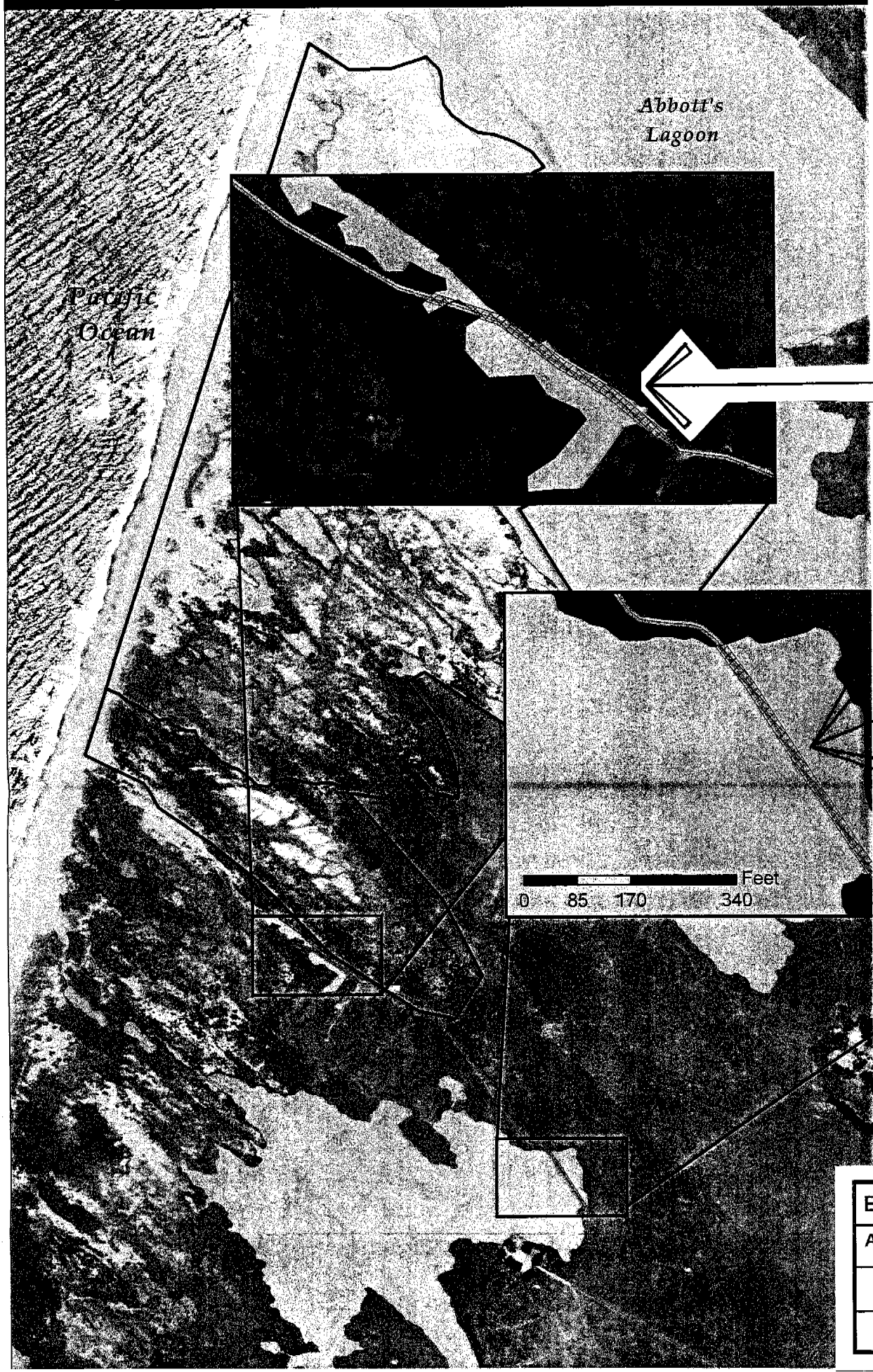


EXHIBIT NO. 3
APPLICATION NO.
CD-026-10

Restore Critical Dune Habitat to Protect Threatened and Endangere
Point Reyes National Seashore



TEMPORARY WETLAND IMPACTS FROM DIRT ROADWAY TEMPORARY IMPROVEMENTS

EXHIBIT NO. 4
APPLICATION NO.
CD-026-10

Restore Critical Dune Habitat to Protect Threatened and Endangered Species
Point Reyes National Seashore

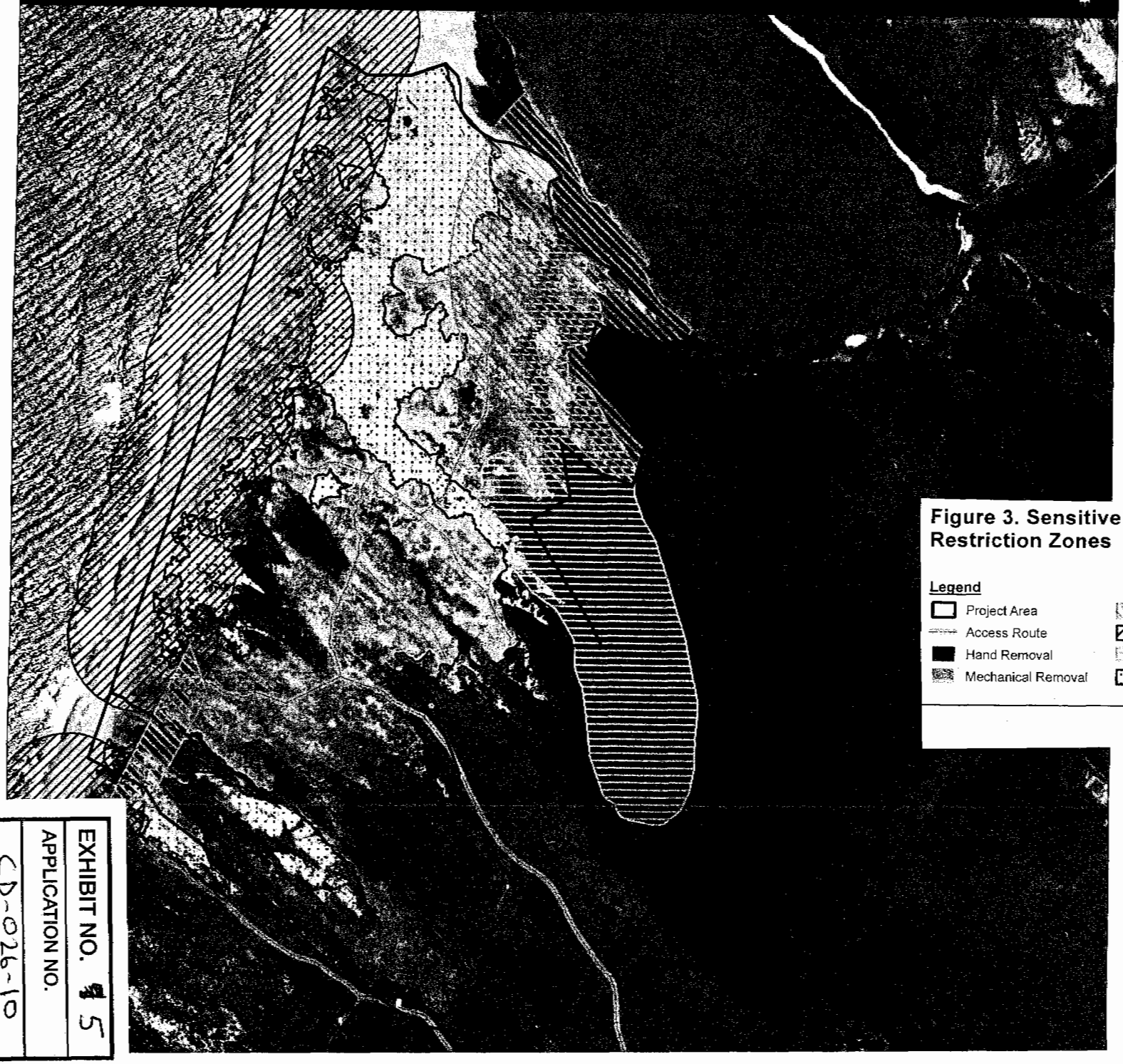


Figure 3. Sensitive Resource Areas and Restriction Zones

Legend

- Project Area
- Access Route
- Hand Removal
- Mechanical Removal
- Area of Archaeological Significance
- Western Snowy Plover Nesting Zone
- CA Red-Legged Frog Zone
- Sensitive Resource Area

Date: 04/16/2010

EXHIBIT NO. 5
APPLICATION NO.
CD-026-10

Restore Critical Dune Habitat to Protect Threatened and Endangere

Point Reyes National Seashore

EXHIBIT NO. 6
APPLICATION NO.
CD-026-10