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BIOLOGICAL ASSESSMENT

OF

PETER FENTON PROPERTY
STONERIDGE ROAD, BIG SUR, CA 93920
APN 420-191-006

Prepared For:

Peter Fenton
Stoneridge Road
Big Sur, CA 93920

Prepared by:

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I. INTRODUCTION

This report has been authorized by Thom Cowen, Architect (property representative) on November 1, 2017.

This Biological Assessment has been prepared to evaluate potential impacts to plants, habitats, and wildlife that would be generated from a proposed development construction project on parcel APN 420-191-006 located on Stoneridge Road in Big Sur, CA. The report also recommends mitigations needed to reduce potential impacts, maps native plant communities and identifies sensitive biotic resources near the proposed development location.

Field surveys of the parcel in the locations of the proposed development area were conducted during one site visit on November 8, 2017.

The project includes a proposed utility building, addition to an existing residence, and replacement of a shed/carport with new studio/garage within a 10.13 acre lot. New development impacts will occur within previously disturbed areas currently occupied by degraded landscape plantings, hardscape pathways and dry-stacked stone walls.

II. SUMMARY

The proposed development areas lie almost exclusively within areas inhabited by landscape introductions, pathway/step development and general landscape development. **There were no observed occurrences of listed native sensitive habitat or individual special status species within the proposed development area. It is unlikely any spring flowing taxa occur due to the impacted nature of the site and lack on native plant communities within the development zone. Impacts to native habitat constituents is expected to be less than significant.**

Comprehensive findings are included in Section V below describing natural communities in the development zone and the parcel. Impact assessments and mitigation measures are included below in Section VII for the development.

Portions of the project occur within 300-feet of Environmentally Sensitive Habitat Areas (redwood forest community) and will be mitigated to the degree necessary to allow for the long-term improvement and maintenance of those elements and habitats (see Big Sur Coast LUP, Ref. Policies 3.3.2.4 and 3.3.2.7) through the use of erosion control measures during development and invasive species eradication. In accordance with the Big Sur Coast LUP, the proposed residential project is sited and designed to minimize site disturbance within the development area. If the recommendations contained in this report are implemented, the impacts of the proposed project will be reduced to levels that sustain the biotic resources supported at the subject property and to natural communities and sensitive elements adjacent to the parcel. In addition when the recommendations in this report are applied, no development activities associated with the proposed project will have long-term adverse impacts on the sensitive biological resources that occur on site or on adjacent areas.

III. REGIONAL SETTING

The subject parcel is located within the boundaries of the Big Sur coastal planning area, 0.5 miles east of Highway 1 directly north of Deetjens Big Sur Inn, in the northwest portion of the Partington Ridge USGS 7.5' quadrangle. The parcel is accessed through a pre-existing dirt shared road off Highway 1 with the subject property sited on an ridge line. The proposed development area is located at approximately 1,200-foot elevation along a west-facing ridge line approximately 300-feet above Graves Canyon to the north and Castro Canyon to the south. The native natural communities found in mixed ecotones within the parcel and extending beyond the boundaries of parcel supports *Coastal Scrub* (California sagebrush series) habitat, *Coast Live Oak Woodland*,

and mixed *Grassland* along the sloped topography. To the south the scrub habitat continues downslope to a redwood canyon 500-feet away. To the north, the habitat transitions to mixed oak woodland and fades to the redwood canyon approximately 300-feet below the ridge. West along the ridge line, 1,000-feet from the project site, the scrub habitat distinctly transitions to perennial grassland mixed with annual grassland species.

IV. METHODS

Field methods included walking the entire proposed development area and a 100-foot perimeter observations while surveying for sensitive elements, inventorying observed plant and animal species, and photographing existing conditions. One reconnaissance site visit was conducted in November 2017. Weather conditions were clear and full access to the site allowed for careful site and resource observations. The proposed construction development area accessible and identified on a site plan supplied by the project architect (Thom Cowen, AIA).

Local maps and consultations with personnel familiar with the project were utilized during the preparation of this Biological Assessment. The California Natural Diversity Data Base (CNDDB) maintained by the State of California Depart of Fish and Wildlife (DFW) and the California Native Plant Society Inventory of Rare and Endangered Plants (website, 2010), were consulted for the identification of known populations of Federal and State listed rare, threatened and endangered plant species on or in the vicinity of the Fenton project site. Survey methods included utilizing The Jepson Manual (Hickman 1993), Invasive Plants of California's Wildlands (Bossard, Randall, and Hoshovsky 2000), A Manual of California Vegetation (Sawyer, Keeler-Wolf, and Evens 2009), An Illustrated Field Key to the Flowering Plants of Monterey County (Matthews and Mitchell 2015), Big Sur Land Use Plan (Monterey County and certified by the CA Coastal Commission 1986), The Natural History of Big Sur (Henson and Usner 1993), and Coastal Implementation Plan, Part 3 (Monterey County – Regulations for Development in the Big Sur Coast Land Use Plan 1988).

V. NATURAL COMMUNITIES

The residential grounds are dominated by landscape plantings, fruit trees, and hardscape elements mixed amongst scattered, varying-aged coast live oak trees (*Quercus agrifollia*) found throughout the development zone. The existing dirt driveway leads directly to the location of the proposed garage/studio development. An auto turntable is proposed to be sited within the existing dirt driveway just north of the garage/studio. The impacts for the proposed construction will occur on pre-existing disturbed or developed areas.

The garage/studio area is sighted at the western most location of the proposed development and open on all sides to native and non-native mixed vegetation. To the west, the ridgeline continues downslope dominated by annual grassland and exotic Italian thistle (*Carduus pycnocephalus*). Groupings of mixed Leyland cypress (*Cupressus x leylandii*) and Monterey pine (*Pinus radiata*) are growing in a compacted stand adjacent to the north of the grassy knoll mixed with a few native coast live oak trees of similar age and development. These trees look to be volunteers and have likely sprouted after the 2008 Basin fire which burned through undeveloped portions of the parcel. The cypress is a hybrid cross and though the Monterey pine is native it is not endemic to the Big Sur area and would be considered an inappropriate planting in this area due to it's highly flammable fuel and ability to act as a fuel ladder.

Surrounding the proposed garage area, native constituents are mixed as crossing ecotones of three habitat types intersect at the project elevation and slope aspect. Oak Woodland understory species, Coastal Scrub, and Grassland species are found scattered and intermixed along the outlining areas of the development zone. Below the ridge line of the development, the topography drops rapidly to the south and north. The southerly slope is exposed and dry with coastal scrub habitat dominated by California sagebrush (*Artemisia californica*) and mixed grassland species intermixed. These habitat communities transition to redwood forest in Castro Canyon approximately 500-feet below the project area. The north-facing, shadier slope exhibits an Oak and Mixed Hardwood Forest, with toyon (*Heteromeles arbutifolia*), tan oak (*Notholithocarpus densiflorus*), bay tree (*Umbellularia californica*), and coast live oak. This habitat changes to Redwood Forest plant community along Graves Canyon, approximately 300-feet from the project location. These areas are well outside the development zone.

The new underground utility bunker adjacent to the garage will impact a grouping of landscape plantings that consists of French lavender, prickly pear cactus (*Opuntia basilaris*), and introduced native Matilija poppy (*Romneya couteri*) and California lilac (*Ceanothus thyrsiflorus*). Several small oaks less than 4" diameter at great height (DBH) may also be impacted. This structure will be keyed into the slope and will require site stabilization of soils to prevent runoff impacts.

Beyond the underground utility bunker to the east, the residential and utility shed development areas along the ridge are enclosed with a dilapidated, deer-enclosure wire fencing surrounding the development zone. Within the fenced area the vegetation is heavily landscaped with introduced ornamental and edible plants and trees. Irrigated citrus and fruit trees are terraced into the landscape amongst a web of pathways and stone retaining walls. Several ornamental vines are connected to lattice work and introduced landscape plantings are found throughout the fenced area including Mexican sage (*Salvia* leucantha), lily of the nile (*Agapanthus* africanus), lavender species, gazania (*Gazania linearis*) and others. Scatterings of native oak understory plantings occur in isolated numbers throughout the fenced area and in higher concentrations beyond the fence including Doulas iris (*Iris douglasiana*), California blackberry (*Rubus ursinus*), California fuchsia (*Epilobium canum*), poison oak (*Toxicodendron diversilobum*), coast morning glory (*Calystegia macrostegia ssp. cyclostegia*), deerweed (*Acmispon glaber var glaber*), and other less prevalent species. Exotic species considered invasive by the California Invasive Plant Council (CalIPC) are found on site including periwinkle (*Vinca major*), ripgut brome (*Bromus diandrus*), and Italian thistle (*Carduus pycnocephalus*). These species are classified as having adverse impacts to native habitats and should be managed to prevent migration to offsite natural communities that are found beyond the development area. The Big Sur LUP Policy 3.3.3.10 encourages Big Sur residents to undertake restoration of natural environments by removal of exotic, invasive plants.

Native coast live oak trees are found throughout the development area, though construction impacts have been designed and sited to avoid the trees. Several of the trees, including the 36" BDH coast live oak adjacent to the proposed new decking on the north side of the residence show signs of burn impacts from the 2008 Basin fire and resulting fungal issues which have greatly compromised the tree trunk structure and integrity with decay.

This tree in particular is highly prone to failure and should be further evaluated by an arborist for recommendations on management and fuel reduction as it is positioned to fall on the main residence if failure was to occur.

Outside the fenced area enclosing the development, the landscape transitions to oak woodland constituents with bay trees and coast live oaks to the north and east between the development area and the access road leading to the property.

Understory species consist of poison oak, mixed grass and grass-like species including native bent grass (*Agrostis pallens*), Monterey sedge (*Carex harfordii*), and Douglas iris. These zones are outside the development area, though they do exist within the fuel management zone and will require appropriate detailing to remove dead tree litter, limbing of lower tree branches, and pruning/mowing management in order to keep the site in compliance for fire clearance mandates.

VI. RARE, THREATENED, AND ENDANGERED SPECIES AND HABITAT

The proposed development site was surveyed for occurrences of potential habitat and impacts to rare, threatened, and endangered plant and wildlife species. The site was also surveyed for current sensitive elements listed by the California Department of Fish and Wildlife Natural Diversity Data Base (CNDDB) for the Partington Ridge USGS Quadrangle and adjacent quadrangles in the Big Sur region. Apart from the previously above listed sensitive elements, the potential for listed special-status wildlife species within the development area was determined to be low, based on the surveys, presence of micro-habitat characteristics, and biological knowledge of the target species that occur within the vicinity.

State Listing is pursuant to Section 1904 (Native Plant Protection Act of 1977) and Section 2074.2 and 2075.5 (California Endangered Species Act of 1984) of the Fish and Game Code, relating to listing Endangered, Threatened, and Rare species of plants and animals. Federal Listing is pursuant with the Federal Endangered Species Act of 1973.

VII. IMPACT ASSESSMENT AND RECOMMENDATIONS

In accordance with the Big Sur Coast LUP, the proposed development is sited and designed to minimize site disturbance and impacts to native habitat, as the development will occur mostly in previously disturbed, impacted, hardscaped or landscaped areas. However, there are sensitive elements that exist in close proximity (within 300-feet) of the proposed development. With the implementation of the below listed items, the project should have a less than significant impact on special natural communities, plants, and animals protected by local, state, or federal regulations. By implementing the listed protection measures and restoration practices, the project should enhance the remnant habitats found on the parcel through long-term management and exotic species control.

Impact 1: Tree Protection

To protect native habitat values and tree resources on site, protective fencing should be installed around the perimeter of the coast live oak trees located in close proximity to the development in order to prevent unwarranted adverse impacts, such as tree/trunk damage or soil compaction of critical root zones, during the construction period. Fencing should also be continuous in wrapping around the tree trunks and should protect as much of the critical root zones as feasibly possible.

Recommendation 1:

1. Prior to any land disturbance or mobilization of equipment and under the guidance of the Project Biologist, install tree protection fencing around the perimeter of the trees adjacent to the development area to the maximum edge necessary to protect root systems and prevent compaction while able to reasonably conduct the construction project.

2. Grading must avoid detrimental impacts to major roots of the existing pine trees and a minimum of 50% of the existing soil surface around the trees should be preserved.

3. No soil deposition should occur to alter the native grades in the location of the existing trees.

Impact 2: Restoration of Disturbed Soils

Implementing restoration practices within the natural communities on site will be consistent with LUP policy regarding restoring natural environments by removal of exotic plants (Ref. LUP Policies 3.3.3.A.10). To restore all areas of disturbance outside the fencing enclosure and all areas on the development area currently enveloped by invasive species, habitat restoration should be enacted with strategies that include long term protocols required for the restoration and management of the coastal scrub and oak woodland understory habitat that occurs on site. Additionally, erosion control measures will be required to cover bare soils and long-term exotic species management will be critical to eliminate invasive species and promote native flora.

Recommendation 2:

1. Restore all impacted ground disturbed areas with site-identified coastal scrub and oak woodland species and eliminate all aggressive exotic invasive species that could adversely impact the restoration of natural communities within the project site. Objectives for accomplishing the project goals will include:

a. Prior to ground disturbance, to prevent the spread of exotic species, eradicate invasive species in areas to be restored.
b. Stabilize soils with erosion control measures.
c. Seed disturbed areas with approved native seed mix or plant materials by planting in the late Fall season to coincide with seasonal rains.
d. Establish long-term maintenance program for invasive species control, and soil stabilization.
e. Avoid impacts to outlining habitats and improve area as habitat for wildlife.

2. Prior to mobilization or land disturbance activities, temporary erosion and sediment control devices must be installed at the lower development perimeter to prevent unwarranted impacts to habitat resources adjacent to the development zone.

Impact 3: General

The project site is not located in direct proximity to any site identified sensitive elements or habitat, though general best management practices should be in place to protect impacts from occurring on adjacent native habitat and potential off site erosion.

Recommendation 5:

1. Use of heavy equipment should be restricted to areas within the construction envelope and access road.

2. Sediment control devices should be installed on the downhill perimeter of the construction envelope and exposed soil areas. Specifically, sediment control devices, debris fencing or silt dams should be installed in a manner that adjacent habitat is protected from disturbed excavated or graded construction soils or construction debris from moving offsite. No site erosion shall be permitted to enter areas supporting natural communities beyond the impact perimeter of the development. Disturbed soils shall be stabilized prior to rainy weather, either with the use of tarping, biodegradable netting, mulching, or hydroseeding an approved native or sterile seed mix, mulch and tackifier.

3. Prior to final grading, all construction debris shall be removed and construction activities completed in the areas to be treated with site stabilization plantings. To protect adjacent habitats and trees from inadvertent soil deposition impacts, excavated material should not be cast into adjacent habitats; rather it should be hauled off location and disposed at a receiver site.

4. Storm water runoff from impervious surfaces must be dispersed in such a way as to prevent rilling and site erosion.

5. After the completion of the soil disturbance activities, all disturbed soils shall be stabilized with site-identified coastal scrub restoration species, with the plant materials installed in the fall months

prior to or in conjunction with the seasonal rains. Any invasive out-plantings that stray from the specified native plant restoration seeding/planting could negatively impact the extant natural communities through competition, shading, or invasion.

6. Any disturbed soil generated by the project must be kept free of invasive, exotic plant species.

7. The ridge line location of the site is prone to high winds and construction materials should be secured, tied down, and tarped on a daily basis to prevent loss of materials or construction debris from entering surrounding habitats or lost downslope to the steep canyons. Trash enclosures need to have lids and tie-downs to prevent trash from blowing into surrounding natural communities.

Impact 4: Exotic Species Control

Adoption of an eradication of invasive species should be on going in an effort to enhance and maintain existing native habitats adjacent to the development zone. Several site-identified highly invasive exotic species, such as Italian thistle, have the ability to invade environmentally sensitive areas and other native habitats throughout the property or offsite. Invasive species can easily overwhelm disturbed soils and storm water runoff from unvegetated slopes can adversely impact water quality and adjacent sensitive habitat. Implementing an exotic species eradication plan will be consistent with LUP policy regarding restoring natural environments by removal of exotic plants (Ref. LUP Policies 3.3.3.A.10). Comprehensive eradication of the invasive, exotic species from the development areas and outside the development zones (and restoration of these habitats) would allow the existing proposed development to be compatible with the habitats occurring on the parcel, and would reduce long-term impacts there, which if left unmitigated would eventually severely degrade or destroy the sensitive elements of the parcel. To prevent erosion in areas treated for eradication, exposed areas not stabilized with existing native plants must be revegetated with site appropriate native species endemic to the communities in which the exotics were removed.

Recommendation 4:

1. In order to protect the habitat values of the parcel and adjoining areas, invasive species within the development area should be eradicated prior to grading activities. In addition to the Italian thistle and periwinkle identified within the development area, several identified species along the access road leading to the property [including French broom (*Gensita* monspessulana), pampas grass (*Cortaderia* selloana),and sticky eupatorium (*Ageratina* adenophora)] are listed by the Cal-IPC as highly invasive species having substantial adverse ecological impacts on native plant communities. By hand removing prior to grading, the species are less likely to spread from its seeds or rhizomes where they have the ability to thrive rapidly in disturbed soils.

2. All disturbed soil generated during any site grading shall be kept free of exotic species, which if left unattended, could cause inadvertent spread of the species and degradation of the sensitive habitats on the site.

3. Mobilization of equipment can also lead to invasive species introductions from other locations. Earthmoving equipment should be pressure-washed prior to mobilization to reduce the ability of invasive species from entering a site and becoming a nuisance.

Impact 4: Fuel Management Guidelines

Fuel management plans are developed to create defensible space around structures through the removal and thinning of vegetation on the parcel and developing new planting concepts using fire-wise landscaping and habitat restoration. Fuel modification should be accomplished through the removal of highly flammable and dead vegetation around the proposed structures and decking, including thinning of additional vegetation and fire-wise landscaping with low-fuel native plant materials.

Recommendation 5:

1. Vegetation in the mixed understory landscape at the Fenton property should be maintained by the reduction of fuel ladders, use of fire-wise landscaping materials, and removal of dead limbs and other ground-laying flammable debris, including piles of cut branches and non-organized firewood piles.

2. Future landscape and restoration plantings should be installed by carefully spacing shrubs and trees, utilizing low groundcovers or mulch, and reducing mass plantings. Plants must be spaced so that fire cannot spread horizontally or vertically (by way of a fuel ladder) from plant to plant. Future treatments around structures should offer protection from intense flames through the use of properly maintained irrigated plants with high moisture content, through walkways, gravel/ stone, or paved surfaces. Vines or other climbing plants attached to structures should be carefully considered, as vines can provide a receptive fuel directly on to the structure.

3. Trees should be treated by removing dead ground material and deadwood tree limbs to reduce fuel loads. Live tree limbs should be pruned up to at least 6-feet above the bare soils and a minimum 3X the height of underlying plants. Leyland cypress and Monterey pine removal should be considered along the knoll west of the proposed garage. These trees are not endemic to the site, carry a large fuel load, and have a high probability to act as a fuel ladder and cause increased fire risk to the property.

4. Fuel Modification Plans generally do not extend to areas outside the subject parcel, however the owner is encouraged to collaborate with adjacent private landowners and agencies to extend fuel modifications in ways that benefit everyone in the community.

5. Fuel Management Plans are not static as the landscape and natural vegetation will continue to change over time. Long-term maintenance is required to ensure that defensible space is maintained and should include vegetation and structural management. In addition to the prescriptions described above, the roof gutters should be maintained to be free of leaves, pine needles, tree duff and other vegetative debris, deadwood pruning should continue yearly especially with any oak tree adjacent to the residence that overhangs the roof, maintain any chimney or stove pipe flue-screening for optimum performance and trim all tree limbs with 10-feet of the outlet, and ensure house numbers are posted per Fire Department requirements.

VIII. LIST OF SPECIES ENCOUNTERED

(* indicates exotic species)

Tree Species

Cupressus x leylandii	Leyland cypress
Notholithocarpus densiflorus	tan oak
Pinus radiata	Monterey pine
Quercus agrifolia	coast live oak
Umbelluaria californica	bay tree
Citrus, Fig, Apple, etc.	mixed ornamental fruit trees

Shrub Species

Acmispon glaber var. glaber	deerweed
Agapanthus africanus *	lily of the nile
Artemisia californica	California sagebrush
Bachcharis pilularis	coyote brush
Ceanothus thrysiflorus	California lilac
Epilobium canum	California fuchsia
Eriophyllum staechadifolium	lizard tail
Gazania linearis *	gazania
Genista monspessulana *	French broom
Grindelia stricta var. platyphylla	gumplant
Heteromeles arbutifolia	toyon
Lavendula sp. *	French lavender
Ribes speciosum	fuchsia-flowering gooseberry
Romneya coulteri	Matilia poppy
Rubus ursinus	California blackberry
Toxicodendron diversilobum	poison oak
Vitis sp. *	ornamental grape vine

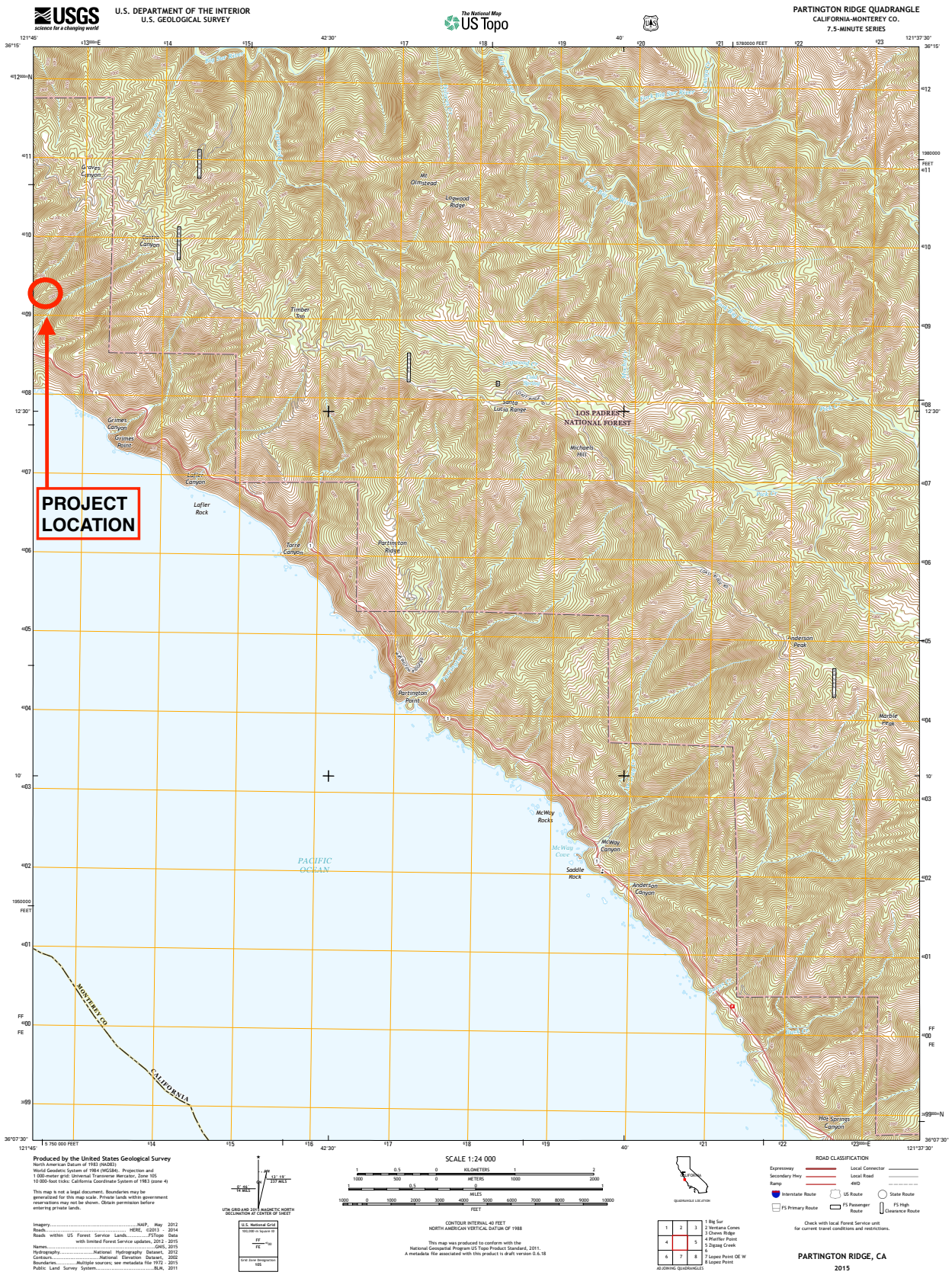
Herbaceous/Forb Species

Achillea millefolium	yarrow
Agrostis pallens	bent grass
Argentina adenophora *	sticky eupatorium
Avena fatua *	wild oat
Bromus diandrus *	ringut brome
Calystegia macrostegia ssp. cyclostegia	coast morning glory
Carduus pycnocephalus *	Italian thistle
Carex harfordii	Monterey sedge
Iris douglasiuna	Douglas iris
Opuntia basilaris	prickly pear
Stachys bullata	wood mint
Vinca major *	periwinkle

Wildlife Species

Aphelocoma californica	scrub jay
Calypte anna	Anna’s hummingbird
Cathartes aura	turkey vulture
Cyanocitta stelleri	Steller’s jay
Junco hyemalis	dark-eyed junco
Melozone crissalis	California towhee
Thomomys bottae	Botta’s pocket gopher

IX. REGIONAL MAP



X. VEGETATION MAP