

Exhibit H

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BIOLOGICAL ASSESSMENT

AN ASSESSMENT OF THE BIOLOGICAL
RESOURCES ON THE LOTS AT 36240 & 36242
HIGHWAY ONE AND THE POTENTIAL IMPACTS
FROM THE DEMOLITION OF AN EXISTING
SINGLE-FAMILY RESIDENCE, AND NEW
CONSTRUCTION OF A 9,392 SQUARE-FOOT 2-
STORY SINGLE-FAMILY RESIDENCE, WITH
ATTACHED GARAGE AND A DETACHED ADU
AND POOL, AND THE REMOVAL OF 5 TREES.
UPDATED AND REVISED MARCH 24, 2025

Patrick Regan

Rupa Desai is proposing a development project at their residence on a 2.9-acre lot at 37600 Highway one, Big Sur CA 93940

The project consists of the demolition of an existing single-family residence, and new construction of a four bedroom 4 and a half bathrooms, 6556 square-foot (4333 square foot upper floor livable) two-story single-family residence, with a 2223 Square foot attached garage and mechanical room below and a detached 798 square foot ADU, pool and firepit at the north end of the property with extensive outdoor patio areas around both dwelling units. The project will have a net disturbance area of .59 acres which include 3575 cubic yards of cut and 180 cy that will be used on site for a net export offsite of 3395 cubic yards. The grading cuts will be done in phases with fill temporarily stockpiled in several locations on site throughout the construction process. Four (4) trees are proposed for removal to accommodate the new construction. They are all Monterey Cypress trees that were planted as part of the original landscape. Though they are abundant in this landscape, Monterey Cypress trees are not native to the site. The project will have no direct impacts on special status (rare, threatened, or endangered) plants or wildlife and no direct impacts to special status native plant communities.

The Desai residence is in Big Sur along Highway 1 In the Soberanes Point quadrangle of USGS. This project is evaluated under the Big Sur Land Use Local Coastal Plan as implemented by Monterey County. I visited the Site on several occasions for this assessment. February 8, 2023, May 10, 2023, February 23, 2024, and January 30 of 2025. I walked the entire site taking photographs and notes on what was seen.



February is not an ideal month for a floristic survey on the Central coast. While several shrubs and perennials do bloom this early along the coast, several of the rare species documented in this quadrangle are spring and summer blooming annual and perennial species and some would not yet be easy to locate or confirm identities of at this time of year. After completing the February visit, I recommended that an additional spring survey would be wise. On May 10, 2023, I returned to the site to conduct a focused survey within the impact zone of the project.



The existing residence is approximately 50 years old. It has a mature landscape with an aging, hardscape and primarily nonnative plant material surrounding the entire structure and escaping into the interface with sage scrub and bluff scrub. The lot is dominated by the Monterey Cypress planted on the south, east and north of the house which shields it from Highway 1. (Aerial image of the Lot on the previous page illustrates the canopy cover of the Cypress) The understory of the Cypress is sparsely vegetated with various nonnative succulents (Aloe, Crassula, Aeonium) and several large shrubs and trees including many other smaller plants from other Mediterranean climate regions of the world including the ubiquitous Iceplant or Hottentot fig (*Carpobrotus*). Where the landscape has invaded into the surrounding native coastal sage scrub and bluff scrub plant communities, several native shrubs and perennials are struggling to coexist including Carmel Ceanothus (*Ceanothus thyrsiflorus* var. *griseus*), Douglas' iris (*Iris douglasiana*), lizard tail (*Eriophyllum staechadifolium*), Seaside daisy (*Erigeron glaucus*), Woodmint (*Stachys bullata*), California sage brush (*Artemisia californica*), Bluff buckwheat (*Eriogonum parvifolium*¹)

The Habitat or Plant community types that were native to the site are Coastal bluff scrub, and Coastal Sage scrub. (Per CNDDDB, Munz and Holland descriptions) Remnants of both occur on the steep west facing bluff on which the house perches and to the northwest and at the south end of the lot. The neighboring property across Highway One to the east of the lot is a continuous swath of the Coastal Sage scrub. Along the Big Sur Coast, common overstory species of Coastal sage scrub are Black sage, California sagebrush, blue blossom Bluff buckwheat, yellow bush lupine and Lizard tail. On moist north facing slopes and bluffs, Bracken fern is dominant in the understory; common cow parsnip, Indian paintbrush, yerba buena and California oatgrass are typically present. Some of the most common plants of these plant communities remain on site including the Carmel Ceanothus, and lizard tail, California sage brush, California blackberry and Poison Oak.

Pinning down a specific CNPS plant alliance is difficult on the site. The dominant species on site is *Carpobrotus* which has become ubiquitous along the Coast of California. The overall vegetative cover of the entire 2.9-acre property is 50-60% *Carpobrotus edulis* or chilense with smaller patches of *Mesembryanthemum* and other ice plant cousins. The CNPS Manual of California vegetation calls this *Mesembryanthemum* spp. - *Carpobrotus* spp. Herbaceous Semi-Natural Alliance. Ice plant mats.

Mixed into the Ice plant mats are small areas where some of the typical native species are more abundant. Like over the septic leach field north of the existing house where Coast hedge nettle (*Stachys bullata*) and Lizard tail (*Eriophyllum staechadifolium*) are codominant with *Carpobrotus* but shrinking in coverage. This would not fit into the CNPS *Eriophyllum staechadifolium* - *Erigeron glaucus* - *Eriogonum latifolium* Herbaceous Alliance. Seaside woolly-sunflower - seaside daisy - buckwheat patches. Beyond the immediate areas adjacent to the house and leach field and corral, the native mix is diverse with no shrub or perennial ever appearing to dominate. Thus, the working definition will remain the older, broader terms of Coastal Scrub and Coastal Bluff scrub.

Coastal Bluff scrub is dominated by low shrubs and prostrate herbaceous species found on steep, exposed bluffs above the ocean. Vegetative cover may be dense or sparse depending on slope steepness. The bluff scrub community may grow on either sandy or serpentine soils. The species composition is very similar to and intergrades into the coastal scrub community, but differs in containing species better adapted to the extreme wind, salt spray, and steep slopes of the bluffs including the live forever's (*Dudleya farinosa* and *Dudleya caespitosa*), Seaside daisy (*Erigeron glaucus*), and surprisingly tough Douglas' iris (*Iris douglasii*) and

¹ *Eriogonum parvifolium* is a host plant for the Smith's Blue butterfly. The six scattered plants observed were not in the project impact area of the property and save for one larger plant were all small straggling plants. They would not constitute "breeding habitat."

several bulbs forming species like Blue dicks (*Dipterostemon capitatus*) and Fremont's death camas (*Toxicoscordion fremontii*).

A continuous swath of Monterey Cypress (*Hesperocyparis macrocarpa*) trees surrounds the house on the north and along Highway 1 south to the end of the lot effectively screening the structures from the road. These were all introduced as part of the landscaping or subsequent volunteer seedlings and are not native to the site. Five (5) of these trees (three of them over twenty-four" dbh) are being proposed for removal for the project. While they are not protected species in this area, they are considered Landmark size trees at greater than twenty-four inches dbh.

Prior to visiting the project site, I conducted a query of the California Natural Diversity Database (CNDDB) and the California Rare Plant inventory for the Soberanes Point quadrangle. From those databases I created a master list of Rare, Threatened and Endangered (RTE) Plants, Animals and Plant communities to focus on during the onsite field work. Rare, Threatened or Endangered species of plants documented to occur nearby in the Coastal sage scrub and/or Coastal Bluff scrub include Little Sur manzanita (*Arctostaphylos edmundsii*), ocean bluff milk-vetch (*Astragalus nuttallii* var. *nuttallii*), Monterey Coast paintbrush (*Castilleja latifolia*), Douglas's spineflower (*Chorizanthe douglasii*), Lewis's clarkia (*Clarkia lewisii*), Seaside birds beak (*Cordylanthus rigidus* ssp. *littoralis*), Hutchinson's larkspur (*Delphinium hutchinsoniae*), sand-loving wallflower (*Erysimum ammophilum*), harlequin lotus (*Hosackia gracilis*), large-flowered leptosiphon (*Leptosiphon grandiflorus*), Michael's rein orchid (*Piperia michaelii*), Yadon's rein orchid (*Piperia yadonii*), and maple-leaved checkerbloom (*Sidalcea malachroides*). None of these species were found in the project impact area on the Desai property in February. Based on the known habitat requirements of these species and the location of the project impact area, several of these species would be considered likely to have occurred here. For this reason, a species-specific follow up survey was conducted in May 2023 to look for ten of these plants, all of which would not have been in bloom in February but would be in May. In addition to looking more carefully for individual plants of *Eriogonum parvifolium*, the primary habitat plant for Smith's Blue butterfly (see discussion below), during my May 10 floristic survey I looked specifically for: Douglas's spineflower (*Chorizanthe douglasii*), Lewis's clarkia (*Clarkia lewisii*), Seaside birds beak (*Cordylanthus rigidus* ssp. *littoralis*), Hutchinson's larkspur (*Delphinium hutchinsoniae*), sand-loving wallflower (*Erysimum ammophilum*), harlequin lotus (*Hosackia gracilis*), large-flowered leptosiphon (*Leptosiphon grandiflorus*), Michael's rein orchid (*Piperia michaelii*), Yadon's rein orchid (*Piperia yadonii*), and maple-leaved checkerbloom (*Sidalcea malachroides*). A complete table of all RTE plants, animals and Plant communities is appended at the end of this report and provides habitat requirements for each as well as an evaluation of whether they would be likely to be found on the Desai property and if they were observed on site.

The May 10 survey yielded one new observation of plants not seen during the February assessment. I would have expected to find small-leaved lomatium (*Lomatium parvifolium*) during my February 8 visit. I have seen it in flower in several locations this year in December and January and assumed it was not present on the property because of the negative findings in February. It is situated on the rocky slope south of the current parking area where a new wing of the house will be built. Approximately twenty individuals of this California Rare Plant Rank List 4.2² species were observed, mixed with White fairy lanterns (*Calochortus albus*) Fremont's death camas (*Toxicoscordion fremontii*), Blue dicks (*Dipterostemon capitatus*) and Sea lettuce

² California Rare Plant Rank 4: Plants of limited distribution, a watch list. Some of the plants constituting California Rare Plant Rank 4 meet the definitions of the California Endangered Species Act of the California Fish and Game Code, and few, if any, are eligible for state listing. While they do not automatically qualify for protection under CEQA, the California Native plant society recommends their protection.

(*Dudleya caespitosa*). Some or all of these may be impacted by the new garage and covered patio.

The search for *Eriogonum parvifolium* plants turned up six individual plants: five small plants south of the proposed new house wing and one large plant off the NW corner of the existing house at the top of the bluff slope. None of these plants will be impacted by the development project.

Wildlife

Twelve (12) species of RTE animals including insects are documented in the Soberanes Point Quadrangle. Only two, both insect species: The Smith's blue butterfly (*Euphilotes enoptes smithii*) and Monarch butterfly (*Danaus plexippus plexippus*) would be expected to potentially occur on or near the property.

Smith's blue butterflies are entirely dependent on one species of buckwheat plant along the Big Sur coast. Seacliff wild buckwheat (*Eriogonum parvifolium*) is the host plant for Smith's blue butterfly (SBB) larvae and the plant that adults utilize primarily for nectar gathering during their short life span. Where Seacliff wild buckwheat is found in dense, dominant stands in the Coastal sage and coastal bluff scrub, it is assumed that the SBB are present as well. No seacliff buckwheat plants were observed in the project impact area but six total individual plants were documented in 2 locations outside of the construction impact area of the property in the Coastal scrub and bluff scrub habitat on the South and northwest sides of the Desai property. Individual isolated plants along a windy bluff would not provide the adequate density or protection to support a breeding population of SBB and the lack of a continuous swath of Buckwheat plants would prevent the site from becoming a "steppingstone" connection for breeding adults travelling between other occupied buckwheat stands. This butterfly has an approximate one-week lifespan in which to find a mate and reproduce. They remain within the small area where they metamorphosed from egg to caterpillar to adult and rarely fly more than 50-100 yards away (though in wind protected areas further inland they have been found to move over ¾'s of a mile) No Smith's blue butterflies are likely to be impacted by this project.

Currently, individual adult monarchs are candidate species for Federal listing. Previously the winter gathering locations (referred to as overwintering sites) that generations of Monarchs consistently return to year after year are considered special status and protected. The time during which I visited the site was in the middle of the period in which Monarch butterflies annually return to the Central Coast and gather in large groups in stands of trees where they spend the next 4-6 months in a state of paused reproduction. They gather in large masses and hang from tree branches during the night or cloudy stormy days and only fly around away from the trees on warm sunny days when they go in search of flower nectar. On the days I visited the Desai Property, in 2023, 2024 and 2025 no monarch butterflies were seen.

The only terrestrial wildlife species observed during either survey were several western fence lizards – *Sceloporus occidentalis*, and a single Coast Gartersnake - *Thamnophis elegans terrestris*. Both common species with no special status.

Impacts

The Demolition, rebuild and additional new structures will impact the landscape zone just south and immediately north and west of the existing house and in the area where the ADU and pool are proposed further north including the driveway to the ADU. The total disturbance to the site will be approximately .59 acre (25,902 Square feet), but much of that square footage was previously impacted by the existing development including structures, hardscape, and landscape (Roughly 22,000 square feet). The existing house and garage and hard-scape structures like decks, retaining walls and fences will be demolished to make way for the new two-story main house, ADU. pool and garage and extensive outdoor hardscape. The corral

and former vegetable garden at the north end of the property where the pool is proposed will be removed but will have no impact on native vegetation in this ultra-disturbed area.

1. Grading and construction of the pool and ADU on the north side of property will impact an approximately 10,000 square-foot area where the native plant community of the site is still partially intact but heavily invaded by Carpobrotus and Black mustard and Poison hemlock. This is not a significant impact but could become so if grading or disturbance occurs further west than necessary.

2. The removal of four Monterey Cypress trees from the landscape has the potential to impact bird nest building and rearing behavior of several species of migratory birds along the coast. If the trees are removed during the typical breeding season there is potential for impacts to bird nesting or rearing behavior.

Fish and Game code 3503. It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.

Section 3503.5. It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

Section 3513. It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act.

MIGRATORY BIRD TREATY ACT

Section 703. Unless and except as permitted by regulations made as hereinafter provided in this subchapter, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, any part, nest, or egg of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof, included in the terms of the conventions between the United States and Great Britain for the protection of migratory birds concluded August 16, 1916 (39 Stat. 1702), the United States and the United Mexican States for the protection of migratory birds and game mammals concluded February 7, 1936, the United States and the Government of Japan for the protection of migratory birds and birds in danger of extinction, and their environment concluded March 4, 1972, and the convention between the United States and the Union of Soviet Socialist Republics for the conservation of migratory birds and their environments concluded November 19, 1976. This law only applies to migratory bird species that are native to the United States or its territories.

The definitions of a nest, active nest, and breeding season as provided by CDFW.

Nest (noun): A nest is a structure or site under construction or preparation, having been constructed or prepared, or being used by a bird, for the purpose of laying eggs, incubating eggs, or rearing young, or is otherwise critical to the life history of the individual (e.g., individuals of species that exhibit site fidelity, colonial nesters and raptors). Perching sites and screening vegetation are not part of the nest.

Active nest: A nest as defined above, during the portion of the breeding season as defined below, once birds begin constructing or repairing the nest in readiness for egg-laying. A nest is no longer an "active nest" if

abandoned by adult birds or once nestlings or fledglings are no longer dependent on the nest. Nests which are critical to the life history of the individual (e.g., individuals of species that exhibit site fidelity, colonial nesters, and raptors) are considered an Active Nest year-round.

Breeding Season: The period of the year during which courting, breeding, or nesting occurs, or when breeding adult birds or their nestlings or fledglings are at or near a nest. The breeding season varies among bird species and geographic locations. (Monterey County applies a period between February 22 to August 1, though several species may begin nesting activity as early as December)

3. The grading and topography change necessary to build the new wing on the south side of the proposed new house will permanently impact approximately twenty individual plants of *Lomatium parvifolium*, a California Rare Plant Rank list 4.2 species. This is a plant of limited distribution along the Central coast but locally abundant in parts of Monterey County. It is not required to be protected under CEQA. If possible, it is recommended to avoid the removal of these plants.

4. The grading and movement of soil containing roots, stems and seeds of nonnative invasive plants found on the site (particularly in the old corral and vegetable garden) has the potential to spread noxious weeds throughout the property where they currently do not exist or even onto neighboring properties.

Measures to offset potential impacts.

1. To offset minor impacts to a mix of native and nonnative plants on the north and northwest of the new project and avoid additional impacts on less invaded native plants further west, the limits of grading will be flagged and sturdy t-posts with bright orange snow fencing will be placed at the edge of the grading limits to prevent machinery or project activity from extending beyond it.

2. To offset overall impacts to the site from the entire demolition and rebuild and additional new development, the property owner will restore .25 acre (10,890 square-feet) of native bluff scrub vegetation west and north of the proposed project site using species collected from the property and utilize these same species in all landscaping on the west side of the new structures.

3. To reduce potential impacts to nesting and rearing bird species - Time tree removal and initial earth moving activities to occur before or after the generally accepted bird breeding season of February 22 to August 1 -OR If tree removal or grading occurs between Feb 22 and August 1 of any given year a pre removal survey of the trees to be removed as well as those surrounding it shall be conducted to determine if the trees are being utilized for bird nesting or rearing. A qualified Biologist from the Monterey County List of approved biological consultants shall conduct a nesting survey within three hundred feet of the impacted trees, no more than 15 days³ prior to commencement of tree removal activities. If active nesting or rearing activities of migratory, non-game birds are detected, the Biologist may at their discretion set a buffer zone around the nesting area that allows for activities to continue beyond that buffer zone (typically one hundred Feet). If an active nest of any bird of prey is detected the tree removal shall be postponed until a follow up survey determines the activity has ceased or after August 1 whichever comes first

4. If the *Lomatium parvifolium* plants present in the area where the new garage and covered patio will be built, cannot be avoided, to lower or eliminate this impact, the existing plants will be flagged as soon as possible to mark their locations before they go dormant and become impossible to locate, and remain so

^{3 3} The County standard is 30 days, but much can happen in a 30-day period during the breeding season. Some nests not seen in an early survey can be fully built and occupied 30 days later and nests occupied by hatchlings can be abandoned and hatchlings fully reared and independent 30 days later. 15 days as a maximum is more realistic to capture a real sense of the on-site activity prior to tree removal or groundbreaking.

until the fall period between October 15 and December 1 when the roots can be carefully dug up and transplanted to an area of the property (southern portion that is undeveloped would be best) where they can be out of the range of current or future development.

5. Despite the low likelihood of being utilized by an active population of Smith's blue butterflies, all the *Eriogonum parvifolium* plants identified and flagged during my survey should remain flagged and have small fences placed around them for the duration of the redevelopment of the site, to protect them and promote opportunity for additional plants to germinate and grow near them. Buckwheat and Smith's Blue butterfly populations are not static. The potential for future growth of the buckwheat increases the potential for future utilization by Smith's blue butterflies from east or south of the property.

6. To offset the potential for increased spread of invasive nonnative species on the property, A Weed identification and eradication plan should be included in the landscape plan. Species to target should include at minimum, the Cape Ivy (*Delairea odorata*) "Ice plant" (*Carpobrotus edulis*), Black mustard (*Brassica nigra*), and Poison hemlock (*Conium maculatum*).

If all the measures described above are followed the demolition and rebuild of a single-family dwelling and the addition on ADU on the property at 36240 & 36242 Highway One in Carmel CA will have a less than significant impact on the native animals, plants, and plant communities on site and adjacent.

Pat Regan

Consulting Biologist



Figure 1: View looking north at SE corner of existing house.



Figure 2: View looking NW at opening where driveway to the proposed ADU will continue to north.

Figure 3: View looking SW at location where new house wing will be built into the slope.





Figure 5: View looking NW from north side of existing house.

Figure 4: View looking west from north side of existing house. Plants on right are all naturalized and some invasive nonnative.





Figure 6: View looking NW from area where pool and ADU will be constructed. Mix of nonnative *Carpobrotus chilensis*, *Carpobrotus edulis*, *Brassica nigra*, and native *Stachys bullata* and *Eriophyllum staechadifolium* in foreground.

Figure 7: View looking north from existing septic leach field. Native pink flowered *Stachys* mixed with nonnative *Carpobrotus*, Black mustard, Poison hemlock and Cape Ivy and Blue gum.





Figure 8: Cluster of Small leaved lomatium (*Lomatium parvifolium*) on rocky outcrop where south edge of new house wing will be constructed.

Figure 9: Single seacliff wild buckwheat (*Eriogonum parvifolium*) near edge of bluff west of NW corner of existing house.



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SPECIAL-STATUS PLANT SPECIES DOCUMENTED IN THE SOBERANES POINT QUADRANGLE WITH THE POTENTIAL TO OCCUR IN THE DESAI PROJECT VICINITY

SPECIES LISTED AS BEING UNLIKELY TO OCCUR WITHIN THE PROJECT AREA ARE CONSIDERED TO BE BEYOND THEIR KNOWN RANGE OR TO HAVE LOW HABITAT SUITABILITY FOR REPRODUCTION, COVER, AND/OR FORAGING. SPECIES LISTED AS HAVING NO CHANCE TO OCCUR ARE ENTIRELY DEPENDENT ON HABITAT CONDITIONS SIMPLY NOT FOUND ON SITE

Scientific and Common name	Legal status Federal /State/ CNPS	Life form	Plant community/Habitat Requirements	Flowering period	Likelihood to naturally Occur within the Project Site	Observed on project site?
<i>Arctostaphylos edmundsii</i> Little Sur manzanita	-/-/1B.2	Evergreen Shrub	Chaparral, Coastal bluff scrub	Nov- April	Low	No
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i> Hooker's manzanita	-/-/1B.2	Evergreen Shrub	Maritime chaparral, Foothill Woodland, Northern Coastal Scrub, Closed-cone Pine Forest	January - June	Unlikely No suitable habitat occurs on site.	No
<i>Astragalus nuttallii</i> var. <i>nuttallii</i> . ocean bluff milk-vetch	-/-/4.2	Perennial herb	Rock, sandy areas, bluffs, below 70 meters	January to October	Low. Marginal habitat occurs on site but not in project impact area	No
<i>Castilleja latifolia</i> Monterey Coast paintbrush	-/-/4.3	Annual herb	Sandy soils. Closed-cone coniferous forest, Cismontane woodland (openings), Coastal dunes, Coastal scrub	Feb-Sept.	Low. Marginal habitat occurs on site but not in project impact area	No
<i>Ceanothus rigidus</i> Monterey ceanothus	-/-/4.2	Evergreen shrub	Maritime chaparral, Foothill Woodland, Northern Coastal Scrub	March-April	Unlikely. No suitable habitat occurs on site	No

<i>Chorizanthe douglasii</i> Douglas's spine flower	-/-/4.3	Annual herb	Chaparral, Foothill Woodland, Yellow Pine Forest	April - July	Unlikely. No suitable habitat occurs on site	No
<i>Clarkia jolonensis</i> Jolon clarkia	-/-/1B.2	Annual herb	Interior foothill woodland	April - June	None. This species does not occur on the Western slopes of the Santa Lucia range	No
<i>Clarkia lewisii</i> Lewis's clarkia	-/-/4.3	Annual herb	Chaparral, Foothill Woodland, Northern Coastal Scrub	April-July	Unlikely. No habitat occurs on site	No
<i>Cordylanthus rigidus ssp. littoralis</i> Seaside bird's beak	-/T/1B.1	Annual herb	Sandy openings in Maritime chaparral, closed-cone Pine forest, Coastal Strand, Northern Coastal Scrub, Coastal Sage Scrub, Southern Oak Woodland, Foothill Woodland	April - October	Unlikely. No suitable habitat occurs on site	No
<i>Delphinium hutchinsoniae</i> Hutchinson's larkspur	-/-/1B.2	Perennial herb	Coastal Prairie, Chaparral, Mixed Evergreen Forest, Northern Coastal Scrub	March - June	Low likelihood. Suitable habitat occurs south of site but not in project area	No
<i>Eriogonum nortonii</i> Pinnacles buckwheat	-/-/1B.3	Perennial	Chaparral, Valley and foothill grassland	August-May	Unlikely. No suitable habitat occurs on site	No
<i>Erysimum ammophilum</i> sand-loving wallflower.	-/-/1B.2	Perennial herb	Sandy openings in Chaparral, Coastal dunes, and Coastal scrub	Feb - June	Unlikely. No suitable habitat occurs on site	No
<i>Hosackia gracilis</i> harlequin lotus	-/-/4.2	Perennial herb	Perennial herb found in water, springy areas, shores, meadows, roadside ditches. Mixed Evergreen Forest, Northern Coastal Scrub, Closed-cone Pine Forest, wetland-riparian	March - July	Unlikely. No suitable habitat occurs on site	No
<i>Leptosiphon grandiflorus</i> large-flowered leptosiphon	-/-/4.2	Annual herb	dunes, coastal Coastal Strand, Foothill Woodland, Northern Coastal Scrub, Coastal Sage Scrub, Closed-cone Pine Forest, Valley Grassland, Coastal Prairie	April - August	Unlikely. No suitable habitat occurs on site	No

<i>Lomatium parvifolium</i> Small leaved lomatium	-/-/4.2	Perennial herb	Chaparral, Closed-cone Pine Forest Serpentine soils	January - June	Unlikely. Marginal suitable habitat occurs on site	Yes
<i>Pinus radiata</i> Monterey Pine	-/-/1B.1	Evergreen tree	Closed-cone Pine Forest	January - February	Not likely. South of natural occurrence	No
<i>Piperia michaelii</i> Michael's rein orchid	-/-/4.2	Perennial herb	Coastal Foothill Woodland, Yellow Pine Forest, Northern Coastal Scrub, Coastal Sage Scrub, Closed-cone Pine Forest	April - August	Unlikely. No suitable habitat occurs on site	No
<i>Piperia yadonii</i> Yadon's rein orchid	E/-/1B.1	Perennial herb	Coastal scrub, Maritime chaparral, Closed-cone pine forest	May - August	Unlikely. No suitable habitat occurs on site	No
<i>Rosa pinetorum</i> Pine rose	-/-/1B.2	Shrub	Yellow Pine Forest, Red Fir Forest	May - July	Unlikely. No suitable habitat occurs on site	No
<i>Sidalcea malachroides</i> Maple leaved checkerbloom	-/-/4.2	Perennial herb	Disturbed areas in Coastal Prairie, Mixed Evergreen Forest, Redwood Forest	April - August	Unlikely. No suitable habitat occurs on site	No

Rare Plant rank - **1**: Rare, threatened, or endangered in California and elsewhere

.1: Seriously endangered in California

.2: Fairly endangered in California

Rare Plant Rank: **4**

Uncommon in California

.2: Fairly endangered in California

Federal status **E**: Endangered

T: Threatened

California Status - **E**: Endangered

T: Threatened

SPECIAL-STATUS WILDLIFE SPECIES KNOWN OR WITH THE POTENTIAL TO OCCUR IN THE PROJECT VICINITY

Scientific and Common name	Legal status Federal/State	Habitat Requirements	Likelihood to naturally Occur within the Project Site	Observed on project site?
Invertebrates				
<i>Danaus plexippus</i> Monarch butterfly	none	Overwintering habitat specific to woodland areas immediately bordering the coast composed of Monterey Pine, Eucalyptus, Cypress and Redwood.	Low. Known overwintering sites documented nearby.	No
<i>Euphilotes enoptes smithi</i> Smith's blue butterfly	E/-/-	Coastal scrub with dominance of specific buckwheat species <i>Eriogonum parvifolium</i> .	Low. 6 individuals of its host plant <i>Eriogonum parvifolium</i> were seen on site. Possible further south and east across Highway 1	No
Mollusks				
<i>Haliotis cracherodii</i> black abalone	E/-/-	Marine	Only offshore	No
Vertebrates				
Mammals				
<i>Enhydra lutris nereis</i> Southern Sea otter	T/-/FP	Entirely aquatic	Offshore	No
<i>Eumetopias jubatus</i> Steller (=northern) sea-lion	DL/-/-	Entirely aquatic	Offshore	No
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-/-/SSC	Big-eared bats have been reported in a wide variety of habitat types ranging from sea level to 3,300 meters. Habitat associations include: coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Distribution is strongly correlated with the availability of caves and cave-like roosting habitat, with population centers occurring in areas dominated by exposed, cavity forming rock and/or historic mining districts.	Unlikely	No

Fish				
Oncorhynchus mykiss irideus steelhead - south/central California	T/-/SSC	Rivers and perennial streams along Central coast	None. No suitable habitat occurs on site	No
Amphibians				
<i>Batrachoseps luciae</i> Santa Lucia slender salamander	-/-/-	Inhabits moist locations in redwood and mixed evergreen forests. Mostly found on north-facing slopes. Found along the western slope of the northern Santa Lucia Mountains in Monterey county from the Monterey Peninsula south to near the San Luis Obispo county line, and on the eastern slopes from Arroyo Seco south to at least the 36th parallel.	Unlikely. No suitable habitat occurs on site or nearby	No
<i>Rana boylei</i> Foothill yellow legged frog	-/Candidate/SSC	Frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools.	Unlikely. No suitable habitat occurs on site	No
<i>Rana draytonii</i> California red-legged frog	T/-/SSC	In the coast range, requires ephemeral or permanent water, ponds, reservoirs, or creeks (with slow moving pools during the winter/spring) with water that lasts at minimum until the end of June for reproduction (Reis 1999a). During the late summer or fall, adult frogs are known to utilize a variety of upland habitat types near water bodies with either leaf litter or mammal burrows.	Unlikely. No suitable habitat occurs on site	No
Birds				
<i>Hydrobates homochroa</i> ashy storm-petrel	-/-/SSC	A small seabird with a limited range, breeding only on offshore islands from central California to northern Baja, and dispersing only short distances at sea. Flies low over the waves with relatively shallow wingbeats. Of the	Unlikely	No

		various all-dark storm-petrels on the west coast, this one is medium-sized and slightly paler than the others		
<i>Pelecanus occidentalis californicus</i> . California Brown pelican	DL/DL/FP	The brown pelican is found in estuarine, marine subtidal, and marine pelagic waters along the California coast. Breeds on Channel Islands: Anacapa, Santa Barbara, and Santa Cruz (Garrett and Dunn 1981) from March to early August; most numerous then within 20 km (12 mi) of those islands (Briggs et al. 1981).	Unlikely	In flight offshore

Federal status **E**: Endangered

T: Threatened

California Status - **E**: Endangered

T: Threatened

SSC = California Species of Special Concern

FP = Fully protected in State of California

WL = Watch list

Plant community	Description and Primary components	Likelihood to naturally occur within the Project Site	Observed on project site
Central Maritime Chaparral	A variable sclerophyll scrub of moderate to high cover (50-100%) dominated by forms of <i>Arctostaphylos tomentosa</i> plus one or more other narrowly distributed manzanita. Survives at scattered locations near Monterey and Ft. Ord and in the Carmel Highlands	Low	No
Monterey Pine Forest	Dominated by <i>Pinus radiata</i> . Canopies may reach 30m and be 80% Monterey Pine. <i>Quercus agrifolia</i> usually is the next most abundant tree. Understories are variable in both composition and density.	Unlikely	No. Several Monterey Pines are planted in the landscape along with Monterey Cypress

Special status natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status species or their habitat.

Latin name	Common name
<i>Acca sellowiana</i> *	Pineapple Guava
<i>Aeonium arboreum</i> *	tree aeonium
<i>Aloe</i> sp.*	aloe
<i>Aptenia cordifolia</i> *	baby sun-rose
<i>Artemisia californica</i>	California sage brush
<i>Brassica nigra</i> *	Black mustard
<i>Calochortus albus</i>	White fairy lanterns
<i>Calystegia microstegia</i> ssp. <i>cyclostegia</i>	Coast morning glory
<i>Carpobrotus chilensis</i> *	sea fig
<i>Ceanothus thyrsiflorus</i> var. <i>griseus</i>	Carmel ceanothus
<i>Ceanothus thyrsiflorus</i> var. <i>thyrsiflorus</i>	blue blossom ceanothus,
<i>Conium maculatum</i> *	poison hemlock
<i>Crassula</i> sp.*	crassula
<i>Delairea odorata</i> *	Cape Ivy
<i>Diplacus aurantiacus</i>	bush monkeyflower
<i>Dipterostemon capitatus</i>	Blue dicks
<i>Dudleya caespitosa</i>	sea lettuce
<i>Dudleya farinosa</i>	Bluff lettuce
<i>Echium candicans</i> *	Pride of madeira
<i>Erigeron glaucus</i>	Seaside daisy
<i>Eriogonum parvifolium</i>	seacliff wild buckwheat
<i>Eriophyllum staechadifolium</i>	lizard tail
<i>Eucalyptus globulus</i> *	blue gum
<i>Frangula californica</i>	coffeeberry
<i>Hesperocyparis macrocarpa</i> ^	Monterey Cypress
<i>Iris douglasii</i>	Douglas' iris
<i>Lomatium parvifolium</i>	little leaf lomatium
<i>Mesembryanthemum nodiflorum</i> *	slender leaved ice plant
<i>Myoporum laetum</i> *	Mousehole tree
<i>Rubus ursinus</i>	California blackberry
<i>Salvia mellifera</i>	black sage
<i>Sanicula crassicaulus</i>	Ggamble weed
<i>Sanicula laciniata</i>	Coast sanicle
<i>Stachys bullata</i>	Woodmint
<i>Stachys chamissonis</i>	Coast hedge nettle
<i>Tetragonia tetragoniodes</i> *	New Zealand spinach
<i>Toxicodendron diversilobum</i>	poison-oak
<i>Toxicoscordion fremontii</i>	Fremont's death camas

* Nonnative to Monterey County

^ Native to Monterey County but not to this site

REGAN BIOLOGICAL & HORTICULTURAL CONSULTING

Mary Israel - Supervising Planner
 Monterey County HCD
 1441 Schilling Place - 2nd Floor South
 Salinas, CA 93901

June 4, 2025

RE: Naik-Desai Residence 36240 Highway 1 in Big Sur

Dear Mary,

This letter is an addendum to the Biological Assessment (Updated and Revised) written for the proposed redevelopment of this property dated March 24, 2025.

Carla Hashimoto of Eric Miller Architects informs me that a subsequent revision to the main house plan has extended part of the structure further south than any previous iteration and it now terminates on the ocean facing side of a Rocky knoll just above an existing fence line and terrace overlooking the water. You requested that this newly added development area be included in the biological assessment of the project area.

The area being added to the development is not significantly out of the area first proposed for development in 2022-2023. It is a Rocky knoll that sits above the existing parking area and house just south of the house and level landscaped areas around the house. It is topped by nonnative (to the site) Monterey Cypress trees that have significantly altered the vegetation under and around them and south of them, a low growing mix of invasive *Carpobrotus chilensis* and typical native bluff scrub species like Seaside daisy (*Erigeron glaucus*), Black sage (*Salvia mellifera*), Coast sagebrush

Figure 1: View looking north through Cypress understory on top of knoll.



(*Artemisia californica*) and Sea lettuce (*Dudleya caespitosa*) and perennial species like Blue dips (*Dipterostemon capitatus*), Fremont's lily (*Toxicoscordion fremontii*), Small-leaved lomatium (*Lomatium parvifolium*) and White fairy lanterns (*Calochortus albus*).

The photo at left shows the high point of the knoll. The House extension will terminate just left of the two-trunked cypress tree in the foreground. The density of the canopy and the natural allelopathic nature of the Cypress leaf litter has effectively eliminated any vegetative cover from directly under the trees.

West of the Cypress trees the knoll drops off steeply to a terrace at house and yard level. This slope is covered by a mix of exotic landscape planting, mostly nonnative succulents like *Aloe* and *Delosperma*, *Cotyledon*, *Crassula* and *Carpobrotus* but also including Pride of Madeira (*Echium fastuosum*) and Norfolk Island Pine (*Araucaria heterophylla*). There are a handful of Coast sagebrush and Sea lettuce and Fremont's lily's interspersed on the slope between the dead zone under the

Figure 2: View looking NE from terrace where proposed southern extension will terminate.



Cypress and terrace, but very few. The exposed rock in the middle of the photo below is approximately where cut and fill would terminate for the proposed south extension.

Further South of the high point of the knoll, the percentage of nonnative plants decreases, and the diversity of native species increases but is still consistently in competition with the ubiquitous *Carpobrotus*. On the south side, once clear of the Canopy of the Cypress trees the mix has a greater quantity of Blue dips (previously known as blue dichs or *Dichelostemma capitatum*) Fremont's lily, and Fairy lantern and additional species include Coast morning glory (*Calystegia macrostegia* ssp *cyclosetegia*), Golden yarrow (*Eriophyllum confertiflorum*), California goldenrod (*Solidago velutina*



Figure 3: View looking east up slope at Cypress trees on top of knoll. Proposed southern extension does not reach this far south.

Figure 4: View looking north at Cypress canopies on top of knoll. Southern extension impacts will not reach this far south.



ssp. californica), Poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), Wood mint (*Stachys bullata*), California sand aster (*Corethrogyne filaginifolia*), leafy bentgrass (*Agrostis pallens*), silver bush lupine (*Lupinus albifrons ssp douglasii*), Coast sagebrush and Black sage. It appears that even when accounting for room to do the grading and cutting that is necessary to add the proposed southern extension, that none of this area will be impacted.

To accommodate the cut and fill and construction of the new proposed southerly extension of the new single family home at 36240 Highway 1 in Big Sur a small area of vegetated westerly facing slope with mostly nonnative landscape plants will be removed and the root systems of several existing cypress trees at the top of the slope will be temporarily (perhaps permanently if not adequately protected) impacted. There are no special status protected plants except for the few *Lomatium parvifolium* (California Rare Plant Rank 4.2¹) already documented and evaluated in the previous Biological Assessment, in this impact area.

Root systems of the Cypress trees on top of the knoll could be negatively impacted by the cut and fill and construction activity. There is already protective fencing called out on sheet A-1.1 though it appears to be at the minimum distance from the trunks and I would recommend having an arborist on site, to observe and advise on root pruning and protection during the actual excavation work along the east side of the construction area.

Otherwise, I see no significant new impact on native plants, plant communities or wildlife that would occur resulting from this extension.

Pat Regan.

¹ California Rare Plant Rank 4: Plants of limited distribution, a watch list. Some of the plants constituting California Rare Plant Rank 4 meet the definitions of the California Endangered Species Act of the California Fish and Game Code, and few, if any, are eligible for state listing. While they do not automatically qualify for protection under CEQA, the California Native plant society recommends their protection.

Mary Israel - Supervising Planner
Monterey County HCD
1441 Schilling Place - 2nd Floor South
Salinas, CA 93901

August 8, 2025

RE: Naik-Desai Residence 36240 Highway 1 in Big Sur. PLN210348

Dear Mary,

This letter is an addendum to the Biological Assessment (Updated and Revised) written for the proposed redevelopment of this property dated March 24, 2025. Specifically, it is an analysis of the significance of the small patch of California Rare Plant Rank 4.2 Small leaved lomatium on the project site and whether its presence and impacts to it reaches CEQA level significance. I do not believe that the small occurrence of *Lomatium parvifolium* that will be impacted by the development on the Desai property represents a CEQA level impact requiring an Initial study or mitigation measures. The project will have a less than significant impact on *Lomatium parvifolium*.

Scientific Name *Lomatium parvifolium* (H. & A.) Jeps.

Common Name small-leaved lomatium

Lomatium parvifolium, commonly known as small-leaved lomatium, is a perennial herb in the Apiaceae that is found only in California. It occurs within Chaparral, Closed-cone coniferous forest, Coastal scrub, and Riparian woodland¹, growing at elevations from 65 to 2295 feet. *Lomatium parvifolium* is ranked 4.2, Plants of Limited Distribution, A Watch List; Moderately threatened in California.

California Rare Plant Rank 4.2

Plants with a California Rare Plant Rank of 4 are of limited distribution or infrequent throughout a broader area in California, and their status should be monitored regularly. Should the degree of endangerment or rarity of a California Rare Plant Rank 4 plant change, we will transfer it to a more appropriate rank. 4.2- Plants of limited distribution; fairly threatened in California.

Some (previous hard copy versions of the Inventory had *very few* rather than *some*) of the plants constituting California Rare Plant Rank 4 meet the definitions of section 1901, Chapter 10 (Native Plant Protection Act) or sections 2062 and 2067 of the California Endangered Species Act of the California Fish and Game Code, and few, if any, are eligible for state listing. Nevertheless, many of them are significant locally, and the CNPS strongly recommends that California Rare Plant Rank 4 plants be evaluated for impact significance during preparation of environmental documents relating to CEQA, or those considered to be functionally equivalent to CEQA, based on CEQA Guidelines §15125 (c) and/or §15380.

Global Rank G3

State Rank S3

¹ The California Native Plant Society Rare Plant Inventory Uses vegetation community names and descriptions following those outlined by Robert F. Holland and John O. Sawyer, Jr. Alliances, sub categories and uniquely titled species- specific vegetative communities are not listed in their descriptions only broad coverage community types. **Chaparral** is most commonly one of the many Central maritime chaparral communities and **Closed cone coniferous forest** is predominantly Monterey Pine Woodland in Monterey County. **Coastal scrub** is a fluid, ever changing mix of woody shrubs that share some species commonality but add or subtract many species over linear distance and atmospheric condition changes from north to south along much of the California coast. The 36240 Highway 1 site did not simply fit into any of the specific CDFW Alliances or natural community definitions. See also the California Wildlife Habitat Relationships System definitions on Page 3

CESA None

FESA None

Other Status SB_SBBG seed banked at Santa Barbara Botanic Garden

Date Added 1/1/1974 *Lomatium parvifolium* was included in the first edition of the Inventory of Rare and Endangered vascular plants of California as a List 4 plant with a R-E-D code of 1-2-3 meaning it was 1_ Rare but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time. 2_ Endangered in a portion of its range. And 3_ Endemic to California.

The R-E-D code has since been replaced with “threat ranks” ranging from 1-3 and *Lomatium parvifolium* is now considered a list 4.2 plant as described above a “plant of limited distribution; fairly threatened in California”

Other than that, it has remained on list 4 for 50 years with no change in status, known range or significant reduction in population. It appears to be stable and in no greater threat of extinction than when it was listed.

Last Change 5/26/2021

Lifeform perennial herb

Blooming Period Jan-Jun

Elevation: ft 65-2295

General Habitat Chaparral, Closed-cone coniferous forest, Coastal scrub, Riparian woodland

General Microhabitat serpentinite

Quadrangles documented: Alder Peak (3512183), Atascadero (3512046), Big Sur (3612137), Burnett Peak (3512172), Burro Mountain (3512173), Chualar (3612155), Gonzales (3612154), Lopez Mtn. (3512035), Marina (3612167), Monterey (3612158), Morro Bay South (3512037), Mt. Carmel (3612147), Pebblestone (3512161), Piedras Blancas (3512163), Pismo Beach (3512026), Prunedale (3612176), San Luis Obispo (3512036), Santa Teresa Hills (3712127), Seaside (3612157), Soberanes Point (3612148), Villa Creek (3512174), Watsonville West (3612187)

The Species range as illustrated by documentation in the California Natural Diversity Database, CalFlora, the Jepson Herbarium and iNaturalist has remained unchanged from County and statewide floras and the CNPS Rare Plant Inventory over the last 50-75 years. Overall understanding of the distribution throughout its natural range has exploded with the advent of smart phones and identification apps. Calflora has 300 plus observations in their database. iNaturalist has 472 photo-documented additional observations of the plant throughout much of Coastal Monterey County, Santa Cruz County, and San Luis Obispo county over the past 10 years. While iNaturalist accepts entries from virtually anyone able to use the app, there is a process for determining the quality of the data entered and approximately half of the 472 entries are considered Research quality. The Quality Grade summarizes the accuracy, precision, completeness, relevance, and appropriateness of an iNaturalist observation as biodiversity data. Some attributes are automatically determined, while others are subject to a vote by iNat users. iNaturalist shares licensed "Research Grade" observations with a number of data partners for use in science and conservation.

The various **special considerations** for including a list 4.2 species in CEQA are not applicable for *Lomatium parvifolium* at this location:

- The **Type locality of a California Rare Plant Rank 4 taxon**; The Type locality for *Lomatium parvifolium* is not known.
- **Occurrences at the periphery of a species' range**; The project location is in the middle of the documented range of the species which includes Ventura, Santa Barbara, San Luis Obispo, Monterey, Santa Cruz, San Benito and Santa Clara Counties and not exceptional as to topography or geography.

- **Areas where the taxon is especially uncommon;** This species is evenly distributed and well represented up and down the Big Sur coast. The occurrence at 36240 Highway 1 is within the normal range of the species and while herbarium specimens and CNDDDB records are historically spotty for this part of the Coast, Citizen science apps like iNaturalist and CalFlora are filling in the blanks rapidly. The species is becoming better understood with the influx of photo documentations and appears to be much more common than previously understood, particularly in the Soberanes Point. Point Sur, Big Sur, Pfeiffer Point and Partington Ridge Quadrangles.
- **Areas where the taxon has sustained heavy losses** (declining); There are no indications, anecdotal or data based, of the taxon losing ground quantitatively in habitat acreage or plant numbers in Coastal Monterey County.
- **Occurrences exhibiting unusual morphology or occurring on unusual substrates;** This occurrence has no morphological details making it exceptional. While the species is noted as frequently occurring on Serpentine soils, it is found in sandstone and granitic based soils on the Monterey peninsula, along the Big Sur coast and throughout the Fort Ord National Monument. The Granite based soil substrate at 36240 Highway 1 is not an unusual substrate compared to other occurrences. Here it is on an exposed outcrop that is partially shaded by nonnative Monterey cypress trees. Under the canopy of the trees there is very little vegetation. The Lomatium is growing in soil pockets in the bedrock on north and west facing slopes. Approximately 20 individuals were observed, mixed with White fairy lanterns (*Calochortus albus*) Fremont's death camas (*Toxicoscordion fremontii*), Blue dicks (*Dipterostemon capitatus*) and Sea lettuce (*Dudleya caespitosa*).
- **Species maintained on BLM, USFWS, or USFS sensitive species lists;** Lomatium parvifolium is not on BLM, USFWS or USFS sensitive Species Lists.
- **Taxa associated with a habitat that is declining in California at a significant rate.** Central maritime chaparral is a locally specialized plant community with several subgroups based on dominant rare, local endemic manzanita species, that is under significant development pressure and threat from succession due to fire suppression and prevention on the Central Coast. The small leaved lomatium may be viewed as more vulnerable in locations where it occurs in those plant communities. There is no Central maritime chaparral habitat on the 36240 Highway 1 property.

Other Classifications-- The following vegetation types and plant communities defined in the literature fall into The California Wildlife Habitat Relationships System **Coastal Scrub** habitat definition: Coyote Brush, Lupine, Salal, Sumac, Ragweed, California Sagebrush, Encelia, Buckwheat and Sage described by Parker and Matyas (1981); the Opuntia series of succulent shrub subformation and the Coastal Sagebrush, Encelia, Baccharis, Salvia, Lupine, and California Buckwheat series of the soft chaparral subformation described by Paysen et al. (1980); Coastal Strand, Northern Coastal Scrub, Coastal Sage Scrub, and Coastal Sagebrush described by Munz and Keck (1973); Coastal Sagebrush, Northern Seashore Communities (Northern Dune Scrub), Southern Seashore Communities (Central Dune Scrub, Southern Dune Scrub), and Coastal Prairie - Scrub Mosaic described by Küchler (1977); and the Northern Coastal Dune Scrub subdivision of Partially Stabilized and Stabilized Coastal Dunes, Coastal Bluff Scrub, Coastal Scrub, and Maritime Cactus Scrub described by Cheatham and Haller (1975).

Please feel free to call or email if you have any questions about how I reached my conclusion.

Thank You

Pat Regan

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