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December 19 , 2016

Subject: Paraiso Springs Resort – PLN040183 - Biological update

Dear John,

This letter is being written to provide further clarity on the Biological survey updates I performed for you on May 3 of 2016 and March 25 2013. In 2013, based on feedback from Monterey County Planning staff regarding the time lapse since the Biological Studies for the Initial Study were completed in 2005 and 2008 as well as the addition of special status species onto database lists for the Paraiso Springs Quadrant of the USGS, it was determined that an addendum to the 2005 and 2008 Biological Assessments would be appropriate and that the plants added to the California Natural Diversity Database (CNDDDB) since the last survey dates, would be the primary targets.

The Plants I searched for specifically in 2013 were;

Chaparral ragwort (*Senecio aphanactis*) Blooms from January to April

Hickman's checkerbloom (*Sidalcea hickmanii* ssp. *hickmanii*) Blooms May to July

San Francisco collinsia (*Collinsia multicolor*) Blooms from March to May

Santa Cruz Mountains pussypaws (*Calyptidium parryi* var. *hesseae*) Blooms May to August

Santa Lucia dwarf rush (*Juncus luciensis*) Blooms April to July

I conducted the survey in late March in 2013, which was generally early for expecting to find flowers of two of the species, but considered other information regarding habitat types, elevations at which the plants were documented, nearby occurrences of the plants (where accessible) that could be compared phenologically as well as the knowledge of the appearance of the plants out of flower. This was essentially the third year of drought for Monterey County and The Paraiso Springs property, already naturally in a rain shadow, was extremely dry. For this reason, I determined to do the survey on the early side rather than wait for things to get dryer and hotter.

I prepared a table outlining the habitat conditions that the plants would be found in, the time of bloom, the elevation range at which the plants have been documented and locations of nearest documented occurrences before visiting the property. During my site visit I spent multiple hours walking back and forth through the property in all the areas of direct project impact and surrounds, walking through woodland, grassland, chaparral and Coastal sage scrub plant communities, as well as the highly disturbed landscape areas and historical agricultural areas. I did not locate any plants that had not already been documented during the 2005 and 2008 biological Assessment work.

None of the five plants listed above were found during that survey. The report was filed as an addendum to the 2005 and 2008 Biological assessments and did not include any additional plant lists or maps.

In May of 2016, I was asked again to do another update that would be filed as an addendum to the 2005, 2008 and 2013 assessments. This addendum was intended to bring survey data up to date and to look at conditions after the first relatively normal rain fall year since 2011. I surveyed the entire area proposed for development as well as those more natural interface areas that are not going to be directly impacted but would be more likely to host more native species including the less common species from the CNDDDB list for the Paraiso Springs Quadrant. During my survey, I did not find any of the species that were targeted in 2013, but did find one new species for the property list, *Chorizanthe douglasii* a rare plant rank 4.3 species. No other Rare, Threatened, or Endangered species were found anywhere on the property.

I have conducted hundreds of plant surveys in Monterey County since 2000 and am very familiar with most of the common species of the county as well as many of the rare, threatened or endangered species. The following plant list was compiled in my notes during the survey. While the weed and introduced landscape species around the old, highly impacted development portions of the property are well documented, I focused my survey notes on the native species in the areas that have not been as highly impacted in the past or will be newly, directly or indirectly impacted by the proposed development including Indian Valley and hiking trails above the resort area. The areas of the property proposed for direct impacts from redeveloping Paraiso Springs resort have been assessed multiple times over the last 12 years and at no time has any Rare, Threatened or Endangered plant species been documented. In fact, very few of the common native plant species that have been documented within Paraiso Springs property lines have been added from observations made within the proposed development impact areas.

Plants in flower were noted and identified to species and confirmed with the assistance of online database's at *CalFlora*, *Calphotos*, and *The Plants of Monterey County an illustrated Flora* by Mary Ann Matthews and Michael Mitchell.

A google earth aerial image with the locations of the Douglas's spineflower and Coast horned lizards that were found during my May 2016 survey is attached.

Please let me know if I can be of further assistance to provide details for clarification.



Pat Regan

Regan Biological and Horticultural Consulting

Plant list for May 3 2016 survey

Achillea millefolium – common yarrow
Acmispon glaber – deer weed
Adenostoma fasciculatum - chamise
Aesculus californicus – California buckeye
Amsinckia menziesii var. *intermedia* – Common fiddleneck
Antirrhinum multiflorum - sticky snapdragon

Antirrhinum kelloggii – Kellogg's snapdragon
Artemisia californica - California sagebrush
Artemisia douglasiana - mugwort
Baccharis pilularis – coyote brush
Baccharis salicifolia – Mule fat
Brassica rapa * - Field mustard
Brickelia californica – California Brickell bush
Bromus diandrus * - ripgut brome
Bromus hordeaceus * - soft chess
Bromus madritensis ssp. *rubens** – foxtail chess
Castilleja exserta – pink owl's clover
Chorizanthe douglasii – Douglas's spine flower
Cirsium occidentale var. *venustum* – Venus thistle
*Cirsium vulgare** - bull thistle
Clematis lasiantha - chaparral clematis
Claytonia perfoliata ssp. *perfoliata* - miner's lettuce
Collinsia heterophylla – Chinese houses
Collomia grandiflora - large-flowered collomia
Collomia heterophylla – variable leaved collomia
Deinandra corymbosa ssp. *corymbosa* -Coast tarweed
Delphinium parryi ssp. *parryi* - Parry's larkspur
Dichelostemma capitatum – Blue dicks
Dudleya cymosa - spreading dudleya
Elymus glaucus - western ryegrass
Eriastrum densifolium - perennial eriastrum
Erigeron Canadensis – horse weed
Eriodictyon tomentosum - woolly yerba santa
Eriogonum elongatum var. *elongatum* - long-stemmed buckwheat
Eriogonum fasciculatum var. *foliolosum* - California buckwheat
Eriogonum nudum – naked buckwheat
Eriogonum saxatile - rock buckwheat
Eriophyllum confertiflorum - golden yarrow
*Erodium cicutarium** - red-stemmed filaree
Festuca microstachys - Nuttall's fescue
Frangula californica - California coffeeberry
Galium angustifolium - narrow-leaved bedstraw
Galium californicum - California bedstraw
Heteromeles arbutifolia - toyon/Christmas berry
Heterotheca grandiflora – Telegraph weed
Juniperus californica – California juniper
Lomatium macrocarpum - sheep parsnip
Lonicera interrupta - chaparral honeysuckle
Lupinus albifrons var. *collinus* - Collins' bush lupine
Lupinus concinnus - bajada lupine
Lupinus hirsutissimus – stinging lupine
Marah fabaceus - man-root/wild cucumber
Melica imperfecta - coast-range melica
Mimulus aurantiacus - sticky monkey flower

Monardella villosa – coyote mint
Pellaea andromedifolia - coffee fern
Pellaea mucronata var. mucronata - bird's-foot fern
Penstemon centranthifolius - scarlet bugler
Phacelia egena - California phacelia
Phacelia imbricata - imbricate phacelia
Phacelia ramosissima - branching phacelia
Pseudognaphalium californicum - California everlasting
Pseudognaphalium microcephalum - white everlasting
Quercus agrifolia – Coast live oak
Quercus berberidifolia – Scrub oak
Quercus douglasii – Blue oak
Pentagramma triangularis – gold back fern
Platanus racemosa – California sycamore
Prunus ilicifolia - holly-leaved cherry
Pseudognaphalium microcephalum - white everlasting
Rafinesquia californica - California chicory
Rhamnus crocea – spiny redberry
Ribes californicum - hillside gooseberry
Ribes speciosum - fuchsia flowered gooseberry
Rubus ursinus – California blackberry
Salix lasiolepis – Arroyo willow
Saltugilia splendens - splendid gilia
Salvia mellifera - black sage
Salvia spathacea – hummingbird sage
Sambucus nigra ssp. caerulea - blue elderberry
Sanicula crassicaulis – Pacific sanicle
Solanum umbelliferum - blue witch
Stachys bullata – wood mint
Stipa pulchra – purple needle grass
Symphoricarpos albus – Common snowberry
Toxicodendron diversilobum - poison oak
Umbellularia californica – Bay laurel
Urtica dioica ssp holosericea - hoary nettle
Urtica urens* - dwarf nettle
Verbena lasiostachys - western vervain
* not native to california

Special Status species

Species documented during May 3, 2016 supplemental botanical survey



Legend

-  Coast horned lizard or Douglas's spine flower
-  Paraiso Springs

Coast horned lizard

