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Tom Figg, Planner
Santa Barbara County
Planning and Development Department
123 E. Anapamu Street
Santa Barbara, CA 93101

Subject: Biological Resources Review of the Santa Barbara Ranch Revised DEIR (04EIR-00000-00014)

Dear Mr. Figg:

David Magney Environmental Consulting (DMEC) has been retained by the Environmental Defense Center on behalf of the Surfrider Foundation to review the biological resources section of the Santa Barbara Ranch (SBR) project Revised Draft Environmental Impact Report (RDEIR). DMEC's comments presented below are generally organized by resource issue of concern.

The proposed (MOU) project would result in the development of 54 single-family, large-lot estates on approximately 485 acres. Approximately 177 acres (36%) would be permanently graded and developed for the 54 houses and related supporting facilities, including up to 54 Residential Second Units (RSUs) allowed pursuant to the proposed Naples Planned Development District (RDEIR Appendix B). The balance of land would be placed under agricultural or open space easements (ACEs and OSCEs).

The Alternative 1 project would result in the development of 72 single-family, large-lot estates, and supporting facilities including up to 72 RSUs, on approximately 690 acres (485 acres on SBR and 205 acres on Dos Pueblos Ranch [DPR]), with another 2,629 acres for agricultural uses and 372 acres for open space.

These two project options are compared to the Naples Grid development scenario – Alternative 3A. However, the Grid development scenario has numerous logistical problems that would likely prevent each of the 114-124 lots deemed potentially buildable by the County actually developable. For example, there is no existing infrastructure in the Naples Grid, nearly all of which would require permitting from a variety of regulatory agencies, most of which would also require California Environmental Quality Act (CEQA) and/or National Environmental Policy Act (NEPA) review. Many of the lots are severely constrained, as shown on RDEIR Figures 11.4-1 and 11.6-1, depicting how the Grid scenario and the Cluster Alternative would avoid constrained grid lots. The County's analysis of grid development also failed to consider 100-foot setbacks required for wetlands present in the coastal bluff drainages.

An error in identification not related to biological resources occurs throughout the RDEIR. The railroad tracks passing through the project site are owned by Southern Pacific Transportation Company, not Union Pacific Railroad.

Special-status Plants and Flora

The flora of the Naples project site is represented by 173 vascular plant taxa, cumulatively including the SBR and DPR, is known and reported only from Holland (2003¹) and SAIC (2005²), who only surveyed the SBR. Of the 173 taxa reported, 10 are considered ornamental or agricultural plantings that are now persisting without active cultivation (Appendix 1 of Holland 2003).

Where is the list of vascular plants observed onsite for the entire project site? The only checklists I could find of the vascular plants found onsite is in SAIC's 2005 report and V.L. Holland's 2003 botanical resources report, which certainly would not be considered complete as neither Holland nor SAIC surveyed the entire Alternative 1 project site, recording only 154 and 173 plant taxa, respectively, on SBR. Note: Holland listed two unidentified species of *Eucalyptus* where SAIC listed only one without indicating that SAIC's listing represented two species; maybe SAIC thought Holland had a duplication error on his list.

Both SAIC and Holland only surveyed the SBR portion (Page 3 of Holland's report; Page 1 of SAIC's 2005 report). Including a list of all plants and wildlife observed or expected onsite in the EIR is a standard practice and helps the public get a better understanding of which taxa are present. When an offsite project alternative is studied at the same level as the proposed project, the EIR must also describe baseline conditions for the alternative project site, i.e. Dos Pueblos Ranch. This lack of disclosure must be rectified. SAIC's Appendix B checklist lists 173 taxa, which is a relatively depauperate flora for a 3,000-acre area in California, or even for a 485-acre property. With at least 11 different plant communities documented onsite, the vascular plant flora of the project site should be between 200 and 300 taxa, even considering the disturbed nature of large portions of the two ranches (see more detailed comments later in this letter).

Section 3.4.3.2 - Special-status Plants, on Page 3.4-29, describes the methods of what special-status species, and the criteria, used for the RDEIR. However, the RDEIR fails to mention locally rare plants identified by CNPS and the Santa Barbara Botanic Garden (through the Central Coast Center for Plant Conservation) developed and first published in 2003 and revised in 2007 (Wilken 2007³). This list uses objective rarity criteria for vascular plants known to occur in Santa Barbara County and lists those taxa that are rare in the county (8 or fewer extant populations). The RDEIR fails to mention this list, which should be part of the impact assessment on biological resources.

Appendix B of SAIC's 2005 report for Santa Barbara Ranch lists plants observed onsite. Numerous taxa are not fully identified to subspecies or variety, and apparently no voucher specimens were collected. This failure to follow minimum standard guidelines (described below) may result in the failure to identify rare taxa that should be assessed in the EIR for significance of impacts.

¹ Holland, V.L. 2003. Botanical Survey of Santa Barbara Ranch, Santa Barbara County, California. San Luis Obispo, California. Prepared for L&P Consultants, Santa Barbra, California.

² Science Applications International Corporation (SAIC). 2005. Biological Survey Report of the Santa Barbara Ranch Property, Gaviota Coast, Santa Barbara County, California, 2004-2005. April. Santa Barbara, California. Final report prepared for County of Santa Barbara, Planning & Development Dept., Santa Barbara, California.

³ Wilken, D. 2007. Rare Plants of Santa Barbara County. (Version 1.8, 6 August 2007.) Central Coast Center for Plant Conservation, Santa Barbara Botanic Garden, Santa Barbara, California. California Native Plant Society, Channel Islands Chapter, Ojai, California. (Published on www.cnpsci.org.)

For example, *Sidalcea malviflora* is not identified to subspecies when two different subspecies are known to occur in the region: *S. malviflora* ssp. *californica* and *S. malviflora* ssp. *laciniata*. Protocols for listing taxa states that if the subspecies/variety is not named, the reader should assume that the type subspecies/variety, in this case *S. malviflora* ssp. *malviflora*, is what should be considered as referred to. However, *S. malviflora* ssp. *malviflora* is known only from the Channel Islands region of Santa Barbara County, with no records from the mainland based on a records search of the Jepson Herbarium Consortium of California Herbaria⁴ (CCH). If indeed *S. malviflora* ssp. *malviflora* is present at the Santa Barbara Ranch site, this would represent a significant botanical find and the population should be treated as a special-status species since it would represent the only record on the mainland of Santa Barbara County. Or, is it another subspecies? Based on email correspondence with Dieter Wilken⁵, Vice President for Programs and Collections of the Santa Barbara Botanic Garden, it is most likely ssp. *californica*, a locally rare taxon (Wilken 2007).

Other native plant taxa not fully identified include: *Baccharis pilularis* (almost certainly ssp. *consanguinea*), *Hazardia squarrosa*, *Isocoma menziesii*, *Achillea millefolium* (varieties lumped in Jepson Manual), *Amsinckia menziesii*, *Bloomeria crocea*, *Brodiaea terrestris*, *Calystegia macrostegia*, *Claytonia perfoliata*, *Clematis*, *Dichelostemma capitatum*, *Epilobium ciliatum*, *Juncus bufonius*, *Juncus effusus*, *Lepidium nitidum*, *Malacothrix saxatilis*, *Marah fabaceus*, *Scrophularia californica*, *Urtica dioica*, *Verbena lasiostachys*, and *Vulpia microstachys*. This represents 21 percent of the SBR flora, excluding cultivated species, most of which are also not fully identified. While most of these are likely relatively common taxa, some are known to have subspecies/varieties that are rare (*Brodiaea terrestris*, *Clematis*, *Malacothrix saxatilis*, and *Sidalcea malviflora*), and it is necessary to have all such taxa fully identified, as recommended by CDFG guidelines and CNPS and California Botanical Society policies. The RDEIR should be revised to include a checklist with all species fully identified and any and all special-status species assessed for potentially significant impacts.

It is clear after reviewing the RDEIR and supporting botanical survey reports (Holland 2003, SAIC 2004, 2005) that botanical survey protocols were not followed as established by the U.S. Fish and Wildlife Service (USFWS), CDFG, CNPS, and/or California Botanical Society, or even Santa Barbara County thresholds⁶. The minimum professional standards for conducting botanical surveys to determine presence for impact assessment purposes basically include: conducting field surveys during seasons when plants are detectable and identifiable, floristic in nature, supported by voucher collections deposited at a public herbarium, conducted by botanists familiar with the local flora, and fully documented in a detailed report and located on appropriately scaled maps.

The USFWS (2000⁷) has established guidelines and minimum survey and reporting standards for botanical surveys, which were not followed for either the MOU Project or Alternative 1 Project. The USFWS guidelines and standards are included below.

⁴ Consortium of California Herbaria (CCH) – search for *Sidalcea malviflora* on 3 January 2008 - <http://ucjeps.berkeley.edu/consortium/>.

⁵ Wilken, D., Vice President for Programs and Collections at Santa Barbara Botanic Garden, personal communication, email dated 3 January 2008 regarding *Sidalcea malviflora* subspecies distribution in Santa Barbara County.

⁶ Santa Barbara County. 2006. Environmental Thresholds and Guidelines Manual. First published May 1992. Planning and Development Department, Santa Barbara, California.

⁷ U.S. Fish and Wildlife Service. 2000. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants. January. Carlsbad, California.



“These guidelines describe protocols for conducting botanical inventories for federally listed, proposed and candidate plants, and describe minimum standards for reporting results. The Service will use, in part, the information outlined below in determining whether the project under consideration may affect any listed, proposed, or candidate plants, and in determining the direct, indirect, and cumulative effects. Field inventories should be conducted in a manner that will locate listed, proposed, or candidate species (target species) that may be present. The entire project area requires a botanical inventory, except developed agricultural lands. The field investigator(s) should:

1. Conduct inventories at the appropriate times of year when target species are present and identifiable. Inventories will include all potential habitats. Multiple site visits during a field season may be necessary to make observations during the appropriate phenological stage of all target species.
2. If available, use a regional or local reference population to obtain a visual image of the target species and associated habitat(s). If access to reference populations(s) is not available, investigators should study specimens from local herbaria.
3. List every species observed and compile a comprehensive list of vascular plants for the entire project site. Vascular plants need to be identified to a taxonomic level which [sic] allows rarity to be determined.
4. Report results of botanical field inventories that include:
 - a. A description of the biological setting, including plant community, topography, soils, potential habitat of target species, and an evaluation of environmental conditions, such as timing or quantity of rainfall, which may influence the performance and expression of target species;
 - b. A map of project location showing scale, orientation, project boundaries, parcel size, and map quadrangle name;
 - c. Survey dates and survey methodology(ies);
 - d. If a reference population is available, provide a written narrative describing the target species reference population(s) used, and date(s) when observations were made;
 - e. A comprehensive list of all vascular plants occurring on the project site for each habitat type;
 - a. Current and historic land uses of the habitat(s) and degree of site alteration;
 - b. Presence of target species off-site on adjacent parcels, if known; and
 - h. An assessment of the biological significance or ecological quality of the project site in a local and regional context.
5. If target species is(are) found, report results that additionally include:
 - a. A map showing federally listed, proposed and candidate species distribution as they relate to the proposed project.
 - b. If target species is (are) associated with wetlands, a description of the direction and integrity of flow of surface hydrology. If target species is (are) affected by adjacent off-site hydrological influences, describe these factors.
 - c. The target species phenology and microhabitat, an estimate of the number of individuals of each target species per unit area; identify areas of high, medium and low density of target species over the project site, and provide acres of occupied habitat of target species. Investigators could provide color slides, photos or color copies of photos of target species or representative habitats to support information or descriptions contained in reports.
 - d. The degree of impact(s), if any, of the proposed project as it relates to the potential unoccupied habitat of target habitat.
6. Document findings of target species by completing California Native Species Field Survey Form(s) and submit form(s) to the Natural Diversity Data Base [sic] maintained by the

Natural Heritage Division of the California Department of Fish & Game. Documentation of determinations and/or voucher specimens may be useful in cases of taxonomic ambiguities, habitat or range extensions.

7. Report as an addendum to the original survey, any change in abundance and distribution of target plants in subsequent years. Project sites with inventories older than 3 years from the current date of project proposal submission will likely need additional survey.
8. Adverse conditions may prevent investigator(s) from determining presence or identifying some target species in potential habitat(s) of target species. Disease, drought, predation, or herbivory may preclude the presence or identification of target species in any year. An additional botanical inventory(ies) in a subsequent year(s) may be required if adverse conditions occur in a potential habitat(s). Investigator(s) may need to discuss such conditions.” (USFWS 2000.)

The CDFG botanical survey guidelines (CDFG 2000⁸) are identical to that of the USFWS; actually, the USFWS adopted CDFG’s revised guidelines, which were first adopted in 1983.

CNPS Botanical Survey Guidelines (CNPS 2001⁹) are similar to that of the USFWS and CDFG, but a bit broader, not focused narrowly on rare species. CNPS also has adopted a policy regarding collecting and documentation of the flora of projects such as the Naples development project (CNPS 1995¹⁰). The California Botanical Society has also adopted this policy. Copies of the CNPS guidelines and policy statement are attached to this letter. The CNPS guidelines best represent professional minimum standards for consulting botanists.

CDFG and CNPS guidelines also include consideration of nonvascular plants (CNPS 1992¹¹), which include bryophytes (mosses, liverworts, and hornworts) and lichens. In addition, the California Lichen Society is concerned about losses to the lichen flora of California¹² and has published a preliminary list of rare lichens of California (Magney 1999¹³). The RDEIR failed to consider project-related impacts to the nonvascular plant flora (bryophytes or lichens) of the project site. Floristic field surveys need to be conducted of the bryophytes and lichens of the project site, and an assessment needs to be performed to determine in the project would significantly impact the nonvascular plant flora and special-status nonvascular plants. Currently, there are 29 bryophyte species and 7 lichen species tracked by the CNDDDB (2008¹⁴).

⁸ California Department of Fish and Game. 2000. Guidelines for Conducting and Reporting Botanical Inventories for Rare, Threatened, and Endangered Plants and Natural Communities. 9 December 1983, Revised 8 May 2000. State of California, The Resources Agency, Sacramento, California.

⁹ California Native Plant Society. 2001. Botanical Survey Guidelines. Adopted 9 December 1983, Revised 2 June 2001. Board of Directors, Sacramento, California. See www.cnps.org for complete text of guidelines.

¹⁰ California Native Plant Society (CNPS). 1995. Collecting Guidelines and Documentation Techniques, Policy Statement. Adopted 4 March 1995. Board of Directors, Sacramento, California. See www.cnps.org for complete text of policy statement.

¹¹ California Native Plant Society (CNPS). 1992. Statement of Policy – Nonvascular Plants. Adopted March 1992. Board of Directors, Sacramento, California. See www.cnps.org for complete text of guidelines.

¹² California Lichen Society. 2000. CALS Mission Statement and Conservation of California Lichens Website. <http://ucjeps.berkeley.edu/rlmoe/cals.html>.

¹³ Magney, D.L. 1999. Preliminary List of Rare California Lichens. *California Lichen Society Bulletin* 6(2):22-27. See <http://128.32.109.44/red.html> or http://ucjeps.berkeley.edu/rlmoe/cals6_2.html.

¹⁴ California Natural Diversity Database (CNDDDB). 2008. Special Vascular Plants, Bryophytes, and Lichens List. January. (Quarterly publication) California Department of Fish and Game, Natural Heritage Division, Sacramento, California. <http://www.dfg.ca.gov/biogeodata/cnddb/plants.asp>.

The Santa Barbara County's own Environmental Thresholds and Guidelines Manual¹⁵ was not followed completely. An excerpt of that manual for biological resources is quoted below:

“C. GUIDELINES FOR ASSESSMENT OF BIOLOGICAL RESOURCES IMPACTS

2. Evaluation of Resources on the Project Site

(1) Resources Inventory

- a. What biological communities are on the site? What size area?
- b. Is the habitat type relatively common? Is it rare and occurring in only a few places in the region, or significantly declining in extent and/or quality? Is the habitat designated as an ESH area on County planning documents, or designated as "critical habitat" for listed species by Federal or State agencies?
- c. Is the site in an urban, rural or outlying area? What are the uses surrounding the site? Is the habitat isolated or is it contiguous with adjacent habitat or close enough to provide a link between habitats?
- d. Does the habitat support resident species or migratory species? Are there protected species (eg., endangered or threatened), or species of candidate, special, or local concern or healthy rare species?

(2) Condition and Quality

- a. Is the habitat pristine or disturbed? How much or to what degree?
- b. How biologically productive is it? Does it support an especially rich and diverse plant and/or wildlife population?
- c. Is the habitat resource (including the surrounding area if it is related) large enough to be viable?

3. Evaluation of Project Impacts

Assessment of impacts must account for both short-term and long-term impacts. Thus the assessment must account for items such as immediate tree removal and longer-term, more subtle impacts such as interruption of the natural fire regime or interference with plant or animal propagation.

(1) Types of Impacts to Biological Resources

Disturbance to habitats or species may be significant, based on substantial evidence in the record (not public controversy or speculation), if they substantially impact significant resources in the following ways:

- a. Substantially reduce or eliminate species diversity or abundance
- b. Substantially reduce or eliminate quantity or quality of nesting areas
- c. Substantially limit reproductive capacity through losses of individuals or habitat
- d. Substantially fragment, eliminate, or otherwise disrupt foraging areas and/or access to food sources
- e. Substantially limit or fragment range and movement (geographic distribution or animals and/or seed dispersal routes)
- f. Substantially interfere with natural processes, such as fire or flooding, upon which the habitat depends.

(2) Less Than Significant Impacts

There are many areas in the County where there is little or no importance to a given habitat and it is presumed that disruption would not create a significant impact. Examples of areas where impacts to habitat are presumed to be insignificant include¹⁶

¹⁵ Santa Barbara County. 2006. Environmental Thresholds and Guidelines Manual. First published May 1992. Planning and Development Department, Santa Barbara, California.

¹⁶ Pursuant to CEQA, a presumption based upon County thresholds that a project's impact is insignificant is rebutted if there is substantial evidence in light of the whole record before the lead agency that the project may have a significant impact on the environment (Pub. Res. Code §21082.2).



- a. Small acreages of non-native grassland if wildlife values are low.
- b. Individuals or stands of non-native trees if not used by important animal species such as raptors or monarch butterflies.
- c. Areas of historical disturbance such as intensive agriculture.
- d. Small pockets of habitats already significantly fragmented or isolated, and degraded or disturbed.
- e. Areas of primarily ruderal [sic] species resulting from pre-existing man-made disturbance.

(3) Impact Assessment Factors

In addition to the criteria listed in (1) "Types of Impacts to Biological Resources" above, the following questions and factors are used in assessing the significance of project impacts on biological resources.

(a) Size

How much of the resource in question both on and off the project site would be impacted?

(percentage of the whole area and square footage and/or acreage are both useful to know)

How does the area or species that would be impacted relate to the remaining populations off the project site? (% of total area or species population, either quantitatively or qualitatively.)

(b) Type of Impact

Would it adversely indirectly affect wildlife (light, noise, barriers to movement, etc.)?

Would it remove the resource or cause an animal to abandon the area or a critical activity (e.g., nesting) in that area?

Would it fragment the area's resource?

(c) Timing

Would the impact occur at a critical time in the life cycle of an important plant or animal (e.g., breeding, nesting, or flowering periods)?

Is the impact temporary or permanent? If it is temporary, how long would the resource take to recover?

Would the impact be periodic, of short duration, but recur again and again?

D. HABITAT-SPECIFIC IMPACT ASSESSMENT GUIDELINES

The following section provides additional impact assessment guidelines specific to several biological communities. These guidelines are to be used in conjunction with the general impact assessment guidelines described in Section III. (Note: Not all habitat types found in Santa Barbara County are addressed by these habitat-specific guidelines. Habitat types not addressed here are assessed with the general impact assessment guidelines in Section III.)

1. Wetlands

(1) Description: Wetlands are among the most biologically productive of habitats, and the County's wetlands have been diminished both in areal extent and quality from the historic condition. As a result, naturally-occurring wetlands are an important resource, and projects with potential impacts to wetlands must be carefully evaluated. Examples of wetlands include coastal salt and brackish marshes, fresh water marshes, and vernal pools. Special cases include seasonal wetlands, vegetated flats, interdunal swale wetlands, and vegetated river bars and flats (riparian areas).

(2) Definition: For the purposes of determining potentially significant effect, Santa Barbara County uses the following wetland definition that has been adopted by most resource protection agencies (U.S. Fish and Wildlife Service, the California Coastal Commission, the California Fish and Game Commission and the California Department of Fish and Game)¹⁷

This definition reads:

¹⁷ It is the goal of Santa Barbara County to maintain a definition of wetlands consistent with Federal and State resources agencies listed above.

"For purposes of this classification wetlands must have one or more of the following three attributes:

- a) *at least periodically, the land supports predominantly hydrophytes, that is plants adapted to moist areas.*
- b) *the substrate is predominantly undrained hydric soil, and*
- c) *the substrate is non soil and is saturated with water or covered by shallow water at some time during the growing season of each year. (Cowardin 1979)"*

In order to ensure that wetland protection standards are applied equitably to affected property owners, wetlands which have only one of the defining three characteristics, especially those defined only by seasonal ponding, require careful review to ensure that highly disturbed areas with artificially compacted soils which do not have true wetland characteristics are not mistakenly identified as wetlands.

(3) Wetland/Upland Boundary Definition: The same category used to delineate wetland is used to delineate the boundary between wetland and upland¹⁸. The upland limit of wetland is designated as 1) the boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic (semi-dry) or xerophytic (dry) cover; or 2) the boundary between soil that is predominantly hydric and soil that is predominantly nonhydric; or 3) in the case of wetlands without vegetation or soil, the boundary between land that is flooded or saturated at some time each year and land that is not.

(4) Wetland Impact Assessment Guidelines: The following types of project-created impacts may be considered significant:

- a. Projects which result in a net loss of important wetland area or wetland habitat value, either through direct or indirect impacts to wetland vegetation, degradation of water quality, or would threaten the continuity of wetland-dependant animal or plant species are considered to have a potentially significant effect on the environment (California Environmental Quality Act: Guidelines, Appendix G; items c, d, and t).
- b. Wildlife access, use, and dispersal in wetland habitats are key components of their ecosystem value. For example, many upland species of wildlife could not persist without access to water. Movement between contiguous habitats through riparian areas (e.g.: from mountainous chaparral to valley grassland or coastal mesa) allows for many species to continue to persist and prevents genetic isolation. Projects which [sic] substantially interrupt wildlife access, use and dispersal in wetland areas would typically be considered to have potentially significant impacts.
- c. The hydrology of wetlands systems must be maintained if their function and values are to be preserved. Therefore, maintenance of hydrological conditions, such as the quantity and quality of run-off, etc., must be assessed in project review."

There is no evidence any seasonal surveys for special-status vascular plant species (much less nonvascular plants) were conducted for the DPR portion of the project except for a statement in Section 9.4.2.1.2 of the RDEIR on Page 9.4-2:

"Site visits by vehicle and on foot on February 7, 2005; March 16, 2005; March 21, 2005; March 29, 2005; April 8, 2005; and July 17, 2005 cumulatively covered the entire Alternative 1 area in order to conduct reconnaissance-level surveys of vegetation and water bodies (Donald Mitchell [botanist] – three site visits)...All parts of the project area were visited at least once".

¹⁸ Methodologies used in delineating wetlands are consistent with those utilized by Federal and State resources agencies referenced above.



Other biologists covered wildlife, not plants. The late March and early April 2005 surveys were restricted to focused aquatic surveys, a prime time to survey for vascular plants. Clearly, the botanical surveys URS conducted of the DPR did not follow USFWS, CDFG, or CNPS survey protocols and minimum standards, or according to the Santa Barbara County Thresholds Manual. Proper seasonal botanical field surveys should be conducted of the entire SBR and DPR properties and the RDEIR should be revised to provide an accurate and complete baseline and impact assessment of the botanical resources.

A statewide rare and endangered plant (CNPS List 1B¹⁹), *Lonicera subspicata* ssp. *subspicata*, was found and reported onsite on SBR, but is listed only on Table 3.4-3 of the RDEIR as a “Locally Sensitive” species, with a note about potentially being impacted by vegetation modification for fire hazard control. There is no mitigation in the RDEIR to address direct or indirect impacts to this shrub species, which would be considered a significant impact under CEQA and County Thresholds. The EIR must be revised to address this inadequacy.

Locally Rare Plants

A review of SAIC’s plant checklist in their 2005 report finds three species that should be treated and assessed as locally rare plants. While these taxa are not on any formal list, each is quite rare in Santa Barbara County, including: *Brodiaea terrestris* ssp. *terrestris* and *Sidalcea malviflora* ssp. *californica*, neither of which were considered in the RDEIR.

Brodiaea terrestris [ssp. *terrestris*] is known from only six (five historic) populations in Santa Barbara County, based on a search of the Consortium of California Herbaria database (CCH 2008²⁰) and Wilken (pers. comm. 2008). Two collections were made in 1895 in Santa Barbara and near Goleta, which likely have been extirpated by development. Holland’s 2003 record for Santa Barbara Ranch is the first record since it was last collected by H. Skolfield in April 1936 (from along Mountain Drive in Santa Barbara). This taxon should be treated as a locally rare species as it is clearly rare in Santa Barbara County (Wilken pers. comm. 2008²¹), and it is on CNPS’ list of locally rare plants of Santa Barbara County (Wilken 2007²²).

There is potential for other locally rare plants to be present, but since the project botanists did not fully determine their identity, the question remains open. These include: *Clematis pauciflora*, *Malacothrix saxatilis* var. *arachnoidea*, and *Sidalcea malviflora* ssp. *californica*. The identity of all plants needs to be determined and if any are locally rare, then impacts to them by the proposed project should be evaluated in the EIR.

¹⁹ California Native Plant Society (CNPS). 2001. *Inventory of Rare and Endangered Plants of California*. Sixth edition. (Special Publication No. 1.) Rare Plant Scientific Advisory Committee, David Tibor, Convening Editor, Sacramento, California. September.

²⁰ Consortium of California Herbaria – search for *Brodiaea terrestris* on 3 January 2008 - <http://ucjeps.berkeley.edu/consortium/>.

²¹ Wilken, D., Vice President for Programs and Collections at Santa Barbara Botanic Garden, personal communication, email dated 3 January 2008 regarding *Brodiaea terrestris* ssp. *terrestris* distribution in Santa Barbara County.

²² Wilken, D. 2007. *Rare Plants of Santa Barbara County*. (version 1.8, 6 August 2007.) Central Coast Center for Plant Conservation, Santa Barbara Botanic Garden, Santa Barbara, California. California Native Plant Society, Channel Islands Chapter, Ojai, California. (Published on www.cnpsci.org.)

Plant Communities and Vegetation Mapping

In section 3.4, the RDEIR describes and maps natural vegetation within the project site generally. Only ten (10) distinct plant communities/land cover types are mapped by SAIC (2005), but only nine (9) are illustrated on Figures 3.4-1A and 1B, and three of these are subsets of grassland vegetation. The annual grasslands, mapped as Non-native Grassland, are further subdivided. SAIC (2005) had also mapped annual grassland areas on SBR that had a significant component of native grassland species but below the 10% threshold of percent cover to be mapped as Native Grassland.

The vegetation is classified using the outdated Holland (1986²³) classification system which has been replaced by California Department of Fish and Game (CDFG) and California Native Plant Society (CNPS) by the National Vegetation Classification Standard (NVCS) system²⁴ as described and used in CNPS' *Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995²⁵). The NVCS follows Federal Geographic Data Committee (FGDC 1997) standards²⁶. The Holland (1986) classification system does not, and using it reduces the quality, accurateness, and completeness of the EIR. The only part of the Holland system that has been retained is the list of sensitive plant communities tracked by the CNDDDB, which is in the process of being replaced by the NVCS (CNDDDB 2003²⁷).

The vegetation of the project site should be mapped and classified according to the uniform standard used by the USGS, CDFG, and CNPS. The reasons the NVCS should be used include:

- The classification system must be scientifically defensible and present a logical progression from existing methods.
- The classification process must be repeatable.
- The classification must employ standard terminology and quantifiable field sampling and data analysis methods so levels of confidence can be documented.
- The classification methods should be broadly accepted both nationally and internationally.
- The system must consistently classify existing biological associations that repeat across the landscape.
- The classification units must be ecologically meaningful.
- The classification units must be mappable from polygons that are discernable on imagery.
- The classification system must be hierarchically organized such that it can be applied at different spatial scales.

²³ Holland, R.F. 1986. Preliminary Description of the Terrestrial Natural Communities of California. California Department of Fish and Game, Sacramento, California.

²⁴ U.S. Geological Survey National Vegetation Standard (NVCS). The vegetation classification and mapping standard used by all federal agencies (and CDFG). <http://biology.usgs.gov/npsveg/nvcs.html>

²⁵ Sawyer, J.O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society, Sacramento, California.

²⁶ Federal Geographic Data Standard. 1997. National Vegetation Classification Standard. June. (FGDC-STD-005.) U.S. Geologic Survey, Federal Geographic Data Committee – Vegetation Subcommittee, Washington, DC. Available at: <http://biology.usgs.gov/npsveg/nvcs.html>.

²⁷ CNDDDB. 2003. List of California Terrestrial Natural Communities Recognized by The California Natural Diversity Database. California Department of Fish and Game, Biographic Data Branch, The Vegetation Classification and Mapping Program. Sacramento, California. September 2003 edition. Available at: <http://www.dfg.ca.gov/biogeodata/vegcamp/pdfs/natcomlist.pdf>



- This system must identify units at an appropriate scale to meet the objectives for resource management and biodiversity conservation.
- The system must be flexible and open ended such that it will allow for additions, modifications, and continuous refinement.
- The classification must be accessible to users to adopt and refine with necessary quality control measures in place.
- The system must be well documented. (USGS 2007²⁸.)

The vegetation mapping appears to be very coarse, with significant amounts of lumping/commission and of more than one plant community into one polygon, and using a very general (coarse) classification system that results in many errors of omission. Since the MOU Project site is relatively small (485 acres), compared to the size of a city or the county as a whole, and considering that the Santa Barbara County General Plan conservation policies and Thresholds Manual, the vegetation mapping should identify sensitive habitats down to a ¼ acre (e.g. native grassland) or finer scale (note, many EIRs done for the County include maps of habitats mapped to hundredths of an acre), it is reasonable to expect vegetation mapping to be conducted at the level detail to map habitat areas of at least ¼ acre.

The vegetation map and text descriptions fail to adequately map or describe all areas containing:

- Coastal Scrub vegetation, which is considered a sensitive plant community (Davis et al. 1995²⁹);
- All areas with trees, such as by the water treatment plant (lumped under Non-native Grassland) and the coastal drainages and trees in Tomate Canada Creek;
- Coastal Scrub around the reservoir and within Lot 188 mapped as Non-native Grassland;
- Plant communities associated with Does Pueblos Creek from near and downstream of the water diversion intake; and
- In the drainages on the coastal bluff.

For example, areas of Coastal Scrub and riparian vegetation along at least the coastal drainages on SBR are not delineated, but are either lumped into Non-native Grassland or Native Grassland. This is particularly evident in SBR Lots 63, 91, 119, and 122 as shown on Figure 3.4-1B of the RDEIR. In addition, the area around the lake mapped as Coastal Scrub clearly includes other land cover types, including groves of tress and at least one house. This skews the results of the impact assessment and oversimplifies the habitat diversity of the project site. This is particularly a problem when sensitive habitats such as Coastal Scrub are not clearly mapped or identified and quantified.

Colors used on Figures 3.4-1A and 1B on the map do not match the colors on the legend, making the map difficult to read and understand. For example, the bright green color for Native Grassland on the map legend is not present on the vegetation map, and the red orange for Coastal Scrub is also not comparable. The reader must believe that the dull green color on the map is

²⁸ USGS. 1994. NBS/NPS Vegetation Mapping Program, Standardized National Vegetation Classification System - Final Draft. USGS website on National Vegetation Classification System, The Importance of a National Vegetation Classification Standard. Page 3. November 1994. Available at: <http://biology.usgs.gov/npsveg/ftp/vegmapping/classification/sect2.doc>

²⁹ Davis, F.W., P.A. Stine, D.M. Stoms, M.I. Borchert, and A.D. Hollander. 1995. Gap Analysis of the Actual Vegetation of California: 1. The Southwestern Region. *Madroño* 42(1):40-78.



supposed to represent the Native Grassland vegetation. Is this correct? Including labels on the polygons would also help the reader identify the polygons.

Why was the Non-native Grassland area that included significant native grassland species (but apparently less than 10% cover) mapped by SAIC (2005) not included on the vegetation maps in the RDEIR?

The County Thresholds Manual states on Page 36 that the resource inventory should identify the relative rarity of all plant communities, and whether the project site habitats are isolated or connected to adjacent, offsite habitats. The RDEIR fails to do this consistently or for all habitats. For example, there is no assessment for connectivity or relative rarity of grassland habitats other than Native Grassland. The reader is left to assume that grassland habitat is not rare, sensitive, or of ecological importance. An assessment of the facts on grassland habitat would result in a different conclusion, which is described in greater detail later in this letter. The RDEIR needs to be revised to include assessments for all habitat types and include justification for all determinations.

Grasslands and Associated Special-Status Species

The Coastal Act Section 30240 states:

“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.”

“Section 30240(b). Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.”

The RDEIR states that the bluff-top homes are to be located under both the MOU Project and Alternative 1 Project to protect native grasslands. A review of the project map shows that some of the houses will be built very close to the areas mapped as native grassland (more detailed discussion later in this letter); however, the setbacks are minimal at best and would not provide sufficient buffer to truly protect the native grasslands mapped onsite from both direct and indirect impacts. Such impacts include annual disturbance for fuel modification (mowing), irrigation runoff from landscaping, spread of invasive exotic plantings from landscaped areas, predation by house cats and domestic dogs, and invasion of adjacent habitats by the Argentine Ant, to name a few. Invasive pest species such as the Argentine Ant and European Milk and Garden Snails are pervasive invaders of native plant communities near (as far as 600 feet) development. These species are known to out-compete native invertebrates and eliminate them from the natural environment. This indirect impact was not analyzed in the RDEIR.

The RDEIR states that livestock grazing of the project site has resulted in the destruction of native grasslands onsite, with refugia remnants of native perennial grasses found in coastal ravines and on coastal bluffs. The RDEIR provides no supporting evidence that livestock grazing onsite is the reason native grassland has been greatly reduced in area on site. In fact, a number of studies have shown that livestock grazing in California grasslands and seasonal wetlands has been found to reduce dominance by invasive grasses and benefited native plant species (Ciagolani et al. 2005³⁰, Marty 2005³¹, Pyke & Marty 2005³², Augustine & McNaughton

³⁰ Cingolani, A.M., I. Noy-Meir, and S. Diaz. 2005. Grazing Effects on Rangeland Diversity: A Synthesis of Contemporary Models. *Ecological Applications* 15(2):757-773.



2006³³). The RDEIR should analyze the adverse as well as any beneficial impacts of removing grazing from the landscape and from native and non-native grasslands.

Edwards (1992³⁴) states, "...most present-day native bunchgrasses show substantial benefits, in a variety of situations, from grazing, clipping, mowing, or fire. Most are tolerate of severe grazing, and some are even tolerate of overgrazing". Findings at other grazed sites found no evidence of reduced species richness or diversity as the result of long-term livestock grazing, such as in Orcutt Canyon/south slope of Santa Paula Peak in Ventura County, where vascular plant species richness was comparable to the California flora and several rare species were found where livestock grazing has occurred for over 200 years (DMEC 2007³⁵).

Native Grassland. Pages 3.4-5 and 6 of the RDEIR states that, "in April and May, 2004, SAIC used calibration transects to determine percent cover of 'native grassland species' in identified areas, then sampled within native grassland polygons using point-intercept (hit/miss) method to confirm >10% relative cover of 'native grassland species' (County of Santa Barbara [2002] threshold). Areas of "native grassland species" >0.25 acres were mapped... SAIC sampled and mapped areas containing native grass species, and noted additional native grassland species. SAIC also mapped general areas where native grassland species were present, but did not meet the County thresholds for percent cover or areal extent".

SAIC's 2004 *Spring Biological Survey Report of the Santa Barbara Ranch Property, Gaviota Coast, California* states in Section 3.2.1, on Page 12 that, "...the target species were native grasses (perennial and annual, although annual native grasses were rare on the project site) **and** native herbaceous species, which were recorded by species". Table 3 on Pages 14 and 15 lists the native grass species and the percent cover of native grassland species found in the six (6) formal transects and five (5) additional visually estimated transects. Sampling was performed on 23 April 2004, about when the non-native grass species are at their full extent, but before peak growth of perennial bunchgrasses. Though the herbaceous species are not listed by transect, they are cumulatively listed in Table 3. SAIC's discussion of native grass species and native grassland species under "Non-Native Grassland" on Page 7 is consistent with Santa Barbara County protocols, though it could be expressed more clearly and should include a broader array of native grassland species.

DMEC's assessment of the protocols used to map and classify native grassland concludes that the County native grassland mapping protocols were generally followed in the SAIC survey used in the 2006 Draft EIR for the SBR property; however, the native forbs should have been included in all calculations. What is not clear is if SAIC considered a transect (Transect T-1) with a total score of 9.5% natives was rounded to the nearest whole number, i.e. 10%, which would satisfy the Thresholds Manual. What is also not shown are the locations of the sampling transects. However, the same protocols/methods were not used for the Dos Pueblos Ranch portion of the Alternative 1 project by URS for the RDEIR.

³¹ Marty, J.T. 2005. Effects of Cattle Grazing on Diversity in Ephemeral Wetlands. *Conservation Biology* 1626-1632.

³² Pyke, C.R., and J.T. Marty. 2005. Cattle Grazing Mediates Climate Change Impacts on Ephemeral Wetlands. *Conservation Biology* 1619-1625.

³³ Augustine, D.J., and S.J. McNaughton. 2006. Interactive Effects of Ungulate Herbivores, Soil Fertility, and Variable Rainfall on Ecosystem Processes in a Semi-arid Savanna. *Ecosystems* 9:1242-1256.

³⁴ Edwards, S.W. 1992. Observations on the Prehistory and Ecology of Grazing in California. *Fremontia* 20(1): 3-11.

³⁵ David Magney Environmental Consulting. 2007. *Biological Resources of the Gold Coast Radio Tower Project Site, Santa Paula, California*. 23 April 2007. (PN 06-0131.) Ojai, California. Prepared for Gold Coast Broadcasting, LLC, Ventura, California.

The survey methods employed by SAIC and URS are not consistent. Only SAIC's survey methods for SBR generally followed the County's definition by including some non-grass species in the surveys (but should have included all "native grassland species" in all calculations). URS' surveys on DPR did not follow the County's native grassland definition because they did not include quantitative measurements of the percent cover of native grassland species and were limited pedestrian surveys looking for native grasses. Methods and results need to be more clearly described and presented, both in SAIC's report and in the RDEIR written by URS.

What is not clear by the description of mapping methods on Page 3.4-6 of the RDEIR, 1st paragraph, is whether ONLY patches of Native Grassland measuring >0.25 acre were mapped after the line-intercept sampling or whether nearby patches were aggregated into larger polygons, as recommended on Page 42 of the Thresholds Manual. SAIC (2005) states on Page 16 that a number of patches "smaller than 0.25 acre (and cannot be combined with other patches without including substantial area that did not support native grasses) are also shown on Figure 2 as areas with 'Native Grasses and other Native Grassland Species but Less than 10 Percent Cover'", but fails to describe just what the distances between these patches was.

The RDEIR, Page 9.4-19, indicates that areas of native grassland less than 0.25 acre were not grouped together. All the "native grassland areas are distributed as ten patches exceeding 0.25 acre in size and scattered throughout portion of the project area".

The criteria used suggest that it is possible that smaller patches of Native Grassland were not aggregated together when mapping, as suggested by this statement on Page 3.4-9 of the RDEIR, "Most of these areas containing a lower density of native grasses are found in broad margins around the mapped native grasslands adjacent to the coastal drainages in the southernmost part of the project area, although isolated patches of native grasses occur throughout the non-native grasslands and adjacent to the coastal scrub vegetation". This implies that native grassland species where not considered or measured, excluding non-grass grassland species. [Emphasis added.] No measurements seem to have been taken of non-grass grassland species during the quantitative sampling, which is not consistent with the Thresholds Manual or the intent of the General Plan policy.

The Coastal Commission considers native grassland habitats ESHA, and all developments that result in direct and indirect impacts to ESHA that are not associated with improving or enhancing ESHA is prohibited.

To aid in identifying native grassland species of the vicinity of the project site, DMEC has compiled Table 4, Native Grassland Species of the Santa Barbara Ranch Area, which provides a partial list of native herbs, forbs, and grasses that support the County Thresholds and Guidelines Manual's definition of native grassland. The plant species listed in Table 4 are either reported onsite or are reported nearby, such as within the San Marcos Foothills project site. The species listed in Table 4 should be considered and measured when determining the extent of native grasslands at the project site. In addition to DMEC's Table 4, Dr. E.L. Painter has also compiled a *List of Possible Grassland and Meadow Taxa* (attached to Environmental Defense Center's comment letter and included here by reference) that includes native grassland species known in Santa Barbara County, as well as native grassland genera of California.

Of the 42 grassland species listed on Table 4 below as typical Santa Barbara south coast grasslands, 28 (67%) are found on the 485-acre Santa Barbara Ranch portion of the site, which are in **bold** typeface. There is a very high probability that this number would be even higher if

the floristics of the 2,769-acre Dos Pueblos Ranch portion of the project site would have been surveyed at the same level, or floristic data disclosed.

Table 4. Native Grassland Species of the Santa Barbara Ranch Area

Scientific Name ³⁶	Common Name	Habit ³⁷	WIS ³⁸	Family
<i>Achillea millefolium</i>	White Yarrow	PH	FACU	Asteraceae
<i>Agrostis pallens</i>	Thingrass	PG	.	Poaceae
<i>Ambrosia psilostachya</i> var. <i>californica</i>	Western Ragweed	BH	FAC	Asteraceae
<i>Amsinckia menziesii</i> var. <i>intermedia</i>	Rancher's Fire	AH	.	Boraginaceae
<i>Asclepias fascicularis</i>	Narrowleaf Milkweed	PH	FAC	Apocynaceae
<i>Bloomeria crocea</i> ssp. <i>crocea</i>	Goldenstars	PH	.	Themidaceae
<i>Brodiaea terrestris</i>	Harvest Brodiaea	PH	.	Themidaceae
<i>Calandrinia ciliata</i>	Redmaids	AH	FACU*	Portulacaceae
<i>Castilleja densiflora</i> ssp. <i>densiflora</i>	Dense-flowered Owl's Clover	AH	.	Orobanchaceae
<i>Castilleja exserta</i> ssp. <i>exserta</i>	Purple Owl's Clover	AH	.	Orobanchaceae
<i>Clarkia purpurea</i>	Purple Clarkia	AH	.	Onagraceae
<i>Conyza canadensis</i>	Horseweed	AH	FAC	Asteraceae
<i>Cryptantha intermedia</i>	Common Forget-Me-Not	AH	.	Boraginaceae
<i>Datura wrightii</i>	Jimson Weed	AH	.	Solanaceae
<i>Deinandra fasciculata</i>	Fascicled Tarplant	AH	.	Asteraceae
<i>Dichelostemma capitatum</i> ssp. <i>capitatum</i>	Blue Dicks	PG	.	Themidaceae
<i>Eremocarpus setigerus</i>	Dove Weed	AH	.	Euphorbiaceae
<i>Eschscholzia californica</i> ssp. <i>californica</i>	California Poppy	AH	.	Papaveraceae
<i>Hordeum brachyantherum</i>	Meadow Barley	AG	FACW	Poaceae
<i>Hordeum intercedens</i>	Vernal Barley	AG	FACU	Poaceae
<i>Lessingia filaginifolia</i> var. <i>filaginifolia</i>	California Cudweed-aster	PH	.	Asteraceae
<i>Leymus triticoides</i>	Creeping Wildrye	PG	FAC+	Poaceae
<i>Lomatium caruifolium</i>	Biscuit Root	PH	.	Apiaceae
<i>Lotus humistratus</i>	Hill Lotus	AH	.	Fabaceae
<i>Lotus strigosus</i>	Strigose Lotus	AH	.	Fabaceae
<i>Lupinus bicolor</i>	Miniature Lupine	AH	.	Fabaceae
<i>Lupinus sparsiflorus</i>	Few-flowered Lupine	AH	.	Fabaceae
<i>Lupinus succulentus</i>	Fleshy Lupine	AH	.	Fabaceae
<i>Lupinus truncatus</i>	Truncate-leaved Lupine	AH	.	Fabaceae
<i>Madia gracilis</i>	Slender Tarplant	AH	.	Asteraceae
<i>Melica imperfecta</i>	Coast Melic Grass	PG	.	Poaceae
<i>Nassella lepida</i>	Foothill Needlegrass	PG	.	Poaceae
<i>Nassella pulchra</i>	Purple Needlegrass	PG	.	Poaceae
<i>Plagiobothrys nothofulvus</i>	Rusty Popcornflower	AH	FAC	Boraginaceae

³⁶ Scientific nomenclature follows the Flora of North America Editorial Committee (1993-2007. Flora of North America. Oxford University Press. New York, New York. Volumes 1 through 26 [incomplete]) and Hickman (1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley, California).

³⁷ Habit definitions: AG = annual grass or graminoid; AH = annual herb; BH = biennial herb; PG = perennial grass or graminoid; PH = perennial herb.

³⁸ WIS = Wetland Indicator Status (Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands: California (Region 0). (Biological Report 88[26.10].) U.S. Fish and Wildlife Service, Ft. Collins, Colorado):

OBL = obligate wetland species, occurs almost always in wetlands (>99% probability)
 FACW = facultative wetland species, usually found in wetlands (67-99% probability).
 FAC = facultative species, equally likely to occur in wetlands or nonwetlands (34-67% probability).
 FACU = facultative upland species, usually occur in nonwetlands (67-99% probability).

+ or - symbols are modifiers that indicate greater or lesser affinity for wetland habitats.

NI = no indicator has been assigned due to a lack of information to determine indicator status.

* = a tentative assignment to that indicator status by Reed (1988).

A period "." indicates that no wetland indicator status has been given in Reed (1988).



Scientific Name ³⁶	Common Name	Habit ³⁷	WIS ³⁸	Family
<i>Plantago erecta</i>	California Plantain	AH	.	Plantaginaceae
<i>Pseudognaphalium californicum</i>	Green Everlasting	A/BH	.	Asteraceae
<i>Sidalcea malvaeflora</i>	Few-leaved Globemallow	S	.	Malvaceae
<i>Sisyrinchium bellum</i>	Blue-eyed Grass	PH	FAC	Iridaceae
<i>Trichostema lanceolatum</i>	Vinegar Plant	AH	.	Lamiaceae
<i>Trifolium albopurpureum</i> var. <i>albopurpureum</i>	Rancheria Clover	AH	.	Fabaceae
<i>Verbena lasiostachys</i> var. <i>lasiostachys</i>	Western Verbena	AH	FAC-	Verbenaceae
<i>Vulpia microstachys</i>	Fescue	AG	.	Poaceae

It should be noted that *Deinandra* [*Hemizonia*] *fasciculata* (Fasciculed Tarplant) is a native annual herb that flowers, and is prevalent, during the summer months. Although this species was observed onsite predominantly within annual grassland during SAIC’s spring surveys, and was widespread in the annual grasslands in the foothills north of U.S. 101 during the 2006 site visit by Environmental Defense Center biologist, Brian Trautwein. This species is an important contributor to perennial native grasslands in the summer months as well. This species was not captured as an important native grassland contributor on DPR due to the limited surveys conducted onsite. Seasonal surveys (early spring, late spring, and mid summer) should be conducted on all portions of the project site proposed for development to capture the blooming period of all species inhabiting the project site. Seasonal surveys are important and required in order to capture all native grassland species defining native grassland plant communities and to identify all special-status plant species inhabiting the project site.

The timing of the percent cover estimates can make a difference in total percent cover by any species, depending on when species x is at its maximum growth stage. Recognizing that each herbaceous species, be it a grass, graminoid, annual or perennial herb, has its own date, or period on the growing season when it will reach maximum areal cover, determining percent coverage by species at one point in time to determine whether an arbitrary threshold is met creates a logistical and logical challenge. An early spring season measurement will likely favor the non-native Mediterranean grasses and forbs while a late season, or summer season measurement will likely favor native and perennial species. Based on the phenology and growth cycle of *Nassella pulchra* (and likely other coastal *Nassella* species), *N. pulchra* does not reach maximum growth until late May during drought years and June during wet years (Nathe pers. comm. 2008³⁹). The timing of the sampling to determine percent cover of grassland species was flawed. Since the vegetation sampling was performed in mid-April when *N. pulchra* and other late-season native grassland species were not at their full extent, the sampling was biased towards dominance by the Mediterranean grasses (*Bromus*, *Hordeum*, *Lolium*). The sampling should have been conducted during the late spring/early summer to ensure native grassland species, *Nassella* species in particular, are appropriately sampled and measured. As a result, the RDEIR’s biological baseline with regards to native grasslands is unreliable.

Since the General Plan has a goal of protecting sensitive biological resources, and due to the variety of problems discussed here, in the RDEIR, and for other projects, the County should take great care that the sensitive resources are protected and not rely solely on an arbitrary 10% cover threshold when it is clear that there is no perfect means to determine whether a site with native grassland species meets this threshold.

³⁹ Craig Nathe, Rangeland Management Specialist, 30 CES/CEVPN, DSN 276-0623, personal communication, email dated 4 January 2008, craig.nathe@vandenber.af.mil, regarding phenology of *Nassella* species.



Impact Bio-7 starting on Page 3.4-58 states that the area of native grassland impacted has been reduced from what was proposed in the DEIR to a total area of 0.22 acre based on part on a fire hazard clearance zone of 30 feet from residences. Lots 63, 91, and 93, based on measurements on Figure 3.4-1B look like the proposed buildings are to be less than 30 feet from what is mapped as Native Grassland. Furthermore, proposed buildings on Lot 66 look to be less than 67 feet from Native Grassland. There appears to be no buffer for native grassland at all for the proposed landscape and development envelopes in the bluff lots. This is inadequate protection for native grassland and violates the Coastal Act and LCP.

The statement that the Santa Barbara Fire Department would only require mowing of grassland vegetation 30 feet out from buildings is unbelievable. Standard fire hazard clearance is 100 feet from structures. It is much more reasonable to expect that the Fire Department, much less insurance companies, will require at least 100 feet clearance. Some insurance companies are requiring homeowners in fire hazard zones, such as the project site, to clear between 200 and 300 feet from their buildings. The impact assessment in the RDEIR certainly should not be underestimating the amount of fuel modification that will almost certainly be required. The RDEIR should include evidence regarding the distance that the Fire Department and/or insurance companies will require be cleared, not just apparent speculation.

The direct loss of 0.22 acre of mapped native grassland, qualifying as ESHA, is not consistent with the Coastal Act or Local Coastal Plan Policy 9-18 since the proposed impacts can be avoided and are not necessary to support or maintain native grassland habitat. The public access trail could be placed along Dos Pueblos Creek using existing access roads.

The RDEIR fails to address or assess indirect impacts fuel hazard clearance required by the Fire Department and insurance companies. Longcore (2000⁴⁰) describes the ecological effects of fuel modification on arthropods and wildlife, which is summarized below:

“Fire protection ordinances mandate clearing of large areas of native vegetation around new and existing structures in southern California. Such destruction of wildlife habitat is an inevitable result of development but its damage is underestimated because of the piecemeal manner in which it is implemented. Fire clearance and concomitant irrigation transform terrestrial arthropod communities, which serve many ecosystem functions. By using comparisons of terrestrial arthropods at disturbed and undisturbed coastal sage scrub sites, the effects of fire clearance can be extrapolated, including interaction of invasive exotic arthropods, elimination of top predators and other sensitive arthropod species, and an overall reduction in native arthropod diversity. Such changes in the arthropod community are likely to have resonating effects on wildlife diversity that extend beyond the area of fire clearance itself. For urbanizing wildlands such as the Santa Monica Mountains, the legal context and rate of development make fuel modification a significant threat to ecosystem health.”

No such assessment was conducted in the RDEIR. Based on the layout proposed for the MOU Project, approximately 177 acres of natural habitat, primarily grasslands, will be altered significantly, reducing the ecological functions of the habitat for a wide variety of invertebrate and vertebrate species. Only truly clustering development onsite will avoid or minimize these impacts.

⁴⁰ Longcore, T. 2000. Ecological Effects of Fuel Modification on Arthropods and Other Wildlife in an Urbanizing Wildland. Pages 000–000 in L.A. Brennan et al. (eds.) National Congress on Fire Ecology, Prevention, and Management Proceedings, No. 1 Tall Timbers Research Station, Tallahassee, FL.

Annual Nonnative Grasslands

Grasslands, regardless of which species are dominant, are important biologically. Davis et al. (1995⁴¹) states on Page 54 of their paper, “Although dominated by exotic species, these grasslands [referring to non-native grasslands] can be rich in native plant species and are habitat to many animal species. Recent efforts to preserve grassland habitats for the Stephen’s kangaroo rat (*Dipodomys stephensi*) in the Riverside Basin attest the ecological significance of this community type. However, annual grasslands in other parts of the [Southwest] region are generally not considered a conservation priority. Our data suggest that from a regional perspective non-native grasslands appear to be at risk”.

A study commissioned by The Nature Conservancy showed that Non-native [annual] grasslands had nearly equal use by bird species as Native Grasslands, and both had some of the highest bird biodiversity of any plant community (next to riparian) in California (Jones & Stokes Associates 1989⁴²). This further supports the ecological importance of “Non-native Grassland” in California.

The name used for grasslands dominated by non-native grasses, Non-native Grassland, imparts a psychological bias against this complex of herbaceous plant communities dominated by Mediterranean grasses as not worthy of consideration as biologically important. For example, the Santa Barbara County General Plan focuses only on Native Grassland, dominated by Purple Needlegrass (*Nassella pulchra*), in part based on the published description of Southern Needlegrass Grassland (Magney 1992⁴³). It is this psychological and real bias towards non-native species in natural communities by botanists, ecologists, and conservationists is why CDFG and CNPS have retired the use of Non-native Grassland and replacing it with “Annual Grassland” (Sawyer and Keeler-Wolf 1995⁴⁴) to reduce the bias since, even though dominated by non-native grass species, these grassland/herbaceous plant communities retain high ecological value worthy of conservation.

The City of Goleta states that, “Annual grassland, although dominated by nonnative species, provides important foraging habitat for local raptors and nesting habitat for many birds” (Goleta 2006⁴⁵). This statement further recognizes the habitat value of annual (nonnative) grasslands as valuable and important habitat for wildlife.

“Grasslands produce large numbers of seeds, an important and reliable food source for numerous seed-eating birds. Raptors cruise the grasslands for preying on these birds and small mammals. Mammals relying on grassland communities include both species that forage on seeds and leaves and carnivores that prey on them. Some mammals construct burrows or dens that, when

⁴¹ Davis, F.W., P.A. Stine, D.M. Stoms, M.I. Borchert, and A.D. Hollander. 1995. Gap Analysis of the Actual Vegetation of California: 1. The Southwestern Region. *Madroño* 42(1):40-78.

⁴² Jones & Stokes Associates, Inc. 1989. Sliding Towards Extinction: Reassembling the Pieces. Sacramento, California. Commissioned by The Nature Conservancy, San Francisco, California.

⁴³ Magney, D.L. 1992. Descriptions of Three New Southern California Vegetation Types: Southern Cactus Scrub, Southern Coastal Needlegrass Grassland, and Scalebroom Scrub. *Crossosoma* 18(1):1-9, June.

⁴⁴ Sawyer, J.O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society, Sacramento, California.

⁴⁵ Goleta, City of. 2006. Goleta General Plan/Coastal Land Use Plan FEIR. September. Goleta, California. Prepared by Jones & Stokes Associates. Section 3.4.1.3, Page 3.4-8.



abandoned, are used by birds such as the burrowing owl or certain reptiles and amphibians.” (Sutter County General Plan⁴⁶.)

The RDEIR states on Page 3.4-7, Table 3.4-1, that there are 381 acres of “Non-native Grassland”, consisting of 215 acres “Non-native Grassland and Ruderal” and 166 acres of “Ruderal-dominated and Non-native Grassland” on the two ranches, noting that a majority of the “Non-native Grassland and Ruderal” (171 acres) occurs south of U.S. 101. This table also indicates that the MOU Project would result in the loss of 137.6 acres of Non-native Grassland (including both subtypes), which represents a loss of 36% of these grassland habitats. Page 9.4-57 of the RDEIR states that the Alternative 1 Project would remove 194 acres of this habitat type.

Since researchers (Davis et al. 1995) and ecologists (Jones & Stokes Associations 1989) consider Non-native Grasslands important habitats and worthy of conservation, that grasslands have been significantly reduced in area statewide, and regional analysis has shown that these habitats are at risk, CEQA requires consideration of them as a sensitive habitat and assessment of significance relative to project impacts. The RDEIR provides no evidence that these grasslands are not sensitive habitats. To the contrary, the RDEIR includes substantial evidence that these grasslands support many special-status species, and therefore sensitive habitats. There are few areas left on the Santa Barbara south coast that have such extensive areas of grassland, and nearly all those remaining are under threat of development in the near future. Only a few small areas have any legal protection from development.

An argument might be made that the value of the Non-native Grasslands onsite are of low value because of the dominance of weedy species and low species richness, especially by native plant species. However, what must be recognized is that these areas support many special-status species of plants and wildlife, as shown on Tables 9.4-3 and 9.4-4 of the RDEIR. Furthermore, the grasslands onsite contain a significant number of native grassland plant species, which indicates that the grassland habitats still retain a native plant community component and are of relatively high value for wildlife even if dominated by non-native grasses. This is supported by habitat connectivity to other habitat types onsite and offsite, including the wetlands and Coastal Scrub in the coastal drainages (SAIC 2005, Holland 2003⁴⁷).

Based on a detailed review of the RDEIR and an extensive knowledge of the plant communities and biological resources of the project area and region, the annual grasslands onsite constituting the coastal terrace, and areas supporting remnant native grasses and grassland forbs are ESHA pursuant to the Coastal Act. These areas support rare species that would be displaced by development within the grasslands onsite. Development of the grasslands would degrade the habitat values and functions and render the area non-ESHA. Development must avoid ESHA to comply with coastal policies, including LCP Policy 2-11.

Section 3.4.4.2.1, Impact Bio-1: Removal of Special-status Plants Associated with Grassland Habitats, starting on Page 3.4-53 of the RDEIR states that “Approximately 381 acres of disturbed non-native grassland occurs within the MOU Project area, approximately 166 acres of which is dominated by ruderal or weedy invasive species. ... The MOU Project would involve approximately 138 acres of direct removal of this habitat by grading, paving, and the development of buildings and development envelope area. The ability of grassland habitats in

⁴⁶ Sutter County. General Plan Habitat Descriptions. Published at <http://ceres.ca.gov/planning/genplan/sutter/natural8.html>.

⁴⁷ Holland, V.L. 2003. Botanical Survey of Santa Barbara Ranch, Santa Barbara County, California. San Luis Obispo, California. Prepared for L&P Consultants, Santa Barbra, California.

the project area to support special-status and other native plants has been affected by decades of intensive livestock grazing and agricultural production, which has converted these areas from native perennial grassland to one dominated by non-native annual grasses and forbs. For these reasons, the likelihood of encountering special-status species in the non-native grassland areas is low, relative to the less disturbed native grassland areas.” The statement, “The ability of grassland habitats in the project area to support special-status and other native plants has been affected by decades of intensive livestock grazing...” is not an accurate statement and is not supported by any evidence; rather, it is conjecture. While certain agricultural practices can certainly impact special-status species populations, a blanket statement that intensive grazing has impacted rare plants is not seen elsewhere in California based on a review of the literature, and surveys of many grazed grasslands by me and by many colleagues.

For example, a recent botanical survey of a portion of Orcutt Canyon on the south slope of Santa Paula Peak in Ventura County (DMEC 2007⁴⁸) that has been grazed continuously for over 200 years, starting with the San Buenaventura Mission establishment in 1783, found numerous rare plant species in California Annual Grassland habitat (non-native grassland as referred to in the RDEIR). The Orcutt Canyon site consisted of grassland and Coastal Scrub habitats, with riparian vegetation along drainages, much like found at the SBR site. The floristics of the Orcutt Canyon site found the ratio of native to non-native species to generally match that for the statewide flora (Hickman 1993⁴⁹) and found 15 special-status plant species onsite mostly in the intensively grazed grassland areas. In addition, the project site smaller than the MOU Project or Alternative 1 project. Similarly, the former 2,000-acre UNOCAL property on Sulphur Mountain southeast of Ojai in Ventura County has a very long history of livestock grazing, and oil production, has a rich flora of at least 197 vascular plant taxa, including 24 special-status species (DMEC 2000⁵⁰). The Hollister Ranch flora (Fletcher 1983⁵¹) of 397 plant taxa is a much richer flora, but also encompasses a much larger area, 14,000 acres, but also has a long history of livestock grazing, yet its flora is still rich. These are just two examples in the region that have undergone grazing for a very long time where the grassland habitats, while dominated by non-native grasses, still possess a rich native flora. Had the botanical surveys of the SBR and DPR been conducted according to minimum botanical survey protocols (described in detail above beginning on Page 3 of this letter), in my professional opinion based on knowledge of the botany of the project area and region, the species richness of the project site and the Alternative 1 site would almost certainly be relatively comparable to the other sites described above.

The County Thresholds require consideration of the area and permanency of impacts to habitats. The proposed MOU and Alternative 1 Projects would result in very large areas of grassland being permanently converted, and fragmented. These grassland areas have high wildlife values and support special-status species. Table 9.4-4 of the RDEIR identifies many special-status species that will be impacted by habitat fragmentation by the MOU Project and Alternative 1

⁴⁸ David Magney Environmental Consulting. 2007. *Biological Resources of the Gold Coast Radio Tower Project Site, Santa Paula, California*. 23 April 2007. (PN 06-0131.) Ojai, California. Prepared for Gold Coast Broadcasting, LLC, Ventura, California.

⁴⁹ Hickman, J. ed. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley, California.

⁵⁰ David Magney Environmental Consulting. 2000. *Biological Resources of the UNOCAL Property on East Sulphur Mountain, Ventura County, California*. June 2000. (PN 99-0181.) Ojai, California. Prepared for Union Oil Company of California, Asset Management Group, Brea, California.

⁵¹ Fletcher, M. 1983. *A Flora of Hollister Ranch, Santa Barbara County, California*. (Publication Number 2.) The Herbarium, Department of Biological Sciences, University of California, Santa Barbara.



Project. The projects have not been modified in any substantive way to reduce impacts to, or to protect this habitat type, and mitigation proposed is inadequate to fully compensate for the impacts. Changes to the access road for lots on SBR south of the railroad tracks are insufficient to substantially lessen impacts to special-status species, grassland habitat, or wildlife movement and migration. They just shifted the access roads a little and consolidated better, but barely changed the project and project impacts.

The MOU Project and Alternative 1 Project both would result in significant intrusion and fragmentation of existing grassland habitat onsite, mostly of California Annual Grasslands labeled as Non-native Grassland in the RDEIR. No attempt is made to cluster the development to leave the majority of grasslands as contiguous pieces. Instead, the projects would result in large houses interwoven between grassland areas, significantly fragmenting them from a functional perspective.

A recent UCSB Bren School study (Chadden et al. 2004) characterized and classified grassland based on a number of conditions, including fragmentation, edge effect, and patch size affected by various types of development, including roads (density of roads and traffic volume), using an ecological condition indexing method to score grassland habitat patches. They found that grasslands with a mean area of only 22+ acres in San Diego County that were intersected/bisected by roads were scored very low in ecological value. This study also found that native grasslands ranked lower in ecological value than non-native grasslands in San Diego County, providing evidence of the importance and functions of non-native grasslands in southern California. The proposed MOU Project and the Alternative 1 Project both would result in numerous dissections (density of roads) of the existing grasslands north and south of U.S. 101, significantly lowering their ecological value over existing conditions. The projects would result in smaller, less contiguous, and substantially lower quality grassland units than exist today.

Several measures are meant to help substantially less the impacts to grassland habitat (Impact Bio-11). Mitigation Measure Bio-3 seeks to control non-native plants. This measure alone, or with others, will not replace or substantially offset habitat losses and degradation caused by either project. Removal of some invasive species may improve grassland habitat conditions somewhat, but it does not mitigate the loss of 138 acres of the most contiguous grassland habitat on the Goleta-Gaviota coast, and it does not lessen the fragmentation of the habitat. Mitigation Bio-9 involves resident education about wildlife and does not offset direct losses and degradation of grasslands onsite.

Page 3.4-77 of the RDEIR, Mitigation Bio-1a, states, "Design changes and other components of the project minimized the fragmentation of grassland habitat", in combination with deferred restoration plans and minor amounts of grassland revegetation of 0.66 acre native grassland, converting non-native grassland to native grassland on Lot 122, plus monitoring, is supposed to mitigate for the loss of 138 acres of annual grassland, which was stated as being important foraging habitat for wide variety of wildlife species. These proposed mitigations are wholly inadequate to fully mitigate the direct and cumulative loss of so much grassland habitat on the south coast. It ignores the existing ecological functions of the non-native grasslands to be used as mitigation for impacts to native grasslands. Unless substantially more grassland habitat currently threatened by development is protected AND improved in function, this impact must be considered a Class I impact.

Coastal Sage Habitats and Special-Status Plant Species



SAIC's 2005 report, on Page 8, states that Coastal Scrub vegetation occurs as "fragments" of 13.7 acres and 2.8 acres, both located north of U.S. 101. What size patch is considered a fragment, a fragment from what perspective? SAIC's Figure 2 and the RDEIR's Figure 3.4-1A shows the two polygons mapped as Coastal Scrub, with the smaller patch surrounded by grassland and the larger "fragment" adjacent to grassland and what appears to be more Coastal Scrub vegetation extending eastward off the project site.

Section 9.4.2.2.1 on Page 9.4-5 of the RDEIR states, "Coastal scrub now is present as localized patches in thin, rocky soils on moderate to steeply sloping ground along the sides of the minor canyons where livestock or row crop agriculture could not reach". First, Coastal Scrub communities are typically found growing on thin, rocky soils of moderate to steep slopes, and rarely on level ground with more highly developed soils. The language of the RDEIR suggests that Coastal Scrub would have been more extensive onsite if it had not been "...subjected to decades of intensive agricultural practices and livestock grazing". This conclusion is not supported by any evidence, such as historical accounts of the actual agricultural practices, grazing levels, crops sown, types of actual ground disturbance, or a review of historical aerial photographs to support the claim of "intensive agricultural practices". There are numerous documented accounts of herbaceous habitats benefiting from livestock grazing because of the benefit of keeping weedy non-native species populations in check, and how these weedy species' populations explode after grazing was terminated (Cingolani et al. 2005⁵², Edwards 1992⁵³, and Marty 2005⁵⁴, to cite a few).

The RDEIR on Pages 3.4-8 and 9.4-9 discuss Coastal Scrub vegetation; however, the RDEIR does not mention the fact that Coastal Scrub vegetation is considered a sensitive plant community that requires consideration of impacts to it as significant pursuant to CEQA. What is discussed on Page 3.4-54 and considered is the presence and potential impact to a large number of rare plant and wildlife species that are associated with Coastal Scrub. The fact that Coastal Scrub vegetation is habitat to so many rare species is just one of the basis for considering Coastal Scrub plant communities as sensitive communities, several of which are tracked by the CNDDDB (2003⁵⁵).

Coastal Scrub communities present or potentially present onsite tracked by the CNDDDB include:

- Black Sage – Coastal Prickly-pear Alliance (32.020.05⁵⁶)
- White Sage Scrub/Alliance (32.030.00)
- California Buckwheat Alluvial Fan (32.040.04)
- California Encelia Scrub (32.050.00)
- Coyote Brush/Creeping Ryegrass (32.060.03)
- Coyote Brush/Purple Needlegrass (32.060.10)

⁵² Cingolani, A.M., I. Noy-Meir, and S. Diaz. 2005. Grazing Effects on Rangeland Diversity: A Synthesis of Contemporary Models. *Ecological Applications* 15(2):757-773.

⁵³ Edwards, S.W. 1992. Observations on the Prehistory and Ecology of Grazing in California. *Fremontia* 20(1): 3-11.

⁵⁴ Marty, J.T. 2005. Effects of Cattle Grazing on Diversity in Ephemeral Wetlands. *Conservation Biology* 1626-1632.

⁵⁵ CNDDDB. 2003. List of California Terrestrial Natural Communities Recognized by The California Natural Diversity Database. California Department of Fish and Game, Biographic Data Branch, The Vegetation Classification and Mapping Program. Sacramento, California. September 2003 edition. Available at: <http://www.dfg.ca.gov/biogeodata/vegcomp/pdfs/natcomlist.pdf>

⁵⁶ CNDDDB Code, listed in CNDDDB 2003 (full citation above).



- California Buckwheat – White Sage Scrub (32.100.00).

Several of these Coastal Scrub alliances are equivalent to Venturan Coastal Sage Scrub, as described by Holland (1986) and referenced by the CNDDDB and Davis et al. (1995).

It is clear by the scant and general plant community description in the RDEIR for Coastal Scrub that the project site contains one or more of these formally described vegetation alliances, all of which are considered sensitive habitats by CDFG's CNDDDB. The RDEIR should be revised to include detailed vegetation mapping at the alliance level and classified according to the NVCS as described in Sawyer & Keeler-Wolf (1995). The RDEIR seriously understates and under-describes the diversity and importance of Coastal Scrub vegetation communities onsite, and how they will be adversely impacted.

Furthermore, since Coastal Scrub habitat is an important natural habitat at risk, provides habitat for special-status species, and is easily degraded by human developments, it qualifies as ESHA according to the Coastal Act and the County Coastal Plan. It should be considered ESHA in the Coastal Zone and is considered a sensitive habitat type beyond the Coastal Zone in Santa Barbara County southward to the California border. The RDEIR should be revised to recognize this.

The loss of 1.11 acres and 6.22 acres of Coastal Scrub by the MOU Project (RDEIR Page 3.4-78) and Alternative 1 Project (RDEIR Page 9.4-74), respectively, each represent significant adverse impacts to the environment. These impacts need to be fully described and characterized, and mitigation measures developed in full during the CEQA review process. The classification of the losses of special-status species associated with Coastal Scrub habitats (Impact Bio-2) as a Class II level impact is premature since feasible mitigation has not been demonstrated for the project to fully compensate for the loss of habitat functions and values. Clearly, the project purpose to provide single-family residences in the Naples area can be easily achieved by better clustering the houses and related infrastructure, and avoid direct and indirect impacts to sensitive Coastal Scrub habitat. Avoidance of the impact should be the highest priority mitigation action pursuant to the County's thresholds manual Biological Resources Section, and be pursued, which appears feasible.

Mitigation Measure Bio-2b improperly defers the development of performance standards for mitigation success until a later date. The RDEIR should be revised to correct this error. Until adequate mitigation is identified that substantially offsets or compensates for the direct and indirect impacts to Coastal Scrub, impacts to Coastal Scrub must be considered Class I (significant and unavoidable). Instead, the RDEIR does not analyze or identify any impacts to Coastal Scrub as a special-status habitat (Section 9.4.4.2).

ESHA

Coastal Act Section 30231 provides:

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



Furthermore, the Coastal Act Section 30240 states:

“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.”

“Section 30240(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.”

Based on these criteria, any natural habitat that satisfies the above-listed subsections of the Coastal Act should be considered ESHA.

Special-status plant surveys were not consistently performed throughout the project site, not all special-status species were considered, floristic field surveys were not performed, or only for portions of the project site, and standard survey and documentation protocols were not followed to provide an adequate and meaningful baseline of existing conditions. Therefore, any determinations about whether natural vegetation onsite could be considered ESHA were flawed and should be redone.

Several plant communities present onsite are clearly ESHA, such as wetlands (including riparian), Coastal Bluff Scrub, and native grasslands. It has been demonstrated elsewhere in this letter that Coastal Scrub habitat should also be considered as ESHA; that areas mapped as Non-native Grassland containing significant amount of native grassland species or supporting special-status wildlife species (such as on the Coastal Terrace) should also be considered ESHA; and that the remaining annual grasslands are still considered important habitat for wildlife and have relatively high ecological value.

The RDEIR needs to be revised to reflect the sensitivity and ecological value of all habitats onsite for both the SBR and DPR.

Wildlife Movement and Habitat Fragmentation

Adoption of either the MOU Project or Alternative 1 Project would result in habitat fragmentation. None of the development proposed are clustered; rather, the large houses are scattered almost evenly across the SBR and the grassland portion of DPR. At present, even though the grasslands onsite have been variously disturbed by agricultural activities, mostly by livestock grazing, the habitats for many wildlife species, including special-status species, is intact or of suitable condition to accommodate foraging, breeding, nesting, and movement between habitat patches on and off site.

Habitat fragmentation thresholds are different for different species. For example, amphibians typically have a small home range and habitat fragmentation resulting from building roads, clearing vegetation, and building houses (Cushman 2006⁵⁷). California Red-legged Frog is believed to disperse across the project site and would be blocked or threatened by development and associated effects (e.g. roads, pets) (RDEIR Page 9.4-70).

The RDEIR, Pages 3.4-64 and 9.4-69 classify restricted wildlife movement as a Class III (less-than-significant) impact. There is no basis for this conclusion based on the extensive

⁵⁷ Cushman, Samuel A. 2006. Effects of Habitat Loss and Fragmentation on Amphibians: A Review and Prospectus. *Biological Conservation* 128:231-240.

fragmentation of the grassland and Coastal Scrub habitat onsite, particularly on SBR. Koutnik (2007⁵⁸) claims that the proposed development on the SBR would not affect east-west movement of wildlife; however, Koutnik's conclusion is better fitting only for large mammals, not invertebrates, amphibians and reptiles, or small mammals, which do not have the same mobility or range.

As described elsewhere in this letter, the encroachment into these existing habitats by houses, outbuildings, roads, irrigated landscaping, farmsteads in ACEs, and vegetation management for fire hazard control all contribute to habitat fragmentation to the point that many species of wildlife, from invertebrate to large mammal species will be inhibited or prevented from movement between the remaining habitat patches onsite or to more intact habitats offsite. With Global Climate Change threatening to change existing habitats, viable movement/migration corridors and paths must be intact for species to maintain viable populations in the region.

The RDEIR, starting on Pages 3.4-64 and 9.4-69, discusses project-related impacts to wildlife movement, and stresses the relative importance of the portion of SBR south of U.S. 101 to foraging raptors, it focuses its impact assessment on the viability of wildlife movement for large mammals, without actually stating such. The RDEIR states that the grasslands on SBR south of U.S. 101 are very important to raptors; however, raptors are not constrained by existing terrestrial movement barriers such as U.S. 101, which forms a formidable north-south barrier to many wildlife species. Those large mammals with wide home ranges have the ability to find suitable movement corridors between habitat north and south of U.S. 101, such as at Dos Pueblos Creek. Birds can fly to other intact habitats but unless that habitat is unoccupied, would be pushed from their ranges into competitor's territories, and forced to expend additional energy (which may be limited) traveling longer distances. However, most invertebrates (those not capable of flying), amphibians, reptiles, and small mammals require minimum-sized habitats of suitable quality to maintain viable populations. No population studies of any kind are reported to have been conducted for the proposed project or the RDEIR.

As the SBR and DPR habitat are fragmented by roads, and houses into smaller and smaller patches, species richness will decrease, some species will be extirpated from that area (MacArthur & Wilson 1963⁵⁹, 1967⁶⁰, Diamond 1976⁶¹, Quinn & Harrison 1988⁶²), maybe even the region. The RDEIR, on Page 9.4-70, notes extirpations are a possible, if not likely, result of the projects.

The RDEIR lacks an adequate assessment of habitat fragmentation. To better characterize potential habitat fragmentation from the proposed MOU Project or the Alternative 1 Project, habitat fragmentation needs to be analyzed from more than one perspective, i.e. large mammals. Fragmentation of habitat and barriers to movement should consider different species groups, including: annual plants, perennial plants, shrubs and trees, invertebrates (flying and non-flying), amphibians, reptiles, small birds, raptors, small mammals, and large mammals. Short of analyzing each group separately, using the species or group of species with the most restrictive

⁵⁸ Daryl Koutnik, letter to Mr. Figg dated 27 September 2007 on the Santa Barbara Ranch DEIR regarding wildlife movement and mitigation for impacts to grasslands.

⁵⁹ MacArthur, R.H., and E.O. Wilson. 1963. An Equilibrium Theory of Insular Zoogeography. *Evolution* 17:373-387.

⁶⁰ MacArthur, R.H., and E.O. Wilson. 1967. *The Theory of Island Biogeography*. Princeton University Press, Princeton, New York.

⁶¹ Diamond, J.M. 1976. Island Biogeography and Conservation: Strategy and Limitations. *Science* 193:1027-1029.

⁶² Quinn, J.F., and S.P. Harrison. 1988. Effects of Habitat Fragmentation and Isolation of Species Richness: Evidence from Biogeographic Patterns. *Oecologia* 75:132-140.



movement and habitat requirements will provide the most appropriate impact assessment related to habitat fragmentation and species movement. The RDEIR fails to provide any sort of analysis of minimum habitat area or quality requirements of any wildlife species known or expected to occur onsite. Lacking such information, how can the RDEIR conclude that the project impacts on habitat fragmentation and wildlife movement are less than significant, particularly when evidence to the contrary, speculative as it is, that some species will be extirpated from the SBR. The original DEIR found that this impact was significant (Class II). Certainly, the minor modifications to proposed driveways was not enough to mitigate the impacts to many species to less than significant, such as in Regions 1, 2, 4, and 5.

Wetlands and Riparian Habitats

Wetlands Delineation. Section 3.4.2.1.3/Page 3.4-3 of the RDEIR states that “...limited field verification was conducted to delimit the boundaries of hydrogeologic features...and associated vegetation types that represent Federal and State jurisdictional waters that occur within the study area. Wetland delineations of the Santa Barbara Ranch (SBR) property and limited portions of the Dos Pueblos Ranch (DPR) property were conducted by SAIC (2004⁶³, 2005) and their analysis was incorporated into this EIR without additional field characterization other than field verification of their results.”

Based on these statements, it is clear that a complete and thorough wetland delineation was not conducted by SAIC at the project site or at the alternative project sites. Furthermore, the RDEIR states that no formal delineation of wetlands was performed by anyone else for this project and the RDEIR, and the wetland delineation performed by SAIC (2005) was not submitted to the U.S. Army Corps of Engineers (Corps) for verification and some wetlands delineated were deleted from consideration by URS. A delineation of wetlands in all the SBR and DPR areas of the proposed project is essential for the public, responsible agencies, and other agencies to ascertain the actual impacts to delineated existing state and federal wetlands. Normal practice is to identify all areas of existing wetlands in order to conduct an assessment of the amount, location, and expected direct and indirect impacts the proposed project would have on existing wetlands, and how much of those wetlands are avoided. Since the extent of all existing wetlands was not delineated within the proposed development envelopes, no assessment or quantification of direct or indirect impacts can be made, and any assessment of project alternatives cannot determine if other wetlands would be impacted directly or indirectly. This is a serious shortcoming that should be rectified. All wetland areas within the vicinity of the project site should be delineated, mapped, and assessed for direct and indirect impacts resulting from any proposed development or alternatives.

Some of the methods used for the wetland delineation onsite do not follow currently accepted methods as prescribed by the Corps. Santa Barbara County’s Environmental Thresholds and Guidelines Manual requires County EIRs to use the wetland definition adopted by the USFWS, the California Coastal Commission and the CDFG. These agencies rely on the methods prescribed by the Corps, and employ an identical definition but require only one of three (instead of three of three) wetland parameters to be met for an area to qualify as a wetland.

⁶³ Science Applications International Corporation. 2004. *2004 Spring Biological Survey Report of the Santa Barbara Ranch Property, Gaviota Coast, California*. December 2004. Prepared for Santa Barbara County Department of Planning and Development.

The Corps' 1987 Wetland Delineation Manual⁶⁴ is the only method recognized by the Corps for determining the extent of wetlands under the Corps' jurisdiction, and only the Corps can determine their limits of jurisdiction. Any delineation performed by others is simply advisory until the Corps formally verifies the extent of their jurisdiction. Failure to adhere to the Corps' method (and by extension the CCC, USFWS, and CDFG's wetland definition) renders the RDEIR's description of project site wetlands inconsistent with the County's Environmental Thresholds and Guidelines Manual wetland definition. The project site wetland delineation report uses unaccepted methods that invalidate it. The delineation results in incorrect results that would likely not be accepted by the Corps and that do not properly describe the existing wetlands baseline on the project site consistent with the County wetland definition in the County's CEQA Thresholds and Guidelines Manual.

For example, the following flaws were observed during a review of the 17 wetland delineation data sheets filled out by SAIC's for the 485-acre SBR site. (No wetland delineation data sheets were filled out for the 2,769-acre DPR site.)

- Only 17 plots were established for the entire project area (and all were limited to the 485-acre SB Ranch) to characterize and determine the extent and location of jurisdictional wetlands. A sampling of only 17 plots is severely inadequate to represent a project site that is over 3,000 acres in size (i.e. SBR and DPR combined). In addition, the Corps Manual requires plots to be sampled along transects; however, no transects were used to define the boundaries of the wetland areas from the upland areas. A total of 17 plots were simply scattered throughout the 3,000-acre project site and were limited to the 485-acre SBR portion of the project site.
- Notes for Plots 1, 2, and 3 indicate that drainage patterns in wetlands were observed. If so, a primary positive indicator for hydrology is present. SAIC states elsewhere that no hydrology was present in the wetland determination. No other notes are provided regarding the topography or if well-defined bed and banks exist. If a well-defined bed and banks exist, then SAIC should have checked "other" under "secondary indicators" on the data forms and provided an explanation, which would have qualified such areas as Corps jurisdictional waters of the U.S.
- Plot 1 lists *Lolium multiflorum* as NI, then it is listed as FAC for Plot 2, 4, and 13, then is listed as FAC* for Plot 8. *L. multiflorum* should be treated as a FAC* species, since it was considered a synonym of *L. perenne* for the 1988⁶⁵ list. Many botanists have misidentified *L. multiflorum* as *L. perenne* in this region, including the primary author of the Corps' 1987 Manual, leading to the misunderstanding of the distribution and ecological conditions under which *L. multiflorum* typically occurs. Regardless, the data sheets should provide the correct and consistent wetland indicator status for each species throughout the analysis. The failure to consistently identify *L. multiflorum* as a FAC* wetland species illustrates the flawed nature of the wetland delineations. The delineation did not use consistent methodology in this regard and as a result cannot be relied upon to accurately delineate wetlands.

⁶⁴ Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. (Technical Report Y-87-1.) U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

⁶⁵ Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands: California (Region 0). (Biological Report 88[26.10].) U.S. Fish and Wildlife Service, Ft. Collins, Colorado.



- Plot 2 indicates that significant organic material is present, but SAIC does not check it as an indicator of hydric soils, and then makes the determination that hydric soils are not present. If high levels of organic material exists, then the plot should have been determined to have positive indicators for hydric soils. Further explanation on the datasheet is needed to understand the delineator's decisions, but is lacking. The data forms were not filed out completely further illustrating the flawed nature of the wetland delineation.
- Plot 3 has low chroma with bright mottles, and SAIC's determination is that no indicators of hydric soil exist. A low chroma matrix with bright mottles is a strong indicator of reducing conditions and should have been checked on the datasheet as a positive indicator for hydric soils. If reducing conditions exist, then hydric soils exist. If hydric soils exist, then the area qualifies as wetland under the County's and CCC's one-parameter wetland definition. Plots 4 and 6 indicate that low chroma soil matrices exist, but that no indicators of hydric soils are present in the wetland determination section. SAIC's only comment for saying no positive indicators of hydric soils exist is that the upland soils are also very dark, without supporting evidence. Then in Plot 5 they say hydric soils are present due to low chroma. These inconsistencies are evident throughout the wetland delineation datasheets, and bring into question the validity or accuracy of any of the wetland conclusions made by SAIC. These errors would not likely withstand scrutiny by the Corps, and render the wetland delineation methodology and results flawed.
- Plot 5 datasheet appears as though SAIC forgot to assess hydrology as nothing is entered in the datasheet for hydrology, but SAIC makes the determination that no hydrology indicators are present in the wetland determination section with nothing supporting that determination.
- Plot 8 states that the plot is within a drainage with 15-foot banks, but they still say no indicators of hydrology are present. This plot should qualify as waters of the U.S. since it apparently possesses well-defined bed and banks. The California Sycamore Riparian Woodland sampled at Plot 8 is not mapped on the RDEIR Figure 3.4-2, why not?
- Plot 9 states that tree frogs are present, and that surface water is present, but no appropriate indicators of hydrology are marked off in the hydrology section. Soils are hydric for this plot, but again SAIC does not mark off (on the datasheets) all the appropriate indicators that are present. Although ultimately hydrology and hydric soils are circled in the determination section, the positive indicators for these criteria should be discussed and presented in their respective sections on the datasheets to understand and explain the delineator's reasoning and conclusions.
- Plot 10 lists only one plant species, then mentions additional plant species in the remarks area, but does not give percent relative cover, wetland indicator status, or stratum for each species. It is unclear if these additional species were used to determine if the plot was dominated by hydrophytic vegetation.
- Plot 11 contains a note that the plot is at bottom of drainage in the hydrology section, then says waters of the U.S. main channel in the notes for the wetland determinations section, but then circles "No" for wetland hydrology in the wetland determination section of the form. This is a contradiction because any plot in a waters of the U.S. main channel possesses wetland hydrology by definition.



- Plot 12 lists three hydrophytic plant species present, but there is no indication of their strata or percent relative cover, and it is not stated that there is 100% dominance by hydrophytic vegetation. This lack of clarity undermines the wetland delineation's accuracy and reliability in defining the existing wetland conditions of the site.
- Plot 15 states that the plot is within a defined bed and banks, but SAIC still says no indicators of hydrology are present, apparent contradictions.
- All data sheets: (1) Under hydrology, recorded data items are not checked off (specifically aerial photography should have been used). (2) Under soils, the drainage class, taxonomy, and map type confirmation are all left blank. (3) SAIC makes no mention of any unmapped inclusions, which is a normal circumstance with mapped soils, due largely to the gross mapping scale used by the Natural Resource Conservation Service (formerly the Soil Conservation Service) when mapping and characterizing soils for a soil survey. (4) Under vegetation, the stratum and percent relative cover are not provided for each plant species, which is a required step in determining the presence of hydrophytic vegetation and the existence of wetlands. (5) All three criteria sections of the data sheets should include all applicable indicators marked off if present (not just presented as notes), and should be followed by a statement of whether positive indicators are present or not for each criterion. (6) FAC-Neutral test is not used consistently to determined in the hydrology section as a secondary indicator.

The RDEIR failed to correct any of the inadequacies described in detail in DMEC's comment letter of 25 September 2006. No revisions appear to have been made to the wetland delineation report prepared by SAIC (2004, 2005). Currently, the Corps requires use of the Arid Southwest Supplement to the Corps Manual for all wetland delineations performed in southern California, including Santa Barbara County. No such revisions or updating of the SAIC delineation has been made. The Corps would reject the delineation as incomplete and not following Corps delineation methods.

Section 3.4.3.1.1 – Federal Authorities and Administering Agencies, of the RDEIR, on Page 3.4-21, describes the authority of the Corps in regulating waters of the U.S. and adjacent wetlands. However, this section failed to mention the required use of the Arid Southwest supplement.

Wetlands that were delineated by SAIC (2005) and recorded by Holland (2003) were excluded from the RDEIR by URS with no apparent justification and no updated wetland delineation. Page 9.4-20 of the RDEIR states, "Wetland delineations were not performed on any of these water bodies for the present report". Page 9.4-86 of the RDEIR states, "The applicant shall conduct a formal wetland delineation after project approval".

Instead, on Page 9.4-3, URS visually estimated the extent of presumed wetlands, while the RDEIR, Page 9.4-4, states that several events influenced the RDEIR's wetland mapping since release of the first DEIR in June 2006, with no explanation of why more than 30 "state wetlands" delineated by SAIC on the coastal terrace drainages in 2005 were deleted and not included in the RDEIR "updated" and "compilation" wetland map illustrated on Figure 9.4-3. Deletion of these wetlands without new formal delineations is improper and undermines the RDEIR's wetland baseline.

The RDEIR is inadequate without fully identifying the location, type, and size of each wetland onsite, particularly if any of them are to be impacted by the MOU Project or Alternative 1 Project. A 100-foot-wide buffer zone (according to County LCP Policy 9-9) should be determined and mapped in the EIR to demonstrate and determine encroachments and violations



of County setback policy. This has not been done and should be rectified. Since wetlands are considered ESHA and regulated by federal and state agencies, direct impacts to wetlands and encroachments into the required 100-foot setback zones must be considered significant impacts, possibly Class I impacts unless it can be demonstrated that feasible mitigation is available to fully compensate for direct and indirect impacts to onsite and offsite wetlands.

Wetland Functions. Impact Bio-8 of the RDEIR (Page 3.4-54) states that, “the coastal terrace south of Highway 101 supports a number of small, scattered wetlands that were delineated and mapped by SAIC (2005) as well as seven other seasonal water bodies that were not evaluated or mapped by them. These seasonal water bodies and/or the 100-foot buffer would be eliminated, encroached upon, fragmented and isolated from other such habitats by the proposed equestrian village and associated residential building envelopes.” However, the RDEIR fails to assess impacts to wetland functions, such as was performed for other development projects (such as the Bridle Ridge project), using a quantitative and objective assessment tool such as the County’s Hydrogeomorphic Assessment Model (HGM) developed for the South Coast of Santa Barbara County⁶⁶. The SAIC delineation and the RDEIR both fail to include any quantitative assessment of changes in wetland functions as a result of the proposed project.

Since the functions of wetlands can be complex and sometimes difficult to accurately assess, a robust and quantitative method is needed. The HGM rapid assessment method (Smith et al. 1995⁶⁷) provides such a tool. The HGM approach depends on development of local models for each biogeographic region for each general wetland type: riverine, estuarine fringe, lacustrine fringe, depression, slope, and mineral soil flats. The primary wetland type onsite is riverine, as defined by the HGM model. The assessment in the DEIR and the SAIC delineation report both fail to quantify the level of impact to the fourteen wetland functions (Table 1, Ecosystem Functions of Riverine Wetlands) known to occur in the riverine/riparian wetlands present onsite. DMEC has successfully⁶⁸ used the HGM assessment model on several projects in the region (Fugro West 1996⁶⁹, DMEC 2000⁷⁰, DMEC 2001⁷¹, DMEC 2004⁷²), including the project site (for the Bridle Ridge project in 1998).

⁶⁶ Lee, L.C., Fiedler, P.L., Stewart, S.R., Curry, R.R., Partridge, D.J., Mason, J.A., Inlander, I.M., Almay, R.B., Aston, D.L., Spencer, M.E. 2001. *Draft Guidebook for Reference Based Assessment of the Functions of Riverine Waters/Wetlands Ecosystems in the South Coast Region of Santa Barbara County, California*. Santa Barbara County Water Agency, Santa Barbara, California.

⁶⁷ Smith, R.D., A. Ammann, C. Bartoldus, and M.M. Brinson. 1995. An Approach for Assessing Wetland Functions Using Hydrogeomorphic Classification, Reference Wetlands, and Functional Indices. (Wetlands Research Program Technical Report WRP DE.) Waterways Experiment Station, U.S. Army Corps of Engineers, Vicksburg, Mississippi.

⁶⁸ Success determined by acceptance of use and results by wetland regulatory agencies such as the U.S. Army Corps of Engineers, CDFG, and Regional Water Quality Control Board.

⁶⁹ Fugro West, Inc. 1996. Draft Environmental Impact Report for the Los Osos Sewer Treatment Facilities. Ventura, CA. Prepared on behalf of County of San Luis Obispo. David Magney performed the assessment while with Fugro West.

⁷⁰ David Magney Environmental Consulting. 2000. Wetland Functional Assessment of the Reinke Development Mitigation Plan, Thousand Oaks, California. November 2000. (PN 00-0131.) Ojai, California. Prepared for Rudy Reinke, Thousand Oaks, California.

⁷¹ David Magney Environmental Consulting. 2001. Wetland Functional Assessment of the Odyssey Program Middle School Project, Malibu, California. December 2001. (PN 00-0301.) Ojai, California. Prepared for Odyssey Program, Malibu, California.

⁷² David Magney Environmental Consulting. 2004. Wetland Functional Assessment of Camarillo Regional Park Wetlands and Golf Course Projects, Ventura County, California. June 2004. (PN 02-0121-2.) Ojai, California. Prepared for California State Coastal Conservancy, Oakland, California.



Table 1. Ecosystem Functions of Riverine Wetlands

Function		Definition
Hydrology		
1	Energy Dissipation	The transformation and/or reduction of the kinetic energy of water as a function of the roughness of the landscape and channel morphology, and vegetation.
2	Surface and Subsurface Water Storage and Exchange	The presence of soil and/or geologic materials within the creek ecosystem, including the hyporheic zone, that have physical characteristics suitable for detention, retention, and transmission of water.
3	Landscape Hydrologic Connections	The maintenance of the natural hydraulic connectivity among source areas of surface and subsurface flow to riverine waters/wetlands and other down gradient waters/wetlands.
4	Sediment Mobilization, Storage, Transport, & Deposition	The mobilization, transport, and deposition of sediment as determined by characteristics (morphology) of the channel as well as the timing, duration and amount of water delivered to the channel.
Biogeochemistry		
5	Cycling of Elements and Compounds	Short- and long-term transformation of elements and compounds through abiotic and biotic processes that convert chemical species (e.g. nutrients and metals) from one form, or valence, to another.
6	Removal of Imported Elements and Compounds	Removal of imported nutrients, contaminants, and other elements and compounds in surface and groundwater.
7	Particulate Detention	The deposition and retention of inorganic and organic particulates (>0.45µm) from the water column, primarily through physical processes.
8	Organic Matter Transport	The export of dissolved and particulate organic carbon from a wetland. Mechanisms include leaching, flushing, displacement, and erosion.
Plant Community		
9	Plant Community	The physical characteristics and ecological processes that maintain the indigenous living plant biomass.
10	Detrital Biomass	The process of production, accumulation, and dispersal of dead plant biomass of all sizes.
Faunal Support / Habitat		
11	Spatial Structure of Habitats	The capacity of waters/wetlands to support animal populations and guilds through the heterogeneity of structure of vegetative communities.
12	Interspersion and Connectivity of Habitats	The capacity of waters/wetlands to permit aquatic, semi-aquatic, and terrestrial organisms to enter and leave a riverine ecosystem via large, contiguous plant communities to meet life history requirements.
13	Distribution & Abundance of Vertebrate Taxa	The capacity of waters/wetlands to maintain characteristic density and spatial distribution of vertebrates (aquatic, semi-aquatic and terrestrial).
14	Distribution & Abundance of Invertebrate Taxa	The capacity of waters/wetlands to maintain the density and spatial distribution of invertebrates (aquatic, semi-aquatic and terrestrial).

The HGM Riverine model considers the state of twenty-eight (28) variables that are assessed in various combinations to measure the level of functioning for each of the fourteen wetland functions, to obtain an index score for each function. Each index is scaled based on reference standards that were established for the Santa Barbara South Coast region, located in Santa



Barbara County (Lee et al. 2001⁷³). The Santa Barbara South Coast HGM model should be applied to this project for all the Riverine/riparian wetlands onsite. A quantitative assessment of the slope wetlands should also have been conducted. The benefits of using the HGM model are that project comparisons are relative to baseline conditions, and should be valid and stable from that perspective. This model provides a systematic method to measure the relative change in wetland functions the proposed project will have, identifying those specific variables and functions that are expected to change, and providing the permitting agencies a relative numerical measurement of pre-project (baseline) and post-project conditions (two projects with variations). Table 2, Riverine HGM Model Variables, lists the 28 variables that were used to scale the index for each wetland function.

Table 2. Riverine HGM Model Variables⁷⁴

Acronym	Variable	Definition
1. VASIGN	Observations and/or Indicators of Animal Presence or Utilization of the Assessment Area	The number of direct (e.g., visual observation of animals) or indirect (e.g., tracks, bedding, scat) observations of animal species presence in or utilization of the VAA.
2. VBUFFCOND	Buffer Condition	Predominant (>50% areal extent) land use or condition within the Ventura County designated stream buffer of 100 feet.
3. VBUFFCONT	Buffer Contiguity	The linear extent of the vegetated buffer on both sides of the stream channel, parallel to the top of bank.
4. VBUFFWIDTH	Buffer Width	The average width of the existing vegetated buffer within the Ventura County designated stream buffer of 100 feet.
5. VCHANROUGH	Channel Roughness	Channel roughness is an indicator of hydraulic resistance produced by natural or anthropogenic immobile features of channel system below ordinary high water (OHW). Channel roughness is expressed as percent of channel cross sectional area occupied by roughness elements that are relatively immobile during flood events.
6. VDECOMP	Decomposition	A measure of the most frequently occurring decomposition class (mode) and the average number of decomposition classes of coarse woody debris (CWD) below OHW and within active channel.
7. VEMBED	Embeddedness of Large Channel Materials	The degree to which "large class" channel bed material is buried in "finer" sediment. Embeddedness is percent burial of material the stream system has the capacity to move (D84 or larger bed material) in material that the channel usually moves (D50 material).
8. VHERBCC	Herbaceous Cover	Percent cover of herbaceous veg, including graminoids, forbs, ferns, & fern allies in VAA.
9. VINCWD	In Channel Coarse Woody Debris	Volume of down and dead trees and/or limbs (>3" diameter) within the active channel and below OHW.
10. VLANDUSE	Land Use	Land use within the project site sub-watershed.
11. VLONGPROF	Longitudinal Profile	The integrity of the natural longitudinal profile of the channel within and/or upstream and downstream from the main channel cross-section.
12. VOFFCWD	Out of Channel Coarse Woody Debris	Volume of down and dead trees and/or limbs (>3" diameter) above OHW within the VAA.
13. VPATCHAREA	Area of Patches	Relative area of habitat patches within the 1,000' radius VAA surrounding the project site.
14. VPATCHCONTIG	Contiguity of Patches	The contiguity of habitat patches within the proposed project site sub-watershed.
15. VPATCHNUM	Number of Patches	The number of habitat patches within the 1,000' radius VAA surrounding the project site.

⁷³ Lee, L.C., Fiedler, P.L., Stewart, S.R., Curry, R.R., Partridge, D.J., Mason, J.A., Inlander, I.M., Almay, R.B., Aston, D.L., Spencer, M.E. 2001. *Draft Guidebook for Reference Based Assessment of the Functions of Riverine Waters/Wetlands Ecosystems in the South Coast Region of Santa Barbara County, California*. Santa Barbara County Water Agency, Santa Barbara, California.

⁷⁴ Adapted from Lee et al. 2001.



Acronym	Variable	Definition
16. VRATIO	Ratio of Native to Non-Native Plant Species	Ratio of the dominant plant taxa within the VAA that are native to those that have been introduced to the region.
17. VREGEN	Regeneration	Regeneration of plants from seedlings, saplings, and clonal shoots within the VAA.
18. VRESIDPOOL	Residual Pool	The number and average distance between residual pools >10 ft ² in area and ≥0.5 ft deep (at their deepest point) within the active channel at low flow to base flow conditions.
19. VSED	Sediment Deposition	Sources and amount of sediment delivery and deposition to waters/wetlands from upgradient landscape positions.
20. VSHADE	Shade Over Channel below OHW	Tree, shrub, and undergrowth vegetation canopy cover overhanging active stream channel.
21. VSHRUBCC	Shrub Canopy Cover	Percent canopy cover of shrubs (multiple stemmed woody species) within the VAA.
22. VSNAGS	Snags	Basal area of standing dead trees (snags) (≥3" DBH).
23. VSOILINT	Soil Profile Integrity	Measure of presence & condition of representative soil profiles (soil horizons) within VAA.
24. VSTRATA	Strata	The number of distinct vegetation layers present within the riparian zone of the VAA. Vegetation strata were defined as follows: trees (single stem woody species ≥3" DBH and >10 ft. tall); shrubs (multiple stem woody species); vines or lianas (woody vines); and herbs (forbs, graminoids, ferns, and fern allies).
25. VSURFIN	Surface Water In	Surface hydrologic connections into the VAA from the adjacent landscape.
26. VTREEBA	Basal Area of Trees	Basal area of trees (single stem woody species with ≥3" DBH & >10 ft. tall) within VAA.
27. VTREECC	Tree Canopy Cover	Percent canopy cover of trees (single stem woody species with ≥3" DBH and >10 ft. tall).
28. VVINECC	Vine Canopy Cover	Percent canopy cover of vines or lianas (woody vines) within the VAA.

Index formulas have been developed by Lee et al. (2001) (Functions 1 through 12) and by DMEC (Functions 13 and 14) to capture the components (variables) of each wetland function, Table 3, Riverine HGM Model Index Formulas⁷⁵. These formulas are then used to scale the level at which the wetland is functioning, independently for each function. It is these index formulas that provide the means to develop a quantitative assessment of existing conditions and how each of the wetland functions would change relative to existing conditions.

Table 3. HGM Model Index Formulas⁷⁶

Function	Index Formula
1	$[(VINCWD)+(VHERBCC+VSHRUBCC+VTREEBA)/3+(VBUFFCONT+VBUFFCOND+VBUFFWIDTH)/3+(VCHANROUGH)]/4$
2	$(VSED+VSOILINT+VRESIDPOOL)/3$
3	$[VLONGPROF+VSOILINT+VSURFIN+VLANDUSE+(VBUFFCONT+VBUFFCOND+VBUFFWIDTH)/3]/5$
4	$[(VHERBCC+VSHRUBCC+VTREEBA)/3+(VBUFFCONT+VBUFFCOND+VBUFFWIDTH)/3+(VCHANROUGH)+(VEMBED)+(VSED)]/5$
5	$[(VSOILINT+VSED)/2+(VINCWD+VOFFCWD)/2+(VHERBCC+VSHRUBCC+VTREEBA)/3+(VBUFFCONT+VBUFFCOND+VBUFFWIDTH)/3+(VDECOMP)]/5$
6	$[(VHERBCC+VSHRUBCC+VTREEBA)/3+(VBUFFCONT+VBUFFCOND+VBUFFWIDTH)/3+(VSOILINT+VSED)/2+VLONGPROF]/4$
7	$[(VHERBCC+VSHRUBCC+VTREEBA)/3+(VBUFFCONT+VBUFFCOND+VBUFFWIDTH)/3+(VCHANROUGH)+(VEMBED)+(VSED)]/5$
8	$[(VINCWD)+(VDECOMP)+(VHERBCC+VSHRUBCC+VTREEBA)/3+(VBUFFCONT+VBUFFCOND+VBUFFWIDTH)/3+(VLONGPROF)]/5$
9	$[(VTREECC+VSHRUBCC+VVINECC+VHERBCC+VREGEN)/5+VRATIO+VSTRATA+VTREEBA]/4$

⁷⁵ From Lee et al. 2001 except formulas for Functions 13 and 14 developed by DMEC.

⁷⁶ From Lee et al. 2001 except formulas for Functions 13 and 14 developed by DMEC.



Function	Index Formula
10	$[(VSNAGS)+(VOFFCWD+VINCWD)/2+(VDECOMP)]/3$
11	$[(VASIGN)+(VBUFFCOND+VBUFFCONT+VBUFFWIDTH)/3+(VSHADE+VRESIDPOOL+VSNAGS+VSTRATA)/4]/3$
12	$[(VPATCHNUM+VPATCHAREA+VPATCHCONTIG)/3+VLANDUSE]/2$
13	$[(VASIGN+(VBUFFCOND+VBUFFCONT+VBUFFWIDTH)/3+VCHANROUGH+VDECOMP+VHERBCC+VINCWD+VLANDUSE+VLONGPROF+VOFFCWD+(VPATCHAREA+VPATCHCONTIG+VPATCHNUM)/3+VREGEN+VRESIDPOOL+VSHRUBCC+VSNAGS+VSOILINT+VSTRATA+VTRECC+VVINECC)]/18$
14	$[(VASIGN+(VBUFFCOND+VBUFFCONT+VBUFFWIDTH)/3+VHERBCC+VINCWD+VLANDUSE+VOFFCWD+(VPATCHAREA+VPATCHCONTIG+VPATCHNUM)/3+VRATIO+VREGEN+VRESIDPOOL+VSHRUBCC+VSNAGS+VSTRATA+VTRECC+VVINECC)]/15$

Impacts to Wetlands. Coastal Act Section 30233 prohibits the filling of wetlands for new residential development and allows for filling of wetlands for only a handful of activities including incidental public services such as laying pipelines, habitat restoration, and boating facilities. For instance, Coastal Act Section 30233(3) says the diking, filling, or dredging of wetlands shall be permitted 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 entrance channels for new or expanded boating facilities. Coastal Act Section 30240 states that, “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.” The County’s CLUP Policy 9-9 requires that a 100-foot wide buffer be maintained around wetlands within the County. Since seasonal water bodies and/or the 100-foot buffer would be eliminated, encroached upon, fragmented and isolated from other such habitats by the proposed equestrian village and associated residential building envelopes (e.g. Lots 41 and 42), the projects conflict with coastal policies and the Coastal Act. The filling of wetlands for roads and homes or residential and infrastructure development within 100 feet of wetlands does not comply with Coastal Act Sections 30233 and 30240 and with LCP Policy 9-9. This includes the construction of the Tomate Canada Bridge.

Mitigation for Impacts to Wetlands. Elimination of wetlands and potential wetlands to accommodate Lots 41 and 42 is described on Page 3.4-56 and 57. The RDEIR finds this impact can be mitigated to less than significant by avoiding wetlands and 100-foot buffers or by creating new wetlands to replace those that would be lost. However, not all wetlands onsite have been formally delineated as acknowledged in the RDEIR. In addition, wetlands have improperly been deleted from the RDEIR and formal delineation is deferred until after project approval (Mitigation Bio-5), so it is unclear that wetlands will be avoided. This mitigation is not specific enough to ensure wetlands will not be significantly impacted. Mitigation measures should be provided to avoid direct wetland impacts in the coastal zone, and to avoid or mitigate for any potential unavoidable impacts to wetland habitats that may result from the project’s inland area.

The mitigation measures for wetland impacts including Measure Bio-5 lack components that are needed to ensure they will be effective at reducing impacts to the maximum extent feasible and to below significance as described in the RDEIR. For example, mitigation should include but not be limited to the following:

1. Impacts to wetland habitat shall be minimized to the maximum extent possible by implementing the following Best Management Practices (BMPs):
 - Construction equipment shall avoid coastal zone wetlands and shall only be allowed within 100-feet of wetlands in the inland area when absolutely necessary for construction equipment access;



- All construction activities, within the 100-foot buffer of wetlands, creeks and tributaries, should be conducted during seasons of no, or minimal, channel flows (summer/early fall);
 - Path selection shall minimize impacts to the existing native vegetation and wetlands;
 - A fence shall be placed around any wetlands and ESHA to ensure avoidance;
 - All active wildlife nests existing within the project site shall be protected and avoided by construction equipment; and
 - A biological monitor shall be present during all construction activities within or adjacent to any creeks.
2. Existing wetlands, not to be impacted by the proposed project, shall be protected in perpetuity through a prohibition from any development. The wetland preserve area(s) shall be clearly marked with signs, and a public education program shall be developed for future residences of the project site and visitors.
 3. Enhancement activities shall include: removing all foreign materials from wetland areas; eradicating and controlling invasive exotic plant species; protecting the watersheds of wetlands; and planting ecologically appropriate native plant species in disturbed areas.
 4. Compensation for direct permanent impacts to wetlands shall be replaced at a 2:1 ratio in area, in-kind, or resulting in an increase in wetland functions onsite by at least ten (10) percent. If after enhancing wetlands does not fully mitigate impacts an offsite mitigation site can be created for any remaining required mitigation after enhancement onsite.
 5. After efforts to minimize the impacts to the wetlands are implemented, appropriate areas of the project site shall be restored, and lost habitat mitigated. Preparing Disturbed Wetland Areas for Replanting shall be accomplished by implementing the following mitigation measures:
 - Regrading portions of the drainages to accommodate onsite revegetation and regain natural topography if needed;
 - Replacing and planting selected portions of the site with indigenous riparian plant species grown from source plants in nearby watersheds (e.g., Gaviota to Goleta);
 - Maintaining and irrigating the restored area;
 - Removing invasive exotic plants, such as *Centaurea melitensis* (Tocalote), and replacing them with native species to increase species diversity and habitat function; and
 - Monitoring the site for at least five (5) years after restoration plantings have been completed or longer if the specified performance criteria have not been met.
 6. Prior to FEIR certification, a detailed Wetlands Restoration Plan and monitoring program shall be developed by the project applicant and shall be approved by the County Biologist. The plan shall contain the following items:
 - Responsibilities/qualifications of personnel implementing and supervising the plan shall be included.
 - Site selection. The site for the mitigation shall be determined and identified on maps in coordination with the project applicant, County and resource agencies with jurisdiction over wetland impacts. The site shall be located on the proposed development site in proximity to the impacted wetlands if feasible, in a dedicated open space area or dedicated open space area shall be purchased off-site. Appropriate sites shall have suitable hydrology and soils for establishment of wetland species.
 - Site preparation and planting implementation. The site preparation shall include: protection of existing native species; trash and weed removal; native species salvage and reuse (i.e. duff); soil treatments (i.e. imprinting, decompacting); temporary irrigation



installation; erosion control measures (i.e. rice bales and/or willow wattles); local native seed mix collection and application; container plantings.

- **Schedule.** A schedule shall be developed that includes planting in late fall and early winter (October to January).
- **Maintenance plan/guidelines.** The maintenance plan shall include: weed control, herbivore control, trash removal, irrigation system maintenance, maintenance training, and replacement planting.
- **Monitoring plan.** The monitoring plan shall include: 1) qualitative monitoring (i.e. photographs and general observations), 2) quantitative monitoring (i.e. randomly placed transects), 3) measurable performance criteria as approved by the County and resource agencies with jurisdiction over wetland impacts, 4) monthly reports for the first year and bimonthly thereafter, and 5) annual reports for five years that shall be submitted to the resource agencies on an annual basis. The site shall be monitored and maintained for five years to ensure successful establishment of riparian habitat within the restored and created areas; however, if there is successful coverage prior to five years, the project applicant may request to be released from the monitoring requirements from USACE and CDFG.
- **Long-term preservation.** Long-term preservation of the site through an appropriate recordable legal instrument shall also be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development.
- **Earth-moving equipment.** Earth-moving equipment shall avoid maneuvering in areas outside the identified limits of grading in order to avoid disturbing open space areas that will remain undeveloped. Prior to grading, the open space limits shall be marked by the construction supervisor and the project biologist. These limits shall be identified on the grading plan. No earth-moving equipment shall be allowed within the open space area. Earth-moving equipment shall be stored a minimum of 200 feet from all wetlands. Earth-moving equipment shall be cleaned prior to entry to project site to remove foreign seeds and shall be cleaned prior to movement to different worksites on the project site to prevent spread of noxious weeds into wetlands.
- **If work must be conducted when surface water flows are present,** specific actions should be taken to avoid increasing water turbidity onsite and downstream of the work area. In order to minimize impacts to aquatic habitat and aquatic wildlife due to sedimentation, construction shall be conducted during times of no active channel flows and between April 15 and November 1.
- **Performance standards to ensure success of mitigation i.e., measurable standards** including wetland species diversity, percent cover of land area by native wetland plant species, compensation ratios, and wetland plant survival and growth rates.

Page 9.4.86 of the RDEIR defers the formal delineation of wetlands until after project approval and EIR certification and defers preparation of a plan for wetland mitigation. This violates CEQA in that the true impacts and permit conditions are not known until after completion of the CEQA review process. All such studies need to be completed and reviewed during the CEQA review process so that the public and decision-makers are fully informed about project impacts. The RDEIR also fails to include performance standards to ensure the mitigation will be effective at reducing the impact to less than significant. Without measurable standards to ensure success (i.e. performance criteria) in the RDEIR, the RDEIR and mitigation measures for wetlands cannot be assured to effectively reduce the significant impact to less than significant. Absent



these performance criteria and specific BMPs, the impacts to wetlands must be classified as Class I significant and unavoidable.

Stream Buffers. CLUP Policy 9-37 states that “the minimum buffer strip for major streams in rural areas, as defined by the land use plan, shall be presumptively 100 feet, and for streams in urban areas, 50 feet. These minimum buffers may be adjusted upward or downward on a case-by-case basis. The buffer shall be established based on an investigation of the following factors and after consultation with the CDFG and RWQCB in order to protect the biological productivity and water quality of streams: soil type and stability of stream corridors, how surface water filters into the ground, slope of the land on either side of the stream, location of the 100-year flood plain boundary. Riparian vegetation shall be protected and shall be included in the buffer. Where riparian vegetation has previously been removed, except for channelization, the buffer shall allow for the reestablishment of riparian vegetation to its prior extent to the greatest degree possible.”

Page 10-60 of the RDEIR states that, “with the exception of the Dos Pueblos Creek tributary crossing Lot 57, all of the drainages within the MOU project area are considered minor streams. A minimum buffer of 50 feet from the top of bank of each stream corridor has been incorporated into the project design to protect riparian habitats. In most cases, these designed setbacks provide at least a 100-foot buffer from the streambed to the nearest building or improvement footprint. These stream corridor setbacks would be included in the proposed Open Space Conservation Easement, except in limited cases where development envelopes would result in landscaped areas within the 50-foot buffer (e.g. in the coastal bluff area).”

The setbacks to these creeks south of Highway 101 and Tomate Canada Creek north of Highway 101 do not mitigate biological impacts to less than significant. The RDEIR claims that the Coastal Terrace drainages are considered “minor streams” only requiring a 50-foot setback, but provides no basis for determining 50-foot setbacks will protect the biological resources in these creeks from significant impacts identified in the RDEIR. According to Policy 9-37, the buffers for major streams can be adjusted but only based on consideration of four factors (e.g. slope, vegetation) and consultation with CDFG and RWQCB. While Tomate Creek and the coastal drainages may not be major streams pursuant to the County’s definition of 500-acre watershed size, the riparian buffers are not adequate to reduce impacts to Tomate Creek and the coastal bluff drainages to less than significant (i.e. to Class II).

The RDEIR does not include a discussion of the four factors to justify the adequacy of 50-foot buffers when LCP Policy 9-9 requires a 100-foot setback buffer in rural areas. No discussion exists regarding CDFG’s and RWQCB’s position with regards to reducing these standard creek buffers. Using the HGM model described above would be an appropriate tool to determine the level of expected change to wetland functions along these streams, but was not used for this analysis.

Mitigation Measures and Alternatives

The RDEIR as a rule fails to consider avoidance of impacts identified in the RDEIR, including impacts to Coastal Scrub, Tomate Creek, and the Coastal Terrace, and other biological resources.

All requisite details for mitigating the majority of significant biological impacts are deferred to the eventual completion of the draft Open Space and Habitat Management Program (OSHMP), included as Appendix G to the RDEIR, the preparation of which is required by the Naples Plan District (Page 3.4-77). The proposed OSHMP will include these different plans: Grassland



Habitat Protection and Restoration Plan, Scrub Habitat Protection Plan, Oak Woodland Habitat Protection Plan, Seasonal Water Body Protection and Restoration Plan, Jurisdictional Waters Protection Plan, and a Landscaping Plan. In addition, a future, detailed Grading and Drainage Plan will detail Best Management Practices during onsite construction.

Because many details of required mitigation measures (implementation guidelines and criteria for measuring success) are deferred to the OSHMP, which has not yet been made public as a final or even a complete draft, standards that will ensure the successful mitigation of this project's significant biological impacts are hypothetical at this point. There is currently no way for any entity reviewing this RDEIR to be assured that mitigation measures will be broad enough in scope to be effective or that such mitigation measures, if appropriate in scope, will be successfully implemented since there are currently few performance standards. Deferring details of mitigation measures including performance standards to a later date (i.e. in the OSHMP) renders them less reliable to effectively reduce impacts and ensure resource protection. While all mitigation plans should be contained in the RDEIR to provide the public an opportunity to understand and comment regarding the effectiveness of mitigation plans, inclusion of performance standards in deferred mitigation plans provides a level of assurance that the plans will be implemented successfully and will effectively mitigate significant impacts. Furthermore, when mitigation plans are deferred to a later point in time as this RDEIR does, CEQA requires the EIR to include performance standards to ensure successful mitigation; performance standards cannot be deferred to a later date.

Mitigations Bio-1a, Bio-1b, and Bio-2a do not include performance standards for the various habitat management sub-plans. In fact, pages 3.4-77 and 3.4-79 explicitly state that performance criteria are not contained in the RDEIR but will be included in the deferred plan.

Detailed BMP practices and strategies for "resource protection" belong in the RDEIR, not in the referenced in the Fuel Management Program, neither of which has been written or made public to date.

Conclusions

The RDEIR fails to adequately address and omits several biological resource issues as DMEC described above, including: direct and indirect impacts to grasslands (annual and native perennial); impacts to wetland and riparian habitats; identification and assessment of locally rare plants; inconsistent and poor mapping and assessment of native plant communities on both SBR and DPR; and mitigation measures for impacts to biological resources.

The project as proposed would significantly impact botanical and wildlife resources onsite. Impacts are improperly classified as mitigated to less than significant (Class II) without mitigation or without effective mitigation. The proposed mitigation measures will either fail to mitigate the impacts, or significant residual impacts will remain after mitigation. DMEC recommends that the RDEIR be revised again to address the inadequacies described in these comments.

Thank you for considering these concerns. DMEC is available to answer any questions the County of Santa Barbara has regarding these comments.

Respectfully,



David L. Magney
President

cc: Brian Trautwein, Environmental Defense Center

Attachments: CNPS Collecting Guidelines and Documentation Techniques (1995)
CNPS Botanical Survey Guidelines (2001)