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Alex Tuttle
Planner
Development Review Division
Santa Barbara County Planning & Development
105 E Anapamu Street
Santa Barbara, CA 93101

Subject: Park Hill Estates Proposed Final MND v.2 (10TRM-00000-00001)

Dear. Mr. Tuttle:

David Magney Environmental Consulting (DMEC) was contracted by the San Antonio Creek and Park Highlands Homeowners Associations to review and provide comments on the Proposed Final Mitigated Negative Declaration (MND), focusing on biological resources. This letter provides general and specific comments on the MND and supporting documents. DMEC previously provided detailed comments on the draft MND dated 17 June 2011.

The Park Hill Estates project site is approximately 14.7 acres, located on a gently sloping terrace containing natural vegetation in the Goleta Valley. The site has never been developed, although it is basically surrounded by residential development. The project applicant is proposing to build 16 single-family homes and related facilities on 16 new lots.

Since the assessment of impacts to biological resources in the MND is based for the most part on work conducted by Mark de la Garza of Watershed Environmental, a review of some of Watershed Environmental's work on the Park Hill Estates project is provided prior to comments on the MND itself. VSJ Biological's 1999 report on biological resources of the project site was available for review. The County needs to provide all reports associated with the proposed project that are used to conduct the impact assessment and make conclusions.

Park Hill Vegetation Survey by Watershed Environmental

Watershed Environmental first conducted botanical surveys of the project site in March 1998, with the results of that work summarized in the March 1999 report, but was not available as part of the CEQA documentation, and has not been provided even after several specific requests to County staff. That report was the basis for the assessment and report to the Planning Commission in 2007. Since then, Watershed Environmental conducted a supplemental survey of the vegetation of the project site in August 2010, dated 25 October 2010¹. Watershed Environmental's 2010 report includes: introduction, survey methods, survey results, conclusions, and references sections.

The introduction section states that the report, "describes the existing botanical resources located at 4700 Via Los Santos Road (APN: 59-290-041) where residential development is proposed. Watershed

¹ Watershed Environmental, Inc. 2010. Vegetation Survey: Park Hill Estates, 4700 Via Los Santos Road, Santa Barbara, California. (25 October 2010.) Orcutt, CA. Prepared for Jeff Nelson, The Nelson Law Firm, Santa Barbara, CA.

Environmental performed a botanical inventory/native grassland survey of this property in 1999 and performed a follow up survey in 2005. We also prepared a native grassland mitigation plan for this property in 2006². DMEC finds the 2010 report wholly inadequate in describing the existing botanical resources of the project site. In addition, the report provides no additional information on wildlife use of the site.

Section 2.0, Survey Methods, on page 1, states, “...biologist Mark de la Garza and mapping analyst Melodee Hickman performed field surveys of the project site on August 11, 18, and 24, 2010. ...Field notes were used to record direct observations of vegetation types and botanical and wildlife resources”. Table 3, Vegetation Observed, starting on page 6, includes a list of vascular plants, including each plant’s scientific name, common name, and status as native or introduced. This list has numerous errors, including spelling errors, and lack of use of currently accepted botanical nomenclature. Examples are provided below:

Watershed Environmental’s use

Ambrosia psilostachya
Baccharis pilularis var. *consanguinea*
Bromus madritensis rubens
Calandrinia ciliate
Ice plant (for *Carpobrotus edulis*)
Crassula connata
Dichelostemma capitatum
Eremocarpus setigerus
Eucalyptus globules
Gnaphalium californicum
Gnaphalium canescens ssp. *microcephalum*
Hemizonia fasciculata
Hordeum brachyantherum
Hordeum murinum
Leymus trutuciudes
Polygonium sp.
Pyranantha sp.
Robinia pseudoacacia
Thysanocarpus laciniatus

Correct Use

Ambrosia psilostachya var. *californica*
Baccharis pilularis ssp. *consanguinea*
Bromus madritensis ssp. *rubens*
Calandrinia ciliata
Hottentot Fig
Crassula connata
Dichelostemma capitatum ssp. *capitatum*
Eremocarpus setigerus
Eucalyptus globules var. *globules*
Pseudognaphalium californicum
Pseudognaphalium microcephalum
Dienandra fasciculata
Hordeum brachyantherum ssp. *brachyantherum*²
Hordeum murinum ssp. *glaucum* or *leporinum* or *murinum*
Elymus triticoides ssp. *triticoides*
Polygonium needs to be identified, and spelled correctly.
Pyranantha needs to be identified, and spelled correctly.
Robinia pseudoacacia
Thysanocarpus laciniatus var. *laciniatus*

These numerous errors put into question the accuracy and completeness of the entire list and other aspects of the report.

Page 6, 3.1.2, Vegetation, states that there are “89 species of plants (Table 3)”; however, Table 3 lists only 86 taxa. What was left off the list? It also says that 62 percent of the species are nonnative and 38 percent of them are native, which appears to correspond to there being 89 taxa, but not knowing which taxa are present but not reported makes it impossible to verify the accuracy of any statistical conclusions.

The list also states that *Calandrinia ciliata* is not native when in fact it is a native annual species, a regular component of annual grasslands. Watershed Environmental’s calculations of native versus nonnative

² Two subspecies of *Hordeum brachyantherum* are known to occur in the region, ssp. *brachyantherum* and ssp. *californicum*. Which subspecies is present? Convention on the use of scientific names says that if the subspecies/variety name is the same as that for the species, then it can be left off; however, when other subspecies/varieties occur onsite or nearby, it is wise, and important, to include the full name to eliminate any question about which taxon is indicated.

species are in error, in part because of errors in such as identified for the native *Calandrinia*. If there are only the 86 taxa present onsite, as evidenced by those taxa listed in Table 3, then the percentage of native species increases to 40 percent. The likelihood is that the flora of the project site contains many more species than observed and reported and that percentage of native species is also higher than reported.

Watershed Environmental's claim on Page 1 that it followed California Native Plant Society (CNPS), U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Game (CDFG) survey protocols and guidelines is not evidenced by what is reported. For example, de la Garza states that he conducted field surveys during March 1998, and 11, 18, and 24 August 2010. Survey protocols state that multiple surveys should be performed during seasons when plants are identifiable. In the Santa Barbara region, plants of various species can be found growing nearly any time of the year; however, most of them are only identifiable during one season, or only a portion of a season. De la Garza failed to conduct any surveys in the middle and late spring, early or late summer, in the fall, or in the winter. The protocols intend that the surveys occur in multiple seasons during the same year, and that if severe climate conditions occur in one season or year, that the surveys should be conducted again the following year. Annual species are especially sensitive to rainfall and temperature patterns/conditions, dependent on minimum climatic conditions suitable for completing their life cycle before they will germinate. Watershed Environmental did NOT follow these survey protocols. To claim that their surveys and reports accurately characterize baseline conditions of biological resources onsite is highly inaccurate and misleading. However, the botanical inventory is silent on nonvascular plants, including bryophytes (mosses, liverworts, hornworts) and lichens.

Watershed Environmental's 1999 report is titled "Botanical Inventory/Native Grassland Survey 4700 Via Los Santos Road, Santa Barbara, California". Summaries of that report clearly show that it does not adequately inventory the botanical resources of the site nor adequately describe and map the native grasslands present. That report needs to be made available to the public for review since the County relies so heavily on that document.

Minimum Botanical Survey Requirements

The USFWS, CDFG, and CNPS each have adopted very similar protocols and guidelines for botanists to follow when conducting field surveys and documenting habitat conditions of a project site proposed for development. Copies of these survey guidelines/protocols are attached for reference, and are incorporated herein. Specific pertinent requirements are discussed below:

USFWS Guidelines (published in 2000³), item "3. List **every** [emphasis added] 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 allows rarity to be determined" and 4e., "a comprehensive list of all vascular plants occurring on the project site for each habitat type".

CNPS Botanical Survey Guidelines (published in 1983 and revised in 2001⁴), item 4b, "Floristic in nature. A floristic survey requires that every plant observed be identified to species, subspecies, or variety as applicable. In order to properly characterize the site, a complete list of plants observed on the site shall be included in every botanical survey report. In addition, a sufficient number of visits spaced throughout the growing season is [sic] necessary to prepare an accurate inventory of all plants that exist on the site. The

³ U.S. Fish and Wildlife Service. 2000. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants.

⁴ California Native Plant Society (CNPS). 2001. Botanical Survey Guidelines. Board of Directors, Sacramento, California. See www.cnps.org for complete text of guidelines. First published in 9 December 1983, revised 2 June 2001.

number of visits and the timing between visits must be determined by geographic location, the plant communities present, and the weather patterns of the year(s) in which the surveys are conducted.”

These guidelines developed and published by the federal and state biological resource agencies, and the botanical profession, through CNPS, establish the minimum standards by which botanical resource inventories are to be conducted. These are the standards expected of the botanical consulting profession.

CDFG (2009⁵) protocols for conducting botanical surveys and assessing impacts are similar to those by the USFWS and CNPS and require floristic field surveys performed enough times of the year to be able to fully identify all plant species.

Nonvascular Plants Not Assessed

There is no mention of nonvascular plants, yet there are numerous species of nonvascular plants that are known from similar habitats nearby, such as the Bridle Ridge/San Marcos Foothills project site a short distance to the east. DMEC conducted a botanical survey of the Bridle Ridge project site in 1997 and 1998 (DMEC 1998⁶) as part of an Environmental Impact Report for that project, finding 59 different species, 23 of those species were found on rock outcrops/boulders. Field surveys were conducted in multiple seasons for vascular as well as nonvascular plants. Several species of lichens on the Bridle Ridge site were considered rare and mitigation was proposed to protect them. Many of the rare lichens at the Bridle Ridge site were on boulders within grassland areas. The Park Hill Estates project site contains similar habitat and may also contain rare lichen species. Surveys of the lichen and bryophyte flora must be conducted before the inventory can be considered adequate. Below are photographs of just a few of the lichen species found onsite.



At least five different species of crustose lichens are illustrated above growing on the boulders onsite.

The lichen and bryophyte flora are important parts of the plant biodiversity of the project site, which has not been recognized in any manner in the MND or supporting biological reports.

Proposed Final MND 2011

Page 7, Section 3.2, Environmental Baseline, now states (as compared to the June 2011 draft MND) that the assessment was based on conditions at the time of the Initial Study at 2010; however, it does not apply

⁵ California Department of Fish and Game (CDFG). 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. 24 November 2009. California Natural Resources Agency, Department of Fish and Game, Sacramento, California.

⁶ David Magney Environmental Consulting. 1998. Botanical Resources of the Bridle Ridge Development Project, Santa Barbara County. May 1998. (PN 97-0162.) Ojai, California. Prepared for County of Santa Barbara, Santa Barbara, California. Prepared on behalf of Rincon Consultants, Inc., Ventura, California.

or consider baseline conditions equally. Most of the surveys for biological resources were performed in 1998, with supplemental work done in 2009, and County review in 2011; however, there have been no wildlife surveys since 1998-1999 and never any surveys for non-vascular plants. There have never been any rare plant surveys during the spring or early summer months.

Page 26, Background and Site History, states that the project site has largely been in a natural state except that it had been dryland farmed for at least one year in 1968; including a small orchard in the southwest corner of the property. Afterwards it was used only for grazing horses until 1995. The site has been unused for any human purpose since 1995. The presence of the boulder outcrops over much of the property is clear and compelling evidence that the majority of the property has never been tilled.

Botanical Resources

Page 27, Methods, state that a botanical survey was conducted in March 1998 (Watershed Environmental 1999), a vegetation survey in August 2010 (Watershed Environmental 2010), and that the County performed grassland sampling in April 2011; “Methods were *largely* based on CNPS survey guidelines (CNPS 2001), and CDFG survey guidelines (CDFG 2009). Quantitative sampling was not performed”. A County P&D biologist visited the site in December 2000, May 2003, July 2010, and March and April 2011.

As stated above under DMEC’s review of Watershed Environmental’s botanical survey report, not one biologist surveying the project site followed standard or defensible field survey methods, yet the conclusions made by the County regarding impacts to botanical resources by the proposed project are based primarily on Watershed Environmental’s inadequate reports and site verification visits by the County biologist. Botanical survey “largely” based on standard survey protocols are NOT following survey protocols. DMEC contends that neither Watershed Environmental or the County did not get even close to “largely” following the survey protocols. Specifics of these failures are further explained below.

Vegetation Sampling

Standard scientifically acceptable (statistically valid) sampling design generally requires at least 20 samples (Dytham 2003⁷), in this case transects or plots. Only 10 plots were sampled onsite, apparently in April 2011, to verify Watershed Environmental’s August 2010 vegetation survey. Dytham (2003⁸) states (on page 3) that when sampling two groups, an equal number of samples should be taken from both groups. This applies to Watershed Environmental’s work and the County’s verification since they were attempting to distinguish “non-native grasslands” from native perennial grasslands, i.e. two groups. However, both Watershed Environmental’s and the County violated scientifically and statistically-sound sampling methods by not collecting data from each basic group, by not sampling the areas randomly (a basic tenant in statistical sampling), not having enough samples to truly be statistically representative, and not sampling in other seasons when a significant component of herbaceous grassland species are present.

Sampling should capture the entire range of conditions or variables. Sampling should capture each variable, in this case, a plant species, at least once. The sampling by Watershed Environmental apparently consisted only of a meandering foot survey and recordation of species observed in field notebooks, detecting less than 86 plant taxa (Watershed Environmental’s report states that 89 species were observed; however, only 86 are included in their Table 3). No transects or survey plots were established. There is no description, other

⁷ Dytham, Calvin. 2003. *Choosing and Using Statistics: A Biologist’s Guide*. Second Edition. Blackwell Science, Malden, Massachusetts.

⁸ Ibid.

than referring to USFWS, CNPS, and CDFG guidelines, as to how plant communities were identified or how the boundaries were determined.

The County sampled 10 plotless plots, and one belt transect on 6 and 14 April 2011. Sampling design should include enough transects to sample each taxon present at least once to ensure statistical validity. CNPS Vegetation Ecologist, Jennifer J. Buck-Diaz states, “I was disheartened to see the quote ‘In addition, it is important to note that Rapid Assessment [RA] sampling is by its very nature a plotless technique (i.e., there is no set size for plots), and it is frequently used in grassland classification (see Sawyer, Keeler-Wolf and Evens, 2009)’. CNPS does not [emphasis added] recommend the use of Rapid Assessments for grassland classification.”⁹

CNPS Vegetation Program Director, Julie Evens states, “Please note: that the CNPS Vegetation Program typically recommends using a plot-based or belt-transect based approach for sampling of grassland communities. Because they are typically diverse and patchy assemblages of herbaceous plants, a bounded plot technique provides a more accurate reflection of the plant richness/cover present (as compared to the rapid assessment method). It appeared that the firm on this project did do some plot-based surveys, which is good. Even so, CNPS has conducted rapid assessments of grasslands once we have determined that enough replicate plot samples have been taken to define the grassland types, since this RA technique allows for broad representation of areas when time is minimal on mapping projects.”¹⁰

Sampling plots/transects should be established randomly (Dytham 2003¹¹). Or if they need to be stratified, randomness must be implemented at some point to avoid or minimize bias by the sampler. Below is language from a Texas A & M University Galveston description of vegetation sampling methods.

“The most common quantitative sampling methods are the quadrat method and the transect method. The quadrat method allows the user to define a fixed area, called a plot, within which plant characters can be measured. Usually, a rectangular quadrat frame, such as the one shown in Figure 1 (not included here), is used to define the sampling area, although a quadrat can also be a permanently established area within a site. Although the exact experimental design will determine where and how many samples are taken, the procedure always involves measuring plant characters of only those plants inside the quadrat. Quadrat sampling usually attempts to define plant community characteristics for an area much larger than the actual area sampled. For this reason, care must be taken to obtain samples that represent the entire habitat and that eliminate the human factor. Usually this means employing an experimental design that ensures random placement of the frame or permanent quadrat.”¹²

“Data collected in the field are usually subjected to some type of statistical analysis. Statistical methods range from simple to complex, with the exact method chosen depending on the objective of the study and the original experimental design.”¹³

Apparently, no one bothered to use any statistical tests to determine the validity of their sampling methods or hypotheses, as is standard in such studies, or at least it should be standard practice. DMEC presumes

⁹ Buck-Diaz, Jennifer J., California Native Plant Society Vegetation Ecologist, email to David Magney re: Proposed Final MND, dated 25 October 2011.

¹⁰ Evens, Julie, California Native Plant Society Vegetation Program Director, email to David Magney re: Proposed Final MND, dated 25 October 2011

¹¹ Ibid.

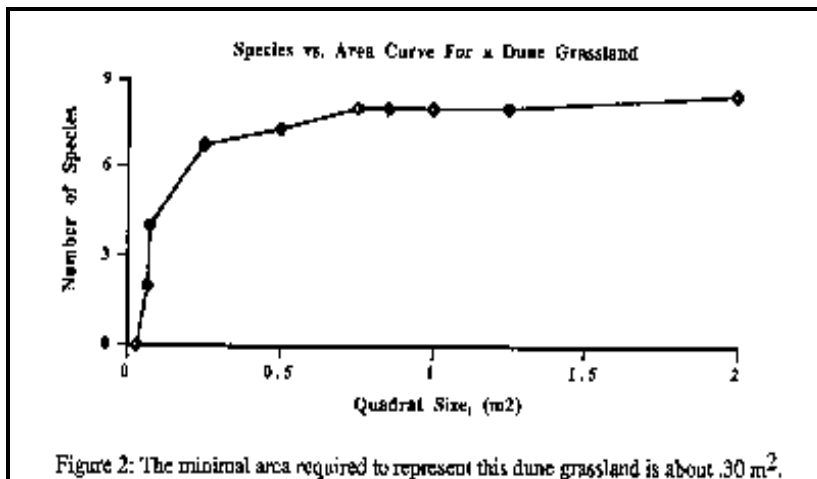
¹² Texas A&M University at Galveston webpage titled, “Scientific Methods for Studying Vegetation”, <http://www.tamug.edu/seacamp/virtual/methods.htm>

¹³ Ibid.

that Watershed Environmental and the County hypothesized that native and nonnative grasslands could be distinguished/mapped onsite. They further biased their sampling by not using any randomness in establishing plots or how they actually sampled, all of which are basic sampling protocols, that is, random sampling is vital to removing bias by the data gatherer (Dytham 2003¹⁴).

Both Watershed Environmental and the County failed to use sample design protocols when determining the size of the relevé plots. First, Watershed Environmental should have assessed the plant community by walking/surveying it and making a list of all plants found during appropriate seasons. The County should have done the same, and only when they reached the plateau of the species-area curve, then they could determine the bounds (size) of the relevé plot(s).

The species-area curve is a chart/graph that indicates the number of species found per unit area. A normal species-area curve will be very steep in the beginning, leveling off at a point when the survey area is so large that the area includes a majority of species occurring in that area, in this case, an area of grassland vegetation. Below is an example of a species-area curve taken from a Society for Ecological Restoration Management Notes website (Fibelibus and MacAller 1993¹⁵).



This curve can be used as a guide to determine the minimum size of the sampling plot to ensure that the sampling minimizes sampling bias, to make sure that the vast majority of species that make up the plant community actually get sampled. Had Watershed Environmental and/or the County followed sampling design and methods as described by the Bureau of Land Management (1999¹⁶), the results would almost certainly have been accepted and show different results than has been presented.

On the issue regarding the seasonality of the sampling, as can be seen in the photographs below taken on June 17th, the “non-native” grasslands of Santa Barbara Ranch south of the railroad tracks west of Isla Vista are clearly dominated by *Deinandra fasciculata*, with well over 10 percent cover over a large portion of the site. All the yellow visible in these photographs is *Deinandra fasciculata*, a common native grassland

¹⁴ Dytham, Calvin. 2003. *Choosing and Using Statistics: A Biologist's Guide*. Second Edition. Blackwell Science, Malden, Massachusetts.

¹⁵ Fibelibus, M.W., and R.T.F. MacAller. 1993. *Methods for Plant Sampling*. Prepared for California Department of Transportation, District 11, San Diego, California. San Diego State University, Biology Department, San Diego, California. Published in *Restoration in the Colorado Desert: Management Notes*. Available at <http://www.sci.sdsu.edu/SERG/techniques/mfps.html>.

¹⁶ Bureau of Land Management. 1999. *Sampling Vegetation Attributes*. (Interagency Technical Reference 1734-4.) Denver, Colorado. Available at <http://www.blm.gov/nstc/library/techref.htm>

species. Watershed Environmental and the County both list this species as present on the Park Hill Estates site, but the dominance of the site by this grassland species changes dramatically as many sites within its range between spring and summer.



Bartolome et al. (2007¹⁷) compared grassland-sampling methods and determined that foliar cover sampling “results vary with season and weather, which can be misleading”. This finding supports DMEC’s contention that Watershed Environmental’s and the County’s sampling were flawed for the purposes of determining native grassland species dominance. DMEC does note that the County otherwise made an attempt to follow CNPS vegetation assessment protocols; however, they were not statistically valid or performed in the summer months as well as the spring, and they inappropriately used relevé plots to characterize the vegetation.

Vegetation Mapping

While DMEC contends that the vegetation sampling did not follow statistically valid methods, the mapping by the County was more accurate for grassland vegetation than mapped by Watershed Environmental; however, without the actual relevé plot areas were not mapped, were not supported by defined plots. There appears to be a heavy bias by the mapper in minimizing the area mapped as native perennial grassland and scrub habitats. The boundaries of the plant communities were absurdly tight (nearly every bush was individually delineated) and but not applied equally for all vegetation types. The boundaries of plant communities are rarely finite; there is often a zone of transition from one type to another. The size of the mapping units should be the same throughout. That is, a minimum polygon size should be determined based on the objectives and size of the project site, and applied uniformly across the site. In this case, the spaces between shrubs containing herbaceous vegetation were classified as annual grassland instead of coastal scrub when grassland types were more generally delineated.

A cursory survey of the site by DMEC on 27 October 2011 found the boundaries between annual and perennial grasslands to be nebulous (not obvious) and the areas between shrubs in the scrub vegetation to be dominated by perennial grasses. Any line drawn dividing perennial grassland and annual grassland on the Park Hill Estates project site is arbitrary at best without extensive plot/transect sampling.

¹⁷ Bartolome, J.W., G.F. Hayes, and L.D. Ford. 2007. Monitoring California Grasslands for Native Perennial Grasses Workshop Handbook. 10 July 2007. ESNEER Coastal Training Program, Berkeley, California.

The grassland onsite are primarily perennial in nature, with patches, some large, with few or no perennial grass species; however, the parts without perennial native grasses represent fingers or patches of annual grassland vegetation that make up a mosaic of herbaceous vegetation that provides habitat for many species of wildlife. Most of the wildlife species using this site use both vegetation subtypes (annual versus perennial).



Photographs of grassland areas of Park Hill Estates site with unusually high densities of *Nassella* [*Stipa*] *pulchra* (Purple Needlegrass), representing Native Perennial Grassland.

The criteria used by Watershed Environmental and the County to delineate the different habitat types are not clearly stated. Examining the edges of the mapped polygons, it is clear that both took extreme care to minimize the areas mapped as scrub and native perennial grassland. However, the approach taken is not justified since no mapping criteria (methods) were stated or supported by sampling plots (at least they are not shown on any maps). There is no stated minimum polygon size; however, it is clear that the areas of only the shrubs are mapped as scrub even when the distance between shrubs and mapped as annual grassland is less than the width of the shrubs mapped as scrub. For grasslands, the areas with only the highest densities of Purple Needlegrass appeared to mapped as Native Perennial Grassland without consideration of other native grassland species presence.

Page 6, last paragraph of the November 2011 staff report states, “The remaining areas of the site are composed largely of non-native annual grasslands and coastal sage scrub, although individual specimens of purple needlegrass and other native species are scattered throughout these areas.” By most definitions of grasslands, if there are any individuals of a native perennial grass species, or other native grassland species, present then the habitat should be considered perennial native grassland, especially when adjacent areas contain denser cover by the perennial species. Functionally, both areas are quite similar and serve the same needs for wildlife. Without detailed analyses of the two areas with scientifically valid sampling, any separation is entirely arbitrary and unfounded.

Since grasslands throughout California have been reduced by 99 percent already, any remaining grassland habitats are vitally important as habitat for wildlife, and those grassland areas currently dominated by non-native species represent important opportunities for restoration to more native conditions. All the grassland areas at the Park Hill Estates site are functionally equivalent and warrant protection, and impacts to them should be considered a significant impact. The fact that a native perennial bunchgrass, Purple Needlegrass,

is basically found throughout the property at varying densities is strong evidence that all, or at least most of the site should be classified as native perennial grassland.

County General Plan Policy Bio-GV-1 requires the County to provide protection to important or sensitive environmental resources and habitats, yet the November 2011 staff report states that there are no such habitats onsite. County General Plan Policy Bio-GV-14 states that, “to the maximum extent possible, areas of native grasslands shall be preserved”. The fact that both the County and the California Department of Fish and Game, and the California Native Plant Society, consider native perennial grasslands such as Purple Needlegrass Grassland as an important and sensitive habitat should be more than adequate justification to consider this habitat onsite as an important and sensitive environmental resource. Doing otherwise is contrary to General Plan policy. Simple because the property contains a significant amount of a sensitive habitat does not excuse the County from abiding by its General Plan policies. The reasons given by the County as to why protection onsite is infeasible is poorly explained, or explained without evidence in fact that at least a portion of the native grassland cannot be preserved onsite. The fact that a 14+-acre site surrounded by development currently contains high value native grassland habitat clearly demonstrates that relatively small areas of this habitat can be maintained. They should be protected onsite.

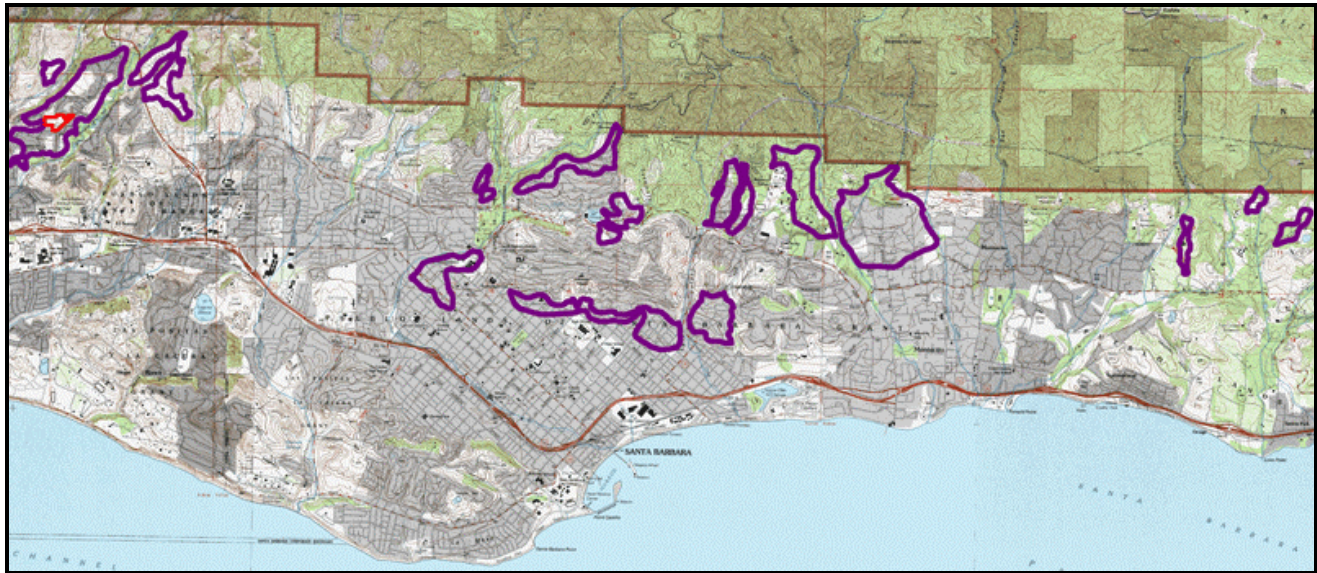
General Plan Policy DevStd BIO-GV-22.2 requires any offsite mitigation site be given “a permanent protective easement”. The University of California is not likely to encumber state property with a protective easement, making the suggested mitigation site unsuitable for mitigation for the Park Hill Estates development.

Question of In-kind Grassland Mitigation

The grasslands and scrub onsite grow in Milpitas stony fine sandy loam soil, 9-15 percent slope (MND page 6, 2nd paragraph). There are only 2,047 acres of Milpitas stony fine sandy loam, 9-15 percent slopes, soil (MDD mapping symbol) in Santa Barbara County as mapped by the Natural Resources Conservation Service, with only 136 acres of it on 2-9 percent slopes, and 1,934 acres on steeper slopes, the latter both typically supporting scrub vegetation, not grasslands. The Milpitas soil series is relatively shallow and course-grained, and is classified as a thermic Mollic Paloxeralfs. The vast majority of Milpitas stony fine sandy loam soil, 9-15 percent slope, soils along the Santa Barbara south coast have been developed, most of it occurring in the Santa Barbara and Montecito area, as shown on the map below.

The soils near Coal Oil Point on UCSB property where the proposed offsite mitigation would be contains Concepcion and Diablo soils, not Milpitas. The Milpitas soils are derived from bedrock while the Concepcion soils are derived from alluvium and have a claypan, and are classified as thermic Xeric Argiobolls. Diablo soils are derived from residuum weathered from mudstone and/or soft shale, and are classified as thermic Chromic Pelloxererts. Neither are the same as, or similar to, Milpitas soils. Soil conditions of a mitigation site are one of the most basic considerations that must be accounted for to achieve mitigation success.

Attempting to restore Milpitas stony fine sandy loam soils grasslands on other soil types is a recipe for failure. While it is possible, even likely, to be able to grow Purple Needlegrass on the Diablo clay soils, the diversity and species composition, plants and wildlife, will not be duplicated/replicated there. Clearly there was no attempt by those developing this mitigation measure to truly understand conditions of either site or the feasibility of the mitigation measure. It is only a plan on paper lacking substantiation on many levels.



Map of majority of areas containing Milpitas stony fine sandy loam, 9-15% slope soils (MdD – purple areas). Red area is Park Hill Estates property. Most of this soil mapping unit has already been developed. The gray areas on the topo map background indicated developed lands. Some of the non-gray areas have since been developed as well.

Furthermore, there is not enough available habitat at UCSB's West Campus Bluffs property to accommodate all the grassland mitigation that is needed, even if it were appropriate and contained similar soils. The West Campus Bluffs preserve area is similar in size to that of the project site; however, significant portions of the bluffs site contain vernal pool wetlands. The site is bounded by development on three sides and is no more defensible from encroachments than areas of the Park Hill Estates site that could be preserved. The fact that UCSB has gotten Purple Needlegrass plants transplanted from the project site to the West Campus Bluffs property to survive does not mean that the perennial grassland habitat found onsite can be successfully recreated there.

These factors bring into question whether the offsite location can reasonably or feasibly recreate the same type of grassland habitat to be destroyed at the Park Hill Estates project site. Clearly the soils are very different, and the proximity to the ocean of the West Campus Bluffs site, immediately adjacent to the ocean, is a different microclimate, with substantially more foggy days than the Park Hill Estates site.

Wetland Habitat

The County biologist found a small population of *Juncus occidentalis* (formerly known as *J. tenuis* var. *occidentalis*) in a shallow swale onsite; however, she did not feel that it was extensive enough to map or consider a wetland habitat. *Juncus occidentalis* is listed by the U.S. Fish and Wildlife Service as a Facultative Wetland (FACW) hydrophyte, as indicated in the MND. Since plants typically found in wetland habitats are growing there for a reason, it is curious, and should have sent up red flags, that maybe a shallow groundwater table occurs within the swale they were growing in.

Looking for additional evidence that this might be the case, DMEC reviewed the list of vascular plants reported from the project site to see if there were other hydrophytes present. The results of this examination found a total of 16 species that are found in wetlands at least 50 percent of the time. This is very strong evidence that wetland conditions do indeed occur onsite. Those plants are: *Crassula connata* (FAC), *Eleocharis macrostachys* (OBL), *Hordeum brachyantherum* (FACW), *Leymus triticoides* (FAC+),

Lolium multiflorum (FAC), *Plantago major* (FACW-), *Poa annua* (FACW-), *Plantago lanceolata* (FAC-), *Picris echioides* (FAC*), *Phalaris aquatica* (FAC+), and *Sonchus asper* (FAC-).

Having performed many wetland delineations throughout California, my experience leads me to believe that wetland habitat may indeed be present onsite.

Wildlife

VJS Biological conducted a survey of wildlife in 1998 and reported observations of several bird and mammal species, and one reptile; however, there is no evidence that he conducted any surveys for any invertebrate species. It does not appear that any supplemental surveys for wildlife species were ever conducted onsite, even though VJS Biological's surveys are now over 13 years old. A copy of the wildlife survey report should have been included as an appendix to the MND.

Since wildlife are mobile, and many more species of wildlife are now considered rare, it is of great concern that the County did not consider this component of the biological resources in the current MND.

For example, several species of terrestrial land snails are known to occur in Santa Barbara County (Roth and Sadeghain 2003¹⁸) and that several of them are rare (CNDDDB 2009¹⁹ and Magney 2009a²⁰). DMEC has compiled a GIS database of all terrestrial snails and slugs of California based primarily on Roth and Sadeghain's work and has been identifying those species that are rare based on their distribution and known occurrences, such as for Ventura County (Magney 2009a) and Los Angeles County (Magney 2009b²¹). Based on this work, several species of terrestrial snails known to occur in Santa Barbara County need to be considered for potential for impacts on them. Some of these taxa are considered sensitive by the California Department of Fish and Game's Natural Diversity Database (CNDDDB 2009) and several additional species are currently under consideration for addition to that list based on my research.

Below is a list of the native terrestrial snails and slugs known to occur in Santa Barbara County mainland:

- *Ariolimax columbianus strimineus* (7 counties and 2 islands)
- *Haplotrema caelatum* (4 counties, not on islands)
- *Helminthoglypta cuyama* (1 county, not on islands) – Santa Barbara County endemic
- *Helminthoglypta fieldi* (2 counties, not on islands)
- *Helminthoglypta phlyctaena* (1 county, not on islands) – Santa Barbara County endemic
- *Helminthoglypta umbilicata* (3 counties, not on islands)
- *Hesperarion hemphilli* (8 counties, not on islands)
- *Nearctula rowellii rowellii* (7 counties and 3 islands)
- *Paralaoma servilis* (31 counties and 2 islands)
- *Striatura pugetensis* (32 counties and 2 islands)
- *Zonitoides arboreus* (33 counties)
- And 8 nonnative species. (Roth & Sadeghain 2003.) One species observed onsite by DMEC.

¹⁸ Roth, Barry, and Patricia S. Sadeghain. 2003. Checklist of the Land Snails and Slugs of California. (Santa Barbara Museum of Natural History Contributions in Science No. 3.) Santa Barbara, California.

¹⁹ California Natural Diversity Database (CNDDDB). 2009. Special Animals. March. California Department of Fish and Game, Biogeographic Data Branch, Sacramento, California.

²⁰ Magney, D.L. 2009a. Ventura County Wildlife – Terrestrial Snails and Slugs. 1 June 2009. David Magney Environmental Consulting, Ojai, California. Published through the Sespe Institute (www.sespeinstitute.com)

²¹ Magney, D.L. 2009b. Terrestrial Snails of Los Angeles County. 20 August 2009. David Magney Environmental Consulting, Ojai, California. Published through the Sespe Institute (www.sespeinstitute.com)

Those rare species tracked by the CNDDDB known to occur in Santa Barbara County include:

- *Haplotrema caelatum* – Slotted Lancethooth (G1NI rarity ranking)
- *Helminthoglypta phlyctaena* – Zaca Shoulderband (G1G2N1N2)

There are undoubtedly additional species; however, the list specific for Santa Barbara County has not yet been developed other than what Roth & Sadeghain (2003) compiled. Seasonal surveys for native terrestrial gastropods (includes snails and slugs) need to be performed to determine if one or more rare species are present onsite, and if they would be significantly impacted by the proposed project. CDFG recently (2009) required Newhall Land & Farming Company to conduct such surveys on the Newhall Ranch for similar concerns, and indeed found four species, two of which Barry Roth, PhD., believes may be undescribed species.

This specific issue was raised in DMEC’s comment letter on the June 2011 draft MND and totally ignored the proposed final MND. There is fairly high potential for one or more native terrestrial mollusks occurring onsite, and rare species are known to occur in the region. Surveys and an impact assessment must be part of the CEQA review process to be considered adequate.

Bird Nests

Calif. Fish & Game Code Section 3503 – prohibits the unnecessary disturbance of any bird nest. Section 3503.5 goes on to prohibit that take of any raptor nest. There is no indication anywhere that a bird nest survey was ever conducted at the project site.

Page 34, e). Specimen Trees, states that the “...removal of one Elderberry tree located on Lot 19, however, this impact would be less than significant given that the tree does not provide significant habitat value for nesting, breeding, or roosting for rare, threatened, endangered, or sensitive species, nor does it provide a significant food source for area wildlife”. This conclusion is not substantiated by the evidence and mischaracterizes the facts. No surveys for bird nests were ever conducted except for White-tailed Kite, and that occurred over 12 years ago. There is no evidence that any surveys for active or inactive bird nests of any kind were performed recently. It is well known that suitable nesting sites are not used every year, and that birds will move into unoccupied nesting areas when other sites are already occupied by others, or nesting sites nearby have been destroyed. The probability that there is at least one active bird nest on the 14-acre site is near 100 percent positive. The entire project site needs to be surveyed for active bird nests during the nesting season, generally between March 1st and July 31st.

Burrowing Owl is known to forage and nest in similar habitats as present at the Park Hill Estates project site, such as the Bridle Ridge/San Marcos Foothill property immediately east of State Route 154. It is quite possible that Burrowing Owl, while not observed onsite by Semenson in the late 1990s, could have colonized the project site since then.

DMEC observed raptors using the property during its cursory survey of the property in late October 2011, including American Kestrel and Barn Owl. An owl species, likely Great-horned Owl, uses the boulder rock outcrops as foraging posts and eating stations as evidenced by droppings and owl pellets, as shown on the photographs below.



*Left: white wash bird droppings on a boulder rock outcrop onsite, typical for raptors.
Right: large owl pellet found below old sign post onsite, mostly likely from a Great-horned Owl.*

Staff Report to Planning Commission 2007

The original project, approved in 2007, for the same project site consisted of 12 single-family residences and associated facilities on the 14+-acre site. A 2.2-acre open space lot would contain associated facilities (detention basin) and onsite mitigation for impacts to biological resources.

The assessment of biological resources was based on Watershed Environmental’s 1999 and VJS Biological’s 1999 reports on botanical and wildlife resources, respectively, as well as opinions of the County biologist.

Since the project avoided some of the impacts to native grassland habitat and the mitigation was proposed to occur onsite, the project was considered to be consistent with the Goleta Community Plan.

Unavoidable cumulative impacts resulting from the project were considered “covered” by a finding of overriding considerations in adopting the Goleta Community (Comprehensive) Plan EIR, as unmitigatable, and no further analysis was required for the Park Hill Estates project (version 1) (see pages 14 and 21 of the 2007 staff report to the Planning Commission).

Inadequacy of Proposed Mitigation Measures

Three proposed mitigation measures focusing on biological resources have serious flaws that make them inadequate or insufficient to reduce stated impacts to less than significant, and need to be amended.

Mitigation Measure Bio-1 (Tree Protection Plan) is intended to protect mature Coast Live Oak trees during construction activities, to just 6 feet beyond the tree driplines. International Society of Arboriculture (ISA) strongly recommends that no disturbance occur 15 feet beyond a tree’s dripline or at least 15 feet from the trunk if the canopy is less than 15 feet in any location. The mitigation measure needs to require that construction activities within 100 feet of any tree to be protected be monitored by a Certified Arborist. The Arborist should be empowered to stop all work that may damage a protected tree. The County should also require that a Certified Arborist inspect all the protected trees after all construction has been completed and submit an assessment report for each tree to the County prior to issuing an occupancy permit. The

current proposal states that a qualified biologist may conduct the monitoring. A biologist who is not a certified arborist lacks the specific training and credentials to make appropriate assessments to protect or assess a tree's health. It is inappropriate for the County to allow anyone other than a certified arborist to conduct the monitoring and assessments.

Mitigation Measure Bio-Sp2 (Native Grassland Compensatory Mitigation Plan) requires a minimum of 6.14 acres of native perennial grassland habitat be restored to compensate for the destruction and loss of 3.07 acres of Purple Needlegrass Grassland. This is in conflict with the Goleta Valley Plan Policy BIO-GV-14, which requires that native grasslands be preserved to the maximum extent possible. Clearly, the proposed project makes no attempt to preserve *any* of the native grasslands onsite, even though a previous project approved by the County did exactly that, and the developer believed that the project was still economically viable.

Regardless, the location and condition of the restoration site is not specifically identified and there is no provision to determine what sensitive biological resources are present at that site. The mitigation site will be nearly half the size of the entire project site, and has great potential to contain one or more sensitive biological resources. This is a violation of CEQA in that all components of a discretionary project must be evaluated as one project. The mitigation site(s) must be identified in the CEQA document and activities at them must be evaluated as part of the proposed project. Furthermore, the proposed mitigation measure does not include remedies for total or partial failure of the mitigation.

As stated earlier, the proposed grasslands mitigation site at UCSB's West Campus Bluffs property between Coal Oil Point and Isla Vista is nearly the same size as the Park Hill Estates site and is bounded by dense urban development to the northwest, north, and east, with the Pacific Ocean directly to the south. The soils on the mitigation site are quite different than occurs at the project site. Soil texture, slope, and condition are critical factors in any habitat mitigation plan; however, this fact has been entirely ignored by the County and Watershed Environmental. Preserving blocks of the grasslands onsite has a much higher chance of success than attempting to restore degraded habitat elsewhere on different soils.

Mitigation Measure Bio-21 (Use Natives) requires native plant material to be used in the rear of Lots 11 and 12, presumably to protect adjacent native habitat to be retained. While this is laudable, it will hardly be effective in protecting natural habitats. DMEC recommends that all landscaping within the project site must be of native plants indigenous to the Santa Barbara region and that the landscapes be designed to minimize the amount of irrigation necessary to maintain the landscaping. The mitigation measure, or an additional measure, needs to also prohibit the planting of any invasive exotic species as listed by CalIPC or the California Native Plant Society.

The MND lacks any mitigation measures to protect raptor nests that occur onsite. The MND lacks any mitigation measures to protect active bird nests other than raptor nests. Migratory birds are protected by international treaty, and that protection extends to their nests and habitat. California Fish & Game Code Section 3503 protects the nests of all birds. While proposed Mitigation Measure Bio-Sp3, Raptor, Special Status Species, and Bird Nest Protection, requires surveys to be conducted for any and all bird nests prior to construction and construction needs to be prohibited from within a safe distance from any active bird nest, typically 500 feet for raptors and 300 feet for other species, it does nothing to mitigate for the loss of bird nests onsite.

Mitigation Measure Bio-Sp2 proposes that all the impacts to native grassland onsite would occur in Isla Vista on UCSB property that is planned for restoration by the University. Pages 15-16 of the November 2011 staff report states, "Off-site mitigation is considered to be a viable option in this case for the following

reasons: (1) there is a minimum of 500-600 ft. of existing development surrounding the project site separating it from the adjacent natural habitats of San Antonio Creek and Maria Ygnacio Creek; (2) on-site avoidance and/or restoration options would result in isolated, low-functioning grassland areas; and (3) feasible off-site restoration has been proposed.”. There are several problems with this approach.

First, the landforms of the two sites are quite different. The soils are different. The microclimates are different. It is unreasonable to expect that the exact, or even near conditions of the grassland habitats at the project site can or will be recreated on the coastal terrace site at UCSB, primarily because site conditions are so different. No one has yet fully duplicated natural habitat through restoration. Natural habitats such as native grasslands take hundreds if not thousands of years to develop, and grow in well-developed soils. The geomorphic landscape on which the project site occurs is significantly different than the geomorphic landscape of the proposed UCSB mitigation site, which is much younger geologically than the project site.

Page 34, paragraph 4 of the MND states, “(2) on-site avoidance and/or restoration options would result in isolated, low-functioning grassland areas”. This claim is false and unsubstantiated. The fact that a 14+-acre site surrounded by urban developed currently contains high-functioning grassland habitats is hard evidence of the fact that small areas of natural habitat can and do exist, and provide important and valuable habitat functions. Really, the only results likely at the mitigation site, based on the prescriptions provided in the habitat restoration plan by Watershed Environmental would be a crop of Purple Needlegrass at the mitigation site, which is also immediately adjacent to urban development. This would in no way mitigate the impacts to an important grassland habitat.

CEQA requires that all aspects of a project undergo an assessment of effects, including that of proposed mitigation sites. No such assessment of the proposed mitigation site has been performed, nor has any documentation of the mitigation site been provided as part of the record. There is no evidence provided that the County has even visited the proposed mitigation site.

Page 35, paragraph d) Non-native Vegetation of Habitat Value, grossly mischaracterizes habitat conditions and ecological processes onsite. First, the area of grassland habitat dominated by non-native species is exaggerated. Second, the County claims that non-native herbs and grasses will continue to colonize the site grasslands from adjacent sources. As explained earlier, characterization methods used by Watershed Environmental and the County were seriously flawed, biased, and not substantiated by statistically valid sampling, or by proper seasonal field surveys. There is little if any “sources” of invasive exotic grassland species on adjacent developed lands, so to claim that any remaining grasslands preserved onsite would be threatened by continual invasion/recolonization from adjacent lands is unsubstantiated and false. The only intent of such claims is to bias decisionmakers away from preserving valuable habitat onsite.

Preservation of grassland habitats onsite is indeed a viable option to avoid and minimize project-related impacts to valuable grassland habitats, and actually much more viable than attempting to recreate them offsite on an entirely different geomorphic landscape. Controls on what species are used in landscaping is a common and routine method of minimizing future problems of colonization of protected areas from new development sites. This is in-fact exactly what Mitigation Measure Bio-21, Use Natives, requires (page 40 of the MND).

Page 36, paragraph e) Specimen Trees, claims that the native and non-native trees onsite are not considered healthy specimen trees; however, there is no evidence provide by a certified arborist or the criteria followed to make such a determination. Such a description of the trees onsite represents an unqualified opinion without any reasoned basis. Every tree has value and function. How much value and what functions it/they provide depends on a wide number of variables, none of which where considered by the County or the

developer's environmental consultant. The trees should be assessed and appraised by a qualified arborist, such as those certified by the International Society of Arboriculture (ISA).

In conclusion, DMEC believes that the County cannot reasonably perform an impact assessment of the proposed project since the biological surveys of the project site are both seriously dated (i.e. out of date), inadequate in not surveying for entire groups of plants (nonvascular plants) and wildlife (invertebrates). Since true baseline conditions are not truly known, it is impossible for anyone to make reasonable conclusions regarding significance of impacts on the biological resources present on the 14+-acre project site. Furthermore, measures recommended to reduce what significant impacts that were identified are either inadequate or infeasible. There was no attempt to avoid any of the project-related impacts to biological resources.

Please contact me if you have any questions about this letter.

Sincerely,



David L. Magney
President/ISA Certified Arborist

cc: Danny Vickers, San Antonio Creek HOA
David M. Brown, Conservation Committee Chairman, Channel Islands Chapter, California Native Plant Society