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3 January 2011

Ms. Carolina Blengini
Department of Regional Planning
County of Los Angeles
Hall of Records
320 West Temple Street, Room 1362
Los Angeles, CA 90012

Subject: Comments on Newhall Ranch Mission Village Development DEIR (State Clearing House No. 2005051143)

Dear Ms. Blengini:

David Magney Environmental Consulting (DMEC) is providing these comments on behalf of the Friends of the Santa Clara River, a California nonprofit corporation, and the California Native Plant Society, which is a member organization of the Friends.

DMEC herein provides comments on the Draft Environmental Impact Report (DEIR) for Newhall Land and Farming Company's Mission Village Development. DMEC is focusing its review on the biological and wetland resources of the project site and how the proposed project will impact those resources.

Issues raised in this letter are listed in the Table of Contents:

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A very important part of CEQA, which is often ignored or overlooked is that of legislative intent.

CEQA § 21001. Additional Legislative Intent, states:

"The Legislature further finds and declares that it is the policy of the state to:

(a) "Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.

(b) "Take all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.

(c) "Prevent the elimination of fish or wildlife species due to man's activities, insure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of the major periods of California history."

The intent of CEQA must be considered concerning a project's impacts on the environment. The health, vitality, and viability of the ecosystem is the foundation of the well-being of the human environment, which is why the legislature, when it enacted CEQA, made a point to delineate those aspects of CEQA that where not delineated expressly elsewhere in the Act.

BIOLOGICAL RESOURCES

The assessment of biological resources is addressed in Section 4.3 of the DEIR. Issues reviewed below include the feasibility and reasonableness of wildlife guilds, assessment, or lack of assessment, of terrestrial mollusks and locally rare plants, unfounded bases for take and preservation of the San Fernando Valley Spineflower (*Chorizanthe parryi* var. *fernandina*), and endangered species, and inadequate mitigation for the SFVS and Slender Mariposa Lily (*Calochortus clavatus* var. *gracilis*). Also addressed is the inadequate assessment of special-status vascular plants, locally rare species, wildlife, wetlands, and assessment of impacts on common wildlife species.

Unlike most project EIRs, the Newhall Ranch project, including the Mission Village project DEIR, relies heavily on previous EIRs, even those that had not been certified at the time of their publication. This comment letter regularly refers to previous related Newhall Ranch project EIRs and supporting documents, and includes those as part of the record in support of these comments on the Mission Village DEIR.

Wildlife Guilds as Assessment Method

Page 4.3-413 of the DEIR talks about common wildlife "guilds", which are category buckets designed to address impacts without looking at impacts directly on unprotected species. Whether these buckets meaningfully capture impacts on the species of wildlife with no special protective status is discussed below. The methodology of the assessment through the use of guilds is not addressed in the methods section. The first mention of this assessment approach occurs on page 4.3-313 in discussing the cumulative impacts.

The DEIR groups common wildlife species in the guilds (as defined in footnote 529 at the bottom of page 4.3-413 "Species guilds are groups of species that use or exploit similar resources or have similar life history characteristics even though they may represent different taxonomic groups." to simplify the impact assessment analysis, primarily,

> "This cumulative biology impacts analysis is organized into four separate discussions. The first addresses cumulative impacts to vegetation communities and land covers. The second addresses cumulative impacts to general wildlife (by species guild).[529] The third addresses impacts to wildlife habitat linkages, wildlife corridors, and wildlife crossings (again, by species guilds). The fourth addresses impacts to special-status species, as such species are defined in subsection 4.3.7(d) of this EIR."

Page 4.3-443 of the DEIR, (2) Impacts to Common Wildlife Organized by Species Guilds and Other Associations, states:

> "The cumulative impact analysis for common wildlife also uses the "project list" approach for the watershed, as applied to the wildlife guilds[554] shown in Table 4.3-24. For each wildlife guild or other association, the habitat relationships were analyzed in the same manner as the vegetation communities and land covers described above in subsection 4.3.11.c.1."

The above reference is based on page 4.5-13 of the SCP DEIR:

> "Because common wildlife species have no formal conservation status, they have been grouped into "guilds," which correspond to their common wildlife classification and, in some cases, to the habitat they use and their relative mobility. Thus, for example, in addition to the *Insect* guild, the *Fish* guild, and the *Aquatic Mollusk* guild, there is also a *Bird – Upland Woodland* guild, and a *Mammal – Low Mobility* guild, among others."
>
> "The purpose of the Common Wildlife impact analysis is to determine the extent to which the various components of the proposed Project and alternatives would affect these common animal species, that, nonetheless, probably provide important biological functions in the overall ecosystem (*e.g.*, as predators or prey)." (Page 4.5-13.)

While DMEC commends the preparers for considering "common" wildlife species, the guilds used are either overly simplistic or in fact include special-status species, which is contrary to its basic purported focus on common wildlife species. The Aquatic Guild is a perfect example, which includes a rare undescribed aquatic snail and at least two rare fish species. Therefore, this guild, and most of the others, does not truly represent the more common wildlife species. The guild approach fails to recognize the fact that each and every species has specific habitat, food, nesting, and migration patterns and requirements. Some species have similar enough habitat requirements to be grouped, but the EIR takes this grouping to an extreme, such that they are actually meaningless.

The assessment is quite mixed in completeness and adequacy. Page 4.5-122 of the SCP DEIR states that over 120 wildlife surveys were conducted on Newhall Ranch between 1988 and 2008. However, not one survey focused on terrestrial mollusks, even though California Department of Fish and Game's (CDFG) Natural Diversity Database (CNDDB) lists 56 mollusk (Gastropoda) species as sensitive species (CNDDB 2004[1]) and 104 mollusk taxa by early 2006 (CNDDB 2006[2]).

[1] California Natural Diversity Database (CNDDB). 2004. Special Animals. August. California Department of Fish and Game, Wildlife and Habitat Data Analysis Branch, Sacramento, California.

The definition of the insect guild is very broad, including all insects on the project site. The Class Insecta (27 orders of insects) contains more species of wildlife than any other group of animals, both in terms of numbers of species (between 6 and 10 million, representing 95% of all wildlife species on Earth) and individuals and in biomass. To group this large and diverse group of animals into just one assessment bucket greatly understates and minimizes the importance of this diverse group of animals.

The Mission Village DEIR offers no mitigation for impacts to the Insect Guild. The only mitigation measures suggested for the insect guild, in the SCP EIR/EIS, are equally broad and vague (e.g. mitigation proposal BIO-64 [develop an integrated pest management plan] is the solution suggested for poisoning of the insect guild by pesticides. Impacts to insects in the Mission Village DEIR relies entirely on habitat, including: MV 4.3-23, MV 4.3-31, MV 4.3-36, MV 4.3-41, MV 4.3-42, and MV 4.3-43.

MV 4.3-41 on page 4.3-351, states:

> "MV 4.3-41 Vegetation communities temporarily impacted by the proposed project shall be revegetated as described in **MV 4.3-31**. Large trunks of removed trees may also remain on site to provide habitat for invertebrates, reptiles, and small mammals or may be anchored within the project site for erosion control. To facilitate restoration, mulch, or native topsoil (the top 6- to 12-inch deep layer containing organic material), may be salvaged from the work area prior to construction. Following construction, salvaged topsoil shall be returned to the work area and placed in the restoration site. Within one year, the project biologist will evaluate the progress of restoration activities in the temporary impact areas to determine if natural recruitment has been sufficient for the site to reach performance goals. In the event that native plant recruitment is determined by the project biologist to be inadequate for successful habitat establishment, the site shall be revegetated in accordance with the methods designed for permanent impacts (i.e., seeding, container plants, and/or a temporary irrigation system may be recommended).
>
> "This will help ensure the success of mitigation areas. The applicant shall restore the temporary construction area per the success criteria and ratios described in **MV 4.3-23, MV 4.3-31**, and **MV 4.3-36**. Annual monitoring reports on the status of the recovery or temporarily impacted areas shall be submitted to the Corps and CDFG as part of the annual mitigation status report (**MV 4.3-42** and **MV 4.3-43**)."

Depending on the size of the habitats temporarily disturbed, the feasibility and time required to reestablish populations of plants and wildlife, in particular invertebrates, at the restoration sites is tenuous and long in duration. Disturbance of any kind, particularly that resulting from construction activities, entirely destroys many microhabitats that may never be recreated. The proposed mitigations do not directly address mitigation to restore invertebrate wildlife onsite; rather, it focuses entirely on replacing plants and all monitoring is focused on measuring plant growth. There is no monitoring or measuring of invertebrate species richness, diversity, or population estimates. As stated elsewhere in this letter, invertebrates represent the largest group of wildlife species on Newhall Ranch, many of which may be rare, a number of which are undescribed, and many of which have very specific habitat requirements. The invertebrate component of the ecosystem is much more important to a healthy environment then identified in the DEIR. Many plants and higher forms of wildlife depend on the invertebrate "community" for their survival. A decrease in the population sizes and diversity will have a direct and indirect impact on a number of species that depend on them, including small mammals and migratory birds.

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[2] California Natural Diversity Database (CNDDB). 2006. Special Animals. February. (Quarterly publication, mimeo.) California Department of Fish and Game, Biogeographic Data Branch, Sacramento, California.

Another much smaller group of invertebrate wildlife species consists of mollusks (Phylum Mollusca), made up of seven classes:

- Aplocophora (glistenworms);
- Bivalvia (bivalves, clams, oysters);
- Cephalopoda (squid, octopuses);
- Gastropoda (snails, slugs, melampus, pedipes, capshells, ancylids, thorn snails, lymnaca, etc.);
- Monoplacophora (monoplacophores);
- Polyplacophora (chitons); and
- Scaphopoda (tusk shells).

Clearly, some of these classes of mollusks are marine taxa and certainly would not be found on the Newhall Ranch project site; however, those groups that are terrestrial or freshwater aquatic species should be better addressed. The fact that a new species of aquatic mollusk, a species of *Pyrgulopsis castaicensis* sp. nova in the Class Gastropoda, was found in a freshwater spring on the ranch clearly illustrates that there are very likely other undescribed, and very possibly rare, species of mollusks that could be directly or indirectly impacted by the proposed development. Hershler (1994[3]), an expert on the *Pyrgulopsis* genus, states that over 50% of the species in North America are rare and very habitat specific. The vast majority of western U.S. *Pyrgulopsis* species are restricted to freshwater spring habitats (Hershler 1994), similar to the situation for the undescribed species found at Middle Canyon Spring.

Based solely on comments from DMEC and others on the SCP DEIR, Newhall contracted Aspen[4] (only identified as an email correspondence, who in actuality contracted with Lawrence Hunt) to conduct field surveys for terrestrial mollusks. While a copy of his report was excluded from the technical appendices of the Mission Village DEIR, he found three terrestrial mollusk taxa on Newhall Ranch. The DEIR's explanation of Hunt's findings will be discussed in greater detail later in this letter.

Only three groups of invertebrate wildlife were given any attention, butterflies (Class Insecta: Order Lepidoptera), general insects (Class Insecta), and mollusks (Class Gastropoda). Nothing is discussed about other groups of invertebrates, such as: pelecypods, arachnids, crustaceans (Anostraca, Isopoda, Amphipoda, or Decapoda), and many other groups of invertebrates. This is inadequate given the history of species discovery on Newhall Ranch and its importance as a biologically rich and important area.

Meloe ajax, a rare blister beetle from chaparral in southwestern Riverside County (Pinto 1998[5]) is just one example of the insect biodiversity of the Los Angeles region, where new species are discovered. It is entirely possible that one or more undescribed species of invertebrates, in particular, insects, occur on Newhall Ranch, including the Mission Village portion of the ranch.

Bond et al. (2006[6]) study hypothesizes that there is high probability of one or more Mygalomorph species on Newhall Ranch and surrounding areas based on their model. This is strong evidence that this sensitive

[3] Hershler, Robert. 1994. A Review of the North American Freshwater Snail Genus *Pyrgulopsis* (Hydrobiidae). *Smithsonian Contributions to Zoology* 554.

[4] Footnote 25 on page 4.3-28 "C. Huntley, "Re: Snail Methods, etc." Email from C. Huntley (Aspen) to P. Behrends (Dudek), A.C. Lynch (Sohagi Law Group), D. Bedford (CDFG), K. Drewe (CDFG), S. White (Aspen), M. Carpenter (Newhall Land), S. Rojas (Newhall Land), and S. Miller (Dudek), March 12, 2010."

[5] Pinto, John D. 1998. A New *Meloe* Linnaeus (Coleoptera: Meloidae, Meloinae) from Southern California Chaparral: A Rare and Endangered Blister Beetle or Simply Secretive? *The Coleopterists Bulletin* 52(4):378-385.

[6] Bond, J.E., D.A. Beamer, T. Lamb, and M. Hedin. 2006. Combining Genetic and Geospatial Analyses to Infer Population Extinction in Mygalomorph Spides Endemic to the Los Angeles Region. June. *American Conservation* 9:145-157.

group of arachnids occur within the project site. Since this group of arachnids is known to contain species that are at risk of extinction, or at least local genetic extirpation, surveys should have been performed for them and impacts those this groups, and individual species, should have been conducted.

Getting back to the appropriateness/adequacy of the use of wildlife guilds, as described in the DEIR, the methods/metrics used to identify/determine each guild is critical to its accuracy and usefulness. The U.S. Environmental Protection Agency (2002[7]) states that the a guild for birds need to, "Define the groups based on similar life history, home range size, or other behavioral or demographic characteristics", and that any guild used needs to be calibrated based on on-the-ground measurements. EPA's guidance on this was focused on wetland birds as a possible wildlife guild to develop a method for assessing impacts to wetlands. EPA recommends that field surveys be conducted in the target habitats and that area surveys and point counts be conducted. This is a very narrow focus, and very different from how Impact Sciences used wildlife guilds for Newhall Ranch. While area surveys for birds were possibly conducted, there is no evidence in the DEIR or any technical appendix provided that suggests point counts were made.

Impact Sciences seriously violates basic science and the very definition of wildlife guild in its impact assessment. For example, the definition used (see footnote 554 on page 4.3-443 of the DEIR) states, "Species guilds are groups of species that use or exploit similar resources or have similar life history characteristics even though they may represent different taxonomic groups". Then Impact Sciences, on Table 4.3-24 uses ten guilds: Insect Guild, Bat Guild, Reptile – Low Mobility Guild, Mammal – Low Mobility Guild, Reptile and Amphibian-Semi-Aquatic Guild, Bird-Riparian Guild, Bird-Upland Scrub and Chaparral Guild, Bird-Upland Grassland Guild, Bird-Upland Woodland Guild, and Mammal-High Mobility Guild, to grossly summarize the cumulative impacts the project would have on all "common" wildlife. NOAA used seven different guilds for birds alone in assessing the long-term impacts to wetland birds affected by the Athos 1 oil spill (Polaris Applied Sciences 2006[8]).

Looking at just the Insect Guild, there is no basis whatsoever to justify that all species of insects occurring on Newhall Ranch, or even the Mission Village portion, "use or exploit similar resources or have similar life history characteristics". Making such a claim, that the Insect Guild meets the guild definition, is fraudulent or gross negligence. There are literally thousands of species on insects along on Newhall Ranch, for which no attempt has been made at all to document the insect fauna of the project site or ranch. Only a few targeted/focused surveys for some of the special-status butterfly species have been conducted onsite. There similar problems with each and every wildlife guild used by Impact Sciences in their impact assessment. The results are absolutely meaningless and tell the public and decision-makers nothing about the cumulative impacts the project will actually have on wildlife. While the use of guilds can be a useful approach to assessing habitat conditions, the make up of each guild and how they are measured needs to be done very carefully and appropriately to have any meaningful results.

Page 4.3-448 of the DEIR states, "Cumulative impacts to oak woodlands could not be quantified due to the coarseness of the vegetative mapping". The fact that Newhall failed to map the natural vegetation at an appropriate level/scale, such as the Association level, is no excuse for not being able to assess the direct and indirect cumulative affects of the project on oak woodlands, or any other plant community or wildlife habitat. This is a self-serving approach; over simplify the habitat mapping then claim that there is not

[7] U.S. Environmental Protection Agency. 2002. Methods for Evaluating Wetland Condition: Biological Assessment Methods for Birds. (EPA-822-R-02-023.) Office of Water, U.S. Environmental Protection Agency, Washington, DC.

[8] Polaris Applied Sciences. 2006. ATHOS 1 NRDA: General Comments on FINAL DRAFT BIRD AND WILDLIFE INJURY ASSESSMENT: *M/TATHOS 1* OIL SPILL, DELAWARE RIVE SYSTEM. Letter to NOAA. http://www.darrp.noaa.gov/northeast/athos/pdf/wildlife324_Polaris_Comments2.pdf

enough detail in the mapping to perform any sort of impact assessment. This must be rectified. The problems with the inadequacies and inaccuracies of the vegetation classification and mapping is discussed in detail later in this letter.

Special-status Species

Special-status habitats are vegetation types, associations, or sub-associations that support concentrations of special-status plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife.

Special-status species are plants and animals that are at least one of the following:

- *Listed as endangered or threatened* under Federal or California Endangered Species Acts,
- *Listed as rare* under the California Native Plant Protection Act, or
- *Considered rare* (but not formally listed) by resource agencies, professional organizations (e.g. Audubon Society, CNPS, The Wildlife Society), and the scientific community.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g. U.S. Fish and Wildlife Service), pursuant to the Federal Endangered Species Act or as endangered, threatened, or rare (for plants only) by the State of California (i.e. California Fish and Game Commission), pursuant to the California Endangered Species Act or the California Native Plant Protection Act, or those formally adopted by a local (e.g. county or city government) agency as of local concern or rare, or similar status. Special-status species are defined in Table 1 below.

Table 1. Definitions of Special-Status Species

o Plants and animals legally protected under the California and Federal Endangered Species Acts or under other regulations.	
o Plants and animals considered sufficiently rare by the scientific community to qualify for such listing; or	
o Plants and animals considered to be sensitive because they are unique, declining regionally or locally, or are at the extent of their natural range.	
Special-Status Plant Species	**Special-Status Animal Species**
o Plants listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (50 CFR 17.12 for listed plants and various notices in *Federal Register* for proposed species). o Plants that are Category 1 or 2 candidates for possible future listing as threatened or endangered under the Federal Endangered Species Act (55 CFR 6184, February 21, 1990). o Plants that meet the definitions of rare or endangered species under the CEQA (*State CEQA Guidelines*, Section 15380). o Plants considered by CNPS to be "rare, threatened, or endangered" in California (Lists 1B and 2 in CNPS 2001). o Plants listed by CNPS as plants needing more information and plants of limited distribution (Lists 3 & 4 in CNPS 2001). o Plants listed by CNPS as locally rare (Lake 2004, Magney 2003, Magney 2010, Wilken 2003). o Plants listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (14 CCR 670.5).	o Animals listed/proposed for listing as threatened/endangered under the Federal Endangered Species Act (50 CFR 17.11 for listed animals and various notices in *Federal Register* for proposed species). o Animals that are Category 1 or 2 candidates for possible future listing as threatened or endangered under Federal Endangered Species Act (54 CFR 554). o Animals that meet the definitions of rare or endangered species under the CEQA (*State CEQA Guidelines*, Section 15380). o Animals listed or proposed for listing by the State of California as threatened and endangered under the California Endangered Species Act (14 CCR 670.5). o Animal species of special concern to the

Act (14 CCR 670.5). o Plants listed under the California Native Plant Protection Act (California Fish and Game Code 1900 et seq.). o Plants considered sensitive by other federal agencies (i.e. U.S. Forest Service, Bureau of Land Management) or state and local agencies or jurisdictions. o Plants considered sensitive or unique by the scientific community; occurs at natural range limits (*State CEQA Guidelines*, Appendix G).	CDFG. o Animal species that are fully protected in California (California Fish & Game Code, Sections 3511 [birds], 4700 [mammals], 5050 [reptiles, amphibians]). o Animals considered rare or sensitive locally by a local agency or scientific community (*State CEQA Guidelines*, Appendix G)

The CNPS' *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2001[9], 2010[10]) categorizes rare California plants into one of five lists (1A, 1B, 2, 3, and 4) representing five levels of species status, one of which is assigned to a sensitive species to indicate its status of rarity or endangerment and distribution. Most taxa also receive a threat code extension following the List (e.g. 1B.1, 2.3), which replaces the old R-E-D Code previously used by CNPS. Table 2, California Native Plant Society List, provides a definition for each List code number, and Table 3, California Native Plant Society List Threat Code Extensions defines the CNPS List Threat Code Extensions that indicates the level of endangerment within the state.

Table 2. California Native Plant Society List (CNPS List)

CNPS List	Definition
1A	Presumed Extinct in California
1B	Rare, Threatened, or Endangered in California and elsewhere
2	Rare, Threatened, or Endangered in California, but more common elsewhere
3	Need more information (a Review List)
4	Plants of Limited Distribution (a Watch List)

Table 3. California Native Plant Society List Threat Code Extensions

CNPS Threat Code Extension	Definition
.1	Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2	Fairly endangered in California (20-80% occurrences threatened)
.3	Not very endangered in California (<20% of occurrences threatened)

The CNDDB Element Ranking system provides a numeric global and state-ranking system for all special-status species tracked by the CNDDB. The global rank (G-rank) is a reflection of the overall condition of

[9] 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.

[10] Changes to the *Inventory* as published on the CNPS website (http://www.cnps.org/programs/Rare_Plant/inventory/changes/changes_accepted.htm).

an element (species or natural community) throughout its global range. The state rank (S-rank) is assigned much the same way as the global rank, except state ranks in California often also contain a threat designation attached to the S-rank. This Element Ranking system is defined below in Table 4, California Natural Diversity Database Element Ranking System.

Table 4. California Natural Diversity Database Element Ranking System

Global Ranking (G)	
G1	Less than 6 viable element occurrences (pops for species), OR less than 1,000 individuals, OR <809.4 hectares (ha) (2,000 acres [ac]). Critically Imperiled.
G2	6 to 20 element occurrences OR 809.4 to 4,047 ha (2,000 to 10,000 ac). Imperiled.
G3	21 to 100 element occurrences OR 3,000 to 10,000 individuals OR 4,047 to 20,235 ha (10,000 to 50,000 ac). Somewhat Imperiled.
G4	Apparently secure; rank lower than G3, factors exist to cause some concern (i.e. there is some threat, or somewhat narrow habitat). Apparently Secure.
G5	Population, or stand, demonstrably secure to ineradicable due to being commonly found in the world. Secure.
GH	All sites are **historic**; the element has not been seen for at least 20 years, but suitable habitat still exists.
GX	All sites are **extirpated;** this element is extinct in the wild.
GXC	Extinct in the wild; exists in cultivation.
G1Q	The element is very rare, but there is a taxonomic question associated with it.
Subspecies Level: Subspecies receive a **T-rank** attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies or variety. **For example:** *Chorizanthe robusta* var. *hartwegii* is ranked G2T1. The G-rank refers to the whole species range (*Chorizanthe robusta*), whereas the T-rank refers only to the global condition of the variety (var. *hartwegii*).	
State Ranking (S)	
S1	Less than 6 element occurrences OR less than 1,000 individuals OR less than 809.4 ha (2,000 ac). S1.1 = very threatened S1.2 = threatened S1.3 = no current threats known
S2	6 to 20 element occurrences OR 3,000 individuals OR 809.4 to 4,047 ha (2,000 to 10,000 ac). S2.1 = very threatened S2.2 = threatened S2.3 = no current threats known..
S3	21 to 100 element occurrences OR 3,000 to 10,000 individuals OR 4,047 to 20,235 ha (10,000 to 50,000 ac). S3.1 = very threatened S3.2 = threatened S3.3 = no current threats known
S4	Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern (i.e., there is some threat, or somewhat narrow habitat). NO THREAT RANK.
S5	Demonstrably secure to ineradicable in California. NO THREAT RANK.
SH	All California sites are **historic**; the element has not been seen for at least 20 years, but suitable habitat still exists.
SX	All California sites are **extirpated;** this element is extinct in the wild.
Notes	
1. Other considerations used when ranking a species or natural community include the pattern of distribution of the element on the landscape, fragmentation of the population/stands, and historical extent as compared to its modern range. It is important to take an aerial view when ranking sensitive elements rather than simply	

counting element occurrences.
2. Uncertainty about the rank of an element is expressed in two major ways: by expressing the rank as a range of values (e.g. S2S3 means the rank is somewhere between S2 and S3), and by adding a ? to the rank (e.g. S2?). This represents more certainty than S2S3, but less than S2.

As described for the CNDDB ranking, not all special-status species considered in this report are tracked by CNPS at a statewide level; however, CNPS, primarily through local chapters (guided by the Local Flora Committee), has developed regional/county lists of **Species of Local Concern**. The Channel Islands Chapter of CNPS has developed a list of locally rare plants of Ventura County (Magney 2010[11]), which is periodically updated, and for Santa Barbara County (Wilken 2003[12], 2007[13]), and a preliminary list of locally rare plants for the Liebre Mountains region, which includes the Santa Clarita Valley and at least portions of Newhall Ranch (Magney 2003[14]). According to Magney (2010), Ventura County Locally Rare plant species are defined as plants with only 5 or fewer occurrences in Ventura County, and Ventura County Locally Uncommon species are defined as plants with only 6 to 10 occurrences in the County. The same criteria are used for the locally rare plants list for the Liebre Mountains. These rarity criteria are taken from the NatureServe (formerly the Natural Heritage Program of The Nature Conservancy) rarity ranking system and applied at the county level. This approach was agreed upon in 2004 by a consensus of local expert botanists, including: Carl Wishner, Richard Burgess, David Bramlet, Elihu Gevirtz, Mary Carroll, John Dreher, Rick Farris, Richard Handley, Steve Junak, Mary Meyer, Rick Reifner, Cher Batchelor, Duane Vander Pluym, Dieter Wilken, Michelle Bates, David Magney, and several others.

The acceptability of using the NatureServe ranking system at the County level is analyzed by Magney (2004[15]), which was reviewed by the CNPS Rare Plant Program's Local Flora Committee and those local botanists listed above. Magney uses those metrics to objectively identify those plant species that met the criteria based on his knowledge of the Ventura County flora (which is in manuscript and spreadsheet forms documenting every known occurrence of every vascular plant taxon known to occur within Ventura County).

Special-status Plants in the DEIR

Page 4.3-71, a. Special-Status Plants, provides definitions and discussions on only 10 species of plants as special-status species as occurring on the Mission Village portion of the 11,999-acre Newhall Ranch, including one undescribed species. Table 4.3-4 lists special-status plants on Newhall Ranch but not on the

[11] Magney, D.L. 2008. Checklist of Ventura County Rare Plants. 23 December 2008, Fourteenth edition. California Native Plant Society, Channel Islands Chapter, Ojai, California. Available at http://cnpsci.org/html/PlantInfo/ChecklistofVenturaCountyRarePlants-20081223.htm

[12] Wilken, D. 2003. Locally Rare Plants of Santa Barbara County. June 2003. Central Coast Center for Plant Conservation, Santa Barbara Botanic Garden, Santa Barbara, California. California Native Plant Society, Channel Islands Chapter, Ojai, California.

[13] 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.)

[14] Magney, D.L. 2003. Rare Plants of the Liebre Mountains, Los Angeles County. 2 May 2003. California Native Plant Society, Channel Islands Chapter, Ojai, California. Published on the CNPS Channel Islands Chapter's website, http://cnpsci.org/PlantInfo/01RarePlants.htm

[15] Magney, D.L. 2004. Acceptability of Using the Natural Heritage Program's Species Ranking System for Determining Ventura County Locally Rare Plants. 25 November 2004. David Magney Environmental Consulting, Ojai, California. Prepared for California Native Plant Society, Channel Islands Chapter, Ojai, California. (Published at www.cnpsci.org.)

project site. The DEIR did not adequately assess impacts to special-status plant species, in particular those that are locally rare (rare in the region or Los Angeles County).

Only three of the 10 special-status plant species were mapped (Figure 4.3-6 of the DEIR). Most of the special-status plant species were not mapped.

Page 4.3-76 Parish's Sagebrush (*Artemisia tridentata* ssp. *parishii*) states, "Parish's sagebrush is considered special status by the County of Los Angeles, but it has no federal, state, or CNPS status". The statement that *Artemisia tridentata* ssp. *parishii* does not have CNPS status is incorrect. This subspecies is listed by CNPS, through the Channel Islands Chapter, as a locally rare species in adjacent Ventura County since at least 2003 (Magney 2003[16], 2010[17]). Furthermore, the DEIR goes on to say, "It is considered regionally rare by local botanists (Mary Meyer, personal communication, October 2007)." This is the exact same wording found in the SPC DEIR/EIS. Since the Channel Islands Chapter is part of CNPS, any lists prepared by the chapters must also be considered as part of the CNPS List. The Channel Islands Chapter lists are specifically cited and linked on the CNPS website.

SLENDER MARIPOSA LILY

Page 4.3-76 of the DEIR states: "Populations of this species have been documented and mapped throughout the project site. The mapped acreage of this species on the Mission Village project site in 2003 was 9.68 acres, in 2004 was 6.63 acres, and in 2005 was 6.23 acres. In total (when the 2003–2005 data is unioned), slender mariposa lily occupies a cumulative footprint of 17.43 acres of the project site." This significant direct impact must also take into consideration known and expected cumulative impacts to this species at Newhall Ranch and throughout its range.

For example, the SCP DEIR states: "The combined direct and indirect permanent loss of slender mariposa lily cumulative occupied area and individuals resulting from implementation of the RMDP and the SCP and build-out of the Specific Plan, VCC, and Entrada planning areas would total **72 acres (35.0%)** and **30,645 (46.4%)** individuals, respectively. The loss of slender mariposa lily occurring as a result of implementation of the RMDP and the SCP and build-out of the Specific Plan, VCC, and Entrada planning areas would be considered a substantial adverse effect on this species and would substantially reduce the number and restrict the range of this species on site (significance criteria 1 and 7). The combined direct and indirect permanent impacts (Impacts to Individuals) would be significant, absent mitigation."

Under the proposed project plan described for the SCP (Alternative 2), there would be 33 acres (16.3%) of cumulative occupied area and 23,963 individuals (36.3%) within 300 feet of development. Even with mitigation and monitoring within the preserve areas, there will still be a large percentage (36.3%) of the population at risk of threats associated with edge effects. As described in Dudek 2007[18] Section 2.4 (page 12) states that only two locations are proposed for receptors sites under the Revised Draft Slender Mariposa Lily Mitigation and Monitoring Plan; the High Country SMA or Salt Creek area. They are to be planted adjacent to existing populations of Slender Mariposa Lily within the preserves. What percentage of

[16] Magney, D.L. 2003. Checklist of Ventura County Rare Plants. 24 June 2003. California Native Plant Society, Channel Islands Chapter, Ojai, California.

[17] Magney, D.L. 2010. Checklist of Ventura County Rare Plants. 9 October 2010, Eighteenth edition. California Native Plant Society, Channel Islands Chapter, Ojai, California. Published on www.cnpsci.org.

[18] Dudek. 2007. Revised Draft Slender Mariposa Lily Mitigation and Monitoring Plan for the Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan Study Area.

these existing populations fall within this 300 feet buffer is not stated; however, this is important since this is the area that is going to be most favorable for receptor sites.

Page 4.3-170 of the DEIR states, "The proposed project would result in the loss of 15.3 acres of the 17.4 acres of cumulative occupied slender mariposa lily habitat on site (see **Figure 4.3-6**). Given the sensitivity of this species, these impacts would be significant."

> "The Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan289 is attached in Appendix 4.3. A Mission Village Slender Mariposa Lily Mitigation and Monitoring Plan will be prepared and submitted to CDFG and the County for review and approval prior to ground disturbance to occupied habitat. Upon approval, the plan will be implemented by the applicant or its designee. The approved plan will demonstrate the feasibility of enhancing or restoring slender mariposa lily habitat in selected areas to be managed as natural open space (i.e., the Salt Creek area or High Country SMA/SEA 20, Spineflower preserves, or River Corridor SMA/SEA 23) without conflicting with other resource management objectives. Habitat replacement/enhancement will be at a 1:1 ratio (acres restored/enhanced to acres impacted). In addition, the applicant would implement a number of mitigation measures designed to avoid and minimize construction-related indirect impacts to the slender mariposa lily. Applicable mitigation measures include the following:
>
> - Mitigation Measure **SP 4.6-27** (enhancement of habitat values within the High Country SMA/SEA 20),
> - Mitigation Measures **SP 4.6-29** through **SP 4.6-32** (recreation and access restrictions within the High Country SMA/SEA 20),
> - Mitigation Measure **SP 4.6-33** (protection of transition areas between the development edge and the High Country SMA/SEA 20),
> - Mitigation Measure **SP 4.6-34** (clear marking of grading perimeters within or adjacent to the High Country SMA/SEA 20),
> - Mitigation Measures **SP 4.6-37** through **SP 4.6-42** (long-term management of the High Country SMA/SEA 20), and
> - Mitigation Measures **SP 4.6-53** and **SP 4.6-59** (requires current, updated, site-specific surveys for special-status species in consultation with CDFG).
>
> "This impact would also be reduced through the implementation of the following:
>
> - Mitigation Measure MV 4.3-27 (implementation of an approved slender mariposa lily mitigation plan) to be implemented by the applicant. The plan shall be subject to the approval of the County prior to the issuance of a grading permit.
> - Mitigation Measure MV 4.3-26 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities)."
>
> "Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and Additional Analysis."

DMEC found insufficient confirmation that the mitigation and monitoring standards as stated in the Revised Draft Slender Mariposa Lily Mitigation and Monitoring Plan for the Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan Study Area have proven to be sufficient based on scientific knowledge. The mitigation ratio proposed, as discussed below, is an example.

Stated in Dudek's Revised Draft Slender Mariposa Lily Mitigation and Monitoring Plan (Dudek 2007) in Section 2.3, Time Frame for Success, page 12, "Success will be defined by meeting the stated requirement in the *Newhall Ranch Resource Management and Development Plan* (Dudek 2008) which states that, "[T]he plan shall replace or transplant the number of individual plants to be removed at a 1:1 ratio and/or enhance and protect existing populations of the species".

The claim is that Dudek's previous work with salvaging, transplanting, and establishing *Calochortus* (both *Calochortus clavatus* var. *gracilis* and *Calochortus plummerae*) indicates that successful results can be achieved. The report states: "In the autumn of 2005, seed and 687 bulbs were salvaged from the River Village footprint and planted into selected sites in similar habitat in late 2005 and early 2006 (Dudek 2006c). Despite two successive years of drought following transplantation, there was a success rate of 69% in 2005–6, 34% in 2006–7, and 93% in 2007–8 (Dudek 2007b, 2007c; Thomson 2008)" (page 12).

While a 93% successes rate in the third year is a good start, there is no proof that the same success will continue for the next two years, and in perpetuity. It is premature of Dudek to claim that they have proved to be successful at salvaging, transplanting, and establishing species of *Calochortus* when they have not reached the goals that they are putting forth in this mitigation and monitoring plan; least a 1:1 ratio of growth. Furthermore, 93% success does not represent full replacement, as required by a 1:1 mitigation ratio.

In order for the 1:1 ratio to be meet under Alternative 2, **30,645** individuals must all survive. This is likely an unobtainable goal. Dudek also claims to have high success rate in regards to their seeding efforts for the first three years of the program. Again, three years does not prove to meet the long-term persistence of the species. The total number of plants within just the Mission Village project site is not stated, other than the acreage of occupied habitat.

Much emphasis is based on the assumption that a minimum of 133 acres of the Slender Mariposa Lily cumulative occupied area will be conserved within the RMDP and Spineflower Conservation Plan (SCP) Project boundaries. DMEC has found multiple problems associated with both of these preserve designs and monitoring standards. We believe that under the current proposed project, neither of theses preserves will ensure the long-term persistence of the Slender Mariposa Lily.

The Entrada planning area was has an extensive population of Slender Mariposa Lily, only a small portion of this area is proposed for preservation (under the SCP). In order to "ensure biological diversity of the species" (Dudek 2007, page 7), an area within San Martinez Grande Canyon will be conserved. The distance between San Martinez Grande Canyon and the Entrada planning area is too far for this objective to be reached.

Table 4.3-9, Significant Impact and Mitigation Summary, of the DEIR states that impacts to Slender Mariposa Lily will be Less Than Significant after mitigation. Since the proposed mitigation, primarily the translocation and planting onsite, is largely infeasible and has a low likelihood of meeting success criteria, there will almost certainly be a residual significant impact. Newhall Ranch is overly optimistic about successfully mitigation this species, which leaves the species at risk. Areas proposed for mitigation, particularly those areas adjacent to existing populations would be occupied already if the habitat was suitable for this plant.

SAN FERNANDO VALLEY SPINEFLOWER

The San Fernando Valley Spineflower (*Chorizanthe parryi* var. *fernandina*) [SFVS] is a candidate species under the federal Endangered Species Act, a California state-listed Endangered species, and a CNPS List 1B species. The SFVS was thought to be extinct until the end of the 20th century. The Newhall RMDP-SCP Final EIS/EIR[19] succinctly reviews the historical and current known population range of the SFVS (p. 4.5-1,755), "Historically, SFVS was known from several occurrences in and around the San Fernando Valley and one site in Orange County (CNPS 2009[20]). As of 1993, all those sites had been presumed extirpated, and the plant presumed extinct (Hickman 1993[21]). In 1999, SFVS was rediscovered in Ventura County, and in 2000 it was rediscovered at Newhall Ranch. Currently, SFVS is known from only these two locations: Laskey Mesa in the Upper Las Virgenes Canyon Open Space in Ventura County, and the Project [Newhall Ranch] area in Los Angeles County."

The entire known range of the SFVS is approximately 32 acres. The Draft Newhall Lands Spineflower Candidate Conservation Agreement[22] describes the extent of the Las Virgenes population (page 5): "Current information indicates that the former Ahmanson Ranch population is composed of 18 sub-populations of various sizes, all located within 0.25 miles (0.49 kilometers) of each other, and occupying approximately 12.9 ac (5.2 ha)." The known SFVS range on the Newhall Ranch (including the Specific Plan area, VCC, and Entrada) is 20.2 acres (Spineflower Conservation Plan [SCP] 2007, p. 15)[23]. Attempts to predict whether suitable SFVS habitat exists outside of the known occupied SFVS range have not been successful. The SCP states (p. 45):

> "The results of this effort [determining where SFVS occurs outside of known habitat on the Newhall project area using a combination of vegetation, soils, geology, elevation, slope, and aspect data] indicate that either existing habitat data may be too coarse to resolve the actual habitat features that SFVS selects or that habitat features are not predictive of spineflower occurrence. It is possible that further studies at a finer scale are needed to better refine the various habitat parameters differentiating occupied SFVS habitat from unoccupied areas."

Based on existing data, there are no known SFVS populations outside of the known range and there is no known method for predicting where SFVS populations will occur outside of their observed distribution.

The project applicant states that there are 8.57 acres of known SFVS habitat on the Mission Village project site. The project applicants estimate that 3.29 acres of this habitat will be eliminated by the Mission Village project (Mission Village DEIR, page 4.3-163). The SFVS habitat loss proposed for the Newhall project, including the Mission Village project, is 26% of the complete known SFVS range (approximately 32 acres). The projected total loss of the Newhall SFVS population (as measured in amount of occupied habitat) is 6.35 acres (31.4% of the 20.2 acres making up the Newhall SFVS population).[1]

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[19] CDFG. 2010. Newhall Ranch Resource Management and Development Plan and the Spineflower Conservation Plan FINAL EIS/EIR. June 2010.

[20] CNPS. 2009. *Inventory of Rare and Endangered Plants.* Online edition, version 7-09a. Revised January 13, 2009; accessed January 15, 2009. Sacramento, California. http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi

[21] Hickman, J.C. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley, California.

[22] The Newhall Land And Farming Company. February 14, 2008. Draft Newhall Land Candidate Conservation Agreement for San Fernando Valley Spineflower

[23] Dudek. 2007. Draft Spineflower Conservation Plan. December 2007. Valencia, California. Prepared for Newhall Land and Farming Company, Valencia, California.

The project applicant proposes to mitigate the SFVS loss by establishing a series of SFVS preserves that they claim "ensures the long-term survival of spineflower populations on the project site and greater NRSP" (Mission Village DEIR, page 4.3-163). These preserves are described in the Mission Village DEIR (pages 4.3-163 to 4.3-164): "The SCP [Spineflower Conservation Plan] establishes five San Fernando spineflower preserves, four within the Newhall Ranch Specific Plan site and one within a portion of the Entrada planning area. Of these preserves, the Airport Mesa Preserve is located on the Mission Village project site…As described in the SCP, the five proposed preserves would encompass a total of 164.8 acres of land. The preserve areas have been designed to accommodate natural spineflower population fluctuations and include 13.26 acres of occupied spineflower habitat and 152.6 acres of buffer area (unoccupied spineflower habitat). In total, the five proposed preserves encompass 68.6 percent of the cumulative occupied spineflower habitat within the SCP area… The Mission Village project includes the proposed Airport Mesa preserve; the Mission Village Airport Mesa preserve as proposed would be larger than the Airport Mesa preserve described in the SCP. The Mission Village Airport Mesa preserve would occupy 65.62 acres, including 5.28 acres of occupied spineflower habitat, 24.39 acres of core expansion area (unoccupied spineflower habitat), and 35.96 acres of buffer area (unoccupied spineflower habitat) (see Figure 4.3-10, Airport Mesa Preserve Core Population). It is unknown if any of the unoccupied open space included in the preserves is suitable for spineflowers. The proposed Airport Mesa preserve was designed to conserve the areas of greatest concentration of spineflower within the general Airport Mesa occurrence."

A basic design assumption of the proposed SFVS preserve system seems to be that an essential "core" of occupied SFVS habitat will be preserved that will adequately conserve the Newhall SFVS population. References are made in the Mission Village DEIR to the "Airport Mesa Preserve Core Population" and that the proposed Airport Mesa preserve will conserve the areas of "greatest concentration" of the SFVS (Mission Village DEIR p. 4.3-163). In reference to the larger preserve system the SCP (page 112) states:

> "This direct impact [take of approximately 6.36 acres (31%) of the 2002 through 2007 cumulative spineflower occurrence area] will be fully mitigated, first by establishing a system of preserves to protect the core occurrences of spineflower in the study area, and second by implementing management and monitoring within an adaptive management framework to maintain or enhance the protected spineflower occurrences within the five preserve areas."

Based on the data presented, the SFVS appears to experience extreme population fluctuations over relatively short periods of time across its entire known 30-acre range. The Las Virgenes (Ahmanson Ranch) population fluctuated between 23,000 individuals in 1999, 1.46 million individuals in 2000, 1.8 million individuals in 2001, and 220,935 individuals in 2002 (SCP, page 14). The Newhall SFVS population has experienced even more extreme population fluctuations than the Las Virgenes populations. The Newhall RMDP-SCP Final EIS/EIR summarizes the known population trends for the SFVS on the Newhall project site, including Mission Village (page 4.5-1,758),

> "In 2003, surveys estimated populations of SFVS totaling 5,947,120 individuals occupying 16 acres. In 2004, the total population of SFVS was estimated to be 558,388 individuals occupying 5.33 acres. In 2005, the total population of SFVS was estimated to be 7,391,813 individuals occupying 11.45 acres. In 2006, the total population of SFVS was estimated to be 1,773,496 individuals occupying 8.49 acres. In 2007, the total population of SFVS was estimated to be 760 individuals occupying 0.12 acre."

Reviewing the methodology used to determine SFVS population size, it is clear that the methods used are not repeatable. That is, it would not pass a common statistical t-test. Obviously, it is not practicle, or really possible, to physically count every SFVS plant. But to come up with a reasonably accurate estimate, strict

statistically valid protocols must be followed. Replicate sampling must be part of those protocols. None of this describes how Newhall Ranch consulting biologists (many of where were not even botanists) counted the plants each year. The same methods were not used from year to year. Comparisons and trends made from such flawed data will only tell a false story. No valid conclusions can be made about the actual number of plants present each year or anything about populations dynamics or trends other than there are some plants this year and there area lots of plants this other year.

The project applicant states that the potential project impacts to the SFVS are evaluated in terms of loss of occupied habitat rather than by number of individual plants impacted because of how SFVS acreage (and associated number of individuals) varies from year to year (Mission Village DEIR, page 4.3-163). They note that the mapped acreage of SFVS on the Mission Village project site varied from 0.42 acre to 7.14 acres based on 2002-2007 survey data (Mission Village DEIR, page 4.3-163). Based on the 2002-2007 survey data, the acreage occupied by SFVS on the overall Newhall project site varied from 0.12 acre to 16 acres.

The population dynamics of the SFVS suggest that the entire range of the population is "core" habitat and that designing a preserve system that designates some of the habitat "core" and some of it expendable, as the project applicant has done, is not biologically valid. The amount of their known range that the SFVS population inhabits varies greatly from year to year. The project applicant makes a factually incorrect statement that, "The location of spineflower cumulative occupied habitat is well understood, based on six years of extensive surveys (2002 through 2007). Occupied habitat varies somewhat, but not widely, from year to year" (Response 84, page RTC-053-56 of project applicant to comments on the SCP by DMEC on behalf of Friends of the Santa Clara River). There is a great variance in occupied SFVS habitat on the Newhall project site, with SFVS occupying 133 times greater area (16 acres) than the lowest known occurrence (0.12 acre). The amount of occupied SFVS habitat on the Mission Village project site varies 17 times from lowest (0.42 acre) to highest (7.14 acres) known occurrences based on the survey data presented.

The project applicant states that the proposed Airport Mesa preserve will conserve the areas of “greatest concentration” of the SFVS (Mission Village DEIR page 4.3-163) on the Mission Village project site, implying that the highest number of individual spineflowers will be conserved by the preserve. The survey data presented indicate that over time the number of individual spineflowers fluctuates greatly along with area occupied by the SFVS in any given year and that there is no biologically meaningful area of "greatest concentration" as the project applicant suggests. The number of individual spineflowers by which "greatest concentration" would be measured varies from millions to hundreds of individuals across years. The concept of conserving the "greatest concentration" of spineflowers also contradicts the project applicant's methodology for measuring project impacts to the SFVS, which is to use occupied acreage rather than number of individuals (Mission Village DEIR, page 4.3-163).

It is not possible to predict what part of the SFVS habitat on the Mission Village project site is "core" habitat or will have the "greatest concentration" of individuals as the project applicant suggests. The concentration of some portion of the SFVS population in a preserve system and the "take" (i.e. destruction) of the remaining habitat will possibly disrupt the population dynamics of the SFVS and reduce the likelihood of population persistence on the Newhall project area, having the exact opposite effect on SFVS conservation that the project applicants claim.

The SFVS is likely dependent on the presence of a seedbank for population persistence (SCP, page 24). There are some years when the amount of area occupied by the SFVS is extremely limited and population

numbers are very low (760 individuals occupying 0.12 acre in 2007). An event such as fire, drought, landslide, grazing, or trampling could extirpate the extant SFVS population in such a year. The presence of the seedbank ensures that in such an event the reproductive material for the SFVS population would survive into succeeding years when germination of future populations of the SFVS could occur. The project applicant has not adequately assessed the possibility in the DEIR or the SCP that removing some of the standing seedbank, as they propose to do, could or wouldn't disrupt the viability of the seedbank and thus overall viability of the SFVS population. The data presented by the project applicant in the SCP (page 45) indicate that the current understanding of vegetation, soils, geology, elevation, slope, and aspect data is not adequate to predict where SFVS (and thus viable SFVS seedbank) will occur outside of their known range. These data are not adequate or sufficient to allow CDFG or any biologist to predict where and how the SFVS will occur within known SFVS range from year to year and thus identify a minimum "core" seedbank that will assure the long-term viability of the SFVS population if the remaining seedbank is removed, as the project applicants propose to do.

In order to understand what "core" habitat is for the SFVS on the Newhall site, one must understand where the "core" seedbank and how the seedbank controls population dynamics of the SFVS. The project applicant has not presented any data demonstrating how they will identify and conserve the "core" seedbank of the SFVS on the Mission Village project site or in the overall proposed Newhall preserve system. The project applicant suggests that the SFVS population dynamics observed in their survey data is probably caused by climate, stating in the Mission Village DEIR (page 4.3-75), "The variation of spineflower abundance and area occupied from year to year is typical of annual plant species. In the case of spineflower, it appears that climatic conditions influence spineflower abundance and area occupied. On the Newhall Ranch property, the estimated number of spineflower was lower in 2002, 2004, and 2007, compared to 2003 and 2005, with 2006 falling in between. Years 2002, 2004, and 2007 experienced below average rainfall; in year 2003, rainfall was considered normal, according to the Western Regional Climate Center. Winter 2004/spring 2005 rainfall was considered to be above normal; in winter 2005/spring 2006, rainfall was slightly below average but was not as low as it was in 2002, 2004, and 2007, according to the Western Regional Climate Center." However, they do not present any ecological data or modeling showing how the SFVS population dynamics observed would be conserved within the proposed preserve system.

It is clear from present knowledge of SFVS population dynamics that some unknown combination of ecological factors (e.g. vegetation, soils, geology, elevation, slope, aspect) interacts with the intact SFVS seedbank to control SFVS population dynamics. Destruction of the intact seedbank outside of the preserves will permanently disrupt the unknown combination of ecological factors that interacts with the intact SFVS seedbank as an ecological "switch" to control or influence SFVS population dynamics. The project applicant states that the seedbank outside of the preserves will be conserved at seedbank repositories (Rancho Santa Ana Botanic Garden and USDA National Seed Storage Lab) and that this is a well-established method for plant species conservation (page 136, Section 12.1, in Newhall SCP). However, the ecological "switch" or "switches" that control SFVS population dynamics will not be conserved outside of the proposed preserve system. It is possible that the intact SFVS seedbank outside of the proposed preserve system (and necessary ecological "switches" that control it) is actually "core" seedbank that is necessary for the long term persistence of the Newhall SFVS population. The proposed take of approximately 6.36 acres (31%) of the 2002 through 2007 cumulative spineflower occurrence area, including the 3.29 acres proposed by the Mission Village project, may remove "core" intact SFVS seedbank and ecological factors that are necessary to conserve the long-term viability of the Newhall SFVS population.

Lacking evidence to the contrary, the baseline assumption must be that all of the 2002 through 2007 cumulative spineflower occurrence area are necessary to conserve the population dynamics of the Newhall SFVS population. The project applicant states, "variation of spineflower abundance and area occupied from year to year is typical of annual plant species" (Mission Village DEIR page 4.3-75). The SFVS is not a typical annual plant species in that it has been extirpated from most of its known range, the entire known range of the taxon consists of two populations on 30 acres, and it is uncertain if there is any viable habitat outside of these 30 acres. The SFVS is a narrow endemic of the Western Transverse Ranges portion of the California Floristic Province that grows only on certain substrates with a specific microclimate occurring only in a restricted area under a Mediterranean-type climate. Most annual plants grow under different climatic regimes, so to lump the SFVS into a group containing all annual plants is an extreme oversimplification of the SFVS's phenology and climatic and edaphic requirements for germination. There are clearly specific ecological aspects of the SFVS life history, ecology, and population dynamics that constrain it to a very specific and limited habitat type, and thus do not make it typical of other annual plant species. The population dynamics of the SFVS cannot be adequately managed in the absence of knowledge of what these ecological aspects of the SFVS life history, ecology, and population dynamics are.

The proposed destruction of the intact SFVS seedbank and its ecological context outside of the proposed preserve system may destroy critical "core" SFVS seedbank necessary to SFVS population persistence. The USFWS reviewed the candidate status of the SFVS for listing under the Endangered Species Act on November 10, 2010[24]. The USFWS stated, "*Chorizanthe parryi* var. *fernandina* is particularly vulnerable to extinction due to its concentration in two isolated areas [Las Virgenes and Newhall]. The existence of only two areas of occurrence, and a relatively small range, makes the variety highly susceptible to extinction or extirpation from significant portion of its range due to random events such as fire, drought, erosion, or other occurrences. We retained a listing priority number 6 for *Chorizanthe parryi* var. *fernandina* due to high magnitude of non-imminent threats." DMEC argues that the proposed destruction of potential "core" SFVS seedbank by the Mission Village project constitutes an imminent threat to the Newhall SFVS population persistence, and thus to the long term persistence of the SFVS.

Table 4.3-9, Significant Impact and Mitigation Summary, of the DEIR states that impacts to SFVS will be Less Than Significant after mitigation. The direct loss of 20% to 30% of an Endangered species cannot be considered a less-than-significant impact when no attempts as establishment offsite have ever succeeded. As will shown later in these comments, the proposed mitigation will not offset the direct and indirect impacts to the SFVS.

Newhall Ranch Spineflower Conservation Plan

The San Fernando Valley Spineflower (*Chorizanthe parryi* var. *fernandina*) is an endangered species under the California Endangered Species Act (CESA) (California Fish and Game Code, Sections 2050– 2097) as of September 8, 2002. Currently it is a candidate species for federal listing under the Endangered Species Act of 1973 (FESA) (16 U.S.C. Section 1531, et seq.).

The San Fernando Valley Spineflower (SFVS) historically was more widespread, and thought extinct until its rediscovery at two locations, Ahmanson Ranch in the southeast corner of Ventura County and on Newhall Ranch (Newhall Land Properties) in western northern Los Angeles County, within the Santa Clara

[24] US Fish and Wildlife Service Review of Native Species That Are Candidates for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions; Proposed Rule. November 10, 2010.

River Valley. SFVS was discovered on Ahmanson Ranch in 1999 during a subsequent biological survey prior to development and on Newhall Ranch in 2000. The population on Ahmanson Ranch (now the Upper Las Virgenes Canyon Open Space Preserve) is no longer in direct threat from development after being acquired the Federal Government; however, potential impacts to that population (impacts associated with movie filming near preserve) still needs to be evaluated (USFWS 2008[25]). Since the Newhall Ranch contains the majority of extant natural populations of the SFVS, the proposals to develop the ranch into a new city must consider how those development plans will affect the plant.

The purpose of the Spineflower Conservation Plan (SCP) to establish a conservation and management plan to permanently protect and manage a system of preserves designed to maximize the long-term persistence of the SFVS within the project study area described below. This SCP describes a preserve system proposed by the applicant, The Newhall Land and Farming Company. The management and monitoring components of this SCP have been developed in consultation with the CDFG.

The five preserves proposed in the SCP would conserve approximately 68.6% of the cumulative SFVS occupied-area within the study area, listed in the SPC's Table 22 (taken from the SCP section 17.0 Take and Conservation, page 144).

Table 22 Conservation and Take by Project Site Using Total Footprint

Project Site	SFVS Acres to be Conserved	SFVS Acres to be Taken	Total
Specific Plan area	12.86 (74%)	4.421 (26%)	17.28
VCC	0.00 (0%)	0.85(100%)	0.85
Entrada	1.03 (49%)	1.09 (51%)	2.10
Total	**13.88 (69%)**	**6.36 (31%)**	**20.24**

"The information provided in this Plan will be used by the applicant in requesting a state permit authorizing the take of spineflower in the areas located outside designated spineflower preserves. Specifically, the applicant is requesting: (1) a Candidate Conservation Agreement from the U.S. Fish and Wildlife Service (USFWS) under FESA and (2) a section 2081(b) Incidental Take Permit from CDFG under CESA"(SCP, 1.2 Purpose and Need, page 2).

As stated in Section 1.2 Purpose and Need, on page 7 of the SCP: "The purpose and need for the Plan under the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. Section 4321, et seq.) and the Plan objectives under the California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000, et seq.) are:

> "To develop and implement a practicable/feasible comprehensive spineflower conservation plan that provides for the long-term persistence of spineflower within Newhall Land properties containing known spineflower populations."

In addition to compliance with NEPA and CEQA, the Corps and CDFG are the lead agencies involved in the preparation of the joint EIS/EIR, which addressed impacts associated the proposed project. In response

25 Fish and Wildlife Service. 50 CFR Part 17. 75176 Federal Register / Vol. 73, No. 238 / Wed, December 10, 2008 / Proposed Rules. http://www.fws.gov/endangered/pdfs/CNOR/08%20CNOR%20published%2012-10-08.pdf

to the proposed city, the CDFG, who has responsibility over state-listed species, must develop and approve a conservation plan that protects the SFVS to ensure its viability and continued existence.

As stated in the Candidate Conversation Agreement: "The purpose of this Agreement is to agree upon conservation, management, and monitoring measures ("Conservation Measures") for the spineflower, located on portions of Newhall's Enrolled Lands, described below. This Agreement is intended to benefit the spineflower, a candidate species, by obtaining Newhall's commitment to implement the Conservation Measures, which, when combined with the benefits that will be achieved by the conservation of the spineflower in the Upper Las Virgenes Canyon Open Space Preserve, **would preclude the need to list the spineflower in the future**" (Candidate Conservation Agreement, page D- 2). As pointed out below, DMEC has serious questions about whether the SCP will work as suggested and adequately conserve the SFVS in perpetuity.

DMEC previously commented on the project applicant's proposed SFVS preserve system and mitigation measures for impacts that their project will have on the Newhall SFVS population (Comments on the Spineflower Conservation Plan by DMEC on behalf of Friends of the Santa Clara River and CNPS). DMEC argued that the knowledge of SFVS population ecology necessary to design a viable preserve system to conserve the Newhall SFVS population did not exist as the project applicant contends. Since the Mission Village EIR relies so heavily on the SCP, the technical and impact assessment problems of that EIR and the SCP must be addressed here as well. The general response of the project applicant to DMEC's comments on their proposed SFVS conservation plan is summarized below.

Project applicants response to DMEC comments on the SCP (page RTC-053-65):

> "Additional information on population dynamics and seed bank function would be useful, but not necessary, to devise an effective Project-related conservation strategy for spineflower at this time, including measures to manage the proposed preserve areas. The description and analysis in the Draft SCP is based on facts, reasonable assumptions, and expert opinion and supports the conclusions and analysis in the Draft EIS/EIR."

Project applicant's response to DMEC comments on the SCP (page RTC-053-36):

> "There is adequate information about the basic ecological processes governing spineflower distribution and abundance to support the analysis and conclusions in the Draft EIS/EIR. Section 4.0 of the Draft SCP describes aspects of the species, such as distribution, abundance, existing and historical occurrences, germination, seed viability, and pollinators. Section 5.0 of the Draft SCP and Subsection 4.5.5.3 of the Draft EIS/EIR provide extensive field survey data compiled by Dudek and Associates over a six-year period (2002-2007) documenting fluctuations in occurrence and abundance over that period, evidently correlated with rainfall and fire patterns. In addition, Section 4.0 the Draft SCP describes and cites studies of spineflower pollination and other ecological investigations (Jones et al. 2002, 2004); studies by LaPierre and Wright (2000) of ants and other arthropods as potential pollinators or seed dispersers; and seed germination trials (reports included in work by Sapphos (2003))."

We anticipate that the project applicant will similarly assert that their SCP, as implemented through their proposed SFVS preserve system, is adequate "based on facts, reasonable assumptions, and expert opinion and supports the conclusions and analysis in the Draft EIS/EIR [SCP] (Project applicants response to DMEC comments on the SCP, page RTC-053-65)".

We argue that the project applicant has misinterpreted the facts and data that they have presented. The basic biological principle underlying their preserve system is that they are preserving adequate core habitat of the SFVS to conserve the population dynamics, seed bank, and overall long-term viability of the Newhall SFVS population. In fact, there is no real biological understanding of what the actual core habitat of the Newhall SFVS population and underlying core seed bank that likely sustains the population is. The population survey data presented show that population abundance and distribution fluctuates from extreme lows to extreme highs. The baseline ecological knowledge needed to predict what part of the known occupied habitat of the Newhall SFVS population is core habitat and what part of the known occupied habitat and underlying seed bank, if any, can be destroyed and assure the persistence of the Newhall SFVS population does not exist, despite the project applicant's claim that it does, or that this knowledge can be inferred from other annual plant species. The SFVS is not a typical annual plant species in that it was extirpated from most of its known range, the entire known range of the taxon consists of two populations on 30 acres, and it is uncertain if there is any viable habitat outside of these 30 acres. It also does not behave like most other annual plant species. It has specific microclimate and edaphic requirements for it to complete its life cycle successfully, which the CDFG and project applicant's "experts" do not understand and lack any expertise with.

Numerous surveys in the region have failed to find additional populations (e.g. ARCADIS 2010[26]; Bonterra Consulting 2009[27]; DMEC 2003[28], 2006[29], 2009[30]; Keane Biological Consulting 2002[31]; Ogden Environmental 1998[32]; Zander Associates 2010[33]). There are clearly specific ecological aspects of the SFVS life history, ecology, and population dynamics that constrain it to a very specific and limited habitat type, and thus do not make it typical of other annual plant species.

The proposed preserve system seems to be based largely on unspecified "expert opinion" (Project applicants response to DMEC comments on the SCP, page RTC-053-65) in the absence of ecological knowledge. The "expert opinion" is asserted by the project applicant, but not documented. DMEC argues that there is no relevant "expert opinion" available with which to design a viable conservation plan for the SFVS, because the information needed to render such an opinion does not exist.

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[26] ARCADIS. 2010. The Termo Company Significant Ecological Areas Biological Constraints Analysis: Termo Well Pads Aliso Canyon and Oat Mountain Oil Fields, Santa Susana Mountains, California. Santa Maria, California.

[27] Bonterra Consulting. 2009. Special Status Plant Survey for the Buck Gully Project Site, Corona del Mar, City of Newport Beach, Orange County, California. Pasadena, California.

[28] David Magney Environmental Consulting (DMEC). 2003. Newhall County Water District Vasquez Water Main Project: Draft Environmental Impact Report (State Clearinghouse No. 2002121116). 7 November 2003. (PN 01-0112). Ojai, California. Prepared for Newhall County Water District, Santa Clarita, California.

[29] David Magney Environmental Consulting (DMEC). 2006. Biota of Lyons Canyon Ranch, Newhall, California. 29 June 2006. (PN 03-0213.) Ojai, California. Prepared for the County of Los Angeles, Los Angeles, California, on behalf of D.R. Horton, Woodland Hills, California.

[30] David Magney Environmental Consulting (DMEC). 2009. Biological Constraints Analysis for the Howell Property, Castaic, California. 21 October 2009. (PN 09-0141.) Ojai, California. Prepared for the County of Los Angeles, Los Angeles, California, on behalf of Norman and Patricia Howell, Castaic, California.

[31] Keane Biological Consulting. 2002. Sloan Canyon School Biological Survey. Prepared for Castaic Union School District. http://www.keanebio.com/projects.html

[32] Ogden Environmental and Energy Services Co., Inc. 1998. Biological Conditions Report, Santa Susana Field Laboratory, Ventura County, California.

[33] Zander Associates Environmental Consultants. 2010. Chatsworth Reservoir Wetlands and Riparian Mitigation Program. (States that no SFVS were seen during Summer 2005, April 2006, or Summer 2010 plant surveys)

Climate Data Required to Understand Plant Ecology

Pages 4.5-51 and 4.5-1,734 of the RMDP-SCP DEIS/EIR states that climate data for Newhall Ranch were obtained from Western Regional Climate Center in 2008. An examination of the weather station site, located in the Santa Clara River Valley east of Piru, in western Los Angeles County, is at an elevation of 730 feet above sea level. The information on the weather station indicates that no temperature data are available from this station.

Climate has a tremendous influence on annual plant populations (Levine et al. 2008[34]). Freas & Kemp (1983[35]) found that annual species growing under climatic conditions similar to the SFVS have genetic coding that tells the seeds when it is appropriate and "safe" to germinate to maximize the probability of completing its life cycle. It is clear by the population dynamics shown by the data presented in the DEIR for the SFVS that it has such genetic coding to determine the best times to germinate and be successful in reproducing.

In order for ecologists to understand habitat requirements of the SFVS, demographic monitoring and population models are needed to examine how seed banking responds to natural variation in precipitation and their competitive environment. Temperature data are also a critical part of any climatic assessment and understanding of the germination and growth requirements of annual species (Levine et al. 2008) like the SFVS. As Levine et al. (2008) remind us, many annual native to California require first major rainstorms of 1 inch or more to stimulate germination to occur early in the wet season. It is critical that both temperature and precipitation are critical physical components that must be included in any study of plant ecology, particularly of annual species, to gain an accurate understanding of a plant's ecology.

The studies of the SFVS occurrences on Newhall Ranch lacked both accurate rainfall data (measured at or near the sites) and (any) temperature data. This is probably the primary reason that those that were studying the SFVS at Newhall Ranch could never understand the reasons for the population dynamics they observed.

Levine et al. (2008) conclude that, "changes in the timing and temperatures associated with the first major rains may have much stronger effects on population persistence than changes in total annual rainfall. Even if season-long precipitation remains unchanged, warmer first rains will likely mean lower germination, and lower population growth rates for all three Santa Rosa Island annuals. Our work adds to a growing body of work (Visser & Both 2005) suggesting that alteration of environmental cues may strongly determine how climate change affects plant communities." They are saying that changes in climate will affect rare annual plants like the SFVS, which can be inferred through changes in the microclimate resulting from global warming to adjacent development. Numerous studies (e.g. Aida & Gotoh 1982[36], Kalma 1974[37], Landsberg 1981[38], Oke 1976[39], Oke 1981[40], Oke 1998[41], Oke & Fuggle 1972[42], Santamouris et al. 2001[43],

[34] Levine, J.M., A.K. McEachern, and C. Cowan. 2008. Rainfall Effects on Rare Annual Plants. *Journal of Ecology* 96:795-806. http://www.lifesci.ucsb.edu/eemb/faculty/levine/publications/JofEcol96p795.pdf

[35] Freas, K.E., and Paul R. Kemp. 1983. Some Relationships Between Environmental Reliability and Seed Dormancy in Desert Annual Plants. *Journal of Ecology* 71:211-217.

[36] Aida, M., and Gotoh, K. 1982. Urban Albedo as a Function of the Urban Structure – a Two-dimensional Numerical Simulation. *Boundary Layer Meteorology* 23:415-424. Boundary Layer Meteorology 2: 290-308. *Buildings. Solar Energy* 70(3): 201-216.

[37] Kalma, J.D. 1974. An Advective Boundary-layer Model Applied to Sydney, Australia. *Boundary-Layer Meteorology* 6:351-361.

[38] Landsberg, H.E. 1981. *The Urban Climate*. Academic Press, New York.

[39] Oke, T.R. 1976. The Distinction Between Canopy and Boundary-layer Urban Heat Islands. *Atmosphere* 14:268-277.

Swaid 1991[44], and Panthi 2010[45]) have shown that climate changes dramatically, in particular temperature, when a natural area is developed.

In conclusion, it is clear that the SFVS is highly restricted in its range, only occupying about 30 acres throughout its known range. Numerous surveys have occurred in the SFVS distribution range without finding historic or new populations. Those that have studied the SFVS do NOT understand why it occurs where it does, and they do not understand what the environmental triggers are for germination. Since they do not understand the ecology of the plant, it is not logical or reasonable to conclude that they know what is necessary to conserve the plant. It is both illogical and unscientific for them to conclude that reducing the known population by 30% and surrounding five of the biggest portions of the Newhall Ranch population by urban development will not put this taxon at jeopardy of extinction.

SCP Goals and Objectives

SCP, starting on page 8, states:

> "The goal of this plan is to ensure the long-term persistence of spineflower within the project study area. As proposed by the applicant in this plan, the long-term conservation of spineflower will be achieved first by establishing a system of preserves to protect the core occurrences of spineflower in the project study area, and second, by implementing management and monitoring within an adaptive management framework to maintain or enhance the protected spineflower occurrences".

The SCP goes on to list specific goals, each supported by two or more objectives, which are listed below.

"Goal 1: Maintain or increase San Fernando Valley Spineflower populations within the preserves", which is supported by several objectives:

- "Objective 1.1 - Maintain or increase the distribution of the spineflower within each preserve
- Objective 1.2 – Maintain or increase the abundance of the spineflower within each preserve
- Objective 1.3 – Reduce or prevent the increase of identified stressors or anthropogenic factors that negatively impact spineflower individual and population performance
- Objective 1.4 – Increase understanding of the ecological factors influencing the distribution, abundance, and population persistence of the spineflower in order to inform management and monitoring within the preserves
- Objective 1.5 - Plan and conduct small scale experimental management trials to test the effects of proposed on-the-ground management treatments and evaluate effectiveness and spineflower's response"

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[40] Oke, T.R. 1981. Canyon Geometry and the Nocturnal Urban Heat Island: Comparison of Scale Model and Field Observations. *Journal of Climatology* 1(3):237-254.

[41] Oke, T.R. 1998. On the Confounding Role of Rural Wetness in Assessing Urban Effects on Climate. Second Urban Environment Symposium, Albuquerque, New Mexico, Americam Meteorological Society.

[42] Oke, T.R., and R.F. Fuggle. 1972. Comparison of Urban/Rural Counter and Net Radiation at Night. *Boundary-Layer Meteorology* 2 (1972) 290-308.

[43] Santamouris, M., N. Papanikolaou, I. Livada, I. Koronakis, C. Georgakis, A. Argiriou, and D.N. Assimakopolous. 2001. On the Impact of Urban Climate on the Energy Consumption of Urban Climate on the Energy Consumption of Buildings. *Solar Energy* 70(3), 201-216.

[44] Swaid, H. 1991. Nocturnal Variations of Air-surface Temperature Gradients for Typical Urban and Rural Surfaces. *Atmospheric Environment* 25B(3):331-341.

[45] Panthi, Jeeban. 2010. Urban Micro Climate and its Effect on Environment. Blog at http://jeebanpanthi.wordpress.com/2010/05/03/urban-micro-climate-and-its-effect-on-environment/

"Goal 2: Maintain or enhance the structure and native species composition of the native communities within the spineflower preserves". Goal 2 is supported by four objectives, one of which is subdivided into two sub-objectives:

- "Objective 2.1 - Maintain a mosaic of naturally occurring native communities within the preserves. Under this objective, management would be implemented if a 25% or greater change is observed in the absolute cover of existing native plant communities within each preserve, as measured through a combination of remote sensing and aerial mapping at 10-year intervals
- Objective 2.1(a) – Restore damaged habitats potentially capable of supporting spineflower, within the preserves
- Objective 2.1(b) – Revegetate areas within preserves that have been damaged and do not support native habitats but are unlikely to support spineflower in the future
- Objective 2.2 – Maintain or increase the absolute cover of native plant species by 15% within each preserve every 10 years
- Objective 2.3 – Maintain or increase the diversity of native plant species within each preserve by at least 15%, as measured within each preserve every 10 years
- Objective 2.4 – Increase understanding of the ecology of the native communities needed to inform management of the preserves by undertaking the studies specified as part of the adaptive management program"

"Goal 3: Facilitate the natural ecological processes required to sustain the native populations and communities in the preserves" is supported by two objectives:

- "Objective 3.1 – Maintain or enhance opportunities for migration of plant and animal populations, including spineflower, between potentially isolated preserves
- Objective 3.2 – Maintain the hydrologic conditions within the preserves"

DMEC believes that these goals have not been achieved under the current proposed preserve design. In order for the SFVS to be actually protected and preserved, much less mitigate for the proposed impacts to the species under any of the project development alternatives, except maybe the No Project alternative, the SCP must truly preserve the SFVS onsite, in perpetuity. It does not.

The shortcoming of the SCP are described below.

SFVS Knowledge Lacking

The SCP acknowledges that there is fundamentally no baseline understanding of the processes governing the distribution and abundance of the SFVS. The SCP states regarding historical knowledge of processes determining spineflower abundance: "Historical records do not include information regarding the abundance of SFVS (page 14)". Preliminary hypotheses about the processes determining SFVS distribution and abundance are based on population survey data collected from Ahmanson Ranch and the proposed project areas at Newhall (Table 2, page 14).

The SCP was developed and assessed in the project EIS/EIR. The SCP presents several biological objectives for the conservation of the SFVS as described above. Among them is, as presented on page 8 of the SCP, "Objective 1.4: Increase understanding of the ecological factors influencing the distribution, abundance, and population persistence of the spineflower in order to inform management and monitoring within the preserves". This objective should rather be to "Increase understanding of the ecological factors

influencing the distribution, abundance, and population persistence of the spineflower in order to inform management and monitoring **of the species**", and it should be the **first** objective of the SCP.

Understanding the ecology of the SFVS is vital to designing a viable preserve system. Little is known that is specific to the SFVS, much of the analysis dealing with the SFVS's phenology have been inferred based on work done with species that may have similar life histories. Therefore, many of the conclusions in the EIS/EIR, SPC, and supporting reports are based on many assumptions. While these assumptions are very helpful in creating guidelines (or strategy), they cannot be relied upon until actual scientific studies have proven them accurate. For instance, the Adaptive Management Section of the SCP relies heavily on relocation/translocation if there is a drop in the population of the SFVS. However, there was no mention if any relocation/ translocation studies have were proven successful.

The following sections describe the known ecology of the SFVS, based on prior investigations. DMEC will expose gaps in knowledge, where the SCP frequently defers to future studies. In order to set viable mitigation standards and meet the goal of ensuring the long-term persistence of spineflower, additional studies are necessary to obtain baseline knowledge of SFVS ecology and habitat predictors. The additional investigations should take place **before** preserve areas and mitigation standards are designated.

Population Dynamics

Understanding the population trends of the species and the role and extent of the seed bank across its overall range across the Newhall property should be a fundamental goal of any plan for the species conservation. The extreme population fluctuations of SFVS (e.g. fluctuating from 6.4 million individuals in 2005 to 760 individuals in 2007, Table 2 on page 14 of the SCP) indicates a population dynamic that potentially exposes the species to high extinction risk if any catastrophic event strikes the population in a low population year and the seed bank is not adequately protected. This scenario is especially true when the SFVS is confined to an isolated system of preserves and the seed bank of the species outside of these preserves is destroyed, as is the scenario proposed in the SCP.

Without understanding the population dynamics of the SFVS, the authors of the SCP cannot be certain that not only will the SFVS endure within the confounds of the preserves, but their population can increase. We feel without this knowledge, the SCP does not meet the objectives as listed above and described in the SCP.

Seedbanks and Genetics

As previously discussed, extreme population fluctuations in the SFVS were witnessed on the Ahmanson and Newhall properties. Germination of the SFVS seedbank typically occurs after late-fall and winter rains which results in winter and spring blooms, as in many other annual plant species. Seedbank and genetic information in the SCP is based on the Slender-horned Spineflower, a close relative of the SFVS. Research suggests that *in situ*, seedbanks are critical to maintaining genetic diversity among isolated populations and that population variations could indicate that seed banks make important contributions to the genetics and population biology (as suggested by Ferguson and Ellstrand (1999) for the Slender-horned Spineflower) (SCP, page 4.10-27).

While these finding are helpful in considering the role seedbanks may play, no comparable research has been done for the SFVS. More investigations into the role that seedbanks play in the SFVS's genetics and population dynamics is essential before 6.32 acres (31 %) of mapped SFVS occurrences on the Newhall property are destroyed to accommodate the proposed urban development.

The SCP authors also suggest that a genetic study be done as future research to investigate the genetic structure of the SFVS occurrence in the study area and the viability of seeds produced from self-fertilization. They claim that this genetic study will be "conducted in the near-term within a 1-year time frame or in the first year where there are sufficient aboveground populations to undertake the study" (Adaptive Management Program Module, page D-27).

The SCP does not provide sufficient management strategies to mitigate for possible loss of genetic diversity in the SFVS population. In the Adaptive Management Program Module section on the Loss of Genetic Diversity and subsequent management proposed to offset. The one strategy given is to maintain or enhance conditions for pollinators, seed dispersal and/or migration. Since they don't understand the mechanisms by which the SFVS germinates and is dispersed, they cannot assume that they can maintain or enhance these conditions. Furthermore, the preserves are so isolated from each other, dispersal and migration are not likely possible between the remaining populations.

One of the goals set forth in Objective 1.2 is to "maintain conditions conducive to persistence of a viable seed bank, in order to increase abundance and enhance long term population persistence" (SCP, page 1.2-11). There is not enough information given in the SCP to make this objective achievable.

Preserve Design, Management Activities, and Monitoring Activities

As previously discussed, the SCP identifies five proposed preserve areas to be established on Newhall Ranch (of Newhall Land Properties). The five preserves proposed in the SCP would conserve approximately 68.6% of the cumulative SFVS occupied area within the study area.

The establishment of the proposed preserves and related management and monitoring activities in the SCP are designed as mitigation for the "take" or loss of 31% of the total SFVS occurrences on the Newhall Land properties. The entire Valencia Commerce Center (VCC) population will be taken under the current plan. The SCP states in Section 17.0 Conservation and Take Estimates, Page144:

> "At VCC, neither avoidance nor minimization is practicable in order to maintain the integrity of the approved development plan. The VCC project was approved for development in 1990, half of which has been built. Spineflower observed in the VCC planning area accounted for approximately 4% of all 2002 through 2007 cumulative spineflower occurrence area."

The following subsections are critiques of the SCP preserve design, management, and monitoring activities.

PRESERVE DESIGN

Initially Dudek performed the Habitat Stability Index (HSI) in order to identify if habitat features are predictors of SFVS occurrences. The six habitat features were used to compute the HIS were vegetation, soils, geology, elevation, slope, and aspect. The results of the HSI were unsatisfactory due to either too course of data or that habitat features were not good predictors of occurrences. The SCP states, "It is possible that further studies at a finer scale may better refine the various habitat parameters differentiating occupied SFVS habitat from unoccupied areas" (SCP, page 7.1-62).

Since the HSI proved unsatisfactory, Dudek next used a representative model to evaluate the percentage contain suitable habitat within the five preserves by comparing distribution of SFVS to the six habitat features given above. However, this implies that the five preserve locations and sizes had already chosen before the representative model was used. The locations of the preserves might have been the best fit for

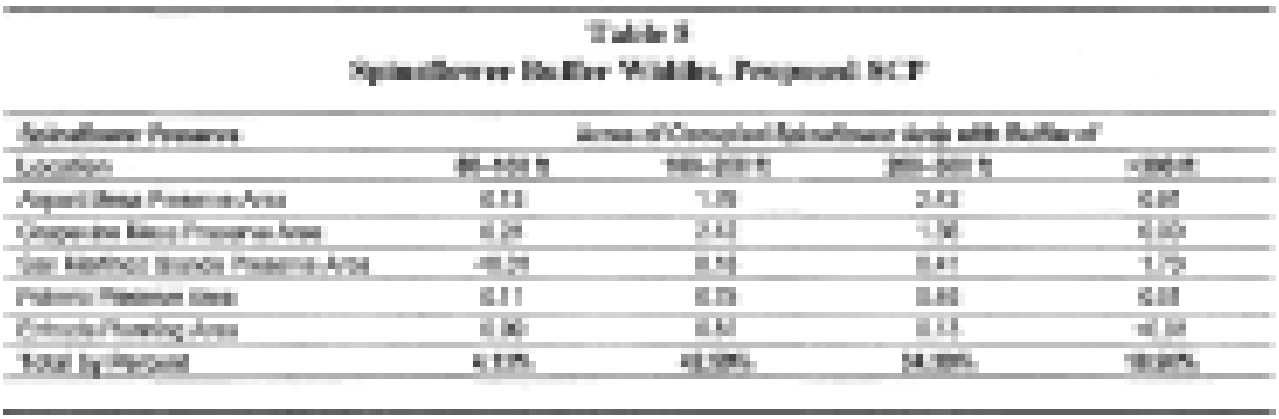
the residential developments; however, they are NOT the best fit for the long-term survival of the SFVS on Newhall Ranch. The preserves need to be significantly larger and directly connected to each other to minimize the negative influence of outside factors and variables.

BUFFER AREAS

Buffer area width can be a very complicated subject. There are many variables that all need to be fully addressed and understood before a specific number on what a buffer area should be can be applied/determined. These variables include: habitat type, pollinators, plant phenology, seed bank viability, edge effects, disturbance factors, drainage, prevailing winds, watershed (local), etc.

The proposed spineflower preserves described in the Spineflower Conservation Plan (SCP) would protect 68.6 % (13.88 acres) occupied spineflower habitat onsite. Buffer areas would be included within the preserves that would serve as protection against threats associated with edge effects from the adjacent urban development. Buffer widths where measured from the edge of the known spineflower occurrences to the nearest spineflower preserve boundary as described in the SCP.

As seen below in Table 5, taken from the Applicant Take Permit Letter[46] page 12, the proposed SFVS preserves would include buffer widths ranging from a minimum of 80 feet to more than 300 feet.



The letter states on page 12, "Within the SCP planning area, the vast majority (95.9%) of the preserved occupied area would be buffered by at least 100 feet, while 18.9% would be more than 300 feet from the nearest spineflower preserve edge". While this statement is a correct calculation, it should not be implied that the 95.9% of area buffered by at least 100 feet is acceptable for protecting the state listed plant. Based additional literature reviewed, much having to do with risk of Argentine Ant in preserve areas, we believe that buffers of 80-200 feet are inadequate to provide protection within the preserve.

The SPC states in Section 7.3 Accommodating Population Fluctuation with Preserve Areas on page 67: "In order to minimize edge effects and certain indirect impacts from development areas, a buffer zone has been incorporated within each preserve area."

There is only a brief discussion in the SCP on how they determined appropriate buffer size. The buffer areas for the SCP are based on the analysis set forth in the "Review of Potential Edge Effects on the San

[46] APPLICATION FOR INCIDENTAL TAKE PERMIT (pursuant to 14 CCR Section 783.2 and California Public Resources Code, Section 2081) Dated: May 9, 2008, page 12.

Fernando Valley Spineflower", prepared by Conservation Biology Institute (CBI 2000[47]), prepared for Ahmanson Ranch, and other sources of scientific information and analysis. Since the buffers are based on this reports findings, the SPC needs to be included in the Newhall EIS/EIR so that it can be reviewed and commented on accordingly. The CBI report is listed in the literature-cited section of the 2007 SCP, but not included in the appendices. This needs to be rectified since it is such an important component and aspect of the SFVS preserve design.

The majority of the buffer areas given for the proposed preserve areas are of 80-200 feet or more to separate the SFVS occurrences from adjacent development. The only mention of where the 80-200 feet buffer widths came from was in regards the CBI study. As stated in the Project Design Features Section of Dukes 2007 report, Relationship of Argentine Ant to Conserved San Fernando Valley Spineflower Populations (SCP, C-8):

> "to minimize initial establishment of Argentine ants adjacent to preserves, container plants to be installed within 200 feet of the preserves shall be inspected for pests, including the Argentine ant, and any plants found to be infested shall be rejected. The CBI (2000) study suggests that this measure will be moderately effective for buffer widths of 80 to 100 feet and highly effective at buffers greater than 200 feet."

Since the CBI study is not available, we cannot determine what other factors were considered when justifying suitable buffer widths, beside that of the Argentine Ant.

The following subsection on Argentine Ants will address in further detail why a minimum buffer area of 80-200 feet as suggested in the SCP, is inadequate to protect the preserves from threats and allow for sustainability of the spineflower population.

INSUFFICIENT BUFFER TO EXCLUDE ARGENTINE ANT

The presence of the Argentine Ant is not a matter of if they invade, its when they will invade, if insufficient natural, undisturbed habitat does not separate the preserves from urban environments. The SCP even states, "it is assumed that they will occur within development areas and Open Areas adjacent to the preserves in the future" (SCP, page 9.2.9-117).

DMEC believes that the 80-200 feet buffer areas applied around 46.7 % the SFVS preserves is insufficient. The Suarez et al. (1998[48]) states that a 200 m (656 ft) buffer is appropriate for preserve areas in Southern California that are adjacent to urban development. While they do cite this article in regards to other issues, there is no mention of this suggested buffer anywhere in the Dudek (2007[49]) report.

Please note these quotes from the Suarez et al. 1998 article, Effects of Fragmentation and Invasion on Native Ant Communities in Coastal Southern California:

> "The Argentine ant can spread into an area immediately after isolation from surrounding urban edges where they are most abundant. The association between Argentine ant activity and distance to the

[47] CBI (Conservation Biology Institute). 2000. Review of Potential Edge Effects on the San Fernando Valley Spineflower (*Chorizanthe parryi* var. *fernandina*). 19 January 2000. Escondido, CA.

[48] Suarez, A.V., D.T. Bolger, T.J. Case. 1998. Effects of Fragmentation and Invasion on Native Ant Communities in Coastal Southern California. *Ecology* 79(6):2041-2056.

[49] Dudek and Associates, Inc. 2007. Relationship of Argentine Ant to Conserved San Fernando Valley Spineflower Populations. December. California. Prepared for the Newhall Land and Farming Company, Valencia, California.

nearest urban edge suggests that urban reserves in coastal southern California will only be effective at maintaining natural populations of native ants at distances 200 m from an edge."

"At the urban–scrub interface, Argentine ants decrease sharply in abundance with increasing distance away from edges such that by 200m few remain."

The SCP states, "In addition, the spineflower preserves are about 25 to 30 miles from the coast and experience hotter and drier summers than the coastal areas of San Diego (i.e. within 10 to 11 miles of the coast) where Suarez et al. (1998) observed ants in all sampled areas. It is possible that the spineflower preserves in the more inland area of Santa Clarita (where the Newhall Ranch spineflower preserve areas are located) would be less susceptible to Argentine ant invasion—all else being equal—than native habitats in coastal San Diego County, although this hypothesis would need to be tested (Dudek 2007, page 7)". We assume this is their justification of why the buffer size in the Santa Clarita (frequently 80-200 ft) should be less than the buffer size recommended for the preserve in San Diego (>200 m or 656 ft) (as suggested by Suarez et al. 1998).

Additional research was done on Argentine Ants in fragmented communities in San Diego County in a 2003 report by Suarez & Case[50]. The report primarily looked to see if exotic vegetation was a contributing factor of spread of the Argentine ant into natural vegetation areas. The report states, "…in Rice Canyon (Fig. 9.4) the vegetation in the east end is predominately native, implying that the spread of Argentine ants into the habitat fragment and the subsequent loss of native species is not dependent on exotic vegetation. This is also supported at the University of California's Elliot Reserve and Torrey Pines State Park where Argentine ants have penetrated over 400 and 1000 m, respectively, into the reserves in areas dominated by native scrub vegetation (Suarez et al. 1998; J. King, unpubl.). This also highlights that the degree to which Argentine ants can penetrate into natural habitat varies depending upon the topography and abiotic conditions of the landscape. For example, in more xeric sites in Riverside County, California, Argentine ants appear only able to penetrate up to 50 m into native vegetation from neighboring urban developments (Suarez and Case, unpubl.)".

DMEC believes that Newhall Ranch falls somewhere between the coastal environments represented in the San Diego research and the xeric environments of Riverside County. Even if we were to use the Riverside County example, it still states that the Argentine Ants is able to penetrate up to 50 meters (164 feet), the proposed preserve areas don't prove sufficient buffers.

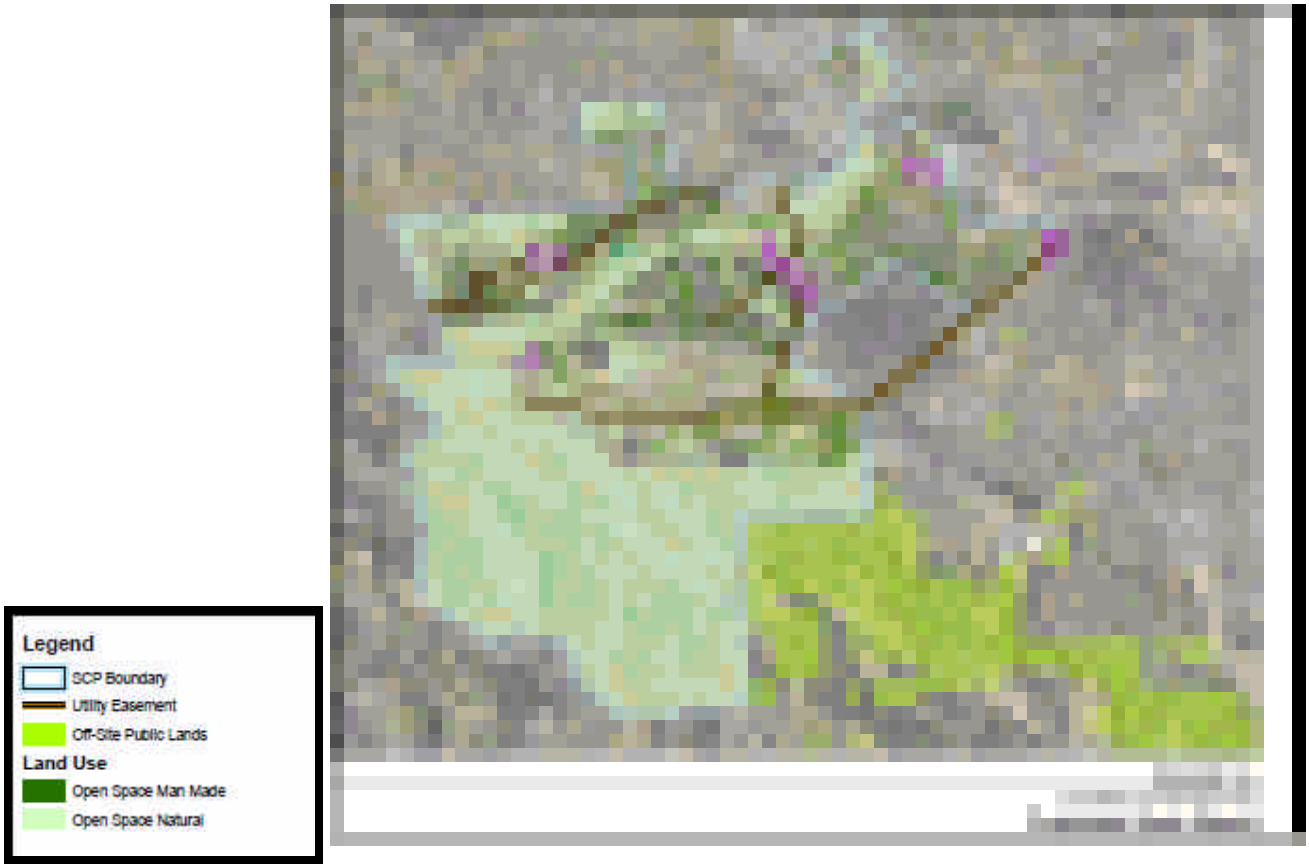
It is well documented that the invasion of the Argentine Ant is directly tied to urban development and associated irrigation (Dudek 2007). The SCP states that by maintaining a "dry zone" of 200 feet between the urban development and the preserve, the Argentine Ant will not be able to colonize. Within the "dry zone", soil moistures are maintained below 10% saturation. While they do attempt to combat the issue of the dispersal of Argentine Ant, it is still an inadequate buffer to protect against invasion.

Connectivity Between Preserves

Due to the size and shape of the SFVS core habitats in the proposed SFVS preserves, as well as the isolated patch locations, in order for the preserves to remain viable and sustainable populations it is extremely

[50] Suarez, A.V. and T.J. Case. 2003. The ecological consequences of a fragmentation mediated invasion: The Argentine Ant, *Linepithema humile*, in southern California. Pages 161-180 in G.A. Bradshaw and P. Marquet (eds.) *How landscapes change: Human disturbance and ecosystem disruptions in the Americas*. Ecological Studies, vol. 162. Springer Verlag, Berlin.

important they allow for connections to other habitat patches. To see connectivity feature as described in detail below, please refer to part of Figure 13 Proposed Open Space taken SCP, page 73. The five preserve areas area outlined in purple.



The Potrero and Grapevine Mesa Preserve Areas are both connected to the Santa Clara River corridor through lands designated as open areas. The Airport Mesa Preserve Area connects to open area via a wildlife-movement arched culvert. The SCP clearly states, "There is no direct connectivity linking the San Martinez Grande Preserve Area to natural habitat areas. A 50- to 100-foot-wide band of proposed development along San Martinez Grande Road separates the San Martinez Grande Preserve Area from a narrow open area located east of the road along the stream corridor. It is not known whether pollinators or dispersal agents would be able to cross developed lands to reach this preserve area" (SPC, page 7.1-71). The Entrada Preserve Area does have a utility easement connecting it to the Santa Clara River corridor, but the report fails to say how long this corridor is and whether it would actually function as a viable connection pathway between SFVS preserve sites. All it describes is that the corridor is 175-feet in width. From hand measurement of the Figure 13 on page 72 of the SCP, this "corridor" is approximately 5,000 feet (approximately 1 mile) to open space not on Newhall property and an additional 7,500 feet (1.4 miles) to the man-made open space on Newhall property and then continuing down the utility easement corridor another approximate 12,500 feet (2.4 miles) to the Santa Clara River corridor. This is a total of 4.8 miles to the Santa Clara River corridor.

The preserve areas fail to provide means of migration for not only the SFVS, but also other plant and animal populations. Only the Potrero and Grapevine Mesa preserves can be directly connected, but only through a long distance (approximately 13,750 feet or 2.6 miles) of open space. The other three preserves (San

Martinez, Airport, and Entrada) can only be connected through long and narrow utility easement corridors or wildlife movement corridors associated with heavily trafficked streets, and the connecting habitat is likely not suitable for SFVS, making dispersal problematic. Therefore, Objective 3.1 will not be achieved. This may result in localized extinctions and a decrease is genetic exchange for all isolated populations.

The SCP fails to address the distance between each preserve by merely stating what connectivity features are present (if any). From what can be easily observed from looking at Figure 13 (page 72) is that there are expansive distances between each of the preserves. If SFVS pollinators and seed dispersal agents cannot easily travel between preserves, the preserve design fails to allow for genetic exchange.

Much of the land use areas adjacent to the preserves are referred to as "open space" but no specific information is given. The SCP report states that, "open areas may include undeveloped land, passive and active use parks, and trails. Development plans are not currently available for open areas, and, therefore, open area land uses adjacent to the proposed spineflower preserves are not known at this time" (SPC, page 7.1-71). This is not sufficient. Land use activities adjacent to preserve will have direct influence on quality and/or long-term viability of the natural vegetation and the amount wildlife that will frequent the preserves.

Management and Monitoring Activities

The proposed management plan described in the SCP was intended to permanently protect and manage a system of preserves designed to maximize the long-term persistence of the SFVS within the project study area. Since so little is known about the ecology and habitat predictors of the SFSV, the management of the proposed preserves relies on consistent monitoring and future studies. The close proximity (80 feet at the closest point) of the preserves to urban development will result in numerous risk factors that need to be constantly monitored so not to impact SFVS populations.

Preserve Manager

The duties of the proposed preserve manager are outlined in Section 9 on page 76 of the SCP, stating, "A preserve manager will be contracted with and paid for by Newhall to perform environmental monitoring, oversee the spineflower preserve areas, and ensure the monitoring and management activities outlined herein are carried out".

Given the large amount of work that will go into maintaining the preserves and the vast amount of scientific monitoring that the SCP will entail, it seems quite unrealistic that one person could accomplish both the managerial and scientific duties necessary for adequate SFVS conservation. We recommend that minimally there be separate preserve management and scientific monitor-investigator positions be created as part of any conservation agreement reached between CDFG and Newhall.

Landscaping Adjacent to Preserves

In the Construction Plans and Specifications, Section 9.1.2 of the SCP, there is a list of measures/restrictions in order to avoid impacting SFVS during construction. One such restriction is, "Avoid planting or seeding invasive species in development areas within 200 feet of spineflower preserve areas" (SCP, page 9.1.2-110). It is incorrect to assume that the Preserve Manager can correctly manage the distribution of competing plant species in the preserves and still allow "invasive species" to be located only

200 feet from SFVS preserves. This restriction should have been stated as "avoid planting or seeding **all** invasive species within the development area and preserve areas".

As described in Section 9.2.3, the use of container plants within public areas within 200 feet of the SFVS preserves seems a meager means of protection from threats to the preserve; disease, weeds, and pests, including Argentine Ant. Inspection of all of these container plants by the Preserve Manager is simply impracticable. Much of the property adjacent to the preserves will be residential. Even with landscaping restrictions (no plants on the Cal-IPC list and their Invasive Ornamental Plants list), it is not feasible for the Preserve Manager to have to deal with landscaping associated with the homes. To do this, the Preserve Manager would also have to be responsible for inspecting the backyards of the adjacent residences. This seems like an outlandish statement; however, it is not feasible to have such tasks given to the Preserve Manager, especially when the report states "it is assumed that they (Argentine ants) will occur within development areas and Open Areas adjacent to the preserves in the future" (SCP, page 9.2.9-117).

Access

As described in Section 9.2.4, all portions of the SFVS preserves shall be closed, with the exception of pre-identified existing dirt roads and utility easements. However, next it explains that "paths proposed for use as nature trails shall have openings in the fencing at identified trailhead locations wide enough only for trail users to pass through" (page 82). This is a direct contradiction to the previous statement. The only other mention of trails is Section 9.3.3 Management of Grapevine Mesa Preserve area (page 25), where it says the existing dirt roadways m ay be incorporated into a pedestrian-only walking trail system with appropriate signage. The trail system will have to be reviewed by CDFG. CDFG needs to have more involvement then just reviewing of the plan. CDFG needs to have override authority for the review to have any meaning.

Trails through preserve areas can lead to soil compaction and possible tramping, not to mention other direct impacts to SFVS plants such as removal and destruction. The extent to which such soil disturbances affect the SFVS is still unknown. Therefore, in order to maintain the protection of the SFVS, no trails should cross the preserves.

Management for Argentine Ant

Section 9.2.9 on page 117 of the SCP states:

> "The goal of management is to preclude the invasion of Argentine ants into the preserves and their associated buffers. Controls will be implemented using an Integrated Pest Management (IPM) approach and will likely require a combination of methods. The primary management strategy focuses on prevention by maintaining an inhospitable habitat condition in the buffer between the development edge and the preserve."

As mentioned above, the CBI study suggested the 80-100 feet buffer would be moderately effective as a buffer width to protect the preserve from Argentine ants. ***Moderately*** effective is not good enough to meet the goal that will "preclude the invasion of the Argentine ant". This is especially true since **46.72%** of the SFVS occupied preserve areas would be buffered by a minimum of 200 feet (4.13% 80-100 feet and 42.59% 100-200 feet), as shown in Table 5 earlier in the letter.

Since the 200-foot "dry zone" will be located next to or within urban landscaping, the SCP will require container plants to be installed within 200 feet of the preserves. The container plants will purportedly be inspected by the Preserve Manager for pests and disease, which assumes that they can actually detect and

identify all the pests and diseases. The SCP once again cites the CBI (2000) study that "suggests that this measure will be **moderately effective** for buffer widths of 80 to 100 feet and **highly effective** at buffers greater than 200 feet (Dudek 2007). Again, the CBI study is not included in the Appendices of the SCP and we are unable to distinguish what these assumptions were based on.

Monitoring for the Argentine Ant would be performed quarterly. As discussed later in the Qualitative Monitoring of Preserve Areas, this allows for too great of a time gap to adequately detect Argentine Ant colonies in time. The report justifies this time gap based on the Suarez et al. (2001) study, in which it was shown that populations of Argentine Ant disperse at a rate of about 15 to 270 meters per year and that "quarterly monitoring for Argentine Ant should be adequate to detect incipient invasions" (Dudek 2007, page 10). If you do the math, this is around 50-885 feet in one year, even if monitored quarterly, Argentine Ant could reach the preserve areas with a buffer area of 80-200 feet in one quarter.

The report claims that the "invasions by Argentine ants, if they occur, are reversible under appropriate conditions" (Dudek 2007, page 10). There have been no studies reporting successful long-term eradicated the Argentine Ant. While restoring the level of soil saturation back to 10% might decrease the abundance of the Argentine Ant, as demonstrated in the Menke and Holway (2006) report, it will not result in full eradication. Additionally, there is no consideration that climatic conditions are highly variable and changing, and the "perfect storm" situation will happen at some time in the foreseeable future. In this case, that would be a situation where a high rainfall season, with rainfall late into the spring, occurs at the same time as Argentine Ant colonies are introduced at multiple points from irrigated landscaped areas adjacent to one or more preserves.

Restoration Activities within Preserve Areas

The SCP puts a lot of emphasis on further analysis that will be included in the Habitat Characterization Study Further (described in Appendix A of the SCP) that will better characterize the SFVS's physical and biological habitat requirements at a fine scale. "Restoration and enhancement efforts within the preserve areas shall be informed by the results of the Spineflower Habitat Characterization Study to be conducted" (SCP, page 9.2.10-118). It is our understanding from email correspondence with Jodi McGraw[51] that the habitat assessment or characterization was not implemented, at least not by her firm. If this is the case, then it is premature for preserve design and future management framework be constructed in the SCP since the basis for many of the restoration and proposed experimental trials depend on the results of this Study.

As described in Section 7.1, "it is not possible at this time to identify suitable habitat for the spineflower" (SCP, page 61). Results of the HSI were unsatisfactory and habitat studies described in Section 5.3 only narrowed down possible suitable habitat based occurrence percentages. Of these, both soil chemistry and soil texture proved not to be good predictors of whether a site represents potentially suitable habitat for the SFVS. It is not justified or reasonable that the SCP can recommend restoration and possible introduction when there is not enough scientific knowledge on what is suitable habitat for the spineflower.

[51] Jodi M. McGraw, Ph.D., Jodi McGraw Consulting, Freedom, CA, personal communication: email dated 6 August 2009 regarding status of the SFVS habitat assessment study; jodi@jodimcgrawconsulting.com.

DMEC

Monitoring Activities

The Spineflower Monitoring Program

The Spineflower Monitoring Programs (Section 11.2 of the SCP) purpose is to achieve the biological goals and objective concerning SFVS populations as addressed in Goal 1 (Section 3.0).

> "The goal of the Spineflower Monitoring Program is to provide objective, repeatable methods for collecting, analyzing, and interpreting ecologically meaningful information that can be used to evaluate the status of spineflower populations, the effectiveness of the conservation strategy, and the design of future management and monitoring, using the most cost-effective methods possible" (SCP, page 11.2-132).

While restoration and improvements made within the preserves will most likely improve growing conditions and they may allow existing SFVS populations the ability to expand, these will only be short-term expansions since the isolation of these preserves will not allow for sustainability of the species; e.g. genetic diversity.

The Spineflower Monitoring Program includes protocols for monitoring both the distribution and abundance of SFVS populations within the preserves. Monitoring will be done by mapping the areal extent of the SFVS distribution. The problem with the protocol as described on page 1 of Appendix E (Draft Monitoring Protocols) is that this will only be done every 10 years, "to reduce the potential for inter-annual variability in density to influence areal extent". Next, it states that mapping will only be conducted in "years with weather conditions appropriate for establishment and survival (i.e., years with above-average rainfall)". The parameters used to determine when mapping will occur needs to be more refined, more than just "above-average rainfall" as this is fairly nebulous, and could include years with just 0.1 inch more rainfall than average. Furthermore, the actual average rainfall at the SFVS populations is not known since no weather stations have been established at any of the population sites, or even the proposed preserve sites. California is currently experiencing a drought (with normal rainfall seasons interspersed) and even if the years post SCP approval have the conditions appropriate, there is too much room for error. Ten-year gaps in areal mapping is insufficient and only mapping in above-rainfall years is ridiculous since dramatic changes to site conditions can occur in much shorter timeframes, and by the time the Preserve Manager conducted the mapping, the damage could be irreversible.

Climate is known to play a large role in the germination of the SFVS. Therefore, it is even more important to do mapping in years with little precipitation. Since the population dynamics of the SFVS are still not well known, any opportunity to map and compare their distribution year to year will lead to a better understanding of its ecology.

The Spineflower Monitoring Program along with the implementing the general management measures (Section 9.2) still prove to be inadequate due to the insufficient buffer area size that will still allow for the invasion of threats such as the Argentine Ant.

Qualitative Monitoring Activities within Preserve Areas

The monitoring proposed, and time frame for report preparation, is not satisfactory and will allow for too much error. The SCP states, "Qualitative monitoring will be performed quarterly and include an overall review of the spineflower populations and habitats within the preserve and preserve buffer" (SCP, page 11.5-133).

Following development and residence, "quarterly monitoring shall be initiated for Argentine ants along the urban–open space interface at sentinel locations where invasions could occur (e.g., where moist microhabitats that attract Argentine ants may be created)" (SCP, page 11.5-134). As previously discussed, the SCP report states, "based on a study by Suarez et al. (2001), Argentine ant populations disperse at a rate of about 15 to 270 meters per year; therefore, quarterly monitoring for Argentine Ant should be adequate to detect incipient invasions" (SCP, page 11.5-134). This actually proves that quarterly monitoring in not adequate because by 15 to 270 meters per year (50-885 feet) ants could invade the 80-200 feet buffered areas in the first quarter.

The SCP claims, "because Argentine ants can be effectively managed within and adjacent to the preserves through general aspects of preserve design with a limited need for active management and human mediation, it is not necessary to address Argentine ants through adaptive management" (SCP, page 10.4-130). Their presence in the adjacent urban development is likely inevitable and containment will require continuous monitoring and treatment to keep out of the preserve areas. This is an inefficient use of the Preserve Manager's time, the use of larger buffers would require less labor and be much more effective in keeping the Argentine Ant out of the SFVS preserves.

The monitoring plans state that if Argentine Ant is detected during monitoring, "the qualified biologist shall distinguish between foraging ants versus nesting ants and implement appropriate direct control measures immediately to help prevent the invasion from worsening" (SCP, page 11.5-134). The training necessary for the said biologists to distinguish between ants is onerous. The plan continues to go through the next steps to be taken if ants are detected, insecticide treatment, and identify/correction the possible source of the increased moisture. However, once the ants have colonized, local treatment can prove effective to decrease volume (with the use of baits and insecticides) but full eradiation is highly **unlikely**.

The quarterly monitoring will also determine the presence or absence of native ant species within the preserves. "If native ant species are determined to be absent, further research into the cause of their disappearance will be conducted, and management measures will be developed to mitigate this effect." Ants have been shown to be effective pollinators for the SFVS, as shown in the Jones et al. (2004) study, if native ants numbers diminish there could be direct impacts on the germination of the SFVS within the preserves. Quarterly monitoring is simply too little!

As discussed in the Monitoring Results section (SCP, page 11.7-135), reports of the quarterly monitoring results are only to be prepared annually for SFVS abundance and every 10 years for SFVS distribution and vegetation in the preserves. This is just too much of a gap in distribution data for a State-listed species. The risk (extirpation) is too great to rest on such infrequent monitoring.

Spineflower Introduction Program

As stated in Section 12.0, "if CDFG determines that avoidance and minimization efforts and establishment of the preserves are not adequate to substantially lessen the significance of direct and indirect impacts to the spineflower, a reintroduction program may be implemented" (SCP, page 12.0-136).

Seed Collection

Section 12.2 calls for approximately 5% additional "seed will be collected in each preserve area each year, only in years of within 20% or greater of normal rainfall, for 10 years, beginning in the year the preserves are established". SFVS seed collection will follow the approved seed collection protocol as described in the

October 8, 2003 CDFG letter. However, they will only collect the 5% of seeds in years within 20% or greater normal rainfall, for the next 10 years" (SCP, page 12.2-136).

These seeds will be used to create additional SFVS occurrences if necessary. Section 12.3 Seeding on page 137 states, "Direct seeding will include identifying locations within the preserve areas with appropriate soils, geology, aspect, slope, and vegetation conditions that have no historical occurrences of spineflower". However, based on the earlier discussion, they don't know what these appropriate conditions are yet.

The seed generated each season will likely have slightly to significantly different genetic coding that is important for the ultimate survival of the SFVS by maintaining and reproducing the variation in the genetic code of the taxon. This variation in genetic code is a vital part of the SFVS's survival strategy, to always have some part of the seedbank germinating and producing new plants that in turn contribute to the seedbank. This genetic variability is even more important considering the expected changes in climate in California as a result of Global Warming.

Conservation of the Seed Bank

A fundamental assumption of the SCP is that the seed bank of this species outside of the preserve areas can be stored at botanical gardens and other seed repositories (SCP, page 12.1-136) and used to restore populations should the preserves fail to adequately protect SFVS populations. Protocols for restoration of SFVS populations from captive propagation are detailed in Section 12 of the SCP (Pages 136-138); however, there has been **no** study done or demonstration that reintroduction of the SFVS, or any *Chorizanthe* species, to previously unoccupied habitat or currently occupied habitat will actually work.

Spineflower Information Center

A major part of the proposed adaptive management plan is the creation of a Spineflower Information Center, a centralized data storage system with all of the relevant SFVS scientific and management data. The Spineflower Information Center should be accessible to the public so that the review of the SFVS status is transparent and can be monitored by members of the public in parallel with the SFVS specialist taskforces that are called for in the adaptive management plan.

Funding

Section 13 of the SCP, Pages107-109, concerns funding the activities outlined in the plan. The longest time horizon addressed in the plan is a 50-year projection for qualitative monitoring and monitoring report costs. There is no financial endowment contemplated or discussed for perpetual scientific monitoring and sustained spineflower preserve maintenance. Newhall is responsible for ensuring the permanent conservation of the SFVS populations on their property and a permanent sustained endowment or comparable financial mechanism to ensure sustained resources for SFVS conservation activities must be provided as part of any conservation plan.

Funding is shown in Table 20 (SCP, page 13.0-139) depicts the costs of the management measures for existing agricultural activities during construction and after construction, as well as costs associated with monitoring and reporting requirements totaling $5,829,180.00 for the next 50-years. The majority of projected costs are fixed and are calculated accordingly. However, nowhere in this assessment is there any room for error. The funding should allow for errors and for continued management after 50 years. Also,

$1 million of this is to be directed to conservation efforts at the Ahmanson Ranch/Laskey Mesa population; however, that population is already officially protected; therefore, directing a large percentage of the mitigation funding for the SFVS to a site that is already protected from development takes away from where the funding is needed even more, at the Newhall population, which is much larger, and at risk of extirpation.

As recent economic conditions have shown, availability of funds from taxes, assessments, or corporations such as Newhall Land and Farming Company, or its parent company, Lennar, cannot be depended upon when the economy sours. Therefore, a permanent endowment needs to be established and adequately funded to provide a secure and permanent source of funding to pay the salaries of the Preserve Manager, other support staff, and implement routine and adaptive management measures to protect the SFVS populations on the Newhall Ranch, in perpetuity.

To ensure adequate funding is available to manage the preserves in perpetuity, the minimum time frame that should be considered to actually be meaningful in protecting the SFVS from extinction. An endowment must be established, and funded well enough, to provide funds annually that are sufficient to fund permanent staff and implement adaptive management strategies, much less the routine maintenance required for managing any preserve. The entire costs associated with managing the SFVS preserves should be born only by the developer, not the taxpayer, since Newhall is the sole beneficiary of any issued take permit from CDFG.

SCP is Inadequate to Mitigation Impacts to SFVS

As currently written, the SCP is inadequate and fails to set forth a sound or feasible plan that can feasibly mitigation project-related impacts on the SFVS. *This results in failure of the SCP to meet CEQA requirements without a finding of overriding consideration of impacts to San Fernando Valley Spineflower survival must be rectified.*

The Spineflower Conservation Plan (SCP) states on page 7:

> "The goal of this plan is to ensure the long-term persistence of spineflower within the study area. As proposed by the applicant in this plan, the long-term conservation of spineflower will be achieved first by establishing a system of preserves to protect the core occurrences of spineflower in the study area, and second by implementing management and monitoring within an adaptive management framework to maintain or enhance the protected spineflower occurrences."

DMEC finds that the SCP is inadequate to ensure the long-term persistence of the San Fernando Valley Spineflower (SFVS) in the proposed project area. Essential knowledge needed to assure the long-term persistence of the spineflower in the proposed preserve system does not exist. The SCP defers acquisition of the knowledge needed to ensure the long-term persistence of this species into the future.

This plan does not adequately provide for mitigation of take of proposed project impacts to the long-term persistence of the SFVS. We argue that the deferral of acquiring essential knowledge needed to meet the fundamental goal of the SCP (i.e. ensuring the long-term persistence of the species) is in practice deferring overall formulation of a viable mitigation plan for proposed impacts to the SFVS by the project applicant. Deferral of formulation of a mitigation plan is a violation of CEQA (CEQA Guidelines Section 15126.4).

In the absence of a viable mitigation plan, a finding of overriding consideration must be found in regards to SFVS in order for this EIS/EIR to be in compliance with CEQA (citation). The Lead Agency must make

findings that the value of this project (Newhall Specific Area Plan and related developments) is more important than the survival of the SFVS to justify the take of the species.

The implementation of the SCP fundamentally depends upon meeting Goal 1 and attendant objectives needed to implement this goal. The goals are listed earlier in this letter.

The other goals in the SCP are subsidiary to attaining the success of Goal 1 (Maintaining or increasing spineflower populations within the preserves) and the objectives needed to implement it. We thus focus this critique on the problems with Goal 1 and its objectives, which render the SCP inoperative as a valid mitigation plan under CEQA.

Lack of Adequate Data

As discussed above, understanding the population trends of the species and the role and extent of the seed bank across its overall range across the Newhall property should be a fundamental goal of any plan for the species conservation. There is a serious lack of adequate data to implement the primary goal and objectives of the SCP.

The SCP acknowledges that there is fundamentally no baseline understanding of the processes governing the distribution and abundance of the SFVS. Also stated above, analysis of population survey data has yielded the initial conclusion regarding ecological processes controlling spineflower distribution and abundance: "More data is [sic] needed, but the preliminary interpretation is that preferred spineflower location is controlled by intrinsic environmental characteristics (e.g. soil type), while population density (and, in turn, actual numbers of individuals) is controlled by extrinsic environmental characteristics (e.g. rainfall) (Pages15-16)". The basic ecological processes controlling SFVS distribution and abundance remain fundamentally unknown and the current state of knowledge of these processes is most directly summarized by the authors of the SCP in this statement: "Many gaps remain in the understanding of the ecology of the spineflower, making it difficult to devise management strategies to prevent its extirpation, and to design efficacious monitoring protocols (SCP, page 8)".

The primary goal and objectives of the Spineflower Conservation Plan cannot be met with existing knowledge and thus the SCP cannot meet CEQA requirements. Objective 1.1 and Objective 1.2 imply that the fundamental baseline knowledge of the ecological processes controlling SFVS distribution and abundance needed to manage these processes exists. As illustrated above, this baseline knowledge does not currently exist. We cannot assume that we have the requisite knowledge to increase or maintain SFVS distribution or abundance and thus cannot codify these processes as management goals until this knowledge exists as Objective 1.1 and Objective 1.2 currently do.

There is no knowledge of how to maintain or increase SFVS distribution or abundance as the SCP goals imply. These goals are not practicable and thus the fundamental assumptions of the SCP are not viable or valid. The research needed to acquire the necessary knowledge to maintain SFVS distribution and abundance is deferred to future studies (e.g. Goals 1.4 and 1.5). The reality of the SCP is that the knowledge and management practices needed to make it a viable mitigation tool are deferred to the future. This is a violation of CEQA Guidelines Section 15126.4 and negates the validity of this SCP.

We provide a detailed critique below of the areas in which the fundamental baseline knowledge of the ecological processes controlling SFVS distribution and abundance are deficient for implementing the SCP as currently written.

1. Failure of Reintroduction as a Viable Spineflower Mitigation Strategy

There has been **no** study done or demonstration that reintroduction of the SFVS, or any *Chorizanthe* species, to previously unoccupied habitat or currently occupied habitat will actually work.

Before destruction of any known part of the SFVS population is contemplated, much less permitted, demonstration that the SFVS seed bank can be successfully stored and sustainably reintroduced to the wild **must be demonstrated.** Fiedler (1991[52]) surveyed the effectiveness of reintroduction of Californian special-status plant species as a mitigation strategy and concluded that "it is suggested that because of the lack of or limited success of most of the transplantation, reintroduction, or restoration attempts documented, and the uncertainty of many of the on-going projects, the Endangered Plant Program of the California Department of Fish and Game's Natural Heritage Division should remain extremely cautious in any mitigation agreement that will allow any of these techniques to serve as mitigation for project impacts". There are no data presented in this plan that the proposed mitigation for destruction of the SFVS seed bank outside of the preserve areas will work.

In the Spineflower Draft Conservation Agreement (page 18), the authors state:

> "Although the reintroduction program is experimental at this stage, the parties consider such a program to be a feasible form of conservation at this juncture based upon available studies."

The authors do not cite any specific studies that validate their conclusion that a reintroduction program is feasible. There are no baseline data extant that collection and storage of the SFVS seedbank is a viable conservation strategy. There is no valid scientific logic presented to support the applicant's assertion that reintroduction is a viable conservation plan for the spineflower.

All knowledge and demonstration that reintroduction is a viable conservation strategy is deferred to the future and thus invalidates reintroduction as a viable mitigation strategy under CEQA Guidelines Section 15126.4. Proceeding with reintroduction strategies with the current lack of knowledge that they are viable would result in the destruction of 6.32 acres (31 %) of mapped SFVS occurrences on the Newhall property and the associated SFVS seedbank underlying these known SFVS population occurrences. The destruction of this seedbank cannot be mitigated for with the current lack of ecological knowledge.

The SCP puts much emphasis on further analysis that will be included in the Habitat Characterization Study. It is our understanding from email correspondence with Jodi McGraw, the designer of the proposed study that the habitat assessment or characterization was not implemented. If this is the case, then it is premature for preserve design and future management framework be constructed in the SCP since the basis for many of the restoration and proposed experimental trials depend on the results of this Study.

It is not justified or reasonable that the SCP can recommend restoration and possible introduction when there is not enough scientific knowledge on what is suitable habitat for the SFVS.

2. Lack of Knowledge About Genetics

There is a lack of knowledge about genetic structure and diversity of the SFVS seedbank, which is needed for adequate management of SFVS abundance and diversity. As discussed extreme population fluctuations occur in spineflower populations. Germination of the SFVS seedbank typically occurs after late-fall and winter rains which results in winter and spring blooms, as in many other annual plant species. Research on

[52] Fiedler, P. 1991. Mitigation Related Transplantation, Translocation and Reintroduction Projects Involving Endangered and Threatened and Rare Plant Species in California. California Department of Fish and Game, Sacramento, California.

the Slender-horned Spineflower suggests that seedbanks are critical for maintaining genetic diversity among isolated populations and that population variations could indicate that seed banks make important contributions to the genetics and population biology (SCP, page 4.10-27). No comparable research has been done for the SFVS. More investigations into the role that seedbanks play in the SFVS's genetics and population dynamics is essential before 6.32 acres (31 %) of mapped SFVS occurrences on the Newhall property are destroyed to accommodate the proposed urban development.

The SCP authors suggest that genetic studies will be done to understand the baseline genetic structure of the population and investigate the genetic viability of seeds produced by self-fertilization. The authors state that these genetic studies will be "conducted in the near-term within a 1-year time frame or in the first year where there are sufficient aboveground populations to undertake the study" (Adaptive Management Program Module, page D-27). We are not aware of any technology or methodology that would allow complex genetic studies such as the ones proposed to be completed in the one year time frame indicated. We argue that the genetic knowledge the authors say is needed for SFVS management should be conducted prior to the approval of any mitigation plan and not be allowed as a vague afterthought in an unrealistic timeline as is proposed in the SCP.

3. Pollination Not Fully Understood and Existing Data Not Used

A pollination study was conducted on the Newhall property (Jones et al. 2004[53]), the results showed variation in pollinators present depended on location (three study sites) and season. Among the most common visitors to the study sites were ants, flies, and beetles. Honeybees were also shown to be effective pollinators although their numbers weren't as prevalent as the other three pollinators were.

Jones et al. (2004) also performed a lab experiment to evaluate the effectiveness of ants as SFVS pollinators. The results confirmed ants to be not only effective pollinators, it also proved that when the plant was alone it was able to self pollinate. These results are important since the pollination of the SFVS is still relatively unknown and any impacts to potential pollinators need to be mitigated as part of the SCP.

The invasion by the Argentine Ant is one of the threats to the pollinators with in the proposed preserves. The Argentine Ant is associated with urban development (Dudek 2007[54], Section 6, C-11). Invasions by the Argentine Ant often results in the displacement of existing invertebrates that serves as seed predators and are effective as seed dispersers. page D-47 of the Adaptive Management Program Module addresses the threat of the Argentine Ant, stating, "In coastal San Diego county, Argentine ants were ineffective in safely dispersing seeds of the myrmecochorous tree poppy (*Dendromecon rigida*) relative to displaced native harvester ant (*Pogonomyrmex subnitidus*) as seeds left by Argentine ants were not sufficiently buried to avoid subsequent predation at the soil surface".

The EIS/EIR spent a fair amount of time describing the threat of the Argentine Ant (Relationship of Argentine Ant to Conserved San Fernando Valley Spineflower Population, Dukek 2007) and plans to manage them; however, the EIS/EIR basically ignored the roll of other pollinators, and how they would be impacted by the project. Flies and beetles were also found to be the most common visitors along with ants and honeybees depending on what seasons the pollination studies were conducted. For example, the only

[53] Jones, C.E., S. Walker, F. Shropshire, R. Allen, D. Sandquist, and J. Luttrell. 2004. Newhall Ranch Investigation of the San Fernando Valley Spineflower, Chorizanthe parryi var. fernandina (S. Watson) Jepson.

[54] Dudek and Associates, Inc. 2007. Relationship of Argentine Ant to Conserved San Fernando Valley Spineflower Populations. December. California. Prepared for the Newhall Land and Farming Company, Valencia, California.

time honeybees are mentioned is on page D-25 of the Adaptive Management Program Module, Loss of Genetic Diversity:

> "European honeybees have been observed visiting spineflower's at the Laskey Mesa site (Jones et al. 2002) and may be able to transfer pollen between preserves. It is believed that European honey bees currently may be experiencing colony collapse syndrome, and pollination relying upon them therefore may be tenuous."

Page 5, paragraph 2, Section 3.8 Phenology, Seed Production and Pollination, states, "However, ants are not efficient pollinators, and the rate of fruit set measured by researchers was high, which would indicate another, more effective pollinator was visiting the plants (USFWS 2004)". This statement alone is strong evidence that the SCP should have examined in greater detail what other pollinators are present, and the EIS/EIR should have assessed how the proposed project would impact those pollinators.

The preserves need to be large enough to ensure viable populations of SFVS pollinators existing onsite, and will persist onsite over the long term.

4. Seed Dispersal

Little is known about dispersal of SFVS seeds. As discussed above, Argentine Ants may pose a threat to native SFVS seed dispersers. Potential interactive effects of granivory and invasion by the Argentine Ant, which may displace native invertebrate granivores, could be significant. In addition, trapping studies conducted by Sapphos in 2001 on Ahmanson Ranch did not clarify whether small mammals play a role in SFVS seed dispersal (SCP, page 4.9-27).

DMEC believes that the buffer areas as proposed under the current plan will be inadequate protection from the invasion of the Argentine Ant within the preserves areas. There will be further discussions on the threat of Argentine Ant and a critique of the Integrated Pest Management (IPM) proposed later in the letter.

5. Soils

With the use of a representative model described later, Dudek found that SFVS occurrences varied among combinations of sandy and gravelly silt and clay loams as discussed in Section 5.3.2 of the SCP. Soil texture and soil chemistry both proved not to be good predictors of whether a site represents potentially suitable habitat for SFVS.

On both the Ahmanson Ranch and Newhall Land properties, SFVS is also in areas with disturbed soils and in areas disturbed by fossorial rodent activity. The SCP suggests that soil disturbances might also directly facilitate spineflower performance by increasing soil nutrients (J. McGraw, unpublished data) (Adaptive Management Module D-51). It is possible that SFVS relies on fossorial rodents since SFVS was found often occurring in areas disturbed by fossorial rodent activity. The size of the preserves may impact the rodent populations if they are too small.

It is clear that more investigation needs to focus on the soil requirements of the SFVS, especially since SCP suggests that enhancement should occur if there is a decrease in SFVS populations within the preserves. There is not information to make these important decisions.

6. Elevation, Slope, and Aspect

The SFVS occurs primarily on slopes with a south-facing aspect. These southern exposures experience more sunlight and heat (solar insolation), which leads to less dense herbaceous growth and/or less dense vegetation when compared to areas with a northern exposure. Therefore, SFVS's tendency to occur on these slope exposures may be due to the prevalence of more sparsely vegetated habitat areas on hotter, drier slopes (SCP, page 4.6-23).

7. Competition

Dudek found that the majority of co-occurring species in 2007 were non-native annual species, suggesting the similarity of ecological requirements and the potential that competitive effects of non-native plants may be especially important in years of below-average rainfall (SCP, page 4.7-23). However, without focused ecological studies and soils analysis, the actual relationships will remain speculative at best. It has been hypothesized that European grasses dominating California landscapes are present and thriving as a result of an increase in soil nitrogen originating from smog. If that excess nitrogen in the soil is depleted, many of those alien species may die off, or at least be reduced in density, which will return the advantage to California native species.

8. Predators

There is currently no evidence that disease or predation are factors affecting the SFVS. Heavy grazing activities have taken place on both the former Ahmanson Ranch site and Newhall's property for many decades. The SCP states, "these factors are not applicable threats to survival of the spineflower" (CCA[55], page 4.1.3-8).

The SCP defers to the Habitat Characterization Study to document the extent of herbivory and to address possible SFVS browsing, effects of herbivory and management for SFVS plants. This study was to be conducted in Spring 2008. To our knowledge this study has not been done (Jody McGraw pers. comm.[56]); therefore, there is not enough evidence to state the extent of herbivory and if a threat to the SFVS.

We can infer from the proposed preserve design that it will result in isolated patches of habitat and lead to impaired connectivity between preserves. This will likely result in declines in the top predators (Mountain Lion, Coyote, Bobcat, raptors) and further result in an increase of small mammal prey species and an increase in herbivory. An increase in herbivory by these prey species could lead to increased competition with invertebrates species that are thought to be potential seed dispersers of the SFVS.

Though the Adaptive Management Program Module section on Herbivory and Seed Predation (D-48) maintains that, "maintenance of large core open-space areas (i.e., High Country Special Management Area (SMA), Salt Creek area, and River Corridor SMA) and biological connectivity between preserves is intended to maintain the presence of top predators, such as raptors, coyotes, and bobcats and would prevent the occurrence of predator release within the preserves", the preserves are located so far apart that this is not likely.

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[55] The Newhall Land And Farming Company, "Draft Newhall Land Candidate Conservation Agreement for San Fernando Valley Spineflower" (February 14, 2008)

[56] Jodi M. McGraw, Ph.D., Jodi McGraw Consulting, Freedom, CA, personal communication: email dated 6 August 2009 regarding status of the SFVS habitat assessment study; jodi@jodimcgrawconsulting.com.

DMEC

9. Climate

Section 11.6 Local and Regional Weather Conditions (SCP, page 11.6-135) states,

"Rain gauges and possibly other basic measurement devices for measuring temperature and soil moisture will be installed on the preserves to ensure that local environmental conditions are being accurately monitored. Because Santa Ana winds may play a role in interacting with drought conditions to reduce survival at critical times, data on wind conditions will also be tracked."

As has been shown by population data gathered to date, the SFVS population varies wildly from year to year, as is typical for many annual species of Mediterranean and desert climates. Exactly what environmental cues the SFVS is responding to stimulate germination is unknown. So far, the trend, from sampling data, is one of decline, suggesting that drought conditions do not stimulate seed germination (which may seem obvious); however, there have not been enough sampling for enough years to cover a typical climate cycle of drought periods and wet periods to identify any clear patterns.

No site-specific climatic data have been gathered at any of the SFVS populations. Precipitation data exist only from established weather stations, which are widely scattered and none close to the SFVS population sites. The nearest self-recording weather stations are Los Angeles Department of Water and Power's Newhall-Soledad (406) and Del Valle (446) stations, both at least 5 miles from the nearest SFVS population. The nearest raingage is at the Valencia Reclamation Plan (1263) at 1,000 feet above mean sea level, which is checked manually on a daily basis. Another nearby station, an automatic recording station, is at Castaic Junction (1012B), at 1,005 feet above mean sea level. Precipitation data from these stations may be useful for determining actual rainfall on the nearby SFVS populations; however, the usefulness of this nearby station may provide erroneous data since the topographic position of this site is different than most of the SFVS population sites.

Precipitation is extremely variable in where and how much falls in any given storm, varying significantly from mile to mile and with relatively small changes in elevation and slope aspect. This means that simply using the nearest weather station data as the means to determine precipitation and temperatures at the SFVS populations may very well provide misleading or incorrect information in determining the actual ecological conditions existing at one or more of the SFVS population sites.

The SCP authors acknowledge that they have not addressed the potential implications of climate change in their plan:

"Anthropogenic contributions to global climate change are generally accepted by the scientific community, and these changes over time may influence the type and composition of native vegetation communities as well as other aspects of the natural environment in Southern California. Although it is an objective of this plan to prevent anthropogenic changes to the naturally-occurring communities within the preserves, management of the preserves is not intended to reverse or slow changes that are the result from global climate change."

This blanket dismissal of the potential affects of climate change on SFVS persistence seems completely inadequate. The question of whether the potentially suitable or unoccupied habitat set aside in the preserves is adequate to control for potential movements of SFVS populations due to climate change should be addressed in the SCP. The adaptive management framework proposed in the SCP is designed to contemplate future uncertainty in SFVS population dynamics. It is unclear why potential effects of climate change are not addressed within the adaptive management framework and they should be.

Page 4.3-306 Mission Village DEIR, Mitigation Measure SP 4.6-66 states: "Direct impacts to known spineflower populations within the Newhall Ranch Specific Plan area shall be avoided or minimized through the establishment of one or more onsite preserves that are configured to ensure the continued existence of the species in perpetuity. Preserve(s) shall be delineated in consultation with the County and CDFG, and will likely require changes and revisions to Specific Plan development footprints for lands within and around the Spineflower Mitigation Area Overlay (Figure 2.6-8).

"Delineation of the boundaries of Newhall Ranch spineflower preserve(s) for the entire Specific Plan area shall be completed in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesas Village, or that portion of Riverwood Village in which the San Martinez spineflower population occurs.

"A sufficient number of known spineflower populations shall be included within the Newhall Ranch spineflower preserve(s) in order to ensure the continued existence of the species in perpetuity. The conservation of known spineflower populations shall be established in consultation with the County and CDFG, and as consistent with standards governing issuance of an incidental take permit for spineflower pursuant to Fish and Game Code Section 2081, subdivision (b).

"In addition to conservation of known populations, spineflower shall be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s). The creation of introduced populations shall require seed collection and/or top soil at impacted spineflower locations and nursery propagation to increase seed and sowing of seed. The seed collection activities, and the maintenance of the bulk seed repository, shall be approved in advance by the County and CDFG.

"Once the boundaries of the Newhall Ranch spineflower preserve(s) are delineated, the project applicant, or its designee, shall be responsible for conducting a Spineflower population census within the Newhall Ranch spineflower preserve(s) annually for 10 years. (These census surveys shall be in addition to the surveys required by Mitigation Measure 4.6-53, above.) The yearly spineflower population census documentation shall be submitted to the County and CDFG, and maintained by the project applicant, or its designee. If there are any persistent population declines documented in the annual population census reports, the project applicant, or its designee, shall be responsible for conducting an assessment of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. In no event, however, shall project-related activities jeopardize the continued existence of the Newhall Ranch spineflower populations. If a persistent population decline is documented, such as a trend in steady population decline that persists for a period of 5 consecutive years, or a substantial drop in population is detected over a 10-year period, spineflower may be introduced in consultation with CDFG in appropriate habitat and soils in the Newhall Ranch preserve(s), utilizing the bulk spineflower seed repository, together with other required management activity or activities. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County and CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management activity or activities, including monitoring, as approved by the County and CDFG.

"Annual viability reports shall be submitted to the County and CDFG for 10 years following delineation of the Newhall Ranch spineflower preserve(s) to ensure long-term documentation of the spineflower population status within the Newhall Ranch preserve(s). In the event annual status reports indicate the spineflower population within the Newhall Ranch preserve(s) is not stable and

viable 10 years following delineation of the spineflower preserve(s), the project applicant, or its designee, shall continue to submit annual status reports to the County and CDFG for a period of no less than an additional 5 years."

As stated in this comment letter, there simply is not enough known about the ecology of this plant to rely on the SCP to conserve this species. There is no evidence that planting seeds will succeed. Why hasn't Newhall and CDFG run planting trials yet? This is a critical part of the SCP, yet there is no evidence that such a crucial part of the plan will be viable. So much of the SCP is based on inadequate or junk science that a real scientist wouldn't even consider putting a species at risk without running trials. Newhall has had plenty of time to do so.

Locally Rare Plants Not Adequately Assessed

The DEIR did not adequately consider or assess project-related impacts on locally rare plant species. A review of the list of plants observed at the project site finds several problems, some of which are easily rectified, and others requiring significant revisions. First, a large number of vascular plants were not fully identified to subspecies or variety, which is necessary to understand which taxon is present, and if that taxon is a rare species meeting the intent and definition of rare under CEQA. Second, no consideration or discussion or assessment is given to species that are rare regionally or within Los Angeles County. DMEC's preliminary assessment of the species present found several plant taxa that should be considered as significant resources, and assessed accordingly.

Based on reviewing Appendix B of SCP DEIS/EIR Appendix F, a list of vascular plants that are not fully identified and may be rare in the region and/or Los Angeles County of which some subspecies or varieties are rare:

Chaenactis glabriuscula – which variety?
Chrysothamnus nauseosus – which subspecies?
Heterotheca sessiliflora – which subspecies?
Lessingia glandulifera – which variety?
Stephanomeria exigua – which subspecies?
Pectocarya linearis – which subspecies?
Plagiobothrys collinus – which variety?
Lepidium virginicum – which variety?
Lonicera subspicata – which variety?
Symphoricarpos sp. – which species?
Spergularia sp. – which species?
Atriplex canescens – which subspecies?
Atriplex lentiformis – which variety?
Dudleya cymosa – which subspecies?
Astragalus trichopodus – which variety? uncommon in Ventura County (Magney 2010)
Lathyrus vestitus – which subspecies?
Lupinus excubitus – variety *excubitus*? Should we assume this variety since variety *hallii* is also listed?
Trifolium sp. – which species?
Trifolium albopurpureum – which variety?
Trifolium gracilentum – which variety?
Ribes aureum – which variety?

Ribes malvaceum – which variety?
Nemophila menziesii – which variety?
Phacelia cicutaria – which variety? Rare in Ventura County (Magney 2010)
Phacelia ramosissima – which variety?
Stachys ajugoides –variety *ajugoides*? Should we assume this variety since variety *rigida* is also listed?
Mentzelia sp. – which species?
Camissonia boothii – which subspecies?
Clarkia purpurea – which subspecies?
Oenothera elata – which subspecies?
Orobanche sp. – which species?
Leptodactylon californicum – which subspecies?
Navarretia ojaiensis in not on the species list; however, it is assessed as a special-status species in the EIS/EIR, but not in the Mission Village DEIR.
Rumex salicifolius – which variety?
Calyptridium – which species?
Claytonia parviflora – which subspecies?
Claytonia perfoliata – which subspecies?
Ceanothus tomentosus – which variety?
Cercocarpus betuloides – which variety? Two varieties are listed below this entry on Appendix B of Appendix F of the SCP DEIR/EIS, including variety *betuloides*, so which other variety could it be?
Prunus ilicifolia – which variety?
Galium angustifolium – which subspecies?
Salix lasiolepis – which variety?
Antirrhinum coulterianum – which subspecies?
Castilleja densiflora – which subspecies?
Cordylanthus rigidus – which subspecies?
Linaria canadensis – which subspecies?
Mimulus aurantiacus –variety *aurantiacus*? Should we assume this variety since variety *pubescens* is also listed?
Urtica dioica – which subspecies?
Carex sp. – which species?
Scirpus acutus – which variety? Rare in Ventura County (Magney 2010)
Juncus sp. – which species?
Juncus balticus – which variety?
Bloomeria crocea – which variety?
Dichelostemma capitatum – which variety?
Bromus catharticus – which variety? Variety *catharticus* is already listed.
Eragrostis mexicana – which variety?

If any of these taxa have ten or fewer populations in Los Angeles County, they should be evaluated as potentially locally rare, and losses to one or more populations should be considered significant, and appropriately mitigated. Nothing in the CEQA Guidelines state that impact assessments will only consider impacts to species that are rare statewide or globally. Certainly, such species must be evaluated; however, the intent of CEQA is to document and evaluate a project's impacts on biological resources. This requires the consulting biologists to actually think and evaluate the impacts the Mission Village project will have on the biological resources onsite. Organizing this assessment into categories and boxes in necessary to clearly

and simply explain the resources present and the project's impacts on them, but it does not mean that the biologists should simply ignore them as has been done at Newhall Ranch.

Below is a list of 35 vascular plants listed in the SCP DEIR or supporting documents that are rare in the region and/or Los Angeles County but where not evaluated as sensitive biological resources pursuant to CEQA:

Juniperus californica – While this species is relatively common in the desert portions of Los Angeles County and southern California, this occurrence on Newhall Ranch represents the southwestern-most occurrence of this species. The limits of a species range, and a disjunct population such as on Newhall Ranch, represents a significant botanical resource that should be assessed. This status is the similar to that for *Artemisia tridentata* ssp. *parishii*, which is treated as a special-status species.

Amaranthus palmeri - uncommon in Ventura County (Magney 2010[57]); there are only 11 vouchered records for this species in Los Angeles County (Consortium of California Herbaria 2010[58]), representing 8 populations of which only 2 are extant, plus the Newhall Ranch populations, meaning that this taxon should be considered rare in Los Angeles County.

Amaranthus powellii - uncommon in Ventura County (Magney 2010); rare in Los Angeles County with 8 vouchered populations, all but one of which where made over 80 years ago (Consortium of California Herbaria 2010) and most are likely extirpated. The Newhall Ranch population is possibly the only extant population and it should be treated as rare in Los Angeles County.

Baccharis sarothroides – not in Ventura County; there are only 2 known populations in Los Angeles County is on the project site (Consortium of California Herbaria 2010); therefore, it should be treated as a rare species.

Helianthus californicus – not in Ventura County; rare in Los Angeles County with only 3 known populations (Consortium of California Herbaria 2010). This species should be treated as a rare species.

Pluchea sericea – rare in Ventura County (Magney 2010); represented by only about 10 extant populations in Los Angeles County (Consortium of California Herbaria 2010) and should be treated as a rare species.

Wyethia ovata – could this be misidentified? – *Balsamorhiza deltoidea* occurs in Ventura County and looks similar to *Wyethia ovata*. *Balsamorhiza is* scattered (not rare) in northern Ventura County but *W. ovata* is not known from Ventura County. This population represents an extralimital population well below its known elevational range and should be treated as a rare species.

Opuntia basilaris* var. *ramosa – not found in Ventura County; only known occurrence in Los Angeles County; this taxon should be treated as a rare species. Appendix B of Appendix F lists *Opuntia basilaris* var. *ramosa* as present on Newhall Ranch; however, there is no explanation as why this variety is listed when many taxonomic sources place it as a synonym of *Opuntia basilaris* var. *basilaris*. It is not listed in the flora for the Liebre Mountains (Boyd 1999[59]), which only includes the northeast and easternmost portions of Newhall Ranch. The only collections of this variety deposited and reported in the Consortium of California Herbaria (CCH) online database[60] are from San Diego County, collected by Mark Elvin.

[57] Magney, D.L. 2010. Checklist of Ventura County Rare Plants. 9 October 2010, Eighteenth edition. California Native Plant Society, Channel Islands Chapter, Ojai, California. Published on www.cnpsci.org.

[58] Consortium of California Herbaria. 20107. Database search of California public herbaria 30 December 2010. Jepson Herbarium, University of California, Berkeley. (http://ucjeps.berkeley.edu/consortium/)

[59] Boyd, S. 1999. *Vascular Flora of the Liebre Mountains, Western Transverse Ranges, California*. November. Rancho Santa Ana Botanic Garden, Claremont, California.

[60] Consortium of California Herbaria online database search: http://ucjeps.berkeley.edu/consortium/ dated 25 August 2009 for *Opuntia basilaris* var. *ramosa*.

Sanders (pers. comm. 2009[61]) believes the Newhall Ranch populations of *Opuntia basilaris* are unique, and best fit under the description for *Opuntia basilaris* var. *ramosa*. The actual identity is unknown; therefore, it should be treated as a special-status species.

Opuntia californica* var. *parkeri – not found in Ventura County; Newhall Ranch site it the only other known occurrence in Los Angeles County and should be treated as a rare species. Appendix B of Appendix F lists *Opuntia californica* var. *parkeri* as present on Newhall Ranch. This variety should be considered a special-status species. There are only a very small number of known populations in California, from San Diego County and western Riverside County (Consortium of California Herbaria online database (2009[62]). If this taxon was indeed found on Newhall Ranch, then it should be treated as a special-status species.

Loeflingia squarrosa* var. *squarrosa– rare in Ventura County (Magney 2010), rare in Liebre Mountains (Boyd 1999, Magney 2003[63]), with only 8 known populations in Los Angeles County (Consortium of California Herbaria 2010) and should be treated as a special-status species in the EIR.

Atriplex serenana* var. *serenana – rare in Ventura County (Magney 2010); represented by only 10 populations in Los Angeles County (Consortium of California Herbaria 2010) and should be considered as a rare species.

Atriplex triangularis – uncommon in Ventura County (Magney 2010); represented in Los Angeles County by about only about 9 extant populations at most (Consortium of California Herbaria 2010) and should be treated as a rare species.

Vicia hassei – rare in Ventura County (Magney 2010); represented in Los Angeles County by about only 9 extant populations at most (Consortium of California Herbaria 2010) and should be treated as a rare species.

Stachys ajugoides* var. *rigida – rare in Ventura County (Magney 2010); represented in Los Angeles County by about 9 populations, most of which are based on vouchers over 60 years old (Consortium of California Herbaria 2010[64]); this taxon should be treated as a rare species in the EIS/EIR.

Malacothamnus fasciculatus* ssp. *laxiflorus – rare in Ventura County (Magney 2010); represented in Los Angeles County by only 6 populations (Consortium of California Herbaria 2010); this taxon should be treated as a rare species.

Clarkia speciosa – rare in Ventura County (Magney 2010) with only one population; Newhall Ranch collection represent the only known population in Los Angeles County (Consortium of California Herbaria 2010); this species is rare in Los Angeles County and should be treated as such in the EIR.

Orobanche parishii* ssp. *parishii – rare in Ventura County (Magney 2010); represented by up to 9 populations in Los Angeles County, 2 of which are on Newhall Ranch (Consortium of California Herbaria 2010) and should be considered a rare species.

Argemone corymbosa – rare in Ventura County (Magney 2010) with only one occurrence; represented by only 4 populations in Los Angeles County (Consortium of California Herbaria 2010) besides the Newhall Ranch occurrence, and should be treated as a rare species.

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[61] Sanders, Andrew, Curator, University of California at Riverside Herbarium, email correspondence on 25 August 2009 regarding taxonomic status of *Opuntia basilaris* var. *ramosa* and the plants at Newhall Ranch.

[62] Consortium of California Herbaria online database search: http://ucjeps.berkeley.edu/consortium/ dated 25 August 2009 for *Opuntia californica* var. *parkeri*.

[63] Magney, D.L. 2003. Rare Plants of the Liebre Mountains, Los Angeles County. California Native Plant Society, Channel Islands Chapter, Ojai, California. Published at http://www.cnpsci.org/html/PlantInfo/Liebre_Rare.htm

[64] Consortium of California Herbaria online database search: http://ucjeps.berkeley.edu/consortium/ dated 30 December 2010.

Eriastrum densifolium* ssp. *mohavense – rare in Ventura County (Magney 2010); represented in Los Angeles County by only 3 populations (Consortium of California Herbaria 2010) and should be treated as a rare species.

Chorizanthe fimbriata – only record for Los Angeles County is on Newhall Ranch with no other known population in Los Angeles County (Consortium of California Herbaria 2010); not in adjacent Ventura County.

Eriogonum viridescens – uncommon in Ventura County (Magney 2010); represented in Los Angeles County by about 6 populations (Consortium of California Herbaria 2010), most of which were collected before 1930. It should be treated as a rare species.

Lastarriaea coriacea – rare in Ventura County (Magney 2010); represented in Los Angeles County by no more than 10 extant populations (Consortium of California Herbaria 2010) and should be treated as a rare species.

Rumex maritimus – rare in Ventura County (Magney 2010); represented in Los Angeles County by no more than 7 extant populations (Consortium of California Herbaria 2010) and should be treated as a rare species.

Galium nuttallii* ssp. *nuttallii – CNPS List 4, occasional (not rare) in Ventura County (Magney 2010); represented in Los Angeles County by no more than 8 extant populations (Consortium of California Herbaria 2010) and should be treated as a rare species.

Parthenocissus vitacea – Rare in California and in Los Angeles County, not found in adjacent Ventura County; represented in Los Angeles County by no more than 6 extant populations (Consortium of California Herbaria 2010), all on Newhall Ranch, and should be treated as a rare species.

Eleocharis rostellata – rare in Ventura County (Magney 2010); represented in Los Angeles County by no more than 7 extant populations (Consortium of California Herbaria 2010) and should be treated as a rare species.

Scirpus robustus* = *Bolboschoenus robustus – rare in Ventura County (Magney 2010); represented in Los Angeles County by only one other extant population in the Liebre Mountains (Consortium of California Herbaria 2010) and should be treated as a rare species.

Juncus longistylis – not found in Ventura County; no other populations in Los Angeles County other than Newhall Ranch (Consortium of California Herbaria 2010); loss of the only population of this taxon in Los Angeles County should be considered a significant impact.

Juncus triformis – rare in Los Angeles County; not found in Ventura County; represented by only 1 extant populations in Los Angeles County on Newhall Ranch (Consortium of California Herbaria 2010); loss of this one Los Angeles County population or individuals of this taxon should be considered a significant impact.

Lemna minuscula – rare in Ventura County (Magney 2010); represented by only 5 historic populations in Los Angeles County (Consortium of California Herbaria 2010); loss of one or more populations of this taxon should be considered a significant impact.

Lemna valdiviana – uncommon in Ventura County (Magney 2010); represented by only 9 historic populations in Los Angeles County (Consortium of California Herbaria 2010); loss of one or more populations of this taxon should be considered a significant impact.

Brodiaea terrestris* ssp. *kernensis – rare in Ventura County (Magney 2010); represented by only 5 historic populations in Los Angeles County (Consortium of California Herbaria 2010); loss of one or more populations of this taxon should be considered a significant impact.

Yucca schidigera – rare in Los Angeles County; not found in Ventura County; represented by only 1 extant population in Los Angeles County on Newhall Ranch (Consortium of California Herbaria 2010); loss of this one Los Angeles County population or individuals of this taxon should be considered a significant impact. Is this planted onsite and not native on the ranch?

Potamogeton foliosus – rare in Ventura County (Magney 2010); represented by about 10 historic populations in Los Angeles County (Consortium of California Herbaria 2010); loss of one or more populations of this taxon should be considered a significant impact.

The loss of any of these 35 plant taxa should be analyzed for significance. There is no doubt as to their rarity in Los Angeles County, the only area in California in which the County has any jurisdiction, but these plants that are rare in Los Angeles County were not considered in the DEIR as significant biological resources. As is practiced in other jurisdictions, such as Ventura County, the loss of a population of any of these taxa would be considered a significant impact, and appropriate mitigation proposed, if feasible. This was not done in the EIR, rendering it inadequate in this area.

Special-status Wildlife in the DEIR

The DEIR takes great leaps in its assessment that all the proposed mitigation measures will fully reduce impacts to almost all special-status wildlife species to less-than-significant levels. Their logic is flawed and not supported by the evidence, as explained below.

The Western Spadefoot Toad (*Spea hammondii*) is likely to occur in the same habitat as the Southwestern Pond Turtle and two-striped garter snake. As the draft EIR/EIS states: "Suitable breeding habitat for the western spadefoot toad on site includes riparian areas and seasonal drainages containing seasonal pools and suitable aestivation habitat includes surrounding uplands within at least several hundred meters of breeding sites. Because western spadefoot toads are associated with specific microhabitats, however, their total suitable habitat on site was not quantified" (page4.5-984). The Mission Village DEIR (page 4.3-191) states that it was observed from two sites within the Mission Village development area.

Given the known occurrence, and likely presence of the Western Spadefoot Toad in the same habitat as Southwestern Pond Turtle and parallel dependence on both terrestrial and aquatic habitat elements, the determination of "significant unavoidable impacts" should be made for the Western Spadefoot Toad following the same reasoning that was used to determine this status for the Southwestern Pond Turtle. The determination that there will be no significant impacts to the Western Spadefoot Toad after mitigation is thus arbitrary and wrong.

Unarmored Threespine Stickleback is a California Fully Protected Species. The DEIR states that authorization for take was issued by CDFG on page 4.3-405. However, this is misleading as there is no take provision for Fully Protected Species. Only the footnote for Table 4.3-20 on page 4.3-406 clarifies that take was not issued by CDFG for this taxon. A more casual read of the DEIR clearly gives the reader the distinct impression that Newhall Ranch had been previously issued a permit to "take" Unarmored Threespine Stickleback, which is not true and would be illegal under current law.

Special-status Mollusks in the DEIR

Following the thread started above, focusing on mollusks, the DEIR provides a description of the mollusks found onsite on page 4.3-65:

> "(4) Gastropods. Three native species of shoulderband snails were detected during the surveys for the Trask shoulderband snail within the Newhall Ranch Specific Plan area and nearby areas, including Southern California shoulderband snail (*Helminthoglypta tudiculata* cf. *H.t. convicta*), Vasquez rocks shoulderband snail (*Helminthoglypta vasquezi*), and Grapevine shoulderband snail (*Helminthoglypta uvasana*). **None of these species are designated by CDFG as special-status species** [emphasis added]. The Southern California shoulderband snail and Vasquez rocks shoulderband snail were detected in the project area in a variety of habitat types, including California annual grassland, coastal scrub, and in riparian areas. All snails were found in association with their expected microclimates (*i.e.*, under rocks, in leaf litter, woody debris piles, under the decaying bases of yucca bushes, and similar moist environments). Vasquez rocks shoulderband snail was found at several locations in the proposed project area and proposed open space areas, including the mouth of Middle Canyon; portions of upper Middle Canyon; and the Magic Mountain Canyon watershed. Southern California shoulderband snail was found at several locations in the proposed project area, including the Middle Canyon area. Grapevine shoulderband snail was not detected in the project area, but was located in the Piru Creek floodplain near the confluence with the Santa Clara River. This species was previously known only from the type locality near Fort Tejon State Historical Park in Kern County. This detection extends the known range of this species at least 42 miles southwest of the type locality and greatly expands the known distribution of the species. Based on these new occurrences, this species is expected to also occur in the project area."

DMEC is pleased to see that field surveys were conducted for terrestrial gastropods. Three native species found. What the DEIR fails to recognize is that all three species, especially those not yet listed by the CNDDB as sensitive species, clearly qualify for federal and state listing as endangered species under the Endangered Species Act and the California Endangered Species Act, respectively. All those species of *Helminthoglypta* found onsite should be treated as rare and endangered species since they all easily and clearly meet listing, rarity, and endangerment criteria.

Helminthoglypta uvasana (Grapevine Shoulderband Snail) was previously known only from two populations, one in upper Grapevine Canyon just south of Old Fort Tejon in southern Kern County and the other at Oak Flat Ranger Station in the Liebre Mountains in northwestern Los Angeles County (Magney 2009[65]). The Newhall Ranch population now represents one-third of the known occurrences in the world. By any measure, the loss of any individuals, much less portions of the Newhall Ranch population must be considered a significant adverse impact.

Helminthoglypta vasquezi (Vasquez Shoulderband Snail) was previously known only from two populations, one at Vasquez Rocks and the other in Agua Dulce Canyon [only a few miles from Vasquez Rocks] (Magney 2009[66]). The Newhall Ranch population now represents one-third of the known occurrences in the world. By any measure, the loss of any individuals, much less portions of the Newhall Ranch population must be considered a significant adverse impact.

Helminthoglypta tudiculata cf. *convicta* (Southern California Shoulderband Snail) was previously known from 15 collections from 14 populations from eastern Ventura County to western Orange and western San Bernardino Counties (Magney 2009). The Newhall Ranch population represents 6.3% of the known

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

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

populations of this subspecies. It is very likely that several of the historic records have been extirpated, increasing the relative importance of the Newhall Ranch population. By any measure, the loss of any individuals, much less portions of the Newhall Ranch population must be considered a significant adverse impact.

Since all of these gastropod species are rare, their locations should be mapped to determine the extent of the direct and indirect impacts the proposed project would have on them. Then occupied habitat should be avoided or impacts to them minimized and feasible mitigation measures proposed to compensate for adverse impacts to them. Furthermore, the report describing the methods and results of the terrestrial gastropod surveys should have been included as a technical appendix so that the public could review it as part of the DEIR.

Interestingly, the DEIR fails to note that the *Helminthoglypta* survey report stated that two of the species found on Newhall Ranch may actually be two species new to science, undescribed, as stated on page RTC-053-8 of the SPC FEIR/EIS, "The Southern California shoulderband snail range widely through coastal southern California and northwestern Baja California, and the snails collected at these localities were preliminarily identified as the subspecies, *H.t. convicta*. However based on morphological variations of the shells, these specimens did not exactly match other *H.t. convicta* specimens in reference collections. It is, therefore, possible that **these specimens represent a new species of shoulderband snail** [emphasis added]; however, additional study of live specimens would be required to determine the taxonomic relevance of these differences (B. Roth, pers. comm. 2010)." Why was this fact not included in the DEIR when it was already known and published in the FEIR for the SCP? Newhall Ranch consultants are taking great liberties with factual data and extrapolating them without scientific basis to claim that the species at hand are not sensitive species. They state that the new occurrences at Newhall Ranch greatly expand the range of the two species, using simple distance measurements between known populations. They conveniently happen to ignore that fact that the world's expert on the taxonomy of *Helminthoglypta*, Dr. Barry Roth, believes that they actually may be new species. If that is the case, then Newhall's or the state's biologists can claim that the Newhall Ranch populations greatly expand the distribution of those species. They also disregard the fact that these species have NOT been found in habitats in between Newhall Ranch and their type localities. For example, most of habitat between Vasquez Rocks, the type locality for *Helminthoglypta vasquezi*, and Newhall Ranch has been developed by the City of Santa Clarita and other intensive developments approved by the County of Los Angeles. If occupied, only remnant populations would remain, which may not be viable. Not one occurrence of that species, or any other *Helminthoglypta* species, has been reported for any of those numerous developments that have been approved in the last 20 years. They were found on Newhall Ranch because of its largely intact nature, its large size, and the diversity of habitats present within a small area.

To expand on the results of the surveys conducted for Helminthoglypta species but not disclosed in the Mission Village DEIR, the SCP FEIR starting on page RTC-053-8 states:

> "Surveys for terrestrial gastropods were conducted in portions of the proposed RMDP development area, the Salt Creek area, High Country SMA, and River Corridor SMA. Survey methods included control sites that consisted of suitable habitat in areas not proposed for development or intended as mitigation lands in both Los Angeles County and Ventura County. These surveys were conducted over a five-day period from November 2009 to January 2010 by a biologist familiar with the ecology of shoulderband snails.

Surveys for terrestrial gastropods where conducted in a broad array of habitat types, including, but not limited to, California annual grassland, coastal scrub, riparian woodland, riparian scrub, big sagebrush scrub, mulefat scrub, oak woodland, and chaparral. Surveys focused on suitable microhabitats within these communities where these species had the potential to occur. Suitable microhabitats included, but were not limited to, brush and debris piles, rock piles, isolated rocks, leaf litter, logs, trash/debris piles and other unique features that may provide soil moisture or refugia. These areas were searched by raking through leaf and stick litter, visually inspecting cracks and crevices, and turning over objects, such as logs and rocks. Specimens were tentatively identified in the field, and then sent to Dr. Barry Roth, a *Helminthoglypta* snail expert located at the California Academy of Science in San Francisco, California, for positive identification.

"Three native species of shoulderband snails were detected during the surveys, including Southern California shoulderband snail (*Helminthoglypta tudiculata* cf. *H.t. convicta*), Vasquez rocks Shoulderband snail (*Helminthoglypta vasquezi*), and Grapevine shoulderband snail (*Helminthoglypta uvasana*). The first two of these were also found on the Project site. These snails were detected in a variety of habitat types including California annual grassland, coastal scrub, and in riparian areas. All the snails were found in association with their expected microclimates (*i.e.*, under rocks, in leaf litter, woody debris piles, under the decaying bases of yucca bushes, and similar moist environments).

"Southern California shoulderband snail was found at several locations on and around the proposed RMDP area (see discussion in revised **Section 4.5** of the Final EIS/EIR). These areas included the Santa Clara River floodplain at the mouth of Potrero Canyon, the mouth of Ayers Canyon, the Middle Canyon area and the lower San Martinez Grande Canyon. This species was also detected near the confluence of Piru Creek and the Santa Clara River, approximately 4.8 miles downstream of the proposed Project. The Southern California shoulderband snail range widely through coastal southern California and northwestern Baja California, and the snails collected at these localities were preliminarily identified as the subspecies, *H.t. convicta*. However based on morphological variations of the shells, these specimens did not exactly match other *H.t. convicta* specimens in reference collections. It is, therefore, possible that these specimens represent a new species of shoulderband snail; however, additional study of live specimens would be required to determine the taxonomic relevance of these differences (B. Roth, pers. comm. 2010).

"Vasquez rocks shoulderband snail was detected at several locations on the proposed RMDP Project area and proposed mitigation sites, including the upper Potrero Canyon area; lower and upper portions of Salt Creek; the east fork of Salt Creek; the Santa Clara River floodplain at the mouth of Potrero Canyon, the mouth of Middle Canyon; portions of upper Middle Canyon and the Magic Mountain Canyon watershed.

"This species was also detected at several locations outside the Project area, including Hasley Canyon two miles upstream of the Newhall Ranch, Castaic Creek approximately 12 miles northwest of Newhall Ranch, and the Castaic Junction area, less than one mile northwest of the project area. This species was previously known only from the type locality at Vasquez Rocks County Park near Agua Dulce in Los Angeles County. The shells collected in this study also differ in several morphological characteristics from the type series, but additional study would be required to determine the taxonomic relevance of these differences (B. Roth, pers. comm.). This detection extends the known range of this species at least 25 miles west of the type locality and greatly expands the known distribution of the species.

"Grapevine shoulderband snail was not detected on the RMDP Project area, but was located in the Piru Creek floodplain near the confluence with the Santa Clara River west of Santa Paula. This species was previously known only from the type locality near Fort Tejon State Historical Park in Kern County. This detection extends the known range of this species at least 42 miles southwest of the type locality and greatly expands the known distribution of the species. Based on these new occurrences, this species is expected to also occur on Newhall Ranch.

"The surveys also found other native and non-native snails, including the introduced garden snail (*Helix aspersa*), decollate snails (*Rumina decollate* [sic]) an introduced predatory gastropod sold in local garden stores, and an aquatic snail belonging to the Family Succineidae a native, cosmopolitan family not considered rare in California by the CDFG.

"The ecology of terrestrial land snails, including shoulderband snails in most of Southern California, is very poorly understood. This may be in part because the species are highly cryptic, extensive surveys for these groups have not been systematically conducted, and, with the exception of a few species, are not considered sensitive by CDFG or USFWS. Based on the findings of the surveys conducted in response to this and other comments, field survey data and preliminary identification of specimens suggests that at least three or more species of shoulderband snail may occur in the proposed Project development area and proposed mitigation lands, including the River Corridor SMA, High Country SMA, and Salt Creek area.

"In addition, the data suggest that the known or expected distribution of these shoulderband species appears to be much wider than previously thought. For example, Vasquez Rocks shoulderband and Grapevine shoulderband snails were previously known from much more restricted ranges, but were both located in the proposed Project development area, proposed mitigation areas, or areas near the Project area. These occurrences represent range extensions for these two species of 25 and 42 miles, respectively.

This suggests that some species of shoulderband snails do not appear to be restricted to discrete locations. Conversely, a review of literature indicates that Trask shoulderband snail occurs across most of southern California and northern Baja California Mexico in areas supporting coastal scrub and chaparral communities. However, this species was not observed during the surveys. Nonetheless based on the information provided by the surveys, and because a Trask shoulderband shell (*Helminthoglypta traskii*) was found in Potrero Canyon in 2005, it is reasonable to conclude that other helminthoglyptid taxa, including the special-status Trask shoulderband snail, have the potential to occur on Newhall Ranch.

"If special status Trask shoulderband snails (subspecies *traskii*) are present in the Project area, construction of the proposed Project (Alternative 2) or Alternatives 3 through 7 could result in loss of individual snails through mechanical disturbance or alteration of habitat during vegetation clearing and/or grading. If present on site, construction of the proposed Project or Alternatives would also result in the loss of microhabitat occupied by the special status Trask shoulderband snail subspecies, as well as short-term and secondary effects. Short-term construction-related effect could include exposure to construction-related dust and ground vibration that could inhibit the species from using suitable habitat for refugia, foraging, and reproduction. Potential long-term secondary effects this species may occur, including habitat fragmentation; off-road vehicles; cattle grazing; altered wildfire regimes; invasive plant species; increased human activity; Argentine ants; other introduced non-native snails such as decollate snails; increased activity by pet, stray, and feral cats and dogs, and pesticides.

> "These impacts, should they occur, would be considered significant absent mitigation. A variety of mitigations measures identified in the Draft EIS/EIR would reduce these impacts to less-than-significant levels. The key mitigation measures relate to the dedication of the River Corridor SMA, High Country SMA, and Salt Creek area (Mitigation Measures SP-4.6-23, SP-4.6-37, and BIO-19, respectively). These mitigation lands total 6,300 acres and provide good quality habitat that could support special status Trask shoulderband (ssp. *traskii*) snails, if present, and would be preserved and managed in perpetuity. These areas contain a suite of topographical features including rocky outcrops, canyons, and drainages; all features where helminthoglyptid species have been documented in the literature. In addition, these areas support a variety of vegetation communities and provide large areas of open space that would allow for gene flow between watersheds or populations. Additional mitigation measures that would reduce impacts to Trask shoulderband to less than significant include SP-4.6-1 through SP-4.6-42, SP-4.6-53, SP-4.6-59, SP-4.6-63, BIO-1 through BIO-16, BIO-19 through BIO-21, BIO-52, BIO-63, BIO-64, BIO-69, BIO-73, and BIO-87.
>
> "Gastropods identified by the CNDDB (CDFG, July 2009) as sensitive or considered sensitive by the criteria identified for the Draft EIS/EIR, were not detected on the proposed Project site. However, the results of the surveys and potential impacts to special-status gastropods, including Trask Shoulderband (ssp. *traskii*) snail, have been added to the Final EIS/EIR and included for analysis of impacts."

All the evidence regarding the status of the Helminthoglypta snails found on Newhall Ranch indicates that they are indeed rare and impacts to them and their habitat should be considered significant impacts. The DEIR failed to do this.

Loss of Local Biodiversity Not Assessed

One of the primary objectives of CEQA, in regards to biological resources, is to protect biodiversity. This general objective can be overwhelming and difficult to quantify, and has often been ignored, as in the case with the Mission Village DEIR. The loss of local biodiversity is "exceedingly important" from an ecological and evolutionary perspective (Bond et al. 2006[67]). This is because population extinction disrupts fundamental evolutionary and evolutionary processes, which impacts future potential for evolutionary response and change.

For example, some groups of invertebrates, such as the Mygalomorphae (trapdoor spiders and their kin), have very long life spans (compared to many invertebrate species), with most species having very specific habitat requirements (Bond et al. 2006). Disturbances to these habitats may result in local population extinctions, which in turn may lead to regional extirpation. Since there are many endemic Mygalomorph species in the Los Angeles Basin, and most of the historic habitats have already been destroyed by urban and industrial development, the remaining habitats and populations are vital to the continued existence of local endemic Mygalomorph species. Bond et al. (2006) point to two species of *Apomastus* that are threatened with extinction by habitat disturbance and loss.

The DEIR fails to adequately describe the biodiversity of the project site or evaluate the potential changes or impacts to that biodiversity. This should be rectified.

[67] Ibid.

Vegetation Classification

The vegetation was not mapped or classified to current standards and methods for the Mission Village project even though the DEIR did use the Alliance and Association labels. However, the definitions for Alliance and Associations are incorrect, and do not follow the CNPS' *Manual of California Vegetation* as found in the second edition (Sawyer et al. 2009[68]). The Alliance is the vegetation type level that is emphasized in the *Manual*[69], stating, "This level is best for considering vegetation at a regional and statewide level…". The *Manual* goes on to state that the Association level "is best used a the local scale". DMEC concurs. The vegetation on Newhall Ranch should have been, and needs to be, mapped and classified at the Plant Association level "because it reflects predictable combinations of plant species that typically have more local specificity as it applies in certain mountain range or an ecological subsection". The vegetation mapping at only the alliance level for Newhall Ranch, and the Mission Village portion of the Ranch, overly simplifies and undervalues the biodiversity and habitat diversity of the project site.

Besides ignoring the basic need to adequately classify and map the vegetation of the project site, Impact Sciences misused or misidentified the alliances that were mapped. For example, Table 4.3-3 on page 4.3-46 lists "California annual grassland" as the first entry under the heading "Floristic Alliance". The *Manual* does not have such an alliance listed/described. Rather, Impact Science's California annual grassland best fits the **group** – California annual form/grass vegetation (page 1,232 of the Manual in Appendix 3), which is part of the *California Annual and Perennial Grassland* Macrogroup (MG045). That **group** includes seven described alliances.

Of the 104 grassland associations (including 12 alliances without named associations) listed by CDFG's CNDDB (2010[70]) on its Hierarchical Natural Communities list, 71 are considered sensitive. Statistically, the probability of one or more sensitive grassland associations occurring on Newhall Ranch is very high. One of the alliances/associations listed by CDFG as sensitive in its Natural Communities list is *Leymus condensatus* Alliance (*Leymus condensatus* Association), which almost certainly occurs on Newhall Ranch. The DEIR missed this entirely.

As stated on CDFG's website[71], the CNDDB includes "…350 alliances, 2140 associations, 82 provisional alliances, 66 provisional associations, 96 semi-natural stands, 15 stand types (within semi-natural category), and 15 special stands".

The vegetation of the project site needs to be remapped and classified at the Association level to be able to determine which, and how much of each, sensitive plant association occurs onsite and how much would be adversely affected by the proposed project.

Grasslands

Page 4.3-55 of the DEIR states that the grasslands onsite are "Non-native Grassland" when referring to California Annual Grassland, as described in the CNPS' 1st edition of its *Manual of California Vegetation*

[68] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation*. Second Edition. California Native Plant Society, Sacramento, California.
[69] Ibid. page 11, 3rd paragraph.
[70] CDFG. 2010. Natural Communities – List. (September 2010.). http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp
[71] CDFG's Biogeographical Data webpage for Natural Communities List: http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp

(Sawyer & Keeler-Wolf 1995[72]), listing numerous nonnative grass and forb species without recognizing or identifying the many species of native annual and perennial plant species that occur in almost all variations of California Annual Grassland. This characterization is a mischaracterization of the true ecological nature and value of the annual grasslands found on Newhall Ranch. For example, the DEIR states on pages

- 4.3-62 that a number of raptors and other birds are found in grasslands onsite;
- 4.3-65 that [rare] native shoulderband snails were found in grassland habitats onsite;
- 4.3-72 that the listed plant, San Fernando Valley Spineflower, occurs in these grasslands onsite;
- 4.3-75 that Slender Mariposa Lily occurs in grasslands;
- 4.3-77 that Pierson's Morning-glory occurs in grasslands onsite;
- 4.3-79, Table 4.3-4, lists grasslands as habitat for a number of special-status plant species;
- Table 4.3-5 lists grasslands as habitat for a number of special-status wildlife species;
- Page 4.3-191 states that grasslands onsite are habitat to the Western Spadefoot Toad; and
- Pages 4.3-195-6 state that grasslands onsite are habitat for Coast Horned Lizard.

The fact that the DEIR includes the SFVS, which during some years has over 1,000,000 plants present at one time in areas mapped as Non-native Grassland (as stated on page 4.3-55) exemplifies the gross generalization and minimalization of the species richness and sensitivity of the herbaceous vegetation types present on Newhall Ranch and in the Mission Village development area. Those areas that are seasonably dominated or characterized by SFVS should be classified as *Chorizanthe parryi* Alliance as just one example of how the grassland vegetation should be classified and mapped, as was actually done and illustrated on Figure 4.3-6.

Page 4.3-142, Table 4.3-8, states that 80% (66.1 acres) of grassland habitats will be disturbed/developed by the proposed project.

Page 4.3-146 of the DEIR then concludes that since the Non-native grasslands onsite are not considered sensitive habitats by CDFG, the loss of 80% of this habitat type onsite would not be a significant impact. In reality, the grasslands onsite, if properly characterized and mapped, would show an entirely different situation, one that identifies the importance and significance of annual grasslands onsite and that the loss of a substantial portion of that habitat would indeed be considered a significant impact.

Impacts to "Common" Plant Communities

The DEIR, page 4.3-417, suggests that several common plant communities impacted by the project would be considered less than significant because there is a lot of these types in the region. However, the basis for Impact Science's conclusions are flawed because they relied upon very coarse data, the Gap Analysis for the Southwest Region (Davis et al. 1995[73]). While that study provides useful data from a regional perspective (much greater than for the Santa Clara Valley region), the coarseness of the mapping and classification makes it inappropriate to use for comparisons at the project scale, as it has large errors of omission and commission. Furthermore, the Gap Analysis did not capture the very high plant community (vegetation alliance and association) diversity found in the region, and on the project site. It is not apparent that Impact Sciences examined the metadata or attribute tables for the Gap Analysis vegetation polygons as each

[72] Sawyer, J.O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society, Sacramento, California, in collaboration with California Department of Fish and Game, Sacramento, California.

[73] 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.

polygon includes information about the dominant species, as well as the dominant species of the major unmapped inclusions of other plant communities.

To make the DEIR's arguments even less valid is the fact that the acreage values of developed lands within the Santa Clara River watershed have increased dramatically since 1998, the date of the Santa Clara River floodplain study. It does not appear that Impact Sciences took all those acres of habitat converted to urban and industrial uses since the 1998 study, which makes their calculations erroneous and minimizes the near historic losses of habitat in the region of the project site. The impact of the Mission Village development to natural habitat is much greater, from a cumulative perspective, then stated in the DEIR.

As another example of the caution that must be taken when using the Gap Analysis mapping, the large area in northwestern Ventura County as Agricultural Lands (on Figure 4.3-19) is an error. This is the San Emigdio Mesa, a large native grassland area in the Chumash Wilderness of the Los Padres National Forest. It has never been farmed; however, it has been grazed historically. A comparison of this area with recent aerial photography, such as available through Google Earth, would provide evidence to a trained aerial photo interpreter, as well as most laymen, that the area has never been farmed.

Inadequacy of Mitigation Measures

DMEC found numerous deficiencies in the mitigation plans and found that many of proposed plans would result in both direct and indirect potentially significant impacts to biological resources onsite.

Inadequacy of the RMDP/SCP & EIS/EIR

Various proposed mitigation measures included in the Mission Village DEIR refer to the Newhall Ranch Management and Development Plan and the Spineflower Conservation Plan (RMDP/SCP)[74]. As previously stated in a comment letter to the California Department of Fish and Game (CDFG) on behalf of the FSCR in response to the RMPD/SCP and EIS/EIR, DMEC found the mitigation measures given to be insufficient resulting in plans that would lead to impacts to biological resources onsite.

In summary, DMEC (2009[75]) found that the RMPD/SCP & EIS/EIR failed to adequately assess all project-related impacts to the biological resources onsite and failed to provide adequate and/or feasible mitigation to reduce the significant impacts to a level of less than significant. The proposed SPC fails to protect SFVS occurrences and would put it at risk of extinction, or at least local extirpation in the long term. Other specific issues covered in this comment letter included: the inadequacy of the assessment of Newhall Ranch biological resources; the inadequacy of the assessment of special-status species; the inadequacy of impact assessment on wetland resources and functions; the feasibility of wetland mitigation plan; and feasibility of the SCP. A copy of DMEC's 2009 comment letter on the RMPD/SCP & EIS/EIR is attached as an appendix to this letter and incorporated herein. Many of the same issues have also been restated in this letter due to their relevance to the issues raised in the Missoin Village DEIR.

[74] Dudek. 2009. Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan and EIS/EIR. 4.5 & Apx 1 (April 2009)

[75] David Magney Environmental Consulting. 2009. Comments on Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan and EIS/EIR. 25 August 2009. Ojai, California. On behalf of the Friends of the Santa Clara River, California Native Plant Society, and Sespe Institute, Inc.

The RMPD/SCP & EIS/EIR had not been certified by the CDFG by the time the Mission Village DEIR was released, as only the draft SCP has been issued to date. CDFG certified the SCP EIR only on 3 December 2010, and DMEC's clients will file a CEQA and CESA legal challenge on that decision in early January 2011. Therefore, there is no legitimate mitigation plan that would compensate for the proposed impacts to Special-status species and waters of the U.S.

Exotic Wildlife Species Control Plan

Mitigation Measure MV 4.3-29 (page 4.3-345) states: "The project applicant will retain a qualified biologist to develop an Exotic Wildlife Species Control Plan and implement a control program for bullfrog, African clawed frog, and crayfish… After the first 5 years, the NLMO or other entity will be responsible for controlling exotic aquatic species."

Mitigation Measure MV 4.3-48 (page 4.3-353) states: "Upon completion of landscaping within a development area, quarterly monitoring shall be initiated for Argentine ants along the urban–open space interface at sentinel locations where invasions could occur (e.g., where moist microhabitats that attract Argentine ants may be created)… After the first 5 years, the NLMO or other entity will be responsible for controlling Argentine ants."

There is no biological evidence presented that the ecological threats posed by the Argentine Ant and species included in the Exotic Wildlife Species Control Plan will end after 5 years. There are no enforcement and funding provisions for continuation of the Exotic Wildlife Species Control Plan and Argentine Ant control beyond 5 years. These mitigation measures must assume as a baseline condition that exotic wildlife control will be required in perpetuity and require an endowment of adequate financial resources needed for perpetual implementation of the Exotic Wildlife Species Control Plan.

These mitigation measures will not continue in perpetuity as there function beyond 5 years is essentially terminated with the vague statement that "after the first 5 years, the NLMO or other entity will be responsible for controlling Argentine ants". The mitigation measures must have explicit funding and enforcement of Argentine Ant and exotic wildlife species control programs that will continue in perpetuity. As constructed, the mitigation measures absolve the project applicant of responsibility for fully mitigating the impacts of Argentine Ant and exotic wildlife species, which must be assumed to be a permanent impact and not one that will be resolved in 5 years.

In the absence of clear language that these mitigation measures will be continued and adequately funded in perpetuity, Mitigation Measures MV 4.3-29 and MV 4.3-48, will not reduce the impacts that they address to less-than-significant levels and the many impacts that depend on these mitigation measures will not be reduced to less than significant levels as the project applicants claim.

WETLANDS

Wetlands, focusing only on wetlands under the jurisdiction of the Corps, are discussed starting on page 4.3-133 of the DEIR). The area and types of wetlands on the Mission Village project site are derived entirely from a 2007 wetland delineation performed by URS, and then by Glenn Lukos Associates in 2008, and a revised preliminary delineation was prepared in mid-2010. There was no effort to identify all wetlands that were not under the Corps' jurisdiction. The Clean Water Act regulations focus the Corps' jurisdiction narrowly and excludes a wide range of wetlands that the State and ecologists recognize. The GLA

delineation did include riparian areas that are also under CDFG permit authority; however, these two agencies do not require permits for work within/modification to all types of wetlands. This is a major flaw in the CEQA assessment of project-related impacts to wetlands, focusing only on wetland types for which a permit is required to do work within or disturb in some fashion.

The wetlands assessment in the Mission Village DEIR primarily refers to the Resource Management Plan/Spineflower Conservation Plan DEIR/EIS.

The Mission Village project is estimated to impact (Table 4.3-9 on page 4.3-144):

- 1.6 acres of 4.0 acres of herbaceous wetlands (page 4.3-59);
- 19.7 acres of 115.1 acres of River Wash waters/wetland;
- 0.5 acre of 0.5 acre of Alluvial Scrub wetlands;
- 22.3 acres of 24.6 acres of riparian Big Sagebrush Scrub wetland;
- 0.1 of 55.6 acres of Giant Reed wetland;
- 6.9 acres of 7.6 acres of Arrow Weed wetlands;
- 5.6 acres of 5.8 acres of Mexican Elderberry Riparian Scrub wetlands;
- 2.8 acres of 2.8 acres of Mulefat Scrub wetlands;
- 0.7 acre of 1.5 acres of Southern Willow Riparian Scrub wetlands; and
- 28.8 acres of 109.2 acres of Fremont Cottonwood Riparian Forest wetlands.

That is a total of 89 acres of jurisdictional wetlands that will be impacted, most of it permanently, to accommodate over 1,400 acres of non-water-dependent urban development uses.

Several mitigation measures are proposed for wetland habitats to be created or enhanced as mitigation for wetlands destroyed by the Newhall Ranch project. Mitigation measures specifically pertaining to wetlands are detailed on Pages 4.5-1,975-1,982 under mitigation measures BIO-1 through BIO-16 in Section 4.5 (Biological Resources) of the EIS/EIR.

Page 4.3-151 of the DEIR states: "Further, the River Corridor SMA/SEA 23 (totaling 977.5 acres) would be protected in perpetuity. Combined, these measures would reduce the project impacts on riparian habitat to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Final Additional Analysis (May 2003)." Claiming that implementation of the previously adopted and recommended mitigation measures will reduce the impacts to a less-than-significant level is not supported by the evidence. As clearly stated by DMEC previously and by the EPA in its comment letter on the SCP DEIR/EIS, the approach used and mitigations proposed are not even close to sufficient to reduce project-related direct and indirect impacts to wetland functions at Newhall Ranch.

For example, development of a "conceptual mitigation plan" is not mitigation as defined by CEQA, it is a plan, a study. There must be details provided on how it will accomplish the goal of reducing the larger variety of impacts to wetland functions before it can meet the high test of reducing impacts to a less-than-significant level.

Specific issues/problems with this approach are discussed below.

Appropriate Taxa for Mitigation Plant Palettes

The mitigation measures section of Section 4.5 mentions that all detailed wetlands mitigation plans must include several specific elements as outlined in the Comprehensive Mitigation Implementation Plan (page

4.5-1,975). Element (2a) must outline the quantity (seed or nursery stock) and species of plant to be planted (all species to be native to region). Any mitigation plant palette should also require that all seeds, propagules, and plantings come from the appropriate taxonomic stock (e.g. species, subspecies, variety) endemic to the mitigation site. A qualified biologist should be required to verify that taxonomically appropriate vegetation stock is being used before any work on the mitigation project starts.

Definition of "Self-sustaining" for Monitoring Success Needed

Proposed mitigation measure BIO-3 (page 4.5-1,977) concerns the creation of new vegetation communities and restoration of impacted vegetation communities. BIO-3 states: "All [mitigation] sites shall contain suitable hydrological conditions and surrounding land uses to ensure a self-sustaining functioning riparian vegetation community".

The concept of mitigation sites being "self-sustaining" is thus a key component for measuring success of mitigation projects and determining completion of the project applicant's responsibilities. Measure BIO-6 (page 4.5-1,978) details the success criteria upon which "completion" of the revegetation site will be determined. The first criterion listed is, "Regardless of the date of initial planning, any restoration site must have been without active manipulation by irrigation, planning, or seeding for a minimum of three years prior to Agency consideration of successful completion". This criterion is the closest thing to a definition for "self-sustaining" that can be found in the mitigation measures.

All monitoring plans must contain a biologically meaningful definition of "self-sustaining" with which to measure the success of each proposed mitigation project. The definition of "self-sustaining" should be defined based on measurable biological standards derived from reference sites directly comparable to the type of wetland being mitigated for.

It seems likely that a biologically meaningful definition of "self-sustaining" could require monitoring the ecological functioning of mitigation sites for an extended period of time. For example, measure BIO-15 concerns guidelines for establishing healthy populations of riparian trees at mitigation sites. This measure states (page 4.5-1,982) that "the growth and survival of the planted trees shall be monitored until they meet the self-sustaining success criteria in accordance with the methods and reporting procedures specified in BIO-6, BIO-7, BIO-11, and BIO-12". A biologically meaningful definition of "self-sustaining" for long-lived riparian tree species may require monitoring for several years.

The proposed mitigation measures do not seem to account for the possibility that monitoring could be required for many years into the future. DMEC suggests that the project applicant be required to endow an ecological monitoring position (or positions as needed) to ensure that all wetland mitigation sites are biologically self-sustaining. The size of the endowment needed should be commensurate to the time-scale needed for monitoring to assure that the wetland mitigation sites are self-sustaining.

Eliminate Loophole for Modifying Mitigation Success Criteria

Measure BIO-6 (page 4.5-1,978) states, "In a sub-notification letter, the applicant may request modification of success criteria on a project by project basis. Acceptance of such request will be at the discretion of CDFG and the Corps".

This language raises concerns that the biological criteria for success of any given mitigation project could retroactively be changed for any unspecified reason. DMEC recognizes that biological systems are dynamic

and that initial conditions for success criteria may be altered by unforeseeable changes in the biological nature of the mitigation project. However, DMEC suggests that any request for modification of previously agreed upon success criteria for wetland mitigation projects must be prepared and submitted by a qualified biologist and available for public review to assure that success criteria are modified only for scientifically valid reasons.

Inappropriate Use of Invasive Exotic Species as Habitat Creation Mitigation

BIO-9 (page 4.5-1,979) states, "As an alternative to the creation/restoration of vegetation communities to compensate for permanent removal of riparian vegetation communities, in the Santa Clara River, the applicant may control invasive exotic plant species within the Upper Santa Clara River Sub-Watershed for a portion of the Santa Clara River mitigation required under BIO-2".

There is no scientific, logistical, or any other reasoning or justification given as to why the project applicant should be relieved of any of their responsibility for mitigating the loss of ANY permanent removal of riparian vegetation communities. While control of invasive plants is an important goal, the project applicant should not be relieved of any of their obligations without valid scientific explanation.

Use of Restoration Areas as Mitigation Banks

BIO-13 (page 4.5-1,981) states, "Nothing in the section 404 or section 2081 Permit or section 1605 agreement shall preclude the applicant from selling mitigation credits to other parties wishing to use those permits or that agreement for a project and/or maintenance activity included in the permits/agreement".

DMEC's interpretation of this language is that the project applicant may intend to use the restored areas required for their project mitigation as a mitigation bank at some point in the future. If this interpretation is correct, then DMEC would argue that this practice should be prohibited as it would constitute "double-dipping" by the project applicant to profit twice-over from their required mitigation activities.

Establishing Accounting System for Wetland Mitigation Requirements

BIO-11 concerns the establishment of an accurate and reliable accounting system for mitigation. In this measure, the project applicant dictates the terms by which the Corps and CDFG will respond to the annual reporting of mitigation credits by the project applicant. This dictation of terms by the project applicant, while perhaps understandable from the perspective of project efficiency, is inappropriate. The project applicant should not be allowed to dictate the terms by which the mitigation accounting system will be developed and implemented.

Improper Impact Assessment of "Giant Reed" Habitat

Page 4.3-253 of the DEIR states that, "Giant Reed" is a plant community that would be significantly impacted by the project: "Giant Reed (42.080.00). The project site contains 5.6 acres of giant reed. The proposed project would not result in the permanent conversion of giant reed; however, 0.1 acre would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated following completion of construction. Of the total acreage present within the boundaries of the River Corridor

SMA/SEA 23, 0.1 acre would be temporarily disturbed. Given the riparian nature of this plant community, the impacts to giant reed would be significant."

Giant Reed is *Arundo donax*, an invasive exotic plant. Conserving this plant community directly contradicts several mitigation measures that require eliminating this plant. Mitigation Measure MV 4.3-36 (page 4.3-349) states that revegetation plans will not be considered complete unless Giant Reed (*Arundo donax*) is completely absent from the vegetation restoration site. Mitigation Measure SP 4.6-11 (page 4.3-288) defines removal of Giant Reed as part of "habitat enhancement". Mitigation Measure SP 4.6-15 (page. 4.3-289) calls for the elimination of Giant Reed.

The DEIR should require that the entire 5.5 acres of Giant Reed should be restored to appropriate wetland habitats as a condition of project approval.

Impacts to Santa Clara River and Inadequacy of Wetland Mitigation Measures

The Mission and Landmark Village project sites are located directly adjacent to the Santa Clara River. Several mitigation measures are proposed for wetland habitats to be created or enhanced as mitigation for wetlands destroyed by the Mission Village project.

EPA Recommends Denial of the RMDP/SCP Project

In a comment letter[76] addressed to the Corps, the U.S. Environmental Protection Agency (EPA) responded to the public notice of the Newhall Ranch Management and Development Plan. A copy of EPA's letter has been attached as an appendix to this letter and is incorporated herein. The EPA letter states:

> "[T]he Santa Clara River is Southern California's longest free-flowing river. The Santa Clara is home to 12 federally endangered plant and animal species and another 25 species of special concern. The river also supports an aquifer that provides drinking water to half of the residents in the Santa Clarita Valley. For these reasons, we are defining the Santa Clara River as an aquatic resource of national importance. Several of the drainages in the Newhall Ranch project area are significant tributaries to the Santa Clara River that provide important watershed functions (e.g., aquatic habitat, water and sediment supply and retention, and groundwater recharge). Modifications of these tributaries have the potential to cause adverse impacts to the Santa Clara River. Given the available information and the potential impacts to the Santa Clara River and its tributaries, EPA has determined that the project as presently proposed may result in significant and unacceptable impacts to aquatic resources of national importance and therefore recommends denial of the project. This letter follows the field level procedures outlined in the August 1992 Memorandum of Agreement between the EPA and the Department of Army, Part IV, paragraph 3(a) regarding section 404(q) of the CWA."

The Corps must approve the project under the regulations of the Clean Water Act. As a result of the EPA's opposition (which has oversight authority over the Corps on the Clean Water Act), the authors of the DEIR cannot rely on the Corps previous permit application as EPA has stated strongly that it is inadequate.

[76] United State Environmental Protection Agency (EPA). 2009. Pubic Notice (PN) 2003-01264-AOA for the proposed Newhall Ranch Management and Development Plan, Los Angeles County, California. (24 August 2009)

Potentially Significant Impacts the Santa Clara River and Tributaries

The Santa Clara River is an important river not only on a regional and statewide level, but also on a national level. In the EPA letter referenced above it states; "The Santa Clara River is an Aquatic Resource of National Importance (ARNI) because it is Southern California's longest free-flowing river and is home to 12 federally endangered plant and animal species plus another 25 species of special concern. The River also supports an aquifer that provides drinking water to half of the residence in the Santa Clarita Valley."

DMEC believes that the mitigation measures given to address these losses in both Corps and CDFG jurisdictional wetlands are inadequate and will still result in significant impacts that are not fully mitigated.

Mitigation Rule Not Followed

There is no approved (by the Corps) compensatory mitigation plan that would compensate for the proposed impacts to waters of the U.S. To deem a Section 404 application complete, there must be a compensatory mitigation plan in place. Without an accepted mitigation plan in place, there is not enough information; therefore, it is premature to say whether the mitigated impacts will be below the level of significance. However, we can comment on the suggested mitigation measures included in this and other **draft** reports made available by the applicant.

As previously stated in this letter, the RMPD/SCP & EIS/EIR has not been approved under the regulations of the Clean Water Act by the Corps or EPA. Therefore, an accepted/approved compensatory mitigation plan that would compensate for the proposed impacts to waters of the U.S. is lacking, and it is highly presumptuous for Newhall Ranch to assume that their application and proposed mitigation plan would be approved by the regulatory agencies, particularly since the EPA has found the EIS prepared by the Corps for the project inadequate.

Any mitigation plan must fully assure to replace in-kind losses. The removal of invasive plants is not an accurate way of mitigating the impacts to waters/wetlands of the U.S. While the removal of such species is beneficial, this actions in no way replaces the lost of functions of lost waters/wetlands. The losses must be replaced in-kind; therefore, there should be equivalent vegetation created before the mitigation would be considered adequate.

A compensatory mitigation plan cannot be created until the impacts to jurisdictional waters are accurately assessed, which they are not currently.

Jurisdictional Waters Not Properly Assessed

A major criticism of a previous project document submitted by the project applicant, the Landmark Village DEIR 2007[77], was that impacts to wetland functions were not adequately addressed (DMEC 2007, page 11). The suggestion was made that the Hydrogeomorphic (HGM) method (Smith et al. 1995) could be used to objectively determine and measure wetland functionality and assessment of project-related impacts to wetland functionality in the project area.

[77] DMEC. 2007. Landmark Village Draft EIR Comments. (30 January 2007)

DMEC suggests that our comments on the use of adequate wetland determination be readdressed with our current position that a new wetland assessment is needed in order to measure current riparian functions and project related impacts.

The investigators of wetland assessment for the Newhall SCP EIS/EIR have used a modified version of the HGM method to assess baseline wetland functionality and estimate project-related impacts to this functionality on the project site. They call their methodology the Hybrid Assessment of Riparian Condition (HARC). The details of what the HARC is, justifications for its use, and how it is implemented to measure wetland functionality are discussed on page 4.6-32-4.6-37 in Section 4.6 (Jurisdictional Waters and Streams) of the SCP EIS/EIR.

The assumptions and methods used to develop and implement the HARC appear sound on the surface. The SCP EIS/EIR authors state that it can be used to determine both baseline wetland functionality and estimated project impacts to this functionality.

For whichever project alternative is adopted, DMEC recommends requiring that the HARC or comparable HGM methodology be used to estimate baseline wetland functionality and the mitigation needed to create or restore equivalent functionality to impacted wetlands. All of the assumptions, implementation procedures, and outputs of the HARC or comparable methodology must be made available for external review by the public to ensure that the process is transparent and the results are scientifically valid.

DMEC also stated in our previous comment letter: "URS's wetland delineation was verified by the U.S. Army Corps of Engineers (Corps) on 4 February 2004" (DMEC 2007[78], page 10). We suggested that the wetland delineation be updated to show current conditions since verifications are only valid for a period of two (2) years, per Clean Water Act regulations and Corps policy, especially since the current riparian functions since the 2005 flood event would have surely altered the riparian areas along the Santa Clara River.

DMEC reaffirms the suggestion and advises that the Corps requests reverification of jurisdictional waters for Section 404(b)(1) Permit authorization. A mitigation plan cannot be created until the impacts to jurisdictional waters are properly assessed. No application should be deemed complete until it is clear where the jurisdictional waters/wetland boundaries are onsite and then appropriate mitigation measures can be determined for the proposed impacts.

Proposed Buffered Size Inadequate

The DEIR suggests that riparian buffers along the Santa Clara River should range from a minimum of 100 to 150 feet in width, depending on the quality of the upland habitat (a larger buffer width required if the upland habitat is of low quality). This suggestion was partially based on a study by Impact Sciences (1997[79]) that focused on bird, in which vegetation analyses, focused bird surveys, and small mammal trapping along the Santa Clara River and adjacent uplands were conducted. However, in their analysis of the appropriate buffer width, the focus was partially based on the riparian bird and small mammal use of high and low quality upland habitat and upland/riparian ecotone.

[78] DMEC. 2007. Landmark Village Draft EIR Comments. (30 January 2007)

[79] Impact Sciences, Inc. 1997. North Valencia Annexation Buffer Study. Draft. Prepared for Newhall Land and Farming Company (April 28, 1997)

While protecting quality wildlife habitat is essential in determining adequate buffer size, it is only represents one element of the functions and characteristics of riparian buffers. DMEC believes in order to determine buffer width, you must also look at filtration (nitrogen, phosphorous, and other contaminants), reduction in erosion and sedimentation, other factors influencing aquatic habitat (woody debris, liter, temperature, and light), and the social and cultural aesthetics values places on riparian areas.

As DMEC[80] suggested in its critique of the previous project DEIR, HGM methods should be used to quantify and qualify riparian functions. The widths of buffers needed to maintain wetland functions vary considerably based on the specific function under consideration. Since HGM is a holistic approach, identifying and measuring 14 different wetland functions, the buffer width that protects all wetland functions would be identified and recommended.

Robins[81] (2002) reviewed the scientific literature on the buffer widths along riparian ecosystems that are needed to conserve specific riparian ecosystem functions. He found that a 300-foot-wide buffer zone likely encompasses enough area for conserving many riparian ecosystem functions. A 300-foot-wide buffer zone is likely adequate for maintaining channel complexity (stream meander and inputs of large wood debris to the riparian watercourse), filtration of sand and silt, removal of fecal coliform, and moderation of water temperature and microclimate (e.g. provision of shade and control of summer stream temperatures essential for maintaining the population dynamics of salmonid fishes). In a review of the effect of riparian buffer width on nitrogen removal, Mayer et al.[82] (2006) noted that riparian buffers greater than 50 meters (150 feet) were the most consistent in removing significant amounts of nitrogen entering the riparian ecosystems studied.

Riparian ecosystem buffers provide habitats for many species of plants, reptiles, birds, and mammals. Robins (2002) notes that 60% of amphibian species, 16% of reptiles, 34% of birds, and 12% of mammals in the Pacific Coast ecoregion are classified as "riparian obligate" species (i.e. are dependent on riparian ecosystems, such as the Santa Clara River, for their survival). In California, more than 225 species of mammals, birds, reptiles, and amphibians are dependent upon riparian ecosystems for their survival (RHJV 2004[83]). As the ecological needs of plant and animal species varies widely, Robins found a wide variety of buffer widths cited as necessary for maintenance of species in riparian ecosystems. The consensus of the scientific studies reviewed by Robins is that a 300-foot-wide buffer zone is likely adequate for protecting a wide variety of plant and animal species. Among the specific recommended buffer width/ranges cited by Robins for conserving habitat for specific groups are 160 feet or greater for riparian mammal habitat, 98-540 feet for reptile and amphibian habitat, 130-1,600 feet for bird habitat, and 30-100 feet for riparian ecosystem plant diversity. For bird habitat the recommended buffer width applies specifically to breeding bird communities in bottomland heartwoods, an ecosystem type found in the Southeastern U.S. and not typical of the Santa Clara River. The majority of bird habitat studies related to riparian buffer width reviewed by Robins recommend a buffer width/range of 130-325 feet for adequately conserving bird habitat.

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[80] DMEC. 2007. Landmark Village Draft EIR Comments. (30 January 2007)

81 Robins, James D. 2002. "Stream Setback Technical Memo" 26. Napa, California: Jones & Stokes Associates, Sacramento, California.

82 Mayer, P.M., S.K. Reynolds, M.D. McCutchen, and T.J. Canfield. 2006. Riparian Buffer Width, Vegetative Cover, and Nitrogen Removal Effectiveness: A Review of Current Science and Regulations. EPA/600/R-05/118. Cincinnati, OH, U.S. Environmental Protection Agency.

[83] RHJV (Riparian Habitat Joint Venture). 2004. The Riparian Bird Conservation Plan. California Partners in Flight. Version 2.0. http://www.prbo.org/calpif/pdfs/riparian_v-2.pdf

Therefore, DMEC recommends a 300-foot-wide buffer zone for the Santa Clara River, which is consistent with the above discussion on protecting a number of riparian functions. For the main and secondary tributaries, DMEC recommends a 100-foot-wide buffer zone. This is in contrast to the 50-foot-wide buffer as recommended by Impact Sciences (1997[84]) for the main tributaries, and the 25-foot buffer for the secondary tributaries. Those narrower buffer zones are simply too narrow to provide adequate protection for most of the 14 riparian wetland functions, as identified by the two southern California HGM riverine regional models (Lee et al. 2001[85], Lee et al. 2003[86]).

Preservation of a buffer zone around main tributaries, high-gradient streams, is important because these streams are the first point where sediments, nutrients, and potential contaminants enter the riparian ecosystem (Robins 2002). The majority of studies on sediment and nutrient removal by riparian buffers cited by Robins recommend that buffer widths should be in the range of 30-100 feet to maintain this essential riparian ecosystem function. This finding is consistent with the recommended 100-foot-wide buffer for the high-gradient stream tributaries of Santa Clara River. Furthermore, for example, the Ventura County General Plan includes a policy establishing a 100-foot-wide riparian wetland buffer zone.

As stated above, Impact Sciences suggests that riparian buffer widths should range from a minimum of 100 to 150 feet, depending on the quality of the upland habitat. In which "a larger buffer width required if the upland habitat is of low quality". Buffers to riparian wetlands need to be set at 300 feet, as shown by Robbins (2002) to adequately buffer most of the 14 wetland functions, as identified by Smith (1995) and Lee et al. (2001, 2003).

The DEIR also states that habitat enhancement in areas where the buffer is narrower could compensate for the smaller buffer. Thus, habitat enhancement in areas where the buffer is narrower could compensate for the smaller buffer. As previously stated, DMEC believes that removal of invasive plants is not an accurate way to mitigating the impacts to waters/wetlands of the U.S.

Inadequate Attention Paid to Federal Floodplain Development Policy in Analyzing Project Alternatives

The Mission Village project described in the DEIR would result in the net loss of the 100-year floodplain of the Santa Clara River. In their critique of the Newhall Ranch Management and Development Program (RDMP) DEIR/EIS the EPA cites President's Floodplain Management Executive Order 11988 and the draft Floodplain Management Executive Order as regulations ordering that federal agencies "shall avoid placing fill in the floodplain to achieve flood protection to the extent practicable." This critique is directly applicable to net loss of Santa Clara River floodplain that will be caused by the currently proposed Mission and Landmark Village projects.

[84] Impact Sciences, Inc. 1997. North Valencia Annexation Buffer Study. Draft. Prepared for Newhall Land and Farming Company (April 28, 1997)

[85] Lee, L.C., P.L. Fiedler, S.R. Stewart, R.R. Curry, D.J. Partridge, J.A. Mason, I.M. Inlander, R.B. Almay, D.L. Aston, and M.E. Spencer. 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.

[86] Lee, L.C., P.L. Fiedler, S.R. Stewart, D.J. Partridge, J.A. Mason, E.M. Inlander, and M.C. Rains. 2003. Draft Operational Guidebook for Assessment of the Functions of Riverine Waters/Wetlands in the Santa Margarita Watershed, Riverside & San Diego Counties, California. San Diego Regional Water Quality Control Board, Technical Publication. San Diego, California.

Inadequate Mission Village Wetland Mitigation Measures

MV 4.3-23 (page 4.3-338) is the development of a conceptual wetlands mitigation plan. A plan is not mitigation and certainly a conceptual one would lack enough specificity to be able to determine if it was both feasible and serve to mitigate the stated impact(s). It leaves open far too many questions about how, where, and when the mitigation would be implemented and whether it is feasible. A conceptual mitigation plan is insufficient to satisfy CEQA requirements. Specific criteria need to be identified for all mitigation measures and this one is entirely lacking in specificity or criteria. If the success criteria listed under MV 4.3-36 are intended to be part of this mitigation measure, then it should not be a separate measure.

MV 4.3-31 (page 4.3-346) simple states that permanently impacted wetland habitats under Corps and CDFG jurisdiction must be mitigated. It states that the mitigation wetlands would need to "habitats of similar functions and values/services (see **MV 4.3-33)** on the project site, or as allowed under **MV4.3-39**". While this sounds good, there are many questions and concerns about this approach. First, the hybrid HGM assessment approach is not tested to show that it can capture wetland functions as well as a pure HGM model. DMEC has successfully used two regional HGM models in the Santa Clara River watershed, the Santa Margarita River Riverine HGM model and the Santa Barbara South Coast Riverine HGM model. The first model is most appropriate for use on the Santa Clara River as the morphology and dynamics of the two rivers are most similar. The Santa Barbara model may be the most appropriate for the tributaries; however, the Santa Margarita River model may be appropriate as well. These models have been tested and used several times in the region within and beyond each model's reference domain (DMEC 2000[87], 2001[88], 2004[89], 2006a[90], 2006b[91], 2009[92]), and the results have been accepted by the regulatory agencies (EPA, Corps, CDFG, California Coastal Commission, County of Ventura). Second, there are no success criteria identified, and the mitigation sites and approaches are left open without the opportunity for the public or lead agency to determine feasibility during the CEQA review process. The public will have no other opportunities to review this mitigation measure.

MV 4.3-36 on page 4.3-349 provides some wetland mitigation success criteria; however, the locations of mitigation and the control sites are unknown. This should be rectified.

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[87] 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.

[88] 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.

[89] David Magney Environmental Consulting. 2004. Wetland Functional Assessment of the 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.

[90] David Magney Environmental Consulting. 2006a. Baseline HGM Assessment for Mountains Restoration Trust, Dry Canyon Creek, Calabasas, California. (Corps File No. 200601215-JWM). August 2006. (PN 05-0262-1). Ojai, California. Prepared for Mountains Restoration Trust, Calabasas, California; City of Calabasas, Calabasas, California; U.S. Army Corps of Engineers, Ventura, California; and California Department of Fish and Game, San Diego, California.

[91] David Magney Environmental Consulting. 2006b. Wetland Functional Assessment of the Gramckow Property Project, Rancho Matilija, California. 15 June 2006. (PN 06-0041.) Ojai, California. Prepared for Ventura County Planning Division, Ventura, California, on behalf of Martin Gramckow, Ojai, California.

[92] David Magney Environmental Consulting. 2009. Wetland Functional Assessment of the Lyons Property Mitigation Bank Project, Santa Paula Canyon, California. 10 March 2009. (PN 08-0152.) Ojai, California. Prepared for BioResource Consultants, Ojai, California, on behalf of Richard Lyons & Laurie Prange Lyons, Ojai, California.

In summary, DMEC finds that the EIR fails to adequately assess all project-related impacts to the biological resources onsite and fails to provide adequate and/or feasible mitigation to reduce the significant impacts to a level of less than significant. The project EIR relies almost exclusively on the SPC, which fails to protect the SFVS and would put it at risk of extinction, or at least local extirpation in the long term. The Friends of the Santa Clara River, California Native Plant Society, and others, are filing a legal challenge on the adequacy of the EIR for the SCP and CDFG's issuance of a take permit pursuant to Section 1081 of the California Endangered Species Act since the SCP does not fully mitigate project-related impacts to the SFVS.

Thank you for considering our concerns with the adequacy of the DEIR.

Sincerely,

David L. Magney
President

David Brown, M.S.
Biologist

Attachments: EPA letter to Corps
DMEC's 2009 comment letter on the RMPD/SCP & EIS/EIR

cc: Ron Bottoroff, Friends of the Santa Clara River
Greg Suba, California Native Plant Society