COMMENTS OF THE NEWHALL RANCH SPECIFIC PLAN APRIL 2001 DRAFT "ADDITIONAL ANALYSIS"

David Magney Environmental Consulting (DMEC) was requested by the California Native Plant Society, Friends of the Santa Clara River, and Environmental Defense Center to assist them in their review of the Newhall Ranch Specific Plan environmental documents. Dr. K. Shawn Smallwood assisted DMEC with these reviews and this analysis. DMEC has reviewed the Draft Environmental Impact Report (DEIR), Final Environmental Impact Report (FEIR), and April 2001 Draft Additional Analysis for the Newhall Ranch Specific Plan. The FEIR was the 1998 FEIR augmented by the Draft Additional Analysis. The Draft Additional Analysis should have been prepared and called a revised or supplemental Draft EIR, since that is the document most resembling the intent of the document pursuant to CEQA (there is no such document under CEQA called "Additional Analysis").

The following is a review of the issues addressed in the DEIR, FEIR, and Additional Analysis, the baseline data, methods used, assessment methodology and the formulation of the mitigation related to the biological resources of the Newhall Ranch Specific Plan area.

Our comments on the April 2001 Additional Analysis includes:

- An overview of our comments on the Additional Analysis and supporting documents;
- A discussion on the sufficiency as an informative document under CEQA;
- Comments on the environmental setting;
- An assessment of the suitability of the assessment of impacts on biological resources;
- An assessment of the alternatives analysis;
- An assessment of the proposed mitigations for impacts to biological resources; and
- Comments on the need for access to the project area by CNPS, independent consultants, and agency biologists.

These comments are found as listed below.

These comments, while highly critical of numerous aspects of the Additional Analysis, are not simply our reasoned opinions (although our opinions on certain issues are also provided); each criticism is supported by basic scientific principles, methods, and peer-reviewed scientific research and literature, as well as CEQA regulations and legislative intent.

OVERVIEW

The piecemeal release of EIR documents has impeded our ability to thoroughly address the internal contradictions and inconsistencies that we detected. It has impeded our ability to locate and review all the information that the County and Impact Sciences must have relied upon to reach conclusions reported in the FEIR and Additional Analysis. We point out that many additional comments could have been made, and should have been made. Our comments in the text that follows are only a beginning of what can and should be said about the EIR documents prepared for the Newhall Ranch Specific Plan.

Our main focus in this comment letter will be on the Additional Analysis.

The FEIR and Additional Analysis pigeonhole species into narrowly defined compartments of the environment of the Newhall Ranch Specific Plan area, which ends up being the riparian vegetation of the Santa Clara River and Salt Creek for most species. Then the FEIR and Additional Analysis minimize impact estimates by claiming to leave these reaches of riparian vegetation intact, even improved in some places. We will not argue that riparian vegetation is unimportant to wildlife – it is important, but rather, the distribution of special-status species has been overly projected to depend on riparian vegetation, and the regional movement patterns of the species has been overly attributed to the Santa Clara River corridor and Salt Creek Canyon.

SUFFICIENCY AS AN INFORMATIVE DOCUMENT

To make informed decisions, lead authorities and the public must have access to good information. Under CEQA[1], "[A] paramount consideration is the right of the public to be informed in such a way that it can intelligently weigh the environmental consequences of any contemplated action and have an appropriate voice in the formulation of any decision". Attributes of such information would include thoroughness, relevance, lack of bias, and honest, full disclosure of the environmental setting and possible cumulative impacts. Documents that present information from a strongly biased perspective will tend to include logical fallacies, internal contradictions, and unfounded boilerplate responses to substantial issues. In this section, we have exposed the errors, logical fallacies, and bias that plague the FEIR and Additional Analysis, thus rendering the information in these documents as unreliable.

For example, the FEIR (4.6-22) claims, "**no Federal candidate wildlife species were recorded on the [Newhall] Ranch**". However, in Appendix 4.6 of the FEIR, we learn that the San Diego Desert Woodrat was trapped at several locations on Newhall Ranch, and the reconnaissance-level surveys turned up Tricolored Blackbird, Loggerhead Shrike, Western Spadefoot Toad, Southwestern Pond Turtle[2], Two-striped Garter Snake, San Diego Horned Lizard, and Coastal Western Whiptail, all of which are reported by this Appendix as being federal candidate species for listing. The FEIR/Additional Analysis did not even consider the possibility of California Thrasher or Coachwhip

[1] Environmental Planning and Information Council vs. County of El Dorado (1982) 131 Cal. App. 3d 350, 354.
[2] Reportedly observed during the Baskin and Haglund surveys in 1992 (FEIR Appendix 4.6, Appendix H).

occurring on the Newhall Ranch, yet they were found during the Dames & Moore surveys of 1993[3]. It certainly gives the appearance of being unprofessionally prepared[4].

Furthermore, the applicant (FEIR:4.6-22) claims "**no State- or Federally-listed wildlife species were observed in upland portions of the Newhall Ranch**". Then we learn that the federally endangered Arroyo Southwestern Toad[5] and the California endangered Western Yellow-billed Cuckoo[6] were discovered in the Specific Plan area, even though the FEIR/Additional Analysis claimed that these species were not found there. Apparently, some parts of the EIR would have us believe that no State- or Federally-listed species were found at Newhall Ranch, whereas another part of it would have us believe that they are just not found in the upland areas. Given the cursory nature of the field surveys, we are not surprised that the consulting biologists failed to see the California Condor foraging overhead, or signs of the multiple other threatened and endangered species that undoubtedly reside on the Newhall Ranch. Many historical records of California Red-legged Frog and other listed species can be found in the California Natural Diversity Database and in public museums. Elsewhere, the applicant claims that the federally endangered San Fernando Valley Spineflower (*Chorizanthe parryi* ssp. *fernandina*) was not recorded on the Ranch, and was given a very low likelihood of occurring on the Newhall Ranch (FEIR Appendix 4.6-56). DMEC also learned in 2000 that this species has been discovered there[7]. The FEIR does not reliably report the existence of special-status species on the Newhall Ranch Specific Plan area. In addition, the Additional Analysis fails to ever mention the fact that both the Southwestern Arroyo Toad and the San Fernando Valley Spineflower both occur on Newhall property. The fact that these two listed species are present onsite and were not properly evaluated in the original EIR or the Additional Analysis warrants reissuance of a supplemental EIR on the entire project, not just piecemeal treatments such as presented in the Additional Analysis.

The Additional Analysis includes old plant species lists as an appendix (Appendix 2.2(c)), both of which contains errors (some of them minor spelling errors) and inconsistencies, but nowhere is there a list of plants observed during the subsequent field surveys in 2000 and 2001.

Of the 17 plant taxa recorded in the 1992 plant species list of 141 taxa, 13 of them are in direct conflict with those reported by RECON in their 1995 plant list. That is, the taxonomic identification of species or varieties reported as present does not agree between the two lists. Also lacking is any indication where the botanists performed the field surveys, which may, or may not account for the differences. An explanation is required. See *Artemisia tridentata, Atriplex lentiformis,* and *Astragalus trichopodus* as examples.

Several plant species are not identified sufficiently to determine their identity, mostly lacking identification to the subspecies or varietal level. These include: *Arctostaphylos glandulosa, Bloomeria crocea, Descurainia pinnata, Eriodictyon crassifolium, Leptodactylon californicum*, and

[3] FEIR Appendix 4.6, Appendix H.
[4] Smallwood, K.S., A. Gonzales, T. Smith, E. West, C. Hawkins, E. Stitt, C. Keckler, C. Bailey, and K. Brown. 2001. Suggested Standards for Science Applied to Conservation Issues. *Transactions of the Western Section of the Wildlife Society*: In press.
[5] Reportedly observed during the RECON surveys (FEIR Appendix 4.6, Appendix H).
[6] FEIR Letter 73 from Dr. Mark Holmgren. Despite Holmgren's letter, The applicant continued to maintain that Western Yellow-billed Cuckoo has not been observed at the site (FEIR RTC-48).
[7] CDFG, Natural Heritage Division, Sacramento, California, presentation to Fish and Game Commission regarding listing the San Fernando Valley Spineflower as an endangered species.

Malacothamnus fasciculatus. Proper identification to the lowest taxonomic level is necessary to determine whether they are special-status species[8].

> "Botanical surveys must be conducted to determine if, or to the extent that, special status or locally significant plants and plant communities will be affected by a proposed project when any natural vegetation occurs on the site and the project has the potential for direct or indirect effects on vegetation.". . . "Botanical surveys should be conducted in a manner that will locate any special status or locally significant plants or plant communities that may be present." From CNPS Botanical Survey Guidelines.[9]

Of the 336 plant taxa reported as present in the specific plan area (based on plant species lists in the Additional Analysis Appendix 2.2(c)), a total of 84 taxa may be considered species of local concern, a subset of special-status species[10]. These 84 taxa are listed below and are shown in **bold** typeface. Nowhere in the CEQA documents are species of local concern mentioned or assessed for project-related impacts. This needs to be rectified. Other questions are raised about the identification of other taxa that also should be resolved.

Scientific Name	1995	1992	Comments/Notes
Agrostis alba		X	What is this? Not reported for California
Amsinckia menziesii* var. *menziesii	X		Fewer than 10 occurrences in Ventura Co.
Arctostaphylos glandulosa	X		Which subspecies? Some subspecies are rare.
Argemone munita	X		Fewer than 10 occurrences in Ventura Co.
Artemisia tridentata* ssp. *tridentata	X		Check identification, likely ssp. *parishii*, a species of local concern.
Astragalus didymocarpus* var. *didymocarpus	X		Fewer than 10 occurrences in Ventura Co.
Astragalus trichopodus* var. *trichopodus		X	Fewer than 10 occurrences in Ventura Co.
Atriplex canescens	X	X	Fewer than 10 occurrences in Ventura Co., represents southwestern most limits of its range.
Atriplex lentiformis* ssp. *lentiformis	X		Fewer than 10 occurrences in Ventura Co.
Atriplex triangularis	X		Fewer than 10 occurrences in Ventura Co.
Baccharis emoryi	X		Regionally rare.
Bloomeria crocea	X		Which subspecies?
Calochortus clavatus* ssp. *clavatus	X	X	CNPS List 4
Calystegia macrostegia ssp. *intermedia*	X		Uncommon in region
Calystegia peirsonii	X	X	Fewer than 10 occurrences in Ventura Co.
Camissonia californica	X		Fewer than 10 occurrences in Ventura Co.
Chenopodium californicum	X	X	Fewer than 10 occurrences in Ventura Co.
Chorizanthe xantii	X		Fewer than 10 occurrences in Ventura Co.

[8] California. Department of Fish and Game. 1984. Guidelines for Assessing Effects of Proposed Developments on Rare and Endangered Plants and Plant Communities. The Resources Agency, Sacramento, California. Unpublished Report.;

[9] California Native Plant Society. 2001. Botanical Survey Guidelines. (Revised 2 June 2001.) Board of Directors Policy. Sacramento, California. http://www.cnps.org.

[10] Magney, D.L. 2001a. *Ventura County Plant Species of Local Concern*. California Native Plant Society, Channel Islands Chapter, Ojai, California;
Boyd, S. 1999. *Vascular Flora of the Liebre Mountains, Western Transverse Ranges, California.* (Publication No. 5.) Rancho Santa Ana Botanic Garden, Claremont, California.

Scientific Name	1995	1992	Comments/Notes
Clarkia bottae	X		Uncommon in region.
Clarkia epilobioides	X		Uncommon in Liebre Mtns.
Clarkia purpurea* ssp. *purpurea	X		Not reported for southern California, check ssp. identification; otherwise this is a rare species occurrence
Clematis pauciflora	X		Not reported from area, a significant occurrence if correct.
Collinsia heterophylla	X		Fewer than 10 occurrences in Ventura Co. but more common in the Liebre Mountains.
Collinsia parryi	X		Fewer than 10 occurrences in Ventura Co., infrequent in Liebre Mtns.
Descurainia pinnata		X	Which subspecies?
Eleocharis parishii	X	X	More common in Liebre Mtns.
Eriastrum densifolium* ssp. *mohavense	X		Not reported for Liebre Mtns.
Eriastrum sapphirinum	X		Fewer than 10 occurrences in Ventura Co.
Ericameria palmeri* var. *pachylepis	X		Fewer than 10 occurrences in Ventura Co.
Eriodictyon crassifolium		X	Which subspecies?
Eriodictyon trichocalyx* var. *trichocalyx	X		Fewer than 10 occurrences in Ventura Co., check variety identification is questionable.
Filago californica	X		Fewer than 10 occurrences in Ventura Co.
Gilia achilleifolia* ssp. *achilleifolia	X		Fewer than 10 occurrences in Ventura Co.
Gilia angelensis		X	Fewer than 10 occurrences in Ventura Co.
Helianthus gracilentus	X		Fewer than 10 occurrences in Ventura Co., more common in Liebre Mtns.
Juglans californica* var. *californica	X	X	CNPS List 4
Lathyrus vestitus* var. *vestitus	X		At southern extent of range, check identification
Layia glandulosa	X		Which subspecies?
Leptochloa uninerva	X		Fewer than 10 occurrences in Ventura Co., not reported in Liebre Mtns.
Leptodactylon californicum	X	X	Which subspecies?
Lomatium utriculatum	X		Fewer than 10 occurrences in Ventura Co.
Lonicera interrupta	X		Fewer than 10 occurrences in Ventura Co.
Lotus hamatus	X		Fewer than 10 occurrences in Ventura Co.
Lotus wrangelianus	X		Fewer than 10 occurrences in Ventura Co.
Lupinus andersonnii	X		Fewer than 10 occurrences in Ventura Co.
Lupinus excubitus* var. *hallii	X		Fewer than 10 occurrences in Ventura Co.
Lupinus sparsiflorus	X		Fewer than 10 occurrences in Ventura Co.
Lupinus truncatus	X		Fewer than 10 occurrences in Ventura Co.
Lythrum californicum	X		Fewer than 10 occurrences in Ventura Co.
Malacothamnus fasciculatus	X		Which subspecies?
Mimulus pilosus	X		Fewer than 10 occurrences in Ventura Co.
Nassella lepida	X		Fewer than 10 occurrences in Ventura Co.
Navarretia atrachtyloides	X		Fewer than 10 occurrences in Ventura Co., scarce in Liebre Mtns.

Scientific Name	1995	1992	Comments/Notes
Nicotiana quadrivalvis	X		Fewer than 10 occurrences in Ventura Co., more common in Liebre Mtns.
Opuntia basilaris* var. *basilaris	X	X	Fewer than 10 occurrences in Ventura Co., rare in region.
Opuntia prolifera	X	X	Fewer than 10 occurrences in Ventura Co., not present in Liebre Mountains.
Paspalum distichum	X		Fewer than 10 occurrences in Ventura Co.
Pectocarya linearis* ssp. *ferocula	X		Fewer than 10 occurrences in Ventura Co.
Phacelia ramosissima* var. *latifolia	X		Fewer than 10 occurrences in Ventura Co.
Phacelia tanacetifolia	X		Fewer than 10 occurrences in Ventura Co.
Plagiobothrys nothofulvus	X	X	Fewer than 10 occurrences in Ventura Co.
Pluchea odorata	X		Fewer than 10 occurrences in Ventura Co.
Pluchea sericea	X	X	Fewer than 10 occurrences in Ventura Co.
Prunus virginiana* var. *demissa	X		Fewer than 10 occurrences in Ventura Co., rare in region.
Rafinesquia californica	X		Fewer than 10 occurrences in Ventura Co.
Ribes aureum* var. *gracillimum	X		Fewer than 10 occurrences in Ventura Co.
Rumex hymenosepalus	X		Fewer than 10 occurrences in Ventura Co.
Scirpus acutus* var. *occidentalis	X		Fewer than 10 occurrences in Ventura Co.
Scirpus americanus	X		Fewer than 10 occurrences in Ventura Co.
Scirpus californicus		X	Fewer than 10 occurrences in Ventura Co.
Scirpus maritimus	X		Fewer than 10 occurrences in Ventura Co.
Senecio californicus	X		Uncommon in region
Solidago confinis	X		Fewer than 10 occurrences in Ventura Co.
Spergularia marina	X		Fewer than 10 occurrences in Ventura Co.
Stillingia linearifolia	X		Fewer than 10 occurrences in Ventura Co.
Tetradymia comosa	X		Fewer than 10 occurrences in Ventura Co.
Trifolium albopurpureum* var. *a.	X		Fewer than 10 occurrences in Ventura Co.
Trifolium fucatum	X		Not reported for Liebre Mtns.
Trifolium gracilentum* var. *gracilentum	X		Fewer than 10 occurrences in Ventura Co.
Trifolium tridentatum		X	Not reported for Liebre Mtns.
Trifolium willdenovii	X		Fewer than 10 occurrences in Ventura Co.
Tropidocarpum gracile	X		More common in Liebre Mtns.
Vicia americana* var. *americana	X		Fewer than 10 occurrences in Ventura Co.
Viola pedunculata	X	X	Fewer than 10 occurrences in Ventura Co., not reported for Liebre Mtns.

In yet another example of unreliability, the FEIR claims "**Federal and state protocols were followed during the study of listed animal species …**" (RTC-95). According to Appendix E in Appendix 4.6:

- two bird surveys were conducted in April/May, 1992;
- small mammal trapping was conducted during May 28 and 29 using only 6 trap-stations and 10 traps per station;

- two hours of spotlight survey were performed during a single night; amphibian surveys were performed during the nights of April 10, 11, and 12, 1995, and;
- incidental wildlife observations were made while mapping vegetation and searching for special-status plant species.

More recent surveys described in the Additional Analysis appear to be even more cursory than these, and bat, invertebrate, and lichen surveys were apparently not performed at all, except for the remote camera surveys, which provided interesting and valuable data (though they needed to be of longer duration and placed in all habitat types to provide the data required to make the claims made in the Additional Analysis). Based on these descriptions of wildlife and plant searches at Newhall Ranch, there is no possibility that the consulting biologists used the state and federal survey protocols for the special-status species. It is ludicrous to suggest that the cursory searches conducted during three nights in April one year could have been exhaustive or at all consistent with state and federal protocols for Arroyo Southwestern Toad, California Red-legged Frog, California Tiger Salamander, Western Spadefoot Toad, and the other amphibians. These shortfalls are appalling at face value, but are even more appalling after reading the consultant's claim that the survey protocols were used. After reading this apparently false statement, we question the credibility of the entire EIR and supporting documents. Furthermore, it is our opinion that this false claim warrants consideration by the prosecution branches of the California Department of Fish and Game (CDFG) and the US Fish and Wildlife Service (USFWS) as a fraud. Short of that, exactly what protocols that were followed should be explicitly described and explained.

The botanists did not appear to have conducted their field surveys according to CDFG and CNPS field survey protocols for rare plants as the timing and completeness of the field surveys over all the areas of the project site are not adequately described, nor was enough time spent in the field to conduct a thorough enough survey of the plants. This is evidenced by the fact that the San Fernando Valley Spineflower has been found as several locations in the Specific Plan area but was not reported in the DEIR, FEIR, or Additional Analysis. Why was it not found during the 1992 and 1995 field surveys? Why is it not disclosed as present onsite in the Additional Analysis? We suspect that it was not observed prior to 2000 because the floristic field surveys were inadequate, and did not meet minimum professional standards for conducting botanical surveys for the purposes of CEQA[11]. We also suspect that the fact that the San Fernando Valley Spineflower was not mentioned in the Additional Analysis would further raise the question of the need to revise the entire CEQA documents, and it raises new information that Newhall, Impact Sciences, and Los Angeles County would rather ignore since they would expose their lack of proper analysis and protocols in their past and current CEQA review documents. Based on the fact that both the San Fernando Valley Spineflower and Southwestern Arroyo Toad have both been observed on Newhall property since the FEIR was published, new signification information is now available, and the EIR needs to be revised and recirculated to provide the public an opportunity to review and comment of these new issues.

The following analysis of the responses to comments, and Table 1 below, illustrate the high level of bias that makes the FEIR unreliable and therefore uninformative.

FEIR RESPONSE TO COMMENTS

The response to comments section of environmental documents also provides evidence of whether good faith efforts are made in using sound scientific or biological information. Many who comment on

[11] CNPS Botanical Survey Guidelines, see www.cnps.org for complete text of guidelines.

environmental documents are professional scientists, of which many hold advanced degrees, work as Professors at institutions of higher learning, or have years of experience in studying or managing natural resources. These comment providers often bring substantial natural history information, scientific data, and interpretation to environmental documents. The lead agency and project consultants are supposed to consider this information so that a better, less environmentally damaging project can be planned and implemented, if approved. If those preparing the environmental documents are committed to using sound science, then they would routinely heed the advice of scientists commenting on these documents.

Methods

We tallied the types of responses given by the lead agency/project consultants. In one type, the response would indicate that a change was made to the FEIR as a result of the comment. In many cases, we recorded a change as having been made when the response read "Based on public comments and issuance criteria, the regulatory agencies have increased the [e.g. mitigation]". We did not record the magnitude of the change, nor did we crosswalk between the DEIR and FEIR to verify that the change was actually made. Therefore, we assumed that when the response claimed to have made a change that the change was indeed made. However, in noting errors retained in some appendices of the Additional Analysis, we are less confident that the errors or corrections were ever made.

Another type of response was "comment noted" or "information noted". This type of response informs the reader that the comment is part of the administrative record, but the lead agency intends to ignore the substance of it. Sometimes, the lead agency/project consultant writes, "the comment is acknowledged for the administrative record" or something to this effect.

Another type of response portrayed the comment as irrelevant. In this case, the response usually referred the reader to another part of the FEIR where, for whatever reason, a change had already been made between the DEIR and FEIR, which rendered the present comment as irrelevant or out-dated. Often, the response would take the form, "We agree, this is why we did such and such". In some cases, the comment was undoubtedly and legitimately irrelevant, although we did not check. However, when this approach is used, the lead agency/project consultants do not acknowledge that the comments had anything to do with the changes added to the FEIR. In addition, the magnitude of the change may or may not have satisfied the comment provider.

Responses often claimed that the comment provider was stating an opinion or speculating. In these cases, the lead agency/project consultants are saying that the conclusion of the comment provider lacked a logical premise or foundation justifying the conclusion expressed in the comment. We did not keep track of how often the responders were correct with this type of response, but sometimes comment providers did indeed state opinions or engage in speculation, even those who are trained scientists. Most often, the respondents accused the comment provider of speculating or of rendering an opinion; then, the respondent would find additional reasons to reject the comment, such as, they disagreed with the commenter. These types of responses were categorized as flawed or wrong (incorrect), and are described below.

We also tallied all responses stating the conclusion of the lead agency/project consultant that the comment was wrong or the logic used was flawed. These responses often deny conclusions presented in the comments, or suggest that the comment provider misinterpreted some part of the EIR or associated Habitat Conservation Plan (HCP) or other supporting documents, or they maintained that the methods used to formulate the comments were inappropriate. Too often, the applicant states, "the draft EIR contains the requested information", implying that the professionals commenting on the EIR were a bunch of dolts. Most often, if the EIR contained the requested information, the professionals who reviewed and commented on the EIR would have found the information.

In some cases, the responses do not address the comment. For example, a response might refer the reader to another response to another comment letter, or to a general response letter. Presumably, the reader would see that the particular comment was addressed by the response to which the reader had been referred. However, these referrals often did not satisfy the commenter, and sometimes the referred response had absolutely nothing to do with the comment at issue. Responding to the USFWS's comment that there were no soils map presented in the DEIR (FEIR Letter 3), the preparer referred the reader to Topical Response 24, but this response said nothing about soils or soils maps (FEIR RTC-27). Responding to the CNPS comment (FEIR letter 51) regarding future planning in the portion of Ventura County proximal to Salt Creek, the applicant referred the reader to Responses 35 and 36, but neither of these comments or responses addressed this issue.

Results

We reviewed the responses to 626 comments in 22 letters made by 4 Ph.D.-level academic and consulting scientists, 4 regulatory agencies, 5 members of CNPS, 2 from the Sierra Club, 1 from the Santa Clarita Organization for Planning the Environment, 1 from the Friends of the Santa Clara River, 2 from the Environmental Defense Center, and 1 from a member of SEATAC (Table 1). These letters were selected for review due to their relevance to environmental issues related to the Specific Plan. The comments in these letters provided the project proponents with a wealth of information about the natural resources at Newhall Ranch and about CEQA and other environmental laws.

Table 1. Summary of FEIR Responses to Comments from Selected Comment Letters Submitted by Environmental Professionals.

Comment Letter	Number of Comments	Change Made	Response Provided Information	Comment Noted	Comment was Not Addressed	Comment Opined or Speculated	Comment Not Relevant	Comment Flawed, Wrong
1. U.S. Army Corps of Engineers	19	0	0	1	5	1	1	11
2. U.S. Environmental Protection Agency	26	0	1	0	3	0	1	21
3. U.S. Fish and Wildlife Service	28	2	0	0	2	0	0	24
4. California Department of Fish and Game	50	0	2	0	2	0	1	45
10. Joan Florsheim, Ph.D., Phillip Williams & Associates	26	0	2	1	0	0	0	23
11. M. Josselyn, Ph.D., Romberg Tiburon Center	26	0	1	2	0	0	5	18
73. Mark Holmgren, Ph.D., UCSB	15	0	0	0	0	0	0	15
74. Jonathon Baskin, Ph.D., Cal Poly, Pomona	10	0	0	0	0	0	0	10
71/72. John Buse, J.D., Environmental Defense Center	60	0	0	0	0	0	2	58
67/70. Carla Bard[12], Environmental Defense Center	32	0	0	0	0	0	0	32
48. Betsy Landis, CNPS	51	0	0	1	9	3	7	31
49. Richard A. Burgess, M.S., CNPS	29	0	0	0	2	1	0	26
50. Rita DePuydt, CNPS	4	0	0	0	0	0	1	3
51. Jan Scow, CNPS	27	3	1	0	1	0	3	19
52. Jan Scow, CNPS	43	0	0	1	1	3	0	38
61. Stanley Hart, Sierra Club	5	0	0	0	0	0	2	3
63. Dick Hingstrom, Sierra Club	7	0	0	0	1	0	1	5
64. Lynne Plumbeck, Friends of the Santa Clara River	138	0	0	7	3	14	1	113
66. Jim Danza, Friends of the Los Angeles River	23	0	0	1	0	0	0	22
84. Carl Wishner, SEATAC member	7	0	0	0	1	0	0	6
Total	**626**	**5**	**7**	**14**	**30**	**22**	**25**	**523**

[12] Carla Bard (deceased) was a former Chair of the State Water Quality Control Board.

However, of these 626 comments, 5 resulted in changes to the FEIR, and 621 (99.2%) were dismissed or rejected as incorrect, speculative, or irrelevant (Table 1). The changes made included:

1. The elimination of 15 estates from a sensitive area of the High Country SMA;
2. A reduced taking of the mesic meadow area (i.e. Cismontane alkali sink) from 100% to 70%;
3. The addition of language to avoid use of exotic, invasive plants;
4. The use of native plants for restoration in the Santa Clara River corridor; and,
5. The use of the local gene pool for planting oaks in the High Country SMA and Open Area.

These changes are helpful, but rather trivial relative to the scope of the Specific Plan and its impacts. Other than these changes, nothing the responders had to say made any difference to the Additional Analysis, except for the continuation of some defensive arguments against comments made on the DEIR.

Whereas we acknowledge that some comments were incorrect, speculative or irrelevant, we reject the claims of the project proponents that >99% of them fell into these categories. The grand majority of these comments were substantial and correct, and would have contributed in very significant ways to the informative value of the FEIR and the compatibility of the Specific Plan with the regional environment. That they were summarily dismissed and rejected clearly demonstrates the biased approach of the project proponents and EIR preparers (Impact Sciences). Below, we will further demonstrate that Impact Sciences and Los Angeles County often failed to meet the minimum standards of the environmental resources and planning professions, and that the EIR documents and conclusions therein are so flawed that this entire planning effort should be scrapped.

Impact Sciences demonstrated bias by also condemning EIR comments for being speculative, while they readily relied on speculation throughout the EIR process. For example, Impact Sciences accused Betsy Landis of speculating that earthquakes and a newly discovered fault could pose a hazard to the Newhall Ranch residents[13].

In the meantime, Impact Sciences had dismissed the no project alternative in the DEIR because it would "likely just divert urban development from this site to another". This unprecedented conclusion in an alternatives analysis was based on the speculated population growth in the region made be the Southern California Area of Governments (RTC-36). In addition, Impact Sciences speculated that Salt Creek Canyon is the primary wildlife movement corridor in the region. They speculated about what physical and floristic qualities compose wildlife movement corridors. The Additional Analysis (Page 2.4-11) speculated that State Route 126 limits wildlife movement (this might be true for some species, but for all of them). The FEIR (RTC-501) speculated, "Under current conditions, the majority of biological resources occur within the 30-year floodplain of the River; therefore the biologically significant width of the river … will be increased after bank stabilization". The FEIR speculated that abrupt withdrawal of grazing cattle might cause an overgrowth of weedy annual plants, which might choke out natives (FEIR RTC-419). None of these speculations was founded in empirical evidence or the scientific literature. Ironically, when it was perfectly appropriate to speculate on the potential impacts of the project on beach visitation by Newhall Ranch residents, the FEIR (RTC-422) declined to do so on the grounds that such an assessment would be "speculative".

[13] FEIR RTC-417.

MINIMIZATION OF IMPACT ESTIMATES

The Additional Analysis begins minimizing impact estimates on Pages 2.4-1 and 2 when it portrays SEA 23 and the Salt Creek canyon as the only places within the Newhall Ranch Specific Plan area with important or significant biological resources, such as rare and endangered species. The Additional Analysis pretends that the rest of the Plan area lacks vegetation cover types and topographic conditions that are important to special-status species, or are too disturbed to support them.

The Additional Analysis describes the vegetation in the Santa Clara River and Potrero Canyon as degraded due to cattle grazing, agriculture, and historic petroleum extractions (Pages 2.2-19 and 2.4-9). It presented no photos of this Canyon, even though photos were offered of Salt Creek (Fig. 2.2-4). Additionally, an examination of the aerial photograph of both watersheds shows no significant habitat differences. The primary differences are in Impact Sciences flawed descriptions, such as characterizing the Annual Grassland vegetation as "Non-Native Grassland". Considering the lack of appropriately timed or thorough botanical field surveys of the project site, and the large number of native wildflower species included on the plant species list (provided in Appendix 2.2(c)), suggests that the grasslands are in fact quite floristically rich and should probably be classified as Wildflower Field, which is a sensitive habitat type according to the CDFG. A prime example of a regionally important Wildflower Field is in the Gorman area of Los Angeles County. Even experienced botanists could not determine the species richness and incredible wildflower displays that occur there if they did not visit the site during the correct time of year.

A visit to the Gorman area in late June would leave the botanist with the impression that the area only contained a grassland vegetation type, likely dominated by nonnative European grasses. As we know, during April and early May, this area provides one of the most spectacular wildflower displays in California, and the nation. Based on evidence and methods used for this project, Impact Sciences would have likely mapped the area as Nonnative Grassland, and totally missed a tremendously important botanical and economically important site.

To say that habitat losses in the Potrero Creek watershed would "affect the long-term movement of wildlife within this watershed" (Page 2.2-25-27), understates the impact. These losses will be complete throughout the watershed (i.e. involve the entire watershed) and will be *permanent*, rather than "long-term".

According to the Additional Analysis (Page 2.2-20), "A large portion of the Potrero Creek watershed is dominated by Non-native Grasslands. Grasslands, in general, support a lower diversity of wildlife than do scrubs or woodlands" … and " … the diversity of species is generally low" [in grasslands]. The Additional Analysis goes on to state that "birds of prey and large mammals such as deer and coyote use grasslands as a food source but not for shelter or breeding activities" (Page 2.2-20). In reality, Mule Deer and Coyote both breed in grasslands[14], as do Short-eared Owl, Burrowing Owl, Peregrine Falcon, Northern Harrier, American Badger, Western Spotted Skunk, San Diego Black-tailed Jackrabbit, and many other species listed in Table 5 (under the heading, **Special-Status Species**). Grasslands support some of the most diverse assemblies of plant and wildlife species in California[15], many of which are threatened and endangered.

[14] see the ratings in the California Wildlife Habitat Relationships System Version 7.0.
[15] Jones & Stokes Associates, Inc. 1989. Sliding Towards Extinction: Reassembling the Pieces. Sacramento, California. Commissioned by The Nature Conservancy, San Francisco, California.

SEA 23 was described as "relatively undisturbed" (Page 2.4-2), yet includes vegetation complexes that are well known to be adapted to a severe disturbance regime associated with the periodic flood events typical of stream channels[16]. In fact, the disturbance regime of the Santa Clara River will defy the neat and nifty "habitat" boundaries depicted in Figures 2, 4, 6, and 7 of the Additional Analysis. All of these boundaries will be wiped out during the next big storm event, which, according to Table 5 of the Additional Analysis, would recur every 10-15 years or so. As a result of this misrepresentation of riparian vegetation as statically distributed, the estimates of storm- and project-related impacts are ill-based, and the proposed mitigation, involving addition of "sensitive habitats" to SEA 23 in exchange for the "non-sensitive habitats" to be taken by the project, will be less effective than suggested in the Additional Analysis. In reality, the "sensitive habitats" added to SEA 23 inevitably will be blown out by future storm events, which will likely be amplified in their erosive force by >3,100 acres of new impervious surfaces in the Santa Clara River watershed. There will be a net loss of habitat within SEA 23 under the habitat-swapping scheme of the Additional Analysis. Regardless, it is only the number of acres within the newly defined SEA-23 that will be similar to existing conditions; the actual habitats within the boundary of the existing SEA-23 will be largely destroyed to make way for the project. Simply shifting the boundary does not mitigate for the impacts to the currently configured SEA.

The Additional Analysis distinguishes between sensitive and nonsensitive habitats within SEA 23 (Page 2.4-5-6). It then suggests that the SEATAC (Page 2.4-4) mistakenly delineated SEA 23, thereby justifying its proposed new delineation, which further minimizes estimates of impacts by excluding the disturbed lands and nonriparian grasslands that compose "nonsensitive habitat". As explained above, disturbance is central to the organization of plants and wildlife within stream corridors. Wildlife in riparian environments survive within a *complex* of vegetation cover types, rather than one or the other[17]. The Additional Analysis's distinction of nonsensitive habitat is arbitrary, based on no biological surveys used to substantiate the distinction, unprecedented in science, and illogical at face value. This fallacious distinction is especially absurd when considering that all the acres of vegetation cover types being discussed herein occur in Significant Ecological Area 23. The SEATAC was not identifying Nonsignificant Ecological Areas. The Additional Analysis identifies disturbed lands and nonriparian grasslands in SEA 23 as non-sensitive habitats (Page 2.4-5-9). This distinction, coupled with the Additional Analysis's pigeonholing of special-status species into sensitive habitat associations (Page 2.4-9), enabled Impact Sciences to further minimize the estimated impacts of the project because the land conversions are proposed on portions of the SEA that are now designated by the Impact Sciences as "non-sensitive". In taking this step, the Additional Analysis neglected to consider that plants and wildlife occurring within riparian corridors are adapted to substantial disturbance regimes involving periodic flood events[18]. So-called disturbed lands and nonriparian grasslands observed today are used

[16] e.g. Kondolf, G. M. 1997. Hungry Water: Effects of Dams and Gravel Mining on River Channels. *Environmental Management* 21:533-551;
Leopold, L.B. 1994. *A View of the River*. Harvard University Press, London;
Naiman et al. 1993.

[17] Naiman et al. 1993.

[18] e.g. Kondolf, G.M. 1997. Hungry Water: Effects of Dams and Gravel Mining on River Channels. *Environmental Management* 21:533-551;
Leopold, L. B. 1994. *A View of the River*. Harvard University Press, London.

by riparian-adapted wildlife, and will be the future sites of cottonwoods, willows, and Mulefat, as examples[19].

Furthermore, based on examination of aerial photographs of the area from the 1980s, the disturbed lands described in this area have been modified since the area was designated as SEA 23. These changes to habitat conditions should be described to gain perspective on why they are degraded today. Whether or not these modifications to the SEA were authorized by appropriate permits should also be discussed. Any and all permits issued that changes the quality of the habitats within the SEA should be listed and explained. To use unpermitted changes in the quality of habitat as reason to exclude these areas is unethical, dishonest, and inappropriate. Regardless, these habitats can be restored relatively easily. Developing them eliminates any restoration potential.

The Additional Analysis declares nonsensitive habitats to be Alluvial Scrub, Arrow Weed Scrub, Coastal Sage, Grassland, Disturbed, Mixed Chaparral, and Mulefat Scrub, which together compose a conveniently located 444 acres within the 1,124 acres of vegetation occurring in the 1,290 acres of SEA 23 (we assume that the total acreage discrepancy is due to the water body). By visiting CDFG's WHR version 7, we established that most of these so-called nonsensitive habitats are actually used for reproduction, cover, and foraging by many of the special-status species occurring in the Newhall Ranch area. Of course, we did not need WHR to establish the importance of these "nonsensitive" habitats to special-status species. It is well established in the scientific literature and in our own experiences that these vegetation cover types are very important to wildlife[20]. As part of the GAP analysis that UCSB conducted for the Southwestern Region[21] of California, which includes the Santa Clara River watershed, Coastal Sage Scrub vegetation was found to be a community at risk, with less than 1% provided any form of protection in Ventura County. Furthermore, Coastal Sage Scrub vegetation types have long been considered an endangered habitat with only 10 to 15% of its original extent remaining[22] and should have been considered as such in the Additional Analysis.

Appearing to be another attempt to minimize impact estimates, the FEIR states, "No state or federally listed wildlife species were observed in upland portions of the Newhall Ranch" (FEIR 4.6-22). This statement overlooks the use of Newhall Ranch as foraging habitat by the California Condor, and it overlooks the linkages between the river and the upland areas near the river, which are critical to the survival of multiple threatened and endangered species, including California Red-legged Frog, California Tiger Salamander, Southwestern Pond Turtle, and Southwestern Arroyo Toad as examples.

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[19] Naiman, R.J., H, DeCamps, and M. Pollock. 1993. The Role of Riparian Corridors in Maintaining Regional Biodiversity. *Ecological Applications* 3:209-212.

[20] for example, see Soule, M.E., D.T. Bolger, A.C. Alberts, J. Wright, M. Sorice, and S. Hill. 1988. Reconstructed Dynamics of Rapid Extinctions of Chaparral-requiring Birds in Urban Habitat Islands. *Conservation Biology* 2:75-92.

[21] 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.

[22] Westman, W.E. 1981. Factors Influencing the Distribution of Species of California Coastal Sage Scrub. *Ecology* 62:439-455;
Westman, W.E. 1986. Implications of Ecological Theory of Rare Plant Conservation in Coastal Sage Scrub. Pages 133-140 In *Conservation and Management of Rare and Endangered Plants.* Proceedings from a Conference of the California Native Plant Society, T.S. Elias, ed. California Native Plant Society, Sacramento, California.

The functions and inhabitants of wetlands and streams are dependant on the existence of adjacent uplands[23].

Later, the Additional Analysis downplays the role of the Santa Clara River in recovering the California Red-legged Frog within the Newhall Ranch Specific Plan area, because it is argued that the proposed critical habitat[24] does not extend onto this reach (Page 2.3-17). However, this argument attempts to minimize the impact estimates by neglecting to mention that the draft California Red-legged Frog recovery plan calls for hydrological restoration of whole watersheds and ecosystem conservation to recover the species[25]. Furthermore, Arroyo Southwestern Toad also occurs in this watershed[26], along with designated critical habitat.

The Additional Analysis lauds its setback of houses 75 to 100 feet from the Santa Clara River (Page 2.4-27), which is an attempt to minimize the estimates of impacts. However, this distance can be covered by the European Starling in about 4 seconds, dogs, cats, and children in about 10 seconds. Proximity of urban areas increases the invasibility of riparian zones to exotic animals[27] and plants[28]. A setback of 75 to 100 feet is not much of an impediment to the intrusive effects of a housing complex located next to a riparian area, especially one that graces the last nonchannelized river that drains the San Gabriel Mountains (Page 2.4-5-6) and Western Transverse Ranges. Also, it must be remembered that riparian corridors are considered the arteries of terrestrial ecosystems, supporting much of the world's terrestrial biodiversity, and >80% of North America's riparian corridor area already has been lost[29], and over 90% has been lost in California[30].

In another attempt to minimize estimates of biological impacts, the velocity of the Santa Clara River is assessed for two-year storm events (Page 2.4-24-25), but not for 50- and 100-year events, which will

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[23] Bedford, B.L. and E.M. Preston. 1988. Developing the Scientific Basis for Assessing Cumulative Effects of Wetland Loss and Degradation on Landscape Functions: Status, Perspectives, and Prospects. *Environmental Management* 12:751-771; Zembal, R. 1993. The Need for Corridors Between Coastal Wetlands and Uplands in Southern California. Pages 205-208 in J.E. Keeley, ed., Interface Between Ecology and Land Development in California, Southern California Academy of Sciences, Los Angeles.

[24] U.S. Fish and Wildlife Service. 2000. Draft Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*). *Federal Register* 65[93]: 30604-30605.

[25] USFWS 2000

[26] U.S. Fish and Wildlife Service. 1998. Recovery Plan for the Southwestern Arroyo Toad (*Bufo microscaphus californicus*).

[27] Brooks, R.P., M.J. Croonquist, E.T. D'Silva, J.E. Gallagher, and D.E. Arnold. 1991. Selection of Biological Indicators for Integrating Assessments of Wetland, Stream, and Riparian Habitats. Pages 81-89 in Biological Criteria: Research and Regulation. (EPA-440/5-91-005.) U.S. Environmental Protection Agency, Washington, D.C.; Lidicker, W.Z., Jr. 1991. Introduced Mammals in California. Pages 263-271 in R.H. Groves and F. Di Castri, Editors. *Biogeography of Mediterranean Invasions*. Cambridge University Press, London; Vuilleumier, F. 1991. Invasions in the Mediterranean Avifaunas of California and Chile. Pages 327-358 in R.H. Groves and F. Di Castri, Editors. Biogeography of Mediterranean Invasions. Cambridge University Press, London; Smallwood, K.S. 1994. Site Invasibility by Exotic Birds and Mammals. *Biological Conservation* 69:251-259.

[28] Mulligan, G.A. 1965. Recent Colonization by Herbaceous Plants in Canada. Pages 127-46 in H.G. Baker, and G.L. Stebbins, eds. *The Genetics of Colonizing Species*. Academic Press, New York; Macdonald, I.A.W., D.M. Graber, S. DeBenedetti, R.H. Groves, E.R. Fuentes. 1988. Introduced Species in Nature Reserves in Mediterranean-type Climatic Regions of the World. *Biol. Conserv.* 44:37-66; Alberts, A.C., A.D. Richman, D. Tran, R. Sauvajot, C. McCalvin, and D.T. Bolger. 1993. Effects of Habitat Fragmentation on Native and Exotic Plants in Southern California Coastal Scrub. Pages 103-110 in J.E. Keeley, ed. Interface Between Ecology and Land Development in California, Southern California Academy of Sciences, Los Angeles.

[29] Naiman et al. 1993.

[30] Frayer, W.E., D.D. Peters, and H.R. Pywell. 1989. Wetlands of the California Central Valley: Status and Trends – 1939 to mid-1980s. U.S. Fish and Wildlife Service, Region 1, Portland, Oregon.

likely become more frequent with 3,187 acres of added impervious surfaces[31], upon which storm water will sheet right off into the streams of the Santa Clara River watershed. Dumping tertiary treated wastewater into the Santa Clara River (Page 2.4-24-25) will pose multiple hazards, including thermal pollution, nutrient loading, and increased flow volume. Only the latter hazard is mentioned in the Additional Analysis, which, based on no logical argument or evidence, concludes there will be no impact. This inadequate representation of the Santa Clara River, and impacts to it, follows numerous comments on the EIR that are almost identical to ours (e.g. comment letters 1 through 4 in the FEIR).

The Santa Susana Mountains are not *potentially* connected to several other surrounding undeveloped areas (Page 2.4-10). They *are* connected. The Additional Analysis further downplays the importance of the Santa Susana Mountains by pointing out the occurrences of freeways and housing tracts that degrade the integrity of the Santa Susana Mountains. However, these existing cumulative impacts only heighten the importance of the remaining connections between wildlife and plant habitats. Again, attempting to downplay the importance of the Specific Plan area, the Additional Analysis describes this area as only an approximately 2- to 5-mile-wide portion of the 35-mile-wide interface", and Salt Creek Canyon as only one of six "major corridors" in the interface area. This attempt at minimizing the estimates of impacts relies on the flawed premise that movement corridors, including *major* movement corridors, have been identified. As discussed in the next paragraph, they have not been identified.

In one of the most blatant attempts to minimize estimates of impacts, the Additional Analysis presents a map of wildlife movement corridors, depicted in Figure 2.4-3 as well as in Figure 2.2-1. These movement corridors appear to have been concocted by planners with no empirical evidence as proof of their existence. Species vary in their reliance on "corridors" and it is premature to designate any linear feature of the landscape as a corridor without proper scientific investigation, including experimental controls[32]. In addition, these figures (Figures 2.4-3 and 2.2-1) incorrectly and misleadingly label the entire area north of the Santa Clara River as within the Los Padres/Angeles National Forests. This is simply incorrect; the area north and west of Santa Paula, Sulphur Mountain, is entirely private property and is not within the forest boundary. This inaccuracy in mapping gives the reader the false impression that all the lands north of the Santa Clara River are "protected" as national forest land. The maps should be corrected, and the actual forest boundary applied, excluding private property in-holdings, which are numerous in this area. Regardless, portions of the Los Padres National Forest north of the Santa Clara River are used for oil extraction, an activity that can also impact wildlife movement.

The Additional Analysis defines wildlife movement corridors as the "gentlest topography and more open habitat" (Page 2.2-10). Page RTC-418 of the FEIR identifies a wildlife corridor as a drainage or riparian vegetation in a canyon, which traverses no other topographic features and will not be surrounded by development in the future. Besides the facts that drainages and riparian vegetation do not traverse other topographic features, and besides the fact that one must either speculate or know that a potential corridor will not be surrounded by development in the future, these definitions are scientifically unprecedented and fit none of the corridor functionality criteria of Beier and Loe (1992). The corridor definition on Page 2.2-10 ignores the conditions required for the movement of Mountain Lion, Ringtail, Western Spotted Skunk, San Diego Desert Woodrat, San Bernardino Ringneck Snake, California Thrasher, Southern California Rufous-crowned Sparrow, Bell's Sage Sparrow, and so many other species listed in Table 5. These species require cover, and often hunt in and reside in steeply graded environments.

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[31] FEIR RTC-416.

[32] Simberloff, D., and J. Cox. 1987. Consequences and Costs of Conservation Corridors. *Conservation Biology* 1:63-71.

Given the two definitions for wildlife corridors discussed in the previous paragraph, it is remarkable that the FEIR (RTC-26) claims "The Salt Creek corridor is only one part of a 2-mile-wide High Country conservation area …," and "There are numerous other landscape connections through the High Country in the Santa Susana Mountains … along ridgelines and corridors connecting to Ventura County to the west and southwest …". This change in topographic features qualifying as corridors was expedient in responding to a comment filed on the DEIR, and it expanded the definition to include any topographic element needed by Impact Sciences. In other words, at this point it appears Impact Sciences feels at liberty to designate any land area as a wildlife movement corridor to fit the immediate need for one, but lacking any foundation in science or sound use of biological information.

Figures 2.2-1 and 2.4-3 appear to be designed to give the impression that many wildlife movement corridors exist in the region, so losing a few of them will not be significant to wildlife. This is a dangerous suggestion because persistence of ecosystem functions relies upon redundancy of ecosystem elements[33], which is true of populations relying on movement corridors[34]. Figure 2.2-1 did not even identify Potrero Canyon, which according to the FEIR was found to have more special-status species of wildlife (i.e. six) than did Salt Creek Canyon (i.e. four, Table 4.6-2). Lacking any empirical substantiation or logical explanation, these illustrations of movement corridors are nothing more than cartoons. What is also not mentioned or described is the fact that the natural habitat connections between the Santa Susana Mountains/Oak Ridge/South Mountain to mountains in the Los Padres National Forest to the north only really occurs in the Potrero Canyon area. The distance between upland habitats north and south of the Santa Clara River get wider and wider west of the Ventura County line. Wildlife would have to travel through several miles of orchard or row crops in the westernmost corridor as illustrated in Figures 2.2-1 and 2.4-3. In other words, the suitability of these concocted wildlife corridors decreases significantly with the distance between the intact natural vegetation. We label these purported wildlife corridors as concocted because Impact Sciences concocted them for the purposes of the EIR, and did not substantiate them with any evidence whatsoever. No field surveys were ever conducted to demonstrate that any of the concocted corridors are used by any wildlife species other than the hit-and-miss (unscientific) attempt described in the Additional Analysis.

What is also not mentioned is the fact that depredation permits are routinely issued to farmers and ranchers in the Santa Clara River Valley to kill various wildlife species, such as Coyote. Also, whenever a Mountain Lion is suspected of attacking livestock, the Mountain Lion is ultimately killed. Therefore, claiming that wildlife corridors that must pass through miles of cultivated lands is satisfactory over a corridor that is predominately composed of natural vegetation greatly misstates that facts.

So as to minimize impact estimates, the Additional Analysis also identifies three local ecotypes that are important to wildlife movement and gene flow in the area. These ecotypes are the uplands of the Santa Susana Mountains, the Santa Clara riparian system, and the uplands in the Angeles and Los Padres National Forests (Page 2.4-11), which are conveniently outside the footprint of the Newhall Ranch Specific Plan, more or less. It states, "It was clear that the Santa Clara River and the high country of the Santa Susana Mountains were the key resources on the Newhall Ranch Specific Area" (Page 2.2-12). The Additional Analysis implies that Coastal Scrub and Mixed Chaparral are of low value to wildlife

[33] Watt, K.E.F., and P.P. Craig. 1986. System Stability Principles. *Systems Research* 3:191-20;
Walker, B.H. 1992. Biodiversity and Ecological Redundancy. *Conservation Biology* 6:18-23.
[34] Beier, P., and R.F. Noss. 1998. Do Habitat Corridors Provide Connectivity? *Conservation Biology* 12:1241-1252.

for movement and gene flow, which contradicts the scientific evidence[35]. It implies that grasslands are not useful as movement corridors, which contradicts the scientific evidence[36]. It implies that Class II, III, and IV streams are not important movement corridors, which contradicts the scientific evidence[37]. However, the Additional Analysis provided no evidence or logical foundation in support of concluding that the identified corridors and local ecotypes are used preferentially over other parts of the Specific Plan area. Impact Sciences only looked along riparian corridors, and then conducted only a cursory survey.

The Santa Clara River corridor is said to remain sufficiently wide to retain sensitive riparian vegetation (Page 2.4-23-24), but at this juncture the Additional Analysis neglects to mention the impact of a narrowed river corridor on wildlife movement and residency, including on reptiles and amphibians[38] and other sensitive species[39]. Later, the Additional Analysis pigeonholes riparian-adapted wildlife species as moving through only the riverbed or the riparian vegetation adjacent to the river course (Page 2.4-26). These conclusions, which are consistent only in fitting the immediate need to minimize estimates of impact, are misleading and lack any substantiation. Many species move along stream courses, but often well outside the riverbed and immediately adjacent vegetation, such as the Mountain Lion and American Badger[40].

Without any data on wildlife use of specific riparian zones, it is premature to conclude that the three bridges over the river will maintain the corridor function of SEA 23 (Page 2.4-26). Adding thousands of houses on the adjacent uplands and storm walls in the channel would only exacerbate the impacts of the three bridges. The Additional Analysis's illustrations of the 50- and 100-year flood events (Figures 2.3-7e and 7f) indicate that wildlife will be forced out of the Santa Clara River during flood events. Bridges and adjacent houses will give wildlife no place to find refugia, which degrades the corridor function of the Santa Clara River[41].

In contrast to the description of vegetation in the Potrero Creek watershed, the Additional Analysis claims "Salt Creek Canyon supports large areas of native scrub and woodland habitats, and thus supports a more diverse assemblage of wildlife" (Page 2.2-20). The premise of this conclusion lacks any support in evidence or reference to source. In addition, even if this conclusion were accurate, it must be remembered that it is not diversity, *per se*, that is central to the Endangered Species Act and to CEQA. Multiple special-status species in Potrero Creek Canyon are glossed over by the Additional

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[35] Akcakaya, H.R., and J.L. Atwood. 1997. A Habitat-based Metapopulation Model of the California Gnatcatcher. *Conservation Biology* 11:422-434

[36] e.g. La Polla, V.N., and G.W. Barrett. 1993. Effects of Corridor Width and Presence on the Population Dynamics of the Meadow Vole *Microtus pennsylvanicus*. *Landscape Ecology* 8:25-37.

[37] Laan R. and B. Verboom. 1990. Effects of Pool Size and Isolation on Amphibian Communities. *Biological Conservation* 54:251-262;
U.S. Fish and Wildlife Service 2000;
U.S. Fish and Wildlife Service 1998.

[38] Rudolph, D.C., and J.G. Dickson. 1990. Streamside Zone Width and Amphibian and Reptile Abundance. *Southwestern Naturalist* 35:472-476.

[39] Croonquist, M.J., and R.P. Brooks. 1993. Effects of Habitat Disturbance on Bird Communities in Riparian Corridors. *Journal of Soil and Water Conservation* 48:65-70.

[40] Smallwood, K.S., and E.L. Fitzhugh. 1995. A Track Count for Estimating Mountain Lion *Felis concolor californica* Population Trend. *Biological Conservation* 71:251-259;
Smallwood, Unpublished data.

[41] Beier, P., and S. Loe. 1992. A Checklist for Evaluating Impacts to Wildlife Movement Corridors. *Wildlife Society Bulletin* 20:434-440.

Analysis's assessment of species diversity. Relevant impact thresholds are overlooked by focusing on diversity.

The Additional Analysis claims that a more diverse small mammal community was observed in the Salt Creek Watershed "due to the greater diversity in community structure, or layers within the vegetation" (Page 2.2-20). However, the Additional Analysis presented no data to back up this claim, nor was there any *use and availability* analysis, which is the standard method of assessing habitat use by plants and wildlife[42]. No habitat measurements were made in support of the conclusion regarding differences in community structure, or "vegetation layers".

Similarly, the Additional Analysis (Page 2.2-20) presents no data or data analysis when it concludes that bird diversity is greater in Salt Creek Canyon due to a greater variety of nest sites that are better protected from predators. This conclusion, and so many like it, appears to be based on pure speculation, which fails to meet the minimum standards of the wildlife biologist and ecology professions[43].

The Additional Analysis (Page 2.2-20) reports that abundant signs of Mule Deer, Bobcat, and Coyote were found in the Salt Creek watershed, but neglected to report what signs were observed in the Potrero Creek watershed.

According to the Additional Analysis (Page 2.2-12), "Salt Creek is important" because "it is part of the larger wildlife movement interface", then later it is identified as the "primary wildlife corridor between the river and the Santa Susana Mountains" (Page 2.2-34). This premise minimizes the estimates of impacts by pretending that Potrero Canyon, Long Canyon, and the other canyons, mountain slopes, and ridges are not part of the larger wildlife movement interface. This premise lacks empirical foundation or precedent in the scientific literature. There is absolutely no foundation for identifying Salt Creek Canyon as the primary movement corridor or as any more important than the other streams and canyons in the area[44]. (This is not to say that the Salt Creek Canyon is unimportant to wildlife; it is likely very important.)

The Additional Analysis concludes that development within SEA 23 will have no impact on wildlife movement in Salt Creek canyon (Page 2.4-26), but in doing so, completely ignores the fact that the Newhall Ranch development would blockade Salt Creek Canyon with a phalanx of thousands of houses.

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[42] e.g. Smallwood, K.S. 2001. Habitat Models Based on Numerical Comparisons. In *Predicting Species Occurrences: Issues of Scale and Accuracy*, J.M. Scott, P.J. Heglund, M. Morrison, M. Raphael, J. Haufler, and B. Wall, editors. Island Press, Covello, California. In press.;
Hall, L.S., P.R. Krausman, and M.L. Morrison. 1997. The Habitat Concept and a Plea for Standard Terminology. *Wildlife Society Bulletin* 25:173-182;
Morrison, M.L., B.G. Marcot, and R.W. Mannan. 1998. *Wildlife- Habitat Relationships: Concepts and Applications*. Second edition. University of Wisconsin Press Madison, Wisconsin.;
Johnson, D.H. 1980. The Comparison of Usage and Availability Measurements for Evaluating Resource Preference. *Ecology* 61:65-71;
Neu C.W., C.R. Byers, and J.M. Peek. 1974. A Technique for Analysis of Utilization-Availability Data. *Journal of Wildlife Management* 38:541-5.

[43] Smallwood et al. 2001;
Ecological Society of America Code of Ethics.

[44] see Beier and Loe 1992; and
Spackman, S.C., and J.W. Hughes. 1995. Assessment of Minimum Stream Corridor Width for Biological Conservation: Species Richness and Distribution Along Mid-order Streams in Vermont, USA. *Biological Conservation* 71:325-332.

The Additional Analysis makes an effort to point out that the Southwestern Willow Flycatchers observed on the Newhall Ranch Specific Plan area were migrants (Section 2.4). The only reason to do this is to minimize the estimates of impacts. However, it really does not matter. The protections of the Endangered Species Act apply to this species whether it is migrant or resident.

As discussed earlier, the characterization of the wetland/riparian habitats in the Specific Plan area is written in such a way as to minimize the level of impact the development will truly have on the environment, and segmented such that the reader and decisionmakers would find it very difficult to understand the whole picture, and the magnitude of the project-related impacts. Section 2.3.3 of the Additional Analysis describes the conditions of the Santa Clara River habitats and flows out of context and from a minimists perspective, such as claiming that the perennial flows in the river in the Specific Plan area are just a result of wastewater (tertiary treated) discharges upstream (Page 2.3.4). This claim is presented as fact when it is not supported by historical or physical data, just coarse computer modeling that has not been calibrated by onsite data (at least not calibrations have been demonstrated cited in the CEQA documents). The Santa Clara River has maintained perennial flows over much of its length prior to excessive surface and groundwater extractions, which began over 100 years ago. The fact that endemic fishes such as the Unarmored Three-spine Stickleback are present in this area is strong evidence that surface flows have always been present in this reach of the river.

We find it interesting that Impact Sciences depends on one individual's (Mr. Louis Cortois, Aquatic Consulting Services Inc.) personal opinion to support it's statement that the "average width of the low flow channel during the summer months is about 50 to 100 feet, with a typical depth of one-foot". This is a measurement that can be, and should be, determined by actual field measurements over time. Any barely qualified fluvial geomorphologist, or other scientists, can take these measurements. Why is Impact Sciences only depending upon one person's opinion or guess without obtaining actual physical measurements? We can see no logical reason why these measurements were not taken.

The analysis performed and described in Section 2.3 states that the post-project fluvial processes will not be significantly changed from existing conditions, and therefore, will not result in significant impacts to the environment. While water volumes and velocities may not change significantly after implementation of the project, the wetland functions of this reach of the river, as well as the downstream reach will be significantly affected. While not all functions will likely be impacted, several functions will. We previously recommended in our NOP comments that the wetland functions under existing conditions and post-project conditions be analyzed using the Hydrogeomorphic Assessment Method (HGM) that has been developed nationwide by the Corps and EPA. No such assessment was performed. The HGM approach is preferred since it assess wetland functions from a holistic approach, that is it looks and instream and adjacent habitat conditions to determine what level each wetland function is, or will be, operating at. HGM is every effective at providing a relative comparison of pre- and post-project conditions of each of the 18 or so wetland functions operating on the Santa Clara River.

Regardless of whether an HGM approach was used or not, the analysis in Section 2.3 fails to reflect the direct and indirect impacts the proposed development will have on each of the wetland functions, many of which are vital to maintaining ecological function and sustainability for many riparian, wetland, and aquatic species, including special-status species. In this manner, the Additional Analysis fails to meet the requirements of CEQA in determining such impacts on the environment. For example, the Southwestern Pond Turtle requires permanent deep pools in the water body, and adjacent upland habitats with sandy soils for hibernation and laying eggs. The proposed development will eliminate nearly all the upland habitats needed by the Southwestern Pond Turtle to complete their life cycles, and

produce offspring, yet this impact is ignored, and no mitigation to avoid or offset this impact is proposed.

DOCUMENT QUALITY

Each conclusion of project impacts should be well founded and source information forming its premise should be referenced. The scientific and biological soundness of each conclusion can be assessed efficiently by comparing each to the standards expected by professional organizations such as The Wildlife Society[45], California Native Plant Society, and California Botanical Society. This comparison, which is accomplished by checking through a worksheet, honestly identifies the potential consequences of each conclusion, its scientific foundation, and the soundness of its founding biological information. For example, conclusions about impacts should be accompanied by statements of uncertainty -- preferably quantitative statements such as confidence intervals or error terms[46], consistent with the intent of CEQA[47]. Additionally, the conclusions in the EIR regarding species presence in the project area should preferentially rely upon scientific studies involving areas larger than the project area[48], and should include quantitative data when available. Any conclusion drawn from a scientific source should also specify the temporal and spatial scales of data collection, as well as a description of the hypotheses tested or of the assessment's objectives, the experimental or research design, the assumptions, and the conditions of the study site. It should include a description of all methods used to collect, aggregate, and analyze the data, as well as the time-periods during which observations were made or data collected. If the conclusion was drawn from an experiment, then it should be accompanied by a description of the experimental treatments, as well as any controls and interspersion of the treatments.

The reliability of the EIR's conclusions should have been maximized by preferentially referencing source information consisting of published reports subjected to independent scientific review. If personal communications or opinions were relied on, then they should have been supported by contact information of the individual(s) cited, along with a statement of uncertainty. Referencing of source information should have been comprehensive and balanced according to the competing arguments. Each reference should have been accurate, relevant, completely described, and readily accessible in a library or other location. In the EIR, all species names should have been spelled correctly and scientific names should have been current. Important terms, such as ecosystem, habitat, population, community, and corridor should have been either clearly defined or a definition referenced. Important terms should have been accurately used, and the qualifications of the analyst or assessor should have been described.

Regarding impacts and mitigation effectiveness, the EIR's conclusions should have included numbers of animals, demography, gender ratio, genetics, and the conditions of food resources and the habitat. They should have also preferentially made use of quantitative, empirical evidence from multiple

[45] Smallwood et al. 2001

[46] National Research Council. 1986. *Ecological Knowledge and Environmental Problem-solving: Concepts and Case Studies*. National Academy Press, Washington, D.C.

[47] Section 15064.7 of the CEQA Guidelines.

[48] Examples: Akcakaya, H.R., and J.L. Atwood. 1997. A Habitat-based Metapopulation Model of the California Gnatcatcher. *Conservation Biology* 11:422-434;
Smallwood, K.S. 1997. Interpreting Puma (*Puma concolor*) Density Estimates for Theory and Management. *Environmental Conservation* 24(3):283-289.

examples, and they should have been specific to individual species or their habitats, or indicator-level variables should have been constructed specifically from special-status species[49].

Reference was almost never made to source information. Many facts and figures are presented without any qualification of reliability. For example, the home range size of Coyotes was presented as 6,400 acres (Page 2.2-28), but no reference to source was provided. In fact, this home range size seems small, and is only 62% of the average size reported in the scientific literature[50]. There are many examples in the FEIR and Additional Analysis of numerical values and statements that are made in the complete absence of reference to a scientific source.

Soundness of Conclusions

There are many conclusions in the FEIR/Additional Analysis that are unfounded in data or the professional literature (i.e. knowledge base). For example, the FEIR responded to a comment about the high edge to interior ratio of the proposed Santa Clara River corridor, thus threatening the corridor with indirect impacts such as exotic species intrusions. This response stated "The proposed River Corridor SMA and adjacent open area would total approximately 1,264 acres, which, by any measure, is a large contiguous block of land" (RTC-517). This statement is wrong. If the analyst were to assess the size of this SMA from the perspective of various special-status species, then the analyst would conclude that this area is too small to support viable populations. For example, there is no possibility that a Mountain Lion or its population would be able to survive for long in this SMA. This acreage would be ineffective for supporting the Mountain Lion or many other species residing on the Newhall Ranch today.

According to the Additional Analysis (Page 2.2-23), "Overall, bird movements are not related to watershed boundaries, but more dependent on the overall pattern of resources …". Scientists do not yet know whether birds recognize watershed boundaries, or whether they use these boundaries to partition home ranges or other means of achieving effective social organization. Those who prepared this Additional Analysis also do not know whether birds depend on "the overall pattern of resources", whatever that phrase is supposed to mean. This and many other statements in the Additional Analysis express pure speculation on the part of Impact Sciences. Speculation should be identified as such, lest it fails meet the minimum professional standards related to environmental document preparation (Smallwood et al. 2001).

On Page 2.2-6, the Additional Analysis states, "… animal species tend to favor certain habitat types over others". There are two major problems exemplified in this statement, and which pervade the entire Additional Analysis. First, this type of a statement is a generalization about wildlife habitat relationships that adds nothing to the assessment of impacts due to the Newhall Ranch Specific Plan. This Additional Analysis is saturated with textbook-like statements that are so over-generalized and trivial that they are effectively filler text.

[49] see Smallwood, K.S., B. Wilcox, R. Leidy, and K. Yarris. 1998. Indicators Assessment for Habitat Conservation Plan of Yolo County, California, USA. *Environmental Management* 22: 947-958.

[50] see summary value reported in Smallwood, K.S. 1999. Scale Domains of Abundance Among Species of Mammalian Carnivora. *Environmental Conservation* 26:102-111.

Second, animals do not favor *habitat types*[51], and this misrepresentation of wildlife-habitat relationships pervades the Additional Analysis. Those aspects of the environment that are used by a particular species are considered part of the habitat of that species, and cannot be identified as "habitat" unless there is empirical evidence to substantiate it as habitat rather than an ecological sink, for example. The parceling up of the Newhall Ranch Specific Plan site is convenient for pigeonholing special-status species into small parcels there, but is unrealistic. Most animal species are not restricted to human-defined "habitat types", but survive in multiple vegetation complexes or rely on other animals that survive in other vegetation complexes. For example, the California Red-legged Frog and California Tiger Salamander rely on both aquatic environments for foraging and reproduction, but also rely on animal burrows in upland grasslands for refugia. The FEIR and Additional Analysis do not list a "habitat type" that would satisfactorily describe the habitat of these two species, nor for the others.

The Additional Analysis (Page 2.2-23) concludes, "Of particular importance as indicators of large mammal movement are mule deer, coyote, and bobcat". However, this Additional Analysis does not explain how these species were chosen as indicators of large mammal movement, or why these species are particularly important as indicators. It is improper to choose whichever indicator species meet the needs of an analyst's argument[52]. Indicator species should be chosen based on objective rationale, and their use interpreted very conservatively. It is improper to make conclusions about project impacts on threatened, endangered, and other special-status species based on the use of common species as indicators[53].

On Page 2.2-23 of the Additional Analysis, the discussion of why tracks were found at the lower end of Salt Creek Canyon makes it very clear that Impact Sciences and their employers have no idea how these tracks relate to whether, and to what extent, Salt Creek Canyon is a wildlife movement corridor. The Additional Analysis (Page 2.2-23) speculates on how water availability affects animal movement, thus revealing that those who prepared the Additional Analysis have no idea on whether and how it does so.

Then on Page 2.2-30, the Additional Analysis states "…current land uses within the Salt Creek watershed in Ventura County (i.e. crop cultivation and cattle grazing) do not appear to inhibit wildlife movement between the Santa Clara River and the Santa Susana Mountains", and "…wildlife use of the watershed in Ventura County is not affected by existing agricultural activities". No empirical evidence or scientific source was offered in support of these statements, which are applied much too liberally to "wildlife". Species of wildlife react to agricultural activities in very different ways, including the ways in which they move across the landscape[54]. These statements in the Additional Analysis are wrong.

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[51] Hall et al. 1997;
Morrison et al. 1998;
Smallwood 2001.

[52] e.g. Smallwood et al. 1998, 1999;
Simberloff, D. 1998. Flagships, Umbrellas, and Keystones: Is Single-Species Management Passe in the Landscape Era? *Biological Conservation* 83:247-257.

[53] e.g. Morrison et al. 1998

[54] e.g., Erichsen, A.L., K.S. Smallwood, A.M. Commandatore, D. M. Fry, and B. Wilson. 1996. White-tailed Kite Movement and Nesting Patterns in an Agricultural Landscape. Pages 166-176 in D.M. Bird, D. Varland, and J.J. Negro, eds. *Raptors in Human Landscapes*. Academic Press, London;
Walk, J.W., and R.E. Warner. 1999. Effects of Habitat Area on the Occurrence of Grassland Birds in Illinois. *American Midland Naturalist* 141:339-344;
Smallwood, K.S., B.J. Nakamoto, and S. Geng. 1996. Association Analysis of Raptors on an Agricultural Landscape. Pages 177-190 in D. M. Bird, D. E. Varland, and J.J. Negro, eds. Raptors in human landscapes. Academic Press, London;

The Additional Analysis goes on to claim that "Development of the Ventura County portion of the corridor … would seriously degrade the creek's [Salt Creek] ability to function as a movement corridor" (Page 2.2-39). The Additional Analysis appears to be saying that development on the Ventura County side of the Canyon would seriously degrade its use as a wildlife movement corridor, but development on the Los Angeles County side would have no impact at all. However, the Additional Analysis presents no empirical evidence or scientific source information in support of the implicit claim that a political boundary somehow divides the impacts on biological resources due to development. This argument is a gross example of misapplying political boundaries to ecological processes[55].

According to the Additional Analysis (Page 2.2-24), "Movement of small mammals within the Potrero Creek watershed appears greater, but is the result of the presence of more animals (e.g. rodents)". If this statement made any sense at all, then it also lacks empirical evidence or interpretation thereof. How does Impact Sciences know that the Potrero Creek watershed has more small mammals? Did they, or someone else, do systematic sampling or trapping in the Potrero Creek and Salt Creek watersheds? Based on what has been presented in all the environmental documents (the DEIR, the revised DEIR, the FEIR, the technical appendices, and the November 2000 Additional Analysis), the answer is "no". Therefore, how can Impact Sciences make such a claim without supporting evidence? The answer is, no, they can't.

According to the Additional Analysis (Page 2.2-24), "Wildlife movement is effected to some extent by the presence of more water troughs for cattle in the Potrero Creek watershed". The Additional Analysis offers no observations of wildlife using water troughs for cattle, nor does it specify which species of wildlife are supposedly using these troughs. There is no scientifically established precedent for water troughs affecting the movement of wildlife in one watershed any more than in another without water troughs. This statement is another example of wild speculation on the part of those who prepared the Additional Analysis. Worse, it is another example of speculation that is biased in favor of an outcome (i.e. the Newhall Ranch Specific Plan) in search of a process (i.e. the EIR).

On Page 2.2-26, the Additional Analysis begins an assessment of impacts that is based on fallacious generalizations where careful analysis of existing data should have been available. For example, the Additional Analysis lists "ecological principles" that were used in assessing direct impacts of the plan on wildlife movement in the Salt Creek watershed. The Additional Analysis identifies these principles as important to impacts assessment because "they are major factors defining the interrelationship between the distribution of habitat types to the distribution and potential movement of wildlife within the Salt Creek watershed". As ecologists, we are curious about what sources were used to derive these principles, because we have never heard of them.

Smallwood, K.S., S. Geng, and M. Zhang. 2001. Comparing Pocket Gopher (*Thomomys bottae*) Density in Alfalfa Stands to Assess Management and Conservation Goals in Northern California. *Agriculture, Ecosystems & Environment*: In press.

[55] e.g. Schonewald-Cox, C. and J.W. Bayless. 1986. The Boundary Model: a Geographic Analysis of Design and Conservation of Nature Reserves. *Biological Conservation* 38:305-322;
Schonewald-Cox, C.M. 1988. Boundaries in the Protection of Nature Reserves: Translating Multidisciplinary Knowledge into Practical Conservation. *BioScience* 38: 480-486;
Kelly, P.A., and J.T. Rotenberry. 1993. Buffer Zones for Ecological Reserves in California: Replacing Guesswork with Science. Pages 85-92 in D.M. Bird, D.E. Varland, and J.J. Negro, eds. *Raptors in Human Landscapes*. Academic Press, London.

The first principle is that "animal species are associated with a certain vegetation community or set of communities." This overly simplistic generalization does not constitute a principle. We challenge those who prepared this Additional Analysis to cite scientific sources that summarize this "principle".

The second principle reads, "on a landscape scale and in the long term, the loss of habitat in an area will decrease the population of animals dependent upon that habitat". Again, this "principle" is contrived. Nowhere in the ecological literature can such a principle be found. In fact, it is logically flawed in several respects. The habitat is defined by the species' use of the environment[56], so all habitat within a landscape will be depended upon by the species to which the habitat is defined. Also, landscapes can be defined at virtually any scale, ranging, for example, from the surface of a leaf to the land area of the Gobi Desert, depending on whether the examples involve the perspectives of fungi or camels. The definition of *landscape* is restricted to no particular scale[57]. Finally, habitat loss due to the Newhall Ranch Specific Plan will cause numerical decreases that are immediate, rather than "long term," and will involve decreases in populations for *some* species, portions of populations in others, and metapopulations for yet other species[58]. Ecological principles are not constructed from improperly used terminology or concepts.

The third principle reads "animals in a specific area (e.g. a watershed) where habitat is removed, in the short term, may become functionally part of the most contiguous adjacent area (e.g. an adjacent watershed), especially from the perspective of wildlife movement patterns". This "principle" has no foundation in ecology, and is pure fantasy. Lacking foundation, it fails to achieve the minimum standards of the wildlife and ecology profession[59]. Increased harm to wildlife is more likely to result, as will be addressed in the next two paragraphs.

Following these principles, the Additional Analysis (Page 2.2-25-26) goes on to suggest that wildlife occurring in the Potrero Creek watershed will simply move over to undisturbed habitats of the Salt Creek watershed after the Newhall Ranch Specific Plan destroys their habitats in the Potrero Creek watershed. The Additional Analysis concludes that animal movement will increase in the Salt Creek Corridor (Page 2.2-40), but assures the reader that no impacts will be realized by this increased movement in Ventura County. Impact Sciences essentially argues that a passive translocation will take place. Even if this translocation, or displacement, were to take place, the evidence strongly supports the conclusion that these translocated/displaced animals (i.e. refugees) will perish and that residents in the receiving areas will be harmed and sometimes killed before the translocated/displaced animals die[60].

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[56] Hall et al. 1997;
Morrison et al. 1998;
Smallwood 2001

[57] Forman, R.T.T. 1981. Interaction Among Landscape Elements: a Core of Landscape Ecology. Pages 35-48 in Proc. Int. Cong. Neth. Soc. Landscape Ecology, Veldhoven. Pudoc, Wageningen;
Turner, M.G. 1989. Landscape Ecology: the Effect of Pattern on Process. *Annual Review of Ecology and Systematics* 20:171-197;
Morrison et al. 1998.

[58] see Smallwood 1999;
Smallwood, K.S. 2001. Ecological Restoration in the Context of Animal Demographic Units and Their Habitat Areas. *Restoration Ecology*: In press.

[59] Smallwood et al. 2001;
Ecological Society of America Code of Ethics.

[60] e.g. Fahselt, D. 1988. The Dangers of Transplantation as a Conservation Technique. *Natural Areas Journal* 8:238-244; Howald, A.M. 1993. Finding Effective Approaches to Endangered Plant Mitigation. Pages 211-221 in D.M. Bird, D.E. Varland, and J.J. Negro, eds., *Raptors in Human Landscapes*. Academic Press, London.

Super-saturation, or crowding, of remnant habitat after adjacent or nearby habitat is removed can cause alterations in competition and predation leading to the demise of the population at issue[61].

The Additional Analysis (Page 2.2-28-30) expects wildlife populations in the Santa Susana Mountains to be relatively stable due to the large area involved and the area's role as part of a much larger region of existing habitat. Based on this expected stability of populations, the Additional Analysis expects that wildlife able to move into the Salt Creek watershed from the developing Newhall Ranch Specific Plan area would find no or few resources to support them and would perish. The Additional Analysis expects that wildlife arriving in the Salt Creek watershed will find the resources tapped out, and will then move over yet again to areas outside the Salt Creek watershed. The Additional Analysis also expects that displaced wildlife will displace animals now occupying the Salt Creek watershed, which would then move outside the watershed and either perish or displace others. However, the Additional Analysis expects that no matter which scenario takes place, these populations would stabilize to the number of individuals supported by the available habitat. The Additional Analysis's expectations are based on the flawed assumption that local populations are stable and that stabilization will be achieved within whatever habitat is left. Population *instability* is indicated by the very fact that so many species in the Newhall Ranch area are threatened, endangered, or listed with some other special status connoting rarity and threat to their persistence. The suggestion that these species will stabilize in whatever habitat remains is ludicrous when one considers the plight of the California Grizzly Bear and so many other species that have perished as their habitats were converted to human uses. For these species, the domino-like spreading out of displaced animals, or the crowding of them into smaller habitat areas, did not work. Therefore, it can be reasonably expected that it will not work here either.

It is biased speculation to say that development in the Potrero Creek watershed will "potentially increase the amount of wildlife movement to the Salt Creek watershed in Ventura and Los Angeles Counties" (Page 2.2-26), or that "fewer available resource pools within the Potrero Creek watershed would cause some level of emigration of wildlife to available resource pools in adjacent areas" (Page 2.2-28). These conclusions are based on the flawed assumption that the numerical capacity of the Santa Susana Mountains will remain constant for each species, despite the habitat loss within the Newhall Ranch Specific Plan area. This assumption appears to violate the second "ecological principle" presented on Page 2.2-26, and it certainly violates the principles shared by professional wildlife biologists and ecologists[62]. If species just moved over and crowded together as the Additional Analysis proposes, then no species in the US would be threatened or endangered; for example, a whole lot of grizzly bears would roam back and forth within the Salt Creek and Potrero Creek corridors (wherever there are flat, open areas, according to the Additional Analysis). This is nonsense.

The Additional Analysis also speculates that the effects of habitat loss in the Potrero Creek watershed will be most noticeable for small mammals and reptiles rather than large mammals because they have small home ranges and more limited movements (Page 2.2-28). The foundation of countable ecosystems[63], and a real principle of ecology[64], is that species occupying higher trophic levels are fewer

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[61] Saunders, D.A., R.J. Hobbs, and C. Margules. 1991. Biological Consequences of Ecosystem Fragmentation: a Review. *Conservation Biology* 5:18-32.

[62] Wilcox, B.A., and D.D. Murphy. 1985. Conservation Strategy: the Effects of Fragmentation on Extinction. *American Naturalist* 125:879-887;
Morrison et al. 1998;
Smallwood 2001.

[63] Cousins, S.H. 1990. Countable Ecosystems Deriving from a New Food Web Entity. *Oikos* 57.

[64] Calder WA III 1984. *Size, Function, and Life History*. Harvard University Press, London;
Damuth, J. 1987. Interspecific Allometry of Population Density in Mammals and Other Animals: the

in number than are species occupying lower trophic levels. Therefore, the numerical losses are not comparable amongst species, unless these numbers are interpreted in terms of extinction probabilities[65] and affects on behaviors, demography, and functional relationships of these species within the ecosystem. Therefore, this speculation in the Additional Analysis is logically flawed.

In conclusion, the Additional Analysis (Page 2.2-35) states, "No further mitigation above and beyond that proposed in the Newhall Ranch Specific Plan EIR is proposed within the Specific Plan area because the identified direct, indirect, and cumulative impacts associated with the proposed specific plan would not significantly affect the Salt Creek watershed in Ventura County". On Page 2.2-40, the Additional Analysis summarizes, "With respect to animal movement, implementation of the Newhall Ranch Specific Plan would not create any unavoidably significant biological impacts within the Ventura County portion of Salt Creek watershed". As we will point out in our comments on the Additional Analysis, it is obvious that there will be multiple, substantial impacts on the Salt Creek watershed due to the Newhall Ranch Specific Plan. The Additional Analysis fails to substantiate its highly unlikely conclusion with empirical evidence or sound use of the scientific literature. Its depiction of wildlife movement corridors and its description of ecological principles are contrived, lacking any foundation in biological information or science.

Logical Fallacies

The Additional Analysis inexplicably identifies Salt Creek as the functioning *primary* wildlife corridor between the river and the Santa Susana Mountains (Page 2.2-34). This statement contradicts the one used on Page 2.2-39 to minimize estimates of impacts on the Salt Creek watershed, "… because many other connections similar to Salt Creek occur along the 35-mile wide interface area, no significant impact would occur due to implementation of the Newhall Ranch Specific Plan". Such self-contradictions, made in order to minimize estimates of impacts, abound in the Additional Analysis. We only identify a few of these in this letter.

According to the Additional Analysis (Page 2.2-23), "Movement of small mammals … and reptiles … within the Salt Creek watershed … are dependent on a more limited range of vegetation communities which tends to restrict their movements, except for dispersal, to the habitats". The Additional Analysis provides no evidence to support this amazing claim that small mammals and reptiles are more dependent on a more limited range of vegetation communities or "habitats", or that the movement of these animals is restricted to these communities. The misrepresentation of *habitat*, and the lack of comparison taxa in the assertion, renders the statement logically fallacious. According to the Additional Analysis, habitats *are* vegetation communities, and as such, the argument is circular. However, as discussed previously, habitat is defined by the species' use of the environment, rather than by arbitrarily defined vegetation communities[66]. In reality, small mammals and reptiles are highly mobile, and persist in and cross through many vegetation communities, the *complex* of which composes the habitat of each species. They just do not always make it across areas occupied by houses, concrete or rock banks, and roads.

Independence of Body Mass and Population Energy-use. *Biological Journal of the Linnean Society* 31:193-246;
Peters, R.H. 1983. *The Ecological Implications of Body Size*. Cambridge University Press, Cambridge.

[65] Boyce, M.S. 1992. Population Viability Analysis. *Annual Review of Ecology and Systematics* 23:481-506.

[66] Hall et al. 1997;
Morrison et al. 1998;
Smallwood 2001

According to the Additional Analysis (Page 2.2-23), "Steep topography and thick brush may also restrict wildlife movement". This statement neglects the mobility of Summer Tanager, California Thrasher, Yellow Warbler, Southern California Rufous-crowned Sparrow, Least Bell's Vireo, California Gnatcatcher, Merlin, Peregrine Falcon, Cooper's Hawk, Sharp-shinned Hawk, Southern Grasshopper Mouse, San Bernardino Desert Woodrat, and the many other species that readily fly, scurry, or otherwise move through thick brush on steep slopes. Later on the same page, the Additional Analysis identifies brushy slopes as impediments to wildlife movement. Not only do many of the species in our Table 5 move through brushy slopes, but they even live there!

The Additional Analysis (Page 2.2-23) states that wildlife in the Potrero Creek watershed have been well documented due to numerous surveys there (it cites Impacts Sciences 1997), then in the next sentence states that the same types of large mammals that use the Salt Creek watershed are *expected* to occur in the Potrero Creek watershed. Why would those who wrote the Additional Analysis *expect* these species to occur in a watershed that was surveyed numerous times? We have to conclude that either the Potrero Creek watershed was not surveyed for wildlife, or large mammals were not seen there during the numerous surveys conducted. In either case, these two sentences in the Additional Analysis raise a troubling red flag to professional environmental scientists (i.e. the presence of Mule Deer, Coyote, and Bobcat is easy to detect). As mentioned earlier, we seriously doubt any of the surveys for wildlife, or plants for that matter, followed survey methods based on scientific methods, or suitable to make any claims about species richness, diversity, or population levels or dynamics. Yet, Impact Sciences has made numerous statements and conclusions about the wildlife populations on and offsite as if they had such data. This Additional Analysis made no use of science or the scientific method[67], and the real impacts were totally ignored or estimates of them minimized to extent of absurdity.

ENVIRONMENTAL SETTING

The description of the environmental setting should have been thorough and sufficiently informative to facilitate informed decisions. It should have considered the full environmental context of the project[68] due to temporal cycles of change in plant and animal distribution and behavior that integrate with climate and fire cycles. It needs to be this thorough in order to make a good faith effort at full disclosure[69] of the special-status species issues, as well as the surprises that future residents of the project would face due to the long periods of time (relative to the planning timeframe) of wildfire, earthquake, flood, and landslide hazards[70].

The environmental setting was described too narrowly to the immediate time period during which the Additional Analysis was written. It should have included environmental conditions during the period of time into the past in which at least one full cycle period of rainfall, fire, and vegetation succession had occurred. The inter-annual variation in abundance of vertebrate species is great[71], and is integrated with

[67] Smallwood et al. 2001
[68] CEQA Guidelines Section 15125.
[69] Kings County Farm Bureau et al. vs. City of Hanford (5th District 1990) Cal. App. 3d 692, 727-728 [270 Cal. Rptr. 650].
[70] Holling, C.S. 1986. The Resilience of Terrestrial Ecosystems: Local Surprise and Global Change. Pages 292-317 in W.C. Clark and R.E. Munn (eds.) *Sustainable Development of the Biosphere*. Cambridge University Press, Cambridge, New York.
[71] Cyr, H. 1997. Does Inter-annual Variability in Population Density Increase with Time? *Oikos* 79:549-558.

cyclic changes in environmental factors[72]. Conditions at the time of the Notice of Preparation are part-and-parcel to conditions associated with inter-annual variability in environmental factors[73], so the appropriate temporal period representing environmental cycles should have been included to consider impacts in their "full environmental context"[74].

Similarly, the description of the environmental setting was confined to the project area when it should have included the entire area influenced by the most widely ranging special-status species. From a biological standpoint, an appropriate minimal area would have been a countable ecosystem[75], defined by the spatial areas used by the Mountain Lion. Its minimum area is about 20,000 ha for an individual[76], or 675,000 ha for a population[77]. It is within these areas that project impacts should have been considered, because these areas are the minimum areas of significance from an environmental point of view.

Approximately 207,000 ha of Mountain Lion habitat remained in the Santa Ana Mountains as of 1995, and this area contained about 20 adults[78]. Approximately 500,000 ha of contiguous habitat remained in the Santa Susana Mountains as of 1995[79]. While no numerical estimate was provided, but based on Smallwood's (1997) work, we estimate no more than 29 Mountain Lions in this area[80] (best case scenario). The average adult female home-range-size is 11,000 ha in this area of southern California[81], so the Specific Plan footprint would remove approximately 44% of a female home range, and would contribute to the demise of 20 individuals in the Santa Ana Mountains and further fragment the habitat of nearly 30 individuals more in the Santa Susana Mountains. This single project could adversely affect 5 to 10% of the remaining Mountain Lions in California[82], which would be a significant regional, as well as state-wide impact.

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[72] Keith, L.B. 1963. *Wildlife's Ten-year Cycle*. University of Wisconsin Press, Madison, Wisconsin.

[73] Also see Reid, L.M. 1998a. Cumulative Watershed Effects: Caspar Creek and Beyond. In: Ziemer, R.R., technical coordinator. *Proceedings of the Conference on Coastal Watersheds: the Caspar Creek Story*, 1998 May 6, Ukiah, California. (General Tech. Rep. PSW GTR-168.) Albany, California: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture. Pages 117-127;
National Research Council 1986.

[74] Section 15125 of CEQA Guidelines.

[75] Cousins 1990.

[76] Anderson, A.E. 1983. A Critical Review of Literature on Mountain Lion (*Felis concolor*). *Colorado Division Wildlife Special Report* 54:91;
Beier, P. and R.H. Barrett. 1993. The Cougar in the Santa Ana Mountain Range, California. Unpublished final report. Orange County Cooperative Mountain Lion Study, California Department of Fish and Game, Sacramento, California; Hopkins, R. A. 1981. The Density and Home Range Characteristics of Mountain Lions in the Diablo Range of California. MS Thesis, San Jose State University;
Padley, W.D. 1990. Home Range Use and Social Interactions of Mountain Lions in the Santa Ana Mountains, California. MS Thesis, California State Polytechnic University, Pomona.

[77] Smallwood 1997.

[78] Beier 1996.

[79] Beier 1996.

[80] Smallwood 1997.

[81] Beier and Barrett 1993.

[82] Smallwood 1997.

Another candidate to establish the minimum spatial scale for describing the environmental context would have been the watershed of the Santa Clara River[83]. The Additional Analysis considered only 4,843 ha, which is 0.7% of the area typically occupied by a Mountain Lion population and roughly 3% of the Santa Clara River watershed. In other words, it fell far short of considering an acceptable area for impacts analyses.

SPECIAL-STATUS SPECIES

The following definitions of special-status species should have been used in the Additional Analysis, which are used routinely in Ventura County and elsewhere in California, and is based on the CEQA Guidelines. Special-status species are plants (including nonvascular plants) and animals that are either listed as endangered or threatened under the Federal or California Endangered Special Acts, or rare under the California Native Plant Protection Act, or considered to be rare (but not formally listed) by resource agencies, professional organizations (e.g. Audubon Society, CNPS, The Wildlife Society [TWS], California Lichen Society [CALS]), and the scientific community. For the purposes of this EIR, special-status species should be defined as described in Table 2. This was previously submitted to L.A. County in November 2000 as part of our comments on the project NOP.

Table 2. Definitions of Special-Status Species

1. Plants and animals legally protected under the California and Federal Endangered Species Acts or under other regulations.
2. Plants and animals considered sufficiently rare by the scientific community to qualify for such listing; or
3. 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
♦ 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 the Federal Register for proposed species). ♦ Plants that are Category 1 or 2 (species of special concern) candidates for possible future listing as threatened or endangered under the Federal Endangered Species Act (55 CFR 6184, February 21, 1990). ♦ Plants that meet the definitions of rare or endangered species under the CEQA (*State CEQA Guidelines*, Section 15380). ♦ Plants considered by the CNPS to be "rare, threatened, or endangered" in California (Lists 1B and 2 in Skinner and Pavlik [1994][84]). ♦ Plants listed by CNPS as plants about which we need more information and plants of limited distribution (Lists 3 and 4 in Skinner and Pavlik [1994]). ♦ Plants listed by the California Lichen Society as rare in California (Magney 1999.[85]).	♦ Animals listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (50 CFR 17.11 for listed animals and various notices in the Federal Register for proposed species). ♦ Animals that are Category 1 or 2 candidates for possible future listing as threatened or endangered under the Federal Endangered Species Act (54 CFR 554). ♦ Animals that meet the definitions of rare or endangered species under the CEQA (*State CEQA Guidelines*, Section 15380). ♦ 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). ♦ Animal species of special concern to the CDFG (Remsen [1978][87] for birds; Williams [1986][88] for

[83] Reid, L.M. 1998b. Chapter 19. Cumulative Watershed Effects and Watershed Analysis. Pages 476-501, in: Naiman, R.J., and R.E. Bilby, eds. *River Ecology and Management: Lessons from the Pacific Coastal Ecoregion*. Springer-Verlag, New York, New York;
Reid, L.M. 1998a;
Bedford and Preston 1988.

[84] Skinner, M.W. and B.M. Pavlik. 1994. *Inventory of Rare and Endangered Vascular Plants of California*. Fifth edition. (Special Publication No. 1.) California Native Plant Society, Sacramento, California

♦ 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). ♦ Plants listed under the California Native Plant Protection Act (California Fish and Game Code 1900 *et seq*.). ♦ Plants considered sensitive by other federal agencies (i.e. U.S. Forest Service, Bureau of Land Management) or state and local agencies or jurisdictions. ♦ Plants considered sensitive or unique by the scientific community or occurring at the limits of its natural range (*State CEQA Guidelines*, Appendix G, and Initial Study Checklist; Magney 2000a[86]).	(Remsen [1978][87] for birds; Williams [1986][88] for mammals). ♦ Animal species that are fully protected in California (California Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]). ♦ Animal species that are of local concern or unique, or are at the limits of their range, or represent disjunct population(s) of the taxon.

To determine which special-status species were likely to occur in the vicinity of the study area, a literature survey (including Skinner and Pavlik [1994], Magney [1999, 2000a, 2000b[89]]) and a search of the California Department of Fish and Game's (CDFG's) Natural Diversity Database (NDDB) should have been conducted for known occurrences in the study area.

Included in the assessment of special-status species, the following information on each special-status species should have included their status, habitat requirements, distribution, and survey results for each special-status species either observed in the study area or believed to occur based on the presence of suitable habitat.

Adequate information on each identified special-status plant species would have included it's:

- scientific and common (vernacular) names;
  - ♣ status (federal; state; CDFG's NDDB Element Ranking [Global and State ranking]; and CNPS [including its Rarity-Endangerment-Distribution (R-E-D) Code]);
- description;
- habitat requirements;
- distribution; and
- survey results.

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 [USFWS]) 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.

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[85] Magney, D.L. 1999. Preliminary List of Rare California Lichens. California Lichen Society Bulletin 6(2)::22-27.
[86] Magney, D.L. 2001b. *Checklist of Ventura County Plant Species of Local Concern*. California Native Plant Society, Channel Islands Chapter, Ojai, California(Note: the text of this document can be obtained from the CNPS website – http://www.cnps.org/rareplants/ChecklistOfVenturaCountySpeciesOfLocalConcern.pdf.
[87] Remsen, J.V., Jr. 1978. Bird Species of Special Concern in California: An Annotated List of Declining or Vulnerable Bird Species. June 1978. Prepared for the California Department of Fish and Game, Sacramento, California.
[88] Williams, D.F. 1986. Mammalian Species of Special Concern in California. (Wildlife Management Division Administrative Report 86-1.) California Department of Fish and Game, Sacramento, California.
[89] Magney, D.L. 2000. Vascular Plants of Ventura County, California: An Annotated Catalogue. Draft. Ojai, California.

The NDDB Element Ranking system[90] provides a numeric global and state ranking system for all special-status species tracked by the NDDB, and should have been used in the Additional Analysis. The global rank (G-rank) is a reflection of the overall condition of an element (species or natural community) throughout its global range. The state ranking (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 3, Natural Diversity Database Element Ranking System. If we could construct Table 2 within a few hours of work, then why could not the project applicant's consultants do so?

Not all special-status species are tracked by the NDDB, nor have global or state rarity ranking been given to them; therefore, the rules described above to "rank" those special-status species lacking such ranking should have been applied. This applies to the rare lichen taxa found at the project site, assuming that any surveys for lichens were even conducted, of which there is no such evidence in the record.

[90] Natural Diversity Database. 1999. Special Plants List. (Quarterly publication, mimeo.) California Department of Fish and Game, Natural Heritage Division, Sacramento, California. August.

Table 3. Natural Diversity Database Element Ranking System

Global Ranking (G)	
G1	Less than 6 viable elements occurrences (populations for species) OR less than 1,000 individuals OR less than 809.4 hectares (ha) (2,000 acres [ac]).
G2	6 to 20 element occurrences OR 809.4 to 4,047 ha (2,000 to 10,000 ac).
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).
G4	Apparently secure; this rank is clearly lower than G3 but factors exist to cause some concern (i.e. there is some threat, or somewhat narrow habitat).
G5	Population or stand demonstrably secure to ineradicable due to being commonly found in the world.
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*. This plant is ranked G2T1. The G-rank refers to the whole species range (i.e., *Chorizanthe robusta*, whereas the T-rank refers only to the global condition of 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 a bird's eye or 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. (Natural Diversity Database 1999.)

The CNPS R-E-D Code is a numeric ranking for each of the three categories (rarity, endangerment, and distribution) that more accurately describes each plant's population levels and is specific for each of the three categories, as described in Table 4, California Native Plant Society R-E-D Code. It should have been used in the Additional Analysis.

Table 4. California Native Plant Society R-E-D Code

Rarity (R)	
1	Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time.
2	Distributed in a limited number of occurrences, occasionally more if each occurrence is small.
3	Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported.
Endangerment (E)	
1	Not endangered.
2	Endangered in a portion of its range.
3	Endangered throughout its range.
Distribution (D)	
1	More or less widespread outside California.
2	Rare outside California.
3	Endemic to California

Skinner and Pavlik, 1994.

As described for the NDDB ranking, not all special-status species that should be considered in the Additional Analysis are tracked by CNPS, nor have R-E-D codes been given to them; however, the rules described above to "rank" those special-status species lacking such ranking should have been applied. This applies to the rare moss, liverwort, and lichen taxa found in the study area, for which CNPS has not yet developed or incorporated into its *Inventory of Rare and Endangered Vascular Plants of California*[91]. CNPS will be incorporating nonvascular plants (i.e. mosses and liverworts) into a future edition of the *Inventory*[92]. Rare lichen taxa will be published by the California Lichen Society in the near future. Taxa for which CNPS R-E-D Codes have been devised for this report are followed by a "?" in parentheses, denoting tentative assignment.

A large number of special-status species known to occur in the region of the project site are listed in Table 5. Surveys for these plants and wildlife should have been conducted in all areas where direct, indirect, or cumulative impacts could adversely affect these taxa. The special-status species that should have been considered are grouped by which kingdom they belong in.

[91] Skinner and Pavlik 1994.
[92] David Tibor, CNPS, personal communication, the 6th edition will be published in early 2001.

Plants

All vascular plants and bryophytes listed by CNPS[93] should have been, but were not, considered and assessed in the project EIR. Seasonal field surveys would have been necessary to determine their presence or absence from the project site; however, unless the field surveys had been comprehensive and complete, those who prepared the EIR should have assumed that undetected individuals or populations are present based on the presence of suitable habitat. As illustrated recently by the rediscovery of the San Fernando Valley Spineflower (*Chorizanthe parryi* var. *fernandina*) on both the Ahmanson Ranch (Laskey Mesa) and Newhall Ranch, rare species can occur in areas where field surveys have been conducted previously. The Newhall Ranch Specific Plan DEIR stated that this taxon was not observed onsite, and was not expected to occur onsite; however, this conclusion was proven to be false, since it was discovered, incidentally, on Newhall Ranch recently, supporting the reasonable scientific conclusion that unless proper, comprehensive, and seasonal field surveys are conducted, a prudent scientist would have to conclude that a taxon's absence cannot be reasonably made. The Additional Analysis did nothing to rectify this error.

In light of the fact that the San Fernando Valley Spineflower has indeed been found on the Newhall Ranch, but not reported in the Additional Analysis, after several botanical field surveys were conducted, one can reasonably conclude that the field surveys on which the EIR was based were inadequate. Or at least the conclusions made in the EIR were not based on sound science or logic. The San Fernando Valley Spineflower is now a Candidate for Listing as Endangered under the California Endangered Species Act, which prohibits "take" without a permit from the CDFG. Thorough field surveys for this, and all special-status species, are warranted to determine project-related impacts to special-status plant species. As far as we can tell in the Additional Analysis, these surveys have not been performed.

Where exactly within the Specific Plan area does the San Fernando Valley Spineflower occur? Is there similar habitat to that where this plant does occur on Newhall Ranch land elsewhere in the Specific Plan area? Have systematic field surveys by qualified botanists during the appropriate field seasons been conducted in the study area? If not, why not? If not, then any reasonable scientist would assume that additional populations likely occur in the region. Clearly, Los Angeles County should have considered the fact that this endangered plant is now known to occur on Newhall Ranch as significant new information and should have required Impact Sciences to disclose this fact publicly (such as in the Additional Analysis) and assess potential impacts to it because of the proposed project. Doing anything less violates the intent of CEQA.

The Additional Analysis should have included, as supporting evidence, complete descriptions of botanical survey methods, qualifications of investigators, maps of areas surveyed, dates of surveys for each area surveyed, and location and list of all voucher specimens collected to support the botanists statements and results. All voucher specimens should have been deposited in a local public herbarium

[93] Skinner and Pavlik 1994,
Magney 2001

(e.g. Rancho Santa Ana Botanic Garden, Santa Barbara Botanic Garden, University of California Santa Barbara Herbarium)[94], and according to California Botanical Society policy and CNPS policies[95].

Lichens

Special-status lichen species are listed by the California Lichen Society (Magney 2000a) and can be viewed on CALS's web page (http://ucjeps.herb.berkeley.edu/rlmoe/cals.html or directly to http://128.32.109.44/red.html). The Additional Analysis failed to assess any impacts on lichens.

The Additional Analysis, and previous documents, have failed to demonstrate that any field surveys for lichens have ever been conducted in the Specific Plan area. An assessment of project-related impacts on the lichen flora, especially rare lichen taxa, must be conducted as part of the assessment of the biological resources of the project site. As part of that assessment, indirect impacts to the lichen flora, such as from air pollution generated because of the project, must be evaluated as well as the direct impacts. Air pollution has caused the loss of lichens in many areas of Southern California, and elsewhere in the developed world. For example, Lace Lichen (*Ramalina menziesii*) was once common along San Antonio Creek in the Ojai Valley[96], but has disappeared entirely from Ventura County likely the result of air pollution. It is entirely likely that the Lace Lichen also occurred in the mesic canyons on the Coast Live Oak trees of the project site; however, no evidence has been presented regarding the presence or absence of any species of lichen in the Specific Plan area.

Many rare lichen species are known from Los Angeles County, including the following taxa:

- *Caloplaca subpyaceella*
- *Phaeophyscia decolor*
- *Phaeophyscia kairamoi*
- *Teloschistes exilis*
- *Teloschistes favicans*
- *Toninia submexicana*
- *Caloplaca stantonii*
- *Catapyenium acarosporoides*
- *Catapyrenium heppioides*
- *Melaglaria columbiana*
- *Cladonia puvinella*
- *Dimelaena californica*
- *Dimelaena weberi*
- *Graphis saxorum*
- *Lecanora xanthosora*
- *Massalongia microphylliza*
- *Mobergia angelica*

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[94] Ferren, W.R., Jr., D.L. Magney, and T.A. Sholars. 1995. The Future of California Floristics and Systematics: Collecting Guidelines and Documentation Techniques. *Madroño* 42(2):197-210.

[95] The policy statements and protocols can be viewed at http://www.cnps.org/archives/documentation.htm, see Botanical Survey Guidelines and Policy on Documentation.

[96] Fry, P. 1999. *The Ojai Valley: An Illustrated History*. Matilija Press, Ojai, California;
Charis Bratt, lichenologist, Santa Barbara Botanic Garden, personal communication, April 2000 regarding *Ramalina menziesii* historic distribution in Ventura County.

- *Pertusaria velata*
- *Pertusaria lacnina*
- *Ramonia albephora*
- *Rhizoplaca glaucophana*
- *Schismatommaa rediunta*
- *Staurothele monicae*
- *Thelenella weberi*
- *Thelopsis isiaca*

One or more of these lichen species may be present in the specific plan area and could be adversely affected by the project. Why were lichens ignored? CNPS previously raised this issue in the Notice of Preparation. The lichen flora should be surveyed for systematically and project-related impacts, both direct and indirect, should be thoroughly evaluated.

Vertebrates

The Additional Analysis does not provide a complete list of wildlife species that should be considered in the Newhall Ranch Area. The Additional Analysis adds no species to the list considered in last year's FEIR. Table 5 in this letter represents a preliminary, but more thorough, list of the species that should have been considered. Table 5 adds 32 special-status species, 12 of which are listed by the federal or state governments as threatened or endangered. Table 5 also presents California Wildlife-Habitats Relationships Version 7.0 associations with vegetation cover types. The threats to the species identify existing cumulative effects, and the fourth column from the left identifies the species that the Newhall Ranch environmental consultants found during reconnaissance level searches or that they thought were possible residents or visitors of the site.

The Additional Analysis described grassland as a nonsensitive habitat (Page 2.4-6) in which none of the special-status species are able to reproduce, and therefore of low value (Page 2.4-9, Page 2.2-20). Designating grassland as "Non-native Grassland" does not preclude it from being used as habitat by native plants and animals[97]. In addition, a review of Table 5 reveals that 33 (37%) of the 89 terrestrial, special-status vertebrate species reproduce in grasslands, and 59 (66%) of them use grasslands for either reproduction, cover, feeding, or for some combination of these needs. WHR rated grasslands as of high reproductive, cover, *and* feeding value for 13 (15%) of these species. Based on the most cursory review of Table 5 and WHR, grasslands are not the low value habitat type portrayed by the Additional Analysis.

Furthermore, the Additional Analysis portrayed Alluvial Scrub, Arrow Weed Scrub, and Mixed Chaparral as non-sensitive habitats (Page 2.4-6), and added Coastal Sage Scrub to these cover types as being of no value to wildlife movements across the Santa Susanna Mountains (Page 2.4-11). To check up on these claims, we represented Alluvial Scrub and Arrow Weed Scrub as *barren* (which of course is absurd since these riparian habitats are not barren except only after a disturbance event), and Coastal Sage Scrub as *Coastal Scrub*, which are probably the closest WHR cover types available to do so. We assigned a simple numeric rating system to the symbolized rating system of WHR, where Low = 1,

[97] Howald 1993.

Medium = 2, and High = 3 (this is the procedure used in WHR). We then added the numeric ratings across the reproduction, cover, and feeding categories, achieving a point range of 0 to 9 for each species' relationship with each cover type. We then tested whether grassland, barren, Coastal Scrub, and Mixed Chaparral cover types are as worthless as the Additional Analysis portrayed them. As a comparison cover type, we included Valley Foothill Riparian, which is the WHR cover type that includes some of the "sensitive" habitat types (e.g. Southern Cottonwood/Willow Riparian Forest, Southern Willow Scrub) identified and proposed for preservation in the Additional Analysis.

We found that each cover type in Table 6 (and in the Newhall Ranch area) was predicted by WHR to be used by many of the special-status species. The average use of each of these cover types was significantly different from 0 (no use), and the mean values for grassland, Mixed Chaparral, and Coastal Sage Scrub were not substantially different from that of Valley Foothill Riparian (Table 6). The Additional Analysis has incorrectly portrayed the relative importance of each of these vegetation cover types.

Note: There is no Page 38

Table 5. Special-Status Vertebrates from the Newhall Ranch Area, Along with Their WHR Ratings

Species Names	Status[a]	Threats to Species[b]	Previously Reported Onsite[98]	Use of Grassland	Use of Barren	Use of Mixed Chaparral	Use of Coastal Scrub	Use of Valley Foothill Riparian
Mammals								
Ornate Shrew *Sorex ornatus*	FC, CSC		no	MMM	---	LLL	LLL	HHH
Fringed Myotis *Myotis thysanodes*	FSC		possible	--L	HHL	--L	--L	--H
Yuma Myotis *Myotis yumanensis*	FSC, CSC		possible	--M	---	--M	--H	--H
Spotted Bat *Euderma maculatum*	FSC, CSC		possible	--L	---	---	--L	--L
Pale Big-eared Bat *Corynorhinus townsendii pallescens*	FSC, CSC		possible	--L	MM-	--L	--M	--M
Greater Western Mastiff Bat *Eumops perotis californicus*	FSC, CSC		possible	--H	MMM	--M	--H	--H
Pallid Bat *Antrozous pallidus*	CSC		possible	--H	HH-	MMM	MMM	--M
San Diego Black-tailed Jackrabbit *Lepus californicus bennetti*	CSC		yes	-LH	---	HHH	HHH	MMM
San Joaquin Pocket Mouse *Perognathus inornatus inornatus*	CSC		no	HHH	LLL	MMM	---	---
White-eared Pocket Mouse *Perognathus alticola alticola*	CSC		no	---	---	MMM	---	---
Los Angeles Little Pocket Mouse *Perognathus longimembris brevinasus*	FSC, CSC		possible	---	---	LLL	HHH	---
Southern Grasshopper Mouse *Onychomys torridus ramona*	FSC		possible	MMM	---	MMM	MMM	LLL
San Diego Desert Woodrat *Neotoma lepida intermedia*	CSC		yes	---	---	HHH	HHH	---
Ringtail *Bassariscus astutus*	CFP		no	--L	L-L	HHH	HHH	HHH
Western Spotted Skunk *Spilogale gracili*s	CSC		no	LLM	---	HHH	HHH	HHH
American Badger *Taxidea taxus*			possible	HHH	MMM	MMM	MMM	LLL
Mountain Lion *Puma concolor*	CFP	CTH	yes	LLL	---	HHH	MMH	HHM
Birds								
Double-crested Cormorant *Phalacrocorax auritus*	CSC		no	---	HH-	---	---	LLH
Great Blue Heron *Ardea herodius*	CSA, CDFS		yes	--H	---	---	MM-	HHM
Great Egret *Ardea alba*	CSA, CDFS		yes	-HH	---	---	---	HHM
Snowy Egret *Egretta thula*	CSA		yes	---	---	---	---	LLL

[98] Reported by Dames & Moore and RECON in DEIR and FEIR for the Newhall Ranch Specific Plan.

Species Names	Status[a]	Threats to	Previously Reported	Use of Grassland	Use of Barren	Use of Mixed	Use of Coastal	Use of Valley Foothill
Black-crowned Night Heron *Nycticorax nycticorax*	CSA		yes	---	---	LL-	HH-	MMH
Western Least Bittern *Ixobrychus exilis hersperis*	FSC, CSC		possible	---	---	---	---	---
White-faced Ibis *Plegadis chihi*	CSC		no	--L	---	---	---	---
Wood Stork *Mycteria americana*	FE, CSC		no	--L	---	---	---	---
Fulvous Whistling Duck *Dendrocygna bicolor*	FSC, CSC		possible	---	---	---	---	---
California Condor *Gymnogyps californianus*	FE, CE		possible	--H	HH-	HHM	HHM	---
Osprey *Pandion haliaetus*	CSC		no	--L	--L	--L	---	HHH
Bald Eagle *Haliaeetus leucocephalus*	CE, FT		no	--L	--L	--L	--L	LLM
Golden Eagle *Aquila chrysaetos*	CFP		possible	LLH	HHH	HHM	HHH	HHL
Ferruginous Hawk *Buteo regalis*	FSC, CSC		possible	-LH	-MM	---	-MM	-LL
Swainson's Hawk *Buteo swainsoni*	CT		possible	MMH	-MH	--L	---	HHM
Northern Harrier *Circus cyaeneus*	CSC		yes	HHH	-LL	-LL	-MM	LMM
White-tailed Kite *Elanus leucurus*	CFP		yes	--H	--L	MHM	MHH	MMM
Cooper's Hawk *Accipiter cooperii*	CSC		yes	--M	---	-LL	-MM	MHH
Sharp-shinned Hawk *Accipiter striatus*	CSC		possible	--M	--L	-MM	-HH	-MH
Northern Goshawk *Accipiter gentilis*	CSC		no	---	---	--L	---	-LM
American Peregrine Falcon *Falco peregrinus anatum*	FE, CE		possible	HHH	HHH	MML	HHM	HHM
Merlin *Falco columbarius*	CSC		possible	--M	--L	-LL	-LL	-HH
Prairie Falcon *Falco mexicanus*	CSC		possible	HHH	-LM	MML	HHL	HHM
Clapper Rail *Rallus longirostrus*	FE, CE		no	---	---	---	---	---
Western Snowy Plover *Charadrius alexandrinus nivosus*	FT, CSC		no	---	HHH	---	---	---
Mountain Plover *Charadrius montanus*	FC, CSC		possible	-HH	-HH	---	---	---
Long-billed Curlew *Numenius americanus*	CSC		no	-HH	-HH	---	---	-LL
Baird's Sandpiper *Calidris bairdii*	CSC		no	---	-HH	---	---	---
California Gull *Larus californicus*	CSC		no	-MM	HH-	---	---	---
Black Tern *Chlidonius niger*	CSC		no	---	---	---	---	---
Xantus' Murrelet *Synthliboramphus hypoleucus*	CSC		no	---	HH-	---	---	---
Marbled Murrelet *Brachyramphus marmoratus* (winter range)	FT, CE		no	---	---	---	---	---
Western Yellow-billed Cuckoo *Coccyzus americanus occidentalis*	CE		possible[c]	---	---	---	---	HHH
Western Burrowing Owl *Athene cunicularia*	FSC, CSC		possible	HHH	HHH	LLL	HHH	LLL
California Spotted Owl *Strix occidentalis occidentalis*	CSC		no	---	---	---	---	LLL
Long-eared Owl *Asio otus*	CSC		possible[c]	--H	---	LHH	---	HHM

Species Names	Status[a]	Threats to	Previously Reported	Use of Grassland	Use of Barren	Use of Mixed	Use of Coastal	Use of Valley Foothill
Short-eared Owl *Asio flammeus*	CSC		no	HHH	---	-MM	-MM	LLL
Vermilion Flycatcher *Pyrocephalus rubinus*	CSC		yes	---	---	---	---	---
Southwestern Willow Flycatcher *Empidonax traillii extimus*	FE, CE		yes	---	---	---	---	HHH
Loggerhead Shrike *Lanius ludovicianus*	CSC		yes	-HH	-LL	LLL	MMM	LLM
Least Bell's Vireo *Vireo bellii pusillus*	FE, CE		yes	---	---	---	---	HHH
California Horned Lark *Eremophila alpestris actia*	CSC		yes	HHH	-HH	---	---	LLL
Bank Swallow *Riparia riparia*	CT		no	HHH	HHL	--L	HHM	HHH
California Gnatcatcher *Polioptila californica californica*	FT, CSC		possible	LLL	---	LLL	HHH	-LL
California Thrasher *Toxostoma redivivum*	FT		no[c]	---	---	HHH	HHH	LMM
Yellow Warbler *Dendroica petechia brewsteri*	CSC		yes	---	---	LLL	-LL	HHH
Yellow-breasted Chat *Icteria virens auricollis*	CSC		yes	---	---	---	-LL	HHH
Summer Tanager *Piranga rubra*	CSC		yes	---	---	---	---	HHH
Southern California Rufous-crowned Sparrow *Aimophila ruficeps canescens*	FSC, CSC		yes	HHH	---	HHH	HHH	-LL
Bell's Sage Sparrow *Amphispiza belli belli*	FSC, CSC		possible	---	---	HHH	HHH	---
Tricolored Blackbird *Agelaius tricolor*	FSC, CSC		yes	--H	---	---	---	MMM
Amphibians								
California Tiger Salamander *Ambystoma californiense*	FC, CSC	ECH	no	HHH	---	---	---	MMM
Coast Range Newt *Taricha torosa torosa*	CSC	CH	no	LLL	---	HHH	HHH	MMM
Tehachapi Slender Salamander *Batrachoseps stebbinsi*	CT		no	---	---	---	---	LLL
Arroyo [Southwestern] Toad *Bufo microscaphus californicus*	FE, CSC	ECHV	possible[c]	---	---	LLL	---	MMM
Western Spadefoot Toad *Spea hammondii*	FSC, CSC	ECH	yes	HHH	---	LLL	LLL	---
California Red-legged Frog *Rana aurora draytonii*	FT, CSC	ECHV	possible	MMM	---	LLL	HHH	LLL
Foothill Yellow-legged Frog *Rana boylii*	CSC	ECH	no	LLL	---	-LL	-LL	HHH
Reptiles								
San Bernardino Ring-necked Snake *Diadophis punctatus modestus*	FSC		possible	LLL	---	HHH	MMM	HHH
Coast Patch-nosed Snake *Salvadora hexalepis virgultea*	FSC, CSC	C	possible	LLL	LLL	MMM	HHH	MMM
Coachwhip *Masticophis flagellum* (range nearby)	CSC		no[c]	LLL	---	LLL	LLL	LLL
Coastal Rosy Boa *Lichanura trivirgata rosafusca*	FSC		possible	---	LLL	MMM	MMM	---
Southern Rubber Boa *Charina bottae umbricata*	CT		no	---	---	---	---	LLL
San Bernardino Mountain Kingsnake *Lampropeltis zonata*	CSC	OCV	no	LLL	---	MMM	---	MMM

Species Names	Status[a]	Threats to	Previously Reported	Use of Grassland	Use of Barren	Use of Mixed	Use of Coastal	Use of Valley Foothill
parvirubra								
South Coast Garter Snake *Thamnophis sirtalis*	CSC	ECHV	no	HHH	---	HHH	LLL	HHH
Two-striped Garter Snake *Thamnophis hammondii hammondii*	FSC, CSC	ECHV	yes	LLL	---	MML	MML	HHH
Southwestern Pond Turtle *Clemmys marmorata pallida*	FSC, CSC	EOCH	yes	MMM	---	LLL	MMM	HHH
Coastal Western Whiptail *Cnemidophorus tigris multiscutatus*	FSC		yes	LLL	---	MMM	---	LLL
California Horned Lizard *Phrynosoma coronatum frontale*	FSC, CSC	ECV	yes	LLL	---	HHH	HHH	MMM
San Diego Horned Lizard *Phrynosoma coronatum blainvillii*	FSC, CSC	ECV	yes	LLL	---	HHH	HHH	MMM
Silvery Legless Lizard *Anniella pulchra pulchra*	FSC, CSC	EC	possible	---	---	MMM	MMM	MMM
Desert Night Lizard *Xantusia vigilis*	CSC		no	LLL	---	---	---	---
Fish								
Unarmored Threespine Stickleback *Gasterosteus aculeatus williamsoni*	FE, CE		yes					
Arroyo Chub *Gila orcutti*	FSC, CSC		yes					
Santa Ana Sucker *Catostomas santaanae*	FSC, CSC		yes					

Note: The WHR ratings of low (L), medium (M), and high (H) for their reproductive, cover, and feeding uses of grassland, barren, Mixed Chaparral, Coastal Scrub, and Valley-Foothill Riparian cover types. A lack of rating in WHR is denoted in the Table as a hyphen (-).

[a] FE = Federal Endangered, FT = Federal threatened, FC = Federal candidate for listing, FSC = Federal species of concern, CE = California Endangered, CT = California threatened, CFP = California Fully Protected, CSC = California Department of Fish and Game listing of California Species of Concern, CSA = California Special Animal, CDFS = California Department of Forestry sensitive.

[b] E = Exotic predators or competitors; O = overcollecting for black market trade; C = Land conversions; H = Modification of hydrology; V = Off-road vehicles; T = Road/highway traffic; H = Human conflicts[99].

[c] Found by Dames & Moore (Appendix H in FEIR Appendix 4.6) or Dr. Mark Holmgren (FEIR letter 73).

[99] Sources are: Jennings, M.R., and M.P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California;
Smallwood, K.S., and E.L. Fitzhugh. 1995. A Track Count for Estimating Mountain Lion *Felis concolor californica* Population Trend. *Biological Conservation* 71:251-259.

Table 6. The Use of Several Cover Types at Newhall Ranch by 89 Terrestrial, Special-Status Species of Wildlife

Cover Type	No. of Species That Use the Cover Type	Mean of Ratings Among 89 Species	Significance of One-Sample Test (Test Value = 0)
Grassland	59	3.03	$P < 0.01$
Barren	32	1.71	$P < 0.01$
Mixed Chaparral	57	3.19	$P < 0.01$
Coastal Scrub	52	3.44	$P < 0.01$
Valley Foothill Riparian	67	4.30	$P < 0.01$

SURVEY METHODS AND DOCUMENTATION

For each special-status species, the Additional Analysis failed to establish the level of occupancy on the project area or the countable ecosystem, and it did not identify the likely demographic units supported there. This step was needed to make estimates of the adverse project impacts so that mitigation measures could then be formulated to avoid impacts or to offset them so that the mitigation is roughly proportional to the impacts[100]. Contrary to the claim made in the FEIR, it is not straightforward that "The ratio of one acre replaced for each acre lost can equate in biological value and, in some cases, improve the value of existing destroyed habitat when maintained" (RTC-518). The FEIR/Additional Analysis provides no empirical or literature-based evidence in support of the claim that acreage replacement ratios can equate in biological value. There were several ways impacts could have been estimated, but were not.

First, aspects of the environmental setting could have been used to estimate the extent to which habitat is available. Habitat is species-specific and complex, so broad cover types often fail to adequately match the distribution of habitat for any particular species, regardless of whether species are arbitrarily designated as flagship, keystone, or umbrella species[101]. Soils, slope aspect, nearness to water, availability of refugia, and many other factors often influence where a species will occur, but mapped cover types are usually overly simplistic and constructed from imagery alone (without on-the-ground corrections). This approach of relying on habitat availability then assumes that the species will be present now, in the recent past, or potentially in the future, so long as the study area is also within the species' geographic range. This approach assumes presence based on habitat availability. Habitat should have been defined by the species' use of the environment[102]. However, the Additional Analysis mischaracterized habitat as vegetation communities. After identifying and mapping habitat in the wrong way, the Additional Analysis ended up pigeonholing species into mapped cover types (to be

[100] Section 15126.4 of the CEQA Guidelines
[101] Simberloff 1998.
[102] Hall et al. 1997; Morrison et al. 1998.

discussed later), which violates the standards for environmental document preparation expected by professional wildlife biologists[103].

Second, records of species presence in or nearby the project area (and within the countable ecosystem) could have been used to verify past presence and to assume possible current or future presence of each species. Such records are available at museums, herbaria, and the California Natural Diversity Database. We cannot tell that Impact Sciences actually looked for these records of occurrence. More importantly, the Additional Analysis improperly considered species to be absent from the study area based on a lack of records. Species populations are naturally clustered, and these clusters shift locations periodically[104], further discrediting the approach of concluding absence based on lack of records or lack of observations during reconnaissance-level searches. This natural shifting mosaic pattern of abundance means that where species are absent today, they can be present in a few years from now, so long as the habitat remains available.

Third, scientifically defensible searches could have been conducted to verify presence, along with sampling to estimate the number of individuals and the demographic units occupying the study area. Like historical records, reconnaissance-level searches cannot be used to conclude that the species is absent from the study area. It was improper to conclude that some species were absent just because Impact Sciences, RECON, or other consulting biologists were unable to find evidence of these species in the study area, especially considering the lack of systematic surveys of the project area. Additional evidence of their lack of adequate survey technique or quality is the incidental discovery of the San Fernando Valley Spineflower on Newhall Ranch property, and others finding the Southwestern Arroyo Toad.

If there had been even the slightest chance of a particular species occurring on or nearby a project site, then it should have been included in the Additional Analysis. The Additional Analysis is more likely to minimize adverse environmental impacts by being overly cautious, but it cannot minimize impacts by liberally limiting the number of species considered, which is what it did. If the species' presence was in doubt, then it should have been included in the Additional Analysis consistent with use of the Precautionary Principle of risk assessment[105].

A before-and-after comparison of both habitat availability and habitat quality would have been a critical means to estimate the project impacts[106], but was not performed. Habitat availability (in spatial units) following the project needs should have been compared to habitat availability before the project, and both of these figures should have been compared to the spatial areas of habitat needed to support various demographic units of each species[107]. In this way, the Additional Analysis could have projected

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[103] Smallwood et al. 2001.

[104] den Boer, P.J. 1981. On the Survival of Populations in a Heterogeneous and Variable Environment. *Oecologia* 50:39-53;
Taylor, R.A.J., and L.R. Taylor. 1979. A Behavioral Model for the Evolution of Spatial Dynamics. Pages 1-28 in R.M. Anderson, B.D. Turner, and L.R. Taylor (editors). *Population Dynamics*. Blackwell Scientific Publications, Oxford.

[105] O'Brien, M. 2000. Making Better Environmental Decisions: An Alternative to Risk Management. The MIT Press, Cambridge, Massachusetts.

[106] Smallwood 2001.

[107] described in Smallwood 1999.

the likely changes in number of individuals and in demographic units that will be supported in the Santa Susana Mountains following the project-caused habitat losses. This approach would have relied upon existing data (i.e. numerical estimates in the published literature), so no new field research was needed. Of course, searches and sampling in the project area could have improved the accuracy of estimates of numerical distributions and demographic organization.

Not only did the FEIR and Additional Analysis lack any sort of habitat analysis for any of the species, but also the habitat descriptions were often wrong, and often pigeonholed species into either the river/riparian or high country aspects of the Specific Plan area (Table 7). For example, the habitat of the Townsend's Big-eared Bat, and of so many of the other species in Table 7, is described to be riparian vegetation, but these descriptions neglect to include other multiple vegetation cover types that scientists know these species use. Annual grass, oak woodlands, and chaparral are often left out of the habitat descriptions in the FEIR. These selective inclusions of riparian cover types appear to present biased descriptions of habitat that are consistent with minimizing impact estimates and directing mitigation measures to locations that will not interfere with this or future nearby construction projects.

Impact Sciences' habitat descriptions listed in Table 7 below are also often erroneous. The Swainson's Hawk is described as using habitat with which no scientist familiar with Swainson's Hawks would agree[108]. The habitat descriptions are wrong for Southwestern Arroyo Toad, Western Spadefoot Toad, Cooper's Hawk, Yellow Warbler, and others. The Northern Harrier was not described as using the cover types for which its previous name had been founded – "Marsh Hawk". Habitat descriptions were not provided for significant listed species such as California Condor and California Red-legged Frog. These shortfalls in habitat descriptions failed to meet the minimum standards of the wildlife profession[109]. We do not believe the FEIR/Additional Analysis are reliable, nor do we believe these documents are adequately informative. Indeed, the biased nature of these documents potentially confuses the issues for decisionmakers.

Plants

Thorough field surveys for all plants occurring in the project area, including areas where direct, indirect, and cumulative impacts may occur, should have been conducted during the appropriate field seasons to positively identify all taxa present. The results of the plant surveys should have been floristic in nature, that is, all taxa should have been identified fully to subspecies or variety level, when a species is so subdivided. A complete list of all taxa present and potentially impacted by the project should have been provided in the Additional Analysis, at least in a technical appendix. Voucher specimens needed to be collected and deposited into a public herbarium for review[110]. CNPS and CDFG have adopted specific survey guidelines for CEQA compliance related to assessment impacts to plants and plant communities

[108] For habitat analysis of Swainson's Hawk, and for references to additional Swainson's Hawk habitat analyses, see Smallwood, K.S. 1995. Scaling Swainson's Hawk Population Density for Assessing Habitat-use Across an Agricultural Landscape. *Journal of Raptor Research* 29:172-178.
[109] Smallwood et al. 2001.
[110] Ferren et al. 1995; CNPS policies (Documentation and Botanical Survey Guidelines), see www.cnps.org.

as a result of development projects[111], but the Additional Analysis gives no indication that these guidelines were implemented.

[111] Guidelines for Assessing the Effects of Proposed Developments on Rare, Threatened, and Endangered Plants and Plant Communities, State of California, THE RESOURCES AGENCY, Department of Fish and Game, May 4, 1984, Revised August 15, 1997; can be viewed at "http://www.cnps.org/rareplants/relations/cdfg_guidelines.htm"

Table 7. Differences in Habitat Descriptions Between the FEIR Section 4.6 (Biological Resources) and Our Cursory Review of California Wildlife Habitat Relationships (WHR) System Version 7.0.

Species	Habitat Description in FEIR Section 4.6	WHR 7.0
Townsend's Big-eared Bat *Corynorhinus townsendii pallescens*	Riparian Scrub & Riparian Woodland	riverine, Valley Foothill Riparian, *annual grass, barren, Coastal Scrub, Chamise-Redshank Chaparral, Mixed Chaparral, Coast Live Oak Woodland, Valley Oak Woodland, irrigated grain crops, irrigated hayfield, irrigated row & field crops, pasture, vineyard, wet meadow*
Yuma Myotis *Myotis yumanensis*	Riparian Scrub & Riparian Woodland	riverine, Valley Foothill Riparian, *annual grass, Coastal Scrub, Chamise-Redshank Chaparral, Mixed Chaparral, Coast Live Oak Woodland, Valley Oak Woodland, dryland grain crops, irrigated grain crops, irrigated hayfield, irrigated row & field crops, pasture, vineyard, wet meadow*
Pallid Bat *Antrozous pallidus*	Riparian Scrub & Riparian Woodland	riverine, Valley Foothill Riparian, *annual grass, barren, Coastal Scrub, Chamise-Redshank Chaparral, Mixed Chaparral, Coast Live Oak Woodland, Valley Oak Woodland, dryland grain crops, irrigated grain crops, irrigated hayfield, irrigated row & field crops, pasture, vineyard, wet meadow*
Greater Western Mastiff Bat *Eumops perotis californicus*	Riparian Scrub & Riparian Woodland	riverine, Valley Foothill Riparian, *annual grass, barren, Coastal Scrub, Chamise-Redshank Chaparral, Mixed Chaparral, Coast Live Oak Woodland, Valley Oak Woodland, dryland grain crops, irrigated grain crops, irrigated hayfield, irrigated row & field crops, pasture, vineyard, fresh emergent wetland, wet meadow*
California Condor *Gymnogyps californianus*	no habitat described	*annual grass, barren, Coastal Scrub, Chamise-Redshank Chaparral, Mixed Chaparral, dryland grain crops, irrigated hayfields, Valley Oak Woodland*
Northern Harrier *Circus cyaeneus*	Non-native Grassland, Coastal Sage Scrub, open areas of chaparral and oak vegetation	annual grass, Coastal Scrub, Coast Live Oak Woodland, Valley Oak Woodland, Chamise-Redshank Chaparral, Mixed Chaparral, *irrigated hayfield, irrigated grain crops, dryland grain crops, vineyard, Valley Foothill Riparian, fresh emergent wetland, wet meadow, riverine, barren*

Species	Habitat Description in FEIR Section 4.6	WHR 7.0
Swainson's Hawk *Buteo swainsoni*	*Riparian Woodland, Coastal Sage Scrub*, chaparral	Chamise Redshank Chaparral, Mixed Chaparral, *annual grass, barren, Coast Live Oak Woodland*
Ferruginous Hawk *Buteo regali*	Coastal Sage Scrub, chaparral, open Riparian Scrub	Coastal Scrub, Chamise-Redshank Chaparral, Valley Foothill Riparian, *annual grass, barren, Coast Live Oak Woodland, Valley Oak Woodland, fresh emergent wetland, wet meadow, pasture*
Cooper's Hawk *Accipiter cooperii*	riparian vegetation & *freshwater marsh*	Valley Foothill Riparian, *annual grass, Coastal Scrub, Coast Live Oak Woodland, Valley Oak Woodland, Chamise-Redshank Chaparral, Mixed Chaparral, irrigated grain crops, irrigated hayfield, vineyard*
Golden Eagle *Aquila chrysaetos*	Riparian Woodland, Coastal Sage Scrub, chaparral	Valley Foothill Riparian, Chamise-Redshank Chaparral, Mixed Chaparral, Coastal Scrub, *annual grass, barren, Coast Live Oak Woodland, Valley Oak Woodland, fresh emergent wetland, wet meadow, pasture*
Mountain Plover *Charadrius montanus*	*Coastal Sage Scrub, chaparral*, *open Riparian Scrub*	*annual grass, barren, irrigated grain fields, irrigated hayfield, irrigated row & field crops*
Vermilion Flycatcher *Pyrocephalus rubinus*	Riparian Scrub, Riparian Woodland, *freshwater marsh*	Desert Riparian, *irrigated hayfield, irrigated grain crops*
Yellow Warbler *Dendroica petechia brewsteri*	Riparian Scrub, Riparian Woodland, *freshwater marsh*	Valley Foothill Riparian, *Coastal Scrub, Coast Live Oak Woodland, Valley Oak Woodland, Chamise-Redshank Chaparral, Mixed Chaparral*
Tricolored Blackbird *Agelaius tricolor*	freshwater marsh and aquatic habitat	fresh emergent wetland, wet meadow, *annual grass, dryland grain crops, irrigated grain crops, irrigated hayfield, irrigated row & field crops, Valley Foothill Riparian*
California Red-legged Frog *Rana aurora draytonii*	no habitat described	*annual grass, Coast Live Oak Woodland, Valley Oak Woodland, Coastal Scrub, fresh emergent wetland, Mixed Chaparral, Valley-Foothill Riparian, wet meadow*
Arroyo Southwestern Toad *Bufo microscaphus californicus*	Riparian Scrub, Riparian Woodland, alluvial scrub, *freshwater marsh*, aquatic habitat	Valley-Foothill Riparian, riverine, *Mixed Chaparral, Coast Live Oak Woodland*
Western Spadefoot Toad *Spea hammondii*	*riparian* and freshwater marsh vegetation	fresh emergent wetland, *annual grass, Valley Oak Woodland, Coast Live Oak Woodland, Coastal Scrub, Mixed Chaparral, Chamise-Redshank Chaparral, irrigated*

Species	Habitat Description in FEIR Section 4.6	WHR 7.0
		field crops, dryland grain crops, vineyards
Southwestern Pond Turtle *Clemmys marmorata pallida*	riparian and freshwater marsh	fresh emergent wetland, Valley Foothill Riparian, riverine, wet meadow, *annual grassland, Chamise-Redshank Chaparral, Mixed Chaparral, Coast Live Oak Woodland, Valley Oak Woodland, Coastal Scrub, pasture*
California Horned Lizard *Phrynosoma coronatum frontale*	Coastal Sage Scrub, chaparral, grassland	annual grassland, Coastal Scrub, Chamise Redshank Chaparral, Mixed Chaparral, *Valley Foothill Riparian, Coast Live Oak Woodland, Valley Oak Woodland, vineyard, irrigated row & field crops, dryland grain crops*
San Diego Horned Lizard *Phrynosoma coronatum blainvillii*	Coastal Sage Scrub, chaparral, grassland	annual grassland, Coastal Scrub, Chamise Redshank Chaparral, Mixed Chaparral, *Valley Foothill Riparian, Coast Live Oak Woodland, Valley Oak Woodland, vineyard, irrigated row & field crops, dryland grain crops*
Two-striped garter snake *Thamnophis hammondii hammondii*	aquatic/riparian habitats	fresh emergent wetland, wet meadow, riverine, Valley Foothill Riparian, *annual grass, Coast Live Oak Woodland, Valley Oak Woodland, Coastal Scrub, Chamise-Redshank Chaparral, Mixed Chaparral*
Western Patch-nosed Snake *Salvadora hexalepis virgultea*	Coastal Sage Scrub, chaparral, open Riparian Scrub	Coastal Scrub, Chamise-Redshank Chaparral, Mixed Chaparral, Valley Foothill Riparian, *annual grass, barren, Coast Live Oak Woodland, Valley Oak Woodland*

Note: Vegetation cover types in italics are those that did not appear in the comparison document (e.g. if an italicized cover type appears in the WHR column, then that cover type did not appear in the FEIR habitat descriptions, and vice versa).

Since most vascular plants are only identifiable when leaves, flowers, and fruits are present, field surveys should have been conducted during at least two, and possibly three times during the year, between March and August, with at least one survey each during the early spring, late spring, and summer. According to the Additional Analysis, this timing and frequency of surveys apparently were not done.

Lichens

Lichen surveys, unlike those for vascular plants and bryophytes, can generally be conducted during any season. The lichenologist must collect enough material with fruiting structures to allow for proper identification. Numerous special-status lichen species are known from Southern California; however, no surveys for lichens were done on the Newhall Ranch. Surveys should have been conducted in all areas of the project site to determine which lichen species are present, and to assess project-related impacts on the lichen flora as a result of project-caused direct, indirect, and cumulative impacts.

Bryophytes

Proper identification of most species of bryophytes requires vegetative and fruiting structures. Field surveys for bryophytes should have been timed to ensure proper identification of all bryophyte taxa to determine if any bryophytes present onsite are considered special-status species. There is no indication in the Additional Analysis that bryophyte surveys were performed, let alone proper ones.

Vegetation Classification and Mapping

All vegetation should have been mapped and classified at the plant association level according to CNPS classification and protocols[112], which have been adopted by the California Department of Fish and Game, California Department of Parks and Recreation, U.S. Forest Service, U.S. Bureau of Reclamation, U.S. Bureau of Land Management, U.S. National Park Service, and U.S. Fish and Wildlife Service, and others. The CNPS classification and protocols are the accepted and widely used standard, except apparently by Impact Sciences. Mapping of the Specific Plan site appears to have been performed hastily (e.g. one day in the Salt Creek watershed, Page 2.2-3) and using a modification of Holland's classification system, which has been long considered out-dated and inadequate, hence the reason CNPS developed it's current system and methods.

Wildlife Survey Methods

All field searches and sampling should have followed agency protocols that are available for various special-status species, and they should have followed safety standards such as the Declining Amphibian Task Force's Fieldwork Code of Practice[113] and the American Society of Mammalogists' Guidelines for the Capture, Handling and Care of Mammals[114]. All of this work should have been performed by

[112] Sawyer, J.O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society, Sacramento, California; see CNPS website for protocols and policies at "www.cnps.org".
[113] http://ventura.fws.gov/SurveyProt/DAPTF_prot.htm
[114] http://www.mammalsociety.org/

professionals appropriately permitted by the California Department of Fish and Game and the US Fish and Wildlife Service. In support of this standard, the Additional Analysis should have included the names, qualifications, and permit numbers of all field personnel. Searches and sampling for rare animal species is difficult and often requires a high level of intensity to detect presence[115].

Searches or sampling for bats should have incorporated mist netting, as well as acoustical detectors, along with voice recognition software for species identification. There are only several professionals in California who are permitted and prepared to use these methods. These professionals should have been retained to perform the bat searches. There is no excuse for the Additional Analysis excluding bats from animal species searches, but it did exclude them.

Sampling for the Ornate Shrew would have required a specialized effort using drift nets and pitfall traps, as well as small Sherman live-traps or specialized shrew traps. A high level of care is needed to avoid inadvertently killing shrews using any trapping method, so trapping for shrews is labor intensive. However, the Additional Analysis indicates no trapping was performed for the Ornate Shrew, or that any special attention was given to prevent death as a result of the trapping that was performed.

Rodent trapping requires traps of various sizes, as well as a variety of baits and multiple trap nights per station. Rare species of rodents are often difficult to catch, so intensive work is required to detect their presence. The Additional Analysis indicates that only cursory rodent trapping was performed, and did not indicate that a variety of traps was used, or baits, or multiple trap nights per station. The Additional Analysis does not indicate that lagomorphs were searched for at all, besides a two-hour spotlight search on one night.

Carnivores are most efficiently detected by searches for tracks and scats[116], although bait stations can also hasten detection in some circumstances. Any sign used to verify the presence of carnivore presence should have been photographed with an object useful for identifying scale[117], but the Additional Analysis presents no evidence of tracks found except from the limited effort along four transects, mostly in Ventura County, during early 2001 as described in the Additional Analysis. This later effort is good evidence of that fact that when you actually look, you will find evidence of the target animal species, such as the tracks of Mountain Lion, which was not even mentioned in the DEIR or FEIR.

For bird species, nest searches can be useful during the breeding season, as well as searches for individuals along transects or at point count locations[118]. Field personnel used for bird searches should be skilled at both visual and auditory identification of species. The field visits to Salt Creek Canyon

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[115] Green, R.H., and R.C. Young. 1993. Sampling to Detect Rare Species. *Ecological Applications* 3:351-356; Sutherland, W.J. 1996. *Ecological Census Techniques: A Handbook*. Cambridge University Press, Cambridge, U.K.;
Wilson, D.E., F.R. Cole, J.D. Nichols, R. Rudran, and M.S. Foster (eds). 1996. *Measuring and Monitoring Biological Diversity: Standard Methods for Mammals*. Smithsonian Institution Press, Washington, D.C.

[116] Smallwood, K.S. and E.L. Fitzhugh. 1995. A Track Count for Estimating Mountain Lion *Felis concolor californica* Population Trend. *Biological Conservation* 71:251-259.

[117] Smallwood, K.S, and M. Grigione. 1997. Photographic Recording of Mountain Lion Tracks. Pages 75-75 in D.W. Padley, ed., Proceedings 5th Mountain Lion Workshop, Southern California Chapter, The Wildlife Society.

[118] Wiens, J.A., and J.T. Rotenberry. 1981. Censusing and the Evaluation of Avian Habitat Occupancy. *Studies in Avian Biology* 6: 522-532.

were done at the wrong time of year to find bird nests or any evidence of nesting by birds (Page 2.2-4). These searches in Salt Creek Canyon are therefore incomplete and unreliable.

The effectiveness of corridors needs to be measured using the methodology of Spackman and Hughes[119] or some related methods[120]. Spackman and Hughes relied on vegetation sampling, bird counts, and counts of mammal signs along transects extending perpendicular and away from the ordinary high water marks of streams. By doing so, they were able to identify the riparian zones serving the greatest corridor functions to various taxonomic groups. These zones include instream, geolittoral, and epilittoral zones[121].

All occurrences of any special-status species found during any field surveys or site visits associated with the project environmental review should have been documented on NDDB Field Survey forms and submitted to the NDDB. Copies of the completed forms should have been included as an appendix to the EIR.

RECON mapped the vegetation of the Salt Creek watershed in one day, and surveyed it to establish its function as a wildlife corridor during September (Page 2.2-3-4). We have considerable experience mapping vegetation, and we have experience sampling landscapes to identify wildlife movement corridors. We are very confident that these efforts in the Salt Creek watershed were so cursory as to be useless, perhaps even misleading.

RECON may have conducted 20 separate field surveys of the Newhall Ranch Specific Plan site (Page 2.2-3), but the Additional Analysis did not describe the dates of these surveys, their duration, nor the search or sampling methods used. These surveys are worthless as foundation for the Additional Analysis without the minimal information expected by members of The Wildlife Society[122] and the California Native Plant Society. They seem awfully few to adequately assess the occurrence and distribution of 89 terrestrial vertebrate, special-status species that likely occur there now or did so in the recent past (and could do so in the near future). California Department of Fish and Game and US Fish and Wildlife Service survey protocols could not have been followed for special-status species such as California Tiger Salamander, California Red-legged Frog, Arroyo Toad, Swainson's Hawk, Burrowing Owl, Peregrine Falcon, and so many other species for which protocols are available. There simply was not enough time available in 20 site visits to conduct protocol-level surveys for these, and other, species.

According to the FEIR, "Federal and state protocols were followed during the study of listed animal species, such as Least Bell's Vireo" (FEIR RTC-95). As we pointed out earlier in this letter, the protocols were followed for no species, as far as we can tell.

OVERVIEW USING INDICATOR-LEVEL DATA

The FEIR relied on a map-based indicator of habitat value, but this indicator was not quantitatively or qualitatively linked to the habitats of special-status species in any way. The indicator of habitat value

[119] Spackman and Hughes 1995.
[120] Brooks et al. 1991.
[121] Nilsson, C. 1983. Frequency Distributions of Vascular Plants in the Geolittoral Vegetation Along Two Rivers in Northern Sweden. *Journal of Biogeography* 10:351-369.
[122] Smallwood et al. 2001.

was arbitrarily constructed from undocumented levels of "disturbance", which is especially problematic considering that these "disturbances" probably qualify as cumulative effects. It was improper to designate habitat as not valuable simply because it is disturbed, especially since no substantial evidence was entered into the record that these disturbances harm the species[123]. None of the terms composing the overall habitat value index were related to species' use of mapped polygons. The component terms *proximity* and *continuity* were essentially the same thing, and were both weighted by the polygon-specific *habitat value* term. Thus, all of the terms of the overall habitat value index were based on the arbitrary *habitat value* rating, which itself was based on some unknown person's judgment of disturbance levels in each mapped polygon. Therefore, the overall habitat value index was built on a house of cards, or a false-cause argument, and has no foundation in sound or ethical science.

Other examples of indicator approaches were available. For example, Smallwood et al.[124] constructed map-based indicators of habitat value from documented relationships between the special-status species of Yolo County and the mapped vegetation complexes. The map-based indicator of habitat value must be scientifically defensible, but it was not in the FEIR.

SUMMARY OF ENVIRONMENTAL SETTING

The environmental setting was inadequately discussed in the Additional Analysis, thereby rendering it less informative than it should have been. The list of special-status and rare biological species was incomplete, and was not accompanied by a fully referenced natural history description and an accounting of factors contributing to the decline of each species. The maps of vegetation cover types were presented without an adequate discussion of groundtruthing (field corrections to maps) or according to currently accepted classification and protocols. There was no map of soil conditions throughout project area (the presence of many species depends upon the soil conditions); and, the map of potential wildlife movement corridors existing within the region of the Newhall Ranch Specific Plan was concocted without any scientific or logical foundation.

IMPACTS ASSESSMENT

The Additional Analysis should have identified the relative magnitudes of the threats to each species and to other environmental resources, but it did not do so. It should have identified the appropriate level of assessment effort and the cost of obtaining a wrong answer, similar to the consequences of committing a Type II error[125], but it did not do so. (A Type II error is a type of statistical error obtained when a statistical test results in either a positive null hypothesis or a negative null hypothesis. A positive null hypothesis results in ignorance and may result in harm. A negative null hypothesis results in ignorance as well but may result in a loss of benefit. A Type I statistical error results in a false positive.)

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[123] Smallwood, K.S., J. Beyea, and M. Morrison. 1999. Using the Best Scientific Data for Endangered Species Conservation. *Environmental Management* 24:421-435.
[124] Smallwood et al. 1998.
[125] Shrader-Frechette, K.S., and E.D. McCoy. 1992. Statistics, Costs and Rationality in Ecological Inference. *Tree* 7: 96-99.

In the analysis phase, the EIR should have identified the key cause-and-effect relationships between threats and impacts to the species[126]. It should have estimated the current conditions and the natural range of variation in conditions for each species and their habitats, and it should have done this by comparing the project site conditions to more pristine, ecologically similar locations. It should have identified past, present, and expected future activities in the project area, and it should have evaluated the sensitivity of the predicted cumulative effects. To evaluate the sensitivity of the cumulative effects analysis, the EIR should have incorporated sensitivity analysis, and it should have tested predictions using measured data. None of these steps were taken in the FEIR or the April 2001 Additional Analysis.

The Additional Analysis (Section 2.2.2) has the following flaws in its analysis:

(1) The vegetation communities may have been mapped (although we are dubious about them being mapped in one day, and the improper classification system used), but no linkage was established between the vegetation communities and their use by specific species of wildlife;

(2) The field observations of wildlife and their sign lacked any sort of sampling design such as systematic or random searches in plots or along transects. These observations are reconnaissance-level only, and scientifically indefensible;

(3) WHR was not utilized in analyzing species distributions based on vegetation communities, nor any other scientifically defensible method. Also, these species distributions were not related to wildlife movement corridor function;

(4) The evaluation of the potential for animal movement based on topography is pure guesswork and not substantiated by any evidence.

The Santa Clara River is the only major river draining the San Gabriel Mountains that has not been converted to a concrete flood channel (Page 2.4-5-6). Thus, Ventura County has an incredibly valuable resource that the residents understandably wish to protect. By maintaining the integrity of this river, the people of this region have a last opportunity to maintain an experimental control on the management activities and land use decisions affecting all the other rivers in the region. This experimental control will enable people to learn about the consequences of their environmental decisions[127].

Furthermore, the mesic meadow (i.e. Cismontane Alkali Sink) is the last of its kind in the region, and is therefore *unique*. Taking only 70% of it instead of 100% is not a minimized impact, and will still destroy this entire unique element of the environment.

The likely project impacts resulting from the Newhall Ranch Specific Plan would include the following:

- Destruction of individuals from grading, vegetation clearing, fire control, etc.;
- Habitat loss;
- Habitat fragmentation, including loss of corridors;
- Loss of productive soils and soil attributes such as water-holding capacity, thereby posing indirect effects such as downstream flooding due to sheet runoff;

[126] MacDonald 2000

[127] Watt, K.E.F. 1973. Man's Efficient Rush Toward the Deadly Dullness. Pages 358-366 in A. Ternes, Editor. *Ants, Indians, and Little Dinosaurs*. Charles Scribner's Sons, New York.

- Hydrological alterations, altered nutrient and sediment loading, and reduced food item input from the terrestrial environment;
- Changes to stream channel morphology;
- Prevention of natural disturbance cycles[128], such as fires;
- Exotic species invasions[129];
- Loss of redundancy in corridor function[130], and forced concentration of animals into fewer corridors;
- Increased light pollution;
- Increased noise pollution;
- Increased NO_x and other atmospheric contaminants, which would threaten ecosystem processes;
- Intrusive effects from urban areas, such as people, pets, and intolerance of adjacency to large carnivores and other native wildlife considered to be pests[131];
- Increased water demand;
- Increased natural gas demand; and
- Increased electrical power demand.

Those impacts that are onsite and immediately realized would be considered direct impacts[132], those occurring offsite or later as a result of the project would be considered indirect impacts, and most would be cumulative impacts, because all of these impacts have already occurred in the region and have been substantial. The following Table summarizes the level of analysis devoted to each impact

Impact	**Addressed in Additional Analysis?**	**Quantitative Estimate?**	**Uncertainty Statement?**	**Determined to be Significant?**
Destruction of individuals from grading, vegetation clearing, fire control, etc.	yes	no	no	yes, for some
Habitat loss	yes	yes (flawed)	no	no
Habitat fragmentation	slight	no	no	no
Loss of soils	no	no	no	no
Reduced water holding capacity in soil	no	no	no	no
Increased sediment loading into River	no	no	no	no

[128] Ricklefs, R.E., Z. Naveh, and R.E. Turner. 1984. Conservation of Ecological Processes. *The Environmentalist* 4, Supplement 8:1-16.
[129] Smallwood 1994
[130] Watt, K.E.F., and P. Craig. 1986. System Stability Principles. *Systems Research* 3:191-201.
[131] Schonewald-Cox 1988;
Schonewald-Cox and Bayliss 1986;
Kelly and Rotenberry 1993.
[132] Section 15358 of the CEQA Guidelines.

Impact	Addressed in Additional Analysis?	Quantitative Estimate?	Uncertainty Statement?	Determined to be Significant?
Increased sheet runoff into River	no	no	no	no
Thermal pollution of River	no	no	no	no
Nutrient loading from tertiary treated wastewater and lawn fertilizer	no	no	no	no
Reduced aquatic food item input from uplands	no	no	no	no
Cessation of natural fire cycle	no	no	no	no
Exotic species invasions	no	no	no	no
Lost redundancy in corridor function	no	no	no	no
Increased light pollution	yes	no	no	no
Increased noise pollution	yes	no	no	no
Increased air pollution	no	no	no	no
Human & pet intrusion into natural areas	yes	no	no	no
Increased energy demand	no	no	no	no
Increased water demand	yes (flawed)	no	no	no

DIRECT IMPACTS

Direct impacts to wildlife cannot be represented simply by the loss of particular habitat types (Page 2.2-24). Direct impacts can only be represented by the known or estimated loss of, or harm to, individuals and larger demographic units such as reproductive groups or populations[133]. The areas needed to support populations of each species can only be estimated after careful comparative analysis involving published estimates of density[134] or field sampling designed to identify the population boundary[135]. Neither approach was presented in any of the EIR documents.

Losses of habitat and movement corridors force animals to concentrate in smaller habitat areas. Some species would be unable to move in time, and would be destroyed by the project, whereas the others would be essentially translocated. Animal and plant translocations, whether forced by changes or the elimination of their habitat, or purposefully relocating them (by humans) have a poor history of success for most native species[136]. The extant species distribution was undoubtedly influenced by thousands of years of natural selection, as well as recent and ongoing cumulative effects of human activities. Forcing

[133] Smallwood 2001
[134] Smallwood 1999
[135] Smallwood 1999b
[136] Griffith et al. 1989, Howald 1993; Fahselt 1988.

conspecifics and individuals of different species to shift locations or to move through a reduced set of corridors works against the behavioral and morphological traits acquired after thousands of years of natural selection[137], and further exacerbates cumulative impacts. It increases resource competition, challenges established mating systems and dispersal needs, undermines well-established symbiotic relationships, and compromises the effectiveness of other traits, all of which reduce the effective population size, N_e[138] which is more likely to go extinct[139]. Scientific research has established empirically that dispersal along movement corridors maintains populations at higher densities and levels of stability for rodents[140] and amphibians[141]. The persistence of populations requires exchange of individuals with other populations via dispersal corridors, consistent with the theory of metapopulation dynamics[142].

In other words, forcing animals to move off a habitat area and to use a smaller set of movement corridors effectively eliminates them from the environment altogether, and likely eliminates some conspecifics from surrounding areas. Indeed, sampling of birds and mammals adjacent to housing construction in the Los Angeles area failed to demonstrate any increase in numbers of individuals that would indicate successful translocation and shared habitat space of individuals forced to vacate the construction sites. Migratory animals are particularly vulnerable to loss of habitat and movement corridors[143], and corridor dwellers are, of course, highly vulnerable to corridor loss[144] since only a small fraction of the landscape is composed of corridors (such as riparian habitats)[145], and as represented on Figures 2.2-1 and 2.4-3 which shows only one corridor in the Specific Plan area. We believe that there are indeed more corridors present in the Specific Plan area, and find that the supposition that the only wildlife movement corridors in the are in Potrero and Salt Creek Canyons to be unsupported by the

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[137] Stamps, J. A. 1991. The Effect of Conspecifics on Habitat Selection in Territorial Species. *Behavioral Ecology and Sociobiology* 28:29-36.

[138] Anthony, L.L., and D.T. Blumstein. 2000. Integrating Behavior into Wildlife Conservation: the Multiple Ways That Behavior Can Reduce N_e. *Biological Conservation* 95:303-315 (Note, this citation simply refers to the principle of "N_e; any other inferences are not intended).

[139] Pimm, S.L., H.L. Jones, and J. Diamond. 1988. On the Risk of Extinction. *American Naturalist* 132:757-785. Note: Impact Sciences' criticism of this citation in our submittal to the NOP is unfounded and not substantiated by any evidence other than their person opinions. Their conclusions about the article's applicability to the project at hand are not substantiated. Birds of various groups react similarly, no matter where they happen to live. This citation is used to present the basic biological principles of behavioral ecology, which finds that bird species in a limited geographical area (an island) has increased risk of extinction when their numbers reach a certain level. The Newhall Ranch area serves as an ecological island for a large number of species that do not have large home ranges and/or have limited dispersal abilities. This is one of the reasons habitat fragmentation is of such high concern by qualified ecologists worldwide. The Newhall Ranch project in fact further fragments an existing ecological island of the Santa Susana Mountains.

[140] La Polla V.N. and G.W. Barrett. 1993. Effects of Corridor Width and Presence on the Population Dynamics of the Meadow Vole *Microtus pennsylvanicus*. *Landscape Ecology* 8:25-37

[141] Laan R. and B. Verboom. 1990. Effects of Pool Size and Isolation on Amphibian Communities. *Biological Conservation* 54:251-262.

[142] Hanski, I.A., and M.E. Gilpin. 1997. *Metapopulation Biology: Ecology, Genetics, and Evolution*. Academic Press, San Diego, CA.

[143] Anthony, L.L., and D.T. Blumstein. 2000. Integrating Behavior into Wildlife Conservation: the Multiple Ways That Behavior Can Reduce N_e. *Biological Conservation* 95:303-315.

[144] Beier and Loe 1992.

[145] Knopf, F.L., R.R. Johnson, T. Rich, F.B. Samson, and R.C. Szaro. 1988. Conservation of Riparian Ecosystems in the United States. *Wilson Bulletin* 100:272-284.

evidence. Different species have different habitat, and movement corridor, requirements. As Knopf et al. (1988)[146] found, riparian habitats are important movement corridors for some bird species and that only about 1 percent of these corridors remain in the United States.

There are two basic approaches an analyst can take to estimate direct impacts, which was described previously under **Survey Methods and Documentation**. One approach involves presence and absence data. If the analyst has assigned presence/absence designations to a list of potentially occurring special-status species, whether these designations are based on field observations, historical records, or habitat associations, then this analyst should conservatively assume that each species occurs everywhere that it can across the project area. Using the methods of Smallwood[147], or similar methods, the analyst should then estimate the number of individuals potentially occurring at the site. This estimate is then the benchmark against which projected changes in habitat conditions will affect the species (i.e. a post-project numerical estimate is also needed).

The second approach involves extensive field sampling using scientifically defensible methods. Using this approach, the analyst can more resolutely characterize the numerical and spatial distributions of each species across the project area. Thus, the first approach is crude and appropriately requires a more conservative interpretation of the numerical and spatial distribution of each species, whereas the second approach is more rigorous and appropriately identifies the specific locations where the species occurs now and is likely to occur in the future.

The FEIR and Additional Analysis presented no numerical estimates of species potentially occurring at the proposed project site. Neither approach 1 nor approach 2 was used. The FEIR and Additional Analysis instead relied on presence/absence data in a biased manner that liberally concluded absence based on a lack of field observations or historical records, then arbitrarily assigned species designated as *present* to narrow compartments of the environment based on presumed habitat associations. By no means were direct impacts estimated in this FEIR/Additional Analysis.

INDIRECT IMPACTS

Indirect effects are usually given little consideration in EIRs, but they warrant great concern; for example:

- artificial light levels can interfere with dispersal movements of mammalian carnivores[148];
- the mating-related singing behaviors of birds[149];
- the behavior of nocturnal frogs[150];

[146] Knopf et al. 1988.
[147] Smallwood 1999, 2001.
[148] Beier, P. 1995. Dispersal of Juvenile Cougars in Fragmented Habitat. *Journal of Wildlife Management* 59:228-237.
[149] Bergen, F. and M. Abs. 1997. Etho-ecological Study of the Singing Activity of the Blue Tit (*Parus caeruleus*), Great Tit (*Parus major*) and Chaffinch (*Fringilla coelebs*). *Journal fuer Ornithologie* 138:451-467;
Derrickson, K.C. 1988. Variation in Repertoire Presentation in Northern Mockingbirds. *Condor* 90:592-606.
[150] Buchanan, B.W. 1993. Effects of Enhanced Lighting on the Behaviour of Nocturnal Frogs. *Animal Behaviour* 45:893-899.

- the nocturnal emergence and foraging activity of salmonids[151];
- the activities and predation risk of moths[152];
- the congregatory behavior and distribution of certain species such as the American Crow[153]; and
- the orientation and mobility of nocturnal, nonvolant insects such as ants[154] and crawlers[155].

Indirect impacts should be more clearly described than just edge effects and increased human presence and activity, which is how the FEIR/Additional Analysis described them. Changes in species occurrence and distribution can and should be predicted based on the change in distribution of habitat edges[156] and based on changes to hydrology[157].

Also, on Page 2.2-30-31, the Additional Analysis concludes that the Newhall Ranch Specific Plan would add little or no impacts of noise, lighting, human and domestic pet encroachment into the Salt Creek watershed in Ventura County due to a one-half mile setback. For example, during the last week of 2000, several young adults drove an allegedly stolen vehicle into the mountains of Ventura County and started a fire that scorched >2,000 acres. A half-mile setback will not prevent indirect impacts. Furthermore, this analysis ignores the establishment of feral populations of dogs and cats founding from urban areas, as well as invasions of natural areas by urban-borne exotic species such as European starlings, rock doves, rose-winged parakeets, and monk parakeets[158].

The FEIR (RTC-501) claimed that animal damage control activities will supplement natural control of domestic pets by populations of coyote, bobcat, and Mountain Lion. The truth is that predators never "control" their prey species, so to say they will defies the vast body of evidence in ecology[159]. More important, whenever a Mountain Lion kills domestic pets, it is almost certain to be killed itself by a Sheriff's Deputy or the California Department of Fish and Game. People do not tolerate losing pets to native carnivores. More important yet, putting children in Mountain Lion habitat is dangerous[160] and

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[151] Contor, C.R. and J.S. Griffith. 1995. Nocturnal Emergence of Juvenile Rainbow Trout from Winter Concealment Relative to Light Intensity. *Hydrobiologia* 299:179-183.

[152] Frank, K.D. 1988. Impact of Outdoor Lighting on Moths: An Assessment. *Journal of the Lepidopterists' Society* 42:63-93;
Rydell, J., and H.J. Baagoe. 1996. Street Lamps Increase Bat Predation on Moths. *Entomologisk Tidskrift* 117:129-135.

[153] Gorenzel, W.P. and T.P. Salmon. 1995. Characteristics of American Crow Urban Roosts in California. *Journal of Wildlife Management* 59:638-645.

[154] Klotz, J.H. and B.L. Reid. 1993. Nocturnal Orientation in the Black Carpenter Ant *Camponotus pennsylvanicus* Degeer (Hymenoptera: Formicidae). *Insectes Sociaux* 40:95-106.

[155] Summers, C.G. 1997. Phototactic Behavior of *Bemisia argentifolii* (Homoptera: Aleyrodidae) Crawlers. *Annals of the Entomological Society of America* 90:372-379.

[156] e.g. Askins, R. A., M. J. Philbrick, and D. S. Sugeno. 1987. Relationship Between the Regional Abundance of Forest and the Composition of Forest Bird Communities. *Biological Conservation* 39:129-152;
Laurence, W. F. and E. Yensen. 1990. Predicting the Impacts of Edge Effects in Fragmented Habitats. *Biological Conservation* 55:77-92;
McCollin, D. 1993. Avian Distribution Patterns in a Fragmented Wooded Landscape (North Humberside, U.K.): the Role of Between-patch and Within-patch Structure. *Global Ecology and Biogeography Letters* 3:48-62.

[157] Moyle, P. B., H. C. Li, and B. Barton. 1986. The Frankenstein Effect: Impact of Introduced Fishes on Native Fishes in North America. In *Fish Culture in Fisheries Management*, ed. R. H. Stroud, pp. 415-26. Maryland: American Fisheries Society, Bethesda, Maryland.

[158] Long, J.L. 1981. *Introduced Birds of the World*. Sydney: Reed Books

[159] e.g. Keith 1963.

[160] Fitzhugh, E.L. 1989. Managing with Potential for Lion Attacks Against Humans. Pages 74-77 in R.H. Smith, editor, *Proc. Third Mountain Lion Workshop*. Arizona Chapter, The Wildlife Society & Arizona Game and Fish Department, Phoenix;

irresponsible. The County of Los Angeles will be liable for deaths and injuries to children due to Mountain Lion attack. Eventually, however, the Newhall Ranch Specific Plan would contribute to the local extinction of the Mountain Lion[161].

As people walk or drive onto or around open space, such as grasslands, raptors, for example, will flush from long distances away[162], thereby increasing the spatial extent of the impacts. The proposed trails, which are also proposed as mitigation measures, will increase these sorts of impacts caused by residents walking into the "conserved" areas. Furthermore, Mountain Lions and other carnivores are well known to use human-constructed trails[163], and would increase the chances for Mountain Lion-human confrontations. The FEIR and Additional Analysis did not seriously address these impacts.

CUMULATIVE IMPACTS

It is important to recognize that nearly all special-status species have been so designated because they have declined due to cumulative impacts. That is, *the list of special-status species is evidence that cumulative impacts have already occurred*. That this list is an exceptionally long one serves as evidence that cumulative effects are profound in the Newhall Ranch Specific Plan area (Table 5). This point was not considered in the FEIR or Additional Analysis.

To perform a quantitative, cumulative impact assessment for each species, the thresholds of significance need to be established, along with margins of safety around these significance thresholds[164]. In the scoping phase of cumulative effects analysis, the EIR needs to identify the temporal and spatial scales of the assessment. The temporal scale should be set by the recovery time of the species or other environmental resources at issue, and the spatial scale should be set by the ecological processes (and their scales) that control the species of other resources of concern. According to Smallwood et al.[165], the cumulative effects analysis should extend over the amortized life of the project or the permit duration, and should consider how long the types of project impacts generally last. They argued that the effects of housing developments are permanent, so the cumulative effects analysis should extend to the time when all land in the region has been converted to houses. For setting the spatial scale, considering the Mountain Lion as the largest carnivore in the Newhall Ranch Specific Plan area, and considering everything within the adult male Mountain Lion's home range as a countable ecosystem[166], then the spatial scale of the assessment should extend to the area of a typical area occupied by a Mountain Lion population. The most common method for establishing the minimum spatial scale for cumulative effects assessment is to identify and delineate the watershed as the area within which to consider

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Beier, P. 1991. Cougar Attacks on Humans in the United States and Canada. *Wildlife Society Bulletin* 19:403-412;
Pemble, D.W. 1992. Cougars in Residential Areas and Evasive Tactics to Prevent Injury. Page 38 in C.E. Braun, editor, *Proceedings of the Mountain Lion-Human Interaction Symposium and Workshop*, Colorado Division of Wildlife, Fort Collins, Colorado;
Seidensticker, J. and S. Lumpkin. 1992. Mountain Lions Don't Stalk People. True or False? *Smithsonian* 22(11):113-122.

[161] Beier, P. 1993. Determining Minimum Habitat Areas for Cougars. *Conservation Biology* 6:94-108.

[162] Holmes, T.L., R.L. Knight, L. Stegall, and G.R. Craig. 1993. Responses of Wintering Grassland Raptors to Human Disturbance. *Wildlife Society Bulletin* 21:461-468.

[163] Smallwood and Fitzhugh 1995.

[164] MacDonald, L.H. 2000. Evaluating and Managing Cumulative Effects: Process and Constraints. *Environmental Management* 26:299-316.

[165] Smallwood et al. 1999

[166] Cousins 1990

cumulative impacts[167]. In this case, the watershed would be the Santa Clara River, its tributaries, and all the land that drains water into the river.

Contrary to the scope of analysis that should have been used, the Additional Analysis describes cumulative impacts as proposed activities in the vicinity of the Newhall Ranch Specific Plan area. In the FEIR, the applicant clarified what was meant by "the vicinity", "… the applicant is not proposing any development on that land [Ventura County], nor are there any plans to do so. Therefore no [cumulative] analysis is warranted". Impact Sciences clearly does not understand that cumulative impacts analysis requires a broader scope than just the Specific Plan boundary.

The Cumulative impacts are distinctly missing from projects downstream of the Specific Plan area, as well as north or south of this area. The Additional Analysis identifies 13 projects (really 12 projects) that would affect the overall biological character of the region (Page 2.2-34), then concludes that the cumulative impacts of these projects would be unavoidable and significant. Other than the 12 projects upstream, the cumulative impacts assessment does not consider incremental impacts from past and ongoing activities in the Santa Clara River watershed, nor does it consider impacts from human actions in Los Angeles and Ventura Counties that are reasonably foreseeable in the future. The Additional Analysis neglects past and on-going activities that qualify as cumulative impacts (Section 2.2.3.4). It also brings up the Greenbelt Ordinance being implemented in Ventura County (Section 2.2.7), but neglected to consider cumulative impacts on this Ordinance.

Contradicting other statements made about how the wildlife movement corridors operate together in a regional interface (Page 2.2-39), the Additional Analysis (Page 2.2-34) concludes that these 12 other projects in the region would have no impact on wildlife movement in the Salt Creek watershed due to distance and isolation. The Additional Analysis (Page 2.2-34) claims "no aspect of the Specific Plan would impair Salt Creek's usefulness as a wildlife corridor". For this latter conclusion to be consistent with these other statements in the Additional Analysis, the other 12 projects would have no impact on any of the "wildlife movement corridors" occurring in their respective plan areas. The figure in the Additional Analysis depicting wildlife movement corridors did not identify any corridors in the vicinity of the 13 other projects, which were mostly clustered together upstream. However, given the various definitions of wildlife movement corridors in the FEIR, there is no reason to expect that this area of cumulative impacts would not include a corridor.

Contrary to the claim of the Additional Analysis (Page 2.2-12), a detailed regional scale assessment of the resources in the River and high country was *not* made. The only regional scale assessment involved the map of wildlife movement corridors, which is nothing more than a cartoon (Figures 2.2-1 and 2.4-3) because it is not based on empirical evidence or rational argument.

There should be no debate over the fact that the Newhall Ranch Specific Plan would contribute to habitat fragmentation and habitat loss of many biological species. Habitat fragmentation is considered "the most serious threat to biological diversity and is the primary cause of the present extinction crisis"[168]. Throughout the Los Angeles Basin and surrounding mountains, houses, commercial buildings, and industrial structures have replaced natural habitats, and have severely fragmented habitats there[169]. This level of habitat fragmentation has caused almost half the bird species to decline

[167] Reid 1998a, b
[168] Wilcox and Murphy 1985.
[169] Scott 1993

substantially[170]. The severe fragmentation of chaparral in southern California has caused high local extinction rates among chaparral-adapted species of birds[171] and small mammals[172]. Exotic plants in southern California have invaded habitat fragments with greater perimeter to edge ratios, artificial water sources, and altered fire regimes[173]. Making this high level of habitat loss and habitat fragmentation even more profound is the fact that this area of California is one of the nation's hotspots in terms of the number of endangered species[174]. Furthermore, it is adjacent to a cluster of Level 1 Management areas within which active management plans are in operation to maintain natural disturbance events and the natural environmental state[175]. The Newhall Ranch Specific Plan would undoubtedly contribute significant cumulative impacts to many special-status and other species.

The Newhall Ranch Specific Plan would be a significant cumulative impact to many special-status species by contributing "an incremental addition to an already significant cumulative impact"[176]. Houses have replaced much of the habitats that were previously available to these species. Many movement and habitat corridors have been converted to human uses throughout the region, usually without any consideration of impacts or mitigation in the relevant EIRs[177]. Given the weight of evidence that corridors are very important to the viability of animal populations, project proponents who would destroy corridors bear the burden of proof that their actions will not seriously harm local animal populations[178]. Simply preserving the Salt Creek corridor does not mitigate for the loss of other movement corridors in the Specific Plan area. It already exists and provides habitat for as many species of wildlife as it can in its current condition. The importance of any movement corridors in the Specific Plan area are not analyzed in any of the CEQA documents for this project, and no systematic surveys or censuses of any of the purported movement corridors in the region have been conducted to support any of Impact Sciences claims.

Mountain Lions in southern California have been losing both their habitat and movement corridors to housing developments to the point of imminent extinction[179]. As housing projects consume habitat, displaced and adjacent Mountain Lions are killed on the roads by increased vehicle traffic[180], they are poached, and citizens demand control measures to prevent human-Mountain Lion confrontations[181].

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[170] Scott 1993
[171] Soule et al. 1988.
[172] Bolger, D.T., A.C. Alberts, R.M. Sauvajot, P. Potenza, C. McCalvin, D. Tran, S. Mazzoni, and M.E. Soule. 1997. Response of Rodents to Habitat Fragmentation in Coastal Southern California. *Ecological Applications* 7:552-563.
[173] Alberts et al. 1993.
[174] Dobson, A.P., J.P. Rodriguez, W.M. Roberts, and D.S. Wilcove. 1997. Geographic Distribution of Endangered Species in the United States. *Science* 275:550-553.
[175] Beardsley, K., and D. Stoms. 1993. Compiling a Digital Map of Areas Managed for Biodiversity in California. *Natural Areas Journal* 13:177-190.
[176] Reid 1998a: 123
[177] Beier and Loe 1992
[178] Beier, P., and R.F. Noss. 1998. Do Habitat Corridors Provide Connectivity? *Conservation Biology* 12:1241-1252.
[179] Beier and Barrett 1993;
Beier, P. 1993. Determining Minimum Habitat Areas for Cougars. *Conservation Biology* 6:94-108;
Beier 1995.
[180] Beier and Barrett 1993
[181] CDFG (California Department of Fish and Game). 1994. Report to the Senate Natural Resources and Wildlife Committee and the Assembly, Water, Parks, and Wildlife Committee regarding Mountain Lions. California

The very existence of the Mountain Lion population in the Santa Ana Mountains hangs in the balance depending on the continued existence of two corridors connecting these mountains to the Santa Susana Mountains, and one of these corridors lead right up into the Newhall Ranch Specific Plan area[182]. There should be no doubt that urban expansion in the Los Angeles area has generated cumulative impacts, and that any additional housing developments will contribute additional cumulative impacts to the Mountain Lion. This is especially so at the Newhall Ranch Specific Plan area, which forms one of the last remaining movement corridors of the Mountain Lion in the Santa Susana-San Gabriel Mountains.

The Recovery Plans of the California Red-legged Frog and Southwestern Arroyo Toad also identify housing construction and related impacts as the greatest threats to the continued survival of these species[183]. Cattle grazing was also identified as a threat to these species in their respective recovery plans. Cattle grazing adds nitrates to streams and breaks down stream banks. Cattle gazing in stream and riparian environments causes loss of streamside vegetation, trampling of stream banks and reduced populations of trout[184]. The FEIR and Additional Analysis do not disclose whether the carrying capacity for cattle grazing has been estimated for the Santa Clara River watershed, or whether current stocking rates exceed this capacity. The FEIR and Additional Analysis do not address the possible ongoing, incremental impacts of cattle grazing in the Santa Clara River watershed, which contributes an additional cumulative impact, especially to listed species such as California Red-legged Frog and Southwestern Arroyo Toad[185].

Cumulative impacts to the Salt Creek corridor were assessed by considering future impacts to the watershed (Section 2.2.3.4). However, this assessment is too restricted in time and space to be adequate. Cumulative impacts assessment should have considered past and on-going activities across the region, not just future impacts in Salt Creek canyon. The Additional Analysis is deficient in failing to analyze cumulative impacts at an adequately large spatial scale, and in not clearly identifying the impacts. The impact analysis of wildlife movement corridors was too gross by lumping all the species together and assessing the functionality of corridors on all of them at the same time. Habitat fragmentation is species-specific, meaning that each species responds to habitat availability and configuration uniquely[186].

Department of Fish and Game, Sacramento, California;
Fitzhugh, E.L. 1989. Managing with Potential for Lion Attacks Against Humans. Pages 74-77 in R. H. Smith, editor, *Proc. Third Mountain Lion Workshop*. Arizona Chapter, The Wildlife Society & Arizona Game and Fish Department, Phoenix;
Mansfield, T. 1995. What We've Learned About Lions. Outdoor California 57:4-7;
Pemble, D.W. 1992. Cougars in Residential Areas and Evasive Tactics to Prevent Injury. Page 38 in C. E. Braun, editor, *Proceedings of the Mountain Lion-Human Interaction Symposium and Workshop*, Colorado Division of Wildlife, Fort Collins, Colorado.

[182] Beier, P. 1996. Metapopulation Models, Tenacious Tracking, and Cougar Conservation. Pages 293-323 in D. R. McCullough, ed. *Metapopulations and Wildlife Conservation*. Island Press, Covelo, California.

[183] USFWS. 2000. Draft Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*). Sacramento, California (Federal Register 65[93]:30604-30605);
USFWS. 1998. Draft Recovery Plan for the Southwestern Arroyo Toad (*Bufo microscaphus californicus*). Ventura, California.

[184] Armour, C. L., D. A. Duff, and W. Elmore. 1991. The Effects of Livestock Grazing on Riparian and Stream Ecosystems. *Fisheries* 16:7-11.

[185] USFWS 1998, 2000.

[186] Villard, M-A., M. K. Trzcinski, and G. Merriam. 1999. Fragmentation Effects on Forest Birds: Relative Influence of Woodland Cover and Configuration on Landscape Occupancy. *Conservation Biology* 13:774-783.

The Additional Analysis (Page 2.2-30) states that since the development will take many years to complete, there will be time for the larger wildlife species to disperse to adjacent areas, and that there this dispersal would not adversely affect them. There is nothing in the scientific literature that would substantiate this claim; however, there is a great volume of scientific literature available that can be used to refute that claim. Habitat fragmentation is usually a gradual process, the ultimate effects of which are genetic bottlenecks, local extinction events, and sometimes, global extinction of species[187]. That this integral premise of the impacts analysis is so utterly flawed, and that the scientific evidence so often contradicts it, demonstrates how this Additional Analysis is hopelessly useless as a planning document.

ALTERNATIVES ANALYSIS

The conclusions of impacts also should be provided for the full range of project and site alternatives, including the 'no project' alternative. They should consider the spatial requirements of the species, as well as Population Viability Assessments (PVAs), and impacts on ecosystem processes that affect the species at each alternative site. Whereas alternative sites were considered in the EIR, the potential environmental impacts at each site were not. Therefore, the alternatives analysis was incomplete and inadequate for making informed decisions about the site that would cause the least environmental degradation[188].

MITIGATION

According to the CEQA Guidelines (Section 15370), mitigation consists of the following actions:

1. Avoiding the impact by not taking an action;
2. Minimizing the impact by limiting the degree or magnitude of the action;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
4. Reducing or eliminating the impact over time by preserving and maintaining operations during the life of the action; and
5. Compensating for the impact by replacing or providing substitute resources or environments.

To achieve roughly proportional mitigation, the project proponents would need to demonstrate that similar numbers and similar demographic organization would be generated as compared to those lost to the Newhall Ranch Specific Plan. Habitat banking, enhancements, and restoration can achieve this level of mitigation only by involving very large areas[189]. In order to achieve this level of mitigation in the face of great uncertainty about the effectiveness of mitigation measures and about future cumulative impacts, it would be prudent to develop an adaptive management plan, so long as it is prepared with a good faith effort to identify thresholds upon which to adopt pre-specified new prescriptions or mitigation measures[190]. In addition, the EIR should have explained why alternative mitigation measures were not used.

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[187] Wilcox and Murphy 1985
[188] O'Brien 2000.
[189] Smallwood 2001
[190] Holling, C.S. (ed.). 1978. *Adaptive Environmental Assessment and Management*. John Wiley & Sons, New York; McLain, R.J. and R.G. Lee. 1996. Adaptive Management: Promises and Pitfalls. *Environmental Management*

To provide roughly proportional mitigation to offset impacts[191], the applicant would need to either restore habitat where it had occurred originally but has since been degraded or destroyed, or it would need to connect habitat patches that have been disconnected for some time. Either of these mitigation measures would likely increase the regional numbers of individuals and the viability of the demographic organization while the same species is being taken at the Newhall Ranch project site. Because the stakes are so high, mitigation measures should be implemented well in advance of groundbreaking at Newhall Ranch, but scientifically defensible monitoring would still need to be implemented to ensure that the mitigation measures continue to work into the distant future. None of these steps were incorporated into the FEIR/Additional Analysis.

The operational units of the mitigation plan need to consist of individuals, demes, populations, and metapopulations, rather than mapped cover types or a single canyon presumed to function as a habitat corridor. There is no shortcut for measuring mitigation effectiveness. Surrogate variables or umbrella style cover types can be acceptable only if they are rigorously and quantitatively related to the operational units for which the environmental laws apply.

The EIR should have identified the options for modification, alternative mitigation measures, and planning and restoration activities[192]. It also should have identified key data gaps, areas of uncertainty, degree of uncertainty, and monitoring needs. Furthermore, when cumulative impacts are already a problem, as they most obviously are in the Newhall Ranch Specific Plan area, mitigation should have been implemented well in advance of the proposed project so that impact levels are demonstrably diminished by the time unavoidable impacts are realized by implementation of the Newhall Ranch Specific Plan[193].

The FEIR lists 64 mitigation measures, which looks impressive at first glance. However, most of these measures actually defer the formulation of the mitigation to a later, unspecified date (Table 8), which is a CEQA violation each time this is done[194]. Many of these measures elaborate trivially on a smaller set of more substantial measures. Some will cause additional environmental impacts, including measures 14, 16-19, 28, 33, 44, 46, 51, 56, and 63. To minimize impacts, revegetation, enhancements, or restoration plans should have included a list of criteria and sites warranting such modifications (rather than sites that may not need them). A few measures rectify past or ongoing activities, but not the proposed project impacts. These include measures 11, 12, and 27, which terminate cattle grazing on conserved areas.

Measures 1 through 26 and 27 through 43 are actually two mitigation measures separated out into component parts. Measures 1 through 26 involve establishing conservation easements and restoring segments of the Santa Clara River riparian zone, along with some trail limitations, removal of grazing cattle, specification of transition areas, and grading guidelines. Mitigation Measures 1 through 26 lack a final plan. These measures collectively defer formulation of the mitigation and monitoring plans to an unspecified later date (Table 8), which is a violation of CEQA. Collectively, these measures do not specify where or to what extent revegetation or habitat enhancements would be applied. These

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20:437-442;
Walters, C.J. 1986. Adaptive Management of Renewable Resources. McGraw-Hill, New York.

[191] CEQA Guidelines section 15126.4
[192] MacDonald 2000
[193] after Reid 1998b
[194] CEQA Guidelines section 15126.4.

measures are grossly inadequate, involving a spatial area that appears to be trivial compared to the area of the project's footprint.

Measures 27 through 43 involve the same mitigation, only in the High Country SMA. Measure 27, removal of grazing, does not qualify as mitigation for the conversion of thousands of acres into residential use. Collectively, Mitigation Measures 27 through 43 are substantial only in transferring land titles and establishing conservation easements to achieve protection of the designated open space. However, it should be noted that these measures would consummate a net loss of habitats, since these open areas already exist.

The bulk of the rectifying and compensating mitigation involves the planting of vegetation and establishment of conservation easements in areas that are not the types of environments to be most severely degraded by the Specific Plan. These mitigation measures are directed toward the Santa Clara River (Measures 1-26) and the "High Country" (Measures 27-43), whereas most of the land conversions would take place between the River and the High Country, in and around Potrero Canyon, Long Canyon, and the nearby mesas and slopes covered by grasslands, chaparral, and Coastal Scrub. In other words, the mitigation largely mismatches the impacts. They will not be roughly proportional. In fact, this mitigation plan maintains the availability of similar physical relief and vegetation cover to the east of the Specific Plan area, which is owned by Newhall Land Company and is similarly attractive for new "infill" housing projects. This project would put obstacles to future population growth where these obstacles will be ineffective, and its leapfrog location and change in zoning would remove existing obstacles to growth.

Apparently, in support of this mitigation plan, the habitat descriptions of the special-status species mostly pigeonholed the species into riparian or "high country" environments. For example, Mountain Lion habitat was described as open areas, such as grasslands (FEIR:4.6-97). This convenient conclusion was made despite the only Mountain Lion track reportedly found in the area was at mid-elevation within Lion Canyon (FEIR Appendix 4.6), which is consistent with the habitat associations reported in the scientific literature[195]. According to this literature, Mountain Lions are most strongly associated with riparian vegetation along second, third, and fourth order streams.

[195] Smallwood and Fitzhugh 1995.

Table 8. An Overview of the Proposed Mitigation Measures in the FEIR, and Whether They Correspond with the Five General Mitigation Measures Described in the CEQA Guidelines.

Mitigation Measure	Comment on Mitigation Measure	Implementation Parameters?	Avoids Impact?	Minimizes Impact?	Rectifies Impact?	Reduces Impact?	Compensates Impact?
1	Defers formulation to future	no	no	no	?	no	?
2	Defers formulation to future	no	no	no	?	no	?
3	Defers formulation to future	yes	no	no	?	no	?
4	Defers formulation to future	yes	no	no	?	no	?
5	Defers formulation to future	yes	no	no	?	no	?
6	Defers formulation to future	yes	no	no	?	no	?
7	Defers formulation to future	yes	no	no	?	no	?
8	Defers formulation to future	yes	no	no	?	no	?
9	Monitoring has no thresholds to take remedial actions	yes	no	no	?	no	?
10	Defers formulation to future	yes	no	no	?	no	?
11	Rectifies past actions, but not project actions	yes	no	no	no	no	no
12	Defers formulation to future	---	no	no	no	no	no
13	Defers formulation to future	yes	no	no	?	no	?
14	Defers formulation to future	---	no	no	no	no	no
15	Defers formulation to future	---	no	no	?	no	?
16	Defers formulation to future; Can cause added impacts	---	no	no	no	no	no
17	Defers formulation to future; Can cause added impacts	yes	no	?	no	no	no
18	Defers formulation to future; Can cause added impacts	---	no	yes	no	no	no
19	Can cause added impacts	yes	no	ditto	no	no	no
20		yes	no	yes	no	no	no
21	Defers implementation	yes	no	no	no	no	yes
22	Defers implementation	no	no	no	no	no	ditto
23	Defers implementation	no	no	no	no	no	ditto
24	Defers implementation	yes	no	no	no	no	yes
25		yes	no	no	no	no	ditto
26	Defers formulation to future	---	no	no	no	no	ditto
27	Rectifies past actions, but not project actions	yes	no	no	yes	no	no
28	Can cause added impacts	yes	no	no	no	no	yes

Mitigation	Comment on Mitigation Measure	Implementation	Avoids	Minimizes	Rectifies	Reduces	Compensates
29		yes	no	yes	no	no	no
30		yes	no	ditto	no	no	no
31		yes	no	ditto	no	no	no
32		yes	no	ditto	no	no	no
33	Adds impacts	yes	no	yes	no	no	no
34		yes	no	yes	no	no	no
35		yes	no	ditto	no	no	no
36	Defers implementation	no	no	no	no	no	yes
37	Defers implementation	yes	no	no	no	no	ditto
38	Defers implementation	yes	no	no	no	no	ditto
39		yes	no	no	no	no	ditto
40		yes	no	no	no	no	ditto
41	Defers implementation	---	no	no	no	no	ditto
42	Defers implementation	yes	no	no	no	no	ditto
43	Defers formulation to future	yes	no	no	yes	no	no
44	Adds impacts	yes	no	yes	no	no	no
45	Defers formulation to future	no	no	ditto	no	no	no
46	Defers formulation to future; Can cause added impacts	no	no	no	no	no	no
47	Defers implementation and formulation to future	no	no	no	no	no	yes
48	Defers implementation	yes	no	no	no	no	ditto
49		yes	no	no	no	no	no
50		yes	no	no	no	no	no
51	Can cause added impacts	yes	no	yes	no	no	no
52		yes	no	ditto	no	no	no
53	Defers formulation to future	no	no	no	no	no	no
54	Defers formulation to future	no	no	no	no	no	no
55	Obtaining permits is not mitigation	no	no	no	no	no	no
56	Can cause added impacts	yes	no	yes	no	no	no
57	Unlikely to avoid impacts	no	yes	no	no	yes	no
58	Permit compliance is not mitigation	no	no	yes	no	no	no
59	Consultation with the USFWS is not mitigation	no	no	yes	no	no	no
60	Defers implementation and formulation to future	no	no	?	no	no	no

Mitigation	Comment on Mitigation Measure	Implementation	Avoids	Minimizes	Rectifies	Reduces	Compensates
61	Defers formulation to future	no	no	?	no	no	no
62		yes	no	?	no	no	no
63	Can cause added impacts	no	no	no	no	no	yes
64	Defers formulation to future	no	no	yes	no	no	no

Table 9. Special-Status Vertebrates from the Newhall Ranch Area

Species Names	Status[a]	Mitigation Measures	FEIR Conclusion of Impact	Does FEIR explain how the measures will be effective?	Will measures likely avoid, offset, or reduce impacts?	Will effective-ness be monitored?
Mammals						
Ornate Shrew *Sorex ornatus*	FC, CSC	none specified	none	---	---	---
Fringed Myotis *Myotis thysanodes*	FSC	none specified	none	---	---	---
Yuma Myotis *Myotis yumanensis*	FSC, CSC	1-26, 53, 55, 56	not significant	no	no	no
Spotted Bat *Euderma maculatum*	FSC, CSC	none specified	none	---	---	---
Pale Big-eared Bat *Corynorhinus townsendii pallescens*	FSC, CSC	1-26, 53, 55, 56	not significant	no	no	no
Greater Western Mastiff Bat *Eumops perotis californicus*	FSC, CSC	1-26, 53, 55, 56	not significant	no	no	no
Pallid Bat *Antrozous pallidus*	CSC	1-26, 53, 55, 56	not significant	no	no	no
San Diego Black-tailed Jackrabbit *Lepus californicus bennetti*	CSC	27-43, 53, 55, 56	significant	no	no	no
San Joaquin Pocket Mouse *Perognathus inornatus inornatus*	CSC	none specified	none	---	---	---
White-eared Pocket Mouse *Perognathus alticola alticola*	CSC	none specified	none	---	---	---
Los Angeles Little Pocket Mouse *Perognathus longimembris brevinasus*	FSC, CSC	none specified	none	---	---	---
Southern Grasshopper Mouse *Onychomys torridus Ramona*	FSC	none specified	none	---	---	---
San Diego Desert Woodrat *Neotoma lepida intermedia*	CSC	27-43, 53, 55, 56	significant	no	no	no
Ringtail *Bassariscus astutus*	CFP	none specified	none	---	---	---
Western Spotted Skunk *Spilogale gracili*s	CSC	none specified	none	---	---	---
American Badger *Taxidea taxus*		none specified	none	---	---	---
Mountain Lion *Puma concolor*	CFP	27-43, 53	significant	no	no	no

Species Names	Status[a]	Mitigation Measures	FEIR Conclusion of Impact	Does FEIR explain how the measures will be effective?	Will measures likely avoid, offset, or reduce impacts?	Will effective-ness be monitored?
Birds						
Double-crested Cormorant *Phalacrocorax auritus*	CSC	none specified	none	---	---	---
Great Blue Heron *Ardea herodius*	CSA, CDFS	1-26, 53, 55, 56	not significant	no	no	no
Great Egret *Ardea alba*	CSA, CDFS	1-26, 53, 55, 56	not significant	no	no	no
Snowy Egret *Egretta thula*	CSA	1-26, 53, 55, 56	not significant	no	no	no
Black-crowned Night Heron *Nycticorax nycticorax*	CSA	1-26, 53, 55, 56	not significant	no	no	no
Western Least Bittern *Ixobrychus exilis hersperis*	FSC, CSC	1-26, 53, 55, 56	not significant	no	no	no
White-faced Ibis *Plegadis chihi*	CSC	none specified	none	---	---	---
Wood Stork *Mycteria americana*	FE, CSC	none specified	none	---	---	---
Fulvous Whistling Duck *Dendrocygna bicolor*	FSC, CSC	1-26, 53, 55, 56	not significant			
California Condor *Gymnogyps californianus*	FE, CE	none specified	none	---	---	---
Osprey *Pandion haliaetus*	CSC	none specified	none	---	---	---
Bald Eagle *Haliaeetus leucocephalus*	CE, FT	none specified	none	---	---	---
Golden Eagle *Aquila chrysaetos*	CFP	27-43, 53	significant	no	no	no
Ferruginous Hawk *Buteo regalis*	FSC, CSC	27-43, 53	significant	no	no	no
Swainson's Hawk *Buteo swainsoni*	CT	27-43, 53	significant	no	no	no
Northern Harrier *Circus cyaeneus*	CSC	27-43, 53	significant	no	no	no
White-tailed Kite *Elanus leucurus*	CFP	27-43, 53	significant	no	no	no
Cooper's Hawk *Accipiter cooperii*	CSC	1-26, 53, 55, 56	not significant	no	no	no
Sharp-shinned Hawk *Accipiter striatus*	CSC	27-43, 53	significant	no	no	no
Northern Goshawk *Accipiter gentilis*	CSC	none specified	none	---	---	---
American Peregrine Falcon *Falco peregrinus anatum*	FE, CE	none specified	none	---	---	---
Merlin *Falco columbarius*	CSC	none specified	none	---	---	---
Prairie Falcon *Falco mexicanus*	CSC	none specified	none	---	---	---
Clapper Rail *Rallus longirostrus*	FE, CE	none specified	none	---	---	---
Western Snowy Plover *Charadrius alexandrinus nivosus*	FT, CSC	none specified	none	---	---	---
Mountain Plover *Charadrius montanus*	FC, CSC	27-43, 53	significant	no	no	no
Long-billed Curlew *Numenius americanus*	CSC	none specified	none	---	---	---
Baird's Sandpiper *Calidris bairdii*	CSC	none specified	none	---	---	---
California Gull *Larus californicus*	CSC	none specified	none	---	---	---
Black Tern *Chlidonius niger*	CSC	none specified	none	---	---	---

Species Names	Status[a]	Mitigation Measures	FEIR Conclusion of Impact	Does FEIR explain how the measures will be	Will measures likely avoid, offset, or reduce	Will effective-ness be monitored?
Xantus' Murrelet *Synthliboramphus hypoleucus*	CSC	none specified	none	---	---	---
Marbled Murrelet *Brachyramphus marmoratus* (winter range)	FT, CE	none specified	none	---	---	---
Western Yellow-billed Cuckoo *Coccyzus americanus occidentalis*	CE	none specified	none	---	---	---
Western Burrowing Owl *Athene cunicularia*	FSC, CSC	27-43, 53	not significant	no	no	no
California Spotted Owl *Strix occidentalis occidentalis*	CSC	none specified	none	---	---	---
Long-eared Owl *Asio otus*	CSC	none specified	none	---	---	---
Short-eared Owl *Asio flammeus*	CSC	none specified	none	---	---	---
Vermilion Flycatcher *Pyrocephalus rubinus*	CSC	1-26, 53, 55, 56	significant	no	no	no
Southwestern Willow Flycatcher *Empidonax traillii extimus*	FE, CE	1-26, 53, 56, 59	not significant	no	no	no
Loggerhead Shrike *Lanius ludovicianus*	CSC	27-43, 53	reduced	no	no	no
Least Bell's Vireo *Vireo bellii pusillus*	FE, CE	1-26, 53, 56, 59	not significant	no	no	no
California Horned Lark *Eremophila alpestris actia*	CSC	27-43, 53	reduced	no	no	no
Bank Swallow *Riparia riparia*	CT	none specified	none	---	---	---
California Gnatcatcher *Polioptila californica californica*	FT, CSC	none specified	none	---	---	---
California Thrasher *Toxostoma redivivum*	FT	none specified	none	---	---	---
Yellow Warbler *Dendroica petechia brewsteri*	CSC	1-26, 53, 55, 56	not significant	no	no	no
Yellow-breasted Chat *Icteria virens auricollis*	CSC	none specified	none	---	---	---
Summer Tanager *Piranga rubra*	CSC	1-26, 53, 55, 56	not significant	no	no	no
Southern California Rufous-crowned Sparrow *Aimophila ruficeps canescens*	FSC, CSC	27-43, 53, 55, 56	significant	no	no	no
Bell's Sage Sparrow *Amphispiza belli belli*	FSC, CSC	none specified	none	---	---	---
Tricolored Blackbird *Agelaius tricolor*	FSC, CSC	1-26, 53, 55, 56	significant	no	no	no
Amphibians						
California Tiger Salamander *Ambystoma californiense*	FC, CSC	none specified	none	---	---	---
Coast Range Newt *Taricha torosa torosa*	CSC	none specified	none	---	---	---
Tehachapi Slender Salamander *Batrachoseps stebbinsi*	CT	none specified	none	---	---	---
Arroyo [Southwestern] Toad *Bufo microscaphus californicus*	FE, CSC	1-26, 53, 55, 56	not significant	no	no	no
Western Spadefoot Toad *Spea hammondii*	FSC, CSC	1-26, 53, 55, 56	not significant	no	no	no
California Red-legged Frog *Rana aurora draytonii*	FT, CSC	none specified	none	---	---	---
Foothill Yellow-legged Frog *Rana boylii*	CSC	none specified	none	---	---	---

Species Names	Status[a]	Mitigation Measures	FEIR Conclusion of Impact	Does FEIR explain how the measures will be effective?	Will measures likely avoid, offset, or reduce impacts?	Will effective-ness be monitored?
Reptiles						
San Bernardino Ring-necked Snake *Diadophis punctatus modestus*	FSC	27-43, 53	significant	no	no	no
Coast Patch-nosed Snake *Salvadora hexalepis virgultea*	FSC, CSC	27-43, 53	significant	no	no	no
Coachwhip *Masticophis flagellum* (range nearby)	CSC	none specified	none	---	---	---
Coastal Rosy Boa *Lichanura trivirgata rosafusca*	FSC	27-43, 53	significant	no	no	no
Southern Rubber Boa *Charina bottae umbricata*	CT	none specified	none	---	---	---
San Bernardino Mountain Kingsnake *Lampropeltis zonata parvirubra*	CSC	none specified	none	---	---	---
South Coast Garter Snake *Thamnophis sirtalis*	CSC	none specified	none	---	---	---
Two-striped Garter Snake *Thamnophis hammondii hammondii*	FSC, CSC	1-26, 53, 55, 56	not significant	no	no	no
Southwestern Pond Turtle *Clemmys marmorata pallida*	FSC, CSC	1-26, 53, 55, 56	not significant	no	no	no
Coastal Western Whiptail *Cnemidophorus tigris multiscutatus*	FSC	none specified	none	---	---	---
California Horned Lizard *Phrynosoma coronatum frontale*	FSC, CSC	27-43, 53, 55, 56	significant	no	no	no
San Diego Horned Lizard *Phrynosoma coronatum blainvillii*	FSC, CSC	27-43, 53, 55, 56	significant	no	no	no
Silvery Legless Lizard *Anniella pulchra pulchra*	FSC, CSC	27-43, 53	significant	no	no	no
Desert Night Lizard *Xantusia vigilis*	CSC	none specified	none	---	---	---
Fish						
Unarmored Threespine Stickleback *Gasterosteus aculeatus williamsoni*	FE, CE	53-56, 57-59	not significant	yes	no	no
Arroyo Chub *Gila orcutti*	FSC, CSC	44, 53, 55, 57, 58	not significant	no	no	no
Santa Ana Sucker *Catostomas santaanae*	FSC, CSC	53, 55, 57, 58	not significant	no	no	no

[a] FE = Federal Endangered, FT = Federal threatened, FC = Federal candidate for listing, FSC = Federal species of concern, CE = California Endangered, CT = California threatened, CFP = California Fully Protected, CSC = California Department of Fish and Game listing of California Species of Concern, CSA = California Special Animal, CDFS = California Department of Forestry sensitive.

[b] E = Exotic predators or competitors; O = overcollecting for black market trade; C = Land conversions; H = Modification of hydrology; V = Off-road vehicles; T = Road/highway traffic; H = Human conflicts[196].

A ? denotes our uncertainty about the effectiveness of the proposed mitigation measure, based on how it was described in the FEIR. "Ditto" refers to the previously listed measure, and indicates that the measure at issue is really just an elaboration of the previous measure.

[196] Sources are: Jennings, M.R., and M.P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California;
Smallwood, K.S., and E.L. Fitzhugh 1995. A Track Count for Estimating Mountain Lion *Felis concolor californica* Population Trend. *Biological Conservation* 71:251-259.

Most special-status species are pigeonholed into riparian vegetation associated with the Santa Clara River, which is where measures 1 through 26 are directed. Many of these species also depend on upland areas, where the houses are intended to go. The California Red-legged Frog and the California Tiger Salamander both require mammal burrows for refugia, such as made by the California Ground Squirrel. This Specific Plan has forced habitat descriptions into general consistency with the areas receiving the bulk of the mitigation measures.

The FEIR and Additional Analysis often state the mitigation goal is to minimize project impacts. Most of the mitigation measures proposed in the FEIR involve action 2 above (Table 9). As examples, measure 4.6-56 directs light patterns away from natural areas, and measure 4.6-57 involves capturing fish out of the Santa Clara River during bridge construction, then putting them back "unharmed" following construction activities. Measure 56 does not, however, discuss the impacts on bats caused by light fixtures near natural areas, whether or not the light patterns are pointed away from the natural areas (see our discussion of indirect impacts below). Measure 57 does not specify what would happen should the captive fishes be harmed or killed during captivity, or what would happen should their places of residence be taken over by neighboring conspecifics moving into the vacated ecological space. Therefore, project impacts are not necessarily minimized by these measures.

Mitigation Measure 4.6-53 is proposed for all special-status animal species considered in the plan. This measure involves pre-construction surveys for listed species, followed by a formulation of a mitigation plan. Thus, the FEIR defers formulation of mitigation plans to unspecified later dates, which, for every species, is a violation of CEQA[197].

Consulting with regulatory agencies in order to gain take permits (e.g. Measures 4.6-54, 4.6-55, and 4.6-59) does not qualify as mitigation, yet measure 4.6-55 is proposed for half of the special-status animal species considered in the plan. Similarly, conforming with NPDES permits is not mitigation (Measure 4.6-58) – it is required. Therefore, these measures are consistent with none of the actions considered by CEQA to qualify as mitigation.

Contrary to the Additional Analysis (Section 2.4.8), the Newhall Ranch Specific Plan is not designed to minimize impacts to sensitive resources. If it were, then it would avoid SEA 23, the Santa Clara River, its tributaries, the grasslands, the Coastal Sage Scrub, Mixed Chaparral, and oak woodlands. If it were designed to minimize impacts, then it would be designed to avoid wildlife movement corridors in the Santa Susana Mountains, meaning that the Plan would be based on a sampling program designed to identify these corridors in the first place. If it were designed to minimize impacts, then the project would be located somewhere else rather than next to a cluster of Level 1 Management Areas[198].

Moving over the SEA to preserve sensitive habitats elsewhere does not prevent the loss of habitat (Page 2.4-23). The distinction of sensitive habitat is flawed, as we pointed out elsewhere in this comment letter. What Impact Sciences analysis does suggest is that SEA 23 should be expanded to include the additional habitats not currently within the designated SEA boundaries.

Overall, the mitigation measures proposed in the FEIR are grossly inadequate. They do not involve minimization of impacts as the FEIR and Additional Analysis often claim. Many of them violate CEQA by deferring formulation of the specific plans to unspecified later dates. Few avoidance measures were identified, and these are unlikely to really avoid impacts. Some measures will add

[197] CEQA Guidelines Section 15126.4.
[198] Beardsley and Stoms 1993.

adverse environmental impacts, and all are of unknown efficacy, which are not supposed to be relied on to conclude that impacts have been reduced to a level of insignificance[199].

Specific Project Impacts

The Additional Analysis states that the Specific Plan's development footprint has been reduced by 210 acres (Page 2.2-38), which is only about 4% of the original footprint. Given the trivial mitigation measures in the FEIR/Additional Analysis, we are confident that the mitigation plan and Specific Plan have not changed to reduce the project impacts that have been apparent since the beginning of this EIR process.

The Additional Analysis (Page 2.2-39) claims that additional existing open space connections were incorporated into the design of the Specific Plan, including the "secondary" connections, Long Canyon, Sawtooth Ridge, and Lion Canyon. The Additional Analysis presents no basis for designating these "connections" as *secondary*. More importantly, these features of the Santa Susana Mountains *already exist*, so it is unclear how they were incorporated into the Specific Plan. The Additional Analysis did not propose to remove barriers to wildlife movement on these topographic features, nor did it propose to enhance the corridor characteristics of these features in any way. Simply adding them to the Specific Plan maps achieves nothing substantial to wildlife in the Santa Susana Mountains.

Santa Clara River Floodplain Modifications

The design compatibility criteria for pursuing a project in an SEA are not met by Newhall (Section 2.2). The houses and commercial buildings will not be "highly compatible" with biotic resources (Criterion a). They will displace the soils and vegetation of tributaries to the Santa Clara River, and will, along with bank stabilization and bridge structures, substantially encroach upon and adversely modify the water bodies and watercourses (Criterion b). The development will destroy the habitats and movement corridor functions of Potrero Canyon and will blockade Salt Creek Canyon and the upstream portion of the Santa Clara River from movement by many species of wildlife (Criterion c). However, no scientifically acceptable means has been used to identify wildlife movement corridors[200]. The amount of vegetative cover and open space removed by the project would devastate the habitat values of the area, along with any buffer between the project and critical resource areas (Criterion d).

The Additional Analysis claims that no mitigation is needed for bank stabilization, bridges, and floodplain changes. The Additional Analysis (Page 2.3-87) claims that these changes will have no significant impacts to biological resources. This premise is flawed, and contradicts the volumes of evidence[201].

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[199] Kings County Farm Bureau et al. vs. City of Hanford (5th District 1990) Cal. App. 3d 692, 727-728 [270 Cal. Rptr. 650].

[200] Beier and Loe 1992.

[201] e.g. Leopold 1995;
Kondolff 1999;
Moyle, P. B. 1986. Fish Introductions into North America: Patterns and Ecological Impact. Pages 27 to 43 in H. A. Mooney and J. A. Drake (Editors), *Ecology of Biological Invasions of North America and Hawaii*. Springer-Verlag, New York.

No monitoring was proposed in the FEIR or Additional Analysis for the cumulative impacts on wildlife and plants inhabiting wetland, stream, and riparian components of the Santa Clara River and Salt Creek watersheds, even though well-accepted methods have been described[202].

The Corps previously commented on the DEIR that project components that may affect jurisdictional wetlands should use a functional assessment of existing conditions and impacts. The current method available and used to assess project-related impacts to wetlands is to use the Corps' Hydrogeomorphic Assessment Method (HGM), for which the Corps and US EPA have developed guidebooks and regional models. The primary objective of the HGM approach is to measure relative changes in wetland functions a project may have on wetland habitats. The FEIR and Additional Analysis totally ignore the Corps' comments, and no assessment has ever been made on how the various wetland functions would be adversely or beneficially affected by the proposed project.

The changes to the Santa Clara River and its tributaries will have both direct and indirect impacts on the wetland functions within Ventura County, be it changes in flood frequency, water quality, connectivity of habitat, groundwater recharge, surface water retention, etc. Based on the Santa Margarita Watershed Riverine HGM model developed by the US EPA[203], the Santa Clara River can be expected to possess 14 specific functions. The HGM assessment methods have been used successfully on several projects under CEQA review over that past few years[204], and results in a more accurate impacts assessment than just quantifying total acres of wetland impacted. It is a valuable tool to identify what wetland functions are affected by a project, and where mitigation measures should focus in order to more directly mitigate for project-related impacts.

ACCESS TO PROJECT SITE BY AGENCY AND VENTURA COUNTY BIOLOGISTS

Verification of existing conditions, methods used, and assessment of conditions and expected project-related impacts and mitigation is necessary to properly evaluate and review any environmental document prepared for any project, especially for such a large project as proposed as the Newhall Ranch development. In addition, since Newhall Land and Farming Company has routinely kept the results of many field surveys a secret from resource and regulatory agencies and interested parties, skepticism of the results presented is high. The project site should be open to reasonable examination

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[202] Brooks, R.P., E.D. Bellis, C.S. Keener, M.J. Croonquist, and D.E. Arnold. 1991. A Methodology for Biological Monitoring of Cumulative Impacts on Wetland, Stream, and Riparian Components of Watersheds. Pages 387-398 in J.A. Kusler and S. Daly, Eds., *Wetlands and river corridor management*. Association of State Wetland Managers, Berne, New York.

[203] Lee, L. C., M. C. Rains, J. A. Mason, and W. J. Kleindl. 1997. Guidebook to Hydrogeomorphic Functional Assessment of Riverine Waters/Wetlands in the Santa Margarita Watershed. Peer review draft. The National Wetland Science Training Cooperative, Seattle, Washington. Prepared for U.S. Environmental Protection Agency, Region IX, San Francisco, California. February.

[204] David Magney Environmental Consulting (DMEC). 2000. Wetland Functional Assessment of the Reinke Development Project Mitigation Plan, Thousand Oaks, California. November 2000. (PN 00-0131.) Ojai, CA.; DMEC. 1997. Botanical Resources of the Bridle Ridge Development Project, Santa Barbara County. December 1997. (PN 97-0161.) Ojai, California. Prepared for County of Santa Barbara Prepared on behalf of Rincon Consultants, Inc., Ventura, CA;
Fugro West, Inc. 1996. Draft Environmental Impact Report for the Los Osos Sewer Treatment Facilities. Ventura, CA. Prepared on behalf of County of San Luis Obispo.

and survey by resource and regulatory agencies and their consultants as part of the CEQA review process.

This concludes our comments on the Newhall Ranch Specific Plan Additional Analysis ("Draft Additional Analysis") dated April 2001.

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